

**PROJECT MANUAL  
VOLUME 1  
Bidding Documents**

**FOR**

**Barron County Justice Center Remodel**

**Project # 1742**

November 13, 2017

 **LIEN & PETERSON  
ARCHITECTS, INC.**

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**SECTION 00 01 15**  
**LIST OF DRAWING SHEETS**

**LIST OF DRAWINGS**

Drawings: Drawings consist of the Contract Drawings and other drawings listed on the Table of Contents page of the separately bound drawing set titled Barron County Justice Center Remodel dated November 13, 2017 as modified by subsequent Addenda and Contract modifications.

List of Drawings: Drawings consist of the following Contract Drawings and other drawings of type indicated:

**ARCHITECTURAL**

Title Sheet, Sheet Index, Project Location Maps .....	T101
Egress Plan.....	A101
Floor Plan - Demolition .....	A201
Reflected Ceiling Plan - Demolition.....	A202
Floor Plan – Proposed, Wall Types, Door Types, Schedules .....	A301
Sections, Details.....	A501
Interior Elevations.....	A601
Reflected Ceiling Plan - Proposed .....	A701

**ELECTRICAL**

Electrical Demolition Plan, Symbols and Schedules .....	E101
Electrical Remodel Plans, Lighting .....	E201

**END OF SECTION**

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4 **SECTION 00 11 13**  
5 **ADVERTISEMENT FOR BIDS**

6  
7  
8 **PROJECT INFORMATION**

9 Notice to Bidders: Qualified bidders may submit bids for project as described in this Document. Submit  
10 bids according to the Instructions to Bidders.

11 Regulatory Requirements: Applicable laws and regulations of the State of Wisconsin shall govern  
12 submittal, opening, and award of bids.

13 Project Information:

14 **BARRON COUNTY JUSTICE CENTER REMODEL**  
15 **1425 WI-25**  
16 **BARRON, WI 54812**

17 Owner Information: **Barron County**

18 Owner's Representative: **Judge James Babler**

19 Architect: **Lien & Peterson Architects, Inc.**

20 Project Description:

21 In general, the work consists of converting the existing Break/Fitness room into a courtroom. This room is  
22 centrally located on the first floor of the southern wing. The process of converting the room into a  
23 courtroom will include wall paneling, furniture, a raised floor system, and background monument to  
24 match existing courtrooms in the building and other work indicated in the Contract Documents.

25 Construction Contract: Bids will be received for the following Work:

26 General Contract (all trades).

27 Multiple Contract Project consisting of the following prime contracts:

28 General Building Construction.

29 Plumbing Construction.

30 Mechanical Construction.

31 Electrical Construction.

32  
33  
34  
35 **BID SUBMITTAL AND OPENING**

36 Owner will receive sealed lump sum bids until the bid time and date at the location given below. Owner  
37 will consider bids prepared in compliance with the Instructions to Bidders issued by Owner, and delivered  
38 as follows:

39 Bid Date: December 19, 2017.

40 Bid Time: 10:00 a.m., local time.

41 Location: Room S1801, Barron County Justice Center, 1425 WI-25, Barron WI 54812.

42 Bids will be thereafter publicly opened and read aloud.

43  
44 **BID SECURITY**

45 Bid security shall be submitted with each bid in the amount of 5 % of the bid amount. No bids may be  
46 withdrawn for a period of 60 days after opening of bids. Owner reserves the right to reject any and all bids  
47 and to waive informalities and irregularities.

48  
49 **PREBID MEETING**

50 Prebid Meeting: A Prebid meeting for all bidders will be held at the Barron County Justice  
51 Center, 1425 WI-25, Barron WI 54812 on November 30<sup>th</sup> at 10:00 a.m., local time.  
52 Prospective prime bidders are encouraged to attend.

53  
54 Bidders' Questions: Architect will provide responses at Prebid conference to bidders' questions  
55 received up to two business days prior to conference.

56

1 **DOCUMENTS**

2 Printed Procurement and Contracting Documents: Obtain after November 13, 2017, by contacting Architect  
3 or online at [2dlp.com/planholders](http://2dlp.com/planholders). The plans will also be submitted to the La Crosse Builders Exchange  
4 (<https://www.laxbx.com/>) as well as the Northwest Regional Builders Exchange  
5 (<http://www.nwr bx.com/index.php>).  
6

7 **TIME OF COMPLETION**

8 Successful bidder shall begin the Work on receipt of the Notice to Proceed and shall complete the Work  
9 within or before March 2, 2018.

10

11

**END OF SECTION**

1 **DOCUMENT 002113**  
2 **INSTRUCTIONS TO BIDDERS**

3  
4 **INSTRUCTIONS TO BIDDERS**

5 AIA Document A701, "Instructions to Bidders," is hereby incorporated into the Procurement and  
6 Contracting Requirements by reference.

7  
8 A copy of AIA Document A701, "Instructions to Bidders," is bound in this Project Manual.  
9

10 **END OF SECTION**

1 **SECTION 00 25 13**  
2 **PREBID MEETINGS**

3  
4 **PREBID MEETING**

5 Architect will conduct a Prebid meeting as indicated below:

6  
7 Meeting Date: November 30, 2017.

8 Meeting Time: 10:00 a.m, local time.

9 Location: Room S1801, Barron County Justice Center, 1425 WI-25, Barron, WI 54812.

10  
11 Attendance:

12 Prime Bidders: Attendance at Prebid meeting is recommended.

13 Subcontractors: Attendance at Prebid meeting is recommended.

14 Notice: Bids will only be accepted from prime bidders represented on Prebid Meeting sign-in sheet.

15  
16 Bidder Questions: Submit written questions to be addressed at Prebid meeting minimum of two business  
17 days prior to meeting.

18  
19 Agenda: Prebid meeting agenda will include review of topics that may affect proper preparation and  
20 submittal of bids, including the following:

21  
22 Procurement and Contracting Requirements:

23 Advertisement for Bids.

24 Instructions to Bidders.

25 Bidder Qualifications.

26 Bonding.

27 Insurance.

28 Bid Security.

29 Bid Form and Attachments.

30 Bid Submittal Requirements.

31 Bid Submittal Checklist.

32 Notice of Award.

33  
34 Communication during Bidding Period:

35 Obtaining documents.

36 Access to Project Web site.

37 Bidder's Requests for Information.

38 Bidder's Substitution Request/Prior Approval Request.

39 Addenda.

40  
41 Contracting Requirements:

42 Agreement.

43 The General Conditions.

44 The Supplementary Conditions.

45 Other Owner requirements.

46  
47 Construction Documents:

48 Scopes of Work.

49 Temporary Facilities.

50 Use of Site.

51 Work Restrictions.

52 Alternates, Allowances, and Unit Prices.

53 Substitutions following award.

54  
55 Separate Contracts:

1 Work by Owner.  
2 Work of Other Contracts.

3  
4 Schedule:  
5 Project Schedule.  
6 Contract Time.  
7 Liquidated Damages.  
8 Other Bidder Questions.

9  
10 Site/facility visit or walkthrough.

11  
12 Post-Meeting Addendum.

13  
14 Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes to attendees.  
15 Minutes of meeting are issued as Available Information and do not constitute a modification to the  
16 Procurement and Contracting Documents. Modifications to the Procurement and Contracting Documents  
17 are issued by written Addendum only.

18  
19 Sign-in Sheet: Minutes will include list of meeting attendees.  
20 List of Planholders: Minutes will include list of planholders.

21  
22 **END OF SECTION**

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**SECTION 00 31 19**  
**EXISTING CONDITION INFORMATION**

**EXISTING CONDITION INFORMATION**

This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of the Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions. This Document and its attachments are not part of the Contract Documents.

Existing drawings that include information on existing conditions including previous construction at Project site are available for viewing at the office of Architect.

Existing specifications that include information on existing conditions including previous construction at Project site are available for viewing at the office of Architect.

**END OF SECTION**



1  
2 **SECTION 00 41 13**  
3 **BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)**

4 **BID INFORMATION**

5  
6 Bidder: \_\_\_\_\_.  
7 Project Name: **Barron County Justice Center Remodel.**  
8 Project Location: **1425 WI-25, Barron, WI 54812**  
9 Owner: **Barron County**  
10 Architect: **Lien & Peterson Architects, Inc.**  
11 Architect Project Number: **1742**  
12

13 **CERTIFICATIONS AND BASE BID**

14 Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the  
15 Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all  
16 subsequent Addenda, as prepared by Lien & Peterson Architects, Inc. and Architect's consultants, having  
17 visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to  
18 furnish all material, labor, equipment and services, including all scheduled allowances, necessary to  
19 complete the construction of the above-named project, according to the requirements of the Procurement  
20 and Contracting Documents, for the stipulated sum of:

21  
22 \_\_\_\_\_ Dollars (\$\_\_\_\_\_).  
23 The above amount may be modified by amounts indicated by the Bidder on the attached Document  
24 004322 "Unit Prices Form" and Document 004323 "Alternates Form."  
25

26 **BID GUARANTEE**

27 The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish  
28 surety as specified within 10 days after a written Notice of Award, if offered within 60 days after receipt of  
29 bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check,  
30 U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting  
31 five percent (5%) of the Base Bid amount above:

32  
33 \_\_\_\_\_ Dollars (\$\_\_\_\_\_).  
34

35 In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return  
36 to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.  
37

38 **SUBCONTRACTORS AND SUPPLIERS**

39 The following companies shall execute subcontracts for the portions of the Work indicated:

40  
41 Concrete Work: \_\_\_\_\_.  
42  
43 Electrical Work: \_\_\_\_\_.  
44

45 **TIME OF COMPLETION**

46 The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on  
47 a date specified in a written Notice to Proceed to be issued by Architect, and shall fully complete the Work  
48 within <Insert number> calendar days.  
49

50 **ACKNOWLEDGEMENT OF ADDENDA**

51 The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of  
52 this Bid:

53  
54 Addendum No. 1, dated \_\_\_\_\_.  
55

1 Addendum No. 2, dated \_\_\_\_\_.

2

3 Addendum No. 3, dated \_\_\_\_\_.

4

5 Addendum No. 4, dated \_\_\_\_\_.

6

7 **BID SUPPLEMENTS**

8 The following supplements are a part of this Bid Form and are attached hereto.

9

10 Bid Form Supplement - Alternates.

11 Bid Form Supplement - Unit Prices.

12 Bid Form Supplement - Allowances.

13 Bid Form Supplement - Bid Bond Form (AIA Document A310).

14

15 **CONTRACTOR'S LICENSE**

16 The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the  
17 state of Wisconsin, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in  
18 full.

19

20 **SUBMISSION OF BID**

21 Respectfully submitted this \_\_\_\_\_ day of \_\_\_\_\_, 2017.

22

23 Submitted By \_\_\_\_\_ (Name of bidding firm or corporation).

24

25 Authorized Signature: \_\_\_\_\_ (Handwritten signature).

26

27 Signed By: \_\_\_\_\_ (Type or print name).

28

29 Title: \_\_\_\_\_ (Owner/Partner/President/Vice President).

30

31 Witness By: \_\_\_\_\_ (Handwritten signature).

32

33 Attest: \_\_\_\_\_ (Handwritten signature).

34

35 By: \_\_\_\_\_ (Type or print name).

36

37 Title: \_\_\_\_\_ (Corporate Secretary or Assistant Secretary).

38

39 Street Address: \_\_\_\_\_ .

40

41 City, State, Zip: \_\_\_\_\_ .

42

43 Phone: \_\_\_\_\_ .

44

45 License No.: \_\_\_\_\_ .

46

47 Federal ID No.: \_\_\_\_\_ (Affix Corporate Seal Here).

48

49

**END OF SECTION**



1 Condition of Existing Building: Maintain portions of existing building affected by construction operations  
2 in a weathertight condition throughout construction period. Repair damage caused by construction  
3 operations.

4  
5 **COORDINATION WITH OCCUPANTS**

6 Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the  
7 exception of areas under construction. Cooperate with Owner during construction operations to minimize  
8 conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations.  
9 Maintain existing exits unless otherwise indicated.

10  
11 Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to  
12 place and install equipment in completed portions of the Work, prior to Substantial Completion of the  
13 Work, provided such occupancy does not interfere with completion of the Work. Such placement of  
14 equipment and limited occupancy shall not constitute acceptance of the total Work.

15  
16 **WORK RESTRICTIONS**

17 Work Restrictions, General: Comply with restrictions on construction operations.

18  
19 Comply with limitations on use of public streets and with other requirements of authorities having  
20 jurisdiction.

21  
22 On-Site Work Hours: Limit work in the existing building to normal business working hours, Monday  
23 through Friday, unless otherwise indicated. Any saw cutting must occur before 8:00 a.m. or any time after  
24 4:30 p.m.

25  
26 Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others  
27 unless permitted under the following conditions and then only after providing temporary utility services  
28 according to requirements indicated:

29  
30 Notify Owner not less than two days in advance of proposed utility interruptions.

31  
32 Restricted Substances: Use of tobacco products and other controlled substances within the existing building  
33 is not permitted.

34  
35 **SPECIFICATION AND DRAWING CONVENTIONS**

36 Specification Content: The Specifications use certain conventions for the style of language and the intended  
37 meaning of certain terms, words, and phrases when used in particular situations. These conventions are as  
38 follows:

39  
40 Imperative mood and streamlined language are generally used in the Specifications. The words "shall,"  
41 "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used  
42 within a sentence or phrase.

43 Specification requirements are to be performed by Contractor unless specifically stated otherwise.

44  
45 Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all  
46 Sections in the Specifications.

47  
48 **PART 2 - PRODUCTS (Not Used)**

49  
50 **PART 3 - EXECUTION (Not Used)**

51  
52 **END OF SECTION**

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**SECTION 01 33 00**  
**SUBMITTAL PROCEDURES**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

- Submittal schedule requirements.
- Administrative and procedural requirements for submittals.

**DEFINITIONS**

Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

**SUBMITTAL SCHEDULE**

Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

**SUBMITTAL FORMATS**

Submittal Information: Include the following information in each submittal:

- Project name.
- Date.
- Name of Architect.
- Name of Contractor.
- Name of firm or entity that prepared submittal.
- Names of subcontractor, manufacturer, and supplier.
- Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
- Category and type of submittal.
- Submittal purpose and description.
- Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
- Drawing number and detail references, as appropriate.
- Indication of full or partial submittal.
- Location(s) where product is to be installed, as appropriate.
- Other necessary identification.
- Remarks.
- Signature of transmitter.

Options: Identify options requiring selection by Architect.

Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional

1 information and revisions, other than those requested by Architect on previous submittals. Indicate by  
2 highlighting on each submittal or noting on attached separate sheet.

3  
4 **Paper Submittals:**

5  
6 Place a permanent label or title block on each submittal item for identification; include name of firm or  
7 entity that prepared submittal.

8 Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review  
9 and approval markings and action taken by Architect.

10 Action Submittals: Submit three paper copies of each submittal unless otherwise indicated. Architect  
11 will return two copies.

12 Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated.  
13 Architect will not return copies.

14 Transmittal for Submittals: Assemble each submittal individually and appropriately for transmittal and  
15 handling. Transmit each submittal using transmittal form.

16  
17 **SUBMITTAL PROCEDURES**

18 Prepare and submit submittals required by individual Specification Sections. Types of submittals are  
19 indicated in individual Specification Sections.

20  
21 Paper: Prepare submittals in paper form, and deliver to Owner.

22  
23 Coordination: Coordinate preparation and processing of submittals with performance of construction  
24 activities.

25  
26 Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related  
27 activities that require sequential activity.

28 Submit all submittal items required for each Specification Section concurrently unless partial  
29 submittals for portions of the Work are indicated on approved submittal schedule.

30 Submit action submittals and informational submittals required by the same Specification Section as  
31 separate packages under separate transmittals.

32  
33 Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for  
34 review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be  
35 authorized because of failure to transmit submittals enough in advance of the Work to permit processing,  
36 including resubmittals.

37  
38 Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if  
39 coordination with subsequent submittals is required. Architect will advise Contractor when a  
40 submittal being processed must be delayed for coordination.

41 Resubmittal Review: Allow 15 days for review of each resubmittal.

42  
43 Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

44  
45 Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators,  
46 installers, authorities having jurisdiction, and others as necessary for performance of construction activities.  
47 Show distribution on transmittal forms.

48  
49 Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals  
50 that are marked with approval notation from Architect's action stamp.

51  
52 **SUBMITTAL REQUIREMENTS**

53 Product Data: Collect information into a single submittal for each element of construction and type of  
54 product or equipment.

1 If information must be specially prepared for submittal because standard published data are unsuitable  
2 for use, submit as Shop Drawings, not as Product Data.  
3 Mark each copy of each submittal to show which products and options are applicable.  
4 Include the following information, as applicable:  
5  
6 Manufacturer's catalog cuts.  
7 Manufacturer's product specifications.  
8 Standard color charts.  
9 Statement of compliance with specified referenced standards.  
10 Testing by recognized testing agency.  
11 Application of testing agency labels and seals.  
12 Notation of coordination requirements.  
13 Availability and delivery time information.  
14  
15 For equipment, include the following in addition to the above, as applicable:  
16  
17 Wiring diagrams that show factory-installed wiring.  
18 Printed performance curves.  
19 Operational range diagrams.  
20 Clearances required to other construction, if not indicated on accompanying Shop Drawings.  
21  
22 Submit Product Data before Shop Drawings, and before or concurrent with Samples.  
23  
24 Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop  
25 Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on  
26 Architect's digital data drawing files is otherwise permitted.  
27  
28 Preparation: Fully illustrate requirements in the Contract Documents. Include the following  
29 information, as applicable:  
30  
31 Identification of products.  
32 Schedules.  
33 Compliance with specified standards.  
34 Notation of coordination requirements.  
35 Notation of dimensions established by field measurement.  
36 Relationship and attachment to adjoining construction clearly indicated.  
37 Seal and signature of professional engineer if specified.  
38  
39 Paper Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit Shop  
40 Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.  
41  
42 Two opaque (bond) copies of each submittal. Architect will return one copy.  
43  
44 Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics  
45 with other materials.  
46  
47 Transmit Samples that contain multiple, related components such as accessories together in one  
48 submittal package.  
49 Identification: Permanently attach label on unexposed side of Samples that includes the following:  
50  
51 Project name and submittal number.  
52 Generic description of Sample.  
53 Product name and name of manufacturer.  
54 Sample source.  
55 Number and title of applicable Specification Section.  
56 Specification paragraph number and generic name of each item.

1  
2 Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample  
3 characteristics, and identification information for record.

4 Paper Transmittal: Include paper transmittal including complete submittal information indicated.

5 Disposition: Maintain sets of approved Samples at Project site, available for quality-control  
6 comparisons throughout the course of construction activity. Sample sets may be used to determine  
7 final acceptance of construction associated with each set.

8  
9 Samples that may be incorporated into the Work are indicated in individual Specification Sections.  
10 Such Samples must be in an undamaged condition at time of use.

11 Samples not incorporated into the Work, or otherwise designated as Owner's property, are the  
12 property of Contractor.

13  
14 Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units  
15 showing the full range of colors, textures, and patterns available.

16  
17 Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or  
18 similar characteristics are required to be selected from manufacturer's product line. Architect  
19 will return submittal with options selected.

20  
21 Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same  
22 material to be used for the Work, cured and finished in manner specified, and physically identical  
23 with material or product proposed for use, and that show full range of color and texture variations  
24 expected. Samples include, but are not limited to, the following: partial sections of manufactured or  
25 fabricated components; small cuts or containers of materials; complete units of repetitively used  
26 materials; swatches showing color, texture, and pattern; color range sets; and components used for  
27 independent testing and inspection.

28  
29 Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets;  
30 remainder will be returned.

31  
32 Submit a single Sample where assembly details, workmanship, fabrication techniques,  
33 connections, operation, and other similar characteristics are to be demonstrated.

34 If variation in color, pattern, texture, or other characteristic is inherent in material or product  
35 represented by a Sample, submit at least three sets of paired units that show approximate  
36 limits of variations.

37  
38 Product Schedule: As required in individual Specification Sections, prepare a written summary indicating  
39 types of products required for the Work and their intended location. Include the following information in  
40 tabular form:

41  
42 Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or  
43 person. Include lists of completed projects with project names and addresses, contact information of  
44 architects and owners, and other information specified.

45  
46 Design Data: Prepare and submit written and graphic information indicating compliance with indicated  
47 performance and design criteria in individual Specification Sections. Include list of assumptions and  
48 summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used  
49 for calculations. Number each page of submittal.

50  
51 Certificates:

52  
53 Certificates and Certifications Submittals: Submit a statement that includes signature of entity  
54 responsible for preparing certification. Certificates and certifications shall be signed by an officer or  
55 other individual authorized to sign documents on behalf of that entity. Provide a notarized signature  
56 where indicated.



1 Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer  
2 complies with requirements in the Contract Documents and, where required, is authorized by  
3 manufacturer for this specific Project.  
4 Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that  
5 manufacturer complies with requirements in the Contract Documents. Include evidence of  
6 manufacturing experience where required.  
7 Material Certificates: Submit written statements on manufacturer's letterhead certifying that material  
8 complies with requirements in the Contract Documents.  
9 Product Certificates: Submit written statements on manufacturer's letterhead certifying that product  
10 complies with requirements in the Contract Documents.  
11 Welding Certificates: Prepare written certification that welding procedures and personnel comply with  
12 requirements in the Contract Documents. Submit record of Welding Procedure Specification and  
13 Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.  
14

15 Test and Research Reports:

16  
17 Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's  
18 standard form, indicating and interpreting results of compatibility tests performed before installation  
19 of product. Include written recommendations for primers and substrate preparation needed for  
20 adhesion.  
21 Field Test Reports: Submit written reports indicating and interpreting results of field tests performed  
22 either during installation of product or after product is installed in its final location, for compliance  
23 with requirements in the Contract Documents.  
24 Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's  
25 standard form, indicating and interpreting test results of material for compliance with requirements  
26 in the Contract Documents.  
27 Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's  
28 standard form, indicating and interpreting results of tests performed before installation of product,  
29 for compliance with performance requirements in the Contract Documents.  
30 Product Test Reports: Submit written reports indicating that current product produced by manufacturer  
31 complies with requirements in the Contract Documents. Base reports on evaluation of tests  
32 performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests  
33 performed by a qualified testing agency.  
34 Research Reports: Submit written evidence, from a model code organization acceptable to authorities  
35 having jurisdiction, that product complies with building code in effect for Project. Include the  
36 following information:  
37 Name of evaluation organization.  
38 Date of evaluation.  
39 Time period when report is in effect.  
40 Product and manufacturers' names.  
41 Description of product.  
42 Test procedures and results.  
43 Limitations of use.  
44

45 **DELEGATED-DESIGN SERVICES**

46 Performance and Design Criteria: Where professional design services or certifications by a design  
47 professional are specifically required of Contractor by the Contract Documents, provide products and  
48 systems complying with specific performance and design criteria indicated.  
49

50 If criteria indicated are insufficient to perform services or certification required, submit a written  
51 request for additional information to Architect.  
52

53 Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required  
54 submittals, submit digitally signed PDF file and three paper copies of certificate, signed and sealed by the  
55 responsible design professional, for each product and system specifically assigned to Contractor to be  
56 designed or certified by a design professional.

1  
2 Indicate that products and systems comply with performance and design criteria in the Contract  
3 Documents. Include list of codes, loads, and other factors used in performing these services.  
4

5 **CONTRACTOR'S REVIEW**

6 Action Submittals and Informational Submittals: Review each submittal and check for coordination with  
7 other Work of the Contract and for compliance with the Contract Documents. Note corrections and field  
8 dimensions. Mark with approval stamp before submitting to Architect.  
9

10 Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp.  
11 Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been  
12 reviewed, checked, and approved for compliance with the Contract Documents.  
13

14 Architect will not review submittals received from Contractor that do not have Contractor's review and  
15 approval.  
16

17 **ARCHITECT'S REVIEW**

18 Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and  
19 return it.  
20

21 PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.  
22

23 Paper Submittals: Architect will stamp each submittal with an action stamp and will mark stamp  
24 appropriately to indicate action, as follows:  
25

26 Informational Submittals: Architect will review each submittal and will not return it, or will return it if it  
27 does not comply with requirements. Architect will forward each submittal to appropriate party.  
28

29 Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has  
30 received prior approval from Architect.  
31

32 Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for  
33 resubmittal without review.  
34

35 Architect will discard submittals received from sources other than Contractor.  
36

37 Submittals not required by the Contract Documents will be returned by Architect without action.  
38

39 **PART 2 - PRODUCTS (Not Used)**

40 **PART 3 - EXECUTION (Not Used)**

41 **END OF SECTION**  
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**SECTION 01 35 16**  
**ALTERATION PROJECT PROCEDURES**  
**PART 1 - GENERAL**

**SUMMARY**

Section includes special procedures for alteration work.

**DEFINITIONS**

Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.

Consolidate: To strengthen loose or deteriorated materials in place.

Design Reference Sample: A sample that represents the Architect's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.

Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.

Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.

Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.

Retain: To keep existing items that are not to be removed or dismantled.

Strip: To remove existing finish down to base material unless otherwise indicated.

**PROJECT MEETINGS FOR ALTERATION WORK**

Preliminary Conference for Alteration Work: Before starting alteration work, conduct conference at Project site.

Attendees: In addition to representatives of Owner, Architect, and Contractor, testing service representative, and chemical-cleaner manufacturer(s) shall be represented at the meeting.

Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:

Fire-prevention plan.

Governing regulations.

Areas where existing construction is to remain and the required protection.

Hauling routes.

Sequence of alteration work operations.

Storage, protection, and accounting for salvaged and specially fabricated items.

1 Existing conditions, staging, and structural loading limitations of areas where materials are stored.

2  
3 Reporting: Record conference results and distribute copies to everyone in attendance and to others  
4 affected by decisions or actions resulting from conference.

5  
6 Coordination Meetings: Conduct coordination meetings specifically for alteration work at monthly  
7 intervals. Coordination meetings are in addition to specific meetings held for other purposes, such as  
8 progress meetings and preinstallation conferences.

9  
10 Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items  
11 of significance that could affect progress of alteration work. Include topics for discussion as  
12 appropriate to status of Project.

13 Reporting: Record meeting results and distribute copies to everyone in attendance and to others  
14 affected by decisions or actions resulting from each meeting.

### 15 **MATERIALS OWNERSHIP**

16 Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents,  
17 commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be  
18 encountered or uncovered during the Work, regardless of whether they were previously documented,  
19 remain Owner's property.

### 20 **INFORMATIONAL SUBMITTALS**

21 Alteration Work Program: Submit 30 days before work begins.

22  
23 Fire-Prevention Plan: Submit 30 days before work begins.

### 24 **QUALITY ASSURANCE**

25 Title X Requirement: Each firm conducting activities that disturb painted surfaces shall be a "Lead-Safe  
26 Certified Firm" according to 40 CFR 745, Subpart E, and use only workers that are trained in lead-safe  
27 work practices.

28 Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each  
29 phase or process and protection of surrounding materials during operations. Show compliance with  
30 indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project  
31 alteration work program with specific requirements of programs required in other alteration work Sections.

32 Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions  
33 and means of egress from occupied areas coordinated with continuing on-site operations and other  
34 known work in progress.

35 Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and  
36 locations and details of temporary protective barriers.

37  
38 Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of  
39 fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process.  
40 Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's  
41 training, duties, and authority to enforce fire safety.

42  
43 Safety and Health Standard: Comply with ANSI/ASSE A10.6.

### 44 **STORAGE AND HANDLING OF SALVAGED MATERIALS**

45 Salvaged Materials:

46 Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.

47 Pack or crate items after cleaning; cushion against damage during handling. Label contents of  
48 containers.

49 Store items in a secure area until delivery to Owner.

1 Transport items to Owner's storage area on-site indicated on Drawings.  
2 Protect items from damage during transport and storage.

3  
4 Salvaged Materials for Reinstallation:

5  
6 Repair and clean items for reuse as indicated.  
7 Pack or crate items after cleaning and repairing; cushion against damage during handling. Label  
8 contents of containers.  
9 Protect items from damage during transport and storage.  
10 Reinstall items in locations indicated. Comply with installation requirements for new materials and  
11 equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to  
12 make items functional for use indicated.

13  
14 Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from  
15 construction work. Where permitted by Architect, items may be dismantled and taken to a suitable,  
16 protected storage location during construction work and reinstalled in their original locations after  
17 alteration and other construction work in the vicinity is complete.

18  
19 Storage: Catalog and store items within a weathertight enclosure where they are protected from moisture,  
20 weather, condensation, and freezing temperatures.

21  
22 Identify each item for reinstallation with a nonpermanent mark to document its original location.  
23 Indicate original locations on plans, elevations, sections, or photographs by annotating the  
24 identifying marks.  
25 Secure stored materials to protect from theft.  
26 Control humidity so that it does not exceed 85 percent. Maintain temperatures 5 deg F or more above  
27 the dew point.

28 **PART 2 - PRODUCTS - (Not Used)**

29  
30 **PART 3 - EXECUTION**

31  
32 **PROTECTION**

33 Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding  
34 buildings from harm resulting from alteration work.

35  
36 Use only proven protection methods, appropriate to each area and surface being protected.  
37 Provide temporary barricades, barriers, and directional signage to exclude the public from areas where  
38 alteration work is being performed.  
39 Erect temporary barriers to form and maintain fire-egress routes.  
40 Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance  
41 and exit that must remain in service during alteration work.  
42 Contain dust and debris generated by alteration work, and prevent it from reaching the public or  
43 adjacent surfaces.  
44 Provide shoring, bracing, and supports as necessary. Do not overload structural elements.  
45 Protect floors and other surfaces along hauling routes from damage, wear, and staining.  
46 Provide supplemental sound-control treatment to isolate demolition work from other areas of the  
47 building.

48  
49 Temporary Protection of Materials to Remain:

50  
51 Protect existing materials with temporary protections and construction. Do not remove existing  
52 materials unless otherwise indicated.  
53 Do not attach temporary protection to existing surfaces except as indicated as part of the alteration  
54 work program.  
55

1 Comply with each product manufacturer's written instructions for protections and precautions. Protect  
2 against adverse effects of products and procedures on people and adjacent materials, components, and  
3 vegetation.

4  
5 **Utility and Communications Services:**

6  
7 Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires,  
8 conduits, pipes, and other services affected by alteration work before commencing operations.

9 Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for  
10 alteration work.

11 Maintain existing services unless otherwise indicated; keep in service, and protect against damage  
12 during operations. Provide temporary services during interruptions to existing utilities.

13  
14 **PROTECTION FROM FIRE**

15 General: Follow fire-prevention plan and the following:

16  
17 Comply with NFPA 241 requirements unless otherwise indicated.

18 Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless  
19 necessary for the immediate work.

20  
21 If combustible material cannot be removed, provide fire blankets to cover such materials.

22  
23 **Heat-Generating Equipment and Combustible Materials:** Comply with the following procedures while  
24 performing work with heat-generating equipment or combustible materials, including welding, torch-  
25 cutting, soldering, brazing, removing paint with heat, or other operations where open flames or implements  
26 using high heat or combustible solvents and chemicals are anticipated:

27  
28 Obtain Owner's approval for operations involving use of open-flame or welding or other high-heat  
29 equipment. Notify Owner at least 72 hours before each occurrence, indicating location of such work.

30 As far as practicable, restrict heat-generating equipment to shop areas or outside the building.

31 Do not perform work with heat-generating equipment in or near rooms or in areas where flammable  
32 liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test  
33 to ensure that the area is safe.

34 Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from  
35 reaching surrounding combustible material.

36 Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks  
37 in floors, walls, ceilings, roofs, and other openings.

38 **Fire Watch:** Before working with heat-generating equipment or combustible materials, station  
39 personnel to serve as a fire watch at each location where such work is performed. Fire-watch  
40 personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B,  
41 NFPA 241, and as follows:

- 42  
43 - Train each fire watch in the proper operation of fire-control equipment and alarms.  
44 - Prohibit fire-watch personnel from other work that would be a distraction from fire-watch  
45 duties.  
46 - Cease work with heat-generating equipment whenever fire-watch personnel are not present.  
47 - Have fire-watch personnel perform final fire-safety inspection each day beginning no sooner  
48 than 30 minutes after conclusion of work in each area to detect hidden or smoldering fires and to  
49 ensure that proper fire prevention is maintained.  
50 - Maintain fire-watch personnel at each area of Project site until 60 minutes after conclusion of  
51 daily work.

52  
53 **Fire-Control Devices:** Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of  
54 rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure  
55 that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.

1 Sprinklers: Where sprinkler protection exists and is functional, maintain it without interruption while  
2 operations are being performed. If operations are performed close to sprinklers, shield them temporarily  
3 with guards.

4  
5 Remove temporary guards at the end of work shifts, whenever operations are paused, and when nearby  
6 work is complete.

7  
8 **PROTECTION DURING APPLICATION OF CHEMICALS**  
9 Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings  
10 from harm or spillage resulting from applications of chemicals and adhesives.

11  
12 Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project  
13 unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use  
14 covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave  
15 residue on surfaces to which they are applied. Apply protective materials according to manufacturer's  
16 written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When  
17 no longer needed, promptly remove protective materials.

18  
19 Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.

20  
21 Neutralize alkaline and acid wastes and legally dispose of off Owner's property.

22  
23 Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil  
24 contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water  
25 penetration into building interior.

26  
27 **GENERAL ALTERATION WORK**  
28 Record existing work before each procedure (preconstruction), and record progress during the work. Use  
29 digital preconstruction documentation photographs or video recordings.

30  
31 Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.

32  
33 Notify Architect of visible changes in the integrity of material or components whether from environmental  
34 causes including biological attack, UV degradation, freezing, or thawing or from structural defects  
35 including cracks, movement, or distortion.

36  
37 Do not proceed with the work in question until directed by Architect.

38  
39 **END OF SECTION**

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

**PART 1 - GENERAL**

**SUMMARY**

Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

**DEFINITIONS**

Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.

New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.

Comparable Product: Product that is demonstrated and approved by Architect through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.

**ACTION SUBMITTALS**

Comparable Product Request Submittal: Submit request for consideration of each comparable product. Identify basis-of-design product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

Include data to indicate compliance with the requirements specified in "Comparable Products" Article.

Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

Form of Architect's Approval of Submittal: As specified in Section 01 33 00 "Submittal Procedures."

Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 33 00 "Submittal Procedures." Show compliance with requirements.



1  
2 **QUALITY ASSURANCE**

3 Compatibility of Options: If Contractor is given option of selecting between two or more products for use  
4 on Project, select product compatible with products previously selected, even if previously selected  
5 products were also options.

6  
7 **PRODUCT DELIVERY, STORAGE, AND HANDLING**

8 Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and  
9 loss, including theft and vandalism. Comply with manufacturer's written instructions.

10  
11 Delivery and Handling:

12  
13 Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of  
14 construction spaces.

15 Coordinate delivery with installation time to ensure minimum holding time for items that are  
16 flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

17 Deliver products to Project site in an undamaged condition in manufacturer's original sealed container  
18 or other packaging system, complete with labels and instructions for handling, storing, unpacking,  
19 protecting, and installing.

20 Inspect products on delivery to determine compliance with the Contract Documents and to determine  
21 that products are undamaged and properly protected.

22  
23 Storage:

24  
25 Store products to allow for inspection and measurement of quantity or counting of units.

26 Store materials in a manner that will not endanger Project structure.

27 Store products that are subject to damage by the elements, under cover in a weathertight enclosure  
28 above ground, with ventilation adequate to prevent condensation.

29 Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and  
30 concealment.

31 Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and  
32 weather-protection requirements for storage.

33 Protect stored products from damage and liquids from freezing.

34  
35 **PRODUCT WARRANTIES**

36 Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties  
37 required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do  
38 not relieve Contractor of obligations under requirements of the Contract Documents.

39  
40 Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular  
41 product and specifically endorsed by manufacturer to Owner.

42 Special Warranty: Written warranty required by the Contract Documents to provide specific rights for  
43 Owner.

44  
45 Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for  
46 execution.

47  
48 Manufacturer's Standard Form: Modified to include Project-specific information and properly  
49 executed.

50 Specified Form: When specified forms are included with the Specifications, prepare a written  
51 document using indicated form properly executed.

52 See other Sections for specific content requirements and particular requirements for submitting special  
53 warranties.

1  
2  
3 **PART 2 - PRODUCTS**

4 **PRODUCT SELECTION PROCEDURES**

5 General Product Requirements: Provide products that comply with the Contract Documents, are  
6 undamaged and, unless otherwise indicated, are new at time of installation.

7 Provide products complete with accessories, trim, finish, fasteners, and other items needed for a  
8 complete installation and indicated use and effect.

9 Standard Products: If available, and unless custom products or nonstandard options are specified,  
10 provide standard products of types that have been produced and used successfully in similar  
11 situations on other projects.

12 Owner reserves the right to limit selection to products with warranties meeting requirements of the  
13 Contract Documents.

14 Where products are accompanied by the term "as selected," Architect will make selection.

15 Descriptive, performance, and reference standard requirements in the Specifications establish salient  
16 characteristics of products.

17  
18 **Product Selection Procedures:**

19  
20 **Sole Product:** Where Specifications name a single manufacturer and product, provide the named  
21 product that complies with requirements. Comparable products or substitutions for Contractor's  
22 convenience will not be considered.

23  
24 Sole product may be indicated by the phrase: "Subject to compliance with requirements, provide  
25 the following: ..."

26  
27 **Sole Manufacturer/Source:** Where Specifications name a single manufacturer or source, provide a  
28 product by the named manufacturer or source that complies with requirements. Comparable products  
29 or substitutions for Contractor's convenience will not be considered.

30  
31 Sole manufacturer/source may be indicated by the phrase: "Subject to compliance with  
32 requirements, provide products by the following: ..."

33  
34 **Limited List of Products:** Where Specifications include a list of names of both manufacturers and  
35 products, provide one of the products listed that complies with requirements. Comparable products  
36 or substitutions for Contractor's convenience will not be considered.

37  
38 Limited list of products may be indicated by the phrase: "Subject to compliance with  
39 requirements, provide one of the following: ..."

40  
41 **Non-Limited List of Products:** Where Specifications include a list of names of both available  
42 manufacturers and products, provide one of the products listed, or an unnamed product, which  
43 complies with requirements.

44  
45 Non-limited list of products is indicated by the phrase: "Subject to compliance with requirements,  
46 available products that may be incorporated in the Work include, but are not limited to, the  
47 following: ..."

48  
49 **Limited List of Manufacturers:** Where Specifications include a list of manufacturers' names, provide a  
50 product by one of the manufacturers listed that complies with requirements. Comparable products or  
51 substitutions for Contractor's convenience will not be considered unless otherwise indicated.

52  
53 Limited list of manufacturers is indicated by the phrase: "Subject to compliance with  
54 requirements, provide products by one of the following: ..."

1 Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers,  
2 provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer,  
3 which complies with requirements.  
4

5 Non-limited list of manufacturers is indicated by the phrase: "Subject to compliance with  
6 requirements, available manufacturers whose products may be incorporated in the Work  
7 include, but are not limited to, the following: ..."  
8

9 Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on  
10 Drawings, and include a list of manufacturers, provide the specified or indicated product or a  
11 comparable product by one of the other named manufacturers. Drawings and Specifications indicate  
12 sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply  
13 with requirements in "Comparable Products" Article for consideration of an unnamed product by  
14 one of the other named manufacturers.  
15

16 For approval of products by unnamed manufacturers, comply with requirements in Section  
17 01 25 00 "Substitution Procedures" for substitutions for convenience.  
18

19 Visual Matching Specification: Where Specifications require "match Architect's sample," provide a product  
20 that complies with requirements and matches Architect's sample. Architect's decision will be final on  
21 whether a proposed product matches.  
22

23 If no product available within specified category matches and complies with other specified  
24 requirements, comply with requirements in Section 01 25 00 "Substitution Procedures" for proposal  
25 of product.  
26

27 Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from  
28 manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect  
29 will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both  
30 standard and premium items.  
31

### 32 **COMPARABLE PRODUCTS**

33 Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for  
34 comparable product when the following conditions are satisfied. If the following conditions are not  
35 satisfied, Architect may return requests without action, except to record noncompliance with these  
36 requirements:  
37

38 Evidence that proposed product does not require revisions to the Contract Documents, is consistent  
39 with the Contract Documents, will produce the indicated results, and is compatible with other  
40 portions of the Work. Detailed comparison of significant qualities of proposed product with those  
41 named in the Specifications. Significant product qualities include attributes such as type, function,  
42 in-service performance and physical properties, weight, dimension, durability, visual characteristics,  
43 and other specific features and requirements.

44 Evidence that proposed product provides specified warranty.

45 List of similar installations for completed projects with project names and addresses and names and  
46 addresses of architects and owners, if requested.

47 Samples, if requested.  
48

### 49 **PART 3 - EXECUTION (Not Used)**

50 **END OF SECTION**  
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**SECTION 01 77 00**  
**CLOSEOUT PROCEDURES**

**PART 1 - GENERAL**

**SUMMARY**

Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

- Substantial Completion procedures.
- Final completion procedures.
- Warranties.
- Final cleaning.
- Repair of the Work.

**ACTION SUBMITTALS**

- Product Data: For each type of cleaning agent.
- Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- Certified List of Incomplete Items: Final submittal at final completion.

**CLOSEOUT SUBMITTALS**

- Certificates of Release: From authorities having jurisdiction.
- Certificate of Insurance: For continuing coverage.
- Field Report: For pest control inspection.

**SUBSTANTIAL COMPLETION PROCEDURES**

Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

- Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
- Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
- Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
- Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number.
- Submit testing, adjusting, and balancing records.
- Submit sustainable design submittals not previously submitted.
- Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

- Advise Owner of pending insurance changeover requirements.
- Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.

1 Complete startup and testing of systems and equipment.  
2 Perform preventive maintenance on equipment used prior to Substantial Completion.  
3 Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and  
4 systems. Submit demonstration and training video recordings specified in Section 01 79 00  
5 "Demonstration and Training."  
6 Advise Owner of changeover in utility services.  
7 Participate with Owner in conducting inspection and walkthrough with local emergency responders.  
8 Terminate and remove temporary facilities from Project site, along with mockups, construction tools,  
9 and similar elements.  
10 Complete final cleaning requirements.  
11 Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

12  
13 Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10  
14 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of  
15 request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements.  
16 Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of  
17 items, either on Contractor's list or additional items identified by Architect, that must be completed or  
18 corrected before certificate will be issued.

#### 19 20 **FINAL COMPLETION PROCEDURES**

21 Submittals Prior to Final Completion: Before requesting final inspection for determining final completion,  
22 complete the following:

23  
24 Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion  
25 inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect.

26 Certified copy of the list shall state that each item has been completed or otherwise resolved for  
27 acceptance.

28 Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with  
29 insurance requirements.

30 Submit pest-control final inspection report.

31  
32 Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days  
33 prior to date the work will be completed and ready for final inspection and tests. On receipt of request,  
34 Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will  
35 prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must  
36 be completed or corrected before certificate will be issued.

#### 37 38 **LIST OF INCOMPLETE ITEMS (PUNCH LIST)**

39 Organization of List: Include name and identification of each space and area affected by construction  
40 operations for incomplete items and items needing correction including, if necessary, areas disturbed by  
41 Contractor that are outside the limits of construction.

42  
43 Organize list of spaces in sequential order, starting with exterior areas first.

44 Organize items applying to each space by major element, including categories for ceiling, individual  
45 walls, floors, equipment, and building systems.

46 Submit list of incomplete items in the following format:

47 PDF electronic file. Architect will return annotated file.

#### 48 49 **SUBMITTAL OF PROJECT WARRANTIES**

50 Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work  
51 where warranties are indicated to commence on dates other than date of Substantial Completion, or when  
52 delay in submittal of warranties might limit Owner's rights under warranty.

53  
54 Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.  
55  
56

1 Warranties in Paper Form:

2  
3 Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as  
4 necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.

5  
6 Provide additional copies of each warranty to include in operation and maintenance manuals.

7  
8 **PART 2 - PRODUCTS**

9  
10 **MATERIALS**

11 Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the  
12 surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that  
13 might damage finished surfaces.

14  
15 **PART 3 - EXECUTION**

16  
17 **FINAL CLEANING**

18 General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws  
19 and ordinances and Federal and local environmental and antipollution regulations.

20  
21 Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or  
22 unit to condition expected in an average commercial building cleaning and maintenance program. Comply  
23 with manufacturer's written instructions.

24  
25 Complete the following cleaning operations before requesting inspection for certification of  
26 Substantial Completion for entire Project or for a designated portion of Project:

27  
28 Clean Project site, yard, and grounds, in areas disturbed by construction activities, including  
29 landscape development areas, of rubbish, waste material, litter, and other foreign substances.

30 Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains,  
31 films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces.

32 Restore reflective surfaces to their original condition.

33 Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts,  
34 trenches, equipment vaults, manholes, attics, and similar spaces.

35 Sweep concrete floors broom clean in unoccupied spaces.

36 Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to  
37 manufacturer's recommendations if visible soil or stains remain.

38 Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from  
39 water exposure.

40 Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers,  
41 registers, and grills.

42 Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.

43 Leave Project clean and ready for occupancy.

44  
45 Pest Control: Comply with pest control requirements in Section 01 50 00 "Temporary Facilities and  
46 Controls." Prepare written report.

47  
48 Construction Waste Disposal: Comply with waste disposal requirements in Section 01 50 00 "Temporary  
49 Facilities and Controls."

50  
51 **REPAIR OF THE WORK**

52 Complete repair and restoration operations, before requesting inspection for determination of Substantial  
53 Completion.

54  
55 Repair, or remove and replace, defective construction. Repairing includes replacing defective parts,  
56 refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating

1 equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove  
2 and replace operating components that cannot be repaired. Restore damaged construction and permanent  
3 facilities used during construction to specified condition.

4  
5

**END OF SECTION**

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**SECTION 02 41 19**  
**SELECTIVE DEMOLITION**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

- Demolition and removal of selected portions of building or structure.
- Salvage of existing items to be reused or recycled.

**MATERIALS OWNERSHIP**

Unless otherwise indicated, demolition waste becomes property of Contractor.

Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

Carefully salvage in a manner to prevent damage and promptly return to Owner.

**PREINSTALLATION MEETINGS**

Predemolition Conference: Conduct conference at Project site.

**INFORMATIONAL SUBMITTALS**

Engineering Survey: Submit engineering survey of condition of building.

Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for dust control and, for noise control. Indicate proposed locations and construction of barriers.

Schedule of selective demolition activities with starting and ending dates for each activity.

Predemolition photographs or video.

Statement of Refrigerant Recovery: Signed by refrigerant recovery technician.

**CLOSEOUT SUBMITTALS**

Inventory of items that have been removed and salvaged.

**QUALITY ASSURANCE**

Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

**FIELD CONDITIONS**

Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

Before selective demolition, Owner will remove the following items:

List will be discussed prior to start of construction.

Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.



1 Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

2  
3 Hazardous materials will be removed by Owner before start of the Work.

4 If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and  
5 Owner. Hazardous materials will be removed by Owner under a separate contract.

6  
7 Storage or sale of removed items or materials on-site is not permitted.

8  
9 Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage  
10 during selective demolition operations.

11 Maintain fire-protection facilities in service during selective demolition operations.

12  
13 Arrange selective demolition schedule so as not to interfere with Owner's operations

14  
15  
16 **WARRANTY**

17 Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during  
18 selective demolition, by methods and with materials and using approved contractors so as not to void  
19 existing warranties.

20  
21 **PART 2 – PRODUCTS**

22  
23 **PERFORMANCE REQUIREMENTS**

24 Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective  
25 demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

26  
27 Standards: Comply with ASSE A10.6 and NFPA 241.

28  
29 **PART 3 - EXECUTION**

30  
31 **EXAMINATION**

32 Verify that utilities have been disconnected and capped before starting selective demolition operations.

33  
34 Inventory and record the condition of items to be removed and salvaged.

35  
36 **UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS**

37 Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them  
38 against damage.

39  
40 Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal  
41 or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.

42  
43 Owner will arrange to shut off indicated services/systems when requested by Contractor.

44 Arrange to shut off utilities with utility companies.

45 If services/systems are required to be removed, relocated, or abandoned, provide temporary  
46 services/systems that bypass area of selective demolition and that maintain continuity of  
47 services/systems to other parts of building.

48 Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems,  
49 equipment, and components indicated on Drawings to be removed.

50  
51 Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug  
52 remaining piping with same or compatible piping material.

53 Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or  
54 compatible piping material and leave in place.

55 Equipment to Be Removed: Disconnect and cap services and remove equipment.

- 1 Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean,
- 2 and store equipment; when appropriate, reinstall, reconnect, and make equipment
- 3 operational.
- 4 Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment
- 5 and deliver to Owner.
- 6 Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining
- 7 ducts with same or compatible ductwork material.
- 8 Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork
- 9 material and leave in place.

10

11 **PROTECTION**

12 Temporary Protection: Provide temporary barricades and other protection required to prevent injury to  
13 people and damage to adjacent buildings and facilities to remain.

14

15 Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to  
16 preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and  
17 to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

18

19 Remove temporary barricades and protections where hazards no longer exist.

20

21 **SELECTIVE DEMOLITION**

22 General: Demolish and remove existing construction only to the extent required by new construction and as  
23 indicated. Use methods required to complete the Work within limitations of governing regulations and as  
24 follows:

25

26 Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods  
27 least likely to damage construction to remain or adjoining construction. Use hand tools or small  
28 power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover  
29 openings to remain.

30

31 Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing  
32 finished surfaces.

32

33 Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such  
34 as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting  
35 operations. Maintain portable fire-suppression devices during flame-cutting operations.

35

36 Maintain fire watch during and for at least 2 hours after flame-cutting operations.

36

37 Locate selective demolition equipment and remove debris and materials so as not to impose excessive  
38 loads on supporting walls, floors, or framing.

38

39 Dispose of demolished items and materials promptly.

39

40 All saw cutting shall be done before 8:00 a.m. or any time after 4:30 a.m.

40

41 Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to  
42 ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used  
43 facilities.

43

44

45 Removed and Salvaged Items:

46

47 Clean salvaged items.

47

48 Pack or crate items after cleaning. Identify contents of containers.

48

49 Store items in a secure area until delivery to Owner.

49

50 Transport items to Owner's storage area designated by Owner.

50

51 Protect items from damage during transport and storage.

51

52 Removed and Reinstalled Items:

53

54 Clean and repair items to functional condition adequate for intended reuse.

55

56 Pack or crate items after cleaning and repairing. Identify contents of containers.

56

Protect items from damage during transport and storage.

1 Reinstall items in locations indicated. Comply with installation requirements for new materials and  
2 equipment. Provide connections, supports, and miscellaneous materials necessary to make item  
3 functional for use indicated.

4  
5 Existing Items to Remain: Protect construction indicated to remain against damage and soiling during  
6 selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage  
7 location during selective demolition and cleaned and reinstalled in their original locations after selective  
8 demolition operations are complete.

9  
10 **CLEANING**

11 Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction  
12 and demolition waste landfill acceptable to authorities having jurisdiction.

13  
14 Do not allow demolished materials to accumulate on-site.

15 Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

16 Remove debris from elevated portions of building by chute, hoist, or other device that will convey  
17 debris to grade level in a controlled descent.

18 Comply with requirements specified in Section 01 74 19 "Construction Waste Management and  
19 Disposal."

20  
21 Burning: Do not burn demolished materials.

22  
23 Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition  
24 operations. Return adjacent areas to condition existing before selective demolition operations began.

25  
26 **END OF SECTION**

1 **SECTION 04 20 00**  
2 **UNIT MASONRY**

3  
4 **PART 1 - GENERAL**

5  
6 **SUMMARY**

7 Section Includes:

8 Concrete masonry units.  
9

10 **ALLOWANCES**

11 Face brick is part of the Face Brick Allowance.  
12

13 **DEFINITIONS**

14 CMU(s): Concrete masonry unit(s).

15 Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.  
16

17 **ACTION SUBMITTALS**

18 Product Data: For each type of product.  
19

20 Shop Drawings: For reinforcing steel. Detail bending, lap lengths, and placement of unit masonry  
21 reinforcing bars. Comply with ACI 315.  
22

23 Samples for Verification: For each type and color of exposed masonry unit and colored mortar.  
24

25 **INFORMATIONAL SUBMITTALS**

26 Material Certificates: For each type and size of product. For masonry units, include data on material  
27 properties, material test reports substantiating compliance with requirements.  
28

29 Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.  
30

31 Include test reports for mortar mixes required to comply with property specification. Test according to  
32 ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and  
33 ASTM C 91/C 91M for air content.

34 Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive  
35 strength requirement.  
36

37 **QUALITY ASSURANCE**

38 Sample Panels: Build sample panels to verify selections made under Sample submittals and to demonstrate  
39 aesthetic effects. Comply with requirements in Section 01 40 00 "Quality Requirements" for mockups.  
40

41 Build sample panels for each type of exposed unit masonry construction in sizes approximately 48  
42 inches long by 36 inches high by full thickness.  
43

44 **FIELD CONDITIONS**

45 Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do  
46 not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing  
47 conditions. Comply with cold-weather construction requirements contained in  
48 TMS 602/ACI 530.1/ASCE 6.  
49

50 Hot-Weather Requirements: Comply with hot-weather construction requirements contained in  
51 TMS 602/ACI 530.1/ASCE 6.  
52

53 **PART 2 - PRODUCTS**  
54

1  
2 **CONCRETE MASONRY UNITS**

3 Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent  
4 units unless otherwise indicated.

5  
6 Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other  
7 special conditions.

8  
9 Decorative CMUs: ASTM C 90.

10 To be a calcium silicate manufactured stone to match existing stone in courtrooms.

11  
12 Provide special shape where shown (monument).

13  
14  
15 **MORTAR**

16 Portland Cement: ASTM C 150/C 150M, Type I or II, except Type III may be used for cold-weather  
17 construction. Provide natural color or white cement as required to produce mortar color indicated.

18  
19 Color: Natural (gray)

20 Custom color: for calcium silicate units. Match existing in other courtrooms.

21 Water: Potable.  
22  
23

24 **TIES AND ANCHORS**

25 General: Ties and anchors shall extend at least 1-1/2 inches into veneer but with at least a 5/8-inch cover on  
26 outside face.

27  
28 Adjustable Masonry-Veneer Anchors:

29  
30 General: Provide anchors that allow vertical adjustment but resist a 100-lbf load in both tension and  
31 compression perpendicular to plane of wall without deforming or developing play in excess of 1/16  
32 inch.

33 Fabricate sheet metal anchor sections and other sheet metal parts from 0.075-inch-thick steel sheet,  
34 galvanized after fabrication.

35 Fabricate wire ties from 0.187-inch- diameter, hot-dip galvanized-steel wire unless otherwise  
36 indicated.

37 Screw-Attached, Masonry-Veneer Anchors: Wire tie and a rib-stiffened, sheet metal anchor section.  
38

39 **MASONRY CLEANERS**

40 Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout  
41 stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging  
42 masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and  
43 manufacturer of masonry units being cleaned.  
44  
45

46 **PART 3 - EXECUTION**

47  
48 **INSTALLATION, GENERAL**

49 Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit  
50 adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow  
51 units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where  
52 possible, cut edges concealed.  
53

54 Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix  
55 units from several pallets or cubes as they are placed.  
56

1 Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute  
2 when tested according to ASTM C 67. Allow units to absorb water so they are damp but not wet at time of  
3 laying.

#### 4 5 **TOLERANCES**

6 Dimensions and Locations of Elements:

- 7  
8 For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch.  
9 For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch.  
10 For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4  
11 inch in a story height or 1/2 inch total.

12  
13 Lines and Levels:

- 14  
15 For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10  
16 feet, or 1/2-inch maximum.  
17 For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by  
18 more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.  
19 For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20  
20 feet, or 1/2-inch maximum.  
21 For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control  
22 joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch  
23 maximum.  
24 For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet,  
25 or 1/2-inch maximum.

26  
27 Joints:

- 28  
29 For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a  
30 maximum thickness limited to 1/2 inch.  
31 For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus  
32 1/4 inch.  
33 For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch.

#### 34 35 **LAYING MASONRY WALLS**

36 Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and  
37 for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-  
38 size units, particularly at corners, jambs, and, where possible, at other locations.

39  
40 Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do  
41 not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

42  
43 Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly  
44 with masonry around built-in items.

45  
46 Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

47  
48 Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar  
49 items unless otherwise indicated.

#### 50 51 **MORTAR BEDDING AND JOINTING**

52 Lay CMUs as follows:

- 53  
54 Bed face shells in mortar and make head joints of depth equal to bed joints.  
55 Bed webs in mortar in all courses of piers, columns, and pilasters.  
56 Bed webs in mortar in grouted masonry, including starting course on footings.

1 Fully bed entire units, including areas under cells, at starting course on footings where cells are not  
2 grouted.

3  
4 Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill  
5 head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

6  
7 Lay structural clay tile as follows:

8  
9 Lay vertical-cell units with full head joints unless otherwise indicated. Provide bed joints with full  
10 mortar coverage on face shells and webs.

11 Lay horizontal-cell units with full bed joints unless otherwise indicated. Keep drainage channels, if  
12 any, free of mortar. Form head joints with sufficient mortar so excess will be squeezed out as units  
13 are placed in position. Butter both sides of units to be placed, or butter one side of unit already in  
14 place and one side of unit to be placed.

15 Maintain joint thicknesses indicated except for minor variations required to maintain bond alignment.  
16 If not indicated, lay walls with 1/4- to 3/8-inch-thick joints.

17  
18 Rake out mortar joints at pre-faced CMUs to a uniform depth of 1/4 inch and point with epoxy mortar to  
19 comply with epoxy-mortar manufacturer's written instructions.

20  
21 Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness  
22 unless otherwise indicated.

23  
24 Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint)  
25 unless otherwise indicated.

#### 26 27 **ANCHORED MASONRY VENEERS**

28 Anchor masonry veneers to wall framing with masonry-veneer anchors to comply with the following  
29 requirements:

30  
31 Fasten screw-attached anchors through sheathing to wall framing with metal fasteners of type  
32 indicated. Use two fasteners unless anchor design only uses one fastener.

33 Embed tie sections in masonry joints.

34 Locate anchor sections to allow maximum vertical differential movement of ties up and down.

35 Space anchors as indicated, but not more than 18 inches o.c. vertically and 24 inches o.c. horizontally,  
36 with not less than one anchor for each 2 sq. ft. of wall area. Install additional anchors within 12  
37 inches of openings and at intervals, not exceeding 8 inches, around perimeter.

38 Space anchors as indicated, but not more than 16 inches o.c. vertically and 25 inches o.c. horizontally,  
39 with not less than one anchor for each [2.67 sq. ft.] [3.5 sq. ft.] of wall area. Install additional  
40 anchors within 12 inches of openings and at intervals, not exceeding 36 inches, around perimeter.

41 Space anchors as indicated, but not more than 18 inches o.c. vertically and horizontally. Install  
42 additional anchors within 12 inches of openings and at intervals, not exceeding 24 inches, around  
43 perimeter.

#### 44 45 **FIELD QUALITY CONTROL**

46 Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare  
47 reports. Allow inspectors access to scaffolding and work areas as needed to perform tests and inspections.  
48 Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.

49  
50 Inspections: Special inspections according to Level B C in TMS 402/ACI 530/ASCE 5.

51  
52 Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.

53 Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and  
54 locations of reinforcement.

55 Place grout only after inspectors have verified proportions of site-prepared grout.  
56

- 1 Testing Prior to Construction: One set of tests.  
2  
3 Testing Frequency: One set of tests for each 5000 sq. ft. of wall area or portion thereof.  
4  
5 Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive  
6 strength.  
7  
8 Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to  
9 ASTM C 780.  
10  
11 Mortar Test (Property Specification): For each mix provided, according to ASTM C 780. Test mortar for  
12 mortar air content and compressive strength.  
13  
14 Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.

15  
16 **PARGING**

- 17 Parge exterior faces of below-grade masonry walls, where indicated, in two uniform coats to a total  
18 thickness of 3/4 inch. Dampen wall before applying first coat, and scarify first coat to ensure full bond to  
19 subsequent coat.  
20  
21 Use a steel-trowel finish to produce a smooth, flat, dense surface with a maximum surface variation of 1/8  
22 inch per foot. Form a wash at top of parging and a cove at bottom.  
23  
24 Damp-cure parging for at least 24 hours and protect parging until cured.

25  
26 **REPAIRING, POINTING, AND CLEANING**

- 27 In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and  
28 smears before tooling joints.  
29  
30 Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

- 31  
32 Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.  
33 Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison  
34 purposes.  
35 Protect adjacent surfaces from contact with cleaner.  
36 Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces  
37 thoroughly with clear water.  
38 Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.  
39 Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written  
40 instructions.

41  
42 **MASONRY WASTE DISPOSAL**

- 43 Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated  
44 sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.

45  
46 Do not dispose of masonry waste as fill within 18 inches of finished grade.

47  
48 Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.

49  
50 Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above  
51 or recycled, and other masonry waste, and legally dispose of off Owner's property.

52  
53

**END OF SECTION**



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**SECTION 06 10 00**  
**ROUGH CARPENTRY**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

- Framing with dimension lumber.
- Framing with engineered wood products.
- Rooftop equipment bases and support curbs.
- Wood blocking and nailers.
- Wood furring.
- Wood sleepers.
- Plywood backing panels.

**ACTION SUBMITTALS**

Product Data: For each type of process and factory-fabricated product.

**INFORMATIONAL SUBMITTALS**

Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

Evaluation Reports: For the following, from ICC-ES:

- Wood-preservative-treated wood.
- Fire-retardant-treated wood.
- Engineered wood products.
- Shear panels.
- Power-driven fasteners.
- Post-installed anchors.
- Metal framing anchors.

**PART 2 - PRODUCTS**

**WOOD PRODUCTS, GENERAL**

Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

- Factory mark each piece of lumber with grade stamp of grading agency.
- For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
- Dress lumber, S4S, unless otherwise indicated.

Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less; 19 percent for more than 2-inch nominal thickness unless otherwise indicated.

Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.

- Allowable design stresses, as published by manufacturer, shall meet or exceed those indicated.
- Manufacturer's published values shall be determined from empirical data or by rational engineering

1 analysis and demonstrated by comprehensive testing performed by a qualified independent testing  
2 agency.

#### 3 4 **WOOD-PRESERVATIVE-TREATED LUMBER**

5 Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in  
6 contact with ground, Use Category UC3b for exterior construction not in contact with ground, and  
7 Use Category UC4a for items in contact with ground.

8  
9 Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or  
10 chromium. Do not use inorganic boron (SBX) for sill plates.

11  
12 Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is  
13 warped or that does not comply with requirements for untreated material.

14  
15 Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

16  
17 Application: Treat all rough carpentry unless otherwise indicated.

18  
19 Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in  
20 connection with roofing, flashing, vapor barriers, and waterproofing.

21 Wood sills, sleepers, blocking, furring, and similar concealed members in contact with masonry or  
22 concrete.

23 Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete  
24 walls.

25 Wood framing members that are less than 18 inches above the ground in crawlspaces or unexcavated  
26 areas.

27 Wood floor plates that are installed over concrete slabs-on-grade.

#### 28 29 **FIRE-RETARDANT-TREATED MATERIALS**

30 General: Where fire-retardant-treated materials are indicated, materials shall comply with requirements in  
31 this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics  
32 specified as determined by testing identical products per test method indicated by a qualified testing  
33 agency.

34  
35 Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of  
36 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive  
37 combustion when the test is extended an additional 20 minutes, and with the flame front not extending  
38 more than 10.5 feet beyond the centerline of the burners at any time during the test.

39  
40 Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-  
41 treated lumber and plywood by pressure process after being subjected to accelerated weathering  
42 according to ASTM D 2898. Use for exterior locations and where indicated.

43 Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested  
44 according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.

45  
46 Kiln-dry lumber after treatment to maximum moisture content of 19 percent. Kiln-dry plywood after  
47 treatment to maximum moisture content of 15 percent.

48  
49 Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.

50  
51 Application: Treat items indicated on Drawings, and the following:

52  
53 Framing for raised platforms.

54 Framing for stages.

55 Concealed blocking.

56 Framing for non-load-bearing partitions.

1 Framing for non-load-bearing exterior walls.  
2 Roof construction.  
3 Plywood backing panels.  
4

5 **DIMENSION LUMBER FRAMING**

6 Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.

7  
8 Application: All interior partitions.  
9 Species:

10  
11 Southern pine or mixed southern pine; SPIB.  
12 Northern species; NLGA.  
13 Eastern softwoods; NeLMA.  
14 Western woods; WCLIB or WWPA.  
15

16 Framing Other Than Non-Load-Bearing Partitions: No. 2 grade.

17  
18 Application: Framing other than interior partitions.  
19 Species:

20  
21 Hem-fir (north); NLGA.  
22 Southern pine; SPIB.  
23 Douglas fir-larch; WCLIB or WWPA.  
24 Southern pine or mixed southern pine; SPIB.  
25 Spruce-pine-fir; NLGA.  
26 Douglas fir-south; WWPA.  
27 Hem-fir; WCLIB or WWPA.  
28 Douglas fir-larch (north); NLGA.  
29 Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.  
30

31 Framing Other Than Non-Load-Bearing Partitions: Any species and grade with a modulus of elasticity of at  
32 least 1,500,000 psi and an extreme fiber stress in bending of at least 1000 psi for 2-inch nominal thickness  
33 and 12-inch nominal width for single-member use.

34  
35 Application: Framing other than interior partitions.  
36

37 Exposed Framing: Hand-select material for uniformity of appearance and freedom from characteristics, on  
38 exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes,  
39 shake, splits, torn grain, and wane.  
40

41 Species and Grade: As indicated above for load-bearing construction of same type.  
42

43 **ENGINEERED WOOD PRODUCTS**

44 Laminated-Veneer Lumber: Structural composite lumber made from wood veneers with grain primarily  
45 parallel to member lengths, evaluated and monitored according to ASTM D 5456 and manufactured with  
46 an exterior-type adhesive complying with ASTM D 2559.

47  
48 Boise Cascade Corporation  
49 Georgia-Pacific Building Products  
50 Louisiana-Pacific Corporation  
51 Weyerhaeuser Company  
52

53 Extreme Fiber Stress in Bending, Edgewise: 3100 psi for 12-inch nominal-depth members.  
54 Modulus of Elasticity, Edgewise: 2,000,000 psi.  
55

1 **MISCELLANEOUS LUMBER**

2 General: Provide miscellaneous lumber indicated and lumber for support or attachment of other  
3 construction, including the following:

- 4
- 5     Blocking.
- 6     Nailers.
- 7     Rooftop equipment bases and support curbs.
- 8     Cants.
- 9     Furring.
- 10    Grounds.

11

12 Dimension Lumber Items: Construction or No. 2 grade lumber of any species.

13

14 Concealed Boards: 15 percent maximum moisture content and any of the following species and grades:

- 15
- 16     Mixed southern pine or southern pine; No. 2 grade; SPIB.
- 17     Eastern softwoods; No. 2 Common grade; NeLMA.
- 18     Northern species; No. 2 Common grade; NLGA.
- 19     Western woods; Construction or No. 2 Common grade; WCLIB or WWPA.

20

21 **PLYWOOD BACKING PANELS**

22 Equipment Backing Panels: Plywood, DOC PS 1,, fire-retardant treated, in thickness indicated or, if not  
23 indicated, not less than 1/2-inch nominal thickness.

24

25 **FASTENERS**

26 General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this  
27 article for material and manufacture.

28

29     Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in  
30     area of high relative humidity, provide fasteners with hot-dip zinc coating complying with  
31     ASTM A 153/A 153M.

32

33 Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having  
34 jurisdiction, based on ICC-ES AC70.

35

36 Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having  
37 jurisdiction, based on ICC-ES AC01 as appropriate for the substrate.

38

39 **METAL FRAMING ANCHORS**

40 Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 41
- 42     Simpson Strong-Tie Co., Inc.
- 43     USP Structural Connectors

44

45 Allowable design loads, as published by manufacturer, shall meet or exceed those indicated. Manufacturer's  
46 published values shall be determined from empirical data or by rational engineering analysis and  
47 demonstrated by comprehensive testing performed by a qualified independent testing agency. Framing  
48 anchors shall be punched for fasteners adequate to withstand same loads as framing anchors.

49

50 Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60  
51 coating designation.

52

53     Use for interior locations unless otherwise indicated.

54

1 Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; structural steel (SS), high-strength low-  
2 alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185  
3 coating designation; and not less than 0.036 inch thick.

4  
5 Use for wood-preservative-treated lumber and where indicated.

#### 6 7 **MISCELLANEOUS MATERIALS**

8 Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch  
9 nominal thickness, compressible to 1/32 inch; selected from manufacturer's standard widths to suit width of  
10 sill members indicated.

11  
12 Sill-Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard  
13 widths to suit width of sill members indicated.

14  
15 Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber or  
16 rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded  
17 polyolefin to produce an overall thickness of not less than 0.025 inch.

18  
19 Adhesives for Gluing Furring to Concrete or Masonry: Formulation complying with ASTM D 3498 that is  
20 approved for use indicated by adhesive manufacturer.

### 21 22 **PART 3 - EXECUTION**

#### 23 24 **INSTALLATION, GENERAL**

25 Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction,"  
26 unless otherwise indicated.

27  
28 Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's  
29 written instructions.

30  
31 Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough  
32 carpentry accurately to other construction. Locate furring, nailers, blocking, and similar supports to comply  
33 with requirements for attaching other construction.

34  
35 Install shear wall panels to comply with manufacturer's written instructions.

36  
37 Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through  
38 each fastener hole.

39  
40 Do not splice structural members between supports unless otherwise indicated.

41  
42 Comply with AWWA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

43  
44 Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible  
45 flashing separator between wood and metal decking.

46  
47 Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with  
48 the following:

49  
50 Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).

51 Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate  
52 Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

53 ICC-ES evaluation report for fastener.

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**PROTECTION**

Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet enough that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

**END OF SECTION**



1 Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-  
2 treated plywood by pressure process after being subjected to accelerated weathering according to  
3 ASTM D 2898. Use for exterior locations and where indicated.

4 Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested  
5 according to ASTM D 3201/D 3201M at 92 percent relative humidity. Use where exterior type is not  
6 indicated.

7 Design Value Adjustment Factors: Treated lumber plywood shall be tested according to ASTM D 5516  
8 and design value adjustment factors shall be calculated according to ASTM D 6305. Span ratings  
9 after treatment shall be not less than span ratings specified.

10 Kiln-dry material after treatment to a maximum moisture content of 15 percent.

11  
12 Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.

13  
14 Application: Treat plywood indicated on Drawings.

### 15 **WALL SHEATHING**

16 Plywood Sheathing: Either DOC PS 1 or DOC PS 2, Exposure 1, Structural I sheathing.

### 17 **FASTENERS**

18  
19 General: Provide fasteners of size and type indicated that comply with requirements specified in this article  
20 for material and manufacture.

21  
22  
23 For wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

### 24 **MISCELLANEOUS MATERIALS**

25 Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with ASTM D 3498 that is  
26 approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

## 27 **PART 3 - EXECUTION**

### 28 **INSTALLATION, GENERAL**

29 Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with  
30 minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span  
31 between fewer than three support members.

32 Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction  
33 unless otherwise indicated.

34  
35 Securely attach to substrate by fastening as indicated, complying with the following:

36 Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.

37 Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate  
38 Attachments," in the ICC's International Residential Code for One- and Two-Family Dwellings.

39 ICC-ES evaluation report for fastener.

40  
41 Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are  
42 installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

43 Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural  
44 support elements.

### 45 **WOOD STRUCTURAL PANEL INSTALLATION**

46 General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood  
47 Construction Guide," for types of structural-use panels and applications indicated.

48  
49 Fastening Methods: Fasten panels as indicated below:



- 1 Wall and Roof Sheathing:
- 2
- 3 Nail to wood framing.
- 4 Screw to cold-formed metal framing.
- 5 Space panels 1/8 inch apart at edges and ends.
- 6
- 7 **END OF SECTION**

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**SECTION 06 20 23**  
**INTERIOR FINISH CARPENTRY**

**PART 1 - GENERAL**

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**SUMMARY**

Section Includes:

- Interior trim, including non-fire-rated interior door frames.
- Interior plywood and hardboard paneling.
- Shelving.

**DEFINITIONS**

- MDF: Medium-density fiberboard.
- MDO: Plywood with a medium-density overlay on the face.
- PVC: Polyvinyl chloride.

**ACTION SUBMITTALS**

- Product Data: For each type of process and factory-fabricated product.
- Samples: For each exposed product and for each color and texture specified.

**PART 2 - PRODUCTS**

**MATERIALS, GENERAL**

Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with applicable rules of any rules-writing agency certified by the American Lumber Standard Committee's (ALSC) Board of Review. Grade lumber by an agency certified by the ALSC's Board of Review to inspect and grade lumber under the rules indicated.

- Factory mark each piece of lumber with grade stamp of grading agency.
- For exposed lumber, mark grade stamp on end or back of each piece.

Softwood Plywood: DOC PS 1.

Hardboard: ANSI A135.4.

**INTERIOR TRIM**

Hardwood Lumber Trim for Transparent Finish (Stain or Clear Finish):

- Species and Grade: Red oak; NHLA.
- Finger Jointing: Not allowed.
- Veneered Material: Allowed.
- Face Surface: Surfaced (smooth).
- Matching: Selected for compatible grain and color.

Hardwood Moldings for Transparent Finish (Stain or Clear Finish): MMPA WM 4, N-grade wood moldings made to patterns included in MMPA's "HWM/Series Hardwood Moulding Patterns."

- Species: Red oak.
- Maximum Moisture Content: 9 percent.
- Finger Jointing: Not allowed.
- Matching: Selected for compatible grain and color.
- Optional Material: Kiln-dried softwood or MDF, with exposed surfaces veneered with species indicated, may be used in lieu of solid wood.
- Base Pattern: Match existing base in other existing courtrooms.

1 Chair-Rail Pattern: Match chair-rail pattern in other existing courtrooms.

2  
3 **PANELING**

4 Hardwood Veneer Plywood Paneling: Manufacturer's stock hardwood plywood panels complying with  
5 HPVA HP-1.

6  
7 Face Veneer Species and Cut: Plain-sliced red oak.

8 Veneer Matching: Selected for similar color and grain.

9 Backing Veneer Species: Any hardwood compatible with face species.

10 Construction: Veneer core.

11 Thickness: 1/4 inch.

12 Glue Bond: Type II (interior).

13 Finish: As selected by Architect from manufacturer's full range.

14  
15 Hardboard Paneling: Interior factory-finished hardboard paneling complying with ANSI A135.5.

16  
17 Thickness: 1/4 inch.

18 Surface-Burning Characteristics: As follows, tested according to ASTM E 84:

19  
20 Flame-Spread Index: 25 or less.

21 Smoke-Developed Index: 450 or less.

22  
23 Colors, Textures, and Patterns: As selected by Architect from manufacturer's full range.

24  
25 Board Paneling: Interior wood-board paneling complying with MMPA WM 9.

26  
27 Species: Western red cedar.

28 Grade: Clear No. 1.

29  
30 **MISCELLANEOUS MATERIALS**

31 Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material,  
32 and finish required for application indicated to provide secure attachment, concealed where possible.

33  
34 Low-Emitting Materials: Adhesives shall comply with testing and product requirements of the California  
35 Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic  
36 Chemical Emissions from Indoor Sources Using Environmental Chambers."

37  
38 Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer for general  
39 carpentry use.

40  
41 Paneling Adhesive: Comply with paneling manufacturer's written instructions for adhesives.

42  
43 Multipurpose Construction Adhesive: Formulation, complying with ASTM D 3498, that is recommended  
44 for indicated use by adhesive manufacturer.

45  
46 **PART 3 - EXECUTION**

47  
48 **PREPARATION**

49 Clean substrates of projections and substances detrimental to application.

50  
51 Before installing interior finish carpentry, condition materials to average prevailing humidity in installation  
52 areas for a minimum of 24 hours unless longer conditioning is recommended by manufacturer.

53  
54 **INSTALLATION, GENERAL**

55 Install interior finish carpentry level, plumb, true, and aligned with adjacent materials.

56

- 1 Use concealed shims where necessary for alignment.  
2 Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended  
3 by manufacturer.  
4 Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless  
5 otherwise indicated.  
6 Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining interior finish  
7 carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for  
8 reveal installation.  
9 Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for  
10 mechanical and electrical items that penetrate interior finish carpentry.  
11

## 12 **STANDING AND RUNNING TRIM INSTALLATION**

13 Install trim with minimum number of joints as is practical, using full-length pieces from maximum lengths  
14 of lumber available.  
15

- 16 Do not use pieces less than 24 inches long, except where necessary.  
17 Stagger joints in adjacent and related standing and running trim.  
18 Miter at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with  
19 full-surface contact throughout length of joint.  
20 Use scarf joints for end-to-end joints.  
21 Plane backs of casings to provide uniform thickness across joints where necessary for alignment.  
22 Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.  
23 Install trim after gypsum-board joint finishing operations are completed.  
24 Install without splitting; drill pilot holes before fastening where necessary to prevent splitting.  
25 Fasten to prevent movement or warping.  
26 Countersink fastener heads on exposed carpentry work and fill holes.  
27

## 28 **PANELING INSTALLATION**

29 Plywood Paneling: Select and arrange panels on each wall to minimize noticeable variations in grain  
30 character and color between adjacent panels.  
31

- 32 Leave 1/4-inch gap to be covered with trim at top, bottom, and openings.  
33 Install with uniform tight joints between panels.  
34 Attach panels to supports with manufacturer's recommended panel adhesive and fasteners.  
35 Space fasteners and adhesive as recommended by panel manufacturer.  
36 Conceal fasteners to greatest practical extent.  
37 Arrange panels with grooves and joints over supports.  
38

- 39 Fasten to supports with nails of type and at spacing recommended by panel manufacturer.  
40 Use fasteners with prefinished heads matching groove color.  
41

42 Hardboard Paneling: Install according to manufacturer's written instructions.  
43

- 44 Leave 1/4-inch gap to be covered with trim at top, bottom, and openings.  
45 Butt adjacent panels with moderate contact.  
46 Use fasteners with prefinished heads matching paneling color.  
47 Wood Stud or Furring Substrate: Install with 1-inch annular-ring shank hardboard nails.  
48 Plaster or Gypsum-Board Substrate: Install with 1-5/8-inch annular-ring shank hardboard nails.  
49 Nailing: Space nails 4 inches o.c. at panel perimeter and 8 inches o.c. at intermediate supports unless  
50 otherwise required by manufacturer.  
51

52 Board Paneling: Install according to manufacturer's written instructions.  
53

- 54 Arrange in random-width pattern suggested by manufacturer unless boards or planks are of uniform  
55 width.  
56 Install in full lengths without end joints.

- 1 Stagger end joints in random pattern to uniformly distribute joints on each wall.
- 2 Install with uniform end joints with only end-matched (tongue-and-groove) joints within each field of
- 3 paneling.
- 4 Install with uniform end joints. Locate end joints only over furring or blocking.
- 5 Select and arrange boards on each wall to minimize noticeable variations in grain character and color
- 6 between adjacent boards.
- 7 Install with uniform tight joints between boards.
- 8 Fasten paneling by face nailing, setting nails, and filling over nail heads.
- 9 Fasten paneling with trim screws, set below face and filled.
- 10 Fasten paneling by blind nailing through tongues.
- 11 Fasten paneling with paneling system manufacturer's concealed clips.
- 12 Fasten paneling to gypsum wallboard with panel adhesive.
- 13
- 14

**END OF SECTION**

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**SECTION 06 40 23**  
**INTERIOR ARCHITECTURAL WOODWORK**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

- Interior standing and running trim.
- Interior frames and jambs.
- Interior stairs and railings.
- Wood furring, blocking, shims, and hanging strips for installing interior architectural woodwork items that are not concealed within other construction.
- Shop priming of interior architectural woodwork.
- Shop finishing of interior architectural woodwork.

**PREINSTALLATION MEETINGS**

Preinstallation Conference: Conduct conference at Project site.

**ACTION SUBMITTALS**

Product Data: For the following:

- Anchors.
- Adhesives.
- Shop finishing materials.
- Fire-Retardant Treatment: Include data and warranty information from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.

Shop Drawings:

- Include the following:
  - Dimensioned plans, elevations, and sections.
  - Attachment details.
- Show large-scale details.
- Show locations and sizes of furring, blocking, and hanging strips, including blocking and reinforcement concealed by construction and specified in other Sections.
- Apply AWI Quality Certification Program label to Shop Drawings.

Samples: For each exposed product and for each shop-applied color and finish specified.

**INFORMATIONAL SUBMITTALS**

Field quality-control reports.

**CLOSEOUT SUBMITTALS**

Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

**QUALITY ASSURANCE**

Manufacturer's Certification: Licensed participant in AWI's Quality Certification Program.

Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

- Build mockups of typical interior architectural woodwork as shown on Drawings.
- Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Owner specifically approves such deviations by Change Order.

1  
2 **PART 2 - PRODUCTS**  
3

4 **ARCHITECTURAL WOODWORK, GENERAL**

5 Quality Standard: Unless otherwise indicated, comply with the Architectural Woodwork Standards for  
6 grades of interior architectural woodwork indicated for construction, finishes, installation, and other  
7 requirements.

8  
9 **INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH**

10 Architectural Woodwork Standards Grade: Custom.

11  
12 Hardwood Lumber:

13  
14 Wood Species and Cut: Match species and cut indicated for other types of transparent-finished  
15 architectural woodwork located in same area of building unless otherwise indicated.

16 Species: Red oak.

17 Wood Moisture Content: 5 to 10 percent.

18 Provide split species on trim that faces areas with different wood species, matching each face of  
19 woodwork to species and cut of finish wood surfaces in areas finished.

20 For trim items other than base wider than available lumber, use veneered construction. Do not glue for  
21 width.

22  
23 For veneered base, use hardwood lumber core, glued for width.

24  
25 For rails thicker than available lumber, use veneered construction. Do not glue for thickness.

26  
27 **INTERIOR FRAMES AND JAMBS FOR TRANSPARENT FINISH**

28 Architectural Woodwork Standards Grade: Custom.

29  
30 Wood Species and Cut: Match species and cut indicated for other types of transparent-finished architectural  
31 woodwork located in same area of building unless otherwise indicated.

32  
33 Species: Red oak.

34 Wood Moisture Content: 5 to 10 percent.

35 Provide split species on frames and jambs that face areas with different wood species, matching each  
36 face of woodwork to species and cut of finish wood surfaces in areas finished.

37  
38 For frames or jambs wider than available lumber, use veneered construction. Do not glue for width.

39  
40 Do not use plain-sawn softwood lumber with exposed, flat surfaces more than 3 inches wide.

41  
42 **HARDWOOD SHEET MATERIALS**

43 Composite Wood and Agrifiber Products: Provide materials that comply with requirements of the  
44 Architectural Woodwork Standards for each type of interior architectural woodwork and quality grade  
45 specified unless otherwise indicated.

46  
47 Medium-Density Fiberboard (MDF): ANSI A208.2, Grade 130.

48 Particleboard: ANSI A208.1, Grade M-2.

49 Particleboard: Straw-based particleboard complying with requirements in ANSI A208.1, Grade M-2,  
50 except for density.

51  
52 Softwood Plywood: DOC PS 1, medium-density overlay.

53 Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1.

1  
2 **FIRE-RETARDANT-TREATED WOOD MATERIALS**

3 Fire-Retardant-Treated Wood Materials: Where fire-retardant-treated materials are indicated, use materials  
4 complying with requirements that are acceptable to authorities having jurisdiction and with fire-test-  
5 response characteristics specified as determined by testing identical products according to test method  
6 indicated by a qualified testing agency.

7  
8 Use treated materials that comply with requirements of the Architectural Woodwork Standards. Do not  
9 use materials that are warped, discolored, or otherwise defective.

10 Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect  
11 finishes. Do not use colorants to distinguish treated materials from untreated materials.

12 Identify fire-retardant-treated materials with appropriate classification marking of qualified testing  
13 agency in the form of removable paper label or imprint on surfaces that will be concealed from view  
14 after installation.

15  
16 Fire-Retardant-Treated Lumber and Plywood: Products with a flame-spread index of 25 or less when tested  
17 according to ASTM E 84, with no evidence of significant progressive combustion when the test is extended  
18 an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline  
19 of the burners at any time during the test.

20  
21 Kiln-dry lumber and plywood after treatment to a maximum moisture content of 19 and 15 percent,  
22 respectively.

23 For items indicated to receive a stained, transparent, or natural finish, use organic resin chemical  
24 formulation.

25 Mill lumber after treatment within limits set for wood removal that do not affect listed fire-test-  
26 response characteristics, using a woodworking shop certified by testing and inspecting agency.

27 Mill lumber before treatment, and implement procedures during treatment and drying processes that  
28 prevent lumber from warping and developing discolorations from drying sticks or other causes,  
29 marring, and other defects affecting appearance of treated woodwork.

30  
31 Fire-Retardant Particleboard: Made from softwood particles and fire-retardant chemicals mixed together at  
32 time of panel manufacture, to achieve flame-spread index of 25 or less and smoke-developed index of 25 or  
33 less according to ASTM E 84.

34  
35 For panels 3/4 inch thick and less, comply with ANSI A208.1 for Grade M-2, except for the following  
36 minimum properties: modulus of rupture, 1600 psi; modulus of elasticity, 300,000 psi; internal bond,  
37 80 psi; and screw-holding capacity on face and edge, 250 and 225 lbf, respectively.

38 For panels 13/16 to 1-1/4 inches thick, comply with ANSI A208.1 for Grade M-1, except for the  
39 following minimum properties: modulus of rupture, 1300 psi; modulus of elasticity, 250,000 psi;  
40 linear expansion, 0.50 percent; and screw-holding capacity on face and edge, 250 and 175 lbf,  
41 respectively.

42  
43 Fire-Retardant Fiberboard: Medium-density fiberboard (MDF) panels complying with ANSI A208.2, made  
44 from softwood fibers, synthetic resins, and fire-retardant chemicals mixed together at time of panel  
45 manufacture, to achieve flame-spread index of 25 or less and smoke-developed index of 200 or less  
46 according to ASTM E 84.

47  
48  
49 Provide self-drilling screws for metal-framing supports, as recommended by metal-framing manufacturer.

50  
51 Anchors: Select material, type, size, and finish required for each substrate for secure anchorage.

52  
53 Provide metal expansion sleeves or expansion bolts for post-installed anchors.

54 Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at  
55 floors.



1 Installation Adhesive: Product recommended by fabricator for each substrate for secure anchorage.

2  
3 **FABRICATION**

4 Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.

5  
6 Fabricate interior architectural woodwork to dimensions, profiles, and details indicated.

7  
8 Ease edges to radius indicated for the following:

9  
10 Edges of Solid-Wood (Lumber) Members: 1/16 inch unless otherwise indicated.

11 Edges of Rails and Similar Members More Than 3/4 Inch Thick: 1/8 inch.

12  
13 Complete fabrication, including assembly, to maximum extent possible before shipment to Project site.

14  
15 Disassemble components only as necessary for shipment and installation.

16 Where necessary for fitting at site, provide allowance for scribing, trimming, and fitting.

17 Trial fit assemblies at fabrication shop that cannot be shipped completely assembled.

18  
19 Install dowels, screws, bolted connectors, and other fastening devices that can be removed after  
20 trial fitting.

21 Verify that parts fit as intended, and check measurements of assemblies against field  
22 measurements indicated on approved Shop Drawings before disassembling for shipment.

23  
24 Stairs: Cut rough carriages to accurately fit treads and risers.

25  
26 Glue treads to risers, and glue and nail treads and risers to carriages.

27 House wall and face stringers, and glue and wedge treads and risers.

28 Fabricate stairs with treads and risers no more than 1/8 inch from indicated position and no more than  
29 1/16 inch out of relative position for adjacent treads and risers.

30  
31 **SHOP PRIMING**

32 Preparations for Finishing: Comply with the Architectural Woodwork Standards for sanding, filling  
33 countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing interior  
34 architectural woodwork, as applicable to each unit of work.

35  
36 Interior Architectural Woodwork for Opaque Finish: Shop prime with one coat of wood primer as specified  
37 in Section 09 91 23 "Interior Painting."

38  
39 Interior Architectural Woodwork for Transparent Finish: Shop-seal concealed surfaces with required  
40 pretreatments and first coat of finish as specified in Section 09 93 00 "Staining and Transparent Finishing."

41  
42 **SHOP FINISHING**

43 Finish interior architectural woodwork with transparent finish at fabrication shop. Defer only final touchup,  
44 cleaning, and polishing until after installation.

45  
46 Preparation for Finishing: Comply with Architectural Woodwork Standards, Section 5 for sanding, filling  
47 countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing interior  
48 architectural woodwork, as applicable to each unit of work.

49  
50 Transparent Finish:

51  
52 Architectural Woodwork Standards Grade: Custom.

53 Staining: Match existing courtrooms.

1 **PART 3 - EXECUTION**

2  
3 **PREPARATION**

4 Before installation, condition interior architectural woodwork to humidity conditions in installation areas  
5 for not less than 72 hours prior to beginning of installation.

6  
7 Before installing interior architectural woodwork, examine shop-fabricated work for completion and  
8 complete work as required, including removal of packing and backpriming of concealed surfaces.

9  
10 **INSTALLATION**

11 Grade: Install interior architectural woodwork to comply with same grade as item to be installed.

12  
13 Assemble interior architectural woodwork and complete fabrication at Project site to the extent that it was  
14 not completed during shop fabrication.

15  
16 Install interior architectural woodwork level, plumb, true in line, and without distortion.

17  
18 Shim as required with concealed shims.

19 Install level and plumb to a tolerance of 1/8 inch in 96 inches.

20  
21 Scribe and cut interior architectural woodwork to fit adjoining work, refinish cut surfaces, and repair  
22 damaged finish at cuts.

23  
24 Preservative-Treated Wood: Where cut or drilled in field, treat cut ends and drilled holes according to  
25 AWPA M4.

26  
27 Fire-Retardant-Treated Wood: Install fire-retardant-treated wood to comply with chemical treatment  
28 manufacturer's written instructions, including those for adhesives used to install woodwork.

29  
30 Anchor interior architectural woodwork to anchors or blocking built in or directly attached to substrates.

31  
32 Secure with countersunk, concealed fasteners and blind nailing.

33 Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with  
34 interior architectural woodwork.

35 For shop-finished items, use filler matching finish of items being installed.

36  
37 Standing and Running Trim:

38  
39 Install with minimum number of joints possible, using full-length pieces (from maximum length of  
40 lumber available) to greatest extent possible.

41 Scarf running joints and stagger in adjacent and related members.

42 Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.

43  
44 Stairs: Securely anchor carriages to supporting substrates.

45  
46 Install stairs with treads and risers no more than 1/8 inch from indicated position.

47 Secure with countersunk, concealed fasteners and blind nailing.

48 Use fine finishing nails or finishing screws] for exposed fastening, countersunk and filled flush with  
49 wood surface.

50  
51 Railings:

52  
53 Install rails with no more than 1/8 inch in 96-inch variation from a straight line.

54 Stair Rails: Glue and dowel or pin balusters to treads and railings, and railings to newel posts.

55  
56 Secure with countersunk, concealed fasteners and blind nailing.





1 Wood Species: Western red cedar.  
2  
3

4 **INTERIOR FRAMES AND JAMBS FOR TRANSPARENT FINISH**

5 Grade: Custom.  
6

7 Wood Species and Cut: Match species and cut indicated for other types of transparent-finished architectural  
8 woodwork located in same area of building unless otherwise indicated.  
9

10 Species: Red oak.

11 Cut: Plain sliced/plain sawn.  
12

13 Fire-Rated Interior Frames and Jambs: Products fabricated from fire-retardant particleboard or fire-  
14 retardant medium-density fiberboard with veneered exposed surfaces and listed and labeled by a testing and  
15 inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing  
16 according to NFPA 252.  
17

18 Fire Rating: 20 minutes.  
19

20 **WOOD MATERIALS**

21 Wood Products: Provide materials that comply with requirements of referenced quality standard for each  
22 type of wood frame and quality grade specified unless otherwise indicated.  
23

24 Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced  
25 quality standard for each type of wood frame and quality grade specified unless otherwise indicated.  
26

27 Water-Repellent Preservative Treated Materials: Comply with AWPA N1 (dip, spray, flood, or vacuum-  
28 pressure treatment) for exterior wood frames indicated to receive water-repellent preservative treatment.  
29

30 Preservative Chemicals: 3-iodo-2-propynyl butyl carbamate (IPBC).

31 Extent of Water-Repellent Preservative Treatment: Treat all exterior wood frames unless otherwise  
32 indicated.  
33

34 **FIRE-RETARDANT-TREATED MATERIALS**

35 Fire-Retardant-Treated Materials, General: Where fire-retardant-treated materials are indicated, use  
36 materials complying with requirements in this article that are acceptable to authorities having jurisdiction  
37 and with fire-test-response characteristics specified as determined by testing identical products per test  
38 method indicated by a qualified testing agency.  
39

40 Identify fire-retardant-treated materials with appropriate classification marking of qualified testing  
41 agency in the form of removable paper label or imprint on surfaces that will be concealed from view  
42 after installation.  
43

44 Fire-Retardant-Treated Lumber: Products with a flame-spread index of 25 or less when tested according to  
45 ASTM E 84, with no evidence of significant progressive combustion when the test is extended an  
46 additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of  
47 the burners at any time during the test.  
48

49 Kiln dry lumber after treatment to a maximum moisture content of 19 percent.  
50

51 Fire-Retardant Particleboard: Panels complying with the following requirements, made from softwood  
52 particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread  
53 index of 25 or less and smoke-developed index of 25 or less per ASTM E 84.  
54

55 For panels 3/4 inch thick and less, comply with ANSI A208.1 for Grade M-2 except for the following  
56 minimum properties: modulus of rupture, 1600 psi; modulus of elasticity, 300,000 psi; internal bond,  
80 psi; and screw-holding capacity on face and edge, 250 and 225 lbf, respectively.

1 Fire-Retardant Fiberboard: Medium-density fiberboard panels complying with ANSI A208.2, made from  
2 softwood fibers, synthetic resins, and fire-retardant chemicals mixed together at time of panel manufacture  
3 to achieve flame-spread index of 25 or less and smoke-developed index of 200 or less per ASTM E 84.  
4

#### 5 6 **MISCELLANEOUS MATERIALS**

7  
8 Interior Blocking, Shims, and Nailers: Softwood or hardwood lumber Fire-retardant-treated softwood  
9 lumber, kiln dried to less than 15 percent moisture content.

10  
11 Provide self-drilling screws for metal-framing supports.

12  
13 Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide  
14 metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip  
15 galvanized anchors and inserts at inside face of exterior walls and at floors.

#### 16 17 **FABRICATION**

18 Fabricate wood frames to dimensions, profiles, and details indicated. Ease edges to radius indicated for the  
19 following:

20  
21 Edges of Solid-Wood (Lumber) Members: 1/16 inch unless otherwise indicated.  
22

#### 23 **SHOP FINISHING**

24 General: Finish wood frames at fabrication shop as specified in this Section. Defer only final touchup,  
25 cleaning, and polishing until after installation.

26  
27 General: Drawings indicate items that are required to be shop finished. Finish such items at fabrication  
28 shop as specified in this Section.  
29

30 Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk  
31 fasteners, sealing concealed surfaces, and similar preparations for finishing wood frames, as applicable to  
32 each unit of work.  
33

34 Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces  
35 of wood frames. Apply two coats to end-grain surfaces.  
36

37  
38 Transparent Finish for Interior Frames:

39  
40 Grade: Custom. Match existing wood doors in courtrooms.  
41

### 42 43 **PART 3 - EXECUTION**

#### 44 45 **PREPARATION**

46 Before installation, condition wood frames to average prevailing humidity conditions in installation areas.  
47

#### 48 **INSTALLATION**

49 Grade: Install wood frames to comply with same grade as item to be installed.  
50

51 Install wood frames level, plumb, true, and straight. Shim as required with concealed shims. Install level  
52 and plumb to a tolerance of 1/8 inch in 96 inches.  
53

54 Scribe and cut wood frames to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.  
55

1 Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with  
2 chemical treatment manufacturer's written instructions, including those for adhesives used to install  
3 woodwork.

4  
5 Anchor wood frames to anchors or blocking built in or directly attached to substrates. Secure with  
6 countersunk, concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed  
7 fastening, countersunk and filled flush with woodwork.

8  
9 For shop-finished items, use filler matching finish of items being installed.

10  
11

**END OF SECTION**

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**SECTION 07 21 00**  
**THERMAL INSULATION**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

Glass-fiber blanket.

**ACTION SUBMITTALS**

Product Data: For each type of product.

**INFORMATIONAL SUBMITTALS**

Product test reports.

Research reports.

**PART 2 - PRODUCTS**

**GLASS-FIBER BLANKET**

Glass-Fiber Blanket, Unfaced: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.

**PART 3 - EXECUTION**

**INSTALLATION, GENERAL**

Comply with insulation manufacturer's written instructions applicable to products and applications.

Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

**INSTALLATION OF SLAB INSULATION**

On vertical slab edge and foundation surfaces, set insulation units using manufacturer's recommended adhesive according to manufacturer's written instructions.

If not otherwise indicated, extend insulation a minimum of 24 inches below exterior grade line.

On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.

If not otherwise indicated, extend insulation a minimum of 48 inches in from exterior walls.

**END OF SECTION**



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**SECTION 08 11 13**  
**HOLLOW METAL DOORS AND FRAMES**

**PART 1 - GENERAL**

**RELATED DOCUMENTS**

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**SUMMARY**

Section includes:

- Interior standard steel doors and frames.
- Exterior standard steel doors and frames.

**ACTION SUBMITTALS**

Product Data: For each type of product.

Shop Drawings: Include the following:

- Elevations of each door type.
- Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
- Frame details for each frame type, including dimensioned profiles and metal thicknesses.

Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

**INFORMATIONAL SUBMITTALS**

Product test reports.

**PART 2 - PRODUCTS**

**INTERIOR STANDARD STEEL DOORS AND FRAMES**

Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

Standard-Duty Doors and Frames: SDI A250.8, Level 1; SDI A250.4, Level C. At locations indicated in the Door and Frame Schedule.

Doors:

- Type: As indicated in the Door and Frame Schedule.
- Thickness: 1-3/4 inches.
- Face: Metallic-coated steel sheet, minimum thickness of 0.032 inch.
- Edge Construction: Model 1, Full Flush.
- Core: Manufacturer's standard Vertical steel stiffener.

Frames:

- Materials: Uncoated steel sheet, minimum thickness of 0.042 inch.
- Construction: Full profile welded.

**EXTERIOR STANDARD STEEL DOORS AND FRAMES**

Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

1  
2 Heavy-Duty Doors and Frames: SDI A250.8, Level 2; SDI A250.4, Level B. At locations indicated in the  
3 Door and Frame Schedule.

4  
5 **Doors:**

6  
7 Type: As indicated in the Door and Frame Schedule.

8 Thickness: 1-3/4 inches.

9 Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch, with minimum A40 coating.

10 Edge Construction: Model 1, Full Flush.

11 Edge Bevel: Provide manufacturer's standard beveled or square edges.

12 Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets.

13 Seal joints against water penetration.

14 Bottom Edges: Close bottom edges of doors where required for attachment of weather stripping  
15 with end closures or channels of same material as face sheets. Provide weep-hole openings in  
16 bottoms of exterior doors to permit moisture to escape.

17 Core: Manufacturer's standard Polystyrene insulation.

18  
19 **Frames:**

20  
21 Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum A40  
22 coating.

23 Construction: Full profile welded.

24  
25 **FRAME ANCHORS**

26 **Jamb Anchors:**

27  
28 Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable  
29 for performance level indicated.

30 Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor  
31 anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.

32 Postinstalled Expansion Anchor: Minimum 3/8-inch-diameter bolts with expansion shields or inserts,  
33 with manufacturer's standard pipe spacer.

34  
35 Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.

36  
37 Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips,  
38 allowing not less than 2-inch height adjustment. Terminate bottom of frames at top of underlayment.

39  
40 Material: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.

41  
42 For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or  
43 ASTM A 1011/A 1011M; hot-dip galvanized according to ASTM A 153/A 153M, Class B.

44  
45 **MATERIALS**

46 Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed  
47 applications.

48  
49 Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or  
50 surface defects; pickled and oiled.

51  
52 Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

53  
54 Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

55

1 Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated,  
2 fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-  
3 metal frames of type indicated.

4  
5 Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers  
6 manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25  
7 and 50, respectively; passing ASTM E 136 for combustion characteristics.

8  
9 Glazing: Comply with requirements in Section 08 80 00 "Glazing."

#### 10 11 **FABRICATION**

12 Door Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for  
13 fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which  
14 astragal is mounted or as required to comply with published listing of qualified testing agency.

15  
16 Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require  
17 multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint,  
18 fabricated of metal of same or greater thickness as frames.

19  
20 Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless  
21 otherwise indicated.

22 Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows.  
23 Keep holes clear during construction.

24  
25 Single-Door Frames: Drill stop in strike jamb to receive three door silencers.

26 Double-Door Frames: Drill stop in head jamb to receive two door silencers.

27  
28 Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised  
29 hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according  
30 to SDI A250.6, the Door Hardware Schedule, and templates.

31  
32 Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

33 Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

34  
35 Glazed Lites: Provide stops and moldings around glazed lites where indicated. Form corners of stops and  
36 moldings with mitered hairline joints.

37  
38 Provide stops and moldings flush with face of door, and with beveled stops unless otherwise indicated.

39 Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.

40 Provide loose stops and moldings on inside of hollow-metal doors and frames.

41 Coordinate rabbet width between fixed and removable stops with glazing and installation types  
42 indicated.

43 Provide stops for installation with countersunk flat- or oval-head machine screws spaced uniformly not  
44 more than 9 inches o.c. and not more than 2 inches o.c. from each corner.

#### 45 46 **STEEL FINISHES**

47 Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

48  
49 Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with  
50 SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and  
51 field-applied coatings despite prolonged exposure.

1 **PART 3 - EXECUTION**

2  
3 **PREPARATION**

4 Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and  
5 dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up  
6 factory-applied finishes where spreaders are removed.

7  
8 Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

9  
10 **INSTALLATION**

11 Hollow-Metal Frames: Comply with SDI A250.11 NAAMM-HMMA 840.

12  
13 Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are  
14 set. After wall construction is complete, remove temporary braces without damage to completed  
15 Work.

16  
17 Where frames are fabricated in sections, field splice at approved locations by welding face joint  
18 continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.  
19 Touch-up finishes.

20 Install frames with removable stops located on secure side of opening.

21  
22 Fire-Rated Openings: Install frames according to NFPA 80.

23 Floor Anchors: Secure with postinstalled expansion anchors.

24  
25 Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors  
26 if so indicated and approved on Shop Drawings.

27  
28 Solidly pack mineral-fiber insulation inside frames.

29 Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and  
30 masonry with grout or mortar.

31 In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion  
32 anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.

33  
34 Installation Tolerances: Adjust hollow-metal frames to the following tolerances:

35  
36 Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb  
37 perpendicular to frame head.

38 Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of  
39 wall.

40 Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and  
41 perpendicular to plane of wall.

42 Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

43  
44 Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified  
45 below.

46  
47 Non-Fire-Rated Steel Doors: Comply with SDI A250.8 NAAMM-HMMA 841 and NAAMM-HMMA  
48 guide specification indicated.

49  
50 Glazing: Comply with installation requirements in Section 08 80 00 "Glazing" and with hollow-metal  
51 manufacturer's written instructions.

52  
53 **CLEANING AND TOUCHUP**

54 Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and  
55 apply touchup of compatible air-drying, rust-inhibitive primer.

1 Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according  
2 to manufacturer's written instructions.

3

4 Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting  
5 Sections.

6

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**END OF SECTION**

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## SECTION 08 14 16 FLUSH WOOD DOORS

### PART 1 - GENERAL

#### SUMMARY

Section Includes:

Solid-core doors with wood-veneer.

Related Requirements:

Section 08 11 13 "Hollow Metal Doors & Frames" for frames.

Section 08 80 00 "Glazing" for glass view panels in flush wood doors.

#### ACTION SUBMITTALS

Product Data: For each type of door. Include factory-finishing specifications.

Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and the following:

Dimensions and locations of blocking.

Dimensions and locations of mortises and holes for hardware.

Dimensions and locations of cutouts.

Undercuts.

Requirements for veneer matching.

Doors to be factory finished and finish requirements.

Samples: For plastic-laminate door faces and factory-finished doors.

#### INFORMATIONAL SUBMITTALS

Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

#### DELIVERY AND STORAGE

Protect wood doors during transit, handling and storage to prevent damage, soiling and deterioration. Store in a dry location and stack in accordance with manufacturer's instructions. The installer shall advise the Contractor of proper procedure required for protection of installed wood doors from damage or deterioration until acceptance of the work.

#### WARRANTY

Submit two (2) copies of written agreement in door manufacturer's standard form signed by the Manufacturer, Installer, and Contractor, agreeing to repair or replace any defective doors which have warped (bow, cup or twist) or which show photographing of construction below in face veneers, as defined in NWMA Standard Door Guarantee, except the NWMA provision for refunding the price received by the door manufacturer for any defective door shall not apply. The guarantee shall also include refinishing and reinstallation which may be required due to repair or replacement of defective doors. Guarantee shall be in effect during the following period of time after the date of acceptance.

Warranty doors for one (1) year after date of substantial completion.

### PART 2 - PRODUCTS

#### FLUSH WOOD DOORS, GENERAL

Quality Standard: In addition to requirements specified, comply with AWI's, AWMAC's, and WI's "Architectural Woodwork Standards and WDMA I.S.1-A, "Architectural Wood Flush Doors."

Provide AWI Quality Certification Labels indicating that doors comply with requirements of grades specified.

1 WDMA I.S.1-A Performance Grade:

2  
3 Heavy Duty unless otherwise indicated.

4  
5 Structural-Composite-Lumber-Core Doors:

6  
7 Structural Composite Lumber: WDMA I.S.10.

8  
9 Screw Withdrawal, Face: 700 lbf.

10 Screw Withdrawal, Edge: 400 lbf.

11  
12 **VENEER-FACED DOORS FOR TRANSPARENT FINISH**

13 Interior Solid-Core Doors:

14  
15 Grade: Custom (Grade A faces).

16 Species: Red oak.

17 Cut: Plain sliced (flat sliced).

18 Match between Veneer Leaves: Book match.

19 Assembly of Veneer Leaves on Door Faces: Balance match.

20 Core: Particleboard.

21 Construction: Five plies. Stiles and rails are bonded to core, then entire unit is abrasive planed before  
22 veneering. Faces are bonded to core using a hot press.

23  
24 **LIGHT FRAMES AND LOUVERS**

25 Metal Frames for Light Openings in Doors: Manufacturer's standard frame formed of 0.048-inch-thick,  
26 cold-rolled steel sheet; with baked-enamel- or powder-coated finish.

27  
28 **FABRICATION**

29 Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced  
30 quality standard for fitting unless otherwise indicated.

31  
32 Factory machine doors for hardware that is not surface applied.

33  
34 Openings: Factory cut and trim openings through doors.

35  
36 Light Openings: Trim openings with moldings of material and profile indicated.

37 Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable  
38 requirements in Section 08 80 00 "Glazing."

39  
40 **FACTORY FINISHING**

41 General: Comply with referenced quality standard for factory finishing. Complete fabrication, including  
42 fitting doors for openings and machining for hardware that is not surface applied, before finishing.

43  
44 Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom  
45 edges, edges of cutouts, and mortises.

46  
47 Factory finish doors that are indicated to receive transparent finish.

48  
49 Transparent Finish:

50  
51 Grade: Custom.

52 Finish: AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" System 10, UV curable,  
53 water based.

54 Staining: As selected by Architect from manufacturer's full range.

55 Effect: Filled finish.

56 Sheen: Satin.

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**PART 3 - EXECUTION**

**INSTALLATION**

Hardware: For installation, see Section 08 71 00 "Door Hardware."

Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.

Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.

**END OF SECTION**



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**SECTION 08 71 00  
DOOR HARDWARE**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

Mechanical door hardware for the following:

Swinging doors.

Sliding doors.

Cylinders for door hardware specified in other Sections.

Electrified door hardware.

**ACTION SUBMITTALS**

Product Data: For each type of product.

Shop Drawings: For electrified door hardware.

Include diagrams for power, signal, and control wiring.

Include details of interface of electrified door hardware and building safety and security systems.

Door hardware schedule.

Keying schedule.

**INFORMATIONAL SUBMITTALS**

Sample warranty.

**CLOSEOUT SUBMITTALS**

Maintenance data.

**QUALITY ASSURANCE**

Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and of an Architectural Hardware Consultant who is available during the course of the Work to consult Contractor, Architect, and Owner about door hardware and keying.

Scheduling Responsibility: Preparation of door hardware and keying schedule.

Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as an Architectural Hardware Consultant (AHC).

**WARRANTY**

Special Warranty: Manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

Warranty Period: Three years from date of Substantial Completion unless otherwise indicated below:

Locks: Five years from date of Substantial Completion.

Exit Devices: Two years from date of Substantial Completion.

Manual Closers: 10 years from date of Substantial Completion.

Concealed Floor Closers: Five years from date of Substantial Completion.

**PART 2 - PRODUCTS**

1 **PERFORMANCE REQUIREMENTS**

2 Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require  
3 use of a key, tool, or special knowledge for operation.

4  
5 Accessibility Requirements: For door hardware on doors in an accessible route, comply with the DOJ's  
6 "2010 ADA Standards for Accessible Design", ICC A117.1, and HUD's "Fair Housing Accessibility  
7 Guidelines".

8  
9 **SCHEDULED DOOR HARDWARE**

10 Provide products for each door that comply with requirements indicated in Part 2 and door hardware  
11 schedule.

12  
13 Door hardware is scheduled in Part 4.

14  
15 **HINGES**

16 Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and  
17 hollow-metal frames.

18  
19 **CONTINUOUS HINGES**

20 Continuous Hinges: BHMA A156.26; minimum 0.120-inch-thick, hinge leaves with minimum overall  
21 width of 4 inches; fabricated to full height of door and frame and to template screw locations; with  
22 components finished after milling and drilling are complete.

23  
24 Pin-and-Barrel-Type Hinges

25  
26 **MECHANICAL LOCKS AND LATCHES**

27 Lock Functions: As indicated in door hardware schedule.

28  
29 Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as  
30 follows:

- 31  
32 Bored Locks: Minimum 1/2-inch latchbolt throw.  
33 Mortise Locks: Minimum 3/4-inch latchbolt throw.  
34 Deadbolts: Minimum 1-inch bolt throw.

35  
36 Lock Backset: 2-3/4 inches unless otherwise indicated.

37  
38 Lock Trim:

39  
40 Levers: Cast.

41  
42 Escutcheons (Roses): Cast.

43 Dummy Trim: Match lever lock trim and escutcheons.

44  
45 Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements  
46 indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished  
47 to match lock or latch.

48  
49 Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.

50 Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.

51 Aluminum-Frame Strike Box: Manufacturer's special strike box fabricated for aluminum framing.

52 Rabbet Front and Strike: Provide on locksets for rabbeted meeting stiles.

53  
54 Bored Locks: BHMA A156.2; Grade 1; Series 4000.

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**LOCK CYLINDERS**

Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.

Standard Lock Cylinders: BHMA A156.5; Grade 1 permanent cores; face finished to match lockset.

Core Type: Interchangeable Removable.

Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.

Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.

**KEYING**

Keying System: Factory registered, complying with guidelines in BHMA A156.28, appendix. Provide one extra key blank for each lock. Hardware supplier shall meet with Owner to develop a keying schedule.

No Master Key System: Only change keys operate cylinders.

Provide three cylinder change keys.

Keys: Nickel silver.

Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

Notation: "DO NOT DUPLICATE."

**OPERATING TRIM**

Operating Trim: BHMA A156.6; bronze unless otherwise indicated.

**SURFACE CLOSERS**

Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written instructions for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

**DOOR GASKETING**

Door Gasketing: BHMA A156.22; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.

Maximum Air Leakage: When tested according to ASTM E 283 with tested pressure differential of 0.3-inch wg, as follows:

- Smoke-Rated Gasketing: 0.3 cfm/sq. ft. of door opening.
- Gasketing on Single Doors: 0.3 cfm/sq. ft. of door opening.
- Gasketing on Double Doors: 0.50 cfm per foot of door opening.

**THRESHOLDS**

Thresholds: BHMA A156.21; fabricated to full width of opening indicated.

1  
2 **METAL PROTECTIVE TRIM UNITS**

3 Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch-thick bronze; with manufacturer's  
4 standard machine or self-tapping screw fasteners.  
5

6 **FINISHES**

7 Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.  
8

9 **PART 3 - EXECUTION**

10  
11 **INSTALLATION**

12 Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise  
13 indicated or required to comply with governing regulations.  
14

15 Standard Steel Doors and Frames: ANSI/SDI A250.8.

16 Custom Steel Doors and Frames: HMMA 831.

17 Wood Doors: DHI's "Recommended Locations for Architectural Hardware for Wood Flush Doors."  
18

19 Install each door hardware item to comply with manufacturer's written instructions. Where cutting and  
20 fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in  
21 another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing  
22 work. Do not install surface-mounted items until finishes have been completed on substrates involved.  
23

24 Hinges: Install types and in quantities indicated in door hardware schedule, but not fewer than the number  
25 recommended by manufacturer for application indicated or one hinge for every 30 inches of door height,  
26 whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or  
27 pivots, are provided.  
28

29 Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in  
30 quantities indicated in door hardware schedule, but not fewer than one intermediate offset pivot per door  
31 and one additional intermediate offset pivot for every 30 inches of door height greater than 90 inches.  
32

33 Lock Cylinders: Install construction cores to secure building and areas during construction period.  
34

35 Replace construction cores with permanent cores as directed by Owner.

36 Furnish permanent cores to Owner for installation.  
37

38 Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying  
39 with requirements specified in Section 07 92 00 "Joint Sealants."  
40

41 Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule.  
42 Do not mount floor stops where they will impede traffic.  
43

44 Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.  
45

46 Do not notch perimeter gasketing to install other surface-applied hardware.  
47

48 Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.  
49

50 Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.  
51

52 **ADJUSTING**

53 Adjust and check each operating item of door hardware and each door to ensure proper operation or  
54 function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control  
55 devices to compensate for final operation of heating and ventilating equipment and to comply with  
56 referenced accessibility requirements.

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**PART 4 - HARDWARE SCHEDULE**

**Set #1 - Int - Sgl - Privacy**

Doors: S1801.1

- 3 Hinges
- 1 Privacy Set
- 1 Wall Bumper
- 3 Door Silencers
- 1 Automatic Door Operator

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**SECTION 09 22 16**  
**NON-STRUCTURAL METAL FRAMING**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

Non-load-bearing steel framing systems for interior partitions.

**ACTION SUBMITTALS**

Product Data: For each type of product.

Sustainable Design Submittals:

**INFORMATIONAL SUBMITTALS**

Evaluation reports for firestop tracks.

**PART 2 - PRODUCTS**

**PERFORMANCE REQUIREMENTS**

Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 119 by an independent testing agency.

STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

**FRAMING SYSTEMS**

Hat-Shaped, Rigid Furring Channels: ASTM C 645.

Minimum Base-Metal Thickness: 0.0179 inch.

Depth: As indicated on Drawings.

**AUXILIARY MATERIALS**

General: Provide auxiliary materials that comply with referenced installation standards.

Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

Isolation Strip at Exterior Walls: Provide[ **one of**] the following:

Asphalt-Saturated Organic Felt: ASTM D 226/D 226M, Type I (No. 15 asphalt felt), nonperforated.

Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

**PART 3 - EXECUTION**

**INSTALLATION, GENERAL**

Installation Standard: ASTM C 754.

- 1 Gypsum Plaster Assemblies: Also comply with requirements in ASTM C 841 that apply to framing  
2 installation.
- 3 Portland Cement Plaster Assemblies: Also comply with requirements in ASTM C 1063 that apply to  
4 framing installation.
- 5 Gypsum Veneer Plaster Assemblies: Also comply with requirements in ASTM C 844 that apply to  
6 framing installation.
- 7 Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing  
8 installation.

9  
10 Install framing and accessories plumb, square, and true to line, with connections securely fastened.

11  
12 Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars,  
13 toilet accessories, furnishings, or similar construction.

14  
15 Install bracing at terminations in assemblies.

16  
17 Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame  
18 both sides of joints independently.

19  
20 **INSTALLING FRAMED ASSEMBLIES**

21 Install framing system components according to spacings indicated, but not greater than spacings required  
22 by referenced installation standards for assembly types.

23  
24 Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls,  
25 install isolation strip between studs and exterior wall.

26  
27 Install studs so flanges within framing system point in same direction.

28  
29 Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or  
30 substrates above suspended ceilings except where partitions are indicated to terminate at suspended  
31 ceilings. Continue framing around ducts that penetrate partitions above ceiling.

32  
33 Direct Furring:

34  
35 Screw to wood framing.

36 Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-  
37 driven fasteners spaced 24 inches o.c.

38  
39 Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from  
40 the plane formed by faces of adjacent framing.

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**SECTION 09 29 00  
GYPSUM BOARD**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

Interior gypsum board.

**ACTION SUBMITTALS**

Product Data: For each type of product.

Samples: For each texture finish indicated on same backing indicated for Work.

**PART 2 - PRODUCTS**

**PERFORMANCE REQUIREMENTS**

Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

**GYPSUM BOARD, GENERAL**

Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

**INTERIOR GYPSUM BOARD**

Gypsum Wallboard: ASTM C 1396/C 1396M.

Thickness: 5/8 inch.

Long Edges: Tapered.

Gypsum Board, Type X: ASTM C 1396/C 1396M.

Thickness: 5/8 inch.

Long Edges: Tapered.

Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.

Core: 5/8 inch, Type X.

Long Edges: Tapered.

Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

**TRIM ACCESSORIES**

Interior Trim: ASTM C 1047.

Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-steel sheet.

Shapes:



1 Cornerbead.  
2 Bullnose bead.  
3 LC-Bead: J-shaped; exposed long flange receives joint compound.  
4 L-Bead: L-shaped; exposed long flange receives joint compound.  
5 U-Bead: J-shaped; exposed short flange does not receive joint compound.  
6 Expansion (control) joint.  
7 Curved-Edge Cornerbead: With notched or flexible flanges.  
8

### 9 **JOINT TREATMENT MATERIALS**

10 General: Comply with ASTM C 475/C 475M.

11  
12 Joint Tape:

13  
14 Interior Gypsum Board: Paper.  
15 Exterior Gypsum Soffit Board: Paper.  
16 Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.  
17 Tile Backing Panels: As recommended by panel manufacturer.  
18

19 Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other  
20 compounds applied on previous or for successive coats.

21  
22 Prefilling: At open joints and damaged surface areas, use setting-type taping compound.  
23 Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use  
24 drying-type, all-purpose compound.  
25

26 Use setting-type compound for installing paper-faced metal trim accessories.  
27

28 Fill Coat: For second coat, use drying-type, all-purpose compound.  
29 Finish Coat: For third coat, use drying-type, all-purpose compound.  
30

### 31 **AUXILIARY MATERIALS**

32 General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's  
33 written instructions.

34  
35 Steel Drill Screws: ASTM C 1002 unless otherwise indicated.

36  
37 Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112  
38 inch thick.

39 For fastening cementitious backer units, use screws of type and size recommended by panel  
40 manufacturer.  
41

42 Sound-Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by  
43 combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.  
44

45 Acoustical Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with  
46 ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and  
47 openings in building construction as demonstrated by testing representative assemblies according to  
48 ASTM E 90.  
49

50 Thermal Insulation: As specified in Section 07 21 00 "Thermal Insulation."  
51

## 52 **PART 3 - EXECUTION**

### 53 **APPLYING AND FINISHING PANELS**

54 Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.  
55  
56



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**SECTION 09 51 23**  
**ACOUSTICAL TILE CEILINGS**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

- Acoustical tiles for interior ceilings.
- Fully concealed, direct-hung, suspension systems.

**ACTION SUBMITTALS**

Product Data: For each type of product.

Samples: For each exposed product and for each color and texture specified.

**INFORMATIONAL SUBMITTALS**

Coordination Drawings: Reflected ceiling plans, drawn to scale, and coordinated with each other, using input from installers of the items involved.

Product test reports.

Research reports.

Field quality-control reports.

**CLOSEOUT SUBMITTALS**

Maintenance data.

**PART 2 - PRODUCTS**

**ACOUSTICAL TILES**

Acoustical Tile Standard: Manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264.

Color: White.

Light Reflectance (LR): Class A, 0.75 or greater.

Ceiling Attenuation Class (CAC): 35-39

Noise Reduction Coefficient (NRC): 0.55

Edge/Joint Detail: Square.

Thickness: 5/8 inch.

Modular Size: 24 by 24 inches.

**METAL SUSPENSION SYSTEM**

Metal Suspension-System Standard: Manufacturer's standard, direct-hung, fully concealed, metal suspension system that complies with applicable requirements in ASTM C 635/C 635M.

1 Direct-Hung, Double-Web Suspension System: Main and cross runners roll formed from and capped with  
2 cold-rolled steel sheet, prepainted, electrolytically zinc coated, or hot-dip galvanized, G30 coating  
3 designation.

4  
5 Structural Classification: Intermediate-duty system.

6 Access: Upward and end pivoted, with initial access openings of size indicated below and located  
7 throughout ceiling within each module formed by main and cross runners, with additional access  
8 available by progressively removing remaining acoustical tiles.

9  
10 Initial Access Opening: In each module, 24 by 24 inches.

#### 11 12 **ACCESSORIES**

13 Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1,  
14 "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

15  
16 Seismic Clips: Manufacturer's standard seismic clips designed to secure acoustical tiles in-place during a  
17 seismic event.

### 18 19 **PART 3 - EXECUTION**

#### 20 21 **PREPARATION**

22 Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges  
23 of each ceiling. Avoid using less-than-half-width tiles at borders unless otherwise indicated.

24  
25 Layout openings for penetrations centered on the penetrating items.

#### 26 27 **INSTALLATION OF SUSPENDED ACOUSTICAL TILE CEILINGS**

28 Install suspended acoustical tile ceilings according to ASTM C 636/C 636M and manufacturer's written  
29 instructions.

30  
31 Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary  
32 to conceal edges of acoustical tiles.

33  
34 Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before  
35 they are installed.

36 Do not use exposed fasteners, including pop rivets, on moldings and trim.

37  
38 Arrange directionally patterned acoustical tiles as indicated on reflected ceiling plans.

#### 39 40 **FIELD QUALITY CONTROL**

41 Special Inspections: Owner will engage a qualified special inspector to perform inspections:

42  
43 Periodic inspection during the installation of suspended ceiling grids according to ASCE/SEI 7.

44  
45 **END OF SECTION**

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6 **SECTION 09 68 16**  
7 **SHEET CARPETING**

8  
9  
10 **PART 1 - GENERAL**

11  
12 **SUMMARY**

13 Section Includes:

- 14 Tufted carpet.  
15 Woven carpet.  
16 Carpet cushion.

17  
18 **PREINSTALLATION MEETINGS**

19 Preinstallation Conference: Conduct conference at Project site.

20  
21 **ACTION SUBMITTALS**

22 Product Data: For each type of product.

23 Shop Drawings: For carpet installation, showing the following:

- 24 Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are  
25 required in carpet.  
26 Carpet type, color, and dye lot.  
27 Seam locations, types, and methods.  
28 Type of installation.  
29 Pattern type, repeat size, location, direction, and starting point.  
30 Pile direction.  
31 Types, colors, and locations of insets and borders.  
32 Types, colors, and locations of edge, transition, and other accessory strips.  
33 Transition details to other flooring materials.  
34 Type of carpet cushion.

35 Samples: For each exposed product and for each color and texture required.

36  
37 **INFORMATIONAL SUBMITTALS**

38 Product test reports.

39 Sample warranties.

40  
41 **CLOSEOUT SUBMITTALS**

42 Maintenance data.

43  
44 **QUALITY ASSURANCE**

45 Installer Qualifications: Certified by the International Certified Floorcovering Installers Association at the  
46 Commercial II certification level.

47  
48 **WARRANTY**

49 Special Warranty for Carpet: Manufacturer agrees to repair or replace components of carpet installation  
50 that fail in materials or workmanship within specified warranty period.

51 Warranty Period: 10 years from date of Substantial Completion.

52 Special Warranty for Carpet Cushion: Manufacturer agrees to repair or replace components of carpet  
53 cushion installation that fail in materials or workmanship within specified warranty period.

54 Warranty Period: 10 years from date of Substantial Completion.  
55

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3  
4 **PART 2 - PRODUCTS**

5  
6 **WOVEN CARPET**

7 Match carpet to existing courtrooms.

8 Color: As selected by Architect from manufacturer's full range.

9  
10 Pattern: Match Architect's samples.

11  
12 Fiber Content: 80 percent wool; 20 percent nylon 6, 6.

13  
14  
15 **INSTALLATION ACCESSORIES**

16 Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation  
17 provided or recommended by [carpet] [carpet cushion] manufacturer.

18  
19 Adhesives: Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions  
20 indicated, that complies with flammability requirements for installed carpet and is recommended or  
21 provided by carpet manufacturer.

22  
23 Tackless Carpet Stripping: Water-resistant plywood, in strips as required to match cushion thickness and  
24 that comply with CRI's "Carpet Installation Standard."

25  
26 Seam Adhesive: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for  
27 sealing and taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at  
28 seams.

29  
30 **PART 3 - EXECUTION**

31  
32 **PREPARATION**

33 General: Comply with CRI's "CRI Carpet Installation Standard" and with carpet manufacturer's written  
34 installation instructions for preparing substrates.

35  
36 Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill  
37 cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch  
38 wide or wider, and protrusions more than 1/32 inch, unless more stringent requirements are required by  
39 manufacturer's written instructions.

40  
41 Concrete Substrates: Remove coatings, including curing compounds, and other substances that are  
42 incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use  
43 mechanical methods recommended in writing by adhesive and carpet manufacturers.

44  
45 Broom and vacuum clean substrates to be covered immediately before installing carpet.

46  
47 **CARPET INSTALLATION**

48 Comply with CRI's "CRI Carpet Installation Standard" and carpet manufacturer's written installation  
49 instructions for the following:

- 50  
51 Direct-glue-down installation.  
52 Double-glue-down installation.  
53 Carpet with attached-cushion installation.  
54 Preapplied adhesive installation.  
55 Hook-and-loop installation.  
56 Stretch-in installation.

- 1           Stair installation.
- 2
- 3       Comply with carpet manufacturer's written instructions and Shop Drawings for seam locations and
- 4       direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams
- 5       under the door in closed position.
- 6
- 7           Stretch-in Carpet Installation: Install carpet cushion seams at 90-degree angle with carpet seams.
- 8
- 9       Install pattern to match existing courtrooms.
- 10
- 11       Install borders with mitered corner seams.
- 12
- 13       Do not bridge building expansion joints with carpet.
- 14
- 15       Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including
- 16       cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet
- 17       manufacturer.
- 18
- 19       Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges,
- 20       alcoves, and similar openings.
- 21
- 22       Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating
- 23       on carpet as marked on subfloor. Use nonpermanent, nonstaining marking device.
- 24
- 25       Protect carpet against damage from construction operations and placement of equipment and fixtures
- 26       during the remainder of construction period. Use protection methods recommended in writing by carpet
- 27       manufacturer.
- 28
- 29

**END OF SECTION**

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**SECTION 09 77 23**  
**FABRIC-WRAPPED PANELS**

**PART 1 - GENERAL**

**SUMMARY**

Section includes shop-fabricated, fabric-wrapped wall panels.

**PREINSTALLATION MEETINGS**

Preinstallation Conference: Conduct conference at Project site.

**ACTION SUBMITTALS**

Product Data: For each type of product.

Shop Drawings: For panel assembly and installation.

Samples: For each exposed product and for each color and texture specified.

**INFORMATIONAL SUBMITTALS**

Product certificates.

**CLOSEOUT SUBMITTALS**

Maintenance data.

**PART 2 - PRODUCTS**

**PERFORMANCE REQUIREMENTS**

Fire-Test-Response Characteristics: Panels shall comply with "Surface-Burning Characteristics" or "Fire Growth Contribution" Subparagraph below, or both, as determined by testing identical products by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

Surface-Burning Characteristics: Comply with ASTM E 84 or UL 723; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

Flame-Spread Index: 25 or less.

Smoke-Developed Index: 450 or less.

Fire Growth Contribution: Comply with acceptance criteria of local code and authorities having jurisdiction when tested according to NFPA 265 Method B Protocol or NFPA 286.

**FABRIC-WRAPPED WALL PANELS**

Fabric-Wrapped Wall Panel: Manufacturer's standard panel construction consisting of facing material laminated to front face, edges, and back edge border of core.

Mounting: Edge mounted with splines secured to substrate.

Mounting: Back mounted with manufacturer's standard adhesive, secured to substrate.

Core: Manufacturer's standard.

Core-Face Layer: Manufacturer's standard.

Reveals between Panels: Recessed reveals.

Facing Material: Match material in existing courtrooms.

**MATERIALS**

Sustainable Design Requirements:



1 Core Materials: Manufacturer's standard.

2  
3 Particleboard: Panels complying with ANSI A208.1, grade to suit performance requirements.

4  
5 Wood and Plywood: Manufacturer's standard plywood or clear, vertical grain, straight, kiln-dried  
6 hardwood.

7  
8 Fire-retardant treated by pressure process with a flame-spread index of 25 or less when tested  
9 according to ASTM E 84 or UL 723, and with no evidence of significant progressive  
10 combustion when the test is extended an additional 20 minutes, and with the flame front not  
11 extending more than 10.5 feet beyond the centerline of the burners at any time during the test.

12  
13 Treated material shall have a moisture content of 28 percent or less when tested according to  
14 ASTM D 3201/D 3201M at 92 percent relative humidity.

15 Kiln-dry material after treatment to 19 percent for lumber and 15 percent or less for plywood.

16  
17 Facing Material: Fabric from same dye lot; color and pattern as selected by Architect from manufacturer's  
18 full range.

## 19 20 **FABRICATION**

21 Standard Construction: Use manufacturer's standard construction unless otherwise indicated; with facing  
22 material applied to face, edges, and back border of dimensionally stable core; and with rigid edges to  
23 reinforce panel perimeter against warpage and damage.

24  
25 Core-Face Layer: Evenly stretched over core face and edges and securely attached to core; free from  
26 puckers, ripples, wrinkles, or sags.

27  
28 Facing Material: Apply fabric fully covering visible surfaces of panel; with material stretched straight, on  
29 the grain, tight, square, and free from puckers, ripples, wrinkles, sags, blisters, seams, adhesive, or other  
30 visible distortions or foreign matter.

31  
32 Fabrics with Directional or Repeating Patterns or Directional Weave: Mark fabric top and attach fabric  
33 in same direction so pattern or weave matches in adjacent panels.

34  
35 Dimensional Tolerances of Finished Panels: Plus or minus 1/16 inch.

## 36 37 **PART 3 - EXECUTION**

### 38 39 **INSTALLATION**

40 Install panels in locations indicated. Unless otherwise indicated, install panels with vertical surfaces and  
41 edges plumb, top edges level and in alignment with other panels, faces flush, and scribed to fit adjoining  
42 work accurately at borders and at penetrations.

43  
44 Comply with manufacturer's written instructions for installation of panels using type of mounting devices  
45 indicated. Mount panels securely to supporting substrate.

46  
47 Align fabric pattern and grain with adjacent panels.

### 48 49 **CLEANING**

50 Clip loose threads; remove pills and extraneous materials.

51  
52 Clean panels on completion of installation to remove dust and other foreign materials according to  
53 manufacturer's written instructions.

54  
55 **END OF SECTION**

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**SECTION 09 91 23**  
**INTERIOR PAINTING**

**PART 1 - GENERAL**

**SUMMARY**

Section includes surface preparation and the application of paint systems on interior substrates.

Wood.

Gypsum board.

Cotton or canvas insulation covering.

**DEFINITIONS**

MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

**ACTION SUBMITTALS**

Product Data: For each type of product. Include preparation requirements and application instructions.

Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

Samples: For each type of paint system and in each color and gloss of topcoat.

**QUALITY ASSURANCE**

Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

Architect will select one surface to represent surfaces and conditions for application of each paint system.

Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft..

Other Items: Architect will designate items or areas required.

Final approval of color selections will be based on mockups.

If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

1  
2 **PART 2 - PRODUCTS**  
3

4 **MANUFACTURERS**

5 Products: Subject to compliance with requirements, available products that may be incorporated into the  
6 Work include, but are not limited to products listed in the Interior Painting Schedule for the paint category  
7 indicated.

8  
9 **PAINT, GENERAL**

10 MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI  
11 Approved Products Lists."

12  
13 Material Compatibility:

14  
15 Materials for use within each paint system shall be compatible with one another and substrates  
16 indicated, under conditions of service and application as demonstrated by manufacturer, based on  
17 testing and field experience.

18 For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers  
19 for use in paint system and on substrate indicated.

20  
21 Colors: As selected by Architect from manufacturer's full range.  
22

23 **PART 3 - EXECUTION**  
24

25 **EXAMINATION**

26 Examine substrates and conditions, with Applicator present, for compliance with requirements for  
27 maximum moisture content and other conditions affecting performance of the Work.  
28

29 Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:  
30

- 31 Concrete: 12 percent.  
32 Fiber-Cement Board: 12 percent.  
33 Masonry (Clay and CMUs): 12 percent.  
34 Wood: 15 percent.  
35 Gypsum Board: 12 percent.  
36 Plaster: 12 percent.  
37

38 Verify suitability of substrates, including surface conditions and compatibility with existing finishes and  
39 primers.  
40

41 Proceed with coating application only after unsatisfactory conditions have been corrected.  
42

43 Application of coating indicates acceptance of surfaces and conditions.  
44

45 **PREPARATION**

46 Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting  
47 Specification Manual" applicable to substrates and paint systems indicated.  
48

49 Remove hardware, covers, plates, and similar items already in place that are removable and are not to be  
50 painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied  
51 protection before surface preparation and painting.  
52

53 After completing painting operations, use workers skilled in the trades involved to reinstall items that  
54 were removed. Remove surface-applied protection if any.

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**APPLICATION**

Apply paints according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

**INTERIOR PAINTING SCHEDULE**

Gypsum Board Substrates:

- Prime Coat: Latex, interior, matching topcoat.
- Intermediate Coat: Latex, interior, matching topcoat.
- Topcoat: Latex, interior, flat (MPI Gloss Level 1).

Wood Substrates: Wood trim, Doors.

Latex over Latex Primer System:

- Prime Coat: Primer, latex for exterior wood.
- Intermediate Coat: Latex, exterior, matching topcoat.
- Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4).

Wood Substrates: Wood-based panel products.

Latex over Latex Primer System:

- Prime Coat: Primer, latex for exterior wood.
- Intermediate Coat: Latex, exterior, matching topcoat.
- Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4).

**END OF SECTION**

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**SECTION 12 36 61.16**  
**SOLID SURFACING COUNTERTOPS**

**PART 1 - GENERAL**

**SUMMARY**

Section Includes:

Solid surface material countertops.

**ACTION SUBMITTALS**

Product Data: For countertop materials.

Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.

Samples: For each type of material exposed to view.

**PART 2 - PRODUCTS**

**SOLID SURFACE COUNTERTOP MATERIALS**

Solid Surface Material: Homogeneous-filled plastic resin complying with ICPA SS-1.

Type: Provide Standard type or Veneer type made from material complying with requirements for Standard type, as indicated unless Special Purpose type is indicated.

Colors and Patterns: As selected by Architect from manufacturer's full range.

Solid Wood Edges and Trim: Clear red oak lumber, free of defects, selected for compatible grain and color, and kiln dried to 7 percent moisture content.

Plywood: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch sanded.

**COUNTERTOP FABRICATION**

Fabricate countertops according to solid surface material manufacturer's written instructions and to the AWI/AWMAC/WI's "Architectural Woodwork Standards."

Grade: Custom.

Configuration:

Front: 3/4-inch bullnose.

Countertops: 3/4-inch- thick, solid surface material with front edge built up with same material.

Joints: Fabricate countertops without joints.

Joints: Fabricate countertops in sections for joining in field.

**INSTALLATION MATERIALS**

Adhesive: Product recommended by solid surface material manufacturer.

Sealant for Countertops: Comply with applicable requirements in Section 07 92 00 "Joint Sealants."

1  
2 **PART 3 - EXECUTION**

3  
4 **INSTALLATION**

5 Fasten countertops by screwing through corner blocks of base units into underside of countertop. Predrill  
6 holes for screws as recommended by manufacturer.

7  
8 Fasten subtops to cabinets by screwing through subtops into cornerblocks of base cabinets. Shim as needed  
9 to align subtops in a level plane.

10  
11 Secure countertops to subtops with adhesive according to solid surface material manufacturer's written  
12 instructions.

13  
14 Bond joints with adhesive and draw tight as countertops are set. Mask areas of countertops adjacent to  
15 joints to prevent adhesive smears.

16  
17 Install backsplashes and end splashes by adhering to wall and countertops with adhesive.

18  
19 Install aprons to backing and countertops with adhesive.

20  
21 Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts to prevent damage  
22 while cutting. Make cutouts to accurately fit items to be installed, and at right angles to finished surfaces  
23 unless beveling is required for clearance. Ease edges slightly to prevent snipping.

24  
25 **END OF SECTION**