

REQUEST FOR PROPOSALS (RFP)
For
GENERAL CONTRACTOR AND CONSTRUCTION SERVICES

HOPE VILLAGE TINY HOUSING ALTERNATIVES INC

A Community Development Block Grant

CDBG-CV Project

September 13, 2021

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Invitation to Submit Proposal

Introduction

The HOPE VILLAGE TINY HOUSING ALTERNATIVES, INC, (HOPE VILLAGE), and/or its designated representative, Chippewa County Housing Authority is seeking proposals for services relating to the HOPE VILLAGE COMMUNITY CENTER, GENERAL CONTRACTOR AND CONSTRUCTION SERVICES Project. HOPE VILLAGE has applied for federal funding from the Community Development Block Grant (CDBG) Program for this project. Proposals will be accepted for GENERAL CONTRACTOR AND CONSTRUCTION SERVICES.

Minimum requirements include previous experience in GENERAL CONTRACTING FOR COMMERCIAL BUILDINGS to include framing, sheetrock, flooring, plumbing, electrical and cabinetry on CDBG or similar state/federally funded projects. Proposals will be accepted from individuals, firms, or groups of firms with the demonstrated expertise and experience in these areas of practice.

Contact Information

All interested persons and firms should contact Valerie Prueher, Rehab Specialist or Joel Weiss, Project Coordinator, between the hours of 8:00 a.m. to 4:30 p.m., Monday - Friday at 715-726-7933 or Housingauthority@co.chippewa.wi.us to request the RFP packet or additional information, as needed.

Persons/firms that intend to submit a proposal should send notification of intent to the CHIPPEWA COUNTY HOUSING AUTHORITY (CCHA) with the person's/firm's name and contact information in case of addenda or other changes. Additionally, the RFP may be sent to those persons/firms that are included on HOPE VILLAGE persons/firms that is specifically created for this RFP. Those who the CHIPPEWA COUNTY HOUSING AUTHORITY (CCHA) has sent an RFP and those who have provided contact information through a request for a copy of the RFP or through a notification of intent will receive all information regarding the RFP. The information may include, but is not limited to, any amendments to the RFP, answers to inquiries received regarding the RFP, or changes to the RFP schedule.

Questions Regarding This RFP

This solicitation contains a description of the project and services required. Interested proposers have the responsibility of understanding what is required by this solicitation. During the review of the RFP, if the Proposer discovers any errors, omissions or ambiguities within the RFP, they should identify them in writing and call them to the immediate attention of the CHIPPEWA COUNTY HOUSING AUTHORITY prior to the RFP submission deadline. HOPE VILLAGE or CHIPPEWA COUNTY HOUSING AUTHORITY shall not be held responsible for any person's/firm's lack of understanding of the project.

Questions for clarification concerning this RFP must be in writing and received via email to Joel Weiss, Project Coordinator, at JWeiss@co.chippewa.wi.us on or before noon on the 2nd of November 2022. After this date, questions involving the content or intent of the proposal will not be answered. All questions will be responded to by Valerie Prueher, Rehab Specialist or Joel Weiss, Project Coordinator, in writing via email, and provided to all parties requesting an RFP for which Hope Village and CCHA has the contact information, and treated as an addendum to the RFP packet.

Hope Village and CCHA makes no representations as to the conditions of the project other than those representations made herein, and no employee or any other representative of the Hope Village has the authority to make any oral or written representations as to the conditions of the project. Persons/firms should only contact the person designated above regarding this RFP and should not contact HOPE VILLAGE, MIKE

COHOON , any HOPE VILLAGE members, any committee members, or any other HOPE VILLAGE staff for clarification on this RFP.

Addenda Interpretations

If it becomes necessary to revise any part of this RFP, a written addendum will be provided. HOPE VILLAGE is not bound by any oral clarifications changing the scope of the work for this project. All addenda issued by the HOPE VILLAGE will become part of the official RFP and will be emailed to all Proposers of record based upon contact information on record at the original time of issuance or subsequently provided.

Scope of Services & Deliverables

HOPE VILLAGE has been awarded federal funding from the Community Development Block Grant (CDBG) Program for the Hope Village Community Center, General Contracting and Construction Services.

The focus of the Hope Village Community Center project will be to remodel the existing building that will include General Contracting and Construction services to include framing, sheetrock, flooring, plumbing, electrical, HVAC and cabinetry for Hope Village located at 1825 Kennedy Rd., Chippewa Falls WI.

Hope Village Community & Project Area Description:

Conversion/renovation of an existing dental office building to serve as a Community Center that will serve homeless households living in the Tiny Houses and other homeless households in the community. The center will include bathrooms with showers, a shared kitchen, living room/school study space, office space, meeting room and laundry facilities.

Project Background:

Hope Village, a non-profit 501c3 organization, with the assistance of the City of Chippewa Falls, which is the sponsoring agency for Hope Village, applied for and was selected to receive a Community Development Block Grant COVID-19 Response (CDBG-CV) Grant from the State of Wisconsin. Background information materials and a Project Area/Service Area Map for the proposed HOPE VILLAGE COMMUNITY CENTER Project location are provided in **Exhibit I** attachments.

CONSTRUCTION Services

Refer to **Exhibit V** for project specifications. The selected person(s)/firm(s) will conduct activities for and complete a CONSTRUCTION COST PROPOSAL to including the following:

- Act as the General Contractor, including all supplies, and sub-contractors to complete the project as laid-out in the attached drawings and plans.
- Provide materials and labor to complete the project as listed in the attached drawing and plans.
- Coordinate work and subcontractors to keep work flow consistent and timely.
- Pull necessary permits and ensure work passes inspections.
- Deliver project on time and within budget.
- Coordinate communication with Hope Village and on-site workers/trades to utilize volunteers where stated.
- Suggest any cost effectiveness components.
- Comply with CDBG regulations and policies applicable to the Project.
- Comply with Davis/Bacon regulations and payroll submission including sub-contractors.
- Provide references.

The final construction of the Community Center must be completed by **December 31, 2022**.

All work to be undertaken as part of this proposed program must be undertaken in accordance with the Federal Code of Federal Regulations, including but not limited to 24 CFR, Part 570 and 24 CFR, Part 58; and other applicable State and Federal requirements. Federal requirements for CDBG projects regarding Conflicts of Interest, Lobbying, and Section 3, Affirmative Action, Equal Opportunity, Minority Business Enterprise/Woman Business Enterprise (MBE/WBE), Federal Labor Standards Provisions, and Davis-Bacon and Related Acts (DBRA)] are provided in **Exhibit II** attachments included with this RFP. Applicable requirements must be met by the selected entity for this RFP, and any entities awarded a contract or subcontract for the CDBG Project.

Proposal Requirements

Directions for Submittal

Proposals must be received at the CHIPPEWA COUNTY HOUSING AUTHORITY OFFICE. Direct submittals to Valerie Prueher, Rehab Specialist, labeled "ATTN: Hope Village,, Community Center CDBG-CV PROJECT, 711 N BRIDGE ST RM # 14, CHIPPEWA FALLS WI 54729; or via email to housingauthority@co.chippewa.wi.us with the Subject of "ATTN: Hope Village Community Center Project RFP Review Committee", no later than 12:00 NOON Central time on **November 2, 2021**. The Bid Opening will be held at 1:00 P.M. in Room 016 of the Chippewa County Courthouse located at 711 N. Bridge St., Chippewa Falls, WI 54729. Hope Village reserves the right to reject any and all Proposals not meeting the requirements of this Request for Proposals for construction services.

Persons requesting ADA assistance accommodations for hearing and speech impaired may contact Valerie Prueher, Rehab Specialist, 715-726-4580 or vprueher@co.chippewa.wi.us.

Individuals/firms interested in being considered for this project must submit a proposal detailing qualifications, technical expertise, management and staff capabilities, related prior experience, and a detailed cost estimate for the Scope of Services described above. The objective of the competitive process is to objectively select the firm that will provide high-quality, efficient, and cost-effective services. The selected person(s)/firm(s) will be invited to contract with Hope Village for construction services.

Exhibit III, attached to this RFP, represents the qualifications sought for the General Contractor services. These criteria have been established to assure the Community of professional expertise with adequate experience and capacity to ensure successful completion of the proposed project within the allocated time constraints.

Exhibit IV, attached hereto, is a Rating System that will be utilized for selection of the General Contractor. This rating system will be employed by HOPE VILLAGE in determining which proposal best meets the needs as outlined in this RFP.

Proposal Contents

1. Cover Letter.
2. Project scope statement describing the work to be undertaken, include the services outlined in the RFP, and any modifications or expansion of the scope provided in order to deliver the construction services.
3. Project work plan indicating mechanisms proposed to coordinate the work effort with the Hope Village.
4. Project coordination plan indicating mechanisms proposed to coordinate the work effort with Hope Village and CCHA
5. Proposer's profile and a clear concise statement with:
 - a. Examples indicating past performance and familiarity with the type of work detailed in the RFP

- b. Examples of implementation of the Proposer's work/services in other communities and noted successes
- c. A list of client references for which Proposer provided similar services as described in the RFP.

Proposal Format

The proposal must be submitted in typed format with the items to be included in the proposal placed in the same order as described in above. The proposal must be signed by the submitter or authorized representative and dated. The pages of the proposal must be numbered in consecutive order and should not exceed the maximum sheet size of 8.5" x 11." The name, mailing address, phone number and email address of the Proposer should be placed in the upper left corner on the cover page of the Proposal.

Selection Process Schedule

Hope Village anticipates authorizing a contract for this work in November 2021 with a notice to proceed no later than November 30, 2021. The scope of services will take place over 12 month period. Hope Village's goal is to have the Community Center, CDBG-CV Project completed as soon as possible and no later than **December 31, 2022**. Responding persons/firms should comment on the above schedule as part of their proposal and state how realistic it is to achieve substantial completion of the work by December 31, 2022.

Other Conditions of Proposal Submittal

1. Only one proposal will be accepted from any person, firm or entity.
2. No proposal will be accepted from any person, firm or entity that is in arrears for any obligation to Hope Village, is debarred from contracting for federally funded projects, or that otherwise may be deemed irresponsible or unresponsive by Hope Village, or Chippewa County Housing Authority staff.
3. All Proposals submitted become public information and may be reviewed by anyone requesting to do so at the conclusion of the evaluation process.
4. Requirements and conditions of employment and contracting to be observed for compliance with Conflict of Interest, Lobbying, and Section 3 , Affirmative Action, Equal Opportunity, Minority-Business Enterprise/Women Business Enterprise (MBE/WBE), Federal Labor Standards, and Davis-Bacon and Related Acts (DBRA)] regulations apply to this project. Refer to **Exhibit II** attachments for the CDBG Project requirements.
5. Return of enclosed: Conflict of Interest Disclosure, Lobbying Certification, Disclosure of Lobbying Activities (if applicable) and Section 3 Information for Reporting Form.

Evaluation and Selection

Final selection of the General Contractor and Construction Services provider will be based upon the maximum total points scored as set forth in the Rating System in **Exhibit IV**.

Hope Village reserves the right to negotiate a contract with the services provider selected to perform the professional services required.

Hope Village, Chippewa County, Wisconsin reserves the right to reject any and all responses submitted.

If you have any questions regarding this Request for Proposal, please contact:
Valerie Prueher, Rehab Specialist or Joel Weiss, Project Coordinator

housingauthority@co.chippewa.wi.us

715-726-7933

EXHIBIT I

Project Background and Project Area/Service Area Maps

REFER TO ATTACHMENTS FOR:

PROJECT BACKGROUND DOCUMENTS PROJECT AREA / SERVICE AREA MAPS

**Project Open House Site visits will be held
Thursday September 23, 2021 at 8:30 a.m. to 10:00 a.m.**

And

Thursday October 5, 2021 at 8:30 a.m. to 10:00 a.m.

At

1825 Kennedy Rd., Chippewa Falls WI 54729

**Please call Joel Weiss, Project Coordinator at 715-559-4119 to register
Or make an alternate appointment**

EXHIBIT II

State and Federal Regulatory Requirements for CDBG-Assisted Projects

REFER TO EXHIBIT II ATTACHMENTS FOR:

1. POTENTIAL CONFLICT OF INTEREST DISCLOSURE
2. CONFLICT OF INTEREST CLAUSE
3. LOBBYING CERTIFICATION
4. DISCLOSURE OF LOBBYING ACTIVITIES (IF APPLICABLE)
5. SECTION 3 INFORMATION FOR REPORTING FORM
6. SECTION 3 CLAUSE
7. AFFIRMATIVE ACTION CLAUSE
8. EQUAL OPPORTUNITY CLAUSE
9. MINORITY BUSINESS ENTERPRISE/WOMAN BUSINESS ENTERPRISE WEB RESOURCES
10. DAVIS-BACON AND RELATED ACTS CLAUSE
11. FEDERAL LABOR STANDARDS PROVISIONS

THE CDBG ATTACHMENTS LISTED ABOVE ARE FROM THE CDBG IMPLEMENTATION HANDBOOK AND HANDBOOK CHAPTER ATTACHMENTS ON THE BUREAU OF COMMUNITY DEVELOPMENT WEBSITE AT:

<https://doa.wi.gov/Pages/LocalGovtsGrants/CDBGImplementationHandbook.aspx>

EXHIBIT III

Minimum Qualifications

- A. The person(s)/firm(s) must have successfully provided General Contractor services for a minimum of 3 similar type projects. The person/firm may not be selected if there have been any unresolved issues relative to the services provided.
- B. The principal responsible for coordination of the General Contractor must have a minimum 3 years of experience with this specific type of work.
- C. The principal responsible for providing the General Contracting must have a minimum of 3 years of experience with the CDBG Program **or** other federal/state funded programs or projects.
- D. The person(s)/firm(s) must submit references as to their professional qualifications from a minimum of 3 previous clients for which the person(s)/firm(s) has/have performed work (include contact name, title, firm/organization/government name, email address, mailing address and telephone number).
- E. The person(s)/firm(s) must have experience with Davis-Bacon Related Acts and payroll submission.
- F. The person(s)/firm should have familiarity the non-profit and similar communities' needs.

EXHIBIT IV

Selection Rating System

1. Project Coordinator/Lead's Experience	<u>Maximum 20 Points</u>
A. 3 or more years experience with CDBG or other federal/state programs	20 Points
B. 2 years experience	15 Points
C. 1 years experience	10 Points
D. Less than 1 year experience	5 Points
E. No experience	0 Points
2. Firm's Project Completion Background	<u>Maximum 20 Points</u>
A. Completion of 3 or more previous, similar type projects within proposed time frame & budget	20 Points
B. Completion of 2 similar projects	15 Points
C. Completion of 1 similar project	10 Points
D. Working on 1 similar project; not completed	5 Points
E. No work on a similar project	0 Points
3. References from Similar Projects	<u>Maximum 20 Points</u>
A. Respondent lists 3 previous clients with similar projects and all references give excellent response on quality of service	20 Points
B. Respondent lists 2 previous clients	15 Points
C. Respondent lists 1 previous client	10 Points
D. Respondent lists no previous references	0 Points
4. Firm's Familiarity with Community's Needs	<u>Maximum 10 Points</u>
A. Firm is thoroughly familiar with community(ies) with similar population and characteristics to Hope Village	10 Points
B. Firm is somewhat familiar with community(ies) with similar population and characteristics to [Hope Village	5 Points
C. Firm is unfamiliar with community(ies) with similar population and characteristics to Hope Village	0 Points
5. Responsiveness to Specifications of Project/RFP	<u>Maximum 20 Points</u>
A. Needs of project are fully addressed in Proposal	20 Points
B. Needs of project are somewhat addressed in Proposal	10 Points
C. Needs of project are not addressed/resolved in Proposal	0 Points
6. Cost Effectiveness	<u>Maximum 10 Points</u>
A. Budget/proposal includes 3 or more cost effectiveness Components	10 Points
B. Budget/proposal includes 1-2 cost effectiveness components	5 Points
C. Budget/proposal does not include cost effectiveness components	0 Points
7. Budget	<u>Maximum 10 Points</u>
A. Budget within Hope Village's capacity as proposed	10 Points
B. Budget slightly above Hope Village's capacity as proposed;	5 Points

- potentially feasible with modest adjustment
- C. Budget not reasonably within Hope Village's capacity as proposed; would require extensive adjustment to be feasible 0 Points
8. Minority or Women Business Enterprise, Disadvantaged Business Enterprise, or Section 3/LMI Firm* Maximum 5 Points
- A. Firm is MBE, WBE, DBE or Section 3/LMI firm 5 Points
- B. Firm is not MBE, WBE, DBE or Section 3/LMI firm 0 Points
9. Small Business Firm Maximum 5 Points
- A. Firm is a small business 5 Points
- B. Firm is not a small business 0 Points

MAXIMUM TOTAL POINTS: 120 POINTS

Note to Responders of RFP:

Proposal submittals are to be organized to address the submittal specifications listed in the RFP and the evaluation criteria listed above.

**MBE/WBE/DBE and Section 3/LMI Firms are Defined As Follows:*

Minority Business Enterprise (MBE) – Business with at least 51% ownership and control held by minority person(s).

Woman Business Enterprise (WBE) – Business with at least 51% ownership and control held by a woman or women.

Disadvantaged Business Enterprise (DBE) – Small business with at least 51% ownership and control held by person(s) classified as “disadvantaged” individual(s) according to the Wisconsin Department of Transportation standards (<https://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/dbe-program-brochure.pdf>)

Section 3/LMI Firm – Firm with at least 51% ownership interest and control held by low-to-moderate income (LMI) Wisconsin resident(s) (LMI according to HUD LMI limits for the County in which the owner resides); or at least 30% of the firm's full-time permanent employees are Wisconsin LMI residents (LMI based on the HUD LMI income limits for the County in which they live); or the owner(s) of the firm commit(s) to awarding at least 25% of its subcontracting dollar amount (i.e., 25% of subcontracting, based on the total amount of subcontracts awarded) to Section 3/LMI firms for the CDBG project.

EXHIBIT V
Project Specifications

REFER TO EXHIBIT V ATTACHMENTS FOR PROJECT PLANS AND SPECIFICATIONS

EXHIBIT I – Attachment

Project Background

PART 5 - PROJECT DESCRIPTION NARRATIVE

1. Current condition of the problem:

Homelessness has been a growing problem in Chippewa County for decades. The Chippewa County Council on Homelessness and Hunger, (CCCHH) was formed in 1990 in response to the increasing number of households requesting emergency housing assistance. The Council was comprised of public and private agencies to collaborate resources and develop programs to assist the residents facing housing crisis. In 2015 the only agency devoted solely to providing homeless services closed its doors, including the only homeless shelter in the County. Since that time other agencies have attempted to fill the service gap. The Council continues to meet monthly and maintains data that is used by member agencies to submit funding applications for housing services. In 2016, Hope Village, a 501(c)(3), was formed to provide temporary shelter for homeless using Tiny Houses placed at local churches. The program grew from 1 Tiny House to 9 with a 10th home near completion. The Tiny Houses along with sporadic funding for motel vouchers are the only shelter programs available in the County.

CDC Outreach Center (CDC) saw an average of 99 households per month seeking housing assistance in 2020. The collaborated numbers through the CCCHH indicated the numbers are even higher. Many are living in a precarious housing situations where they are just one negative episode away (such as a large car repair or missed days of work because a child is sick) from becoming homeless. A high number of them are living in a unit, but are behind in their rent and are facing eviction. Many are doubled or tripled up, living with friends or relatives, putting a strain on the relationship and jeopardizing their housing due to overcrowding. Some have already lost their housing and are living in their cars, camping outdoors or couch hopping. The waiting lists for the Section 8 Voucher Program average 12 to 18 months. For many, the financial crisis comes before their name reaches the top of the waiting list and they seek emergency assistance through CDC. These folks often have a difficult time competing for rental vacancies in the open market because they have poor rental references, low credit scores, they cannot come up with the security deposit fast enough, or they don't have the means to travel to fill out the application or view apartments fast enough to compete with other applicants. These are the households we will serve through this grant.

2. Describe the increased frequency with which the problem occurs due to the coronavirus pandemic as compared to the situation prior to coronavirus. (Include supporting documentation in the attachments when necessary):

Statistics kept by the CCCHH and CDC show that the number of persons/households seeking housing assistance nearly doubled from 2019 through 2020 and documentation of this is included in the Attachments and Supporting Documentation. CDC collaborated with West-CAP to administer ESG Covid Grant funds in Chippewa County receiving \$60,000 for emergency rent payments and motel vouchers. The funds were disbursed in less than 3 months 8/19/20 to 11/7/20 serving 64 households. Tiny House guests faced barriers during 2020 as the churches restricted access to their buildings, the YMCA closed and restricted access as did the Laundry service program. The Chippewa County School districts were virtual from March to June, and most went virtual again in September only recently opening in mid-January. Supporting documentation from these facilities is included.

3. Number of persons and/or households affected by the problem compared to before the coronavirus pandemic:

The letter from CCCHH provides the statistics gathered from 2019 through 2020. It demonstrates the dramatic increase in persons/households seeking emergency housing assistance. CDC also documented how the number of requests for emergency housing assistance increased as coronavirus took hold of our community. Notable was their number of new, never before served applicants indicating that they were specifically affected by coronavirus.

4. Effect(s) of the problem if left untreated:

CDC has provided the number of unsheltered households for the last two years. These are households who were provided information and referral only because there were no openings in Tiny Houses and/or

no funds available for motel vouchers. The effects of being homeless are devastating. Seeking nightly shelter becomes their priority and they are unable to attend to their health, find adequate meals, children miss school, adults miss work and lose their jobs. Family and friend try to help, often putting their own housing in jeopardy. Increasing Hope Village's and CDC's capacity to serve more households will help to reduce the number who go unsheltered.

5. Extent to which this proposed CDBG CV project will prepare, prevent or respond to coronavirus.:

We expect to serve 188 homeless households during the 17-month grant period (June 2021 to December 2022) who have been affected by the coronavirus in the following ways:

- We will house 35 households who have become homeless in the 10 Tiny Houses to be located on the property. These households will have daily access to the Hope Village Community Center for bathrooms, showers, laundry facility, and shared kitchen for preparing individual household meals and/or congregate meals, office space for housing search, virtual schooling, meeting with mentors or other appointments.
- We will serve 68 households by offering showering and laundry services for those households who are homeless but do not reside in one of the Tiny Houses.
- We will provide motel vouchers to 85 homeless households who cannot be housed in in a Tiny House

6. Scope of work

Conversion/renovation of an existing dental office building to serve as a community center that will serve homeless households living in the Tiny Houses and other homeless households as described above. The center would include bathrooms with showers, a shared kitchen, living room/ school study space, office space, meeting room, and laundry facilities. Preliminary drawings have been completed and a copy is attached to this application.

Infrastructure to a property adjacent to the community center including a driveway, 10 concrete pads for setting the Tiny Houses, electrical hook-ups and sidewalks. Preliminary drawings have been completed and a copy is attached to this application.

Installation of the infrastructure to the property adjacent to the center including of water/ Sewer laterals, electricity, phone and cable for the eventual construction of apartments for low income households who are homeless or transitioning from a Tiny House. Preliminary drawings have been completed and a copy is attached to this application.

Motel vouchers to be used to house homeless households who cannot be housed in a Tiny House due to full capacity of the Tiny Houses or the household is not eligible for a Tiny House.

The City has approved the Community Development Permit, Special Use Permit to locate the Tiny Houses on the site and has rezoned the properties for the multi-family units to be built in later phases in the future. The properties have been purchased by Hope Village. The project is ready to proceed upon grant award by the State.

7. Extent to which CDBG CV funding is needed to complete the project:

Hope Village has already raised funds to operate a successful program including the building of 10 Tiny Homes, purchasing the building to be used as a community center and purchasing land for the development and eventual construction of affordable housing units. It continues to pay for the ongoing costs of navigator services and expects to hire a part time Director by 7/1/21. Hope Village's donation base does not provide sufficient support for offering motel vouchers. Without the funds for the conversion of the community center we cannot move our Tiny Houses to a central location that will have daily access to bathrooms and showers. The cost of the infrastructure and remodeling and funds for the motel vouchers would exhaust our donation base and take years to accumulate. It would be difficult and more expensive to do the infrastructure work in pieces. The project would be on hold until all the funds were available. This grant will lay the foundation for the first phase of the development and expand services to homeless households right away. With the infrastructure in place we will be able to move forward with the next phases by constructing affordable, accessible housing as soon as construction funds are secured.

PROJECT BUDGET & MATCHING FUNDS

ACTIVITY	CDBG FUNDS	MATCH FUNDS <i>(if applicable)</i>	TOTAL COSTS (by Activity)
Acquisition - Land	\$ -	\$ 33,984.00	\$ 33,984.00
Acquisition - Building(s)	\$ -	\$ 230,435.00	\$ 230,435.00
Building Improvements	\$ 220,000.00	\$ 13,748.00	\$ 233,748.00
Center/Facility Construction	\$ -	\$ -	\$ -
Clearance - Site	\$ -	\$ -	\$ -
Homeless/Transitional Housing	\$ -	\$ -	\$ -
Rental/Mortgage Assistance	\$ -	\$ -	\$ -
Microenterprise Assistance	\$ -	\$ -	\$ -
Job Creation/Retention Business Assistance	\$ -	\$ -	\$ -
Food Pantry Service	\$ -	\$ -	\$ -
Employment Services	\$ -	\$ -	\$ -
Health Services	\$ -	\$ -	\$ -
Increased Staff Wages & Benefits	\$ -	\$ -	\$ -
Maintaining Facility for Public Service Program	\$ -	\$ -	\$ -
Motel Vouchers	\$ 124,950.00	\$ -	\$ 124,950.00
Infrastructure	\$ 408,603.00	\$ -	\$ 408,603.00
Fixtures-Tiny House Construction	\$ -	\$ 64,821.00	\$ 64,821.00
Furnishings			\$ -
Engineering/Architecture, Permits, Surveys, WI DSPS plan Fees	\$ 20,000.00	\$ 14,321.00	\$ 34,321.00
Administration	\$ 99,444.00	\$ -	\$ 99,444.00
Sub-Total(s):	\$ 872,997.00	\$ 357,309.00	\$ 1,230,306.00

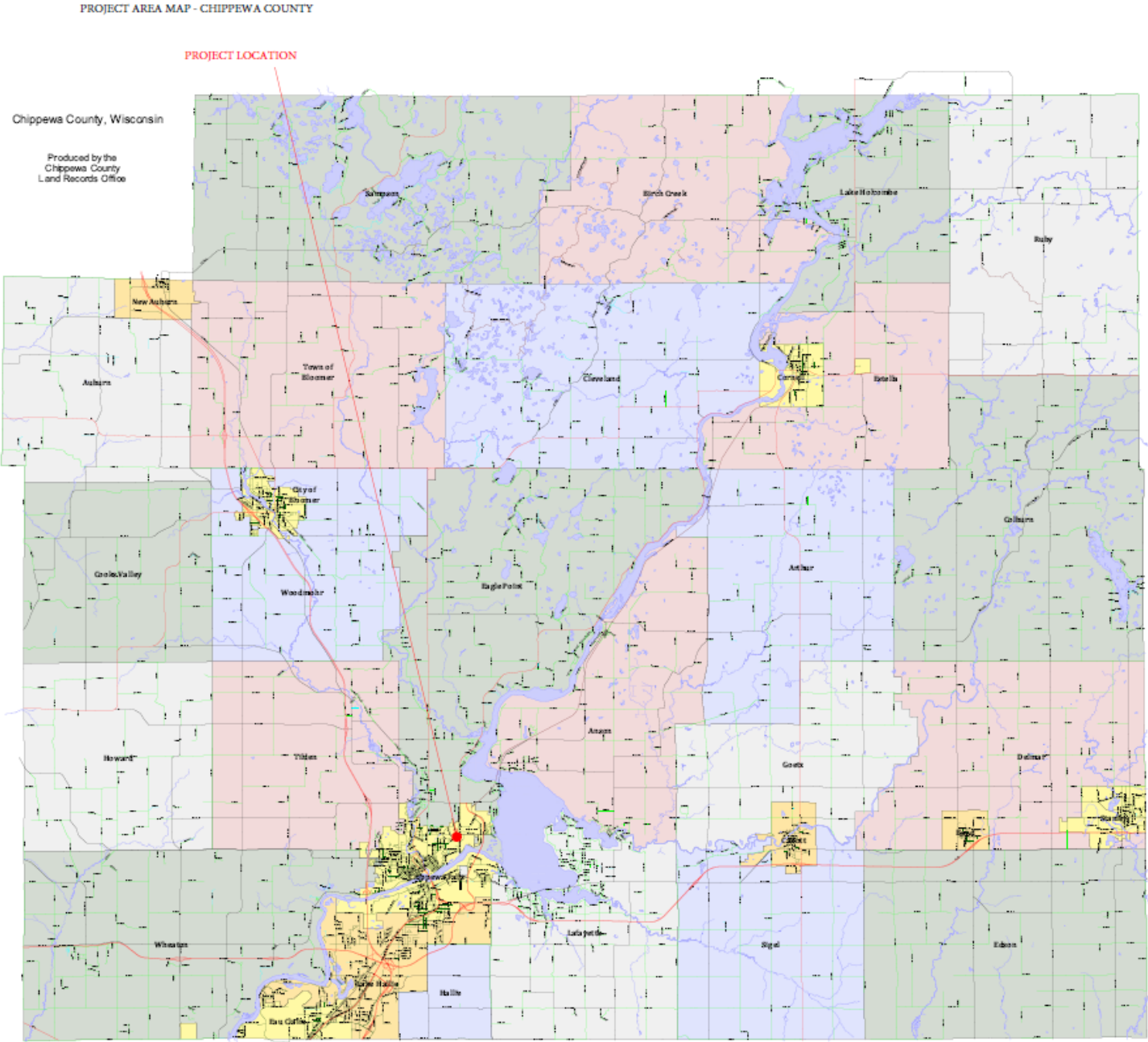
CONSTRUCTION COST ESTIMATE

DATE : February 19, 2021
Project # : 20072
Project : Hope Village
Location : Chippewa Falls, WI
Basis for Estimate : Preliminary
Prepared by : GG
Checked by :

REMODEL
ESTIMATE

Sect. #	Description	Quantity	Unit	Per Unit	Material	Total				Totals
		Estimated								
START-UP										
	Mobilization	1	EA	12,500.00		12,500.00				\$ 12,500.00
	Demolition	650	SF	11.50		9,775.00				\$ 9,775.00
						Total				\$ 22,275.00
SHELL										
	interior walls	824	SF	9.25		7,590.00				\$ 7,590.00
	ceramic tile	576	SF	14.75		8,496.00				\$ 8,496.00
	paint	3312	SF	0.95		3,146.40				\$ 3,146.40
	restaining siding	2400	SF	0.95		2,280.00				\$ 2,280.00
	masonry repointing	128	SF	18.75		2,393.60				\$ 2,393.60
	exterior sealants	185	LF	15.50		2,867.50				\$ 2,867.50
						Shell Subtotal				\$ 26,770.00
INTERIOR OPENINGS										
	frame	5	EA	218.00		1,090.00				\$ 1,090.00
	door	5	EA	350.00		1,750.00				\$ 1,750.00
	hardware	13	EA	860.00		11,180.00				\$ 11,180.00
	finish	210	SF	0.93		195.30				\$ 195.30
						Interior Openings Subtotal				\$ 14,440.00
FINISHES AND EQUIPMENT										
Flooring	Carpet	892	SF	7.25		6,427.00				\$ 6,427.00
	Tile (Toilet Rooms/Entry)	288	SF	14.75		4,248.00				\$ 4,248.00
	Vinyl	320	SF	6.90		2,208.00				\$ 2,210.00
Ceilings	ACT	892	SF	5.44		4,852.48				\$ 4,850.00
	GYP Bead	808	SF	3.90		3,166.80				\$ 2,130.00
Wall Base	Vinyl (VCT and CPT)	352	LF	7.40		2,604.80				\$ 2,600.00
	Ceramic	160	LF	15.25		2,440.00				\$ 2,440.00
Kitchen Fittings	Base Cabinets	24	LF	230.00		5,520.00				\$ 5,520.00
	Upper Cabinets	24	LF	250.00		6,000.00				\$ 6,030.00
	Stainless Steel Counters	24	LF	240.00		5,760.00				\$ 5,760.00
	Built-in cooktop	1	EA	1,500.00		1,500.00				\$ 1,500.00
	Built-in wall oven	1	EA	750.00		750.00				\$ 750.00
	Built-in microwave	2	EA	475.00		950.00				\$ 950.00
	Built-in commercial dishwasher	1	EA	1,450.00		1,450.00				\$ 1,450.00
	commercial grade refrigerator/freezer	1	EA	2,250.00		2,250.00				\$ 2,250.00
	commercial grade clothes washer	3	EA	900.00		2,700.00				\$ 2,700.00
	commercial grade clothes dryer	3	EA	900.00		2,700.00				\$ 2,700.00
Assignable Locked Storage		10	EA	1,200.00		12,000.00				\$ 12,000.00
						Finishes & Equip Subtotal				\$ 67,046.00
ACCESSORIES										
	Mirrors	4	EA	222.00		888.00				\$ 890.00
	Grab bars (sets)	7	EA	205.00		1,435.00				\$ 1,440.00
	basins	4	EA	84.00		336.00				\$ 340.00
	diaper station	2	EA	550.00		1,100.00				\$ 1,100.00
	shower seat	3	EA	290.00		870.00				\$ 875.00
	towel	6	EA	34.00		204.00				\$ 206.00
	soap	7	EA	190.00		1,330.00				\$ 1,330.00
	shower curtain/shed	3	EA	240.00		720.00				\$ 725.00
						Accessories Subtotal				\$ 6,895.00
TOTALS										
	General Construction	(Total from above)								\$ 157,415.00
	Plumbing	1500	sf	19.25						\$ 28,875.00
	HVAC	1500	sf	6.50						\$ 9,750.00
	Electrical	1500	sf	12.50						\$ 18,750.00
	contingency	20%								\$ 38,958.00
	TOTAL CONSTRUCTION									\$ 233,748.00

Project Area/Service Area Maps



SERVICE AREA MAP - CITY OF CHIPPEWA FALLS

PROJECT LOCATION

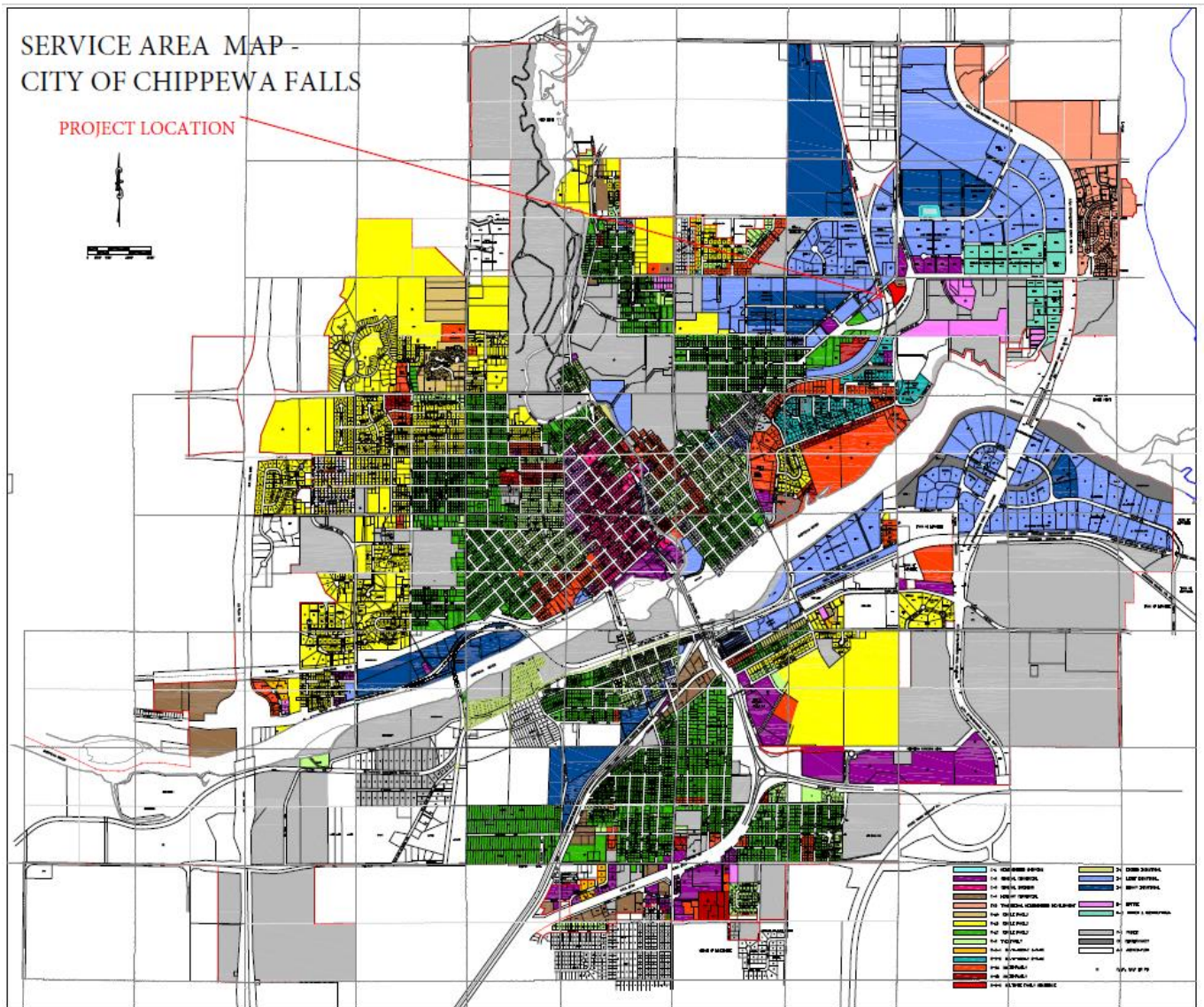


EXHIBIT II – Attachments 1 – 11

Attachment 1 – Conflict of Interest Disclosure Form

**DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST
COMMUNITY DEVELOPMENT BLOCK GRANT
CITY OF CHIPPEWA FALLS
HOPE VILLAGE CDBG-CV**

The federal government believes that conflict of interest may arise if a contracted service or business is related by family or business ties to any employee, elected or appointed official or agent of a unit of local government who exercises any functions or responsibilities with respect to CDBG activities. This is a list of employees, elected or appointed officials, and agents, whose work is related to the CDBG program. Please indicate in the space provided if you have family or business ties with any of those persons. Family is defined as spouse, fiancée/fiancé, children and stepchildren, brother/sister and brother/sister-in-law, parents and parent-in-law, and anyone who receives more than 50% of their support from the person (e.g. adopted child, foster child, etc.) is also ineligible.

I understand that I must disclose any family or business ties that I have with the persons listed on this sheet.

I certify to the best of my knowledge that the information provided on the back sheet is true and complete. I understand that providing misinformation or omitting information is considered fraud.

*Do you have family or business ties to any of the following people? Please check **YES** or **NO** next to their name. If yes, indicate the nature of the relationship in the column indicated.*

You MUST mark YES or NO for each line below

Office	Name of Official	Yes	No	Relationship
Mayor	Greg Hoffman			
Treasurer	Lynne R. Bauer			
Clerk	Bridget Givens			
City Council Members	John Monarski 1st Ward			
	Rob Kiefer 2 nd Ward			
	Christopher Gilliam 3 rd Ward			
	Chuck Hull 4 th Ward			
	Hayden Frey 5 th Ward			
	Paul Nadreau 6 th Ward			

	Jason Hiess 7 th Ward			
Office	Name of Official	Yes	No	Relationship
Director, Hope Village	Mike Cohoon			
Hope Village Board Members	Christopher Brooke			
	Nicole Estenson			
	Ken Froelich			
	Dick Hebert			
	Carla Ingalls			
	Gayle Klitzke			
	Heather Martell			
	Chris Maslonkowski			
	Jessica Oleson-Bue			
	Gail Prock			
	Ruth Rosenow			
	Tiffany Woghan			
Grant Administrator	Jessica Oleson-Bue			
	Joel Weiss			
	Valerie Prueher			
	Lori Artz			

Please Note: The name of any bidder with a potential conflict of interest will be disclosed at the HOPE VILLAGE Board meeting in which bids are discussed. Potential conflicts of interest will be reviewed in accordance with 24 CFR 570.489(h).

Printed Name of Individual

Title

Signature

Name of Business/Firm/Company

Date Signed [MM/DD/YYYY]

24 CFR 570.489(h) CONFLICT OF INTEREST CLAUSE

FOR COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAMS

Code of Federal Regulations Title 24 570.489(h) Program administrative requirements

(h) Conflict of interest:

(1) Applicability. (i) In the procurement of supplies, equipment, construction, and services by the States, units of local general governments, and sub-recipients, the conflict of interest provisions in paragraph (g) of this section shall apply.

(ii) In all cases not governed by paragraph (g) of this section, this paragraph (h) shall apply. Such cases include the acquisition and disposition of real property and the provision of assistance with CDBG funds by the unit of general local government or its sub-recipients, to individuals, businesses and other private entities.

(2) Conflicts prohibited. Except for eligible administrative or personnel costs, the general rule is that no persons described in paragraph (h)(3) of this section who exercise or have exercised any functions or responsibilities with respect to CDBG activities assisted under this subpart or who are in a position to participate in a decision-making process or gain inside information with regard to such activities, may obtain a financial interest or benefit from the activity, or have an interest or benefit from the activity, or have an interest in any contract, subcontract or agreement with respect thereto, or the proceeds thereunder, either for themselves or those with whom they have family or business ties, during their tenure or for one year thereafter.

(3) Persons covered. The conflict of interest provisions for paragraph (h)(2) of this section apply to any person who is an employee, agent, consultant, officer, or elected official or appointed official of the state, or of a unit of general local government, or of any designated public agencies, or sub-recipients which are receiving CDBG funds.

(4) Exceptions: Thresholds requirements. Upon written request by the State, an exception to the provisions of paragraph (h)(2) of this section involving an employee, agent, consultant, officer, or elected official or appointed official of the state may be granted by HUD on a case-by-case basis. In all other cases, the state may grant such an exception upon written request of the unit of general local government provided the state shall fully document its determination in compliance with all requirements of paragraph (h)(4) of this section including the state's position with respect to each factor at paragraph (h)(5) of this section and such documentation shall be available for review by the public and by HUD. An exception may be granted after it is determined that such an exception will serve to further the purpose of the Act and the effective and efficient administration of the program or project of the state or unit of general local government as appropriate. An exception may be considered only after the state or unit of general local government, as appropriate, has provided the following:

(i) A disclosure of the nature of the conflict, accompanied by an assurance that there has been public disclosure of the conflict and a description of how the public disclosure was made; and

(ii) An opinion of the attorney for the state or the unit of general local government, as appropriate, that the interest for which the exception is sought would not violate state or local law.

- (5) *Factors to be considered for exceptions. In determining whether to grant a requested exception after the requirements of paragraph (h)(4) of this section have been satisfactorily met, the cumulative effect of the following factors, where applicable, shall be considered:*
- (i) *Whether the exception would provide a significant cost benefit or an essential degree of expertise to the program or project which would otherwise not be available;*
 - (ii) *Whether an opportunity was provided for open competitive bidding or negotiation;*
 - (iii) *Whether the person affected is a member of a group or class of low or moderate income persons intended to be the beneficiaries of the assisted activity, and the exception will permit such person to receive generally the same interests or benefits as are being made available or provided to the group or class;*
 - (iv) *Whether the affected person has withdrawn from his or her functions or responsibilities, or the decision-making process with respect to the specific assisted activity in question;*
 - (v) *Whether the interest or benefit was present before the affected person was in a position as described in paragraph (h)(3) of this section;*
 - (vi) *Whether undue hardship will result either to the State or the unit of general local government or the person affected when weighed against the public interest served by avoiding the prohibited conflict; and*
 - (vii) *Any other relevant considerations.*

LOBBYING CERTIFICATION

FROM THE

☐ Municipality/UGLG: _____

☒ Contractor/Sub-Contractor

☐ Other: _____

The undersigned certifies, to the best of his/her knowledge and belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including sub-contracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Name of Municipality/UGLG/Business/Firm

Signature of the Chief Elected Official, Owner, or Chief Executive Officer

Title

Date Signed

Printed Name of the Chief Elected Official, Owner, or Chief Executive Officer

Attachment 4 – Disclosure of Lobbying Activities Form

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

Approved by OMB
0348-0046

(See reverse for public burden disclosure.)

1. Type of Federal Action: a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Federal Action: a. bid/offer/application b. initial award c. post-award	3. Report Type: a. initial filing b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <div style="display: flex; justify-content: space-between;"> Prime Subawardee </div> Tier _____, <i>if known</i> : Congressional District, if known : 4c		5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, if known :
6. Federal Department/Agency: Housing and Urban Development	7. Federal Program Name/Description: Community Development Block Grant CFDA Number, <i>if applicable</i> :	
8. Federal Action Number, if known :	9. Award Amount, if known : \$	
10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i>	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i> 	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10
(a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of

Section 3 – Information for Reporting

This form is to gather information needed for reporting purposes only. We will be sending this form with every contract. This information will stay confidential and not shared with clients.

Contractor EIN: _____
 Company Name: _____
 Owner Name(s): _____
 Company Address: _____

Section 3

Section 3 Businesses provide evidence that they meet one of the following criteria:

1. 51% or more owned by Section 3 residents*; or
2. At least 30% of its full time employees include persons that are currently Section 3 residents, or were Section 3 residents within three years of the first hire date; or
3. Provides evidence, as required, of a commitment to a subcontract in excess of 25% of the dollar award of all subcontracts to businesses that meet one of the first two criteria above.

*A Section 3 resident is 1) a public housing resident, or 2) a low-income or very low-income person residing in our area.

(Income limits by County are listed below (effective 4/24/21):

Number of Household Members	Barron	Buffalo	Chippewa	Clark	Dunn	Eau Claire	Pepin	Pierce	Polk	St. Croix
1	40,250	40,250	44,800	40,250	41,350	44,800	40,750	55,950	40,250	55,950
2	46,000	46,000	51,200	46,000	47,250	51,200	46,550	63,950	46,000	63,950
3	51,750	51,750	57,600	51,750	53,150	57,600	52,350	71,950	51,750	71,950
4	57,450	57,450	64,000	57,450	59,050	64,400	58,150	79,900	57,450	79,900
5	62,050	62,050	69,150	62,050	63,800	69,150	62,850	86,300	62,050	86,300
6	66,650	66,650	74,250	66,650	68,500	74,250	67,500	92,700	66,650	92,700
7	71,250	71,250	79,400	71,250	73,250	79,400	72,150	99,100	71,250	99,100
8	75,850	75,850	84,500	75,850	77,950	84,500	76,800	105,500	75,850	105,500

Are you a Section 3 Business? ☐ YES ☐ NO

Have you had any new hires? ☐ YES ☐ NO

If yes, new hire(s) a Section 3 resident? ☐ YES ☐ NO

Position of all new hire(s): _____

NOTE: You only have to report each new hire one time.

WBE/MBE

A WBE is a Woman Business Enterprise and a MBE is a Minority Business Enterprise. A business must be 51% OWNED AND OPERATED by either a woman or an ethnic minority. A woman is not considered a minority when applying for MBE status, in this case minority means an ethnic minority such as Asian American, African American, Hispanic or Native American.

Is your company a: ☐ WBE ☐ MBE ☐ Neither

Internal Office Use ONLY

Project Name: _____ Project Contract Cost \$ _____
 Contact Acceptance Date: _____ Funding Used on Project: CDBG HOME NSP

SECTION 3 CLAUSE

1. Section 3 of the Housing and Urban Development Act of 1968. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
2. The parties to this contract agree to comply with HUD's regulations in 24 CFR 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulation.
3. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship, and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
4. The contractor agrees to include this Section 3 clause in every sub-contract subject to compliance with regulations in 24 CFR 135, and agrees to take appropriate action, as provided in an applicable provision of the sub-contractor in this Section 3 clause, upon a finding that the sub-contractor is in violation of the regulations in 24 CFR 135. The contractor will not sub-contract with any sub-contractor where the contractor has notice or knowledge that the sub-contractor has been found in violation of the regulations in 24 CFR 135.
5. The contractor will certify that any vacant employment positions, including training positions, that are filled
 - (1) after the contractor is selected but before the contract is executed, and
 - (2) with persons other than those to whom the regulations of 24 CFR 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR 135.
6. Non-compliance with HUD's regulations in 24 CFR 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
7. With respect to work performed in connection with Section 3 covered Indian housing assistance, Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible: (i) preference and opportunities for training and employment shall be given to Indians; and (ii) preference in the award of contracts and sub-contracts shall be given to Indian organizations and Indian-Owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and Section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

AFFIRMATIVE ACTION REQUIREMENTS (EO 11246)

(Applicable to construction contracts/sub-contracts exceeding \$10,000)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for Women = **6.9 percent** (this goal applies nationwide)

Goals for minority participation = .5 (this goal applies county-wide)
(Insert goals – see next page)

These goals are applicable to all the contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographic area located outside of the covered area, it shall apply the goals established for such geographic area where the work is actually performed. The contractor is also subject to the goals for both its federal and nonfederal construction.

3. The contractor's compliance with the Executive Order and the regulations in 41 CFR 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3 (a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.
4. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction sub-contract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the sub-contractor; employer identification number; estimated dollar amount of the sub-contract; estimated starting and completion dates of the sub-contract; and the geographical area in which the contract is to be performed.

As used in this notice, and in the contract resulting from this solicitation, the "covered area" is a description of the geographical areas where the contract is to be performed indicating the state, county and city, if any.

GOALS FOR WOMEN AND MINORITY UTILIZATION IN CONSTRUCTION

These goals apply to all federally assisted construction contracts and sub-contracts in excess of \$10,000 (EO 11246). All hours of work (federal and non-federal) in each trade, regardless of the location of work, are subject to these goals.

Directions: Use the applicable county percentage below to fill in the "Goals for minority participation" on the previous page.

A. Goals for Women--6.9 percent (this goal applies nationwide).

B. Minority Goals--percentage listed for each county:

Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	.6
Barron	.6	Jackson	.6	Price	.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	.6	Richland	1.7
Buffalo	.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	.6
Calumet	.9	La Crosse	.8	St. Croix	2.9
Chippewa	.5	Lafayette	.5	Sauk	1.7
Clark	.6	Langlade	.6	Sawyer	.6
Columbia	1.7	Lincoln	.6	Shawano	1.0
Crawford	.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	.6	Taylor	.6
Dodge	7.0	Marinette	1.0	Trempealeau	.6
Door	1.0	Marquette	1.7	Vernon	.6
Douglas	1.0	Menomonie	1.0	Vilas	.6
Dunn	.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	.5	Monroe	.6	Washburn	.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	.6	Waukesha	8.0
Forest	1.0	Outagamie	.9	Waupaca	1.0
Grant	.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	.6	Winnebago	.9
Green Lake	1.0	Pierce	2.2	Wood	.6

EQUAL OPPORTUNITY CLAUSE (EO 11246) (FOR CONTRACTORS)

During the performance of this contract, the contractor agrees as follows:

1. The contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The contractor shall, in all solicitations or advertisement for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration without regard to race, color, religion, sex, or national origin.
3. The contractor shall send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Contract Compliance Officer advising the said labor union or workers' representatives of the contractor's commitment under this section, and shall post copies of the notice in conspicuous place available to employees and applicants for employment.
4. The contractor shall comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
5. The contractor shall furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Department of Energy, Housing and Community Resources and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and others.
6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, the contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965 or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.
7. The contractor shall include the provisions of paragraphs 1 through 7 in every sub-contract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each sub-contractor or vendor. The contractor will take such action with respect to any sub-contract or purchase order as DEHCR may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a sub-contractor or vendor as a result of such direction by DEHCR, the contractor may request the United States to enter into such litigation to protect the interest of the United States.

8. The UGLG further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work. Provided that if the UGLG participating is a state or local government, the above equal opportunity clause is not applicable to any agency, instrumentality, or subdivision of such government which does not participate in work on or under the contract.

9. The UGLG agrees that it will assist and cooperate actively with DEHCR and the Secretary of Labor in obtaining the compliance of contractors and sub-contractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor; that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance; and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

10. The UGLG further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and sub-contractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the UGLG agrees that if it fails or refuses to take any or all of the following actions: cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurances of future compliance has been received from such applicant, and refer the case to the Department of Justice for appropriate legal proceedings.

MINORITY BUSINESS ENTERPRISE/WOMAN BUSINESS ENTERPRISE/DISADVANTAGED BUSINESS ENTERPRISE WEB RESOURCES

Resources for outreach to, contracting with, and certified registration for Minority-Owned Business Enterprise (MBE), Women-Owned Business Enterprise (WBE) and Disadvantaged Business Enterprise (DBE) firms:

Department of Administration Certified Minority-Owned Business Enterprise (MBE) and Women-Owned Business Enterprise (WBE) Directory: <https://wisdp.wi.gov/search.aspx>

City of Madison Targeted Business Enterprise Program Directories:
<http://www.cityofmadison.com/dcr/aaTBDDir.cfm>

Department of Transportation Disadvantaged Business Enterprise (DBE) Program:
<https://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx>

DAVIS-BACON AND RELATED ACTS (DBRA) CLAUSE

- A. Force Account - Under most Davis-Bacon statutes, only employees of contractors or subcontractors are subject to Davis-Bacon wage requirements. In some instances, rather than contracting or sub-contracting out construction work, a grant recipient performs the construction in-house, with its own "force account" employees. Such force account work is not subject to Davis-Bacon wage requirements under statutes that cover only employees of contractors and subcontractors. Furthermore, the USDOL does not consider a state or local government to be a contractor, even if it enters into a contract to perform construction work (see 29 CFR Section 5.2(h)). However, under the Housing and Community Development Act of 1974, a private firm that receives federal assistance funds indirectly from a recipient pursuant to a written procurement contract of sub-grant agreement that provides for the performance of construction work is considered a contractor or sub-contractor, and the force account exception **does not** apply to construction activity performed by employees of such a firm.

Laborers and mechanics employed by a local or state agency PHA (Public Housing Authority only), even though not employed by a contractor, are subject to Davis-Bacon when performing development work financed by the U.S. Housing Act of 1937, as amended. Davis-Bacon federal wage requirements are not applicable where such employees are used in work defined as major repairs (deferred maintenance) pursuant to 24 CFR 868.3 and 868.9(h), which constitute project operation rather than development.

- B. Compliance and Certification Parameters - HUD policy clearly affords federal wage protection for all laborers and mechanics, regardless of contractual relationship. There is no exception to this protection for self-employed laborers or mechanics, including owners of businesses, sole proprietors, partners, corporate officers, or others. Laborers and mechanics may not certify to the payment of their own federal wages except where the laborer or mechanic is the owner of a business working on the site of the work with his/her own crew.

Accordingly, HUD and program participants responsible for labor standards administration and enforcement **may not** accept certified payrolls reporting single or multiple owners (e.g., partners) are certifying that they have paid to themselves the prevailing wage for their craft. A sole proprietor may not submit a payroll reporting himself or herself as simply "Owner" signing the certification as to his/her own wage payment from "draws" or other payment methods. Nor may several mechanics submit a payroll reporting themselves as "partners" with one or more certifying as to the payment of their wages or salaries. Such mechanics must instead be carried on the certified payroll of the contractor or sub-contractor for whom they are working and with whom they have executed a "contract" for services.

In these cases, maintenance of an accurate accounting of weekly work hours including any overtime hours for such mechanics is essential. Whatever method of compensation computation is utilized (piecework, weekly contract draw performance), the amount of weekly compensation divided by the actual hours of work performed for that week must result in an "effective" hourly wage rate for that week that is not less than the prevailing hourly rate for the type of work involved. This computation must take into account overtime pay rates (i.e., one and one-half) for all hours worked in excess of 40 hours per week, pursuant to the CWHSSA, where applicable, and pursuant to the Fair Labor Standards Act where CWHSSA is not applicable.

The name, work classification, actual hours of work, effective hourly wage rate, and wage payment for each such mechanic and laborer must be reported and certified on the responsible employer's weekly payroll. Note that the effective hourly wage rate for such mechanics and laborers may fluctuate from week to week. However, the effective hourly wage rate may not be less than the minimum prevailing wage rate for the respective craft.

In any case, where the effective rate falls below the corresponding craft prevailing wage rate, the responsible employer must compensate the mechanic at no less than the prevailing wage rate on the wage determination for the craft.

- C. Business Owners Working with Their Crew - Owners of businesses working with their crew on the same HUD-assisted job site may certify to the payment of their own federal wages in conjunction with the prevailing wages paid to their employees. This exception to compliance standards **does not** suggest that such owners are not likewise entitled to prevailing wages for their labor. Rather, it accepts the wage payment certification on weekly payroll reports by the owner of his/her own wages as that certification **accompanies** the certification offered for payment of prevailing wages to his/her employees. On weekly payroll reports, include the owner's name, identifying him/her as "owner," and the daily and total hours worked on the covered project for the week. Omit the Rate of Pay and Amount Earned.
- D. Owner-operators of Power Equipment - Frequently, owner-operators of power equipment (e.g., backhoes, front-end loaders) will contract for services at a rate for both "man and machine." In these cases, the owner-operator includes liability, equipment maintenance, and salary in an hourly or contract rate for services. Because of the prevalence of such practice and the inherent difficulty in ascribing costs for liability and maintenance costs versus hourly labor salary, HUD and its program clients may accept a combined ("man and machine") hourly rate on the responsible contractor's certified payroll provided that such hourly rate may not be less than the rate on the wage determination for the respective power equipment operator. **Note:** Owner-operators of power equipment, like self-employed mechanics, **may not** submit their own payrolls certifying to the payment of their own wage but must be carried on the responsible contractor's certified payroll report. Include the name, work classification, and actual hours worked. Upon completion of the contract, verify the pay by taking the amount paid to the sub-contractor (documented with copies of all invoices identified for this job) and divide by the hours reported on the certified payrolls. Compare the actual hourly wage rate with the rate in the Wage Determination. If the actual hourly wage is less than the Davis-Bacon Wage Rate, collect and disburse the wage underpayments.
- E. "Owner Operator" Truck Drivers - A USDOL administration policy excludes bona fide owner-operators of trucks who are independent contractors from Davis-Bacon/CWHSSA provisions concerning their own hours of work and rate(s) of pay. These truck "owner-operators" can certify to their own weekly payrolls **but** the payrolls do not need to show the hours worked or rates allegedly paid - only the notation "Owner-operator." **Note** that any laborers or mechanics, including truck drivers, employed by the owner-operator/independent contractor are subject to Davis Bacon/CWHSSA provisions in the usual manner.

This policy **does not** pertain to owner-operator of other equipment such as backhoes, bulldozers, cranes and scrapers (i.e., power equipment as noted in the paragraph titled "Owner-operators of Power Equipment," above).

"Contractor's" Truck Drivers Based on the decision made in the Midway Excavating trial, (Building and Construction Trades Department, AFL-CIO vs. USDOL Wage Appeals Board "Midway") truck drivers employed by contractors are only covered by federal wage requirements when they are performing labor on the site of the work. (e.g. if the UGLG is building a highway and the truck driver is loading, unloading, spreading, or driving back and forth on the site, then the truck driver is covered). Hauling materials to or from the site, if not performed on the site, is not covered time. HUD has advised that they currently believe unloaded are likewise not covered.

- F. Determining Proper Classification for Various Work - Questions as to the proper classification of a laborer or mechanic for various types of work are resolved by making an area-practice determination. In determining the proper classification for work performed on a project, it is immaterial whether the contractor is union or nonunion.

On projects where the federal wage rate for the classifications in question within the applicable wage determination is based on negotiated rates, the prevailing practice concerning work performed in those classifications is to follow the practice observed on projects built by contractors who are a signatory to the collective bargaining agreements. Therefore, unless there is a jurisdictional dispute between the crafts, the duties ascribed to any job classification will be the same as those outlined in the appropriate collective bargaining agreements. If the collective bargaining agreements are silent on this issue, the local unions involved must be consulted. Conversely, in areas where open shop (non-union) rates are determined to prevail for the classifications in question, those prevailing job practices followed on projects by open shop contractors in the same area become area practice.

- G. Helpers - **The classification of Helper in any trade will be very difficult to have approved by the USDOL.** If the contractor wants to pursue a helper classification through the USDOL, they should contact the Labor Standards Specialist at DOA.
- H. Relatives - There are no exceptions made in the enforcement of Davis-Bacon on the basis of family relationship for relatives who are performing the work of laborers or mechanics. They **must be paid the federal wage rate for the classification of work performed and be included on the certified payrolls.**
- I. Volunteers - HUD allows for the waiver of Davis-Bacon wage rates for volunteers that are **not otherwise employed** at any time of the work for which the individual volunteers. Contact DOA's Labor Standards Specialist for more details if the community plans on using volunteers on the construction site.
- J. Job Corps Workers - USDOL staff in Washington, DC has informed HUD staff that Job Corps workers are not exempt from Davis-Bacon wage when they are working on a job subject to the Davis-Bacon Act.
- K. Employees of a Governmental Body -The USDOL has taken the position that the prevailing wage requirements does not apply to employees of a state or political subdivision of a state, but shall apply to employees of a private contractor who is sub-contractor of the state or political subdivision. This rule does not apply to the Public Housing Authority (PHA) employees under the U.S. Housing Act of 1937 (see paragraph A. in this section). **Employees of utilities are exempt providing they are only extending existing service to the property.**

- L. Employees Performing Work in More than One Classification - (Split Classification) if the UGLG/contractor has employees who perform work in more than one trade during a work week, it can pay the wage rates specified for each work classification in which work was performed only if maintaining accurate time records showing the amount of time spent in each classification. If the UGLG does not maintain accurate time records, it must pay these employees the highest wage rate of all the classifications of work performed. **Work, which is normally performed as part of the mechanic's craft, is not separable.**
- M. Laborers and Mechanics – Definition - The terms "laborers" and "mechanics" are construed to include at least those workers whose duties are manual or physical in nature as distinguished from mental or managerial. Since the classifications of laborers and mechanics to who specified wage rates are payable are identified in the Davis-Bacon wage rate, there is ordinarily no need to distinguish between laborers and mechanics. However, **mechanics are generally considered to include any worker who uses tools, or who is performing the work of a trade.**
- N. Precutting of Parts and Prefabrication of Assemblies - The precutting of parts and/or the prefabrication of assemblies are not covered unless conducted in connection with and at the site of the project, or in a temporary plant set up elsewhere solely to supply the needs of the project.
- O. Supply and Installation Contracts -The manufacturing or furnishing of materials, articles, supplies, or equipment is not subject to prevailing wages unless conducted in connection with and at the site of the project, or in a temporary plant set up elsewhere solely to meet the needs of the project.
- P. Start of Construction - "Start of Construction," as that term is used in connection with labor standards and prevailing wage requirements, means the beginning of initial site clearance and preparation, provided those activities are pursued diligently and are followed without appreciable delay by other construction activity.
- Q. Site of Work - The "site of work" is limited to the physical place or places where the construction called for in the contract will remain when work on it has been completed and to other adjacent or nearby property used by the contractor in such construction which can reasonably be said to be included in the "site" because of proximity. **Operations of a commercial or material supplier established in the proximity of but not on the active site of work prior to the opening of bids are not covered by the Act even if dedicated exclusively to the federal project for a time.**
- R. Fringe Benefits – Funded Plans - A contractor may credit contributions for "bona fide" fringe benefits regardless of whether the USDOL has found the particular benefits to be prevailing in the area. Such fringe benefits must be "bona fide." Ordinarily, bona fide benefits are those common to the construction industry and are paid directly to the employee in cash or into a fund, plan, or program on the employee's behalf. Contractors may take credit for contributions made under such conventional plans without requesting approval of the USDOL.
- S. Fringe Benefits – Unfunded Plans - Where fringe benefit plans are not of the conventional type, it will be necessary for the USDOL to determine if the benefits are "bona fide." **Contractors seeking approval of unfounded plans must obtain approval from the USDOL.** Contact DOA for more details.
- T. Fringe Benefits – General

1. Contributions to funded plans must be made at least quarterly.
2. When the cash paid and the per-hour contribution for benefits do not equal the total rate set forth in the wage determination, the difference must be paid to the employee in cash.
3. Fringe benefits must be paid for straight time and overtime; however, fringe benefits are not included when computing the overtime rate.
4. Employees who are excluded from funded plans for whatever reason must be paid fringe benefits in cash.
5. **Note:** Vacation and sick leave plans are generally unfunded, paid from the contractor's own account, and require USDOL approval before a contractor takes credit toward meeting the fringe benefit obligation.
6. In determining the cash equivalent credit for fringe benefits payments, the period of time to be used is the period covered by the contribution. For example, if an employer contributes to a plan on a weekly basis, the total hours worked each week (federal and nonfederal) by each employee should be divided into the contribution made by the employer.
7. Acceptable fringe benefits include the following: medical or hospital care; pensions on retirement or death; compensation for injuries or illness resulting from occupational activity; or insurance to provide any of the foregoing, unemployment benefits, life insurance, disability and sickness insurance, accident insurance, vacation and holiday pay, defrayment of cost of apprenticeship or other similar programs, or other bona fide fringe benefits; but only where the contractor to sub-contractor is not required by other federal, state, or local law to provide any of such benefits. The Act excludes fringe benefits that a contractor or sub-contractor is obligated to provide under other federal, state, or local law. No credit may be taken for such benefits. For example, payment for workmen's compensation insurance under either a compulsory or elective state statute is not considered payments for fringe benefits under the Act. Payments made for travel, subsistence, or to industry promotion funds are not normally payments for fringe benefits under the Act.

No type of fringe benefits is eligible for consideration as a so-call unfunded plan unless:

- a. It could be reasonably anticipated to provide benefits described in the act;
- b. It represents a commitment that can be legally enforced;
- c. It is carried out under a financially responsible plan or program; and
- d. The plan or program providing the benefits has been communicated in writing to the laborers and mechanics affected

- U. Summer Youth Employment - Youth who are bona fide students and part of a bona fide "youth opportunity program" may be employed on Davis-Bacon projects on a temporary basis during the summer months and paid below the predetermined Davis-Bacon rates. USDOL All Agency Memoranda #71 and #96 provide policy guidance in this area. HUD requires that the following stipulations be met before summer youth may be employed at less than Davis-Bacon rates:

1. Where collective bargaining agreements representing workers performing similar or related activities at the worksite to which youth are out stationed exists, the union or unions representing those workers must provide concurrence as to the design of the employment project and the use of the youth;
2. Such employment must be provided in accord with statutory safety and minimum wage requirements (both state and federal);
3. Competent supervision must be provided to all youth employment on the project worksites. Ratios of youth to such supervisors should be no greater than four-to-one.

In order to ensure that the administration of summer youth employment complies with USDOL policies and regulations, request for exceptions to the application of Davis-Bacon must be made to the HUD Field Office Labor Relations Staff who will advise the requesting contractor of its decision. The specific provisions of the agreement (between management and labor) or the plan of employment must be submitted to the Department of Labor, Wage and Hour and Public Contracts Division, for enforcement purposes. The HUD Field Office Labor Relations Staff will send such plans to the Headquarters Office of Labor Relations.

V. Non-Covered Job Classifications - Workers performing the normal duties of the following job classifications are not subject to Davis-Bacon federal wage requirements:

1. Project Superintendent.
2. Project Engineer.
3. Project Foreman, as distinguished from a working foreman (working foremen, who devote more than 20 percent of their time during the workweek to mechanic or laborer duties, are laborers and mechanics for the time spent and must be paid the applicable rate for the hours so worked).
4. Watchman.
5. Water Carrier.
6. Messenger, Clerical Workers.

Financing of Construction Work – CDBG - Laborers and mechanics employed by contractors and sub-contractors on construction work financed in whole or in part with Title I assistance are subject to Davis-Bacon wage rates under Section 110 of Title I. To the extent that Part 570 requires broader Davis-Bacon coverage, e.g., on construction work “assisted” under that Part, the regulations shall govern unless an individual waiver is requested and granted by the Assistant Secretary for Community Planning and Development. The use of Title I funds for any of the following items is an example of financing construction work, and Davis-Bacon wage rates shall apply to all construction work performed on the building or property in question: construction loans or grants; payment for construction materials; payment of interest (or part of the interest) on a construction loan; payment of construction loan origination fees; provisions of a Title I funded permanent loan, mortgage or grant on a structure constructed with a private construction loan when the parties contemplate such ultimate Title I financing at the time of construction; Title I funded “collateral” or “default” accounts established with the lending

bank which receive no interest or less than the interest payable on demand accounts. Questions as to whether a use of Title I funds constitutes financing of construction work shall be referred to HUD headquarters for determination.

- W. Technical/Maintenance Wage Rates – Public Housing - Section 12 of the U.S. Housing Act of 1937 requires that wages prevailing in the locality shall be paid to all architects, technical engineers, draftsmen, and technicians employed in the development, and all maintenance laborers and mechanics employed in the operation of the project. Such wages are determined or adopted by HUD.
- X. Payment of Low- and Moderate-Income (LMI) assessments - In some projects federal funds are used to pay special assessments of LMI households, where those assessments are for the purpose of paying for a public improvement. This use of federal funds invokes the Federal Labor Standards Provisions and makes the construction subject to Davis-Bacon wage rates.
- Y. Piecework - Roofers and dry-wall hangers are sometimes paid by piecework. Piecework is work paid for at a fixed rate (piece rate) per piece of work done.

Attachment 11 – Federal Labor Standards Provisions

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

- A. 1. (i) Minimum Wages.** All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section I (b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5. 5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5. 5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5. 5 (a) (1) (ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.
- (ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U. S. Department of Labor, Washington, D. C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30 -day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215- 0140.)
- (c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215 -0140.)
- (d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis- Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets

for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215- 0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section I(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5. 5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section I (b)(2)(B) of the Davis- Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215 -0140 and 1215- 0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5. 5(a) (3) (i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e. g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form W H-347 is available for this purpose from the Wage and Hour Division Website at [http:// www. dol. gov/ esa/whd/forms/ wh347instr. htm](http://www.dol.gov/esa/whd/forms/wh347instr.htm) or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215 -0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5. 5 (a) (3)(ii), the appropriate information is being maintained under 29 CFR 5. 5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A. 3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A. 3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5. 12.

4. Apprentices and Trainees

- (i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (ii) **Trainees.** Except as provided in 29 CFR 5. 16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to, and individually registered in a program which has received prior approval, evidenced by formal certification by the U. S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- 5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U. S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3 (a) of the Davis-Bacon Act or 29 CFR 5.12 (a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3 (a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U. S. C. 1001. Additionally, U. S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally- assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

- C. Health and Safety.** The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.
- (1)** No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
 - (2)** The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91 - 54, 83 Stat 96). 40 USC 3701 et seq.
 - (3)** The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

EXHIBIT V – Attachment
Project Plans and Specifications

HOPE VILLAGE

1825 KENNEDY ROAD
CHIPPEWA FALLS, WI 54729

GENERAL

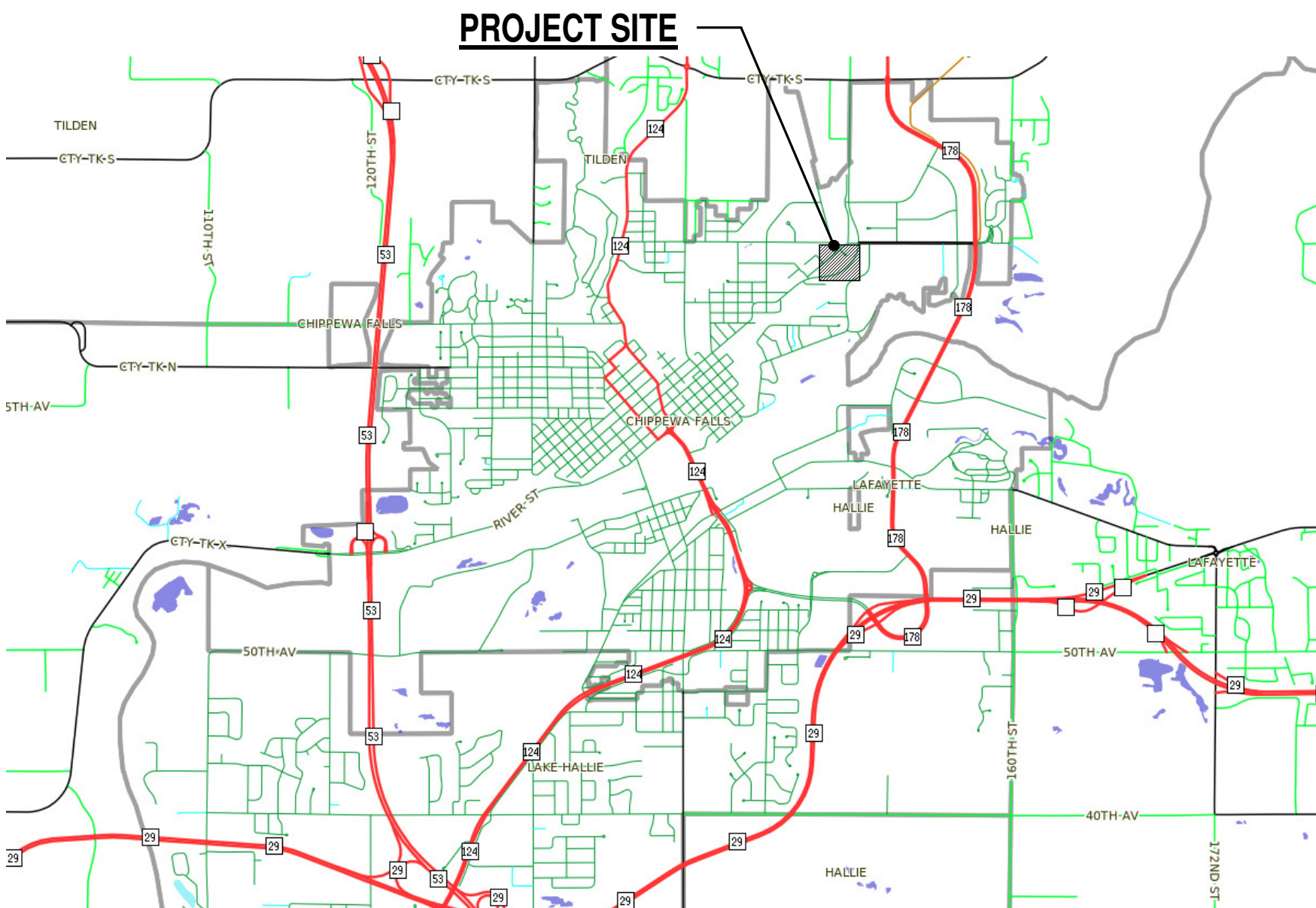
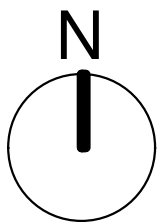
T100 TITLE SHEET
T101 EGRESS PLANS, CODE ANALYSIS

ARCHITECTURAL

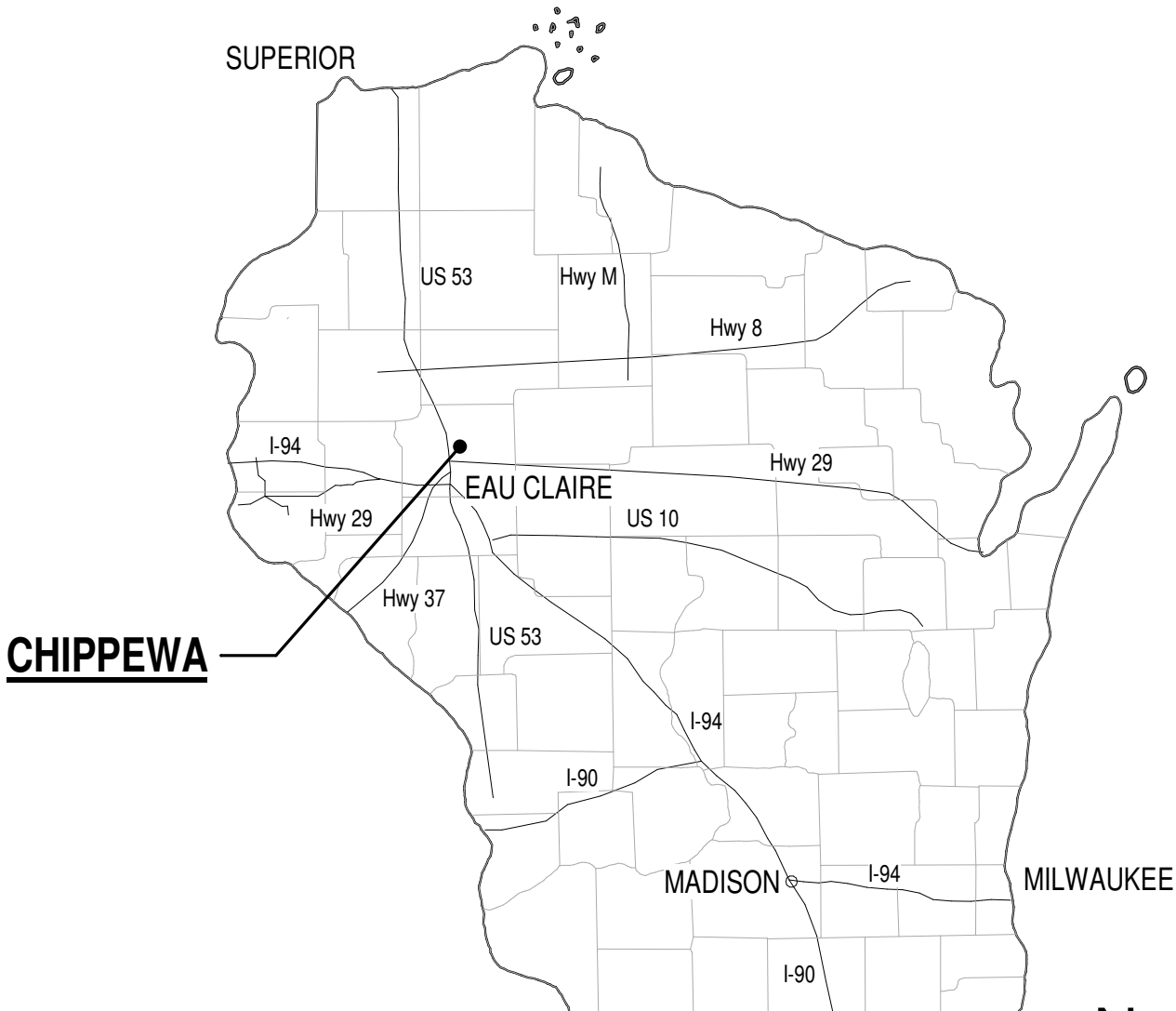
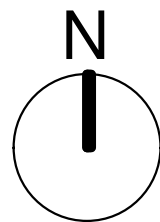
A300 DEMOLITION PLAN, PROPOSED FLOOR PLAN, WALL
TYPES, DOOR AND FRAME TYPES, SCHEDULES
A600 INTERIOR ELEVATIONS



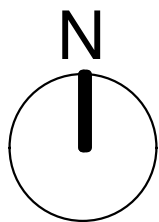
3 VICINITY MAP
N.T.S.



2 AREA MAP
N.T.S.



1 STATE MAP
N.T.S.



HOPE VILLAGE
1825 KENNEDY ROAD
CHIPPEWA FALLS, WI 54729

TITLE SHEET

REVISIONS:	
NO.	DATE

ISSUE DATE:
JUNE 30, 2021

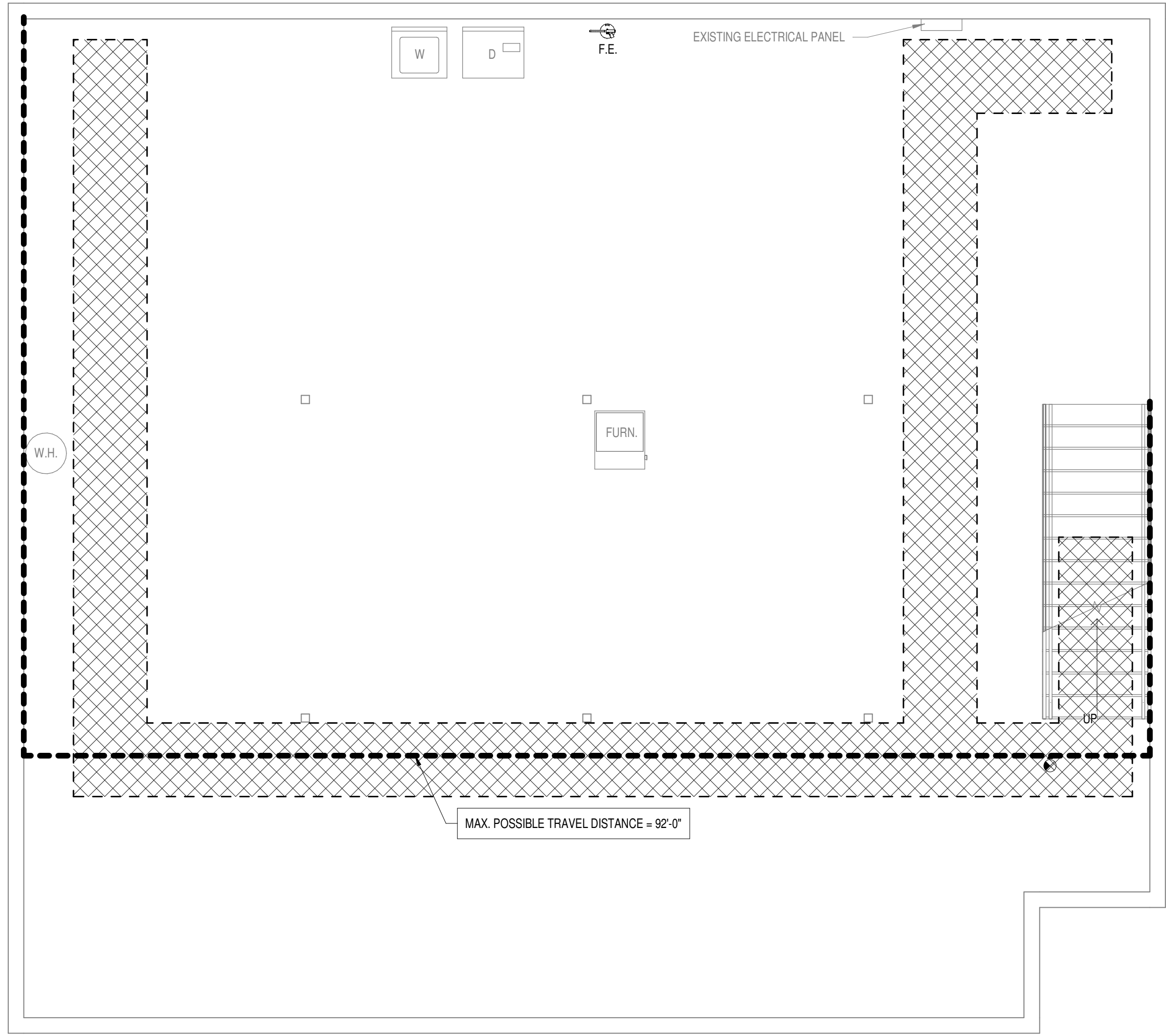
T100

L&P PROJECT # 20072

LIEN & PETERSON ARCHITECTS, INC
4675 ROYAL DIRVE
EAU CLAIRE, WI
TELEPHONE
EMAIL
PO BOX 925
54701
715-835-7500
admin@2dlp.com

ARCHITECTS
L&P
ENGINEERS

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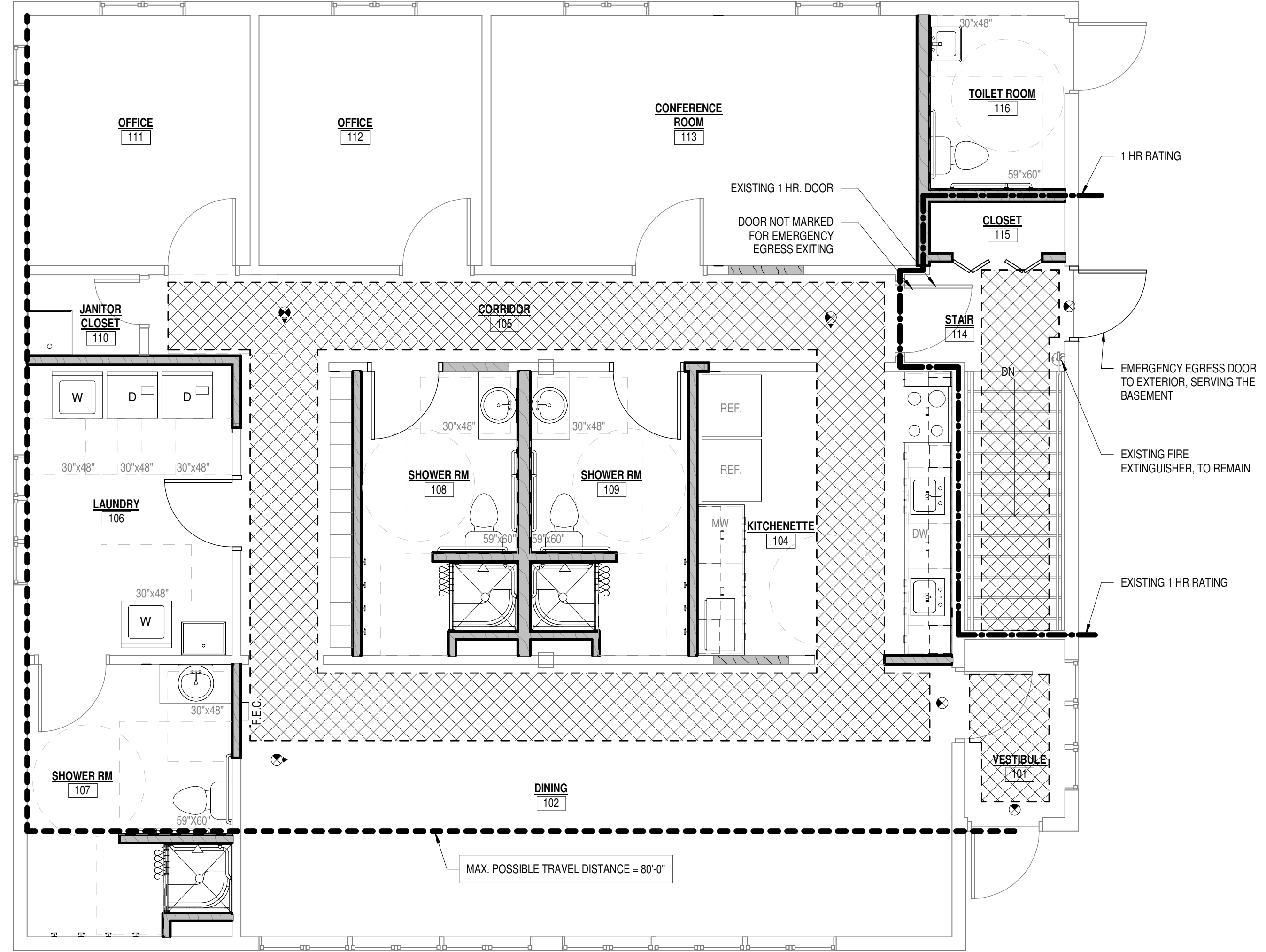
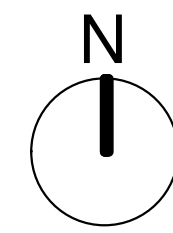


****NO WORK TO BE DONE IN THE BASEMENT****

2 BASEMENT EGRESS PLAN
1/4" = 1'-0"

CODE LEGEND

- EXIT LIGHT
- 1 HR. RATING
- PATH OF EGRESS
- MAX. ACTUAL TRAVEL DISTANCE
- FIRE EXTINGUISHER CABINET AND EXTINGUISHER
- F.E.C.
- BRACKET-MOUNTED FIRE EXTINGUISHER
- F.E.



1 FIRST FLOOR EGRESS PLAN
1/4" = 1'-0"

CODE ANALYSIS		
BUILDING CODE	IBC 2015	
ACCESSIBILITY CODE	ICC/ANSI A117.1-2009	
CONSTRUCTION TYPE	VB	
OCCUPANCY GROUP	B	
OCCUPANT LOAD	28	
ALLOWABLE BLDG HT & SF	3	9,000
AREA INCREASE	NA	
FIRE SUPPRESSION	NONE	
MAX. TRAVEL DISTANCE	200'	
EXITS (REQ'D/PROVIDED)	1 EA.	1 EA.
WORK AREA	1,860 S.F.	
PARKING (REQ'D/PROVIDED)	EXISTING: 24 STANDARD, 2 ADA STALLS	
TOILET ROOM (REQ'D/PROVIDED)	1 EA.	1 EA.

NOTE: SHOWER ROOMS ARE PROVIDED TO SERVE THE MAXIMUM 24 ADJACENT TEMPORARY OCCUPANTS OF TINY HOMES ON SITE.

ARCHITECTS
L&P
ENGINEERS

LIEN & PETERSON ARCHITECTS, INC
PO BOX 925
EAU CLAIRE, WI 54701
715-835-7500
admin@2dlp.com

HOPE VILLAGE
1825 KENNEDY ROAD
CHIPPEWA FALLS, WI 54729

EGRESS PLANS, CODE ANALYSIS
REVISIONS:
NO. DATE

ISSUE DATE:
JUNE 30, 2021
T101
2dlp PROJECT # 20072

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ROOM FINISH SCHEDULE								
NO.	NAME	FLOOR FINISH	BASE FINISH	WALL FINISH			CEILING FINISH	NOTES
				NORTH	EAST	SOUTH		
101	VESTIBULE	LVT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
102	DINING	LVT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
103	NOT USED	-	-	-	-	-	-	
104	KITCHENETTE	LVT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
105	CORRIDOR	LVT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
106	LAUNDRY	S.V.	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
107	SHOWER RM	S.V.	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
108	SHOWER RM	S.V.	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
109	SHOWER RM	S.V.	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
110	JANITOR CLOSET	S.V.	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
111	OFFICE	CPT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
112	OFFICE	CPT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
113	CONFERENCE ROOM	CPT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
114	STAIR	LVT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
115	CLOSET	LVT	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	
116	TOILET ROOM	S.V.	V.B.	EX./PNT	EX./PNT	EX./PNT	EX./PNT	

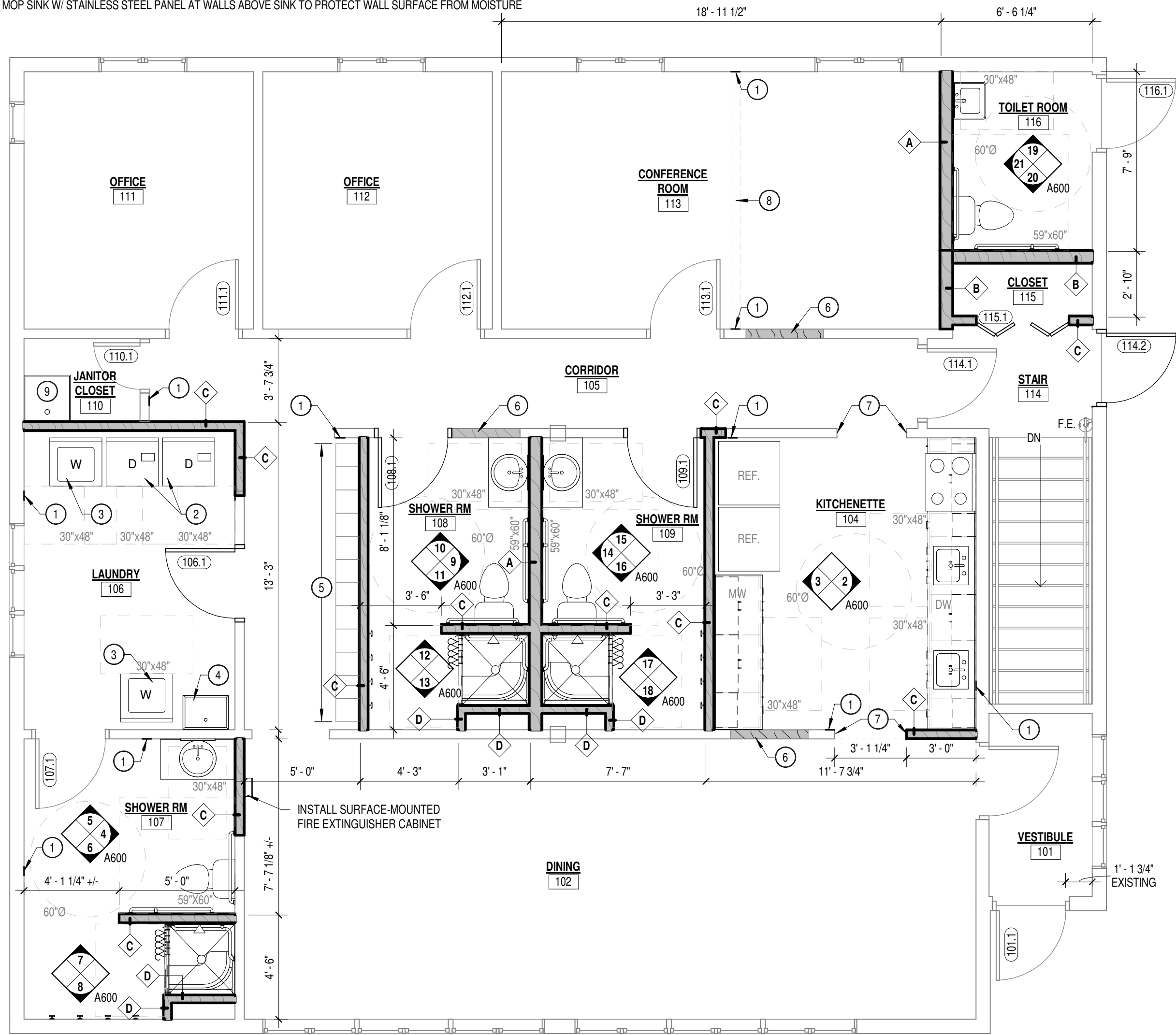
ROOM FINISH SCHEDULE ABBREVIATIONS:			
ACT	ADHERED ACOUSTIC CEILING TILE	PNT	PAINT FINISH
CPT	CARPET TILE	S.R.	SAG-RESISTANT
EX	EXISTING	S.V.	SHEET VINYL
GPDW	5/8" GYPSUM DRYWALL	V.B.	VINYL BASE
LVT	LUXURY VINYL TILE - PLANK	W.R.	WATER-RESISTANT

GENERAL FLOOR PLAN NOTES:

- INTERIOR DIMENSIONS:
- OPENINGS: EDGE OF OPENING
- INTERIOR STUD WALLS: FACE OF STUD, NOMINAL
- WOOD BLOCKING:
- PROVIDE SOLID WOOD BLOCKING FOR ALL WALL AND SOFFIT MOUNTED PRODUCTS AND EQUIPMENT INDICATED ON DRAWINGS
- EXISTING COLUMNS AND SUPPORTS TO REMAIN INTACT
- PROVIDE CORNER GUARD PROTECTION AT ALL OUTSIDE CORNERS
- FURNITURE AND FILE STORAGE BY OWNER
- ALL ADA REQUIRED CLEARANCES SHOWN ON PLAN WITH GRAY DASHED LINES
- ALL MECHANICAL, ELECTRICAL, AND PLUMBING WORK TO BE DESIGNED BY OTHER

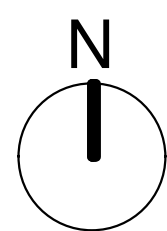
KEYED FLOOR PLAN NOTES:

- PATCH WALL TO MATCH ADJACENT WHERE WALL WAS REMOVED
- INSTALL DRYERS AND PROVIDE ALL NECESSARY ELECTRICAL HOOK UPS AS WELL AS REQUIRED DUCTING
- INSTALL WASHING MACHINES AND PROVIDE ALL NECESSARY ELECTRICAL AND PLUMBING HOOK UPS
- INSTALL LAUNDRY TUB AND PROVIDE ALL NECESSARY PLUMBING HOOK UPS
- 12"x12" STORAGE LOCKERS, BY OWNER
- INFILL WALL AND PATCH TO MATCH ADJACENT FINISH
- GPDW FINISHED OPENING
- PATCH CEILING ABOVE TO MATCH ADJACENT WHERE WALL WAS REMOVED
- INSTALL NEW MOP SINK W/ STAINLESS STEEL PANEL AT WALLS ABOVE SINK TO PROTECT WALL SURFACE FROM MOISTURE



FLOOR PLAN LEGEND:

ROOM NAME	ROOM TAG
101	ROOM TAG
(RM#)	DOOR TAG
101	ELEVATION TAG
101	SECTION TAG
101	WALL TAG



2 FIRST FLOOR PROPOSED

1/4" = 1'-0"

DOOR HARDWARE GROUPS

GROUP 1: SGL. INT. PRIVACY

- 1 LEVER HANDLE PRIVACY LOCKSET W/ USE INDICATOR
- 3 HINGES
- 1 DOOR CLOSER
- 1 WALL BUMPER

GROUP 2: SGL. INT. OFFICE

- 1 LEVER HANDLE OFFICE LOCKSET
- 1 DOOR CLOSER
- 1 WALL BUMPER

GROUP 3: SGL. INT. PASSAGE

- 1 LEVER HANDLE PASSAGE LOCKSET
- 1 DOOR CLOSER

GROUP 4: SGL. INT. STORAGE

- 1 LEVER HANDLE STORAGE LOCKSET

GROUP 5: SGL. INT. PASSAGE W/ DEADBOLT

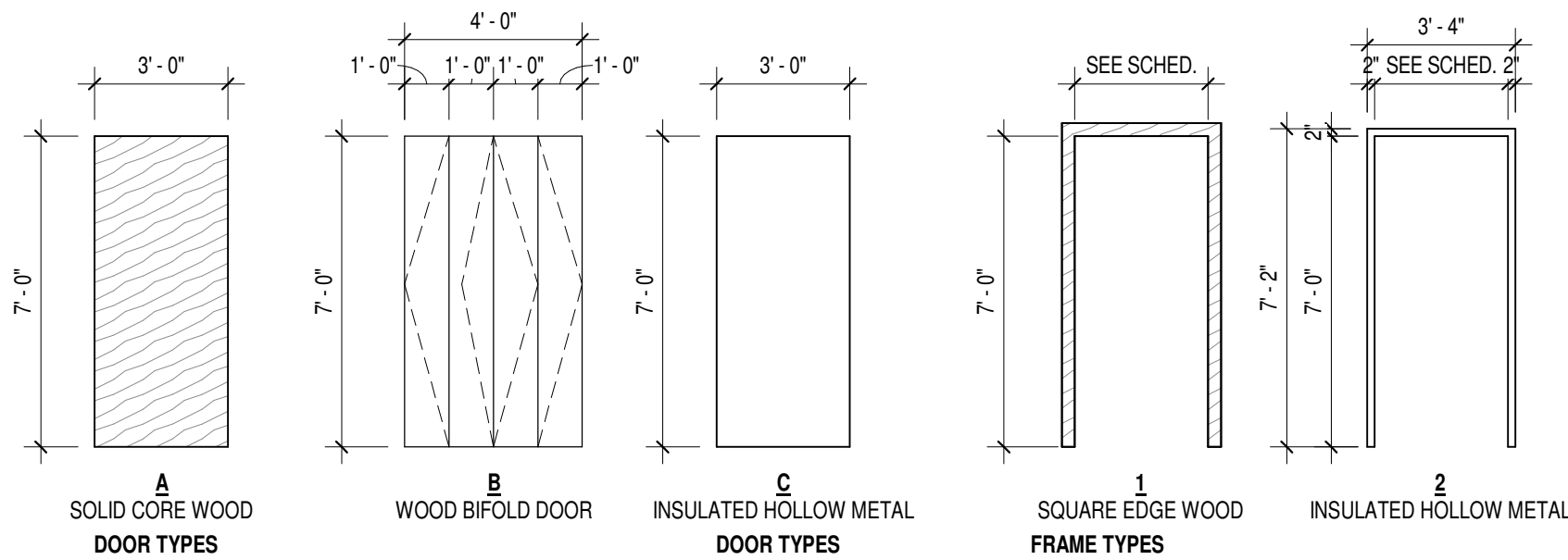
- 1 LEVER HANDLE PASSAGE LOCKSET
- 1 DEADBOLT, KEYED BOTH SIDES
- 3 HINGES

GROUP 6: SGL. EXT. ENTRANCE (H.M.)

- 1 CONTINUOUS GEARED STAINLESS STEEL HINGE
- 1 PANIC BAR
- 1 ELECTRIC STRIKE
- 1 LEVER HANDLE ENTRY LOCKSET
- 1 DOOR CLOSER
- 1 CARD READER
- WEATHER STRIPPING
- THRESHOLD

GROUP 7: SGL. EXT. PRIVACY

- 1 LEVER HANDLE PRIVACY LOCKSET W/ USE INDICATOR
- 1 ELECTRIC STRIKE
- 1 DOOR CLOSER
- 1 CARD READER



4 DOOR AND FRAME TYPES

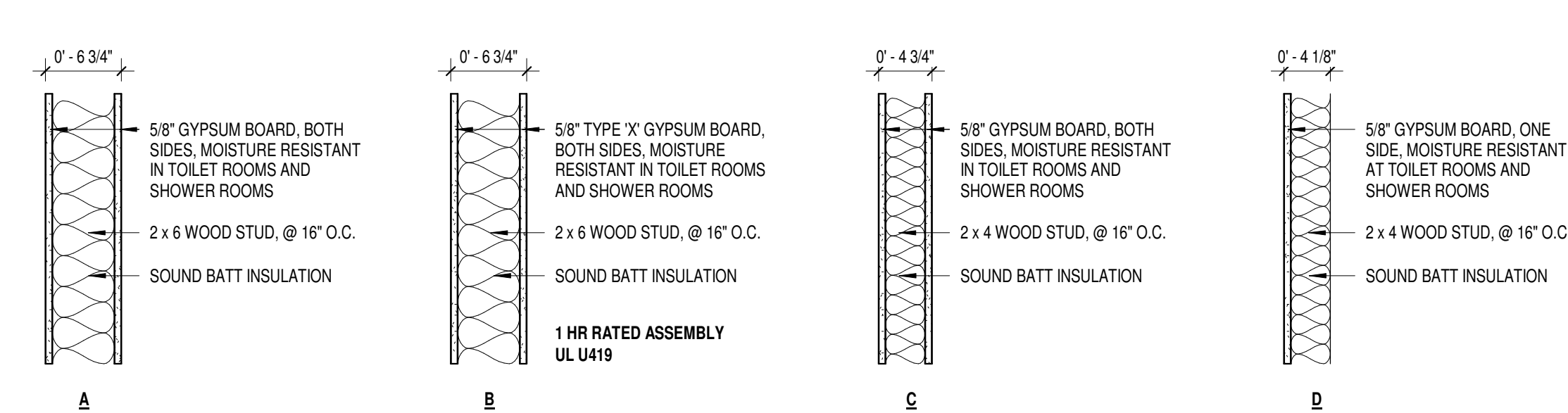
1/4" = 1'-0"

3 WALL TYPES

1" = 1'-0"

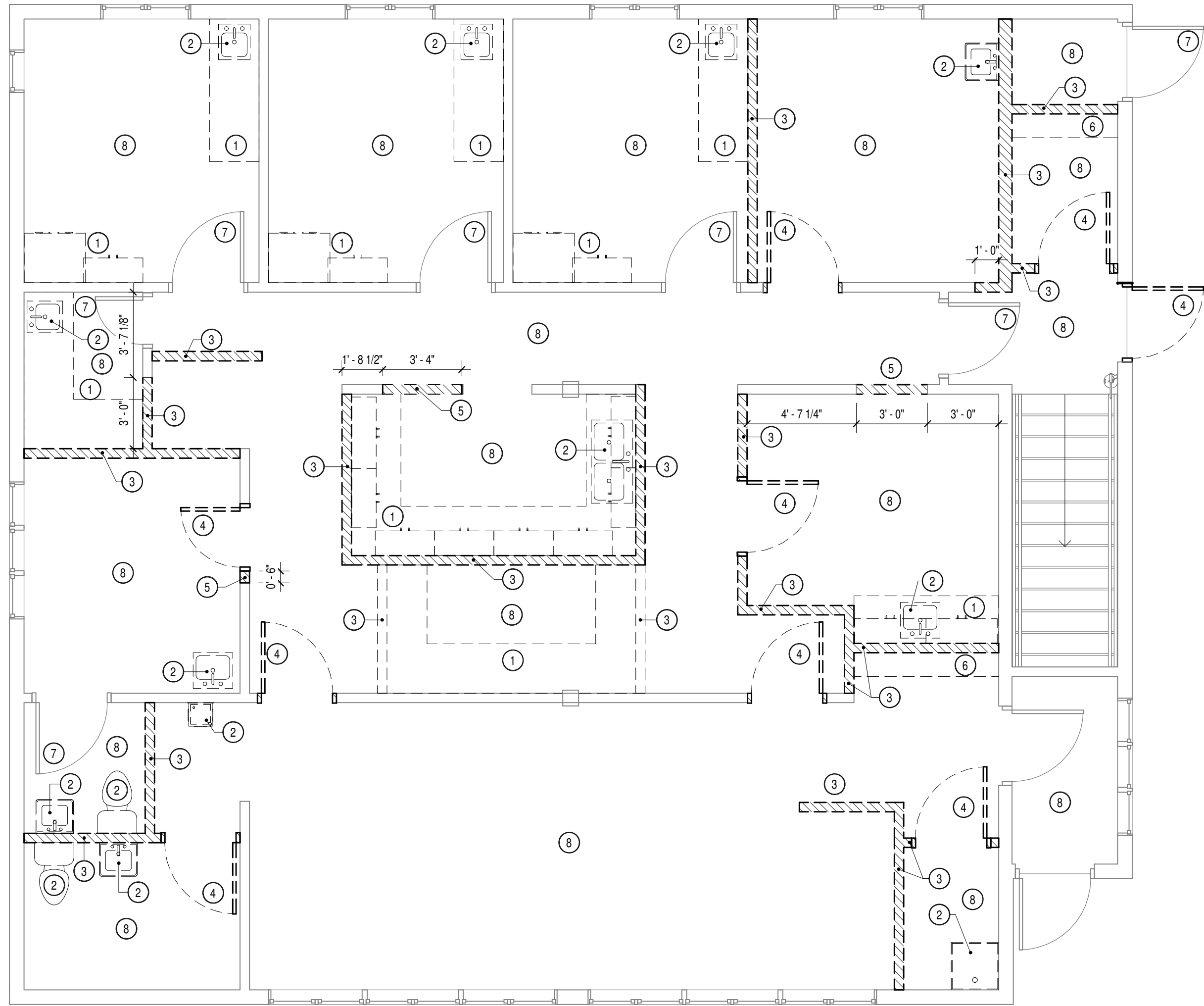
DOOR SCHEDULE

NO.	TYPE	DOOR			FRAME	HARDWARE	NOTES
		WIDTH	HEIGHT	THICKNESS			
101.1	EXISTING	3'-0"	7'-0"	0'-1 3/4"	EXISTING	EXISTING	ADD PADDLE LATCH AND ALL ASSOCIATED REQUIRED HARDWARE TO EXISTING DOOR FOR EGRESS EXITING
106.1	A	3'-0"	7'-0"	0'-1 3/4"	1	GROUP 3	
107.1	EXISTING	3'-0"	7'-0"	0'-1 3/4"	EXISTING	GROUP 1	EXISTING DOOR, NO NEW HINGES NEEDED
108.1	A	3'-0"	7'-0"	0'-1 3/4"	1	GROUP 1	
109.1	A	3'-0"	7'-0"	0'-1 3/4"	1	GROUP 1	
110.1	EXISTING	2'-0"	7'-0"	0'-1 3/4"	EXISTING	GROUP 4	
111.1	EXISTING	3'-0"	7'-0"	0'-1 3/4"	EXISTING	GROUP 2	
112.1	EXISTING	3'-0"	7'-0"	0'-1 3/4"	EXISTING	GROUP 2	
113.1	EXISTING	3'-0"	7'-0"	0'-1 3/4"	EXISTING	GROUP 2	
114.1	EXISTING	3'-0"	7'-0"	0'-1 3/4"	EXISTING	GROUP 5	EXISTING 1 HR RATED DOOR
114.2	C	3'-0"	7'-0"	0'-1 3/4"	2	GROUP 6	
115.1	B	4'-0"	7'-0"	0'-1 1/2"	1	-	PROVIDE ALL REQUIRED BIFOLD DOOR HARDWARE
116.1	EXISTING	3'-0"	7'-0"	0'-1 3/4"	EXISTING	GROUP 7	



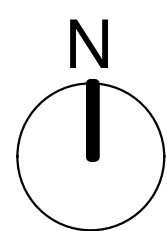
KEYED DEMOLITION NOTES:

- REMOVE COUNTERTOP AND ASSOCIATED CASEWORK BELOW. COMPLETED BY OWNER
- REMOVE PLUMBING FIXTURE AND ASSOCIATED PIPING. PLUMBING FIXTURES REMOVED AND PIPING CAPPED BY OWNER
- REMOVE WALL, FULL HEIGHT. COMPLETED BY OWNER
- REMOVE DOOR AND FRAME. COMPLETED BY OWNER
- REMOVE PORTION OF WALL, UP TO 7'-0" A.F.F., FOR NEW OPENING
- REMOVE SHELF AND POLE. COMPLETED BY OWNER
- REMOVE DOOR HARDWARE. PREP FOR NEW HARDWARE SET
- REMOVE FLOOR FINISH AND WALL BASE, THIS ROOM. COMPLETED BY OWNER



1 FIRST FLOOR DEMOLITION

1/4" = 1'-0"



ADDITIONAL BIDDING NOTES

ELECTRIC

All work is to be done to comply with local and state codes

All work must be done by a licensed electrician- License # _____

PLUMBING

All work is to be done to comply with local and state codes

All work must be done by a licensed plumber-License # _____

HVAC, VENTING, AND FANS

Each toilet/shower room, the kitchen, and the janitors closet needs ventilation, and the main heating system needs to provide fresh air to balance.

WATER HEATERS

Analyze the current water heater to see if it will meet the needs of the new layout. Bid to add additional water heaters to meet the needs of the new showers, bathrooms, laundry, and kitchen.

LUMBER

Hope Village has saved a lot of the framing lumber from the demolition. Analyze what is currently at the building and determine what could be re-used and bid accordingly

PAINTING

Hope Village volunteers will do all of the priming and final painting. Please bid all finishing thru taping and texturing.

SPRINKLER SYSTEM

Sprinkler system schematic needs to be moved

1 **SECTION 02 41 19**
2 **SELECTIVE DEMOLITION**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Demolition and removal of selected portions of building or structure.
9 Demolition and removal of selected site elements.
10 Salvage of existing items to be reused or recycled.

11
12 **MATERIALS OWNERSHIP**

13 Unless otherwise indicated, demolition waste becomes property of Contractor.

14
15 **INFORMATIONAL SUBMITTALS**

16 Proposed Protection Measures: indicate the measures proposed for protecting individuals and property, for
17 dust control and, for noise control. Indicate proposed locations and construction of barriers.

18
19 Schedule of selective demolition activities with starting and ending dates for each activity.

20
21 **CLOSEOUT SUBMITTALS**

22 Inventory of items that have been removed and salvaged.

23
24 **FIELD CONDITIONS**

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

27
28 Notify Architect of discrepancies between existing conditions and Drawings before proceeding with
29 selective demolition.

30
31 Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

32
33 If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and
34 Owner. Hazardous materials will be removed by Owner under a separate contract.

35
36 Storage or sale of removed items or materials on-site is not permitted.

37
38 Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage
39 during selective demolition operations.

40
41 Maintain fire-protection facilities in service during selective demolition operations.

42
43 Arrange selective demolition schedule so as not to interfere with Owner's operations.

44
45 **WARRANTY**

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

49
50 **PART 2 - PRODUCTS**

51
52 **PERFORMANCE REQUIREMENTS**

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

Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

EXAMINATION

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

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

UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

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

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

Arrange to shut off utilities with utility companies.

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

Disconnect, demolish, and remove plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.

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

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

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

Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.

Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.

Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

PROTECTION

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

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

Remove temporary barricades and protections where hazards no longer exist.

SELECTIVE DEMOLITION

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

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

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

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

6 Maintain fire watch during and for at least 24 hours after flame-cutting operations.

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

9 Dispose of demolished items and materials promptly.

10

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

14

15 Removed and Salvaged Items:

16

17 Clean salvaged items.

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

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

20

21 Removed and Reinstalled Items:

22

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

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

25 Protect items from damage during transport and storage.

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

29

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

34

35 **CLEANING**

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

38

39 Do not allow demolished materials to accumulate on-site.

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

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

43

44 Burning: Do not burn demolished materials.

45

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

48

49 **END OF SECTION**

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1 **SECTION 03 30 53**
2 **MISCELLANEOUS CAST-IN-PLACE CONCRETE**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section includes cast-in-place concrete, including reinforcement, concrete materials, mixture design,
8 placement procedures, and finishes.
9

10 **ACTION SUBMITTALS**

11 Product Data: For each type of product.
12

13 Design Mixtures: For each concrete mixture.
14

15 **QUALITY ASSURANCE**

16 Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed
17 concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and
18 equipment.
19

20 **PART 2 - PRODUCTS**

21
22 **CONCRETE, GENERAL**

23 Comply with ACI 301.

24 Comply with ACI 117.
25

26 **STEEL REINFORCEMENT**

27 Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled
28 content not less than 25 percent.
29

30 Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
31

32 Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, plain, fabricated from as-drawn steel
33 wire into flat sheets.
34

35 **CONCRETE MATERIALS**

36 Regional Materials: Concrete shall be manufactured within 500 miles of Project site from aggregates and
37 cementitious materials that have been extracted, harvested, or recovered, as well as manufactured, within
38 500 miles of Project site.
39

40 Regional Materials: Concrete shall be manufactured within 500 miles of Project site.
41

42 Cementitious Materials:
43

44 Portland Cement: ASTM C 150/C 150M, Type I/II.

45 Fly Ash: ASTM C 618, Class C or F.

46 Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
47

48 Normal-Weight Aggregate: ASTM C 33/C 33M, 1-1/2-inch nominal maximum aggregate size.
49

50 Air-Entraining Admixture: ASTM C 260/C 260M.
51

52 Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not
53 contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium
54 chloride or admixtures containing calcium chloride.
55

Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
Retarding Admixture: ASTM C 494/C 494M, Type B.
Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

Water: ASTM C 94/C 94M.

RELATED MATERIALS

Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils thick; or plastic sheet, ASTM E 1745, Class C.

Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

CURING MATERIALS

Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.

Absorptive Cover: AASHTO M 182, Class 3, burlap cloth or cotton mats.

Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

Water: Potable.

Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

CONCRETE MIXTURES

Normal-Weight Concrete:

Minimum Compressive Strength: 4000 psi at 28 days.

Maximum W/C Ratio: 0.50.

Cementitious Materials: Use fly ash, pozzolan, slag cement, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.

Slump Limit: 4 inches, plus or minus 1 inch.

Air Content: Maintain within range permitted by ACI 301. Do not allow air content of trowel-finished floor slabs to exceed 3 percent.

CONCRETE MIXING

Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

When air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

FORMWORK INSTALLATION

Design, construct, erect, brace, and maintain formwork according to ACI 301.

EMBEDDED ITEM INSTALLATION

Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1
2 **VAPOR-RETARDER INSTALLATION**

3 Install, protect, and repair vapor retarders according to ASTM E 1643; place sheets in position with longest
4 dimension parallel with direction of pour.

5
6 Lap joints 6 inches and seal with manufacturer's recommended adhesive or joint tape.

7
8 **STEEL REINFORCEMENT INSTALLATION**

9 Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

10
11 Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing
12 concrete.

13
14 **JOINTS**

15 General: Construct joints true to line with faces perpendicular to surface plane of concrete.

16
17 Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into
18 areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness

19
20 Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with
21 vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as
22 indicated.

23
24 Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface
25 unless otherwise indicated.

26
27 **CONCRETE PLACEMENT**

28 Before test sampling and placing concrete, water may be added at Project site, subject to limitations of
29 ACI 301.

30
31 Do not add water to concrete during delivery, at Project site, or during placement.

32
33 Consolidate concrete with mechanical vibrating equipment according to ACI 301.

34
35 **FINISHING FORMED SURFACES**

36 Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects
37 repaired and patched. Remove fins and other projections exceeding 1/2 inch.

38
39 Apply to concrete surfaces not exposed to public view.

40
41 Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly
42 and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove
43 fins and other projections exceeding 1/8 inch.

44
45 Apply to concrete surfaces exposed to public view, or to be covered with a coating or covering
46 material applied directly to concrete.

47
48 Rubbed Finish: Apply the following rubbed finish, defined in ACI 301, to smooth-formed-finished as-cast
49 concrete where indicated:

50
51 Smooth-rubbed finish.

52
53 Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to
54 formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue
55 final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise
56 indicated.

FINISHING UNFORMED SURFACES

General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface.

Do not further disturb surfaces before starting finishing operations.

Scratch Finish: Apply scratch finish to surfaces indicated and surfaces to receive concrete floor topping or mortar setting beds for ceramic or quarry tile, portland cement terrazzo, and other bonded cementitious floor finishes unless otherwise indicated.

Float Finish: Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, fluid-applied or direct-to-deck-applied membrane roofing, or sand-bed terrazzo.

Trowel Finish: Apply a hard trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system.

Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling, to surfaces indicated and to surfaces where ceramic or quarry tile is to be installed by either thickset or thinset methods. Immediately after second troweling, and when concrete is still plastic, slightly scarify surface with a fine broom.

Slip-Resistive Broom Finish: Apply a slip-resistive finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

CONCRETE PROTECTING AND CURING

General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 305.1 for hot-weather protection during curing.

Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:

Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

Water.

Continuous water-fog spray.

Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and

1 sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any
2 holes or tears during curing period, using cover material and waterproof tape.
3 Curing Compound: Apply uniformly in continuous operation by power spray or roller according to
4 manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after
5 initial application. Maintain continuity of coating and repair damage during curing period.
6 Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous
7 operation by power spray or roller according to manufacturer's written instructions. Recoat areas
8 subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later
9 and apply a second coat. Maintain continuity of coating and repair damage during curing period.

10

11 **FIELD QUALITY CONTROL**

12 Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

13

14 Tests: Perform according to ACI 301.

15

16 Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture .

17

18

END OF SECTION

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1 **SECTION 05 50 00**
2 **METAL FABRICATIONS**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Miscellaneous steel framing and supports.
9 Shelf angles.
10 Metal floor plate.
11 Miscellaneous steel trim.
12 Metal bollards.
13 Loose bearing and leveling plates.

14
15 Products furnished, but not installed, under this Section include the following:

- 16 Loose steel lintels.
17 Anchor bolts, steel pipe sleeves, slotted-channel inserts, and wedge-type inserts indicated to be cast
18 into concrete or built into unit masonry.
19 Steel weld plates and angles for casting into concrete.

20
21 **ACTION SUBMITTALS**

22 Product Data: For the following:

- 23
24 Fasteners.
25 Shop primers.
26 Shrinkage-resisting grout.

27
28 Shop Drawings: Show fabrication and installation details. Include plans, elevations, sections, and details of
29 metal fabrications and their connections. Show anchorage and accessory items.

30
31 **PART 2 - PRODUCTS**

32
33 **METALS**

34 Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal
35 fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks,
36 rolled trade names, or blemishes.

37
38 Steel Plates, Shapes, and Bars: ASTM A36/A36M.

39
40 Rolled-Steel Floor Plate: ASTM A786/A786M, rolled from plate complying with ASTM A36/A36M or
41 ASTM A283/A283M, Grade C or D.

42
43 Steel Tubing: ASTM A500/A500M, cold-formed steel tubing.

44
45 Steel Pipe: ASTM A53/A53M, Standard Weight (Schedule 40) unless otherwise indicated.

46
47 **FASTENERS**

48 General: Unless otherwise indicated, provide Type 304 stainless steel fasteners for exterior use and zinc-
49 plated fasteners with coating complying with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, at
50 exterior walls. Select fasteners for type, grade, and class required.

- 51
52 Provide stainless steel fasteners for fastening aluminum.
53 Provide bronze fasteners for fastening bronze.

1 Cast-in-Place Anchors in Concrete: Either threaded or wedge type unless otherwise indicated; galvanized
2 ferrous castings, either ASTM A47/A47M malleable iron or ASTM A27/A27M cast steel. Provide bolts,
3 washers, and shims as needed, all hot-dip galvanized per ASTM F2329/F2329M.

4 5 **MISCELLANEOUS MATERIALS**

6 Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying
7 with MPI#79 and compatible with topcoat.

8
9 Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

10
11 Water-Based Primer: Emulsion type, anticorrosive primer for mildly corrosive environments that is
12 resistant to flash rusting when applied to cleaned steel, complying with MPI#107 and compatible with
13 topcoat.

14
15 Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.

16
17 Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and
18 compatible with finish paint systems indicated.

19
20 Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible
21 with paints specified to be used over it.

22
23 Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

24
25 Shrinkage-Resistant Grout: Factory-packaged, nonmetallic, nonstaining, noncorrosive, nongaseous grout
26 complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for
27 interior and exterior applications.

28
29 Concrete: Comply with requirements in Section 03 30 53 "Miscellaneous Cast-in-Place Concrete" for
30 normal-weight, air-entrained concrete with a minimum 28-day compressive strength of 3000 psi.

31 32 **FABRICATION, GENERAL**

33 Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as
34 necessary for shipping and handling limitations. Use connections that maintain structural value of joined
35 pieces. Clearly mark units for reassembly and coordinated installation.

36
37 Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of
38 approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

39
40 Form bent-metal corners to smallest radius possible without causing grain separation or otherwise
41 impairing work.

42
43 Form exposed work with accurate angles and surfaces and straight edges.

44
45 Weld corners and seams continuously to comply with the following:

46
47 Use materials and methods that minimize distortion and develop strength and corrosion resistance of
48 base metals.

49 Obtain fusion without undercut or overlap.

50 Remove welding flux immediately.

51 At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness
52 shows after finishing.

53
54 Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where
55 possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless
56 otherwise indicated. Locate joints where least conspicuous.

1
2 Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide
3 weep holes where water may accumulate.
4

5 Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel
6 strap anchors, not less than 8 inches from ends and corners of units and 24 inches o.c.
7

8 **MISCELLANEOUS FRAMING AND SUPPORTS**

9 Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated.
10 Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.
11

12 Fabricate steel girders for wood frame construction from continuous steel shapes of sizes indicated.
13

14 Where wood nailers are attached to girders with bolts or lag screws, drill or punch holes at 24 inches
15 o.c.
16

17 Fabricate steel pipe columns for supporting wood frame construction from steel pipe with steel baseplates
18 and top plates as indicated. Drill or punch baseplates and top plates for anchor and connection bolts and
19 weld to pipe with fillet welds all around. Make welds the same size as pipe wall thickness unless otherwise
20 indicated.
21

22 **SHELF ANGLES**

23 Fabricate shelf angles from steel angles of sizes indicated and for attachment to concrete framing. Provide
24 horizontally slotted holes to receive 3/4-inch bolts, spaced not more than 6 inches from ends and 24 inches
25 o.c., unless otherwise indicated.
26

27 Provide mitered and welded units at corners.

28 Provide open joints in shelf angles at expansion and control joints. Make open joint approximately 2
29 inches larger than expansion or control joint.
30

31 For cavity walls, provide vertical channel brackets to support angles from backup masonry and concrete.
32 Galvanize shelf angles located in exterior walls.
33

34 Prime shelf angles located in exterior walls with zinc-rich primer.
35

36 Furnish wedge-type concrete inserts, complete with fasteners, to attach shelf angles to cast-in-place
37 concrete.
38

39 **MISCELLANEOUS STEEL TRIM**

40 Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with
41 continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where
42 possible.
43

44 Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.
45

46 Provide with integrally welded steel strap anchors for embedding in concrete or masonry construction.
47

48 Galvanize exterior miscellaneous steel trim.
49

50 **LOOSE BEARING AND LEVELING PLATES**

51 Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction. Drill
52 plates to receive anchor bolts and for grouting.
53

54 Galvanize bearing and leveling plates.
55

56 Prime plates with zinc-rich primer.

LOOSE STEEL LINTELS

Fabricate loose steel lintels from steel angles and shapes of size indicated for openings and recesses in masonry walls and partitions at locations indicated. Fabricate in single lengths for each opening unless otherwise indicated. Weld adjoining members together to form a single unit where indicated.

Galvanize and prime loose steel lintels located in exterior walls.

Prime loose steel lintels located in exterior walls with zinc-rich primer.

STEEL WELD PLATES AND ANGLES

Provide steel weld plates and angles not specified in other Sections, for items supported from concrete construction as needed to complete the Work. Provide each unit with no fewer than two integrally welded steel strap anchors for embedding in concrete.

GENERAL FINISH REQUIREMENTS

Finish metal fabrications after assembly.

STEEL AND IRON FINISHES

Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A153/A153M for steel and iron hardware and with ASTM A123/A123M for other steel and iron products.

Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.

Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

Shop prime with universal shop primer unless otherwise indicated.

Preparation for Shop Priming: Prepare surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

INSTALLATION, GENERAL

Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

Field Welding: Comply with the following requirements:

Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.

Obtain fusion without undercut or overlap.

Remove welding flux immediately.

At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

1 Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are
2 required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and
3 masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.

4
5 Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or
6 similar construction.

7 **INSTALLATION OF MISCELLANEOUS FRAMING AND SUPPORTS**

8
9 Install framing and supports to comply with requirements of items being supported, including
10 manufacturers' written instructions and requirements indicated on Shop Drawings.

11
12 Anchor shelf angles securely to existing construction with expansion anchors or through bolts.

13
14 Support steel girders on solid grouted masonry, concrete, or steel pipe columns. Secure girders with anchor
15 bolts embedded in grouted masonry or concrete or with bolts through top plates of pipe columns.

16 **INSTALLATION OF BEARING AND LEVELING PLATES**

17
18 Clean concrete and masonry bearing surfaces of bond-reducing materials, and roughen to improve bond to
19 surfaces. Clean bottom surface of plates.

20
21 Set bearing and leveling plates on wedges, shims, or leveling nuts. After bearing members have been
22 positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims but, if protruding, cut off
23 flush with edge of bearing plate before packing with shrinkage-resistant grout. Pack grout solidly between
24 bearing surfaces and plates to ensure that no voids remain.

25 **REPAIRS**

26
27 Touchup Painting:

28
29 Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated
30 and abraded areas with same material as used for shop painting to comply with SSPC-PA 1 for
31 touching up shop-painted surfaces.

32
33 Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to
34 comply with ASTM A780/A780M.

35
36 **END OF SECTION**

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1 **SECTION 06 10 00**
2 **ROUGH CARPENTRY**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Framing with dimension lumber.
9 Framing with engineered wood products.
10 Wood blocking and nailers.
11 Wood furring and grounds.
12 Wood sleepers.
13 Plywood backing panels.

14
15 **ACTION SUBMITTALS**

16 Product Data:

- 17 For each type of process and factory-fabricated product.
18 For preservative-treated wood products.
19

20 **PART 2 - PRODUCTS**

21
22 **WOOD PRODUCTS, GENERAL**

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

- 27
28 Factory mark each piece of lumber with grade stamp of grading agency.
29 For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back
30 of each piece or omit grade stamp and provide certificates of grade compliance issued by grading
31 agency.
32 Dress lumber, S4S, unless otherwise indicated.
33

34 Maximum Moisture Content:

- 35
36 Boards: 15 percent.
37 Dimension Lumber: 15 percent for 2-inch nominal thickness or less; 19 percent for more than 2-inch
38 nominal thickness unless otherwise indicated.
39

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

- 42
43 Allowable design stresses, as published by manufacturer, shall meet or exceed those indicated.
44 Manufacturer's published values shall be determined from empirical data or by rational engineering
45 analysis and demonstrated by comprehensive testing performed by a qualified independent testing
46 agency.
47

48 **DIMENSION LUMBER FRAMING**

49 Non-Load-Bearing Interior Partitions by Grade: Construction or No. 2 grade.

- 50
51 Application: All interior partitions.
52 Species:

- 53
54 Southern pine or mixed southern pine; SPIB.
55 Northern species; NLGA.

Eastern softwoods; NeLMA.
Western woods; WCLIB or WWPA.

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

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

MISCELLANEOUS LUMBER

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

Blocking.
Nailers.
Rooftop equipment bases and support curbs.
Cants.
Furring.
Grounds.

Dimension Lumber Items: Standard, Stud, or No. 3 grade lumber of any species.

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

Mixed southern pine or southern pine; No. 3 grade; SPIB.
Eastern softwoods; No. 3 Common grade; NeLMA.
Northern species; No. 3 Common grade; NLGA.
Western woods; Standard or No. 3 Common grade; WCLIB or WWPA.

PLYWOOD BACKING PANELS

Equipment Backing Panels: Plywood, DOC PS 1, Exterior, A-C, in thickness indicated or, if not indicated, not less than 1/2-inch nominal thickness.

FASTENERS

General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 1-1/2 inches into wood substrate.

Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M.

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

MISCELLANEOUS MATERIALS

Sill-Sealer Gaskets:

Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch nominal thickness, compressible to 1/32 inch; selected from manufacturer's standard widths to suit width of sill members indicated.
Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to suit width of sill members indicated.
Self-adhering sheet consisting of 64 mils of rubberized asphalt laminated on one side to a 4-mil-thick, polyethylene-film reinforcement, and with release liner on adhesive side; formulated for application with primer or surface conditioner that complies with VOC limits of authorities having jurisdiction.

1
2 Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber or
3 rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded
4 polyolefin to produce an overall thickness of not less than 0.025 inch.
5

6 Adhesives for Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with
7 ASTM D3498 that is approved for use indicated by adhesive manufacturer.
8

9 **PART 3 - EXECUTION**

10 **INSTALLATION**

11 Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction,"
12 unless otherwise indicated.
13

14 Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's
15 written instructions.
16

17 Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry
18 accurately to other construction. Locate furring, nailers, blocking, grounds, and similar supports to comply
19 with requirements for attaching other construction.
20

21 Install shear wall panels to comply with manufacturer's written instructions.
22

23 Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through
24 each fastener hole.
25

26 Do not splice structural members between supports unless otherwise indicated.
27

28 Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
29

30 Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible
31 flashing separator between wood and metal decking.
32

33 Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with
34 the following:
35

36 Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
37

38 Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate
39 Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
40

41 ICC-ES evaluation report for fastener.
42

43 **PROTECTION**

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

47 Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-
48 registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
49

50 **END OF SECTION**

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SECTION 06 20 23
INTERIOR FINISH CARPENTRY

SECTION 06 20 23

INTERIOR FINISH CARPENTRY

PART 1 - GENERAL

SUMMARY

Section Includes:

Interior trim, including non-fire-rated interior door frames.

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, or omit grade stamp and provide certificates of grade compliance issued by grading agency.

Softwood Plywood: DOC PS 1.

Hardboard: ANSI A135.4.

MDF: ANSI A208.2, Grade 130.

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

INTERIOR TRIM

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

Species and Grade:

Eastern white pine; NeLMA or NLGA Finish or 1 Common.

Douglas fir-larch or Douglas fir south; NLGA, WCLIB, or WWPA Superior or C & Btr finish.

Southern pine; SPIB C & Btr finish.

Western red cedar; NLGA, WCLIB, or WWPA Grade B.

Maximum Moisture Content: 15 percent.

Finger Jointing: Allowed.

Face Surface: Surfaced (smooth).

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

Species and Grade: Red oak White maple; NHLA B Finish.
Maximum Moisture Content: 10 percent.
Finger Jointing: Not allowed.
Gluing for Width: Allowed.
Veneered Material: Allowed.
Face Surface: Surfaced (smooth).
Matching: Selected for compatible grain and color.

Lumber Trim for Opaque Finish (Painted Finish):

Species and Grade:

Eastern white pine; NeLMA or NLGA Finish or 1 Common.

Species and Grade: Douglas fir-larch or Douglas fir south; NLGA, WCLIB, or WWPA Superior or C & Btr finish.

Spruce-pine-fir; NeLMA, NLGA, WCLIB, or WWPA 2 Common.

Maximum Moisture Content for softwoods: 15 percent.

Maximum Moisture Content for Hardwoods: 10 percent.

Finger Jointing: Allowed.

Face Surface: Surfaced (smooth).

Optional Material: Primed MDF of same actual dimensions as lumber indicated may be used in lieu of lumber.

SHELVING AND CLOTHES RODS

Exposed Shelving: Made from one of the following materials, 3/4 inch thick:

Particleboard with radiused and filled or solid-wood front edge.

MDF with radiused or solid-wood front edge.

MDO softwood plywood with solid-wood edge.

Wood boards as specified above for lumber trim for opaque finish.

Shelf Brackets with Rod Support: BHMA A156.16, B04051; prime-painted formed steel.

Shelf Brackets without Rod Support: BHMA A156.16, B04041; prime-painted formed steel.

Standards for Adjustable Shelf Brackets: BHMA A156.9, B04102; powder-coat-finished steel.

Adjustable Shelf Brackets: BHMA A156.9, B04112; powder-coat-finished steel.

Wood Clothes Rods: 1-1/2-inch-diameter, clear, kiln-dried hardwood.

MISCELLANEOUS MATERIALS

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

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

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

Multipurpose Construction Adhesive: Formulation, complying with ASTM D3498, that is recommended for indicated use by adhesive manufacturer.

PART 3 - EXECUTION

PREPARATION

Clean substrates of projections and substances detrimental to application.

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

INSTALLATION, GENERAL

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

Use concealed shims where necessary for alignment.

Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.

Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.

Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining interior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.

Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

INSTALLATION OF STANDING AND RUNNING TRIM

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

Do not use pieces less than 24 inches long, except where necessary.

Stagger joints in adjacent and related standing and running trim.

Cope at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint.

Use scarf joints for end-to-end joints.

Plane backs of casings to provide uniform thickness across joints where necessary for alignment.

Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.

Install trim after gypsum-board joint finishing operations are completed.

Install without splitting; drill pilot holes before fastening where necessary to prevent splitting.

Fasten to prevent movement or warping.

Countersink fastener heads on exposed carpentry work and fill holes.

INSTALLATION OF PANELING

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

Leave 1/4-inch gap to be covered with trim at top, bottom, and openings.

Install with uniform tight joints between panels.

Attach panels to supports with manufacturer's recommended panel adhesive and fasteners.

Space fasteners and adhesive as recommended by panel manufacturer.

Conceal fasteners to greatest practical extent.

Arrange panels with grooves and joints over supports.

Fasten to supports with nails of type and at spacing recommended by panel manufacturer.

Use fasteners with prefinished heads matching groove color.

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

Leave 1/4-inch gap to be covered with trim at top, bottom, and openings.

1 Butt adjacent panels with moderate contact.
2 Use fasteners with prefinished heads matching paneling color.
3 Wood Stud or Furring Substrate: Install with 1-inch annular-ring shank hardboard nails.
4 Plaster or Gypsum-Board Substrate: Install with 1-5/8-inch annular-ring shank hardboard nails.
5 Nailing: Space nails 4 inches o.c. at panel perimeter and 8 inches o.c. at intermediate supports unless
6 otherwise required by manufacturer.
7

8 Board Paneling: Install according to manufacturer's written instructions.
9

10 Arrange in random-width pattern suggested by manufacturer unless boards or planks are of uniform
11 width.
12 Install in full lengths without end joints.
13 Stagger end joints in random pattern to uniformly distribute joints on each wall.
14 Install with uniform end joints with only end-matched (tongue-and-groove) joints within each field of
15 paneling.
16 Install with uniform end joints. Locate end joints only over furring or blocking.
17 Select and arrange boards on each wall to minimize noticeable variations in grain character and color
18 between adjacent boards.
19 Install with uniform tight joints between boards.
20 Fasten paneling by face nailing, setting nails, and filling over nail heads.
21 Fasten paneling with trim screws, set below face and filled.
22 Fasten paneling by blind nailing through tongues.
23 Fasten paneling with paneling system manufacturer's concealed clips.
24 Fasten paneling to gypsum wallboard with panel adhesive.
25

26 **INSTALLATION OF SHELVING AND CLOTHES RODS**

27 Cut shelf cleats at ends of shelves about 1/2 inch less than width of shelves and sand exposed ends smooth.
28

29 Install shelf cleats by fastening to framing or backing with finish nails or trim screws, set below face
30 and filled.
31 Space fasteners not more than 16 inches o.c. Use two fasteners at each framing member or fastener
32 location for cleats 4 inches nominal in width and wider.
33 Apply a bead of multipurpose construction adhesive to back of shelf cleats before installing.
34 Remove adhesive that is squeezed out after fastening shelf cleats in place.
35

36 Install shelf brackets according to manufacturer's written instructions, spaced not more than 36 inches o.c.
37 Fasten to framing members, blocking, or metal backing, or use toggle bolts or hollow wall anchors.
38

39 Install standards for adjustable shelf supports according to manufacturer's written instructions. Fasten to
40 framing members, blocking, or metal backing, or use toggle bolts or hollow wall anchors. Space fasteners
41 not more than 12 inches o.c.
42

43 Install standards for adjustable shelf brackets according to manufacturer's written instructions, spaced not
44 more than 36 inches o.c. and within 6 inches of ends of shelves. Fasten to framing members, blocking, or
45 metal backing, or use toggle bolts or hollow wall anchors.
46

47 Cut shelves to neatly fit openings with only enough gap to allow shelves to be removed and reinstalled.

48 Install shelves, fully seated on cleats, brackets, and supports.

49 Fasten shelves to cleats with finish nails or trim screws, set flush.

50 Fasten shelves to brackets to comply with bracket manufacturer's written instructions.
51

52 Install rod flanges for rods as indicated.

53 Fasten to shelf cleats, framing members, blocking, or metal backing, or use toggle bolts or hollow wall
54 anchors.

55 Install rods in rod flanges.
56

END OF SECTION

1 Laminate Cladding for Exposed Surfaces:

2
3 Horizontal Surfaces: Grade HGS.

4 Postformed Surfaces: Grade HGP.

5 Vertical Surfaces: Grade HGS.

6 Edges: Grade HGS.

7 Pattern Direction: Vertically for drawer fronts, doors, and fixed panels.

8
9 Concealed Backs of Panels with Exposed Plastic-Laminate Surfaces: High-pressure decorative laminate,
10 NEMA LD 3, Grade BKL.

11
12 Drawer Construction: Fabricate with exposed fronts fastened to subfront with mounting screws from
13 interior of body.

14
15 Join subfronts, backs, and sides with glued rabbeted joints supplemented by mechanical fasteners or
16 glued dovetail joints.

17
18 Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed
19 laminate surfaces complying with the following requirements:

20
21 As indicated by laminate manufacturer's designations.

22 Match Architect's sample.

23 As selected by Architect from laminate manufacturer's full range in the following categories:

24
25 Solid colors, matte finish.

26 Solid colors with core same color as surface, matte finish.

27 Wood grains, matte finish.

28 Patterns, matte finish.

29
30 **WOOD MATERIALS**

31 Wood Products: Provide materials that comply with requirements of referenced quality standard for each
32 type of architectural cabinet and quality grade specified unless otherwise indicated.

33
34 Wood Moisture Content: 5 to 10 percent.

35
36 Composite Wood Products: Provide materials that comply with requirements of referenced quality standard
37 for each type of architectural cabinet and quality grade specified unless otherwise indicated.

38
39 Medium-Density Fiberboard (MDF): ANSI A208.2, Grade 130.

40 Particleboard (Medium Density): ANSI A208.1, Grade M-2.

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

42 Thermally Fused Laminate (TFL) Panels: Particleboard or MDF finished with thermally fused,
43 melamine-impregnated decorative paper and complying with requirements of NEMA LD 3,
44 Grade VGL, for Test Methods 3.3, 3.4, 3.6, 3.8, and 3.10.

45
46 **FIRE-RETARDANT-TREATED MATERIALS**

47 Fire-Retardant-Treated Materials, General: Where fire-retardant-treated materials are indicated, use
48 materials that are acceptable to authorities having jurisdiction as determined by testing performed on
49 identical products by a qualified testing agency.

50
51 Use treated materials that comply with requirements of referenced quality standard. Do not use
52 materials that are warped, discolored, or otherwise defective.

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

1 Identify fire-retardant-treated materials with appropriate classification marking of qualified testing
2 agency in the form of removable paper label or imprint on surfaces that will be concealed from view
3 after installation.
4

5 **CABINET HARDWARE AND ACCESSORIES**
6 General: Provide cabinet hardware and accessory materials associated with architectural cabinets .
7

8 Butt Hinges: 2-3/4-inch, five-knuckle steel hinges made from 0.095-inch-thick metal, and as follows:
9

10 Semiconcealed Hinges for Flush Doors: ANSI/BHMA A156.9, B01361.
11

12 Frameless Concealed Hinges (European Type): ANSI/BHMA A156.9, B01602, 100 degrees of
13 opening, self-closing.
14

15 Back-Mounted Pulls: ANSI/BHMA A156.9, B02011.
16

17 Wire Pulls: Back mounted, solid metal, 4 inches long, 5/16 inch in diameter.
18

19 Catches: Magnetic catches, ANSI/BHMA A156.9, B03141.
20

21 Adjustable Shelf Standards and Supports: ANSI/BHMA A156.9, B04071; with shelf rests, B04081.
22

23 Shelf Rests: ANSI/BHMA A156.9, B04013; metal.
24

25 Drawer Slides: ANSI/BHMA A156.9.
26

27 Standard Duty (Grade 1 and Grade 2): Side mount and extending under bottom edge of drawer.
28 Heavy-Duty (Grade 1HD-100 and Grade 1HD-200): Side mount.
29 Type: Full extension.
30 Material: Aluminum slides.
31 Motion Feature: Soft close dampener.
32

33 Door and Drawer Silencers: ANSI/BHMA A156.16, L03011.
34

35 Exposed Hardware Finishes: For exposed hardware, provide finish that complies with
36 ANSI/BHMA A156.18 for ANSI/BHMA finish number indicated.
37

38 Dark, Oxidized, Satin Bronze, Oil Rubbed: ANSI/BHMA 613 for bronze base; ANSI/BHMA 640 for
39 steel base; match Architect's sample.
40 Bright Brass, Clear Coated: ANSI/BHMA 605 for brass base; ANSI/BHMA 632 for steel base.
41 Bright Brass, Vacuum Coated: ANSI/BHMA 723 for brass base; ANSI/BHMA 729 for zinc-coated-
42 steel base.
43 Satin Brass, Blackened, Bright Relieved, Clear Coated: ANSI/BHMA 610 for brass base;
44 ANSI/BHMA 636 for steel base.
45 Satin Chromium Plated: ANSI/BHMA 626 for brass or bronze base; ANSI/BHMA 652 for steel base.
46 Bright Chromium Plated: ANSI/BHMA 625 for brass or bronze base; ANSI/BHMA 651 for steel base.
47 Satin Stainless Steel: ANSI/BHMA 630.
48

49 For concealed hardware, provide manufacturer's standard finish that complies with product class
50 requirements in ANSI/BHMA A156.9.
51

52 **MISCELLANEOUS MATERIALS**
53 Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln-dried to less than 15
54 percent moisture content.
55

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

4
5 Adhesive for Bonding Plastic Laminate: Unpigmented contact cement.

6
7 Adhesive for Bonding Edges: Hot-melt adhesive.

8 9 **FABRICATION**

10 Complete fabrication, including assembly and hardware application, to maximum extent possible before
11 shipment to Project site. Disassemble components only as necessary for shipment and installation. Where
12 necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

13
14 Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and
15 similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately
16 sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

17
18 Install glass to comply with applicable requirements in Section 08 80 00 "Glazing" and in GANA's
19 "Glazing Manual."

20
21 For glass in frames, secure glass with removable stops.

22 For exposed glass edges, polish and grind smooth.

23 24 **PART 3 - EXECUTION**

25 26 **INSTALLATION**

27 Before installation, condition cabinets to humidity conditions in installation areas for not less than 72 hours.

28
29 Architectural Woodwork Standards Grade: Install cabinets to comply with quality standard grade of item to
30 be installed.

31
32 Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with wafer-head
33 cabinet installation screws.

34
35 Install cabinets level, plumb, and true in line to a tolerance of 1/8 inch in 96 inches using concealed shims.

36
37 Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

38 Install cabinets without distortion so doors and drawers fit openings and are accurately aligned. Adjust
39 hardware to center doors and drawers in openings and to provide unencumbered operation.

40 Complete installation of hardware and accessory items as indicated.

41 Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches o.c. with
42 No. 10 wafer-head screws sized for not less than 1-1/2-inch penetration into wood framing,
43 blocking, or hanging strips.

44 45 **FIELD QUALITY CONTROL**

46 Inspections: Provide inspection of installed Work certifying that woodwork, including installation,
47 complies with requirements of the Architectural Woodwork Standards for the specified grade.

48
49 Inspection entity shall prepare and submit report of inspection.

50 51 **END OF SECTION**

1 **SECTION 07 21 00**
2 **THERMAL INSULATION**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Extruded polystyrene foam-plastic board insulation.
9 Molded (expanded) polystyrene foam-plastic board insulation.
10 Glass-fiber blanket insulation.

11
12 **ACTION SUBMITTALS**

13 Product Data: For the following:

- 14 Extruded polystyrene foam-plastic board insulation.
15 Molded (expanded) polystyrene foam-plastic board insulation.
16 Glass-fiber blanket insulation.

17
18 **INFORMATIONAL SUBMITTALS**

19 Installer's Certification: Listing type, manufacturer, and R-value of insulation installed in each element of
20 the building thermal envelope.

21
22 Sign, date, and post the certification in a conspicuous location on Project site.

23
24 Product test reports.

25 Research reports.

26
27 **PART 2 - PRODUCTS**

28
29 **EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD INSULATION**

30 Extruded Polystyrene Board Insulation, Type X: ASTM C578, Type X, 15-psi minimum compressive
31 strength; unfaced.

32
33 Flame-Spread Index: Not more than 25 when tested in accordance with ASTM E84.

34 Smoke-Developed Index: Not more than 450 when tested in accordance with ASTM E84.

35 Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

36 Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and
37 wider in width.

38
39 **MOLDED (EXPANDED) POLYSTYRENE FOAM-PLASTIC BOARD INSULATION**

40 Molded (Expanded) Polystyrene Board Insulation, Type I: ASTM C578, Type I, 10-psi minimum
41 compressive strength.

42
43 Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and
44 wider in width.

45
46 **GLASS-FIBER BLANKET INSULATION**

47 Glass-Fiber Blanket Insulation, Unfaced: ASTM C665, Type I; passing ASTM E136 for combustion
48 characteristics.

49
50 Flame-Spread Index: Not more than 25 when tested in accordance with ASTM E84.

51 Smoke-Developed Index: Not more than 50 when tested in accordance with ASTM E84.

52 Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and
53 wider in width.

1 Glass-Fiber Blanket Insulation, Polypropylene-Scrim-Kraft Faced: ASTM C665, Type II (nonreflective
2 faced), Class A (faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor
3 barrier).

4
5 Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and

6 **ACCESSORIES**

7 Insulation for Miscellaneous Voids:

8
9 Glass-Fiber Insulation: ASTM C764, Type II, loose fill; with maximum flame-spread and smoke-
10 developed indexes of 5, per ASTM E84.

11 Spray Polyurethane Foam Insulation: ASTM C1029, Type II, closed cell, with maximum flame-spread
12 and smoke-developed indexes of 75 and 450, respectively, per ASTM E84.

13 Polyurethane Pour-In-Place Insulation: Closed cell, with maximum flame-spread and smoke-developed
14 indexes of 75 and 450, respectively, per ASTM E84, specifically formulated for pour-in-place
15 applications.

16
17 Insulation Anchors, Spindles, and Standoffs: As recommended by manufacturer.

18
19 Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials,
20 and with demonstrated capability to bond insulation securely to substrates without damaging insulation and
21 substrates.

22
23 Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed and sized to fit between
24 roof framing members and to provide ventilation between insulated attic spaces and vented eaves.

25 **PART 3 - EXECUTION**

26 **INSTALLATION, GENERAL**

27
28 Comply with insulation manufacturer's written instructions applicable to products and applications.

29
30
31 Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or
32 snow at any time.

33
34 Install insulation with manufacturer's R-value label exposed after insulation is installed.

35
36 Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with
37 insulation. Remove projections that interfere with placement.

38
39 Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths.
40 Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up
41 total thickness or to achieve R-value.

42 **INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION**

43
44 Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

45
46 Use insulation widths and lengths that fill the cavities formed by framing members. If more than one
47 length is required to fill the cavities, provide lengths that will produce a snug fit between ends.

48 Place insulation in cavities formed by framing members to produce a friction fit between edges of
49 insulation and adjoining framing members.

50 Maintain 3-inch clearance of insulation around recessed lighting fixtures not rated for or protected
51 from contact with insulation.

52 Attics: Install eave ventilation troughs between roof framing members in insulated attic spaces at
53 vented eaves.

54 For metal-framed wall cavities where cavity heights exceed 96 inches, support unfaced blankets
55 mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.

56 For wood-framed construction, install blankets according to ASTM C1320 and as follows:

With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

Vapor-Retarder-Faced Blankets: Tape joints and ruptures in vapor-retarder facings, and seal each continuous area of insulation to ensure airtight installation.

Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

Glass-Fiber Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft..

Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

INSTALLATION OF CURTAIN-WALL INSULATION

Install board insulation in curtain-wall construction according to curtain-wall manufacturer's written instructions.

Hold insulation in place by securing metal clips and straps or integral pockets within window frames, spaced at intervals recommended in writing by insulation manufacturer to hold insulation securely in place without touching spandrel glass. Maintain cavity width of dimension indicated on Drawings between insulation and glass.

Install insulation to fit snugly without bowing.

END OF SECTION

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1 **SECTION 07 92 00**
2 **JOINT SEALANTS**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Silicone joint sealants.
9 Nonstaining silicone joint sealants.
10 Urethane joint sealants.
11 Mildew-resistant joint sealants.
12 Latex joint sealants.

13
14 **ACTION SUBMITTALS**

15 Product data.

16
17 Samples: Manufacturer's standard color charts consisting of strips of cured sealants showing the full range
18 of colors available for each product exposed to view.

19
20 Joint-sealant schedule.

21
22 **INFORMATIONAL SUBMITTALS**

23 Field Quality-Control Submittals:

24 Field-Adhesion-Test Reports: For each sealant application tested.

25
26 Sample warranties.

27
28 **CLOSEOUT SUBMITTALS**

29 Warranty Documentation:

- 30 Manufacturers' special warranties.
31 Installer's special warranties.

32
33 **QUALITY ASSURANCE**

34 Qualifications:

- 35 Installers: Authorized representative who is trained and approved by manufacturer.
36 Testing Agency: Qualified in accordance with ASTM C1021 to conduct the testing indicated.

37
38
39 **PART 2 - PRODUCTS**

40
41 **JOINT SEALANTS, GENERAL**

42 Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one
43 another and with joint substrates under conditions of service and application, as demonstrated by joint-
44 sealant manufacturer, based on testing and field experience.

45
46 Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

47
48 **SILICONE JOINT SEALANTS**

49 Silicone, S, NS, 100/50, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement
50 capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS,
51 Class 100/50, Use NT.

52
53 **NONSTAINING SILICONE JOINT SEALANTS**

54 Nonstaining Joint Sealants: No staining of substrates when tested in accordance with ASTM C1248.

1 Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and
2 minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920,
3 Type S, Grade NS, Class 100/50, Use NT.

4 5 **URETHANE JOINT SEALANTS**

6 Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent
7 movement capability, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.

8 9 **MILDEW-RESISTANT JOINT SEALANTS**

10 Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent
11 mold and mildew growth.

12
13 Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag,
14 plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint
15 sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.

16 17 **LATEX JOINT SEALANTS**

18 Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type OP, Grade NF.

19 20 **JOINT-SEALANT BACKING**

21 Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and
22 other joint fillers; and approved for applications indicated by sealant manufacturer based on field
23 experience and laboratory testing.

24
25 Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin), and of size
26 and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

27
28 Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for
29 preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint.
30 Provide self-adhesive tape where applicable.

31 32 **MISCELLANEOUS MATERIALS**

33 Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to
34 joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

35
36 Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant
37 backing materials, free of oily residues or other substances capable of staining or harming joint substrates
38 and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to
39 joint substrates.

40
41 Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to
42 joints.

43 44 **PART 3 - EXECUTION**

45 46 **PREPARATION**

47 Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with
48 joint-sealant manufacturer's written instructions and the following requirements:

49
50 Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant,
51 including dust, paints (except for permanent, protective coatings tested and approved for sealant
52 adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing,
53 water repellents, water, surface dirt, and frost.

54 Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of
55 these methods to produce a clean, sound substrate capable of developing optimum bond with joint

1 sealants. Remove loose particles remaining after cleaning operations above by vacuuming or
2 blowing out joints with oil-free compressed air. Porous joint substrates include the following:
3 Concrete.
4 Masonry.
5 Unglazed surfaces of ceramic tile.
6 Exterior insulation and finish systems.
7 .
8 Remove laitance and form-release agents from concrete.
9 Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm
10 substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint
11 substrates include the following:
12 Metal.
13 Glass.
14 Porcelain enamel.
15 Glazed surfaces of ceramic tile.
16
17 Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by
18 preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant
19 manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or
20 migration onto adjoining surfaces.
21
22 Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining
23 surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods
24 required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.
25
26 **INSTALLATION OF JOINT SEALANTS**
27 General: Comply with joint-sealant manufacturer's written installation instructions for products and
28 applications indicated, unless more stringent requirements apply.
29
30 Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as
31 applicable to materials, applications, and conditions indicated.
32
33 Install sealant backings of type indicated to support sealants during application and at position required to
34 produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum
35 sealant movement capability.
36
37 Do not leave gaps between ends of sealant backings.
38 Do not stretch, twist, puncture, or tear sealant backings.
39 Remove absorbent sealant backings that have become wet before sealant application, and replace them
40 with dry materials.
41
42 Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs
43 of joints.
44
45 Install sealants using proven techniques that comply with the following and at the same time backings are
46 installed:
47
48 Place sealants so they directly contact and fully wet joint substrates.
49 Completely fill recesses in each joint configuration.
50 Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant
51 movement capability.
52
53 Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins,
54 tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of
55 configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of
56 joint.

1
2 Remove excess sealant from surfaces adjacent to joints.
3 Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor
4 sealants or adjacent surfaces.
5 Provide concave joint profile in accordance with Figure 8A in ASTM C1193 unless otherwise
6 indicated.
7 Provide flush joint profile at in accordance with Figure 8B in ASTM C1193.
8 Provide recessed joint configuration of recess depth and in accordance with Figure 8C in
9 ASTM C1193.
10 Use masking tape to protect surfaces adjacent to recessed tooled joints.

11
12 Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with
13 cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints
14 occur.

15
16 Protect joint sealants during and after curing period from contact with contaminating substances and from
17 damage resulting from construction operations or other causes so sealants are without deterioration or
18 damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut
19 out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired
20 areas are indistinguishable from original work.

21 22 **JOINT-SEALANT SCHEDULE**

23 Exterior joints in vertical surfaces and horizontal nontraffic surfaces:

24 Joint Locations:

25 Construction joints in cast-in-place concrete.
26 Control and expansion joints in unit masonry.
27 Joints between different materials listed above.
28 Perimeter joints between materials listed above and frames of doors windows and louvers.
29 Control and expansion joints in ceilings and other overhead surfaces.
30 Other joints as indicated on Drawings.

31 Joint Sealant: Silicone, nonstaining, S, NS, 50, NT.

32 Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
33

34 Interior joints in vertical surfaces and horizontal nontraffic surfaces:

35 Joint Locations:

36 Control and expansion joints on exposed interior surfaces of exterior walls.
37 Tile control and expansion joints.
38 Vertical joints on exposed surfaces of unit masonry concrete walls.
39 Other joints as indicated on Drawings.

40 Joint Sealant: Urethane, S, NS, 25, NT.

41 Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
42

43 Interior joints in vertical surfaces and horizontal nontraffic surfaces not subject to significant movement:

44 Joint Locations:

45 Control joints on exposed interior surfaces of exterior walls.
46 Perimeter joints between interior wall surfaces and frames of interior doors and windows.
47 Other joints as indicated on Drawings.

48 Joint Sealant: Acrylic latex.

49 Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
50

51 Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces:

52 Joint Locations:

53 Joints between plumbing fixtures and adjoining walls, floors, and counters.
54 Tile control and expansion joints where indicated.
55 .Other joints as indicated on Drawings.

56 Joint Sealant: Silicone, mildew resistant, acid curing, S, NS, 25, NT.

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SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

SUMMARY

Section includes:

Interior 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.

Field quality control reports.

CLOSEOUT SUBMITTALS

Record Documents: For fire-rated doors, list of door numbers and applicable room name and number to which door accesses.

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: ANSI/SDI A250.8, Level 1; ANSI/SDI A250.4, Level C..

Doors:

Type: As indicated in the Door and Frame Schedule.

Thickness: 1-3/4 inches.

Face: Uncoated steel sheet, minimum thickness of 0.032 inch.

Edge Construction: Model 1, Full Flush.

Core: Manufacturer's standard.

Frames:

Materials: Uncoated steel sheet, minimum thickness of 0.042 inch.

Sidelite and Transom Frames: Fabricated from same thickness material as adjacent door frame.

Construction: Knocked down.

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.

Heavy-Duty Doors and Frames: ANSI/SDI A250.8, Level 2; ANSI/SDI A250.4, Level B..

Doors:

Type: As indicated in the Door and Frame Schedule.

Thickness: 1-3/4 inches.

1 Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch, with minimum A40 coating.
2 Edge Construction: Model 1, Full Flush.
3 Edge Bevel: Provide manufacturer's standard beveled or square edges.
4 Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets.
5 Seal joints against water penetration.
6 Bottom Edges: Close bottom edges of doors with end closures or channels of same material as
7 face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to
8 escape.
9 Core: Manufacturer's standard.

10
11 **Frames:**

12 Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum A40
13 coating.
14 Construction: Full profile welded.
15

16 **FRAME ANCHORS**

17 **Jamb Anchors:**

18
19 Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable
20 for performance level indicated.
21 Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor
22 anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.
23 Postinstalled Expansion Anchor: Minimum 3/8-inch-diameter bolts with expansion shields or inserts,
24 with manufacturer's standard pipe spacer.
25

26 Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.
27

28 Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips,
29 allowing not less than 2-inch height adjustment. Terminate bottom of frames at top of underlayment.
30

31 Material: ASTM A879/A879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
32

33 For anchors built into exterior walls, steel sheet complying with ASTM A1008/A1008M or
34 ASTM A1011/A1011M; hot-dip galvanized in accordance with ASTM A153/A153M, Class B.
35

36 **MATERIALS**

37 Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed
38 applications.
39

40 Hot-Rolled Steel Sheet: ASTM A1011/A1011M, Commercial Steel (CS), Type B; free of scale, pitting, or
41 surface defects; pickled and oiled.
42

43 Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B.
44

45 Inserts, Bolts, and Fasteners: Hot-dip galvanized in accordance with ASTM A153/A153M.
46

47 Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated,
48 fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-
49 metal frames of type indicated.
50

51 Mineral-Fiber Insulation: ASTM C665, Type I (blankets without membrane facing); consisting of fibers
52 manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25
53 and 50, respectively; passing ASTM E136 for combustion characteristics.
54

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

FABRICATION

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

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

Sidelite and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by welding.

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

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

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

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

Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping in accordance with ANSI/SDI A250.6, the Door Hardware Schedule, and templates.

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

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

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

Provide stops and moldings flush with face of door, and with square stops unless otherwise indicated.

Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.

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

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

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

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

STEEL FINISHES

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

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

PART 3 - EXECUTION

PREPARATION

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

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

INSTALLATION

Hollow-Metal Frames: Comply with ANSI/SDI A250.11.

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

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

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

Fire-Rated Openings: Install frames in accordance with NFPA 80.

Floor Anchors: Secure with postinstalled expansion anchors.

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

Solidly pack mineral-fiber insulation inside frames.

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

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

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

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

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

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

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

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

Non-Fire-Rated Steel Doors: Comply with ANSI/SDI A250.8.

Fire-Rated Doors: Install doors with clearances in accordance with NFPA 80.

Smoke-Control Doors: Install doors in accordance with NFPA 105.

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

REPAIR

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

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

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

END OF SECTION

1 **SECTION 08 14 16**
2 **FLUSH WOOD DOORS**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Five-ply flush wood veneer-faced doors for transparent finish.
9 Factory finishing flush wood doors and frames.
10 Factory fitting flush wood doors to frames and factory machining for hardware.

11
12 **ACTION SUBMITTALS**

13 Product Data: For each type of product, including the following:

- 14 Door core materials and construction.
15 Door edge construction
16 Door face type and characteristics.
17 Door louvers.
18 Door trim for openings.
19 Door frame construction.
20 Factory-machining criteria.
21 Factory- finishing specifications.

22
23 Shop Drawings: Indicate location, size, and hand of each door; elevation of each type of door; construction
24 details not covered in Product Data; and the following:

- 25
26 Door schedule indicating door and frame location, type, size, fire protection rating, and swing.
27 Door elevations, dimension and locations of hardware, lite and louver cutouts, and glazing thicknesses.
28 Details of frame for each frame type, including dimensions and profile.
29 Details of electrical raceway and preparation for electrified hardware, access control systems, and
30 security systems.
31 Dimensions and locations of blocking for hardware attachment.
32 Clearances and undercuts.
33 Requirements for veneer matching.

34
35 Samples: For factory-finished doors.

36
37 **CLOSEOUT SUBMITTALS**

38 Record Documents: For fire-rated doors, list of door numbers and applicable room name and number to
39 which door accesses.

40
41 **QUALITY ASSURANCE**

42 Fire-Rated Door Inspector Qualifications: Inspector for field quality-control inspections of fire-rated door
43 assemblies shall comply with qualifications set forth in NFPA 80, Section 5.2.3.1 and the following:

- 44
45 DHI's Fire and Egress Door Assembly Inspector (FDAI) certification.

46
47 Egress Door Inspector Qualifications: Inspector for field quality-control inspections of egress door
48 assemblies shall comply with qualifications set forth in NFPA 101, Section 7.2.1.15.4 and the following:

- 49
50 DHI's Fire and Egress Door Assembly Inspector (FDAI) certification.

51 **PART 2 - PRODUCTS**
52
53

SOLID-CORE, FIVE-PLY FLUSH WOOD VENEER-FACED DOORS FOR TRANSPARENT FINISH

Interior Doors:

Performance Grade: ANSI/WDMA I.S. 1A Standard Duty.

Architectural Woodwork Standards Grade: Custom.

Faces: Single-ply wood veneer not less than 1/50 inch thick.

Species: Red oak.

Cut: Plain sliced (flat sliced).

Match between Veneer Leaves: Random match.

Assembly of Veneer Leaves on Door Faces: Running match.

Exposed Vertical and Top Edges: Applied wood-veneer edges of same species as faces and covering edges of faces - Architectural Woodwork Standards edge Type B Applied wood edges of same species as faces and covering edges of crossbands - Architectural Woodwork Standards edge Type D.

Screw-Holding Capability: [550 lbf] [475 lbf] [400 lbf] in accordance with WDMA T.M. 10.

Core for Non-Fire-Rated Doors:

ANSI A208.1, Grade LD-2 particleboard.

Blocking: Provide wood blocking in particleboard-core doors as needed to eliminate through-bolting hardware.

5-inch top-rail blocking, in doors indicated to have closers.

5-inch bottom-rail blocking, in exterior doors and doors indicated to have kick, mop, or armor plates.

5-inch midrail blocking, in doors indicated to have exit devices.

Glued wood stave.

WDMA I.S. 10 structural composite lumber.

Screw Withdrawal, Face: 475 lb.

Screw Withdrawal, Edge: 475 lb.

Either glued wood stave or WDMA I.S. 10 structural composite lumber.

LIGHT FRAMES AND LOUVERS

Wood Beads for Light Openings in Wood Doors: Provide manufacturer's standard wood beads unless otherwise indicated.

Wood Species: Same species as door faces.

Profile: Flush rectangular beads.

Wood-Veneered Beads for Light Openings in Fire-Rated Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire-protection rating indicated on Drawings. Include concealed metal glazing clips where required for opening size and fire-protection rating indicated.

Wood Louvers: Door manufacturer's standard solid-wood louvers unless otherwise indicated.

Wood Species: Same species as door faces.

Profile: Flat.

1
2 Metal Louvers:

3
4 Blade Type: Vision-proof, inverted V.

5 Metal and Finish: Hot-dip galvanized steel, 0.040 inch thick, factory primed for paint with baked-
6 enamel- or powder-coated finish.

7
8 **FABRICATION**

9 Factory fit doors to suit frame-opening sizes indicated.

10
11 Comply with clearance requirements of referenced quality standard for fitting unless otherwise
12 indicated.

13 Comply with NFPA 80 requirements for fire-rated doors.

14
15 Factory machine doors for hardware that is not surface applied.

16
17 Locate hardware to comply with DHI-WDHS-3.

18 Comply with final hardware schedules, door frame Shop Drawings, ANSI/BHMA-156.115-W, and
19 hardware templates.

20 Coordinate with hardware mortises in metal frames, to verify dimensions and alignment before factory
21 machining.

22 For doors scheduled to receive electrified locksets, provide factory-installed raceway and wiring to
23 accommodate specified hardware.

24 Metal Astragals: Factory machine astragals and formed-steel edges for hardware for pairs of fire-rated
25 doors.

26
27 Openings: Factory cut and trim openings through doors.

28
29 Light Openings: Trim openings with moldings of material and profile indicated.

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

32 Louvers: Factory install louvers in prepared openings.

33
34 **FACTORY FINISHING**

35 Comply with referenced quality standard for factory finishing.

36
37 Complete fabrication, including fitting doors for openings and machining for hardware that is not
38 surface applied, before finishing.

39 Finish faces, all four edges, edges of cutouts, and mortises.

40 Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.

41
42 Factory finish doors.

43
44 Factory finish doors that are indicated on Drawings to receive transparent finish.

45
46 Factory finish doors where indicated in schedules or on Drawings as factory finished.

47
48 Transparent Finish:

49
50 Architectural Woodwork Standards Grade: Custom.

51 Finish: Architectural Woodwork Standards System-5, Varnish, Conversion.

52 Staining: As selected by Architect from manufacturer's full range.

53 Effect: Filled finish.

54 Sheen: Satin.

55
56 Opaque Finish:

Architectural Woodwork Standards Grade: Custom.
Finish: Architectural Woodwork Standards System-5, Varnish, Conversion.
Color: As selected by Architect from manufacturer's full range.
Sheen: Semigloss.

PART 3 - EXECUTION

INSTALLATION

Hardware: For installation, see Section 08 71 00 "Door Hardware."

Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

Install frames level, plumb, true, and straight.

Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
Anchor frames to anchors or blocking built in or directly attached to substrates.

Secure with countersunk, concealed fasteners and blind nailing.

Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork.

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

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 on Drawings.

Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.

Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.

Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

ADJUSTING

Operation: Rehang or replace doors that do not swing or operate freely.

Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION

1 **SECTION 08 71 00**
2 **DOOR HARDWARE**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

8 Mechanical door hardware for the following:

9 Swinging doors.

10 Folding doors.

11 Cylinders for door hardware specified in other Sections.

12 Electrified door hardware.

13
14 **ACTION SUBMITTALS**

15 Product Data: For each type of product.

16
17 Shop Drawings: For electrified door hardware.

18 Include diagrams for power, signal, and control wiring.

19 Include details of interface of electrified door hardware and building safety and security systems.

20
21 Samples: For each exposed product in each finish specified.

22 Door hardware schedule.

23 Keying schedule.

24
25 **INFORMATIONAL SUBMITTALS**

26 Sample warranty.

27
28 **CLOSEOUT SUBMITTALS**

29 Maintenance data.

30
31 **QUALITY ASSURANCE**

32 Installer Qualifications: Supplier of products and an employer of workers trained and approved by product
33 manufacturers and of an Architectural Hardware Consultant who is available during the course of the Work
34 to consult Contractor, Architect, and Owner about door hardware and keying.

35
36 Scheduling Responsibility: Preparation of door hardware and keying schedule.

37 Engineering Responsibility: Preparation of data for electrified door hardware, including Shop
38 Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies
39 similar to those indicated for this Project.

40
41 **WARRANTY**

42 Special Warranty: Manufacturer agrees to repair or replace components of door hardware that fail in
43 materials or workmanship within specified warranty period.

44
45 Warranty Period: Three years from date of Substantial Completion unless otherwise indicated below:

46 Exit Devices: Two years from date of Substantial Completion.

47 Manual Closers: 10 years from date of Substantial Completion.

48
49 **PART 2 - PRODUCTS**

50
51 **PERFORMANCE REQUIREMENTS**

52 Electrified Door Hardware: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and
53 marked for intended location and application.

Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

Accessibility Requirements: For door hardware on doors in an accessible route, comply with ICC A117.1.

HINGES

Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.

CONTINUOUS HINGES

Continuous Hinges: BHMA A156.26; minimum 0.120-inch-thick, hinge leaves with minimum overall width of 4 inches; fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.

Continuous, Gear-Type Hinges: Extruded-aluminum, pinless, geared hinge leaves joined by a continuous extruded-aluminum channel cap; with concealed, self-lubricating thrust bearings.

MECHANICAL LOCKS AND LATCHES

Lock Functions: As indicated in door hardware schedule.

Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:

- Bored Locks: Minimum 1/2-inch latchbolt throw.

- Mortise Locks: Minimum 3/4-inch latchbolt throw.

- Deadbolts: Minimum 1-inch bolt throw.

Lock Backset: 2-3/4 inches unless otherwise indicated.

Lock Trim:

- Description: As indicated on Drawings.

- Levers: Wrought.

- Escutcheons (Roses): Wrought.

- Dummy Trim: Match lever lock trim and escutcheons.

Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.

- Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.

Bored Locks: BHMA A156.2; Grade 1; Series 4000.

Mortise Locks: BHMA A156.13; Operational Grade 1; stamped steel case with steel or brass parts; Series 1000.

AUXILIARY LOCKS

Bored Auxiliary Locks: BHMA A156.36; Grade 1; with strike that suits frame.

Mortise Auxiliary Locks: BHMA A156.36; Grade 1; with strike that suits frame.

Push-Button Combination Locks: BHMA A156.36; cylindrical; Grade 1; lock opens by entering a one- to five-digit code by pushing correct buttons in correct sequence; automatically relocks when door is closed; with strike that suits frame.

SELF-CONTAINED ELECTRONIC LOCKS

Self-Contained Electronic Locks: BHMA A156.25, mortise; with internal, battery-powered, self-contained electronic locks; consisting of complete lockset, motor-driven lock mechanism, and actuating device;

enclosed in zinc-dichromate-plated, wrought-steel case, and strike that suits frame. Provide key override, low-battery detection and warning, LED status indicators, and ability to program at the lock.

MANUAL FLUSH BOLTS

Manual Flush Bolts: BHMA A156.16; minimum 3/4-inch throw; designed for mortising into door edge.

EXIT DEVICES AND AUXILIARY ITEMS

Exit Devices and Auxiliary Items: BHMA A156.3.

LOCK CYLINDERS

Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.[**Provide cylinder from same manufacturer of locking devices.**]

Standard Lock Cylinders: BHMA A156.5; Grade 1 permanent cores; face finished to match lockset.

Core Type: Interchangeable.

KEYING

Keying System: Factory registered, complying with guidelines in BHMA A156.28, appendix. Provide one extra key blank for each lock.

Existing System:

Master key or grand master key locks to Owner's existing system.

Re-key Owner's existing master key system into new keying system.

Keyed Alike: Key all cylinders to same change key.

Keys: Brass.

Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

OPERATING TRIM

Operating Trim: BHMA A156.6; stainless steel 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.

CLOSER HOLDER RELEASE DEVICES

Closer Holder Release Devices: BHMA A156.15; Grade 1; closer connected with separate or integral releasing and fire- or smoke-detecting devices. Door shall become self-closing on interruption of signal to release device. Automatic release is activated by [**smoke detection system**] [**loss of power**].

MECHANICAL STOPS AND HOLDERS

Wall- and Floor-Mounted Stops: BHMA A156.16.

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 in accordance with ASTM E283 with tested pressure differential of 0.3-inch wg, as follows:

Gasketing on Single Doors: 0.3 cfm/sq. ft. of door opening.

Gasketing on Double Doors: 0.50 cfm per ft. m/s per m) of door opening.

1
2 **THRESHOLDS**

3 Thresholds: BHMA A156.21; fabricated to full width of opening indicated.
4

5 **METAL PROTECTIVE TRIM UNITS**

6 Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch-thick stainless steel; with
7 manufacturer's standard machine or self-tapping screw fasteners.
8

9 **FINISHES**

10 Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.
11

12 **PART 3 - EXECUTION**
13

14 **INSTALLATION**

15 Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise
16 indicated or required to comply with governing regulations.

17 Standard Steel Doors and Frames: ANSI/SDI A250.8.

18 Custom Steel Doors and Frames: HMMA 831.

19 Wood Doors: DHI's "Recommended Locations for Architectural Hardware for Wood Flush Doors."
20

21 Install each door hardware item to comply with manufacturer's written instructions. Where cutting and
22 fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in
23 another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing
24 work. Do not install surface-mounted items until finishes have been completed on substrates involved.
25

26 Hinges: Install types and in quantities indicated in door hardware schedule, but not fewer than the number
27 recommended by manufacturer for application indicated or one hinge for every 30 inches of door height,
28 whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or
29 pivots, are provided.
30

31 Lock Cylinders: Install construction cores to secure building and areas during construction period.

32 Replace construction cores with permanent cores as directed by Owner.

33 Furnish permanent cores to Owner for installation.
34

35 Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying
36 with requirements specified in Section 07 92 00 "Joint Sealants."
37

38 Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule.
39 Do not mount floor stops where they will impede traffic.
40

41 Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

42 Do not notch perimeter gasketing to install other surface-applied hardware.
43

44 Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
45

46 Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.
47

48 **ADJUSTING**

49 Adjust and check each operating item of door hardware and each door to ensure proper operation or
50 function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control
51 devices to compensate for final operation of heating and ventilating equipment and to comply with
52 referenced accessibility requirements.
53

54 **DOOR HARDWARE SCHEDULE**

55 See Drawings for descriptions
56

END OF SECTION

1 **SECTION 09 29 00**
2 **GYPSUM BOARD**

3
4 **PART 1 - GENERAL**
5

6 **SUMMARY**

7 Section Includes:

- 8 Interior gypsum board.
9 Tile backing panels.
10 Texture finishes.
11

12 **ACTION SUBMITTALS**

13 Product Data:

- 14 Gypsum wallboard.
15 Mold-resistant gypsum board.
16 Glass-mat, water-resistant backing board.
17 Cementitious backer units.
18 Interior trim.
19 Joint treatment materials.
20

21 Samples: For each texture finish indicated on same backing indicated for Work.
22

23 **PART 2 - PRODUCTS**
24

25 **GYPSUM BOARD, GENERAL**

26 Size: Provide maximum lengths and widths available that will minimize joints in each area and that
27 correspond with support system indicated.
28

29 **INTERIOR GYPSUM BOARD**

30 Gypsum Wallboard: ASTM C1396/C1396M.

- 31 Thickness: 5/8 inch.
32 Long Edges: Tapered and featured (rounded or beveled) for prefilling.
33

34 Mold-Resistant Gypsum Board: ASTM C1396/C1396M. With moisture- and mold-resistant core and paper
35 surfaces.

- 36 Core: 5/8 inch, regular type.
37 Long Edges: Tapered.
38 Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.
39

40 **TILE BACKING PANELS**

41 Glass-Mat, Water-Resistant Backing Board: ASTM C1178/C1178M, with manufacturer's standard edges.

- 42 Core: As indicated on Drawings 5/8 inch, regular type.
43 Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.
44

45 Cementitious Backer Units: ANSI A118.9 and ASTM C1288 or ASTM C1325, with manufacturer's
46 standard edges.

- 47 Thickness: 5/8 inch.
48 Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.
49

50 **TRIM ACCESSORIES**

51 Interior Trim: ASTM C1047.

- 52 Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-
53 steel sheet.
54 Shapes:
55 Cornerbead.

Bullnose bead.
LC-Bead: J-shaped; exposed long flange receives joint compound.
L-Bead: L-shaped; exposed long flange receives joint compound.
U-Bead: J-shaped; exposed short flange does not receive joint compound.
Expansion (control) joint.

JOINT TREATMENT MATERIALS

General: Comply with ASTM C475/C475M.

Joint Tape:

Interior Gypsum Board: Paper.
Tile Backing Panels: As recommended by panel manufacturer.

Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.

Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.

Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.

Use setting-type compound for installing paper-faced metal trim accessories.

Fill Coat: For second coat, use drying-type, all-purpose compound.

Finish Coat: For third coat, use drying-type, all-purpose compound.

Joint Compound for Tile Backing Panels:

Glass-Mat, Water-Resistant Backing Panel: As recommended by backing panel manufacturer.

Cementitious Backer Units: As recommended by backer unit manufacturer.

AUXILIARY MATERIALS

Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.

Steel Drill Screws: ASTM C1002 unless otherwise indicated.

Use screws complying with ASTM C954 for fastening panels to steel members from 0.033 to 0.112 inch thick.

For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

Sound-Attenuation Blankets: ASTM C665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.

Thermal Insulation: As specified in Section 07 21 00 "Thermal Insulation."

PART 3 - EXECUTION

INSTALLATION AND FINISHING OF PANELS

Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

Comply with ASTM C840.

Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch-wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

1
2 Prefill open joints, rounded or beveled edges, and damaged surface areas.
3
4 Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to
5 receive tape.
6
7 Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C840:
8 Level 1: Ceiling plenum areas, concealed areas, and where indicated.
9 Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.
10 Primer and its application to surfaces are specified in Section 09 91 23 "Interior Painting."
11
12 Glass-Mat Faced Panels: Finish according to manufacturer's written instructions.
13
14 Cementitious Backer Units: Finish according to manufacturer's written instructions.
15
16 **PROTECTION**
17 Protect installed products from damage from weather, condensation, direct sunlight, construction, and other
18 causes during remainder of the construction period.
19
20 Remove and replace panels that are wet, moisture damaged, and mold damaged.
21
22 **END OF SECTION**

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1 **SECTION 09 30 13**
2 **CERAMIC TILING**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Porcelain tile.
9 Waterproof membranes.
10 Crack isolation membranes.

11
12 **ACTION SUBMITTALS**

13 Product Data: For each type of product.

14
15 Samples:

- 16 Each type and composition of tile and for each color and finish required.
17 Assembled samples mounted on a rigid panel, with grouted joints, for each type and composition of
18 tile and for each color and finish required.

19
20 **INFORMATIONAL SUBMITTALS**

21 Qualification Data: For Installer.

22
23 **MAINTENANCE MATERIAL SUBMITTALS**

24 Furnish extra materials that match and are from same production runs as products installed and that are
25 packaged with protective covering for storage and identified with labels describing contents.

- 26
27 Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each
28 type, composition, color, pattern, and size indicated.

29
30 **QUALITY ASSURANCE**

31 Installer Qualifications:

- 32 Installer's supervisor for Project holds the International Masonry Institute's Foreman Certification.

33
34 **PART 2 - PRODUCTS**

35
36 **PRODUCTS, GENERAL**

37 ANSI Ceramic Tile Standard: Provide Standard-grade tile that complies with ANSI A137.1 for types,
38 compositions, and other characteristics indicated.

39
40 ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI
41 standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods
42 specified in tile installation schedules, and other requirements specified.

43
44 **TILE PRODUCTS**

45
46 Porcelain Tile Type: Unglazed.

- 47
48 Certification: Tile certified by the Porcelain Tile Certification Agency.
49 Face Size: 4 by 4 inches.
50 Face Size Variation: Rectified.
51 Thickness: 1/4 inch.
52 Face: Plain with square or cushion edges.
53 Dynamic Coefficient of Friction: Not less than 0.42.
54 Tile Color, Glaze, and Pattern: As indicated by manufacturer's designations.
55 Grout Color: As indicated by manufacturer's designations.

Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:

Base Cap: Surface bullnose, module size same as adjoining flat tile.

External Corners: Surface bullnose, module size same as adjoining flat tile.

Tapered Transition Tile: Shape designed to effect transition between thickness of tile floor and adjoining floor finishes of different thickness, tapered to provide reduction in thickness from 1/2 to 1/4 inch across nominal 4-inch dimension.

WATERPROOF MEMBRANES

General: Manufacturer's standard product, selected from the following, that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.

Waterproof Membrane, Chlorinated Polyethylene Sheet: Nonplasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric.

Nominal Thickness: 0.040 inch.

Waterproof Membrane, PVC Sheet: PVC heat-fused on both sides to facings of nonwoven polyester.

Nominal Thickness: 0.040 inch.

Waterproof Membrane, Polyethylene Sheet: Polyethylene faced on both sides with fleece webbing; 0.008-inch nominal thickness.

Waterproof Membrane, Fabric-Reinforced, Modified-Bituminous Sheet: Self-adhering, SBS-modified-bituminous sheet with fabric reinforcement facing; 0.040-inch nominal thickness.

Waterproof Membrane, Fabric-Reinforced, Fluid-Applied: System consisting of liquid-latex rubber or elastomeric polymer and continuous fabric reinforcement.

Waterproof Membrane, Fluid-Applied: Liquid-latex rubber or elastomeric polymer.

Latex-Portland Cement Waterproof Mortar: Flexible, waterproof mortar consisting of cement-based mix and latex additive.

Waterproofing and Tile-Setting Adhesive: One-part, fluid-applied product intended for use as both waterproofing and tile-setting adhesive in a two-step process.

CRACK ISOLATION MEMBRANES

General: Manufacturer's standard product, selected from the following, that complies with ANSI A118.12 for standard performance and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.

Crack Isolation Membrane, Chlorinated Polyethylene Sheet: Nonplasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric; 0.030-inch nominal thickness.

Crack Isolation Membrane, PVC Sheet: PVC heat-fused on both sides to facings of nonwoven polyester; 0.040-inch nominal thickness.

Crack Isolation Membrane, Polyethylene Sheet: Polyethylene faced on both sides with fleece webbing; 0.008-inch nominal thickness.

1 Corrugated Polyethylene: Corrugated polyethylene with dovetail-shaped corrugations and with anchoring
2 webbing on the underside; 3/16-inch nominal thickness.
3
4 Crack Isolation Membrane, Fabric-Reinforced, Modified-Bituminous Sheet: Self-adhering, modified-
5 bituminous sheet with fabric reinforcement facing; 0.040-inch nominal thickness.
6
7 Crack Isolation Membrane, Fabric-Reinforced, Fluid-Applied: System consisting of liquid-latex rubber or
8 elastomeric polymer and fabric reinforcement.
9
10 Crack Isolation Membrane, Fluid-Applied: Liquid-latex rubber or elastomeric polymer.
11
12 Latex-Portland Cement Crack-Resistant Mortar: Flexible mortar consisting of cement-based mix and latex
13 additive.
14
15 Crack Isolation Membrane and Tile-Setting Adhesive: One-part, fluid-applied product intended for use as
16 both a crack isolation membrane and tile-setting adhesive in a two-step process.
17
18 **SETTING MATERIALS**
19 Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
20
21 Standard Dry-Set Mortar (Thinset): ANSI A118.1.
22
23 For wall applications, provide nonsagging mortar.
24
25 Modified Dry-Set Mortar (Thinset): ANSI A118.4.
26
27 Provide prepackaged, dry-mortar mix to which only water must be added at Project site.
28 Provide prepackaged, dry-mortar mix combined with liquid-latex additive at Project site.
29 For wall applications, provide nonsagging mortar.
30
31 Improved Modified Dry-Set Mortar (Thinset): ANSI A118.15.
32
33 Provide prepackaged, dry-mortar mix to which only water must be added at Project site.
34 Provide prepackaged, dry-mortar mix combined with liquid-latex additive at Project site.
35 For wall applications, provide nonsagging mortar.
36
37 EGP (Exterior Glue Plywood) Latex-Portland Cement Mortar (Thinset): ANSI A118.11.
38
39 Provide prepackaged, dry-mortar mix to which only water must be added at Project site.
40 Provide prepackaged, dry-mortar mix combined with liquid-latex additive at Project site.
41
42 Water-Cleanable, Tile-Setting Epoxy: ANSI A118.3.
43
44 Organic Adhesive: ANSI A136.1, Type I.
45
46 **GROUT MATERIALS**
47 Sand-Portland Cement Grout: ANSI A108.10, consisting of white or gray cement and white or colored
48 aggregate as required to produce color indicated.
49
50 Standard Cement Grout: ANSI A118.6.
51
52 High-Performance Tile Grout: ANSI A118.7.
53
54 Polymer Type:
55 Dry, redispersible form, prepackaged with other dry ingredients.
56 Liquid-latex form for addition to prepackaged dry-grout mix.

Water-Cleanable Epoxy Grout: ANSI A118.3, with a VOC content of 65 g/L or less.

Grout for Pregrouted Tile Sheets: Same product used in factory to pregrout tile sheets.

MISCELLANEOUS MATERIALS

Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

Metal Edge Strips: Angle or L-shape, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for flooring applications; half-hard brass exposed-edge material.

Floor Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.

PART 3 - EXECUTION

EXAMINATION

Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.

Verify that concrete substrates for tile floors installed with adhesives bonded mortar bed or thinset mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.

Proceed with installation only after unsatisfactory conditions have been corrected.

PREPARATION

Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

Where indicated, prepare substrates to receive waterproof membrane by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.

Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

INSTALLATION

Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

For the following installations, follow procedures in the ANSI A108 series of tile installation standards for providing 95 percent mortar coverage:

Exterior tile floors.

Tile floors in wet areas.

Tile swimming pool decks.

Tile floors in laundries.

1 Tile floors consisting of tiles 8 by 8 inches or larger.
2 Tile floors consisting of rib-backed tiles.
3
4 Extend tile work into recesses and under or behind equipment and fixtures to form complete covering
5 without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners
6 without disrupting pattern or joint alignments.
7
8 Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible
9 surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints.
10 Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers
11 overlap tile.
12
13 Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
14
15 Where accent tile differs in thickness from field tile, vary setting bed thickness so that tiles are flush.
16
17 Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields
18 in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that
19 are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
20
21 Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
22
23 Porcelain Tile: 1/4 inch.
24
25 Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.
26
27 Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction,
28 and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and
29 tile. Do not saw-cut joints after installing tiles.
30
31 Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
32
33 Metal Edge Strips: Install where exposed edge of tile flooring meets carpet, wood, or other flooring that
34 finishes flush with top of tile.
35
36 Floor Sealer: Apply floor sealer to cementitious grout joints in tile floors according to floor-sealer
37 manufacturer's written instructions. As soon as floor sealer has penetrated grout joints, remove excess
38 sealer and sealer from tile faces by wiping with soft cloth.
39
40 Install tile backing panels and treat joints according to ANSI A108.11 and manufacturer's written
41 instructions for type of application indicated. Use modified dry-set mortar for bonding material unless
42 otherwise directed in manufacturer's written instructions.
43
44 Install waterproof membrane to comply with ANSI A108.13 and manufacturer's written instructions to
45 produce waterproof membrane of uniform thickness that is bonded securely to substrate.
46
47 Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to
48 produce membrane of uniform thickness that is bonded securely to substrate.
49
50 **INTERIOR CERAMIC TILE INSTALLATION SCHEDULE**
51
52 Interior Floor Installations, Wood Subfloor:
53
54 TCNA F144: Thinset mortar on waterproof membrane over cementitious backer units or fiber-cement
55 backer board.
56

- 1 Ceramic Tile Type: Porcelain.
- 2 Thinset Mortar: Modified dry-set mortar.
- 3 Grout: Water-cleanable epoxy grout.
- 4
- 5 **END OF SECTION**

SECTION 09 51 13
ACOUSTICAL PANEL CEILINGS

SECTION 09 51 13

ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

SUMMARY

Section includes acoustical panels and exposed suspension systems for interior ceilings.

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

PERFORMANCE REQUIREMENTS

Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design seismic restraints for ceiling systems.

Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

Flame-Spread Index: Class A according to ASTM E 1264.

Smoke-Developed Index: 50 or less.

ACOUSTICAL PANELS

Acoustical Panel Standard (ACT-1): Manufacturer's standard panels according to ASTM E 1264.

Classification: mineral fiber, square-edge, lay-in, medium texture.

Color: White.

Light Reflectance (LR): 0.85.

Ceiling Attenuation Class (CAC): 35.

Noise Reduction Coefficient (NRC): 0.75.

Articulation Class (AC): 170.

Edge/Joint Detail: Square.

Thickness: 15/16 inch.

Modular Size: 24 by 24 inches.

Vinyl on Gypsum Board Panels (ACT-2): Provide Vinylrock-X non-perforated 24 inch x 24 inch x 1/2 inch vinyl faced Type-X gypsum board ceiling panels as manufactured by Capaul Ceilings or equal. Provide all panels with a factory applied, washable white vinyl finish having a light reflectivity Class A, 0.75 or greater, according to ASTM C523. Ceiling sound transmission class shall fall within the range 40-44, according to AIMA 1-11. Ceiling panels shall have a flame spread rating of 0-25, according to ASTM E84. Provide edge sealer as recommended by ceiling manufacturer for all panels requiring trimming to fit within the ceiling grids. Sealer shall be applied as recommended by ceiling manufacturer. Panels shall weigh a minimum of 1 lb. per sq. ft.

METAL SUSPENSION SYSTEM

Metal Suspension-System Standard: Manufacturer's standard, direct-hung, metal suspension system and accessories according to ASTM C 635/C 635M.

Wide-Face, Capped, Double-Web, Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet; prepainted, electrolytically zinc coated, or hot-dip galvanized, G30 coating designation; with prefinished 15/16-inch-wide metal caps on flanges.

Structural Classification: Intermediate-duty system.

End Condition of Cross Runners: Override (stepped) or butt-edge type.

Face Design: Flat, flush.

Cap Material: Cold-rolled steel or aluminum.

Cap Finish: Painted white.

ACCESSORIES

Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

Hold-Down Clips: Manufacturer's standard hold-down.

Impact Clips: Manufacturer's standard impact-clip system designed to absorb impact forces against acoustical panels.

METAL EDGE MOLDINGS AND TRIM

Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that comply with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension-system runners.

PART 3 - EXECUTION

PREPARATION

Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders unless otherwise indicated.

Layout openings for penetrations centered on the penetrating items.

INSTALLATION

Install acoustical panel ceilings according to ASTM C 636/C 636M and manufacturer's written instructions.

Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.

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SECTION 09 65 13
RESILIENT BASE AND ACCESSORIES

SECTION 09 65 13

RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

SUMMARY

Section Includes:

Vinyl base.

Vinyl molding accessories.

ACTION SUBMITTALS

Product Data: For each type of product.

Samples: For each exposed product and for each color and texture specified.

PART 2 - PRODUCTS

VINYL BASE

Product Standard: ASTM F 1861, Type TV (vinyl, thermoplastic).

Group: I (solid, homogeneous) or II (layered).

Style and Location:

Style A, Straight: Provide in areas with carpet.

Style B, Cove: Provide in areas with resilient floor coverings.

Minimum Thickness: 0.125 inch.

Height: 4 inches.

Lengths: Coils in manufacturer's standard length.

Outside Corners: Job formed or preformed.

Inside Corners: Job formed or preformed.

Colors and Patterns: As indicated by manufacturer's designations.

VINYL MOLDING ACCESSORY

Description: Vinyl nosing for carpet nosing for resilient floor covering reducer strip for resilient floor covering joiner for tile and carpet transition strips.

Profile and Dimensions: As indicated.

Locations: Provide vinyl molding accessories in areas indicated.

Colors and Patterns: As indicated by manufacturer's designations.

INSTALLATION MATERIALS

Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

1
2 Stair-Tread Nose Filler: Two-part epoxy compound recommended by resilient stair-tread manufacturer to
3 fill nosing substrates that do not conform to tread contours.

4
5 Floor Polish: Provide protective, liquid floor-polish products recommended by resilient stair-tread
6 manufacturer.

7 8 **PART 3 - EXECUTION**

9 10 **PREPARATION**

11 Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

12
13 Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove
14 bumps and ridges to produce a uniform and smooth substrate.

15
16 Do not install resilient products until materials are the same temperature as space where they are to be
17 installed.

18
19 Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

20 21 **RESILIENT BASE INSTALLATION**

22 Comply with manufacturer's written instructions for installing resilient base.

23
24 Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent
25 fixtures in rooms and areas where base is required.

26
27 Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces
28 aligned.

29
30 Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact
31 with horizontal and vertical substrates.

32
33 Do not stretch resilient base during installation.

34
35 On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with
36 manufacturer's recommended adhesive filler material.

37
38 Preformed Corners: Install preformed corners before installing straight pieces.

39
40 Job-Formed Corners:

41
42 Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than
43 3 inches in length.

44
45 Form without producing discoloration (whitening) at bends.

46
47 Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3
48 inches in length.

49
50 Miter or cope corners to minimize open joints.

51 52 **RESILIENT ACCESSORY INSTALLATION**

53 Comply with manufacturer's written instructions for installing resilient accessories.

54
55 Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length
56 of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

1
2 **CLEANING AND PROTECTION**
3 Comply with manufacturer's written instructions for cleaning and protecting resilient products.
4
5 Floor Polish: Remove soil, adhesive, and blemishes from resilient stair treads before applying liquid floor
6 polish.
7
8 Apply one coat(s).
9
10 Cover resilient products subject to wear and foot traffic until Substantial Completion.
11
12 **END OF SECTION**

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1 **SECTION 09 65 16**
2 **RESILIENT SHEET FLOORING**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

8 Vinyl sheet flooring with backing.
9

10 **ACTION SUBMITTALS**

11 Product Data: For each type of product.

12 Samples: For each exposed product and for each color, texture, and pattern specified.
13

14 **CLOSEOUT SUBMITTALS**

15 Maintenance data.
16

17 **QUALITY ASSURANCE**

18 Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques
19 required by manufacturer for resilient sheet flooring installation and seaming method indicated.
20

21 Engage an installer who employs workers for this Project who are trained or certified by resilient sheet
22 flooring manufacturer for installation techniques required.
23

24 **PART 2 - PRODUCTS**
25

26 **PERFORMANCE REQUIREMENTS**

27 Fire-Test-Response Characteristics: For resilient sheet flooring, as determined by testing identical products
28 according to ASTM E 648 or NFPA 253 by a qualified testing agency.
29

30 Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
31

32 **VINYL SHEET FLOORING WITH BACKING**

33 Product Standard: ASTM F 1303.
34

35 Type (Binder Content): Type I, minimum binder content of 90 percent.

36 Wear-Layer Thickness: Grade 1.

37 Overall Thickness: As standard with manufacturer.

38 Interlayer Material: Foamed plastic.

39 Backing Class: Class B (nonfoamed plastic).
40

41 Wearing Surface: Embossed.
42

43 Sheet Width: 12 feet.
44

45 Seamless-Installation Method: Chemically bonded.
46

47 Colors and Patterns: As indicated by manufacturer's designations <Insert colors and patterns>.
48

49 **INSTALLATION MATERIALS**

50 Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended
51 hydraulic-cement-based formulation provided or approved by resilient sheet flooring manufacturer for
52 applications indicated.
53

54 Adhesives: Water-resistant type recommended by flooring and adhesive manufacturers to suit resilient
55 sheet flooring and substrate conditions indicated.

Seamless-Installation Accessories:

Chemical-Bonding Compound: Manufacturer's product for chemically bonding seams.

Floor Polish: Provide protective, liquid floor-polish products recommended by resilient sheet flooring manufacturer.

PART 3 - EXECUTION

PREPARATION

Prepare substrates according to resilient sheet flooring manufacturer's written instructions to ensure adhesion of resilient sheet flooring.

Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

Do not install resilient sheet flooring until materials are the same temperature as space where they are to be installed.

At least 48 hours in advance of installation, move flooring and installation materials into spaces where they will be installed.

Immediately before installation, sweep and vacuum clean substrates to be covered by resilient sheet flooring.

RESILIENT SHEET FLOORING INSTALLATION

Comply with manufacturer's written instructions for installing resilient sheet flooring.

Unroll resilient sheet flooring and allow it to stabilize before cutting and fitting.

Lay out resilient sheet flooring as follows:

Maintain uniformity of flooring direction.

Minimize number of seams; place seams in inconspicuous and low-traffic areas, at least 6 inches away from parallel joints in flooring substrates.

Match edges of flooring for color shading at seams.

Avoid cross seams.

Scribe and cut resilient sheet flooring to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.

Extend resilient sheet flooring into toe spaces, door reveals, closets, and similar openings.

Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on resilient sheet flooring as marked on substrates. Use chalk or other nonpermanent marking device.

Install resilient sheet flooring on covers for telephone and electrical ducts and similar items in installation areas. Maintain overall continuity of color and pattern between pieces of flooring installed on covers and adjoining flooring. Tightly adhere flooring edges to substrates that abut covers and to cover perimeters.

Adhere resilient sheet flooring to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

Seamless Installation:

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1 **SECTION 09 65 19**
2 **RESILIENT TILE FLOORING**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

8 Solid vinyl floor tile.

9 Vinyl composition floor tile.

10
11 **ACTION SUBMITTALS**

12 Product Data: For each type of product.

13
14 Samples: For each exposed product and for each color and pattern specified.

15
16 **CLOSEOUT SUBMITTALS**

17 Maintenance data.

18
19 **QUALITY ASSURANCE**

20 Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques
21 required by manufacturer for floor tile installation.

22
23 **PART 2 - PRODUCTS**

24
25 **PERFORMANCE REQUIREMENTS**

26 Fire-Test-Response Characteristics: For resilient floor tile, as determined by testing identical products
27 according to ASTM E 648 or NFPA 253 by a qualified testing agency.

28
29 Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

30
31 **SOLID VINYL FLOOR TILE**

32 Tile Standard: ASTM F 1700.

33
34 Class: As indicated by product designations.

35 Type: B, Embossed Surface.

36
37 Thickness: 0.100 inch.

38
39 Size: 3 by 36 inches.

40
41 Colors and Patterns: As indicated by manufacturer's designations.

42
43
44 **INSTALLATION MATERIALS**

45 Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended
46 hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications
47 indicated.

48
49 Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile
50 and substrate conditions indicated.

51
52 Floor Polish: Provide protective, liquid floor-polish products recommended by floor tile manufacturer.

1
2 **PART 3 - EXECUTION**
3

4 **PREPARATION**

5 Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient
6 products.

7
8 Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove
9 bumps and ridges to produce a uniform and smooth substrate.

10
11 Do not install floor tiles until materials are the same temperature as space where they are to be installed.

12
13 At least 48 hours in advance of installation, move resilient floor tile and installation materials into
14 spaces where they will be installed.

15
16 Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

17
18 **FLOOR TILE INSTALLATION**

19 Comply with manufacturer's written instructions for installing floor tile.

20
21 Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at
22 opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less
23 than one-half tile at perimeter.

24
25 Lay tiles square with room axis.

26
27 Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured
28 and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.

29
30 Lay tiles with grain running in one direction.

31
32 Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including
33 built-in furniture, cabinets, pipes, outlets, and door frames.

34
35 Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of
36 door openings.

37
38 Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating
39 on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.

40
41 Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar
42 items in installation areas. Maintain overall continuity of color and pattern between pieces of tile installed
43 on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover
44 perimeters.

45
46 Adhere floor tiles to substrates using a full spread of adhesive applied to substrate to produce a completed
47 installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader
48 marks, and other surface imperfections.

49
50 Floor Polish: Remove soil, adhesive, and blemishes from floor tile surfaces before applying liquid floor
51 polish.

52
53 Apply one coat(s).

54
55 **END OF SECTION**

1 **SECTION 09 68 13**
2 **TILE CARPETING**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

8 Modular carpet tile.

9
10 **ACTION SUBMITTALS**

11 Product Data: For each type of product.

12
13 Samples: For each exposed product and for each color and texture required.

14
15 **INFORMATIONAL SUBMITTALS**

16 Product test reports.

17 Sample warranty.

18
19 **CLOSEOUT SUBMITTALS**

20 Maintenance data.

21
22 **WARRANTY**

23 Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile
24 installation that fail in materials or workmanship within specified warranty period.

25
26 Warranty Period: 10 years from date of Substantial Completion.

27
28 **PART 2 - PRODUCTS**

29
30 **CARPET TILE**

31
32 Color: As selected by Architect from manufacturer's full range.

33
34 Pattern: similar to Shaw Strataworx.

35
36 Fiber Content: 100 percent nylon 6, 6.

37
38 Fiber Type: Solution dyed.

39
40 Pile Characteristic: Level-loop pile.

41
42 Density: <5091 oz./cu. yd. >.

43
44 Pile Thickness: **0.099 inches** for finished carpet tile[**according to ASTM D6859**].

45
46 Stitches: 10

47
48 Gage: **1/10**.

49
50 Surface Pile Weight: 14.0.

51
52 Primary Backing/Backcoating: Manufacturer's standard composite materials.

53
54 Secondary Backing: Manufacturer's standard material.

Backing System: Strataworx.

Size: 24 by 24 inches.

Applied Treatments:

Soil-Resistance Treatment: Manufacturer's standard treatment.

Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:

Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

INSTALLATION ACCESSORIES

Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.

Adhesives: Water-resistant, mildew-resistant, nonstaining, pressure-sensitive type to suit products and subfloor conditions indicated, that comply with flammability requirements for installed carpet tile, and are recommended by carpet tile manufacturer for releasable installation.

PART 3 - EXECUTION

EXAMINATION

Wood Subfloors: Verify that underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.

PREPARATION

General: Comply with the Carpet and Rug Institute's CRI 104 and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile.

Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch unless more stringent requirements are required by manufacturer's written instructions.

Concrete Substrates: Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by adhesive and carpet tile manufacturers.

Metal Substrates: Clean grease, oil, soil and rust, and prime if recommended in writing by adhesive manufacturer. Rough sand painted metal surfaces and remove loose paint. Sand aluminum surfaces, to remove metal oxides, immediately before applying adhesive.

Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

INSTALLATION

General: Comply with the Carpet and Rug Institute's CRI 104, Section 10, "Carpet Tile," and with carpet tile manufacturer's written installation instructions.

Installation Method: As recommended in writing by carpet tile manufacturer.

Maintain dye-lot integrity. Do not mix dye lots in same area.

Maintain pile-direction patterns indicated on Drawings recommended in writing by carpet tile manufacturer.

1
2 Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including
3 cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet
4 tile manufacturer.
5
6 Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges,
7 alcoves, and similar openings.
8
9 Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating
10 on carpet tile as marked on subfloor. Use nonpermanent, nonstaining marking device.
11
12 Install pattern parallel to walls and borders.
13
14 Access Flooring: Stagger joints of carpet tiles so carpet tile grid is offset from access flooring panel grid.
15 Do not fill seams of access flooring panels with carpet adhesive; keep seams free of adhesive.
16
17 Protect carpet tile against damage from construction operations and placement of equipment and fixtures
18 during the remainder of construction period. Use protection methods indicated or recommended in writing
19 by carpet tile manufacturer.
20

21 **END OF SECTION**

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1 **SECTION 09 91 23**
2 **INTERIOR PAINTING**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Primers.
9 Water-based finish coatings.
10 Dry fall coatings.

11
12 **ACTION SUBMITTALS**

13 Product Data: For each type of product.

14
15 Samples: For each type of topcoat product.

16
17 Product Schedule: Use same designations indicated on Drawings and in the Interior Painting Schedule to
18 cross-reference paint systems specified in this Section. Include color designations.

19
20
21 **PART 2 - PRODUCTS**

22
23 **PAINT PRODUCTS, GENERAL**

24 Material Compatibility:

25 Materials for use within each paint system shall be compatible with one another and substrates
26 indicated, under conditions of service and application as demonstrated by manufacturer, based on
27 testing and field experience.

28 For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers
29 for use in paint system and on substrate indicated.

30
31 Colors: As selected by Architect from manufacturer's full range.

32 Ten percent of surface area will be painted with deep tones.

33
34 **PRIMERS**

35 Interior/Exterior Latex Block Filler: Water-based, high-solids, emulsion coating formulated to bridge and
36 fill porous surfaces of exterior concrete masonry units in preparation for specified subsequent coatings.

37
38 Alkali-Resistant, Water-Based Primer: Water-based primer formulated for use on alkaline surfaces, such as
39 plaster, vertical concrete, and masonry.

40
41 Interior Latex Primer Sealer: Water-based latex sealer used on new interior plaster, concrete, and gypsum
42 wallboard surfaces.

43
44 Interior, Institutional Low-Odor/VOC Primer Sealer: Water-based primer sealer with low-odor
45 characteristics and a VOC of less than 10 grams per liter for use on new interior plaster, concrete, and
46 gypsum wallboard surfaces that are subsequently to be painted with latex finish coats.

47
48 Interior Latex Primer for Wood: Waterborne-emulsion primer formulated for resistance to extractive
49 bleeding, mold, and microbes; for hiding stains; and for use on interior wood subject to extractive
50 bleeding.

51
52 Interior Alkyd Primer Sealer: Solvent-based, alkyd-type, primer/sealer for new interior wood, plaster, and
53 porous surfaces,

1 Water-Based Rust-Inhibitive Primer: Corrosion-resistant, water-based-emulsion primer formulated for
2 resistance to flash rusting when applied to cleaned, interior ferrous metals subject to mildly corrosive
3 environments.

4
5 Alkyd Quick-Dry Primer for Metal: Corrosion-resistant, solvent-based, modified-alkyd primer; lead and
6 chromate free; formulated for quick-drying capabilities and for use on cleaned, interior steel surfaces.

7
8 Anti-Corrosive Epoxy Primer: Corrosion-resistant, solvent-based, two-component epoxy primer formulated
9 for use on prepared, interior ferrous- and galvanized-metal surfaces.

10
11 Surface-Tolerant Metal Primer: Corrosion-resistant, solvent-based metal primer formulated for use on
12 structural steel and metal fabrications that have been minimally prepared.

13
14 Cementitious Galvanized Primer: Solvent-based primer composed of linseed oil/alkyd resin and portland
15 cement for cleaned galvanized metal prior to finish coating.

16
17 Water-Based Galvanized-Metal Primer: Corrosion-resistant, acrylic primer; formulated for use on
18 cleaned/etched, exterior, galvanized metal to prepare it for subsequent water-based coatings.

19
20 Quick-Drying Aluminum Primer: Corrosion-resistant, solvent-based, alkyd or modified-alkyd primer
21 formulated for quick-drying capabilities and for use on prepared exterior aluminum.

22
23 Vinyl Wash Primer: Two-component, vinyl butyral/phosphoric acid, wash primer formulated for use over
24 cleaned metal surfaces and zinc-rich primers as a tie coat for subsequent corrosion-resistant primers or
25 finish coatings.

26
27 Water-Based Bonding Primer: Water-based-emulsion primer formulated to promote adhesion of
28 subsequent specified coatings.

29
30 Solvent-Based Bonding Primer: Solvent-based primer formulated to seal substrates and promote adhesion
31 of specified subsequent coatings.

32 33 **WATER-BASED FINISH COATS**

34 Interior, Latex, Institutional Low Odor/VOC, Semigloss: White or colored latex paint with low-odor
35 characteristics and a VOC of less than 10 grams per liter, for use in areas, such as hospitals and other
36 occupied buildings, where the odor and VOC levels of conventional latex products would preclude their
37 use.

38 Gloss Level: Manufacturer's standard semigloss finish.

39 40 **DRY FALL COATINGS**

41 Dry Fall, Latex, Eggshell: Pigmented, water-based, emulsion-type, fast-drying coating for use on interior
42 plaster, concrete, gypsum board, primed wood, and metal ceilings.

43 44 **PART 3 - EXECUTION**

45 46 **EXAMINATION**

47 Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and
48 primers.

49
50 Proceed with coating application only after unsatisfactory conditions have been corrected.

51 Application of coating indicates acceptance of surfaces and conditions.

52 53 **PREPARATION**

54 Comply with manufacturer's written instructions and recommendations applicable to substrates and paint
55 systems indicated.

1 Remove hardware, covers, plates, and similar items already in place that are removable and are not to be
2 painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied
3 protection before surface preparation and painting.

4
5 After completing painting operations, use workers skilled in the trades involved to reinstall items that were
6 removed. Remove surface-applied protection if any.

7 8 **INSTALLATION**

9 Apply paints according to manufacturer's written instructions.

10
11 Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller
12 tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

13
14 Painting Fire-Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and
15 Security Work:

16 Paint the following work where exposed in equipment rooms:

17 Equipment, including panelboards.

18 Uninsulated metal piping.

19 Uninsulated plastic piping.

20 Pipe hangers and supports.

21 Metal conduit.

22 Plastic conduit.

23 Tanks that do not have factory-applied final finishes.

24 Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other
25 paintable jacket material.

26
27 Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are
28 visible from occupied spaces.

29 30 **CLEANING AND PROTECTION**

31 After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping,
32 or other methods. Do not scratch or damage adjacent finished surfaces.

33
34 Protect work of other trades against damage from paint application. Correct damage to work of other trades
35 by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged
36 condition.

37
38 At completion of construction activities of other trades, touch up and restore damaged or defaced painted
39 surfaces.

40 41 **INTERIOR PAINTING SCHEDULE**

42 Exposed Wood Framing:

43
44 Institutional Low-Odor/VOC Latex System:

45 Prime Coat: Interior latex primer for wood.

46 Intermediate Coat: Matching topcoat.

47 Topcoat: Interior, latex, institutional low odor/VOC, eggshell

48
49 Finish Carpentry: Doors.

50
51 Institutional Low-Odor/VOC Latex System:

52 Prime Coat: Interior latex primer for wood.

53 Intermediate Coat: Matching topcoat.

54 Topcoat: Interior, latex, institutional low odor/VOC, semigloss.

1 Architectural Woodwork: Wood paneling and casework:

2
3 Institutional Low-Odor/VOC Latex System:

4 Prime Coat: Interior latex primer for wood.

5 Intermediate Coat: Matching topcoat.

6 Topcoat: Interior, latex, institutional low odor/VOC, semigloss.

7
8 Spray-Textured Ceiling Substrates:

9
10 Latex System: Spray applied:

11 Prime Coat: Matching topcoat.

12 Intermediate Coat: Matching topcoat.

13 Topcoat: Interior, latex, eggshell.

14
15 Gypsum Board and Plaster Substrates:

16
17 Institutional Low-Odor/VOC Latex System:

18 Prime Coat: Interior, institutional low-odor/VOC primer sealer.

19 Intermediate Coat: Matching topcoat.

20 Topcoat: Interior, latex, institutional low odor/VOC, satin.

21
22 **END OF SECTION**

SECTION 10 28 00
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

SUMMARY

Section Includes:

- 8 Public-use washroom accessories.
9 Public-use shower room accessories.
10 Childcare accessories.
11 Underlavatory guards.
12 Custodial accessories.

ACTION SUBMITTALS

Product Data: For each type of product.

Samples: For each exposed product and for each finish specified, full size.

18 Approved full-size Samples will be returned and may be used in the Work.

INFORMATIONAL SUBMITTALS

Sample warranties.

CLOSEOUT SUBMITTALS

Maintenance data.

WARRANTY

Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to repair or replace mirrors that fail in materials or workmanship within specified warranty period.

29
30 Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

PUBLIC-USE WASHROOM ACCESSORIES

Toilet Tissue (Roll) Dispenser:

36
37 Description: Double-roll dispenser.
38 Mounting: Surface mounted.
39 Operation: Noncontrol delivery with standard spindle.
40 Capacity: Designed for 4-1/2- or 5-inch- diameter tissue rolls.
41 Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).

Paper Towel (Folded) Dispenser:

44
45 Mounting: Surface mounted.
46 Minimum Capacity: 400 C-fold or 525 multifold towels.
47 Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).
48 Refill Indicator: Pierced slots at sides or front.

Soap Dispenser:

51
52 Description: Designed for manual operation and dispensing soap in liquid or lotion form.
53 Mounting: Vertically oriented, surface mounted.
54 Refill Indicator: Window type.

1 Grab Bar:

- 2
3 Mounting: Flanges with concealed fasteners.
4 Material: Stainless steel, 0.05 inch thick.
5 Finish: Smooth, ASTM A480/A480M No. 4 finish (satin).
6 Outside Diameter: 1-1/4 inches.
7 Configuration and Length: As indicated on Drawings.
8

9 Mirror Unit:

- 10
11 Frame: Stainless steel angle, 0.05 inch thick.
12 Corners: Manufacturer's standard.
13 Size: As indicated on Drawings.
14 Hangers: Manufacturer's standard rigid, tamper and theft resistant.
15

16 Hook:

- 17
18 Description: Double-prong unit.
19 Mounting: Concealed.
20 Material and Finish: Polished chrome-plated brass.
21

22 **PUBLIC-USE SHOWER ROOM ACCESSORIES**

23 Shower Curtain Rod:

- 24
25 Description: 1-inch- outside diameter, straight rod.
26 Configuration: As indicated on Drawings
27 Mounting Flanges: Concealed fasteners; in manufacturer's standard material and finish.
28 Rod Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).
29

30 Shower Curtain:

- 31
32 Size: Minimum 6 inches wider than opening by 72 inches high.
33 Material: Vinyl, minimum 0.006 inch thick, opaque, matte.
34 Color: White.
35 Grommets: Corrosion resistant at minimum 6 inches o.c. through top hem.
36 Shower Curtain Hooks: Chrome-plated or stainless steel, spring wire curtain hooks with snap
37 fasteners, sized to accommodate specified curtain rod. Provide one hook per curtain grommet.
38

39 Folding Shower Seat:

- 40
41 Configuration: L-shaped seat, designed for wheelchair access.
42 Seat: Phenolic or polymeric composite of slat-type or one-piece construction in color as selected by
43 Architect.
44 Mounting Mechanism: Stainless steel, ASTM A480/A480M No. 4 finish (satin).
45

46 Soap Dish:

- 47
48 Description: Surface mounted, with the following features:
49 Washcloth bar.
50 Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).
51

52 Robe Hook:

- 53
54 Description: Double-prong unit.
55 Material and Finish: Polished chrome-plated brass.

1
2 **CHILDCARE ACCESSORIES**

3 Diaper-Changing Station:

4
5 Description: Horizontal unit that opens by folding down from stored position and with child-
6 protection strap.

7 Engineered to support minimum of 250-lb static load when opened.

8 Mounting: Surface mounted, with unit projecting not more than 4 inches from wall when closed.

9 Operation: By pneumatic shock-absorbing mechanism.

10 Material and Finish: HDPE in manufacturer's standard color.

11 Liner Dispenser: Provide built-in dispenser for disposable sanitary liners.

12
13 **UNDERLAVATORY GUARDS**

14 Underlavatory Guard:

15
16 Description: Insulating pipe covering for supply and drain piping assemblies that prevents direct
17 contact with and burns from piping; allow service access without removing coverings.

18 Material and Finish: Antimicrobial, molded plastic, white.

19
20 **CUSTODIAL ACCESSORIES**

21 Custodial Utility Shelf:

22
23 Description: With exposed edges turned down not less than 1/2 inch and supported by two triangular
24 brackets welded to shelf underside.

25 Size: 16 inches long by 6 inches deep.

26 Material and Finish: Not less than nominal 0.05-inch-thick stainless steel, ASTM A480/A480M No. 4
27 finish (satin).

28
29
30 **FABRICATION**

31 Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide
32 minimum of six keys to Owner's representative.

33
34 **PART 3 - EXECUTION**

35
36 **INSTALLATION**

37 Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate
38 indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in
39 locations and at heights indicated.

40
41 Remove temporary labels and protective coatings.

42
43 Grab Bars: Install to comply with specified structural-performance requirements.

44
45 Shower Seats: Install to comply with specified structural-performance requirements.

46
47 **END OF SECTION**

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1 **SECTION 10 44 13**
2 **FIRE PROTECTION CABINETS**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

8 Fire-protection cabinets for portable fire extinguishers.

9
10 **ACTION SUBMITTALS**

11 Product Data: For each type of product.

12 Shop Drawings: For fire-protection cabinets.

13 Samples: For each type of exposed finish required.

14
15 **CLOSEOUT SUBMITTALS**

16 Maintenance data.

17
18 **COORDINATION**

19 Coordinate size of fire-protection cabinets to ensure that type and capacity of fire extinguishers indicated
20 are accommodated.

21 Coordinate sizes and locations of fire-protection cabinets with wall depths.

22
23 **PART 2 - PRODUCTS**

24
25 **FIRE-PROTECTION CABINET**

26 Cabinet Type: Suitable for fire extinguisher.

27
28 Cabinet Construction: Nonrated.

29
30 Cabinet Material: Cold-rolled steel sheet.

31
32 Semirecessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall
33 surface, with exposed trim face and wall return at outer edge (backbend).

34 Square-Edge Trim: 1-1/4- to 1-1/2-inch backbend depth.

35
36 Cabinet Trim Material: Same material and finish as door.

37
38 Door Material: Steel sheet.

39
40 Door Style: Fully glazed panel with frame.

41
42 Door Glazing: Tempered float glass (clear).

43
44 Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim
45 style, and door material and style indicated.

46
47 Accessories:

48 Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire-protection
49 cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or
50 baked-enamel finish.

51 Lettered Door Handle: One-piece, cast-iron door handle with the word "FIRE" embossed into face.

52 Door Lock: Cam lock that allows door to be opened during emergency by pulling sharply on door
53 handle.

54 Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing,
55 and location. Locate as directed by Architect.

1 Identify fire extinguisher in fire-protection cabinet with the words "FIRE EXTINGUISHER."

2 Location: Applied to cabinet door.

3 Application Process: Pressure-sensitive vinyl letters.

4 Lettering Color: Red.

5 Orientation: Vertical.

6
7 **Materials:**

8 Cold-Rolled Steel: ASTM A1008/A1008M, Commercial Steel (CS), Type B.

9 Finish: Baked enamel, TGIC polyester powder coat, HAA polyester powder coat, epoxy powder
10 coat, or polyester/epoxy hybrid powder coat, complying with AAMA 2603.

11 Color: As selected by Architect from manufacturer's full range.

12 Tempered Float Glass: ASTM C1048, Kind FT, Condition A, Type I, Quality q3, 3 mm thick, Class 1
13 (clear).

14
15 **FABRICATION**

16 Fire-Protection Cabinets: Provide manufacturer's standard box (tub) with trim, frame, door, and hardware
17 to suit cabinet type, trim style, and door style indicated.

18
19 **PART 3 - EXECUTION**

20
21 **INSTALLATION**

22 Prepare recesses for semirecessed fire-protection cabinets as required by type and size of cabinet and trim
23 style.

24
25 Install fire-protection cabinets in locations and at mounting heights indicated or, if not indicated, at heights
26 acceptable to authorities having jurisdiction.

27
28 Fire-Protection Cabinets: Fasten cabinets to structure, square and plumb.

29
30 Identification: Apply vinyl lettering at locations indicated.

31
32 Adjust fire-protection cabinet doors to operate easily without binding. Verify that integral locking devices
33 operate properly.

34
35 **END OF SECTION**

1 **SECTION 12 36 16**
2 **METAL COUNTERTOPS**

3
4 **PART 1 - GENERAL**

5
6 **SUMMARY**

7 Section Includes:

- 8 Stainless-steel countertops.
9 Stainless-steel wall-mounted shelves.
10 Stainless-steel sinks.

11
12 **ACTION SUBMITTALS**

13 Product Data: For each type of product.

14
15 Shop Drawings: For metal fabrications.

- 16
17 Include plans, sections, details, and attachments to other work. Detail fabrication and installation,
18 including field joints.
19 For countertops, show locations and sizes of cutouts and holes for items installed in metal countertops.
20 For wall-mounted shelves, indicate requirements for blocking or reinforcements in supporting
21 construction.

22
23 **PART 2 - PRODUCTS**

24
25 **STAINLESS-STEEL FABRICATIONS**

26 Countertops: Fabricate from 0.062-inch-thick, stainless-steel sheet. Provide smooth, clean exposed tops and
27 edges in uniform plane, free of defects. Provide front and end overhang of 1 inch over the base cabinets.

28
29 Joints: Fabricate countertops without field-made joints.

30 Weld shop-made joints.

31 Sound deaden the undersurface with heavy-build mastic coating.

32 Extend the top down to provide a 1-inch-thick edge with a 1/2-inch return flange.

33 Form the backsplash coved to and integral with top surface, with a 1/2-inch-thick top edge and 1/2-
34 inch return flange.

35 Provide raised (marine) edge around perimeter of tops containing sinks; pitch tops containing sinks
36 two ways to provide drainage without channeling or grooving.

37
38 Wall-Mounted Shelves: Fabricate from stainless-steel sheet, not less than 0.050-inch nominal thickness.
39 Weld shop-made joints. Fold front edge down a minimum of 3/4 inch; fold back edge up a minimum of 3
40 inches. Provide integral stiffening brackets, formed by folding up ends a minimum of 3/4 inch and by
41 welding to upturned edges.

42
43 Stainless-Steel Sinks: Fabricate from stainless-steel sheet, not less than 0.050-inch nominal thickness.
44 Fabricate with corners rounded and coved to at least 5/8-inch radius. Slope the sink bottoms to outlet
45 without channeling or grooving. Provide continuous butt-welded joints.

46
47 Provide sizes indicated or manufacturer's closest standard size of equal or greater volume, as approved
48 by Architect.

49 Provide double-wall construction for sink partitions with top edge rounded to at least 1/2-inch
50 diameter.

51 Factory punch holes for fittings.

52 Provide sinks with stainless-steel strainers and tailpieces.

53 Factory weld sinks to stainless-steel countertops to provide one, integral unit.

54 Apply 1/8-inch-thick coating of heat-resistant, sound-deadening mastic to undersink surfaces.

1
2 **MATERIALS**

3 Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304.
4

5 Sealant for Countertops: Manufacturer's standard sealant that complies with applicable requirements in
6 Section 07 92 00 "Joint Sealants" and the following:
7

8 Mildew-Resistant Joint Sealant: Mildew resistant, single component, nonsag, neutral curing, silicone.

9 Color: As selected by Architect from manufacturer's full range.
10

11 **STAINLESS-STEEL FINISH**

12 Grind and polish surfaces to produce uniform, directional satin finish matching No. 4 finish, with no
13 evidence of welds and free of cross scratches. Run grain with long dimension of each piece. When
14 polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces
15 clean.
16

17 **PART 3 - EXECUTION**
18

19 **INSTALLATION**

20 Install metal countertops level, plumb, and true; shim as required, using concealed shims.
21

22 Field Jointing: Where possible, make field jointing in the same manner as shop jointing; use fasteners
23 recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and
24 edge surfaces is not required. Locate field joints where shown on Shop Drawings.
25

26 Secure countertops to cabinets with Z- or L-type fasteners or equivalent; use two or more fasteners at each
27 front, end, and back.
28

29 Abut top and edge surfaces in one true plane, with internal supports placed to prevent deflection.
30

31 Seal junctures of countertops, splashes, and walls with sealant for countertops.
32

33 Wall-Mounted Shelves: Fasten to supporting construction through upturned back edge at not less than 24
34 inches o.c.
35

36 For framed construction, fasten through wall or partition finishes directly to framing, blocking, or
37 reinforcements.
38

39 Protection: Provide 6-mil plastic or other suitable water-resistant covering over countertop surfaces. Tape
40 to underside of countertop at a minimum of 48 inches o.c. Remove protection at Substantial Completion.
41

42 **END OF SECTION**