Invitation to Bid

The Rochester Housing Authority, Rochester, New York, will receive sealed bids for **Bronson Court Renovations-Units 29,31,84. 1 Prime-General Contractor.**

in connection with the **Above Project**, NY-**41-34** at **Bronson Court , in the City of Rochester, New York UNTIL:**

Wednesday, November 4, 2026 @ 11:00 a.m. at its Procurement Office,
495 Upper Falls Blvd., Rochester, New York, at which time and place all bids will be publicly opened and read aloud.

There will be a walk through at 29,31,84 Bronson Court on Wednesday, October 14, 2026, at 11:00 am. Meet in the Bronson Court Parking Lot on Dr. Samuel McCree Way.
Walk through questions must be submitted before Wednesday, October 21.
All Questions will be answered in an Addendum on Wednesday, October 28.

Plans and specifications may be obtained from the RHA website www.rochesterhousing.org and The Builders Exchange at www.robex.com after registering your request beginning **Monday, October 5, 2026.**
Bids will not be accepted unless the documents have been obtained under the name of the bidding party and all other bid requirements, as identified here, are met. Bids must include all required documentation, bid security and addendum(s).

The contact person (s) is/are **mwolfe@rochesterhousing.org**

A satisfactory Bid Bond executed by the Bidder and an acceptable surety company listed on US Treasury Circular 570, in an amount equal to five percent (5%) of the bid shall be submitted with each bid in excess of One Hundred Thousand Dollars ($100,000).

For all construction contracts exceeding $100,000, the successful bidder shall be required to furnish and pay for a Performance Bond & a Payment Bond each for 100% of the contract price (Surety company must be listed on the US Treasury Circular 570 as a certified company)

The Rochester Housing Authority reserves the right to reject any or all bids for any reason or to waive any informalities in the bidding included but not limited to:

- All received bids exceed the budgeted amount for this project.
- Submitted bids that are unreasonably low for the project scope based on RHA *determination of responsibility.*

No bids shall be withdrawn for a period of ninety (90) days after bid opening without the express consent of the Rochester Housing Authority.

Rochester Housing Authority

ROCHESTER Housing Authority

To: All Contractors

All bids that are submitted to RHA must include completely filled out bid forms.

What does this consist of?

a. Bid Proposal form must be completed with any unit prices and alternates

b. Schedule of Amounts for Contract Payments (HUD-51000)

c. Previous Participation Certification (HUD-2530) for jobs over $50,000.00-completed

d. Acknowledgment of Principal – **Notarized**

e. Affidavit - **Notarized**

f. Representations, Certifications, and Other Statements of Bidders (HUD-5369A) must be fully filled out completely

g. 5% Bid Security for all bids over $100,000

h. If Applicable, Acknowledgment of receipt of Addendum(s). Signed cover page(s) of all addendum(s) pertaining to this project **must** be included with bid submission.

i. Section 3 Vendor Commitment form. **MUST be included in your bid submission.**

(Note: All Notary stamps/signatures MUST be originals, not photocopies)

Failure to include the above items in your bid may render the bid non-responsive.

If you have *any questions* on the above paperwork or require any clarification, please contact mwolfe@rochesterhousing.org

PROPOSAL FORM
Bronson Court Renovations-Units 29,31,84

PROJECT NY 41-34

Date: November 4, 2026

Rochester Housing Authority
495 Upper Falls Blvd.
Rochester, New York 14605

Contractors:

The undersigned, having become familiar with the Contract Documents including all addenda (No's _____), the requirements necessary to provide, perform and/or supply as necessary the work, materials, supplies or equipment as either solicited or advertised and further having visited the site of the project to ascertain all local conditions affecting the cost of the work, material, supplies or equipment, hereby proposes to furnish all the labor, materials, tools, supplies, equipment and all other incidental items necessary to complete the work or deliver in first class condition supplies and/or equipment, including insurance and taxes, and to do and perform all things as required in the specifications, all in accordance with the Contract Documents, TERMS MAY BE UPDATED FROM TIME TO TIME, WHICH TERMS ARE INCORPORATED HEREIN BY REFERENCE AND MADE PART HEREOF, for the total sum of;
_____and /100 dollars

($_____)

If unit prices are noted for additional work or work that may be required in conjunction with this contract the unit prices will then become part of this proposal.

Unit Prices	**DEDUCT Alternates**
N/A	N/A
$_____	$_____

The undersigned further agrees to complete the entire work to the satisfaction of the Rochester Housing Authority, and in strict conformance with the Drawings, Specifications and the Contract Documents within ****180** calendar days subsequent to the date upon which work hereunder is to commence as set forth in the Notice and Order to Proceed, and that Liquidated Damages may be assessed by the Authority as per the "Schedule of Liquidated Damages" for each calendar day of delay beyond the completion date as established in the Notice and Order to Proceed. The Notice and Order to Proceed will commence on the day of the Pre-Construction Conference, and/or Purchase Order is given to the Contractor/unless a specific date is in the Special Conditions in the bid package.

_____
(Bidder)

_____
(Address)

_____
(City State Zip)

_____
(Signature & Title)

Schedule of Amounts for Contract Payments

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing

OMB Approval No. 2577-0157
(Exp. 11/30/2023)

No progress payments shall be made to the contractor unless a schedule of amounts for contract payments in accordance with the construction contract is received.

Public reporting burden for the collection of this information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection displays a valid OMB control number. Construction practices and HUD administrative requirements establish the need tha HA's maintain certain records or submit certain documents in conjunction with the oversight of the award of construction contracts for the construction of new low-income housing developments or modernization of existing developments. These forms are used by HAs to provide information on the construction progress schedule of amounts for contract payments. Responses to the collection of information are required to obtain a benefit or to retain a benefit. The information requested does not lend itself to confidentiality.

Project Name & Location:	Example Project			
Name, Address, and Zip Code of Contractor		Project Number	xxxxx	
Nature of Contract:	Example Project	Contract Number	xxxxx	
Approved for Contractor by		Title:	Date	
Approved for Architect by		Title:	Date	
Approved by Owner by		Title:	Date	

Item No (1)	Description of Item (2)		Quantity (3)	Unit of Measure (4)	Unit Price in Place (5)	Amount of Sub-Item (6)	Amount of Principal (7)
2	**General Conditions (5%maximum)**		1	lump sum	10.00	10.00	**10.00**
3	**Demo & Clearing**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
14	**Masonry**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
19	**Sheet Metal**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
22	**Caulking**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
24	**Lath & Plastering - Drywall**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
26	**Finish Carpentry**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
32	**Floors**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
33	**Painting & Decorating**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
35	**Plumbing**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	

EXAMPLE ONLY

	sub-item	Materials	1	each	100.00	100.00	
37	**Ventilating System**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
38	**Electrical**						**450.00**
	sub-item	Labor	10.00	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
43	Other						**450.00**
	sub-item	Labor	10	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
57	Shades & Drapery Rods						**450.00**
	sub-item	Labor	10	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
60	Kitchen Cabinets						**450.00**
	sub-item	Labor	10	hours	35.00	350.00	
	sub-item	Materials	1	each	100.00	100.00	
63	Punch List						450.00
		Labor	10	hours	35.00	350.00	
		Materials	1	each	100.00	100.00	
	Permits						**10.00**
	Overhead						**10.00**
	Profit						**10.00**
	Total Amount of Contract or Carried Forward						**$6,760.00**

To the best of my knowledge, all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate. Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802

Signature of authorized representative

Date signed (mm/dd/yyyy)

X

form HUD-51000 (7/97)

Previous editions are obsolete

ref Handbooks 7417.1 and 7485.1

EXAMPLE ONLY

Master List of Items

Item NO.	Division of Work
1	Bond
2	General Conditions (1)
3	Demolition & Clearing
	Structures
4	General Excavation

Item NO.	Division of Work
20	Rough Carpentry
21	Metal Bucks
22	Caulking
23	Weatherstripping
24	Lath & Plaster-Drywall
25	Stucco

Site Improvements
Retaining Walls
Storm Sewers
Sanitary Sewers
Water Distribution System

5	Footing Excavation	26	Finish Carpentry		Gas Distribution System
6	Backfill	27	Finish Hardware		Electrical Distribution System
7	Foundation Piles & Caissons	28	Glass & Glazing		Street & Yard lighting
8	Concrete Foundations	29	Metal Doors		Fire & Police Alarm System
9	Concrete Superstructures	30	Metal Base & Trim		Fire Protection System
10	Reinforced Steel	31	Toilet Partitions		Street Work
11	Waterproofing & Dampproofing	32	Floors		Yard Work
12	Spandrel Waterproofing	33	Painting & Decorating		(Other)
13	Structural Steel	34	Screens		(Other)
14	Masonry	35	Plumbing		
15	Stonework	36	Heating		
16	Miscellaneous & Ornamental Metal	37	Ventilating System		**Equipment**
17	Metal Windows	38	Electrical		Shade & Drapery Rods
18	Roofing	39	Elevators		Ranges
19	Sheet Metal	40	Elevator Enclosures-Metal		Refrigerators
		41	Incinerators-Masonry & Parts		Kitchen Cabinets & Work Tables
		42	(Other)		Laundry Equipment
		43	(Other)		(Other)
					Punch List (2)
					Lawns & Plantings

1 General Conditions should be 3% to 5% of contract amount.
2 Punch List should be approximately 1/2 of 1% or $30.00 per dwelling unit whichever is greater.

EXAMPLE ONLY

Schedule of Amounts for Contract Payments

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing

No progress payments shall be made to the contractor unless a schedule of amounts for contract payments in accordance with the construction contract is received.

Public reporting burden for the collection of this information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection displays a valid OMB control number. Construction practices and HUD administrative requirements establish the need tha HA's maintain certain records or submit certain documents in conjunction with the oversight of the award of construction contracts for the construction of new low-income housing developments or modernization of existing developments. These forms are used by HAs to provide information on the construction progress schedule of amounts for contract payments. Responses to the collection of information are required to obtain a benefit or to retain a benefit. The information requested does not lend itself to confidentiality.

Project Name & Location:	29, 31, 84 Bronson Court Remodel				
Name, Address, and Zip Code of Contractor		Project Number	41-17		
Nature of Contract:	Construction	Contract Number	324599		
Approved for Contractor by		Title:		Date	
Approved for Architect by		Title:		Date	
Approved by Owner by		Title:		Date	

Item No (1)	Description of Item (2)		Quantity (3)	Unit of Measure (4)	Unit Price in Place (5)	Amount of Sub-Item (6)	Amount of Principal (7)
1	**Bond**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
2	**General Conditions**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
3	**Demolition & Clearing**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
19	**Sheet Metal**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
20	**Rough Carpentry**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
22	**Caulking**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
24	**Lath & Plaster - Drywall**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
26	**Finish Carpentry**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
27	**Finish Hardware**						
	sub-item	Labor		hours			
	sub-item	Materials		each			

Schedule of Amounts for Contract Payments

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing

32	**Floors**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
33	**Painting & Decorating**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
34	**Screens**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
35	**Plumbing**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
37	**Ventilating System**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
38	**Electrical**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
42	**Appliances**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
43	**Shade & Drapery**						
	sub-item	Labor		hours			
	sub-item	Materials		each			
	Cabinets						
	sub-item	Labor		hours			
	sub-item	Materials		each			
63	**Punch List**						
		Labor		hours			
		Materials		each			
	Permits						
	Overhead						
	Profit						
	Total Amount of Contract or Carried Forward						

To the best of my knowledge, all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate. Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802

Signature of authorized representative

Date signed (mm/dd/yyyy)

X

form HUD-51000

Previous editions are obsolete

Schedule of Amounts for Contract Payments

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing

Master List of Items

Item NO.	Division of Work
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9	Concrete Superstructures
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12	Spandrel Waterproofing
13	Structural Steel
14	Masonry
15	Stonework
16	Miscellaneous & Ornamental Metal
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32	Floors
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39	Elevators
40	Elevator Enclosures-Metal
41	Incinerators-Masonry & Parts
42	(Other)
43	(Other)
	Site Improvements
44	Retaining Walls
45	Storm Sewers
46	Sanitary Sewers
47	Water Distribution System
48	Gas Distribution System
49	Electrical Distribution System
50	Street & Yard lighting
51	Fire & Police Alarm System
52	Fire Protection System
53	Street Work
54	Yard Work
55	(Other)
56	(Other)
	Equipment
57	Shade & Drapery Rods
58	Ranges
59	Refrigerators
60	Kitchen Cabinets & Work Tables
61	Laundry Equipment
62	(Other)
63	Punch List (2)
64	Lawns & Plantings

1 General Conditions should be 3% to 5% of contract amount.

2 Punch List should be approximately 1/2 of 1% or $30.00 per dwelling unit whichever is greater.

Previous editions are obsolete

form HUD-51000 (4/20)
ref Capital Fund Guidebook

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing

Instructions to Bidders for Contracts Public and Indian Housing Programs

Instructions to Bidders for Contracts

Public and Indian Housing Programs

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1. Bid Preparation and Submission

(a) Bidders are expected to examine the specifications, drawings, all instructions, and, if applicable, the construction site (see also the contract clause entitled **Site Investigation and Conditions Affecting the Work** of the *General Conditions of the Contract for Construction*). Failure to do so will be at the bidders' risk.

(b) All bids must be submitted on the forms provided by the Public Housing Agency/Indian Housing Authority (PHA/IHA). Bidders shall furnish all the information required by the solicitation. Bids must be signed and the bidder's name typed or printed on the bid sheet and each continuation sheet which requires the entry of information by the bidder. Erasures or other changes must be initialed by the person signing the bid. Bids signed by an agent shall be accompanied by evidence of that agent's authority. (Bidders should retain a copy of their bid for their records.)

(c) Bidders must submit as part of their bid a completed form HUD-5369-A, "Representations, Certifications, and Other Statements of Bidders."

(d) All bid documents shall be sealed in an envelope which shall be clearly marked with the words "Bid Documents," the Invitation for Bids (IFB) number, any project or other identifying number, the bidder's name, and the date and time for receipt of bids.

(e) If this solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "No Bid" in the space provided for any item on which no price is submitted.

(f) Unless expressly authorized elsewhere in this solicitation, alternate bids will not be considered.

(g) Unless expressly authorized elsewhere in this solicitation, bids submitted by telegraph or facsimile (fax) machines will not be considered.

(h) If the proposed contract is for a Mutual Help project (as described in 24 CFR Part 905, Subpart E) that involves Mutual Help contributions of work, material, or equipment, supplemental information regarding the bid advertisement is provided as an attachment to this solicitation.

2. Explanations and Interpretations to Prospective Bidders

(a) Any prospective bidder desiring an explanation or interpretation of the solicitation, specifications, drawings, etc., must request it at least 7 days before the scheduled time for bid opening. Requests may be oral or written. Oral requests must be confirmed in writing. The only oral clarifications that will be provided will be those clearly related to solicitation procedures, i.e., not substantive technical information. No other oral explanation or interpretation will be provided. Any information given a prospective bidder concerning this solicitation will be furnished promptly to all other prospective bidders as a written amendment to the solicitation, if that information is necessary in submitting bids, or if the lack of it would be prejudicial to other prospective bidders.

(b) Any information obtained by, or provided to, a bidder other than by formal amendment to the solicitation shall not constitute a change to the solicitation.

3. Amendments to Invitations for Bids

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date on the bid form, or (3) by letter, telegram, or facsimile, if those methods are authorized in the solicitation. The PHA/IHA must receive acknowledgement by the time and at the place specified for receipt of bids. Bids which fail to acknowledge the bidder's receipt of any amendment will result in the rejection of the bid if the amendment(s) contained information which substantively changed the PHA's/IHA's requirements.

(c) Amendments will be on file in the offices of the PHA/IHA and the Architect at least 7 days before bid opening.

4. Responsibility of Prospective Contractor

(a) The PHA/IHA will award contracts only to responsible prospective contractors who have the ability to perform successfully under the terms and conditions of the proposed contract. In determining the responsibility of a bidder, the PHA/IHA will consider such matters as the bidder's:

(1) Integrity;

(2) Compliance with public policy;

(3) Record of past performance; and

(4) Financial and technical resources (including construction and technical equipment).

(b) Before a bid is considered for award, the bidder may be requested by the PHA/IHA to submit a statement or other documentation regarding any of the items in paragraph (a) above. Failure by the bidder to provide such additional information shall render the bidder nonresponsible and ineligible for award.

5. Late Submissions, Modifications, and Withdrawal of Bids

(a) Any bid received at the place designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it:

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been mailed by the 15th);

(2) Was sent by mail, or if authorized by the solicitation, was sent by telegram or via facsimile, and it is determined by the PHA/IHA that the late receipt was due solely to mishandling by the PHA/IHA after receipt at the PHA/IHA; or

(3) Was sent by U.S. Postal Service Express Mail Next Day Service - Post Office to Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of proposals. The term "working days" excludes weekends and observed holidays.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the bid, modification, or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the PHA/IHA is the time/date stamp of PHA/IHA on the proposal wrapper or other documentary evidence of receipt maintained by the PHA/IHA.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and Failure by a bidder to acknowledge receipt of the envelope or wrapper.

(f) Notwithstanding paragraph (a) of this provision, a late modification of an otherwise successful bid that makes its terms more favorable to the PHA/IHA will be considered at any time it is received and may be accepted.

(g) Bids may be withdrawn by written notice, or if authorized by this solicitation, by telegram (including mailgram) or facsimile machine transmission received at any time before the exact time set for opening of bids; provided that written confirmation of telegraphic or facsimile withdrawals over the signature of the bidder is mailed and postmarked prior to the specified bid opening time. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

6. Bid Opening

All bids received by the date and time of receipt specified in the solicitation will be publicly opened and read. The time and place of opening will be as specified in the solicitation. Bidders and other interested persons may be present.

7. Service of Protest

(a) Definitions. As used in this provision:

"Interested party" means an actual or prospective bidder whose direct economic interest would be affected by the award of the contract.

"Protest" means a written objection by an interested party to this solicitation or to a proposed or actual award of a contract pursuant to this solicitation.

(b) Protests shall be served on the Contracting Officer by obtaining written and dated acknowledgement from —

[Contracting Officer designate the official or location where a protest may be served on the Contracting Officer]

(c) All protests shall be resolved in accordance with the PHA's/IHA's protest policy and procedures, copies of which are maintained at the PHA/IHA.

8. Contract Award

(a) The PHA/IHA will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the PHA/IHA considering only price and any price-related factors specified in the solicitation.

(b) If the apparent low bid received in response to this solicitation exceeds the PHA's/IHA's available funding for the proposed contract work, the PHA/IHA may either accept separately priced items (see 8(e) below) or use the following procedure to determine contract award. The PHA/IHA shall apply in turn to each bid (proceeding in order from the apparent low bid to the high bid) each of the separately priced bid deductible items, if any, in their priority order set forth in this solicitation. If upon the application of the first deductible item to all initial bids, a new low bid is within the PHA's/IHA's available funding, then award shall be made to that bidder. If no bid is within the available funding amount, then the PHA/IHA shall apply the second deductible item. The PHA/IHA shall continue this process until an evaluated low bid, if any, is within the PHA's/IHA's available funding. If upon the application of all deductibles, no bid is within the PHA's/IHA's available funding, or if the solicitation does not request separately priced deductibles, the PHA/IHA shall follow its written policy and procedures in making any award under this solicitation.

(c) In the case of tie low bids, award shall be made in accordance with the PHA's/IHA's written policy and procedures.

(d) The PHA/IHA may reject any and all bids, accept other than the lowest bid (e.g., the apparent low bid is unreasonably low), and waive informalities or minor irregularities in bids received, in accordance with the PHA's/IHA's written policy and procedures.

(e) Unless precluded elsewhere in the solicitation, the PHA/IHA may accept any item or combination of items bid.

(f) The PHA/IHA may reject any bid as nonresponsive if it is materially unbalanced as to the prices for the various items of work to be performed. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

(g) A written award shall be furnished to the successful bidder within the period for acceptance specified in the bid and shall result in a binding contract without further action by either party.

9. Bid Guarantee (applicable to construction and equipment contracts exceeding $25,000)

All bids must be accompanied by a negotiable bid guarantee which shall not be less than five percent (5%) of the amount of the bid. The bid guarantee may be a bid bond secured by a surety company acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. In the case where the work under the contract will be performed on an Indian reservation area, the bid guarantee may also be an irrevocable Letter of Credit (see provision 10, Assurance of Completion, below). Certified checks and bank drafts must be made payable to the order of the PHA/IHA. The bid guarantee shall insure the execution of the contract and the furnishing of a method of assurance of completion by the successful bidder as required by the solicitation. Failure to submit a bid guarantee with the bid shall result in the rejection of the bid. Bid guarantees submitted by unsuccessful bidders will be returned as soon as practicable after bid opening.

10. Assurance of Completion

(a) Unless otherwise provided in State law, the successful bidder shall furnish an assurance of completion prior to the execution of any contract under this solicitation. This assurance may be [Contracting Officer check applicable items] —

[X] (1) a performance and payment bond in a penal sum of 100 percent of the contract price; or, as may be required or permitted by State law;

[ ] (2) separate performance and payment bonds, each for 50 percent or more of the contract price;

[ ] (3) a 20 percent cash escrow;

[ ] (4) a 25 percent irrevocable letter of credit; or,

[ ] (5) an irrevocable letter of credit for 10 percent of the total contract price with a monitoring and disbursements agreement with the IHA (applicable only to contracts awarded by an IHA under the Indian Housing Program).

(b) Bonds must be obtained from guarantee or surety companies acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. Individual sureties will not be considered. U.S. Treasury Circular Number 570, published annually in the Federal Register, lists companies approved to act as sureties on bonds securing Government contracts, the maximum underwriting limits on each contract bonded, and the States in which the company is licensed to do business. Use of companies listed in this circular is mandatory. Copies of the circular may be downloaded on the U.S. Department of Treasury website **http://www.fms.treas.gov/c570/index.html**, or ordered for a minimum fee by contacting the Government Printing Office at (202) 512-2168.

(c) Each bond shall clearly state the rate of premium and the total amount of premium charged. The current power of attorney for the person who signs for the surety company must be attached to the bond. The effective date of the power of attorney shall not precede the date of the bond. The effective date of the bond shall be on or after the execution date of the contract.

(d) Failure by the successful bidder to obtain the required assurance of completion within the time specified, or within such extended period as the PHA/IHA may grant based upon reasons determined adequate by the PHA/IHA, shall render the bidder ineligible for award. The PHA/IHA may then either award the contract to the next lowest responsible bidder or solicit new bids. The PHA/IHA may retain the ineligible bidder's bid guarantee.

11. Preconstruction Conference (applicable to construction contracts)

After award of a contract under this solicitation and prior to the start of work, the successful bidder will be required to attend a preconstruction conference with representatives of the PHA/IHA and its architect/engineer, and other interested parties convened by the PHA/IHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract (e.g., Equal Employment Opportunity, Labor Standards). The PHA/IHA will provide the successful bidder with the date, time, and place of the conference.

12. Indian Preference Requirements (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

(a) HUD has determined that the contract awarded under this solicitation is subject to the requirements of section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e(b)). Section 7(b) requires that any contract or subcontract entered into for the benefit of Indians shall require that, to the greatest extent feasible

(1) Preferences and opportunities for training and employment (other than core crew positions; see paragraph (h) below) in connection with the administration of such contracts or subcontracts be given to qualified "Indians." The Act defines "Indians" to mean persons who are members of an Indian tribe and defines "Indian tribe" to mean any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians; and,

(2) Preference in the award of contracts or subcontracts in connection with the administration of contracts be given to Indian organizations and to Indian-owned economic enterprises, as defined in section 3 of the Indian Financing Act of 1974 (25 U.S.C. 1452). That Act defines "economic enterprise" to mean any Indian-owned commercial, industrial, or business activity established or organized for the purpose of profit, except that the Indian ownership must constitute not less than 51 percent of the enterprise; "Indian organization" to mean the governing body of any Indian tribe or entity established or recognized by such governing body; "Indian" to mean any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act; and Indian "tribe" to mean any Indian tribe, band, group, pueblo, or community including Native villages and Native groups (including

corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

(b) (1) The successful Contractor under this solicitation shall comply with the requirements of this provision in awarding all subcontracts under the contract and in providing training and employment opportunities.

(2) A finding by the IHA that the contractor, either (i) awarded a subcontract without using the procedure required by the IHA, (ii) falsely represented that subcontracts would be awarded to Indian enterprises or organizations; or, (iii) failed to comply with the contractor's employment and training preference bid statement shall be grounds for termination of the contract or for the assessment of penalties or other remedies.

(c) If specified elsewhere in this solicitation, the IHA may restrict the solicitation to qualified Indian-owned enterprises and Indian organizations. If two or more (or a greater number as specified elsewhere in the solicitation) qualified Indian-owned enterprises or organizations submit responsive bids, award shall be made to the qualified enterprise or organization with the lowest responsive bid. If fewer than the minimum required number of qualified Indian-owned enterprises or organizations submit responsive bids, the IHA shall reject all bids and readvertise the solicitation in accordance with paragraph (d) below.

(d) If the IHA prefers not to restrict the solicitation as described in paragraph (c) above, or if after having restricted a solicitation an insufficient number of qualified Indian enterprises or organizations submit bids, the IHA may advertise for bids from non-Indian as well as Indian-owned enterprises and Indian organizations. Award shall be made to the qualified Indian enterprise or organization with the lowest responsive bid if that bid is -

(1) Within the maximum HUD-approved budget amount established for the specific project or activity for which bids are being solicited; and

(2) No more than the percentage specified in 24 CFR 905.175(c) higher than the total bid price of the lowest responsive bid from any qualified bidder. If no responsive bid by a qualified Indian-owned economic enterprise or organization is within the stated range of the total bid price of the lowest responsive bid from any qualified enterprise, award shall be made to the bidder with the lowest bid.

(e) Bidders seeking to qualify for preference in contracting or subcontracting shall submit proof of Indian ownership with their bids. Proof of Indian ownership shall include but not be limited to:

(1) Certification by a tribe or other evidence that the bidder is an Indian. The IHA shall accept the certification of a tribe that an individual is a member.

(2) Evidence such as stock ownership, structure, management, control, financing and salary or profit sharing arrangements of the enterprise.

(f) (1) All bidders must submit with their bids a statement describing how they will provide Indian preference in the award of subcontracts. The specific requirements of that statement and the factors to used by the IHA in determining the statement's adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement shall be rejected as nonresponsive. The IHA may require that comparable statements be provided by subcontractors to the successful Contractor, and may require the Contractor to reject any bid or proposal by a subcontractor that fails to include the statement.

(2) Bidders and prospective subcontractors shall submit a certification (supported by credible evidence) to the IHA in any instance where the bidder or subcontractor believes it is infeasible to provide Indian preference in subcontracting. The acceptance or rejection by the IHA of the certification shall be final. Rejection shall disqualify the bid from further consideration.

(g) All bidders must submit with their bids a statement detailing their employment and training opportunities and their plans to provide preference to Indians in implementing the contract; and the number or percentage of Indians anticipated to be employed and trained. Comparable statements from all proposed subcontractors must be submitted. The criteria to be used by the IHA in determining the statement(s)'s adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement(s), or that includes a statement that does not meet minimum standards required by the IHA shall be rejected as nonresponsive.

(h) Core crew employees. A core crew employee is an individual who is a bona fide employee of the contractor at the time the bid is submitted; or an individual who was not employed by the bidder at the time the bid was submitted, but who is regularly employed by the bidder in a supervisory or other key skilled position when work is available. Bidders shall submit with their bids a list of all core crew employees.

(i) Preference in contracting, subcontracting, employment, and training shall apply not only on-site, on the reservation, or within the IHA's jurisdiction, but also to contracts with firms that operate outside these areas (e.g., employment in modular or manufactured housing construction facilities).

(j) Bidders should contact the IHA to determine if any additional local preference requirements are applicable to this solicitation.

(k) The IHA [ ] does [ ] does not [Contracting Officer check applicable box] maintain lists of Indian-owned economic enterprises and Indian organizations by specialty (e.g., plumbing, electrical, foundations), which are available to bidders to assist them in meeting their responsibility to provide preference in connection with the administration of contracts and subcontracts.

U.S. Department of Housing and Urban Development

Office of Public and Indian Housing

Representations, Certifications, and Other Statements of Bidders

Public and Indian Housing Programs

Representations, Certifications, and Other Statements of Bidders

Public and Indian Housing Programs

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1. Certificate of Independent Price Determination

(a) The bidder certifies that--

(1) The prices in this bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to (i) those prices, (ii) the intention to submit a bid, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a competitive proposal solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit a bid for the purpose of restricting competition.

(b) Each signature on the bid is considered to be a certification by the signatory that the signatory--

(1) Is the person in the bidder's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(l) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(l) through (a)(3) above.

_____ [insert full name of person(s) in the bidder's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the bidder's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the bidder deletes or modifies subparagraph (a)2 above, the bidder must furnish with its bid a signed statement setting forth in detail the circumstances of the disclosure.

[X] [Contracting Officer check if following paragraph is applicable]

(d) Non-collusive affidavit. (applicable to contracts for construction and equipment exceeding $50,000)

(1) Each bidder shall execute, in the form provided by the PHA/IHA, an affidavit to the effect that he/she has not colluded with any other person, firm or corporation in regard to any bid submitted in response to this solicitation. If the successful bidder did not submit the affidavit with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the affidavit by that date may render the bid nonresponsive. No contract award will be made without a properly executed affidavit.

(2) A fully executed "Non-collusive Affidavit" [ ] is, [ ] is not included with the bid.

2. Contingent Fee Representation and Agreement

(a) Definitions. As used in this provision:

"Bona fide employee" means a person, employed by a bidder and subject to the bidder's supervision and control as to time, place, and manner of performance, who neither exerts, nor proposes to exert improper influence to solicit or obtain contracts nor holds out as being able to obtain any contract(s) through improper influence.

"Improper influence" means any influence that induces or tends to induce a PHA/IHA employee or officer to give consideration or to act regarding a PHA/IHA contract on any basis other than the merits of the matter.

(b) The bidder represents and certifies as part of its bid that, except for full-time bona fide employees working solely for the bidder, the bidder:

(1) [ ] has, [ ] has not employed or retained any person or company to solicit or obtain this contract; and

(2) [ ] has, [ ] has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(c) If the answer to either (a)(1) or (a)(2) above is affirmative, the bidder shall make an immediate and full written disclosure to the PHA/IHA Contracting Officer.

(d) Any misrepresentation by the bidder shall give the PHA/IHA the right to (1) terminate the contract; (2) at its discretion, deduct from contract payments the amount of any commission, percentage, brokerage, or other contingent fee; or (3) take other remedy pursuant to the contract.

3. Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (applicable to contracts exceeding $100,000)

(a) The definitions and prohibitions contained in Section 1352 of title 31, United States Code, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The bidder, by signing its bid, hereby certifies to the best of his or her knowledge and belief as of December 23, 1989 that:

(1) No 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 on his or her behalf in connection with the awarding of a contract resulting from this solicitation;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) 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 on his or her behalf in connection with this solicitation, the bidder shall complete and submit, with its bid, OMB standard form LLL, "Disclosure of Lobbying Activities;" and

(3) He or she will include the language of this certification in all subcontracts at any tier and require that all recipients of subcontract awards in excess of $100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than $10,000, and not more than $100,000, for each such failure.

(d) Indian tribes (except those chartered by States) and Indian organizations as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) are exempt from the requirements of this provision.

4. Organizational Conflicts of Interest Certification

The bidder certifies that to the best of its knowledge and belief and except as otherwise disclosed, he or she does not have any organizational conflict of interest which is defined as a situation in which the nature of work to be performed under this proposed contract and the bidder's organizational, financial, contractual, or other interests may, without some restriction on future activities:

(a) Result in an unfair competitive advantage to the bidder; or,

(b) Impair the bidder's objectivity in performing the contract work.

[ ] In the absence of any actual or apparent conflict, I hereby certify that to the best of my knowledge and belief, no actual or apparent conflict of interest exists with regard to my possible performance of this procurement.

5. Bidder's Certification of Eligibility

(a) By the submission of this bid, the bidder certifies that to the best of its knowledge and belief, neither it, nor any person or firm which has an interest in the bidder's firm, nor any of the bidder's subcontractors, is ineligible to:

(1) Be awarded contracts by any agency of the United States Government, HUD, or the State in which this contract is to be performed; or,

(2) Participate in HUD programs pursuant to 24 CFR Part 24.

(b) The certification in paragraph (a) above is a material representation of fact upon which reliance was placed when making award. If it is later determined that the bidder knowingly rendered an erroneous certification, the contract may be terminated for default, and the bidder may be debarred or suspended from participation in HUD programs and other Federal contract programs.

6. Minimum Bid Acceptance Period

(a) "Acceptance period," as used in this provision, means the number of calendar days available to the PHA/IHA for awarding a contract from the date specified in this solicitation for receipt of bids.

(b) This provision supersedes any language pertaining to the acceptance period that may appear elsewhere in this solicitation.

(c) The PHA/IHA requires a minimum acceptance period of [Contracting Officer insert time period] calendar days.

(d) In the space provided immediately below, bidders may specify a longer acceptance period than the PHA's/IHA's minimum requirement. The bidder allows the following acceptance period: calendar days.

(e) A bid allowing less than the PHA's/IHA's minimum acceptance period will be rejected.

(f) The bidder agrees to execute all that it has undertaken to do, in compliance with its bid, if that bid is accepted in writing within (1) the acceptance period stated in paragraph (c) above or (2) any longer acceptance period stated in paragraph (d) above.

7. Small, Minority, Women-Owned Business Concern Representation

The bidder represents and certifies as part of its bid/ offer that it --

(a) [ ] is, [ ] is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) [ ] is, [ ] is not a women-owned business enterprise. "Women-owned business enterprise," as used in this provision, means a business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(c) [ ] is, [ ] is not a minority business enterprise. "Minority business enterprise," as used in this provision, means a business which is at least 51 percent owned or controlled by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of its voting stock is owned by one or more minority group members, and whose management and daily operations are controlled by one or more such individuals. For the purpose of this definition, minority group members are:

(Check the block applicable to you)

[ ] Black Americans	[ ] Asian Pacific Americans
[ ] Hispanic Americans	[ ] Asian Indian Americans
[ ] Native Americans	[ ] Hasidic Jewish Americans

8. Indian-Owned Economic Enterprise and Indian Organization Representation (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

The bidder represents and certifies that it:

(a) [ ] is, [ ] is not an Indian-owned economic enterprise. "Economic enterprise," as used in this provision, means any commercial, industrial, or business activity established or organized for the purpose of profit, which is at least 51 percent Indian owned. "Indian," as used in this provision, means any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act.

(b) [ ] is, [ ] is not an Indian organization. "Indian organization," as used in this provision, means the governing body of any Indian tribe or entity established or recognized by such governing body. Indian "tribe" means any Indian tribe, band, group, pueblo, or

community including Native villages and Native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

9. Certification of Eligibility Under the Davis-Bacon Act (applicable to construction contracts exceeding $2,000)

(a) By the submission of this bid, the bidder certifies that neither it nor any person or firm who has an interest in the bidder's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of the contract resulting from this solicitation shall be subcontracted to any person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

10. Certification of Nonsegregated Facilities (applicable to contracts exceeding $10,000)

(a) The bidder's attention is called to the clause entitled **Equal Employment Opportunity** of the General Conditions of the Contract for Construction.

(b) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(c) By the submission of this bid, the bidder certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in the contract.

(d) The bidder further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) prior to entering into subcontracts which exceed $10,000 and are not exempt from the requirements of the Equal Employment Opportunity clause, it will:

(1) Obtain identical certifications from the proposed subcontractors;

(2) Retain the certifications in its files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

Notice to Prospective Subcontractors of Requirement for Certifications of Nonsegregated Facilities

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause of the prime contract. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

Note: The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

11. Clean Air and Water Certification (applicable to contracts exceeding $100,000)

The bidder certifies that:

(a) Any facility to be used in the performance of this contract [ ] is, [ ] is not listed on the Environmental Protection Agency List of Violating Facilities:

(b) The bidder will immediately notify the PHA/IHA Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the bidder proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and,

(c) The bidder will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

12. Previous Participation Certificate (applicable to construction and equipment contracts exceeding $50,000)

(a) The bidder shall complete and submit with his/her bid the Form HUD-2530, "Previous Participation Certificate." If the successful bidder does not submit the certificate with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the certificate by that date may render the bid nonresponsive. No contract award will be made without a properly executed certificate.

(b) A fully executed "Previous Participation Certificate"

[ ] is, [ ] is not included with the bid.

13. Bidder's Signature

The bidder hereby certifies that the information contained in these certifications and representations is accurate, complete, and current.

_____
(Signature and Date)

_____
(Typed or Printed Name)

_____
(Title)

_____
(Company Name)

(Company Address)

Previous Participation Certification

OMB Approval No. 2502-0118
(Exp. 05/31/2019)

US Department of Housing and Urban Development
Office of Housing/Federal Housing Commissioner

US Department of Agriculture
Farmers Home Administration

Part I to be completed by Principals of Multifamily Projects *(See instructions)* Reason for submission:		**For HUD HQ/FmHA use only**	
1. Agency name and City where the application is filed		**2**. Project Name, Project Number, City and Zip Code	
3. Loan or Contract amount $	**4**. Number of Units or Beds	**5**. Section of Act	**6**. Type of Project (check one) ☐ Existing ☐ Rehabilitation ☐ Proposed (New)

7. List all proposed Principals and attach organization chart for all organizations

Name and address of Principals and Affiliates (Name: Last, First, Middle Initial) proposing to participate	**8 Role of Each Principal in Project**	**9. SSN or IRS Employer Number**

Certifications: The principal(s) listed above hereby apply to HUD or USDA FmHA, as the case maybe, for approval to participate as principal(s) in the role(s) and project listed above. The principal(s) each certify that all the statements made on this form are true, complete and correct to the best of their knowledge and belief and are made in good faith, including any Exhibits attached to this form. **Warning:** HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. The principal(s) further certify that to the best of their knowledge and belief:

1. Schedule A contains a listing, for the last ten years, of every project assisted or insured by HUD, USDA FmHA and/or State and local government housing finance agencies in which the principal(s) have participated or are now participating.
2. For the period beginning 10 years prior to the date of this certification, and except as shown on the certification:

a. No mortgage on a project listed has ever been in default, assigned to the Government or foreclosed, nor has it received mortgage relief from the mortgagee;
b. The principals have no defaults or noncompliance under any Conventional Contract or Turnkey Contract of Sale in connection with a public housing project;
c. There are no known unresolved findings as a result of HUD audits, management reviews or other Governmental investigations concerning the principals or their projects;
d. There has not been a suspension or termination of payments under any HUD assistance contract due to the principal's fault or negligence;
e. The principals have not been convicted of a felony and are not presently the subject of a complaint or indictment charging a felony. (A felony is defined as any offense punishable by imprisonment for a term exceeding one year, but does not include any offense classified as a misdemeanor under the laws of a State and punishable by imprisonment of two years or less);
f. The principals have not been suspended, debarred or otherwise restricted by any Department or Agency of the Federal Government or of a State Government from doing business with such Department or Agency;
g. The principals have not defaulted on an obligation covered by a surety or performance bond and have not been the subject of a claim under an employee fidelity bond;

3. All the names of the principals who propose to participate in this project are listed above.
4. None of the principals is a HUD/FmHA employee or a member of a HUD/FmHA employee's immediate household as defined in Standards of Ethical Conduct for Employees of the Executive Branch in 5 C.F.R. Part 2635 (57 FR 35006) and HUD's Standard of Conduct in 24 C.F.R. Part 0 and USDA's Standard of Conduct in 7 C.F.R. Part 0 Subpart B.
5. None of the principals is a participant in an assisted or insured project as of this date on which construction has stopped for a period in excess of 20 days or which has been substantially completed for more than 90 days and documents for closing, including final cost certification, have not been filed with HUD or FmHA.
6. None of the principals have been found by HUD or FmHA to be in noncompliance with any applicable fair housing and civil rights requirements in 24 CFR 5.105(a). (If any principals or affiliates have been found to be in noncompliance with any requirements, attach a signed statement explaining the relevant facts, circumstances, and resolution, if any).
7. None of the principals is a Member of Congress or a Resident Commissioner nor otherwise prohibited or limited by law from contracting with the Government of the United States of America.
8. Statements above (if any) to which the principal(s) cannot certify have been deleted by striking through the words with a pen, and the relevant principal(s) have initialed each deletion (if any) and have attached a true and accurate signed statement (if applicable) to explain the facts and circumstances.

Name of Principal	**Signature of Principal**	**Certification Date(mm/dd/yyyy**	**Area Code and Tel. No.**
This form prepared by (print name)		**Area Code and Tel. No.**	

Schedule A: List of Previous Projects and Section 8 Contracts. Below is a complete list of the principals' previous participation projects and participation history in multifamily Housing programs of HUD/FmHA, State and local Housing Finance Agencies. **Note:** Read and follow the instruction sheet carefully. Make full disclosure. Add extra sheets if you need more space. Double check for accuracy. If no previous projects, write by your name, "**No previous participation, First Experience"**.

1. Principals Name (Last, First)	2. List of previous projects (Project name, project ID and, Govt. agency involved)	3.List Principals' Role(s) (indicate dates participated, and if fee or identity of interest participant)	4. Status of loan (current, defaulted, assigned, foreclosed)	5.Was the Project ever in default during your participation Yes	No	If yes, explain	6. Last MOR rating and Physical Insp. Score and date

Part II- For HUD Internal Processing Only

Received and checked by me for accuracy and completeness; recommend approval or refer to Headquarters after checking appropriate box.

Date (mm/dd/yyyy)	Tel No. and area code	☐ A. No adverse information; form HUD-2530 approval recommended.	☐ C. Disclosure or Certification problem
Staff	Processing and Control	☐ B. Name match in system	☐ D. Other (attach memorandum)

Supervisor	Director of Housing/Director, Multifamily Division	Approved ☐ Yes ☐ No	Date (mm/dd/yyyy)

Instructions for Completing the Previous Participation Certificate, form HUD-2530

Carefully read these instructions and the applicable regulations. A copy of those regulations published at 24 C.F.R. 200.210 to 200.245 can be obtained from the Multifamily Housing Representative at any HUD Office. Type or print neatly in ink when filling out this form. Mark answers in all blocks of the form. If the form is not filled completely, it will delay approval of your application.

Attach extra sheets as you need them. Be sure to indicate "Continued on Attachments" wherever appropriate. Sign each additional page that you attach if it refers to you or your record.

Carefully read the certification before you sign it. Any questions regarding the form or how to complete it can be answered by your HUD Office Multifamily Housing Representative.

Purpose: This form provides HUD with a certified report of all previous participation in HUD multifamily housing projects by those parties making application. The information requested in this form is used by HUD to determine if you meet the standards established to ensure that all principal participants in HUD projects will honor their legal, financial and contractual obligations and are acceptable risks from the underwriting standpoint of an insurer, lender or governmental agency. HUD requires that you certify your record of previous participation in HUD/USDA-FmHA, State and Local Housing Finance Agency projects by completing and signing this form, before your project application or participation can be approved.

HUD approval of your certification is a necessary precondition for your participation in the project and in the capacity that you propose. If you do not file this certification, do not furnish the information requested accurately, or do not meet established standards, HUD will not approve your certification.

Note that approval of your certification does not obligate HUD to approve your project application, and it does not satisfy all other HUD program requirements relative to your qualifications.

Who Must Sign and File Form HUD-2530:

Form HUD-2530 must be completed and signed by all principals applying to participate in HUD multifamily housing projects, including those who have no previous participation. The form must be signed and filed by all principals and their affiliates who propose participating in the HUD project. Use a separate form for each role in the project unless there is an identity of interest.

Principals include all individuals, joint ventures, partnerships, corporations, trusts, non-profit organizations, any other public or private entity that will participate in the proposed project as a sponsor, owner, prime contractor, turnkey developer, managing agent, nursing home administrator or operator, packager, or consultant. Architects and attorneys who have any interest in the project other than an arm's length fee arrangement for professional services are also considered principals by HUD.

In the case of partnerships, all general partners regardless of their percentage interest and limited partners having a 25 percent or more interest in the partnership are considered principals. In the case of public or private corporations or governmental entities, principals include the president, vice president, secretary, treasurer and all other executive officers who are directly responsible to the board of directors, or any equivalent governing body, as well as all directors and each stockholder having a 10 percent or more interest in the corporation.

Affiliates are defined as any person or business concern that directly or indirectly controls the policy of a principal or has the power to do so. A holding or parent corporation would be an example of an affiliate if one of its subsidiaries is a principal.

Exception for Corporations – All principals and affiliates must personally sign the certificate except in the following situation. When a corporation is a principal, all of its officers, directors, trustees and stockholders with 10 percent or more of the common (voting) stock need not sign personally if they all have the same record to report. The officer who is authorized to sign for the corporation or agency will list the names and title of those who elect not to sign. However, any person who has a record of participation in HUD projects that is separate from that of his or her organization must report that activity on this form and sign his or her name. The objective is **full** disclosure.

Exemptions – The names of the following parties do not need to be listed on form HUD-2530: Public Housing Agencies, tenants, owners of less than five condominium or cooperative units and all others whose interests were acquired by inheritance or court order.

Where and When Form HUD-2530 Must Be Filed: The original of this form must be submitted to the HUD Office where your project application will be processed at the same time you file your initial project application. This form must be filed with applications for projects, or when otherwise required in the situations listed below:

- Projects to be financed with mortgages insured under the National Housing Act (FHA).
- Projects to be financed according to Section 202 of the Housing Act of 1959 (Elderly and Handicapped).
- Projects in which 20 percent or more of the units are to receive a subsidy as described in 24 C.F.R. 200.213.
- Purchase of a project subject to a mortgage insured or held by the Secretary of HUD.
- Purchase of a Secretary-owned project.
- Proposed substitution or addition of a principal or principal participation in a different capacity from that previously approved for the same project.
- Proposed acquisition by an existing limited partner of an additional interest in a project resulting in a total interest of 25 percent or more or proposed acquisition by a corporate stockholder of an additional interest in a project resulting in a total interest of 10 percent or more.
- Projects with U.S.D.A., Farmers Home Administration, or with state or local government housing finance agencies that include rental assistance under Section 8 of the Housing Act of 1937. For projects of this type, form HUD-2530 should be filed with the appropriate applications directly to those agencies.

Review of Adverse Determination: If approval of your participation in a HUD project is denied, withheld, or conditionally granted on the basis of your record of previous participation, you will be notified by the HUD Office. You may request reconsideration by the HUD Review Committee. Alternatively, you may request a hearing before a Hearing Officer. Either request must be made in writing within 30 days from your receipt of the notice of determination.

If you do request reconsideration by the Review Committee and the reconsideration results in an adverse determination, you may then request a hearing before a Hearing Officer. The Hearing Officer will issue a report to the Review Committee. You will be notified of the final ruling by certified mail.

Specific Line Instructions:

Reason for submitting this Certification: e.g., refinance, change in ownership, change in management agent, transfer of physical assets, etc.

Block 1: Fill in the name of the agency to which you are applying. For example: HUD Office, Farmers Home Administration District office, or the name of a State or local housing finance agency. Below that, fill in the name of the city where the office is located.

Block 2: Fill in the name of the project, such as "Greenwood Apts." If the name has not yet been selected, write "Name unknown." Below that, enter the HUD contract or project identification number, the Farmers Home Administration project number, or the State or local housing finance agency project or contract number. Include **all** project or contract identification numbers that are relevant to the project. Also enter the name of the city in which the project is located, and the ZIP Code.

Block 3: Fill in the dollar amount requested in the proposed mortgage, or the annual amount of rental assistance requested.

Block 4: Fill in the number of apartment units proposed, such as "40 units." For hospital projects or nursing homes, fill in the number of beds proposed, such as "100 beds."

Block 5: Fill in the section of the Housing Act under which the application is filed.

Block 7: Definitions of all those who are considered principals and affiliates are given above in the section titled "Who Must Sign and File...."

Block 8: Beside the name of each principal, fill in the appropriate role. The following are examples of possible roles that the principals may assume: Owner/Mortgagor, Managing Agent, Sponsor, Developer, General Con-tractor, Packager, Consultant, Nursing Home Administrator etc.

Block 9: Fill in the Social Security Number or IRS employer number of every principal listed, including affiliates.

Instructions for Completing Schedule A:

Be sure that Schedule A is filled-in completely, accurately and the certification is properly dated and signed, because it will serve as a legal record of your previous experience. All Multifamily Housing projects involving HUD/ FmHA, and State and local Housing Finance Agencies in which you have previously participated **must be** listed. Applicants are reminded that previous participation pertains to the individual principal within an entity as well as the entity itself. A newly formed company may not have previous participation, but the principals within the company may have had extensive participation and disclosure of that activity is required.

Column 2. ***All previous projects must be listed or your certification cannot be processed.*** Include the name of all projects, project number, city where it is located and the governmental agency (HUD, USDA-FmHA or state or local housing finance agency) that was involved.

Column 3. List the role(s) as a principal, dates participated and if fee or identity of interest (IOI) with owners.

Column 4. Indicate the current status of the loan. Except for current loan, the date associated with the status is required. Loans under a workout arrangement are considered assigned. For all noncurrent loans, an explanation of the status is required.

Column 5. Explain any project defaults during your participation.

Column 6. Provide the latest Management Review (MOR) rating and Physical Inspection score.

Certification: After you have completed all other parts of form HUD-2530, including schedule A, read the Certification carefully. In the box below the statement of the certification, fill in the names of all principals and affiliates as listed in block 7. Each principal should sign the certification with the exception in some cases of individuals associated with a corporation (see "Exception for Corporations" in the section of the instructions titled "Who Must Sign and File Form HUD-2530). Principal who is signing on behalf of the entity should attach signature authority document. Each principal who signs the form should fill in the date of the signature and a telephone number. By providing a telephone number, HUD can reach you in the event of any questions.

If you cannot certify and sign the certification as it is printed because some statements do not correctly describe your record, use a pen to strike through those parts that differ with your record, and then sign and certify.

Attach a signed statement of explanation of the items you have struck out on the certification. Item 2e. relates to felony convictions within the past 10 years. If you are convicted of a felony within the past 10 years, strike out 2e. and attach statement of explanation. A felony conviction will not necessarily cause your participation to be disapproved unless there is a criminal record or other evidence that your previous conduct or method of doing business has been such that your participation in the project would make it an unacceptable risk from the underwriting stand point of an insurer, lender or governmental agency.

The Department of Housing and Urban Development (HUD) is authorized to collect this information by law (42 U.S.C. 3535(d) and 24 C.F.R. 200.217) and by regulation at 24 CFR 200.210. This information is needed so that principals applying to participate in multifamily programs can become HUD-approved participants. The information you provide will enable HUD to evaluate your record with respect to established standards of performance, responsibility and eligibility. Without prior approval, a principal may not participate in a proposed or existing multifamily project. HUD uses this information to evaluate whether or not principals pose an unsatisfactory underwriting risk. The information is used to evaluate the potential principals and approve only individuals and organizations that will honor their legal, financial and contractual obligations.

Privacy Act Statement: The Housing and Community Development Act of 1987, 42 U.S.C. 3543 requires persons applying for a Federally-insured or guaranteed loan to furnish his/her Social Security Number (SSN). HUD must have your SSN for identification of your records. HUD may use your SSN for automated processing of your records and to make requests for information about you and your previous records with other public agencies and private sector sources. HUD may disclose certain information to Federal, State and local agencies when relevant to civil, criminal, or regulatory investigations and prosecutions. It will not be otherwise disclosed or released outside of HUD, except as required and permitted by law. You must provide all of the information requested in this application, including your SSN.

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

A response is mandatory. Failure to provide any of the information will result in your disapproval of participation in this HUD program.

General Conditions for Construction Contracts - Public Housing Programs

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing
OMB Approval No. 2577-0157 (exp. 1/31/2027)

Applicability. This form is applicable to any construction/development contract greater than $250,000.

Public reporting burden for this collection of information is estimated to average 1.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding the accuracy of this burden estimate and any suggestions for reducing this burden can be sent to the Reports Management Officer, Office of Policy Development and Research, REE, Department of Housing and Urban Development, 451 7th St SW, Room 4176, Washington, DC 20410-5000. When providing comments, please refer to OMB Approval No. 2577-0157. This form includes those clauses required by OMB's common rule on grantee procurement, implemented at HUD in 2 CFR 200, and those requirements set forth in Section 3 of the Housing and Urban Development Act of 1968 and its amendment by the Housing and Community Development Act of 1992, implemented by HUD at 24 CFR Part 75. The form is required for construction contracts awarded by Public Housing Agencies (PHAs). The form is used by Housing Authorities in solicitations to provide necessary contract clauses. If the form were not used, PHAs would be unable to enforce their contracts. Responses to the collection of information are required to obtain a benefit or to retain a benefit. The information requested does not lend itself to confidentiality. HUD may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB number.

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1. Definitions

(a) "Architect" means the person or other entity engaged by the PHA to perform architectural, engineering, design, and other services related to the work as provided for in the contract. When a PHA uses an engineer to act in this capacity, the terms "architect" and "engineer" shall be synonymous. The Architect shall serve as a technical representative of the Contracting Officer. The Architect's authority is as set forth elsewhere in this contract.

(b) "Contract" means the contract entered into between the PHA and the Contractor. It includes the forms of Bid, the Bid Bond, the Performance and Payment Bond or Bonds or other assurance of completion, the Certifications, Representations, and Other Statements of Bidders (form HUD-5370), these General Conditions of the Contract for Construction (form HUD-5370), the applicable wage rate determinations from the U.S. Department of Labor, any special conditions included elsewhere in the contract, the specifications, and drawings. It includes all formal changes to any of those documents by addendum, change order, or other modification.

(c) "Contracting Officer" means the person delegated the authority by the PHA to enter into, administer, and/or terminate this contract and designated as such in writing to the Contractor. The term includes any successor Contracting Officer and any duly authorized representative of the Contracting Officer also designated in writing. The Contracting Officer shall be deemed the authorized agent of the PHA in all dealings with the Contractor.

(d) "Contractor" means the person or other entity entering into the contract with the PHA to perform all of the work required under the contract.

(e) "Drawings" means the drawings enumerated in the schedule of drawings contained in the Specifications and as described in the contract clause entitled Specifications and Drawings for Construction herein.

(f) "HUD" means the United States of America acting through the Department of Housing and Urban Development including the Secretary, or any other person designated to act on its behalf. HUD has agreed, subject to the provisions of an Annual Contributions Terms and Conditions (ACC), to provide financial assistance to the PHA, which includes assistance in financing the work to be performed under this contract. As defined elsewhere in these General Conditions or the contract documents, the determination of HUD may be required to authorize changes in the work or for release of funds to the PHA for payment to the Contractor. Notwithstanding HUD's role, nothing in this contract shall be construed to create any contractual relationship between the Contractor and HUD.

(g) "Project" means the entire project, whether construction or rehabilitation, the work for which is provided for in whole or in part under this contract.

(h) "PHA" means the Public Housing Agency organized under applicable state laws which is a party to this contract.

(j) "Specifications" means the written description of the technical requirements for construction and includes the criteria and tests for determining whether the requirements are met.

(l) "Work" means materials, workmanship, and manufacture and fabrication of components.

2. Contractor's Responsibility for Work

(a) The Contractor shall furnish all necessary labor, materials, tools, equipment, and transportation necessary for performance of the work. The Contractor shall also furnish all necessary water, heat, light, and power not made available to the Contractor by the PHA pursuant to the clause entitled Availability and Use of Utility Services herein.

(b) The Contractor shall perform on the site, and with its own organization, work equivalent to at least [ ] (12 percent unless otherwise indicated) of the total amount of work to be performed under the order. This percentage may be reduced by a supplemental agreement to this order if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the PHA.

(c) At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

(d) The Contractor shall be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence, and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The Contractor shall hold and save the PHA, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(e) The Contractor shall lay out the work from base lines and bench marks indicated on the drawings and be responsible for all lines, levels, and measurements of all work executed under the contract. The Contractor shall verify the figures before laying out the work and will be held responsible for any error resulting from its failure to do so.

(f) The Contractor shall confine all operations (including storage of materials) on PHA premises to areas authorized or approved by the Contracting Officer.

(g) The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. After completing the work and before final inspection, the Contractor shall (1) remove from the premises all scaffolding, equipment, tools, and materials (including rejected materials) that are not the property of the PHA and all rubbish caused by its work; (2) leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer; (3) perform all specified tests; and, (4) deliver the installation in complete and operating condition.

(h) The Contractor's responsibility will terminate when all work has been completed, the final inspection made, and the work accepted by the Contracting Officer. The Contractor will then be released from further obligation except as required by the warranties specified elsewhere in the contract.

3. Architect's Duties, Responsibilities, and Authority

(a) The Architect for this contract, and any successor, shall be designated in writing by the Contracting Officer.

(b) The Architect shall serve as the Contracting Officer's technical representative with respect to architectural, **Schedule** engineering, and design matters related to the work performed under the contract. The Architect may provide direction on contract performance. Such direction shall be within the scope of the contract and may not be of a nature which: (1) institutes additional work outside the scope of the contract; (2) constitutes a change as defined in the Changes clause herein; (3) causes an increase or decrease in the cost of the contract; (4) alters the Construction Progress Schedule; or (5) changes any of the other express terms or conditions of the contract.

(c) The Architect's duties and responsibilities may include but shall not be limited to:

(1) Making periodic visits to the work site, and on the basis of his/her on-site inspections, issuing written reports to the PHA which shall include all observed deficiencies. The Architect shall file a copy of the report with the Contractor's designated representative at the site;

(2) Making modifications in drawings and technical specifications and assisting the Contracting Officer in the preparation of change orders and other contract modifications for issuance by the Contracting Officer;

(3) Reviewing and making recommendations with respect to - (i) the Contractor's construction progress schedules; (ii) the Contractor's shop and detailed drawings; (iii) the machinery, mechanical and other equipment and materials or other articles proposed for use by the Contractor; and, (iv) the Contractor's price breakdown and progress payment estimates; and,

(4) Assisting in inspections, signing Certificates of Completion, and making recommendations with respect to acceptance of work completed under the contract.

4. Other Contracts

The PHA may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with PHA employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by PHA employees

Construction Requirements

5. Pre-construction Conference and Notice to Proceed

(a) Within ten calendar days of contract execution, and prior to the commencement of work, the Contractor shall attend a preconstruction conference with representatives of the PHA, its Architect, and other interested parties convened by the PHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract. The PHA will provide the Contractor with the date, time, and place of the conference.

(b) The contractor shall begin work upon receipt of a written Notice to Proceed from the Contracting Officer or designee. The Contractor shall not begin work prior to receiving such notice.

6. Construction Progress

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring labor, materials, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments or take other remedies under the contract until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as required by the Contracting Officer, and immediately deliver three copies of the annotated schedule to the Contracting Officer. If the Contracting Officer determines, upon the basis of inspection conducted pursuant to the clause entitled Inspection and Acceptance of Construction, herein that the Contractor is not meeting the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the PHA. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the Contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the Default clause of this contract.

7. Site Investigation and Conditions Affecting the Work

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to, (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads;(3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is

reasonably ascertainable from an inspection of the site, including all exploratory work done by the PHA, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the PHA.

(b) The PHA assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the PHA. Nor does the PHA assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

8. Differing Site Conditions

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site(s), of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. Work shall not proceed at the affected site, except at the Contractor's risk, until the Contracting Officer has provided written instructions to the Contractor. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, the Contractor shall file a claim in writing to the PHA within ten days after receipt of such instructions and, in any event, before proceeding with the work. An equitable adjustment in the contract price, the delivery schedule, or both shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

9. Specifications and Drawings for Construction

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by", or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown" "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place" that is "furnished and installed".

(d) "Shop drawings" means drawings, submitted to the PHA by the Contractor, subcontractor, or any lower tier subcontractor, showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., form, fit, and attachment details) of materials of equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The PHA may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with other contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the PHA's reasons therefore. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Architect approves any such variation and the Contracting Officer concurs, the Contracting Officer shall issue an appropriate modification to the contract, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) It shall be the responsibility of the Contractor to make timely requests of the PHA for such large scale and full size drawings, color schemes, and other additional information, not already in his possession, which shall be

required in the planning and production of the work. Such requests may be submitted as the need arises, but each such request shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay.

(h) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the PHA and one set will be returned to the Contractor. As required by the Contracting Officer, the Contractor, upon completing the work under this contract, shall furnish a complete set of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the work is completed and accepted.

(i) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all shop drawings prepared by subcontractors are submitted to the Contracting Officer.

10. As-Built Drawings

(a) "As-built drawings," as used in this clause, means drawings submitted by the Contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract. "As-built drawings" shall be synonymous with "Record drawings."

(b) As required by the Contracting Officer, the Contractor shall provide the Contracting Officer accurate information to be used in the preparation of permanent as-built drawings. For this purpose, the Contractor shall record on one set of contract drawings all changes from the installations originally indicated, and record final locations of underground lines by depth from finish grade and by accurate horizontal offset distances to permanent surface improvements such as buildings, curbs, or edges of walks.

(c) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all as-built drawings prepared by subcontractors are submitted to the Contracting Officer.

11. Material and Workmanship

(a) All equipment, material, and articles furnished under this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the contract to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of, and as approved by the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) Approval of equipment and materials.

(1) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(2) When required by the specifications or the Contracting Officer, the Contractor shall submit appropriately marked samples (and certificates related to them) for approval at the Contractor's expense, with all shipping charges prepaid. The Contractor shall label, or otherwise properly mark on the container, the material or product represented, its place of origin, the name of the producer, the Contractor's name, and the identification of the construction project for which the material or product is intended to be used.

(3) Certificates shall be submitted in triplicate, describing each sample submitted for approval and certifying that the material, equipment or accessory complies with contract requirements. The certificates shall include the name and brand of the product, name of manufacturer, and the location where produced.

(4) Approval of a sample shall not constitute a waiver of the PHA right to demand full compliance with contract requirements. Materials, equipment and accessories may be rejected for cause even though samples have been approved.

(5) Wherever materials are required to comply with recognized standards or specifications, such specifications shall be accepted as establishing the technical qualities and testing methods, but shall not govern the number of tests required to be made nor modify other contract requirements. The Contracting Officer may require laboratory test reports on items submitted for approval or may approve materials on the basis of data submitted in certificates with samples. Check tests will be made on materials delivered for use only as frequently as the Contracting Officer determines necessary to insure compliance of materials with the specifications. The Contractor will assume all costs of retesting materials which fail to meet contract requirements and/or testing materials offered in substitution for those found deficient.

(6) After approval, samples will be kept in the Project office until completion of work. They may be built into the work after a substantial quantity of the materials they represent has been built in and accepted.

(c) Requirements concerning lead-based paint. The Contractor shall comply with the requirements concerning lead-based paint contained in the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846) as implemented by 24 CFR Part 35.

12. Permits and Codes

(a) The Contractor shall give all notices and comply with all applicable laws, ordinances, codes, rules and regulations. Notwithstanding the requirement of the Contractor to comply with the drawings and specifications in the contract, all work installed shall comply with all applicable codes and regulations as amended by any

waivers. Before installing the work, the Contractor shall examine the drawings and the specifications for compliance with applicable codes and regulations bearing on the work and shall immediately report any discrepancy it may discover to the Contracting Officer. Where the requirements of the drawings and specifications fail to comply with the applicable code or regulation, the Contracting Officer shall modify the contract by change order pursuant to the clause entitled Changes herein to conform to the code or regulation.

(b) The Contractor shall secure and pay for all permits, fees, and licenses necessary for the proper execution and completion of the work. Where the PHA can arrange for the issuance of all or part of these permits, fees and licenses, without cost to the Contractor, the contract amount shall be reduced accordingly.

13. Health, Safety, and Accident Prevention

(a) In performing this contract, the Contractor shall:

(1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health and/or safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation;

(2) Protect the lives, health, and safety of other persons;

(3) Prevent damage to property, materials, supplies, and equipment; and,

(4) Avoid work interruptions.

(b) For these purposes, the Contractor shall:

(1) Comply with regulations and standards issued by the Secretary of Labor at 29 CFR Part 1926. 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 U.S.C. 3701 et seq.; and

(2) Include the terms of this clause in every subcontract so that such terms will be binding on each subcontractor.

(c) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 CFR Part 1904.

(d) The Contracting Officer shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.

(e) The Contractor shall be responsible for its subcontractors' compliance with the provisions of this clause. The Contractor shall take such action with respect to any subcontract as the PHA, the Secretary of Housing and Urban Development, or the Secretary of Labor shall direct as a means of enforcing such provisions.

14. Temporary Heating

The Contractor shall provide and pay for temporary heating, covering, and enclosures necessary to properly protect all work and materials against damage by dampness and cold, to dry out the work, and to facilitate the completion of the work. Any permanent heating equipment used shall be turned over to the PHA in the condition and at the time required by the specifications.

15. Availability and Use of Utility Services

(a) The PHA shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the PHA or, where the utility is produced by the PHA, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(b) The Contractor, at its expense and in a manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the PHA, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

16. Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed under this contract, and which do not unreasonably interfere with the work required under this contract.

(b) The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during performance of this contract, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(c) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. Prior to disturbing the ground at the construction site, the Contractor shall ensure that all underground utility lines are clearly marked.

(d) The Contractor shall shore up, brace, underpin, secure, and protect as necessary all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be affected by the excavations or other operations connected with the construction of the project.

(e) Any equipment temporarily removed as a result of work under this contract shall be protected, cleaned, and replaced in the same condition as at the time of award of this contract.

(f) New work which connects to existing work shall correspond in all respects with that to which it connects and/or be similar to existing work unless otherwise required by the specifications.

(g) No structural members shall be altered or in any way weakened without the written authorization of the Contracting Officer, unless such work is clearly specified in the plans or specifications.

(h) If the removal of the existing work exposes discolored or unfinished surfaces, or work out of alignment, such surfaces shall be refinished, or the material replaced as necessary to make the continuous work uniform and harmonious. This, however, shall not be construed to require the refinishing or reconstruction of dissimilar finishes previously exposed, or finished surfaces in good condition, but in different planes or on different levels **Construction** when brought together by the removal of intervening work, unless such refinishing or reconstruction is specified in the plans or specifications.

(i) The Contractor shall give all required notices to any adjoining or adjacent property owner or other party before the commencement of any work.

(j) The Contractor shall indemnify and save harmless the PHA from any damages on account of settlement or the loss of lateral support of adjoining property, any damages from changes in topography affecting drainage, and from all loss or expense and all damages for which the PHA may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

(k) The Contractor shall repair any damage to vegetation, structures, equipment, utilities, or improvements, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

17. Temporary Buildings and Transportation of Materials

(a) Temporary buildings (e.g., storage sheds, shops, offices, sanitary facilities) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the PHA. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(b) The Contractor shall, as directed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

18. Clean Air and Water

The contactor shall comply with the Clean Air Act, as amended, 42 USC 7401 et seq., the Federal Water Pollution Control Water Act, as amended, 33 U.S.C. 1251 et seq., and standards issued pursuant thereto in the facilities in which this contract is to be performed.

19. Energy Efficiency

The Contractor shall comply with mandatory standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163) for the State in which the work under the contract is performed.

20. Inspection and Acceptance of

(a) Definitions. As used in this clause -
(1) “Acceptance” means the act of an authorized representative of the PHA by which the PHA approves and assumes ownership of the work performed under this contract. Acceptance may be partial or complete.
(2) “Inspection” means examining and testing the work performed under the contract (including, when appropriate, raw materials, equipment, components, and intermediate assemblies) to determine whether it conforms to contract requirements.
(3) “Testing” means that element of inspection that determines the properties or elements, including functional operation of materials, equipment, or their components, by the application of established scientific principles and procedures.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. All work is subject to PHA inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) PHA inspections and tests are for the sole benefit of the PHA and do not: (1) relieve the Contractor of responsibility for providing adequate quality control measures; (2) relieve the Contractor of responsibility for loss or damage of the material before acceptance; (3) constitute or imply acceptance; or, (4) affect the continuing rights of the PHA after acceptance of the completed work under paragraph (j) below.

(d) The presence or absence of the PHA inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specifications without the Contracting Officer’s written authorization. All instructions and approvals with respect to the work shall be given to the Contractor by the Contracting Officer.

(e) The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The PHA may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The PHA shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The PHA may conduct routine inspections of the construction site on a daily basis.

(g) The Contractor shall, without charge, replace or correct work found by the PHA not to conform to contract requirements, unless the PHA decides that it is in its interest to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(h) If the Contractor does not promptly replace or correct rejected work, the PHA may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor, or (2) terminate for default the Contractor's right to proceed.

(i) If any work requiring inspection is covered up without approval of the PHA, it must, if requested by the Contracting Officer, be uncovered at the expense of the Contractor. If at any time before final acceptance of the entire work, the **Construction** PHA considers it necessary or advisable, to examine work already completed by removing or tearing it out, the Contractor, shall on request, promptly furnish all necessary facilities, labor, and material. If such work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray all the expenses of the examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the Contracting Officer shall make an equitable adjustment to cover the cost of the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(j) The Contractor shall notify the Contracting Officer, in writing, as to the date when in its opinion all or a designated portion of the work will be substantially completed and ready for inspection. If the Architect determines that the state of preparedness is as represented, the PHA will promptly arrange for the inspection. Unless otherwise specified in the contract, the PHA shall accept, as soon as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines and designates can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the PHA's right under any warranty or guarantee.

21. Use and Possession Prior to Completion

(a) The PHA shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the PHA intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The PHA's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the PHA has such possession or use, the Contractor shall be relieved of the responsibility for (1) the loss of or damage to the work resulting from the PHA's possession or use, notwithstanding the terms of the clause entitled Permits and Codes herein; (2) all maintenance costs on the areas occupied; and, (3) furnishing heat, light, power, and water used in the areas occupied without proper remuneration therefore. If prior possession or use by the PHA delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

22. Warranty of Title

The Contractor warrants good title to all materials, supplies, and equipment incorporated in the work and agrees to deliver the premises together with all improvements thereon free from any claims, liens or charges, and agrees further that neither it nor any other person, firm or corporation shall have any right to a lien upon the premises or anything appurtenant thereto.

23. Warranty of

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (j) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. This warranty shall continue for a period of twenty-four months (one year unless otherwise indicated) from the date of final acceptance of the work. If the PHA takes possession of any part of the work before final acceptance, this warranty shall continue for a period of (one year unless otherwise indicated) from the date that the PHA takes possession.

(b) The Contractor shall remedy, at the Contractor's expense, any failure to conform, or any defect. In addition, the Contractor shall remedy, at the Contractor's expense, any damage to PHA-owned or controlled real or personal property when the damage is the result of—

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defects of equipment, material, workmanship or design furnished by the Contractor.

(c) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for (one year unless otherwise indicated) from the date of repair or replacement.

(d) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect or damage.

(e) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the PHA shall have the right to replace, repair or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(f) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall:

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed in writing, for the benefit of the PHA; and,

(3) Enforce all warranties for the benefit of the PHA.

(g) In the event the Contractor's warranty under paragraph (a) of this clause has expired, the PHA may bring suit at its own expense to enforce a subcontractor's, manufacturer's or supplier's warranty.

(h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defect of material or design furnished by the PHA nor for the repair of any damage that results from any defect in PHA furnished material or design.

(i) Notwithstanding any provisions herein to the contrary, the establishment of the time periods in paragraphs (a) and (c) above relate only to the specific obligation of the Contractor to correct the work, and have no relationship to the time within which its obligation to comply with the contract may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to its obligation other than specifically to correct the work.

(j) This warranty shall not limit the PHA's rights under the Inspection and Acceptance of Construction clause of this contract with respect to latent defects, gross mistakes or fraud.

24. Prohibition Against Liens

The Contractor is prohibited from placing a lien on the PHA's property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers.

Administrative Requirements

25. Contract Period

this contract within 180 calendar days of the effective date of the contract, or within the time schedule established in the notice to proceed issued by the Contracting Officer.

26. Order of Provisions

accordance with the terms and conditions of the

In the event of a conflict between these General Conditions and the Specifications, the General Conditions shall prevail. In the event of a conflict between the contract and any applicable state or local law or regulation, the state or local law or regulation shall prevail; provided that such state or local law or regulation does not conflict with, or is less restrictive than applicable federal law, regulation, or Executive Order. In the event of such a conflict, applicable federal law, regulation, and Executive Order shall prevail.

27. Payments

retain ten (10) percent of the amount of progress

(a) The PHA shall pay the Contractor the price as provided in this contract.

(b) The PHA shall make progress payments approximately every 30 days as the work proceeds, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer. The PHA may, subject to written determination and approval of the Contracting Officer, make more frequent payments to contractors which are qualified small businesses.

(c) Before the first progress payment under this contract, the Contractor shall furnish, in such detail as requested by the Contracting Officer, a breakdown of the total contract price showing the amount included therein for each principal category of the work, which shall substantiate the payment amount requested in order to provide a basis for determining progress payments. The breakdown shall be approved by the Contracting Officer and must be acceptable to HUD. If the contract covers more than one project, the Contractor shall furnish a separate breakdown for each. The values and quantities employed in making up this breakdown are for determining the amount of progress payments and shall not be construed as a basis for additions to or deductions from the contract price. The Contractor shall prorate its overhead and profit over the construction period of the contract.

(d) The Contractor shall submit, on forms provided by the PHA, periodic estimates showing the value of the work performed during each period based upon the approved

submitted not later than 30 days in advance of the date set for payment and are subject to correction and revision as required. The estimates must be approved by the Contracting Officer with the concurrence of the Architect prior to payment. If the contract covers more than one project, the Contractor shall furnish a separate progress payment estimate for each.

(e) Along with each request for progress payments and the required estimates, the Contractor shall furnish the following certification, or payment shall not be made: I hereby certify, to the best of my knowledge and belief, that:

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements; and,

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in

subcontract.

Name:

Title:

Date:

(f) Except as otherwise provided in State law, the PHA shall

payments until completion and acceptance of all work under the contract; except, that if upon completion of 50 percent of the work, the Contracting Officer, after consulting with the Architect, determines that the Contractor's performance and progress are satisfactory, the PHA may make the remaining payments in full for the work subsequently completed. If the Contracting Officer subsequently determines that the Contractor's performance and progress are unsatisfactory, the PHA shall reinstate the ten (10) percent (or other percentage as provided in State law) retainage until such time as the Contracting Officer determines that performance and progress are satisfactory.

(g) The Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration when computing progress payments.

Material delivered to the Contractor at locations other than the site may also be taken into consideration if the Contractor furnishes satisfactory evidence that (1) it has acquired title to such material; (2) the material is properly stored in a bonded warehouse, storage yard, or similar suitable place as may be approved by the Contracting Officer; (3) the material is insured to cover its full value; and (4) the material will be used to perform this contract. Before any progress payment which includes delivered material is made, the Contractor shall furnish such documentation as the Contracting Officer may require to assure the protection of the PHA's interest in such materials. The Contractor shall remain responsible for such stored material notwithstanding the transfer of title to the PHA.

(h) All material and work covered by progress payments made shall, at the time of payment become the sole property of the PHA, but this shall not be construed as (1) relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or, (2) waiving the right of the PHA to require the fulfillment of all of the terms of the contract. In the event the work of the Contractor has been damaged by other contractors or persons other than employees of the PHA in the course of their employment, the Contractor shall restore such damaged work without cost to the PHA and to seek redress for its damage only from those who directly caused it.

(i) The PHA shall make the final payment due the Contractor under this contract after (1) completion and final acceptance of all work; and (2) presentation of release of all claims against the PHA arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. Each such exception shall embrace no more than one claim, the basis and scope of which shall be clearly defined. The amounts for such excepted claims shall not be included in the request for final payment. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned.

(j) Prior to making any payment, the Contracting Officer may require the Contractor to furnish receipts or other evidence of payment from all persons performing work and supplying material to the Contractor, if the Contracting Officer determines such evidence is necessary to substantiate claimed costs.

(k) The PHA shall not; (1) determine or adjust any claims for payment or disputes arising there under between the Contractor and its subcontractors or material suppliers; or, (2) withhold any moneys for the protection of the subcontractors or material suppliers. The failure or refusal of the PHA to withhold moneys from the Contractor shall in nowise impair the obligations of any surety or sureties under any bonds furnished under this contract.

28. Contract Modifications

(a) Only the Contracting Officer has authority to modify any term or condition of this contract. Any contract modification shall be authorized in writing.

(b) The Contracting Officer may modify the contract unilaterally (1) pursuant to a specific authorization stated in a contract clause (e.g., Changes); or (2) for administrative matters which do not change the rights or responsibilities of the parties (e.g., change in the PHA address). All other contract modifications shall be in the form of supplemental agreements signed by the Contractor and the Contracting Officer.

(c) When a proposed modification requires the approval of HUD prior to its issuance (e.g., a change order that exceeds the PHA's approved threshold), such modification shall not be effective until the required approval is received by the PHA.

29. Changes

(a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract including changes:
(1) In the specifications (including drawings and designs);
(2) In the method or manner of performance of the work;
(3) PHA-furnished facilities, equipment, materials, services, or site; or,
(4) Directing the acceleration in the performance of the work.

(b) Any other written order or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances and source of the order and (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for a adjustment based on defective specifications, no proposal for any change under paragraph (b) above shall be allowed for any costs incurred more than 20 days (5 days for oral orders) before the Contractor gives written notice as required. In the case of defective specifications for which the PHA is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause, or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting a written statement describing the general nature and the amount of the proposal. If the facts justify it, the Contracting Officer may extend the period for submission. The proposal may be included in the notice required under paragraph (b) above. No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(f) The Contractor's written proposal for equitable adjustment shall be submitted in the form of a lump sum proposal supported with an itemized breakdown of all increases and decreases in the contract in at least the following details:

(1) Direct Costs. Materials (list individual items, the quantity and unit cost of each, and the aggregate cost); Transportation and delivery costs associated with materials; Labor breakdowns by hours or unit costs (identified with specific work to be performed); Construction equipment exclusively necessary for the change; Costs of preparation and/ or revision to shop drawings resulting from the change; Worker's Compensation and Public Liability Insurance; Employment taxes under FICA and FUTA; and, Bond Costs when size of change warrants revision.

(2) Indirect Costs. Indirect costs may include overhead, general and administrative expenses, and fringe benefits not normally treated as direct costs.

(3) Profit. The amount of profit shall be negotiated and may vary according to the nature, extent, and complexity of the work required by the change. The allowability of the direct and indirect costs shall be determined in accordance with the Contract Cost Principles and Procedures for Commercial Firms in Part 31 of the Federal Acquisition Regulation (48 CFR 1-31), as implemented by HUD Handbook 2210.18, in effect on the date of this contract. The Contractor shall not be allowed a profit on the profit received by any subcontractor. Equitable adjustments for deleted work shall include a credit for profit and may include a credit for indirect costs. On proposals covering both increases and decreases in the amount of the contract, the application of indirect costs and profit shall be on the net-change in direct costs for the Contractor or subcontractor performing the work.

(g) The Contractor shall include in the proposal its request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the completion of the contract in its entirety.

(h) The Contracting Officer shall act on proposals within 30 days after their receipt, or notify the Contractor of the date when such action will be taken.

(i) Failure to reach an agreement on any proposal shall be a dispute under the clause entitled Disputes herein. Nothing in this clause, however, shall excuse the Contractor from proceeding with the contract as changed.

(j) Except in an emergency endangering life or property, no change shall be made by the Contractor without a prior order from the Contracting Officer.

30. Suspension of Work

(a) The Contracting Officer may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the PHA.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified (or within a reasonable time if not specified) in this contract an adjustment shall be made for any increase in the cost of performance of the contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor or for which any equitable adjustment is provided for or excluded under any other provision of this contract.

(c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and, (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

31. Disputes

(a) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to the contract. A claim arising under the contract, unlike a claim relating to the contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim. The submission may be converted to a claim by complying with the requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(b) Except for disputes arising under the clauses entitled Labor Standards - Davis Bacon and Related Acts, herein, all disputes arising under or relating to this contract, including any claims for damages for the alleged breach thereof which are not disposed of by agreement, shall be resolved under this clause.

(c) All claims by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the PHA against the Contractor shall be subject to a written decision by the Contracting Officer.

(d) The Contracting Officer shall, within 60 (unless otherwise indicated) days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.

(e) The Contracting Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in the PHA in accordance with the PHA's policy and procedures, (2) refers the appeal to an independent mediator or arbitrator, or (3) files suit in a court of competent jurisdiction. Such appeal must be made within (30 unless otherwise indicated) days after receipt of the Contracting Officer's decision.

(f) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.

32. Default

(a) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with the diligence that will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within this time, the Contracting Officer may, by written notice to the Contractor, terminate the right to

proceed with the work (or separable part of the work) that has been delayed. In this event, the PHA may take over the work and complete it, by contract or otherwise, and may take possession of and use any materials, equipment, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the PHA resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the PHA in completing the work.

(b) The Contractor's right to proceed shall not be terminated or the Contractor charged with damages under this clause if—

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (i) acts of God, or of the public enemy, (ii) acts of the PHA or other governmental entity in either its sovereign or contractual capacity, (iii) acts of another contractor in the performance of a contract with the PHA, (iv) fires, (v) floods, (vi) epidemics, (vii) quarantine restrictions, (viii) strikes, (ix) freight embargoes, (x) unusually severe weather, or (xi) delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within days (10 days unless otherwise indicated) from the beginning of such delay (unless extended by the Contracting Officer) notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, time for completing the work shall be extended by written modification to the contract. The findings of the Contracting Officer shall be reduced to a written decision which shall be subject to the provisions of the Disputes clause of this contract.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been for convenience of the PHA.

33. Liquidated Damages

(a) If the Contractor fails to complete the work within the time specified in the contract, or any extension, as specified in the clause entitled Default of this contract, the Contractor shall pay to the PHA as liquidated damages, the sum of $ 150.00 Contracting Officer insert amount] for each day of delay. If different completion dates are specified in the contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed. To the extent that the Contractor's delay or nonperformance is excused under another clause in this contract, liquidated damages shall not be due the PHA. The Contractor remains liable for damages caused other than by delay.

(b) If the PHA terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the PHA in completing the work.

(c) If the PHA does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

34. Termination for Convenience

(a) The Contracting Officer may terminate this contract in whole, or in part, whenever the Contracting Officer determines that such termination is in the best interest of the PHA. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which the performance of the work under the contract is terminated, and the date upon which such termination becomes effective.

(b) If the performance of the work is terminated, either in whole or in part, the PHA shall be liable to the Contractor for reasonable and proper costs resulting from such termination upon the receipt by the PHA of a properly presented claim setting out in detail: (1) the total cost of the work performed to date of termination less the total amount of contract payments made to the Contractor; (2) the cost (including reasonable profit) of settling and paying claims under subcontracts and material orders for work performed and materials and supplies delivered to the site, payment for which has not been made by the PHA to the Contractor or by the Contractor to the subcontractor or supplier; (3) the cost of preserving and protecting the work already performed until the PHA or assignee takes possession thereof or assumes responsibility therefore; (4) the actual or estimated cost of legal and accounting services reasonably necessary to prepare and present the termination claim to the PHA; and (5) an amount constituting a reasonable profit on the value of the work performed by the Contractor.

(c) The Contracting Officer will act on the Contractor's claim within days (60 days unless otherwise indicated) of receipt of the Contractor's claim.

(d) Any disputes with regard to this clause are expressly made subject to the provisions of the Disputes clause of this contract.

35. Assignment of Contract

The Contractor shall not assign or transfer any interest in this contract; except that claims for monies due or to become due from the PHA under the contract may be assigned to a bank, trust company, or other financial institution. Such assignments of claims shall only be made with the written concurrence of the Contracting Officer. If the Contractor is a partnership, this contract shall inure to the benefit of the surviving or remaining member(s) of such partnership as approved by the Contracting Officer.

36. Insurance

(a) Before commencing work, the Contractor and each subcontractor shall furnish the PHA with certificates of insurance showing the following insurance is in force and will insure all operations under the Contract:

(1) Workers' Compensation, in accordance with state or Territorial Workers' Compensation laws.

(2) Commercial General Liability with a combined single limit for bodily injury and property damage of not less than $ 1,000,000 [Contracting Officer insert amount]

per occurrence to protect the Contractor and each subcontractor against claims for bodily injury or death and damage to the property of others. This shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability under (3) below. If the Contractor has a "claims made" policy, then the following additional requirements apply: the policy must provide a "retroactive date" which must be on or before the execution date of the Contract; and the extended reporting period may not be less than five years following the completion date of the Contract.

(3) Automobile Liability on owned and non -owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than $ 100,000 / 300,000 [Contracting Officer insert amount] per occurrence.

(b) Before commencing work, the Contractor shall furnish the PHA with a certificate of insurance evidencing that Builder's Risk (fire and extended coverage) Insurance on all work in place and/or materials stored at the building site(s), including foundations and building equipment, is in force. The Builder's Risk Insurance shall be for the benefit of the Contractor and the PHA as their interests may appear and each shall be named in the policy or policies as an insured. The Contractor in installing equipment supplied by the PHA shall carry insurance on such equipment from the time the Contractor takes possession thereof until the Contract work is accepted by the PHA. The Builder's Risk Insurance need not be carried on excavations, piers, footings, or foundations until such time as work on the superstructure is started. It need not be carried on landscape work. Policies shall furnish coverage at all times for the full cash value of all completed construction, as well as materials in place and/or stored at the site(s), whether or not partial payment has been made by the PHA. The Contractor may terminate this insurance on buildings as of the date taken over for occupancy by the PHA. The Contractor is not required to carry Builder's Risk Insurance for modernization work which does not involve structural alterations or additions and where the PHA's existing fire and extended coverage policy can be endorsed to include such work.

(c) All insurance shall be carried with companies which are financially responsible and admitted to do business in the State in which the project is located. If any such insurance is due to expire during the construction period, the Contractor (including subcontractors, as applicable) shall not permit the coverage to lapse and shall furnish evidence of coverage to the Contracting Officer. All certificates of insurance, as evidence of coverage, shall provide that no coverage may be canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Contracting Officer.

37. Subcontracts

(a) Definitions. As used in this contract -

(1) "Subcontract" means any contract, purchase order, or other purchase agreement, including modifications and change orders to the foregoing, entered into by a subcontractor to furnish supplies, materials, equipment, and services for the performance of the prime contract or a subcontract.

(2) "Subcontractor" means any supplier, vendor, or firm that furnishes supplies, materials, equipment, or services to or for the Contractor or another subcontractor.

(b) The Contractor shall not enter into any subcontract with any subcontractor who has been temporarily denied participation in a HUD program or who has been suspended or debarred from participating in contracting programs by any agency of the United States Government or of the state in which the work under this contract is to be performed.

(c) The Contractor shall be as fully responsible for the acts or omissions of its subcontractors, and of persons either directly or indirectly employed by them as for the acts or omissions of persons directly employed by the Contractor.

(d) The Contractor shall insert appropriate clauses in all subcontracts to bind subcontractors to the terms and conditions of this contract insofar as they are applicable to the work of subcontractors.

(e) Nothing contained in this contract shall create any contractual relationship between any subcontractor and the PHA or between the subcontractor and HUD.

38. Subcontracting with Small and Minority Firms, Women's Business Enterprise, and Labor Surplus Area Firms

The Contractor shall take the following steps to ensure that, whenever possible, subcontracts are awarded to small business firms, minority firms, women's business enterprises, and labor surplus area firms:

(a) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(b) Ensuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;

(c) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;

(d) Establishing delivery schedules, where the requirements of the contract permit, which encourage participation by small and minority businesses and women's business enterprises; and

(e) Using the services and assistance of the U.S. Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and State and local governmental small business agencies.

39. Equal Employment Opportunity

During the performance of this contract, the Contractor/ Seller agrees as follows:

(a) The Contractor/Seller shall not discriminate against any employee or applicant for employment because of of race color, religion, sex, sexual orientation, gender identity, disability, or national origin.

(b) The Contractor/Seller shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, disability, or national origin. Such action shall include, but not be limited to, (1) employment, (2) upgrading demotion, (4) transfer, (5) recruitment or recruitment advertising, (6) layoff or termination, (7) rates of pay or other forms of compensation, and (8) selection for training,including apprenticeship

(c) The Contractor/Seller agrees to post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.
(d) The Contractor/Seller shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor/Seller, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
(e) The Contractor/Seller shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.
(f) The Contractor/Seller shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.
(g) The Contractor/Seller shall furnish all information and reports required by Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto. The Contractor/Seller shall permit

access to its books, records, and accounts by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(h) In the event of a that the Contractor/Seller is in noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor/seller may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided 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.

(i)The contractor/seller will include the provisions of paragraphs (a) through (h) in every subcontract 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/seller] or vendor. The [contractor/seller] will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions in cluding sanctions for noncompliance: Provided, however, that in the event the [contractor/seller] becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the [contractor/seller] may request the United States to enter into such litigation to protect the interests of the United States.

(j) Compliance with the requirements of this clause shall be to the maximum extent consistent with, but not in derogation of, compliance with section 7(b) of the Indian Self-Determination and Education Assistance Act and the Indian Preference clause of this contract.

40. Employment, Training, and Contracting Opportunities for Low-Income Persons, Section 3 of the Housing and Urban Development Act of 1968.

(a) 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.
(b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 75, 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 75 regulations.
(c) 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 prioritization requirements and shall state the minimum percentages of labor hour requirements established in the Benchmark Notice (FR-6085-N-04).
(d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 75, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 75. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 75.
(e) Noncompliance with HUD's regulations in 24 CFR Part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
(f) Contracts, subcontracts, grants, or subgrants subject to Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5307(b)) or subject to tribal preference requirements as authorized under 101(k) of the Native American Housing Assistance and Self-Determination Act (25 U.S.C. 4111(k)) must provide preferences in employment, training, and business opportunities to Indians and Indian organizations, and are therefore not subject to the requirements of 24 CFR Part 75.

41. Interest of Members of Congress

No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

42. Interest of Members, Officers, or Employees and Former Members, Officers, or Employees

No member, officer, or employee of the PHA, no member of the governing body of the locality in which the project is situated, no member of the governing body of the locality in which the PHA was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the project, shall, during his or her tenure, or for one year thereafter, have any interest, direct or indirect, in this contract or the proceeds thereof.

43. Limitations on Payments made to Influence Certain Federal Financial Transactions

(a) The Contractor agrees to comply with Section 1352 of Title 31, United States Code which prohibits the use of **Acts** Federal appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: 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; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(b) The Contractor further agrees to comply with the requirement of the Act to furnish a disclosure (OMB Standard Form LLL, Disclosure of Lobbying Activities) if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) 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 a Federal contract, grant, loan, or cooperative agreement.

44. Royalties and Patents

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringement of any patent rights and shall save the PHA harmless from loss on account thereof; except that the PHA shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified and the Contractor has no reason to believe that the specified design, process, or product is an infringement. If, however, the Contractor has reason to believe that any design, process or product specified is an infringement of a patent, the Contractor shall promptly notify the Contracting Officer. Failure to give such notice shall make the Contractor responsible for resultant loss.

45. Examination and Retention of Contractor's Records

(a) The PHA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until 3 years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.

(b) The Contractor agrees to include in first-tier subcontracts under this contract a clause substantially the same as paragraph (a) above. "Subcontract," as used in this clause, excludes purchase orders not exceeding $10,000.

(c) The periods of access and examination in paragraphs (a) and (b) above for records relating to (1) appeals under the Disputes clause of this contract, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the PHA, HUD, or Comptroller General or any of their duly authorized representatives has taken exception shall continue until disposition of such appeals, litigation, claims, or exceptions.

46. Labor Standards - Davis-Bacon and Related

If the total amount of this contract exceeds $2,000, the Federal labor standards set forth in the clause below shall apply to the development or construction work to be performed under the contract.

(a) Minimum Wages.

(1) All laborers and mechanics employed under this contract in the development or construction of the project(s) involved 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 1(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 regular 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 in 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.

(2) (i) Any class of laborers or mechanics, including helpers, 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 all the following criteria have been met: (A) The work to be performed by the classification requested is not performed by a classification in the wage determination; and (B) The classification is utilized in the area by the construction industry; and (C) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(ii) 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, Employee Standards Administration, U.S. Department of Labor, Washington, DC 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.

(iii) 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 of the Wage and Hour Division 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.

(iv) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (a)(2)(ii) or (iii) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in classification.

(3) 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.

(4) 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.

(b) Withholding of funds. 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 in the construction or development of the project, all or part of the wages required by the contract, HUD or its designee may, after written notice to the Contractor, 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.

(c) Payrolls and basic records.

(1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working in the construction or development of the project. 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 1(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 costs reasonably anticipated in providing benefits under a plan or program described in section 1(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.

(2) (i) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer 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 subparagraph (c)(1) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1214-0149.)

(ii) 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:

(A) That the payroll for the payroll period contains the information required to be maintained under paragraph (c) (1) of this clause and that such information is correct and complete;

(B) 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; and

(C) 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.

(iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by subparagraph (c)(2)(ii) of this clause.

(iv) 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 3729 of Title 31 of the United States Code.

(3) The Contractor or subcontractor shall make the records required under subparagraph (c)(1) available for inspection, copying, or transcription by authorized representatives of HUD or its designee, the Contracting Officer, 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, 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.

(d) (1) 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 and Training, Employer and Labor Services (OATELS), or with a State Apprenticeship Agency recognized by OATELS, 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 OATELS 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 in this paragraph, 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 journeyman 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 of the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event OATELS, or a State Apprenticeship Agency recognized by OATELS, 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.

(2) 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 in 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 in 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 in the wage determination for the classification of 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 in 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.

(3) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(e) Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

(f) Contract termination; debarment. A breach of this contract clause may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.

(g) 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.

(h) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this clause 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 the PHA, HUD, the U.S. Department of Labor, or the employees or their representatives.

(i) Certification of eligibility.

(1) 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 contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a United States Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(3) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

(j) Contract Work Hours and Safety Standards Act. 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, including watchmen and guards, 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 provisions set forth in subparagraph (j)(1) of this clause, 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 provisions set forth in subparagraph (j)(1) of this clause, in the sum of $27 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 provisions set forth in subparagraph (j)(1) of this clause. DOL posts current fines at: https://www.dol.gov/whd/govcontracts/cwhssa.htm#cmp

(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 Federal contract with the same prime Contractor, 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 provisions set forth in subparagraph (j)(2) of this clause.

(k) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts all the provisions contained in this clause, and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all these provisions.

47. Non-Federal Prevailing Wage Rates

(a) Any prevailing wage rate (including basic hourly rate and any fringe benefits), determined under State or tribal law to be prevailing, with respect to any employee in any trade or position employed under the contract, is inapplicable to the contract and shall not be enforced against the Contractor or any subcontractor, with respect to employees engaged under the contract whenever such non-Federal prevailing wage rate exceeds:

(1) The applicable wage rate determined by the Secretary of Labor pursuant to the Davis-Bacon Act (40 U.S.C. 3141 et seq.) to be prevailing in the locality with respect to such trade;

(b) An applicable apprentice wage rate based thereon specified in an apprenticeship program registered with the U.S. Department of Labor (DOL) or a DOL-recognized State Apprenticeship Agency; or

(c) An applicable trainee wage rate based thereon specified in a DOL-certified trainee program.

48. Procurement of Recovered Materials.

(a) In accordance with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, the Contractor shall procure items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition. The Contractor shall procure items designated in the EPA guidelines that contain the highest percentage of recovered materials practicable unless the Contractor determines that such items: (1) are not reasonably available in a reasonable period of time; (2) fail to meet reasonable performance standards, which shall be determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable to the item; or (3) are only available at an unreasonable price.

( ) Paragraph (a) of this clause shall apply to items purchased under this contract where: (1) the Contractor purchases in excess of $10,000 of the item under this contract; or (2) during the preceding Federal fiscal year, the Contractor: (i) purchased any amount of the items for use under a contract that was funded with Federal appropriations and was with a Federal agency or a State agency or agency of a political subdivision of a State; and (ii) purchased a total of in excess of $10,000 of the item both under and outside that contract.

ROCHESTER Housing Authority

Procurement Department
675 West Main Street
Rochester, NY 14611
585-697-6182
procurementRHA@rochesterhousing.org

RHA Contractor/Vendor Section 3 Goals

What Is Section 3?

Section 3 is a provision of the Housing and Urban Development Act of 1968. The purpose of Section 3 is to ensure that employment and other economic opportunities generated by certain HUD financial assistance shall, to **the greatest extent feasible**, and consistent with existing Federal, State, and local laws and regulations, be directed to low- and very low-income persons, particularly those who are recipients of government assistance for housing, and to business concerns which provide economic opportunities to low- and very low-income persons.

RHA SECTION 3 CONTRACTOR/VENDOR COMMITMENT FORM

INSTRUCTIONS: All contractors/vendors MUST complete this Section 3 commitment form as part of their bid/proposal, or to amend a commitment after a contract has been successfully awarded. Please answer the questions, **AS PROMPTED**. This form must be signed when completed. If additional forms are required, it will be noted in the appropriate section of this form.

Is your company an RHA recognized Section 3 Business Concern? (Check one) **YES ____ NO _____**

If **YES**, provide RHA Section 3 Business Concern Certificate, initial clauses (a - e), and complete signature page at the bottom of this form.

If **NO**, initial clauses (a - e) and continue to Question **2**:

1. As a recipient of a Section 3 covered contract you, the company, understand the obligations of a Section 3 covered contract and certify to the following: (please read each clause carefully, and initial on the line next to each clause)

    a. _____The work to be performed under this contract is subject to the requirements of Section 3. The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance to **the greatest extent feasible**, be directed to low-income persons, particularly persons who are recipients of RHA assistance for housing.

    b. _____The parties (RHA and the Contractor) to the contract agree to comply with HUD's regulations.

    c. _____The company agrees to send to each labor organization or representative or 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 company'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. (This is **only** required for **new (unfilled)** employment opportunities for this project, before the project start, **or** that arise **during the project**)

    d. _____The company agrees to include this Section 3 clause in every subcontract.

2. Does your company or subcontractor need to hire additional labor **for this project**? YES___NO___ (Check one and initial clause)

_____Contractor/Vendor agrees to interview RHA supplied, low-income candidates (if available) for **open** positions before the start of the project or that arise **during the project**. (contractor/vendor is not required to hire candidates who are not qualified for the open position(s) but must provide an interview opportunity)

3. Does your company have **unfilled** subcontracts for this project? YES___NO_____ (Check one and initial clauses)

_____Contractor/Vendor agrees to notify the RHA if/when a need to subcontract occurs **during the project**.

_____Contractor/Vendor agrees to interview/negotiate with RHA supplied, low-income subcontractor candidates (if available) for the needed service (if needed). (**contractor/vendor is not required to subcontract to businesses not qualified for the needed services or who cannot supply the services at an agreeable price**)

4. _____Contractor/Vendor agrees to submit a list of all employees who worked on the project including subcontractor employees stating the employee's address, date of hire, income at date of hire and current annual income. (This will be a fillable close out document supplied by RHA)

5. _____Contractors agrees to submit certified payrolls for all contracts $2,000 or more.

I/we *(name of company)*_____located at

(Address of company) _____

By signing below, the company acknowledges and understands that it has reviewed RHA's Section 3 compliance requirements and agrees to comply with the selected commitments indicated above. Contractor/Vendor attests that the proof supplied, and representations made for Section 3 status are accurate, to the best of its knowledge and belief and understands that any intentional submission of false information shall be a material breach of the contract. To the extent that the completion of this form is contingent upon future information, for example price negotiations, request for specific services, etc., the undersigned hereby affirms and agrees to fully adhere in good faith to the RHA Section 3 compliance goals. The undersigned acknowledges and affirms responsibility for completion and submission of this form PRIOR TO AWARD of a contract and acknowledges that failure to submit this form may jeopardize the responsiveness of its submission.

_____ _____

Signature Date

_____

Title of Signatory

For any questions regarding this Form, please contact Melissa Berrien at mberrien@rochesterhousing.org or 585-232-1112 ext. 229

Procurement Office
495 Upper Falls Blvd.
Rochester, NY 14605
Fax: 585-697-7164
WWW.ROCHESTERHOUSING.ORG

Affidavit of Non-Collusion

State of _____)

County of _____) S.S

City of _____)

_____, Being first duly sworn deposes and says: that they are _____
(Printed Name) (Title)

of _____, the party making the foregoing proposal or bid that such bid
(Company Name)

is genuine and not collusive or sham, that said bidder has not colluded, conspired, connived, or agreed directly or indirectly, with any bid, bidder, or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference with any person to fix the bid price of affiant or any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any bidder to secure any advantage against the Rochester Housing Authority or any person interested in the proposed contract and that all statements contained in said proposal or bid are true.

Each bidder that contacts the Rochester Housing Authority (RHA) during the restricted period of a proposal or bid shall only make contact with the individuals stated in the bidding paperwork provided by RHA or contact those referred to by an individual stated in the RHA bidding paperwork. Contact to any other employee, officer, or member of RHA regarding a bid or proposal during the restricted period is in violation of New York State-State Finance Laws Section 139-j and 139-k. The "restricted period" of a bidding opportunity is the period of time commencing with the earliest written notice or advertisement and ending with the final contract award written notification provided by RHA. By signing this affidavit, the bidder understands of and agrees to comply with RHA's procedures relating to permissible contacts during a governmental procurement pursuant to New York State Finance Laws Section 139-j and 139-k, that all information provided to RHA with respect to these sections is complete, true, and accurate. In the event such certification is found to be intentionally false, intentionally incomplete, or does not disclose the determination of being non-responsible by any other governmental entity for violating similar regulations over the previous four years, then RHA reserves the right to terminate any contracts awarded to such bidder.

Signed: _____ Date: _____

_____
(Printed name)

Subscribed and Sworn to me this _____ day of _____ in the year _____.

Notary Public _____
Signature (with seal or stamp affixed)

ROCHESTER Housing Authority

Procurement Office
495 Upper Falls Blvd.
Rochester, NY 14605
Fax: 585-697-7164
WWW.ROCHESTERHOUSING.ORG

Acknowledgement of Principal, if a Corporation

State of: _____) S.S.
County of: _____)
On this _____ day of _____, in the year _____ before me personally appeared _____ to me known, who, being by me duly sworn, did depose and say that they reside at _____, that they are the _____ of _____. The corporation described in and which executed the foregoing instrument; that they know the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the director of said corporation and that they signed their name thereto by like order.

_____ _____
Signature of Principal Signature of Notary Public (with seal/stamp below)

Acknowledgement of Principal, if a Partnership

State of: _____) S.S.
County of: _____)
On this _____ day of _____, in the year _____ before me personally appeared _____ to me known and known to me to be one of the members of the firm of _____, described in and who executed the foregoing instrument and this person acknowledged to me that they executed the same as and for the act of said firm.

_____ _____
Signature of Principal Signature of Notary Public (with seal/stamp below)

Acknowledgement of Principal, if an Individual

State of: _____) S.S.
County of: _____)
On this _____ day of _____, in the year _____ before me personally appeared _____ to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged the same.

_____ _____
Signature of Principal Signature of Notary Public (with seal/stamp below)

If the Principal represents a Firm with multiple members, state here the name and address of each member.

Member Name	Member Address	Member Name	Member Address
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NOTE: use additional sheets, if necessary

IMPORTANT: If the business owned by the individual or partnership is conducted under a trade or assumed name, a certified copy of "doing business under an assumed name" must be annexed.

GENERAL REQUIREMENTS FOR: Bronson Court Renovations-Units 29,31,84
LOCATION: Bronson Court
THE FOLLOWING REQUIREMENTS ARE TO BE CONSIDERED AS PART OF THIS SPECIFICATION:

1. The contractor shall use only material, equipment, and procedures approved by O.S.H.A. All products utilized must be free of known hazardous compounds; any products manufactured outside of the U.S. shall include documentation to verify the products meet all applicable U.S. manufacturing regulations.
2. It is the responsibility of the contractor to make exact measurements and to determine the amount of material and/or dimension of materials needed.
3. The work area shall be picked up and/or swept each day at completion of the days work. All debris is to be disposed of off site by the contractor. If the extent of the work is such that a dumpster is required, the contractor shall supply a dumpster at his/her expense. In no instance is the Authority's dumpster to be used.
4. RHA, as being publicly funded is tax exempt, Contractors shall not factor in their bid price the cost of sales tax for material or expect reimbursement for sales tax. The Contractor awarded the work may call the state offices in Albany, 1-518-485-2889 (Sales Tax Registration Option) for a tax-exempt number for this work. Forms may be obtained via the internet at. http://www.tax.ny.gov/
5. No substitutions of materials or methods are permitted without the written consent of the Authority.
6. The contractor is responsible for repairing, at his/her expense, any damage to Authority property, its tenants or adjoining property if caused by the contractor's workers or equipment.
7. To minimize disruption to the tenants, all work shall be conducted between the hours of 8:30 A.M. to 4:30 P.M. Monday through Friday ONLY.
8. Tradesman under direct supervision provided by the contractor shall perform all work.
9. All certificates of Guarantee or Warranty must be supplied to RHA PRIOR to final payment.
10. The contractor shall be responsible to obtain and provide the Authority all applicable permits - (Building, Plumbing, Electrical, etc…), Certificates of Occupancy if asked for, and N.Y.S. Underwriter's Inspection Certificate.
11. Contractors must provide valid Certificate of Insurance for General liability, Automotive liability, and Worker's compensation for minimum coverage amounts as determined by RHA for the entire term of the contract.
12. IF HUD Determined or Davis-Bacon Wage Rates are required for this contract, weekly payroll information must be provided by the contractor on HUD form WH-347.
13. The contractor shall be responsible for all materials, whether issued by the Authority or purchased by the contractor. The contractor must replace at his/her expense any material lost, stolen or damaged.
14. Effective July 18, 2008, all contracts of at least $250,000.00 will require certification that all laborers, workers and mechanics working on the site, be certified as having successfully completed the OSHA 10-hour construction safety and health course, S1537-A. This provision is an addition to the existing prevailing wage rate laws, Labor Law §220, section 220-h. Proper certification must be presented to the RHA prior to contract award. The RHA will have the right to terminate any contract in which the contract fails to comply with this requirement or any other OSHA or labor regulation.
15. Questions concerning the specifications or scope of work, including those raised at the walk-thru, must be submitted to RHA in writing eight days prior to bid opening. If questions are not submitted, RHA's understanding of the specifications will be final.
16. Direct all questions regarding these specifications to **mwolfe@rochesterhousing.org**

    Direct all questions regarding bid forms, bonding, or RHA and HUD regulations to **Michael Wolfe @ mwolfe@rochesterhousing.org.**

29, 31, 84 Bronson Court Remodel
General Scope of Work

This is a single prime, competitively bid, contract with Davis Bacon Wage Rates.

Contractor is to comply with all state, local, federal and OSHA laws and requirements. Contractors and their sub-contractors are to pick up all equipment, tools, and debris at the end of each day.

All hazardous materials in these units have been abated by a certified abatement contractor. RHA project manager and architects will be on site periodically to do inspections and interviews of employees for wage rates per HUD guidelines. Questions can be directed to them while on site.

The Contractor will be responsible for the following at minimum.

(This is just a brief overview, see construction documents for complete details and information)

- Rough and finish carpentry.
- Full electrical.
- Full plumbing.
- Bathroom fixtures.
- Full cabinetry.
- HVAC duct work and controls.
- Doors.
- Flooring.
- Painting.
- If you have questions you will need to submit them before the question deadline. Any questions received due to missing or confusing language will be answered via. addendum to all registered contractors for this project.

- **Liquidated Damage** charges of 150.00/day will be charged for every calendar day beyond the contract termination date that the scope of work is not substantially completed. (please review the HUD 5370 General Conditions for more details).
- Please review drawings and specifications carefully, submit any questions to Michael Wolfe (mwolfe@rochesterhousing.org) before the question submission deadline.
- Procore software will be used for this project for all submittals and approvals, RFI's and scheduling.
- Contractor is responsible for all permits related to the project and for payment of them. Copies of permits are to be submitted to RHA Project Manager **before** any physical work commences.

29, 31, 84, Bronson Court Remodel

Project:
This is a competitively bid contract to remodel three units at the Bronson Court Apartment complex**.**

List of interested contractors and Pre-Project walk-through:
It is important to **register** and obtain plans and specifications **prior to the walk-through**. Plans and specifications will be available on RHA's and Robex websites. A contractor walk-through of the site and review of the project will occur with interested contractors prior to the bid opening. The plans may not illustrate all defined field measurements. It will be important to verify actual field conditions and measurements prior to your bid. Multiple walk-through's will not be held. Please make sure someone from your team attends the walk-through.

Important note:
Any **questions** generated during the walk-through or upon reading the plans must be answered to all interested parties, therefore, any questions you have regarding this project will be answered in a pre-bid addendum to all registered contractors. If you have any questions during the walk-through, you will be instructed to e-mail your questions to Michael Wolfe at (mwolfe@rochesterhousing.org) after the walk-though. Your questions will be answered in an addendum and be delivered to all registered parties via E-Mail and posted on the website. You must submit a signed acknowledgement of addendum form in your bid submission **or your bid will not be accepted**.

Bonding Requirements:
A satisfactory **Bid Bond** executed by the Bidder and an acceptable surety company listed on US Treasury Circular 570, in an amount equal to five percent (5%) of the bid shall be submitted with each bid, of more than One Hundred Thousand Dollars ($100,000). The Bid Bond must be submitted in your bid package, or your bid will be considered non-responsive, non-responsible, and **will not be accepted**. For all construction contracts exceeding One Hundred Thousand Dollars ($100,000), the successful bidder shall be required to furnish and pay for a **Performance Bond & a Payment Bond** each for 100% of the contract price (Surety company must be listed on the US Treasury Circular 570 as a certified company.

Pre-qualification meeting
The contractor will be responsible for completing the full scope of work as indicated on the plans and specifications. Through a pre-qualification process, the contractor selected will need to show that they have the staffing and skills to perform all the obligations of the project and in the timelines required. The "apparent low bidder" will be asked to provide (3) references and may be asked for primary material submittals prior to the final Purchase Order award and notice-to-proceed.

HUD Section 3 requirements:
Along with the paperwork components of this project, RHA will be asking that the selected contractor partner with RHA toward meeting HUD's Section 3 goals. If the contractor must hire (**new**) workers to assist with this project, we ask that you consider employing, from an RHA supplied list, a resident of Public Housing, or low-income individual or sub-contractor as part of your labor support team. The contractor **MUST** include a signed and dated **"RHA Section 3 Contractor/Vendor Commitment Form"** (included in the RHA bid package) with their bid submission and if awarded a contract, they **must** supply information for each employee scheduled to work on this project. That includes subcontractor employees and the information is to include employee name, address, date of hire, annual income at date of hire and current annual income. This information will be used by RHA to determine if any workers on this project are classified by HUD as low-income/Section 3 Workers. RHA will report the number of labor hours performed by low-income/Section 3 Workers on this project to HUD. It is HUD's mission to employ as many low-income/Section 3 Workers as possible on projects funded with HUD Federal Dollars.

Scheduling before and throughout the project:
At the pre-construction meeting, the contractor must submit an advance work plan (calendar schedule/GANTT Chart) to show how he/she can accomplish the work in the **180 calendar days**. This plan would graphically illustrate weekly goals and staffing. Once per week, the project foreman will meet with the RHA representative and/or Architect/Engineer to review the progress from the past week and see it there are any adjustments needed for the coming week.
Work hours are 7:00 am-5:30 pm Monday through Friday unless otherwise given permission.
Arrival on the site can be before that, but no noise or work can start before 7:00 am.

Staffing, Skills and timeline:

The contract timeline for this project will be a maximum of **180 calendar days** from the Notice-To-Proceed. Please note that the **180 calendar days** will include all lead times, submittals, mobilization, construction, punch list and paperwork close-out. Prior to final selection of the contractor, RHA will meet with that contractor to review his/her ability to meet the staffing, skill set and timelines for this project. The start of the **180 calendar days** will **begin** at the completion of the pre-construction meeting with the issuance of the Purchase Order, and Notice-To-Proceed. The count for contract days and construction days will include weekends and holidays; 7 days / week (calendar days).

Contractor's schedule of values

The contractor will be required to submit a thoughtful schedule of values with the bid documents. (See HUD form 51000-Schedule of Amounts for Contract Payments). It will be the responsibility of the contractor to have this document completed with accuracy prior to bidding on the work. Make sure it adds up to the total amount. Then going forward, a copy of the completed HUD form 51000 must be available at all meetings, pre-construction, during construction, and as part of the billing and payment process. Procore software will be used for the construction process. This will be shared with contractor at start of project with no charge to the contractor.

Permits

The contractor shall obtain and pay for all necessary NYS and/or City of Rochester permits that will cover the full project. All permits must be obtained before any work can be started. A copy of the permit(s) shall be posted at the project site. A copy must be submitted to RHA Project Manager. Contractor is responsible for administering any permit inspections and delivering all close-out documents to the RHA Project Manager. **No physical work can begin** until required permits are obtained by the contractor and delivered to the RHA Project Manager.

Contractor payroll, sign-in sheets, change orders

The contractor will be required to have the employees sign a **"sign-in sheet"** each day on the job. A copy of the record shall be retained by the contractor, and one copy shall be provided to RHA Procurement Dept. *weekly*. The sign-in sheet will be a key document for the processing of the payroll. This project will have Davis Bacon wage rates assigned and the contractor will need to show they are paying the employees a minimum of the said wage rate by submitting a weekly Certified Payroll Form to RHA's Procurement Dept.

RHA does not expect any change orders for this project, however If there is a need for a change of plan or a change order, all work (associated with the change) must stop until the change order is fully approved by RHA. It is the responsibility of the contractor to understand the HUD change order process. The contractor must swiftly initiate the completed change order request to RHA, not vice versa. Forms will be provided in a fillable format as needed (please review the HUD 5370 General Conditions for more details).

Contractor set-up:

Electricity and water will be available for contractor use during the project.
The Contractor must have fire extinguishers on site in each work area during the project.
Contractors will be allowed to have a dumpster on site if needed.
Contractor is responsible for having a chemical toilet (port-a-john) on site during the project timeline.
The contractor will be expected to have their full support team on site during the start-up of day one for a kick-off meeting.

GENERAL REQUIREMENTS FOR: The 29, 31, 84 Bronson Court Remodel Project
THE FOLLOWING REQUIREMENTS ARE TO BE CONSIDERED AS PART OF THIS SPECIFICATION:

1. The contractor shall use only material, equipment, and procedures approved by O.S.H.A. All products utilized must be free of known hazardous compounds; any products manufactured outside of the U.S. shall include documentation to verify the products meet all applicable U.S. manufacturing regulations.

2. It is the responsibility of the contractor to make exact measurements and to determine the amount of material and/or dimension of materials needed.

3. The work area shall be picked up and/or swept each day at completion of the day's work. All debris is to be disposed of offsite by the contractor, in no instance are any of the Rochester Housing Authority's dumpsters to be used by contractors.

4. RHA, as being publicly funded is tax exempt, Contractors shall not factor in their bid price the cost of sales tax for material or expect reimbursement for sales tax. The Contractor awarded the work may call the state offices in Albany, 1-518-485-2889 (Sales Tax Registration Option) for a tax-exempt number for this work. Forms may be obtained via the internet at. http://www.tax.ny.gov/

5. No substitutions of materials or methods are permitted without the written consent of the Rochester Housing Authority.

6. The contractor is responsible for repairing at his/her expense any damage to Rochester Housing Authority property, its tenants or adjoining property if caused by the contractor's workers or equipment.

7. To minimize disruption to the tenants, all work shall be conducted between the hours of 7:00 A.M. to 5:30 P.M. Monday through Friday (unless otherwise authorized by the RHA Project Manager).

8. Tradesmen under direct supervision provided by the contractor shall perform all work.

9. All certificates of ***Guarantee or Warranty and Certificate of Occupancy*** must be supplied to RHA PRIOR to final payment.

10. The contractor shall be responsible for obtaining and providing the Rochester Housing Authority with all applicable permits.

11. Contractors must provide valid Certificate of Insurance for General liability, Automotive liability, and Workmen's compensation for minimum coverage amounts as determined by RHA for the entire term of the contract.

12. IF HUD Determined or Davis-Bacon Wage Rates are required for this contract, weekly payroll information must be provided by the contractor on HUD form WH-347.

13. The contractor shall be responsible for all materials, whether issued by the Authority or purchased by the contractor. The contractor must replace at his/her expense any material lost, stolen or damaged.

14. Effective July 18, 2008, all contracts of at least $250,000.00 will require certification that all laborers, workers and mechanics working on the site, be certified as having successfully completed the OSHA 10-hour construction safety and health course, S1537-A. This provision is an addition to the existing prevailing wage rate laws, Labor Law §220, section 220-h. Proper certification must be presented to the RHA prior to contract award. The RHA will have the right to terminate any contract in which the contract fails to comply with this requirement or any other OSHA or labor regulation.

15. Questions concerning the specifications or scope of work, including those raised at the walk-through, must be submitted to RHA in writing eight days prior to bid opening. If questions are not submitted, RHA's understanding of the bidding documents **will be final.**

16. Direct all questions regarding these specifications to Michael Wolfe **mwolfe@rochesterhousing.org**

    Direct all questions regarding bid forms, bonding, or RHA and HUD regulations to **Michael Wolfe mwolfe@rochesterhousing.org**

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SECTION 02 41 00
DEMOLITION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Selective demolition of building elements for alteration purposes.

B. Demolishing designated building equipment and fixtures.

C. Demolishing designated construction.

D. Removing designated items for Owner retention.

E. Protecting items designated to remain.

F. Removing demolished materials.

1.2 SUBMITTALS

A. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction. Refer to RHA front ends for additional information.

1.3 QUALITY ASSURANCE

A. Demolition Firm Qualifications: Company specializing in the type of work required.
   1. Minimum of ten years of documented experience.

B. Design shoring, bracing, underpinning under direct supervision of Professional Engineer experienced in design of this Work and licensed the State of New York.

C. Conform to applicable code for demolition work, safety of adjacent structures, dust control, products requiring electrical disconnection and re-connection.

D. Conform to applicable code for procedures when hazardous or contaminated materials are discovered.

E. Obtain required permits from authorities having jurisdiction.

1.4 SEQUENCING

A. Owner will conduct salvage operations before demolition begins to remove materials Owner chooses to retain.

1.5 PRE-INSTALLATION MEETINGS

A. Convene minimum one week prior to commencing work of this section.

1.6 SCHEDULING

A. Schedule work to coincide with new construction.

B. Cooperate with Owner in scheduling noisy operations and waste removal that may impact Owner operations. Refer to RHA front ends for additional information.

C. Performance of noisy, malodorous, dusty, and removal of hazardous material work:

1. All activities must be coordinated with the Owner to ensure that programming and services will be uninterrupted by construction activities and to ensure the safety of the residents and pedestrians.

D. Coordinate utility and building service interruptions with Owner.
   1. Do not disable or disrupt building fire or life safety systems without five days prior written notice to Owner.
   2. Schedule tie-ins to existing systems to minimize disruption.
   3. Coordinate work to ensure fire sprinklers, fire alarms, smoke detectors, emergency lighting, exit signs and other life safety systems remain in full operation in occupied areas.

1.7 PROJECT CONDITIONS

A. Buildings indicated to be demolished will be vacated before start of Work.

B. Owner assumes no responsibility for actual condition of buildings to be demolished.

C. Hazardous Materials: Known hazardous materials will be removed before start of Work. Notify Architect/Engineer upon discovery of a hazardous material.

D. Each contractor shall be responsible for the cutting and patching of existing surfaces as required to complete the work of their contract unless noted otherwise.

E. Conduct demolition to minimize interference with adjacent and occupied building areas.

F. Cease operations immediately if structure appears to be in danger and notify Architect. Do not resume operations until directed.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.1 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
   1. Obtain required permits.
   2. Coordinate demolition sequence and procedures to prevent structures from becoming unstable.
   3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
   4. Provide, erect, and maintain temporary barriers and security devices.
   5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
   6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
   7. Do not close or obstruct roadways or sidewalks or hydrants without permit.
   8. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
   9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Do not begin removal until built elements to be salvaged or relocated have been removed.

D. Do not begin removal until vegetation to be relocated has been removed and vegetation to remain has been protected from damage.

E. Protect existing structures and other elements to remain in place and not removed.
   1. Provide bracing and shoring.
   2. Prevent movement or settlement of adjacent structures.
   3. Stop work immediately if adjacent structures appear to be in danger.

F. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

G. Verify hazardous material abatement is complete before beginning demolition.

H. Carefully remove building components indicated to be reused.
   1. Mark components and packaged parts to permit reinstallation.
   2. Store components, protected from construction operations until reinstalled.

I. At completion of the demolition work restore, repair or refinish all building systems, components and finishes disturbed as the result of the demolition process.

3.2 EXISTING UTILITIES

A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone. Identify and mark, in same manner as other utilities to remain, utilities to be reconnected.

3.3 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
   1. Verify construction and utility arrangements are as indicated.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Maintain weatherproof exterior building enclosure, except for interruptions required for replacement or modifications; prevent water and humidity damage.

C. Remove existing work as indicated and required to accomplish new work.
   1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction indicated.
   2. Remove items indicated on drawings.

D. Services including, but not limited to, HVAC, Plumbing, Fire Protection, and Electrical: Remove existing systems and equipment as indicated.

1. Maintain existing active systems to remain in operation, and maintain access to equipment and operational components.
2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
3. Verify that abandoned services serve only abandoned facilities before removal.
4. Remove abandoned pipe, ducts, conduits, and equipment. Remove back to source of supply where possible, otherwise cap stub and tag with identification.

E. Protect existing work to remain.
1. Prevent movement of structure. Provide shoring and bracing as required.
2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
3. Repair adjacent construction and finishes damaged during removal work.
4. Patch to match new work.

3.4 SALVAGE REQUIREMENTS

A. Coordinate with Owner to identify building components and equipment required to be removed and delivered to Owner.

B. Tag components and equipment Owner designates for salvage.

C. Protect designated salvage items from demolition operations until items can be removed.

D. Carefully remove building components and equipment indicated to be salvaged.

E. Disassemble as required to permit removal from building.

F. Package small and loose parts to avoid loss.

G. Mark equipment and packaged parts to permit identification and consolidation of components of each salvaged item.

H. Prepare assembly instructions consistent with disassembled parts. Package assembly instructions in protective envelope and securely attach to each disassembled salvaged item.

I. Deliver salvaged items to Owner. Obtain signed receipt from Owner.

3.5 DEBRIS AND WASTE REMOVAL

A. Remove materials not to be reused on site; do not burn or bury.

B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 05 73 00
DECORATIVE METAL RAILINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Railing systems.

1.2 REFERENCE STANDARDS

A. ASTM E985 - Standard Specification for Permanent Metal Railing Systems and Rails for Buildings; 2024.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product data, including description of materials, components, finishes, fabrication details, glass, anchors, and accessories.

B. Samples: Submit one of each item below for each type and condition shown.
   1. Railing: 12-inch long section of each railing member, including handrails and pickets; show color, finish, and connection details.

C. Manufacturer's Instructions: Indicate installation.

D. Maintenance Data: Manufacturer's instructions for care and cleaning.

E. Specimen warranty.

F. Executed warranty.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in factory-provided protective coverings and packaging.

B. Protect materials against damage during transit, delivery, storage, and installation at site.

C. Inspect materials upon delivery for damage. Replace damaged items.

D. Prior to installation, store materials and components under cover in dry location.

1.5 WARRANTY

A. Manufacturer's Warranty: Manufacturer's standard 1-year warranty against defects in materials, fabrication, finishes, and installation commencing on Date of Substantial Completion; complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Metal Rail Infill:
   1. B.O.D. Evermark : www.evermark-lnl.com.
   2. Approved Equal..

2.2 RAILING SYSTEMS

A. General: Factory- or shop-fabricated to suit project conditions, for proper connection to building structure, and in largest sizes practical for delivery to site.

B. Performance Requirements:
1. Comply with ASTM E985.

C. Assembly: Use slip-on, nonweld mechanical fittings, flanges, escutcheons, and wall brackets to join lengths, seal open ends, and conceal exposed mounting bolts and nuts.

D. Joints: Machined smooth with hairline seams; tightly fitted and secured.

E. Field Connections: Provide sleeves to accommodate site assembly and installation.

F. Metal Railing: Engineered, post-supported railing system with metal infill.
1. Configuration: metal baluster fit into wood cap base and wood hanrail.
2. Decorative Flanges for Embedded Posts: Decorative shoe, collared cover plate with screw holes, as manufactured by Evermark (or approved equal).
3. Fasteners: Concealed.
4. Infill at Picket Railings: Vertical pickets.
a. Horizontal Spacing: Maximum 4-1/2 inches on center.
b. Material: Iron.
c. Shape: Round.
d. Size: 5/8"-inch diameter.

2.3 ACCESSORIES

A. Anchors and Fasteners: Provide anchors, fasteners, and other attachment devices required to attach to structure.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate and site conditions are acceptable and ready to receive work.

B. Verify field dimensions of locations and areas to receive work.

C. Notify Architect immediately of conditions that would prevent satisfactory installation.

D. Do not proceed with work until detrimental conditions are corrected.

3.2 PREPARATION

A. Review installation drawings before beginning installation. Coordinate diagrams, templates, instructions, and directions for installation of anchorages and fasteners.

B. Clean surfaces to receive railings. Remove materials and substances detrimental to installation.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install components plumb and level, accurately fitted, free from distortion or defects, and with tight joints, except where necessary for expansion.

C. Anchor securely to structure.

D. Conceal anchor bolts and screws whenever possible. Where not concealed, use flush countersunk fastenings.

E. Isolate dissimilar materials with bituminous coating, bushings, grommets, or washers to prevent electrolytic corrosion.

3.4 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per floor level, noncumulative.

B. Maximum Offset From True Alignment: 1/4 inch.

C. Maximum Out-of-Position: 1/4 inch.

3.5 CLEANING

A. Remove protective film from exposed metal surfaces.

B. Metal: Clean exposed metal finishes with potable water and mild detergent in accordance with manufacturer recommendations; do not use abrasive materials or chemicals, detergents, or other substances that may damage material or finish.

3.6 PROTECTION

A. Protect installed components and finishes from damage after installation.

B. Repair damage to exposed, making finishes indistinguishable from undamaged areas.

C. Replace finishes and components that have irreparable damage. Ensure damaged areas are indistinguishable from undamaged finishes and surfaces.

END OF SECTION

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SECTION 06 10 00
ROUGH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Structural dimension lumber framing.

B. Structural composite lumber framing.

C. Nonstructural dimension lumber framing.

D. Rough opening framing for doors, windows, and roof openings.

E. Sheathing.

F. Subflooring.

G. Underlayment.

H. Concealed wood blocking, nailers, and supports.

1.2 REFERENCE STANDARDS

A. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.

B. ASTM D5456 - Standard Specification for Evaluation of Structural Composite Lumber Products; 2021, with Editorial Revision.

C. PS 1 - Structural Plywood; 2023.

D. PS 20 - American Softwood Lumber Standard; 2025.

E. SPIB (GR) - Standard Grading Rules; 2021.

1.3 SUBMITTALS

A. Structural Composite Lumber: Submit manufacturer's published structural data including span tables, marked to indicate which sizes and grades are being used; if structural composite lumber is being substituted for dimension lumber or timbers, submit grading agency structural tables marked for comparison.

B. Samples: For rough carpentry members exposed to view, submit one sample, 4" by 4" inch in size illustrating wood grain, color, and general appearance.

1.4 DELIVERY, STORAGE, AND HANDLING

A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
   1. Species: Douglas Fir, unless otherwise indicated.
   2. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
   3. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.2 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. Sizes: Nominal sizes as indicated on drawings, S4S.

B. Moisture Content: S-dry or MC19.

C. Stud Framing (2 by 2 through 2 by 6):
   1. Species: Hem-Fir.
   2. Grade: No. 2.

D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
   1. Lumber: S4S, No. 2 or Standard Grade.
   2. Boards: Standard or No. 3.

2.3 EXPOSED DIMENSION LUMBER

A. Sizes: Nominal sizes as indicated on drawings.

B. Surfacing: S4S.

C. Moisture Content: S-dry or MC19.

2.4 STRUCTURAL COMPOSITE LUMBER

A. Structural Composite Lumber Materials: Factory-fabricated engineered wood products consisting of wood veneers, strands, or flakes pressed with moisture-resistant adhesive into blocks of material, evaluated in accordance with ASTM D5456.
   1. Laminated Veneer Lumber (LVL): Engineered wood products consisting of thin wood veneer bonded together with adhesive with grain of veneers running parallel to long dimension.
      a. Manufacturer's Published Modulus of Elasticity, E: 1,800,000 psi, minimum.
      b. Application: For beams.
      c. Products:
         1) B.O.D. : Boise Cascade Company; Versa-Lam LVL: www.bc.com/#sle.
         2) Approved Equal..

2.5 CONSTRUCTION PANELS

A. Underlayment: APA Underlayment; plywood, Exposure 2, 1/4" inch thick. Fully sanded faces at resilient flooring.

2.6 ACCESSORIES

A. Metal and Finish of Fasteners:
   1. Untreated Wood: Type 316 stainless steel.
      a. Fasteners for Structural composite lumber: Cold-formed steel counter sink wood screws as manufactured by OMG Inc. or Approved Equal.

B. Anchors: Toggle bolt type for anchorage to hollow masonry.

C. Die-Stamped Connectors: Hot dipped galvanized steel, sized to suit framing conditions.
   1. Products:

a. B.O.D. Simpson Strong Tie.
b. Approved Equal..

PART 3 EXECUTION

3.1 PREPARATION

A. Coordinate installation of rough carpentry members specified in other sections.

3.2 INSTALLATION - GENERAL

A. Select material sizes to minimize waste.

B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

3.3 FRAMING INSTALLATION

A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.

B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.

C. Install structural members full length without splices.

D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.

E. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.

F. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.4 BLOCKING, NAILERS, AND SUPPORTS

A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
   1. Blocking members to be installed shall meet the requirements of the 2018 National Design Specification (NDS) for Wood Construction.

B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

C. Provide nonstructural framing and blocking to support the following:
   1. Cabinets and shelf supports.
   2. Wall brackets.
   3. Handrails.
   4. Grab bars.
   5. Towel and bath accessories.
   6. Wall-mounted door stops.
   7. Other wall- or ceiling-mounted items indicated on drawings.

3.5 ROOF-RELATED CARPENTRY

A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

B. Provide wood curb at each roof opening except where prefabricated curbs are specified and where specifically indicated otherwise; form corners by alternating lapping side members.

3.6 INSTALLATION OF CONSTRUCTION PANELS

A. Subflooring: Glue and nail to framing; staples are not permitted.

3.7 TOLERANCES

A. Framing Members: 1/4 inch from true position, maximum.

B. Variation from Plane, Other than Floors: 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

3.8 CLEANING

A. Waste Disposal: Refer to RHA front ends for additional information.
   1. Comply with applicable regulations.
   2. Do not burn scrap on project site.
   3. Do not burn scraps that have been pressure treated.
   4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or “waste-to-energy” facilities.

B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.

C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

SECTION 06 20 00
FINISH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Finish carpentry items.

B. Hardware.

C. Shop finishing.

1.2 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

D. AWI/AWMAC (QSI) - Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada; 2005, 8th Ed., Version 2.0.

E. BHMA A156.9 - Cabinet Hardware; 2020.

F. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2024.

G. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information.
   1. Provide manufacturer's product data, storage and handling instructions for factory-fabricated units.
   2. Provide instructions for attachment hardware and finish hardware.

B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.

C. Samples: Submit one sample of finish plywood, 4" inch in size illustrating wood grain and specified finish.

D. Manufacturer's Instructions: Provide manufacturer's installation instructions for factory-fabricated units.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Protect from moisture damage.

B. Handle materials and products to prevent damage to edges, ends, or surfaces.

PART 2 PRODUCTS

2.1 FINISH CARPENTRY ITEMS

A. Interior Woodwork Items:
   1. Moldings, Bases, Casings, and Miscellaneous Trim: Clear white pine; prepare for paint finish.
   2. Doors: See "Stile and Rail Wood Doors" in Section 08.
   3. Window Sills: 1/2" Maple, eased edge; prepare for paint finish.
   4. Stair Posts & Handrails: Red oak; prepare for stain finish.
   5. Stair Risers: 3/4" plywood; prepare for paint finish.
   6. Loose Shelving: laminated spruce shelving, prepare for paint finish.
   7. Closet Rod: heavy duty hard wood closet rod, prepare for stain finish.

2.2 PLASTIC LAMINATE MATERIALS

A. High Pressure Decorative Laminate: NEMA LD 3, GP50 for horizontal surfaces, GP28 for vertical surfaces, CL20 for cabinet liner surfaces, BK20 for undecorated backing sheets, PF42 for post forming.

B. Plastic Laminate: NEMA LD 3, HGS; color as selected by Architect; textured, low gloss finish.
   1. Products: See "Countertops" in Section 12.

C. Laminate Adhesive: Type recommended by laminate manufacturer to suit application; not containing formaldehyde or other volatile organic compounds.

2.3 FASTENINGS

A. Fasteners: Of size and type to suit application; no finish in concealed locations and Hot dipped galvanized steel for high humidity finish in exposed locations.

B. Concealed Joint Fasteners: Threaded steel.

2.4 ACCESSORIES

A. Adhesive: Type recommended by fabricator to suit application.

B. Primer: Alkyd primer sealer.

C. Wood Filler: Solvent base, tinted to match surface finish color.

2.5 HARDWARE

A. Hardware: Comply with BHMA A156.9.

B. Shelf and Rod Bracket: 10" inches x 3/4" inch, white powder coat finish, as manufactured by Everbilt or approved equal.

2.6 FABRICATION

A. Shop assemble work for delivery to site, permitting passage through building openings.

B. Fit exposed sheet material edges with 3/8 inch matching hardwood edging. Use one piece for full length only.

C. Cap exposed plastic laminate finish edges with material of same finish and pattern.

D. Shop prepare and identify components for book match grain matching during site erection.

E. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

F. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.

G. Apply laminate backing sheet to reverse face of plastic laminate finished surfaces.

2.7 SHOP FINISHING

A. Sand work smooth and set exposed nails and screws.

B. Apply wood filler in exposed nail and screw indentations.

C. On items to receive transparent finishes, use wood filler that matches surrounding surfaces and is of type recommended for the applicable finish.

D. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows:
   1. Transparent:
      a. System - 6, Oil, Synthetic Penetrating (transparent only).
      b. Stain: As selected by Architect. See finish schedule on drawings.
      c. Sheen: Satin.
   2. Opaque:
      a. System - 4, Latex Acrylic, Water-based.
      b. Color: As selected by Architect. See finish schedule on drawings.
      c. Sheen: Semigloss.

E. Seal, and varnish exposed to view surfaces. Brush apply only.

F. Back prime woodwork items to be field finished, prior to installation.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify adequacy of backing and support framing.

B. Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

3.2 INSTALLATION

A. Set and secure materials and components in place, plumb and level.

B. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

C. Install components with nails, screws and bolts as indicated . Where not indicated provide fastener type to suit application and with least visibility.

D. Install hardware in accordance with manufacturer's written instructions.

3.3 PREPARATION FOR SITE FINISHING

A. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.

B. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

END OF SECTION

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SECTION 06 83 16
FIBERGLASS REINFORCED PANELING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Fiberglass reinforced plastic panels.

1.2 RELATED REQUIREMENTS

A. See Section RHA front ends for related requirements.

1.3 REFERENCE STANDARDS

A. ASTM D5319 - Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels; 2022.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.

1.4 SUBMITTALS

A. See Section RHA front ends for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store panels flat, indoors, on a clean, dry surface. Remove packaging and allow panels to acclimate to room temperature for 48 hours prior to installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Fiberglass Reinforced Plastic Panels:
   1. Crane Composites, Inc: www.cranecomposites.com/#sle.
   2. Marlite, Inc: www.marlite.com/#sle.
   3. Nudo Products, Inc: www.nudo.com/#sle.

2.2 PANEL SYSTEMS

A. Wall Panels:
   1. Panel Size: 4 by 8 feet.
   2. Panel Thickness: 0.10 inch.
   3. Surface Design: Smooth.
   4. Color: White.
   5. Attachment Method: Adhesive only, sealant joints, no trim.

2.3 MATERIALS

A. Panels: Fiberglass reinforced plastic (FRP), complying with ASTM D5319.

1. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.

B. Adhesive: Type recommended by panel manufacturer.

PART 3 EXECUTION

3.1 INSTALLATION - WALLS

A. Install panels in accordance with manufacturer's instructions.

B. Cut and drill panels with carbide tipped saw blades, drill bits, or snips.

C. Apply adhesive to the back side of the panel using trowel as recommended by adhesive manufacturer.

D. Apply panels to wall with seams plumb and pattern aligned with adjoining panels.

E. Install panels with manufacturer's recommended gap for panel field and corner joints.

F. Seal gaps at floor, ceiling, and between panels with applicable sealant to prevent moisture intrusion.

G. Remove excess sealant after paneling is installed and prior to curing.

END OF SECTION

SECTION 07 21 00
THERMAL INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Batt insulation in exterior wall, ceiling, and roof construction.

B. Batt insulation for filling 2nd floor exterior corner(s) over-framing..

1.2 REFERENCE STANDARDS

A. ASTM C240 - Standard Test Methods for Testing Cellular Glass Insulation Block; 2021.

B. ASTM C552 - Standard Specification for Cellular Glass Thermal Insulation; 2022.

C. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2017).

D. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2024.

E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.

1.3 SUBMITTALS

A. Product Data: Provide data on product characteristics, performance criteria, and product limitations. Refer to RHA front ends for additional information.

B. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

1.4 FIELD CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.1 APPLICATIONS

A. Insulation in Wood Framed Walls: Batt insulation with no vapor retarder.

B. Insulation in Wood Framed Ceiling Structure: Batt insulation with no vapor retarder.

2.2 MINERAL FIBER BLANKET INSULATION MATERIALS

A. Flexible Glass Fiber Blanket Thermal Insulation: Preformed insulation, complying with ASTM C665; friction fit.
   1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
   2. Combustibility: Non-combustible, when tested in accordance with ASTM E136.
   3. Formaldehyde Content: Zero.
   4. Thermal Resistance: R-value of 38.
   5. Thickness: As indicated on drawings.

6. Facing: Asphalt treated Kraft paper, one side.
7. Products:
   a. B.O.D. Knauf Insulation: www.knaufinsulation.com.
   b. Approved Equal.
   c. Substitutions: See RHA front ends.

B. Mineral Wool Blanket Thermal Insulation: Flexible or semi-rigid preformed insulation, complying with ASTM C665.
1. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
2. Products:
   a. ROCKWOOL; COMFORTBATT: www.rockwool.com/#sle.
   b. Approved Equal.

2.3 ACCESSORIES

A. Insulation Fasteners: Impaling clip of unfinished steel with washer retainer and clips, to be adhered to surface to receive insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.

B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.2 BATT INSTALLATION

A. Install in exterior wall, roof, and ceiling spaces without gaps or voids. Do not compress insulation.

B. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.

C. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

D. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.

3.3 PROTECTION

A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION

SECTION 07 21 19
FOAMED-IN-PLACE INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Foamed-in-place insulation.
   1. In exterior framed walls.

1.2 REFERENCE STANDARDS

A. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2021.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.

C. ASTM E2178 - Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials; 2021a.

D. UL 1040 - Standard for Safety Fire Test of Insulated Wall Construction; Current Edition, Including All Revisions.

1.3 SUBMITTALS

A. Product Data: Provide product description, insulation properties, and preparation requirements. Refer to RHA front ends for additional information.

B. Manufacturer's Installation Instructions: Indicate special procedures, and perimeter conditions requiring special attention.

C. Manufacturer Qualification: Submit documentation of current evaluation of proposed manufacturer and materials.

D. Installer Qualification: Submit documentation of current contractor accreditation and current installer certification. Keep copies of all contractor accreditation and installer certification on site during and after installation. Present on-site documentation upon request.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with not less than three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified, with minimum three years documented experience, and approved by manufacturer.

1.5 FIELD CONDITIONS

A. Do not apply foam when temperature is below that specified by the manufacturer for ambient air and substrate.

B. Do not apply foam when temperature is within 5 degrees F of dew point.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Foamed-In-Place Insulation:
1. B.O.D. Handi Foam: www.handifoam.com.
2. Or Approved Equal.

2.2 MATERIALS

A. Foamed-In-Place Insulation: Low-density, flexible, closed cell, water vapor permeable polyurethane foam; foamed on-site, using blowing agent of water or non-ozone-depleting gas.
1. Thermal Resistance: R-value of 3.0, minimum, per 1 inch thickness at 75 degrees F mean temperature when tested in accordance with ASTM C518.
2. Air Permeance: 0.04 cfm per square foot, maximum, when tested at intended thickness in accordance with ASTM E2178 at 1.57 psf.
3. Surface Burning Characteristics: Flame spread/smoke developed index of 25/450, maximum, when tested in accordance with ASTM E84.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify work within construction spaces or crevices is complete before insulation application.

B. Verify that surfaces are clean, dry, and free of matter that may inhibit insulation adhesion.

3.2 PREPARATION

A. Mask and protect adjacent surfaces from over spray or dusting.

3.3 APPLICATION

A. Apply insulation in accordance with manufacturer's instructions.

B. Apply insulation by spray method, to a uniform monolithic density without voids.

C. Do not apply cellulose fiber insulation in areas where temperatures exceed 150 degrees F.

D. Patch damaged areas.

E. Trim excess away for applied trim or remove as required for continuous sealant bead.

3.4 PROTECTION

A. Do not permit subsequent construction work to disturb applied insulation.

END OF SECTION

SECTION 07 84 00
FIRESTOPPING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Firestopping systems.

B. Firestopping of all joints and penetrations in fire-resistance rated and smoke-resistant assemblies, whether indicated on drawings or not, and other openings indicated.

1.2 REFERENCE STANDARDS

A. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2024.

B. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2024.

C. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems; 2024.

D. ASTM E2837 - Standard Test Method for Determining the Fire Resistance of Continuity Head-of-Wall Joint Systems Installed between Rated Wall Assemblies and Nonrated Horizontal Assemblies; 2023a, with Editorial Revision (2024).

E. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015, with Editorial Revision (2021).

F. ITS (DIR) - Directory of Listed Products; Current Edition.

G. FM (AG) - FM Approval Guide; Current Edition.

H. UL 1479 - Standard for Fire Tests of Penetration Firestops; Current Edition, Including All Revisions.

I. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems; Current Edition, Including All Revisions.

J. UL (DIR) - Online Certifications Directory; Current Edition.

K. UL (FRD) - Fire Resistance Directory; Current Edition.

1.3 SUBMITTALS

A. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, and firestopping test or design number.

B. Product Data: Provide data on product characteristics, performance ratings, and limitations. Refer to RHA front ends for additional information.

C. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Manufacturer's qualification statement.

F. Installer's qualification statement.

1.4 QUALITY ASSURANCE

A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
   1. Listing in UL (FRD), FM (AG), or ITS (DIR) will be considered as constituting an acceptable test report.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years documented experience.

C. Installer Qualifications: Company specializing in performing the work of this section and:
   1. Trained by manufacturer.
   2. With minimum ten years documented experience installing work of this type.

1.5 FIELD CONDITIONS

A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation; maintain minimum temperature before, during, and for three days after installation of materials.

B. Provide ventilation in areas where solvent-cured materials are being installed.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Firestopping Manufacturers:
   1. B.O.D. : Hilti, Inc: www.us.hilti.com.
   2. Approved Equal..

2.2 MATERIALS

A. Mold and Mildew Resistance: Provide firestopping materials with mold and mildew resistance rating of zero(0) in accordance with ASTM G21.

B. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Provide type of materials as required for tested firestopping assembly.

C. Fire Ratings: Refer to drawings for required systems and ratings.

2.3 FIRESTOPPING ASSEMBLY REQUIREMENTS

A. Head-of-Wall (HW) Joint System Firestopping at Joints Between Fire-Rated Wall Assemblies and Non-Rated Horizontal Assemblies: Use system that has been tested according to ASTM E2837 to have fire resistance F Rating equal to required fire rating of wall assembly.
   1. Movement: Provide systems that have been tested to show movement capability as indicated.

B. Floor-to-Floor (FF), Floor-to-Wall (FW), Head-of-Wall (HW), and Wall-to-Wall (WW) Joints, Except Perimeter, Where Both Are Fire-Rated: Use system that has been tested according to ASTM E1966 or UL 2079 to have fire resistance F Rating equal to required fire rating of the assembly in which the joint occurs.
   1. Movement: Provide systems that have been tested to show movement capability as indicated.
   2. Air Leakage: Provide systems that have been tested to show L Rating as indicated.
   3. Watertightness: Provide systems that have been tested to show W Rating as indicated.
   4. Listing by FM (AG), ITS (DIR), UL (DIR), or UL (FRD) in their certification directories will be considered evidence of successful testing.

C. Through Penetration Firestopping: Use system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.
   1. Temperature Rise: Provide systems that have been tested to show T Rating as indicated.

2. Air Leakage: Provide systems that have been tested to show L Rating as indicated.
3. Watertightness: In addition, provide systems that have been tested to show W Rating as indicated.
4. Listing by FM (AG), ITS (DIR), UL (DIR), or UL (FRD) in their certification directories will be considered evidence of successful testing.

2.4 FIRESTOPPING FOR FLOOR-TO-FLOOR, FLOOR-TO-WALL, HEAD-OF-WALL, AND WALL-TO-WALL JOINTS

A. Concrete and Concrete Masonry Walls and Floors:

B. Gypsum Board Walls:

2.5 FIRESTOPPING PENETRATIONS THROUGH CONCRETE AND CONCRETE MASONRY CONSTRUCTION

A. Blank Openings:
1. In Floors or Walls:
a. B.O.D. 2 Hour Construction: UL System C-AJ-0090; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. Approved Equal.

B. Penetrations Through Floors or Walls By:
1. Multiple Penetrations in Large Openings:
a. B.O.D.: 2 Hour Construction: UL System C-AJ-8143; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. Approved Equal.
2. Uninsulated Metallic Pipe, Conduit, and Tubing:
a. B.O.D.: 2 Hour Construction: UL System C-AJ-1226; Hilti FS-ONE MAX Intumescent Firestop Sealant.
3. Uninsulated Non-Metallic Pipe, Conduit, and Tubing:
4. Insulated Pipes:
a. B.O.D.: 2 Hour Construction: UL System C-AJ-5091; Hilti FS-ONE IMAX Intumescent Firestop Sealant.
b. Approved Equal.
5. HVAC Ducts, Uninsulated:
a. B.O.D.: 2 Hour Construction: UL System C-AJ-7111; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. Approved Equal.

2.6 FIRESTOPPING PENETRATIONS THROUGH GYPSUM BOARD WALLS

A. Penetrations By:
1. Uninsulated Metallic Pipe, Conduit, and Tubing:
a. B.O.D.: 2 Hour Construction: UL System W-L-1164; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. Approved Equal.
2. Uninsulated Non-Metallic Pipe, Conduit, and Tubing:
a. B.O.D.: 2 Hour Construction: UL System W-L-2128; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. Approved Equal.
3. Electrical Cables Not In Conduit:
a. B.O.D.: 2 Hour Construction: UL System W-L-3065; Hilti FS-ONE MAX Intumescent Firestop Sealant, CP 606 Flexible Firestop Sealant, CD 601S Elastomeric Firestop Sealant, or CP 618 Firestop Putty Stick.
b. Approved Equal.
4. Insulated Pipes:

a. B.O.D.: 2 Hour Construction: UL System W-L-5028; Hilti FS-ONE MAX Intumescent Firestop Sealant.
b. Approved Equal.

5. HVAC Ducts, Insulated:
   a. B.O.D.: 2 Hour Construction: UL System W-L-7156; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   b. Approved Equal.

2.7 FIRESTOPPING SYSTEMS

A. Manufacturers:
   1. Hilti Corp. .
   2. Approved Equal.

B. Firestopping:
   1. Fire Ratings: Use system that is listed by FM (AG), ITS (DIR), or UL (FRD) and tested in accordance with ASTM E814, ASTM E119, or UL 1479 with F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and in compliance with other specified requirements.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify openings are ready to receive the work of this section.

3.2 PREPARATION

A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other materials that could adversely affect bond of firestopping material.

B. Remove incompatible materials that could adversely affect bond.

C. Install backing materials to prevent liquid material from leakage.

3.3 INSTALLATION

A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.

B. Do not cover installed firestopping until inspected by authorities having jurisdiction.

C. Install labeling required by code.

3.4 FIELD QUALITY CONTROL

A. Inspect installed firestopping for compliance with specifications and submitted schedule.

B. Repair or replace penetration firestopping and joints at locations where inspection results indicate firestopping or joints do not meet specified requirements.

3.5 CLEANING

A. Clean adjacent surfaces of firestopping materials.

3.6 PROTECTION

A. Protect adjacent surfaces from damage by material installation.

END OF SECTION

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SECTION 07 92 00
JOINT SEALANTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Nonsag gunnable joint sealants.

B. Joint backings and accessories.

1.2 REFERENCE STANDARDS

A. ASTM C834 - Standard Specification for Latex Sealants; 2017 (Reapproved 2023).

B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).

C. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.

D. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants; 2023.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Submit manufacturer's technical datasheets for each product to be used; include the following:
   1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
   2. List of backing materials approved for use with the specific product.
   3. Backing material recommended by sealant manufacturer.
   4. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
   5. Substrates the product should not be used on.
   6. Substrates for which use of primer is required.
   7. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
   8. Sample product warranty.
   9. Certification by manufacturer indicating that product complies with specification requirements.

B. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

C. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

D. Manufacturer's qualification statement.

E. Installer's qualification statement.

F. Executed warranty.

1.4 QUALITY ASSURANCE

A. Field Quality Control Plan:
   1. Visual inspection of entire length of sealant joints.

1.5 WARRANTY

A. Manufacturer Warranty: Provide 2-year manufacturer warranty for installed sealants and accessories that fail to achieve a watertight seal, exhibit loss of adhesion or cohesion, or do not cure. Complete forms in Owner's name and register with manufacturer.

B. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Nonsag Sealants:
   1. B.O.D. Richards Paint: www.richardspaint.com.
   2. Approved Equal.

2.2 JOINT SEALANT APPLICATIONS

A. Scope:
   1. Interior Joints:
      a. Do not seal interior joints indicated on drawings as not sealed.
      b. Seal the following joints:
         1) Joints between door frames, window frames, other frames, and items specifically called out in construction drawings and adjacent construction.
   2. Do Not Seal:
      a. Intentional weep holes in masonry.
      b. Joints indicated to be covered with expansion joint cover assemblies.

B. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.
   1. Wall and Ceiling Joints in Nonwet Areas: Acrylic emulsion latex sealant.
   2. Wall and Ceiling Joints in Wet Areas: Nonsag polyurethane sealant for continuous liquid immersion.

C. Interior Wet Areas: Bathrooms, restrooms, and kitchens; fixtures in wet areas include plumbing fixtures, countertops, cabinets, and other similar items.

2.3 NONSAG JOINT SEALANTS

A. Silicone Sealant: ASTM C920, Grade NS, Uses M, A, G, and O; not expected to withstand continuous water immersion or traffic.
   1. Movement Capability: Plus and minus 25 percent, minimum.
   2. Color: White at painted locations, clear at stained locations.
   3. Products:
      a. Approved Equal.

B. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
   1. Color: White.
   2. Products:
      a. Richards Paint.
      b. Approved Equal.

C. Noncuring Butyl Sealant: Solvent-based, single component, nonsag, nonskinning, nonhardening, nonbleeding; nonvapor permeable; intended for fully concealed applications.

2.4 ACCESSORIES

A. Sealant Backing Materials, General: Materials placed in joint before applying sealants; assists sealant performance and service life by developing optimum sealant profile and preventing three-sided adhesion; type and size recommended by sealant manufacturer for compatibility with sealant, substrate, and application.

B. Sealant Backing Rod, Open-Cell Type:
   1. Cylindrical flexible sealant backings complying with ASTM C1330 Type O.
   2. Size: 25 to 50 percent larger in diameter than joint width.

C. Sealant Backing Rod, Bi-Cellular Type:
   1. Cylindrical flexible sealant backings complying with ASTM C1330 Type B.
   2. Size: 25 to 50 percent larger in diameter than joint width.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that joints are ready to receive work.

B. Verify that backing materials are compatible with sealants.

3.2 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.3 INSTALLATION

A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Provide joint sealant installations complying with ASTM C1193.

C. Install bond breaker backing tape where backer rod cannot be used.

D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.

F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

3.4 FIELD QUALITY CONTROL

A. Perform field quality control inspection/testing as specified in PART 1 under QUALITY ASSURANCE article.

B. Remove and replace failed portions of sealants using same materials and procedures as indicated for original installation.

END OF SECTION

SECTION 08 14 16
FLUSH WOOD DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Medium-Density Fiberboard (MDF) Flush Doors

1.2 REFERENCE STANDARDS

A. ANSI A135.4 - Basic Hardboard; 2012 (Reaffirmed 2020).

B. ANSI A208.1 - American National Standard for Particleboard; 2022.

C. WDMA I.S. 1A - Interior Architectural Wood Flush Doors; 2021, with Errata (2022).

1.3 SUBMITTALS

A. See Section RHA front ends for submittal procedures.

B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.

C. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.

D. Full size door sample: Contractor to furnish one complete door unit at each project location to be randomly core sampled. Door to be selected by Architect in field. Door to be sampled would have similar hardware type to other doors to be provided.

E. Manufacturer's Installation Instructions: Indicate special installation instructions.

F. Warranty, executed in Owner's name.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.

B. Accept doors on site in manufacturer's packaging, and inspect for damage.

C. Protect doors with resilient packaging; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges if stored more than one week, and break seal on site to permit ventilation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Medium-Density Fiberboard (MDF) Flush Doors:
   1. B.O.D. : Jeld Wen : www.jeld-wen.com.
   2. Or Approved Equal.

2.2 DOORS

A. Doors: See drawings for locations and additional requirements.

1. Quality Standard: Grade as indicated on drawings, Heavy Duty performance, in accordance with WDMA I.S. 1A.
2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.

B. Interior Doors: 1-3/8 inches thick unless otherwise indicated; flush construction.
1. Provide solid core doors at each location. Doors shall have a cove and bead sticking profile as indicated in drawings.
2. B.O.D. : Jeld-Wen Molded Wood Composite Interior Door, ProCore- Solid Core, Colonist Smooth, 6 panel, flat top, factory primed and painted

2.3 DOOR AND PANEL CORES

A. Non-Rated Solid Core and 20 Minute Rated Doors: Type structural composite lumber core (SCLC), plies and faces as indicated.

2.4 DOOR FACINGS

A. Veneer Facing for Opaque Finish: Medium density fiberboard (MDF), in compliance with indicated quality standard.

B. Hardboard Facing for Opaque Finish: ANSI A135.4, Class 1 - Tempered, S2S (smooth two sides) hardboard, 1/8 inch thick.

2.5 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores Constructed with stiles and rails:
1. Provide solid blocks at lock edge and top of door for closer for hardware reinforcement.
2. Provide solid blocking for other throughbolted hardware.

C. Fit door edge trim to edge of stiles after applying veneer facing. No exposed cross banding.

D. Bond edge banding to cores.

E. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

F. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
1. Exception: Doors to be field finished.

G. Provide edge clearances in accordance with the quality standard specified.

2.6 FINISHES - WOOD VENEER DOORS

A. Factory finish doors in accordance with approved sample.

B. Seal door top edge with same sealer to match door facing.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.2 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard.

B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.

C. Use machine tools to cut or drill for hardware.

D. Coordinate installation of doors with installation of frames and hardware.

3.3 TOLERANCES

A. Comply with specified quality standard for fit and clearance tolerances.

B. Comply with specified quality standard for telegraphing, warp, and squareness.

3.4 ADJUSTING

A. Adjust doors for smooth and balanced door movement.

B. Adjust closers for full closure.

END OF SECTION

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SECTION 08 71 00
DOOR HARDWARE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Hardware for wood doors.

B. Weatherstripping and gasketing.

1.2 REFERENCE STANDARDS

A. BHMA A156.1 - Standard for Butts and Hinges; 2021.

B. BHMA A156.2 - Bored and Preassembled Locks and Latches; 2022.

C. BHMA A156.5 - Cylinders and Input Devices for Locks; 2020.

D. BHMA A156.6 - Standard for Architectural Door Trim; 2021.

E. BHMA A156.7 - Template Hinge Dimensions; 2022.

F. BHMA A156.13 - Mortise Locks & Latches Series 1000; 2022.

G. BHMA A156.14 - Sliding and Folding Door Hardware; 2024.

H. BHMA A156.18 - Standard for Materials and Finishes; 2020.

I. BHMA A156.21 - Thresholds; 2025.

J. BHMA A156.22 - Standard for Gasketing; 2021.

K. BHMA A156.115W - Hardware Preparation in Wood Doors with Wood or Steel Frames; 2006.

L. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors; 1993; also in WDHS-1/WDHS-5 Series, 1996.

M. UL 437 - Standard for Key Locks; Current Edition, Including All Revisions.

1.3 SUBMITTALS

A. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.

B. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

C. Keys: Owner to provide provide its approved keying and lock standard, construction-core requirements, key schedule, and final key-control procedure.
   1. Deliver with identifying tags to Owner by security shipment direct from hardware supplier.
   2. Owner must approve submitted keying prior to the ordering of permanent cylinders/cores.

1.4 QUALITY ASSURANCE

A. Furnish hardware marked and listed in BHMA Directory of Certified Products.

B. Manufacturer: Obtain each type of hardware (ie., lock sets) from a single manufacturer, although several may be indicated as offering products complying with requirements.

1.5 WARRANTY

A. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of the hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

B. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

PART 2 PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.

B. Provide individual items of single type, of same model, and by same manufacturer.

C. Provide door hardware products that comply with the following requirements:
   1. Applicable provisions of federal, state, and local codes.

2.2 HINGES

A. Manufacturers:
   1. B.O.D. : IVES.
   2. Or Approved Equal.

B. Hinges: Comply with BHMA A156.1, Grade 1.
   1. Provide hinges on every swinging door.
   2. Provide five-knuckle full mortise butt hinges unless otherwise indicated.
   3. Provide following quantity of butt hinges for each door:
      a. Doors From 60 inches High up to 90 inches High: Three hinges.

C. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
   1. Widths up to 3’0”: 4-1/2” standard or heavy weight as specified.

D. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
   1. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

2.3 TRACK AND HANGERS

A. Manufacturers: Bypass door hardware kit, sized to fit opening width
   1. B.O.D. Everbilt.
   2. Or Approved Equal.

2.4 CYLINDRICAL LOCKS

A. Manufacturers:
   1. B.O.D.: Schlage, an Allegion brand: www.allegion.com/us/#sle.

2. Or Approved Equal..

B. Cylindrical Locks (Bored): Comply with BHMA A156.2, Grade 1, 4000 Series.
1. Bored Hole: 2-1/8 inch diameter.
2. Latchbolt Throw: 1/2 inch, minimum.
3. Backset: 2-3/4 inch unless otherwise indicated.
4. Strikes: Provide manufacturer's standard strike for each latchset or lockset with strike box and curved lip extending to protect frame in compliance with indicated requirements.
a. Finish: To match lock or latch.
5. Trim: Provide lever handle or pull trim on outside of each lock, unless otherwise indicated.

2.5 WALL STOPS

A. Manufacturers:
1. B.O.D.: IVES.
2. B.O.D.: Prime Line.
3. Or Approved Equal.

B. Wall Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.
1. Type: Hinge pin wall stop.
2. Material: Bronze housing with rubber insert.

C. Wall Stops: Anti slam protective bumper
1. Type: Convex
2. Material: Rubber

2.6 THRESHOLDS

A. Manufacturers:
1. B.O.D. : Schluter Systems :www.schluter.com www..
2. Or Approved Equal.

B. Thresholds: Comply with BHMA A156.21.
1. Provide threshold at interior doors for transition between two different floor types, unless otherwise indicated.
2. Type: Flat surface.
3. Material: Aluminum.
4. Threshold Surface: Smooth and flat.
5. Field cut threshold to profile of frame and width of door sill for tight fit.
6. Provide non-corroding fasteners at exterior locations.

2.7 WEATHERSTRIPPING AND GASKETING

A. Manufacturers:
1. B.O.D.: Zero International, Inc: www.zerointernational.com/#sle.
2. Or Approved Equal.

B. Weatherstripping and Gasketing: Comply with BHMA A156.22.
1. Head and Jamb Type: Self-adhesive.
2. Door Sweep Type: Door shoe.
3. Material: Aluminum, with silicone weatherstripping.
4. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated.
5. Provide door bottom sweep on each exterior door, unless otherwise indicated.

2.8 FINISHES

A. Finishes: Provide door hardware of same finish, unless otherwise indicated.

1. Primary Finish: 646; satin nickel with steel base material; BHMA A156.18.
2. Exceptions:
   a. Where base material metal is specified to be different, provide finish that is an equivalent appearance in accordance with BHMA A156.18.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that doors and frames are ready to receive this work.

3.2 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and applicable codes.

B. Use templates provided by hardware item manufacturer.

C. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list, unless noted otherwise on drawings.
   1. For Wood Doors: Install in compliance with DHI WDHS.3 recommendations.

3.3 ADJUSTING

A. Adjust hardware for smooth operation.

B. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.4 CLEANING

A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.

B. Clean adjacent surfaces soiled by hardware installation.

C. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

3.5 PROTECTION

A. Do not permit adjacent work to damage hardware or finish.

END OF SECTION

SECTION 09 05 61
COMMON WORK RESULTS FOR FLOORING PREPARATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
   1. Resilient tile and sheet.
   2. Thin-set ceramic tile and stone tile.

B. Removal of existing floor coverings.

C. Preparation of new and existing wood-based floors and subfloors for installation of new floor coverings.

1.2 REFERENCE STANDARDS

A. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.

B. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.3 SUBMITTALS

A. Visual Observation Report: For existing floor coverings to be removed.

B. Floor Covering and Adhesive Manufacturers' Product Literature: Refer to RHA front ends for more information. For each specific combination of substrate, floor covering, and adhesive to be used; showing:
   1. Moisture and alkalinity (pH) limits and test methods.
   2. Manufacturer's required bond/compatibility test procedure.

C. Adhesive Bond and Compatibility Test Report.

D. Copy of RFCI (RWP).

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, handle, and protect products in accordance with manufacturer’s instructions and recommendations.

B. Deliver materials in manufacturer’s packaging; include installation instructions.

C. Keep materials from freezing.

PART 2 PRODUCTS

2.1 MATERIALS

A. Alternate Flooring Adhesive: Floor covering manufacturer's recommended product, suitable for the moisture and pH conditions present; low-VOC. In the absence of any recommendation from flooring manufacturer, provide a product recommended by adhesive manufacturer as suitable for substrate and floor covering and for conditions present.

PART 3 EXECUTION

3.1 REMOVAL OF EXISTING FLOOR COVERINGS

A. Comply with local, State, and federal regulations and recommendations of RFCI (RWP), as applicable to floor covering being removed.

B. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.2 PRELIMINARY CLEANING

A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.

B. Do not use solvents or other chemicals for cleaning.

3.3 PREPARATION

A. See individual floor covering section(s) for additional requirements.

B. Comply with requirements and recommendations of floor covering manufacturer.

3.4 ADHESIVE BOND AND COMPATIBILITY TESTING

A. The Owner's Special Inspector shall verify proper adhesion of flooring adhesives, coatings, and leveling compounds to the final vapor reduction coating system for acceptability. Contact Manufacturer's Representatives for recommendations.

B. Comply with requirements and recommendations of floor covering manufacturer.

3.5 PROTECTION

A. Cover prepared floors with building paper or other durable covering.

B. Protect each coat during specified cure period from any kind of traffic, topical water and contaminants.

END OF SECTION

SECTION 09 21 16
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Performance criteria for gypsum board assemblies.

B. Gypsum wallboard.

C. Joint treatment and accessories.

1.2 REFERENCE STANDARDS

A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).

B. ASTM C514 - Standard Specification for Nails for the Application of Gypsum Board; 2004 (Reapproved 2020).

C. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2017).

D. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2024.

E. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2024.

F. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2022.

G. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.

H. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.

I. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2024.

J. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.

K. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.

L. GA-216 - Application and Finishing of Gypsum Panel Products; 2024.

1.3 SUBMITTALS

A. Product Data: See RHA front ends for additional information.
   1. Provide data on gypsum board, accessories, and joint finishing system.

1.4 QUALITY ASSURANCE

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store gypsum products and accessories indoors and keep above freezing. Elevate boards above floor, on nonwicking supports, in accordance with manufacturer's recommendations.

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

B. Interior Partitions: Provide completed assemblies with the following characteristics:

C. Fire Rated Assemblies: Provide completed assemblies (Tested rating determined in accordance with ASTM119) with rating as indicated on drawings.
   1. Fire-Resistance-Rated Partitions: IBC Table 722.2.1.4(2); 2 hour rating.

2.2 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:
   1. B.O.D.: CertainTeed Corporation: www.certainteed.com/#sle.
   2. Approved Equal..

B. Gypsum Wallboard - General
   1. All gypsum wallboard incorporated into the Work, whether indicated or not, shall comply with all of the following:
      a. Thickness: 1/2 inch, unless noted otherwise.
      b. Core: Type X, UL or WH listed.
         1) Exception: Where Fire Resistance Rating requires Type C.
      c. Core and Face: Moisture and mold resistant, with a mold resistance score of 10, when tested in accordance with ASTM D3273.

C. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
      a. Mold resistant board is required at wet locations: kitchen and bathrooms.
   3. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
   4. Thickness:
      a. Vertical Surfaces: 1/2 inch.
      b. Ceilings: 1/2 inch.
      c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.
   5. Mold-Resistant, Paper-Faced Products:
      a. B.O.D.: CertainTeed Corporation; M2Tech 1/2" Moisture & Mold Resistant Drywall: www.certainteed.com/#sle.
      b. B.O.D.: CertainTeed Corporation; M2Tech 5/8" Type X Moisture & Mold Resistant Drywall: www.certainteed.com/#sle.
      c. Approved Equal..

2.3 GYPSUM BOARD ACCESSORIES

A. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.

1. Corner Beads: Low profile, for 90 degree outside corners.
   a. Products:
      1) CertainTeed Corporation; No-Coat Drywall Corner: Aquabead L-Trim: www.certainteed.com/#sle.
      2) Approved Equal..
2. L-Trim with Tear-Away Strip: Sized to fit 1/2-inch thick gypsum wallboard.

B. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
   1. Fiberglass Tape: 2 inch wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
   2. Paper Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
   3. Joint Compound: Drying type, vinyl-based, ready-mixed.
   4. Joint Compound: Setting type, field-mixed.

C. Nails for Attachment to Wood Members: ASTM C514.

D. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that project conditions are ready to receive work and opening dimensions are as indicated on shop drawings to commence.

3.2 EXISTING WORK

A. Extend existing gypsum board installations using materials and methods as specified.

B. Repair and remodel existing gypsum board assemblies which remain or are to be altered.

3.3 FRAMING INSTALLATION

A. Studs: Space studs at 16 inches on center.
   1. Extend partition framing to structure where indicated and to ceiling in other locations.
   2. Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging. Provide extended leg ceiling runners with compressible fire rated fill.

B. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

C. Standard Wall Furring: Install at concrete walls scheduled to receive gypsum board, not more than 4 inches from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches on center.

D. Blocking: Install wood blocking for support of:
   1. Framed openings.
   2. Wall-mounted cabinets.
   3. Plumbing fixtures.
   4. Toilet accessories.
   5. Wall-mounted door hardware.
   6. Wood frame opening.
   7. Or any other materials requiring blocking. Coordinate blocking requirements with other contractors.

3.4 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
   1. Use screws when fastening gypsum board to metal furring or framing.

B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

C. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
   1. Erect single layer fire rated gypsum board vertically, with edges and ends occurring over firm bearing.

D. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.

E. Installation on Wood Framing: For rated assemblies, comply with requirements of listing authority. For nonrated assemblies, install as follows:
   1. Single-Layer Applications: Screw attachment.

3.5 INSTALLATION OF TRIM AND ACCESSORIES

A. Corner Beads: Install at external corners, using longest practical lengths.

B. Edge Trim: Install at locations where gypsum board abuts dissimilar materials and as indicated.

3.6 JOINT TREATMENT

A. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.

3.7 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

3.8 PROTECTION

A. Protect installed gypsum board assemblies from subsequent construction operations.

END OF SECTION

SECTION 09 30 00
TILING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Tile for floor applications.

B. Tile for wall applications.

C. Ceramic accessories.

D. Non-ceramic trim.

E. Accessory materials.

1.2 REFERENCE STANDARDS

1. ANSI A108.19 - American National Standard Specifications for Interior Installation of Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs by the Thin-Bed Method Bonded with Modified Dry-Set Cement Mortar or Improved Modified Dry-Set Cement Mortar; 2020.

B. ANSI A108/A118/A136 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2024.
   1. ANSI A118.3 - American National Standard Specifications for Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy and Water Cleanable Tile-Setting Epoxy Adhesive; 2021.
   2. ANSI A118.4 - American National Standard Specifications for Modified Dry-Set Cement Mortar; 2023.
   3. ANSI A118.5 - American National Standard Specifications for Chemical Resistant Furan Mortars and Grouts for Tile Installation; 1999 (Reaffirmed 2021).
   4. ANSI A118.7 - American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2019.
   5. ANSI A118.10 - American National Standard Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation; 2023.
   6. ANSI A118.12 - American National Standard Specifications for Crack Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation; 2014 (Reaffirmed 2024).
   7. ANSI A118.15 - American National Standard Specifications for Improved Modified Dry-Set Cement Mortar; 2023.

C. ANSI A137.1 - American National Standard Specifications for Ceramic Tile; 2022.

D. ASTM C373 - Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products; 2018 (Reapproved 2023).

E. TCNA (HB-GP) - Handbook for Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs Installation; 2023.

F. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2025.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Pre-installation Meeting: Convene a pre-installation meeting one week before starting work of this section; require attendance by all affected installers.

1.4 SUBMITTALS

A. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives. Refer to RHA's front ends for more details.

B. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.

C. Samples: Submit two sets of samples of the following for color selection or verification of color and finish variations:
   1. Tile products.
   2. Threshold, trims, and accessories.
   3. Grouts.
   4. Sealants.

D. Certificate: Certify products of this section meet or exceed specified requirements.

E. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum ten years of documented experience.

B. Installer Qualifications:
   1. Company specializing in performing tile installation, with minimum of five years of documented experience.

C. Warranty: Installer of work contained in this Section to warrant installation for minimum of 1 year from date of completion for defects in workmanship.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.7 FIELD CONDITIONS

A. Provide lighting level of 80 fc measured mid-height at substrate surface.

B. Maintain ambient and substrate temperature above 50 degrees F and below 100 degrees F during installation and curing of setting materials.

PART 2 PRODUCTS

2.1 TILE

A. Porcelain Tile: ANSI A137.1, standard grade.
   1. Moisture Absorption: 0 to 0.5 percent as tested in accordance with ASTM C373.
   2. Size: 12 by 24 inch, nominal.
   3. Thickness: 0.33 inch.
   4. Edges: Square.
   5. Surface Finish: Matte glazed.
   6. Color(s): Carbon.
   7. Trim Units: Matching bullnose shapes in sizes indicated.
      a. Color(s): As indicated on drawings.
   8. Products:
      a. BO.D. Anatolia: www.anatolia.com.

b. Approved Equal..

2.2 TRIM AND ACCESSORIES

A. Ceramic Accessories: Glazed finish, same color and finish as adjacent field tile; same manufacturer as tile.

B. Ceramic Trim: Matching bullnose, double bullnose, cove base, and cove shapes in sizes coordinated with field tile.
1. Manufacturers: Same as for tile.

C. Non-Ceramic Trim: Integrally colored extruded PVC, style and dimensions to suit application, for setting using tile mortar or adhesive.
1. Thickness: As required by installation and to comply with ADA Regulations.
2. Applications:
a. Transition between floor finishes of different heights.
b. Floor and wall expansion and control joints.
3. Products:
a. LATICRETE International, Inc; Porfiles and Trims: www.laticrete.com/#sle.
b. Profilitec; Profiles: www.us.profilitec.com.
c. Schluter-Systems; Schiene: www.schluter.com/#sle.

D. Thresholds: 2 inches wide by full width of wall or frame opening; beveled edge on both long edges; without holes, cracks, or open seams.

2.3 SETTING MATERIALS

A. Provide setting and grout materials from same manufacturer.

B. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4.
1. Applications: Use this type of bond coat where indicated, and where no other type of bond coat is indicated.
2. Products:
a. LATICRETE International, Inc; 253 Gold: www.laticrete.com/#sle.
b. LATICRETE International, Inc; Tri-lite: www.laticrete.com/#sle.
c. Substitutions: See RHA front ends for additional information.

C. Improved Latex-Portland Cement Mortar Bond Coat: ANSI A118.15.
1. Applications: Use this type of bond coat where indicated, and where no other type of bond coat is indicated.
2. Products:
a. LATICRETE International, Inc; LATICRETE 254 Platinum: www.laticrete.com/#sle.
b. Substitutions: See RHA front ends for additional information.

2.4 GROUTS

A. Provide setting and grout materials from same manufacturer.

B. High Performance Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.
1. Applications: Use where indicated on drawings and where no other type of grout is indicated.
2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
3. Products:
a. LATICRETE International, Inc; LATICRETE PERMACOLOR Grout: www.laticrete.com/#sle.
b. Substitutions: See RHA front ends for additional information.

C. Epoxy Grout: ANSI A118.3 chemical resistant and water-cleanable epoxy grout.
1. Applications: Where indicated.
2. Color(s): As scheduled. Refer to Finish Key

3. Products:
   a. LATICRETE International, Inc; LATICRETE SPECTRALOCK PRO Premium Grout: www.laticrete.com/#sle.
   b. Substitutions: See RHA front ends for additional information.

D. Furan Grout: ANSI A118.5 chemical resistant furan resin grout.
1. Applications: Use where indicated on drawings.
2. Color(s): As scheduled Refer to Finish Key.
3. Products:
   a. LATICRETE International, Inc; LATICRETE SPECTRALOCK 2000 IG: www.laticrete.com/#sle.
   b. Substitutions: See RHA front ends for additional information.

E. Premixed Polymer Modified Grout: Single component, stain resistant grout.
1. Applications: Use where indicated on drawings.
2. Color: As indicated on drawings.
3. Products:
   a. LATICRETE International, Inc; SPECTRALOCK 1 Pre-Mixed Grout: www.laticrete.com/#sle.
   b. Substitutions: See RHA front ends for additional information.

2.5 MAINTENANCE MATERIALS

A. Tile Sealant: Gunnable, silicone, siliconized acrylic, modified silane polymer, or urethane sealant; moisture- and mildew-resistant type.
1. Applications: Between tile and plumbing fixtures.
2. Color(s): As scheduled Refer to Finish Key.
3. Products:
   a. LATICRETE International, Inc; LATICRETE LATASIL: www.laticrete.com/#sle.
   b. Substitutions: See RHA front ends for additional information.

B. Epoxy Grout Haze Remover: Water based gel for vertical and horizontal surfaces.
1. Products:
   a. STONETECH, a division of LATICRETE international, Inc; STONETECH Epoxy Grout Haze and Coating Stripper: www.laticrete.com.
   b. Substitutions: See RHA front ends for additional information.

2.6 ACCESSORY MATERIALS

A. Waterproofing and Slab Crack IsolationMembrane at Floors: Specifically designed for bonding to cementitious substrate under thick mortar bed or thin-set tile; complying with ANSI A118.10.
1. Crack Resistance: No failure at 1/8 inch gap, minimum; comply with ANSI A118.12.
2. Fluid or Trowel Applied Type:
   a. Material: Synthetic rubber.
   b. Thickness: 25 mils, minimum, dry film thickness.
   c. Products:
      1) LATICRETE International, Inc; LATICRETE HYDRO BAN: www.laticrete.com/#sle.
      2) Substitutions: See RHA front ends for additional information.

B. Backer Board: Cementitious type; See Section 09 21 16 - Gypsum Board Assemblies.

PART 3 EXECUTION

3.1 EXAMINATION

A. See RHA front ends for administrative requirements.

B. Verify that sub-floor surfaces, in areas with floor drains, are pitched uniformly to drains at 1/4 inch per foot nominal if not indicated on the drawings.
   1. Exception: Where tile is installed in areas of previously removed floor covering, and the sub-floor does not meet the stated pitch, build up thinset during installation to provide a positive pitch to drains of 1/8" per foot, minimum in all directions.

3.2 PREPARATION

A. Vacuum clean surfaces and damp clean.

B. Seal substrate surface cracks with filler.

C. Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

D. Scarify existing glazed structural block prior to installation of wall tile.

E. Place thresholds and edge strips at exposed tile edges.

F. Mix or shuffle all tile for intended installation area, inc

3.3 INSTALLATION - GENERAL

A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108/A118/A136, manufacturer's instructions, and TCNA (HB) or TCNA (HB-GP) recommendations, as applicable.

B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings. Arrange pattern so that a full tile or joint is centered on each wall and that no tile less than 1/2" width is used.

C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.

D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.
   1. Tile joint width shall be as recommended by manufacturer for the individual tile type indicated, however, tile joint shall be no less than 1/8 inch, unless otherwise noted.

E. Form internal angles square and external angles bullnosed.

F. Install ceramic accessories rigidly in prepared openings.

G. Maintain specified positive pitch to all floor drains in all directions.

H. Install non-ceramic trim in accordance with manufacturer's instructions.

I. Install thresholds where indicated on drawings.

J. Sound tile after setting. Replace hollow sounding units.

K. Control and Expansion Joints:
   1. Keep control and expansion joints free of mortar, grout, and adhesive.
   2. Provide interior control joints in tiled surfaces at 20’-25’ in each direction.
   3. Provide exterior control joints in tiled surfaces at 8’-12’ in each direction.
   4. Provide interior control joints in tiled surfaces exposed to direct sunlight or moisture at 8’ to 12’ in each direction.
   5. Provide movement joints where tile work abuts restraining surfaces, including perimeter walls, dissimilar floors, curbs, columns, pipes, door and window frames and where changes occur in backing materials.
   6. Joints through tilework directly over structural joints must never be narrower than the structural joint.
   7. Apply sealant to joints.

L. Prior to grouting, allow installation to completely cure; minimum of 48 hours.

M. Grout tile joints unless otherwise indicated on drawings. Use standard grout unless otherwise indicated on drawings.

N. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

O. When installation requires varying tile thickness due to patterning, build up thinset so that the entire installation is flush.

P. Seal all sanded and unsanded grout, with the exception of epoxy grout, per grout manufacturer's installation instructions.

3.4 INSTALLATION - FLOORS - THIN-SET METHODS

A. Over interior concrete substrates, install in accordance with TCNA (HB) Method F113, dry-set or latex-Portland cement bond coat, on ground, with standard grout, unless otherwise indicated on drawings.
   1. Where waterproofing membrane is indicated on drawings, install in accordance with TCNA (HB) Method F122, with latex-Portland cement grout, on ground.
   2. Where epoxy bond coat and grout are indicated on drawings, install in accordance with TCNA (HB) Method F131.

3.5 INSTALLATION - WALL TILE

A. Over cementitious backer units on studs, install in accordance with TCNA (HB) Method W244C, using membrane at toilet rooms.

B. Over gypsum wallboard on wood or metal studs, install in accordance with TCNA (HB) Method W243, thin-set with dry-set or latex-Portland cement bond coat.

C. Over interior concrete and masonry, install in accordance with TCNA (HB) Method W202I, thin-set with dry-set or latex-Portland cement bond coat.

3.6 CLEANING

A. See RHA front ends for Execution and Closeout Requirements.

B. Clean tile and grout surfaces per manufacturer's recommendations.

3.7 PROTECTION

A. See RHA front ends for Execution and Closeout Requirements: Protecting installed construction.

B. Do not permit traffic over finished floor surface for 4 days after installation.

C. Protect installed tile from damage due to subsequent construction until Date of Substantial Completion.

3.8 SCHEDULES

A. Refer to Finish Key and Schedules.

END OF SECTION

SECTION 09 65 00
RESILIENT FLOORING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Resilient tile/plank flooring.

B. Resilient stair accessories.

C. Installation accessories.

1.2 REFERENCE STANDARDS

A. ASTM F2169 - Standard Specification for Resilient Stair Treads; 2015 (Reapproved 2020).

B. ASTM F3261 - Standard Specification for Resilient Flooring in Modular Format with Rigid Polymeric Core; 2020.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

B. Shop Drawings: Field verify actual measurements before fabrication; indicate recorded measurements on shop drawings. Indicate floor patterns, colors and seaming plan.

C. Verification Samples: Submit one sample, 7-1/4"x48" illustrating color and pattern for each resilient flooring product specified.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum five years documented experience.

B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience and approved by flooring manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.

B. Store all materials off of the floor in an acclimatized, weather-tight space.

C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

1.6 FIELD CONDITIONS

A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

1.7 CLOSEOUT SUBMITTALS

A. Refer to RHA front ends for additional information.

B. Furnish 10 percent of installed vinyl tile flooring and base, 5 percent of installed linoleum flooring and 5 percent of rubber flooring of each type and color specified. Deliver all required overage and maintenance stock to Owner's specified location prior to start of installation.

C. Operation and Maintenance Data: Submit maintenance procedures, recommended maintenance materials and suggested schedule for cleaning, stripping and re-waxing.

PART 2 PRODUCTS

2.1 TILE FLOORING

A. Luxury Vinyl Tile: Class III Printed Vinyl Plank.
   1. Manufacturers:
      a. (LVP-1)B.O.D.: Next Floor: www.nextfloor.net.
      b. Approved Equal.
   2. Minimum Requirements: Comply with ASTM F1700, of Class corresponding to type specified.
   3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648, NFPA 253, ASTM E 648, or NFPA 253.
   4. Plank Size: ~ 7.25 by 39.38 inch.
   5. Wear Layer Thickness: 20 mil.
   6. Total Thickness: 2.5 mm.
   7. Installation Method(s): Ashlar/Non-directional -- Refer to Drawings
   8. Color(s): Refer to Finish Key/Schedule.
   9. Basis of Design:
      a. Colorado #417-114 "Charcoal Rustic Oak".

2.2 STAIR COVERING

A. Stair Treads: Rubber; full width and depth of stair tread in one piece; tapered thickness.
   1. Manufacturers:
      a. (RT-1) B.O.D.: Roppe Corporation; Rubber Stair Treads: www.roppe.com/#sle.
      b. Approved Equal..
   2. Nosing: Round.
   3. Texture: Ribbed.
   4. Color: As indicated on drawings.

2.3 ACCESSORIES

A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.

B. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.

C. Adhesive for Rubber Stair Tread :
   1. Manufacturers:
      a. B.O.D.: Roppe: EN-610 Nose Filler.
      b. Approved Equal.

D. Moldings, Transition and Edge Strips: Same material as flooring.
   1. Thickness: As required by installation and to comply with ADA Regulations.
   2. Color: To match color selection of flooring.

E. Sealer and Wax: Types recommended by flooring manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Verify that required floor-mounted utilities are in correct location.

3.2 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.

C. Fill excessive low areas with self leveling flowable fill. Reduce ridges or bumps by grinding.

D. Prohibit traffic until filler is fully cured.

E. Clean substrate to remove adhesives, coatings or contaminates that will inhibit adhesion of the new floor system. Use chemical treatment or bead blast as dictated by the existing conditions and as recommended by the flooring manufacturer .

F. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

3.3 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's written instructions.

C. Adhesive-Applied Installation:
   1. Spread only enough adhesive to permit installation of materials before initial set.
   2. Fit joints and butt seams tightly.
   3. Set flooring in place, press with heavy roller to attain full adhesion.

D. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
   1. Resilient Strips: Attach to substrate using adhesive.

E. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.4 INSTALLATION - TILE FLOORING

A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

B. Lay flooring with joints and seams parallel to building lines to produce symmetrical pattern.

C. Install plank tile in Ashlar pattern, with a random offset of at least 6 inches from adjacent rows. Allow minimum 1/2 full plank width at room or area perimeter.

3.5 INSTALLATION - STAIR COVERINGS

A. Install stair coverings in one piece for full width and depth of tread.

B. Adhere over entire surface. Fit accurately and securely.

3.6 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean, seal and maintain in accordance with manufacturer's instructions.

3.7 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION

SECTION 09 91 23
INTERIOR PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
   1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
   2. Exposed blocking for equipment, furnishings, and accessories.

D. Do Not Paint or Finish the Following Items:
   1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
   5. Stainless steel, anodized aluminum, bronze, terne-coated stainless steel, and lead items.
   6. Floors, unless specifically indicated.
   7. Brick, architectural concrete, cast stone, integrally colored plaster, and stucco.
   8. Glass.
   9. Concrete masonry units in utility, mechanical, and electrical spaces.
   10. Acoustical materials, unless specifically indicated.
   11. Concealed pipes, ducts, and conduits.

1.2 DEFINITIONS

A. Comply with ASTM D16 for interpretation of terms used in this section.

1.3 REFERENCE STANDARDS

A. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.

B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020 (Reapproved 2025).

C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.

D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

E. SCAQMD 1113 - Architectural Coatings; 1977, with Amendment (2016).

F. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).

G. SSPC-SP 2 - Hand Tool Cleaning; 2024.

H. SSPC-SP 3 - Power Tool Cleaning; 2024.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional infor Provide complete list of products to be used, with the following information for each:
   1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
   2. MPI product number (e.g., MPI #47).
   3. Cross-reference to specified paint system products to be used in project; include description of each system.
   4. Manufacturer's installation instructions.
   5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.

B. Samples: Submit one paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
   1. Allow 30 days for approval process, after receipt of complete samples by Architect.

C. Manufacturer's Instructions: Indicate special surface preparation procedures.

D. Maintenance Data: Submit data including product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, and repair of painted and finished surfaces.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Paint and Finish Materials: 1 gal of each color; from the same product run, store where directed.
   2. Label each container with finish type tag designation (ie: PNT-1) in addition to the manufacturer's label.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.

B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 10 years experience and approved by manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.7 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply materials when relative humidity exceeds 85 percent, at temperatures less than 5 degrees F above the dew point, or to damp or wet surfaces.

D. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 fc measured mid-height at substrate surface.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Provide paints and finishes from the same manufacturer to the greatest extent possible.

B. Paints:
1. B.O.D: Richards Paint: www.richardspaint.com.
2. Approved Equal.

C. Primer Sealers: Same manufacturer as top coats.

2.2 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.
1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
2. Supply each paint material in quantity required to complete entire project's work from a single production run.
3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Volatile Organic Compound (VOC) Content:
1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
b. 6 CRR-NY, Chapter III, Subpart A.
c. Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
1) Opaque, Flat: 50 g/L, maximum.
2) Opaque, Nonflat: 100 g/L, maximum.
3) Opaque, High Gloss: 150 g/L, maximum.
d. Architectural coatings VOC limits of the State of New York.
2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

D. Colors: As indicated on drawings. Final selection to be approved by Owner from manufacturer's full range of available colors.

2.3 PAINT SYSTEMS - INTERIOR

A. Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board and wood.
1. Two top coats and one coat primer.
2. Top Coat(s): Interior Latex; MPI #43, 44, 52, 53, 54, or 114.
a. Products:
1) B.O.D.: Richards Paint: www.richardspaint.com.
2) Approved Equal
3. Top Coat Sheen:

a. PNT-2) Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces.
b. PNT-3) Eggshell: MPI gloss level 3; use this sheen at walls.
c. PNT-4) Semi-Gloss: MPI gloss level 5; use this sheen at exposed finished carpentry, refer to finish schedule on drawings..

4. Primer: PNT-1) As recommended by top coat manufacturer for specific substrate.

2.4 ACCESSORY MATERIALS

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin application of paints and finishes until substrates have been adequately prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

3.2 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or repair existing paints or finishes that exhibit surface defects.

D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

E. Seal surfaces that might cause bleed through or staining of topcoat.

F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

H. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

3.3 APPLICATION

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

E. Sand wood surfaces lightly between coats to achieve required finish.

F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.4 FIELD QUALITY CONTROL

A. Owner will provide field inspection.

3.5 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.6 PROTECTION

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

3.7 SCHEDULE

A. Refer to Finish Key and Schedule on Drawings.

END OF SECTION

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SECTION 09 93 00
STAINING AND TRANSPARENT FINISHING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Field application of stains.

B. Field application of transparent finishes.

1.2 DEFINITIONS

A. Comply with ASTM D16 for interpretation of terms used in this section.

1.3 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; Current Edition.

B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.

C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020 (Reapproved 2025).

D. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.

E. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

1.4 SUBMITTALS

A. Product Data: Provide complete list of products to be used, with the following information for each:
   1. Manufacturer's name, product name and catalog number, and general product category.
   2. MPI product number (e.g. MPI #33).
   3. Manufacturer's installation instructions.
   4. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.

B. Samples: Submit one sample, illustrating selected colors and sheens for each system. Submit on actual wood substrate to be finished, 4 by 4 inch in size or in sample appropriate for type of work.

C. Certification: By manufacturer that stains and transparent finishes comply with VOC limits specified.

D. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

E. Manufacturer's Qualification Statement.

F. Applicator's Qualification Statement.

G. Maintenance Data: Submit data including product technical data sheets, safety data sheets (SDS), care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Stock Materials: Stain and transparent finish materials, 1/4 gal of each color; store where directed.
   2. Label each container with finish type mark (ie:ST-1) in addition to the manufacturer's label.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with at least three years of documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of stain or transparent finish, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Stain and Transparent Finish Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.7 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by manufacturer of stains and transparent finishes.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply materials when relative humidity exceeds 85 percent, at temperatures less than 5 degrees F above the dew point, or to damp or wet surfaces.

D. Minimum Application Temperature: 50 degrees F unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 fc measured mid-height at substrate surface.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Provide finishes from the same manufacturer to the greatest extent possible.

B. Transparent Finishes:

C. Stains:
1. B.O.D.: Richards Paint: www.richardspaint.com.
2. Approved Equal.

2.2 STAINS AND TRANSPARENT FINISHES - GENERAL

A. Finishes:
1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.
2. Provide finishes capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
3. Provide materials compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
4. Supply each finish material in quantity required to complete entire project's work from a single production run.
5. Do not reduce, thin, or dilute finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Volatile Organic Compound (VOC) Content:
   1. Provide stains and transparent finishes that comply with the most stringent requirements specified in the following:
      a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
      b. 6 CRR-NY, Chapter III, Subpart A.
   2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

C. Flammability: Comply with applicable code for surface burning characteristics.

D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

E. Colors: As indicated on drawings. Final selection to be made on site by Owner/Architect.

2.3 INTERIOR STAIN AND TRANSPARENT FINISH SYSTEMS

A. Finish on Wood - Doors and finished millwork as shown on drawings.
   1. ST-1) Stain: Semi-transparent stain for wood, solvent based.
      a. Products:
         1) B.O.D.: Richards Paint: www.richardspaint.com.
         2) Approved Equal.
   2. ST-2) Top Coat: Alkyd varnish; MPI #73 or 75.
      a. Products:
         1) B.O.D.: Richards Paint: www.richardspaint.com.
         2) Approved Equal.

2.4 ACCESSORY MATERIALS

A. Accessory Materials: Cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of finished surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin application of stains and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Wood: 15 percent, measured in accordance with ASTM D4442.

3.2 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or repair existing finishes that exhibit surface defects.

D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

E. Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.

F. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.

3.3 APPLICATION

A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

D. Sand wood surfaces lightly between coats to achieve required finish.

E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

F. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.

G. Reinstall items removed prior to finishing.

3.4 FIELD QUALITY CONTROL

A. Owner will provide field inspection.

3.5 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.6 PROTECTION

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

SECTION 10 28 00
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Residential toilet, shower, and bath accessories.

1.2 REFERENCE STANDARDS

A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

B. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2024.

C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025.

D. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.

E. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium; 2017 (Reapproved 2022).

F. ASTM C1036 - Standard Specification for Flat Glass; 2025.

G. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2025.

H. GSA CID A-A-3002 - Mirrors, Glass; U.S. General Services Administration; 1996.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.

1.4 SUBMITTALS

A. Product Data: Refer to the RHA front ends for additional information. Submit data on accessories describing size, finish, details of function, and attachment methods.

B. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Residential Toilet, Shower, and Bath Accessories:
   1. B.O.D.: Franklin Brass: www.franklin-brass.com.
   2. B.O.D.: Kleankin
   3. B.O.D.: Kohler: www.kohler.com
   4. B.O.D.: Design House: www.todaysdesignhouse.com
   5. B.O.D.: Moen:www.moen.com

6. Approved Equal.

2.2 MATERIALS

A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
   1. Grind welded joints smooth.
   2. Fabricate units made of metal sheet of seamless sheets with flat surfaces.

B. Stainless Steel Sheet: ASTM A666/A666M, Type 304.

C. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.

D. Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.

E. Mirror Glass: Tempered safety glass, ASTM C1048; and ASTM C1036 Type I, Class 1, Quality Q2, with silvering as required.

F. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.

G. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.3 RESIDENTIAL TOILET, SHOWER, AND BATH ACCESSORIES

A. Medicine Cabinet: Metal cabinet, shelves, and door; surface mounted.
   1. Overall Size: 35.5" inches wide by 25.5" inches high.
   2. Cabinet Construction: Stainless steel, satin finish.
   3. Shelves: Adjustable, stainless steel; provide not less than three shelves.
   4. Door Type: Mirror with satin finish stainless steel frame.
   5. Triple Doors: Fitted with soft-close gravity hinges.
   6. Top/bottom Illuminated Models: Integrated LED with USB
   7. Products:
      a. B.O.D: Kleankin.
      b. Approved Equal.

B. Toilet Paper Holder: Surface mounted, single roll, concealed attachment.
   1. Material: Zinc die cast with aluminum tubing; Oil-Rubbed Bronze finish.
   2. Type: Spring-loaded spindle with brackets.
   3. Type: Straight post holder.
   4. Type: Post with hanging holder.
   5. Products:
      a. B.O.D. : Franklin Brass; Kinla Collection.
      b. Approved Equal.

C. Towel Bar: Round tubular bar; round mounting posts, concealed attachment.
   1. Mounting Post Material: Zinc die cast with aluminum tubing; Oil-Rubbed Bronze finish.
   2. Bar Material: To match mounting posts..
   3. Length: 24 inches.
   4. Products:
      a. (P-5) B.O.D. : Franklin Brass; Kinla Collection.
      b. Approved Equal..

D. Towel Ring: Post with hanging ring, concealed attachment.
   1. Post Material: Zinc die cast with aluminum tubing; Oil-Rubbed Bronze finish.
   2. Ring Material: To match post material.
   3. Products:
      a. (P-6) B.O.D. : Franklin Brass; Kinla Collection.
      b. Approved Equal..

E. Shower Curtain Rod: Straight tube, 1 inch diameter, with mounting flanges for Tension attachment.
   1. Material: Stainless steel; Oil-Rubbed Bronze finish.
   2. Length: 42-72 inches.
   3. Products:
      a. (P-7)B.O.D.: Design House: www.todaysdesignhouse.com.
      b. Approved Equal.

F. Robe Hook: Single-prong, concealed attachment.
   1. Material: Zinc die cast with aluminum tubing; Oil-Rubbed Bronze finish.
   2. Products:
      a. (P-8) B.O.D. : Franklin Brass; Kinla Collection.
      b. Approved Equal..

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify exact location of accessories for installation.

C. For electrically-operated accessories, verify that electrical power connections are ready and in the correct locations.

D. Verify that field measurements are as indicated on drawings.

E. Verify installation of blocking in/on walls.

3.2 PREPARATION

A. Deliver inserts and rough-in frames to site for timely installation.

B. Provide templates and rough-in measurements as required.

3.3 INSTALLATION

A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.

B. Install plumb and level, securely and rigidly anchored to substrate.

C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

3.4 PROTECTION

A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

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SECTION 10 28 19
TUB AND SHOWER ENCLOSURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Tub and shower surrounds.

1.2 REFERENCE STANDARDS

A. ASTM A276/A276M - Standard Specification for Stainless Steel Bars and Shapes; 2025.

B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).

C. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.

D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.3 SUBMITTALS

A. Product Data: Provide manufacturer's literature for enclosure.

B. Shop Drawings: Indicate layout, dimensions, identification of components, and interface with adjacent construction.

C. Manufacturer's Installation Instructions: Indicate complete preparation, installation, and cleaning requirements.

D. Specimen warranty.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products under cover and elevated above grade in manufacturer's unopened packaging until installation.

1.6 WARRANTY

A. Manufacturer Warranty: Provide 10-year manufacturer warranty against defects in workmanship or material. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Cast Polymer Tub and Shower Surrounds:
   1. B.O.D.: Delta: www.deltafaucet.com.
   2. Approved Equal

2.2 TUB AND SHOWER SURROUNDS

A. Description: Cast polymer panels self-supporting over structural members; installed in alcove above shower receptor or tub; available as individual panels or as kits.

B. Shower Wall Panel Kit Model B12207-6032-WH, consisting of two side panels, one back panel, two corner molding strips, horizontal grab bars, shower seat, and two corner soap shelves.
   1. Alcove Panel Dimensions: 60" by 32" by 72" inches.

2.3 MATERIALS

A. Cast Polymer Surround Material: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, unfilled, and pigments; homogenous, nonporous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
   1. Color and Pattern: As indicated on drawings.

B. Sealant: One-part mildew-resistant silicone sealant, complying with ASTM C920, clear.

C. Touch-Up Materials: As recommended by coating manufacturer for field application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Do not begin installation until supports and adjacent substrates are complete.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean substrates thoroughly prior to installation.

B. Prepare substrates as recommended by the manufacturer.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved shop drawings.

B. Fit and align tub and shower enclosure level and plumb.

3.4 FIELD QUALITY CONTROL

A. Verify enclosure does not leak while shower is running and door is fully closed and catch is engaged.

3.5 PROTECTION

A. Protect installed products until Date of Substantial Completion.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

SECTION 11 30 13
RESIDENTIAL APPLIANCES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Kitchen appliances.

1.2 RELATED REQUIREMENTS

A. Section 26 05 83 - Wiring Connections: Electrical connections for appliances.

1.3 REFERENCE STANDARDS

A. ICC (IMC)-2021 - International Mechanical Code; 2021.

B. ICC (IRC)-2021 - International Residential Code for One- and Two-Family Dwellings; 2021.

C. UL (DIR) - Online Certifications Directory; Current Edition.

D. UL 2158A - Clothes Dryer Transition Duct; Current Edition, Including All Revisions.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for more information. Manufacturer's data indicating dimensions, capacity, and operating features of each piece of residential equipment specified.

B. Copies of Warranties: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

B. Electric Appliances: Listed and labeled by UL (DIR) and complying with NEMA Standards (National Electrical Manufacturers Association).

C. Gas Appliances: Bearing design certification seal of American Gas Association (AGA).

1.6 WARRANTY

A. Provide five (5) year manufacturer warranty on refrigeration system of refrigerators.

PART 2 PRODUCTS

2.1 KITCHEN APPLIANCES

A. Range: Electric, free-standing, with standard burners and removable drip pans
   1. Size: 30 inches wide.
   2. Oven: Manual cleaning with electronic ignition.
   3. Elements: Four (4).
   4. Controls: Push to turn knobs.

5. Features: Include storage drawer, oven door window, and oven light. Sensi-temp technology. to meet UL858 Household Electric Ranges standard for Safety.
6. Exterior Finish: Porcelain enameled steel, color as indicated.
7. Manufacturers:
   a. (A-1) GE Appliances: www.geappliances.com/#sle.
   b. Approved Equal..

B. Cooking Exhaust: Range hood.
1. Size: 30 inches wide.
2. Fan: Two-speed, 500 cfm
3. Exhaust: Recirculating.
4. Features: Include cooktop light.
5. Exterior Finish: Painted steel, color white.
6. Manufacturers:
   a. (A-2) Broan-NuTone, LLC: www.broan-nutone.com/#sle.
   b. Approved Equal.

2.2 ACCESSORIES

A. Dryer Vent Assembly: Comply with ICC (IMC)-2021 and ICC (IRC)-2021.
1. Exhaust Duct: Aluminum ribbon, 4-inch diameter, comply with UL 2158A.
   a. Clamps: Stainless steel, 3-1/2 to 4-3/4-inch diameter range.
2. Finish for Exposed Metals: Black powder coat.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify utility rough-ins are provided and correctly located.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.3 ADJUSTING

A. Adjust equipment to provide efficient operation.

3.4 CLEANING

A. Remove packing materials from equipment and properly discard.

B. Wash and clean equipment.

END OF SECTION

SECTION 12 21 13
HORIZONTAL LOUVER BLINDS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Horizontal slat louver blinds.

B. Operating hardware.

1.2 REFERENCE STANDARDS

A. WCMA A100.1 - Standard for Safety of Window Covering Products; 2022.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide data indicating physical and dimensional characteristics and operating features.

B. Shop Drawings: Indicate opening sizes, tolerances required, method of attachment, clearances, and operation.

C. Samples: Submit one samples, 4 inch minimum long illustrating slat materials and finish, cord type and color.

D. Manufacturer's Installation Instructions: Indicate special procedures.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Blind Assemblies: One of each size.
   2. Extra Slats: 20 of each type and size.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.5 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.6 COORDINATION

A. Coordinate the Work with window installation and placement of concealed blocking to support blinds.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Horizontal Louver Blinds:
   1. B.O.D.: Levolor: www.commercial.levolor.com/#sle.
   2. Approved Equal

2.2 BLINDS

A. Description: Horizontal slat louvers hung from full-width headrail with full-width bottom rail.

B. Manual Operation: Control of raising and lowering by hand with full range locking; blade angle adjustable by control wand.

C. Plastic Slats: Polymer composite, radiused slat corners.
   1. Width: 2 inch.
   2. Color: As indicated on drawings.
   3. Texture: Simulated wood-grain.

D. Slat Support: Woven polypropylene cord, ladder configuration.

E. Head Rail: Pre-finished, formed aluminum box, with end caps; internally fitted with hardware, pulleys, and bearings for operation; same depth as width of slats.
   1. Color: Same as slats.

F. Lift Cord: Braided nylon, continuous loop with restraining device; comply with WCMA A100.1.
   1. Free end weighted.
   2. Color: As selected by Architect.

G. Control Wand: Extruded hollow plastic; hexagonal shape.
   1. Non-removable type.
   2. Length of window opening height less 12 inch.
   3. Color: As selected by Architect.

H. Headrail Attachment: Wall brackets.

I. Accessory Hardware: Type recommended by blind manufacturer.

2.3 FABRICATION

A. Fabricate blinds to fit within openings with uniform edge clearance of 1/4 inch.

B. At openings requiring multiple blind units, provide separate blind assemblies with space of 1/2 inch between blinds, located at window mullion centers.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that openings are ready to receive the work.

3.2 INSTALLATION

A. Install blinds in accordance with manufacturer's instructions.

3.3 TOLERANCES

A. Maximum Offset From Level: 1/8 inch.

3.4 ADJUSTING

A. Adjust blinds for smooth operation.

3.5 CLEANING

A. Clean blind surfaces just prior to occupancy.

3.6 SCHEDULE

A. Refer to Drawings and Window Schedule for sizes, quantities, and locations.

END OF SECTION

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SECTION 12 35 30
RESIDENTIAL CASEWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Kitchen cabinets.

B. Vanity cabinets.

1.2 REFERENCE STANDARDS

A. BHMA A156.9 - Cabinet Hardware; 2020.

B. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2024.

C. KCMA A161.1 - Performance and Construction Standard for Kitchen and Vanity Cabinets; 2022.

D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.3 SUBMITTALS

A. Product Data: Provide component dimensions, configurations, construction details, and joint details.

B. Shop Drawings: Indicate casework locations, scale plans, elevations, clearances required, rough-in and anchor placement dimensions and tolerances.

C. Cabinet Finish Sample: Submit one samples of each type of finish, 2 inches by 3 inches in size, illustrating color, texture, gloss, and wood species.

D. Cabinet Door Sample: Of sufficient size to show cabinet style and finish, with selected hardware.

E. Manufacturer's Qualification Statement.

F. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.4 WARRANTY

A. Correct defective Work within a five year period after Date of Substantial Completion.

B. Provide five year manufacturer warranty for cabinets free from defects from material or workmanship.

PART 2 PRODUCTS

2.1 CABINETS

A. Manufacturers:
   1. B.O.D.: Kraftmaid Cabinetry, Inc: www.kraftmaid.com/#sle.
   2. Approved Equal..

B. Kitchen and Vanity Cabinets: Premanufactured and factory-finished, complying with construction and testing requirements in KCMA A161.1.

C. Cabinet Box: Framed construction.

1. Side Panels: Plywood.
   a. Exposed Side Panel Finish: Wood veneer, coordinate with cabinet door and drawer color/finish.
2. Back Panel: Plywood.
3. Bottom (and Top) Panel: Plywood.
4. Face Frame: Solid wood.
5. Interior Cabinet Finish: Thermally fused laminate.
6. Exposed Panel Edges: Finish with manufacturer's standard edge banding, color coordinated with other exposed finishes.

D. Cabinet Door/Drawer Configuration: Partial overlay.

E. Cabinet Doors:
1. B.O.D. Style: Geneva Half-Overlay manufactured by Kraftmaid, or Approved Equal.
2. Species: Maple.
3. B.O.D. Paint Color: PNT-5: "Frost" white as manufactured by Kraftmaid or approved equal.

F. Drawers:
1. Solid wood sides with dovetail joints, plywood bottom panel.
2. Drawer Front: To match cabinet doors in style, material, and finish.
3. Interior Finish: Manufacturer's standard.

G. Shelves: Manufacturer's standard adjustable shelves and shelf supports.

H. Trim: Wood 3/4" x 3/4" outside corner; color coordinating with typical cabinet finish.
1. Install at end of Fiberglass Reinforced Panling.
2. See elevations for locations.
3. See section 06 83 16 - Fiberglass Reinforced Panling.

I. Cabinet Hardware: As selected from manufacturer's standard types, styles and finishes, and as indicated below.
1. Comply with BHMA A156.9.
2. Drawer and Cabinet Pulls: Bar Pull, 3-1/2", Oil Rubbed Bronze Finish.
3. Hinges: Manufacturer's standard soft-close concealed hinges or approved equal.
4. Drawer Slides: Manufacturer's standard drawer slides or approved equal.

J. Countertops: As specified in other sections.

2.2 MATERIALS

A. Wood-Based Materials:
1. Solid Wood: Air-dried to 4.5 percent moisture content, then tempered to 6 percent moisture content before use.

B. Solid Wood: Clear, dry, sound, plain sawn, selected for species grain and color, no defects.

C. Hardwood Plywood: Veneer core; same species as exposed solid wood, clear, compatible grain and color, no defects. Band exposed edges with solid wood of same species as veneer.

2.3 FABRICATION

A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.

B. Fabricate corners and joints without gaps.

C. Fabricate each unit to be rigid and not dependent on adjacent units for rigidity.

D. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify adequacy of support framing.

3.2 INSTALLATION

A. Install casework, components and accessories in accordance with manufacturer's instructions.

B. Set casework items plumb and square, securely anchored to building structure.

C. Carefully scribe casework abutting other components, with maximum gaps of 1/8 inch.

3.3 ADJUSTING

A. Adjust doors, drawers, hardware, and other moving or operating parts to function smoothly.

3.4 CLEANING

A. Clean casework, countertops, shelves, and hardware.

3.5 PROTECTION

A. Do not permit finished casework to be exposed to continued construction activity.

3.6 SCHEDULES

A. As shown on drawings.

END OF SECTION

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SECTION 12 36 00
COUNTERTOPS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Countertops for manufactured casework.

B. Sinks molded into countertops.

C. Wall-hung back splash.

1.2 REFERENCE STANDARDS

A. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

D. IAPMO Z124 - Plastic Plumbing Fixtures; 2022, with Editorial Revision.

E. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.

F. ISO 4586-2 - High-Pressure Decorative Laminates (HPL, HPDL) – Sheets Based on Thermosetting Resins (Usually Called Laminates) – Part 2: Determination of Properties; 2018.

G. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for more information. Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Specimen warranty.

B. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.

C. Verification Samples: For each finish product specified, minimum size 3 inchesX 5 inches, representing actual product, color, and patterns.

D. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

E. Installer's qualification statement.

F. Installation Instructions: Manufacturer's installation instructions and recommendations.

G. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 COUNTERTOPS

A. Plastic Laminate Countertops: High-pressure decorative laminate (HPDL) sheet bonded to substrate.
   1. Laminate Sheet: NEMA LD 3, Grade HGP, for postforming, 0.039 inch nominal thickness.
      a. Manufacturers:
         1) B.O.D.: Wilsonart: www.wilsonart.com.
         2) Approved Equal.
      b. Finish: Matte or suede, gloss rating of 5 to 20.
      c. Surface Color and Pattern: As indicated on drawings.
   2. Exposed Edge Treatment: Postformed laminate; front edge substrate built up to minimum 1-1/4 inch thick with raised radiused edge, integral coved backsplash with radiused top edge.
   3. Back Splashes: Same material, same construction.
   4. Fabricate in accordance with manufacturer's standard requirements.

B. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
   1. Flat Sheet Thickness: 1/2 inch, minimum.
   2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, unfilled, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
      a. Manufacturers:
         1) B.O.D.: LX Hausys America, Inc; HI-MACS 12mm: www.lxhausys.com/#sle.
         2) Approved Equal.
      b. Sinks and Bowls: Integral castings; minimum 3/4 inch wall thickness; comply with IAPMO Z124 Model #1612, as manufactured by LX Hausys or approved equal.
      c. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
      d. Color and Pattern: As indicated on drawings.
   3. Countertops shall be conventionally fabricated and self-edge banded with backsplash at cabinetry.
   4. Other Components Thickness: 1/2 inch, minimum.
   5. Exposed Edge Treatment: Built up to minimum 1-1/2 inch thick; square edge; use marine edge at sinks.
   6. Back and End Splashes: Same sheet material, square top; minimum 4 inches high.
   7. Fabricate in accordance with manufacturer's standard requirements.

C. Stainless Steel Back Splash: ASTM A666/A666M, Type 304, stainless steel sheet
   1. Manufacturers:
      a. B.O.D.: Broan-Nutone.
      b. Approved Equal.
   2. Finish: 4B satin brushed finish.
   3. Edge and Backsplash Sink Details: As indicated on drawings.
   4. Splash Dimensions: 30 inch wide by 24 inch high by 0.023 inch thick, unless otherwise indicated.

2.2 MATERIALS

A. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

B. Joint Sealant: Mildew-resistant silicone sealant, white.

2.3 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
   1. Join lengths of tops using best method recommended by manufacturer.
   2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
   3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
   1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
   2. Height: 4 inches, unless otherwise indicated.

C. Solid Surfacing: Fabricate tops up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.
   1. Integral sinks: Shop-mount securely to countertop with adhesives, using flush configuration, as per manufacturer's instructions, and as detailed on drawings.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install vanities in accordance with manufacturer’s instructions and approved shop drawings

B. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

C. Attach plastic laminate countertops using screws with minimum penetration into substrate board of 5/8 inch.

D. Attach stainless steel back splash using stainless steel fasteners and clips.

E. Seal joint between back/end splashes and vertical surfaces.

3.4 TOLERANCES

A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.

B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.

C. Field Joints: 1/8 inch wide, maximum.

3.5 CLEANING

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

SECTION 22 10 05
PLUMBING PIPING AND SPECIALTIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Sanitary waste piping, above grade.

B. Domestic water piping, above grade.

C. Pipe, pipe fittings, valves, connections and specialties for:
   1. Sanitary sewer systems.
   2. Domestic water systems.
   3. Gas systems.
   4. Pipe flanges, unions, and couplings.
   5. Pipe hangers and supports.
   6. Pipe sleeve-seal systems.

1.2 REFERENCE STANDARDS

A. ANSI Z21.22 - American National Standard for Relief Valves for Hot Water Supply Systems; 2015 (Reaffirmed 2020).

B. ANSI Z223.1 - National Fuel Gas Code; 2024.

C. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300; 2021.

D. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 2021.

E. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2021.

F. ASME B16.23 - Cast Copper Alloy Solder Joint Drainage Fittings: DWV; 2021.

G. ASME B16.29 - Wrought Copper and Wrought Copper Alloy Solder-Joint Drainage Fittings—DWV; 2022.

H. ASME B31.9 - Building Services Piping; 2025.

I. ASME BPVC-IV - Boiler and Pressure Vessel Code, Section IV - Rules for Construction of Heating Boilers; 2025, with Errata.

J. ASME BPVC-IX - Boiler and Pressure Vessel Code, Section IX - Qualification Standard for Welding, Brazing, and Fusing Procedures; Welders; Brazers; and Welding, Brazing, and Fusing Operators; 2025.

K. ASSE 1003 - Water Pressure Reducing Valves for Potable Water Distribution Systems; 2023.

L. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2024.

M. ASTM B32 - Standard Specification for Solder Metal; 2020.

N. ASTM B42 - Standard Specification for Seamless Copper Pipe, Standard Sizes; 2020.

O. ASTM B68/B68M - Standard Specification for Seamless Copper Tube, Bright Annealed; 2025.

P. ASTM B75/B75M - Standard Specification for Seamless Copper Tube; 2020.

Q. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2022.

R. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric); 2020.

S. ASTM B306 - Standard Specification for Copper Drainage Tube (DWV); 2020.

T. ASTM B813 - Standard Specification for Water Flushable Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube; 2024.

U. ASTM B828 - Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings; 2023.

V. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120; 2021a.

W. ASTM D2241 - Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series); 2025a.

X. ASTM D2466 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40; 2024.

Y. ASTM D2564 - Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems; 2020 (Reapproved 2024).

Z. ASTM D2665 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings; 2025.

AA. ASTM D2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2021.

BB. ASTM D2855 - Standard Practice for the Two-Step (Primer and Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets; 2020 (Reapproved 2024).

CC. ASTM D3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2024, with Editorial Revision (2025).

DD. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe; 2014 (Reapproved 2021).

EE. ASTM F493 - Standard Specification for Solvent Cements for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings; 2022.

FF. ASTM F679 - Standard Specification for Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings; 2021.

GG. ASTM F876 - Standard Specification for Crosslinked Polyethylene (PEX) Tubing; 2025.

HH. ASTM F877 - Standard Specification for Crosslinked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems; 2025.

II. ASTM F1960 - Standard Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-Linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing; 2024.

JJ. AWWA C105/A21.5 - Polyethylene Encasement for Ductile-Iron Pipe Systems; 2018.

KK. AWWA C111/A21.11 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings; 2023.

LL. AWWA C151/A21.51 - Ductile-Iron Pipe, Centrifugally Cast; 2023.

MM. AWWA C900 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 In. through 60 In. (100 mm through 1500 mm); 2022.

NN. ICC (IFGC) - International Fuel Gas Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

OO. ICC (IPC) - International Plumbing Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

PP. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2025.

QQ. NSF 61 - Drinking Water System Components - Health Effects; 2024.

RR. NSF 372 - Drinking Water System Components - Lead Content; 2024.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for more information. Provide data on pipe materials, pipe fittings, valves, hangers, supports and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.

B. Project Record Documents: Record actual locations of valves.

C. Hangers and Supports: Submit manufacturers catalog information including load capacity.

D. Pumps: Submit pump type, capacity, certified pump curves showing pump performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable. Include electrical characteristics and connection requirements.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. Valve Repacking Kits: One for each type and size of valve.

1.4 QUALITY ASSURANCE

A. Perform work in accordance with applicable codes.

B. Perform Work in accordance with standards of the State of New York.

C. Valves: Manufacturer's name and pressure rating marked on valve body.

D. Welding Materials and Procedures: Comply with ASME BPVC-IX and applicable state labor regulations.

E. Welder Qualifications: Certified in accordance with ASME BPVC-IX.

F. Identify pipe with marking including size, ASTM material classification, ASTM specification, potable water certification, water pressure rating.

1.5 REGULATORY REQUIREMENTS

A. Conform to applicable code for installation of backflow prevention devices.

B. Provide certificate of compliance from authority having jurisdiction indicating approval of installation of backflow prevention devices.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.

B. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

1.7 FIELD CONDITIONS

A. Do not install underground piping when bedding is wet or frozen.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.2 SANITARY WASTE PIPING, ABOVE GRADE

A. Cast Iron Pipe: CISPI 301, hubless, service weight.
   1. Fittings: Cast iron.
   2. Joints: CISPI 310, neoprene gaskets and stainless steel clamp-and-shield assemblies.

B. PVC Pipe: ASTM D2729.
   1. Fittings: PVC.
   2. Joints: Solvent welded, with ASTM D2564 solvent cement.

C. PVC Pipe - (Not For Use in Return Air Plenums or Exposed in Places of Assembly.): ASTM D2665.
   1. Fittings: PVC.
   2. Joints: Solvent welded, with ASTM D2564 solvent cement.

D. PVC Pipe: ASTM D1785 Schedule 40, or ASTM D2241 SDR 26 with not less than 150 psi pressure rating.
   1. Fittings: ASTM D2466, PVC.
   2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.3 DOMESTIC WATER PIPING, ABOVE GRADE

A. Copper Tubing for pipe 2 1/2 inches and smaller: ASTM B 88 (ASTM B 88M), Type L (B), Drawn (H)
   1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
   2. Joints: ASTM B 32, alloy Sn95 solder. Lead free.

B. Copper Tubing for pipe 3 inches and larger: ASTM B88, Type L (B), hard drawn, rolled grooved ends
   1. Fittings: ASTM B584 bronze sand castings, grooved ends.
   2. Joints: Grooved mechanical couplings meeting ASTM F1476.
      a. Housing Clamps: ASTM A395/A395M and ASTM A536 ductile iron, enamel coated, compatible with copper tubing sizes, to engage and lock designed to permit some angular deflection, contraction, and expansion.
      b. Gasket: Elastomer composition for operating temperature range from -30 degrees F to 180 degrees F.
      c. Accessories: Stainless steel bolts, nuts, and washers.
   3. Mechanically pressed fitting are allowed for this application.

C. Cross-Linked Polyethylene (PEX) Pipe: ASTM F876 or ASTM F877.
   1. Manufacturers:
      a. B.O.D.: SharkBite, a brand of Reliance Worldwide Corporation: www.sharkbite.com/#sle.
      b. Approved Equal.
   2. Fittings: Brass and engineered polymer (EP) ASTM F1960.

2.4 NATURAL GAS PIPING, ABOVE GRADE

A. Steel Pipe: ASTM A53/A53M Schedule 40 black.
   1. Fittings: ASME B16.3, malleable iron, or ASTM A234/A234M, wrought steel welding type.
   2. Joints: NFPA 54, Threaded for pipe size 2-1/2" inch and smaller and welded for pipe size 3 inch and larger to ASME B31.1.
   3. Exterior gas piping above grade:

a. Apply one coat of rust inhibitive primer paint and one finish coat of paint per manufacturer's recommendation. Rust preventive enamel, OSHA approved. Color to be coordinated with Owner.

2.5 FLUE AND COMBUSTION AIR PIPING

A. CPVC Pipe: ULC S636 compliant, chlorinated polyvinyl chloride (CPVC-FGV) material.
1. Fittings: ULC S636 compliant.
2. Joints: ULC S636 compliant.
3. All ULC S636 compliant pipes, fitting and cements to be supplied from same manufacturer.

2.6 PIPE FLANGES, UNIONS, AND COUPLINGS

A. Unions for Pipe Sizes 2 inches and Under:
1. Copper Tube and Pipe: Class 150 bronze unions with soldered joints.
2. PVC Piping: PVC
3. CPVC Piping: PVC

B. Flanges for Pipe Size Over 2 inches:
1. Copper Tube and Pipe: Class 150 slip-on bronze flanges; preformed neoprene gaskets.
2. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.
3. PVC Piping: PVC.
4. CPVC Piping: PVC.
5. Gaskets: 1/16 inch thick preformed neoprene gaskets.

2.7 PIPE HANGERS AND SUPPORTS

A. Provide hangers and supports that comply with MSS SP-58.
1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.

B. Plumbing Piping - Drain, Waste, and Vent:
1. Conform to ASME B31.9.
2. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
3. Hangers for Pipe Sizes 2 inch and Over: Carbon steel, adjustable, clevis.
4. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
5. Wall Support for Pipe Sizes to 3 inch: Cast iron hook.
6. Wall Support for Pipe Sizes 4 inch and Over: Welded steel bracket and wrought steel clamp.
7. Vertical Support: Steel riser clamp.
8. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
9. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

C. Plumbing Piping - Water:
1. Conform to ASME B31.9.
2. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
3. Hangers for Cold Pipe Sizes 2 inch and Over: Carbon steel, adjustable, clevis.
4. Hangers for Hot Pipe Sizes 2 to 4 inch: Carbon steel, adjustable, clevis.
5. Hangers for Hot Pipe Sizes 6 inch and Larger: Adjustable steel yoke, cast iron pipe roll, double hanger.
6. Multiple or Trapeze Hangers: Steel channels with welded supports or spacers and hanger rods.
7. Multiple or Trapeze Hangers for Hot Pipe Sizes 6 Inches and Over: Steel channels with welded supports or spacers and hanger rods, cast iron roll.
8. Wall Support for Pipe Sizes Up to 3 inch: Cast iron hook.
9. Wall Support for Pipe Sizes 4 inch and Larger: Welded steel bracket and wrought steel clamp.
10. Wall Support for Hot Pipe Sizes 6 inch and Larger: Welded steel bracket and wrought steel clamp with adjustable steel yoke and cast iron pipe roll.

11. Vertical Support: Steel riser clamp.
12. Floor Support for Cold Pipe: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
13. Floor Support for Hot Pipe Sizes to 4 inch: Cast iron adjustable pipe saddle, locknut, nipple, floor flange, and concrete pier or steel support.
14. Floor Support for Hot Pipe Sizes 6 inch and Larger: Adjustable cast iron pipe roll and stand, steel screws, and concrete pier or steel support.
15. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

D. Hanger Fasteners: Attach hangers to structure using appropriate fasteners, as follows:
1. Concrete Wedge Expansion Anchors: Comply with ICC-ES AC193.
2. Masonry Wedge Expansion Anchors: Comply with ICC-ES AC01.
3. Concrete Screw Type Anchors: Comply with ICC-ES AC193.
4. Masonry Screw Type Anchors: Comply with ICC-ES AC106.
5. Concrete Adhesive Type Anchors: Comply with ICC-ES AC308.

E. FLASHING
1. Metal Flashing: 26 gage thick galvanized steel.
2. Metal Counterflashing: 22 gage thick galvanized steel.
3. Lead Flashing:
   a. Waterproofing: 5 lb./sq. ft sheet lead.
   b. Soundproofing: 1 lb./sq. ft sheet lead.
4. Flexible Flashing: 47 mil thick sheet compatible with roofing.
5. Caps: Steel, 22 gage minimum; 16 gage at fire resistant elements.

F. MECHANICAL SLEEVE SEALS
1. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

2.8 PIPE SLEEVE-SEAL SYSTEMS

A. Modular Mechanical Seals:
1. Elastomer-based interlocking links continuously fill annular space between pipe and wall-sleeve, wall or casing opening.
2. Watertight seal between pipe and wall-sleeve, wall or casing opening.
3. Size and select seal component materials in accordance to service requirements.
4. Glass reinforced plastic pressure end plates.

2.9 BALL VALVES

A. Manufacturers:
1. B.O.D.: Watts: www.watts.com.
2. Approved Equal

B. Construction, 4 Inches and Smaller: MSS SP-110, Class 150, 400 psi CWP, bronze body, 304 stainless steel ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle, threaded ends. Lead free.

2.10 FLOOR DRAIN / FLOOR SINK

A. Floor Drain Cover, FD-1: 4" Drain Cover, 3-3/8", Oil Rubbed Bronze finish

B. Manufacturer:
1. B.O.D.: Moen: www.moen.com
2. Approved Equal.

2.11 SUMP PITS

A. Type: Vertical centrifugal, direct connected, duplex arrangement.

B. Casing: Cast iron volute with radial clearance around impeller.

C. Impeller: Bronze keyed to stainless steel shaft.

D. Support: Cast iron pedestal motor support on steel floor plate with gas tight gaskets.

E. Bearings: Forced grease lubricated bronze sleeve spaced maximum 48 inches and grease lubricated ball thrust at floor plate.

F. Drive: Flexible coupling to vertical, solid shaft ball bearing electric motor.

G. Sump: Steel cover plate with inspection opening and cover, and alarm fittings.

H. Controls (Duplex): Float operated mechanical alternator with float rod, stops, and corrosion resistant float to alternate operation of pumps. Cut-in second pump on rising level or lead pump failure. Furnish high level alarm with transformer, alarm bell, and standpipe and extra set of wired terminals for remote alarm circuit.

PART 3 EXECUTION

3.1 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.

B. Remove scale and dirt, on inside and outside, before assembly. Protect open ends with temporary plugs or caps.

C. Prepare piping connections to equipment with flanges or unions.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.

C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.

D. Install piping to maintain headroom, conserve space, and not interfere with use of space.

E. Group piping whenever practical at common elevations.

F. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.

G. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.

H. Provide access where valves and fittings are not exposed.

I. Install vent piping penetrating roofed areas to maintain integrity of roof assembly.

J. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc-rich primer to welding.

K. Provide support for utility meters in accordance with requirements of utility companies.

L. Install valves with stems upright or horizontal, not inverted.

M. Install water piping to ASME B31.9.

N. Copper Pipe and Tube: Make soldered joints in accordance with ASTM B828, using specified solder, and flux meeting ASTM B813; in potable water systems use flux also complying with NSF 61 and NSF 372.

O. PVC Pipe: Make solvent-welded joints in accordance with ASTM D2855.

P. Sleeve pipes passing through partitions, walls, and floors.

Q. Install brass male adapters each side of valves in copper piped system. Solder adapters to pipe.

R. PVC piping is not allowed to be installed in places of assembly, plenum spaces, exit discharge corridors or stairs. Use cast iron or copper piping in these locations.

S. Install firestopping at fire rated construction perimeters and openings containing penetrating sleeves and piping.

T. Install water hammer arrestors complete with accessible isolation valve on hot and cold water supply piping to fixtures to prevent hammer or install air chambers on hot and cold water supply piping to each fixture or group of fixtures (each washroom). Fabricate same size as supply pipe or 3/4 inch minimum, and minimum 18 inches long.

U. Pipe Hangers and Supports:
   1. Install in accordance with ASME B31.9.
   2. Support horizontal piping as indicated.
   3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
   4. Place hangers within 12 inches of each horizontal elbow.
   5. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
   6. Support vertical piping at every other floor. Support riser piping independently of connected horizontal piping.
   7. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
   8. Provide copper plated hangers and supports for copper piping.
   9. Prime coat exposed steel hangers and supports. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.
   10. Support cast iron drainage piping at every joint.

V. Pipe Sleeve-Seal Systems:
   1. Install manufactured sleeve-seal systems in sleeves located in grade slabs and exterior concrete walls at piping entrances into building.
   2. Provide sealing elements of the size, quantity, and type required for the piping and sleeve inner diameter or penetration diameter.
   3. Locate piping in center of sleeve or penetration.
   4. Install field assembled sleeve-seal system components in annular space between sleeve and piping.
   5. Tighten bolting for a watertight seal.
   6. Install in accordance with manufacturer's recommendations.

W. When installing more than one piping system material, ensure system components are compatible and joined to ensure the integrity of the system. Provide necessary joining fittings. Ensure flanges, union, and couplings for servicing are consistently provided.

X. Equipment Bases and Supports
   1. Provide housekeeping pads type and size recommended by equipment manufacturer, but no less than 3-1/2" high measured from finished floor and 6" clearance around perimeter of unit.
   2. Using templates furnished with equipment, install anchor bolts, and accessories for mounting and anchoring equipment.

Y. Flashing

1. Provide flexible flashing and metal counterflashing where piping penetrates weather or waterproofed walls, floors, and roofs.
2. Flash vent and soil pipes projecting 3 inches minimum above finished roof surface with lead worked 1 inch minimum into hub, 8 inches minimum clear on sides with 24 x 24 inches sheet size. For pipes through outside walls, turn flanges back into wall and caulk, metal counter-flash, and seal.
3. Seal floor, shower, and mop sink drains watertight to adjacent materials.

3.3 APPLICATION

A. Install unions downstream of valves and at equipment or apparatus connections.

B. Install brass male adapters each side of valves in copper piped system. Solder adapters to pipe.

C. Install ball valves for shut-off and to isolate equipment, part of systems, branch piping, or vertical risers.

D. Install globe valves for throttling, bypass, or manual flow control services.

3.4 TOLERANCES

A. Sanitary Drainage Piping: Establish invert elevations, slopes for drainage to 1/8 inch per foot minimum on mains 4 inches and larger. Install branch mains smaller than 4 inch with 1/4 inch per foot minimum.

B. Water Piping: Slope at minimum of 1/32 inch per foot and arrange to drain at low points.

3.5 FIELD TESTS AND INSPECTIONS

A. Verify and inspect systems according to requirements by the Authority Having Jurisdiction. In the absence of specific test and inspection procedures proceed as indicated below.

B. Domestic Water Systems:
   1. Perform hydrostatic testing for leakage prior to system disinfection.
   2. Test Preparation: Close each fixture valve or disconnect and cap each connected fixture.
   3. General:
      a. Fill the system with water and raise static head to 10 psi above service pressure. Minimum static head of 50 to 150 psi. As an exception, certain codes allow a maximum static pressure of 80 psi.

C. Gas Distribution Systems:
   1. Test Preparation: Close each appliance valve or disconnect and cap each connected appliance.
   2. General Systems:
      a. Inject a minimum of 10 psi of compressed air into the piping system for a duration of 15 minutes and verify with a gauge that no perceptible pressure drop is measured.
      b. Ensure test pressure gauge has a range of twice the specific pressure rate selected with an accuracy of 1/10 of 1 pound.

D. Test Results: Document and certify successful results, otherwise repair, document, and retest.

3.6 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

A. Final water samples shall be sent to a State Department of Health approved testing lab in the State of New York and sample test results shall be submitted to A/E of record.

B. Prior to starting work, verify system is complete, flushed, and clean.

C. Ensure acidity (pH) of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).

D. Inject disinfectant, free chlorine in liquid, powder, tablet, or gas form throughout system to obtain 50 to 80 mg/L residual.

E. Bleed water from outlets to ensure distribution and test for disinfectant residual at minimum 15 percent of outlets.

F. Maintain disinfectant in system for 24 hours.

G. If final disinfectant residual tests less than 25 mg/L, repeat treatment.

H. Flush disinfectant from system until residual equal to that of incoming water or 1.0 mg/L.

I. Take samples no sooner than 24 hours after flushing, from 10 percent of outlets and from water entry, and analyze in accordance with AWWA C651.

END OF SECTION

SECTION 22 40 00
PLUMBING FIXTURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Tank type water closets.

B. Lavatories.

C. Sinks.

1.2 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

B. ASME A112.18.1 - Plumbing Supply Fittings; 2024.

C. ASME A112.19.2 - Ceramic Plumbing Fixtures; 2024.

D. ASME A112.19.5 - Flush Valves and Spuds for Water Closets, Urinals, and Tanks; 2022.

E. ASSE 1070 - Performance Requirements for Water Temperature Limiting Devices; 2020.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's literature and data sheets for each product. Include materials of fabrication, rough-in requirements, location and sizes of connections, configurations, dimensions, finishes, features, and accessories.

B. Manufacturer's Instructions: Indicate installation methods and procedures.

C. Maintenance Data: Include fixture trim exploded view and replacement parts lists.

D. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

1.5 REGULATORY REQUIREMENTS

A. Plumbing piping, joints, faucets, etc. must comply with the requirements, and bear the label indicating the materials comply with the definition of “lead free” requirement of the Environmental Protection Agency “Reduction of Lead in Drinking Water Act”.

B. Lead Water Testing: Lead water testing shall be conducted at all Lavatories, Sinks and Drinking Fountains in accordance with Public Health Law section 1370-a and 1110, Subpart 67-4 of Title 10 (Health) of the Official Compilation of Codes, Rules and Regulations of the State of New York and the Environmental Protection Agency 3T’s for Reducing Lead in Drinking Water.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Accept fixtures on-site in factory packaging. Inspect for damage.

B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

1.7 WARRANTY

A. Provide standard manufacturer warranty for Plumbing Fixtures.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Potable Water Systems: Provide drinking water system components certified as complying with NSF 61 and NSF 372.

2.2 REGULATORY REQUIREMENTS

A. Comply with applicable codes for installation of plumbing systems.

2.3 MANUFACTURERS:

A. Refer to Plumbing Fixture Schedule on drawing for Manufacturer, Model, Trim and Remarks.

2.4 TANK TYPE WATER CLOSETS

A. Manufacturers:
   1. (P-10) B.O.D.: Mansfield Plumbing Products: www.mansfieldplumbing.com/#sle.
   2. Approved Equal.

B. Floor-Mounted Bowl:
   1. ASME A112.19.2; siphon jet, vitreous china, 17 5/16" inches high, close-coupled closet combination with elongated rim, insulated vitreous china closet tank with fittings and lever flushing valve, bolt caps.
   2. Water Consumption: 1.6 gal per flush, maximum.
   3. Trapway Outlet: 3 inch.

C. Toilet Seats:
   1. Plastic: Solid, white, enlongated, closed front, slow-closing hinged seat cover, and brass bolts with covers.

2.5 LAVATORIES

A. Manufacturers:
   1. (P-11) B.O.D. :LXHAUYS: www.lxhauys.com : 1612.

B. Lavatory, Single Integral Solid Surface Countertop and Bowl: ANSI Z124.3, Z124.6, ANSI/ICPA SS-1-2001, chemical resistant, solid surface countertop with integral bowl. Provide single hole faucet mount drilling, backsplash, and marine edge: refer to solid surface countertops.

C. Supply Faucet:
   1. Deck Mounted Faucet Manufacturers:
      a. (P-12) Moen:www.moen.com : Hilliard #84537 .
      b. Approved Equal.
   2. Two-Handle, Supply Faucet: ASME A112.18.1; deck-mount, ceramic cartridge disc valve, and maximum flow of 1.2 gpm. Oil-rubbed bronze finish.

2.6 SINKS

A. Manufacturers:
   1. (A-3) B.O.D.: Elkay: www.elkay.com.
   2. Approved Equal.

B. Single Compartment Bowl - Drop in installation
   1. ASME A112.19.3; 27" by 22" by 8" inch outside dimensions, 18 gauge, 0.050 inch thick, type 304 stainless steel, self-rimming and undercoated, with ledge back drilled for trim.
   2. Drain: 3-1/2 inch crumb cup and tailpiece.
   3. Products:
      a. B.O.D.: Moen: D1125.
      b. Approved Equal.

C. Faucets:
   1. Manufacturers:
   2. Single Handle Faucet with Pulldown Spray Head:
      a. Minimum Spout Height: 9 inch.
      b. Type: Deck-mount, high arc faucet with mounting plate.
      c. Spray Functions: Stream and aerated spray at 1.75 gpm, maximum.
      d. ASME A112.18.1, ADA Standards, and NSF 61 compliant assembly.
      e. Materials: Ceramic disc-cartridge valve on brass body with oil-rubbed bronze finish.
      f. Products:
         1) (A-4) B.O.D.: Moen: www.moen.com : Lilibeth .
         2) Approved Equal..

D. Accessories: Provide braided water supply lines, slip-joint p-trap, and stainless steel basket strainer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify walls, floors, and finishes are prepared and ready for installation of fixtures.

B. Verify rough-ins for field connections match sizes and locations shown on drawings.

C. Review casework and countertop shop drawings. Confirm locations and sizes of fixtures and openings before rough-in and installation.

D. Verify casework and countertops are prepared and ready for installation of fixtures.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install components level and plumb.

C. Secure fixtures in place with appropriate fasteners, adhesive, and bolts.

D. Solidly attach water closets to floor with lag screws. Lead flashing is not intended to hold fixture in place.

E. Install rigid or flexible supplies to fixtures. Provide loose key supply stops, reducers, and escutcheons.

3.3 FIELD QUALITY CONTROL

A. Inspect each product for damage and defects.

B. Repair or replace damaged or defective products.

C. Test fixtures after installation to verify operation. Correct deficiencies.

3.4 ADJUSTING

A. Adjust stops and valves so fixtures operate without splashing, noise, or overflow.

3.5 CLEANING

A. Clean plumbing fixtures to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

3.6 PROTECTION

A. Protect installed products from damage due to subsequent construction operations.

B. Do not permit use of fixtures by construction personnel.

END OF SECTION

SECTION 22 40 17
BATHTUBS AND SHOWERS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Bathtubs.

B. Bathtub and shower faucets, valves, and trim.

1.2 REFERENCE STANDARDS

A. ASME A112.18.1 - Plumbing Supply Fittings; 2024.

B. ASME A112.18.2 - Plumbing Waste Fittings; 2020.

C. ASME A112.19.1 - Enamelled Cast Iron and Enamelled Steel Plumbing Fixtures; 2024.

D. ASSE 1016 - Performance Requirements for Automatic Compensating Valves for Individual Showers and Tub/Shower Combinations; 2017 (Reaffirmed 2021).

E. ASSE 1070 - Performance Requirements for Water Temperature Limiting Devices; 2020.

F. NSF 61 - Drinking Water System Components - Health Effects; 2024.

G. NSF 372 - Drinking Water System Components - Lead Content; 2024.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional infProvide manufacturer's literature and data sheets for each product. Include materials of fabrication, rough-in requirements, location and sizes of connections, configurations, dimensions, finishes, features, and accessories.

B. Operation and Maintenance Data: Provide for the following:
   1. For bathtub and shower faucets, valves, and trim: Provide exploded view and replacement parts list.

C. Specimen warranty.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

C. Store products indoors in clean, dry area. Protect from water and dirt. Elevate above floor.

1.5 WARRANTY

A. Provide manufacturer's standard warranties for products specified herein.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Potable Water Systems: Provide supply fixtures, fittings, valves, and trim certified as complying with NSF 61 and NSF 372.

B. Maximum Fixture and Faucet Supply Pressure: 80 psi unless stated otherwise.

2.2 BATHTUBS

A. Manufacturers:
   1. (P-13) B.O.D.: MAXX.
   2. Approved Equal

B. Porcelain-Enameled Steel Bathtubs: ASME A112.19.1, enamelled steel, with slip-resistance bathing surface.

C. Drains and Overflows: Provide ASME A112.18.2, NPS 1-1/2 drain, overflow, and p-trap.

2.3 BATHTUB AND SHOWER FAUCETS, VALVES, AND TRIM

A. Combination Tub-Shower Trim Kits:
   1. Manufacturers:
   2. Assembly: ASME A112.18.1, with control valve, shower head and arm, tub spout, and diverter.
   3. Control Valve: ASSE 1016, pressure-balancing, brass or bronze body with inlet checkstops; integral volume and temperature control with adjustable high-temperature limit stop.
   4. Finish: Oil-rubbed bronze.
   5. Shower Flow Rate: Maximum 1.75 gpm at 80 psi.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify walls, floors, and finishes are prepared and ready for installation of fixtures.

B. Verify rough-ins for field connections match sizes and locations shown on drawings.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install products level and plumb.

C. Secure fixtures in place.

D. Install ball valves in hot- and cold-water piping to fixtures if supply stops have not been specified or provided. Locate ball valves in accessible locations.

E. Install wall-mounted fixtures, trim, and accessories at heights indicated on drawings.

3.3 FIELD QUALITY CONTROL

A. Inspect each product for damage and defects.

B. Repair or replace damaged or defective products.

C. Test fixtures after installation to verify operation. Correct deficiencies.

3.4 CLEANING

A. Clean fixtures to remove dirt, fingerprints, paint, and other foreign material. Restore finishes to match original factory finish.

3.5 PROTECTION

A. Protect installed products from damage due to subsequent construction operations.

B. Do not permit use of fixtures by construction personnel.

END OF SECTION

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SECTION 23 31 00
HVAC DUCTS AND CASINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Metal ducts.

B. Flexible ducts.

1.2 REFERENCE STANDARDS

A. ASHRAE (FUND) - ASHRAE Handbook - Fundamentals; Most Recent Edition Cited by Referring Code or Reference Standard.

B. ASHRAE Std 126 - Method of Testing HVAC Air Ducts; 2020.

C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.

D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025.

E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.

F. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.

G. NFPA 90B - Standard for the Installation of Warm Air Heating and Air-Conditioning Systems; 2024.

H. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2020.

I. SMACNA (LEAK) - HVAC Air Duct Leakage Test Manual; 2012.

J. UL 181 - Standard for Factory-Made Air Ducts and Air Connectors; Current Edition, Including All Revisions.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide data for duct materials.

B. Shop Drawings: Indicate duct fittings, particulars such as gages, sizes, welds, and configuration prior to start of work for all modifications / systems. Contractor will be responsible for any rework of shop drawings due to field conditions prior to approval of drawings. Contractor shall field verify field conditions prior to submitting shop drawings.

C. Test Reports: Indicate pressure tests performed. Include date, section tested, test pressure, and leakage rate per appropriate seal class, following SMACNA (LEAK).

D. Project Record Documents: Record actual locations of ducts and duct fittings. Record changes in fitting location and type. Show additional fittings used.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience, and approved by manufacturer.

B. Installer Qualifications: Company specializing in performing the type of work specified in this section, with minimum five years of documented experience.

C. Maintain one copy of each document on site.

1.5 FIELD CONDITIONS

A. Do not install duct sealants when temperatures are less than those recommended by sealant manufacturers.

B. Maintain temperatures within acceptable range during and after installation of duct sealants.

C. Provide offsets as required for installation of ductwork due to field conditions.

1.6 FIELD MEASUREMENTS

A. Verify field measurements of all duct installations prior to fabrication.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Provide UL Class 1 ductwork, fittings, hangers, supports, and appurtenances in accordance with NFPA 90A and SMACNA (DCS) guidelines unless stated otherwise.

B. Provide metal duct unless otherwise indicated.

C. Duct Fabrication Requirements:
1. Duct and Fitting Fabrication and Support: SMACNA (DCS) including specifics for continuously welded round and oval duct fittings.
2. No variation of duct configuration or size permitted except by written permission. Size round duct installed in place of rectangular ducts in accordance with ASHRAE (FUND) Handbook - Fundamentals.
3. Use reinforced and sealed sheet-metal materials at recommended gauges for indicated operating pressures or pressure class.
4. Construct tees, bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline. Where not possible and where rectangular elbows must be used, provide airfoil turning vanes of perforated metal with glass fiber insulation.
5. Provide turning vanes of perforated metal with glass fiber insulation when acoustical lining is indicated.
6. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.
7. Provide turning vanes of perforated metal with glass fiber insulation when an acoustical lining is required.
8. Where ducts are connected to exterior wall louvers and duct outlet is smaller than louver frame, provide blank-out panels sealing louver area around duct. Use same material as duct, painted black on exterior side; seal to louver frame and duct.

2.2 METAL DUCTS

A. Material Requirements:
1. Galvanized Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M FS Type B, with G60/Z180 coating.
a. Manufacturers:
1) B.O.D: Gray Metal: www.graymetal.com
2) Approved Equal.

B. Rectangular Metal Duct:
1. Rectangular Single Wall: Rectangular, longitudinal lock seam duct with galvanized steel wall.

2. Rectangular Double Wall Insulated: Rectangular, longitudinal lock seam duct with galvanized steel outer wall, perforated galvanized steel inner wall; fitting with solid inner wall.
    a. Insulation:
        1) Thickness: 1 inch.
        2) Material: Fiberglass.
        3) Insulation K Value: 0.26.
        4) Insulation Density: 1.5 lb.
    b. Manufacturers:

C. Round Metal Ducts:
1. Round Single Wall Duct: Round lock seam duct with galvanized steel outer wall.
2. Round Double Wall Insulated Duct: Round spiral lock seam duct with galvanized steel outer wall, perforated galvanized steel inner wall; fitting with the solid inner wall.
    a. Insulation:
        1) Thickness: 1 inch.
        2) Material: Fiberglass.
3. Round Connection System: Interlocking duct connection system in accordance with SMACNA (DCS).

D. Round Spiral Duct:
1. Round spiral lock seam duct with galvanized steel outer wall.

E. Connectors, Fittings, Sealants, and Miscellaneous:
1. Fittings: Manufacture with solid inner wall of perforated galvanized steel.
2. Transverse Duct Connection System: SMACNA "E" rated rigid class connection, interlocking angle and duct edge connection system with sealant, gasket, cleats, and corner clips in accordance with SMACNA (DCS).
    a. Manufacturers:
        1) B.O.D.: Ductmate Industries, Inc, a DMI Company: www.ductmate.com/#sle.
        2) Approved Equal.
3. Joint Sealers and Sealants: Non-hardening, water resistant, mildew and mold resistant.
    a. Type: Heavy mastic or liquid used alone or with tape, suitable for joint configuration and compatible with substrates, and recommended by manufacturer for pressure class of ducts.
    b. VOC Content: Not more than 250 g/L, excluding water.
    c. Surface Burning Characteristics: Flame spread index of zero and smoke developed index of zero, when tested in accordance with ASTM E84.
    d. For Use with Flexible Ducts: UL labeled.
    e. Manufacturers:
        1) B.O.D.: Ductmate Industries, Inc, a DMI Company: www.ductmate.com/#sle: Pro Seal.
4. Gasket Tape:
    a. Provide butyl rubber gasket tape for a flexible seal between transfer duct connector (TDC), transverse duct flange (TDF), applied flange connections, and angle ring connections.
5. Hanger Rod: ASTM A36/A36M; steel, galvanized; threaded both ends, threaded one end, or continuously threaded.
6. Hanger Fasteners: Attach hangers to structure using appropriate fasteners.

2.3 FLEXIBLE DUCTS

A. Flexible Ducts: UL 181, Class 1, polyethylene film, mechanically fastened and rolled using galvanized steel to form spiral helix.
1. Insulation: 1" Fiberglass insulation with polyethylene vapor barrier film.
2. Pressure Rating: 16 in-wc positive and 2 in-wc negative.
3. Maximum Velocity: 5500 fpm.
4. Temperature Range: Minus 20 degrees F to 250 degrees F.

B. Uninsulated Flexible Air Ducts:
1. UL 181, Class 1, aluminum laminate and polyester film with latex adhesive supported by helically wound spring steel wire.

2. Pressure Rating: From 16 in-wc to 2 in-wc negative.
3. Temperature Range: Minus 20 to 210 degrees F.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install products following the manufacturer's instructions.

B. Comply with safety standards NFPA 90A and NFPA 90B.

C. During construction, provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering the ductwork system.

D. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.

E. Flexible Ducts: Connect to metal ducts with adhesive.

F. Duct sizes indicated are precise inside dimensions. For lined ducts, maintain sizes inside lining.

G. Provide openings in ductwork as indicated to accommodate thermometers and controllers. Provide pilot tube openings as indicated for testing of systems, complete with metal can with spring device or screw to insure against air leakage. For openings, insulate ductwork and install insulation material inside a metal ring.

H. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.

I. Use crimp joints with or without bead for joining round duct sizes 8 inch and smaller with a crimp in the direction of airflow.

J. Use double nuts and lock washers on threaded rod supports.

K. Connect terminal units to supply ducts directly or with one foot maximum length of flexible duct. Do not use flexible duct to change direction.

L. Connect diffusers or light troffer boots to low-pressure ducts directly or with 5 feet maximum length of flexible duct held in place with strap or clamp.

M. Set plenum doors at 6 to 12 inches above floor. Arrange door swings so that fan static pressure holds door in closed position.

N. At exterior wall louvers, seal duct to louver frameand transition to louver frame size.

O. Duct Insulation: Provide duct insulation.

3.2 CLEANING

A. Clean duct systems with high-power vacuum machines. Protect equipment that could be harmed by excessive dirt with filters or bypass during cleaning. Provide adequate access to the ductwork for cleaning purposes.

END OF SECTION

SECTION 23 37 00
AIR OUTLETS AND INLETS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Registers/grilles:
   1. Wall-mounted, supply register/grilles.
   2. Wall-mounted, exhaust and return register/grilles.

B. Duct-mounted supply and return registers/louvers.

1.2 REFERENCE STANDARDS

A. AMCA 511 - Certified Ratings Program Product Rating Manual for Air Control Devices; 2021, with Editorial Revision (2022).

B. ASHRAE Std 70 - Method of Testing the Performance of Air Outlets and Air Inlets; 2023.

C. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.

D. NFPA 90B - Standard for the Installation of Warm Air Heating and Air-Conditioning Systems; 2024.

E. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.3 SUBMITTALS

A. Product Data: See RHA front ends for more information. Provide data for equipment required for this project. Review outlets and inlets as to size, finish, and type of mounting prior to submission. Submit schedule of outlets and inlets showing type, size, location, application, and noise level.

B. Project Record Documents: Record actual locations of air outlets and inlets.

C. Test Reports: Rating of air outlet and inlet performance.

D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

A. Test and rate air outlet and inlet performance in accordance with ASHRAE Std 70.

B. Test and rate louver performance in accordance with AMCA 500-L.

C. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. B.O.D.: Continental Industries: www.continentalindustries.com.

B. Approved Equal.

2.2 DUCT-MOUNTED SUPPLY AND RETURN REGISTERS/LOUVERS

A. Manufacturers:
   1. B.O.D.: Broan-Nutone: www.broannutone.com.
   2. Approved Equal.

B. Product Requirements:
   1. Airflow: 80 CFM
   2. Automatic Controls: Humidity control automaticaly turns on when appropriate conditions are detected (humidity above 50% RH or a rapid to moderate increase of humidity).
   3. Remains ON 30 minuites after humidity has stabilized.

C. Type: Roof Vent Kit: Metal Roof Cap for round-spiral duct , reducer , and 2 duct clamps to match 4" metal duct connector, optional 4" to 3" reducer. Includes 8ft of 4" flexible 2 ply metallic laminate ducting.Performance to match manufacturer's catalog data.

D. Color: manufacturer's standard black.

2.3 WALL SUPPLY REGISTERS/GRILLES

A. Type: Streamlined blades, 1/2 inch spacing with spring or other device to set blades, vertical face, single deflection.

B. Frame: 3/8" inchminimum margin with countersunk screw mounting and gasket.

C. Fabrication: Steel with 20 gauge, 0.0359 inch minimum frames and 22 gauge, 0.0299 inch minimum blades, steel and aluminum with 20 gauge, 0.0359 inch minimum frame, or aluminum extrusions, with factory baked enamel finish.

D. Color: white.

E. Damper: Integral, gang-operated opposed blade type with removable key operator, operable from face.

2.4 WALL EXHAUST AND RETURN REGISTERS/GRILLES

A. Type: Streamlined blades, 3/4 inch minimum depth, 1/2 inch spacing, with spring or other device to set blades, vertical face.

B. Frame: 1 inch mimimum margin with countersunk screw mounting.

C. Fabrication: Steel frames and blades, with factory baked enamel finish.

D. Color: white.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Comply with SMACNA (ASMM) for flashing/counter-flashing of roof penetrations and supports for roof curbs and roof mounted equipment.

C. Check location of outlets and inlets and make necessary adjustments in position to comply with architectural features, symmetry, and lighting arrangement.

D. Install diffusers to ductwork with air tight connection.

E. Provide balancing dampers on duct take-off to diffusers and grilles and registers, despite whether dampers are specified as part of diffuser, or grille and register assembly.

3.2 CLOSEOUT ACTIVITIES

A. Demonstrate operational system to Owner's representative.

B. Instruct Owner's representative to maintain system and use occupant controls or interfaces, as required.

3.3 PROTECTION

A. Protect installed products until completion of project.

B. Replace, repair, or touch-up damaged products before Substantial Completion.

END OF SECTION

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SECTION 23 54 00
FURNACES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Forced air furnaces.

B. Thermostats.

1.2 REFERENCE STANDARDS

A. ANSI Z21.47 - American National Standard for Gas-Fired Central Furnaces; 2021.

B. ASHRAE Std 103 - Method of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers; 2022, with Errata (2025).

C. NFPA 54 - National Fuel Gas Code; 2024.

D. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

E. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.

F. NFPA 90B - Standard for the Installation of Warm Air Heating and Air-Conditioning Systems; 2024.

G. NFPA 211 - Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances; 2024.

H. UL (DIR) - Online Certifications Directory; Current Edition.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide rated capacities, weights, accessories, electrical nameplate data, and wiring diagrams.

B. Shop Drawings: Indicate assembly, required clearances, and location and size of field connections.

C. Manufacturer's Instructions: Indicate rigging, assembly, and installation instructions.

D. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, installation instructions, maintenance and repair data, and parts listing.

E. Warranty: Submit manufacturers warranty and ensure forms have been filled out in Owner's name and registered with manufacturer.

F. Project Record Documents: Record actual locations of components and connections.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Filters: One for each furnace.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years of experience and approved by manufacturer.

1.5 WARRANTY

A. Provide three year manufacturers warranty for solid state ignition modules.

PART 2 PRODUCTS

2.1 REGULATORY REQUIREMENTS

A. Comply with NFPA 70.

B. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified and indicated.

2.2 THERMOSTATS

A. Manufacturers:
1. B.O.D.:Honeywell: www.honeywell.com.
2. Approved Equal.

B. Room Thermostat: Low voltage, controlling heat and fan to maintain temperature setting; with system selector switch (heat-off) and fan control switch (auto-off).

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrates are ready for installation of units and openings are as indicated on shop drawings.

B. Verify that proper power supply is available and located correctly.

C. Verify that proper fuel supply is available for connection.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions and requirements of authorities having jurisdiction.

B. Install in accordance with NFPA 90A.

END OF SECTION

SECTION 26 05 00
COMMON WORK RESULTS FOR ELECTRICAL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. General requirements applicable to all components and systems included in Electric Work Prime Contract

B. Products Installed but Not Furnished Under This Section

C. Make all electrical connections to equipment shown on Drawings and furnished by other Prime Contractors. Obtain approved wiring diagrams and location drawings for roughing in and final connections from Prime Contractor furnishing equipment. Provide disconnect switches, push button stations, and similar components, required but not furnished with equipment as shown on Drawings.

1.2 REFERENCES

A. AIA American Institute of Architects

B. AISC American Institute of Steel Construction

C. ANSI American National Standards Institute

D. ASTM American Society of Testing Materials

E. IEEE Institute of Electric and Electronic Engineers

F. IES Illuminating Engineering Society

G. NBFU National Board of Fire Underwriters

H. NEC National Electric Code

I. NEMA National Electrical Manufacturers' Association

J. NETA International Electrical Testing Association

K. NFPA National Fire Protection Association

L. UL Underwriters' Laboratories, Inc.

1.3 SYSTEM DESCRIPTIONS

A. Design Requirements - Provide complete systems, properly tested, balanced, and ready for operation including necessary details, items and accessories although not expressly shown or specified, including (but not limited to):
   1. All wiring and conduit for work specified in Project Manual and shown on Drawings.
   2. All electrical devices and equipment for work specified in Project Manual and shown on Drawings.

B. Systems included, but not limited to:
   1. Electrical Distribution
   2. Electrical Connections
   3. Electric Layouts: Arrange all panels, disconnect switches, enclosed breakers, equipment, raceways, and similar components neatly, orderly and symmetrically. Provide 3/4-inch plywood backboards for all surface mounted panels, disconnect switches, enclosed breakers, and similar equipment. Arrangements shown on Drawings are diagrammatic only; provide and adjust raceways, wiring, and other components as required.

4. Power Interruptions and Scheduled Outages: Coordinate scheduling of all power interruptions and outages with Owner. EC shall confirm with Owner prior to interruption of power, which building systems are considered critical and must remain operational during the interruption. If a scheduled power outage is to extend beyond one standard workday, EC shall provide temporary power to operate critical building systems (including, but not limited to fire alarm system, security system, building access control system, and building energy management control system).

1.4 QUALITY ASSURANCE

A. Codes and Standards: Comply with all applicable Federal, State and Local Building and Electrical Codes, Laws, Ordinances, and Regulations, and comply with all applicable NFPA, National Electrical Code and Utility Company requirements and regulations. Provide Underwriter's Laboratory Seal on all materials.

B. Permits and Inspections: Obtain all approvals, tests, and inspections required by Architect, Engineer, Local Electrical Inspector, agent or agency specified in Project Manual, or National, State, or Local Codes and Ordinances.

C. Schedule electrical inspection by a third party inspection agency, such as New York State Board of Fire Underwriters or equivalent, acceptable to the local authority having jurisdiction, and submit final inspection certificate to Architect.

D. Furnish all materials and labor necessary for tests and pay all costs associated with tests and inspections.

E. Conduct all tests under load for load balancing and where required by Codes, Regulations, Ordinances, or Technical Specification.

F. Electrical Components, Devices, and Accessories: UL Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction and marked for intended use.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Take all reasonable precautions to store materials and products to protect finishes and not permit dust and dirt to penetrate equipment.

B. Replace all equipment damaged beyond reasonable repair as required by Architect.

C. Refinish any equipment with marks, stains, scratches, dents, etc., as required by Architect.

1.6 COORDINATION OF WORK

A. New Construction
   1. Openings, Chases, Recesses, Sleeves, Lintels and Bucks (required for admission of Electric Work Prime Contract systems and components): Coordinate requirements with General Work Prime Contractor for inclusion in General Work Prime Contract. Furnish all necessary information (e.g. locations and sizes) to General Work Prime Contractor in ample time for installation of systems and components included in Electric Work Prime Contract.
   2. Anchor Bolts: Deliver to General Work Prime Contractor all anchor bolts required for Electric Work Prime Contract construction that are to be installed in construction included in General Work Prime Contract.
   3. Locate settings, check locations as installation in General Work Prime Contract progresses, and provide templates or holding fixtures as required to maintain proper accuracy.

B. Existing Construction: Unless otherwise specified, employ General Work Prime Contractor for all cutting, patching, repairing and replacing of general work required for installation of systems and components included in Electric Work Prime Contract. Secure approval before cutting.

1. Anchor Bolts: Deliver to General Work Prime Contractor all anchor bolts required for Electric Work Prime Contract construction that are to be installed in construction included in General Work Prime Contract. Provide templates or holding fixtures as required to maintain proper accuracy.

1.7 ALTERATION PROCEDURES

A. In locations where existing devices are indicated to be disconnected and removed and existing circuit is not scheduled to be reused:
   1. Remove circuit conductors back to source.
   2. Modify panel directory for that circuit.
   3. Remove all existing exposed and accessible conduit
   4. Patch and paint existing walls where disturbed by the electrical demolition, if necessary.

B. In locations where existing devices are to remain in place, ensure circuits feeding such devices remain operational. Modify existing circuits as required to allow new construction to occur and to maintain all necessary circuitry to existing devices.

C. In locations where entire existing system is being removed or modified:
   1. Refer to individual system specification sections for Documentation and Testing Requirements prior to any alteration work on any system.
   2. Take all necessary measures to ensure that down time will not compromise safety
   3. Notify Owner, Architect and all other Prime Contractors not less than 2 weeks prior to interruptions in service.
   4. Coordinate work schedule to minimize duration of system outage during hours when building is occupied.

1.8 SUBMITTALS

A. Comply with requirements of RHA's front ends and as modified below. Refer to submittal listing in each section for specific items required.

B. Factory-Finished Surfaces: On all submittals, indicate standard factory color. Where more than one color is available, selection made by Architect from manufacturer's full range of colors.

C. Contract Closeout Submittals: Comply with requirements of RHA's front ends, including submission of operating and maintenance instructions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 CUTTING AND PATCHING

A. Furnish and install all sleeves, inserts, panels, raceways, boxes, etc., ahead of general construction work and maintain Contractor personnel at Site during installation of general construction work to be responsible for and to maintain these items in position.

B. Unless otherwise noted elsewhere in Contract Documents, bear expense of all cutting, patching, repairing or replacing of work of other trades made necessary by any fault, error or tardiness on part of Electrical Work Prime Contract or damage done by Electric Work Prime Contract. Employ and pay Prime Contractor whose work is involved.

C. Do not cut waterproofed floors or walls for admission of any equipment or materials and do not pierce any structural members without written permission.

3.2 DEMONSTRATION OF COMPLETE ELECTRICAL SYSTEMS

A. Thoroughly demonstrate and instruct Owner's designated representative in care and operation of all electrical systems and equipment furnished and installed in Electric Work Prime Contract.

B. System Operator: Maintain competent operator at building for at least 2 days in 2 consecutive weeks after Owner takes occupancy of major parts of building to operate systems and equipment in presence of Owner's representative.

C. Coordinate and schedule time and place of all training through the Architect at the Owner’s convenience.

D. Submit letters attesting to satisfactory completion of all instructions, including date of completion of instruction, names of persons in attendance and signature of Owner’s authorized representative

E. Architect's representative must be present when Owner's representatives participate in instruction.

F. The following equipment and systems are included:
1. Fire alarm system

3.3 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment that remain or that are to be reused.

B. Provide full inspection of exposed finishes.

C. Remove burrs, dirt, and construction debris.

D. Repair damaged surfaces including chips, scratches, and abrasions. Damp Rag clean all electrical equipment, panels, boxes, and accessories.

END OF SECTION

SECTION 26 05 05
SELECTIVE DEMOLITION FOR ELECTRICAL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Electrical demolition.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Materials and equipment for patching and extending work: As specified in individual sections.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that abandoned wiring and equipment serve only abandoned facilities.

B. Demolition drawings are based on casual field observation and existing record documents.

C. Report discrepancies to Architect before disturbing existing installation.

D. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

A. Disconnect electrical systems in walls, floors, and ceilings to be removed.

B. Coordinate utility service outages with utility company.

C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

A. Remove, relocate, and extend existing installations to accommodate new construction.

B. Remove abandoned wiring to source of supply.

C. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.

D. Disconnect and remove abandoned panelboards and distribution equipment.

E. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.

F. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.

G. Repair adjacent construction and finishes damaged during demolition and extension work.

H. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.

3.4 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment that remain or that are to be reused.

B. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

END OF SECTION

SECTION 26 05 19
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Single conductor building wire.

B. Metal-clad cable.

C. Wire and cable for 600 volts and less.

D. Wiring connectors.

E. Electrical tape.

F. Heat shrink tubing.

G. Oxide inhibiting compound.

H. Wire pulling lubricant.

I. Cable ties.

1.2 REFERENCE STANDARDS

A. ASHRAE Std 90.1 I-P - Energy Standard for Buildings Except Low-Rise Residential Buildings; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

B. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire; 2013 (Reapproved 2024).

C. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2023.

D. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes; 2010, with Editorial Revision (2020).

E. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2020).

F. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape; 2024.

G. ASTM D4388 - Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes; 2020.

H. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

I. NECA 120 - Standard for Installing Armored Cable (AC) and Type Metal-Clad (MC) Cable; 2018.

J. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy; 2021.

K. NETA ATS - Standard for Acceptance Testing Specifications for Electrical Power Equipment And Systems; 2025.

L. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

M. UL 44 - Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.

N. UL 83 - Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.

O. UL 267 - Outline of Investigation for Wire-Pulling Compounds; Current Edition, Including All Revisions.

P. UL 486A-486B - Wire Connectors; Current Edition, Including All Revisions.

Q. UL 486C - Splicing Wire Connectors; Current Edition, Including All Revisions.

R. UL 486D - Sealed Wire Connector Systems; Current Edition, Including All Revisions.

S. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape; Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
   2. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
   3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Refer to RHA's front ends for more information. Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.

B. Manufactured Wiring System Shop Drawings: Provide plan views indicating proposed system layout with components identified; indicate branch circuit connections.

C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

D. Project Record Documents: Record actual installed circuiting arrangements. Record actual routing.

1.5 QUALITY ASSURANCE

A. Comply with all requirements of the Energy Conservation Construction Code in the State of New York, including but not limited to US Department of Energy, IECC 2018, and ASHRAE 90.1, including all updates, revisions and amendments.

B. Comply with requirements of NFPA 70.

C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

D. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 CONDUCTOR AND CABLE APPLICATIONS

A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.

B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.

C. Nonmetallic-sheathed cable is not permitted.

D. Concealed Dry Interior Locations: Use only building wire with Type THHN/THWN insulation in raceway.

E. Exposed Dry Interior Locations: Use only building wire with Type THHN/THWN insulation in raceway or metal clad cable.

F. Wet or Damp Interior Locations: Use only building wire with Type THHN/THWN insulation in raceway.

G. Exterior Locations: Use only building wire with Type THHN/THWN insulation in raceway.

H. Use solid conductors for all 12 AWG circuits. Use stranded conductors only for 10 AWG and larger.

I. Use solid conductor not smaller than 12 AWG for power and lighting circuits.

J. Use conductor not smaller than 16 AWG for control circuits.

K. Use 10 AWG stranded conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.

L. Use 10 AWG stranded conductors for 20 ampere, 277 volt branch circuits longer than 150 feet.

2.2 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

A. Provide products that comply with requirements of NFPA 70.

B. Provide products listed, classified, and labeled as suitable for the purpose intended.

C. Provide new conductors and cables manufactured not more than one year prior to installation.

D. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.

E. Comply with NEMA WC 70.

F. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.

G. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.

H. Conductor Material:
   1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
   2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
   3. Tinned Copper Conductors: Comply with ASTM B33.

I. Minimum Conductor Size:
   1. Branch Circuits: 12 AWG.
      a. Exceptions:
         1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
         2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.
         3) 20 A, 277 V circuits longer than 150 feet: 10 AWG, for voltage drop.

J. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

K. Conductor Color Coding:
1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
2. Color Coding Method: Integrally colored insulation.
a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
3. Color Code:
a. 240/120 V, 1 Phase, 3 Wire System:
1) Phase A: Black.
2) Phase B: Red.
3) Neutral/Grounded: White.
b. Equipment Ground, All Systems: Green.

2.3 SINGLE CONDUCTOR BUILDING WIRE

A. Manufacturers:
1. Copper Building Wire:
a. Cerro Wire LLC: www.cerrowire.com/#sle.
b. Encore Wire Corporation: www.encorewire.com/#sle.
c. General Cable Technologies Corporation: www.generalcable.com/#sle.
d. Industrial Wire & Cable, Inc: www.iewc.com.
e. Southwire Company: www.southwire.com/#sle.
f. Approved Equal.

B. Description: Single conductor insulated wire.

C. Insulation Voltage Rating: 600 V.

D. Insulation:
1. Copper Building Wire: Type THHN/THWN.

2.4 METAL-CLAD CABLE

A. Manufacturers:
1. AFC Cable Systems Inc: www.afcweb.com/#sle.
2. Encore Wire Corporation: www.encorewire.com/#sle.
3. Southwire Company: www.southwire.com/#sle.
4. Approved Equal..

B. Description: NFPA 70, Type MC cable listed and labeled as complying with UL 1569, and listed for use in classified firestop systems to be used.

C. Insulation Voltage Rating: 600 V.

D. Insulation: Type THHN or THHN/THWN.

E. Provide dedicated neutral conductor for each phase conductor.

F. Grounding: Full-size integral equipment grounding conductor.

G. Armor: Steel, interlocked tape.

H. Provide PVC jacket applied over cable armorfor exterior installations, or where indicated or required for environment of installed location.

2.5 WIRING CONNECTORS

A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.

B. Connectors for Grounding and Bonding: Comply with Section 26 05 26.

C. Wiring Connectors for Splices and Taps:
   1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
   2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors; split bolt type.
      a. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.

D. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.

E. Wiring Connectors for Terminations:
   1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
   2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
   3. Copper Conductors6 AWG and larger: Use mechanical connectors where connectors are required.
   4. Stranded Conductors: Use crimped terminals for connections to terminal screws.

F. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.

G. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.

H. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
   1. Manufacturers:
      a. 3M: www.3m.com/#sle.
      b. Ideal Industries, Inc: www.idealindustries.com/#sle.
      c. Approved Equal.

I. Mechanical Connectors: Provide bolted type or set-screw type.
   1. Manufacturers:
      a. Burndy LLC: www.burndy.com/#sle.
      b. Thomas & Betts Corporation: www.tnb.com/#sle.
      c. Approved Equal.

J. Compression Connectors: Provide circumferential type crimp configuration.
   1. Manufacturers:
      a. Burndy LLC: www.burndy.com/#sle.
      b. Thomas & Betts Corporation: www.tnb.com/#sle.
      c. Substitutions: See RHA front ends for additional information.
      d. Approved Equal.

K. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for connection to be made.
   1. Manufacturers:
      a. Burndy LLC: www.burndy.com/#sle.
      b. Thomas & Betts Corporation: www.tnb.com/#sle.
      c. Approved Equal.

2.6 ACCESSORIES

A. Electrical Tape:
   1. Manufacturers:

a. 3M: www.3m.com/#sle.
b. Approved Equal.

2. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F.
3. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
4. Rubber Splicing Electrical Tape: Ethylene Propylene Rubber (EPR) tape, complying with ASTM D4388; minimum thickness of 30 mil; suitable for continuous temperature environment up to 194 degrees F and short-term 266 degrees F overload service.
5. Electrical Filler Tape: Rubber-based insulating moldable putty, minimum thickness of 125 mil; suitable for continuous temperature environment up to 176 degrees F.
6. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.

B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.
1. Manufacturers:
a. 3M: www.3m.com/#sle.
b. Thomas & Betts Corporation: www.tnb.com/#sle.
c. Approved Equal.

C. Oxide Inhibiting Compound: Listed; suitable for use with the conductors or cables to be installed.
1. Manufacturers:
a. Burndy LLC: www.burndy.com/#sle.
b. Ideal Industries, Inc: www.idealindustries.com/#sle.
c. Approved Equal..

D. Wire Pulling Lubricant:
1. Manufacturers:
a. 3M: www.3m.com/#sle.
b. Ideal Industries, Inc: www.idealindustries.com/#sle.
c. Approved Equal.
2. Listed and labeled as complying with UL 267.
3. Suitable for use with conductors/cables and associated insulation/jackets to be installed.
4. Suitable for use at installation temperature.

E. Cable Ties: Material and tensile strength rating suitable for application.
1. Manufacturers:
a. Burndy LLC: www.burndy.com/#sle.
b. Approved Equal..

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that interior of building has been protected from weather.

B. Verify that work likely to damage wire and cable has been completed.

C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.

D. Verify that field measurements are as indicated.

E. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.3 INSTALLATION

A. Circuiting Requirements:
   1. Unless dimensioned, circuit routing indicated is diagrammatic.
   2. When circuit destination is indicated without specific routing, determine exact routing required.
   3. Include circuit lengths required to install connected devices within 10 ft of location indicated.
   4. Maintain separation of wiring for emergency systems in accordance with NFPA 70.
   5. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is permitted, under the following conditions:
      a. Provide no more than six current-carrying conductors in a single raceway. Dedicated neutral conductors are considered current-carrying conductors.
      b. Increase size of conductors as required to account for ampacity derating.
      c. Size raceways, boxes, etc. to accommodate conductors.
   6. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.
   7. Provide oversized neutral/grounded conductors where indicated and as specified below.
      a. Provide 200 percent rated neutral for feeders fed from K-rated transformers.
      b. Provide 200 percent rated neutral for feeders serving panelboards with 200 percent rated neutral bus.

B. Install products in accordance with manufacturer's instructions.

C. Perform work in accordance with NECA 1 (general workmanship).

D. Install metal-clad cable (Type MC) in accordance with NECA 120.

E. Installation in Raceway:
   1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
   2. Pull all conductors and cables together into raceway at same time.
   3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
   4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.

F. Exposed Cable Installation (only where specifically permitted):
   1. Route cables parallel or perpendicular to building structural members and surfaces.
   2. Protect cables from physical damage.

G. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.

H. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
   1. Installation in Vertical Raceways: Provide supports where vertical rise exceeds permissible limits.

I. Terminate cables using suitable fittings.
   1. Metal-Clad Cable (Type MC):
      a. Use listed fittings.
      b. Cut cable armor only using specialized tools to prevent damaging conductors or insulation. Do not use hacksaw or wire cutters to cut armor.

J. Install conductors with a minimum of 12 inches of slack at each outlet.

K. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.

L. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.

M. Make wiring connections using specified wiring connectors.
1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
3. Do not remove conductor strands to facilitate insertion into connector.
4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

N. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
1. Dry Locations: Use electrical tape.
a. For taped connections, first apply adequate amount of rubber splicing electrical tape or electrical filler tape, followed by outer covering of vinyl insulating electrical tape.
2. Damp Locations: Use insulating covers specifically designed for the connectors.
a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.
3. Wet Locations: Use heat shrink tubing.

O. Insulate ends of spare conductors using vinyl insulating electrical tape.

P. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at each termination and at each location conductors are accessible.

Q. Identify conductors and cables in accordance with Section 26 05 53. Identify each conductor with its circuit number or other designation indicated.

R. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 84 00.

S. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

3.4 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS, except Section 4.

B. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is only required for services and feeders. The resistance test for parallel conductors listed as optional is not required.

C. Correct deficiencies and replace damaged or defective conductors and cables.

END OF SECTION

SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Grounding and bonding requirements.

B. Conductors for grounding and bonding.

C. Connectors for grounding and bonding.

1.2 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

B. NETA ATS - Standard for Acceptance Testing Specifications for Electrical Power Equipment And Systems; 2025.

C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

D. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's standard catalog pages and data sheets for grounding and bonding system components.

B. Project Record Documents: Record actual locations of grounding electrode system components and connections.

C. Certificate of Compliance: Indicate approval of installation by authority having jurisdiction.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 GROUNDING AND BONDING REQUIREMENTS

A. Existing Work: Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.

B. Do not use products for applications other than as permitted by NFPA 70 and product listing.

C. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.

D. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

E. Grounding System Resistance:
1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Architect. Precipitation within the previous 48 hours does not constitute normally dry conditions.
2. Grounding Electrode System: Not greater than 5 ohms to ground, when tested according to IEEE 81 using "fall-of-potential" method.
3. Between Grounding Electrode System and Major Electrical Equipment Frames, System Neutral, and Derived Neutral Points: Not greater than 0.5 ohms, when tested using "point-to-point" methods.

F. Service-Supplied System Grounding:
1. For each service disconnect, provide grounding electrode conductor to connect neutral (grounded) service conductor to grounding electrode system. Unless otherwise indicated, make connection at neutral (grounded) bus in service disconnect enclosure.
2. For each service disconnect, provide main bonding jumper to connect neutral (grounded) bus to equipment ground bus where not factory-installed. Do not make any other connections between neutral (grounded) conductors and ground on load side of service disconnect.

G. Bonding and Equipment Grounding:
1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
7. Provide bonding for interior metal piping systems in accordance with NFPA 70. This includes, but is not limited to:
   a. Metal gas piping.
8. Provide bonding for interior metal air ducts.
9. Provide bonding for metal building frame.
10. Provide bonding for metal siding not effectively bonded through attachment to metal building frame.

H. Communications Systems Grounding and Bonding:

1. Provide intersystem bonding termination at service equipment or metering equipment enclosure and at disconnecting means for any additional buildings or structures in accordance with NFPA 70.

2.2 GROUNDING AND BONDING COMPONENTS

A. General Requirements:
   1. Provide products listed, classified, and labeled as suitable for the purpose intended.
   2. Provide products listed and labeled as complying with UL 467 where applicable.

B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 05 26:
   1. Use insulated copper conductors unless otherwise indicated.
      a. Exceptions:
         1) Use bare copper conductors where installed underground in direct contact with earth.
         2) Use bare copper conductors where directly encased in concrete (not in raceway).
   2. Wire: Stranded Copper.

C. Connectors for Grounding and Bonding:
   1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
   2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
   3. Unless otherwise indicated, use bronze mechanical connectors for accessible connections.
      a. Exceptions:
         1) Use exothermic welded connections for connections to metal building frame.
   4. Manufacturers - Mechanical and Compression Connectors:
      a. Burndy LLC: www.burndy.com/#sle.
      b. Copperweld: www.copperweld.com.
      c. Erico International: www.erico.com.
      d. O-Z Gedney: www.emerson.com.
      e. Thomas & Betts Corporation: www.tnb.com/#sle.
      f. Approved Equal.
   5. Manufacturers - Exothermic Welded Connections:
      a. Copperweld: www.copperweld.com.
      b. O-Z Gedney: www.emerson.com.
      c. Approved Equal.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Perform work in accordance with NECA 1 (general workmanship).

C. Make grounding and bonding connections using specified connectors.
   1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
   2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
   3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
   4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
   5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

D. Identify grounding and bonding system components in accordance with Section 26 05 53.

3.2 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for additional requirements.

B. Inspect and test in accordance with NETA ATS except Section 4.

C. Perform inspections and tests listed in NETA ATS, Section 7.13.

D. Perform ground electrode resistance tests under normally dry conditions. Precipitation within the previous 48 hours does not constitute normally dry conditions.

E. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.

F. Submit detailed reports indicating inspection and testing results and corrective actions taken.

END OF SECTION

SECTION 26 05 29
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.2 REFERENCE STANDARDS

A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.

C. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2023.

D. MFMA-4 - Metal Framing Standards Publication; 2004.

E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate sizes and arrangement of supports and bases with actual equipment and components to be installed.
   2. Coordinate work to provide additional framing and materials required for installation.
   3. Coordinate compatibility of support and attachment components with mounting surfaces at installed locations.
   4. Coordinate arrangement of supports with ductwork, piping, equipment and other potential conflicts.
   5. Notify Architect of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's standard catalog pages and data sheets for channel/strut framing systems, nonpenetrating rooftop supports, and post-installed concrete/masonry anchors.

B. Evaluation Reports: For products specified as requiring evaluation and recognition by ICC Evaluation Service, LLC (ICC-ES), provide current ICC-ES evaluation reports upon request.

C. Installer's qualification statement.

D. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.5 QUALITY ASSURANCE

A. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 SUPPORT AND ATTACHMENT COMPONENTS

A. General Requirements:
   1. Comply with the following. Where requirements differ, comply with most stringent.
      a. NFPA 70.
      b. Requirements of authorities having jurisdiction.
   2. Provide required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for complete installation of electrical work.
   3. Provide products listed, classified, and labeled as suitable for purpose intended, where applicable.
   4. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for the load to be supported. Include consideration for vibration, equipment operation, and shock loads where applicable.
   5. Do not use products for applications other than as permitted by NFPA 70 and product listing.
   6. Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless specifically indicated or permitted.
   7. Steel Components: Use corrosion-resistant materials suitable for environment where installed.
      a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise indicated.
      b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel or approved equivalent unless otherwise indicated.
      c. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
      d. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.

B. Conduit and Cable Supports: Straps and clamps suitable for conduit or cable to be supported.

C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.
   1. Manufacturers:
      a. ABB: www.electrification.us.abb.com/#sle.
      b. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
      c. HoldRite, a brand of Reliance Worldwide Corporation: www.holdrite.com/#sle.
      d. Substitutions: See RHA front ends for additional information.

D. Metal Channel/Strut Framing Systems:
   1. Description: Factory-fabricated, continuous-slot, metal channel/strut and associated fittings, accessories, and hardware required for field assembly of supports.
   2. Comply with MFMA-4.
   3. Channel Material:
      a. Indoor Dry Locations: Use zinc-plated steel.
      b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.
   4. Minimum Channel Thickness: Steel sheet, 12 gauge, 0.1046 inch.
   5. Minimum Channel Dimensions: 1-5/8 inch wide by 13/16 inch high.

E. Hanger Rods: Threaded, zinc-plated steel unless otherwise indicated.
   1. Minimum Size, Unless Otherwise Indicated or Required:
      a. Equipment Supports: 1/2-inch diameter.
      b. Single Conduit up to 1-inch (27 mm) Trade Size: 1/4-inch diameter.

c. Single Conduit Larger than 1-inch (27 mm) Trade Size: 3/8-inch diameter.
d. Trapeze Support for Multiple Conduits: 3/8-inch diameter.
e. Outlet Boxes: 1/4-inch diameter.
f. Luminaires: 1/4-inch diameter.

F. Anchors and Fasteners:
1. Unless otherwise indicated and where not otherwise restricted, use anchor and fastener types indicated for specified applications.
2. Solid or Grout-Filled Masonry: Use expansion anchors or screw anchors.
3. Hollow Masonry: Use toggle bolts.
4. Hollow Stud Walls: Use toggle bolts.
5. Wood: Use wood screws.
6. Powder-actuated fasteners are permitted only as follows:
a. Use only threaded studs; do not use pins.
7. Hammer-driven anchors and fasteners are not permitted.
8. Preset Concrete Inserts: Continuous metal channel/strut and spot inserts specifically designed to be cast in concrete ceilings, walls, and floors.
a. Manufacturer: Same as manufacturer of metal channel/strut framing system.
b. Comply with MFMA-4.
c. Channel Material: Use galvanized steel.
d. Minimum Channel Thickness: Steel sheet, 12 gauge, 0.1046 inch minimum base metal thickness.
9. Post-Installed Concrete and Masonry Anchors: Evaluated and recognized by ICC Evaluation Service, LLC (ICC-ES) for compliance with applicable building code.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive support and attachment components.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install hangers and supports in accordance with NECA 1.

C. Install anchors and fasteners in accordance with ICC Evaluation Services, LLC (ICC-ES) evaluation report conditions of use where applicable.

D. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.

E. Unless specifically indicated or approved by Architect, do not provide support from suspended ceiling support system or ceiling grid.

F. Unless specifically indicated or approved by Architect, do not provide support from roof deck.

G. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.

H. Equipment Support and Attachment:
1. Use metal, fabricated supports or supports assembled from metal channel/strut to support equipment as required.
2. Use metal channel/strut secured to studs to support equipment surface mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.

3. Use metal channel/strut to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
   a. Minimum standoff: 1 inch.
4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.
5. Rigidly weld support members or use hexagon-head bolts to present neat appearance with adequate strength and rigidity. Use spring lock washers under all nuts.
6. Install surface-mounted cabinets and panelboards with minimum of four anchors.
7. Use sheet metal channel to bridge studs above and below cabinets and panelboards recessed in hollow partitions.

I. Secure fasteners in accordance with manufacturer's recommended torque settings.

J. Remove temporary supports.

3.3 FIELD QUALITY CONTROL

A. Inspect support and attachment components for damage and defects.

B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

C. Correct deficiencies and replace damaged or defective support and attachment components.

END OF SECTION

SECTION 26 05 33.13
CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Galvanized steel rigid metal conduit (RMC).

B. Stainless steel rigid metal conduit (RMC).

C. Galvanized steel intermediate metal conduit (IMC).

D. Stainless steel intermediate metal conduit (IMC).

E. PVC-coated galvanized steel rigid metal conduit (RMC).

F. Flexible metal conduit (FMC).

G. Liquidtight flexible metal conduit (LFMC).

H. Galvanized steel electrical metallic tubing (EMT).

I. Stainless steel electrical metallic tubing (EMT).

J. Rigid polyvinyl chloride (PVC) conduit.

1.2 REFERENCE STANDARDS

A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC); 2020.

B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S); 2020.

C. ANSI C80.6 - American National Standard for Electrical Intermediate Metal Conduit; 2018.

D. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

E. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT); 2020.

F. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.

G. NEMA RN 1 - Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Metal Conduit and Intermediate Metal Conduit; 2018.

H. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit; 2020.

I. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing; 2021.

J. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

K. UL 1 - Flexible Metal Conduit; Current Edition, Including All Revisions.

L. UL 6 - Electrical Rigid Metal Conduit-Steel; Current Edition, Including All Revisions.

M. UL 6A - Electrical Rigid Metal Conduit-Aluminum, Red Brass, and Stainless Steel; Current Edition, Including All Revisions.

N. UL 360 - Liquid-Tight Flexible Metal Conduit; Current Edition, Including All Revisions.

O. UL 514A - Metallic Outlet Boxes; Current Edition, Including All Revisions.

P. UL 514B - Conduit, Tubing, and Cable Fittings; Current Edition, Including All Revisions.

Q. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings; Current Edition, Including All Revisions.

R. UL 797 - Electrical Metallic Tubing-Steel; Current Edition, Including All Revisions.

S. UL 797A - Electrical Metallic Tubing - Aluminum and Stainless Steel; Current Edition, Including All Revisions.

T. UL 1242 - Electrical Intermediate Metal Conduit-Steel; Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate minimum sizes of conduits with actual type and quantity of conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
   2. Coordinate arrangement of conduits with structural members, ductwork, piping, equipment, and other potential conflicts.
   3. Verify exact conduit termination locations required for boxes, enclosures, and equipment.
   4. Coordinate work to provide roof penetrations that preserve integrity of roofing system and do not void roof warranty.
   5. Notify Architect of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:
   1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's standard catalog pages and data sheets for conduits and fittings.

B. Project Record Documents: Record actual routing for conduits installed underground, conduits embedded within concrete slabs, and conduits 2-inch (53 mm) trade size and larger.

1.5 QUALITY ASSURANCE

A. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

B. Work shall be inspected by a local Authority Having Jurisdiction (AHJ). Contractor shall provide certificate of inspection prior to final payment request.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 CONDUIT APPLICATIONS

A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, manufacturer's instructions, and product listing.

B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.

C. Concealed Within Masonry Walls: Use electrical metallic tubing (EMT).

D. Concealed Within Hollow Stud Walls: Use electrical metallic tubing (EMT).

E. Concealed Above Accessible Ceilings: Use electrical metallic tubing (EMT).

F. Interior, Damp or Wet Locations: Use galvanized steel rigid metal conduit (RMC), stainless steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), stainless steel intermediate metal conduit (IMC), galvanized steel electrical metallic tubing (EMT), or stainless steel electrical metallic tubing (EMT).

G. Exposed, Interior, Not Subject to Physical Damage: Use electrical metallic tubing (EMT).

H. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit.
   1. Locations subject to physical damage include, but are not limited to:
      a. Where exposed below 8 feet, except within electrical and communication rooms or closets.

I. Concealed, Exterior, Not Embedded in Concrete or in Contact With Earth: Use galvanized steel rigid metal conduit (RMC), stainless steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), stainless steel intermediate metal conduit (IMC), galvanized steel electrical metallic tubing (EMT), or stainless steel electrical metallic tubing (EMT).

J. Fished in Existing Walls, Where Necessary: Use flexible metal conduit (FMC), galvanized steel electrical metallic tubing (EMT), or stainless steel electrical metallic tubing (EMT).

2.2 CONDUIT - GENERAL REQUIREMENTS

A. Comply with NFPA 70.

B. Existing Work: Where existing conduits are indicated to be reused, they may be reused only where they comply with specified requirements, are free from corrosion, and integrity is verified by pulling mandrel through them.

C. Provide conduit, fittings, supports, and accessories required for complete raceway system.

D. Provide products listed, classified, and labeled as suitable for purpose intended.

E. Minimum Conduit Size, Unless Otherwise Indicated:
   1. Branch Circuits: 3/4 inch (21 mm) trade size.
   2. Branch Circuit Homeruns: 3/4-inch trade size.
   3. Flexible Connections to Luminaires: 1/2 inch (16 mm) trade size.

F. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.3 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Manufacturers:
   1. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
   2. Picoma: www.picoma.com.
   3. Wheatland Tube, a division of Zekelman Industries: www.wheatland.com/#sle.
   4. Approved Equal.

B. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.

C. Fittings:

1. Manufacturers:
   a. ABB; T&B: www.electrification.us.abb.com/#sle.
   b. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.us/#sle.
   c. Bridgeport Fittings Inc: www.bptfittings.com/#sle.
   d. Approved Equal.
   e. Substitutions: See RHA front ends for additional information.
2. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
3. Material: Use steel.
4. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.4 STAINLESS STEEL RIGID METAL CONDUIT (RMC)

A. Description: NFPA 70, Type RMC stainless steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6A.

B. Fittings:
   1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6A.
   2. Material: Use stainless steel with corrosion resistance equivalent to conduit.
   3. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.5 GALVANIZED STEEL INTERMEDIATE METAL CONDUIT (IMC)

A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.

B. Fittings:
   1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 1242.
   2. Material: Use steel or malleable iron.
   3. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.6 STAINLESS STEEL INTERMEDIATE METAL CONDUIT (IMC)

A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.

B. Fittings:
   1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 1242.

2.7 PVC-COATED GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit with external polyvinyl chloride (PVC) coating complying with NEMA RN 1 and listed and labeled as complying with UL 6.

B. Exterior Coating: Polyvinyl chloride (PVC), nominal thickness of 40 mil, 0.040 inch.

C. PVC-Coated Boxes and Fittings:
   1. Manufacturer: Same as manufacturer of PVC-coated conduit to be installed.
   2. Nonhazardous Locations: Use boxes and fittings listed and labeled as complying with UL 514A, UL 514B, or UL 6.
   3. Material: Use steel or malleable iron.
   4. Exterior Coating: Polyvinyl chloride (PVC), minimum thickness of 40 mil, 0.040 inch.

D. PVC-Coated Supports: Furnish with exterior coating of polyvinyl chloride (PVC), minimum thickness of 15 mil, 0.015 inch.

2.8 FLEXIBLE METAL CONDUIT (FMC)

A. Manufacturers:
1. AFC Cable Systems, Inc: www.afcweb.com/#sle.
2. Electri-Flex Company: www.electriflex.com/#sle.
3. International Metal Hose: www.metalhose.com/#sle.
4. Approved Equal.

B. Description: NFPA 70, Type FMC standard-wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems.

C. Fittings:
1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
2. Material: Use steel or malleable iron.

2.9 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

A. Manufacturers:
1. AFC Cable Systems, Inc: www.afcweb.com/#sle.
2. Electri-Flex Company: www.electriflex.com/#sle.
3. International Metal Hose: www.metalhose.com/#sle.
4. Approved Equal.

B. Description: NFPA 70, Type LFMC polyvinyl chloride (PVC) jacketed steel flexible metal conduit listed and labeled as complying with UL 360.

C. Fittings:
1. Manufacturers:
a. Bridgeport Fittings, LLC: www.bptfittings.com/#sle.
b. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
c. Approved Equal.
2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
3. Material: Use aluminum.

2.10 GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT)

A. Manufacturers:
1. Allied Tube & Conduit: www.alliedeg.com/#sle.
2. Nucor Tubular Products: www.nucortubular/#sle.
3. Wheatland Tube Company: www.wheatland.com/#sle.
4. Approved Equal.

B. Description: NFPA 70, Type EMT galvanized steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.

C. Fittings:
1. Manufacturers:
a. Bridgeport Fittings, LLC: www.bptfittings.com/#sle.
b. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
c. Approved Equal.
2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
3. Material: Use steel.
4. Connectors and Couplings: Use set-screw type.

a. Do not use indenter type connectors and couplings.

2.11 STAINLESS STEEL ELECTRICAL METALLIC TUBING (EMT)

A. Description: NFPA 70, Type EMT stainless steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797A.

B. Fittings:
1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
2. Connectors and Couplings: Use compression/gland or set-screw type.

2.12 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

A. Manufacturers:
1. Cantex Inc: www.cantexinc.com/#sle.
2. JM Eagle: www.jmeagle.com/#sle.
3. Picoma: www.picoma.com.
4. Approved Equal.

B. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 80 unless otherwise indicated; rated for use with conductors rated 90 degrees C, schedule 40 not permitted.

C. Fittings:
1. Manufacturer: Same as manufacturer of conduit to be connected.
2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.13 ACCESSORIES

A. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.

B. Pull Strings: Use nylon or polyester tape with average breaking strength of not less than 1,250 lbf.

C. Sealing Compound for Hazardous/Classified Location Sealing Fittings: Listed for use with particular fittings to be installed.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive conduits.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Where conduit is installed on an existing wall, paint conduit to match the wall finish.

C. Install conduit in accordance with NECA 1.

D. Galvanized Steel Rigid Metal Conduit (RMC): Install in accordance with NECA 101.

E. Intermediate Metal Conduit (IMC): Install in accordance with NECA 101.

F. PVC-Coated Galvanized Steel Rigid Metal Conduit (RMC): Install using only tools approved by manufacturer.

G. Rigid Polyvinyl Chloride (PVC) Conduit: Install in accordance with NECA 111.

H. Conduit Routing:
1. Unless dimensioned, conduit routing indicated is diagrammatic.
2. When conduit destination is indicated without specific routing, determine exact routing required.
3. Conceal conduits unless specifically indicated to be exposed.
4. Conduits in the following areas may be exposed, unless otherwise indicated:
   a. Electrical rooms.
   b. Mechanical equipment rooms.
   c. Within joists in areas with no ceiling.
5. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
6. Arrange conduit to maintain adequate headroom, clearances, and access.
7. Arrange conduit to provide no more than the equivalent of three 90 degree bends between pull points.
8. Route conduits above water and drain piping where possible.
9. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
10. Maintain minimum clearance of 6 inches between conduits and piping for other systems.
11. Maintain minimum clearance of 12 inches between conduits and hot surfaces. This includes, but is not limited to:
    a. Heaters.
    b. Hot water piping.
    c. Flues.
12. Group parallel conduits in same area on common rack.

I. Conduit Support:
1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 26 05 29.
2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
4. Use conduit strap to support single surface-mounted conduit.
   a. Use clamp back spacer with conduit strap for damp and wet locations to provide space between conduit and mounting surface.
5. Use metal channel/strut with accessory conduit clamps to support multiple parallel surface-mounted conduits.
6. Use conduit clamp to support single conduit from beam clamp or threaded rod.
7. Use trapeze hangers assembled from threaded rods and metal channel/strut with accessory conduit clamps to support multiple parallel suspended conduits.
8. Use of spring steel conduit clips for support of conduits is not permitted.
9. Use of wire for support of conduits is not permitted.

J. Connections and Terminations:
1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
3. Use suitable adapters where required to transition from one type of conduit to another.
4. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.

5. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
6. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
7. Secure joints and connections to provide mechanical strength and electrical continuity.

K. Penetrations:
1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
2. Make penetrations perpendicular to surfaces unless otherwise indicated.
3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
4. Conceal bends for conduit risers emerging above ground.
5. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
6. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.
7. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 07 84 00.

L. Embedment Within Structural Concrete Slabs (only where approved by Structural Engineer):
1. Secure conduits to prevent floating or movement during pouring of concrete.

M. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
2. Where calculated in accordance with NFPA 70 for rigid polyvinyl chloride (PVC) conduit installed above ground to compensate for thermal expansion and contraction.
3. Where conduits are subject to earth movement by settlement or frost.

N. Conduit Sealing:
1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not limited to:
   a. Where conduits enter building from outside.
   b. Where service conduits enter building from underground distribution system.
   c. Where conduits enter building from underground.
   d. Where conduits may transport moisture to contact live parts.
2. Where conduits cross barriers between areas of potential substantial temperature differential, use foam conduit sealant at accessible point near penetration to prevent condensation. This includes, but is not limited to:
   a. Where conduits pass from outdoors into conditioned interior spaces.
   b. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.

O. Provide pull string in each empty conduit and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches at each end.

P. Provide grounding and bonding; see Section 26 05 26.

Q. Identify conduits; see Section 26 05 53.

3.3 FIELD QUALITY CONTROL

A. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

B. Where coating of PVC-coated galvanized steel rigid metal conduit (RMC) contains cuts or abrasions, repair in accordance with manufacturer's instructions.

C. Correct deficiencies and replace damaged or defective conduits.

3.4 CLEANING

A. Clean interior of conduits to remove moisture and foreign matter.

3.5 PROTECTION

A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION

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SECTION 26 05 33.16
BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Outlet and device boxes up to 100 cubic inches, including those used as junction and pull boxes.

B. Cabinets and enclosures, including junction and pull boxes larger than 100 cubic inches.

C. Boxes and enclosures for integrated power, data, and audio/video.

D. Accessories.

1.2 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

B. NECA 130 - Standard for Installing and Maintaining Wiring Devices; 2016.

C. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2024.

D. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.

E. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports; 2013 (Reaffirmed 2020).

F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

G. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.

H. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.

I. UL 508A - Industrial Control Panels; Current Edition, Including All Revisions.

J. UL 514A - Metallic Outlet Boxes; Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
   2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
   3. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.
   4. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.
   5. Coordinate the placement of boxes with millwork, furniture, devices, equipment, etc. installed under other sections or by others.
   6. Coordinate the work with other trades to preserve insulation integrity.

7. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted boxes where indicated.
8. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's standard catalog pages and data sheets for cabinets and enclosures, boxes for hazardous (classified) locations, floor boxes, and underground boxes/enclosures.

B. Project Record Documents: Record actual locations for outlet and device boxes, pull boxes, cabinets and enclosures, floor boxes, and underground boxes/enclosures.

C. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. Keys for Lockable Enclosures: Two of each different key.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 BOXES

A. General Requirements:
1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
3. Provide products listed, classified, and labeled as suitable for the purpose intended.
4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
5. Provide grounding terminals within boxes where equipment grounding conductors terminate.

B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes:
1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
2. Use cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
3. Use cast aluminum boxes where exposed galvanized steel rigid metal conduit is used.
4. Use suitable masonry type boxes where flush-mounted in masonry walls.
5. Use raised covers suitable for the type of wall construction and device configuration where required.
6. Use shallow boxes where required by the type of wall construction.
7. Do not use "through-wall" boxes designed for access from both sides of wall.
8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.

10. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
11. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes unless specifically indicated or permitted.
12. Wall Plates: Comply with Section 26 27 26.
13. Manufacturers:
    a. Cooper Crouse-Hinds, a division of Eaton Corporation: www.cooperindustries.com/#sle.
    b. Hubbell Incorporated; Bell Products: www.hubbell-rtb.com/#sle.
    c. Hubbell Incorporated; RACO Products: www.hubbell-rtb.com/#sle.
    d. Thomas & Betts Corporation: www.tnb.com/#sle.
    e. Approved Equal.

C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches:
1. Comply with NEMA EN 10250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
2. NEMA EN 10250 Environment Type, Unless Otherwise Indicated:
    a. Indoor Clean, Dry Locations: Type 1, painted steel.
    b. Outdoor Locations: Type 4, painted steel.
3. Junction and Pull Boxes Larger Than 100 cubic inches:
    a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.
    b. Boxes 6 square feet and Larger: Provide sectionalized screw-cover or hinged-cover enclosures.
4. Finish for Painted Steel Enclosures: Manufacturer's standard grey unless otherwise indicated.
5. Manufacturers:
    a. Cooper B-Line, a division of Eaton Corporation: www.cooperindustries.com/#sle.
    b. Hoffman, a brand of Pentair Technical Products: www.hoffmanonline.com/#sle.
    c. Hubbell Incorporated; Wiegmann Products: www.hubbell-wiegmann.com/#sle.
    d. Approved Equal.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive boxes.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.

C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

D. Provide separate boxes for emergency power and normal power systems.

E. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.

F. Flush-mount boxes in finished areas unless specifically indicated to be surface-mounted.

G. Unless otherwise indicated, boxes may be surface-mounted where exposed conduits are indicated or permitted.

H. Box Locations:
   1. Unless dimensioned, box locations indicated are approximate.
   2. Locate boxes as required for devices installed under other sections or by others.
      a. Switches, Receptacles, and Other Wiring Devices: Comply with Section 26 27 26.
   3. Locate boxes so that wall plates do not span different building finishes.
   4. Locate boxes so that wall plates do not cross masonry joints.
   5. Unless otherwise indicated, where multiple outlet boxes are installed at the same location at different mounting heights, install along a common vertical center line.
   6. Do not install flush-mounted boxes on opposite sides of walls back-to-back. Provide minimum 6 inches horizontal separation unless otherwise indicated.
   7. Fire Resistance Rated Walls: Install flush-mounted boxes such that the required fire resistance will not be reduced.
      a. Do not install flush-mounted boxes on opposite sides of walls back-to-back; provide minimum 24 inches separation where wall is constructed with individual noncommunicating stud cavities or protect both boxes with listed putty pads.
      b. Do not install flush-mounted boxes with area larger than 16 square inches or such that the total aggregate area of openings exceeds 100 square inches for any 100 square feet of wall area.
   8. Locate junction and pull boxes as indicated, as required to facilitate installation of conductors, and to limit conduit length and/or number of bends between pulling points in accordance with Section 26 05 33.13.
   9. Locate junction and pull boxes in the following areas, unless otherwise indicated or approved by the Architect:
      a. Within joists in areas with no ceiling.
      b. Basement.

I. Box Supports:
   1. Secure and support boxes in accordance with NFPA 70 and Section 26 05 29 using suitable supports and methods approved by the authority having jurisdiction.
   2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
   3. Use far-side support to secure flush-mounted boxes supported from single stud in hollow stud walls. Repair or replace supports for boxes that permit excessive movement.

J. Install boxes plumb and level.

K. Flush-Mounted Boxes:
   1. Install boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that front edge of box or associated raised cover is not set back from finished surface more than 1/4 inch or does not project beyond finished surface.
   2. Install boxes in combustible materials such as wood so that front edge of box or associated raised cover is flush with finished surface.
   3. Repair rough openings around boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that there are no gaps or open spaces greater than 1/8 inch at the edge of the box.

L. Install boxes as required to preserve insulation integrity.

M. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.

N. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 84 00.

O. Close unused box openings.

P. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.

Q. Provide grounding and bonding in accordance with Section 26 05 26.

R. Identify boxes in accordance with Section 26 05 53.

3.3 CLEANING

A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

3.4 PROTECTION

A. Immediately after installation, protect boxes from entry of moisture and foreign material until ready for installation of conductors.

END OF SECTION

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SECTION 26 05 53
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Electrical identification requirements.

B. Identification nameplates and labels.

C. Wire and cable markers.

1.2 REFERENCE STANDARDS

A. ASTM D709 - Standard Specification for Laminated Thermosetting Materials; 2017.

B. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

C. NFPA 70E - Standard for Electrical Safety in the Workplace; 2024.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.

B. Sequencing:
   1. Do not conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
   2. Do not install identification products until final surface finishes and painting are complete.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's standard catalog pages and data sheets for each product.

B. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation and installation of product.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed and classified by Underwriters Laboratories Inc. as suitable for purpose specified and shown.

1.6 FIELD CONDITIONS

A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

PART 2 PRODUCTS

2.1 IDENTIFICATION APPLICATIONS

A. Existing Work: Unless specifically excluded, identify existing elements to remain that are not already identified in accordance with specified requirements.

B. Identification for Equipment:
   1. Use identification nameplate or identification label to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
   2. In addition to identifying data specific to individual pieces of equipment listed, each equipment identification namplate or label shall include a date of installation in a MM/YYYY format.
      a. Panelboards:
         1) Identify ampere rating.
         2) Identify voltage and phase.
         3) Identify power source and circuit number. Include location.
         4) Identify main overcurrent protective device. Use identification label for panelboards with a door. For power distribution panelboards without a door, use identification nameplate or identification label.
         5) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces.
      b. Enclosed switches, circuit breakers, and motor controllers:
         1) Identify voltage and phase.
         2) Identify power source and circuit number. Include location when not within sight of equipment.
         3) Identify load(s) served. Include location.
   3. Available Fault Current Documentation: Use identification label to identify the available fault current and date calculations were performed at locations requiring documentation by NFPA 70 including but not limited to the following.
      a. Service equipment.
   4. Arc Flash Hazard Warning Labels: Use warning labels to identify arc flash hazards for electrical equipment, such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized.
      a. Minimum Size: 3.5 by 5 inches.
      b. Legend: Include orange header that reads "WARNING", followed by the word message "Arc Flash and Shock Hazard; Appropriate PPE Required; Do not operate controls or open covers without appropriate personal protection equipment; Failure to comply may result in injury or death; Refer to NFPA 70E for minimum PPE requirements" or approved equivalent.
      c. Service Equipment: Include the following information in accordance with NFPA 70, 110.16.
         1) Nominal system voltage.
         2) Available fault current.
         3) Clearing time of service overcurrent protective device(s).
         4) Date label applied.

C. Identification for Conductors and Cables:
   1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 05 19.
   2. Use wire and cable markers to identify circuit number or other designation indicated for power, control, and instrumentation conductors and cables at the following locations:
      a. At each source and load connection.
      b. Within boxes when more than one circuit is present.
      c. Within equipment enclosures when conductors and cables enter or leave the enclosure.
   3. Use wire and cable markers to identify connected grounding electrode system components for grounding electrode conductors.

D. Identification for Boxes:
   1. Use identification labels or handwritten text using indelible marker to identify circuits enclosed.

E. Identification for Devices:
   1. Use identification label to identify serving branch circuit for all receptacles.

2.2 IDENTIFICATION NAMEPLATES AND LABELS

A. Identification Labels:
   1. Manufacturers:
      a. Brady Corporation: www.bradyid.com/#sle.
      b. Brother International Corporation: www.brother-usa.com/#sle.
      c. Panduit Corp: www.panduit.com/#sle.
   2. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
   3. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

2.3 WIRE AND CABLE MARKERS

A. Manufacturers:
   1. Brady Corporation: www.bradyid.com/#sle.
   2. Seton Identification Products: www.seton.com.
   3. Approved Equal.

B. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth type markers suitable for the conductor or cable to be identified.

C. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.

D. Legend: Power source and circuit number or other designation indicated.

E. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.

F. Minimum Text Height: 1/8 inch.

G. Color: Black text on white background unless otherwise indicated.

PART 3 EXECUTION

3.1 PREPARATION

A. Clean and degrease surfaces to receive adhesive products according to manufacturer's instructions.

3.2 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:
   1. Surface-Mounted Equipment: Enclosure front.
   2. Flush-Mounted Equipment: Inside of equipment door.
   3. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
   4. Branch Devices: Adjacent to device.
   5. Interior Components: Legible from the point of access.
   6. Boxes: Outside face of cover.
   7. Conductors and Cables: Legible from the point of access.
   8. Devices: Outside face of cover.

C. Install identification products centered, level, and parallel with lines of item being identified.

D. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.

E. Mark all handwritten text, where permitted, to be neat and legible.

3.3 FIELD QUALITY CONTROL

A. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

END OF SECTION

SECTION 26 05 83
WIRING CONNECTIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Electrical connections to equipment.

1.2 REFERENCE STANDARDS

A. NEMA WD 1 - General Color Requirements for Wiring Devices; 1999 (Reaffirmed 2020).

B. NEMA WD 6 - Wiring Devices - Dimensional Specifications; 2021.

C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Obtain and review shop drawings, product data, manufacturer's wiring diagrams, and manufacturer's instructions for equipment furnished under other sections.
   2. Determine connection locations and requirements.

B. Sequencing:
   1. Install rough-in of electrical connections before installation of equipment is required.
   2. Make electrical connections before required start-up of equipment.

1.4 SUBMITTALS

A. See RHA front ends for Administrative Requirements.

B. Product Data: Refer to RHA front ends for additional information. Provide wiring device manufacturer’s catalog information showing dimensions, configurations, and construction.

C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed, classified, and labeled as suitable for the purpose intended.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

PART 2 PRODUCTS

2.1 MATERIALS

A. Cords and Caps: NEMA WD 6; match receptacle configuration at outlet provided for equipment.
   1. Colors: Comply with NEMA WD 1.

2. Cord Construction: NFPA 70, Type SO, multiconductor flexible cord with identified equipment grounding conductor, suitable for use in damp locations.
3. Size: Suitable for connected load of equipment, length of cord, and rating of branch circuit overcurrent protection.
4. Substitutions: See RHA front ends for additional information.

B. Wiring Devices: As specified in Section 26 27 26.

C. Flexible Conduit: As specified in Section 26 05 33.13.

D. Wire and Cable: As specified in Section 26 05 19.

E. Boxes: As specified in Section 26 05 33.16.

2.2 EQUIPMENT CONNECTIONS

A. Refer to equipment Schedules on drawing for specific requirements for each piece of equipment.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that equipment is ready for electrical connection, wiring, and energization.

3.2 ELECTRICAL CONNECTIONS

A. Make electrical connections in accordance with equipment manufacturer's instructions.

B. Make conduit connections to equipment using flexible conduit. Use liquidtight flexible conduit with watertight connectors in damp or wet locations.

C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.

D. Provide receptacle outlet to accommodate connection with attachment plug.

E. Provide cord and cap where field-supplied attachment plug is required.

F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.

G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.

H. Install terminal block jumpers to complete equipment wiring requirements.

I. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

END OF SECTION

SECTION 26 24 16
PANELBOARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Lighting and appliance panelboards.

B. Load centers.

C. Overcurrent protective devices for panelboards.

1.2 REFERENCE STANDARDS

A. FS W-C-375 - Circuit Breakers, Molded Case; Branch Circuit and Service; 2013e, with Amendments (2022).

B. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

C. NECA 407 - Standard for Installing and Maintaining Panelboards; 2015.

D. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2024.

E. NEMA PB 1 - Panelboards; 2011.

F. NEMA PB 1.1 - General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 1000V or Less; 2023.

G. NETA ATS - Standard for Acceptance Testing Specifications for Electrical Power Equipment And Systems; 2025.

H. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.

J. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.

K. UL 67 - Panelboards; Current Edition, Including All Revisions.

L. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures; Current Edition, Including All Revisions.

M. UL 943 - Ground-Fault Circuit-Interrupters; Current Edition, Including All Revisions.

N. UL 1053 - Ground-Fault Sensing and Relaying Equipment; Current Edition, Including All Revisions.

O. UL 1699 - Arc-Fault Circuit-Interrupters; Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.

2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
3. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted panelboards where indicated.
4. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.
5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's standard catalog pages and data sheets for panelboards, enclosures, overcurrent protective devices, and other installed components and accessories.

B. Project Record Documents: Record actual installed locations of panelboards and actual installed circuiting arrangements.

C. Maintenance Data: Include information on replacement parts and recommended maintenance procedures and intervals.

D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. Panelboard Keys: Two of each different key.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store panelboards in accordance with manufacturer's instructions and NECA 407.

B. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

C. Handle carefully in accordance with manufacturer's written instructions to avoid damage to panelboard internal components, enclosure, and finish.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Schneider Electric; Square D Products: www.schneider-electric.us/#sle.

B. Approved Equal..

2.2 PANELBOARDS - GENERAL REQUIREMENTS

A. Provide products listed, classified, and labeled as suitable for the purpose intended.

B. Unless otherwise indicated, provide products suitable for continuous operation under the following service conditions:
   1. Altitude: Less than 6,600 feet.
   2. Ambient Temperature:
      a. Panelboards Containing Circuit Breakers: Between 23 degrees F and 104 degrees F.

C. Short Circuit Current Rating:
   1. Provide panelboards with listed short circuit current rating not less than the available fault current at the installed location as indicated on the drawings.

D. Mains: Configure for top or bottom incoming feed as indicated or as required for the installation.

E. Branch Overcurrent Protective Devices: Replaceable without disturbing adjacent devices.

F. Bussing: Sized in accordance with UL 67 temperature rise requirements.
   1. Provide fully rated neutral bus unless otherwise indicated, with a suitable lug for each feeder or branch circuit requiring a neutral connection.
   2. Provide solidly bonded equipment ground bus in each panelboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.

G. Conductor Terminations: Suitable for use with the conductors to be installed.

H. Enclosures: Comply with NEMA EN 10250, and list and label as complying with UL 50 and UL 50E.
   1. Environment Type per NEMA EN 10250: Unless otherwise indicated, as specified for the following installation locations:
      a. Indoor Clean, Dry Locations: Type 1.
      b. Outdoor Locations: Type 3R.
   2. Boxes: Galvanized steel unless otherwise indicated.
      a. Provide wiring gutters sized to accommodate the conductors to be installed.
   3. Fronts:
      a. Fronts for Surface-Mounted Enclosures: Same dimensions as boxes.
      b. Fronts for Flush-Mounted Enclosures: Overlap boxes on all sides to conceal rough opening.
      c. Finish for Painted Steel Fronts: Manufacturer's standard grey unless otherwise indicated.
   4. Lockable Doors: All locks keyed alike unless otherwise indicated.

I. Future Provisions: Prepare all unused spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.

J. Ground Fault Protection: Where ground-fault protection is indicated, provide system listed and labeled as complying with UL 1053.
   1. Where electronic circuit breakers equipped with integral ground fault protection are used, provide separate neutral current sensor where applicable.

2.3 LIGHTING AND APPLIANCE PANELBOARDS

A. Description: Panelboards complying with NEMA PB 1, lighting and appliance branch circuit type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.

B. Conductor Terminations:
   1. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
   2. Main and Neutral Lug Type: Mechanical.

C. Bussing:
   1. Phase Bus Connections: Arranged for sequential phasing of overcurrent protective devices.
   2. Phase and Neutral Bus Material: Copper.
   3. Ground Bus Material: Copper.
      a. Provide insulated ground bus where indicated.

D. Circuit Breakers: Thermal magnetic bolt-on type unless otherwise indicated.

E. Enclosures:
1. Provide surface-mounted or flush-mounted enclosures as indicated.
2. Fronts: Provide door-in-door trim with hinged cover for access to load terminals and wiring gutters, and separate lockable hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
3. Provide metal circuit directory holder mounted on inside of door.

2.4 LOAD CENTERS

A. Description: Circuit breaker type load centers listed and labeled as complying with UL 67; ratings, configurations, and features as indicated on the drawings.

B. Bussing:
1. Phase Bus Connections: Arranged for sequential phasing of overcurrent protective devices.
2. Bus Material: Copper.

C. Circuit Breakers: Thermal magnetic plug-in type.

D. Enclosures:
1. Provide flush-mounted enclosures unless otherwise indicated.
2. Provide circuit directory label on inside of door or individual circuit labels adjacent to circuit breakers.

2.5 OVERCURRENT PROTECTIVE DEVICES

A. Molded Case Circuit Breakers:
1. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.
2. Interrupting Capacity:
a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated, but not less than:
1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
2) 14,000 rms symmetrical amperes at 480 VAC.
b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
3. Conductor Terminations:
a. Provide mechanical lugs unless otherwise indicated.
b. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
4. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
a. Provide field-adjustable magnetic instantaneous trip setting for circuit breaker frame sizes 225 amperes and larger.
5. Multi-Pole Circuit Breakers: Furnish with common trip for all poles.
6. Provide the following circuit breaker types where indicated:
a. Ground Fault Circuit Interrupter (GFCI) Circuit Breakers: Listed as complying with UL 943, class A for protection of personnel.
b. Arc-Fault Circuit Interrupter (AFCI) Circuit Breakers: Combination type listed as complying with UL 1699.
7. Do not use tandem circuit breakers.
8. Provide the following features and accessories where indicated or where required to complete installation:
a. Shunt Trip: Provide coil voltage as required for connection to indicated trip actuator.
b. Handle Pad-Lock Provision: For locking circuit breaker handle in OFF position.

2.6 SOURCE QUALITY CONTROL

A. Factory test panelboards according to NEMA PB 1.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that the ratings and configurations of the panelboards and associated components are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive panelboards.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship).

B. Install products in accordance with manufacturer's instructions.

C. Install panelboards in accordance with NECA 407 and NEMA PB 1.1.

D. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

E. Provide required support and attachment in accordance with Section 26 05 29.

F. Install panelboards plumb.

G. Install flush-mounted panelboards so that trims fit completely flush to wall with no gaps and rough opening completely covered.

H. Mount panelboards such that the highest position of any operating handle for circuit breakers or switches does not exceed 79 inches above the floor or working platform.

I. Provide minimum of six spare 1 inch trade size conduits out of each flush-mounted panelboard stubbed into accessible space above ceiling.

J. Provide grounding and bonding in accordance with Section 26 05 26.

K. Install all field-installed branch devices, components, and accessories.

L. Height: 6 feet to top of panelboard; install panelboards taller than 6 feet with bottom no more than 4 inches above floor.

M. Provide filler plates to cover unused spaces in panelboards.

N. Identify panelboards in accordance with Section 26 05 53.

O. Provide typed circuit directory for each branch circuit panelboard. Revise directory to reflect circuiting changes required to balance phase loads.

3.3 FIELD QUALITY CONTROL

A. Perform field inspections and testing in accordance with RHA front ends.

B. Inspect and test in accordance with NETA ATS, except Section 4.

C. Fusible Switches: Perform inspections and tests listed in NETA ATS, Section 7.5.1.1.

D. Molded Case Circuit Breakers: Perform inspections and tests listed in NETA ATS, Section 7.6.1.1 for all main circuit breakers. Tests listed as optional are not required.

E. Ground Fault Protection Systems: Test in accordance with manufacturer's instructions as required by NFPA 70.

F. Test GFCI circuit breakers to verify proper operation.

G. Test AFCI circuit breakers to verify proper operation.

H. Test shunt trips to verify proper operation.

I. Correct deficiencies and replace damaged or defective panelboards or associated components.

3.4 ADJUSTING

A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

B. Adjust alignment of panelboard fronts.

C. Load Balancing: For each panelboard, rearrange circuits such that the difference between each measured steady state phase load does not exceed 20 percent and adjust circuit directories accordingly. Maintain proper phasing for multi-wire branch circuits.

3.5 CLEANING

A. Clean dirt and debris from panelboard enclosures and components according to manufacturer's instructions.

B. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION

SECTION 26 25 00
BASIC ELECTRICAL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Grounding and Bonding Requirements

B. Electrical identification.

C. Electrical demolition.

D. Cutting and patching for electrical construction.

E. Touchup painting.

1.2 REFERENCE STANDARDS

A. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2024.

B. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

1.3 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. For circuit breakers and fused disconnects.

B. Project Record Documents: Record actual locations of components and grounding electrodes.

C. Certificate of Compliance: Indicate approval of installation by authority having jurisdiction.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70,
   1. Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
   2. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 CONDUCTORS

A. Conductors: Stranded copper with THHN/THWN insulation

B. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.

2.2 GROUNDING AND BONDING REQUIREMENTS

A. Do not use products for applications other than as permitted by NFPA 70 and product listing.

B. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.

C. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.3 GROUNDING AND BONDING COMPONENTS

A. General Requirements:
   1. Provide products listed, classified, and labeled as suitable for the purpose intended.
   2. Provide products listed and labeled as complying with UL 467 where applicable.

B. Conductors for Grounding and Bonding, in Addition to Requirements of Section :
   1. Grounding Electrode Conductor: Size to meet NFPA 70 requirements.
   2. Use insulated copper conductors unless otherwise indicated.
      a. Exceptions:
         1) Use bare copper conductors where installed underground in direct contact with earth.
         2) Use bare copper conductors where directly encased in concrete (not in raceway).
   3. Wire: Stranded Copper.

C. Connectors for Grounding and Bonding:
   1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
   2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
   3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.
   4. Manufacturers - Mechanical and Compression Connectors:
      a. Copperweld: www.copperweld.com.
      b. Erico International: www.erico.com.
      c. O-Z Gedney: www.emerson.com.
      d. Thomas & Betts Corporation: www.tnb.com/#sle.
   5. Manufacturers - Exothermic Welded Connections:
      a. Cadweld, a brand of Erico International Corporation: www.erico.com/#sle.
      b. Copperweld: www.copperweld.com.
      c. O-Z Gedney: www.emerson.com.

2.4 SUPPORTING DEVICES

A. Selection of Supports: Comply with manufacturer's written instructions.

B. Material: Cold-formed steel, with corrosion-resistant coating acceptable to authorities having jurisdiction.

C. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel.

D. Slotted-Steel Channel Supports: Stainless Steel Flange edges turned toward web, and 9/16-inch diameter slotted holes at a maximum of 2 inches o.c., in webs.

E. Raceway and Cable Supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring-steel clamps or click-type hangers.

F. Strength of Supports: Adequate to carry present and future loads, times a safety factor of at least four; minimum of 200-lb design load.

G. Expansion Anchors: Carbon-steel wedge or sleeve type.

H. Toggle Bolts: All-steel springhead type.

I. Powder-Driven Threaded Studs: Heat-treated steel.

2.5 ELECTRICAL IDENTIFICATION

A. Tape Markers for Wire: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.

B. Engraved-Plastic Labels for transfer switches: Engraving stock, melamine plastic laminate punched or drilled for mechanical fasteners 1/16-inch minimum thickness for signs up to 20 sq. in. and 1/8-inch minimum thickness for larger sizes. Engraved legend in black letters on white background. Label shall include source panel and circuit number.

C. Fasteners for Nameplates and Signs: Self-tapping, stainless-steel screws or No. 10/32 stainless-steel machine screws with nuts and flat and lock washers.

2.6 CIRCUIT BREAKERS

A. Molded case, UL listed for the panelboard they are being installed within.

2.7 TOUCHUP PAINT

A. For Equipment: Equipment manufacturer's paint selected to match installed equipment finish.

B. Galvanized Surfaces: Zinc-rich paint recommended by item manufacturer.

2.8 DISCONNECTS

A. Fused, NEMA rated for the HP rating of the load, NEMA 1 indoors and NEMA 3R outdoors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that work likely to damage grounding and bonding system components has been completed.

B. Verify that field measurements are as shown on the drawings.

C. Verify that conditions are satisfactory for installation prior to starting work.

D. Verify existing conditions prior to beginning work.

3.2 ELECTRICAL EQUIPMENT INSTALLATION

A. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide the maximum possible headroom.

B. Materials and Components: Install level, plumb, and parallel and perpendicular to other building systems and components, unless otherwise indicated.

C. Equipment: Install to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.

D. Right of Way: Give to raceways and piping systems installed at a required slope.

3.3 RACEWAY APPLICATION

A. Use the following raceways for outdoor installations:
   1. Boxes and Enclosures: NEMA 250, Type 3R or Type 4.

B. Use the following raceways for indoor installations (non-hazardous locations only):
   1. Boxes and Enclosures: NEMA 250, Type 1, unless otherwise indicated.

3.4 RACEWAY AND CABLE INSTALLATION

A. Make conduit bends and offsets so ID is not reduced. Keep legs of bends in the same plane and straight legs of offsets parallel, unless otherwise indicated.

B. Use raceway and cable fittings compatible with raceways and cables and suitable for use and location.

C. Connect motors and equipment subject to vibration, noise transmission, or movement with a maximum of 72-inch flexible conduit. Install LFMC in wet or damp locations. Install separate ground conductor across flexible connections.

3.5 WIRING INSTALLATION

A. Install splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

B. Connect outlet and component connections to wiring systems and to ground. Tighten electrical connectors and terminals, according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.

C. Install grounding and bonding system components in a neat and workmanlike manner in accordance with NECA 1.

D. Equipment Grounding Conductor: Provide separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

E. Make grounding and bonding connections using specified coductors and connectors.
   1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
   2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.

F. Install ground electrodes at locations indicated. Install additional rod electrodes as required to achieve specified resistance to ground.

G. Provide bonding to meet requirements described in Quality Assurance.

H. Bond together metal siding not attached to grounded structure; bond to ground.

3.6 SUPPORT INSTALLATION

A. Install support devices to securely and permanently fasten and support electrical components.

B. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U-bolts, clamps, attachments, and other hardware necessary for hanger assemblies and for securing hanger rods and conduits.

C. Arrange supports in vertical runs so the weight of raceways and enclosed conductors is carried entirely by raceway supports, with no weight load on raceway terminals.

D. Simultaneously install vertical conductor supports with conductors.

E. Securely fasten electrical items and their supports to the building structure, unless otherwise indicated. Perform fastening according to the following unless other fastening methods are indicated:
   1. Wood: Fasten with wood screws or screw-type nails.
   2. Masonry: Toggle bolts on hollow masonry units and expansion bolts on solid masonry units.

3. Fasteners: Select so the load applied to each fastener does not exceed 25 percent of its proof-test load.

3.7 IDENTIFICATION MATERIALS AND DEVICES

A. Tag disconnects with load supplied, and source.

B. Update panelboard directories..

C. Color-code system secondary service, feeder, and branch-circuit conductors throughout the secondary electrical system as follows:
1. Phase A: Black.
2. Phase B: Red.
3. Neutral: White.
4. Ground: Green.

3.8 DEMOLITION

A. Protect existing electrical equipment and installations indicated to remain. If damaged or disturbed in the course of the Work, remove damaged portions and install new products of equal capacity, quality, and functionality.

B. Accessible Work: Remove exposed electrical equipment and installations, indicated to be demolished, in their entirety.

C. Remove demolished material from Project site.

3.9 CUTTING AND PATCHING

A. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces required to permit electrical installations. Perform cutting by skilled mechanics of trades involved.

B. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing firestopping has been disturbed. Repair and refinish materials and other surfaces by skilled mechanics of trades involved.

3.10 REFINISHING AND TOUCHUP PAINTING

A. Clean damaged and disturbed areas and apply primer, intermediate, and finish coats to suit the degree of damage at each location.

B. Follow paint manufacturer's written instructions for surface preparation and for timing and application of successive coats.

C. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

D. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

3.11 CLEANING AND PROTECTION

A. On completion of installation, including outlets, fittings, and devices, inspect exposed finish. Remove burrs, dirt, paint spots, and construction debris.

B. Protect equipment and installations and maintain conditions to ensure that coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

END OF SECTION

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SECTION 26 27 26
WIRING DEVICES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Wall switches.

B. Receptacles.

C. Wall plates and covers.

1.2 REFERENCE STANDARDS

A. FS W-C-596 - Connector, Electrical, Power, General Specification for; 2014h (Validated 2022).

B. FS W-S-896 - Switches, Toggle (Toggle and Lock), Flush Mounted (General Specification); 2017g (Validated 2023).

C. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

D. NECA 130 - Standard for Installing and Maintaining Wiring Devices; 2016.

E. NEMA WD 1 - General Color Requirements for Wiring Devices; 1999 (Reaffirmed 2020).

F. NEMA WD 6 - Wiring Devices - Dimensional Specifications; 2021.

G. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

H. UL 20 - General-Use Snap Switches; Current Edition, Including All Revisions.

I. UL 498 - Attachment Plugs and Receptacles; Current Edition, Including All Revisions.

J. UL 514D - Cover Plates for Flush-Mounted Wiring Devices; Current Edition, Including All Revisions.

K. UL 943 - Ground-Fault Circuit-Interrupters; Current Edition, Including All Revisions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the placement of outlet boxes with millwork, furniture, equipment, etc. installed under other sections or by others.
   2. Coordinate wiring device ratings and configurations with the electrical requirements of actual equipment to be installed.
   3. Coordinate the installation and preparation of uneven surfaces, such as split face block, to provide suitable surface for installation of wiring devices.
   4. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

B. Sequencing:
   1. Do not install wiring devices until final surface finishes and painting are complete.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's catalog information showing dimensions, colors, and configurations.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed, classified, and labeled as suitable for the purpose intended.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND PROTECTION

A. Store in a clean, dry space in original manufacturer's packaging until ready for installation.

PART 2 PRODUCTS

2.1 WIRING DEVICES - GENERAL REQUIREMENTS

A. Provide wiring devices suitable for intended use with ratings adequate for load served.

B. Wiring Device Applications:
1. Receptacles Installed Outdoors or in Damp or Wet Locations: Use weather-resistant GFCI receptacles with weatherproof covers.
2. Provide GFCI protection for:
a. Receptacles installed within 6 feet of sinks.
b. Receptacles installed in kitchens.
3. Single Receptacles Installed on Individual Branch Circuits: Provide receptacle ampere rating equal to branch circuit rating.

C. Wiring Device Finishes:
1. Provide wiring device finishes as described below, unless otherwise indicated.
2. Wiring Devices, Unless Otherwise Indicated: White with stainless steel wall plate.

2.2 WALL SWITCHES

A. Manufacturers:
1. B.O.D.: Leviton Manufacturing Company, Inc: www.leviton.com/#sle.
2. Approved Equal..

B. Wall Switches - General Requirements: AC only, quiet operating, general-use snap switches with silver alloy contacts, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 20and where applicable FS W-S-896; types as indicated on the drawings.
1. Wiring Provisions: Terminal screws for side wiring and screw actuated binding clamp for back wiring with separate ground terminal screw.

C. Standard Wall Switches: Residential grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.

2.3 RECEPTACLES

A. Manufacturers:
1. B.O.D.: Leviton Manufacturing Company, Inc: www.leviton.com/#sle.
2. Approved Equal.

B. Receptacles - General Requirements: Self-grounding, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 498and where applicable FS W-C-596; types as indicated on the drawings.

1. Wiring Provisions: Terminal screws for side wiring or screw actuated binding clamp for back wiring with separate ground terminal screw.
2. NEMA configurations specified are according to NEMA WD 6.

C. Convenience Receptacles:
1. Tamper Resistant Convenience Receptacles: Residential grade, 20A, 125V, NEMA 5-20R, listed and labeled as tamper resistant type; single or duplex as indicated on the drawings.

D. GFCI Receptacles:
1. GFCI Receptacles - General Requirements: Self-testing, with feed-through protection and light to indicate ground fault tripped condition and loss of protection; listed as complying with UL 943, class A.
   a. Provide test and reset buttons of same color as device.
2. Tamper Resistant GFCI Receptacles: Residential grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, listed and labeled as tamper resistant type.

E. USB Charging Devices:
1. USB Charging / Receptacle Combination Devices: Two-port (1 type A and 1 type C) USB 3.1 charging device and receptacle, residential grade, duplex, 20A, 125V, NEMA 5-20R; rectangular decorator style.GFCI where applicable.

2.4 WALL PLATES AND COVERS

A. Manufacturers:
1. B.O.D.: Leviton Manufacturing Company, Inc: www.leviton.com/#sle.
2. Approved Equal.

B. Wall Plates: Comply with UL 514D.
1. Configuration: One piece cover as required for quantity and types of corresponding wiring devices.
2. Size: Standard.
3. Screws: Metal with tamper-resistant heads finished to match wall plate finish.

C. Nylon Wall Plates: Smooth finish, high-impact thermoplastic.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate devices and conductors in accordance with NFPA 70.

C. Verify that wall openings are neatly cut and will be completely covered by wall plates.

D. Verify that final surface finishes are complete, including painting.

E. Verify that branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

F. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.3 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards unless otherwise indicated.

B. Coordinate locations of outlet boxes provided under Section 26 05 33.16 as required for installation of wiring devices provided under this section.
   1. Mounting Heights: Unless otherwise indicated, as follows:
      a. Wall Switches: 48 inches above finished floor.
      b. Receptacles: 18 inches above finished floor or 6 inches above counter.
   2. Orient outlet boxes for vertical installation of wiring devices unless otherwise indicated.
   3. Where multiple receptacles, wall switches, or wall dimmers are installed at the same location and at the same mounting height, gang devices together under a common wall plate.
   4. Locate wall switches on strike side of door with edge of wall plate 4 inches from edge of door frame. Where locations are indicated otherwise, notify Architect to obtain direction prior to proceeding with work.

C. Install wiring devices in accordance with manufacturer's instructions.

D. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.

E. Where required, connect wiring devices using pigtails not less than 6 inches long. Do not connect more than one conductor to wiring device terminals.

F. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.

G. Provide GFCI receptacles with integral GFCI protection at each location indicated. Do not use feed-through wiring to protect downstream devices.

H. Install wiring devices plumb and level with mounting yoke held rigidly in place.

I. Install wall switches with OFF position down.

J. Install vertically mounted receptacles with grounding pole on top and horizontally mounted receptacles with grounding pole on left.

K. Install wall plates to fit completely flush to wall with no gaps and rough opening completely covered without strain on wall plate. Repair or reinstall improperly installed outlet boxes or improperly sized rough openings. Do not use oversized wall plates in lieu of meeting this requirement.

L. Install blank wall plates on junction boxes and on outlet boxes with no wiring devices installed or designated for future use.

M. Identify wiring devices in accordance with Section 26 05 53.

3.4 FIELD QUALITY CONTROL

A. Inspect each wiring device for damage and defects.

B. Operate each wall switch with circuit energized to verify proper operation.

C. Test each receptacle to verify operation and proper polarity.

D. Test each GFCI receptacle for proper tripping operation according to manufacturer's instructions.

E. Correct wiring deficiencies and replace damaged or defective wiring devices.

3.5 ADJUSTING

A. Adjust devices and wall plates to be flush and level.

B. Adjust presets for wall dimmers according to manufacturer's instructions as directed by Architect.

3.6 CLEANING

A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

END OF SECTION

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SECTION 26 51 00
INTERIOR LIGHTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Interior luminaires.

1.2 REFERENCE STANDARDS

A. NECA/IESNA 500 - Standard for Installing Indoor Lighting Systems; 2006.

B. NECA/IESNA 502 - Standard for Installing Industrial Lighting Systems; 2006.

C. NEMA LE 4 - Recessed Luminaires, Ceiling Compatibility; 2023.

D. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the installation of luminaires with mounting surfaces installed under other sections or by others. Coordinate the work with placement of supports, anchors, etc. required for mounting. Coordinate compatibility of luminaires and associated trims with mounting surfaces at installed locations.
   2. Coordinate the placement of luminaires with structural members, ductwork, piping, equipment, diffusers, fire suppression system components, and other potential conflicts installed under other sections or by others.
   3. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, installed accessories, and ceiling compatibility; include model number nomenclature clearly marked with all proposed features.

B. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

C. Operation and Maintenance Data: Instructions for each product including information on replacement parts.

D. Project Record Documents: Record actual connections and locations of luminaires and any associated remote components.

1.5 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND PROTECTION

A. Receive, handle, and store products according to NECA/IESNA 500 (commercial lighting), NECA/IESNA 502 (industrial lighting), and manufacturer's written instructions.

B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

1.7 WARRANTY

A. Provide 3-year manufacturer warranty for LED luminaires, including drivers.

PART 2 PRODUCTS

2.1 LUMINAIRE TYPES

A. Furnish products as indicated in luminaire schedule included on the drawings.

2.2 LUMINAIRES

A. Provide products that comply with requirements of NFPA 70.

B. Provide products that are listed and labeled as complying with UL 1598, where applicable.

C. Provide products listed, classified, and labeled as suitable for the purpose intended.

D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.

E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, supports, trims, accessories, etc. as necessary for a complete operating system.

F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.

G. Recessed Luminaires:
1. Ceiling Compatibility: Comply with NEMA LE 4.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate conductors in accordance with NFPA 70.

C. Verify that suitable support frames are installed where required.

D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to luminaires.

E. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.3 INSTALLATION

A. Coordinate locations of outlet boxes provided under Section 26 05 33.16 as required for installation of luminaires provided under this section.

B. Install products in accordance with manufacturer's instructions.

C. Install luminaires securely, in a neat and workmanlike manner.

D. Provide required support and attachment in accordance with Section 26 05 29.

E. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.

F. Wall-Mounted Luminaires: Unless otherwise indicated, specified mounting heights are to center of luminaire.

G. Install accessories furnished with each luminaire.

H. Bond products and metal accessories to branch circuit equipment grounding conductor.

I. Install lamps in each luminaire.

3.4 FIELD QUALITY CONTROL

A. Inspect each product for damage and defects.

B. Operate each luminaire after installation and connection to verify proper operation.

C. Correct wiring deficiencies and repair or replace damaged or defective products. Repair or replace excessively noisy ballasts as determined by Architect.

3.5 ADJUSTING

A. Aim and position adjustable luminaires to achieve desired illumination as indicated or as directed by Architect. Secure locking fittings in place.

B. Aim and position adjustable emergency lighting unit lamps to achieve optimum illumination of egress path as required or as directed by Architect or authority having jurisdiction.

3.6 CLEANING

A. Clean surfaces according to manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

3.7 PROTECTION

A. Protect installed luminaires from subsequent construction operations.

END OF SECTION

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SECTION 28 46 14
SINGLE AND MULTIPLE STATION ALARMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Single- and multiple-station alarms.

1.2 RELATED REQUIREMENTS

A. Section 07 84 00 - Firestopping.

B. Section 26 05 26 - Grounding and Bonding for Electrical Systems.

C. Section 26 05 53 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

B. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

C. NFPA 72 - National Fire Alarm and Signaling Code; Most Recent Edition Cited by Referring Code or Reference Standard.

D. UL 217 - Standard for Smoke Alarms; Current Edition, Including All Revisions.

1.4 SUBMITTALS

A. Product Data: Refer to RHA front ends for additional information. Provide manufacturer's standard catalog pages and data sheets for products, including ratings, configurations, standard wiring diagrams, dimensions, finishes, service condition requirements, and installed features.

B. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

C. Executed warranty.

D. Specimen warranty.

1.5 QUALITY ASSURANCE

A. Comply with the following:
   1. NFPA 70.
   2. NFPA 72.
   3. Requirements of authorities having jurisdiction.
   4. Applicable local codes.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

B. Store products in manufacturer's unopened packaging, keep dry and protect from damage until ready for installation.

1.7 FIELD CONDITIONS

A. Maintain field conditions within required service conditions during and after installation.

1.8 WARRANTY

A. Manufacturer Warranty: Provide 10-year manufacturer warranty for alarm units. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. B.O.D.: Kidde; www.kidde.com.

B. Approved Equal.

2.2 SINGLE- AND MULTIPLE-STATION ALARMS

A. General Requirements:
   1. Power Supply: 120 VAC with battery backup, alkaline or sealed lithium with 10-year life. Battery-operated only alarms not permitted.
   2. Utilize plug-in mounting with tamper-resistant features.
   3. Provide alarm test and silence features.
   4. Self restoring; automatic alarm reset upon clearing of alarm condition.
   5. Multiple-Station Alarms:
      a. Utilize wired communication between interconnected alarms.
      b. Limit number of interconnected alarms in accordance with manufacturer's requirements and applicable codes.
      c. The unit shall at a minimum meet the requirements of UL 217, UL 2034, NFPA 72, NFPA 101 (one- and two-family dwellings), Federal Housing Authority (FHA), and Housing and Urban Development (HUD).

B. Smoke Alarms:
   1. Listed and labeled as complying with UL 217.
   2. Smoke Sensor: Photoelectric or ionization type as indicated on drawings.

C. Combination and Multicriteria Alarms: Comply with respective requirements for each detection method.

PART 3 EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1 for general workmanship.

B. Install products in accordance with manufacturer's instructions.

C. Install new batteries in devices with field-installed battery backup.

D. Provide grounding and bonding; see Section 26 05 26.

E. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 07 84 00.

F. Identify system wiring, components, and overcurrent protective devices for branch circuits serving alarms; see Section 26 05 53.

3.2 FIELD QUALITY CONTROL

A. Comply with requirements of authorities having jurisdiction for scheduling and observation of inspections and tests.

B. Perform initial acceptance inspection and testing in accordance with NFPA 72 and requirements of authorities having jurisdiction; document each inspection and test.

C. Use integral test feature to confirm operation of each alarm and activation of interconnected alarms.

D. Test for operation of connected external auxiliary devices.

E. Test for interface with other systems.

F. Correct deficiencies and replace damaged or defective alarms and accessories.

3.3 PROTECTION

A. Protect installed alarms from subsequent construction operations.

END OF SECTION

ROCHESTER HOUSING AUTHORITY

BRONSON COURT UNIT 29, 31, & 84

90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

ISSUED FOR BIDDING

ROCHESTER Housing Authority

LIST OF DRAWINGS:

GENERAL DRAWINGS

C	COVER SHEET
G0.1	SYMBOLS & ABBREVIATIONS
G1.1	CODE COMPLIANCE
G1.2	CODE COMPLIANCE - CONTINUED
G1.3	TYPICAL AIR SEAL DETAILS
G1.4	TYPICAL ASSEMBLY
G1.5	FIXTURE & FINISH SCHEDULES

ARCHITECTURAL DRAWINGS

A0.1	TYPICAL DEMOLITION PLANS
A1.1	TYPICAL ENLARGED PLANS & ELEVATIONS
A1.2	TYPICAL SECTIONS AND DETAILS
A1.3	TYPICAL SECTIONS AND DETAILS
A1.A	UNIT 29 CONSTRUCTION PLANS
A1.B	UNIT 31 CONSTRUCTION PLANS
A1.C	UNIT 84 CONSTRUCTION PLANS
A6.1	TYPICAL DOORS
A6.2	TYPICAL WINDOWS

MECHANICAL DRAWINGS

M1.1	TYPICAL HVAC PLANS

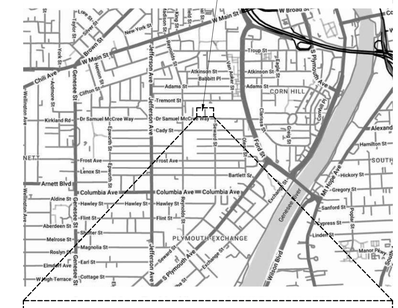
ELECTRICAL & FIRE PROTECTION DRAWINGS

E1.1	TYPICAL ELECTRICAL DEMO PLANS
E1.2	TYP. ELEC. & FIRE PROTECTION PLANS
E1.3	TYPICAL ELECTRICAL SCHEDULES

PLUMBING DRAWINGS

P1.1	TYPICAL PLUMBING PLANS

PROJECT LOCATION:
90 DR SAMUEL MCCREE WAY,
ROCHESTER, NY 14608



KEY PLAN: 39 UNITS

07/17/2026

HUNT PROJECT NO.: 2285-068

SCOPE OF WORK:

WORK IN THIS PROJECT INCLUDES SELECTIVE DEMOLITION AND ALTERATIONS TO UNITS 29, 31, & 84 AT BRONSON COURT TOWN HOUSES. SELECTIVE DEMOLITION IS SUBSEQUENT TO ASBESTOS REMOVAL BY SEPARATE CONTRACT. UNITS 29, 31, & 84 WILL BE COMPLETELY GUTTED, BY OTHERS OTHER THAN FENESTRATION AND OTHER SPECIFICALLY NOTED ITEMS. ALTERATIONS INVOLVE MINOR PLAN CHANGES, PROVIDING GYPSUM BOARD, INSULATION, FLOOR / WALL / CEILING FINISHES, CASEWORK, DOORS, PLUMBING, HVAC, AND ELECTRICAL SYSTEMS.

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS.
2. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. BIDS SHALL INCLUDE PROVISIONS FOR A COMPLETE JOB BASED ON EXISTING CONDITIONS AND THE DRAWINGS AND SPECIFICATIONS.
3. IF THE CONTRACTOR OR SUBCONTRACTOR SHOULD FIND ANY DISCREPANCY IN AND / OR OMISSIONS FROM THESE DRAWINGS OR IF THE CONTRACTOR SHOULD BE IN QUESTION AS TO THEIR MEANING OR INTENT, THE CONTRACTOR SHOULD CONTACT THE ARCHITECT AT ONCE FOR INTERPRETATION OR CLARIFICATION.
4. AREAS OF THE SITE OR ANY EXISTING CONSTRUCTION TO REMAIN, IF DAMAGED DURING CONSTRUCTION, SHALL BE RESTORED TO IT'S ORIGINAL CONDITION AT NO COST TO THE OWNER.
5. COORDINATE USE OF THE EXISTING SITE AND PREMISES WITH THE OWNER AND ARCHITECT. LOCATION OF STORED MATERIALS SHALL BE COORDINATED WITH THE OWNER. THE OWNER IS NOT RESPONSIBLE FOR STORED MATERIALS THAT ARE DAMAGED OR STOLEN.
6. PROTECT, PATCH, REPAIR, AND PAINT EXISTING CONSTRUCTION TO REMAIN AS REQUIRED DUE TO REMOVALS. INSTALLATION OF NEW WORK AND/OR AS REQUIRED TO RECEIVE NEW WORK.
7. ALL MATERIALS USED SHALL BE EQUAL TO OR EXCEED ALL APPLICABLE STATE OR LOCAL CODES AND REQUIREMENTS.
8. CONTRACTOR SHALL REMOVE PROMPTLY AND LEGALLY ALL ACCUMULATED DEBRIS, PROTECT ALL EXPOSED PORTIONS OF WORK FROM ELEMENTS, AVOID OVER-LOADING STRUCTURE, AND SECURELY STORE ALL ITEMS TO BE USED FOR CONSTRUCTION.
9. ALL EXISTING UTILITIES AND CITY SERVICES ARE TO BE MAINTAINED, KEPT IN SERVICE, AND PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.
10. ALL ELECTRICAL CALCULATIONS AND WIRE SIZE TO BE PROVIDED BY A LICENSED ELECTRICAL CONTRACTOR. RECEPTACLE, FIXTURE, AND EQUIPMENT LOCATIONS TO BE COORDINATED WITH OWNER. CONTRACTOR TO VERIFY LOCATION, FIXTURE TYPES AND EQUIPMENT WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.
11. MECHANICAL SYSTEM BY CONTRACTOR. PLUMBING PIPING SHALL BE INSTALLED BY A LICENSED PLUMBER.
12. ALL EXITS TO BE OPERABLE FROM THE INSIDE WITHOUT USE OF A KEY OR SPECIAL KNOWLEDGE.

THIS IS TO CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF - THESE PLANS AND SPECIFICATIONS ARE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF THE BUILDING CODE, FIRE CODE, AND ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.

REGISTERED ARCHITECT
MICHAEL TRAPANOTTO
094108-1
STATE OF NEW YORK

EXP. 04/30/2027

HUNT ENGINEERS | ARCHITECTS | SURVEYORS

HORSEHEADS, NY 607 - 358 - 1000 ROCHESTER, NY 585 - 327 - 7949 TOWANDA, PA 570 - 265 - 4868
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WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

A	AREA
A/C	AIR CONDITIONING COOLING
AB	ANCHOR BOLTS
ABV	ABOVE
AC	ALTERNATING CURRENT
ACT	ACOUSTICAL TILE
AD	AREA DRAIN
ADD	ADDENDUM
ADH	ADHESIVE
ADJ	ADJACENT
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
AHU	AIR HANDLER
AL	ALUMINUM
ALIGN	ALIGNMENT
ALLOW	ALLOWANCE
ALT	ALTERNATE
AMP	AMPERAGE
ANC	ANCHOR(AGE)
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASB	ASBESTOS
ASBC	ASBESTOS CONTRACTOR
ASPH	ASPHALT
AUX	AUXILIARY
AVG	AVERGAGE
AWG	AMERICAN WIRE GAGE
BCJ	BRICK CONTROL JOINT
BCU	CLOWER COIL UNIT
BD	BOARD
BEJ	BRICK EXPANSION JOINT
BEL	BELOW
BEV	BEVELED
BF	BOARD FEET
BIT	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCH MARK
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BPL	BEARING PLATE
BRG	BEARING
BRK	BRICK
BRKT	BRACKET
BS	BOTH SIDES
BTU	BRITISH THERMAL UNITS
BUR	BUILT-UP ROOF
BW	BOTH WAYS
C	CHANNEL
C-C	CENTER TO CENTER
CAB	CABINET
CAP	CAPACITY
CB	CATCH BASIN
CBF	HUNDRED BOARD FEET
CD	COLD DRAWN
CEM	CEMENT
CER	CERAMIC
CF	CUBIC FOOT
CFLG	COUNTER FLASHING
CFM	CUBIC FOOT/MINUTE
CFMF	COLD-FORMED METAL FRAMING
CFS	CUBIC FEET/SECOND
CH	CABINET HEATER
CHBD	CHALKBOARD
CI	CAST IRON
CIP	CAST-IN PLACE CONCRETE
CIR	CIRCLE
CJ	CONTROL JOINT
CK	CAULK(ING)
CLG	CEILING
CLO	CLOSET
CLR	CLEAR(ANCE)
CLS	CLOSURE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT, COMPANY
COL	COLUMN
COMB	COMINNATION
COMP	COMPRESSED(), (ION), (IBLE)
CON	CONNECTOR, CONNECTION
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS, CONTINUE
CONTR	CONTRACTOR()
COORD	COORDINATE
CP	CLAY PIPE
CPG	COPING
CPR	COPPER

CPT	CARPET(ED)
CR	COLD ROLLED
CRS	COURSE(S)
CSMT	CASEMENT
CST	CAST STONE
CT	CERAMIC TILE
CTR	COUNTER
CU	CUBIC
CULV	CULVERT
CV	CHECK VALVE
CW	COLD WATER
CY	CUBIC YARD
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEMO	DEMOLITION
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIV	DIVISION
DL	DEAD LOAD
DLV	DOOR LOUVER
DN	DOWN
DOZ	DOZEN
DP	DAMP-PROOFING
DPR	DAMPER
DR	DOOR
DS	DOUNSPOUT
DT	DRAIN TILE
DTA	DOVETAIL ANCHOR
DTL	DETAIL
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL()
ELEV	ELEVATOR
EMER	EMERGENCY
ENC	ENCLOSE, ENCLOSURE
ENG	ENGINEER
ENT	ENTRANCE
EOC	EVERY OTHER COURSE
EOD	EDGE OF DECK
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL BOARD
EQ	EQUAL
EQP	EQUIPMENT
EST	ESTIMATE(D)
EW	EACH WAY
EWC	ELECTRICAL WATER COOL
EWF	ELECTRIC WALL FAN
EXC	EXCAVATE
EXG	EXISTING
EXH	EXHAUST
EXP	EXPOSED
EXT	EXTERIOR
FA	FIRE ALARM, FRESH AIR
FAI	FRESH AIR INTAKE
FAS	FASTENER
FB	FACE BRICK
FBD	FIBERBOARD
FBO	FINISHED BY OTHERS
FC	FAN COIL
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FDR	FOLDING DOOR
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FGL	FIBERGLASS
FIG	FIGURE
FIN	FINISH(ED)
FLCO	FLOOR CLEANOUT
FLEX	FLEXIBLE
FLG	FLASHING
FLOUR	FLOURESCENT
FLR	FLOOR(ING)
FND	FOUNDATION
FO	FRAMED OPENING
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FP	FIREPROOF
FPL	FLOOR PLATE
FR	FRAME(D), (ING)

FRT	FIRE-RETARDANT
FT	FOOT (')
FTG	FOOTING
FUR	FURRIED, FURRING
FURN	FURNITURE
FXT	FIXTURE
GA	GAGE, GAUGE
GALV	GALVANIZED
GAS	GAS
GB	GRAB BAR
GC	GENERAL CONTRACTOR()
GCMU	GLAZED CMU
GD	GRADE, GRADING
GF	GRANULAR FILL
GFI	GROUND FAILT INTERRUPTER
GI	GALVANIZED IRON
GL	GLASS, GLAZING
GP	GALVANIZED PIPE
GPM	GALLONS PER MINUTE
GSS	GALVANIZED STEEL SHEET
GST	GLAZED STRUCTURAL TILE
GVL	GRAVEL
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
HB	HOSE BIB
HC	HVAC CONTRACTOR
HCP	HANDICAP
HD	HEAVY DUTY
HDJT	HEAD JOINT
HDR	HEADER
HDW	HARDWARE
HH	HANDHOLE
HI	HEIGHT OF INSTRUMENT
HK	HOOK(S)
HM	HOLLOW METAL
HOR	HORIZONTAL
HP	HORSEPOWER
HR	HANDRAIL
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HTX	HEAT EXCHANGER
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HW	HOT WATER
HWH	HOT WATER HEATER
HYD	HYDRANT
ID	INSIDE DIAMETER
IN	INCH (")
INCIN	INCINERATOR
INCL	INCLUDE(D), INCLUDING
INFO	INFORMATION
INS	INSULATE(D)
INT	INTERIOR
INV	INVERT (ELEVATION)
IP	IRON PIPE / IRON PIPE SIZE
JC	JANITORS CLOSET
JF	JOINT FILLER
JNT	JOINT
JST	JOIST
KIT	KITCHEN
KO	KNOCKOUT
KPL	KICKPLATE
L	LENGTH
LAB	LABORATORY
LAD	LADDER
LAM	LAMINATE(D)
LAT	LATITUDE
LAV	LAVATORY
LBL	LABEL
LF	LINEAR FOOT
LH	LEFT HAND
LIC	LICENSE(D)
LIN	LINEAR
LINO	LINOLEUM
LIQ	LIQUID
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMS	MINESTONE
LONG	LONGITUDE, LONGITUDINAL
LP	LIGHT PANEL
LPT	LOW POINT
LRG	LARGE
LT	LIGHT
LTL	LINTEL
LVR	LOUVER

LVT	LUXURY VINYL TILE
MAINT	MAINTENANCE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MBF	1000 BOARD FEET
MBR	MEMBER
MC	MECHANICAL CONTRACT(OR)
MECH	MECHAICAL()
MED	MEDIUM
MFD	MANUFACTURED
MFG	MANUFACTURING
MFR	MANUFACTURE(ER)
MGR	MANAGER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MKBD	MARKERBOARD
MLD	MOULDING, MOLDING
MMB	MEMBRANE
MNT	MOUNT(ED), (ING)
MO	MASONRY OPENING
MOD	MODULAR
MON	MONUMENT
MOV	MOVABLE
MRB	MARBLE
MRD	METAL ROOF DECKING
MTFR	METAL FURRING
MTL	METAL
MULL	MULLION
MULT	MULTIPLE
MWK	MILLWORK
N/F	NOW OR FORMERLY
NA	NOT AVAILABLE/APPLICABLE
NAT	NATURAL
NEC	NATIONAL ELECTRIC CODE
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NL	NAILABLE
NMT	NON-METALLIC
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NS	NEAR SIDE
NTS	NOT TO SCALE
O/H	OVERHEAD
OA	OVERALL
OBS	OBSCURE
OC	ON CENTER(S)
OD	OUTSIDE DIAMETER
OFF	OFFICE
OHG	OVERHANG
OPG	OPENING
OPH	OPPOSITE HAND
OPP	OPPOSITE
OPS	OPPOSITE SURFACE
ORIG	ORIGINAL
OWSJ	OPEN-WEB STEEL JOIST
PA	PUBLIC ADDRESS
PAR	PARALLEL
PB	PANIC BAR
PBD	PARTICLE BOARD
PC	PLUMBING CONTRACT(OR)
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PE	PORCELAIN ENAMEL
PEN	PENETRATION
PERF	PERFORATE(D)
PERI	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PFB	PREFABRICATE(D)
PFN	PREFINISH(ED)
PG	PLATE GLASS
PKG	PARKING
PL	PLATE
PLAM	PLATIC LAMINATE
PLAST	PLASTER
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PLS	PLASTIC
PNL	PANEL
PNT	PAINT(ED)
POB	POINT OF BEGINNING
PR	PAIR
PRF	PREFORMED
PROJ	PROJECT
PRT	PRESERVATIVE TREATED
PSC	PRE-STRESSED CONCRETE
PSF	POUNDS PER SQUARE FOOT

PSI	POUNDS PER SQUARE INCH
PT	POINT
PTD	PAPER TOWEL DISPENSER
PTM	PATCH TO MATCH
PTN	PARTITION
PTR	PAPER TOWEL RECEPTOR
PV	PAVE(D), PAVING
PVC	POLYVINYL CHLORIDE
PVCP	PVC PIPE
PVMT	PAVEMENT
PWD	PLYWOOD
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
R	RISE(R)
RA	RETURN AIR
RAD	RADIUS
RBR	RUBBER
RBT	RABBET
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE, REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIDERATOR, REFRIDGERATED
REG	REGISTER
REINF	REINFORCE(D), REINFORCING
REQ	REQUIRED
RES	RESILIENT
RET	RETURN
REV	REVISED, REVISION(S)
RFG	ROOFING
RFH	ROOF HATCH
RFL	REFLECTED), (IVE), (OR)
RH	RIGHT HAND
RIM	RIM (ELEVATION)
RL	RAIL(ING)
RM	ROOM
RMV	REMOVE
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RP	RADIENT PANEL
RPM	REVOLUTIONS PER MINUTE
RS	REINFORCING STEEL
RT	RUBBER TILE
RTE	ROUTE
RWC	RAINWATER CONDUCTOR
SAN	SANITARY (SEWAR)
SB	SPLASH BLOCK
SC	SOLIDCORE
SCH	SCHEDULE
SCN	SCREEN
SD	STORM DRAIN
SDG	SIDING
SEC	SECTION
SF	SQUARE FOOT
SFGL	SAFETY GLASS
SGT	STRUCTURAL GLAZED TILE
SH	SHELF, SHELVING
SHT	SHEET
SHTG	SHEATHING
SHWR	SHOWER
SIM	SIMILAR
SKL	SKYLIGHT
SL	SLEEVE
SNT	SEALANT
SP	SOUND PROOF
SPC	SPACER
SPEC	SPECIFICATION(S)
SPKR	SPEAKER
SPL	SPECIAL
SQ	SQUARE
SS	STAINLESS STEEL
SSK	SERVICE SINK
STA	STATION
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STN	STAIN(ED)
STOR	STORAGE
STR	STRUCTURAL
SUBSTR	SUBSTRUCTURE
SUPT	SUPERINTENDENT
SURF	SURFACE
SUSP	SUSPENDED
SW	SWITCH
SY	SQUARE YARD
SYS	SYSTEM
T	TREAD

T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TAB	TABULATE
TC	TERRA COTTA
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERATURE
TF	TRANSPARENT FINISH
THK	THICK(NESS)
THR	THRESHOLD
TKBD	TACKBOARD
TKS	TACKSTRIP
TMBR	TERMINATION BAR
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOL	TOLERANCE
TOM	TOP OF MASONRY
TOPO	TOPOGRAPHIC
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TPTN	TOILET PARTITION
TR	TRANSON
TRM	TOILET ROOM
TV	TELEVISION, CABLE
TWP	TOWNSHIP
TYP	TYPICAL
TZ	TERRAZZO
U/G	UNDERGROUND
UC	UNDERCUT
UN	UNIT HEATER
UNF	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UNP	UNPAINTED
UR	URINAL
UV	UNIT VENTILATOR
V	VOLT
VB	VINYL/RUBBER BASE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VENT	VENTILATOR
VERT	VERTICAL
VEST	VESTIBULE
VF	VINYL FABRIC
VIF	VERIFY IN FIELD
VIN	VINYL
VJ	V-JOINT(ED)
VOL	VOLUME
VWC	VINYL WALL COVER
W	WIDE, WIDTH
W/	WITH
W/O	WITHOUT
WB	WOODBASE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WD	WOOD
WDW	WINDOW
WF	WALL FIN RADIATION
WG	WIRE(ED) GLASS
WH	WALL HYDRANT
WHB	WHEEL BUMPER
WI	WROUGHT IRON
WM	WIRE MESH
WP	WATERPROOF(ED), (ING)
WR	WATER REPELLENT
WS	WATERSTOP
WSCT	WAINSCOT
WT	WEIGHT
WTW	WALL TO WALL
WV	WET VENT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
XSECT	CROSS SECTION
YD	YARD
YR	YEAR

SITEWORK SYMBOLS

CONTROL POINT
UTILITY POLE W/ ANCHOR
SIGN
EXG. WATER VALVE
NEW WATER VALVE
UTILITY POLE W/ LIGHT
STREET LIGHT
EXG. FIRE HYDRANT
NEW FIRE HYDRANT
CATCH BASIN/ DRYWELL
CURB BOX VALVE
EXISTING DECIDIOUS TREE
EXISTING CONIFEROUS TREE
X 941.5 EXG. ELEVATION
+941.5 NEW ELEVATION
G GAS LINE
EXISTING MANHOLE
NEW MANHOLE
90 NEW CONTOUR*
E EXISTING ELECTRIC*
W WATER LINE*
SAN SANITARY LINE*
TEL TELEPHONE LINE*
ST STORM SEWER*
O/H OVERHEAD UTILITY
UGE UNDERGROUND ELECTRIC*
ROAD CENTER LINE
*LINES SHOWN AS SCREENED (GRAY) DENOTE EXISTING
EDGE OF STREAM OR SWALE
SHUBBERY, WOODS

SITEWORK SYMBOLS

EXISTING CULVERT
NEW CULVERT WITH END SECTION
TP-* TEST PIT
TH-* TEST HOLE
RIP RAP
COORDINATE POINT LOCATION
5/8" REBAR WITH SURVEY CAP SET
EXISTING IRON ROD
EXISTING IRON PIPE
UTILITY POLE
ORIGINAL LOT LINE
DEED LINE
PROPERTY LINE
EXISTING FENCE
NEW FENCE
GUARD RAIL
EASEMENT LINE
CONCRETE MONUMENT

PLUMBING SYMBOLS

(CW) DOMESTIC COLD WATER PIPING
(HW) DOMESTIC HOT WATER PIPING
(HWR) DOMESTIC RECIRCULATING WATER PIPING
POINT OF CONNECTION
SPRINKLER HEAD
VOLUME DAMPER
(G) NATURAL GAS PIPING
BELOW SLAB SANITARY PIPING
ABOVE SLAB SANITARY PIPING
ST BELOW SLAB STORM (ROOF DRAINAGE) PIPING

PLUMBING SYMBOLS

RD ABOVE SLAB STORM (ROOF DRAINAGE) PIPING
V (V) SANITARY VENT PIPING
CD (CD) CONDENSATE DRAIN PIPING
EXISTING PIPING TO REMAIN.
EXISTING PIPING AND EQUIPMENT TO BE REMOVED
CHECK VALVE
FLOOR PENETRATION
AW ACID WASTE
AV ACID VENT
HOT WATER SUPPLY PIPING
HOT WATER RETURN PIPING
RS REFRIGERANT SUCTION PIPING
RL REFRIGERANT LIQUID PIPING
(OR) SHUT-OFF VALVE
TOP-PIPE CONECT
BOTTOM-PIPE CONNECTION
BALANCING VALVE/ AUTOMATIC FLOW/ CONTROL FITTING/ SPRINKLER UPRIGHT

HVAC SYMBOLS

AAD AUTOMATIC DAMPER
D-1 / 100 DIFFUSER NUMBER / CFM
G-1 / 300 GRILLE NUMBER CFM
R-1 / 300 REGISTER NUMBER CFM
DUCT W/ MANUAL VOLUME DAMPER
SUPPLY AIR DIFFUSER
GRILLER OR REG.
FD FIRE DAMPER
T THERMOSTAT
T G THERMOSTAT W/GUARD
S SENSOR
MITERED ELBOW W/ TURNING VALVES
10/8 FIRST NUMBER IS SIZE SHOWN FOR DUCT WIDTH

HVAC SYMBOLS

POINT OF CONNECTION
DUCT DOWN
DUCT UP
DUCT PENETRATION THRU FLOOR OR ROOF ABOVE SUPPLY
DUCT PENETRATION THRU FLOOR OR ROOF ABOVE EXHAUST OR RETURN

ELECTRICAL SYMBOLS

NON-FUSED DISCONNECT SWITCH
FUSED DISCONNECT SWITCH
MAGNETIC CONTACTOR
COMBINATION MAGNETIC MOTOR STARTER AND FUSED DISCONNECT SWITCH
PP FLUSH WALL MOUNTED POWER PANEL BD.
PP SURFACE MOUNTED POWER PANEL BD.
CP-1 MOTOR TYPE ELECTRICAL LOAD
HD HAND DRYER / HAIR DRYER ELEC. LOAD
XX UV-UNIT VENT
AHU-AIR HANDLING UNIT
FC- FAN COIL UNIT
P-PUMP
EF-EXHAUST FAN
CU-CONDENSING UNIT
DUPLEX RECEPTACLE WALL MOUNTED
GFI-GROUND FAULT CIRCUIT INTERRUPT
IG-ISOLATED GROUND TYPE
WP-GROUND FAULT TYPE IN WATERPROOF HOUSING
AC-MNT. ABOVE COUNTER BACKSPLASH
BC-MNT. BELOW COUNTER
14-50R SPECIAL RECEPTACLE WITH NEMA CONFIGURATION SHOWN
FL FLOOR RECEPTACLE
QUAD RECEPTACLE
TOGGLE SWITCH
K KEYED TYPE TOGGLE SWITCH
LV LOW VOLTAGE MOMENTARY CONTRACT KEYED SWITCH
OC OCCUPANCY SENSOR TYPE SWITCH
CEILING MOUNTED LIGHT FIXTURE
WALL MOUNTED LIGHT FIXTURE
HID LIGHT FIXTURE - CLG. MNT.

ELECTRICAL SYMBOLS

TRACK LIGHTING WITH FIXTURES
STRIP TYPE FLUORESCENT LIGHT FIXTURE
NEW RECESS. FLUORESCENT LIGHT FIXTURE
2'X4' RECESSED LIGHT FIXTURE EM-DENOTED EMERGENCY FIXTURE, CONNECTED TO EMERGENCY CIRCUIT, NL-DENOTES NITE LIGHT CKT. TYPES VARY REFER TO FIXTURE SCHEDULE
EXISTING RECESSED FLUORESCENT LIGHT FIXTURE
PENDANT MOUNTED FLUORSCENT LIGHT FIXTURE
CEILING MOUNTED EMERGENCY EXIT SIGN (SINGLE FACE)
WALL MOUNTED EMERGENCY EXIT SIGN (DUAL FACE) ARROWS FOR EGRESS PATH DIRECTION
EXTERIOR WALL MOUNTED HID LIGHT FIXTURE
EMERGENCY EGRESS BATTERY BACKUP LIGHT FIXTURE
ILLUMINATED "AREA OF RESCUE ASSISTANCE" SIGNAGE
CEILING MOUNTED OCCUPANCY SENSOR
FAA FIRE ALARM ANNUNCIATOR
FACP FIRE ALARM CONTORL PANEL
RA "AREA OF RESCUE ASSISTANCE" CONTROL STATION
F MANUAL FIRE ALARM PULL STATION
H FIXED HEAT DETECTOR
S SMOKE DETECTOR (REFER TO SPECIFICATIONS FOR DEFAULT TYPE)
S_D DUCT SMOKE DETECTOR
FIC FIRE ALARM VISUAL ANNUNCIATOR
FIC FIRE ALARM AUD.-VIS. ANNUNCIATOR
M MAGNETIC DOOR HOLDER
M MAG. DOOR HOLDER (W/EXTENSION)
DATA PORT
W WALL MOUNTED FULL FEATURE TELEPHONE & JACK
C WALL MOUNTED CLOCK
S WALL MOUNTED PA SPEAKER
C S CLOCK/SPEAKER IN INTEGRAL HOUSING
PUBLIC ADDRESS SYSTEM "CALL" PUSH BUTTONS
TV COMBINATION TELEVISION JACK & COMPUTER MONITOR INTERFACE
TV SINGLE TELEVISION JACK
P1-1 HOME RUN OF WIRE AND CONDUIT

TECHNOLOGY SYMBOLS

CABLE TRAY
FIBER OPTICAL CABLING
FLOOR POKE-THRU
MULTI COMPARTMENT POWER POLE
FB FLOOR BOX
PB PULL BOX
MULTI COMPARTMENT SURFACE RACEWAY
CATEGORY 6 DATA OUTLET # = QUANTITY OF DATA OUTLETS IN FACEPLATE IF GREATER THAN ONE
WAP WIRELESS ACCESS POINT WITH CAT. 6 CABLING
W WALL MOUNT STYLE CAT. 6 TELEPHONE OUTLET
(#) CATEGORY 6 TELEPHONE OUTLET # = QTY. OF OUTLETS IF GREATER THAN ONE
IP TELEPHONE LOCATION ### = PHONE TYPE
S CEILING MOUNT SPEAKER
S WALL MOUNT SPEAKER
HORN TYPE SPEAKER
VC SPEAKER VOLUME CONTROL
C S CLOCK/SPEAKER
C CLOCK
TV TELEVISION OUTLET
PROJ PROJECTOR
INTERACTIVE BOARD INTERACTIVE BOARD
A/V AUDIO/VIDEO CONNECTIONS TO PROJECTOR
#C-# SECURITY CAMERA #=CAM NUMBER ##= CAM. TYPE
CR CARD READER
IC INTERCOM
DC DOOR CONTACT SWITCH
REX REQUEST TO EXIT SENSOR
DS ELECTRIC DOOR LOCK DEVICE (DOOR STRIKE)
LIGHTNING ARRESTOR
GENERAL SYMBOL ANNOTATIONS
"E" =EXISTING TO REMAIN
"R" =EXISTING TO BE REPLACED
"RE" =EXISTING TO BE RELOCATED
"WG" =PROVIDE WIRE GUARD
"W-MT" =WALL MOUNT
P_D COMMUNICATIONS RACEWAY DEVICE LOCATION
C_B COMMUNICATIONS BACKBOX LOCATION

ARCHITECTURAL SYMBOLS

ROOM NAME, NUMBER, & APPROXIMATE AREA
BUILDING SECTION CALLOUT
A@1 WALL SECTION/ DETAIL SECTION
INTERIOR ELEVATION CALLOUT
EXTERIOR ELEVATION CALLOUT
DETAIL/TITLE NUMBER
COLUMN GRID LINE
CUT LINE
MATCH LINE
CENTERLINE
ELEVATION INDICATOR
CASEWORK NUMBER & TYPE - REFER TO CASEWORK SCHEDULE
WINDOW NUMBER
DOOR NUMBER
WALL PARTITION TYPE
D# DEMOLITION KEYNOTE
DRAWING KEYNOTE
MARKERBOARD AND TACKBOARD TYPES
TOILET ACCESSORY TAG
FEC FIRE EXTINGUISHER CABINET
ELEVATION MARK OR COORDINATE POINT
RD ROOF DRAIN
SLOPE OR ENTRY POINT

ARCHITECTURAL SYMBOLS

V VENT PIPE
EXHAUST HOOD
EXISTING WALL/ CONSTRUCTION TO REMAIN
DEMOLITION WORK
NEW MASONRY WALL CONSTRUCTION
NEW STUD WALL CONSTRUCTION

ARCHITECTURAL MATERIAL SYMBOLS

EARTH/COMPACT FILL
POROUS FIL/GRAVEL
CONCRETE/ STRUCTURAL CONCRETE
SAND/ ARCHITECTURAL PRECAST CONCRETE
BRICK/BRICK PAVERS
CONCRETE MASONRY
STEEL
FINISH WOODWORK
NOMINAL CUT LUMBER, CONTINUOUS BLOCKING
BLOCKING SHIM
PLYWOOD/ PARTICLEBOARD
PLASTIC/ SOLID SURFACE
BATT INSULATION
RIGID INSULATION
FIREPROOFING
GLAZING
LATH AND PLASTER
CARPET
TERRAZZO
CERAMIC TILE - SECTION
GYPSUM WALL BOARD

REGISTERED ARCHITECT MICHAEL TRAPANOTTO 034481 STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY: JEH
CHECKED BY: MT
DATE: 07/17/2026
PHASE: CD

Copyright: 2026

#	DATE:	DESCRIPTION OF REVISION:
1	09/30/2026	ISSUED FOR BID

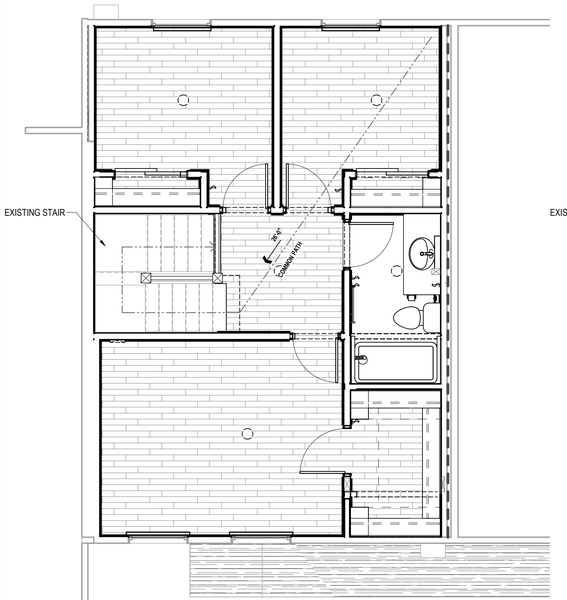
"IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO MAKE UNAUTHORIZED ALTERATIONS OR ADDITIONS TO PLANS BEARING A LICENSED ENGINEER'S, ARCHITECT'S OR SURVEYOR'S SEAL."

HUNT ENGINEERS | ARCHITECTS | SURVEYORS
ROCHESTER, NY 585 - 327 - 7050
BINGHAMTON, NY 607 - 786 - 8081
WWW.HUNT-EAS.COM
TOWANDA, PA 570 - 265 - 4868
ALBANY, NY 607 - 798 - 8081
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. PC-RM422035-1-1-E

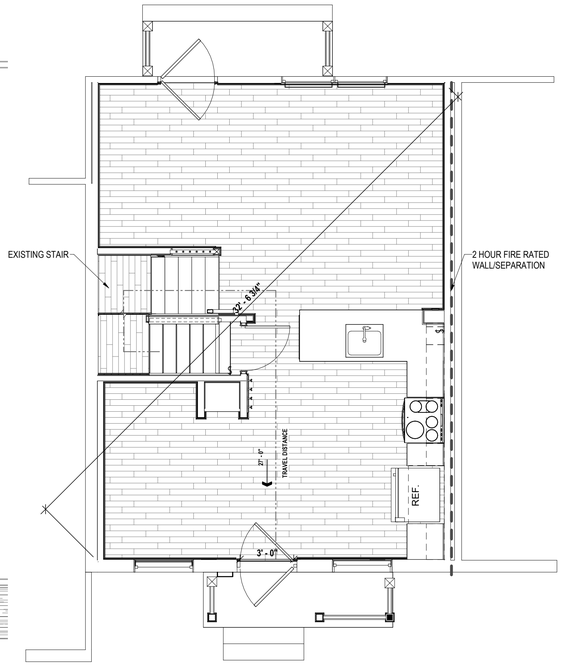
SYMBOLS & ABBREVIATIONS
BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

G0.1

PROJECT NO: 2285-068

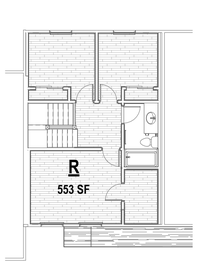


2 SECOND FLOOR CODE COMPLIANCE PLAN
1/4" = 1'-0"

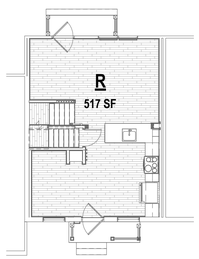


1 FIRST FLOOR CODE COMPLIANCE PLAN
1/4" = 1'-0"

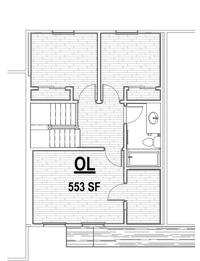
N



6 OCCUPANCY TYPE - SECOND FL.
3/32" = 1'-0"



5 OCCUPANCY TYPE - FIRST FL.
3/32" = 1'-0"



4 OCCUPANT LOAD - SECOND FL.
3/32" = 1'-0"



3 OCCUPANT LOAD - FIRST FL.
3/32" = 1'-0"

ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE 2025

CHAPTER 3 GENERAL REQUIREMENTS

SECTION/ DESCRIPTION		
[NY] C301.1 GENERAL	APPLICABLE CLIMATE ZONE FROM FIGURE C301.1/TABLE C301.1	MONROE ; CLIMATE ZONE 5
[NY] C402.1.3 OPAQUE BUILDING THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD	ATTIC AND OTHER: R53 MIN. WOOD FRAMED AND OTHER: R19+R5ci	ATTIC AND OTHER: R53 MIN. WOOD FRAMED AND OTHER: R19 +R6.9ci • NEW R19 INSULATION WILL BE PROVIDED IN THE EXISTING WALL ASSEMBLY • EXISTING 1" POLYISOCYANURATE INSULATION MAKES UP THE EXTERIOR CONTINUOUS INSULATION.
[NY] C501.2 COMPLIANCE	ADDITIONS, ALTERATIONS, REPAIRS, AND CHANGES OF OCCUPANCY TO, OR RELOCATION OF, EXISTING BUILDINGS AND STRUCTURES SHALL COMPLY WITH SECTIONS C502, C503, C504 AND C505 OF THIS CODE, AS APPLICABLE, AND WITH THE PROVISIONS FOR ALTERATIONS, REPAIRS, ADDITIONS AND CHANGES OF OCCUPANCY OR RELOCATION, RESPECTIVELY, IN THE BUILDING CODE OF NEW YORK STATE, EXISTING BUILDING CODE OF NEW YORK STATE, FIRE CODE OF NEW YORK STATE, FUEL GAS CODE OF NEW YORK STATE, MECHANICAL CODE OF NEW YORK STATE, PLUMBING CODE OF NEW YORK STATE, PROPERTY MAINTENANCE CODE OF NEW YORK STATE, AND NFPA 70.	
[NY] C503.1 ALTERATIONS - GENERAL	[NY] C503.1 GENERAL ALTERATIONS TO ANY BUILDING OR STRUCTURE SHALL COMPLY WITH THE REQUIREMENTS OF SECTION C503. ALTERATIONS SHALL BE SUCH THAT THE EXISTING BUILDING OR STRUCTURE IS NOT LESS CONFORMING TO THE PROVISIONS OF THIS CODE THAN THE EXISTING BUILDING OR STRUCTURE WAS PRIOR TO THE ALTERATION. ALTERATIONS TO AN EXISTING BUILDING, BUILDING SYSTEM OR PORTION THEREOF SHALL CONFORM TO THE PROVISIONS OF THIS CODE AS THOSE PROVISIONS RELATE TO NEW CONSTRUCTION WITHOUT REQUIRING THE UNALTERED PORTIONS OF THE EXISTING BUILDING OR BUILDING SYSTEM TO COMPLY WITH THIS CODE. ALTERATIONS SHALL NOT CREATE AN UNSAFE OR HAZARDOUS CONDITION OR OVERLOAD EXISTING BUILDING SYSTEMS.	
[NY] C503.2 BUILDING THERMAL ENVELOPE	ALTERATIONS OF EXISTING BUILDING THERMAL ENVELOPE ASSEMBLIES SHALL COMPLY WITH THIS SECTION. NEW BUILDING THERMAL ENVELOPE ASSEMBLIES THAT ARE PART OF THE ALTERATION SHALL COMPLY WITH SECTION C402. AN AREA-WEIGHTED AVERAGE U-FACTOR FOR NEW AND ALTERED PORTIONS OF THE BUILDING THERMAL ENVELOPE SHALL BE PERMITTED TO SATISFY THE U-FACTOR REQUIREMENTS IN TABLE C402.1.2. THE EXISTING R-VALUE OF INSULATION SHALL NOT BE REDUCED OR THE U-FACTOR OF A BUILDING THERMAL ENVELOPE ASSEMBLY BE INCREASED AS PART OF A BUILDING THERMAL ENVELOPE ALTERATION EXCEPT WHERE COMPLYING WITH SECTION C407.	
[NY] C503.2 BUILDING THERMAL ENVELOPE	ALTERATIONS OF EXISTING BUILDING THERMAL ENVELOPE ASSEMBLIES SHALL COMPLY WITH THIS SECTION. NEW BUILDING THERMAL ENVELOPE ASSEMBLIES THAT ARE PART OF THE ALTERATION SHALL COMPLY WITH SECTION C402. AN AREA-WEIGHTED AVERAGE U-FACTOR FOR NEW AND ALTERED PORTIONS OF THE BUILDING THERMAL ENVELOPE SHALL BE PERMITTED TO SATISFY THE U-FACTOR REQUIREMENTS IN TABLE C402.1.2. THE EXISTING R-VALUE OF INSULATION SHALL NOT BE REDUCED OR THE U-FACTOR OF A BUILDING THERMAL ENVELOPE ASSEMBLY BE INCREASED AS PART OF A BUILDING THERMAL ENVELOPE ALTERATION EXCEPT WHERE COMPLYING WITH SECTION C407.	MONROE ; CLIMATE ZONE 5

2025 MECHANICAL CODE OF NEW YORK STATE

CHAPTER 4 VENTALATION

SECTION/ DESCRIPTION		
403.1 MECHANICAL VENTALATION	MECHANICAL VENTILATION SHALL BE PROVIDED BY A METHOD OF SUPPLY AIR AND RETURN OR EXHAUST AIR EXCEPT THAT MECHANICAL VENTILATION AIR REQUIREMENTS FOR GROUP R-2, R-3 AND R-4 OCCUPANCIES SHALL BE PROVIDED BY AN EXHAUST SYSTEM, SUPPLY SYSTEM OR COMBINATION THEREOF. THE AMOUNT OF SUPPLY AIR SHALL BE APPROXIMATELY EQUAL TO THE AMOUNT OF RETURN AND EXHAUST AIR. THE SYSTEM SHALL NOT BE PROHIBITED FROM PRODUCING NEGATIVE OR POSITIVE PRESSURE. THE SYSTEM TO CONVEY VENTILATION AIR SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH CHAPTER 6.	NOTE HERE

BUILDING INFORMATION:

90 DR. SAMUEL MCCREE WAY ROCHESTER NY 14611 / MAILING ADDRESS: 675 W MAIN ST ROCHESTER NY 14608

SECTION/ DESCRIPTION	
DESCRIPTION	ALTERATION OF EXISTING TOWNHOUSE UNITS 29, 31, AND 84 AT ROCHESTER HOUSING AUTHORITY'S BRONSON COURT TOWNHOUSES. (UNIT PROTOTYPE) WORK INCLUDES SELECTIVE DEMOLITION, MINOR PLAN CHANGES TO INTERIOR FINISHES, WINDOWS, DOORS, CASEWORK, HVAC, ELECTRICAL, AND PLUMBING SYSTEMS.
APPLICABLE CODES, REGULATIONS, & GUIDELINES	2025 NEW YORK STATE EXISTING BUILDING CODE, 2025 RESIDENTIAL CODE OF NEW YORK STATE, U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)
OCCUPANCY CLASSIFICATION	R-2 TOWNHOUSES/APARTMENT HOUSES
YEAR BUILT	1968
STORIES	2
SPRINKLERS	NONE, NOT REQUIRED PER 2025 EBC (803.2.2)
TYPE OF CONSTRUCTION	V-B APARTMENT, 2 STORY, LOAD SUPPORTING WALLS
ZONING DISTRICT	R-1 LOW DENSITY RESIDENTIAL
HISTORICAL DISTRICT	NON-HISTORICAL
ACRES	2.05
BUILDING AREA	BUILDING 2: ~4,350 SF BUILDING 7: ~3,220 SF
WORK AREA	~1,050 SF EACH UNIT
ACCESIBLE SIDES	(2) SIDES

EXISTING BUILDING CODE OF NEW YORK STATE 2025

CHAPTER 3 PROVISIONS FOR ALL COMPLIANCE METHODS

SECTION/ DESCRIPTION	
301.3 ALTERATION, ADDITION OR CHANGE OF OCCUPANCY	THE ALTERATION, ADDITION OR CHANGE OF OCCUPANCY OF ALL EXISTING BUILDINGS SHALL COMPLY WITH ONE OF THE METHODS LISTED IN SECTION 301.3.1, 301.3.2 OR 301.3.3 AS SELECTED BY THE APPLICANT. SECTIONS 301.3.1 THROUGH 301.3.3 SHALL NOT BE APPLIED IN COMBINATION WITH EACH OTHER.
301.3.2 WORK AREA COMPLIANCE METHOD	ALTERATIONS, ADDITIONS, AND CHANGES OF OCCUPANCY COMPLYING WITH THE APPLICABLE REQUIREMENTS OF CHAPTERS 6 THROUGH 12 OF THIS CODE SHALL BE CONSIDERED IN COMPLIANCE WITH THE PROVISIONS OF THIS CODE.
302.3 ADDITIONAL CODES	ALTERATIONS, REPAIRS, ADDITIONS AND CHANGES OF OCCUPANCY TO, OR RELOCATION OF, EXISTING BUILDINGS AND STRUCTURES SHALL COMPLY WITH THE PROVISIONS FOR ALTERATIONS, REPAIRS, ADDITIONS AND CHANGES OF OCCUPANCY OR RELOCATION, RESPECTIVELY, IN THIS CODE AND THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE, FIRE CODE OF NEW YORK STATE, FUEL GAS CODE OF NEW YORK STATE, MECHANICAL CODE OF NEW YORK STATE, PLUMBING CODE OF NEW YORK STATE, PROPERTY MAINTENANCE CODE OF NEW YORK STATE, RESIDENTIAL CODE OF NEW YORK STATE AND NFPA 70. WHERE PROVISIONS OF THE OTHER CODES CONFLICT WITH PROVISIONS OF THIS CODE, THE PROVISIONS OF THIS CODE SHALL TAKE PRECEDENCE.
302.4 NEW AND REPLACEMENT MATERIALS	EXCEPT AS OTHERWISE REQUIRED OR PERMITTED BY THE CODE, MATERIALS PERMITTED BY THE APPLICABLE CODE FOR NEW CONSTRUCTION SHALL BE USED. LIKE MATERIALS SHALL BE PERMITTED FOR REPAIRS AND ALTERATIONS, PROVIDED THAT UNSAFE CONDITIONS ARE NOT CREATED. HAZARDOUS MATERIALS SHALL NOT BE USED WHERE THE CODE FOR NEW CONSTRUCTION WOULD NOT PERMIT THEIR USE IN BUILDINGS OF SIMILAR OCCUPANCY, PURPOSE AND LOCATION.
306.3 DESIGN	BUILDINGS AND FACILITIES SHALL BE DESIGNED AND CONSTRUCTED TO BE ACCESSIBLE IN ACCORDANCE WITH THIS CODE AND THE ALTERATION AND EXISTING BUILDING PROVISIONS IN ICC A117.1, AS APPLICABLE.
306.7 ALTERATIONS	A FACILITY THAT IS ALTERED SHALL COMPLY WITH THE APPLICABLE PROVISIONS IN CHAPTER 11 OF THE BUILDING CODE OF NEW YORK STATE, ICCC A117.1 AND THE PROVISIONS OF SECTIONS 306.7.1 THROUGHT 306.7.19, UNLESS TECHNICALLY INFEASIBLE. WHERE COMPLIANCE WITH THIE SECTION IS TECHNICALLY INFEASIBLE, THE ALTERATION SHALL PROVIDE ACCESS TO THE MAXIMUM EXTENT TECHNINCALLY FEASIBLE.
306.7.4 TYPE B UNITS	TYPE B DWELLING OR SLEEPING UNITS REQUIRED BY SECTION 1108 OF THE BUILDING CODE OF THE NEW YORK STATE ARE NOT REQUIRED TO BE PROVIDED IN EXISTING BUILDINGS AND FACILITES UNDERGOING ALTERATIONS WHERE THE WORK ARES IS 50 PERCENT OR LESS OF THE AGGREGATE AREA OF THE BUILDING
307.1 SMOKE ALARMS	WHERE AN ALTERATION, ADDITION, CHANGE OF OCCUPANCY OR RELOCATION OF A BUILDING IS MADE TO AN EXISITNG BUILDING OR STRUCTURE OF A GROUP R AND I-1 OCCUPANCY, THE EXISTING BUILDING SHALL BE PROVIDED WITH SMOKE ALARMS IN ACCORDANCE WITH THE FIRE CODE OF NEW YORK STATE OR SECTION R310 OF THE RESIDENTIAL CODE OF NEW YORK STATE.
308.1 CARBON MONOXIDE DETECTION	EXISTING BUILDINGS SHALL BE PROVIDED WITH CARBON MONOXIDE DETECTION IN ACCORDANCE WITH SECTION 915 OF THE FIRE CODE OF NEW YORK STATE.
603.2 ALTERATION LEVEL 2	LEVEL 2 ALTERATIONS SHALL COMPLY WITH THE PROVISIONS OF CHAPTER 7 FOR LEVEL 1 ALTERATIONS AS WELL AS THE PROVISIONS OF CHAPTER 8.
801.3 SYSTEM INSTALLATIONS	REQUIREMENTS RELATED TO WORK AREA ARE NOT APPLICABLE WHERE THE LEVEL 2 ALTERATIONS ARE LIMITED SOLELY TO ONE OR MORE OF THE FOLLOWING: 1.MECHANICAL SYSTEMS, ELECTRICAL SYSTEMS, FIRE PROTECTION SYSTEMS AND ABATEMENT OF HAZARDOUS MATERIALS. 2.WINDOWS, HARDWARE, OPERATING CONTROLS, ELECTRICAL OUTLETS AND SIGNS. 3.ALTERATIONS UNDERTAKEN FOR THE PRIMARY PURPOSE OF INCREASING THE ACCESSIBILITY OF A FACILITY.
802.4 INTERIOR FINISH	THE INTERIOR FINISH AND TRIM OF WALLS AND CEILINGS IN EXITS AND CORRIDORS IN ANY WORK AREA SHALL COMPLY WITH THE REQUIREMENTS OF THE BUILDING CODE OF NEW YORK STATE.
803.4.1.6 GROUP R-2	A FIRE ALARM SYSTEM SHALL BE INSTALLED IN WORK AREAS OF GROUP R-2 APARTMENT BUILDINGS AS REQUIRED BY THE FIRE CODE OF NEW YORK STATE FOR EXISTING GROUP R-2 OCCUPANCIES.
804.11 STAIRWAYS	AN EXISTING STAIRWAY SHALL NOT BE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF SECTION 1011 OF THE BUILDING CODE OF NEW YORK STATE WHERE THE EXISTING SPACE AND CONSTRUCTION DOES NOT ALLOW A REDUCTION IN PITCH OR SLOPE.
804.13.2 HANDRAIL DESIGN	HANDRAILS REQUIRED IN ACCORDANCE WITH SECTION 804.13.1 SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE OF NEW YORK STATE. EXCEPTION: HANDRAILS OTHERWISE REQUIRED TO COMPLY WITH SECTION 1011.11 OF THE BUILDING CODE OF NEW YORK STATE SHALL NOT BE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF SECTION 1014.6 OF THE BUILDING CODE OF NEW YORK STATE REGARDING FULL EXTENSION OF THE HANDRAILS WHERE SUCH EXTENSIONS WOULD BE HAZARDOUS BECAUSE OF PLAN CONFIGURATION.
807.2 ALTERED EXISTING SYSTEMS	IN MECHANICALLY VENTILATED SPACES, EXISTING MECHANICAL VENTILATION SYSTEMS THAT ARE ALTERED, RECONFIGURED OR EXTENDED SHALL PROVIDE NOT LESS THAN 5 CUBIC FEET PER MINUTE (CFM) (0.0024 M3/S) PER PERSON OF OUTDOOR AIR AND NOT LESS THAN 15 CFM (0.0071 M3/S) OF VENTILATION AIR PER PERSON, OR NOT LESS THAN THE AMOUNT OF VENTILATION AIR DETERMINED BY THE INDOOR AIR QUALITY PROCEDURE OF ASHRAE 62.1.
809.1 ENERGY CONSERVATION REQUIREMENTS	LEVEL 2 ALTERATIONS TO EXISTING BUILDINGS OR STRUCTURES ARE PERMITTED WITHOUT REQUIRING THE ENTIRE BUILDING OR STRUCTURE TO COMPLY WITH THE ENERGY REQUIREMENTS OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE OR RESIDENTIAL CODE OF NEW YORK STATE. THE ALTERATIONS SHALL CONFORM TO THE ENERGY REQUIREMENTS OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE AS IT RELATES TO NEW CONSTRUCTION ONLY.

REGISTERED ARCHITECT
MICHAEL TRAPASSO
028108
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

G1.1

PROJECT NO: 2285-068

NEW YORK STATE BUILDING CODE 2025

CHAPTER 10 MEANS OF EGRESS

SECTION/ DESCRIPTION	
1011.5.5.3 SOLID RISERS	RISERS SHALL BE SOLID.
1011.6 STAIRWAY LANDINGS	THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH STAIRWAY. THE WIDTH OF LANDINGS, MEASURED PERPENDICULARLY TO THE DIRECTION OF TRAVEL, SHALL BE NOT LESS THAN THE WIDTH OF STAIRWAYS SERVED. EVERY LANDING SHALL HAVE A MINIMUM DEPTH, MEASURED PARALLEL TO THE DIRECTION OF TRAVEL, EQUAL TO THE WIDTH OF THE STAIRWAY OR 48 INCHES (1219 MM), WHICHEVER IS LESS. DOORS OPENING ONTO A LANDING SHALL NOT REDUCE THE LANDING TO LESS THAN ONE-HALF THE REQUIRED WIDTH. WHEN FULLY OPEN, THE DOOR SHALL NOT PROJECT MORE THAN 7 INCHES (178 MM) INTO THE REQUIRED WIDTH OF A LANDING. WHERE WHEELCHAIR SPACES ARE REQUIRED ON THE STAIRWAY LANDING IN ACCORDANCE WITH SECTION 1009.6.3, THE WHEELCHAIR SPACE SHALL NOT BE LOCATED IN THE REQUIRED WIDTH OF THE LANDING AND DOORS SHALL NOT SWING OVER THE WHEELCHAIR SPACES.
1013.1 EXIT SIGNS - WHERE REQUIRED	EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. THE PATH OF EGRESS TRAVEL TO EXITS AND WITHIN EXITS SHALL BE MARKED BY READILY VISIBLE EXIT SIGNS TO CLEARLY INDICATE THE DIRECTION OF EGRESS TRAVEL IN CASES WHERE THE EXIT OR THE PATH OF EGRESS TRAVEL IS NOT IMMEDIATELY VISIBLE TO THE OCCUPANTS. INTERVENING MEANS OF EGRESS DOORS WITHIN EXITS SHALL BE MARKED BY EXIT SIGNS. EXIT SIGN PLACEMENT SHALL BE SUCH THAT ANY POINT IN AN EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS WITHIN 100 FEET (30 480 MM) OR THE LISTED VIEWING DISTANCE OF THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN EXCEPTIONS: EXIT SIGNS ARE NOT REQUIRED IN OCCUPANCIES IN GROUP U AND INDIVIDUAL SLEEPING UNITS OR DWELLING UNITS IN GROUP R-1, R-2 OR R-3.
1014.2 HANDRAIL - HEIGHT	HANDRAIL HEIGHT, MEASURED ABOVE STAIR TREAD NOSINGS, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE UNIFORM, NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM). HANDRAIL HEIGHT OF ALTERNATING TREAD DEVICES AND SHIP'S LADDERS, MEASURED ABOVE TREAD NOSINGS, SHALL BE UNIFORM, NOT LESS THAN 30 INCHES (762 MM) AND NOT MORE THAN 34 INCHES (864 MM).
1014.5 HANDRAIL CONTINUITY	HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS, WITHOUT INTERRUPTION BY NEWEL POSTS OR OTHER OBSTRUCTIONS. EXCEPTIONS: WITHIN A DWELLING UNIT THAT IS NOT AN ACCESSIBLE UNIT OR TYPE A UNIT, THE CONTINUITY OF HANDRAIL GRIPPING SURFACES IS ALLOWED TO BE INTERRUPTED BY A NEWEL POST AT A TURN OR LANDING. WITHIN A DWELLING UNIT, THE USE OF A VOLUTE, TURNOUT, STARTING EASING OR STARTING NEWEL IS ALLOWED OVER THE LOWEST TREAD. HANDRAIL BRACKETS OR BALUSTERS ATTACHED TO THE BOTTOM SURFACE OF THE HANDRAIL THAT DO NOT PROJECT HORIZONTALLY BEYOND THE SIDES OF THE HANDRAIL WITHIN 1 1/2 INCHES (38 MM) OF THE BOTTOM OF THE HANDRAIL SHALL NOT BE CONSIDERED OBSTRUCTIONS. FOR EACH 1/2 INCH (12.7 MM) OF ADDITIONAL HANDRAIL PERIMETER DIMENSION ABOVE 4 INCHES (102 MM), THE VERTICAL CLEARANCE DIMENSION OF 1 1/2 INCHES (38 MM) SHALL BE PERMITTED TO BE REDUCED BY 1/8 INCH (3.2 MM).
1014.6 HANDRAIL EXTENSIONS	HANDRAILS SHALL RETURN TO A WALL, GUARD OR THE WALKING SURFACE OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT FLIGHT OF STAIRS OR RAMP RUN. WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN FLIGHTS, THE HANDRAILS SHALL EXTEND HORIZONTALLY NOT LESS THAN 12 INCHES (305 MM) BEYOND THE TOP RISER AND CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER. AT RAMPS WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN RUNS, THE HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING 12 INCHES (305 MM) MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. THE EXTENSIONS OF HANDRAILS SHALL BE IN THE SAME DIRECTION OF THE FLIGHTS OF STAIRS AT STAIRWAYS AND THE RAMP RUNS AT RAMPS.
1015.2 GUARDS - WHERE REQUIRED	GUARDS SHALL BE LOCATED ALONG OPEN-SIDED WALKING SURFACES, SUCH AS MEZZANINES, EQUIPMENT PLATFORMS, AISLES, STAIRS, RAMPS AND LANDINGS, THAT ARE LOCATED MORE THAN 30 INCHES (762 MM) MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES (914 MM) HORIZONTALLY TO THE EDGE OF THE OPEN SIDE AND AT THE PERIMETER OF OCCUPIABLE ROOFS. GUARDS SHALL BE ADEQUATE IN STRENGTH AND ATTACHMENT IN ACCORDANCE WITH SECTION 1607.9.
1015.3 GUARDS - HEIGHT	REQUIRED GUARDS SHALL BE NOT LESS THAN 42 INCHES (1067 MM) HIGH, MEASURED VERTICALLY AS FOLLOWS: FROM THE ADJACENT WALKING SURFACES. ON STAIRWAYS AND STEPPED AISLES, FROM THE LINE CONNECTING THE NOSINGS. ON RAMPS AND RAMPED AISLES, FROM THE RAMP SURFACE AT THE GUARD. EXCEPTIONS: FOR OCCUPANCIES IN GROUPS R-2 AND R-3, WITHIN THE INTERIOR CONDITIONED SPACE OF INDIVIDUAL DWELLING UNITS, WHERE THE OPEN-SIDED WALKING SURFACE IS LOCATED NOT MORE THAN 25 FEET (7.62 METERS) MEASURED VERTICALLY TO THE FLOOR OR WALKING SURFACE BELOW, REQUIRED GUARDS SHALL NOT BE LESS THAN 36 INCHES (914 MM) IN HEIGHT MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE.
1015.4 GUARDS - OPENING LIMITATIONS	REQUIRED GUARDS SHALL NOT HAVE OPENINGS THAT ALLOW PASSAGE OF A SPHERE 4 INCHES (102 MM) IN DIAMETER FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT. EXCEPTIONS: FROM A HEIGHT OF 36 INCHES (914 MM) TO 42 INCHES (1067 MM), GUARDS SHALL NOT HAVE OPENINGS THAT ALLOW PASSAGE OF A SPHERE 4 3/8 INCHES (111 MM) IN DIAMETER.
TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE	R-2 250 FT MAX — SEE CODE COMPLIANCE DRAWING ON SHEET CO1.1 (53'-0")

CHAPTER 11 ACCESSIBILITY

SECTION/ DESCRIPTION	
SECTION 1101 GENERAL SCOPE	THE RESIDENTIAL CODE OF NEW YORK STATE REFERENCES CHAPTER 11 FOR ACCESSIBILITY PROVISIONS; THEREFORE, THIS CHAPTER MAY BE APPLICABLE TO HOUSING COVERED UNDER THE RESIDENTIAL CODE OF NEW YORK STATE. THE PROVISIONS IN THE NYS CODES ARE INTENDED TO MEET OR EXCEED THE REQUIREMENTS IN THE FEDERAL ACCESSIBILITY REQUIREMENT FOUND IN THE AMERICANS WITH DISABILITIES ACT AND THE FAIR HOUSING ACT.
SECTION 1105.1.8 ACCESSIBLE ENTRANCE - DWELLING UNITS AND SLEEPING UNITS	AT LEAST ONE ACCESSIBLE ENTRANCE SHALL BE PROVIDED TO EACH DWELLING UNIT AND SLEEPING UNIT IN A FACILITY. EXCEPTION: AN ACCESSIBLE ENTRANCE IS NOT REQUIRED TO DWELLING UNITS AND SLEEPING UNITS THAT ARE NOT REQUIRED TO BE ACCESSIBLE UNITS, TYPE A UNITS OR TYPE B UNITS.
SECTION 1108.8.6.2 GROUP R-2 APARTMENT HOUSES, MONASTERIES, AND CONVENTS	TYPE A UNITS AND TYPE B UNITS SHALL BE PROVIDED IN APARTMENT HOUSES, MONASTERIES AND CONVENTS IN ACCORDANCE WITH SECTIONS 1108.6.2.2.1 AND 1108.6.2.2.2. BEDROOMS IN MONASTERIES AND CONVENTS SHALL BE COUNTED AS UNITS FOR THE PURPOSE OF DETERMINING THE NUMBER OF UNITS. WHERE THE BEDROOMS ARE GROUPED IN SLEEPING UNITS, ONLY ONE BEDROOM IN EACH SLEEPING UNIT SHALL COUNT TOWARD THE NUMBER OF REQUIRED TYPE A UNITS.
SECTION 1108.6.2.2.2 TYPE B UNITS	WHERE THERE ARE FOUR OR MORE DWELLING UNITS OR SLEEPING UNITS INTENDED TO BE OCCUPIED AS A RESIDENCE IN A SINGLE STRUCTURE, EVERY DWELLING UNIT AND SLEEPING UNIT INTENDED TO BE OCCUPIED AS A RESIDENCE SHALL BE A TYPE B UNIT. EXCEPTION: THE NUMBER OF TYPE B UNITS IS PERMITTED TO BE REDUCED IN ACCORDANCE WITH SECTION 1108.7.
SECTION 1108.7.2 MULTISTORY UNITS	A MULTISTORY DWELLING UNIT OR SLEEPING UNIT THAT IS NOT PROVIDED WITH ELEVATOR SERVICE IS NOT REQUIRED TO BE A TYPE B UNIT. WHERE A MULTISTORY UNIT IS PROVIDED WITH EXTERNAL ELEVATOR SERVICE TO ONLY ONE FLOOR, THE FLOOR PROVIDED WITH ELEVATOR SERVICE SHALL BE THE PRIMARY ENTRY TO THE UNIT, SHALL COMPLY WITH THE REQUIREMENTS FOR A TYPE B UNIT AND, WHERE PROVIDED WITHIN THE UNIT, A LIVING AREA, A KITCHEN AND A TOILET FACILITY SHALL BE PROVIDED ON THAT FLOOR.

CHAPTER 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS

SECTION/ DESCRIPTION	
[F] 907.5 SMOKE ALARMS - OCCUPANT NOTIFICATION	OCCUPANT NOTIFICATION BY FIRE ALARMS SHALL BE IN ACCORDANCE WITH SECTIONS 907.5.1 THROUGH 907.5.2.3.3. OCCUPANT NOTIFICATION BY SMOKE ALARMS IN GROUP R-1 AND R-2 OCCUPANCIES SHALL COMPLY WITH SECTION 907.5.2.1.3.2.
[F] 907.5.2.1.3.2 SMOKE ALARM SIGNAL IN SLEEPING ROOMS	IN SLEEPING ROOMS OF GROUP R-1, R-2 AND I-1 OCCUPANCIES THAT ARE REQUIRED BY SECTION 907.2.8 OR 907.2.9 TO HAVE A FIRE ALARM SYSTEM, THE AUDIBLE ALARM SIGNAL ACTIVATED BY SINGLE- OR MULTIPLE-STATION SMOKE ALARMS IN THE DWELLING UNIT OR SLEEPING UNIT SHALL BE A 520-HZ SIGNAL COMPLYING WITH NFPA 72. WHERE A SLEEPING ROOM SMOKE ALARM IS UNABLE TO PRODUCE A 520-HZ SIGNAL, THE 520-HZ ALARM SIGNAL SHALL BE PROVIDED BY A LISTED NOTIFICATION APPLIANCE OR A SMOKE DETECTOR WITH AN INTEGRAL 520-HZ SOUNDER.
[F] 907.5.2.3.3 SMOKE ALARMS - GROUP R-2	IN GROUP R-2 OCCUPANCIES REQUIRED BY SECTION 907 TO HAVE A FIRE ALARM SYSTEM, EACH STORY THAT CONTAINS DWELLING UNITS AND SLEEPING UNITS SHALL BE PROVIDED WITH THE CAPABILITY TO SUPPORT FUTURE VISIBLE ALARM NOTIFICATION APPLIANCES IN ACCORDANCE WITH CHAPTER 11 OF ICC A117.1. SUCH CAPABILITY SHALL ACCOMMODATE WIRED OR WIRELESS EQUIPMENT.
[F] 916.1 CARBON MONOXIDE DETECTION - GENERAL	CARBON MONOXIDE (CO) DETECTION SHALL BE INSTALLED IN NEW AND EXISTING BUILDINGS IN ACCORDANCE WITH SECTION 915 OF THE FIRE CODE OF NEW YORK STATE.

CHAPTER 10 MEANS OF EGRESS

SECTION/ DESCRIPTION		PROJECT PROPOSED
1003.2 CEILING HEIGHT	THE MEANS OF EGRESS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET 6 INCHES (2286 MM) ABOVE THE FINISHED FLOOR. EXCEPTIONS: 4. STAIR HEADROOM IN ACCORDANCE WITH SECTION 1011.3. 5. DOOR HEIGHT IN ACCORDANCE WITH SECTION 1010.1.1.	4. THE EXISTING NON-CONFORMING HEADROOM AT THE STAIRS IS LESS THAN 80". STAIRS WILL NOT BE RE-CONSTRUCTED AS A PART OF NEW WORK. 5. DOOR HEIGHT THROUGHOUT THE UNIT IS NO LESS THAN 80".
TABLE 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT	RESIDENTIAL 200 GROSS	1,050SF / 200SF = 5 OCCUPANTS
1007.1.1 TWO EXITS OR EXIT ACCESS DOORWAYS	WHERE TWO EXITS, EXIT ACCESS DOORWAYS, EXIT ACCESS STAIRWAYS OR RAMPS, OR ANY COMBINATION THEREOF, ARE REQUIRED FROM ANY PORTION OF THE EXIT ACCESS, THEY SHALL BE PLACED A DISTANCE APART EQUAL TO NOT LESS THAN ONE-HALF OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING OR AREA TO BE SERVED MEASURED IN A STRAIGHT LINE BETWEEN THEM. INTERLOCKING OR SCISSOR STAIRWAYS SHALL BE COUNTED AS ONE EXIT STAIRWAY.	SEE CODE COMPLIANCE DRAWING ON SHEET CO1.1
1007.1.1.1 MEASUREMENT POINT	THE SEPARATION DISTANCE REQUIRED IN SECTION 1007.1.1 SHALL BE MEASURED IN ACCORDANCE WITH THE FOLLOWING: 1.THE SEPARATION DISTANCE TO EXIT OR EXIT ACCESS DOORWAYS SHALL BE MEASURED TO ANY POINT ALONG THE WIDTH OF THE DOORWAY. 2.THE SEPARATION DISTANCE TO EXIT ACCESS STAIRWAYS SHALL BE MEASURED TO THE CLOSEST RISER. 3.THE SEPARATION DISTANCE TO EXIT ACCESS RAMPS SHALL BE MEASURED TO THE START OF THE RAMP RUN.	SEE CODE COMPLIANCE DRAWING ON SHEET CO1.1
1010.1.1 SIZE OF DOORS	THE REQUIRED CAPACITY OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL PROVIDE A MINIMUM CLEAR OPENING WIDTH OF 32 INCHES (813 MM). THE CLEAR OPENING WIDTH OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1.57 RAD). WHERE THIS SECTION REQUIRES A MINIMUM CLEAR OPENING WIDTH OF 32 INCHES (813 MM) AND A DOOR OPENING INCLUDES TWO DOOR LEAVES WITHOUT A MULLION, ONE LEAF SHALL PROVIDE A MINIMUM CLEAR OPENING WIDTH OF 32 INCHES (813 MM). IN GROUP I-2, DOORS SERVING AS MEANS OF EGRESS DOORS WHERE USED FOR THE MOVEMENT OF BEDS SHALL PROVIDE A MINIMUM CLEAR OPENING WIDTH OF 411/2 INCHES (1054 MM). THE MAXIMUM WIDTH OF A SWINGING DOOR LEAF SHALL BE 48 INCHES (1219 MM) NOMINAL. THE MINIMUM CLEAR OPENING HEIGHT OF DOORS SHALL BE NOT LESS THAN 80 INCHES (2032 MM). EXCEPTIONS: 1.IN GROUP R-2 AND R-3 DWELLING AND SLEEPING UNITS THAT ARE NOT REQUIRED TO BE AN ACCESSIBLE UNIT, TYPE A UNIT OR TYPE B UNIT, THE MINIMUM AND MAXIMUM WIDTH SHALL NOT APPLY TO DOOR OPENINGS THAT ARE NOT PART OF THE REQUIRED MEANS OF EGRESS.	
1010.1.2 EGRESSS DOOR TYPES	EGRESS DOORS SHALL BE OF THE SIDE-HINGED SWINGING DOOR, PIVOTED DOOR, OR BALANCED DOOR TYPES.	
1010.1.3 FORCES TO UNLATCH AND OPEN DOORS	THE FORCES TO UNLATCH DOORS SHALL COMPLY WITH THE FOLLOWING: WHERE DOOR HARDWARE OPERATES BY PUSH OR PULL, THE OPERATIONAL FORCE TO UNLATCH THE DOOR SHALL NOT EXCEED 15 POUNDS (67 N). WHERE DOOR HARDWARE OPERATES BY ROTATION, THE OPERATIONAL FORCE TO UNLATCH THE DOOR SHALL NOT EXCEED 28 INCH-POUNDS (315 N-CM). THE FORCE TO OPEN DOORS SHALL COMPLY WITH THE FOLLOWING: FOR INTERIOR SWINGING EGRESS DOORS THAT ARE MANUALLY OPERATED, OTHER THAN DOORS REQUIRED TO BE FIRE RATED, THE FORCE FOR PUSHING OR PULLING OPEN THE DOOR SHALL NOT EXCEED 5 POUNDS (22 N). FOR OTHER SWINGING DOORS, SLIDING DOORS OR FOLDING DOORS, AND DOORS REQUIRED TO BE FIRE RATED, THE DOOR SHALL REQUIRE NOT MORE THAN A 30-POUND (133 N) FORCE TO BE SET IN MOTION AND SHALL MOVE TO A FULL-OPEN POSITION WHEN SUBJECTED TO NOT MORE THAN A 15-POUND (67 N) FORCE.	
1010.1.4 FLOOR ELEVATION	THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF A DOOR. SUCH FLOOR OR LANDING SHALL BE AT THE SAME ELEVATION ON EACH SIDE OF THE DOOR. LANDINGS SHALL BE LEVEL EXCEPT FOR EXTERIOR LANDINGS, WHICH ARE PERMITTED TO HAVE A SLOPE NOT TO EXCEED 0.25 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE). 3.AT EXTERIOR DOORS SERVING GROUP U AND INDIVIDUAL DWELLING UNITS AND SLEEPING UNITS IN GROUPS R-2 AND R-3, AND WHERE SUCH UNITS ARE NOT REQUIRED TO BE ACCESSIBLE UNITS, TYPE A UNITS OR TYPE B UNITS, THE LANDING AT AN EXTERIOR DOORWAY SHALL BE NOT MORE THAN 7 3/4 INCHES (197 MM) BELOW THE LANDING ON THE EGRESS SIDE OF THE DOOR. SUCH DOORS, INCLUDING STORM OR SCREEN DOORS, SHALL BE PERMITTED TO SWING OVER EITHER LANDING.	
1011.2 STAIRWAY - WIDTH AND CAPACITY	THE REQUIRED CAPACITY OF STAIRWAYS SHALL BE DETERMINED AS SPECIFIED IN SECTION 1005.1, BUT THE MINIMUM WIDTH SHALL BE NOT LESS THAN 44 INCHES (1118 MM). SEE SECTION 1009.3 FOR ACCESSIBLE MEANS OF EGRESS STAIRWAYS. EXCEPTIONS: 1.STAIRWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL HAVE A WIDTH OF NOT LESS THAN 36 INCHES (914 MM).	SEE CODE COMPLIANCE DRAWING ON SHEET CO1.1
1011.3 HEADROOM	STAIRWAYS SHALL HAVE A HEADROOM CLEARANCE OF NOT LESS THAN 80 INCHES (2032 MM) MEASURED VERTICALLY FROM A LINE CONNECTING THE EDGE OF THE NOSINGS. SUCH HEADROOM SHALL BE CONTINUOUS ABOVE THE STAIRWAY TO THE POINT WHERE THE LINE INTERSECTS THE LANDING BELOW, ONE TREAD DEPTH BEYOND THE BOTTOM RISER. THE MINIMUM CLEARANCE SHALL BE MAINTAINED THE FULL WIDTH OF THE STAIRWAY AND LANDING.	
1011.5.5 NOSING AND RISER PROFILE	NOSINGS SHALL HAVE A CURVATURE OR BEVEL OF NOT LESS THAN 1/16 INCH (1.6 MM) BUT NOT MORE THAN 9/16 INCH (14.3 MM) FROM THE FOREMOST PROJECTION OF THE TREAD. RISERS SHALL BE SOLID AND VERTICAL OR SLOPED UNDER THE TREAD ABOVE FROM THE UNDERSIDE OF THE NOSING ABOVE AT AN ANGLE NOT MORE THAN 30 DEGREES (0.52 RAD) FROM THE VERTICAL.	

CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

SECTION/ DESCRIPTION	
706.1 GENERAL	FIRE WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTIONS 706.2 THROUGH 706.11. THE EXTENT AND LOCATION OF SUCH FIRE WALLS SHALL PROVIDE A COMPLETE SEPARATION. WHERE A FIRE WALL SEPARATES OCCUPANCIES THAT ARE REQUIRED TO BE SEPARATED BY A FIRE BARRIER WALL, THE MOST RESTRICTIVE REQUIREMENTS OF EACH SEPARATION SHALL APPLY.
706.4 FIRE-RESISTANCE RATING	FIRE WALLS SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN THAT REQUIRED BY TABLE 706.4 - R-2 (3) HOURS. IN TYPE II OR V CONSTRUCTION, WALLS SHALL BE PERMITTED TO HAVE 2-HOUR FIRE-RESISTANCE RATING.
720.2.1 FACINGS	WHERE SUCH MATERIALS ARE INSTALLED IN CONCEALED SPACES IN BUILDINGS OF TYPE III, IV OR V CONSTRUCTION, THE FLAME SPREAD AND SMOKE-DEVELOPED LIMITATIONS DO NOT APPLY TO FACINGS, COVERINGS, AND LAYERS OF REFLECTIVE FOIL INSULATION THAT ARE INSTALLED BEHIND AND IN SUBSTANTIAL CONTACT WITH THE UNEXPOSED SURFACE OF THE CEILING, WALL OR FLOOR FINISH.
720.3.1 ATTIC FLOORS	EXPOSED INSULATION MATERIALS INSTALLED ON ATTIC FLOORS SHALL HAVE A CRITICAL RADIANT FLUX OF NOT LESS THAN 0.12 WATT PER SQUARE CENTIMETER WHEN TESTED IN ACCORDANCE WITH ASTM E970.
720.6 CELLULOSIC FIBER LOOSE-FILL INSULATION AND SELF SUPPORTED SPRAY APPLIED CELLULOSIC INSULATION	CELLULOSIC FIBER LOOSE-FILL INSULATION AND SELF-SUPPORTED SPRAY-APPLIED CELLULOSIC INSULATION SHALL COMPLY WITH CPSC 16 CFR PARTS 1209 AND 1404. EACH PACKAGE OF SUCH INSULATING MATERIAL SHALL BE CLEARLY LABELED IN ACCORDANCE WITH CPSC 16 CFR PARTS 1209 AND 1404.

CHAPTER 8 INTERIOR FINISHES

SECTION/ DESCRIPTION	
801.1 INTERIOR FINISHES- SCOPE	THE PROVISIONS OF THIS CHAPTER SHALL GOVERN THE USE OF MATERIALS USED AS INTERIOR FINISHES, TRIM, AND DECORATIVE MATERIALS.
TABLE 803.13 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS (B) CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS (B) ROOMS AND ENCLOSED SPACES (C)
804.1 INTERIOR FLOOR FINISH - GENERAL	INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIALS SHALL COMPLY WITH SECTIONS 804.2 THROUGH 804.4.2. EXCEPTION: FLOOR FINISHES AND COVERINGS OF A TRADITIONAL TYPE, SUCH AS WOOD, VINYL, LINOLEUM OR TERRAZZO, AND RESILIENT FLOOR COVERING MATERIALS THAT ARE NOT COMPOSED OF FIBERS.
[F] 806.1 DECORATIVE MATERIALS AND TRIM - GENERAL	THE FOLLOWING REQUIREMENTS SHALL APPLY TO ALL OCCUPANCIES: FURNISHINGS OR DECORATIVE MATERIALS OF AN EXPLOSIVE OR HIGHLY FLAMMABLE CHARACTER SHALL NOT BE USED. FIRE-RETARDANT COATINGS IN EXISTING BUILDINGS SHALL BE MAINTAINED SO AS TO RETAIN THE EFFECTIVENESS OF THE TREATMENT UNDER SERVICE CONDITIONS ENCOUNTERED IN ACTUAL USE. FURNISHINGS OR OTHER OBJECTS SHALL NOT BE PLACED TO OBSTRUCT EXITS, ACCESS THERETO, EGRESS THEREFROM OR VISIBILITY THEREOF. THE PERMISSIBLE AMOUNT OF DECORATIVE VEGETATION AND NONCOMBUSTIBLE DECORATIVE MATERIALS SHALL NOT BE LIMITED.
[F] 806.6 INTERIOR TRIM	MATERIAL, OTHER THAN FOAM PLASTIC USED AS INTERIOR TRIM, SHALL HAVE A MINIMUM CLASS C FLAME SPREAD AND SMOKE-DEVELOPED INDEX WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723, AS DESCRIBED IN SECTION 803.1.2. COMBUSTIBLE TRIM, EXCLUDING HANDRAILS AND GUARDRAILS, SHALL NOT EXCEED 10 PERCENT OF THE SPECIFIC WALL OR CEILING AREA TO WHICH IT IS ATTACHED.
[F] 806.6 INTERIOR FLOOR - WALL BASE	INTERIOR FLOOR-WALL BASE THAT IS 6 INCHES (152 MM) OR LESS IN HEIGHT SHALL BE TESTED IN ACCORDANCE WITH SECTION 804.2 AND SHALL BE NOT LESS THAN CLASS II. WHERE A CLASS I FLOOR FINISH IS REQUIRED, THE FLOOR-WALL BASE SHALL BE CLASS I. EXCEPTION: INTERIOR TRIM MATERIALS THAT COMPLY WITH SECTION 806.6.
807.1 INSULATION	THERMAL AND ACOUSTICAL INSULATION SHALL COMPLY WITH SECTION 720.

CHAPTER 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS

SECTION/ DESCRIPTION	
[F] 907.2.9 SMOKE ALARMS - GROUP R-2	FIRE ALARM SYSTEMS AND SMOKE ALARMS SHALL BE INSTALLED IN GROUP R-2 OCCUPANCIES AS REQUIRED IN SECTIONS 907.2.91 THROUGH 907.2.9.3
[F] [NY] 907.2.11.2 SMOKE ALARMS - GROUPS R-2, R-3, R-4, I-1	SINGLE- OR MULTIPLE-STATION SMOKE ALARMS SHALL BE INSTALLED AND MAINTAINED IN GROUPS R-2, R-3, R-4 AND I-1 REGARDLESS OF OCCUPANT LOAD AT ALL OF THE FOLLOWING LOCATIONS: ON THE CEILING OR WALL OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOMS. IN EACH ROOM USED FOR SLEEPING PURPOSES. IN EACH STORY WITHIN A DWELLING UNIT, INCLUDING BASEMENTS BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL. NOT LESS THAN 3 FEET (914 MM) HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY THIS SECTION. IN THE HALLWAY AND IN THE ROOM OPEN TO THE HALLWAY IN DWELLING UNITS WHERE THE CEILING HEIGHT OF A ROOM OPEN TO A HALLWAY SERVING BEDROOMS EXCEEDS THAT OF THE HALLWAY BY 24 INCHES (610 MM) OR MORE. WITHIN THE ROOM TO WHICH A SLEEPING LOFT IS OPEN, IN THE IMMEDIATE VICINITY OF THE SLEEPING LOFT. IN EACH COMMON SPACE SHARED BY THREE OR MORE DWELLING UNITS SUCH THAT AN ALARM NOTIFICATION IS CLEARLY AUDIBLE IN EACH COMMON SPACE. WHERE THE INTERIOR FLOOR AREA FOR A GIVEN LEVEL OF A DWELLING UNIT, EXCLUDING GARAGE AREAS, IS GREATER THAN 1000 FT2 (93 M2), SMOKE ALARMS SHALL BE INSTALLED PER BOTH OF THE FOLLOWING: ALL POINTS ON THE CEILING SHALL HAVE A SMOKE ALARM WITHIN A DISTANCE OF 30 FT (9.1 M) TRAVEL DISTANCE OR SHALL HAVE AN EQUIVALENT OF ONE SMOKE ALARM PER 500 FT2 (46 M2) OF FLOOR AREA. WHERE DWELLING UNITS INCLUDE GREAT ROOMS OR VAULTED/CATHEDRAL CEILINGS EXTENDING OVER MULTIPLE FLOORS, SMOKE ALARMS LOCATED ON THE UPPER FLOOR THAT ARE INTENDED TO PROTECT THE AFOREMENTIONED AREA SHALL BE PERMITTED TO BE CONSIDERED AS PART OF THE LOWER FLOOR'S PROTECTION SCHEME.
[F] 907.2.11.3 SMOKE ALARMS - INSTALLATION NEAR COOKING APPLIANCES	SMOKE ALARMS SHALL BE INSTALLED NOT LESS THAN 10 FEET (3048 MM) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. EXCEPTION: SMOKE ALARMS SHALL BE PERMITTED TO BE INSTALLED NOT LESS THAN 6 FEET (1829 MM) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE WHERE NECESSARY TO COMPLY WITH SECTION 907.2.11.1 OR 907.2.11.2.
[F] 907.2.11.4 SMOKE ALARMS - INSTALLATION NEAR BATHROOMS	SMOKE ALARMS SHALL BE INSTALLED NOT LESS THAN 3 FEET (914 MM) HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY SECTION 907.2.11.1 OR 907.2.11.2.
[F] 907.2.11.5 SMOKE ALARMS - INTERCONNECTION	WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT OR SLEEPING UNIT IN GROUP R OR I-1 OCCUPANCIES, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. PHYSICAL INTERCONNECTION OF SMOKE ALARMS SHALL NOT BE REQUIRED WHERE LISTED WIRELESS ALARMS ARE INSTALLED AND ALL ALARMS SOUND UPON ACTIVATION OF ONE ALARM. THE ALARM SHALL BE CLEARLY AUDIBLE IN ALL BEDROOMS OVER BACKGROUND NOISE LEVELS WITH ALL INTERVENING DOORS CLOSED.

REGISTERED ARCHITECT
MICHAEL TRAPASSO
028198
STATE OF NEW YORK
EXP. 04/30/2027

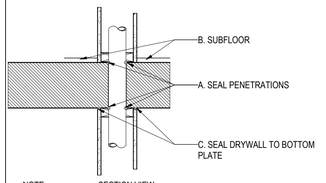
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CHECKED BY: MT
DATE: 07/17/2026
PHASE: CD
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#	DATE:	DESCRIPTION OF REVISION:
1	08/30/2026	ISSUED FOR BID

"IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO MAKE UNAUTHORIZED ALTERATIONS OR ADDITIONS TO PLANS BEARING A LICENSED ENGINEER'S, ARCHITECT'S OR SURVEYOR'S SEAL."

HUNT ENGINEERS | ARCHITECTS | SURVEYORS
HORSEHEADS, NY 607 - 358 - 1000 ROCHESTER, NY 585 - 327 - 7050
TOWANDA, PA 570 - 265 - 4668 BINGHAMTON, NY 607 - 798 - 8081
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

CODE COMPLIANCE - CONTINUED



NOTE: SECTION VIEW

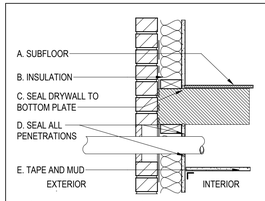
A, B, C. INTENT: REDUCE LEAKAGE BETWEEN WALL CAVITIES AND APARTMENTS

A. INCLUDES DUCTS, PIPES, WIRES, ETC.
B. SIZE OF GAP DEPENDS ON THICKNESS OF DRYWALL TO BE INSTALLED.
C. OPTION: SEAL DRYWALL TO SLAB (IN LIEU OF PLANK)

RESPONSIBILITIES:

DRYWALL: C
MECH/ ELEC/ PLUMB: A

14) INTERIOR WALLS- TOP/BOTTOM



NOTE: SECTION VIEW

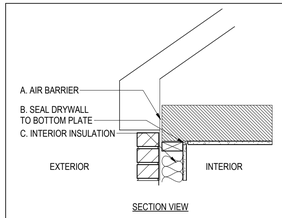
A, C. INTENT: REDUCE LEAKAGE BETWEEN FLOOR AND WALL CAVITIES

A. OPTION: SEAL DRYWALL TO SLAB (IN LIEU OF PLANK)
B. INCORPORATE WITH EXTERIOR AIR BARRIER
D. INCLUDES DUCTS, PIPES, WIRES, ETC. (HIGH PRIORITY)
E. TYPICAL

RESPONSIBILITIES:

ENVELOPE: B
DRYWALL: C, E
MECH/ ELEC/ PLUMB: D

13) EXTERIOR WALL - MIDDLE (DEMISING/CORRIDOR WALLS SIM.)



SECTION VIEW

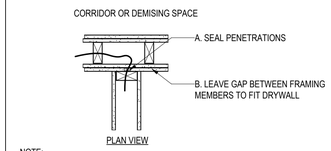
NOTE:

A. TYPICAL VAPOR BARRIER
B. INTENT: REDUCE LEAKAGE BETWEEN WALL CAVITY AND APARTMENT
C. TYPICALLY DRYWALL

RESPONSIBILITIES:

ENVELOPE: A
DRYWALL: B, C

12) EXTERIOR WALL - SOFFIT



PLAN VIEW

NOTE:

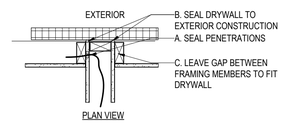
A. INTENT: REDUCE LEAKAGE BETWEEN CORRIDOR / DEMISING WALL AND INTERIOR PARTITION

A. INCLUDES DUCTS, PIPES, WIRES, ETC.
B. SIZE OF GAP DEPENDS ON THICKNESS OF DRYWALL TO BE INSTALLED.

RESPONSIBILITIES:

DRYWALL: C
MECH/ ELEC/ PLUMB: A

11) INTERIOR PARTITION AT DEMISING/ CORRIDOR WALL



PLAN VIEW

NOTE:

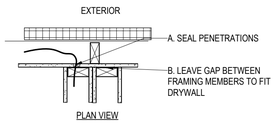
A, B. INTENT: REDUCE LEAKAGE BETWEEN EXTERIOR / CORRIDOR AND DEMISING WALL / INTERIOR PARTITION

A. INCLUDES DUCTS, PIPES, WIRES, ETC.
B. SIZE OF GAP DEPENDS ON THICKNESS OF DRYWALL TO BE INSTALLED.

RESPONSIBILITIES:

FRAMING: C
DRYWALL: B
MECH/ ELEC/ PLUMB: A

10) DEMISING WALL / INTERIOR PARTITION AT EXTERIOR WALL



PLAN VIEW

NOTE:

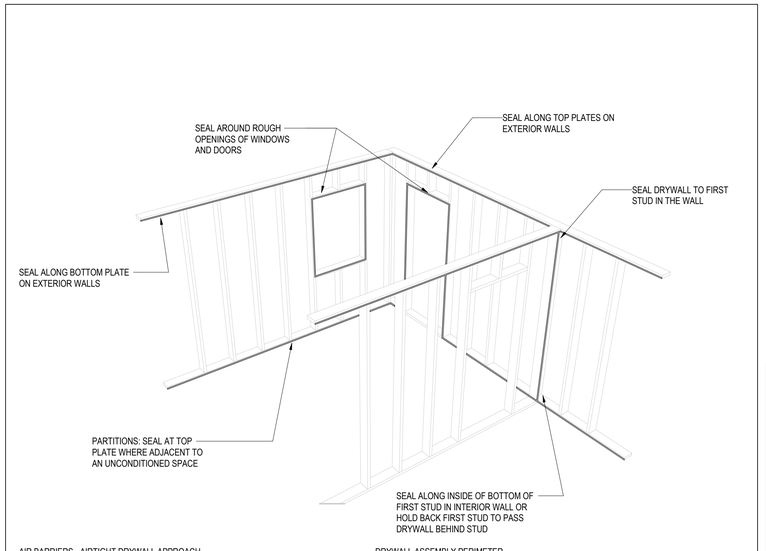
A. INTENT: REDUCE LEAKAGE BETWEEN EXTERIOR / CORRIDOR AND DEMISING WALL / INTERIOR PARTITION

A. INCLUDES DUCTS, PIPES, WIRES, ETC.
B. SIZE OF GAP DEPENDS ON THICKNESS OF DRYWALL TO BE INSTALLED.

RESPONSIBILITIES:

FRAMING: B
MECH/ ELEC/ PLUMB: A

9) ALTERNATE METHOD FOR WALL CAVITY SEPARATION



AIR BARRIERS - AIRTIGHT DRYWALL APPROACH

GYPSUM BOARD DRYWALL ITSELF IS A SUITABLE AIR BARRIER MATERIAL. THE TAPING OF DRYWALL SEAMS RESULTS IN A PLANE OF AIRTIGHTNESS AT THE FIELD OF THE WALL. THERE ARE SEVERAL ADDITIONAL STEPS NEEDED TO APPLY TO THIS MATERIAL PROPERTY TO CREATE A CONTINUOUS AND COMPLETE AIR BARRIER SYSTEM. IT IS IMPORTANT TO CREATE AIR BARRIER CONTINUITY AT THE PERIMETER OF DRYWALL ASSEMBLIES, AT ALL PENETRATIONS THROUGH THE DRYWALL, AND, IN AREAS OF THE ENCLOSURE WITHOUT INTERIOR DRYWALL.

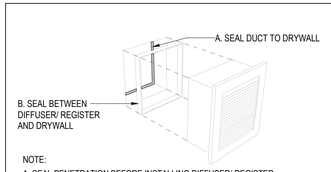
DRYWALL ASSEMBLY PERIMETER

AIR BARRIER CONTINUITY AT THE PERIMETER OF DRYWALL ASSEMBLIES IS ACHIEVED BY SEALING THE EDGES OF THE DRYWALL TO SOLID FRAMING MATERIALS. THIS REQUIRES A CONTINUOUS BEAD OF SEALANT ALONG:

- ALL EXTERIOR WALL BOTTOM AND TOP PLATES
- ALL TOP PLATES AT INSULATED CEILINGS
- ROUGH OPENING PERIMETERS
- BOTH SIDES OF THE FIRST INTERIOR STUD OF PARTITION WALLS.

BASIS OF DESIGN AT NON-FIRE RATED ASSEMBLIES : RICHARDS PAINT C-100 SEAL-FLEX 100 SILICONIZED ACYLIC CAULK
BASIS OF DESIGN AT FIRE-RATED ASSEMBLIES: HILTI FS-ONE MAX

5) AXONIMETRIC SHOWING TYPICAL SEALANT AREAS



NOTE:

A. SEAL PENETRATION BEFORE INSTALLING DIFFUSER/ REGISTER

A. INTENT:
- REDUCE LEAKAGE BETWEEN WALL CAVITIES AND SPACE
- REDUCE DUCT LEAKAGE INTO WALL CAVITIES

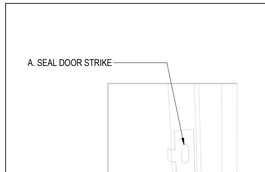
A. TYPICAL PENETRATIONS INCLUDES:
- HEATING / COOLING DUCTWORK
- EXHAUST DUCTWORK
- EXHAUST FANS
- DRYER VENT

B. SUGGESTED (OPTIONS: CAULK, FOAM, GASKET)

RESPONSIBILITIES:

DRYWALL: A
MECHANICAL: B

8) DUCTWORK



NOTE:

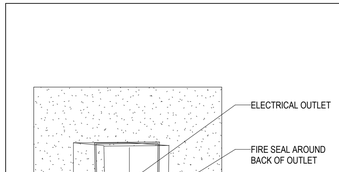
A. INTENT: REDUCE LEAKAGE BETWEEN WALL CAVITITES AND SPACE

A. EXPANDING FOAM WORKS BEST (BE CAREFUL NOT TO OVERSPRAY)

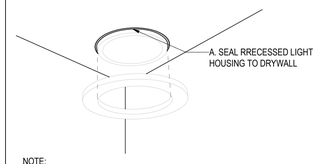
RESPONSIBILITIES:

DRYWALL: A

7) DOOR LATCH HOLE



6) OUTLET FIRE STOPPING DETAIL



NOTE:

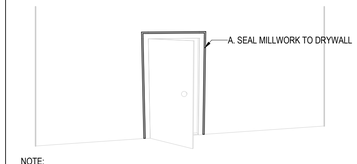
A. INTENT: REDUCE LEAKAGE BETWEEN ATTIC/FLOOR CAVITIES AND BUILDING

A. OPTIONS: - CAULK, - FOAM, - GASKET
A. USE INSULATION CONTACT AIR-TIGHT CANS (ICAT)

RESPONSIBILITIES:

DRYWALL: A

4) RECESSED LIGHTING



NOTE:

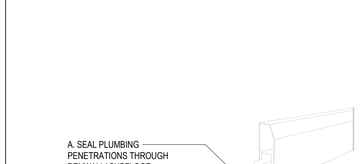
A. SEAL ALL EDGES OF MILLWORK

A. INTENT: REDUCE LEAKAGE BETWEEN WALL CAVITIES AND SPACE.
A. USE INSULATION CONTACT AIR-TIGHT CANS (ICAT)

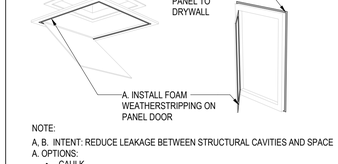
RESPONSIBILITIES:

DRYWALL: A

3) MILLWORK (TRIM)



2) NOT USED



NOTE:

A, B. INTENT: REDUCE LEAKAGE BETWEEN STRUCTURAL CAVITIES AND SPACE
A. OPTIONS:
- CAULK
- FOAM
- GASKET

B. INEXPENSIVE, ADHESIVE-BACKED WEATHERSTRIPPING USUALLY WORKS BEST

RESPONSIBILITIES:

DRYWALL: A
MECHANICAL / PLUMB: B

1) UTILITY/ACCESS PANELS

REGISTERED ARCHITECT
MICHAEL TRAPANI
028198
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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#	DATE:	DESCRIPTION OF REVISION:
1	09/30/2026	ISSUED FOR BID

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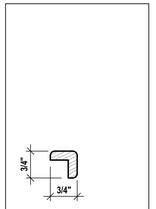
HUNT ENGINEERS | ARCHITECTS | SURVEYORS
HORSEHEADS, NY 607 - 358 - 1000 ROCHESTER, NY 585 - 327 - 7050
TOWANDA, PA 570 - 265 - 4888 BINGHAMTON, NY 607 - 798 - 8081
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC22031314641

TYPICAL AIR SEAL DETAILS

BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

G1.3

PROJECT NO: 2285-068



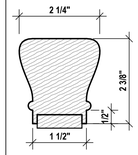
OUTSIDE CORNER TRIM

WD-7



CEILING TRIM

WD-6



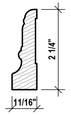
STAIR HANDRAIL

WD-5



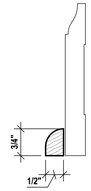
STAIR RUNNER MOLDING

WD-4



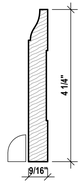
DOOR CASING / WINDOW TRIM

WD-3



SHOE BASE MOLDING

WD-2



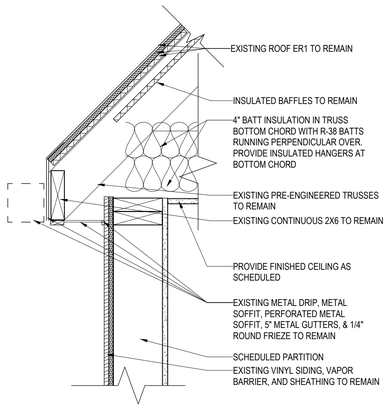
WALL BASE

WD-1

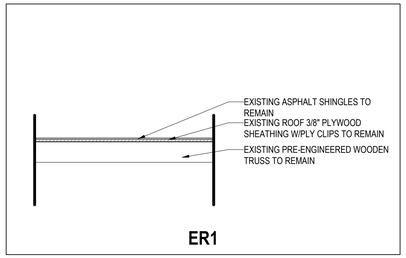
TYPICAL TRIM PROFILES
6" = 1'-0"

ROOF TYPE SCHEDULE

MARK	ROOF ASSEMBLY DESCRIPTION	NOTES
ER1	(ER-1) EXISTING ROOF 3/8" PLYWOOD W/PLY CLIPS ASPHALT SHINGLES	<varies>



ATTIC INSULATION DETAIL FOR VENTED ROOF
1 1/2" = 1'-0"

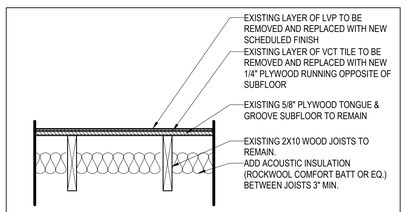


ER1

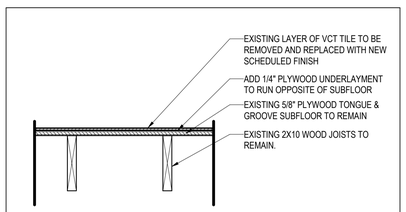
TYPICAL ROOF TYPES
1" = 1'-0"

FLOOR TYPE SCHEDULE

MARK	FLOOR ASSEMBLY DESCRIPTION	NOTES
EF-1	(EF-1) EXISTING FLOOR - 3" CONCRETE SLAB WITH WELDED WIRE MESH WITH VAPOR BARRIER OVER GRAVEL FILL	EXISTING FLOOR TO REMAIN.
EF-2	(EF-2) EXISTING FLOOR - 12" CONCRETE FOOTING	EXISTING FLOOR TO REMAIN.
EF-3	(EF-3) EXISTING VCT OVER SUBFLOOR ON WOOD JOISTS	MODIFY FLOOR AS SHOWN IN DETAIL. PREPARE FLOOR FOR NEW FINISHES.
EF-4	(EF-4) EXISTING LVP OVER SUB FLOOR ON WOOD JOISTS	MODIFY FLOOR AS SHOWN IN DETAIL. PREPARE FLOOR FOR NEW FINISHES.

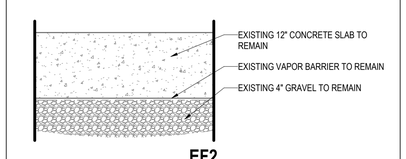


EF4



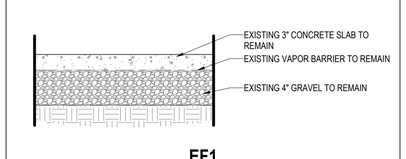
EF3

NOTE:
EXISTING CONCRETE FOOTING IS PRESENT AT STEEL COLUMN. 12" DEEP, 24"x24" WIDE



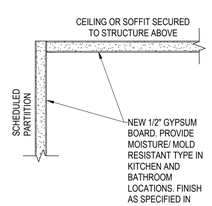
EF2

NOTE:
EXISTING CONCRETE FOOTING IS PRESENT AT BEARING WALLS. 8" DEEP, 18" WIDE



EF1

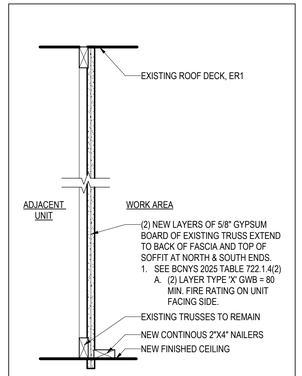
TYPICAL FLOOR TYPES
1" = 1'-0"



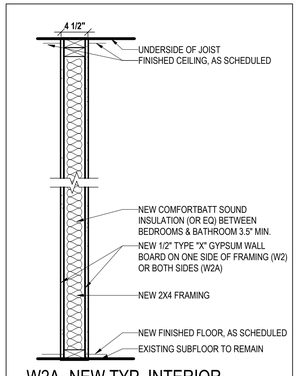
1 TYPICAL CEILING CONNECTION DETAIL
3" = 1'-0"

WALL TYPE SCHEDULE

MARK	WALL ASSEMBLY DESCRIPTION	NOTES
EW1	(EW1) 8" EXISTING CONCRETE BLOCK WALL	EXISTING WALL TO REMAIN. PREPARE WALL FOR NEW FINISHES.
EW2	(EW2) 10" EXISTING CONCRETE BLOCK WALL	EXISTING WALL TO REMAIN. PREPARE WALL FOR NEW FINISHES.
EW3	(EW3) EXISTING WOOD FRAMED COMMON WALL	EXISTING WALL TO REMAIN. PREPARE WALL FOR NEW FINISHES.
EW3A	(EW3A) EXISTING WOOD FRAMED COMMON WALL	APPLY NEW LAYER OF 3-1/2" INSULATION AND 1/2" GYPSUM WALL BOARD ATTACHED TO EXISTING FRAMING ON WORKING UNIT SIDE
EW4	(EW4) EXISTING BRICK SIDING EXTERIOR WALL	APPLY NEW LAYER OF 2" INSULATION AND 1/2" GYPSUM WALL BOARD ATTACHED TO EXISTING FRAMING
EW5	(EW5) EXISTING VINYL SIDING EXTERIOR WALL	APPLY NEW LAYER OF 2" INSULATION AND 1/2" GYPSUM WALL BOARD ATTACHED TO EXISTING FRAMING
EW6	(EW6) 2 X 4 WOOD FRAMING	APPLY NEW LAYER OF 1/2" GYPSUM WALL BOARD ATTACHED TO EXISTING FRAMING, EACH SIDE
W1	(W1) LAMINATE - 1/2" TYPE 'X' GYPSUM WALL BOARD MECHANICALLY FASTENED TO FRAMING MEMBER.	NEW LAYER OF GYPSUM WALL BOARD ATTACHED TO ANY EXPOSED FRAMING.
W2	(W2) 2X4 WOOD FRAMING ONE SIDE GWB	APPLY NEW LAYER OF 1/2" GYPSUM WALL BOARD ATTACHED TO EXISTING FRAMING,ONE SIDE
W2A	(W2) 2X4 WOOD FRAMING	APPLY NEW LAYER OF 1/2" GYPSUM WALL BOARD ATTACHED TO EXISTING FRAMING, EACH SIDE
W3	(W3) TENANT SEPARATION - 2 LAYERS 5/8" TYPE 'X' GYPSUM WALL BOARD MECHANICALLY FASTENED TO FRAMING MEMBER	2 NEW LAYERS OF GYPSUM WALL BOARD ATTACHED TO EXISTING TRUSS

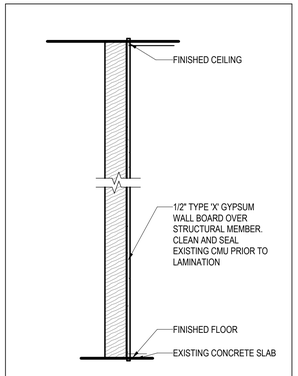


W3- NEW UNIT SEPARATION @ ATTIC

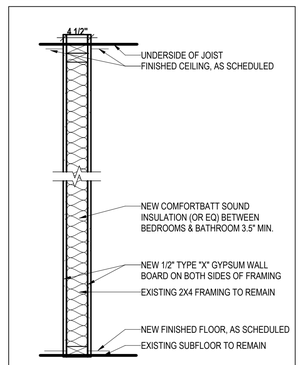


W2A- NEW TYP. INTERIOR

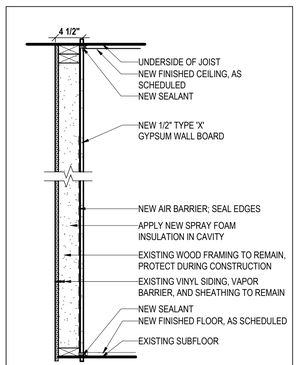
W2 - NEW TYP. INTERIOR



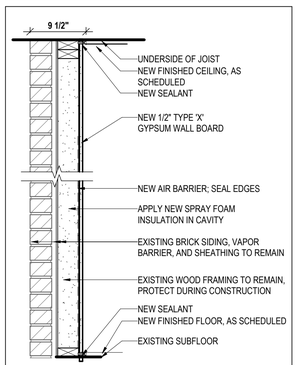
W1- LAMINATE



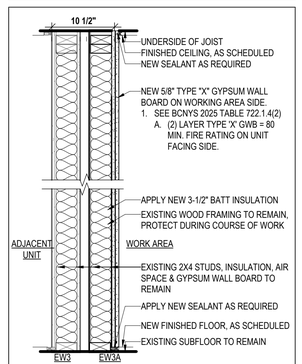
EW6 - EXISTING TYP. INTERIOR



EW5 - EXISTING VINYL EXTERIOR

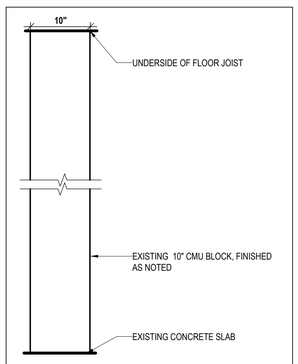


EW4 - EXISTING BRICK EXTERIOR

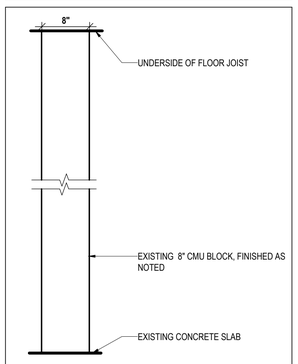


EW 3- UNIT SEPARATION WALL

EW3A -UNIT SEPARATION WALL



EW2 - EXISTING 10" CMU WALL



EW1 - EXISTING 8" CMU WALL

TYPICAL WALL TYPES
1" = 1'-0"

REGISTERED ARCHITECT
MICHAEL TRAPANOTTO
087981
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

Copyright: 2026

#	DATE:	DESCRIPTION OF REVISION:
1	09/30/2026	ISSUED FOR BID

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TYPICAL ASSEMBLY

BRONSON COURT UNIT 29, 31, & 84

ROCHESTER HOUSING AUTHORITY

90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

G1.4

PROJECT NO: 2285-068

CASEWORK SCHEDULE

TYPE MARK	MANU.	SERIES	FINISH	SIZE			HINGE	HANDLE	COUNT	NOTES
				HEIGHT	WIDTH	DEPTH				
BASE CABINET - BLIND RIGHT										
BBR	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	34 1/2"	24"	36"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	3	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, MAPLE INTERIOR, UNFINISHED EXTERIOR SIDE PANELS. PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
BASE CABINET - DOUBLE DOOR & 2 DRAWER										
B24	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	34 1/2"	24"	24"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	9	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, MAPLE INTERIOR, UNFINISHED EXTERIOR SIDE PANELS, FLUSH BACK CONSTRUCTION. PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
BASE CABINET - DOUBLE DOOR SINK UNIT										
SB24	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	34 1/2"	24"	24"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	3	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, MAPLE INTERIOR, UNFINISHED EXTERIOR SIDE PANELS. PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
SB36	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	34 1/2"	36"	24"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	3	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, BIRCH INTERIOR, UNFINISHED EXTERIOR SIDE PANELS. PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
BASE CABINET - SINGLE DOOR & DRAWER										
B15	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	34 1/2"	15"	24"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	9	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, MAPLE INTERIOR, FURNITURE FINISHED EXTERIOR SIDE PANEL(S). PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
WALL CABINET - DOUBLE DOOR										
W24	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	42"	24"	12"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	1	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, MAPLE INTERIOR, UNFINISHED EXTERIOR SIDE PANELS. PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
W30	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	30"	30"	12"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	1	
W36	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	42"	36"	12"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	1	
WR	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	27"	39"	24"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	1	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, MAPLE INTERIOR, UNFINISHED EXTERIOR SIDE PANELS. PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
WALL CABINET - SINGLE DOOR										
W12	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	42"	12"	12"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	1	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, BIRCH INTERIOR, UNFINISHED EXTERIOR SIDE PANELS. PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
W15	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	42"	15"	12"	CONCEALED, SOFT CLOSE	SEE DOOR HARDWARE SCHEDULE	1	MAPLE CABINET FRONT FACE AND DOOR, ALL PLYWOOD CONSTRUCTION, BIRCH INTERIOR, UNFINISHED EXTERIOR SIDE PANELS. PROVIDE MATCHING RECESSED PANEL DRAWER FACE.PROVIDE METAL BAR PULL FOR EACH DOOR & DRAWER.
WALL FILLER										
WF	KRAFTMAID	GENEVA SQUARE HALF	SEE FINISH SCHEDULE	42"	2 5/16"	12"	NONE	NONE	1	MAPLE CABINET FRONT FACE AND RECESSED PANEL

KITCHEN & LAUNDRY FIXTURE SCHEDULE

TYPE MARK	ITEM	MANU.	MODEL	FINISH	NOTES
A-9	WATER HEATER	AO SMITH	ETR		EXISTING WATER HEATER TO REMAIN. PROTECT DURING THE COUSE OF CONSTRUCTION.
A-10	FURNACE	RHEEM	ETR		EXISTING FURNACE TO REMAIN. PROTECT DURING THE COUSE OF CONSTRUCTION.
A-10	FURNACE	RHEEM	ETR		EXISTING FURNACE TO REMAIN. PROTECT DURING THE COUSE OF CONSTRUCTION.
UNIT 29					
A-1	RANGE	GE	JBS160DMWW	WHITE	ELECTRIC RANGE WITH SENSI-TEMP TECHNOLOGY.
A-2	RANGE HOOD	BROAN	41000	WHITE	ELECTRIC RANGE RECIRCULATING HOOD. COORDINATE WITH INSTALLATION AT UPPER CABINET.
A-3	SINK	ELKAY	DSESR127221	ALUMINUM	PROVIDE ELKAY SS DRAIN AND BASKET MODEL D1125.
A-4	KITCHEN FAUCET	MOEN	LILIBETH 87913	SPOT RESISTANT STAINLESS	COORDINATE WITH DROP SINK CUTOUTS.
A-5	SPLASH PLATE	BROAN - NUTONE	SP3004	STAINLESS STEEL	30"x24" S.S. BACKSPLASH WITH PREDRILLED CORNER SCREW HOLES. ORIENT BEHIND STOVE TO ALIGN WITH WIDTH OF RANGE AND BOTTOM OF RANGE HOOD.
A-6	REFRIGERATOR	-	-	-	POWER SUPPLIED BY CONTRACTOR. REFRIGERATOR TO BE SUPPLED BY TENANT, MAXIMUM 36" WIDTH. SEE E SERIES DRAWINGS.
A-7	WASHER	TBD	TBD	TBD	POWER & WATER CONNECTIONS SUPPLIED BY CONTRACTOR. WASHING MACHINE TO BE SUPPLIED BY TENANT. SEE E SERIES DRAWINGS.
A-8	DRYER	TBD	TBD	TBD	POWER & VENTILATION CONNECTIONS SUPPLIED BY CONTRACTOR. DRYER TO BE SUPPLIED BY TENANT. SEE E SERIES DRAWINGS.
A-9	WATER HEATER	AO SMITH	ETR	N/A	EXISTING WATER HEATER TO REMAIN. PROTECT DURING THE COUSE OF CONSTRUCTION.
A-10	FURNACE	RHEEM	ETR	N/A	EXISTING FURNACE TO REMAIN. PROTECT DURING THE COUSE OF CONSTRUCTION.
A-11	FLOOR DRAIN COVER	MOEN	101664BN		PROVIDE NEW COVER ONLY.
UNIT 31					
A-1	RANGE	GE	JBS160DMWW	WHITE	ELECTRIC RANGE WITH SENSI-TEMP TECHNOLOGY.
A-2	RANGE HOOD	BROAN	41000	WHITE	ELECTRIC RANGE RECIRCULATING HOOD. COORDINATE WITH INSTALLATION AT UPPER CABINET.
A-3	SINK	ELKAY	DSESR127221	ALUMINUM	PROVIDE ELKAY SS DRAIN AND BASKET MODEL D1125.
A-4	KITCHEN FAUCET	MOEN	LILIBETH 87913	SPOT RESISTANT STAINLESS	COORDINATE WITH DROP SINK CUTOUTS.
A-5	SPLASH PLATE	BROAN - NUTONE	SP3004		30"x24" S.S. BACKSPLASH WITH PREDRILLED CORNER SCREW HOLES. ORIENT BEHIND STOVE TO ALIGN WITH WIDTH OF RANGE AND BOTTOM OF RANGE HOOD.
A-6	REFRIGERATOR	-	-	TBD	POWER SUPPLIED BY CONTRACTOR. REFRIGERATOR TO BE SUPPLED BY TENANT, MAXIMUM 36" WIDTH. SEE E SERIES DRAWINGS.
A-7	WASHER	TBD	TBD	TBD	POWER & WATER CONNECTIONS SUPPLIED BY CONTRACTOR. WASHING MACHINE TO BE SUPPLIED BY TENANT. SEE E SERIES DRAWINGS.
A-8	DRYER	TBD	TBD	TBD	POWER & VENTILATION CONNECTIONS SUPPLIED BY CONTRACTOR. DRYER TO BE SUPPLIED BY TENANT. SEE E SERIES DRAWINGS.
A-9	WATER HEATER	AO SMITH	ETR	N/A	EXISTING WATER HEATER TO REMAIN. PROTECT DURING THE COUSE OF CONSTRUCTION.
A-10	FURNACE	RHEEM	ETR	N/A	EXISTING FURNACE TO REMAIN. PROTECT DURING THE COUSE OF CONSTRUCTION.
A-11	FLOOR DRAIN COVER	MOEN	101664BN	BRUSHED NICKEL	PROVIDE NEW COVER ONLY.
UNIT 84					
A-1	RANGE	GE	JBS160DMWW	WHITE	ELECTRIC RANGE WITH SENSI-TEMP TECHNOLOGY.
A-2	RANGE HOOD	BROAN	41000	WHITE	ELECTRIC RANGE RECIRCULATING HOOD. COORDINATE WITH INSTALLATION AT UPPER CABINET.
A-3	SINK	ELKAY	DSESR127221	ALUMINUM	PROVIDE ELKAY SS DRAIN AND BASKET MODEL D1125.
A-4	KITCHEN FAUCET	MOEN	LILIBETH 87913	SPOT RESISTANT STAINLESS	COORDINATE WITH DROP SINK CUTOUTS.
A-5	SPLASH PLATE	BROAN - NUTONE	SP3004		30"x24" S.S. BACKSPLASH WITH PREDRILLED CORNER SCREW HOLES. ORIENT BEHIND STOVE TO ALIGN WITH WIDTH OF RANGE AND BOTTOM OF RANGE HOOD.
A-6	REFRIGERATOR	-	-	TBD	POWER SUPPLIED BY CONTRACTOR. REFRIGERATOR TO BE SUPPLED BY TENANT, MAXIMUM 36" WIDTH. SEE E SERIES DRAWINGS.
A-7	WASHER	TBD	TBD	TBD	POWER & WATER CONNECTIONS SUPPLIED BY CONTRACTOR. WASHING MACHINE TO BE SUPPLIED BY TENANT. SEE E SERIES DRAWINGS.
A-8	DRYER	TBD	TBD	TBD	POWER & VENTILATION CONNECTIONS SUPPLIED BY CONTRACTOR. DRYER TO BE SUPPLIED BY TENANT. SEE E SERIES DRAWINGS.
A-10	FURNACE	RHEEM	ETR	N/A	EXISTING FURNACE TO REMAIN. PROTECT DURING THE COUSE OF CONSTRUCTION.
A-11	FLOOR DRAIN COVER	MOEN	101664BN		PROVIDE NEW COVER ONLY.

FINISH SCHEDULE

TYPE MARK	MATERIAL TYPE	MANU.	SERIES	SIZE	NUMBER	MATERIAL/ COLOR	NOTES
FLOORING							
LVP-1	LUXURY VENEER PLANK	NEXT FLOOR (OR EQUAL)	COLORADO 417	7-1/4" X 48" X 2.5mm	#417 114	CHARCOAL RUSTIC OAK	TYPICAL FLOORING. SUBMIT SAMPLE FOR APPROVAL. USE NEXT 1200 ADHESIVE (OR EQUAL) TO APPLY FLOORING. SEE PLANS FOR START POINTS.
PT-1	PORCELAIN TILE	ANATOLIA	LOCALE	12" x 24" x 8.4 MM	#4500-1019-0	PRESSED MATTE - CARBON	SUBMIT 12"x24" SAMPLE FOR APPROVAL.
PT-2	PORCELAIN TILE	ANATOLIA	KEATON	3" X 13"	#4002-0025-0	BULLNOSE MATTE - ICE	SUBMIT 3" X 13" SAMPLE FOR APPROVAL. INSTALL AS WALL BASE AT PT-1 LOCATIONS.
S-1	STAIR TREAD	ROPPE (OR EQUAL)	#81 LIGHT DUTY RIBBED DESIGN	12-1/4" X 2" X 0.080"	#110	SOLID COLORS - BROWN	SUBMIT SAMPLE COLOR FOR APPROVAL. USE EN-610 EPOXY NOSE FILLER (OR EQUAL) APPLY TRIM WD-4 OVER TREAD TO SECURE ENDS IN PLACE. TO BE PLACED ON ALL INTERIOR STAIR TREADS U.O.N.
T-1	TRANSITION STRIP	SCHLUTER SYSTEMS (OR EQUAL)	VIN-PRO-U-VPU 80 ATGB	SIZED TO FIT	#80	BRUSHED NICKEL	VERIFY DIMENSIONS IN FIELD. TRANSITION STRIP SHALL BE CONTINUOUS UNDER ENTIRE LENGTH OF DOOR THRESHOLD.
PAINT							
PNT-1	PAINT PRIMER	RICHARDS PAINT (OR EQUAL)	RICHTEX #300	NONE	#300	WHITE	DRYWALL PRIMER/SEALER. USE AS PRIMER ON ALL NEW PARTITIONS TO RECIEVE PNT-3.
PNT-2	INTERIOR PAINT	RICHARDS PAINT (OR EQUAL)	RICH PRO 6500	NONE	#6500	WHITE	FLAT FINISH. TO BE USED ON ALL FINISHED CEILINGS.
PNT-3	INTERIOR PAINT	RICHARDS PAINT (OR EQUAL)	RICH PRO 6000	NONE	#6530	TBD	EGGSHELL FINISH. TO BE USED ON ALL FINISHED PARTITIONS & VERTICAL EXPOSED WOOD & WOOD BLOCKING (U.O.N.). PROVIDE SAMPLE COLOR CHIP AND 6"x6" MOCK UP FOR APPROVAL.
PNT-4	INTERIOR PAINT	RICHARDS PAINT (OR EQUAL)	RICH PRO 6000	NONE	#6550	WHITE	SEMI-GLOSS FINISH. TO BE USED ON ALL TRIM MOLDINGS, U.N.O.
PNT-5	CABINET FINISH	KRAFTMAID (OR EQUAL)	MANUFACTERER FINISH	NONE	#H21	FROST	PRE-MANUFACTURED MAPLE FACED PLYWOOD WITH FACTORY APPLIED FINISHES. PROVIDE DOOR SAMPLE & FINISH CHIP FOR APPROVAL.
PNT-6	DOOR FINISH	JELD-WEN (OR EQUAL)	MANUFACTERER FINISH	NONE	MODERN WHITE	WHITE	PRE-MANUFACTURED DOOR FINISH
ST-1	OIL WOOD STAIN	RICHARDS PAINT (OR EQUAL)	PENETRATING WOOD STAIN	NONE	#40	CUSTOM COLOR:BY36C3D8KX12	SUBMIT 6"X4" SAMPLE WITH SPECIFIED MATERIALS TO RECEIVE STAIN (SHELVING, MOLDING/TRIM, DOORS,HANDRAIL, ETC). SAND FOR EVEN AND SMOOTH COAT PRIOR TO APPLICATION.
ST-2	CLEAR URETHANE VARNISH	RICHARDS PAINT (OR EQUAL)	ACRYLIC (WATER) URETHANE SATIN VARNISH	NONE	#75	CLEAR	SATIN FINISH. TO BE USED AS FINISH COAT OVER ST-1. SEE ST-1 NOTES.
PLASTIC LAMINATE							
PL-1	PLASTIC LAMINATED WOOD	WILSONART (OR EQUAL)	HIGH PRESSURE LAMINATE	SEE DRAWINGS	#335/#350	TYPHOON ICE 4952K-22-MATTE FINISH	SUBMIT SAMPLE FINISH CHIP FOR APPROVAL. PROVIDE INTEGRAL RADIUSED 4" BACKSPLASH AGAINST WALL LOCATIONS. PROVIDE ROUNDED EDGEBANDING AT ALL EXPOSED EDGES.
SOLID SURFACE							
SS-1	SOLID SURFACE	LX HAUSYS (OR EQUAL)	HIMACS CLASSIC COLLECTION	1/2"THICK	S006	ARTIC WHITE S006	SUBMIT SAMPLE COLOR FOR APPROVAL. INTEGRAL SINK LOCATED IN TOILET ROOMS; REFER TO PLANS FOR SINK DIMENSIONS.
TRIM PROFILES							
WD-1	WOOD TRIM	WOODGRAIN (OR EQUAL)	MOULDING AND TRIM	9/16" X 4-1/4"	620	PRIMED FINGER JOINTED PINE	TYPICAL WALL BASE.
WD-2	WOOD TRIM	WOODGRAIN (OR EQUAL)	MOULDING AND TRIM	1/2"x3/4"	126	PRIMED FINGER JOINTED PINE	TYPICAL WALL BASE SHOE MOLDING.
WD-3	WOOD TRIM	WOODGRAIN (OR EQUAL)	MOULDING AND TRIM	11/16" X 2-1/4"	356	RAW WHITE PINE	TYPICAL DOOR/WINDOW TRIM.
WD-4	WOOD TRIM	WOODGRAIN (OR EQUAL)	MOULDING AND TRIM	1/2"x3/4"	126	PRIMED FINGER JOINTED PINE	STAIR RUNNER TRIM.
WD-5	WOOD HANDRAIL	EVERMARK (OR EQUAL)	HANDRAIL	2-1/4" X 2-3/8"	6010- PLOWED	RAW RED OAK	APPLY ST-1 & ST-2 FINISH. ATTACH HANDRAIL TO WALL/POST WITH MECHANICAL FASTENERS.
WINDOW TREATMENT							
SH-1	WINDOW SHADES	LEVOLOR (OR EQUAL)	FAUXWOOD CLASSIC VALUE 2" SLATS	V.I.F.	BR035	WALNUT	SUBMIT SAMPLE COLOR FOR APPROVAL. PROVIDE ALL COMPONENTS FOR COMPLETE INSTALLATION. PROVIDE 2 SETS OF BLINDS ON SAME HEADRAIL FOR PAIRED WINDOWS. PROVIDE STANDARD VALANCE TO MATCH FAUXWOOD CORDLESS RAISE/LOWER BLINDS. PROVIDE CONTROL WAND FOR EACH SET OF BLINDS. INSIDE MOUNT BLIND. COORDINATE DIMENSIONS FOR SMOOTH OPERATION.

BATHROOM FIXTURE SCHEDULE

TYPE MARK	ITEM	MANUFACTURER	MODEL	FINISH	NOTES
UNIT 29					
P-1	FRAMELESS MEDICINE CABINET- TRIPLE DOOR	JENSEN (OR EQUAL)	HORIZON FRAMELESS 255224X 30"X24"X5-1/2"	WHITE	3 DOOR MEDICINE CABINET. REFER TO DRAWINGS FOR DOOR SWING DIRECTIONS.
P-2	TOILET PAPER HOLDER	FRANKLIN BRASS (OR EQUAL)	KIN50-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-3	TOWEL BAR	FRANKLIN BRASS (OR EQUAL)	KIN24-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-4	TOWEL RING	FRANKLIN BRASS (OR EQUAL)	KIN46-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-5	SHOWER CURTAIN ROD	DESIGN HOUSE (OR EQUAL)	#560912	SATIN NICKEL	ADJUSTABLE TENSION SHOWER CURTAIN ROD.
P-6	WALL HOOK	FRANKLIN BRASS (OR EQUAL)	KIN35-SN-1	SATIN NICKEL	PROVIDE MULTIPLE ON EXPOSED FINISHED BLOCKING AS SHOWN ON DRAWINGS.
P-7	ACRYLIC TUB & SHOWER SURROUND	COMFORT DESIGNS BATHWARE (OR EQUAL)	XSA 6000TS OT	WHITE	COORDINATE INSTALLATION WITH DRAIN LOCATION. UNIT INCLUDES GRAB BARS
P-8	TUB/SHOWER TRIM KIT	MOEN (OR EQUAL)	EVA M-CORE 2 SERIES #UT2133EPBN	SATIN NICKEL	TRIP LEVER W/OVERFLOW, DRAIN COVER, AND DIVERTER
P-9	TOILET AND TANK COMBINATION	MANSFIELD (OR EQUAL)	148WH/ AND TANK 123	WHITE	PROVIDE KOHLER K-22203 HIGHLINE QUIETCLOSE ELONGATED TOILET SEAT.
P-10	VANITY SINK	LXHAUSYS (OR EQUAL)	VANITY 1612	SOLID SURFACE	SOLID SURFACE INTEGRAL VANITY SINK.
P-11	VANITY FAUCET	MOEN (OR EQUAL)	HILLIARD #84537 SRN	SPOT RESISTANT BRUSHED NICKEL	PROVIDE COMPATIBLE MOUNTING KIT BASED ON DECK THICKNESS. REFER TO SS-1 ON FINISH SCHEDULE.
UNIT 31					
P-1	FRAMELESS MEDICINE CABINET- TRIPLE DOOR	JENSEN (OR EQUAL)	HORIZON FRAMELESS 255224X 30"X24"X5-1/2"	WHITE	3 DOOR MEDICINE CABINET. REFER TO DRAWINGS FOR DOOR SWING DIRECTIONS.
P-2	TOILET PAPER HOLDER	FRANKLIN BRASS (OR EQUAL)	KIN50-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-3	TOWEL BAR	FRANKLIN BRASS (OR EQUAL)	KIN24-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-4	TOWEL RING	FRANKLIN BRASS (OR EQUAL)	KIN46-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-5	SHOWER CURTAIN ROD	DESIGN HOUSE (OR EQUAL)	#560912	SATIN NICKEL	ADJUSTABLE TENSION SHOWER CURTAIN ROD.
P-6	WALL HOOK	FRANKLIN BRASS (OR EQUAL)	KIN35-SN-1	SATIN NICKEL	PROVIDE MULTIPLE ON EXPOSED FINISHED BLOCKING AS SHOWN ON DRAWINGS.
P-7	ACRYLIC TUB & SHOWER SURROUND	COMFORT DESIGNS BATHWARE (OR EQUAL)	XSA 6000TS OT	WHITE	COORDINATE INSTALLATION WITH DRAIN LOCATION. UNIT INCLUDES GRAB BARS
P-8	TUB/SHOWER TRIM KIT	MOEN (OR EQUAL)	EVA M-CORE 2 SERIES #UT2133EPBN	SATIN NICKEL	TRIP LEVER W/OVERFLOW, DRAIN COVER, AND DIVERTER
P-9	TOILET AND TANK COMBINATION	MANSFIELD (OR EQUAL)	148WH/ AND TANK 123	WHITE	PROVIDE KOHLER K-22203 HIGHLINE QUIETCLOSE ELONGATED TOILET SEAT.
P-10	VANITY SINK	LXHAUSYS (OR EQUAL)	VANITY 1612	SOLID SURFACE	SOLID SURFACE INTEGRAL VANITY SINK.
P-11	VANITY FAUCET	MOEN (OR EQUAL)	HILLIARD #84537 SRN	SPOT RESISTANT BRUSHED NICKEL	PROVIDE COMPATIBLE MOUNTING KIT BASED ON DECK THICKNESS. REFER TO SS-1 ON FINISH SCHEDULE.
UNIT 84					
P-1	FRAMELESS MEDICINE CABINET- TRIPLE DOOR	JENSEN (OR EQUAL)	HORIZON FRAMELESS 255224X 30"X24"X5-1/2"	WHITE	3 DOOR MEDICINE CABINET. REFER TO DRAWINGS FOR DOOR SWING DIRECTIONS.
P-2	TOILET PAPER HOLDER	FRANKLIN BRASS (OR EQUAL)	KIN50-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-3	TOWEL BAR	FRANKLIN BRASS (OR EQUAL)	KIN24-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-4	TOWEL RING	FRANKLIN BRASS (OR EQUAL)	KIN46-SN-1	SATIN NICKEL	PROVIDE IN WALL BLOCKING.
P-5	SHOWER CURTAIN ROD	DESIGN HOUSE (OR EQUAL)	#560912	SATIN NICKEL	ADJUSTABLE TENSION SHOWER CURTAIN ROD.
P-6	WALL HOOK	FRANKLIN BRASS (OR EQUAL)	KIN35-SN-1	SATIN NICKEL	PROVIDE MULTIPLE ON EXPOSED FINISHED BLOCKING AS SHOWN ON DRAWINGS.
P-7	ACRYLIC TUB & SHOWER SURROUND	COMFORT DESIGNS BATHWARE (OR EQUAL)	XSA 6000TS OT	WHITE	COORDINATE INSTALLATION WITH DRAIN LOCATION. UNIT INCLUDES GRAB BARS
P-8	TUB/SHOWER TRIM KIT	MOEN (OR EQUAL)	EVA M-CORE 2 SERIES #UT2133EPBN	SATIN NICKEL	TRIP LEVER W/OVERFLOW, DRAIN COVER, AND DIVERTER
P-9	TOILET AND TANK COMBINATION	MANSFIELD (OR EQUAL)	148WH/ AND TANK 123	WHITE	PROVIDE KOHLER K-22203 HIGHLINE QUIETCLOSE ELONGATED TOILET SEAT.
P-10	VANITY SINK	LXHAUSYS (OR EQUAL)	VANITY 1612	SOLID SURFACE	SOLID SURFACE INTEGRAL VANITY SINK.
P-11	VANITY FAUCET	MOEN (OR EQUAL)	HILLIARD #84537 SRN	SPOT RESISTANT BRUSHED NICKEL	PROVIDE COMPATIBLE MOUNTING KIT BASED ON DECK THICKNESS. REFER TO SS-1 ON FINISH SCHEDULE.

REGISTERED ARCHITECT
MICHAEL TRAPANOTTO
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JCH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

FIXTURE & FINISH SCHEDULES

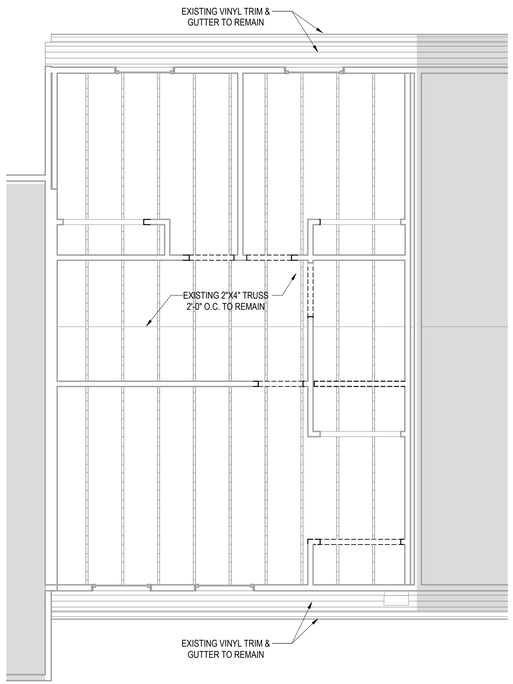
BRONSON COURT UNIT 29, 31, & 84

ROCHESTER HOUSING AUTHORITY

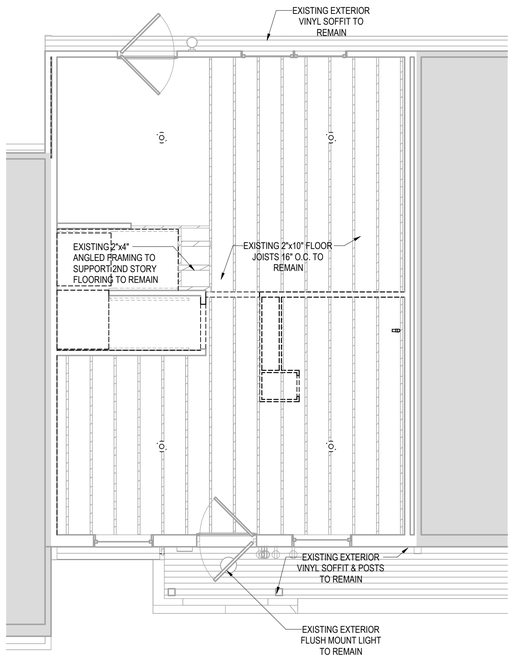
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

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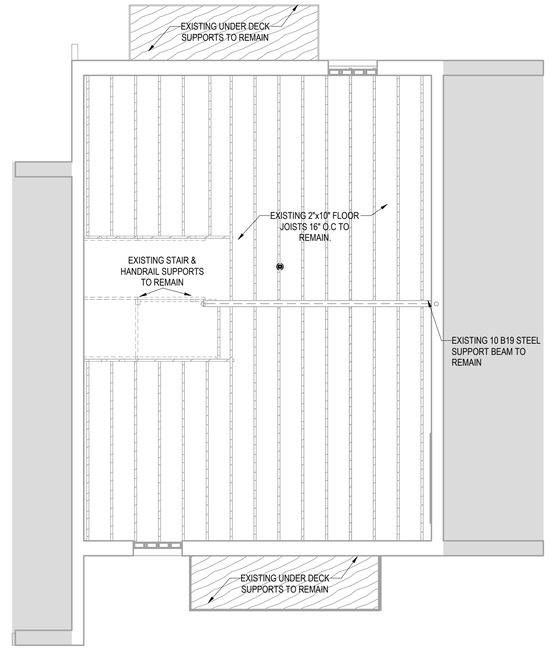
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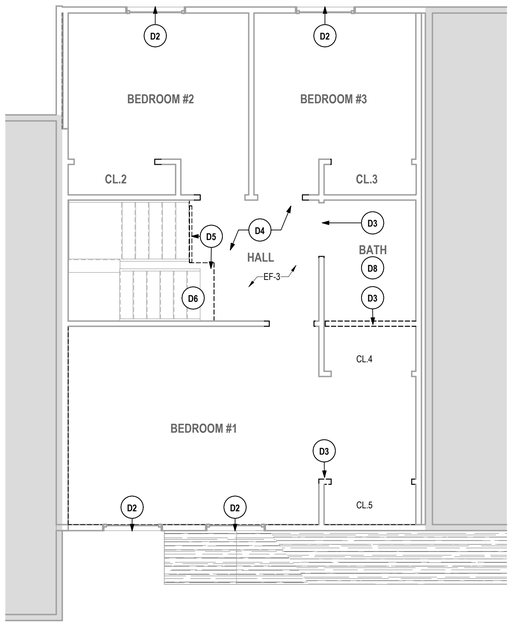
6 DEMOLITION SECOND FLOOR RCP
1/4" = 1'-0"



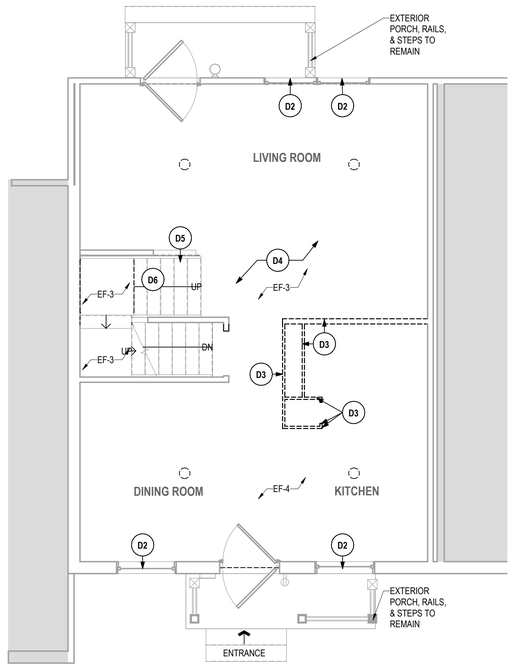
5 DEMOLITION FIRST FLOOR RCP
1/4" = 1'-0"



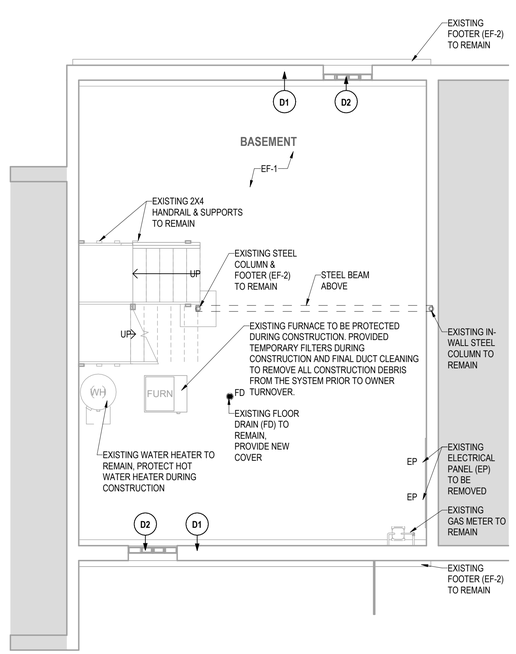
4 DEMOLITION BASEMENT RCP
1/4" = 1'-0"



3 DEMOLITION SECOND FLOOR PLAN
1/4" = 1'-0"



2 DEMOLITION FIRST FLOOR PLAN
1/4" = 1'-0"



1 DEMOLITION BASEMENT PLAN
1/4" = 1'-0"

N

RHA GENERAL OPERATIONS NOTES

THE CONTRACTOR SHALL PERFORM THE WORK WITHIN AN ACTIVE, OCCUPIED RESIDENTIAL DEVELOPMENT. ADJACENT DWELLING UNITS, PEDESTRIAN ROUTES, PARKING AREAS, COMMON SITE AREAS, UTILITIES, AND LIFE-SAFETY SYSTEMS SHALL REMAIN SAFE, SECURE, ACCESSIBLE, AND OPERATIONAL THROUGHOUT CONSTRUCTION.

PRIOR TO MOBILIZATION, THE CONTRACTOR SHALL SUBMIT A PROJECT-SPECIFIC RESIDENT PROTECTION, SITE LOGISTICS, AND UTILITY SHUTDOWN PLAN TO THE ROCHESTER HOUSING AUTHORITY FOR REVIEW AND APPROVAL. THE PLAN SHALL INCLUDE, AT A MINIMUM:

1. PROPOSED WORK HOURS AND SCHEDULING OF NOISY, DUSTY, MALODOROUS, OR OTHERWISE DISRUPTIVE OPERATIONS.
2. PROCEDURES AND ADVANCE-NOTICE REQUIREMENTS FOR WORK AFFECTING RESIDENTS, ADJACENT DWELLING UNITS, ACCESS ROUTES, PARKING AREAS, COMMON AREAS, UTILITIES, OR BUILDING SERVICES.
3. TEMPORARY BARRIERS, DUST CONTROL, SECURITY, SIGNAGE, WEATHER PROTECTION, AND OTHER MEASURES REQUIRED TO PROTECT RESIDENTS, RHA STAFF, VISITORS, AND THE PUBLIC.
4. MAINTENANCE OF REQUIRED MEANS OF EGRESS. EMERGENCY-RESPONDER ACCESS, ACCESSIBLE PEDESTRIAN ROUTES, AND SAFE ACCESS TO ALL OCCUPIED DWELLING UNITS.
5. CONTROL OF CONTRACTOR PERSONNEL, DELIVERIES, MATERIAL STORAGE, EQUIPMENT, AND CONSTRUCTION PARKING.
6. DAILY HOUSEKEEPING, DEBRIS REMOVAL, AND CLEANING OF AFFECTED COMMON, EXTERIOR, AND PEDESTRIAN AREAS.
7. IDENTIFICATION OF THE CONTRACTOR 'S ON-SITE REPRESENTATIVE RESPONSIBLE FOR COORDINATION WITH RHA AND FOR RESPONDING TO RESIDENT, SAFETY, SECURITY, ACCESS, AND SERVICE CONCERNS.
8. IDENTIFICATION OF EACH PROPOSED UTILITY OR BUILDING-SERVICE INTERRUPTION, INCLUDING THE TYPE OF SERVICE, SHUTDOWN LOCATION, ANTICIPATED DURATION, AFFECTED DWELLING UNITS, AFFECTED COMMON AREAS, AND THE CONTRACTOR OR SUBCONTRACTOR RESPONSIBLE FOR THE WORK.
9. WRITTEN VERIFICATION THAT THE PROPOSED SHUTDOWN WILL NOT AFFECT DWELLING UNITS OR BUILDING AREAS OTHER THAN THOSE IDENTIFIED IN THE APPROVED SHUTDOWN PLAN.
10. TEMPORARY UTILITY OR LIFE-SAFETY SERVICES REQUIRED TO MAINTAIN SAFE AND HABITABLE CONDITIONS DURING THE INTERRUPTION, INCLUDING TEMPORARY HEAT, ELECTRICAL POWER, LIGHTING, WATER, SANITARY SERVICE, FIRE ALARM, OR OTHER SERVICES AS DIRECTED BY RHA.
11. PROCEDURES FOR ISOLATION, LOCKOUT/TAGOUT, SYSTEM DRAIN-DOWN, PROTECTION OF EXISTING EQUIPMENT, RECONNECTION, STARTUP, TESTING, AND RESTORATION OF EACH AFFECTED SYSTEM.
12. EMERGENCY CONTACT INFORMATION FOR THE CONTRACTOR, RESPONSIBLE SUBCONTRACTOR, AND RHA REPRESENTATIVE DURING THE ENTIRE SHUTDOWN AND RESTORATION PERIOD.

GENERAL DEMOLITION NOTES:

A NO ASBESTOS CONTAINING MATERIALS HAVE BEEN IDENTIFIED AS PART OF THIS PROJECT. THE OWNER HAS REPORTS IDENTIFYING ACM MATERIALS AND WILL HAVE THESE AVAILABLE FOR CONTRACTORS REFERENCE. IF SUSPECT MATERIAL NOT SCHEDULED IS ENCOUNTERED, STOP WORK IMMEDIATELY, DO NOT DISTURB THE MATERIAL AND NOTIFY THE OWNER'S REPRESENTATIVES.

B THE OWNER RESERVES THE RIGHT TO RETAIN ANY REMOVED ITEMS AFTER CONTRACTOR REMOVAL. THE CONTRACTOR SHALL REMOVE FROM THE SITE AND DISPOSE OF ALL REMOVED ITEMS THE OWNER DOES NOT WISH TO RETAIN.

C DIMENSIONS SHOWN FOR ALL NEW OPENINGS IN EXISTING CONSTRUCTION SHOULD BE COORDINATED WITH THE NEW PLANS AND EXISTING CONDITIONS IN THE FIELD.

D ITEMS SHOWN ARE INTENDED TO GIVE APPROXIMATE QUANTITY, LOCATION AND TYPE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACTUAL QUANTITIES AND EXISTING FIELD CONDITIONS IN ORDER TO COMPLETE THE WORK.

E COORDINATE ANY WALL/FLOOR REPAIR/INFILL AND PREPARE SURFACE TO RECEIVE NEW FINISHES.

F REMOVE EXISTING WOOD BLOCKING FOR EXISTING WALL MOUNTED EQUIPMENT AND/OR DEVICES THAT INTERFERE WITH NEW WORK OR NEW ROOM FINISHES AND WALL TREATMENTS. TYPICAL FOR ALL AREAS.

G MAINTAIN EXISTING STRUCTURAL SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY SHORING AND BRACING AT LOCATIONS WHERE THE EXISTING STRUCTURE IS BEING MODIFIED. PROTECT THE EXISTING STRUCTURE SCHEDULED TO REMAIN FROM DAMAGE DURING DEMOLITION. MAINTAIN SHORING AND BRACING UNTIL THE NEW STRUCTURE IS INSTALLED AND READY TO ACCEPT LOADS.

H CONTACT OWNER/ARCHITECT AFTER THE DEMOLITION FOR FURTHER REVIEW.

DEMOLITION NOTES:

D1 REMOVE BATT INSULATION AT RIM JOIST.

D2 EXISTING WINDOWS TO REMAIN. PROTECT DURING THE COURSE OF CONSTRUCTION (TYPICAL THROUGHOUT).

D3 REMOVE PARTITIONS & BLOCKING UP TO FLOOR JOIST ABOVE TO THE EXTENTS SHOWN ON PLAN. MAINTAIN SHORING REQUIRED FOR LOAD BEARING CONSTRUCTION AT ALL TIMES.

D4 REMOVE EXISTING FINISHED FLOORING IN IT'S ENTIRETY. PREPARE EXISTING SUBFLOORING FOR NEW FINISHES (TYPICAL THROUGHOUT).

D5 REMOVE EXISTING RAILINGS AND SUPPORTS.

D6 REMOVE EXISTING STAIR TREAD COVERS

D7 REMOVE ALL EXISTING INTERIOR ELECTRICAL FIXTURES AND DEVICES IN AREA OF WORK, REFER TO E-SERIES DRAWINGS.

D8 REMOVE SUB-FLOORING TO JOISTS.

REGISTERED ARCHITECT
MICHAEL TRAPANI JR.
026181
STATE OF NEW YORK
EXP. 04/30/2027

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CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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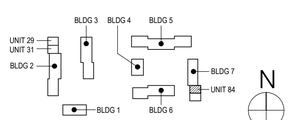
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NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC22031314641

TYPICAL DEMOLITION PLANS

BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608



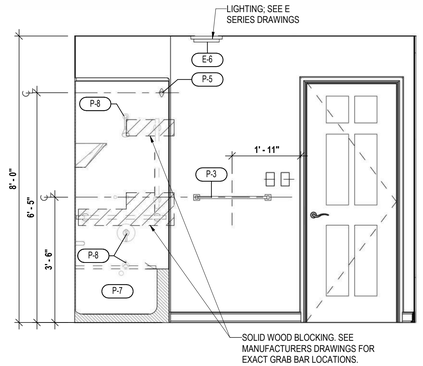
KEY PLAN

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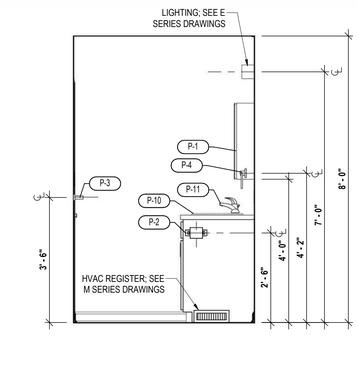
PROJECT NO: 2285-068

GENERAL NOTES:

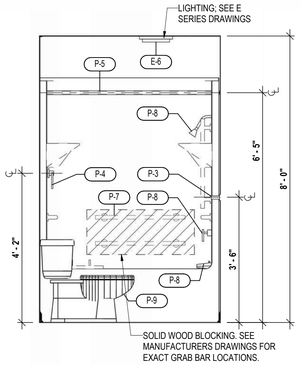
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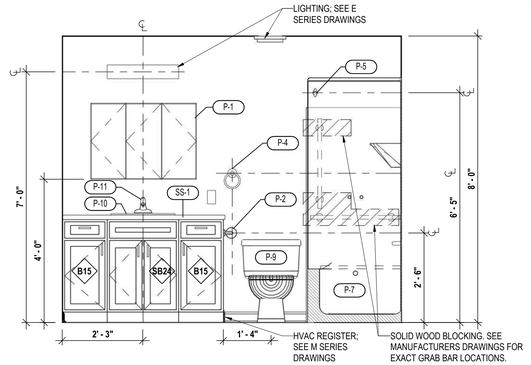
10 BATH ELEVATION 4
1/2" = 1'-0"



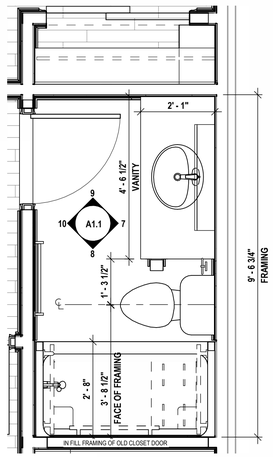
9 BATH ELEVATION 3
1/2" = 1'-0"



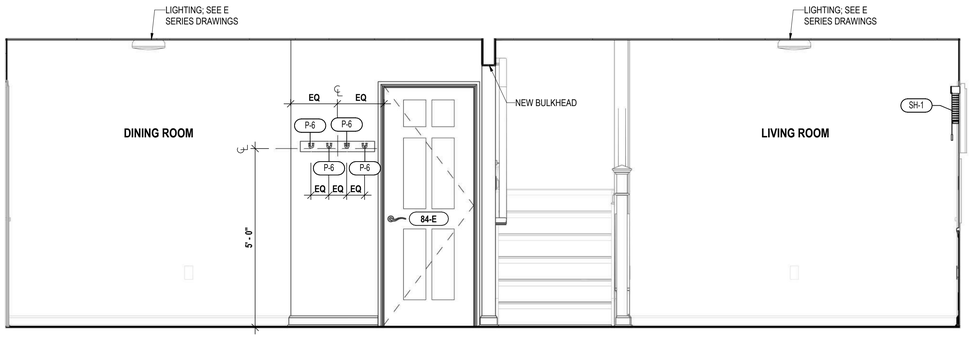
8 BATH ELEVATION 2
1/2" = 1'-0"



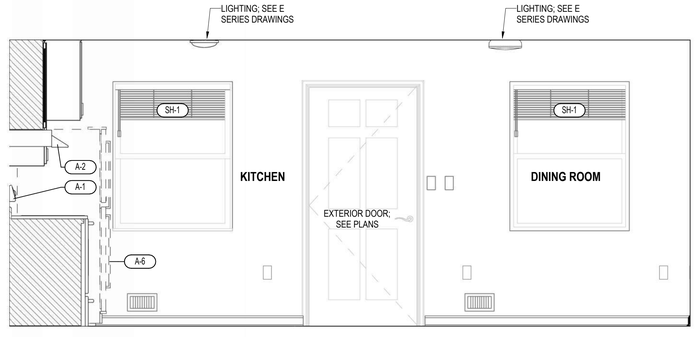
7 BATH ELEVATION 1
1/2" = 1'-0"



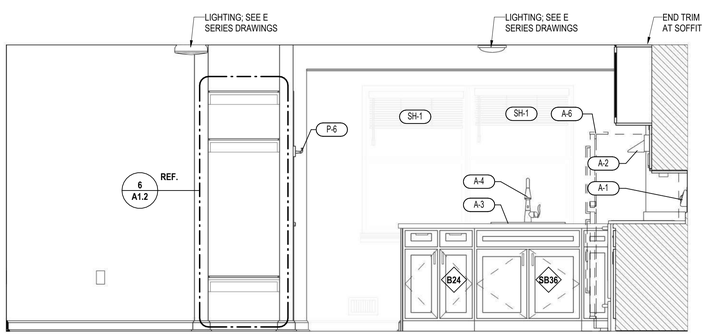
6 TYPICAL ENLARGED BATHROOM PLAN
1/2" = 1'-0"



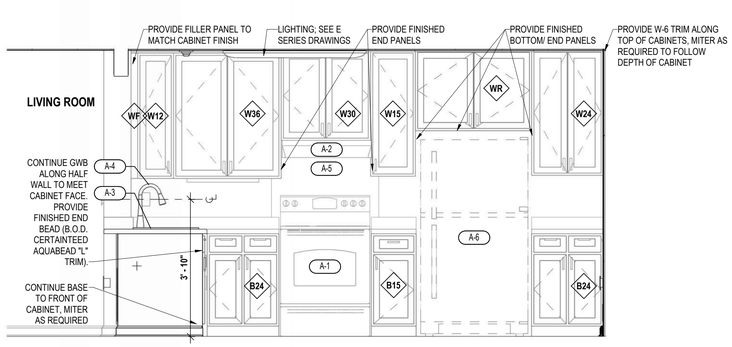
5 FIRST FLOOR STAIR ELEVATION
1/2" = 1'-0"



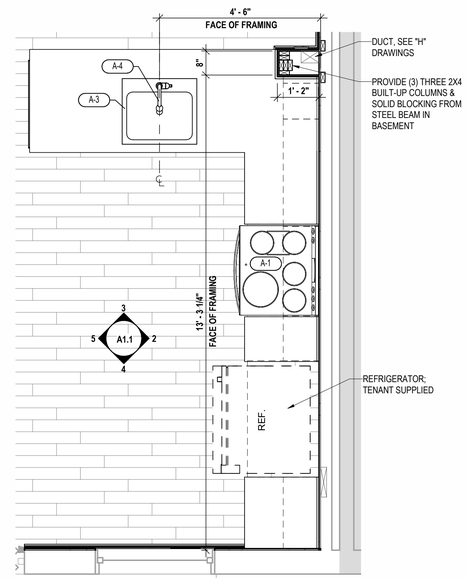
4 KITCHEN ELEVATION 3
1/2" = 1'-0"



3 KITCHEN ELEVATION 2
1/2" = 1'-0"



2 KITCHEN ELEVATION 1
1/2" = 1'-0"



1 TYPICAL ENLARGED KITCHEN PLAN
1/2" = 1'-0"

REGISTERED ARCHITECT
MICHAEL TRAPANI ARCHITECT
098481
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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TYPICAL ENLARGED PLANS & ELEVATIONS

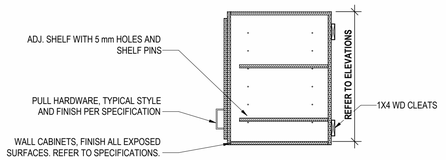
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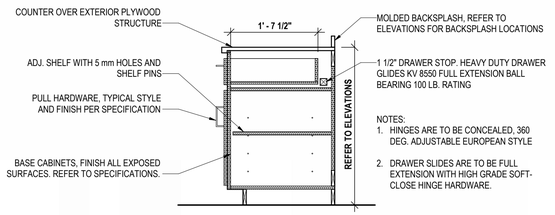
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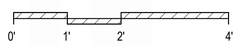
PROJECT NO: 2285-068

GENERAL NOTES:

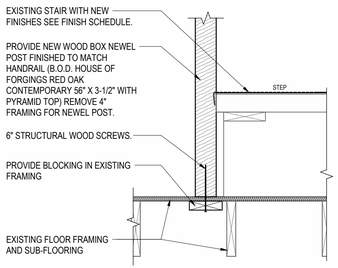
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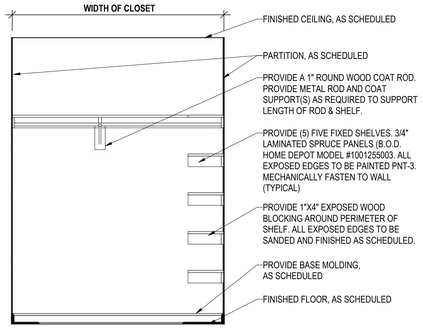




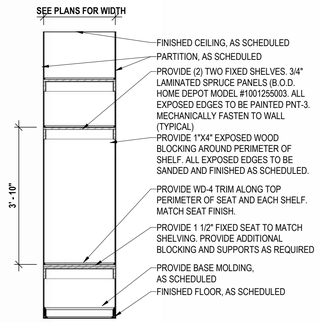
9 TYPICAL CASEWORK SECTION
3/4" = 1'-0"



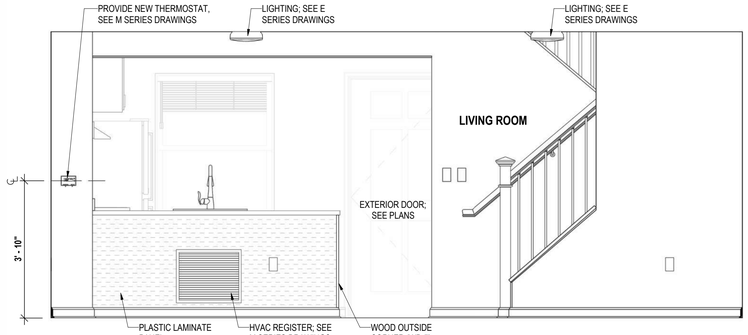
8 NEWEL SUPPORT DETAIL 1
1" = 1'-0"



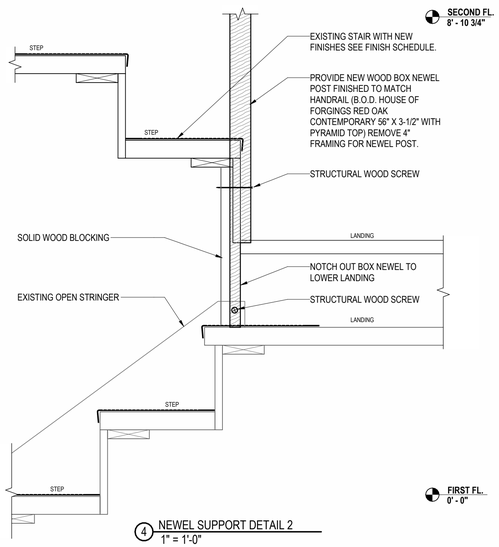
7 TYPICAL SHELVING DETAIL 2
1/2" = 1'-0"



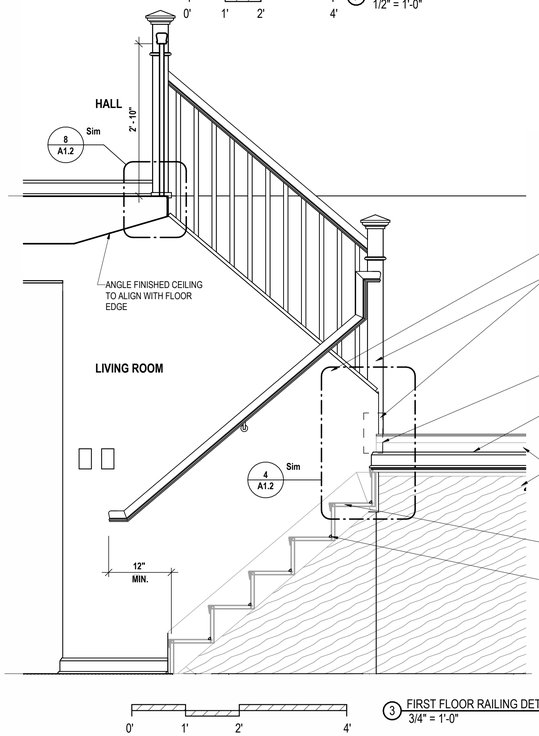
6 TYPICAL SHELVING DETAIL 1
1/2" = 1'-0"



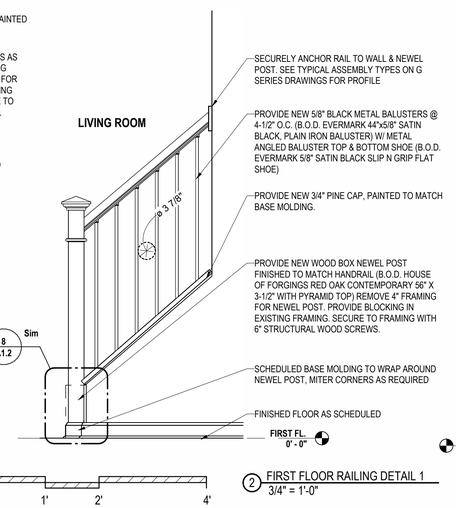
5 LIVING ROOM ELEVATION 1
1/2" = 1'-0"



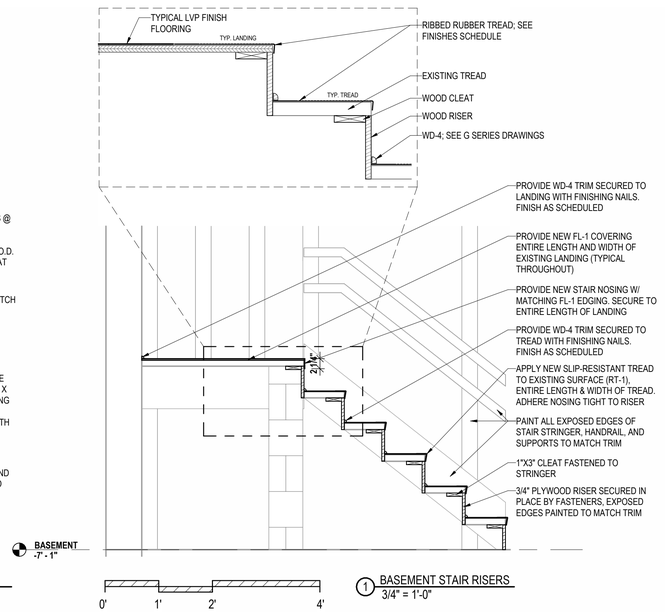
4 NEWEL SUPPORT DETAIL 2
1" = 1'-0"



3 FIRST FLOOR RAILING DETAIL 2
3/4" = 1'-0"



2 FIRST FLOOR RAILING DETAIL 1
3/4" = 1'-0"



1 BASEMENT STAIR RISERS
3/4" = 1'-0"

REGISTERED ARCHITECT
MICHAEL TRAPANI HOOVER
087898
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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1	09/30/2026	ISSUED FOR BID

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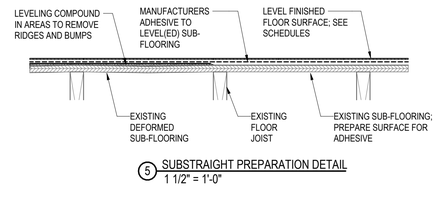
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NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC22031314641

TYPICAL SECTIONS AND DETAILS

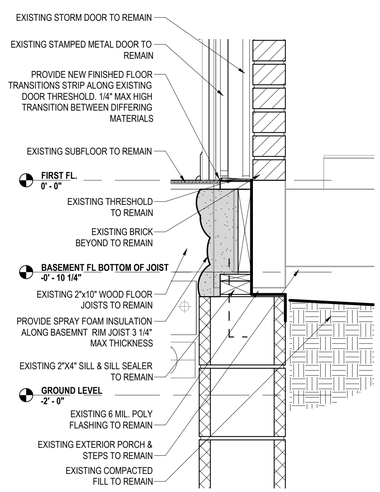
BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

A1.2

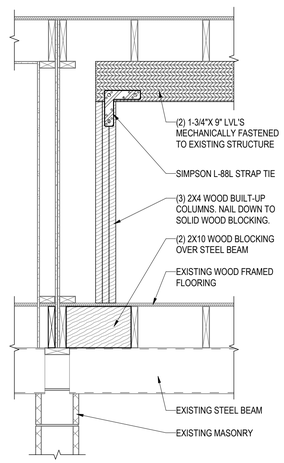
PROJECT NO: 2285-068



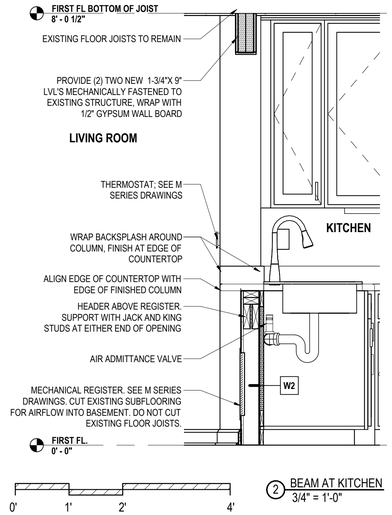
5 SUBSTRAIGHT PREPARATION DETAIL
1 1/2" = 1'-0"



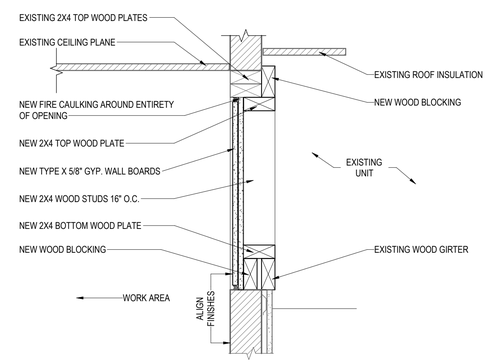
4 ENTRANCE SECTION DETAIL
1 1/2" = 1'-0"



3 BEAM CONNECTIONS DETAIL
3/4" = 1'-0"



2 BEAM AT KITCHEN
3/4" = 1'-0"



1 FIRSTOPPING DETAIL
1 1/2" = 1'-0"

REGISTERED ARCHITECT
MICHAEL TRAPANI
028109
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JCH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

TYPICAL SECTIONS AND DETAILS

BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

A1.3

PROJECT NO: 2285-068

GENERAL NOTES:

A REFER TO G SERIES DRAWINGS FOR TAGED ASSEMBILIES, FIXTURES, AND FINISHES.
B THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK REQUIRED TO IMPLEMENT THE WORK OF THE CONTRACT, REGARDLESS OF WHETHER SPECIFICALLY INDICATED OR NOT, UNLESS NOTED OTHERWISE.
C THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING ANY WORK AND NOTIFY ARCHITECT IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
D THE CONTRACTOR SHALL COORDINATE THE WORK OF THIS CONTRACT WITH THE WORK OF ALL OTHER CONTRACTED WORK AND WORK PERFORMED BY THE OWNER.
E ALL NEW DOOR FRAME SHALL BE MOUNTED 4" FROM ADJACENT WALLS UNLESS NOTED OR DETAILED OTHERWISE.
F PROVIDE SOLID WOOD BLOCKING OR METAL STRAPPING AS REQUIRED IN STUD WALLS AT ALL WALL MOUNTED EQUIPMENT AND ACCESSORIES INCLUDING FURNITURE FIXTURES AND EQUIPMENT. COORDINATE WITH THE WORK OF ALL OTHER CONTRACTED WORK AND WORK PERFORMED BY THE OWNER.
G ITEMS SHOWN ARE INTENDED TO GIVE APPROXIMATE QUANTITY, LOCATION & TYPE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACTUAL QUANTITY & EXISTING FIELD CONDITIONS.
H ALL DIMENSIONS ARE TAKEN FROM FACE OF WALL TO FACE OF WALL. UNLESS NOTED OTHERWISE.
I ALL FINISHED ASSEMBLIES ARE REQUIRED TO BE PROTECTED DURING THE COURSE OF CONSTRUCTION. ALL FINISHED ASSEMBLIES DAMAGED DURING THE COURSE OF CONSTRUCTION ARE REQUIRED TO BE REPLACED OR REPAIRED AT THE ARCHITECTS DIRECTION.

REFLECTED CEILING PLAN (RCP) NOTES:

R1 PROVIDE NEW CEILING TRIM AT ALL UPPER CABINETS. PROVIDE FINISH AS SCHEDULED. MITER ALL CORNERS.
R2 PROVIDE NEW CEILINGS ATTACHED TO EXISTING FRAMING (TYPICAL THROUGHOUT). COORDINATE HEIGHTS WITH HVAC DUCTS.
R3 PROVIDE NEW LIGHTING FIXTURES, CENTERED IN ROOM, UNLESS OTHERWISE NOTED (TYPICAL THROUGHOUT). REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
R4 PROVIDE NEW SMOKE DETECTORS. REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
R5 PROVIDE NEW DUCT GRILLE COVERS. COORDINATE FINAL LOCATION WITH DUCT ROUTING. SEE HVAC DRAWINGS.
R6 PROVIDE 22"X22" LOCKABLE ATTIC ACCESS HATCH,COORDINATE WITH LAYOUT OF EXISTING STRUCTURE; PRE-FINISHED WHITE

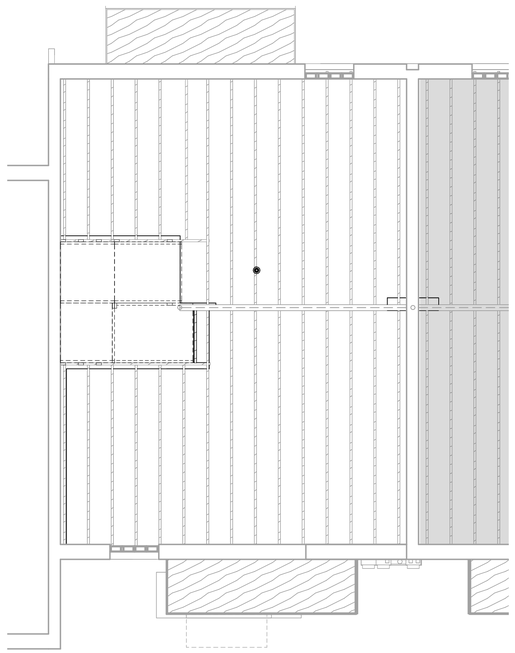
REFLECTED CEILING PLAN LEGEND:

X'-X" CEILING HEIGHT
CENTER LINE
ROUND LIGHTING FIXTURE
RECTANGULAR LIGHTING FIXTURE
COMBINATION LIGHT AND EXHAUST FAN
OVAL LIGHTING FIXTURE
CEILING MOUNTED HVAC DUCT GRILL
SMOKE DETECTOR
E-# LIGHTING FIXTURE TAG

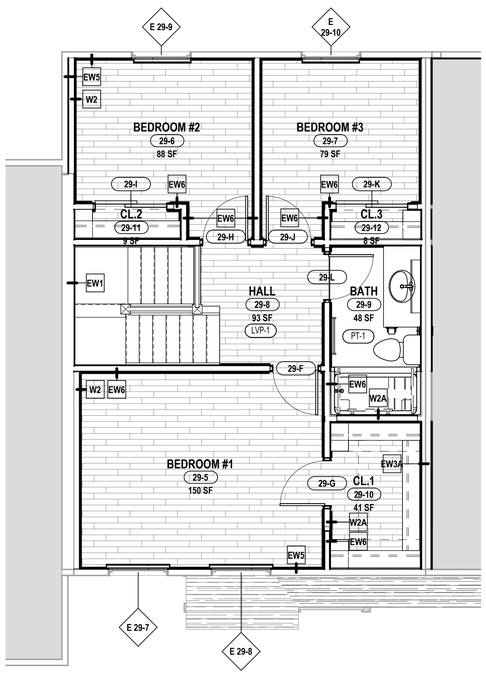


6 UNIT 29 SECOND FLOOR CONSTRUCTION RCP
1/4" = 1'-0"

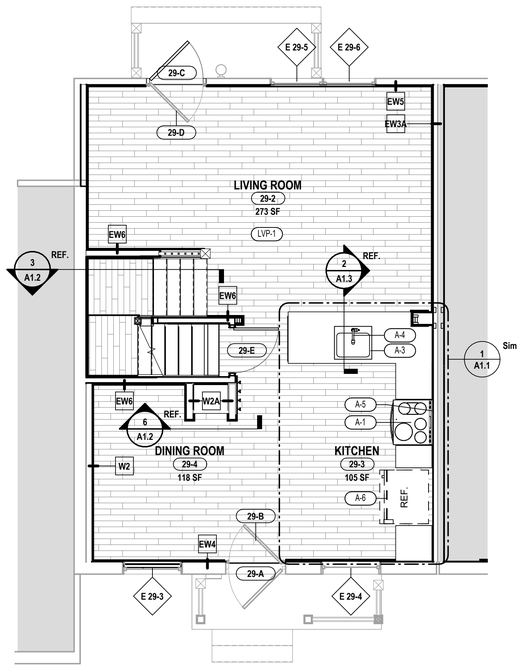
5 UNIT 29 FIRST FLOOR CONSTRUCTION RCP
1/4" = 1'-0"



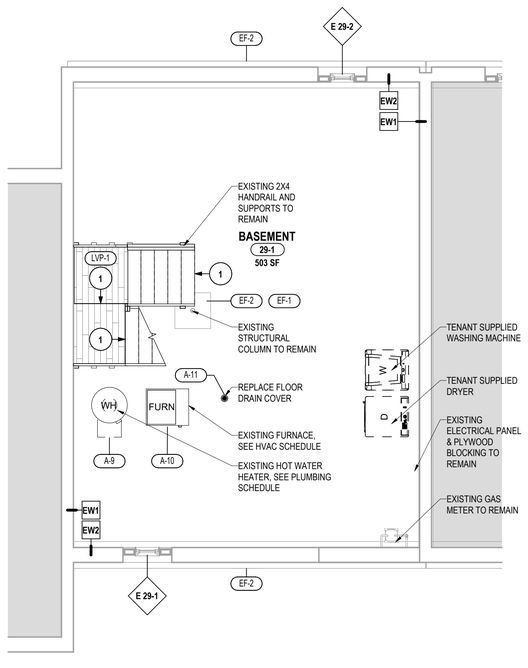
4 UNIT 29 BASEMENT CONSTRUCTION RCP
1/4" = 1'-0"



3 UNIT 29 SECOND FLOOR CONSTRUCTION PLAN
1/4" = 1'-0"



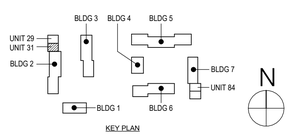
2 UNIT 29 FIRST FLOOR CONSTRUCTION PLAN
1/4" = 1'-0"



1 UNIT 29 BASEMENT CONSTRUCTION PLANS
1/4" = 1'-0"

CONSTRUCTION PLAN NOTES:

1 PROVIDE RISERS AT BASEMENT STAIRS. SEE FINISHS SCHEDULE.
2 PROVIDE NEW FINISHES AT STAIR TREADS AND RISERS. PROVIDE STAIR TRIM AS SHOWN ON G-SERIES DRAWINGS. (TYPICAL ON ALL INTERIOR STAIRS) PROVIDE FINISHES AS SCHEDULED.
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4 PROVIDE NEW INTERIOR DOORS, FRAMES, AND HARDWARE AS SHOWN. PROVIDE FINISHES AS SCHEDULED.
5 PROVIDE NEW FLOORING THROUGHOUT. REFER TO FLOORING NOTES ON G-SERIES DRAWINGS AND FINISH SCHEDULE FOR FINISH TYPE. SEE FLOOR FINISH START POINT ON PLANS.
6 PROVIDE NEW PARTITIONS, CEILINGS, & INSULATION AS SHOWN (TYPICAL THROUGHOUT). SEE G-SERIES DRAWINGS FOR PARTITION TYPES.
7 PROVIDE NEW READY TO ASSEMBLE CABINETRY AND/OR MILLWORK AS SHOWN. LAYOUT & DIMENSIONS TO BE VERIFIED IN FIELD BEFORE INSTALLATION. REFER TO MILLWORK SCHEDULE AND DETAILS FOR MORE INFORMATION.
8 PROVIDE NEW 'FIXTURES', ACCESSORIES, AND FINISHES AS INDICATED (TYPICAL THROUGHOUT). FINAL LOCATIONS TO BE COORDINATED IN FIELD. SEE FIXTURE SCHEDULE FOR MORE INFORMATION.
9 PROVIDE NEW COUNTERTOPS AS SHOWN. COORDINATE LOCATIONS OF PLUMBING FIXTURES. SECURELY ANCHOR COUNTERTOPS TO EXISTING/NEW STRUCTURE. PROVIDE BLOCKING AND SHIMMING AS REQURIED FOR A SECURE, FLUSH CONDITION.
10 PROVIDE NEW BASEBOARD TRIM (TYPICAL THROUGHOUT). REFER TO TRIM PROFILES ON G-SERIES DRAWINGS. MITER ALL CORNERS.
11 PROVIDE NEW CUSTOM MILLWORK SHELVING. SAND SMOOTH EDGES AND PAINT EXPOSED WOOD SUPPORTS AND SHELFS.
12 NOT USED.
13 PROVIDE NEW LIGHTING FIXTURES. FIXTURES TO BE CENTERED WITHIN ROOM, UNLESS OTHERWISE NOTED. REFER TO E-SERIES DRAWINGS FOR FIXTURE SCHEDULE.
14 PROVIDE NEW SMOKE DETECTION DEVICES. SEE E SERIES DRAWINGS.



REGISTERED ARCHITECT
MICHAEL TRAPANI HUNT
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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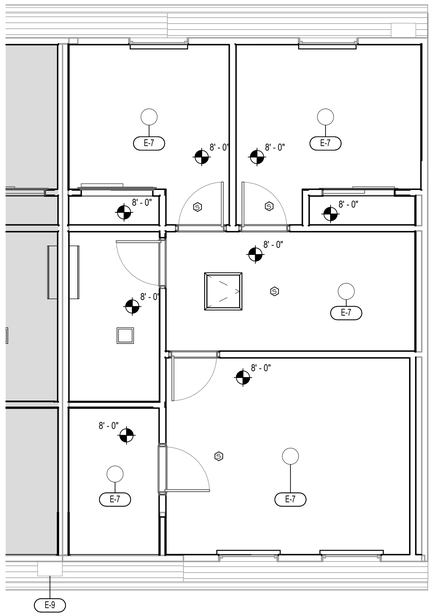
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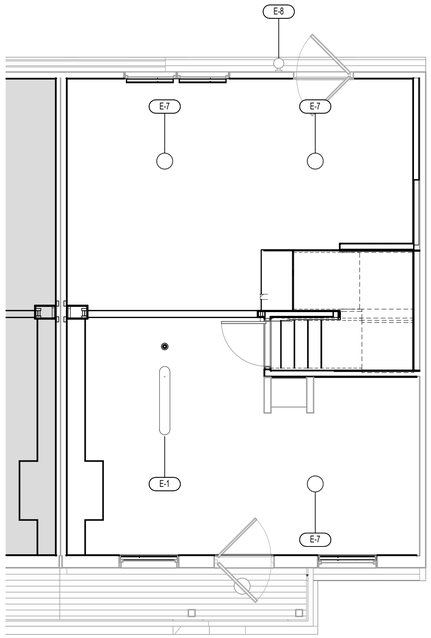
UNIT 29 CONSTRUCTION PLANS
BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

A1.A

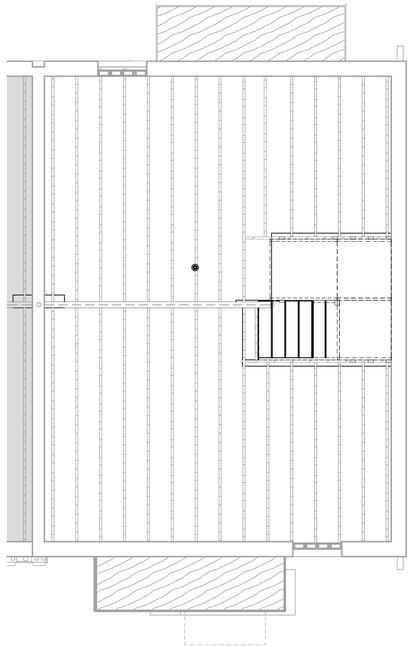
PROJECT NO: 2285-068



6 UNIT 31 SECOND FLOOR CONSTRUCTION RCP
1/4" = 1'-0"



5 UNIT 31 FIRST FLOOR CONSTRUCTION RCP
1/4" = 1'-0"



4 UNIT 31 BASEMENT CONSTRUCTION RCP
1/4" = 1'-0"

GENERAL NOTES:

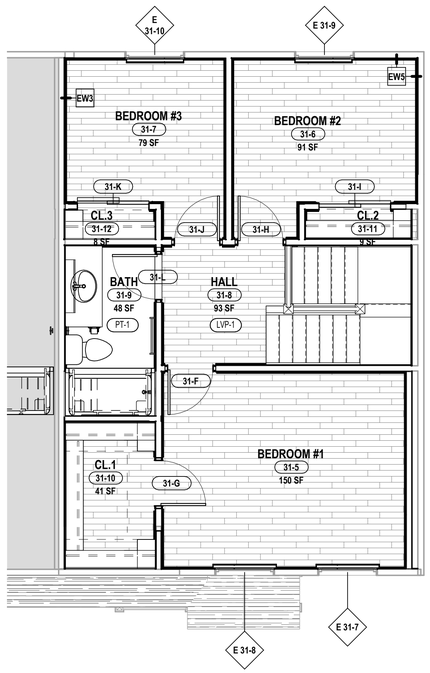
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REFLECTED CEILING PLAN (RCP) NOTES:

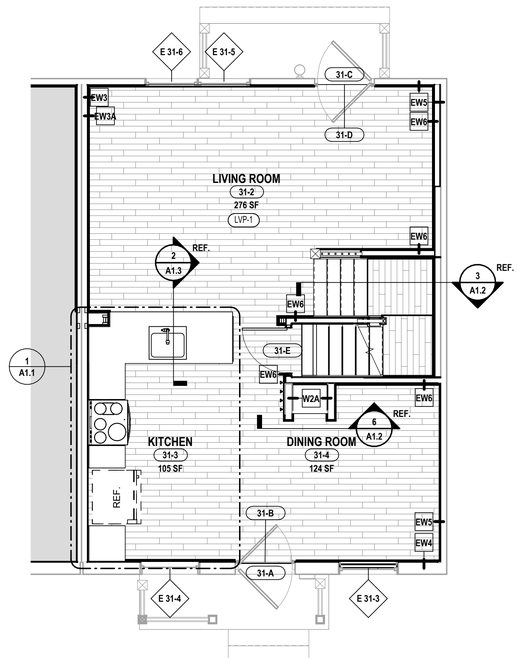
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R4 PROVIDE NEW SMOKE DETECTORS. REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
R5 PROVIDE NEW DUCT GRILLE COVERS. COORDINATE FINAL LOCATION WITH DUCT ROUTING. SEE HVAC DRAWINGS.
R6 PROVIDE 22"X22" LOCKABLE ATTIC ACCESS HATCH.COORDINATE WITH LAYOUT OF EXISTING STRUCTURE; PRE-FINISHED WHITE

REFLECTED CEILING PLAN LEGEND:

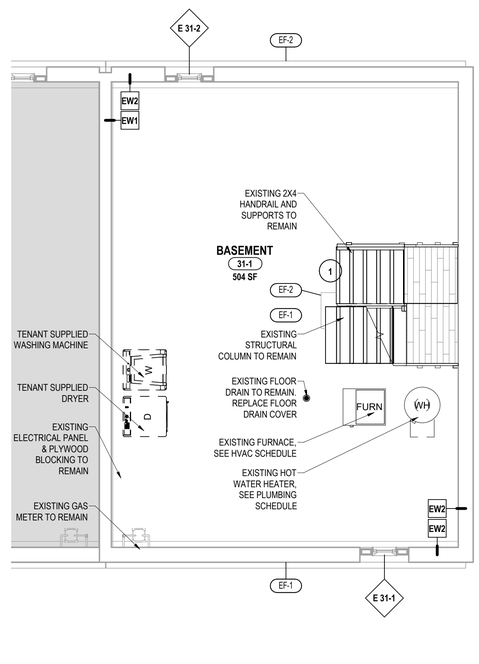
X'-X" CEILING HEIGHT
CENTER LINE
ROUND LIGHTING FIXTURE
RECTANGULAR LIGHTING FIXTURE
COMBINATION LIGHT AND EXHAUST FAN
OVAL LIGHTING FIXTURE
CEILING MOUNTED HVAC DUCT GRILL
SMOKE DETECTOR
E-# LIGHTING FIXTURE TAG



3 UNIT 31 SECOND FLOOR CONSTRUCTION PLAN
1/4" = 1'-0"



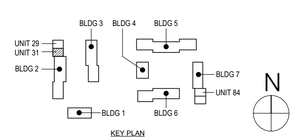
2 UNIT 31 FIRST FLOOR CONSTRUCTION PLAN
1/4" = 1'-0"



1 UNIT 31 BASEMENT CONSTRUCTION PLAN
1/4" = 1'-0"

CONSTRUCTION PLAN NOTES:

1 PROVIDE RISERS AT BASEMENT STAIRS. SEE FINISHS SCHEDULE.
2 PROVIDE NEW FINISHES AT STAIR TREADS AND RISERS. PROVIDE STAIR TRIM AS SHOWN ON G-SERIES DRAWINGS. (TYPICAL ON ALL INTERIOR STAIRS) PROVIDE FINISHES AS SCHEDULED.
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14 PROVIDE NEW SMOKE DETECTION DEVICES. SEE E SERIES DRAWINGS.



0' 1' 2' 4'

N

REGISTERED ARCHITECT
MICHAEL TRAPANI ARCHITECT
094981
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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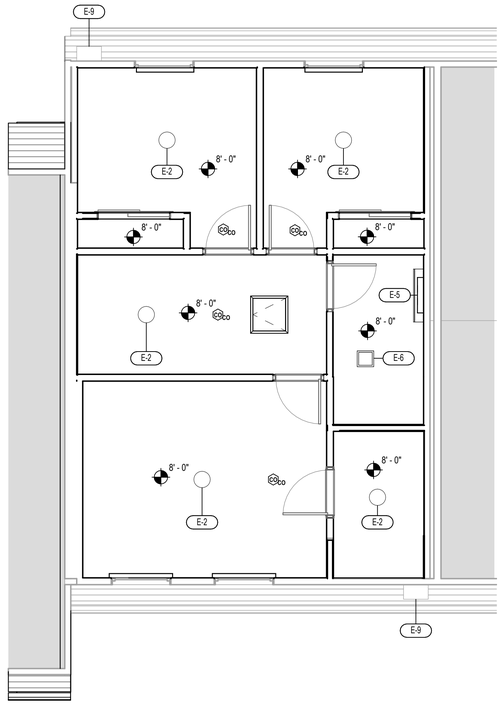
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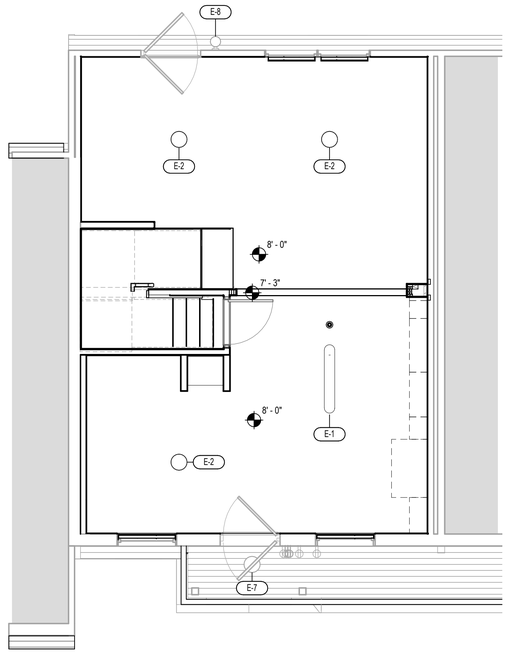
UNIT 31 CONSTRUCTION PLANS
BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

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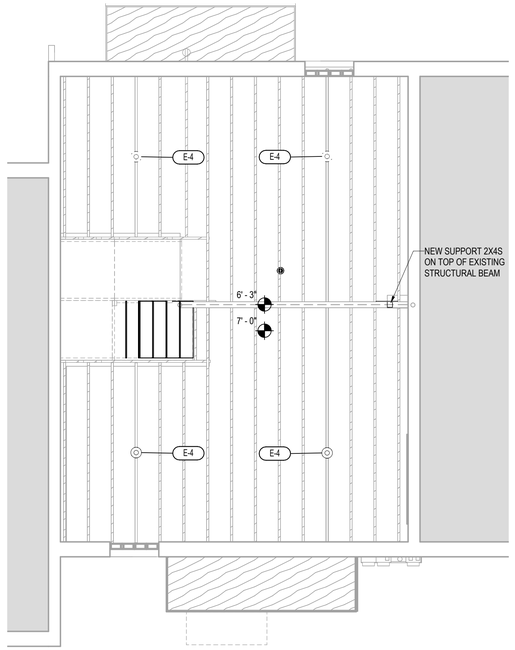
PROJECT NO: 2285-068



6 UNIT 84 SECOND FLOOR CONSTRUCTION RCP
1/4" = 1'-0"



5 UNIT 84 FIRST FLOOR CONSTRUCTION RCP
1/4" = 1'-0"



4 UNIt 84 BASEMENT CONSTRUCTION RCP
1/4" = 1'-0"

GENERAL NOTES:

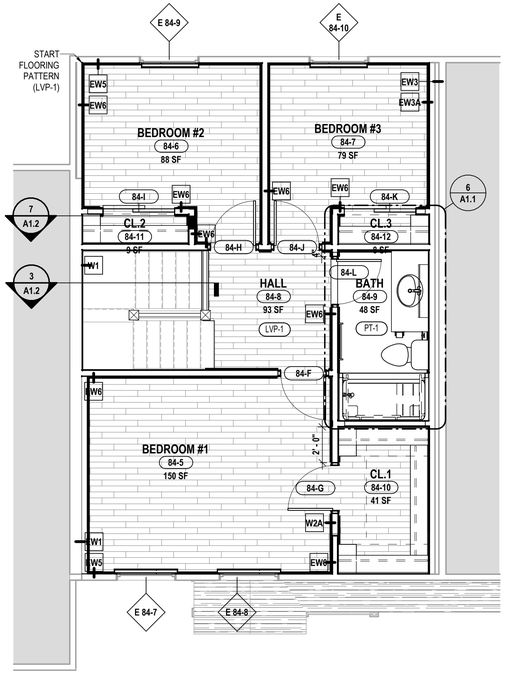
A REFER TO G SERIES DRAWINGS FOR TAGED ASSEMBILIES, FIXTURES, AND FINISHES.
B THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK REQUIRED TO IMPLEMENT THE WORK OF THE CONTRACT, REGARDLESS OF WHETHER SPECIFICALLY INDICATED OR NOT, UNLESS NOTED OTHERWISE.
C THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING ANY WORK AND NOTIFY ARCHITECT IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
D THE CONTRACTOR SHALL COORDINATE THE WORK OF THIS CONTRACT WITH THE WORK OF ALL OTHER CONTRACTED WORK AND WORK PERFORMED BY THE OWNER.
E ALL NEW DOOR FRAME SHALL BE MOUNTED 4" FROM ADJACENT WALLS UNLESS NOTED OR DETAILED OTHERWISE.
F PROVIDE SOLID WOOD BLOCKING OR METAL STRAPPING AS REQUIRED IN STUD WALLS AT ALL WALL MOUNTED EQUIPMENT AND ACCESSORIES INCLUDING FURNITURE FIXTURES AND EQUIPMENT. COORDINATE WITH THE WORK OF ALL OTHER CONTRACTED WORK AND WORK PERFORMED BY THE OWNER.
G ITEMS SHOWN ARE INTENDED TO GIVE APPROXIMATE QUANTITY, LOCATION & TYPE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACTUAL QUANTITY & EXISTING FIELD CONDITIONS.
H ALL DIMENSIONS ARE TAKEN FROM FACE OF WALL TO FACE OF WALL. UNLESS NOTED OTHERWISE.
I ALL FINISHED ASSEMBLIES ARE REQUIRED TO BE PROTECTED DURING THE COURSE OF CONSTRUCTION. ALL FINISHED ASSEMBLIES DAMAGED DURING THE COURSE OF CONSTRUCTION ARE REQUIRED TO BE REPLACED OR REPAIRED AT THE ARCHITECTS DIRECTION.

REFLECTED CEILING PLAN (RCP) NOTES:

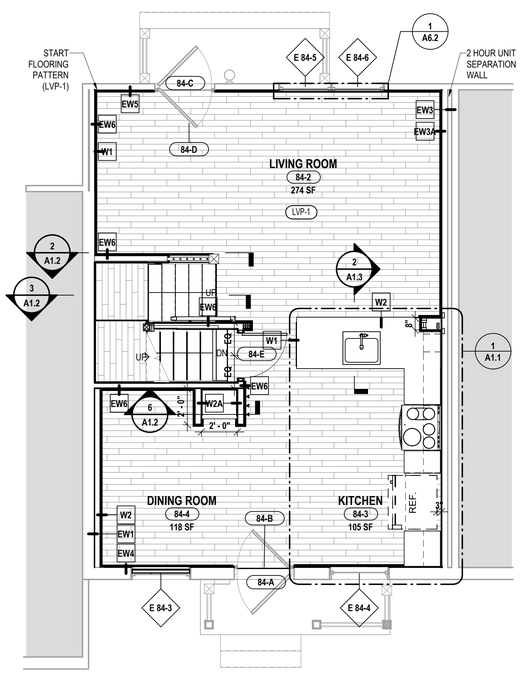
R1 PROVIDE NEW CEILING TRIM AT ALL UPPER CABINETS. PROVIDE FINISH AS SCHEDULED. MITER ALL CORNERS.
R2 PROVIDE NEW CEILINGS ATTACHED TO EXISTING FRAMING (TYPICAL THROUGHOUT). COORDINATE HEIGHTS WITH HVAC DUCTS.
R3 PROVIDE NEW LIGHTING FIXTURES, CENTERED IN ROOM, UNLESS OTHERWISE NOTED (TYPICAL THROUGHOUT). REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
R4 PROVIDE NEW SMOKE DETECTORS. REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
R5 PROVIDE NEW DUCT GRILLE COVERS. COORDINATE FINAL LOCATION WITH DUCT ROUTING. SEE HVAC DRAWINGS.
R6 PROVIDE 22"X22" LOCKABLE ATTIC ACCESS HATCH.COORDINATE WITH LAYOUT OF EXISTING STRUCTURE; PRE-FINISHED WHITE

REFLECTED CEILING PLAN LEGEND:

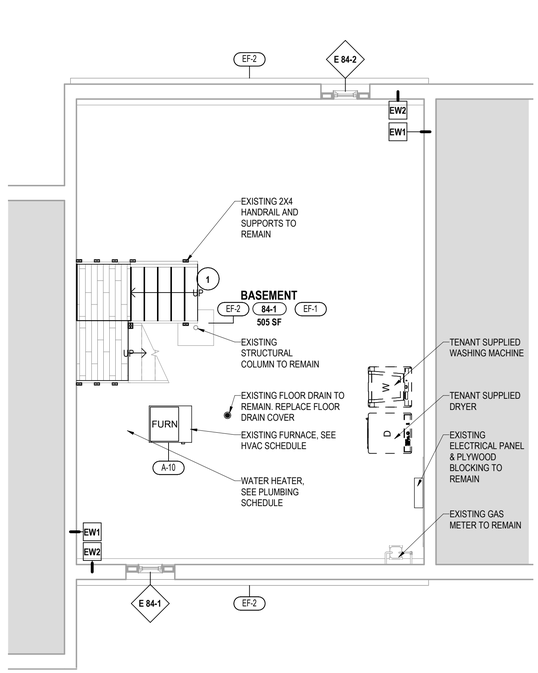
X'-X" CEILING HEIGHT
CENTER LINE
ROUND LIGHTING FIXTURE
RECTANGULAR LIGHTING FIXTURE
COMBINATION LIGHT AND EXHAUST FAN
OVAL LIGHTING FIXTURE
CEILING MOUNTED HVAC DUCT GRILL
SMOKE DETECTOR
E-# LIGHTING FIXTURE TAG



3 UNIT 84 SECOND FLOOR CONSTRUCTION PLAN
1/4" = 1'-0"



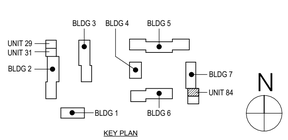
2 UNIT 84 FIRST FLOOR CONSTRUCTION PLAN
1/4" = 1'-0"



1 UNIT 84 BASEMENT CONSTRUCTION PLAN
1/4" = 1'-0"

CONSTRUCTION PLAN NOTES:

1 PROVIDE RISERS AT BASEMENT STAIRS. SEE FINISHS SCHEDULE.
2 PROVIDE NEW FINISHES AT STAIR TREADS AND RISERS. PROVIDE STAIR TRIM AS SHOWN ON G-SERIES DRAWINGS. (TYPICAL ON ALL INTERIOR STAIRS) PROVIDE FINISHES AS SCHEDULED.
3 PROVIDE NEW WALL & POST SECURED HANDRAILS WITH INTERMEDIATE BALUSTERS & MOUNTING ACCESSORIES. REFER TO STAIR DETAILS ON A1 SERIES DRAWINGS.
4 PROVIDE NEW INTERIOR DOORS, FRAMES, AND HARDWARE AS SHOWN. PROVIDE FINISHES AS SCHEDULED.
5 PROVIDE NEW FLOORING THROUGHOUT, REFER TO FLOORING NOTES ON G-SERIES DRAWINGS AND FINISH SCHEDULE FOR FINISH TYPE. SEE FLOOR FINISH START POINT ON PLANS.
6 PROVIDE NEW PARTITONS, CEILINGS, & INSULATION AS SHOWN (TYPICAL THROUGHOUT). SEE G-SERIES DRAWINGS FOR PARTITION TYPES.
7 PROVIDE NEW READY TO ASSEMBLE CABINETRY AND/OR MILLWORK AS SHOWN. LAYOUT & DIMENSIONS TO BE VERIFIED IN FIELD BEFORE INSTALLATION. REFER TO MILLWORK SCHEDULE AND DETAILS FOR MORE INFORMATION.
8 PROVIDE NEW 'FIXTURES', ACCESSORIES, AND FINISHES AS INDICATED (TYPICAL THROUGHOUT). FINAL LOCATIONS TO BE COORDINATED IN FIELD. SEE FIXTURE SCHEDULE FOR MORE INFORMATION.
9 PROVIDE NEW COUNTERTOPS AS SHOWN. COORDINATE LOCATIONS OF PLUMBING FIXTURES. SECURELY ANCHOR COUNTERTOPS TO EXISTING/NEW STRUCTURE. PROVIDE BLOCKING AND SHIMMING AS REQURIED FOR A SECURE, FLUSH CONDITION.
10 PROVIDE NEW BASEBOARD TRIM (TYPICAL THROUGHOUT). REFER TO TRIM PROFILES ON G-SERIES DRAWINGS. MITER ALL CORNERS.
11 PROVIDE NEW CUSTOM MILLWORK SHELVING. SAND SMOOTH EDGES AND PAINT EXPOSED WOOD SUPPORTS AND SHELFS.
12 NOT USED.
13 PROVIDE NEW LIGHTING FIXTURES. FIXTURES TO BE CENTERED WITHIN ROOM, UNLESS OTHERWISE NOTED. REFER TO E-SERIES DRAWINGS FOR FIXTURE SCHEDULE.
14 PROVIDE NEW SMOKE DETECTION DEVICES. SEE E SERIES DRAWINGS.



REGISTERED ARCHITECT
MICHAEL TRAPANOTTO
084981
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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#	DATE:	DESCRIPTION OF REVISION:
1	09/30/2026	ISSUED FOR BID

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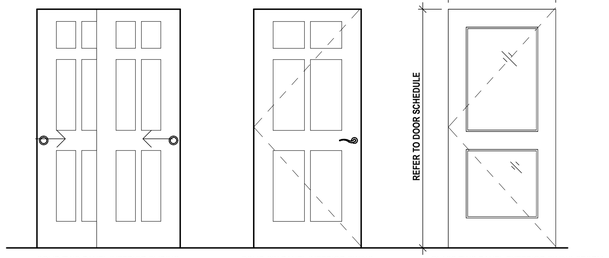
DOOR HARDWARE SCHEDULE

HDWR ITEM NAME	SERIES / MODEL #	HDWR FINISH	HDWR MANU.	NOTES
NO.1 - EXTERIOR DOORS				
SELF ADHESIVE NEOPRENE WEATHERSTRIPPING	#8172 N	BLACK	ZERO INTERNATIONAL OR EQ.	PROVIDE NEW WEATHERSTRIPPING AROUND PERIMETER OF EXISTING EXTERIOR DOORS
DOOR SHOE GASKETING	MATCH EXISTING	ALUMINUM MILL FINISH	PEMKO OR EQ.	REINSTALL EXISTING HARDWARE AT DOORS TO BE REFINISHED. ENSURE GASKETING ALLOWS DOOR TO OPERATE PROPERLY AND MAKES TIGHT SEAL.
EXISTING HARDWARE	TBD	TBD	TBD	REINSTALL EXISTING HARDWARE AT DOORS TO BE REFINISHED WHEN POSSIBLE. REPLACE ITEMS TO MATCH EXISTING.
NO. 2 - PASSAGE/BEDROOM DOORS				
CYLINDRICAL LOCK (PASSAGE)	ACCENT #F10 ACC 619	SATIN NICKEL	SCHLAGE OR EQ.	CURVED RETURN LEAVER, GRADE 2 CYLINDRICAL LEAVER SET, MEDIUM DUTY CYLINDRICAL LOCK. FIT TO 1-3/8" DOOR THICKNESS. DOOR STRIKE TO MATCH FINISH. HARDWARE COLOR.
ARCHITECTURAL HINGES	1010RP	SATIN NICKEL	IVES OR EQ.	3-1/2" X 3-1/2"FULL MORTICE FIVE KNUCKLE LESS THAN 70 LB DOOR, PLAIN BEARING HINGE, SQUARE CORNER.
HINGE PIN DOOR STOP	72	SATIN NICKEL	IVES OR EQ.	HINGE PIN WITH REMOVABLE BUSHINGS TO ACCOMODATE 1/4"-5/16" DIAMETER HINGE PINS. APPLY WHITE BUMPER TIPS.
NO. 3 - PRIVACY DOORS				
CYLINDRICAL LOCK (PRIVACY)	ACCENT #F40 ACC 619	SATIN NICKEL	SCHLAGE OR EQ.	CURVED RETURN LEAVER, GRADE 2 CYLINDRICAL LEAVER SET, MEDIUM DUTY CYLINDRICAL LOCK. FIT TO 1-3/8" DOOR THICKNESS. DOOR STRIKE TO MATCH FINISH. HARDWARE COLOR.
ARCHITECTURAL HINGES	1010RP	SATIN NICKEL	IVES OR EQ.	3-1/2" X 3-1/2"FULL MORTICE FIVE KNUCKLE LESS THAN 70 LB DOOR, PLAIN BEARING HINGE, SQUARE CORNER.
HINGE PIN DOOR STOP	72	SATIN NICKEL	IVES OR EQ.	HEAVY GAUGE SPRING. APPLY WHITE RUBBER TIP.
NO. 4 - BI-PASS CLOSET DOORS				
FLUSH CLOSET DOOR PULL	# N7297	SATIN NICKEL	PRIME LINE OR EQ.	PROVIDE 1 SET PER PAIR OF SLIDING DOORS. INSET DOOR PULL IN DOOR PANEL FACING ROOM. PREPARE DOOR AS REQUIRED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
BI-PASS SLIDING DOOR TRACK HARDWARE KIT	# 18396	GALVANIZED STEEL	EVERBILT OR EQ.	PROVIDE 48 IN BI-PASS SLIDING DOOR SET TO ALLOW (2) DOORS OF SCHEDULED THICKNESS TO PASS SMOOTHLY AND QUIETLY. PROVIDE FLUSH INSTALL OF DOOR HANGER, ALIGNMENTS TRACK, ROLLER, AND FLOOR GUIDE.
WALL MOUNTED ANTI-SLAM PROTECTIVE BUMPERS	# N 6658	WHITE	PRIME LINE OR EQ.	PROVIDE AT MINIMUM (1) BUMPER AT PULL LEVEL TO PROTECT DOOR FROM DAMAGING WALL AT JAMB.
NO. 5 - CABINET HARDWARE				
CENTER TO CENTER PULL	SLOAN #4026	SATIN NICKEL	KRAFTMAID (OR EQUAL)	4 INCH BAR PULL

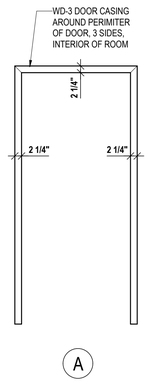
DOOR HARDWARE SET QUANTITIES:
VERIFY TOTAL AMOUNT OF SETS ON SUBMITTAL (NO. 1 - 6 SETS, NO. 2 - 12 SETS, NO. 3 - 6 SETS, NO. 4 - 6 SETS, NO. 5 - 81 SETS).

DOOR SCHEDULE

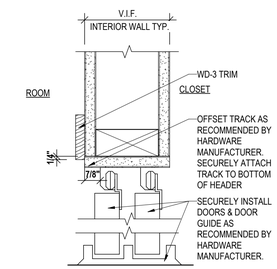
MARK	DOOR						HDWR SET	FRAME			DETAIL			NOTES
	TYPE	HEIGHT	WIDTH	THICK.	MATERIAL	FINISH		TYPE	MATERIAL	FINISH	SILL	HEAD	JAMB	
UNIT 29														
29-A	1	6' - 8"	3' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING EXTERIOR SWING STORM DOOR W/ GLAZING.
29-B	2	6' - 8"	3' - 0"	1 3/8"	EXISTING	PNT-4	NO. 1	A	WOOD WD-3	PNT-4	EXISTING	EXISTING	EXISTING	REFINISH EXISTING METAL STAMPED INTERIOR SWING 6 PANEL DOOR.
29-C	1	6' - 8"	3' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING EXTERIOR SWING STORM DOOR W/ GLAZING.
29-D	2	6' - 8"	3' - 0"	1 3/8"	EXISTING	PNT-4	NO. 1	A	WOOD WD-3	PNT-4	EXISTING	EXISTING	EXISTING	REFINISH EXISTING METAL STAMPED INTERIOR SWING 6 PANEL DOOR.
29-E	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO .3	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
29-F	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
29-G	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO .3	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
29-H	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
29-I	3	6' - 8"	4' - 0"	1 3/8"	MDF	PNT-6	NO. 4	A	WOOD WD-3	PNT-4	4/A6.1	4/A6.1	5/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
29-J	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
29-K	3	6' - 8"	4' - 0"	1 3/8"	MDF	PNT-6	NO. 4	A	WOOD WD-3	PNT-4	4/A6.1	4/A6.1	5/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
29-L	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
UNIT 31														
31-A	1	6' - 8"	3' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING EXTERIOR SWING STORM DOOR W/ GLAZING.
31-B	2	6' - 8"	3' - 0"	1 3/8"	EXISTING	PNT-4	NO. 1	A	WOOD WD-3	PNT-4	EXISTING	EXISTING	EXISTING	REFINISH EXISTING METAL STAMPED INTERIOR SWING 6 PANEL DOOR.
31-C	1	6' - 8"	3' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING EXTERIOR SWING STORM DOOR W/ GLAZING.
31-D	2	6' - 8"	3' - 0"	1 3/8"	EXISTING	PNT-4	NO. 1	A	WOOD WD-3	PNT-4	EXISTING	EXISTING	EXISTING	REFINISH EXISTING METAL STAMPED INTERIOR SWING 6 PANEL DOOR.
31-E	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO .3	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
31-F	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
31-G	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO .3	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
31-H	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
31-I	3	6' - 8"	4' - 0"	1 3/8"	MDF	PNT-6	NO. 4	A	WOOD WD-3	PNT-4	4/A6.1	4/A6.1	5/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
31-J	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
31-K	3	6' - 8"	4' - 0"	1 3/8"	MDF	PNT-6	NO. 4	A	WOOD WD-3	PNT-4	4/A6.1	4/A6.1	5/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
31-L	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
UNIT 84														
84-A	1	6' - 8"	3' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING EXTERIOR SWING STORM DOOR W/ GLAZING.
84-B	2	6' - 8"	3' - 0"	1 3/8"	EXISTING	PNT-4	NO. 1	A	WOOD WD-3	PNT-4	EXISTING	EXISTING	EXISTING	REFINISH EXISTING METAL STAMPED INTERIOR SWING 6 PANEL DOOR.
84-C	1	6' - 8"	3' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING EXTERIOR SWING STORM DOOR W/ GLAZING.
84-D	2	6' - 8"	3' - 0"	1 3/8"	EXISTING	PNT-4	NO. 1	A	WOOD WD-3	PNT-4	EXISTING	EXISTING	EXISTING	REFINISH EXISTING METAL STAMPED INTERIOR SWING 6 PANEL DOOR.
84-E	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO .3	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
84-F	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
84-G	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO .3	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
84-H	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
84-I	3	6' - 8"	4' - 0"	1 3/8"	MDF	PNT-6	NO. 4	A	WOOD WD-3	PNT-4	4/A6.1	4/A6.1	5/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
84-J	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
84-K	3	6' - 8"	4' - 0"	1 3/8"	MDF	PNT-6	NO. 4	A	WOOD WD-3	PNT-4	4/A6.1	4/A6.1	5/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.
84-L	2	6' - 8"	2' - 6"	1 3/8"	MDF	PNT-6	NO. 2	A	WOOD WD-3	PNT-4	1/A6.1	2/A6.1	3/A6.1	USE JELD-WEN COLONIST PROCORE 6 PANEL PREFINISHED DOOR U.O.N.



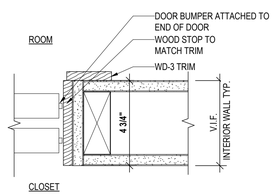
DOOR TYPES
1/2" = 1'-0"



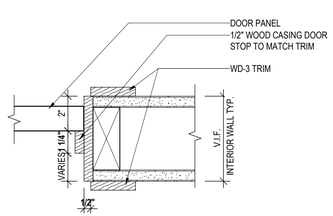
DOOR FRAME TYPES
1/2" = 1'-0"



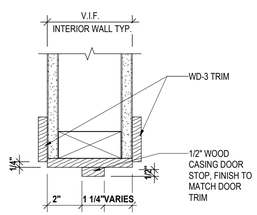
4 SLIDING DOOR HEAD & SILL DETAIL
3" = 1'-0"



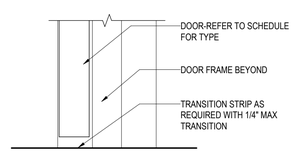
5 SLIDING DOOR JAMB
3" = 1'-0"



3 INTERIOR DOOR JAMB DETAIL
3" = 1'-0"



2 INTERIOR DOOR HEAD DETAIL
3" = 1'-0"



1 INTERIOR THRESHOLD DETAIL
3" = 1'-0"

REGISTERED ARCHITECT
MICHAEL TRAPANI
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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#	DATE:	DESCRIPTION OF REVISION:
1	09/30/2026	ISSUED FOR BID

"IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO MAKE UNAUTHORIZED ALTERATIONS OR ADDITIONS TO PLANS BEARING A LICENSED ENGINEER'S, ARCHITECT'S OR SURVEYOR'S SEAL."

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TOWANDA, PA 570 - 265 - 4868 BINGHAMTON, NY 607 - 798 - 8081
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

TYPICAL DOORS

BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

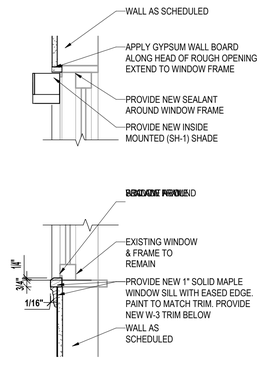
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PROJECT NO: 2285-068

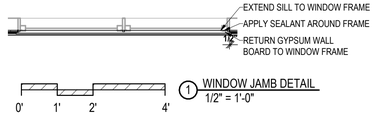
WINDOW SCHEDULE

MARK	WINDOW TYPE	SILL HEIGHT (A.F.F.)	FRAME			SHADE	DETAIL			NOTES
			TYPE	MATERIAL	FINISH		HEAD	JAMB	SILL	
UNIT 29										
E 29-1	1	5' - 4"	16"X8" HOPPER	ALUMINUM	EXISTING	NONE	-	-	-	-
E 29-2	1	5' - 4"	16"X8" HOPPER	ALUMINUM	EXISTING	NONE	-	-	-	-
E 29-3	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 29-4	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 29-5	2	2' - 8"	31.25"x50.25" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 29-6	2	2' - 8"	31.25"x50.25" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 29-7	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 29-8	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 29-9	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 29-10	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
UNIT 31										
E 31-1	1	5' - 4"	16"X8" HOPPER	ALUMINUM	EXISTING	NONE	-	-	-	-
E 31-2	1	5' - 4"	16"X8" HOPPER	ALUMINUM	EXISTING	NONE	-	-	-	-
E 31-3	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 31-4	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 31-5	2	2' - 8"	31.25"x50.25" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 31-6	2	2' - 8"	31.25"x50.25" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 31-7	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 31-8	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 31-9	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 31-10	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
UNIT 84										
E 84-1	1	5' - 4"	16"X8" HOPPER	ALUMINUM	EXISTING	NONE	-	-	-	-
E 84-2	1	5' - 4"	16"X8" HOPPER	ALUMINUM	EXISTING	NONE	-	-	-	-
E 84-3	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 84-4	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 84-5	2	2' - 8"	31.25"x50.25" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 84-6	2	2' - 8"	31.25"x50.25" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 84-7	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 84-8	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 84-9	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.
E 84-10	2	2' - 8"	3'-4" X 4'-2" DOUBLE HUNG	ALUMINUM	EXISTING	SH-1	6/A6.1	7/A6.1	6/A6.1	WINDOW TO RECEIVE NEW INTERIOR WOOD TRIM. REFER TO DETAILS FOR TRIM TYPES AND LOCATIONS. WINDOW TO RECIEVE NEW BLINDS. REFER TO FINISH SCHEDULE.

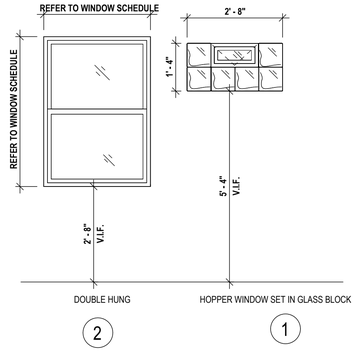
NOTE: CONTRACTOR TO VERIFY IN FIELD IF SECURITY SCREENS ARE NEEDED ON THE EXTERIOR FACE OF FIRST FLOOR WINDOWS.



2 WINDOW FRAME HEAD & SILL DETAIL
1 1/2" = 1'-0"



1 WINDOW JAMB DETAIL
1/2" = 1'-0"



WINDOW TYPES
1/2" = 1'-0"

REGISTERED ARCHITECT
MICHAEL TRAPANI
044981
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

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#	DATE:	DESCRIPTION OF REVISION:
1	08/30/2026	ISSUED FOR BID

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TOWANDA, PA 570 - 265 - 4888 BINGHAMTON, NY 607 - 798 - 8081
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC22031314641

TYPICAL WINDOWS

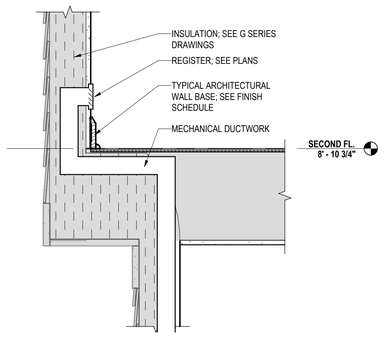
BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

A6.2

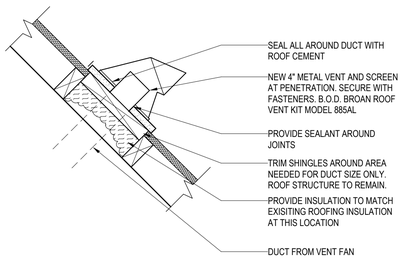
PROJECT NO: 2285-068

DIFFUSER/ GRILLE/ REGISTER SCHEDULE

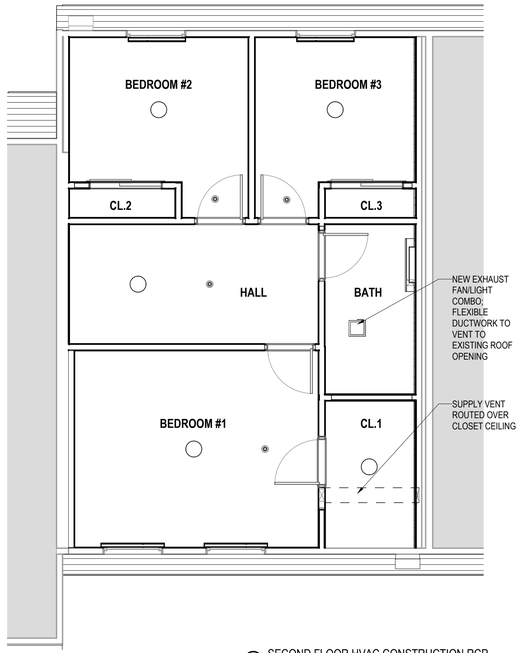
NO.	SERVICE	NECK SIZE	FACE SIZE	MATERIAL	MOUNTING	DAMPER	FINISH	MANUFACTURER AND MODEL NO.	NOTES:
S-1	SUPPLY	10" X 8"	12" X 8"	ALUMINUM	SURFACE	YES	WHITE	CONTINENTAL INDUSTRIES NO. 22	TYPICAL REGISTERS
S-2	SUPPLY	10" X 8"	10" X 2 1/4"	ALUMINUM	SURFACE	YES	WHITE	CONTINENTAL INDUSTRIES T32	TOE REGISTER
R-1	RETURN	10"X 8"	12" X 8"	ALUMINUM	SURFACE	NONE	WHITE	CONTINENTAL INDUSTRIES G35	TYPICAL GRILLE
R-2	RETURN	14" X 18"	16" X 20"	ALUMINUM	SURFACE	NONE	WHITE	CONTINENTAL NO. G35W 1418	INTAKE AT PENINSULA



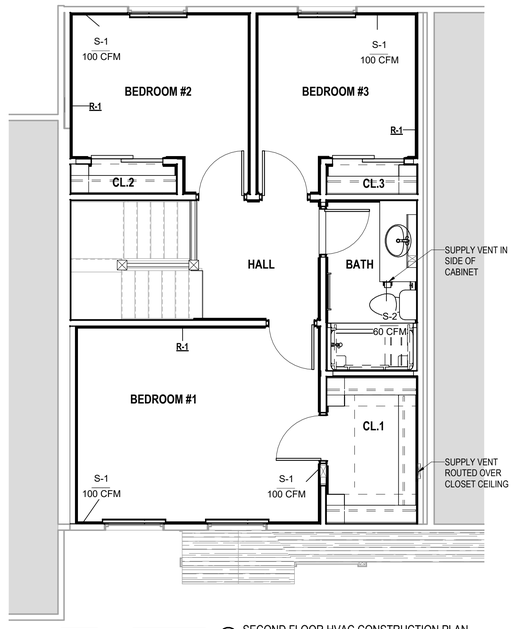
7 DUCT LAYOUT SECTION AT EXTERIOR SOFFIT
1 1/2" = 1'-0"



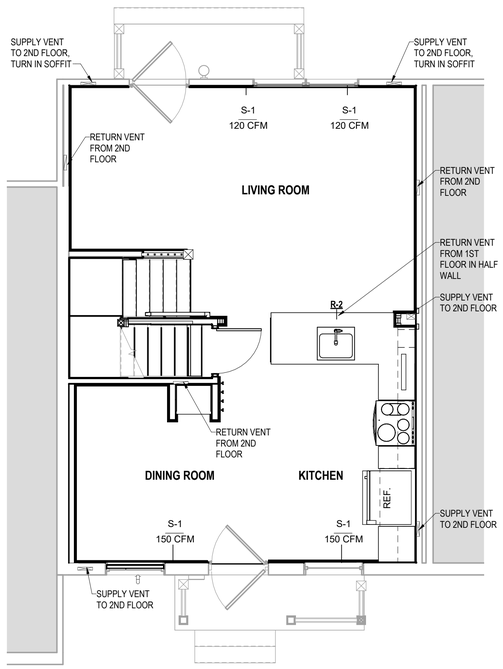
6 EXTERIOR VENT DETAIL 1
1 1/2" = 1'-0"



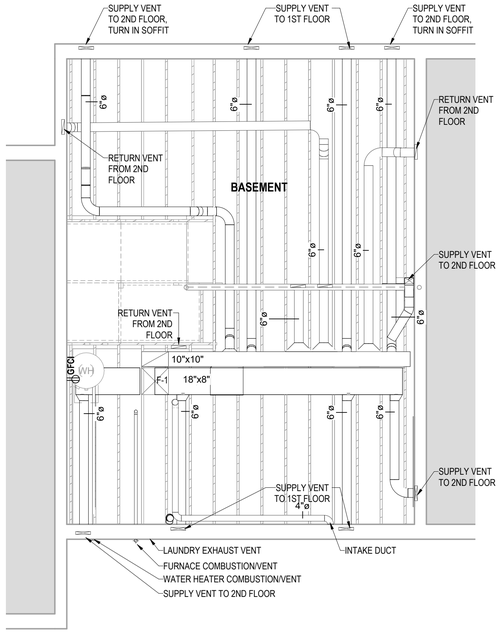
5 SECOND FLOOR HVAC CONSTRUCTION RCP
1/4" = 1'-0"



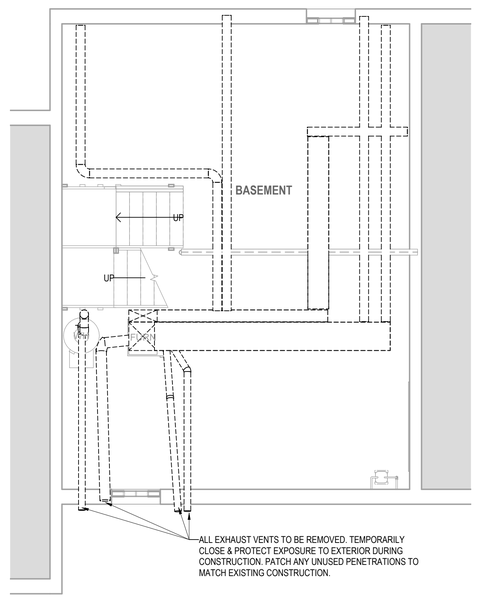
4 SECOND FLOOR HVAC CONSTRUCTION PLAN
1/4" = 1'-0"



3 FIRST FLOOR HVAC CONSTRUCTION PLAN
1/4" = 1'-0"



2 BASEMENT HVAC CONSTRUCTION RCP
1/4" = 1'-0"



1 BASEMENT HVAC DEMOLITION PLAN
1/4" = 1'-0"

GENERAL NOTES - MECHANICAL

A. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, THE 2020 NYS MECHANICAL CODE, AND THE ENERGY CONSERVATION CODE OF NYS.

B. EQUIPMENT PERFORMANCE RATINGS: COMPLY WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION CODE OF NYS.

C. OBTAIN ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL COSTS AND FEES ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT.

D. SHOP DRAWINGS - PROVIDE ONE SET OF SHOP DRAWINGS FOR ALL FIXTURES AND EQUIPMENT.

a. OPERATION AND MAINTENANCE MANUALS - BIND IN COMMON BROCHURE CONTAINING. A LISTING OF ALL EQUIPMENT REQUIRING PERIODIC MAINTENANCE, WITH A SUMMARY OF THE MAINTENANCE PROCEDURES REQUIRED, AND MAINTENANCE SCHEDULE.
b. MANUFACTURER'S PRINTED INSTRUCTIONS FOR THE OPERATION AND CARE OF EACH ITEM FURNISHED.
c. A SET OF "AS-BUILT" PRINTS AND CATALOG CUTS OF ALL MAJOR ITEMS AND EQUIPMENT.
d. INSTRUCTIONS WRITTEN AND TYPED BY THE CONTRACTOR FOR ALL ITEMS WHERE MANUFACTURER'S WRITTEN INSTRUCTIONS ARE NOT AVAILABLE AND FOR ALL ITEMS AND SYSTEMS THAT REQUIRE SPECIAL INSTRUCTIONS FOR MAINTENANCE.
e. COMPLETE INFORMATION ON CONTROL DEVICES, CONTROL SEQUENCES, AND OPERATIONAL DESCRIPTIONS.

E. PROVIDE "AS-BUILT" PRINTS INCORPORATING ALL CHANGES AND SHOP DRAWING DETAILS TO ACCURATELY PORTRAY ACTUAL INSTALLED CONDITIONS AT THE COMPLETION OF WORK. EQUIPMENT SCHEDULES SHALL BE CHANGED TO INCLUDE ACTUAL INSTALLED EQUIPMENT, INCLUDING MANUFACTURER, MODEL NUMBER, AND OTHER APPROPRIATE DATA.

F. ALL MOTORS, VALVES, EQUIPMENT CONTROL DEVICES, ELECTRICAL PANELS, MOTOR STARTERS, SAFETY DISCONNECTS, SPECIALTIES, ETC., SHALL BE SO LOCATED AS TO PROVIDE EASY ACCESS FOR INSPECTION, REPAIR, AND MAINTENANCE. IF SUCH EQUIPMENT IS CONCEALED THEN ADEQUATELY SIZED DOORS, PANELS OR COVERS SHALL BE PROVIDED.

G. TEST AND BALANCE AIRFLOWS AND DUCTWORK FOR CONFORMANCE WITH NYS ENERGY CONSERVATION CODE, ASHRAE AND SMACNA STANDARDS.

H. START AND TEST ALL EQUIPMENT FOR PROPER ORIENTATION AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

I. ALL PRODUCTS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE CODE PROVISIONS.

J. THE WORK OF THIS CONTRACT SHALL BE COORDINATED WITH THE WORK OF THE OTHER TRADES INVOLVED WITH THE PROJECT. WORK SHALL BE SCHEDULED TO AVOID DELAY IN THE INSTALLATION AND COMPLETION OF ANY INTERRELATED WORK.

K. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING AND COORDINATING WITH ANY LOCAL UTILITIES OR GOVERNMENTAL AGENCIES REQUIRED FOR THE COMPLETION OF THEIR WORK.

L. CONDUITS, DUCTWORK, PIPING AND EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER SO AS TO PRESERVE ACCESS TO ALL OTHER PIPING AND EQUIPMENT. LINES AND PIPES WHOSE ELEVATIONS CANNOT BE CHANGED SHALL HAVE RIGHT-OF-WAY OVER LINES WHOSE ELEVATIONS CAN BE CHANGED.

M. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL EQUIPMENT INLET AND DISCHARGE CONNECTIONS, JOINTS BETWEEN DISSIMILAR METAL IN DUCTWORK, OR WHERE REQUIRED FOR VIBRATION ISOLATION.

N. CONTRACTOR IS RESPONSIBLE TO PREVENT FREEZING AND/ OR WATER DAMAGE TO BUILDING, EQUIPMENT & SYSTEMS. REPAIR OR REPLACE AT NO CHARGE IN CONTRACT, ANY SUCH DAMAGE TO BUILDING, EQUIPMENT & SYSTEMS.

O. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND AS SUCH THEY REFLECT APPROXIMATE LOCATIONS OF EQUIPMENT, DUCTWORK, ETC. OFFSETS, TRANSITIONS, ETC REQUIRED BECAUSE OF INTERFERENCES SHALL BE PROVIDED. CONTRACTOR SHALL COORDINATE LOCATIONS WITH GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO ORDERING OF MATERIALS OR COMMENCEMENT OF FABRICATION.

P. CONTRACTOR SHALL PROVIDE COMPLETE SYSTEMS INSTALLED PER MANUFACTURER `S INSTRUCTIONS AND TESTED. ALL EXPOSED DUCTWORK IN UNCONTROLLED SPACES SHALL BE INSULATED AND BE CONSTRUCTED IN A WAY THAT LEAVES A GOOD APPEARANCE.

HVAC CONSTRUCTION NOTES:

1 EXISTING FURNACE AS SCHEDULED. EXISTING INTAKE, FLUE AND GAS LINE TO REMAIN IN PLACE. PROVIDE NEW DISTRIBUTION SYSTEM INCLUDING BUT NOT LIMITED TO DUCTWORK, DIFFUSERS, GRILLES, AND THERMOSTAT.
2 PROVIDE INSULATED OUTSIDE AIR INTAKE DUCT WITH MECHANICAL CONTROL DAMPER, INCLUDING SCREENED CAP, BALANCING AND ALL OTHER MATERIALS FOR A COMPLETE AIR INTAKE SYSTEM. BALANCE TO PLAN CFM MINIMUM SETTING. TERMINATE MORE THAN 6' FROM EXHAUST, WATER HEATER, AND FURNACE VENTS.
3 PROVIDE CONDENSATE DRAIN PUMP. PROVIDE INDIRECT TIE INTO SUMP PIT.
4 MOUNT COMBUSTION/ VENT PIPES PER MANUFACTURER'S CLEARANCE AND SPACING RECOMMENDATIONS.
5 PROVIDE COMFORT AIR BALANCING.
6 PROVIDE OPEN STUD SPACE FOR DUCTWORK TO TRAVEL TO AND FROM EACH LEVEL WITHOUT INTERFERENCE WITH CONSTRUCTION MATERIALS. (TYPICAL THROUGHOUT)
7 PROVIDE DIRECT VENT WATER HEATER. SCHEDULE 40 PVC VENT PIPE, FITTINGS, HANGERS, AND TERMINATION ELBOW. INSTALL PER WATER HEATER MANUFACTURER'S INSTRUCTIONS.
8 PROVIDE HUMIDITY SENSING FAN EXHAUST FAN/ LIGHT COMBINATION FOR BATHROOM INCLUDING FAN, GRILL, AND BACK DRAFT DAMPER. CONNECT TO EXISTING OPENING IN ROOF.

HVAC DEMOLITION NOTES:

D1 EXISTING FURNACE PROTECT DURING THE COUSE OF CONSTRUCTION.
D2 EXISTING WATER HEATER AND CONNECTIONS. PROTECT DURING THE DURATION OF CONSTRUCTION.
D3 REMOVE AND DISPOSE OF EXISTING HVAC DUCTWORK, HANGERS DIFFUSERS, GRILLS, AND OTHER ACCESSORIES WITHIN WORK UNIT. (TYPICAL THROUGHOUT)
D4 REPLACE EXISTING MAKE UP AIR SCUTTLE.

REGISTERED ARCHITECT MICHAEL TRAPANOTTO 030481 STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

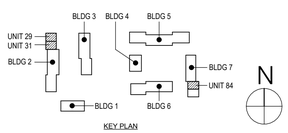
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"IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO MAKE UNAUTHORIZED ALTERATIONS OR ADDITIONS TO PLANS BEARING A LICENSED ENGINEER'S, ARCHITECT'S OR SURVEYOR'S SEAL."

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TOWANDA, PA 570 - 265 - 4888 BINGHAMTON, NY 607 - 798 - 8081
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

TYPICAL HVAC PLANS
BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608



KEY PLAN

M1.1

PROJECT NO: 2285-068

GENERAL NOTES - ELECTRICAL

A. CONTRACTOR IS RESPONSIBLE FOR ALL WORK ON THIS DRAWING UNLESS CLEARLY INDICATED TO BE PART OF ANOTHER PRIME CONTRACT.

B. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND INSTALLATION AND NOTIFY ENGINEER/ARCHITECT OF CONFLICTS AND CONDITIONS WHICH INTERFERE WITH INSTALLATION AS SET FORTH IN CONTRACT DOCUMENTS.

C. CONTRACTOR IS RESPONSIBLE FOR ALL NEW WALL OPENINGS, EXCAVATIONS, AND PENETRATIONS, UNLESS SPECIFICALLY NOTED. UPON COMPLETION, ALL PENETRATIONS TO BE SEALED TO MAINTAIN FIRE RATING AS SPECIFIED ON ARCHITECTURAL DRAWINGS.

D. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING UNLESS CLEARLY INDICATED AS PART OF ANOTHER PRIME CONTRACT.

E. MINIMUM CONDUIT SIZE USED ON THIS PROJECT SHALL BE 3/4" UNLESS OTHERWISE NOTED.

F. MINIMUM WIRE SIZE USED ON THIS PROJECT SHALL BE #12 THHN/THWN UNLESS OTHERWISE NOTED.

G. ALL CABLING INSTALLATIONS AND TERMINATIONS TO ADHERE TO CURRENT NEC CODES AND RELATED ANSI/TIA/EIA STANDARDS.

H. DURING DEMOLITION OF EXISTING CABLING, ANY DAMAGE TO FUNCTIONING CABLING SYSTEM IS THE RESPONSIBILITY OF AND WILL BE REPAIRED BY THE CONTRACTOR.

I. ALL ELECTRICAL DEVICES, MATERIALS, AND PACKAGED EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES INC. (UL).

J. NEW CIRCUIT BREAKER(S) THAT ARE TO BE ADDED TO EXISTING PANELBOARD(S) SHALL BE LISTED/LABELED FOR USE WITH THE EXISTING PANELBOARD(S).

K. THE SHORT-CIRCUIT RATINGS OF ALL PROTECTIVE DEVICES SHALL BE EQUAL TO OR EXCEED THE AVAILABLE SHORT-CIRCUIT CURRENT.

L. ALL WORK TO CONFORM TO CURRENT NEC AND ALL APPLICABLE CODES.

M. CONTRACTOR TO NOTIFY ELECTRICAL ENGINEER FOR INSPECTION OF ALL INSTALLATIONS BEFORE BEING BURIED OR COVERED.

N. ALL ELECTRICAL DEVICES AND EQUIPMENT SCHEDULED FOR REMOVAL ARE CONSIDERED PROPERTY OF THE OWNER. ELECTRICAL DEVICES AND EQUIPMENT SHALL BE PLACED IN AN AREA DESIGNATED BY THE OWNER. ANY DEVICE OR EQUIPMENT THE OWNER WISHES NOT TO KEEP SHALL BE DISPOSED OF BY THE CONTRACTOR.

O. CONTRACTOR IS RESPONSIBLE FOR DISCONNECTING POWER TO ANY EQUIPMENT SCHEDULED TO BE REMOVED OR REPLACED. COORDINATE WORK WITH OTHER PRIME CONTRACTORS AND DRAWINGS.

P. CONTRACTOR IS RESPONSIBLE FOR PROVIDING POWER TO ANY EQUIPMENT SCHEDULED TO BE NEWLY INSTALLED. COORDINATE WORK WITH OTHER PRIME CONTRACTORS AND DRAWINGS.

Q. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONDUIT LOCATIONS IN FIREWALLS. A MAXIMUM OF ONE PIECE OF CONDUIT IS ALLOWED IN A NON-REINFORCED CORE. NO CONDUIT SHALL BE PLACED IN A VERTICALLY REINFORCED CORE IN A FIREWALL.

ELECTRICAL DEMOLITION NOTES:

D1 SPACE IS COMPLETELY RENOVATED. REMOVE ALL ELECTRICAL-RELATED DEVICES, LIGHTING, FIRE ALARM COMPONENTS, WIRING, AND CONDUIT BACK TO SOURCE, INCLUDING ALL CEILING-MOUNTED DEVICES. CONTRACTOR TO COORDINATE POWER DISCONNECT WITH LOCAL UTILITY COMPANY. CONTRACTOR TO VERIFY EXISTING ELECTRICAL PANEL IS DE-ENERGIZED BEFORE STARTING WORK.

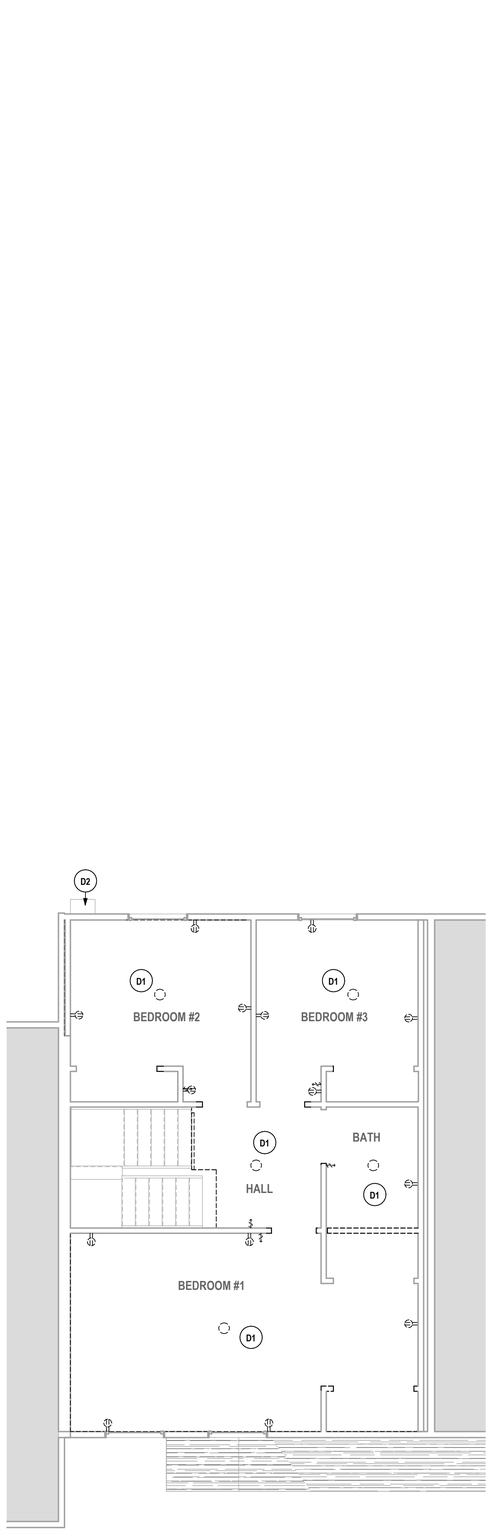
D2 LIGHT FIXTURE TO REMAIN. COORDINATE REMOVAL AND/OR REWIRING AS REQUIRED. SEE E1.1 FOR MORE INFORMATION.

D3 LIGHT FIXTURE TO REMAIN. REMOVE ASSOCIATED WIRE AND SUPPORTS COMPLETE BACK TO SOURCE.

D4 EXISTING PANEL AND BACKBOX TO BE REMOVED INCLUDING MAIN FEEDER AND ALL ASSOCIATED WIRE AND CONDUIT FROM PANEL TO ELECTRICAL DEVICES.

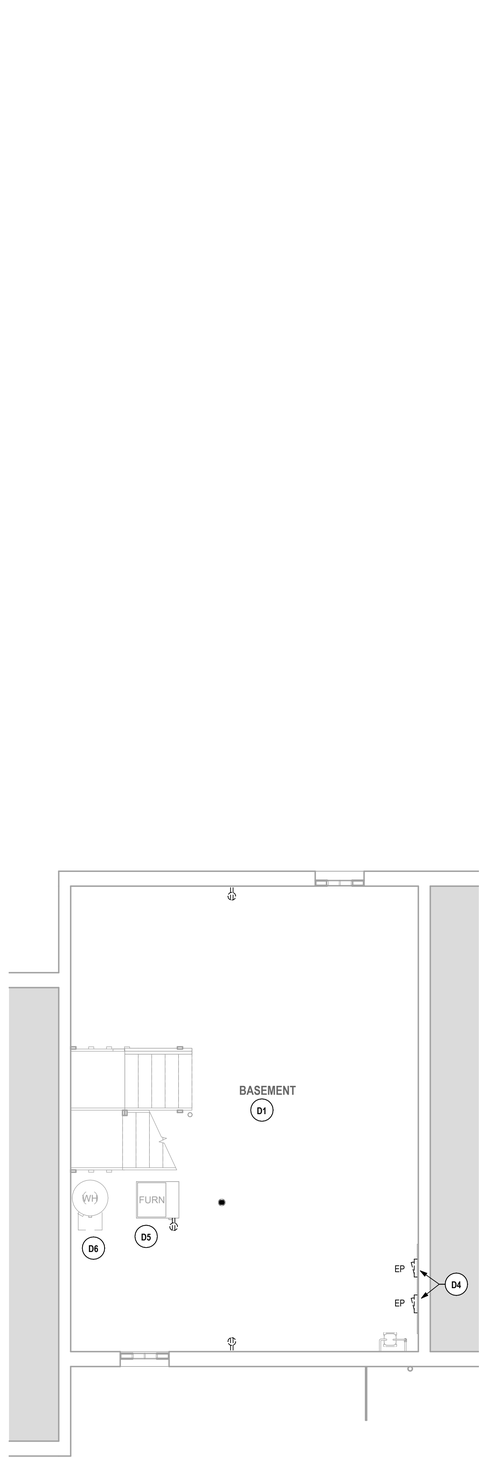
D5 DISCONNECT AND REMOVE POWER SERVING HVAC UNIT. REMOVE ALL ASSOCIATED STARTERS, DISCONNECTS, WIRE AND CONDUIT BACK TO SOURCE.

D6 DISCONNECT AND REMOVE POWER SERVING WATER HEATER. REMOVE ALL ASSOCIATED STARTERS, DISCONNECTS, WIRE AND CONDUIT BACK TO SOURCE.

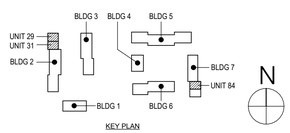


3 SECOND FLOOR ELECTRICAL DEMOLITION PLAN
1/4" = 1'-0"
0' 2' 4' 8'

2 FIRST FLOOR ELECTRICAL DEMOLITION PLAN
1/4" = 1'-0"
0' 2' 4' 8'



1 BASEMENT ELECTRICAL DEMOLITION PLAN
1/4" = 1'-0"
0' 2' 4' 8'



KEY PLAN

N

REGISTERED ARCHITECT
MICHAEL TRAPANI JR.
026181
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	SPS
CHECKED BY:	JXT
DATE:	07/17/2026
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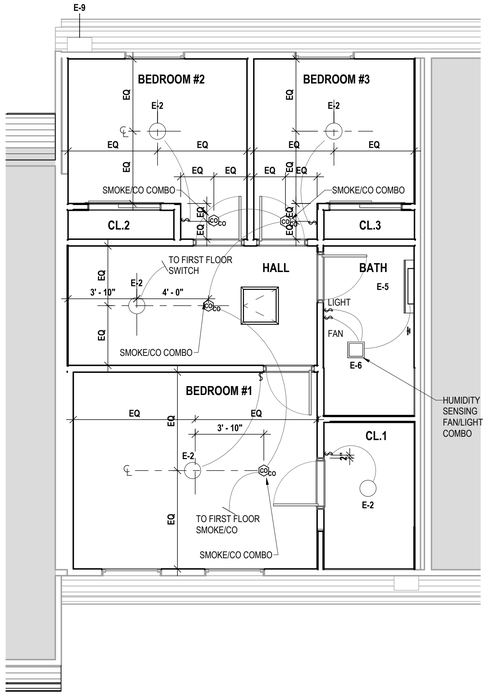
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TYPICAL ELECTRICAL DEMO PLANS

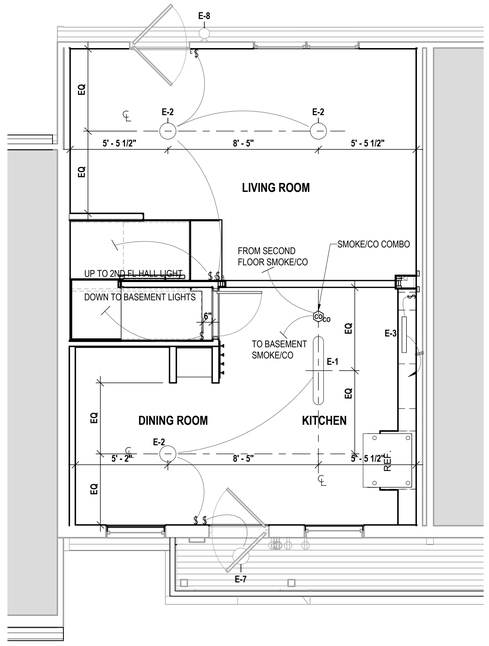
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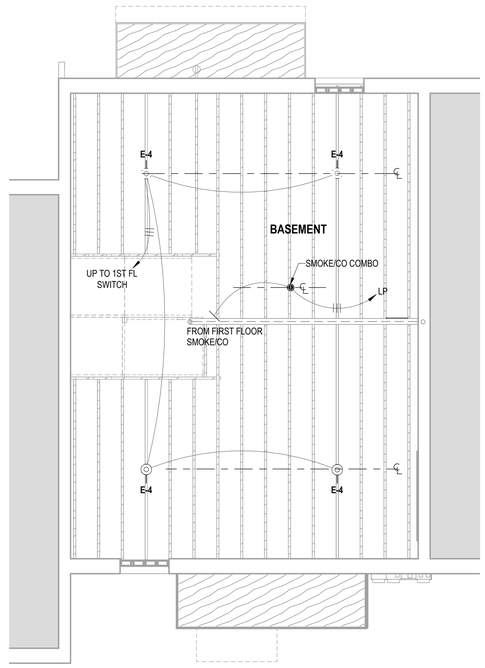
PROJECT NO: 2285-068



6 SECOND FLOOR LIGHTING & FIRE ALARM CONSTRUNCTION RCP
1/4" = 1'-0"



5 FIRST FLOOR LIGHTING & FIRE ALARM CONSTRUCTION RCP
1/4" = 1'-0"



4 BASEMENT LIGHTING & FIRE ALARM CONSTRUCTION RCP
1/4" = 1'-0"

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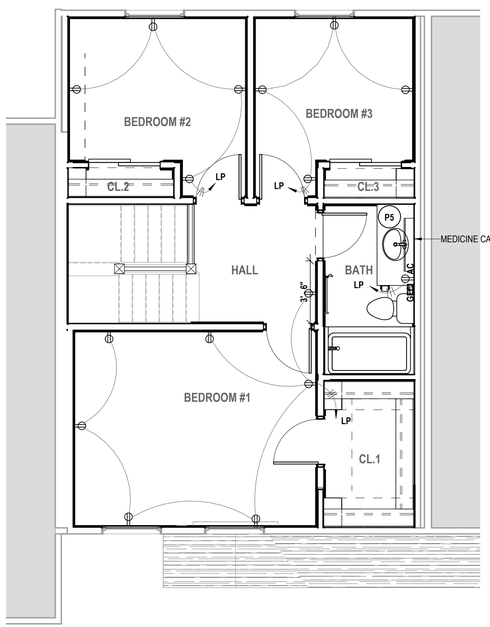
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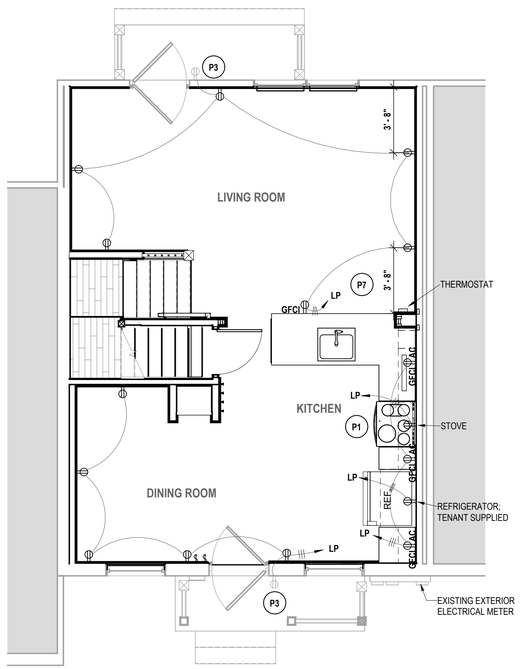
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CONSTRUCTION NOTES - POWER

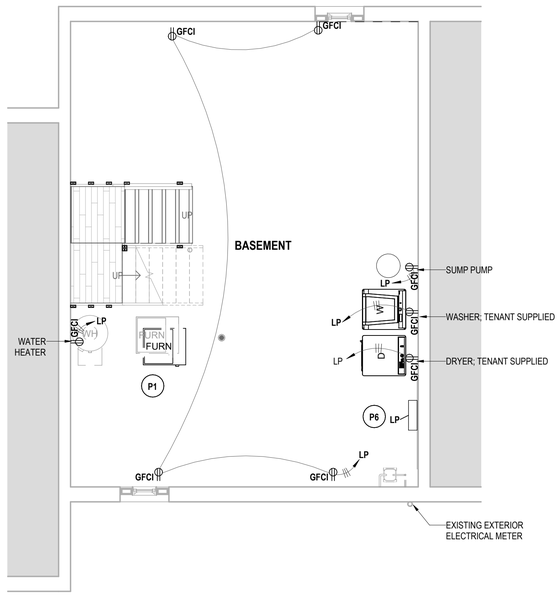
P1 PROVIDE A 20A/1P BREAKER IN PANEL "LP" TO SERVE RANGE HOOD IN THIS LOCATION.
P2 PROVIDE NEW SQUARE D HOMELINE 120/240V, 150 AMP RATED, 30 SPACE, 60 CIRCUITS SINGLE PHASE PANEL, WITH A 150A MCB, PROVIDE NEW ARC FAULT BREAKERS WITHIN PANEL TO SERVE NEW CIRCUITS. CIRCUIT PANEL TO EXISTING OUTSIDE ELECTRIC METER USING (3) #1/0, (1) #6G IN 2 " C.
P3 RECONNECT RECEPTACLE TO THE DESIGNATED CIRCUIT AS SHOWN.
P4 PROVIDE POWER TO FURNACE. REFER TO ELECTRICAL SCHEDULES SHEET.
P5 NOT USED
P6 CIRCUIT PANEL TO OUTSIDE METER USING (3)- #1/0, (1)-#6G IN 1 1/2"C.
P7 LOCATE HONEYWELL PRO 3000 THERMOSTAT AT THIS LOCATION. CONNECT TO THE FURNACE PER MANUFACTURER'S INSTRUCTIONS. ALL MATERIALS REQUIRED FOR PROPER INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR.



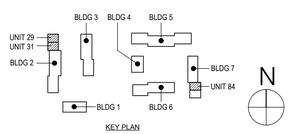
3 SECOND FLOOR POWER CONSTRUCTION PLAN
1/4" = 1'-0"



2 FIRST FLOOR POWER CONSTRUCTION PLAN
1/4" = 1'-0"



1 BASEMENT POWER CONSTRUCTION PLAN
1/4" = 1'-0"



KEY PLAN

REGISTERED ARCHITECT
MICHAEL TRAPANI JR.
028481
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	SPS
CHECKED BY:	JXT
DATE:	07/17/2026
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TYP. ELEC. & FIRE PROTECTION PLANS
BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

E1.2

PROJECT NO: 2285-068

MECHANICAL EQUIPMENT CONNECTION AND CONTROL SCHEDULE

EQUIPMENT						SUPPLY				CONTROL DEVICES MOUNTED IN ROOMS AS SCHEDULED AND AS SHOWN ON PLANS (AU = AT UNIT)															
IDENTIFICATION / TAG	DESCRIPTION	LOCATION (ROOM #)	HORSEPOWER / KILOWATTS / FLA / MCA	PHASE	VOLTAGE	PANEL OR CONTROL CENTER	CIRCUIT BREAKER	WIRE SIZE	REFERENCE NOTES	DISCONNECT SWITCH (FURNISHED & INSTALLED BY E.C.)	DISCONNECT SWITCH (FURNISHED BY H.C. & INSTALLED BY E.C.)	PRE-WIRED FACTORY MOUNTED DISCONNECT SWITCH (BY MNFTR.)	MANUAL MOTOR STARTER (FURNISHED & INSTALLED BY E.C.)	MAGNETIC STARTER (FURNISHED & INSTALLED BY E.C.)	COMBINATION STARTER (FURNISHED & INSTALLED BY E.C.)	VARIABLE SPEED DRIVE (FURNISHED & INSTALLED BY E.C.)	VFD PACKAGE (FURNISHED & INSTALLED BY H.C. CONNECTED BY E.C.)	VFD WITH CHOKE (FURNISHED BY H.C. & INSTALLED BY E.C.)	PACKAGED CONTROL UNIT	SINGLE POINT CONNECTION	FAN SHUTDOWN UPON FACP ACTIVATION (X>1000CFM)	DUCT SMOKE DETECTOR IN RETURN DUCT (X>2000CFM)	BOILER SHUTDOWN SAFETY SWITCH	LINE VOLTAGE THERMOSTAT (FURNISHED BY H.C. & INSTALLED BY E.C.)	FACTORY MOUNTED STARTER & DISCONNECT (BY MFR.)	CONNECT AQUASTAT	PROVIDE 20AMP, 120V GFCI RECEPTACLE IN WEATHERPROOF ENCLOSURE AT UNIT.
EF-1	EXHAUST FAN/ LIGHT COMBO	BATH RM: 29-9	1.6A	1	120	LP	20/1	(2)-#12 , (1)-#12 G															
EF-2	EXHAUST FAN/ LIGHT COMBO	BATH RM: 31-9	1.6A	1	120	LP	20/1	(2)-#12 , (1)-#12 G															
EF-3	EXHAUST FAN/ LIGHT COMBO	BATH RM: 84-9	1.6A	1	120	LP	20/1	(2)-#12 , (1)-#12 G															
ST-1	STOVE	KITCHEN RM: 29-3	50A	1	240	LP	50/2	(2)-#6 , (1)-#10G															
ST-2	STOVE	KITCHEN RM: 31-3	50A	1	240	LP	50/2	(2)-#6 , (1)-#10G															
ST-3	STOVE	KITCHEN RM: 84-3	50A	1	240	LP	50/2	(2)-#6 , (1)-#10G															
D-1	DRYER	BASEMENT RM: 29-1	30A	1	240	LP	30/2	(2)-#10 , (1)-#10G															
D-2	DRYER	BASEMENT RM: 31-1	30A	1	240	LP	30/2	(2)-#10 , (1)-#10G															
D-3	DRYER	BASEMENT RM: 84-1	30A	1	240	LP	30/2	(2)-#10 , (1)-#10G															
W-1	WASHER	BASEMENT RM: 29-1	20A	1	120	LP	30/2	(2)-#10 , (1)-#10G															
W-2	WASHER	BASEMENT RM: 31-1	20A	1	120	LP	30/2	(2)-#10 , (1)-#10G															
W-3	WASHER	BASEMENT RM: 84-1	20A	1	120	LP	30/2	(2)-#10 , (1)-#10G															
E FURN-1	EXISTING FURNACE	BASEMENT RM: 29-1	1/2 HP	1	120	LP	30/2	(2)-#10 , (1)-#10G															
E FURN-2	EXISTING FURNACE	BASEMENT RM: 31-1	1/2 HP	1	120	LP	30/2	(2)-#10 , (1)-#10G															
E FURN-3	EXISTING FURNACE	BASEMENT RM: 84-1	1/2 HP	1	120	LP	30/2	(2)-#10 , (1)-#10G															
E WH-1	EXISTING WATER HEATER	BASEMENT RM: 29-1	20A	1	120	LP	30/2	(2)-#10 , (1)-#10G															
E WH-2	EXISTING WATER HEATER	BASEMENT RM: 31-1	20A	1	120	LP	30/2	(2)-#10 , (1)-#10G															
E WH-3	EXISTING WATER HEATER	BASEMENT RM: 84-1	20A	1	120	LP	30/2	(2)-#10 , (1)-#10G															
SP-1	SUMP PUMP	BASEMENT RM: 29-1	1/4 HP	1	120	LP	20/1	(2)-#10 , (1)-#10G															
SP-2	SUMP PUMP	BASEMENT RM: 31-1	1/4 HP	1	120	LP	20/1	(2)-#10 , (1)-#10G															

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	SIZE	MOUNTING	VOLTAGE	LUMENS	LED COLOR TEMP	LOAD EA. (WATTS)	MANUFACTURER/CATALOG NO.	FINISH	QUANTITY	REMARKS	NOTES
E-1	SURFACE LINEAR	4'	SURFACE	120	4819	4000	67.2	GOOD EARTH LIGHTING #LF1086-BR4-48LF5-G	BRONZE	3		
E-2	ROUND SURFACE	13"	SURFACE	120	1690	2700	60	COMMERCIAL ELECTRIC #HUI8011LL/ORB	BRONZE	24		
E-3	UNDER CABINET LINEAR	24"	SURFACE	120	1000	6500	12	UTILITEC #MXW1012-L100K9027	WHITE	3		1
E-4	ROUND LAMP HOLDER	4.5R	SURFACE	250	TBD	TBD	660	LEVITON LAMPHOLDER #49875	WHITE	12		2
E-5	WALL MOUNTED LIGHT BAR	24"	SURFACE	UNV	1250	3000	16	LITHONIA LIGHTING #WC 2 17 MVOLT	BRONZE	3		
E-6	FAN/LIGHT COMBO	8" X 8"	RECESSED	120	1000	3500	26.9	NUTONE #FLEX SERIES AE80SL	WHITE	3	HUMIDITY SENSING FAN. REFER TO HVAC DWGS.	2
E-7	EXISTING EXTERIOR FLUSH ROUND	11"	SURFACE	120	830	3000	12.5	HAMPTON BAY #54471291	BLACK	3	RATED FOR WET LOCATIONS	3
E-8	EXISTING EXTERIOR SCONCE	8"x13.5"	SURFACE	120	800	3000	9.3	GENERATION LIGHTING WILBURN #860901EN3-12	BLACK	3	RATED FOR WET LOCATIONS	3
E-9	EXISTING EXTERIOR WALL PACK	14"x9"	SURFACE	120	5010	3000	35	KEYSTONE XFIT #KT-WPLED35-M1-8CSB-VDIM	BRONZE	3	DUSK TO DAWN FEATURE	3,4

LIGHT FIXTURE SCHEDULE NOTES:

1. REFER TO MECHANICAL POINT OF CONNECTION SCHEDULE FOR MORE INFORMATION.
2. FIXTURE DOES NOT COME WITH A PRE-INSTALLED LIGHT BULB, CONTRACTOR TO PROVIDE LED BULB. LOAD ESTIMATED IS BASED OFF OF MAXIMUM BULB WATTAGE FIXTURE WILL SUPPORT.
3. RECONNECT EXISTING FIXTURE BACK TO NEW PANEL.
4. REFER TO SHEET E1.1 FOR ADDITIONAL INFORMATION

Branch Panel: LP

Location: BASEMENT
Supply From: METER
Mounting: Surface
Enclosure: TYPE 1

Volts: 120/240
Phases: 1
Wires: 4

A.I.C. Rating: 10 KAIC
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

CKT	Circuit Description	Trip	Poles	A	B	Poles	Trip	Circuit Description	CKT
1	RANGE HOOD	20 A	1			1	20 A	WASHER	2
3	WATER HEATER	20 A	1			1	20 A	RECEPT. BATHROOM & EF-1	4
5	RECEPTS. BEDROOM #3	20 A	1			1	20 A	RECEPTS. BEDROOM #2	6
7	RECEPTS. BEDROOM #1	20 A	1			1	20 A	RECEPTS. DINING ROOM	8
9	RECEPTS. LIVING ROOM	20 A	1			1	20 A	RECEPTS. KITCHEN	10
11	REFRIGERATOR	20 A	1			1	20 A	FURNACE	12
13	RECEPTS. BASEMENT.	20 A	1			1	20 A	LIGHTING FIRST FLOOR	14
15	STOVE	50 A	2			1	20 A	LIGHTING SECOND FLOOR	16
17	--	--	--			1	20 A	LIGHTING BATHROOM	18
19	SUMP PUMP*	20 A	1			1	20 A	LIGHTING BASEMENT	20
21	Power	20 A	1			2	30 A	DRYER	22
23	SMOKE/CO DETECTORS	20 A	1			--	--	--	24
25									26
27									28
29									30

Notes:
* CIRCUIT SUMP PUMP TO PANEL LP, PROVIDE ALL NECESSARY CIRCUIT AND WIRING NEEDED.

REGISTERED ARCHITECT
MICHAEL TRAPANI JOSEPH
028481
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY: SPS
CHECKED BY: JXT
DATE: 07/17/2026
PHASE: CD

Copyright: 2026

#	DATE:	DESCRIPTION OF REVISION:
1	09/30/2026	ISSUED FOR BID

"IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO MAKE UNAUTHORIZED ALTERATIONS OR ADDITIONS TO PLANS BEARING A LICENSED ENGINEER'S, ARCHITECT'S OR SURVEYOR'S SEAL."

HUNT ENGINEERS | ARCHITECTS | SURVEYORS
HORSEHEADS, NY 607 - 358 - 1000 ROCHESTER, NY 585 - 327 - 7050
TOWANDA, PA 570 - 265 - 4868 BINGHAMTON, NY 607 - 798 - 8081
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC22031314641

TYPICAL ELECTRICAL SCHEDULES

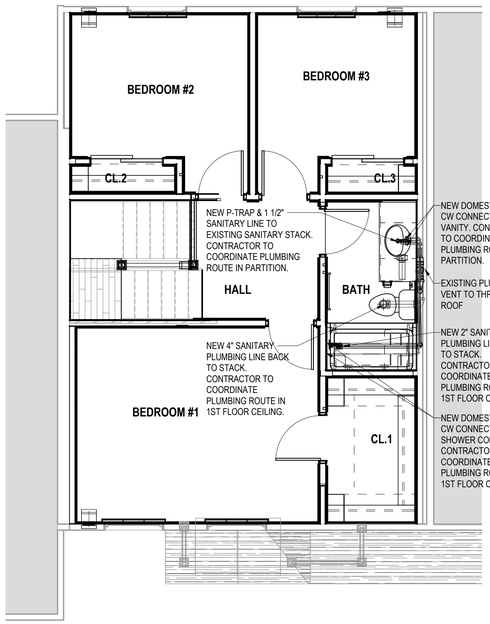
BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

E1.3

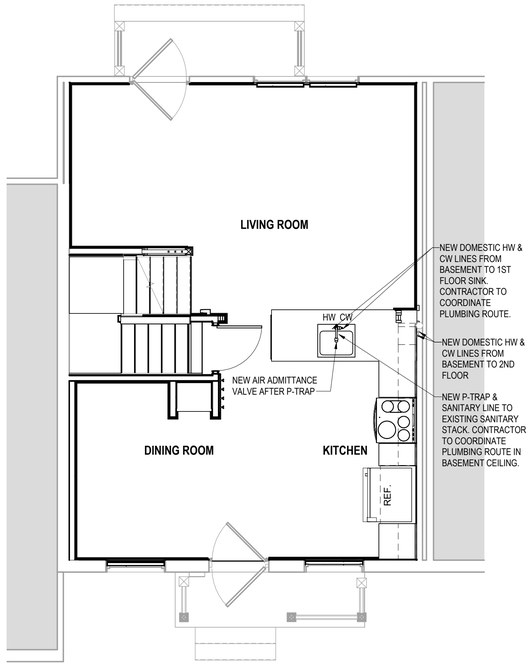
PROJECT NO: 2285-068

GENERAL NOTES - PLUMBING

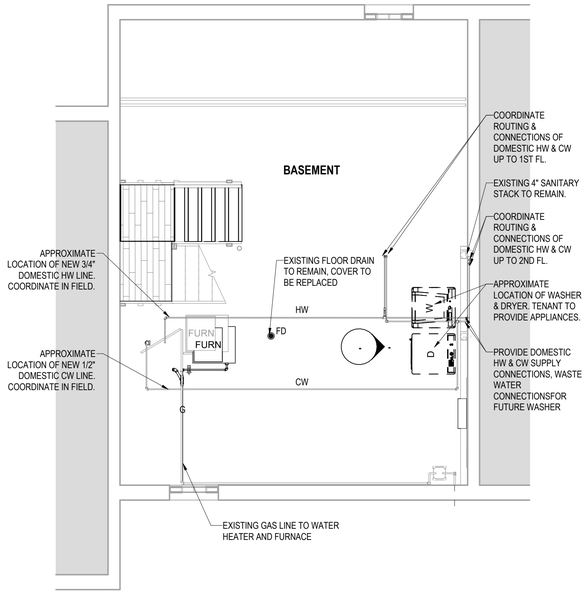
A. THESE DRAWINGS ARE INTENDED TO SHOW THE GENERAL SCOPE OF ITEMS TO BE MODIFIED AND/OR REMOVED. IT IS NOT INTENDED TO BE ALL INCLUSIVE. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS TO BE REMOVED. ANY ITEM IN QUESTION SHOULD BE VERIFIED WITH ENGINEER PRIOR TO REMOVAL.
B. REMOVE ALL COPPER PIPING TO WATER METER. TURN OVER COPPER TO RHA.
C. ALL ITEMS SCHEDULED FOR DEMOLITION ARE THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL PLACE WANTED EQUIPMENT IN AREA DESIGNATED ON SITE BY OWNER. ANY ITEM THE OWNER WISHES NOT TO KEEP SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
D. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR ALL NEW FLOOR OPENINGS, EXCAVATIONS OF EXISTING SUBSTRATES AND WALL PENETRATIONS TO INSTALL NEW PIPING.
E. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR PATCHING AND SEALING OF ALL DISTURBED SUBSTRATE, WALLS AND CEILING TO EXISTING FINISHES UNLESS OTHERWISE NOTED.
F. THE PLUMBING CONTRACTOR TO COORDINATE ALL NEW ROOF, WALL & FLOOR PENETRATIONS.
G. ALL PIPING TO BE ROUTED AS HIGH AND AS TIGHT TO STRUCTURE AS POSSIBLE.
H. THE CONTRACTOR WILL BE RESPONSIBLE FOR FINAL CONNECTION OF PLUMBING UTILITIES TO ALL EQUIPMENT REQUIRING SAID UTILITIES, INCLUDING THOSE PROVIDED BY OTHERS. COORDINATE AS REQUIRED.
I. INSULATE NEW WATER SUPPLY LINES TO FIXTURES AS SHOWN. INSULATE DOMESTIC HOT AND COLD WATER PIPING WITH PRE-MOLDED 1/2" THICK FOAM PIPE INSULATION WITH ALL SERVICE JACKET(ASJ) AND PVC FITTING COVERS. MAINTAIN VAPOR BARRIER. INSULATION THICKNESS PER ENERGY CODE REQUIREMENTS.
J. REFER TO A-SERIES DRAWINGS FOR INDICATION OF FIXTURES & ACCESSORIES, & ASSOCIATED MOUNTING HEIGHTS.



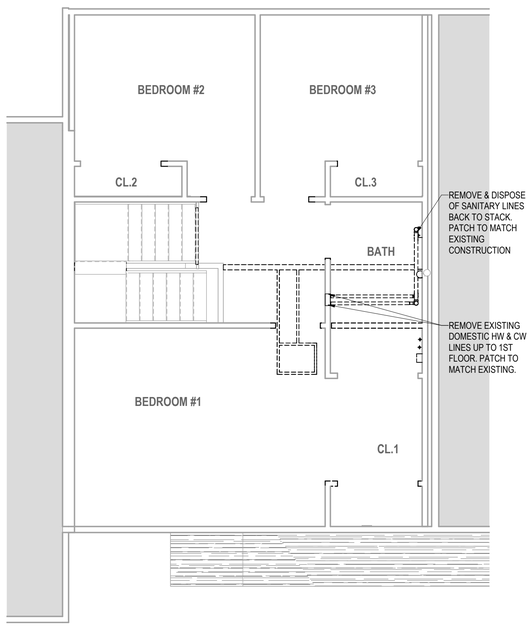
0' 2' 4' 8'
6 SECOND FLOOR PLUMBING CONSTRUCTION PLAN
1/4" = 1'-0"



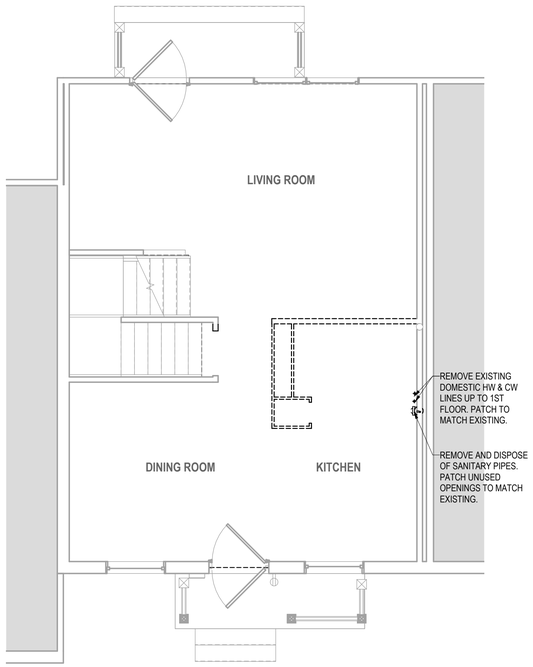
0' 2' 4' 8'
5 FIRST FLOOR PLUMBING CONSTRUCTION PLAN
1/4" = 1'-0"



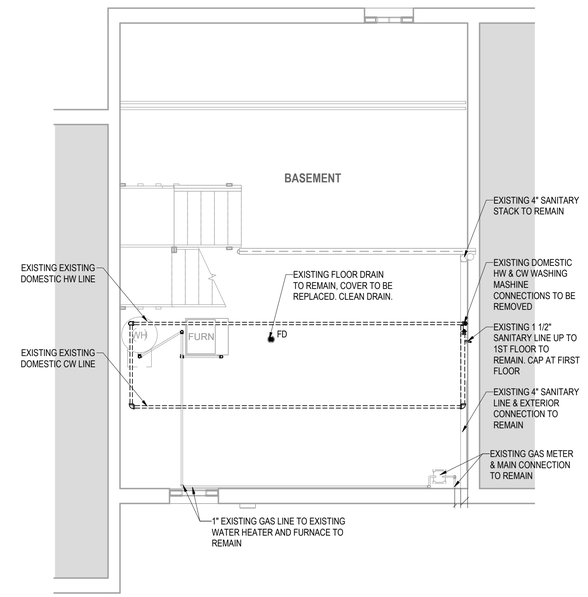
0' 2' 4' 8'
4 BASEMENT PLUMBING CONSTRUCTION PLAN
1/4" = 1'-0"



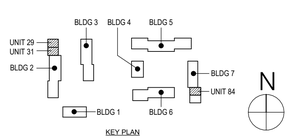
0' 2' 4' 8'
3 SECOND FLOOR PLUMBING DEMOLITION PLAN
1/4" = 1'-0"



0' 2' 4' 8'
2 FIRST FLOOR PLUMBING DEMOLITION PLAN
1/4" = 1'-0"



0' 2' 4' 8'
1 BASEMENT DEMOLITION PLUMBING PLAN
1/4" = 1'-0"



REGISTERED ARCHITECT
MICHAEL T. MCCREE
028198
STATE OF NEW YORK
EXP. 04/30/2027

DRAWN BY:	JEH
CHECKED BY:	MT
DATE:	07/17/2026
PHASE:	CD

Copyright: 2026

#	DATE:	DESCRIPTION OF REVISION:
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ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

TYPICAL PLUMBING PLANS

BRONSON COURT UNIT 29, 31, & 84
ROCHESTER HOUSING AUTHORITY
90 DOCTOR SAMUEL MCCREE WAY, ROCHESTER, NY, 14608

P1.1

PROJECT NO: 2285-068

"General Decision Number: NY20260085 05/18/2026

State: New York

Construction Types: Residential

Counties: New York Counties of
Monroe

RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

BRNY0003-001 07/01/2025

	Rates	Fringes
BRICKLAYER	$ 25.38	12.02

CARP0276-020 07/01/2024

	Rates	Fringes
CARPENTER (FORM WORK ONLY)	$ 33.24	23.46
CARPENTER (EXCLUDES FORM WORK, DRYWALL HANGING, AND METAL STUD INSTALLATION)	$ 33.24	23.46

IRON0033-019 07/01/2025

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 35.75	30.80

IRON0417-004 07/01/2025

	Rates	Fringes
IRONWORKER, ORNAMENTAL A) PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, FOURTH OF JULY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING (UNPAID), CHRISTMAS DAY	$ 42.63	53.70

LABO0210-002 07/01/2016

	Rates	Fringes
LABORER: MASON TENDER - CEMENT/CONCRETE	$ 26.38	23.65

	Rates	Fringes
SHEET METAL WORKER, INCLUDES HVAC DUCT INSTALLATION	$ 21.39	8.25
ROOFER	$ 18.17	0.00
PLUMBER	$ 22.36	11.20
PAINTER (BRUSH AND ROLLER)	$ 22.15	15.62
OPERATOR: LOADER	$ 27.88	21.40
OPERATOR: BULLDOZER	$ 21.20	0.00
OPERATOR: BACKHOE/EXCAVATOR/TRACKHOE	$ 27.88	19.75
LABORER: MASON TENDER - BRICK	$ 18.03	0.00
LABORER: COMMON OR GENERAL	$ 16.38	0.00
LABORER: ASBESTOS ABATEMENT (REMOVAL FROM FLOORS, WALLS, & CEILINGS)	$ 18.53	10.88
IRONWORKER, REINFORCING	$ 27.06	23.02
ELECTRICIAN	$ 20.86	6.96
CEMENT MASON/CONCRETE FINISHER	$ 24.58	7.50
CARPENTER (DRYWALL HANGING AND METAL STUD INSTALLATION ONLY)	$ 16.91	5.56

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The

applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than “SU”, “UAVG”, “SA”, or “SC” denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The “SU” identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

“SU” wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The “SA” identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the “SA” identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION

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