



10 MARKS ROAD

DRAWINGS

- T-000

Title Sheet
- G-001

General Notes + Site Plan
- G-002

Code Analysis + Egress Plans
- A-010

Exterior Demo + Prop Floor 1 Plans
- A-020

Exterior Demo + Prop Floor 2 Plans
- A-110

Interior Demo + Prop Apt 1 Plans
- A-120

Interior Demo + Prop Apt 4 Plans
- A-140

Exist + Prop Roof Plans
- A-200

West Elevations Demo + Prop
- A-210

North + South Elevations Demo + Prop
- A-220

East Elevations Demo + Prop
- A-300

Existing Sections
- A-410

Apt 1: Interior Elevs + Plans
- A-420

Apt 4: Interior Elevs Plans
- A-500

Exterior Wall Sections
- A-501

Exterior Wall Sections
- A-510

Exterior Wall Details
- A-511

Exterior Wall Details
- A-520

Exterior Plan Details
- A-550

Interior Details
- A-590

Partition Types
- A-600

Schedules
- A-610

Door and Window Schedules
- A-710

Apt 1: RCP
- A-720

Apt 4: RCP
- A-810

Apt 1: Furniture Plan
- A-820

Apt 4: Furniture Plan

- P-001

Plumbing Riser Diagram + Notes
- P-110

Apt 1: Prop Plumbing Plan
- P-120

Apt 4: Prop Plumbing Plan

ALTERNATES

S.1: EXTERIOR (BASE BID)
See A-010, A-020, A-200, A-210, A-220, A-500, A-550, A-610

S.2: APARTMENT 1 INTERIOR
See A-110, A-410, A-550, A-590, A-600, A-610, A-710, P-001, P-110, struc dwgs, mech dwgs

S.3: APARTMENT 4 INTERIOR
See A-120, A-420, A-550, A-590, A-600, A-610, A-720, P-001, P-120, struc dwgs, mech dwgs

S.4: FURNITURE
See A-810, A-820

STABLES

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ISSUES:

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ESSEX COUNTY FARMWORKER HOUSING RENOVATION
Stables
10 Marks Road
Westport NY 12993

T-000

TITLE SHEET

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GENERAL NOTES

1) The construction manager / general contractor shall verify all existing conditions in the field prior to commencing work and shall report any discrepancies between the drawings and existing conditions to the architect.

2) Minor details not usually shown or specified but necessary for proper construction of any part of the work shall be included as if they were indicated in the drawings except for compromise to base building systems and finishes.

3) The construction manager / general contractor shall coordinate all work with requirements of local authorities.

4) The construction manager / general contractor shall verify all load-bearing walls, posts, beams, etc and notify architect immediately of any discrepancies or conflicts with new work.

5) All dimensions are from finished walls and partitions unless otherwise indicated. Walls shown to 'align' shall be finished flush and smooth with existing work. After the floor channels for the partition walls have been laid the architect is to be notified so that work may be inspected and approved for conformance with design before proceeding with additional construction.

6) The construction manager / general contractor is responsible for coordination of all subcontractors, suppliers, and vendors as well as deliveries, off-loading, and handling of all materials and equipment unless otherwise noted. Any substitute in specifications must be submitted to the architect for omissions, ambiguities, or conflicts in any of the construction drawings, or be in doubt as to their meaning, he must bring the question to the attention of the architect prior to the start of construction. The architect shall review the question and where the information sought is not clearly indicated or specified, will issue a clarifying addendum. Neither the owner nor the architect will be responsible for verbal instructions.

7) These drawings are supplemented by separate standard specifications in the project manual which establish the minimum standard of materials and workmanship. If there is any conflict between the drawings and specifications, the most stringent requirement shall apply.

8) Written requests must be submitted for any proposed changes in the scope of work by the construction manager / general contractor to the owner and architect before any work is started. Such requests shall indicate scope of work, cost, and possible delays to the project.

9) The construction manager / general contractor shall be responsible for the protection of all conditions and materials within the proposed construction area. The construction manager / general contractor shall have sole responsibility for any damage or injuries caused by or during the execution of the work.

- A) Where demolition is indicated, remove all objects except those specifically designated to remain.
- B) The drawings may not show all items or objects existing at the site. The construction manager / general contractor must verify at the site all objects to be preserved and report to the architect any discrepancies or questionable items.
- C) Use all means necessary to protect existing objects designated to remain, and in the event of damage, immediately make all repairs and replacements necessary to the approval of the architect at no additional expense to the owner.
- D) Prior to commencement, carefully locate and inspect the entire site and all objects designated to be removed and to be preserved, as well as all existing utilities and determine all requirements for disconnecting, capping, or protecting all such work in accordance with the requirements of the utility company, building management, or agency involved.
- E) The construction manager / general contractor shall remove, reroute, and / or cap all unused utilities after checking with the architect. The items shall be capped off within existing walls or slabs.

10) Partitions:

- A) All outside corners at masonry and drywall partitions shall have metal corner beads. Tape and spackle smooth where required. Three coat spackle finish minimum.
- B) All defective plaster and / or drywall on adjacent existing walls shall be chopped out and / or patched free of irregularities and shall match adjacent walls in finish and thickness.
- C) Alignment of new wall construction to existing walls and columns shall be done in a manner so as to visible eliminate the point of contact or joint of new and existing materials.
- D) Where demolition has occurred, contractor shall fill all holes, patch smooth, and level all remaining surfaces including walls, floors and ceilings. Square all corners and properly prepare all surface to receive finishes.
- E) For the removal of all unwanted equipment and debris at the completion of construction, debris storage will only be permitted in the owner's space until contractor's debris removal trucks arrive on site. At that time, as coordinated with building management, it will be permitted to bring the debris down through the building. All removal cost will be born by the contractor.
- F) Clean fixtures, equipment, finish hardware, and painted and decorated surfaces and remove marks, stains, paint, dirt, and other soiling resulting from the work of this contract.

11) Temporary power and lighting to be taken from the owner's meter panel. Contractor to coordinate with owner.

12) The owner is responsible for land surveys, topographic surveys, boundary and property surveys.

13) The contractor is responsible for Building and Planning Department inspections and any inspections required for the project by the authorities having jurisdiction.

14) General contractor to relinquish any construction materials, equipment, and fixtures requested by owner.

15) Maintain structure in weather-tight condition at all times.

16) All materials and products shall be installed strictly in accordance with the manufacturer's instructions.

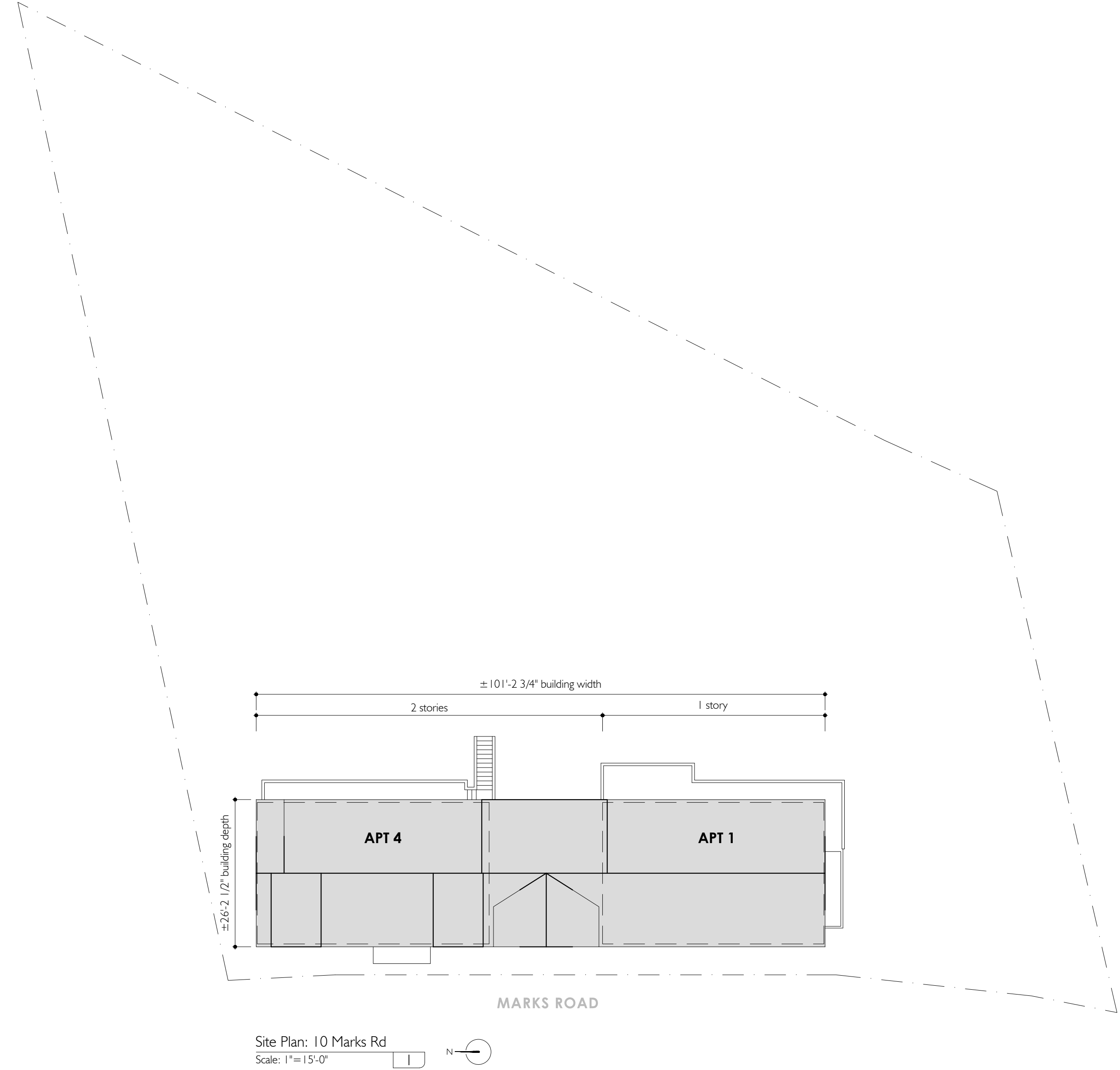
ASBESTOS AND LEAD PAINT REMOVAL NOTES

1) The owner is responsible for the discovery and disclosure of hazardous construction materials / finishes at the site. All work areas must be tested for asbestos and lead paint contamination by a certified inspector before commencing work.

2) New York State laws and regulations (NYS Dept of Labor Code Rule 56) require the owner of a building to have an asbestos survey completed prior to renovations. The building owner shall engage a certified asbestos inspector to sample and test all building construction materials (interior and exterior) that will be disturbed (cut, drilled, removed, or demolished) for renovations. The asbestos inspector will provide a report of the asbestos containing building materials located in the subject building. Then the owner shall have an abatement design (drawings and specifications) prepared by a certified asbestos designer. All asbestos containing building materials shall be abated or enclosed by a NYS licensed asbestos abatement contractor in accordance with all state and federal regulations. The asbestos survey and abatement costs are the responsibility of the owner.

3) The contractor is responsible for the proper protection or removal of hazardous construction materials / finishes during construction, in compliance with all state and federal regulations. Contractor must adhere to EPA standards for lead paint removal. Removal of lead and asbestos may only be undertaken by certified professionals.

4) If lead is present, contractor must be EPA certified to remove lead paint and all employees on site must be trained in lead-safe work practices. Contractor shall provide proof of training and certification.

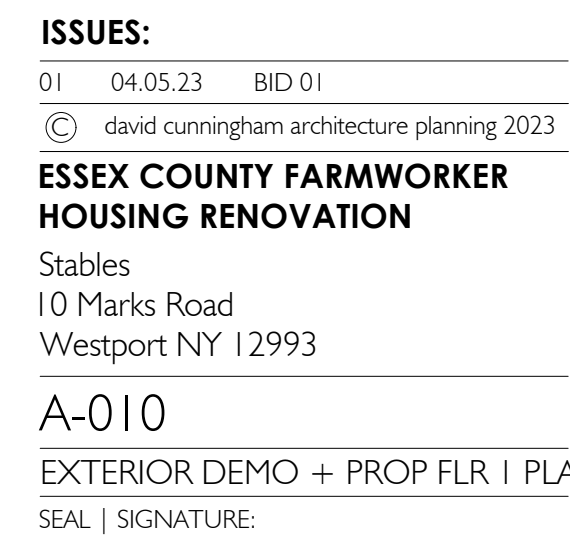
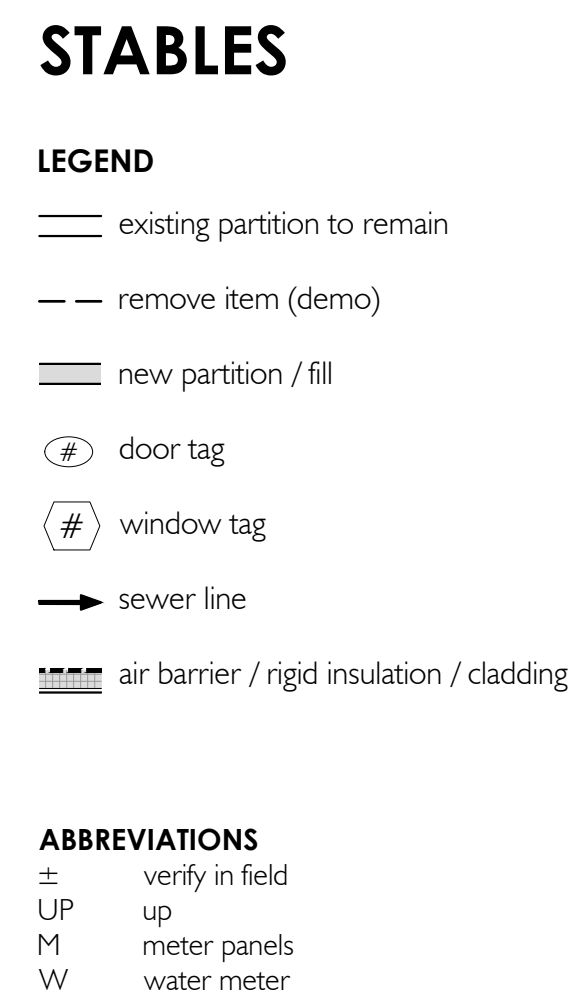


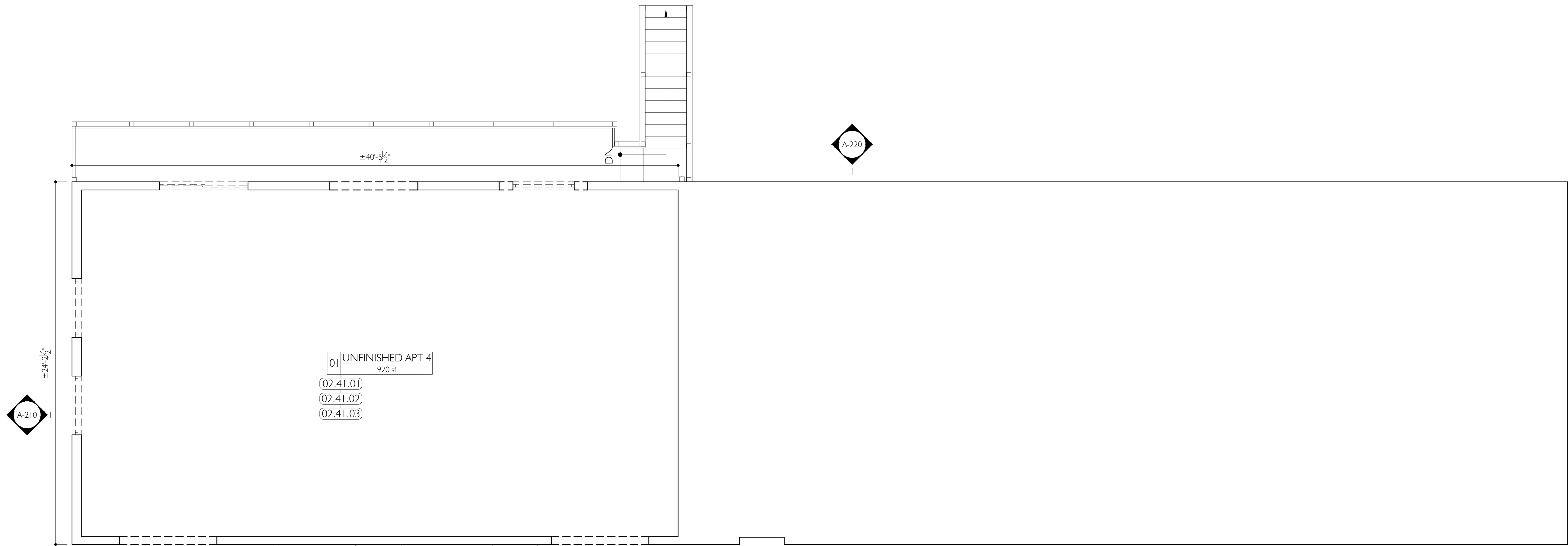
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ISSUES:

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ESSEX COUNTY FARMWORKER HOUSING RENOVATION
Stables
10 Marks Road
Westport NY 12993
G-001
GENERAL NOTES + SITE PLAN
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Exterior Demo Plan Floor 2
Scale: 1/4" = 1'-0"

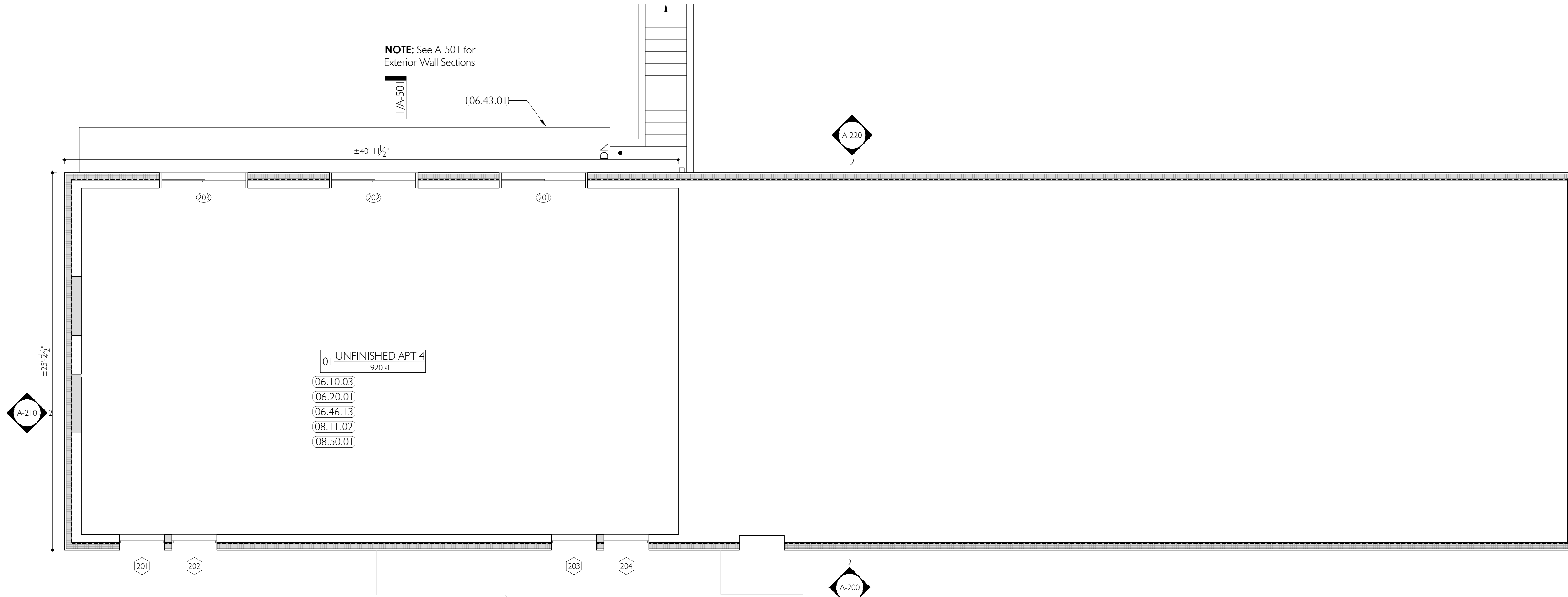
NOTE: A-020 demolition includes exterior demolition only. No interior demolition is to occur.

- 02.41.01
02.41.02
02.41.03

NOTE: See A-501 for Exterior Wall Sections

1/A-501

06.43.01



Exterior Proposed Plan Floor 2
Scale: 1/4" = 1'-0"

2

05.19.01

- KEY NOTES**
- 02.41.01 remove framing around existing opening
02.41.02 remove all existing vinyl siding, sheathing and building paper
02.41.03 remove exterior doors, windows and trim as indicated
02.41.06 remove wood posts
02.41.07 remove canopy over door
05.19.01 canopy tension rod assembly
06.10.03 2x rough carpentry (#1 or better)
06.43.01 pressure treated lumber railing extension to match existing
06.46.13 wood door and window casings
08.11.02 fiberglass sliding deck door (refer to A-600 for door schedule)
08.50.01 fiberglass foam-filled windows w/ triple-pane IGU (refer to A-600 window schedule)

STABLES

LEGEND

- existing partition to remain
— remove item (demo)
— new partition / fill
⊙ door tag
⊙ window tag
→ sewer line
air barrier / rigid insulation / cladding

ABBREVIATIONS

- ± verify in field
DN down
M meter panels

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ESSEX COUNTY FARMWORKER HOUSING RENOVATION

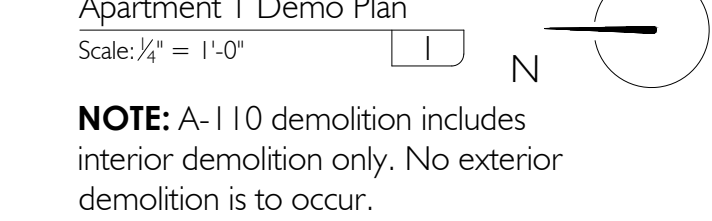
Stables
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


A-020

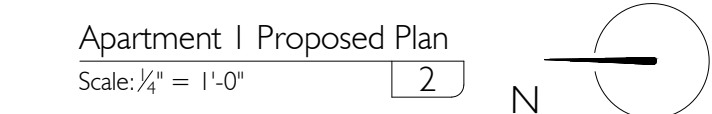
EXTERIOR DEMO + PROP FLR 2 PLANS

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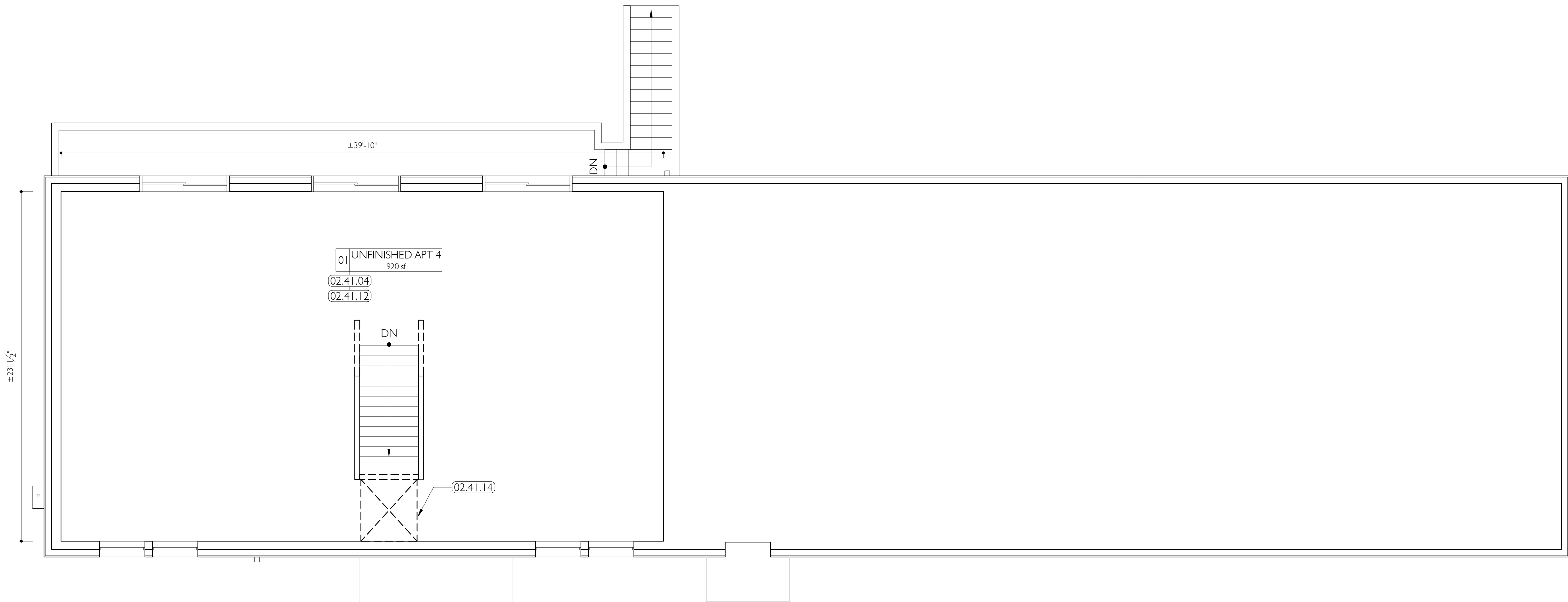




- # STABLES
- ## LEGEND
-  e/g partition to remain
-  remove item (demo)
-  new partition / fill
-  door tag
-  window tag
-  sewer line
-  air barrier / rigid insulation / cladding
- ## ABBREVIATIONS
- ± verify in field
- EP electrical panel
- F refrigerator
- HW/H hot water heater
- M utility box / meters
- S sewer line
- UP up
- W water meter
- W/D combination washer / dryer

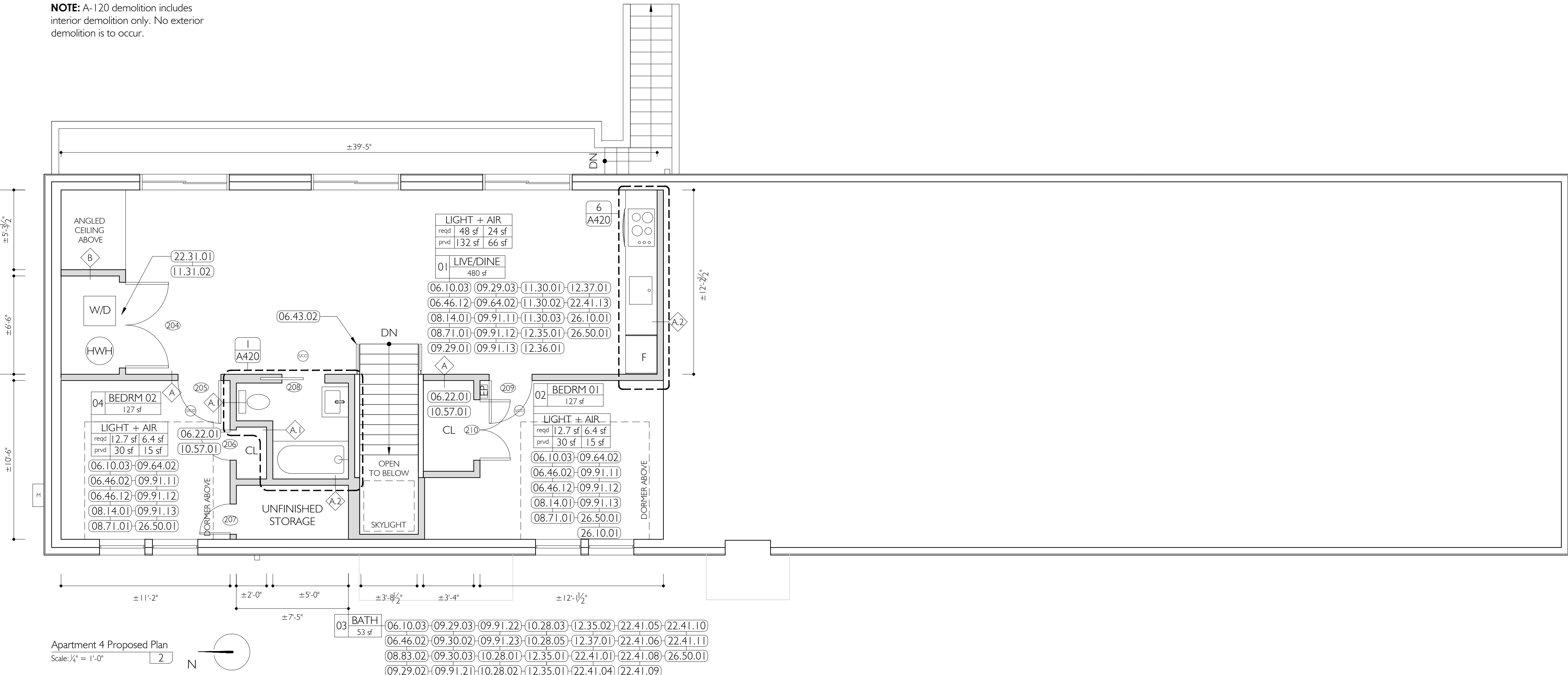


029092



Apartment 4 Demo Plan
Scale: 1/4" = 1'-0"

NOTE: A-120 demolition includes interior demolition only. No exterior demolition is to occur.



Apartment 4 Proposed Plan
Scale: 1/4" = 1'-0"

- KEY NOTES
- 02.41.04 remove interior stud framing as indicated
 - 02.41.12 remove remaining cavity insulation and non structural furring
 - 02.41.14 remove existing floor joists
 - 06.10.03 2x rough carpentry (No 1 or better)
 - 06.22.01 closet shelf
 - 06.43.02 wood railing
 - 06.46.02 1 x 4 wood casing, clear pine flat stock, poly finish (refer to A-550 for casing details)
 - 06.46.12 1 x 6 wood wall base, clear pine flat stock, poly finish (refer to A-550 for Wall Base Details)
 - 08.14.01 solid wood doors, trusile (refer to A-610 door schedule)
 - 08.71.01 door hardware (refer to A-610)
 - 08.83.02 mirrored medicine cabinet 20" x 40" (refer to A-600 bathroom schedule)
 - 09.29.01 5/8" interior G.W.B. per schedule
 - 09.29.02 5/8" interior moisture, mold and mildew resistant board
 - 09.29.03 5/8" interior cementitious backer board
 - 09.30.01 ceramic tile, 2" hexagon
 - 09.30.02 ceramic tile, 2" x 8" subway
 - 09.30.03 ceramic tile base
 - 09.64.02 wood floor, 3" white oak strip
 - 09.91.11 paint, interior, wall
 - 09.91.12 paint, interior, trim
 - 09.91.13 paint, interior, ceiling
 - 09.91.21 paint, interior bathroom, wall
 - 09.91.23 paint, interior bathroom, ceiling
 - 10.28.01 shower curtain rod
 - 10.28.02 shower curtain
 - 10.28.03 toilet paper holder
 - 10.28.05 robe hook
 - 10.57.01 closet rod
 - 11.30.01 range
 - 11.30.02 refrigerator
 - 11.30.03 microwave over range
 - 11.31.02 electric washer/dryer combo
 - 12.35.01 kitchen cabinet
 - 12.35.02 bathroom vanity cabinet 30" wide
 - 12.36.01 kitchen countertop
 - 12.37.01 cabinet hardware
 - 22.31.01 50 gallon hybrid electric heat pump hot water heater
 - 22.41.01 lavatory undermount sink
 - 22.41.04 lavatory faucet
 - 22.41.05 bathtub
 - 22.41.06 bathtub surround
 - 22.41.08 bathtub spout
 - 22.41.09 shower system
 - 22.41.10 shower rough
 - 22.41.11 toilet
 - 22.41.13 kitchen faucet
 - 26.10.01 install new 100 A main panel
 - 26.50.01 light fixture (see RCP A-900, A910 and A-600 lighting schedule)

STABLES

LEGEND

- e'g partition to remain
- remove item (demo)
- new partition / fill
- ⊙ door tag
- # window tag
- sewer line
- air barrier / rigid insulation / cladding

ABBREVIATIONS

- ± verify in field
- DN down
- F refrigerator
- M utility box / meters
- S sewer line
- W/D stack washer / dryer

ISSUES:

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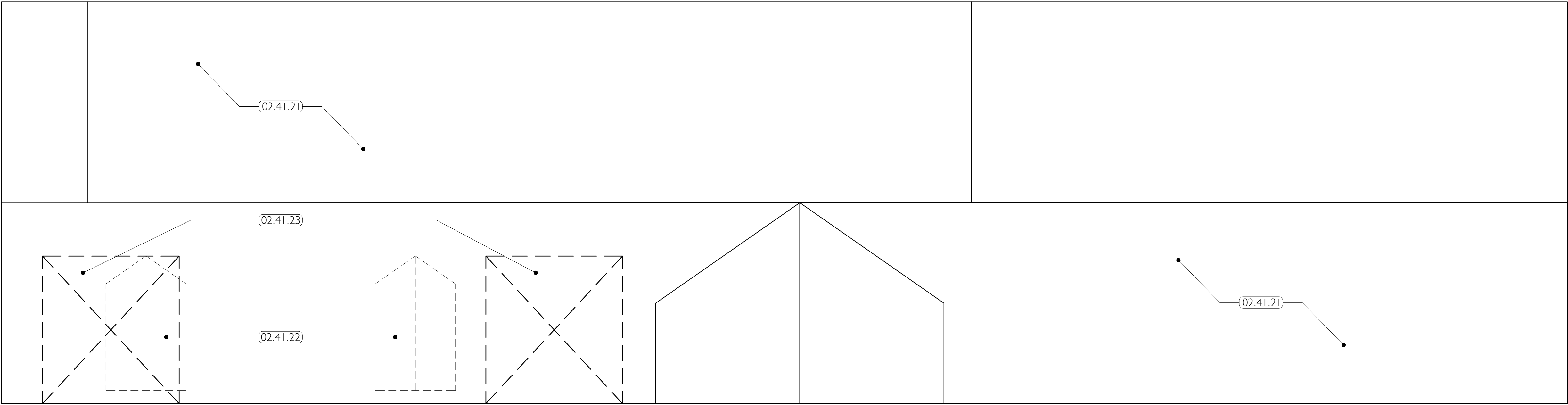
ESSEX COUNTY FARMWORKER HOUSING RENOVATION

Stables
10 Marks Road
Westport NY 12993

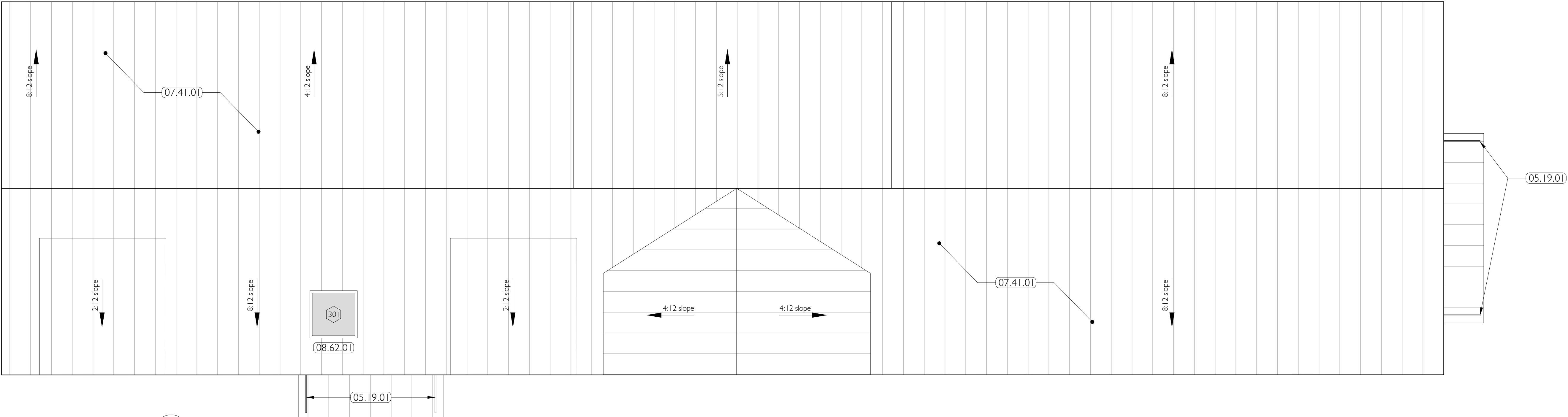
A-120

INTERIOR DEMO + PROP APT 4 PLANS
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Demo Roof Plan
Scale: 1/4" = 1'-0"



Proposed Roof Plan
Scale: 1/4" = 1'-0"

- KEY NOTES
- 02.41.21 remove and salvage metal roofing
 - 02.41.22 remove existing dormers
 - 02.41.23 remove metal roofing, roof decking, and framing for new opening
 - 05.19.01 canopy tension rod assembly
 - 07.41.01 Pac Clad Tite-Loc standing seam metal roof panel
 - 08.62.01 Velux fixed curb mounted skylight

STABLES

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ESSEX COUNTY FARMWORKER HOUSING RENOVATION

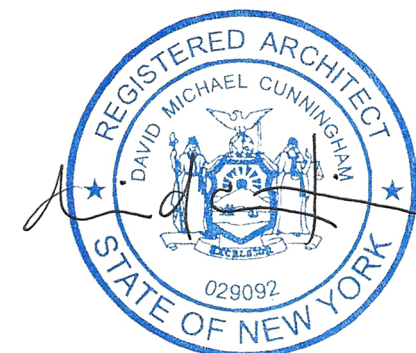
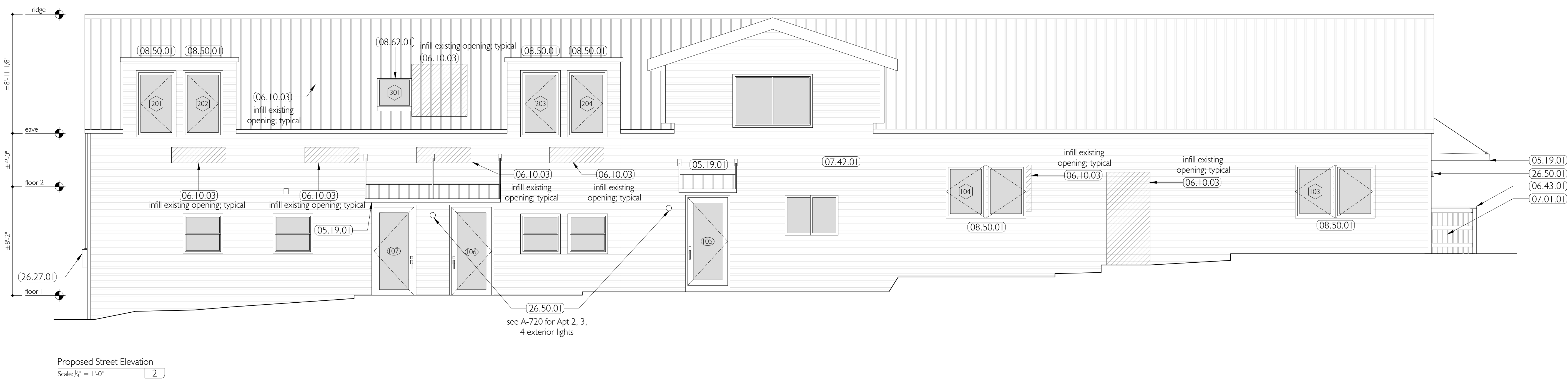
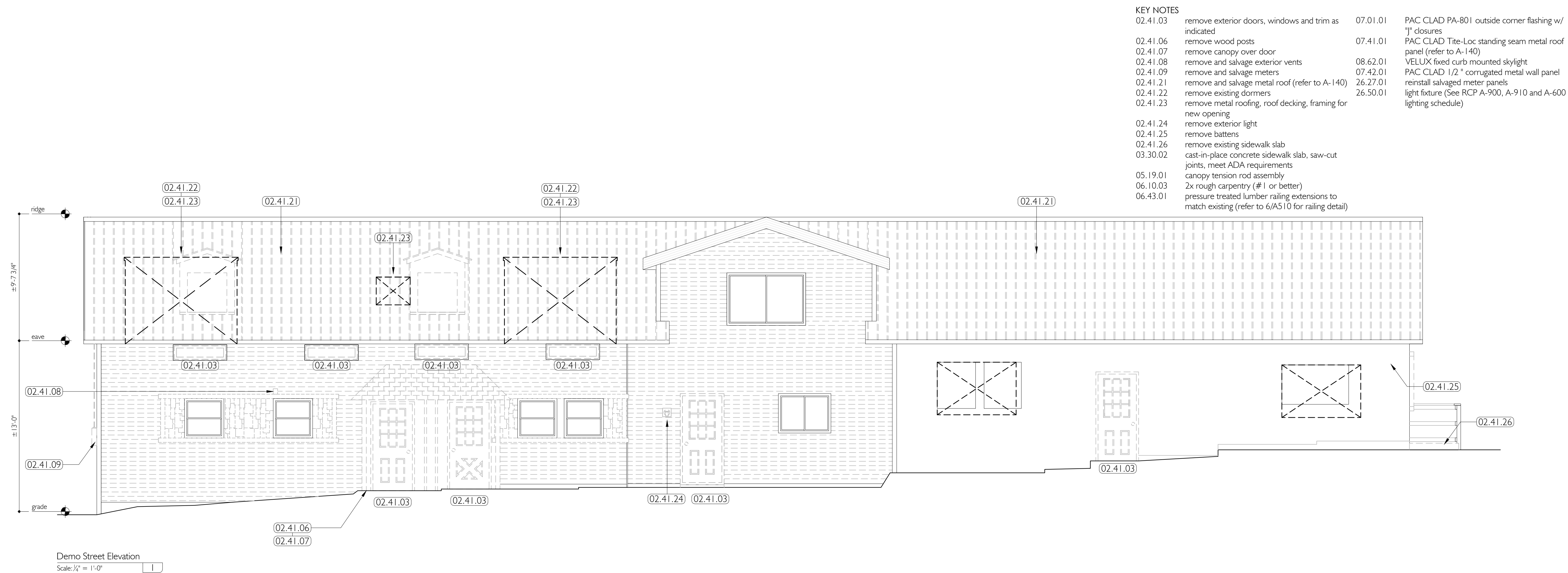
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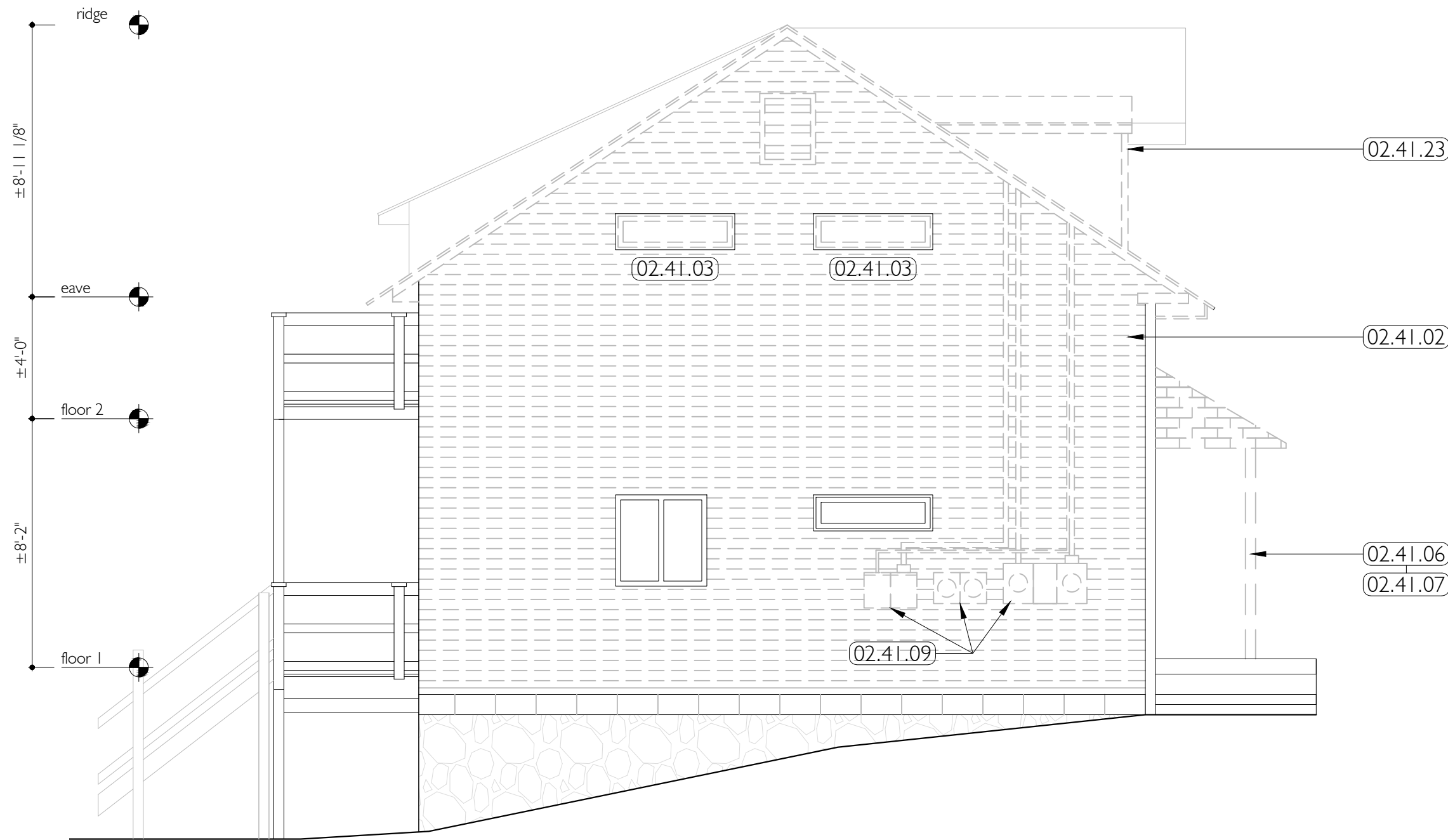
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EXIST + PROP ROOF PLANS

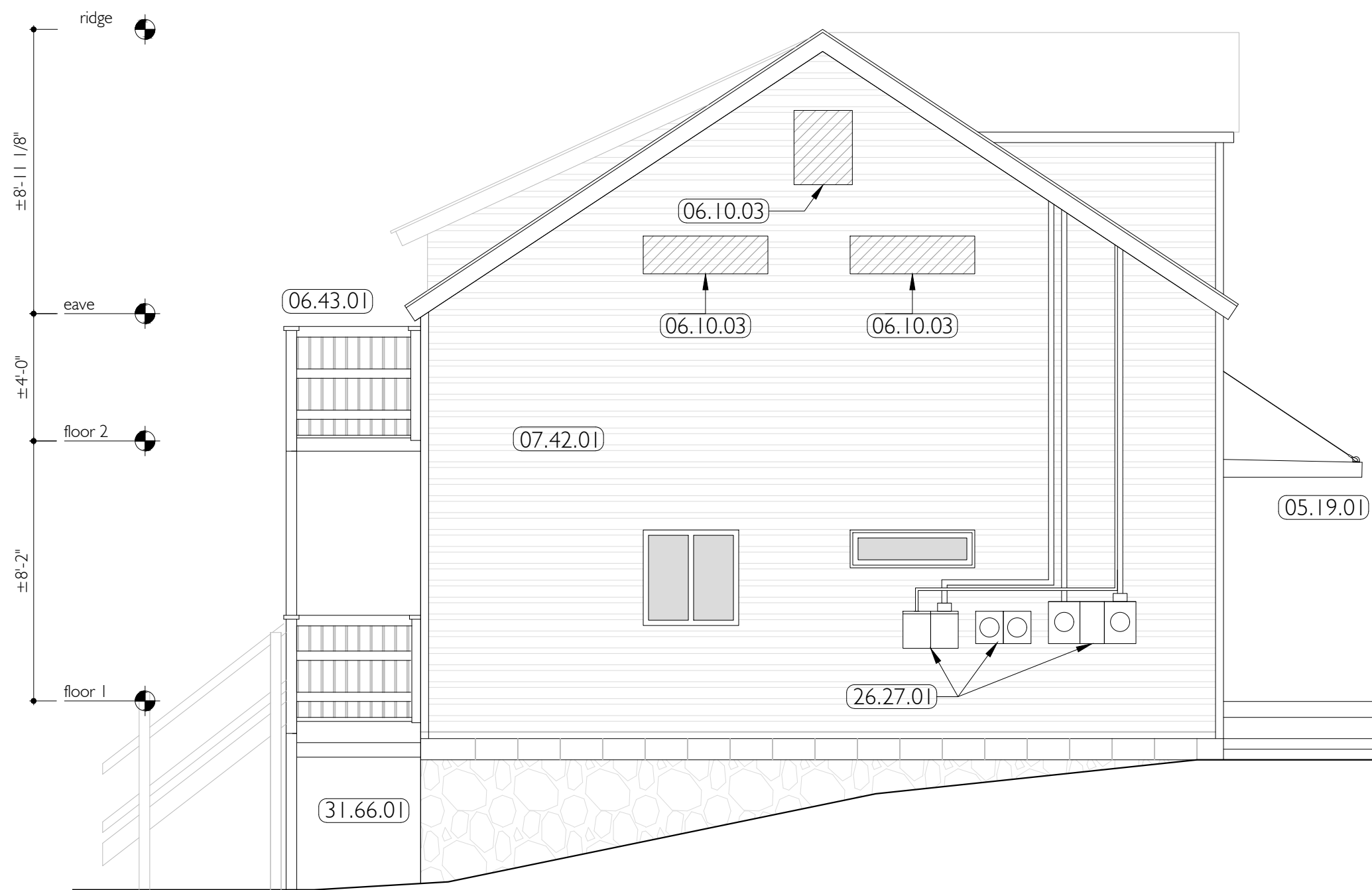
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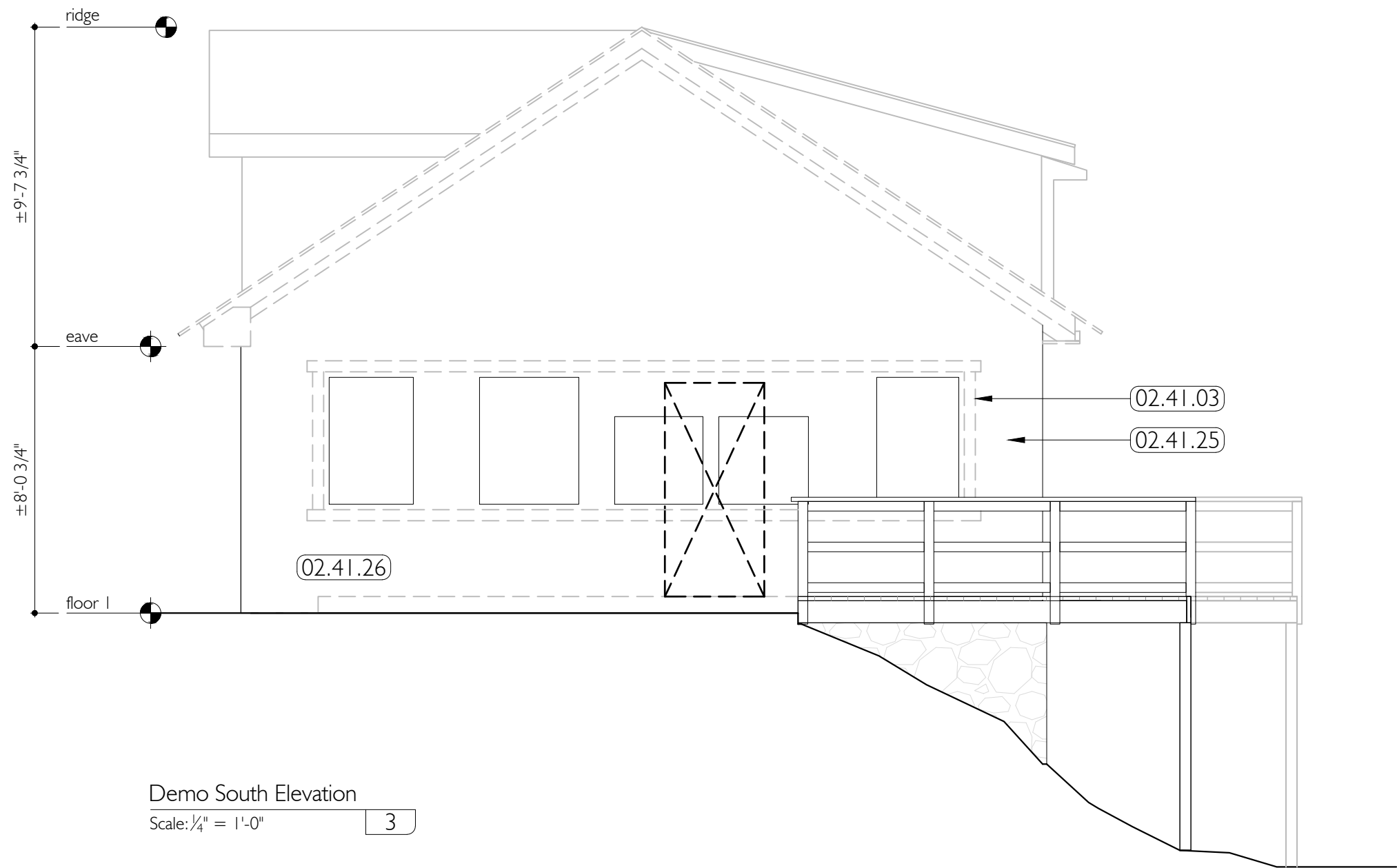




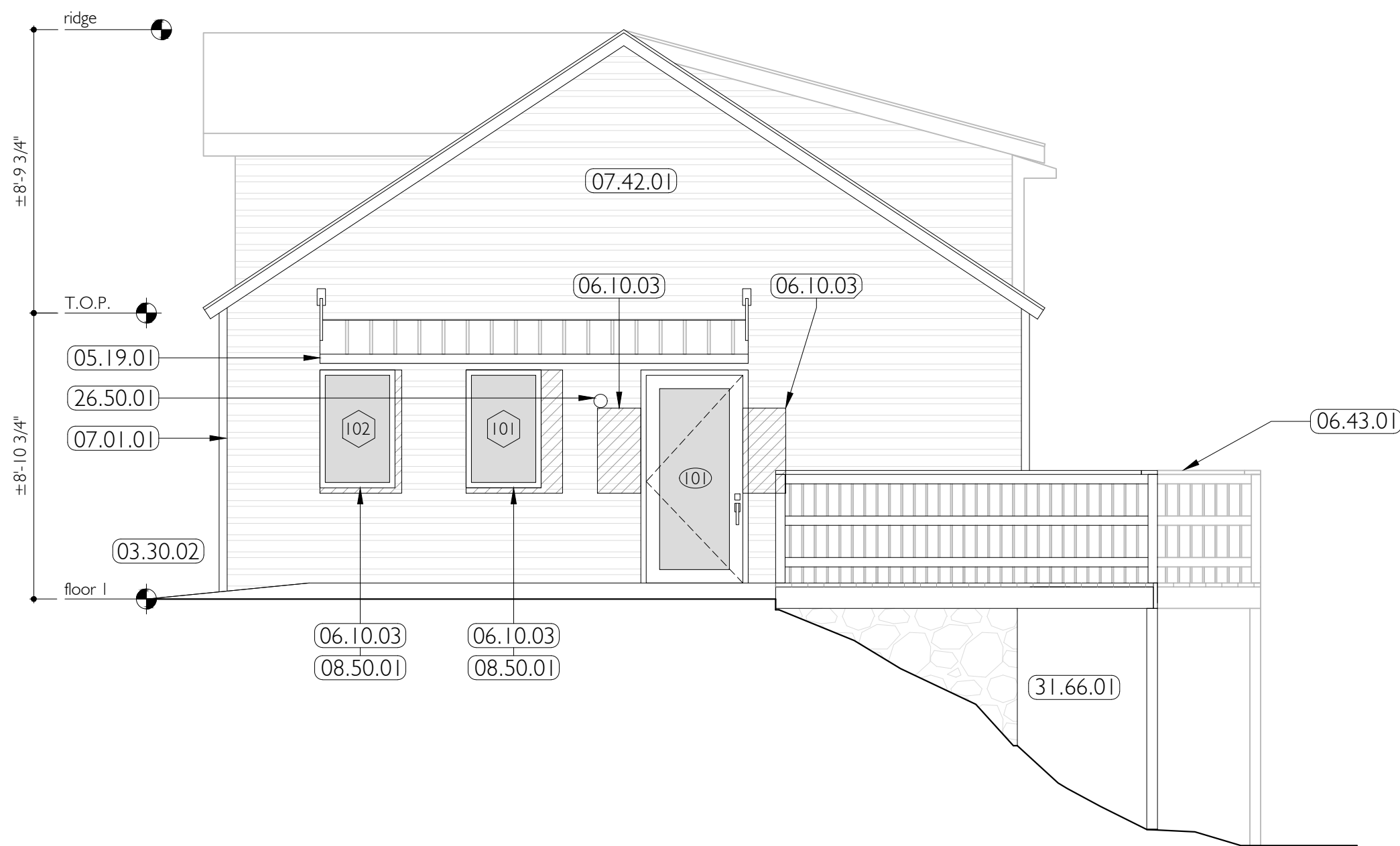
Demo North Elevation
Scale: 1/4" = 1'-0"



Proposed North Elevation
Scale: 1/4" = 1'-0"



Demo South Elevation
Scale: 1/4" = 1'-0"





Proposed South Elevation
Scale: 1/4" = 1'-0"


- KEY NOTES**
- | | | | |
|-----------|---|----------|--|
| 0.2.41.02 | remove all existing vinyl siding, sheathing, building paper | 07.01.01 | PAC CLAD PA-801 outside corner flashing w/ "J" closures |
| 02.41.03 | remove exterior doors, windows and trim as indicated | 07.42.01 | PAC CLAD 1/2 " corrugated metal wall panel |
| 02.41.06 | remove wood posts | 08.50.01 | Fiberglass foam-filled windows with triple pane glazing |
| 02.41.07 | remove canopy over door | 26.27.01 | reinstall salvaged meter panels |
| 02.41.09 | remove and salvage meters | 26.50.01 | light fixture (See RCP A-900, A-910 and A-600 lighting schedule) |
| 02.41.25 | remove battens | 31.66.01 | infill existing rubble foundation |
| 02.41.26 | remove existing sidewalk slab | | |
| 03.30.02 | cast-in-place concrete sidewalk slab, saw-cut joints, meet ADA requirements | | |
| 05.19.01 | canopy tension rod assembly | | |
| 06.10.03 | 2x rough carpentry (#1 or better) | | |
| 06.43.01 | pressure treated lumber railing extensions to match existing (refer to 6/A510 for railing detail) | | |


STABLES

LEGEND

 infill existing opening, typical

 new opening

 remove existing siding, sheathing, building paper

 existing framed opening without window

 remove and salvage existing metal roofing

ISSUES:

01 04.05.23 BID 01

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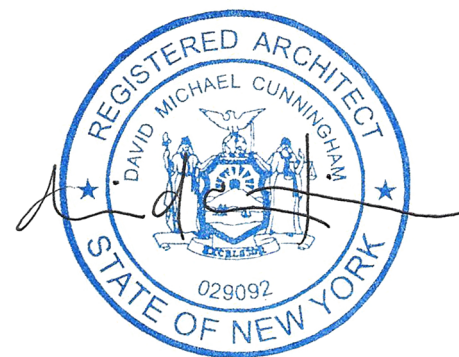
ESSEX COUNTY FARMWORKER HOUSING RENOVATION

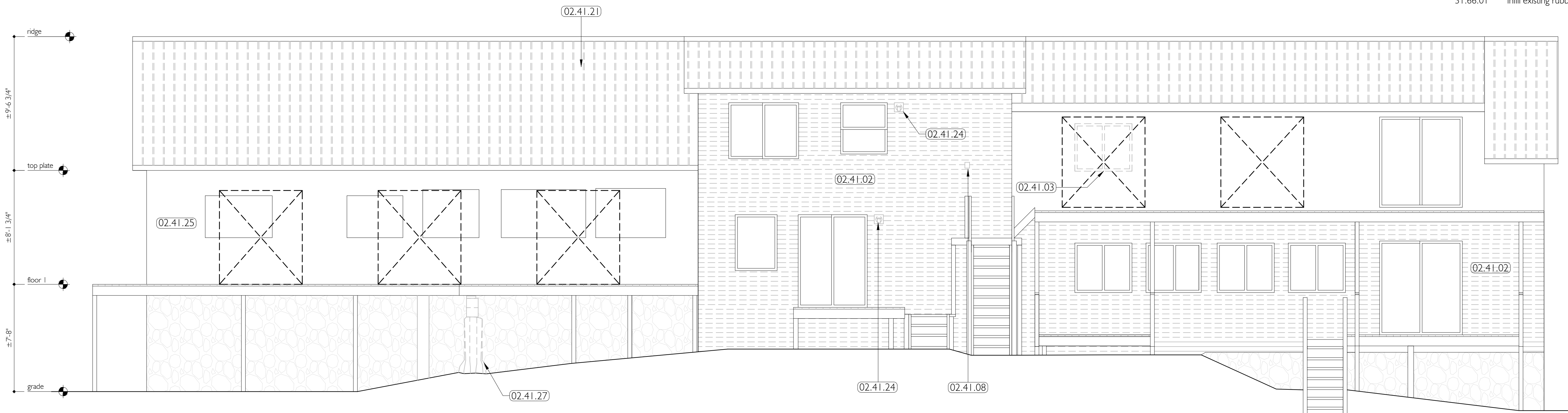
Stables
10 Marks Road
Westport NY 12993

A-210

DEMO + PROP NORTH + SOUTH ELEVATIONS

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Existing East Elevation
Scale: 1/4" = 1'-0"

NOTE: Deck shown without railing for clarity. Refer to 6/A-510 for proposed railing detail to span deck.








Proposed East Elevation
Scale: 1/4" = 1'-0"

NOTE: Deck shown without railing for clarity. Refer to 6/A-510 for proposed railing detail to span deck.

KEY NOTES			
0.2.41.02	remove all existing vinyl siding, sheathing, building paper	06.43.01	pressure treated lumber railing extensions to match existing (refer to 6/A510 for railing detail)
02.41.03	remove exterior doors, windows and trim as indicated	07.01.01	PAC CLAD PA-801 outside corner flashing w/ "J" closures
02.41.25	remove battens	07.42.01	PAC CLAD 1/2 " corrugated metal wall panel
02.41.27	remove structural tree stump	08.11.02	Fiberglass sliding deck door (refer to A-610 door schedule)
03.30.02	cast-in-place concrete sidewalk slab, saw-cut joints, meet ADA requirements	08.50.01	Fiberglass foam-filled windows with triple pane glazing
05.19.01	canopy tension rod assembly	26.27.01	reinstall salvaged meter panels
06.10.03	2x rough carpentry (#1 or better)	26.50.01	light fixture (See RCP A-900, A-910 and A-600 lighting schedule)
06.11.01	structural wood pier in place of tree stump	31.66.01	infill existing rubble foundation

STABLES

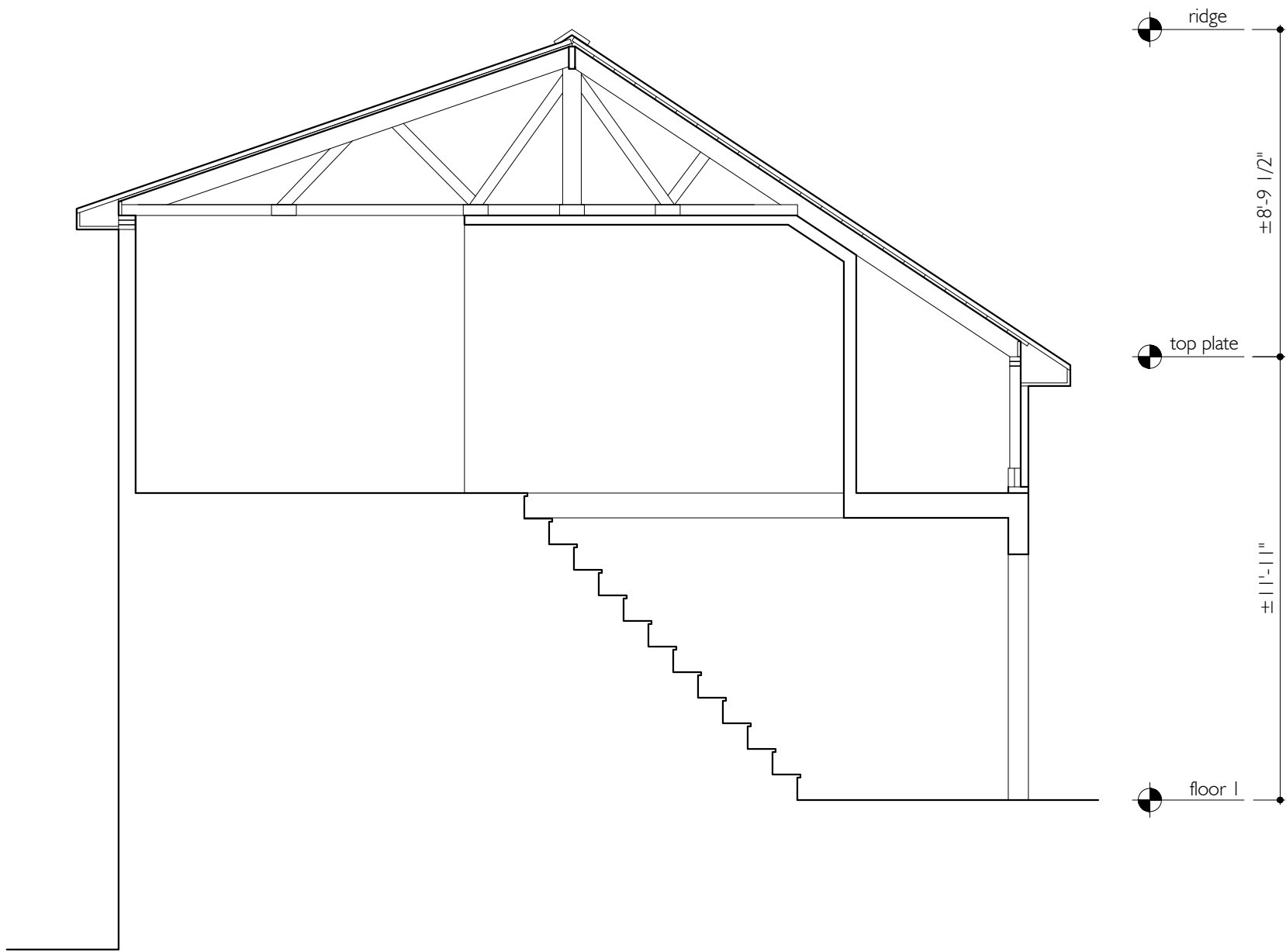
LEGEND

-  infill existing opening, typical
-  new opening
-  remove existing siding, sheathing, building paper
-  existing framed opening without window
-  remove and salvage existing metal roofing

ISSUES:

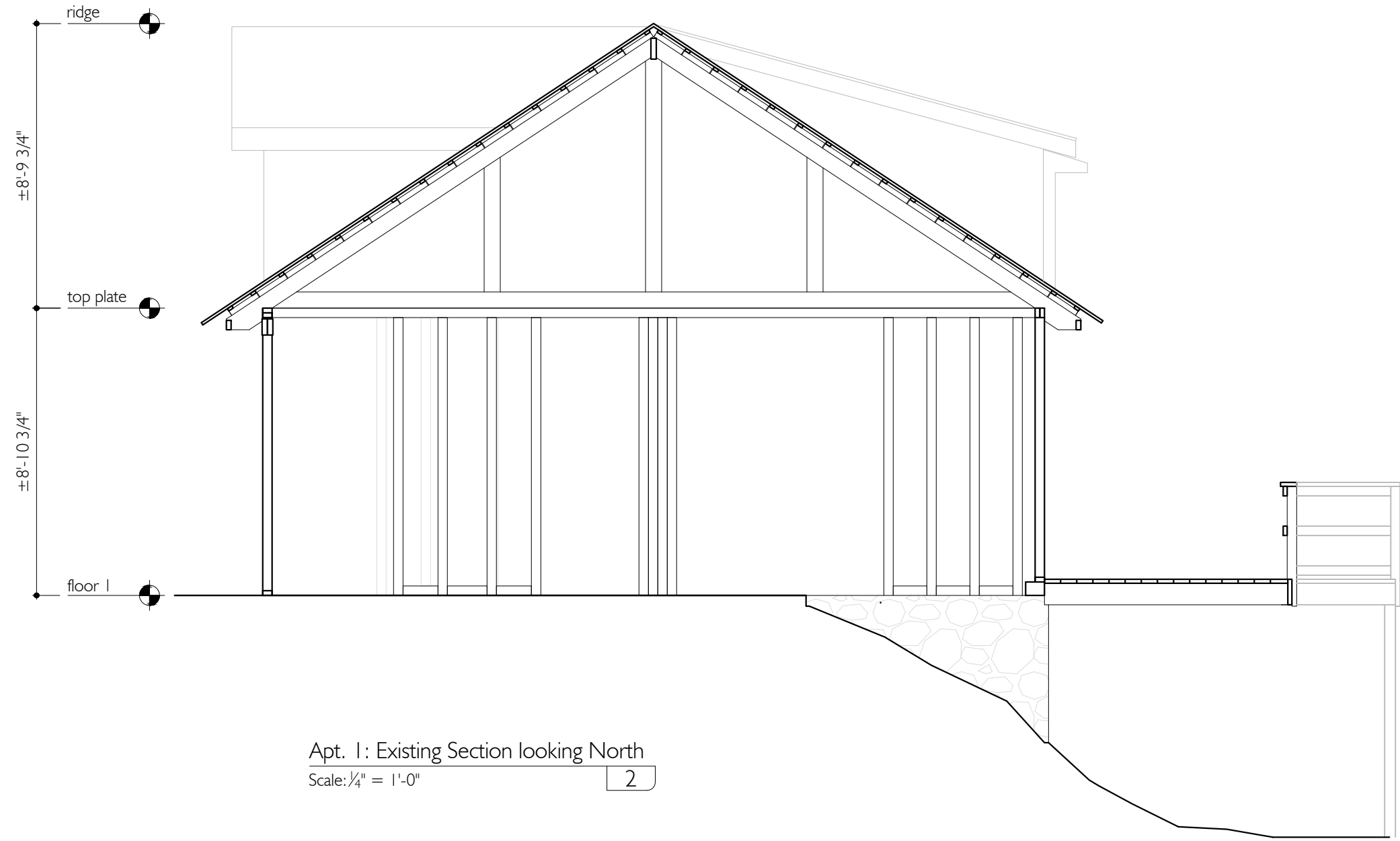
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A-220
DEMO + PROP EAST ELEVATIONS
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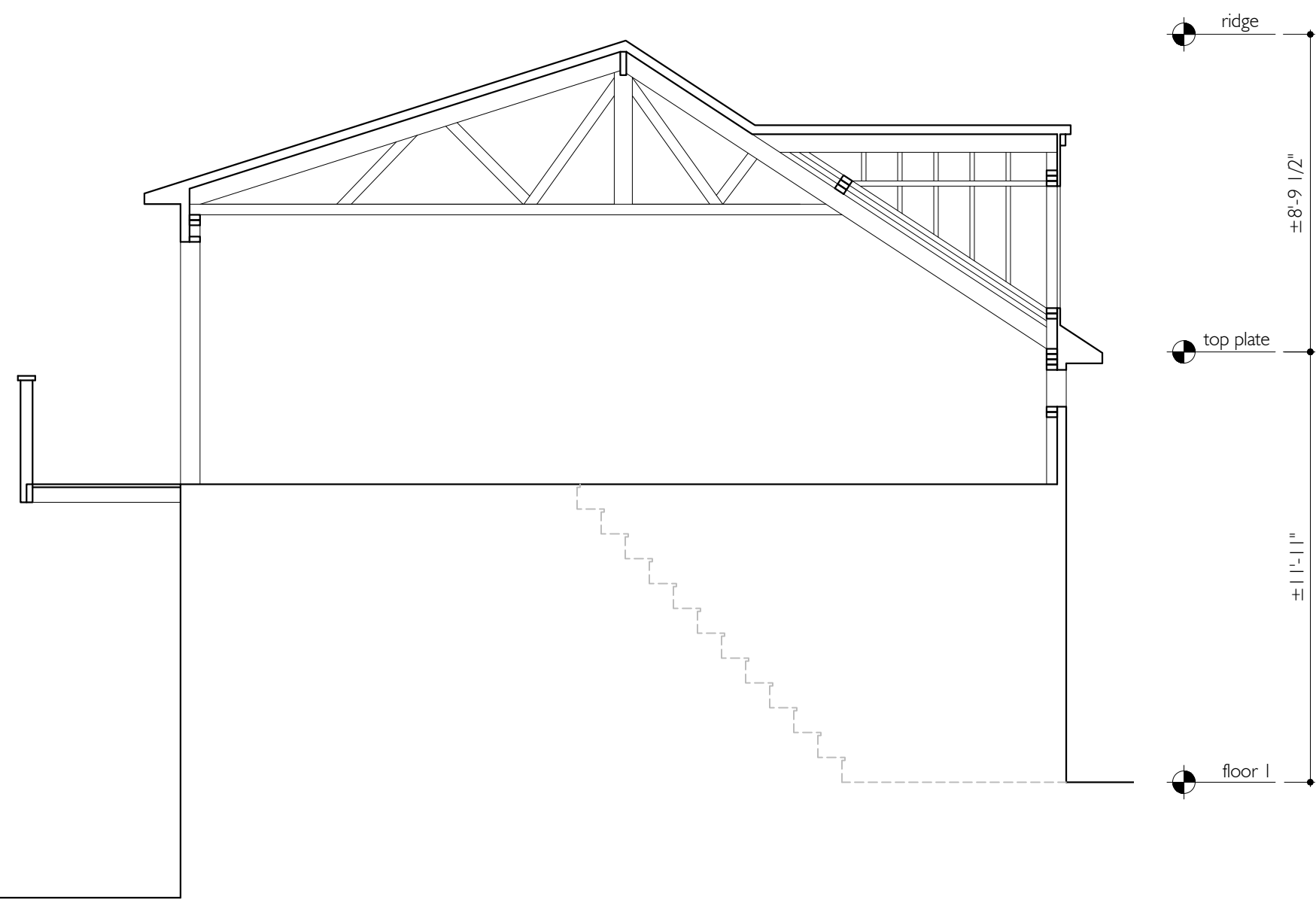
Apt. 4: Existing Section at Dormer looking South
Scale: 1/4" = 1'-0"

1



Apt. 1: Existing Section looking North
Scale: 1/4" = 1'-0"

2



Apt. 4: Existing Section at Dormer looking South
Scale: 1/4" = 1'-0"

3

ISSUES:

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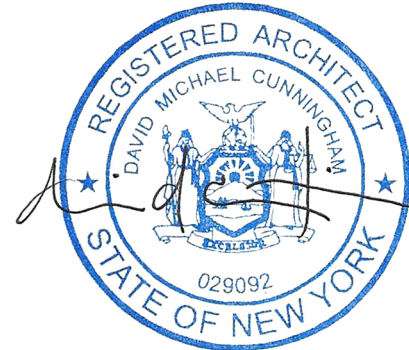
ESSEX COUNTY FARMWORKER
HOUSING RENOVATION

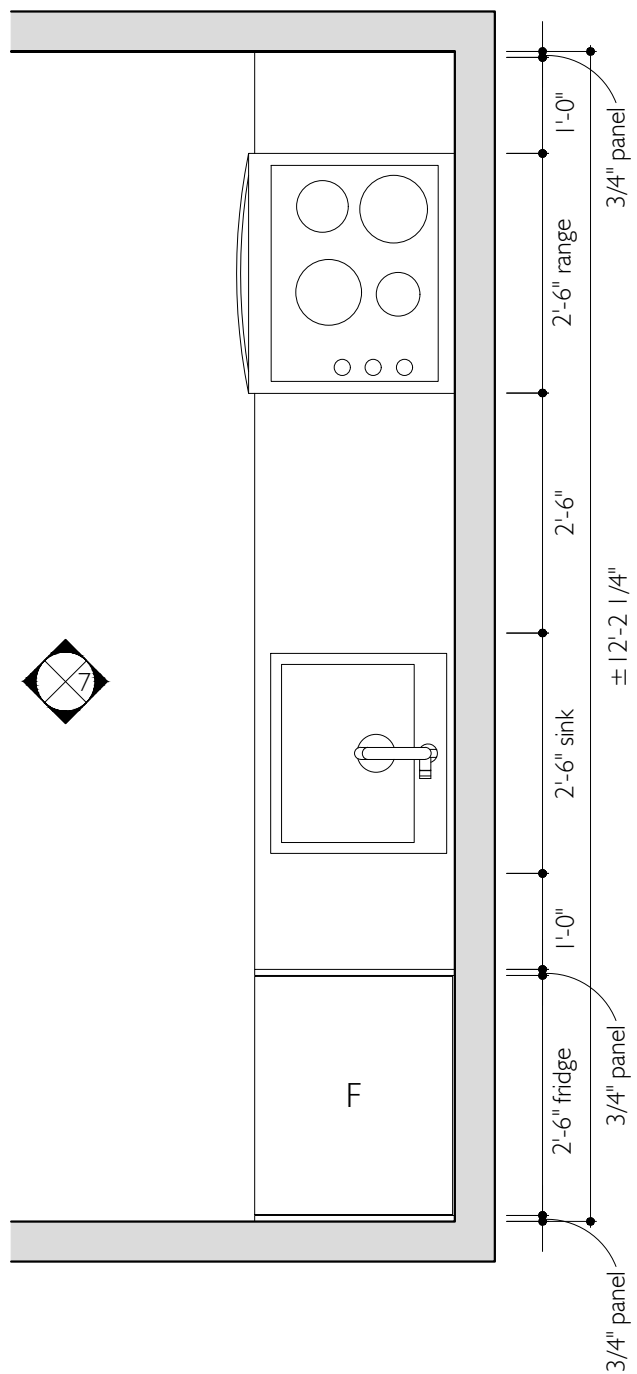
Stables
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Westport NY 12993

A-300

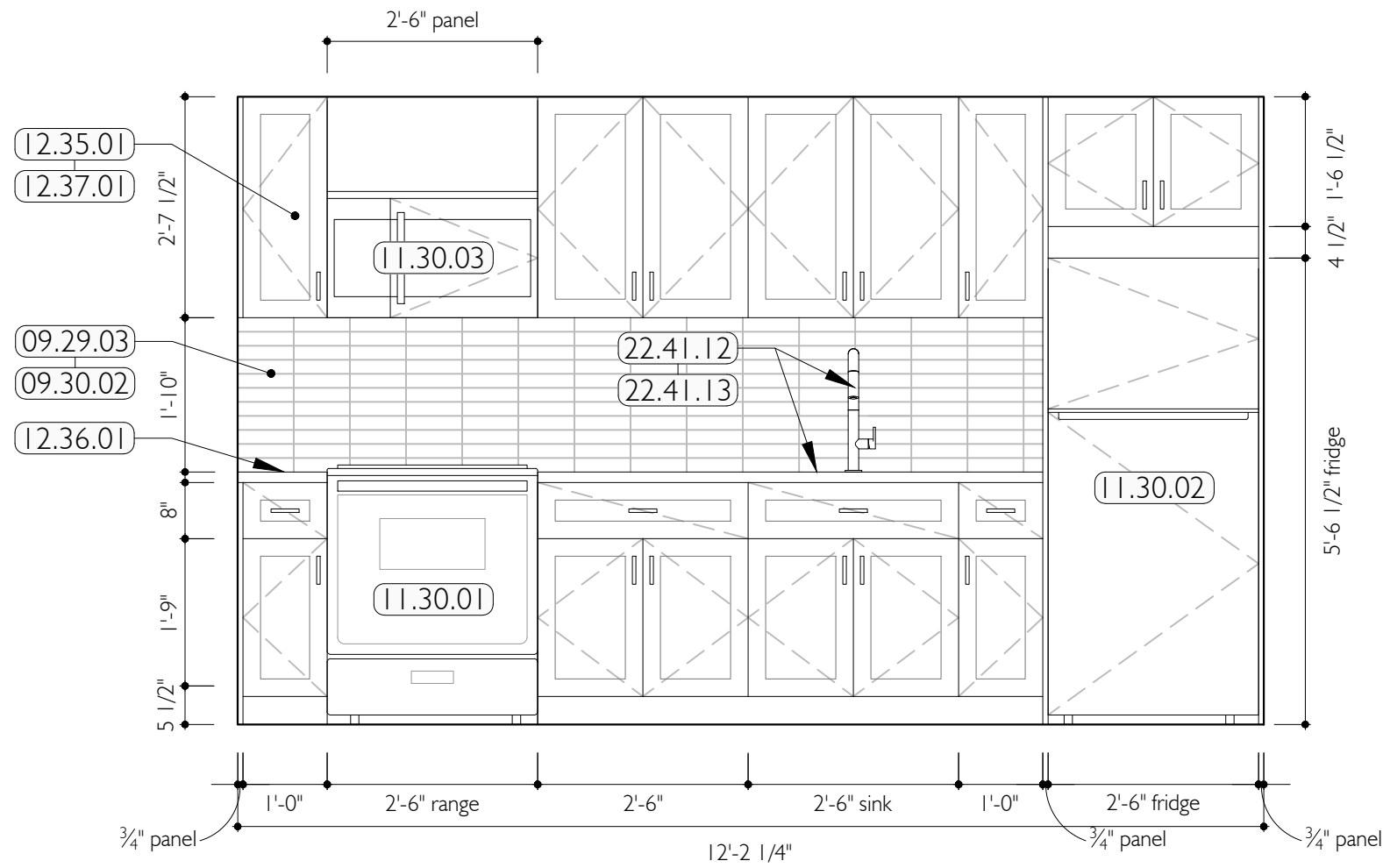
EXISTING SECTIONS

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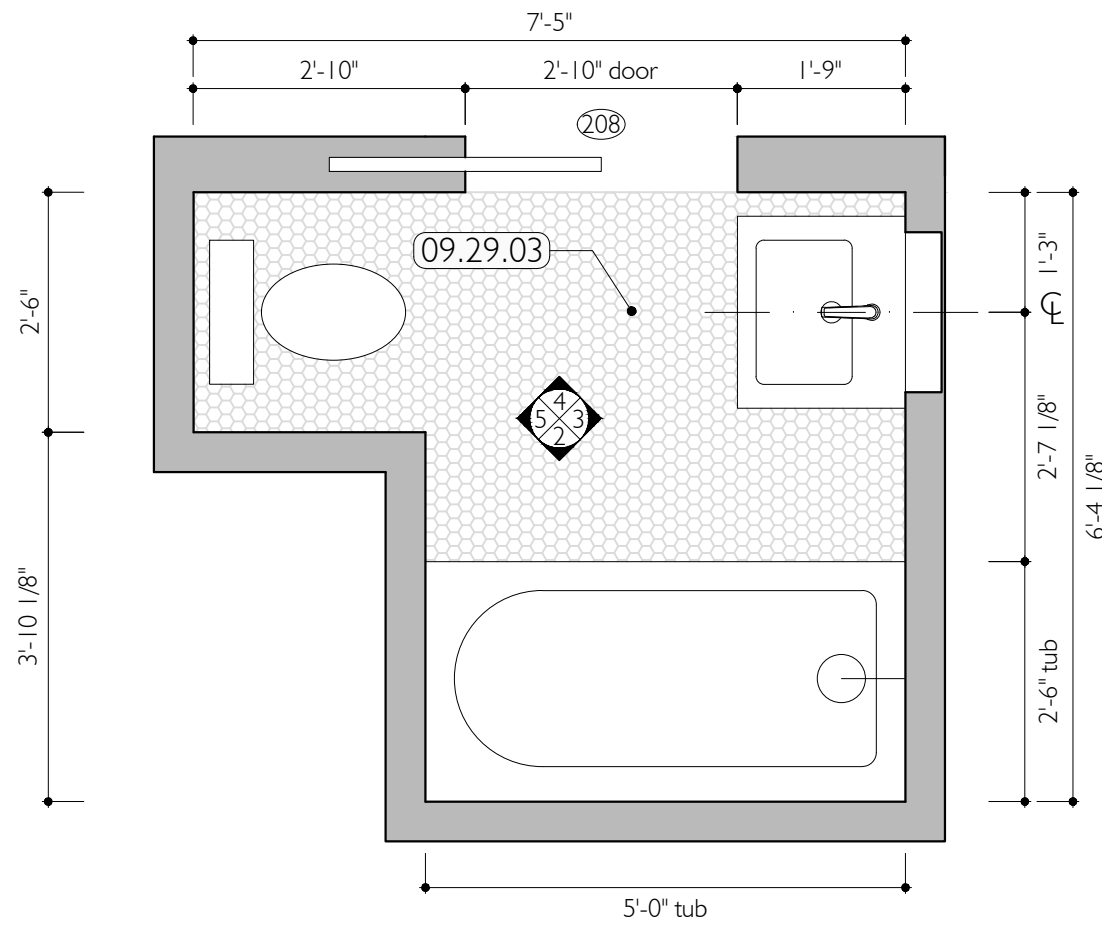




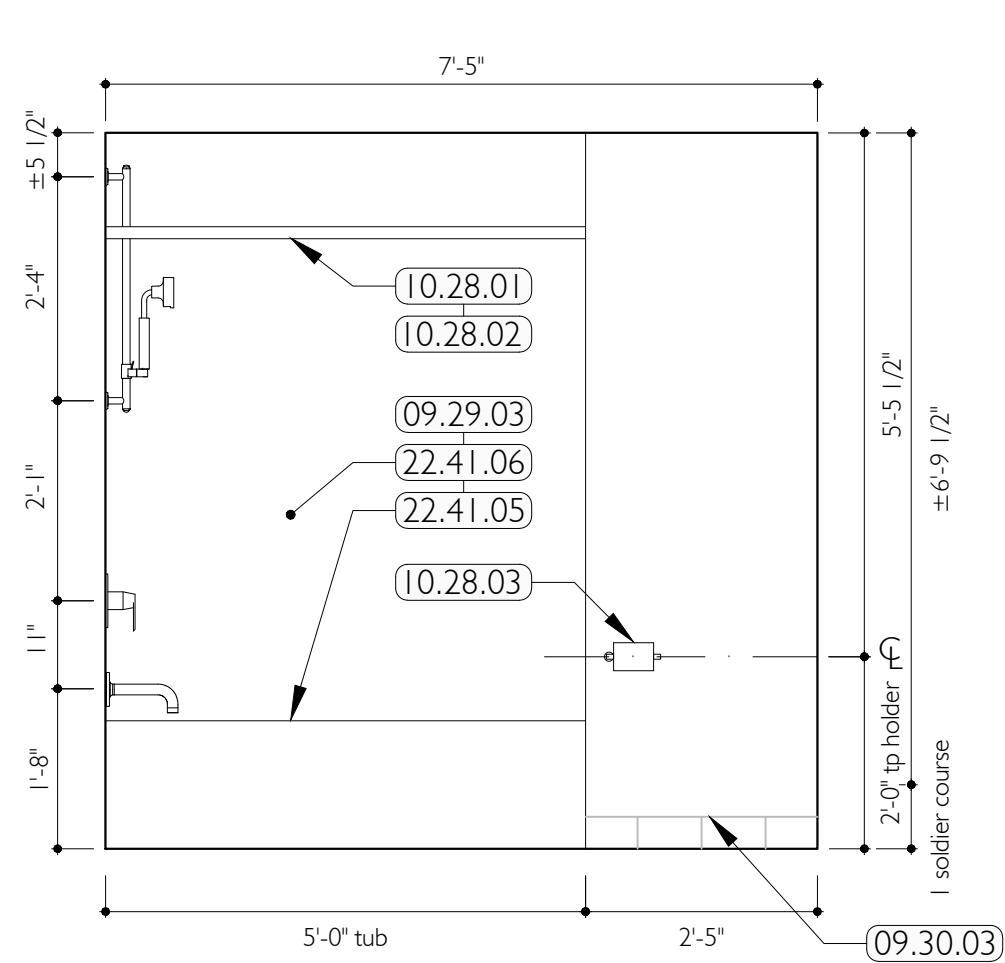
Apt 4 Kitchen Plan
Scale: 1/2" = 1'-0"



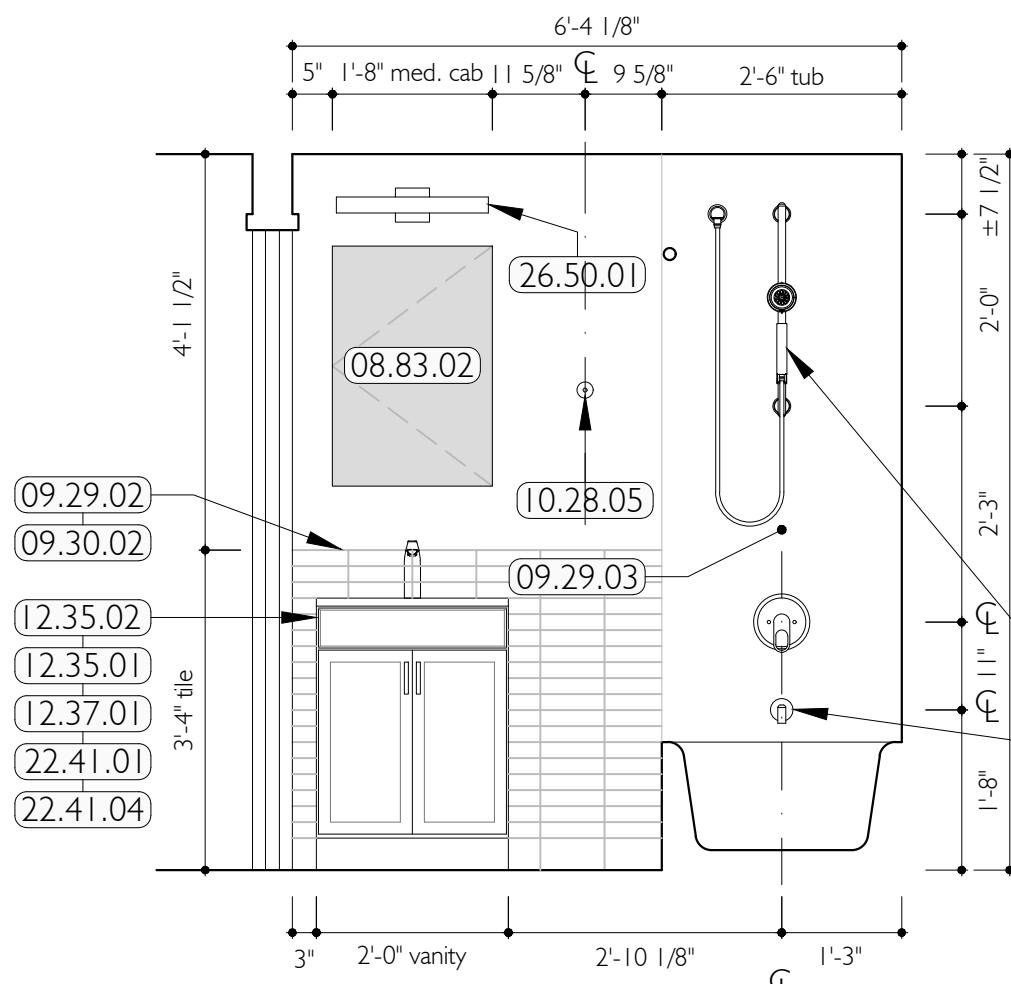
Apt 4 Kitchen Elevation
Scale: 1/2" = 1'-0"



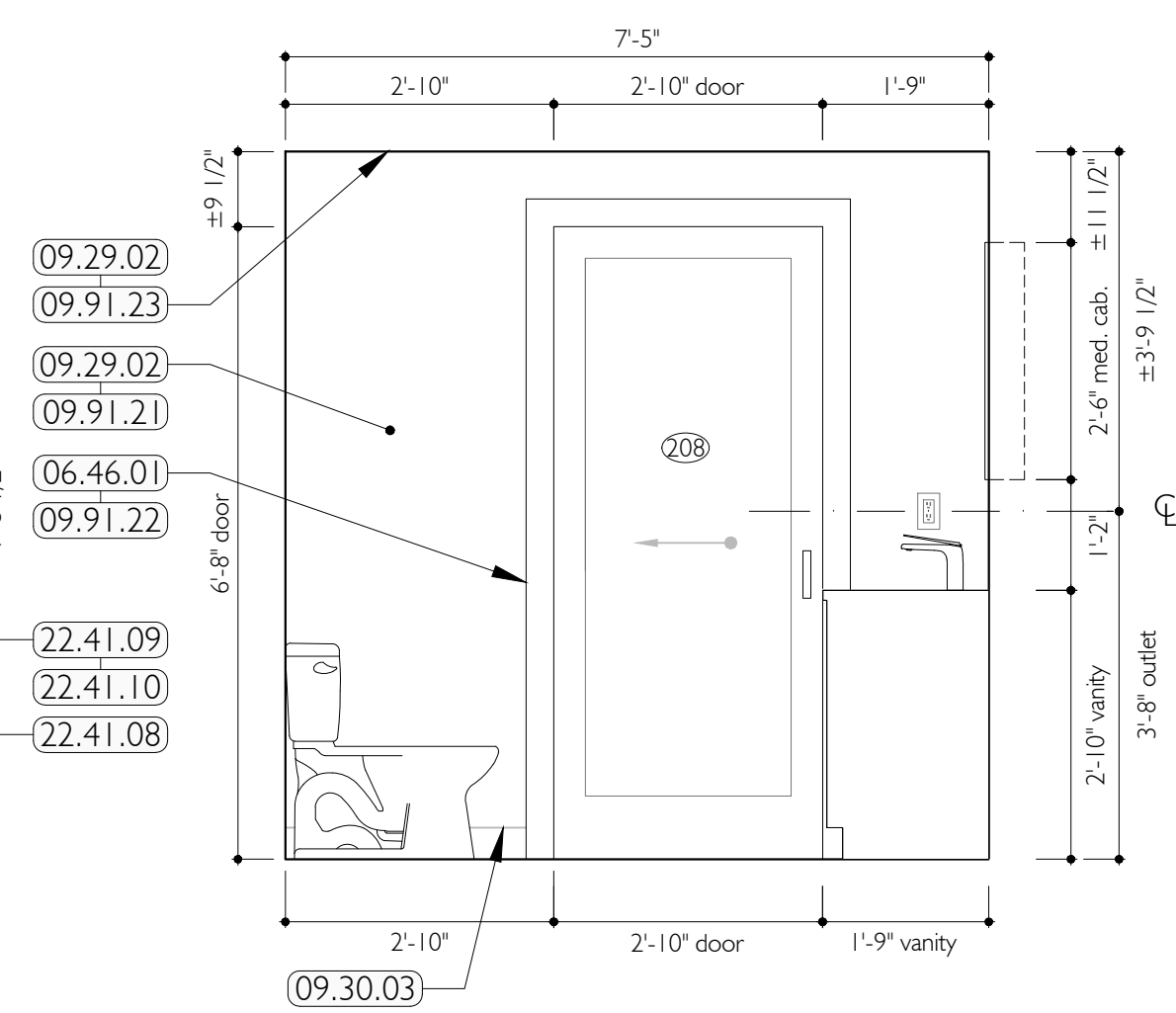
Apt 4 Bathroom Plan
Scale: 1/2" = 1'-0"



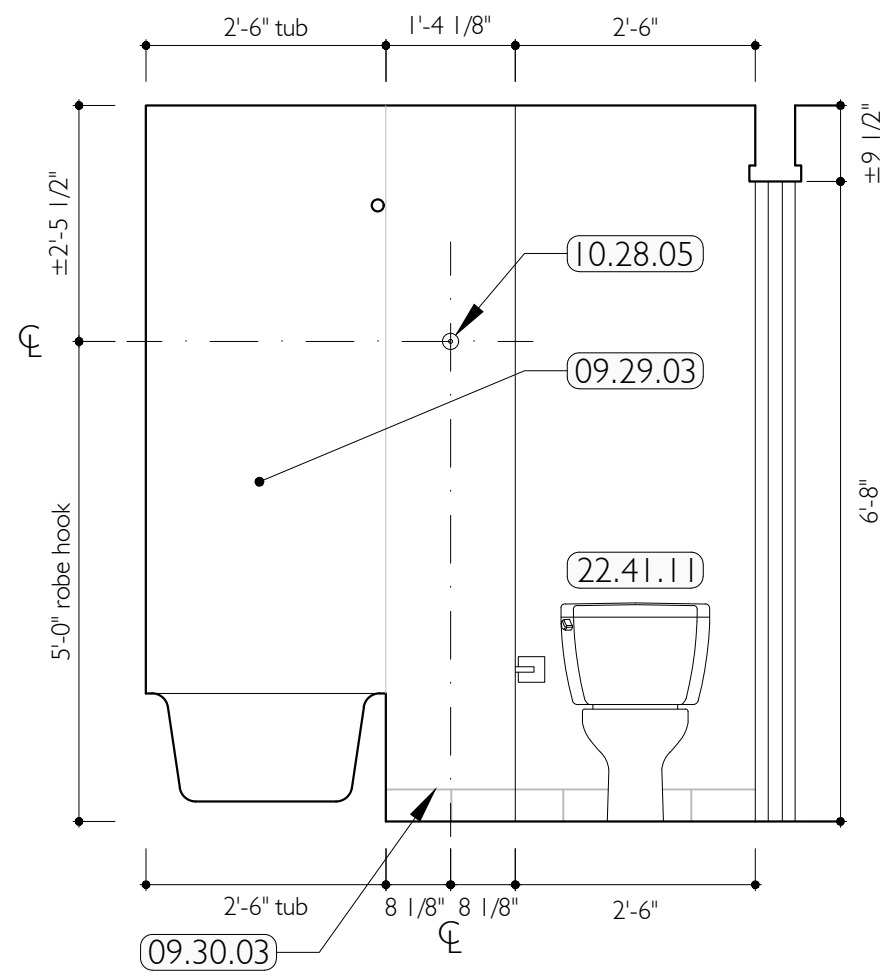
Apt 4 Bathroom Elevation
Scale: 1/2" = 1'-0"



Apt 4 Bathroom Elevation
Scale: 1/2" = 1'-0"



Apt 4 Bathroom Elevation
Scale: 1/2" = 1'-0"



Apt 4 Bathroom Elevation
Scale: 1/2" = 1'-0"

KEY NOTES

- 08.83.01 Mirror
- 08.83.02 Mirrored medicine cabinet, 20" x 40" (refer to A-600 Bathroom Schedule)
- 09.29.02 5/8" interior moisture, mold, and mildew resistant board
- 09.29.03 5/8" interior cementitious backer board
- 09.30.01 Ceramic tile, 2" hexagon
- 09.30.02 Ceramic tile, 2" x 8" subway
- 09.30.03 Ceramic tile base
- 09.91.11 Paint, interior, wall
- 09.91.12 Paint, interior, trim
- 09.91.13 Paint, interior, ceiling
- 09.91.21 Paint, interior bathroom, wall
- 09.91.22 Paint, interior bathroom, trim

- 09.91.23 Paint, interior bathroom, ceiling
- 10.28.01 Shower curtain rod (refer to A-600 Bathroom Schedule)
- 10.28.02 Shower curtain (refer to A-600 Bathroom Schedule)
- 10.28.03 Toilet paper holder (refer to A-600 Bathroom Schedule)
- 10.28.04 Towel bar, 24" (refer to A-600 Bathroom Schedule)
- 10.28.05 Robe hook (refer to A-600 Bathroom Schedule)
- 10.28.06 Grab bar (refer to A-600 Bathroom Schedule)
- 11.30.01 Range (refer to A-600 Kitchen Schedule)
- 11.30.02 Refrigerator (refer to A-600 Kitchen Schedule)

- 11.30.03 Microwave over range (refer to A-600 Kitchen Schedule)
- 12.35.01 Kitchen cabinet (refer to A-600 Kitchen Schedule)
- 12.35.02 Bathroom vanity cabinet, 30" wide (refer to A-600 Bathroom Schedule)
- 12.35.03 Medicine cabinet, 24" x 28" (refer to A-600 Bathroom Schedule)
- 12.36.01 Countertop (refer to A-600 Bathroom or Kitchen Schedule)
- 12.37.01 Cabinet hardware (refer to A-600 Bathroom or Kitchen Schedule)
- 22.41.01 Lavatory undermount sink (refer to A-600 Plumbing Schedule)

- 22.41.02 Lavatory wall mount sink (refer to A-600 Plumbing Schedule)
- 22.41.03 Lavatory metal trough sink (refer to A-600 Plumbing Schedule)
- 22.41.04 Lavatory faucet (refer to A-600 Plumbing Schedule)
- 22.41.05 Bathtub (refer to A-600 Plumbing Schedule)
- 22.41.06 Bathtub surround (refer to A-600 Plumbing Schedule)
- 22.41.07 Shower base 36" x 36" (refer to A-600 Plumbing Schedule)
- 22.41.08 Bathtub spout (refer to A-600 Plumbing Schedule)
- 22.41.09 Shower system (refer to A-600 Plumbing Schedule)

- 22.41.10 Shower rough (refer to A-600 Plumbing Schedule)
- 22.41.11 Toilet (refer to A-600 Plumbing Schedule)
- 22.41.12 Kitchen undermount sink (refer to A-600 Plumbing Schedule)
- 22.41.13 Kitchen faucet (refer to A-600 Plumbing Schedule)
- 26.50.01 Light fixture (refer to A-600 Lighting Schedule and A-720 RCP)

STABLES

LEGEND

- remove item
- new partition
- # door tag
- # window tag
- smoke / CO detector

ABBREVIATIONS

- MW microwave
- F refrigerator
- RD radiator
- ± verify in field
- PBO purchased by owner

ISSUES:

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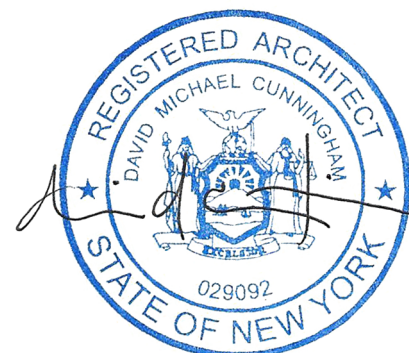
ESSEX COUNTY FARMWORKER
HOUSING RENOVATION

Stables
10 Marks Road
Westport NY 12993

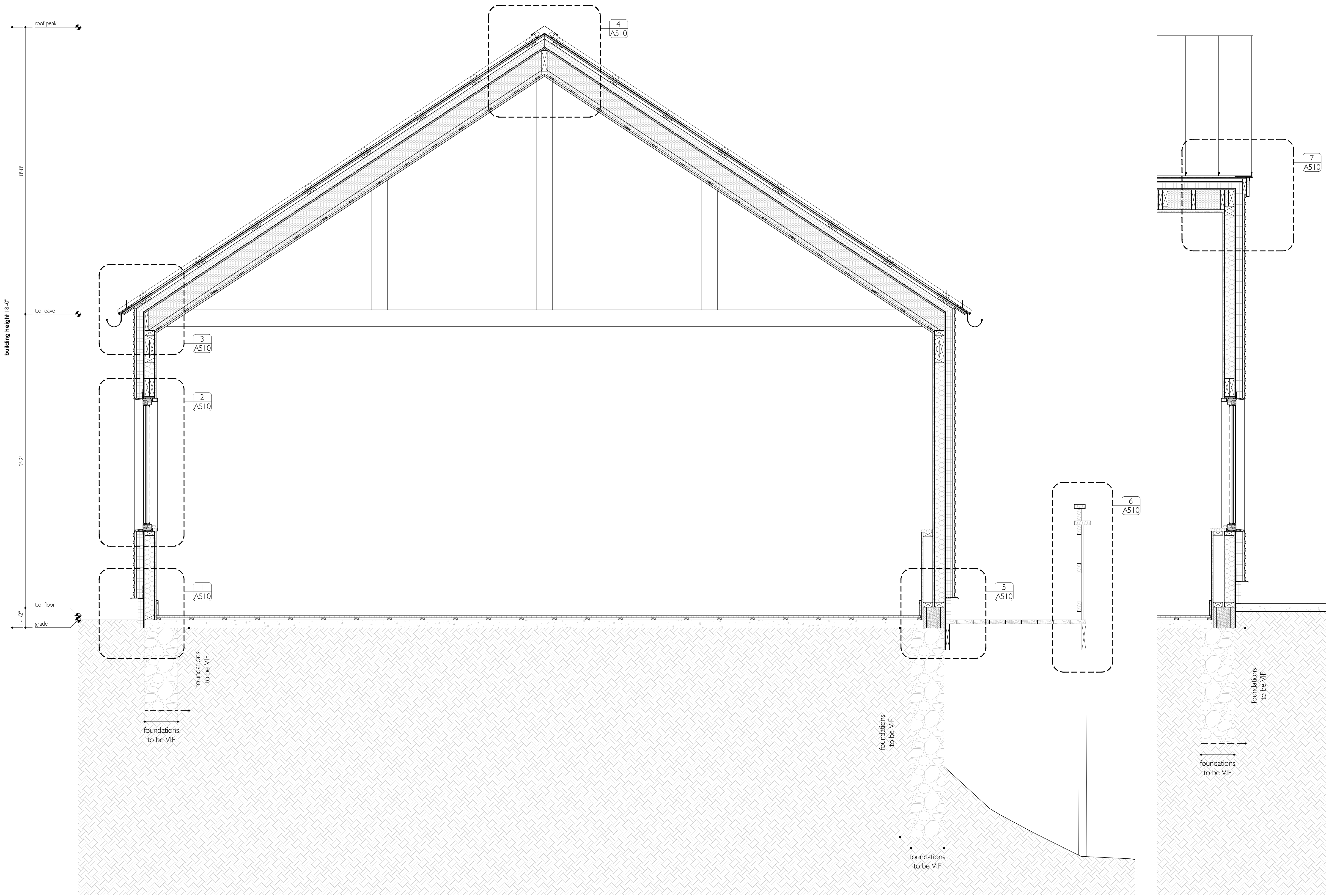
A-420

APT 4: INTERIOR ELEVS + PLANS

SEAL | SIGNATURE:



STABLES



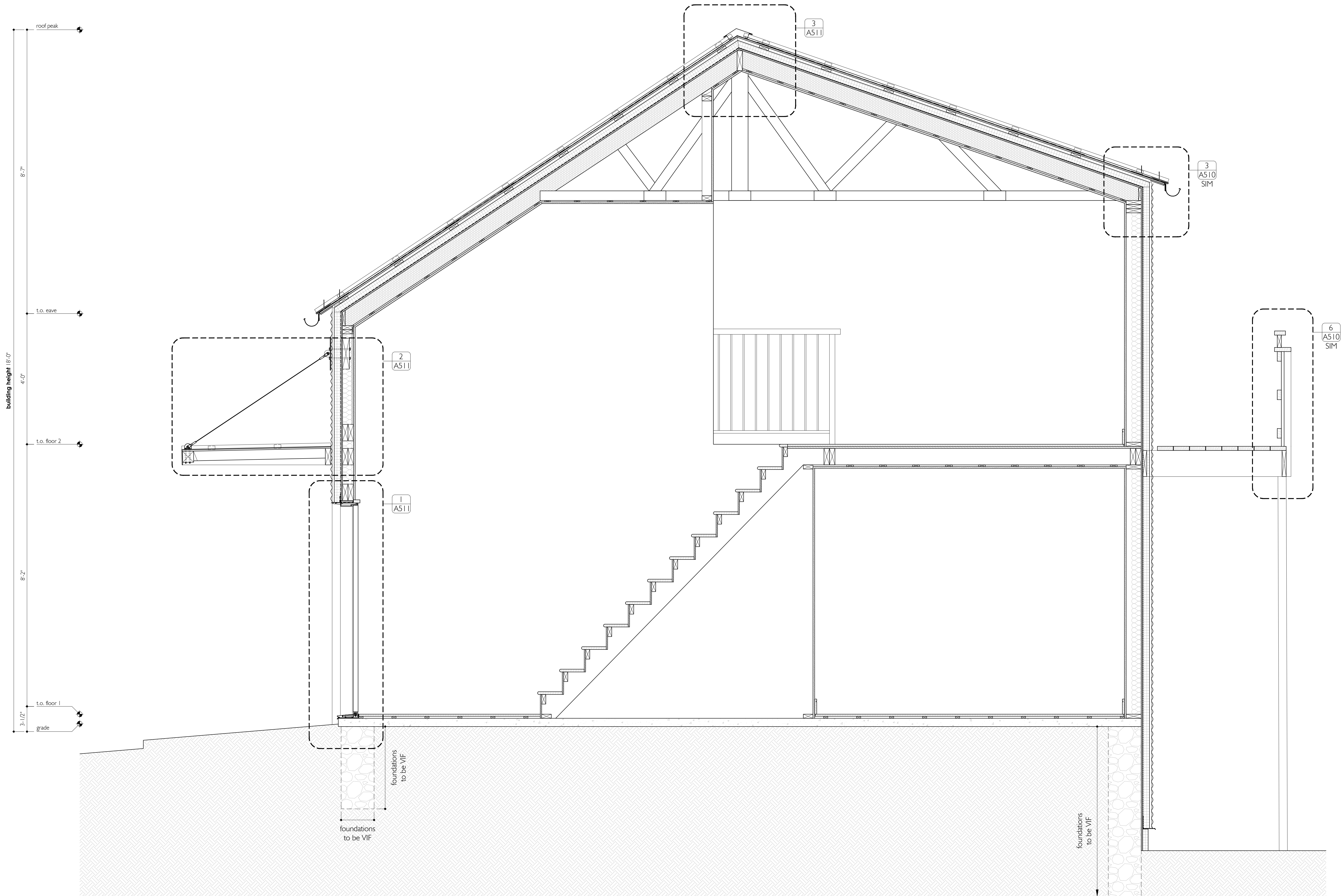
Wall Section Through Eaves @ Apartment 1
Scale: 3/4"= 1'-0"

Wall Section Through Rake @ Apartment 1
Scale: 3/4"= 1'-0"

ISSUES:
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**ESSEX COUNTY FARMWORKER
HOUSING RENOVATION**
Stables
10 Marks Road
Westport NY 12993
A-500
EXTERIOR WALL SECTIONS
SEAL | SIGNATURE:



STABLES



Wall Section Through Stairs @ Apartment 4
Scale: 3/4" = 1'-0"

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HOUSING RENOVATION

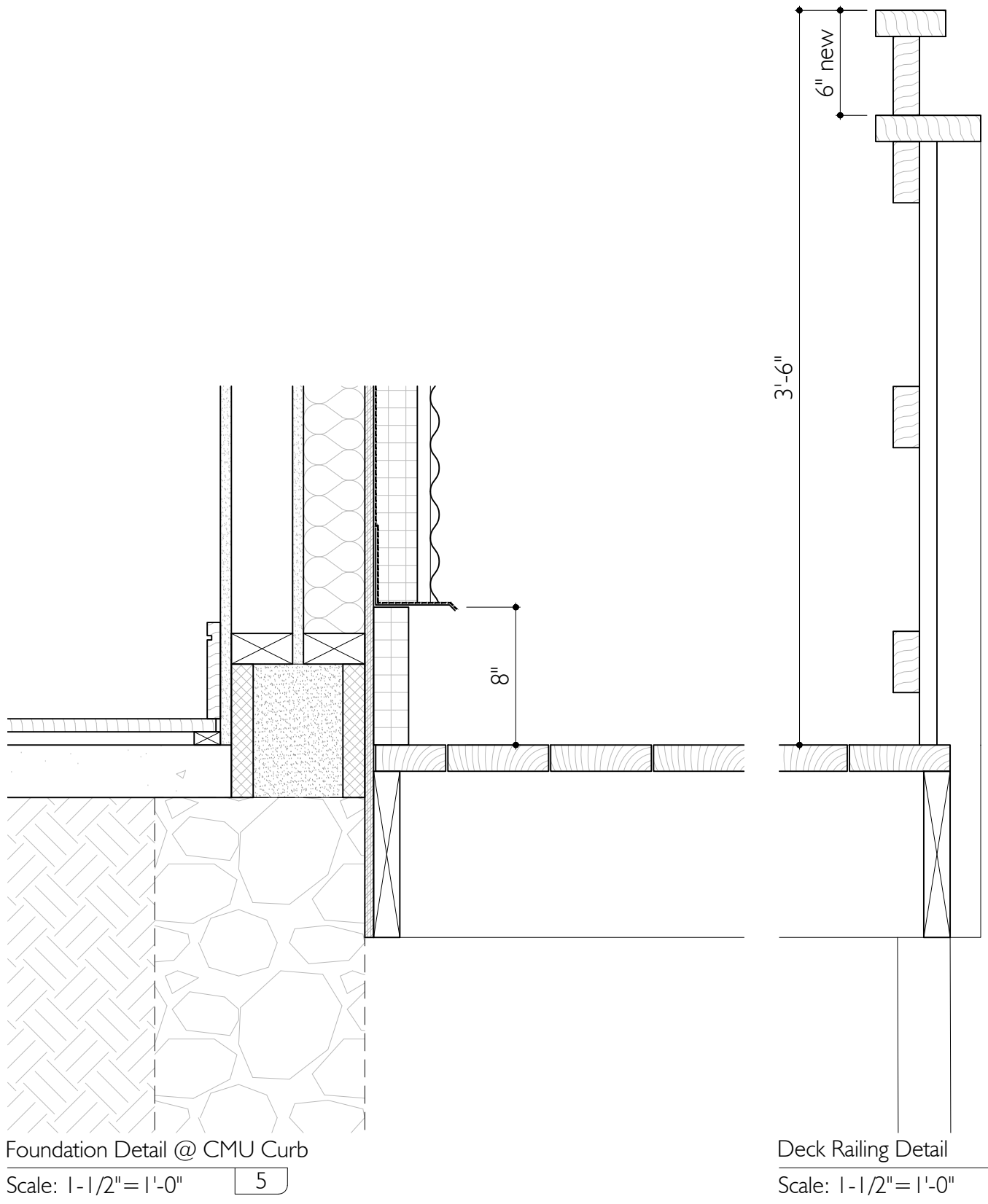
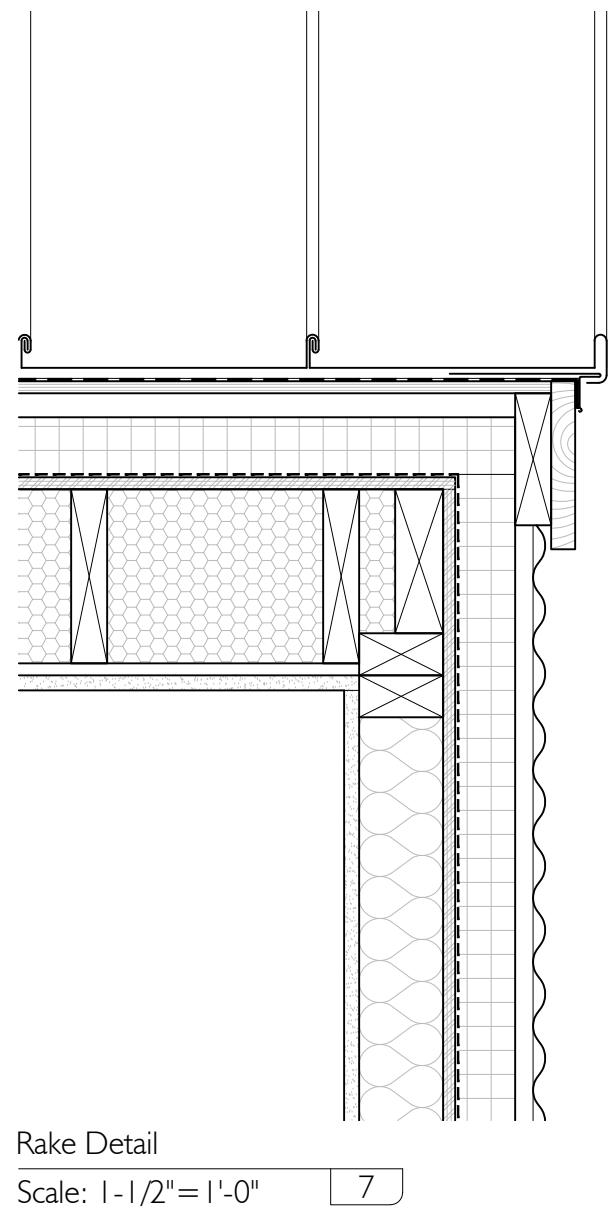
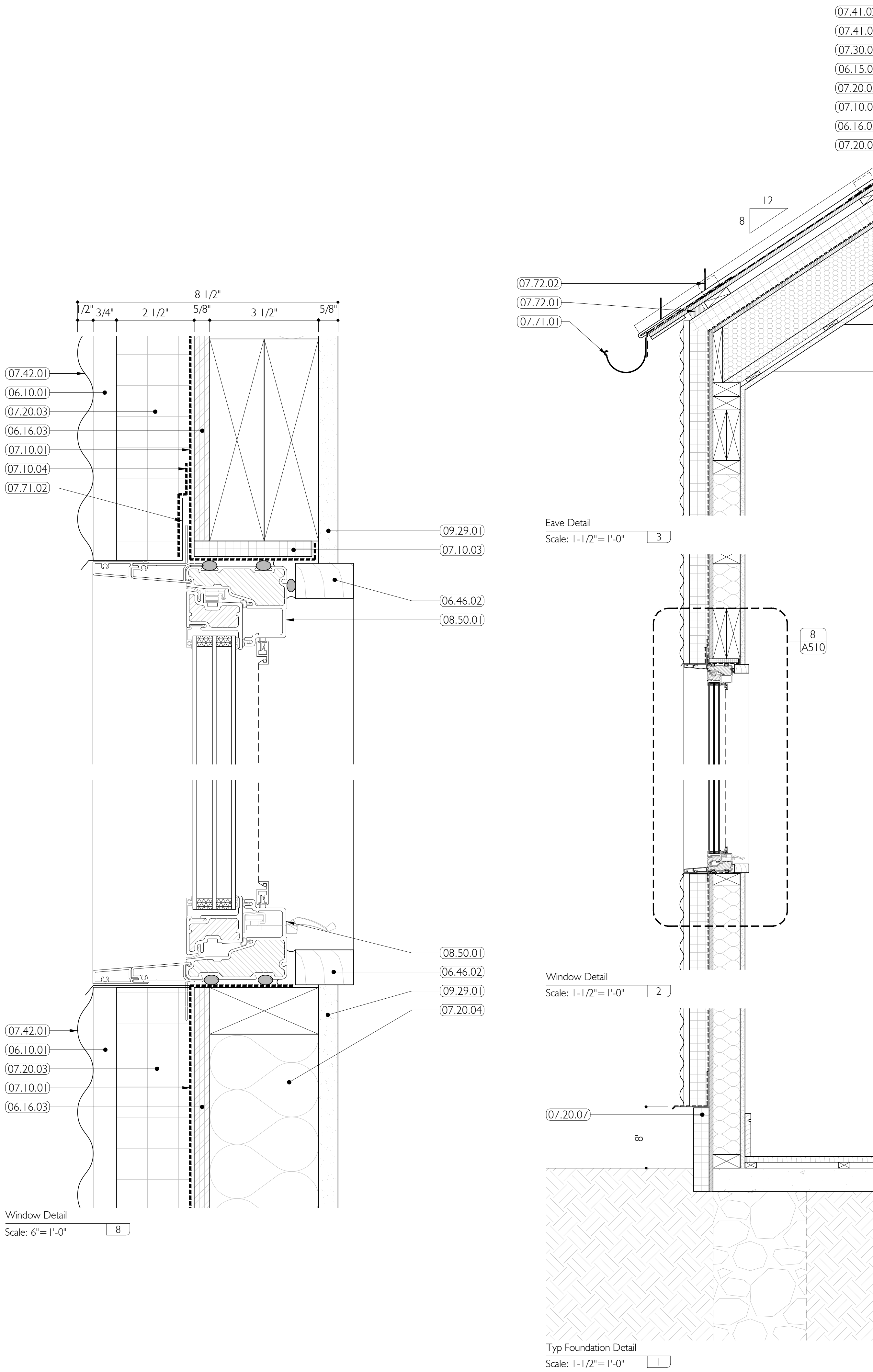
Stables
10 Marks Road
Westport NY 12993

A-501

EXTERIOR WALL SECTIONS

SEAL | SIGNATURE:





- KEY NOTES**
- 05.19.01 canopy tension rod assembly
 - 06.10.01 1x3 pressure treated lumber battens
 - 06.10.03 2x rough carpentry (no. 1 or better)
 - 06.15.01 roof decking
 - 06.16.03 exterior-grade 5/8" CDX plywood sheathing
 - 06.46.02 1x4 wood casing
 - 07.10.01 Pro Clima Intello X: variable-permeability mesh-reinforced "smart" membrane air/weather barrier
 - 07.10.02 Tescon Vana: vapor-permeable sealing tape
 - 07.10.04 Pro Clima Contega Solido Exo-D: exterior window sealing tape
 - 07.20.01 Dry installed dense-packed cellulose insulation (R-3.8/inch minimum)
 - 07.20.03 Roxul Comfortboard 80: mineral wool dense batts (R-4.2/inch minimum)
 - 07.20.04 Roxul Comfortbatt: mineral wool batts (R-14 minimum)
 - 07.20.07 Styro rigid insulation board with cementitious coating
 - 07.30.01 (2) layers #15 roofing felt, staggered seams, mechanically fastened
 - 07.41.01 Pac Clad Tite-Loc: standing seam metal roof ridge vent flashing with Z closures
 - 07.42.01 Pac Clad 1/2" corrugated metal wall panel
 - 07.71.01 seamless aluminum 6" half round, Kynar finish
 - 07.71.02 Kynar painted aluminum drip edges + flashing
 - 07.72.01 Cor-A-Vent soffit and siding vent
 - 07.72.02 metal snow guard
 - 08.11.01 fiberglass foam-filled entry door
 - 08.50.01 fiberglass foam-filled windows w/ triple pane
 - 09.29.01 5/8" interior GWB

ISSUES:

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ESSEX COUNTY FARMWORKER HOUSING RENOVATION

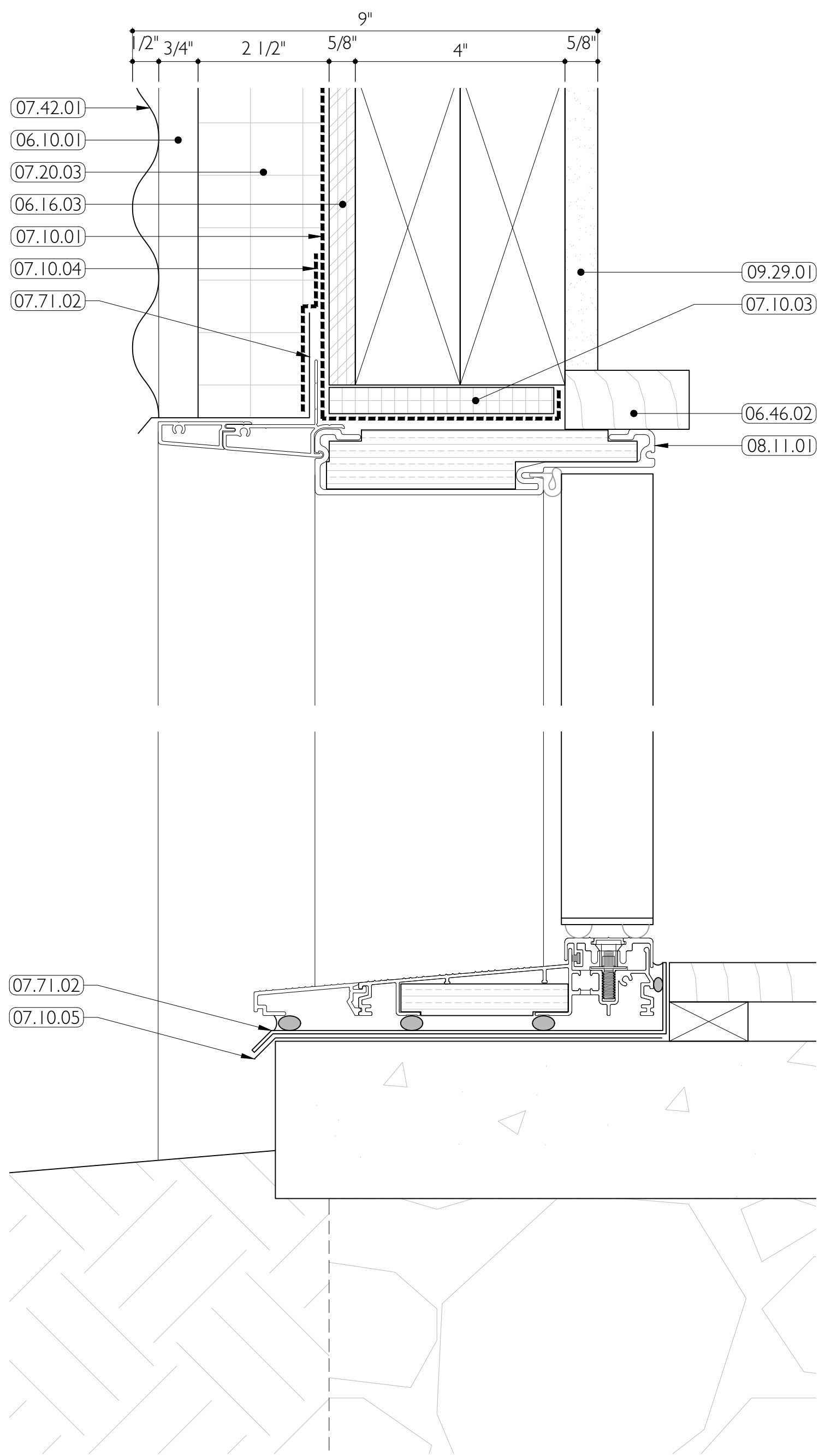
Stables
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Westport NY 12993

A-510

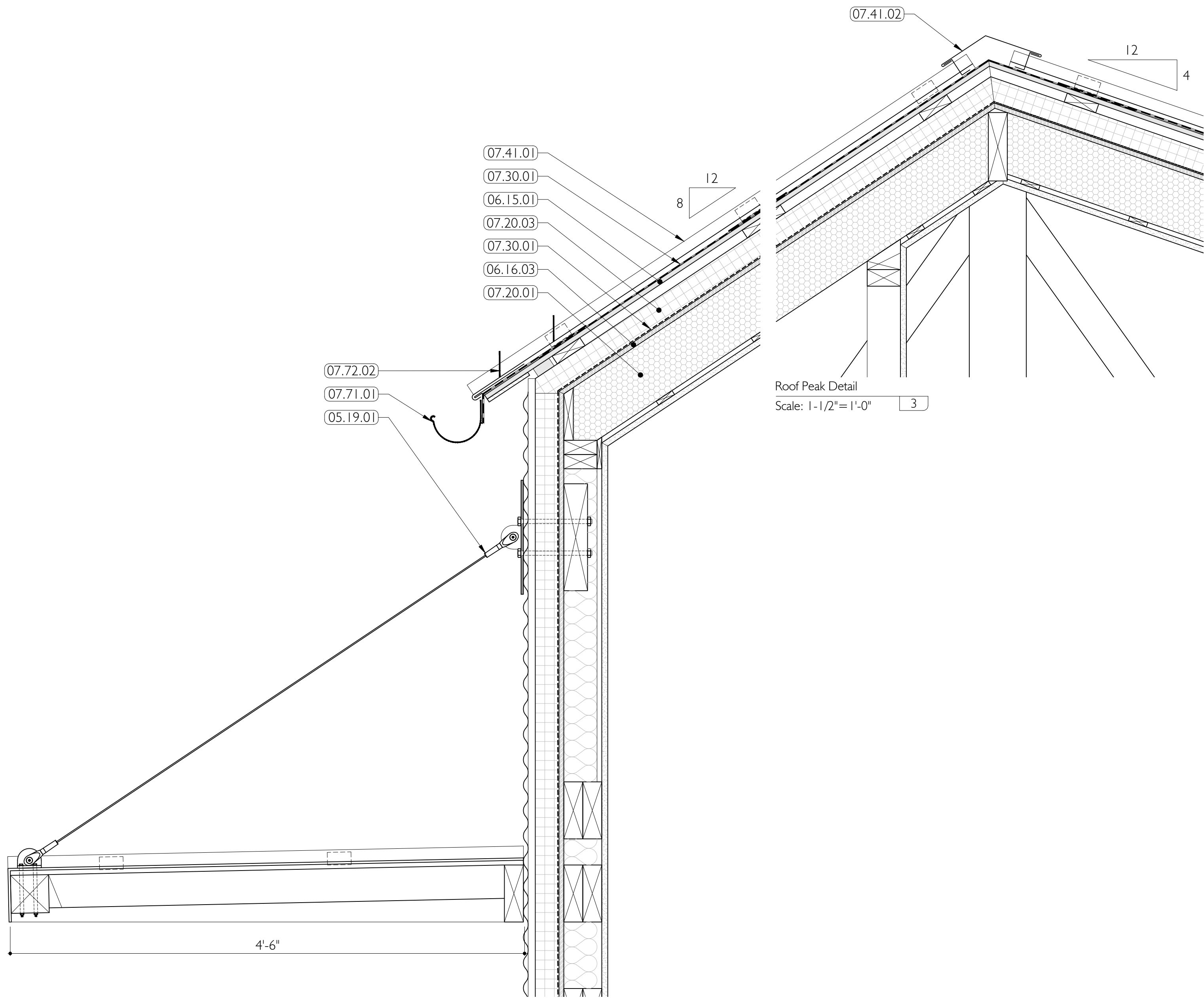
EXTERIOR WALL DETAILS

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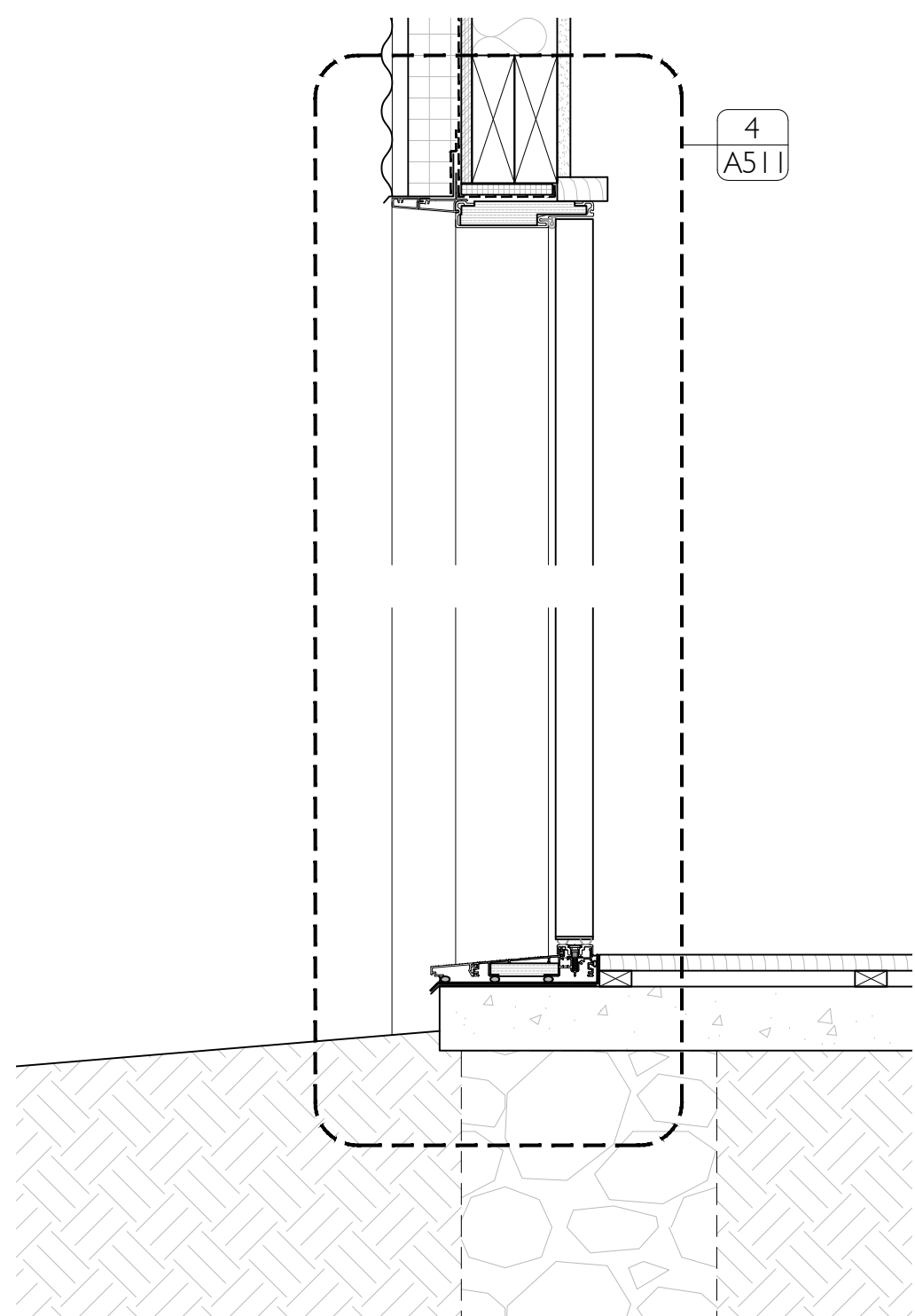




Door Detail
Scale: 6"= 1'-0" 4



Canopy Detail
Scale: 1-1/2"= 1'-0" 2



Entry Door Detail
Scale: 1-1/2"= 1'-0" 1

- KEY NOTES**
- 05.19.01 canopy tension rod assembly
 - 06.10.01 1x3 pressure treated lumber battens
 - 06.10.03 2x rough carpentry (no. 1 or better)
 - 06.15.01 roof decking
 - 06.16.03 exterior-grade 5/8" CDX plywood sheathing
 - 06.46.02 1x4 wood casing
 - 07.10.01 Pro Clima Intello X: variable-permeability mesh-reinforced "smart" membrane air/weather barrier
 - 07.10.02 Tescon Vana: vapor-permeable sealing tape
 - 07.10.04 Pro Clima Contega Solido Exo-D: exterior window sealing tape
 - 07.20.01 Dry installed dense-packed cellulose insulation (R-3.8/inch minimum)
 - 07.20.03 Roxul Comfortboard 80: mineral wool dense batts (R-4.2/inch minimum)
 - 07.20.04 Roxul Comfortbatt: mineral wool batts (R-14 minimum)
 - 07.20.07 Styro rigid insulation board with cementitious coating
 - 07.30.01 (2) layers #15 roofing felt, staggered seams, mechanically fastened
 - 07.41.01 Pac Clad Tite-Loc: standing seam metal roof
 - 07.41.02 ridge vent flashing with Z closures
 - 07.42.01 Pac Clad 1/2" corrugated metal wall panel
 - 07.71.01 seamless aluminum 6" half round, Kynar finish
 - 07.71.02 Kynar painted aluminum drip edges + flashing
 - 07.72.01 Cor-A-Vent soffit and siding vent
 - 07.72.02 metal snow guard
 - 08.11.01 fiberglass foam-filled entry door
 - 08.50.01 fiberglass foam-filled windows w/ triple pane
 - 09.29.01 5/8" interior GWB

ISSUES:

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HOUSING RENOVATION

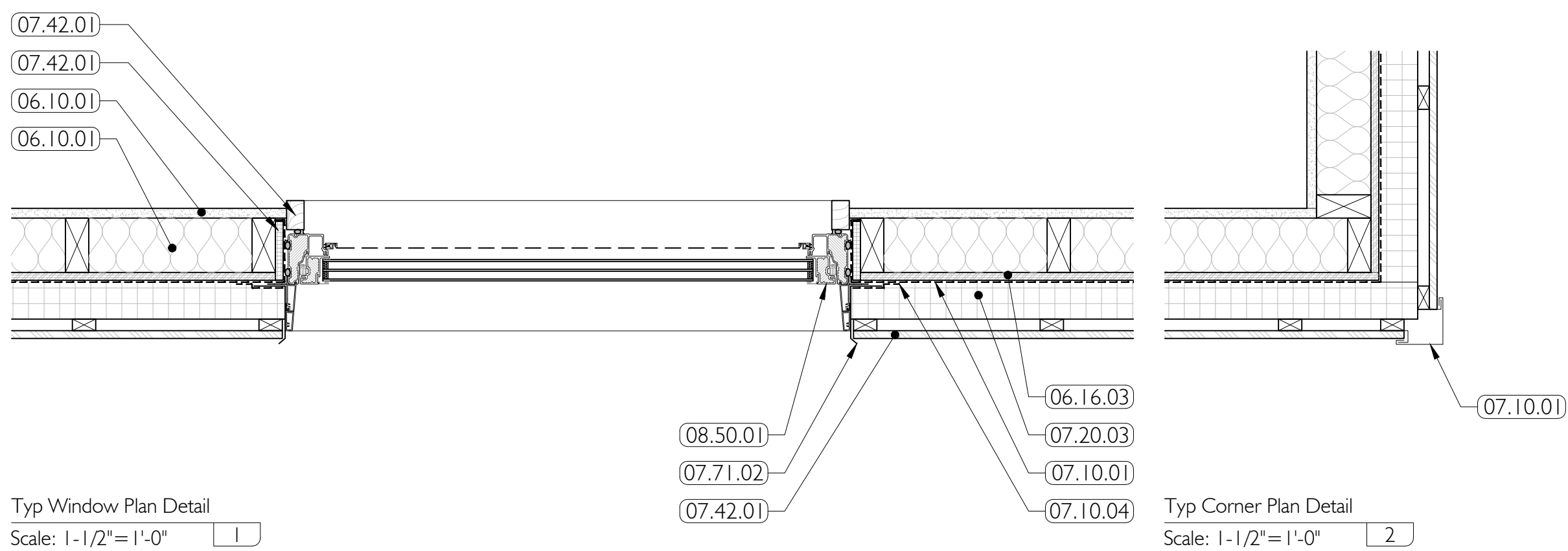
Stables
10 Marks Road
Westport NY 12993

A-511

EXTERIOR WALL DETAILS

SEAL | SIGNATURE:





- KEY NOTES**
- 05.19.01 canopy tension rod assembly
 - 06.10.01 1x3 pressure treated lumber battens
 - 06.10.03 2x rough carpentry (no. 1 or better)
 - 06.15.01 roof decking
 - 06.16.03 exterior-grade 5/8" CDX plywood sheathing
 - 06.46.02 1x4 wood casing
 - 07.01.01 PAC CLAD PA-801 Outside Corner Flashing w/ "J" Closures
 - 07.10.01 Pro Clima Intello X: variable-permeability mesh-reinforced "smart" membrane air/weather barrier
 - 07.10.02 Tescon Vana: vapor-permeable sealing tape
 - 07.10.04 Pro Clima Contega Solido Exo-D: exterior window sealing tape
 - 07.20.01 Dry installed dense-packed cellulose insulation (R-3.8/inch minimum)
 - 07.20.03 Roxul Comfortboard 80: mineral wool dense batts (R-4.2/inch minimum)
 - 07.20.04 Roxul Comfortbatt: mineral wool batts (R-14 minimum)
 - 07.20.07 Styro rigid insulation board with cementitious coating
 - 07.30.01 (2) layers #15 roofing felt, staggered seams, mechanically fastened
 - 07.41.01 Pac Clad Tite-Loc: standing seam metal roof ridge vent flashing with Z closures
 - 07.41.02 Pac Clad 1/2" corrugated metal wall panel
 - 07.71.01 seamless aluminum 6" half round, Kynar finish
 - 07.71.02 Kynar painted aluminum drip edges + flashing
 - 07.72.01 Cor-A-Vent soffit and siding vent
 - 07.72.02 metal snow guard
 - 08.11.01 fiberglass foam-filled entry door
 - 08.50.01 fiberglass foam-filled windows w/ triple pane
 - 09.29.01 5/8" interior GWB

ISSUES:

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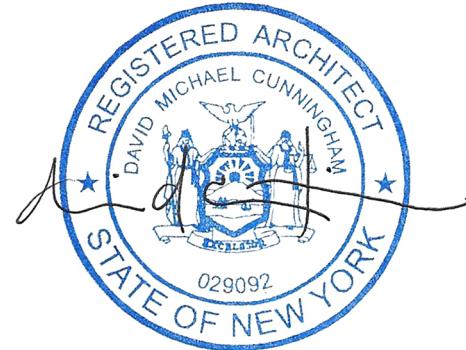
**ESSEX COUNTY FARMWORKER
HOUSING RENOVATION**

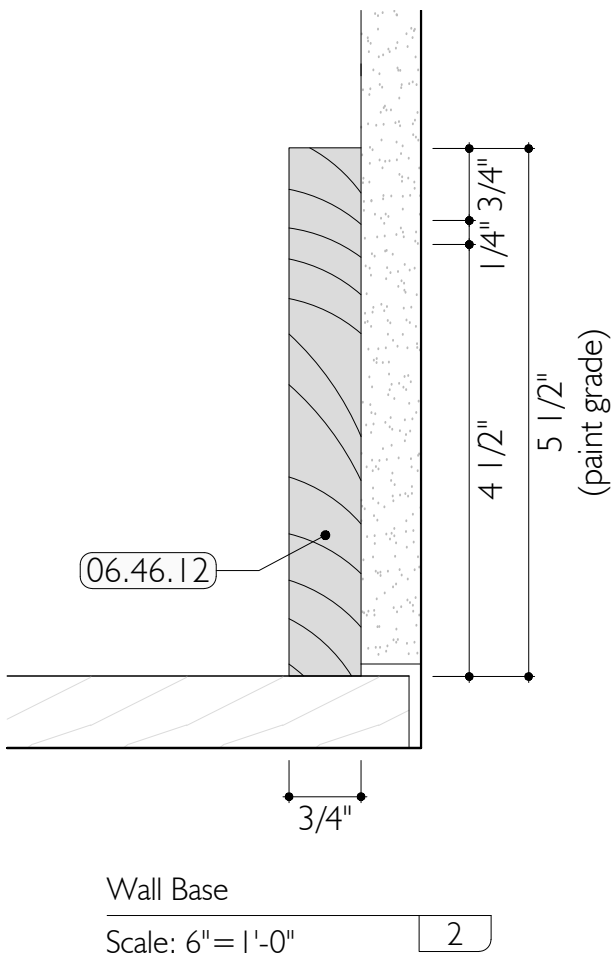
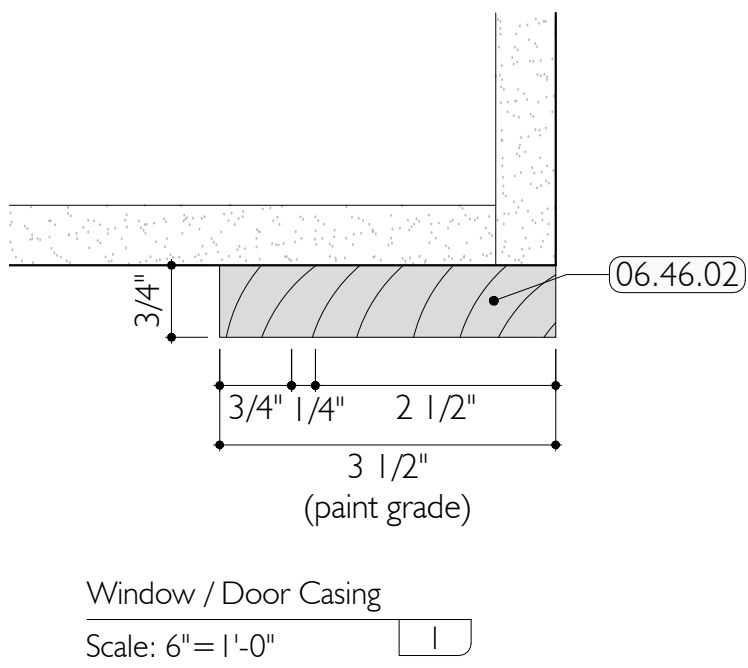
Stables
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Westport NY 12993

A-520

PLAN DETAILS

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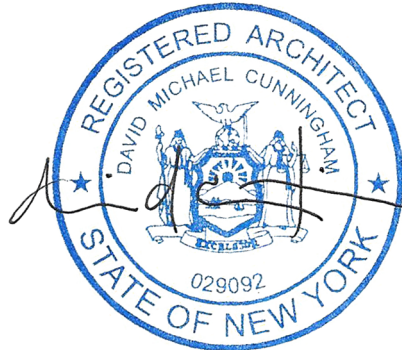
- KEY NOTES**
- 06.46.02 1 x 4 wood casing, clear pine flat stock, polyurethane finish (refer to A-550 for Casing Details)
 - 06.46.12 1 x 6 wood wall base, clear pine flat stock, poly finish (refer to A-550 for Wall Base Details)

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**ESSEX COUNTY FARMWORKER
HOUSING RENOVATION**
Stables
10 Marks Road
Westport NY 12993

A-550

INTERIOR DETAILS
SEAL | SIGNATURE:



PLAN DIMENSION 5" 4 3/4"		
CLNG		<ul style="list-style-type: none">BOTTOM OF STRUCTURE2 x 4 WOOD TOP PLATEACOUSTIC CAULK BOTH SIDES
PLAN		<ul style="list-style-type: none">3/8" G.W.B. / TAPE JOINTS2 x 4 WOOD STUDS @ 16" O.C3/8" G.W.B. / TAPE JOINTS
FLOOR		<ul style="list-style-type: none">2 x 4 SOLE PLATEACOUSTIC CAULK BOTH SIDESTOP OF STRUCTURE
STANDARD PARTITION NON-RATED NON-LOAD- BEARING	A.0	TYPICAL
	A.1	<ul style="list-style-type: none">5/8" MOISTURE / MILDEW / MOLD RESISTANT BOARD, SUBSTITUTE ONE LAYER ONE SIDEOPTIONAL THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)
	A.2	<ul style="list-style-type: none">5/8" CEMENTITIOUS BACKER UNIT SUBSTITUTE ONE LAYER ONE SIDELIQUID APPLIED WATER PROOFING (DASHED LINES)THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)

PLAN DIMENSION 5" 4 3/4"		
CLNG		<ul style="list-style-type: none">BOTTOM OF STRUCTURE2 x 4 WOOD TOP PLATEACOUSTIC CAULK BOTH SIDES
PLAN		<ul style="list-style-type: none">3/8" SHEETROCK FIRECODE CORE PANELS, OR 3/8" SHEETROCK ULTRAUGHT PANELS FIRECODE X / TAPE JOINTS2 x 4 WOOD STUDS @ 16" O.CR-11 FIBERGLASS SOUND BAT3/8" SHEETROCK FIRECODE CORE PANELS, OR 3/8" SHEETROCK ULTRAUGHT PANELS FIRECODE X / TAPE JOINTS
FLOOR		<ul style="list-style-type: none">2 x 4 SOLE PLATEACOUSTIC CAULK BOTH SIDESTOP OF STRUCTURE
STANDARD PARTITION 1-HOUR-RATED LOAD-BEARING	B.0	TYPICAL
	B.1	<ul style="list-style-type: none">5/8" MOISTURE / MILDEW / MOLD RESISTANT BOARD, SUBSTITUTE ONE LAYER ONE SIDEOPTIONAL THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)

PLAN DIMENSION 5" 5"		
CLNG		<ul style="list-style-type: none">BOTTOM OF STRUCTURE2 x 4 WOOD TOP PLATEACOUSTIC CAULK BOTH SIDES
PLAN		<ul style="list-style-type: none">3/8" SHEETROCK FIRECODE CORE GYPSUM PANELS, ONE SIDE2 x 4 WOOD STUDS @ 16" O.C3-1/2" THERMAFIBER SAFB1/2" OR 3/8" DUROCK CEMENT BOARD / TAPE JOINTSLIQUID APPLIED WATER PROOFING (DASHED LINES)1/2" CERAMIC TILE, GROUT JOINTS
FLOOR		<ul style="list-style-type: none">2 x 4 SOLE PLATEACOUSTIC CAULK BOTH SIDESTOP OF STRUCTURE
STANDARD PARTITION 1-HOUR-RATED LOAD-BEARING	B.2	CEMENT BOARD / TILE ONE SIDE STC 40
	B.3	CEMENT BOARD / TILE BOTH SIDES STC 37 <ul style="list-style-type: none">1/2" OR 3/8" DUROCK CEMENT BOARD SUBSTITUTE FOR SHEETROCKLIQUID APPLIED WATER PROOFING (DASHED LINES)OPTIONAL THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)

PLAN DIMENSION 6" 6"		
CLNG		<ul style="list-style-type: none">BOTTOM OF STRUCTURE2 x 4 WOOD TOP PLATEACOUSTIC CAULK BOTH SIDES
PLAN		<ul style="list-style-type: none">(2) 3/8" SHEETROCK FIRECODE CORE GYPSUM PANELS, OR SHEETROCK WATER-RESISTANT FIRECODE CORE GYPSUM PANELS, OR FIBEROCK / TAPE JOINTS2 x 4 WOOD STUDS @ 16" O.C2" MINERAL WOOL BAT(2) 3/8" SHEETROCK FIRECODE CORE GYPSUM PANELS, OR SHEETROCK WATER-RESISTANT FIRECODE CORE GYPSUM PANELS OR FIBEROCK / TAPE JOINTS
FLOOR		<ul style="list-style-type: none">2 x 4 SOLE PLATEACOUSTIC CAULK BOTH SIDESTOP OF STRUCTURE
STANDARD PARTITION 2-HOUR-RATED LOAD-BEARING	C.0	TYPICAL
	C.1	<ul style="list-style-type: none">5/8" MOISTURE / MILDEW / MOLD RESISTANT BOARDSUBSTITUTE ONE LAYER ONE SIDEOPTIONAL THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)
	C.2	(DASHED LINES) <ul style="list-style-type: none">5/8" CEMENTITIOUS BACKER UNITS ADD ONE LAYER ONE SIDELIQUID APPLIED WATER PROOFINGTHINSET MORTAR / TILE PER SCHEDULE

PLAN DIMENSION 2" 2 1/8"		
CLNG		<ul style="list-style-type: none">BOTTOM OF STRUCTUREAIR BARRIER TO TERMINATE AT STRUCTURE2 x 3 FURRING STRIPACOUSTIC CAULK BOTH SIDES
PLAN		<ul style="list-style-type: none">EXISTING EXTERIOR WOOD STUD WALL AND INSULATION TO REMAIN (SHOWN IN GREY)AIR BARRIER2 x 3 HORIZONTAL FURRING STRIPS @ 16" O.C3/8" G.W.B. / TAPE JOINTS
FLOOR		<ul style="list-style-type: none">ACOUSTIC CAULK BOTH SIDES2 x 3 FURRING STRIPAIR BARRIER TO TERMINATE AT STRUCTURETOP OF STRUCTURE
AIR BARRIER PARTITION NON-RATED NON-LOAD- BEARING	Q.0	TYPICAL
	Q.1	<ul style="list-style-type: none">5/8" MOISTURE / MILDEW / MOLD RESISTANT BOARD, SUBSTITUTE FOR G.W.B.OPTIONAL THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)
	Q.2	<ul style="list-style-type: none">5/8" CEMENTITIOUS BACKER UNIT SUBSTITUTE FOR G.W.B.LIQUID APPLIED WATER PROOFING (DASHED LINES)THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)

PLAN DIMENSION 1" 5/8"		
CLNG		<ul style="list-style-type: none">BOTTOM OF STRUCTUREAIR BARRIER TO TERMINATE AT STRUCTUREACOUSTIC CAULK BOTH SIDES
PLAN		<ul style="list-style-type: none">EXISTING EXTERIOR WOOD STUD WALL AND INSULATION TO REMAIN (SHOWN IN GREY)AIR BARRIER3/8" G.W.B. / TAPE JOINTS
FLOOR		<ul style="list-style-type: none">ACOUSTIC CAULK BOTH SIDESAIR BARRIER TO TERMINATE AT STRUCTURETOP OF STRUCTURE
AIR BARRIER PARTITION NON-RATED NON-LOAD- BEARING	R.0	TYPICAL, LESS FURRING STRIPS / SERVICE CAVITY
	R.1	<ul style="list-style-type: none">5/8" MOISTURE / MILDEW / MOLD RESISTANT BOARD, SUBSTITUTE FOR G.W.B.OPTIONAL THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)
	R.2	<ul style="list-style-type: none">5/8" CEMENTITIOUS BACKER UNIT SUBSTITUTE FOR G.W.B.LIQUID APPLIED WATER PROOFING (DASHED LINES)THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)

PLAN DIMENSION 1'-2" 6"		
CLNG		<ul style="list-style-type: none">BOTTOM OF STRUCTURE2 x 4 TOP PLATE (STUDS ON SEPARATE TOP PLATES)ACOUSTIC CAULK BOTH SIDES
PLAN		<ul style="list-style-type: none">3/8" SHEETROCK FIRECODE CORE GYPSUM PANELS / TAPE JOINTS3 1/2" GLASS FIBER INSULATION2 x 4 WOOD STUDS @ 16" O.C6" PIPE SPACE2 x 4 WOOD STUDS @ 16" O.C3 1/2" GLASS FIBER INSULATION3/8" SHEETROCK FIRECODE CORE GYPSUM PANELS / TAPE JOINTS
FLOOR		<ul style="list-style-type: none">2 x 4 SOLE PLATE (STUDS ON SEPARATE SOLE PLATES)ACOUSTIC CAULK BOTH SIDESTOP OF STRUCTURE
CHASE PARTITION 1-HOUR-RATED LOAD-BEARING	F.0	TYPICAL
	F.1	<ul style="list-style-type: none">5/8" MOISTURE / MILDEW / MOLD RESISTANT BOARD, SUBSTITUTE ONE LAYER ONE SIDEOPTIONAL THINSET MORTAR / TILE PER SCHEDULE (DASHED LINES)
	F.2	(DASHED LINES) <ul style="list-style-type: none">5/8" CEMENTITIOUS BACKER UNITS ADD ONE LAYER ONE SIDELIQUID APPLIED WATER PROOFINGTHINSET MORTAR / TILE PER SCHEDULE

FLOOR CLNG 11' 3 1/8"		
STANDARD FLOOR / CEILING 1-HOUR-RATED	X.0	<ul style="list-style-type: none">3/4" WOOD FLOOR AND FINISH PER SCHEDULE3/4" PLYWOOD SUBFLOOR2 x 10 WOOD JOIST @ 16" O.C.3/8" SHEETROCK FIRECODE C CORE GYPSUM PANELS AT CEILING
	UL DES L512	

FLOOR CLNG 11' 1"		
STANDARD FLOOR / CEILING 2-HOUR-RATED	Y.0	<ul style="list-style-type: none">3/4" WOOD FLOOR AND FINISH PER SCHEDULE3/4" PLYWOOD SUBFLOOR2 x 10 WOOD JOIST @ 16" O.C.RC-1 CHANNEL OR EQUIVALENT SPACED 24" O.C. PERPENDICULAR TO JOISTS(2) 3/8" SHEETROCK FIRECODE C CORE GYPSUM PANELS AT CEILING, TAPE JOINTS
	UL DES L511	

ISSUES:

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ESSEX COUNTY FARMWORKER
HOUSING RENOVATION
Stables
10 Marks Road
Westport NY 12993
A-590
PARTITION TYPES
SEAL | SIGNATURE:



STABLES

SCHEDULE NOTES

- All keynotes to be as specified (or approved equal). See project manual for additional information.
- All exterior, interior, and bathroom paint to be Benjamin Moore Aura: Exterior, Interior, and Bath + Spa (respectively).

PLUMBING SCHEDULE

KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
22.41.01	Lavatory undermount sink	American Standard	0614.000	white	18" W x 12" L x 6 7/8" D	1	
22.41.02	Lavatory wall mount sink	American Standard	9024.001EC	white	20" W x 18 1/2" L x 5" D	1	ADA
22.41.04	Lavatory faucet	American Standard	7105121	polished chrome	7" H	2	WaterSense, ADA
22.41.05	Bathtub	American Standard	2946.102 or 2946.202	white	60" L x 32" W x 18" H	2	
22.41.06	Bathtub surround	American Standard	2946.BW	white	58" H	2	
22.41.08	Bathtub spout	American Standard	8888.022.002	polished chrome		2	
22.41.09	Shower system	American Standard	TU662221.002	polished chrome		2	slidebar with handshower system
22.41.10	Shower rough	American Standard	RU101SS			2	
22.41.11	Toilet	American Standard	2988.101	white		2	WaterSense, ADA
22.41.12	Kitchen undermount sink	American Standard	185B6252211.075	stainless steel	28" W x 22" L x 6" D	2	ADA, 29" min cabinet required
22.41.13	Kitchen faucet	American Standard	4931.300	polished chrome	17-6/16" H	2	ADA, single deck mount
22.41.14	Washing machine	General Electric	GPW148SSMWW	white	23 7/8" W x 25 3/8" D x 33 1/4" H	1	stackable with dryer (see plumbing schedule)

EQUIPMENT SCHEDULE

KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
11.31.01	electric dryer	General Electric	GFT14ESSMWW	white	23 7/8" W x 24 1/2" D x 33 1/4" H	1	stackable with washer (see plumbing schedule)
11.31.02	electric washer/dryer combo	General Electric	GFT14ESSMWW	white	23 7/8" W x 24 1/2" D x 33 1/4" H	1	

BATHROOM SCHEDULE

KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
08.83.01	Mirror					1	surface mount
08.83.02	Mirrored medicine cabinet	Kohler	K-99002	aluminum	20" W x 30" H	1	recessed, soft close hinges
12.35.02	Bathroom vanity cabinet	KOB Kitchen and Bath	Stock cabinets	Gray Shaker	30" W x 33" H x 21"D	1	soft close hinges
12.37.01	Cabinet hardware	KOB Kitchen and Bath		polished chrome	4" pulls		
12.36.01	Countertop	IceStone	QuartzStone	snowflake	1" thick		
10.28.01	Shower curtain rod	Kohler	K-9351-S	polished steel	20" W x 30" H	2	
10.28.02	Shower curtain					2	
10.28.03	Toilet paper holder	Kohler	K-27292-CP	polished chrome		2	
10.28.04	Towel bar, 24"	Kohler	K-27287-CP	polished chrome	24"	4	
10.28.05	Robe hook	Kohler	K-27290-CP	polished chrome	20" W x 30" H	2	
10.28.06	Grab bar (Apt 1 only)	Kohler Contemporary	model varies per size	polished chrome	sizes vary, see A-410	8	provide blocking as indicated on A-410
09.30.01	Floor tile (Apt 1)	Daltile Keystones	2" hexagon mosaic	D452	2"	28 sf	match grout to tile, see A-410
	Floor tile (Apt 4)					26 sf	match grout to tile, see A-420
09.30.02	Wall tile (Apt 1)	Daltile Linear	2x8, 4x8, S4289MOD	0190 (1)	2 x 8, 4 x 8, 2 x 8 bullnose	17 sf	stacked bond, match grout to tile, see A-410
	Wall tile (Apt 4)					13 sf	stacked bond, match grout to tile, see A-420
09.30.03	Base tile (Apt 1)	Daltile Linear	S4489MOD	0190 (1)	4 x 8 bullnose	7 lf	match grout to tile, see A-410
	Base tile (Apt 4)					11 lf	match grout to tile, see A-420

KITCHEN SCHEDULE

KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
12.35.01	Kitchen upper cabinets	KOB Kitchen and Bath	Stock cabinets	Gray Shaker			soft close hinges and runners
	Kitchen base cabinets	KOB Kitchen and Bath	Stock cabinets	Gray Shaker			soft close hinges and runners
12.37.01	Cabinet hardware	KOB Kitchen and Bath		polished chrome	4" pulls		
12.36.01	Countertop	IceStone	QuartzStone	snowflake	1" thick		
11.30.01	Range	General Electric	PHS930YPFS	stainless steel	30" W	2	slide in, induction range
11.30.02	Refrigerator	General Electric	GTE19J5NRSS	stainless steel	30" W	2	
11.30.03	Microwave	General Electric	JVM6172DKBB	stainless steel	30" W	2	microwave over range, vented to exterior
09.30.02	Wall tile (Apt 1)	Daltile Linear	2x8	0190 (1)	2 x 8	18 sf	stacked bond, match grout to tile, see A-410
	Wall tile (Apt 4)					18 sf	stacked bond, match grout to tile, see A-420

FURNITURE SCHEDULE

KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
12.58.02	Bed Frame - Full XL	Ecologic: Academy	40-45480	rubberwood, steel	60"W x 80"D	4	Headboard and Footboard, Steel Tubular Platform
12.58.04	Mattress - Full XL	Ecologic	99-VF-IS-5480	nylon	60"W x 80"L x 8"H	4	Nylon Inverted Seam
12.58.07	Sofa	Ecologic: Collins	00-111003-2		80"W x 33"D x 29"H	2	3-Seat
12.58.08	Sofa Chair	Ecologic: Pacifica	00-111001-2	engineered hardwood	36"W x 33"D x 29"H	2	
12.58.09	Coffee Table	Ecologic: Pacifica	85-66440-T	engineered hardwood	40"W x 20"D x 18"H	2	
12.58.10	Dining Table	Savoy	5090	oak	60"W x 36"D x 30"H	2	
12.58.11	Chair	Savoy: Metro Chair	917WSB	oak	19" x 22" x 33"	8	
10.57.01	Closet rod						provide blocking as required

ISSUES:

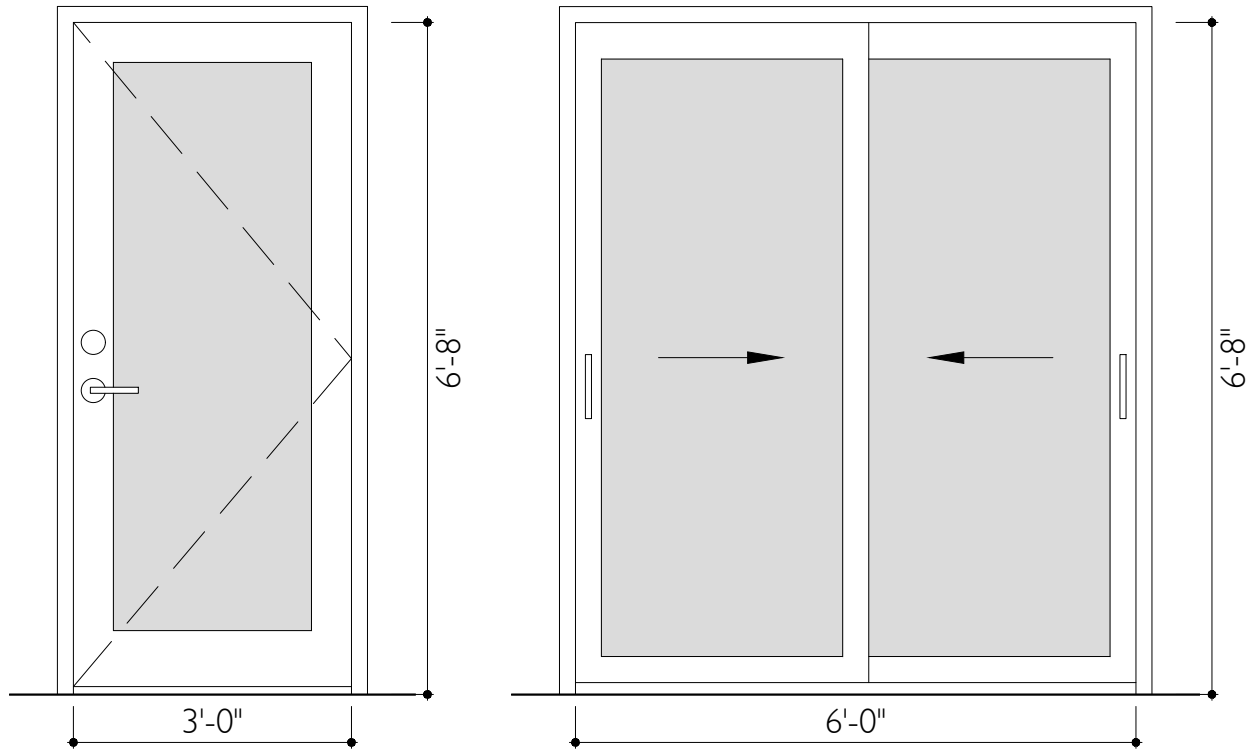
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A-600
SCHEDULES
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STABLES

SCHEDULE NOTES

- All keynotes to be as specified (or approved equal). See project manual for additional information.



TYPE A
glazed entry door

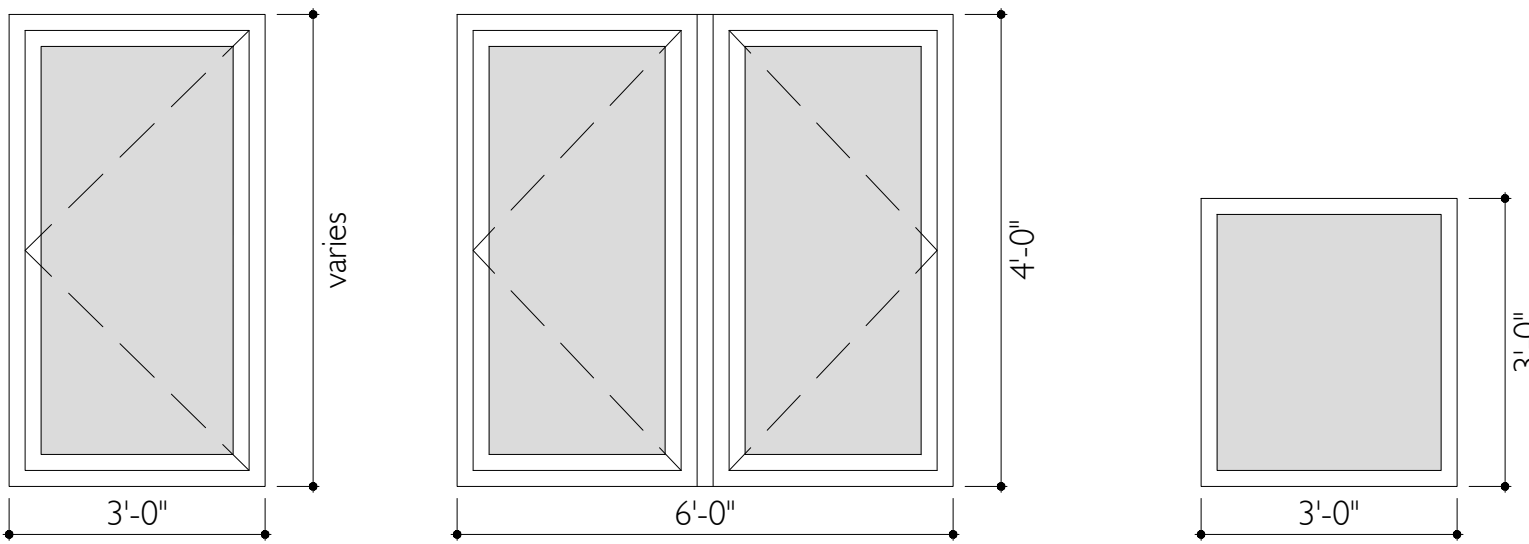
TYPE B
glazed sliding door

Door Types

Scale: 1/2"= 1'-0"



EXTERIOR DOOR SCHEDULE												
BASIC			DESCRIPTION	DIMENSIONS			MATERIAL	FRAME	FINISH	MANUFACTURER	MODEL	HARDWARE SET #
#	type	quantity		thickness	width	height						
101	A	1	apt 1 entry	1 3/4"	3'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	1
102	B	1	apt 1 deck	1 3/4"	6'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
103	B	1	apt 1 deck	1 3/4"	6'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
104	B	1	apt 1 deck	1 3/4"	6'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
105	A	1	apt 2 entry	1 3/4"	3'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
106	A	1	apt 3 entry	1 3/4"	3'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
107	A	1	apt 4 entry	1 3/4"	3'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
201	B	1	apt 4 deck	1 3/4"	6'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
202	B	1	apt 4 deck	1 3/4"	6'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
203	B	1	apt 4 deck	1 3/4"	6'-0"	6'-8"	glass	fiberglass	integral	Fibertec	flush fiberglass entry door with glazed full light	
1. All exterior doors must meet the applicable building and energy codes. 2. All exterior doors must be NFRC rated. 3. All hardware shall be Omnia levers with satin chrome finish. 4. General contractor to provide door shop drawings and schedule for review and approval by architect and owner prior to ordering.												



TYPE A
single casement

TYPE B
double casement

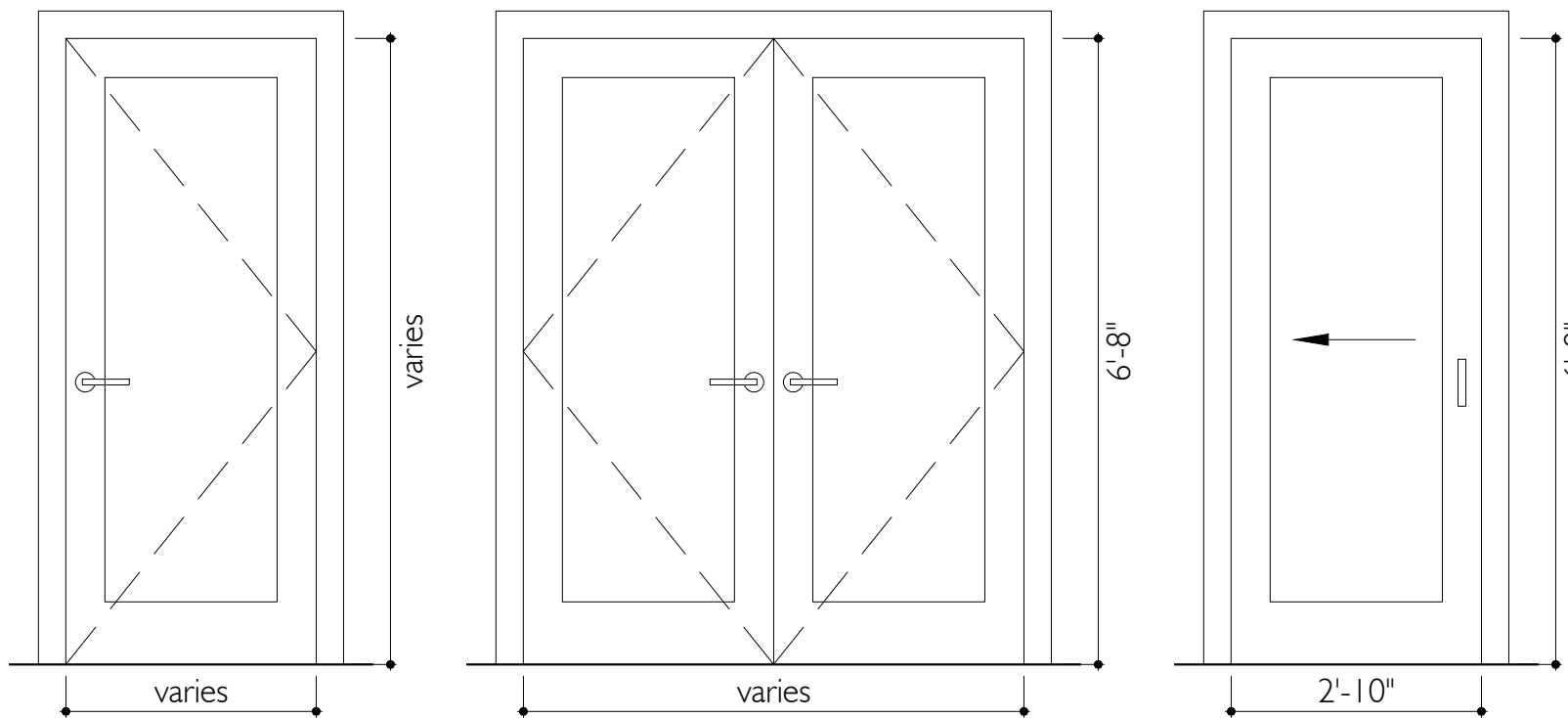
TYPE C
skylight

Window Types

Scale: 1/2"= 1'-0"



WINDOW SCHEDULE									
BASIC		FUNCTION	DIMENSIONS		HARDWARE	MANUFACTURER	MODEL	GLAZING	ACCESSORIES
#	TYPE		WIDTH	HEIGHT					
101	A	single casement	3'-0"	4'-0"	lock	Fibertec	300 series	Low-E triple glazed	foam-filled fiberglass frame, weather stripping, insect screen
102	A	single casement	3'-0"	4'-0"	lock	Fibertec	300 series	Low-E triple glazed	foam-filled fiberglass frame, weather stripping, insect screen
103	B	double casement	6'-0"	4'-0"	lock	Fibertec	300 series	Low-E triple glazed	foam-filled fiberglass frame, weather stripping, insect screen
104	B	double casement	6'-0"	4'-0"	lock	Fibertec	300 series	Low-E triple glazed	foam-filled fiberglass frame, weather stripping, insect screen
201	A	single casement	3'-0"	5'-0"	lock	Fibertec	300 series	Low-E triple glazed	foam-filled fiberglass frame, weather stripping, insect screen
202	A	single casement	3'-0"	5'-0"	lock	Fibertec	300 series	Low-E triple glazed	foam-filled fiberglass frame, weather stripping, insect screen
203	A	single casement	3'-0"	5'-0"	lock	Fibertec	300 series	Low-E triple glazed	foam-filled fiberglass frame, weather stripping, insect screen
204	A	single casement	3'-0"	5'-0"	lock	Fibertec	300 series	Low-E triple glazed	foam-filled fiberglass frame, weather stripping, insect screen
301	C	skylight	3'-0"	3'-0"	N/A	Velux	FCM		
1. All windows and skylights must meet the applicable building and energy codes. 2. All windows and skylights must be NFRC rated. 3. General contractor to verify all rough opening dimensions in field. 4. General contractor to provide window shop drawings and schedule for review and approval by architect and owner prior to ordering.									



TYPE C.1
interior door

TYPE C.2
interior door

TYPE D
interior pocket door

Door Types

Scale: 1/2"= 1'-0"



INTERIOR DOOR SCHEDULE												
BASIC			DESCRIPTION	DIMENSIONS			MATERIAL	FRAME	FINISH	MANUFACTURER	MODEL	HARDWARE SET #
#	type	quantity		thickness	width	height						
108	C.2	1	utility closet	1 3/8"	4'-8"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and louvered panel	3
109	C.1	1	bedroom	1 3/8"	2'-10"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	2
110	C.2	1	closet	1 3/8"	4'-8"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	3
111	C.1	1	bathroom	1 3/8"	2'-10"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	2
112	C.1	1	bedroom	1 3/8"	2'-10"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	2
113	C.2	1	closet	1 3/8"	4'-8"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	3
204	C.2	1	utility closet	1 3/8"	5'-8"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and louvered panel	3
205	C.1	1	bedroom	1 3/8"	2'-10"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	2
206	C.1	1	closet	1 3/8"	2'-0"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	4
207	C.1	1	storage	1 3/8"	2'-0"	3'-0"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	4
208	D	1	bathroom	1 3/8"	2'-10"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	2
209	C.1	1	bedroom	1 3/8"	2'-10"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	2
210	C.2	1	closet	1 3/8"	4'-0"	6'-8"	wood	wood	paint grade	TruSile	TS1000 with square sticking and flat panel	3
1. Interior doors to be TruSile solid wood doors or approved equal. 2. All hardware shall be Omnia levers with satin chrome finish. Provide privacy locks at all bathrooms and bedrooms. 3. General contractor to provide door shop drawings and schedule for review and approval by architect and owner prior to ordering.												

HARDWARE SETS SCHEDULE				
QTY	DESCRIPTION	MANUFACTURER	MODEL	FINISH
SET #1: EXTERIOR ENTRY DOOR				
3	Hinge	per door manufacturer		satin chrome
1	Lockset / Entry Hardware			
1	Faceplate / Strikeplate			
1	Weatherstrip Gasket			
1	Door Sweep			
1	Door Stop (half-dome)	Baldwin	4000	satin nickel
SET #2: BEDROOM / BATHROOM DOOR				
3	Hinges	Omnia	985BB/48TN	satin chrome
1	Privacy Lever		912MD/X234F.PR26D	
1	Faceplate / Strikeplate		1724	
1	Door Stop (half-dome)	Baldwin	4000	satin nickel
SET #3: CLOSET - DOUBLE DOOR				
6	Hinges	Omnia	985BB/48TN	satin chrome
2	Dummy Lever		912MD/R.SD15	
1	Magnetic Catch	Don-Jo	1724	
2	Door Stop (half-dome)	Baldwin	4000	satin nickel
SET #4: CLOSET - SINGLE DOOR				
3	Hinges	Omnia	985BB/48TN	satin chrome
1	Passage Lever		912MD/X234F.PA26D	
1	Faceplate / Strikeplate			
1	Door Stop (half-dome)	Baldwin	4000	satin nickel

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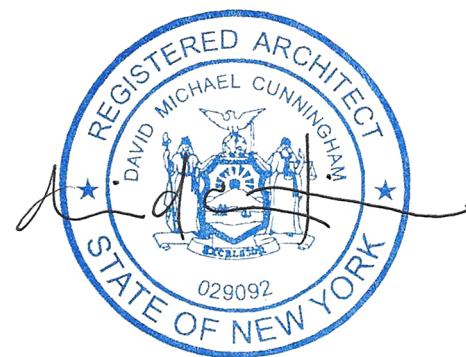
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















DOOR AND WINDOW SCHEDULES

SEAL | SIGNATURE:



STABLES

LEGEND

-  ceiling mounted light
-  recessed light
-  ceiling fan
-  wall mounted light
-  linear light
-  radiant flooring
-  duplex outlet
-  USB / outlet combo
-  quad outlet
-  floor outlet
-  switch
-  3 way switch
-  dimmer switch
-  electrical panel
-  smoke / CO detector
-  internet access point / data
-  intercom
-  thermostat
-  security camera
-  doorbell
-  exit sign

ABBREVIATIONS

- DN

down
- F

refrigerator
- GFI

ground fault interrupt
- R

range
- RD

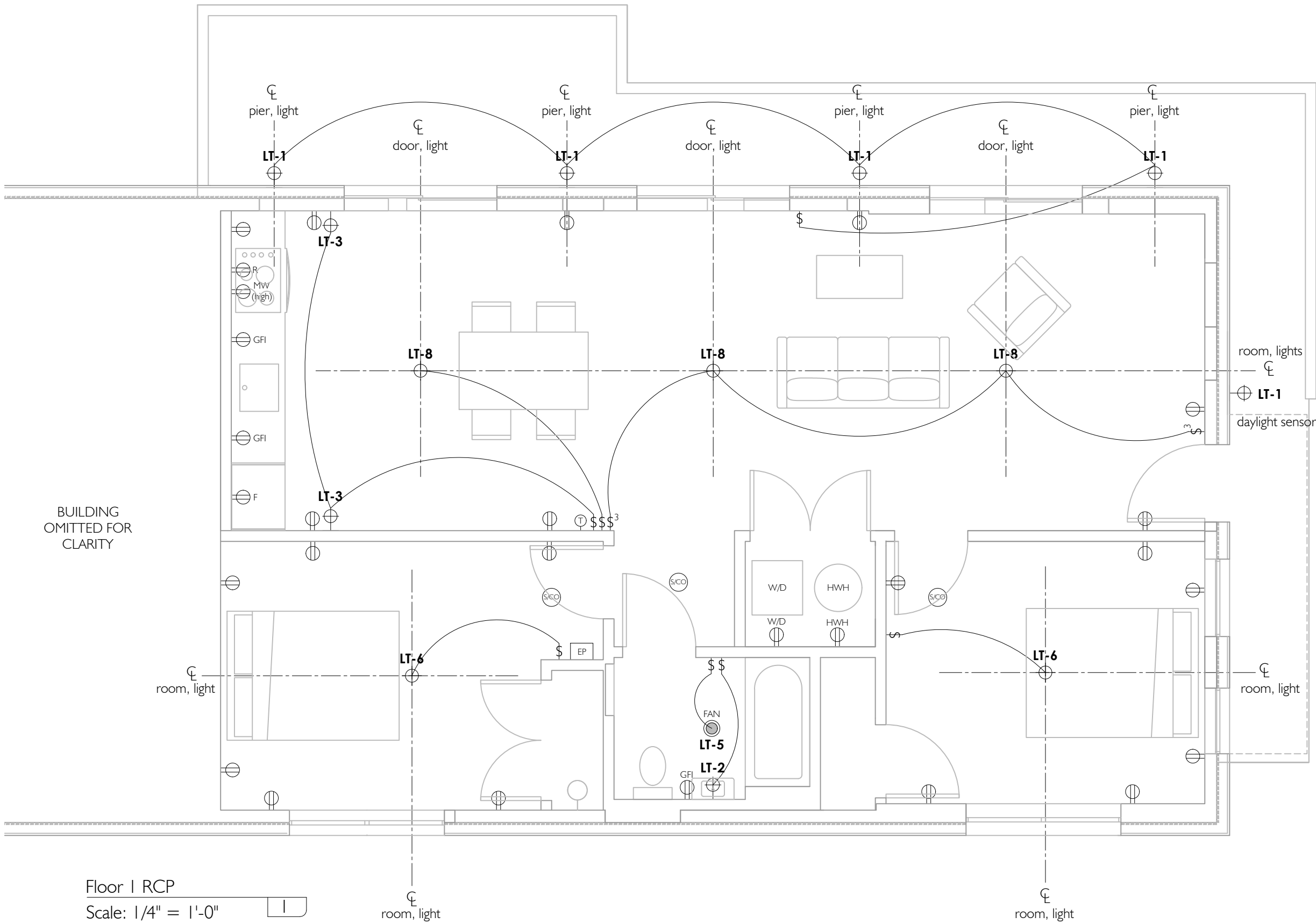
radiator
- MW

microwave
- W/D


washer/dryer
- ±

verify in field
- PBO

purchased by owner



APARTMENT 1: LIGHT FIXTURE SCHEDULE

SYMBOL	TAG	DESCRIPTION	MANUFACTURER	MODEL	FINISH	WATTS	LAMP	COLOR	QTY	NOTES
	LT-1	wall sconce, exterior	RBW Crisp	RBW1771963	frosted	8.5	LED	3000K	5	daylight sensor at apt entry
	LT-2	bath sconce, interior, 18" bar	MAXIM Spec	52000-SN	satn nickel	12	LED	3000K	2	
	LT-3	wall sconce, interior 11" Ø	MAXIM Trim	57664-WT	white	20	LED	3000K	2	Triac CL dimming
	LT-5	recessed light / fan combo, 4" Ø	BROAN	744LED	white	66/9.5	LED	2700K	1	includes 70cfm exhaust fan
	LT-6	ceiling mount, interior, 16" Ø	BROMIDE DESIGN Lynch	1661521537	white / silver	allow 50	LED	3000K	2	requires (3) LED A lamps
	LT-8	pendant, interior, 19" Ø	MAXIM Oslo	114148KWT	white / black	8	LED	3000K	3	requires (1) LED A lamps

- NOTES:
1.

See interior and exterior elevations for switch, outlet, and fixture heights.
2.

Center light fixtures in soffits and in rooms unless noted otherwise.
3.

Coordinate fixture installation with engineering systems.
4.

Coordinate locations of junction boxes for equipment with equipment contractor. Provide gang boxes for all key type switches. Review final locations with the Architect.

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APT 1: RCP

SEAL | SIGNATURE:



STABLES

LEGEND

-  ceiling mounted light
-  recessed light
-  ceiling fan
-  wall mounted light
-  linear light
-  radiant flooring
-  duplex outlet
-  USB / outlet combo
-  quad outlet
-  floor outlet
-  switch
-  3 way switch
-  dimmer switch
-  electrical panel
-  smoke / CO detector
-  internet access point / data
-  intercom
-  thermostat
-  security camera
-  doorbell
-  exit sign

ABBREVIATIONS

- | | |
|-----|------------------------|
| DN | down |
| F | refrigerator |
| GFI | ground fault interrupt |
| R | range |
| RD | radiator |
| MW | microwave |
| W/D | washer/dryer |
| ± | verify in field |
| PBO | purchased by owner |

ISSUES:

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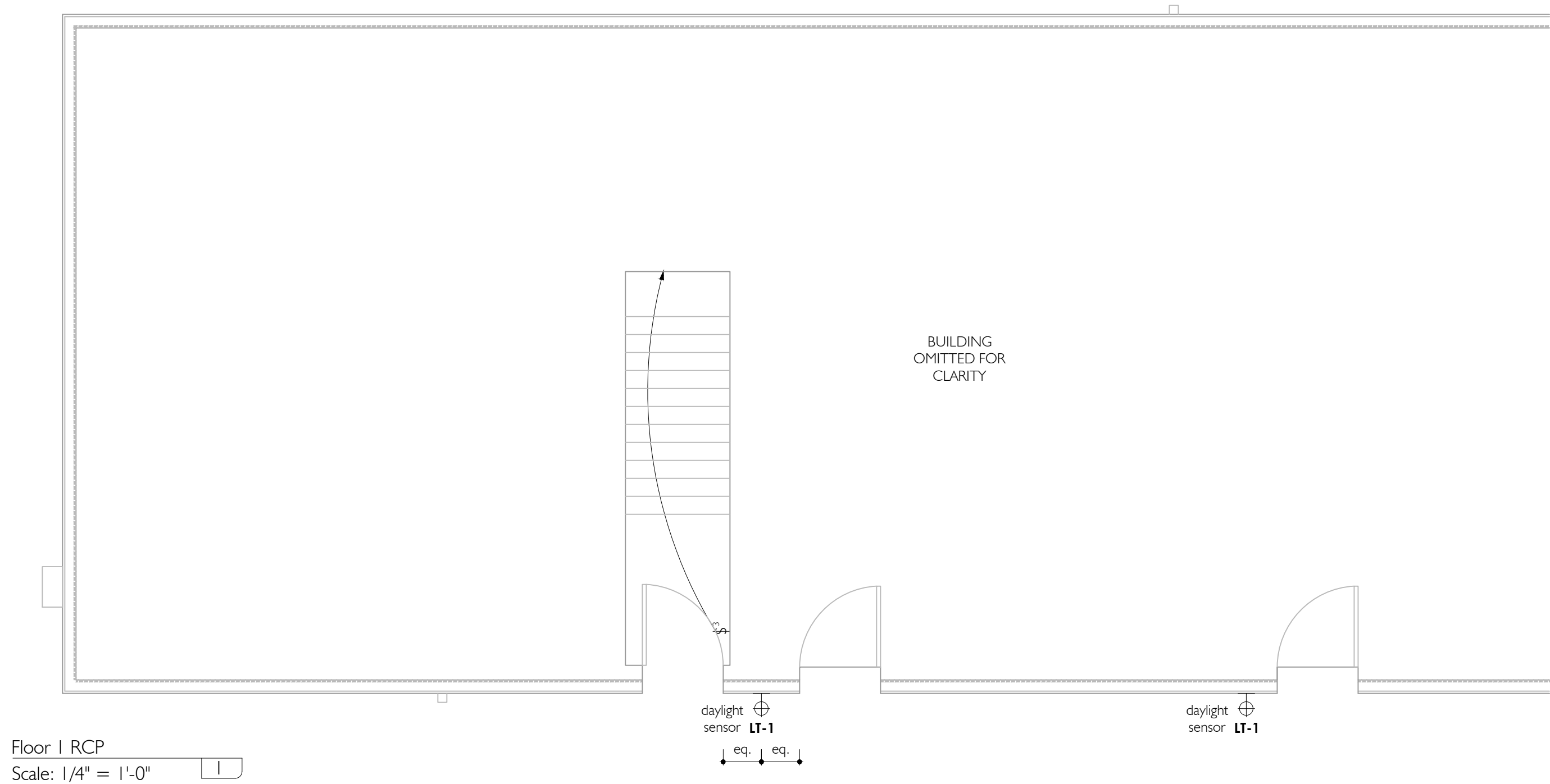
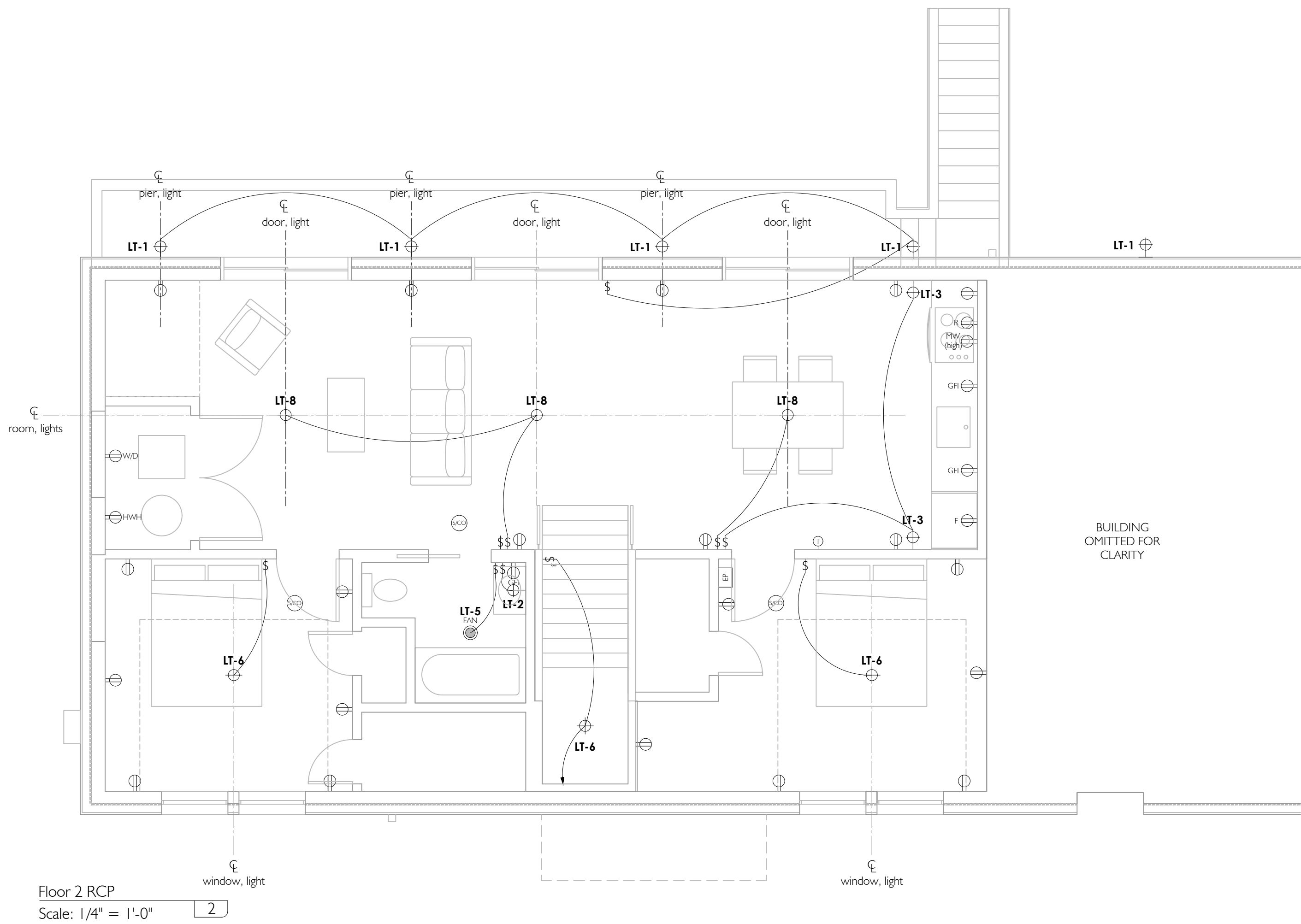
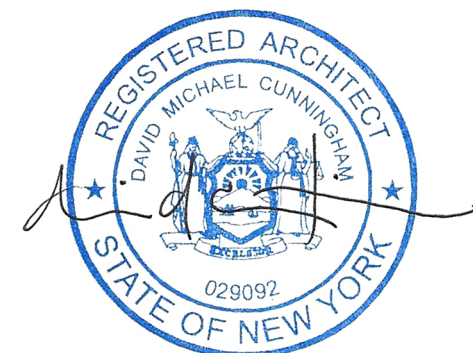
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APT 4: RCP

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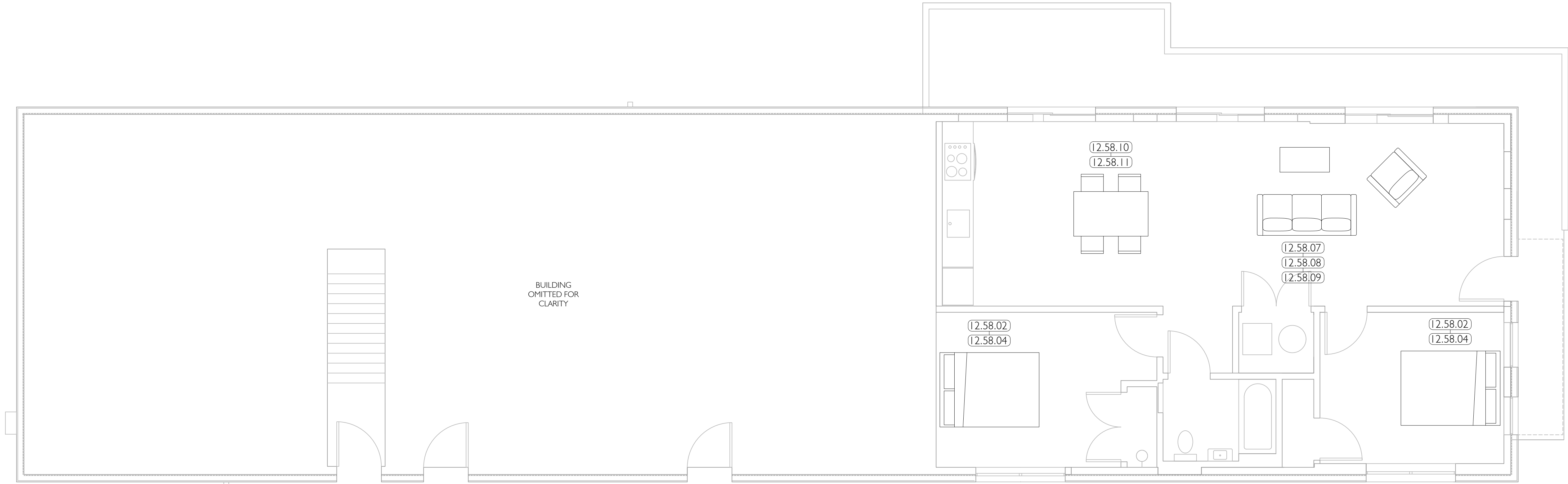


APARTMENT 4: LIGHT FIXTURE SCHEDULE

SYMBOL	TAG	DESCRIPTION	MANUFACTURER	MODEL	FINISH	WATTS	LAMP	COLOR	QTY	NOTES
	LT-1	wall sconce, exterior	RBW Crisp	RBW17171963	frosted	8.5	LED	3000K	7	daylight sensor at apt entry
	LT-2	bath sconce, interior, 18" bar	MAXIM Spec	52000-SN	satin nickel	12	LED	3000K	1	
	LT-3	wall sconce, interior 11" Ø	MAXIM Trim	57664-WT	white	20	LED	3000K	2	TriaC CL dimming
	LT-5	recessed light / fan combo, 4" Ø	BROAN	744LED	white	66/9.5	LED	2700K	1	includes 70cfm exhaust fan
	LT-6	ceiling mount, interior, 16" Ø	BROMIDIESIGN Lynch	1661521537	white / silver	allow 50	LED	3000K	3	requires (3) LED A lamps
	LT-8	pendant, interior, 19" Ø	MAXIM Oslo	11414BKWTT	white / black	8	LED	3000K	3	requires (1) LED A lamps

NOTES:

1. See interior and exterior elevations for switch, outlet, and fixture heights.
2. Center light fixtures in soffits and in rooms unless noted otherwise.
3. Coordinate fixture installation with engineering systems.
4. Coordinate locations of junction boxes for equipment with equipment contractor. Provide gang boxes for all key type switches. Review final locations with the Architect.



Apt 1 Furniture Plan
Scale: 1/4" = 1'-0"

KEY NOTES
(refer to A-600 Furniture Schedule)

- | | |
|----------|---------------------|
| 12.58.02 | Bed Frame - Full XL |
| 12.58.04 | Mattress - Full XL |
| 12.58.07 | Sofa |
| 12.58.08 | Sofa Chair |
| 12.58.09 | Coffee Table |
| 12.58.10 | Dining Table |
| 12.58.11 | Chair |

ISSUES:

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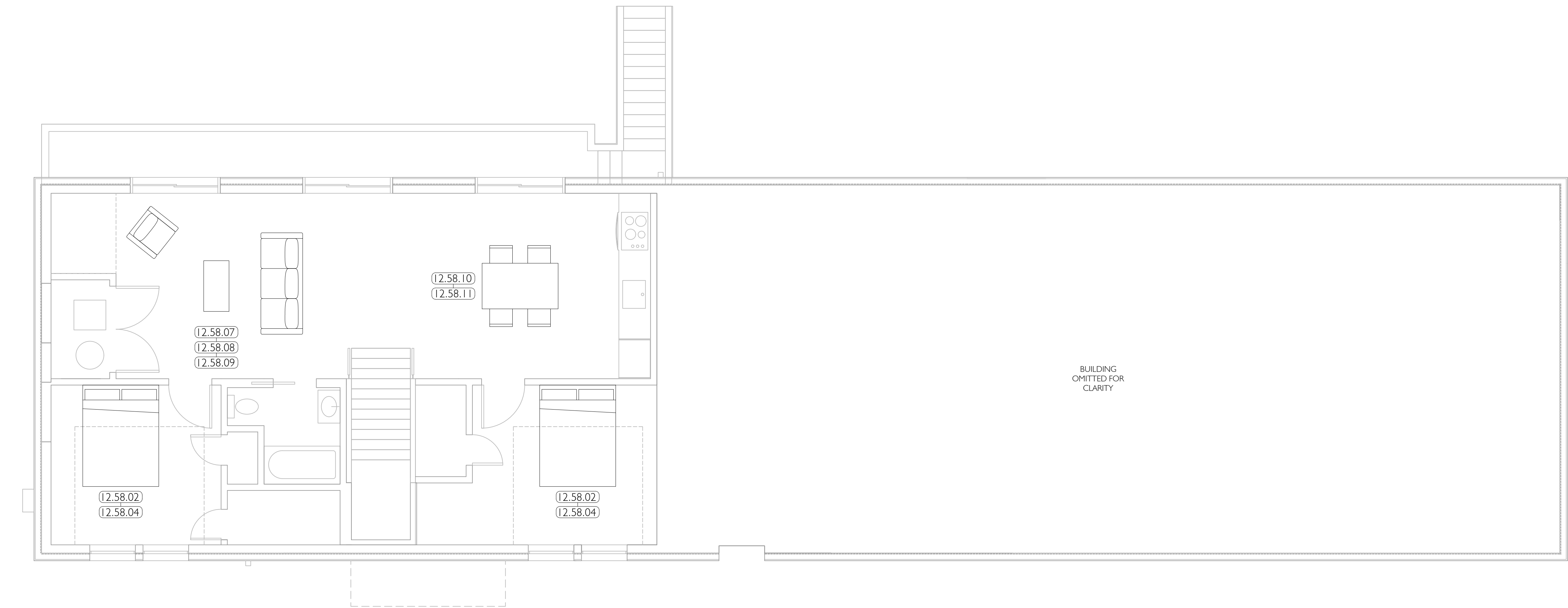
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A-810

APT 1: FURNITURE PLAN

SEAL | SIGNATURE:





Apt 4 Furniture Plan
Scale: 1/4" = 1'-0"

KEY NOTES
(refer to A-600 Furniture Schedule)

- | | |
|----------|---------------------|
| 12.58.02 | Bed Frame - Full XL |
| 12.58.04 | Mattress - Full XL |
| 12.58.07 | Sofa |
| 12.58.08 | Sofa Chair |
| 12.58.09 | Coffee Table |
| 12.58.10 | Dining Table |
| 12.58.11 | Chair |

ISSUES:

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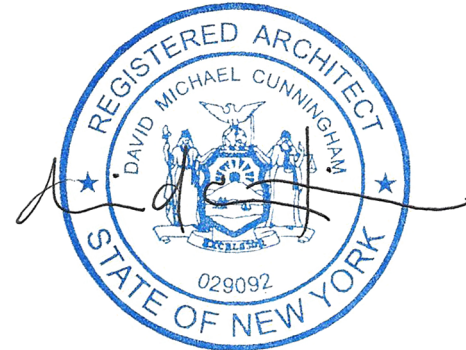
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A-820

APT 4: FURNITURE PLAN

SEAL | SIGNATURE:



PLUMBING GENERAL NOTES

- 1) All plumbing work shall comply with the New York State Plumbing Code.
- 2) Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.
- 3) Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.
- 4) Install material at fire rated construction perimeters and openings containing penetrating sleeves, piping, and other items requiring firestopping.
- 5) Where piping penetrates floor, ceiling, or wall, close off space between pipe or duct and adjacent work with firestopping insulation and caulk airtight.
- 6) Plumbing Contractor shall coordinate final pipe and equipment elevations with other trades. Piping installations shall not interfere with space usage, lighting systems, electrical systems, or HVAC grilles and diffusers.
- 7) Coordinate temporary shutdown of plumbing systems with owner prior to performing work. Provide temporary services.
- 8) The Contractor for this work shall carefully inspect and acquaint themselves with all drawings in order to fully understand the work required. The Contractor shall field measure and verify all dimensions and conditions before proceeding with the work.

9) Piping layouts are diagrammatic and intended to show general arrangement, size, and capacity. All offsets are not necessarily shown. The plumbing Contractor shall arrange and coordinate the work, furnish necessary offsets, valves, vents, and fittings to avoid conflicts with other mechanical and electrical services and with structural and architectural elements.

10) The Contractor shall be responsible for the removal of debris generated by this work and workers at the end of each working day, for general good housekeeping by their workers, and shall supply debris container(s) or dumpster(s) as required.

11) Refer to architectural plans for locations of fire walls and walls which require sealing. The plumbing Contractor shall be responsible for sealing all floor and wall penetrations with fire rated sealant before final payment.

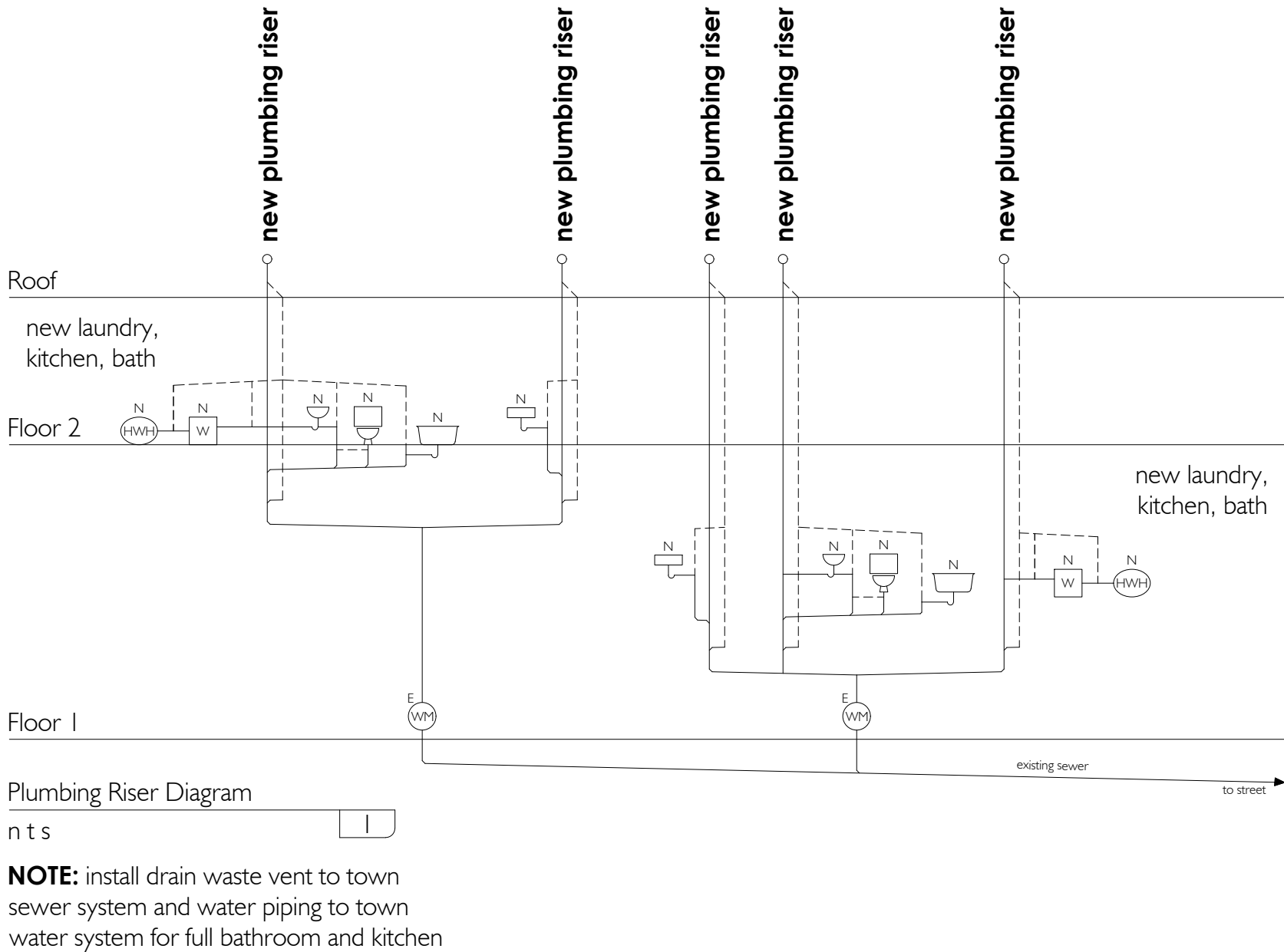
12) The Contractor shall replace any piping system and components which do not pass testing procedures specified and retest repaired portions of the system.

13) The Contractor shall make final connections to all plumbing equipment and equipment supplied by others, including required faucets, stops, valves, fittings, traps, etc.

14) The Contractor shall provide and install all indirect waste piping.

15) The Contractor shall run all piping to avoid reinforcing and / or footings at all column lines.

16) Trap primers shall be provided and readily available as per local code for all floor drains with no water content.



- DRAWINGS**
- P-001.02 Plumb Riser Diagram + Notes
- P-110.00 Apt 1: Prop Plumbing Plan
- P-120.00 Apt 4: Prop Plumbing Plan

PLUMBING FIXTURE SCHEDULE				
FIXTURE	NUMBER	SIZE OF PLUMBING LINES		
		WASTE	VENT	COLD WATER
water closet	1	3"	2"	1/2"
lavatory	1	1/2"	2"	1/2"
sink	2	1/2"	2"	1/2"
shower	1	2"	2"	1/2"
washer / dryer	1	2"	2"	1/2"

PIPE INSULATION SCHEDULE							
SYSTEM	FLUID TEMP	INSULATION CONDUCTIVITY (BTU/IN)(H*FT2*F)	NOMINAL PIPE SIZE			NOMINAL PIPE SIZE	
			< 1"	1" to < 1-1/2"	1-1/2" to < 4"	< 1"	1" to < 1-1/2"
			CODE REQUIRED MINIMUM INSULATION			SPECIFIED INSULATION THICKNESS	
domestic hot water supply	110°F - 140°F	0.21 - 0.28	1"		1-1/2"	1"	1-1/2"
domestic cold water supply	45°F - 55°F	0.21 - 0.27	1/2"	1/2"	1/2"	1/2"	1/2"
domestic hot water recirculation	95°F - 115°F	0.21 - 0.28	1"	1"	1-1/2"	1"	1-1/2"

STABLES

- ABBREVIATIONS**
- E existing
- HWH hot water heater
- LAV lavatory
- N new
- W washer
- WC water closet
- WM water meter

- ISSUES:**
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- Stables
- 10 Marks Road
- Westport NY 12993
- P-001
- PLUMB RISER DIAGRAM + NOTES
- SEAL | SIGNATURE:



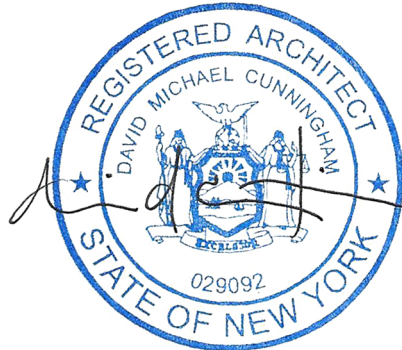
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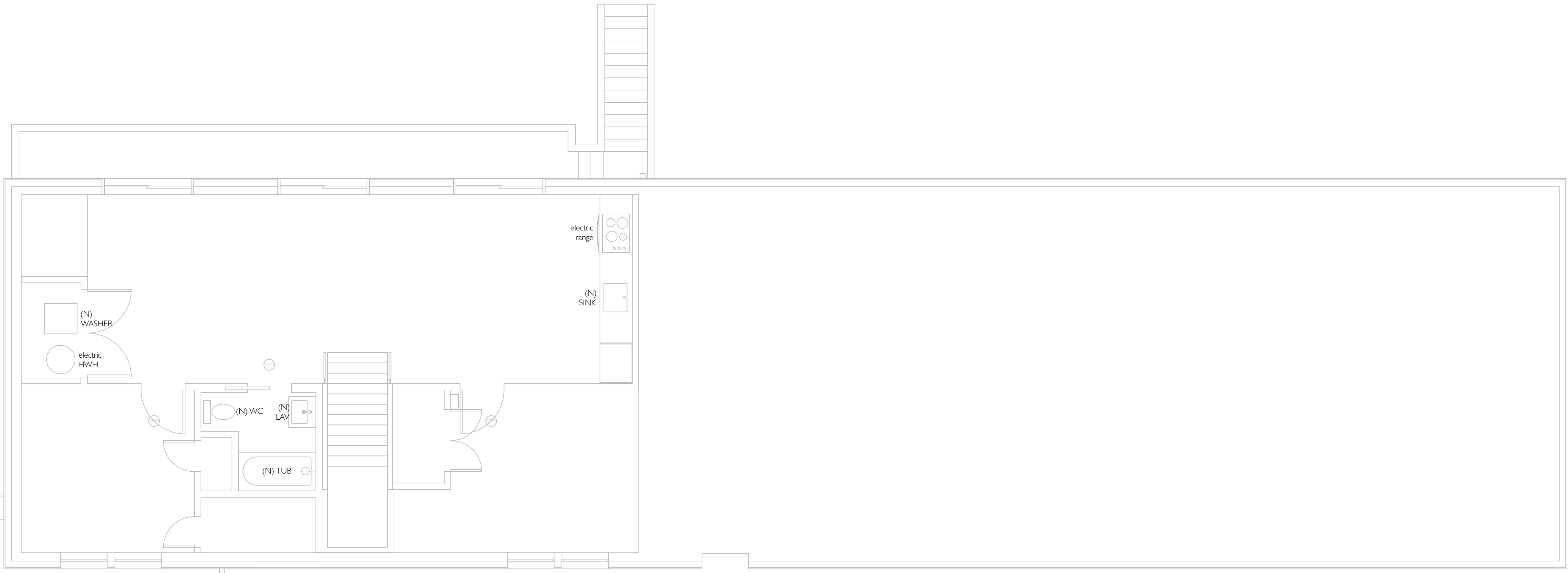
ABBREVIATIONS
HWH hot water heater
LAV lavatory
(N) new
WC water closet
WM water meter



Apt 1 Proposed Plumbing Plan
Scale: 1/4" = 1'-0"

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HOUSING RENOVATION**
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P-110
APT 1: PROP PLUMBING PLAN
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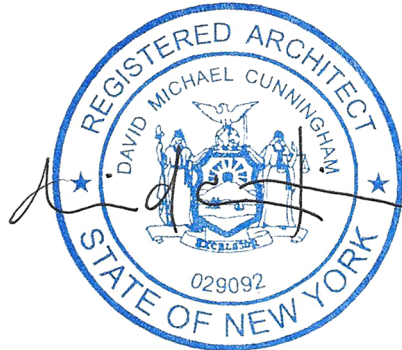


Apt 4 Proposed Plumbing Plan
Scale: 1/4" = 1'-0"

STABLES

- ABBREVIATIONS
HWH hot water heater
LAV lavatory
(N) new
WC water closet

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P-120
APT 4: PROP PLUMBING PLAN
SEAL | SIGNATURE:



Essex Farmworker Housing Renovation

STABLES

DRAWING LIST:

- T-001 TITLE SHEET & GENERAL NOTES
DM-101 FIRST FLOOR DEMOLITION PLAN
DM-102 SECOND FLOOR DEMOLITION PLAN
DM-103 ROOF DEMOLITION PLAN
S-101 FIRST FLOOR FRAMING PLAN
S-102 SECOND FLOOR FRAMING PLAN
S-103 ROOF FRAMING PLAN
S-201 EXISTING AND PROPOSED ELEVATIONS
S-202 PROPOSED SECTIONS
S-301 TYPICAL DETAILS

SCOPE OF WORK

- Reconfigure walls and openings per architectural drawings.
- Raise deck railing.
- Reinforce roof framing structure.
- Reframe roof rafters and joists to support new dormer windows.
- Repair or replace roofing and wall sheathing.
- Repair or replace damaged structural wood members.

STATEMENTS

- The construction documents herein comply with the 2020 Building Code of New York State.

Gravity Load Schedule		
	Floor Level	
Material	1st - 2nd	Roof
Wood Framing	8 Psf	5 Psf
Wood Sheathing	3 Psf	3 Psf
Floor Finish	4 Psf	-
Roofing	-	2 Psf
Hung Ceiling	10 Psf	-
Dead Load Total	25 Psf	10 Psf
Live Load	40 Psf	16 Psf
Snow Load	-	37.8 Psf
Wind Load	15 Psf	17 Psf
Total Load	65 Psf	47.8 Psf
Loads and design comply with the provisions of the 2020 Building Code of New York State.		

FRAMING LUMBER

- All framing lumber shall conform to the following governing standards:
 - American Institute of Timber Construction, "Timber Construction";
 - National Forest Products Association, "National Design Specification for Wood Construction" latest edition.
- Framing lumber shall be of the following minimum grade and species for the specified use. All lumber shall be grade-stamped by a recognized grading agency and shall be surface dry.

Dimension Lumber
Joists and rafters: Douglas Fir Larch #2
Studs and plates: Douglas Fir Larch Stud Grade

Heavy Timber
Posts and timbers: Douglas Fir Larch #1
Beams and stringers: Douglas Fir Larch #1

Manufactured Wood Products
Parallel-strand-lumber beams: Trus-Joist "Parallam" or approved equivalent.
Joists: Trus-Joist "TJI" or approved equivalent.

- Where framing lumber is flush-framed to Parallam, glulam, or steel girders, set the girders 1/4" clear below the top of lumber to allow for shrinkage.
- Stud walls are to be 2x4 @ 16" o.c. at interior and 2x6 @ 16" o.c. at exterior.
- All rafters and joists shall align directly with studs below. Install additional studs where required.
- Use double studs at ends of walls and ends of wall openings.
- Use double trimmers and headers at floor openings unless otherwise noted.
- Lap all plates at corners and at intersections of partitions.
- Unless otherwise noted, provide headers over all openings as follows:
Interior walls: (2) 2x10s
Exterior walls: (3) 2x10s
- Unless otherwise noted, provide a built-up or solid post at the ends of all beams, headers, and girders. Post width shall be at least equal to the width of the member it supports and post depth is 4" at interior walls and 6" at exterior walls.
- Provide cross-bridging or blocking at maximum 8'-0" o.c. for all joists. No joists shall be cut or notched without approval.
- Blocking for floors or roofs framed with engineered wood products shall be timberstrand or equivalent framing member.

TIMBER CONNECTORS

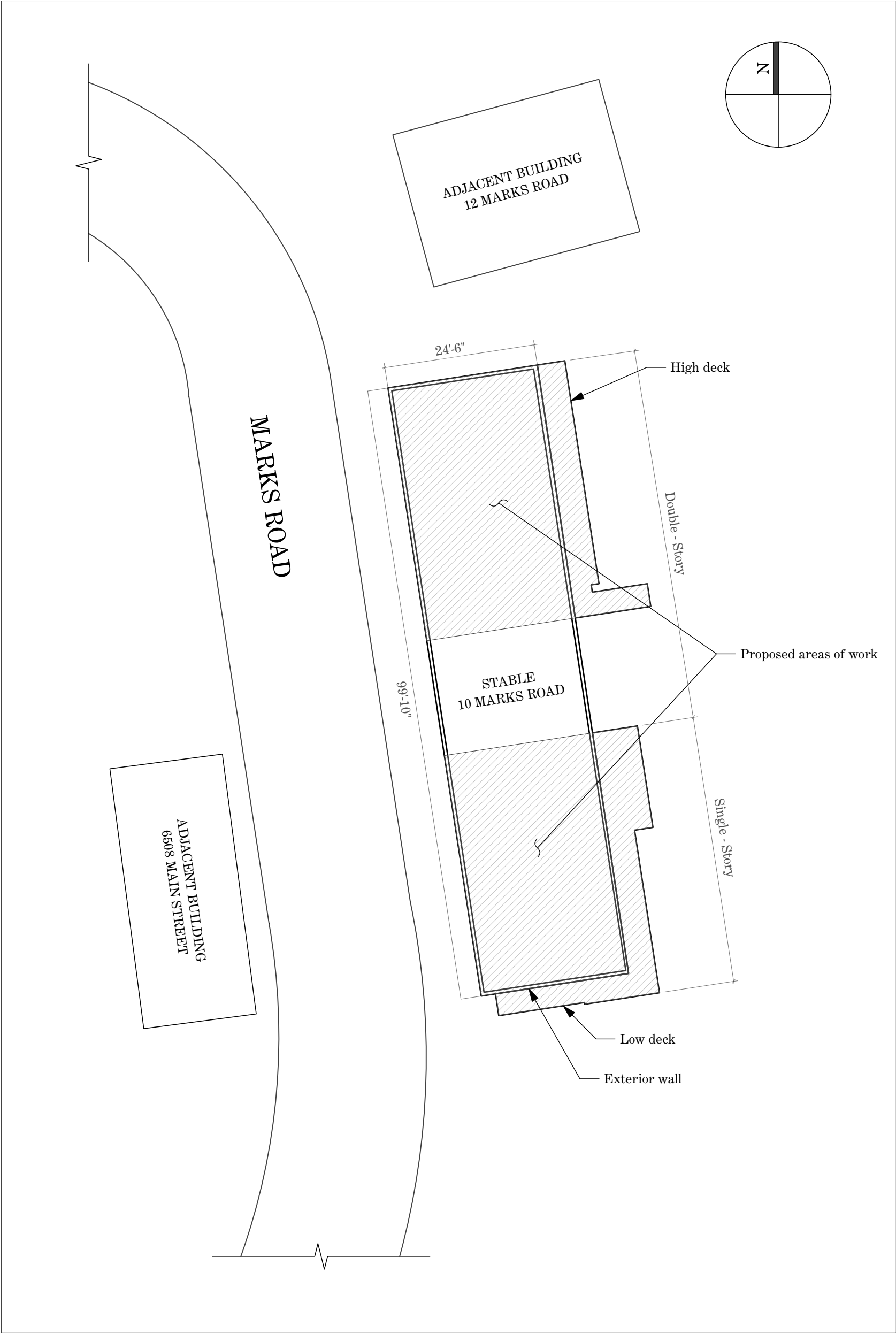
- Joist headers, cross-bridging, and connectors for wood construction shall be galvanized steel manufactured by United Steel Products, Simpson, or approved equivalent. Special nails supplied by manufacturer shall be used for required nailing.
- Where joists are flush-framed to headers, use approved joist hangers or bridle irons.
- All bolts shall be A307 grade. Steel plates at connections shall be 1/2" thick A36 steel grade, unless noted otherwise.
- Hanger and bridging nailing schedule shall be as specified in Simpson strong tie connectors manual.
- Unless otherwise noted, steel connectors such as those manufactured by Simpson company, shall be used to join rafters, trusses, joists, or beams to other members at flush-framed conditions. Hangers shall be of a size specifically designed for the member supported.
- Unless otherwise noted, minimum plywood nailing requirements are:

Boundary 8d nails @ 4" on center
Panel edges 8d nails @ 6" on center
Intermediate supports 8d nails @ 12" on center

PLYWOOD

- Plywood sheathing shall be APA grade stamped for the specified span, made with exterior glue, and be of the following thickness:
Roof: 5/8" (ext. grade)
Floors: 3/4"
Walls: 1/2" (ext. grade if exterior wall)
- Index stamp shall be visible on all sheets.
- All plywood shall be glue-nailed to floor joists an elastomeric construction adhesive that conforms to APA specification AFG-01 or ASTM D3498 (B.F. Goodrich PL400 or approved equal).
- Use pyclicps or other edge support as required for plywood sheathing.
- Leave 1/16" space at all plywood panel end joints and 1/8" space at all panel edge joints.
- Floor sheathing shall be installed continuous over two or more spans with the long dimension across supports.

BUILDING KEY PLAN N.T.S.



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Revisions

No.	Date	Description
00	04/07/2023	Preliminary Bid Set

Professional's Seal



(Marie Entis, P.E.)

Essex County Farmworker
Housing Renovation

Stables
10 Marks Road
Westport, NY 12993

Title Sheet & General Notes

Scale: No Scale
Issue Date: April 07, 2023
Drawn by: MM
Project #: J5066.01

Drawing No.

T-001.00

Sheet 01 of 10

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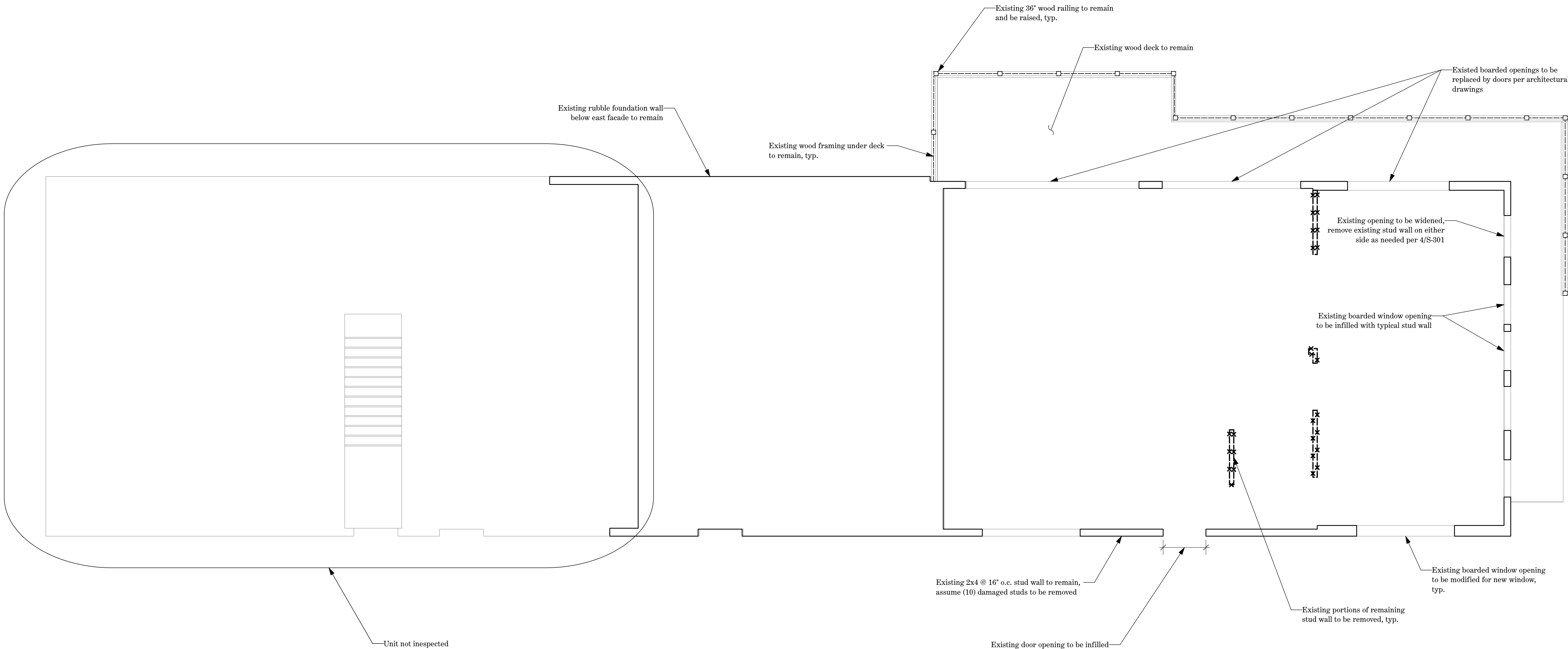
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Scale: 1/4" = 1'-0"
Issue Date: April 07, 2023
Drawn by: MM
Project #: J5066.01

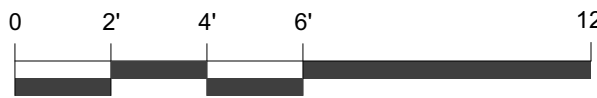
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Sheet 02 of 10



1 First Floor Demolition Plan
Scale: 1/4" = 1'-0"



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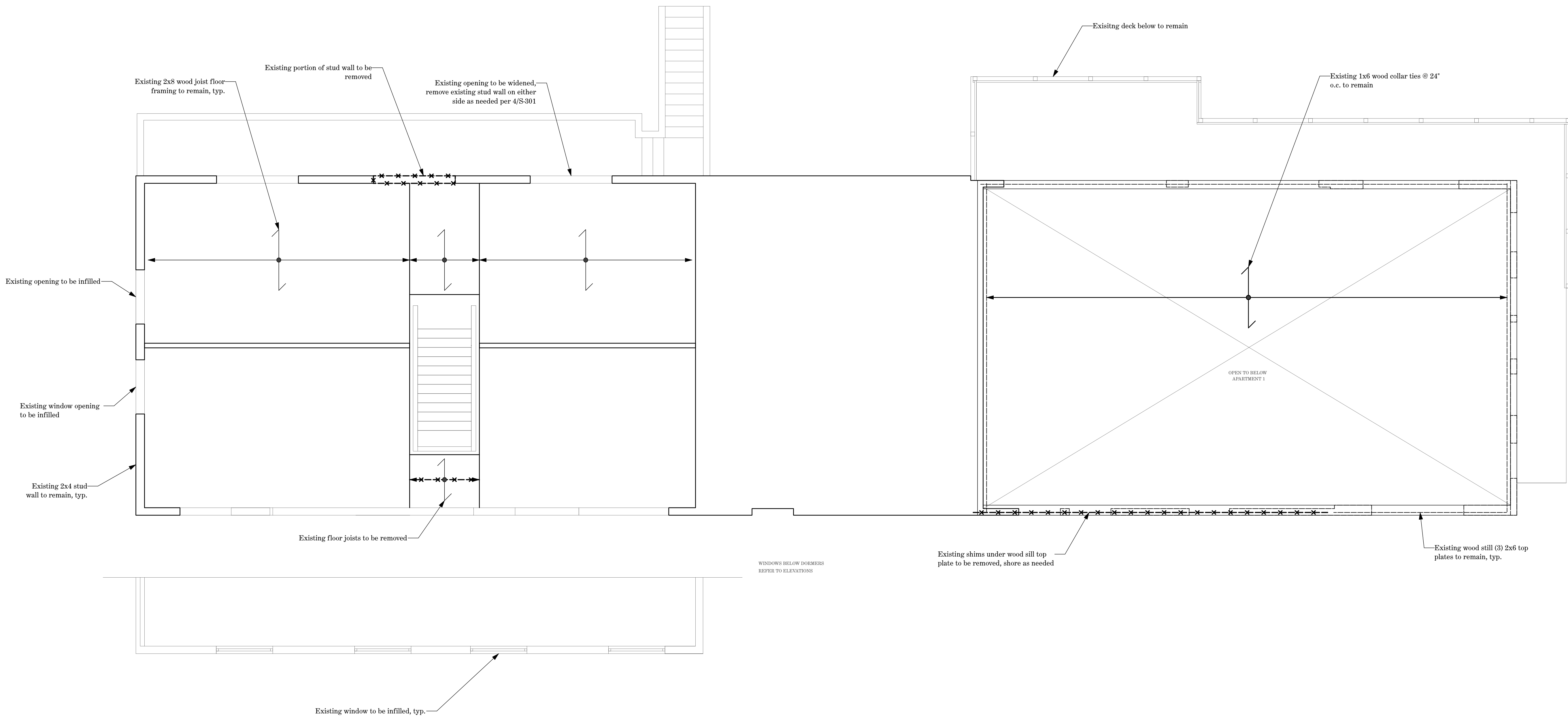
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Project #: J5066.01

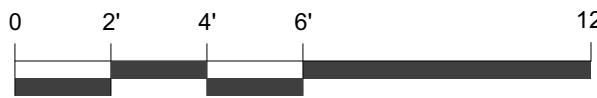
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Sheet 03 of 10



1 Second Floor Demolition Plan
Scale: 1/4" = 1'-0"



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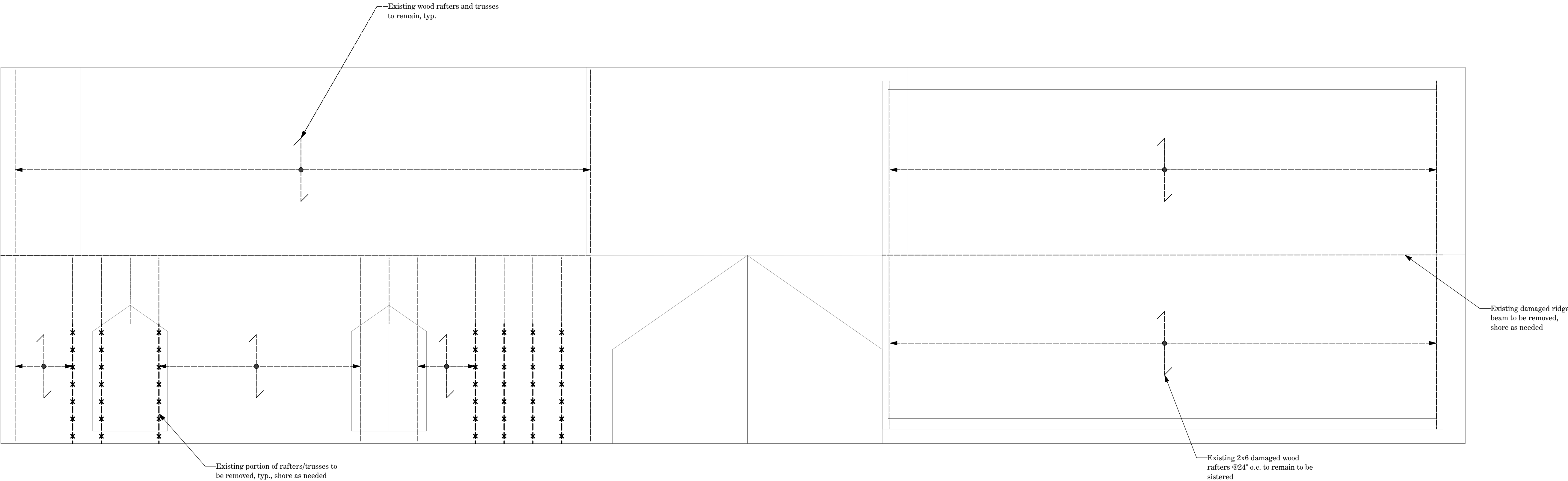
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Drawn by: MM
Project #: J5066.01

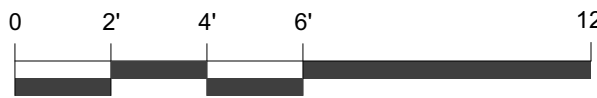
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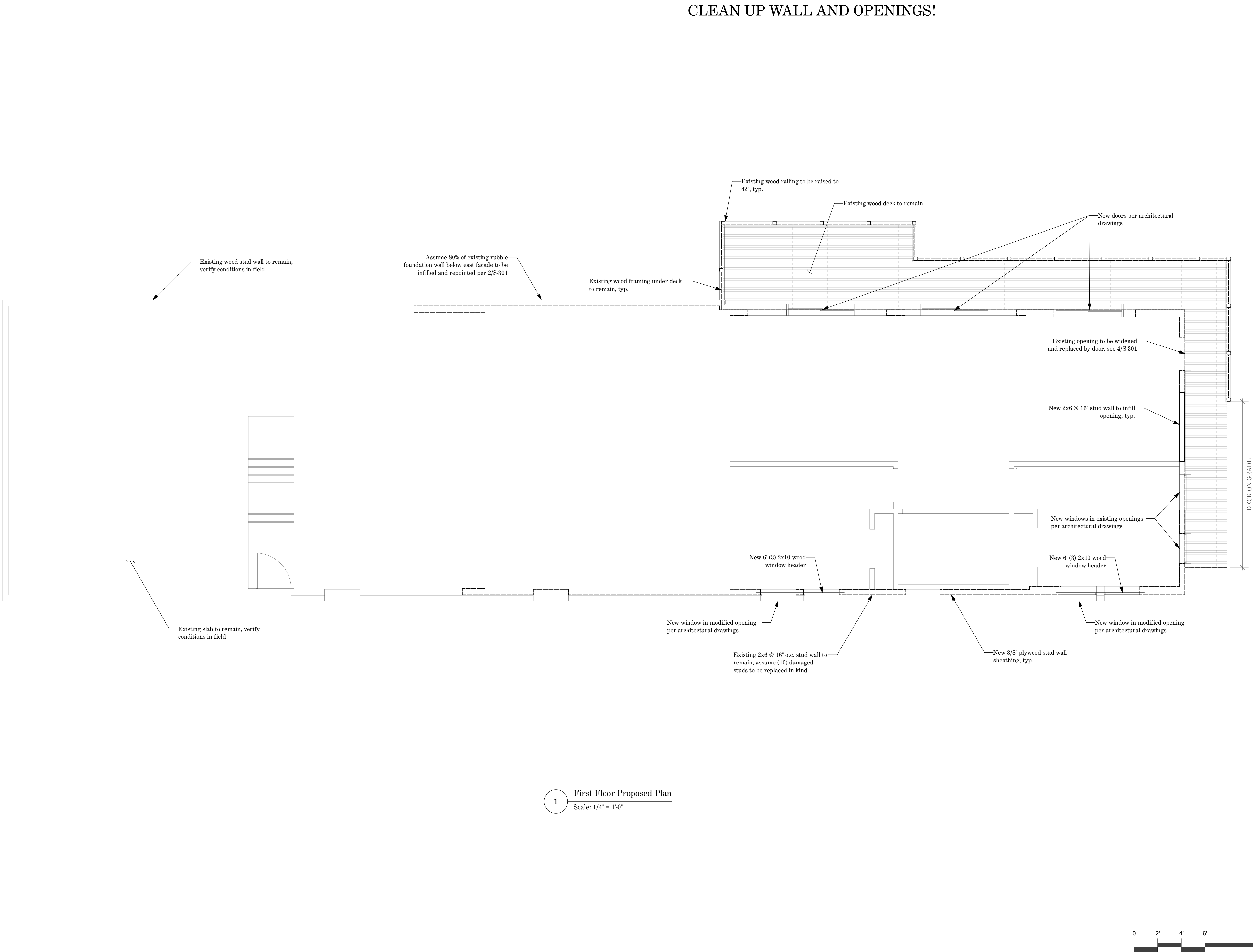
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1 Roof Demolition Plan
Scale: 1/4" = 1'-0"





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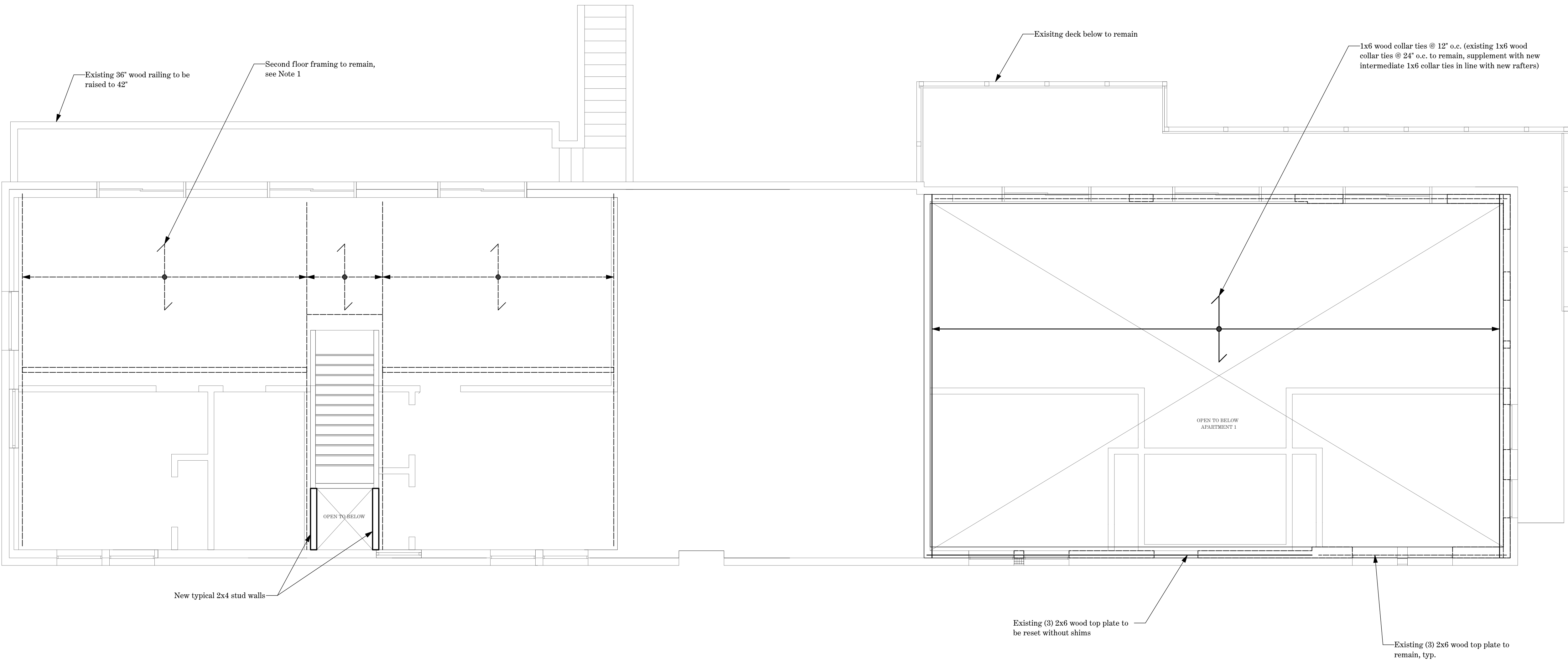
First Floor Framing Plan

Scale: 1/4" = 1'-0"
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Drawn by: MM
Project #: J5066.01

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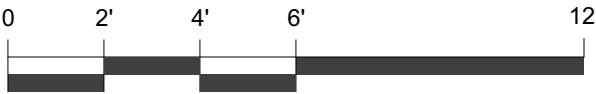
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Sheet 05 of 10



Note:
1. Second floor framing does not need to be reinforced as long as joist spacing is not larger than 24" o.c.. Verify in field.

1 Second Floor Proposed Plan
Scale: 1/4" = 1'-0"



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Second Floor Framing Plan

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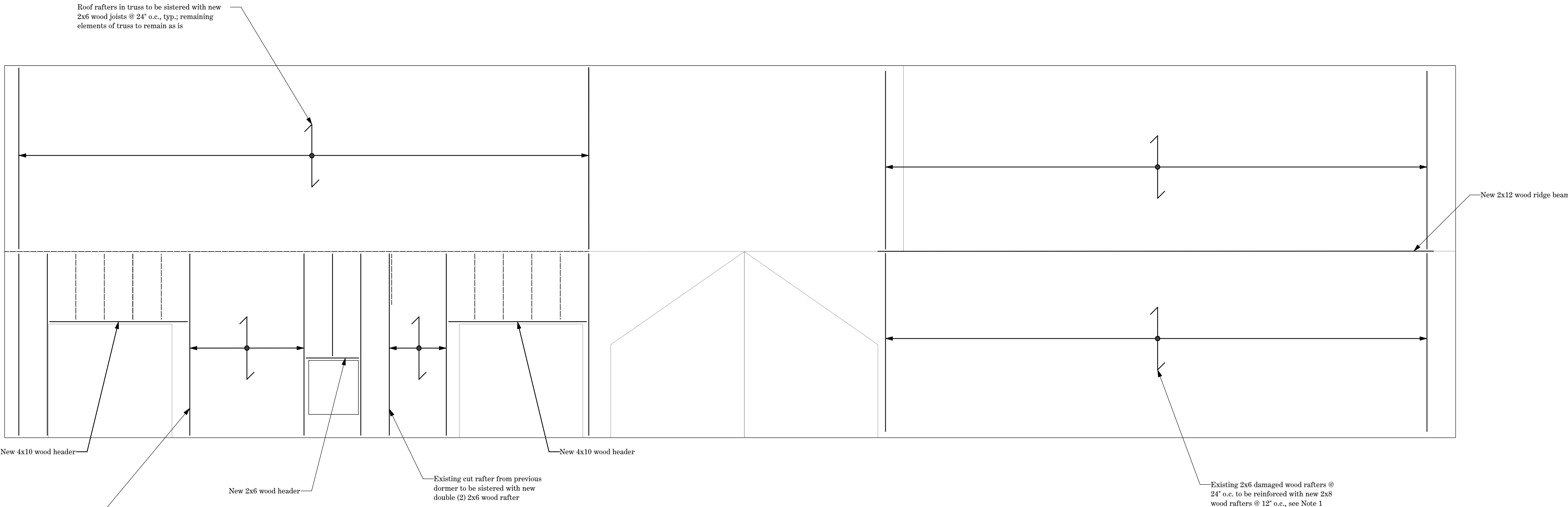
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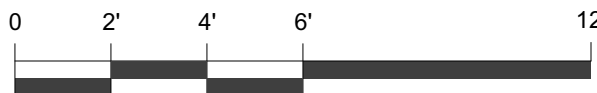
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Sheet 07 of 10



Note:
1. Each existing 2x6 wood rafter to be sistered with a new 2x8 wood rafter. Supplement with additional new 2x8 wood rafters in between the existing joists (12" from each).
Alternatively, all existing joists could be removed and replaced with new 2x8 wood rafters @ 12" o.c.

1 Roof Proposed Plan
Scale: 1/4" = 1'-0"



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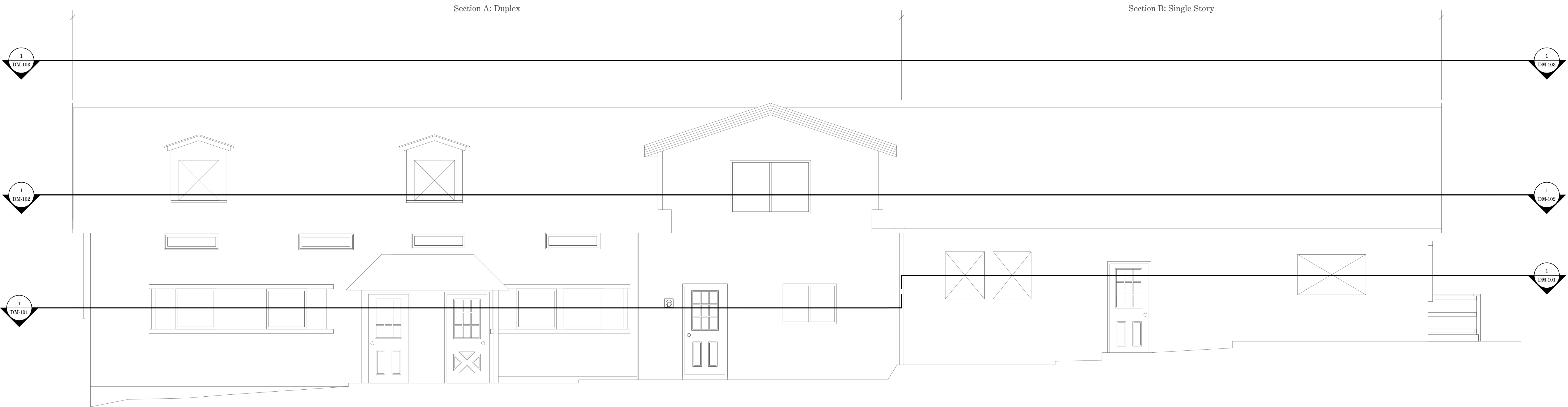
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Elevations

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Drawn by: MM
Project #: J5066.01

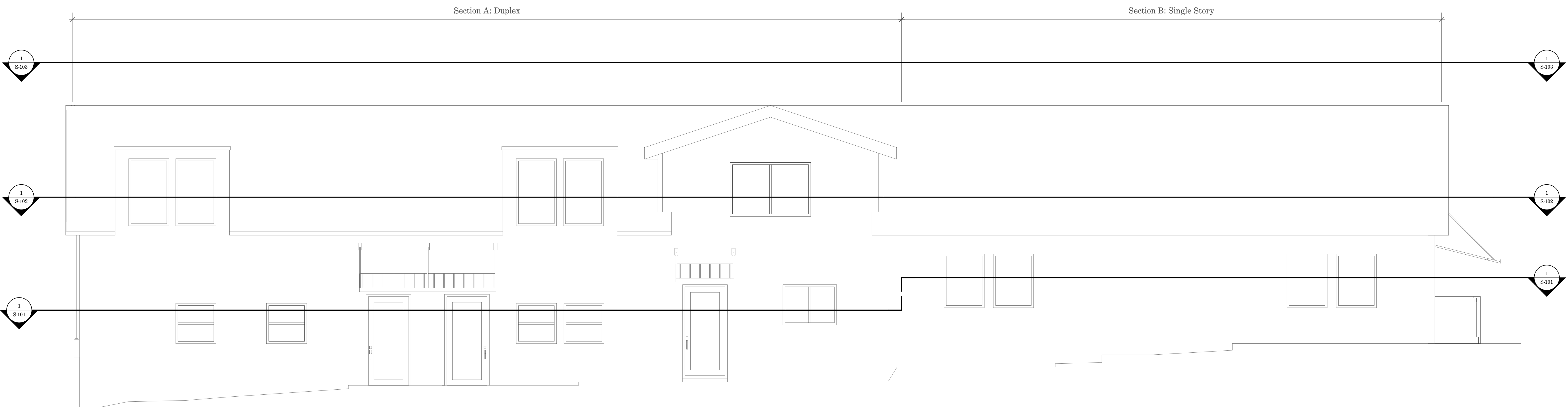
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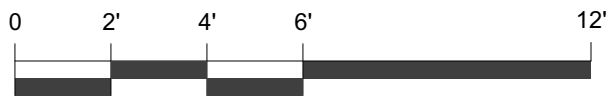
Sheet 08 of 10



1 Existing Front Elevation
Scale: 1/4" = 1'-0"



2 Proposed Front Elevation
Scale: 1/4" = 1'-0"



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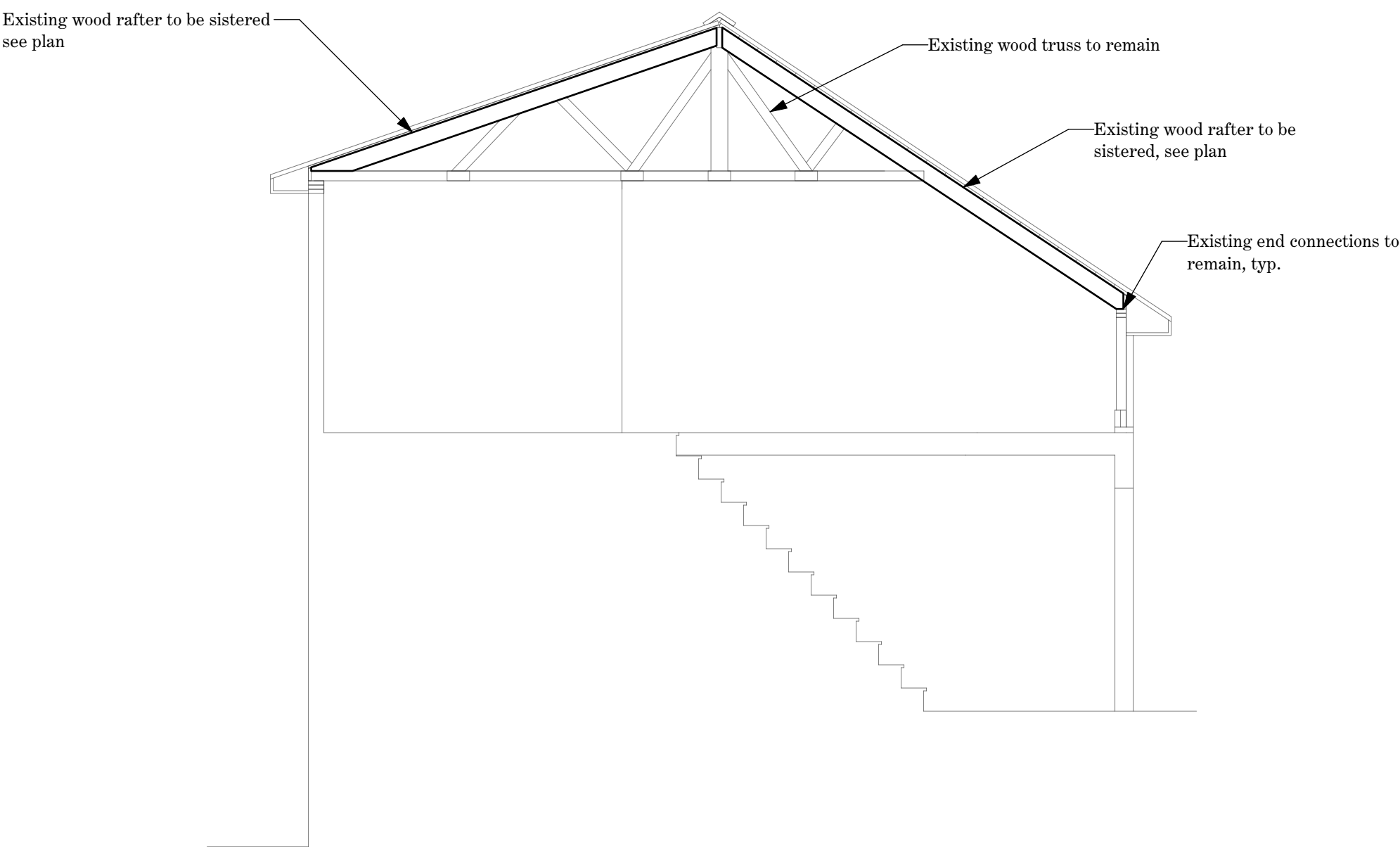
Proposed Sections

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Drawn by: MM
Project #: J5066.01

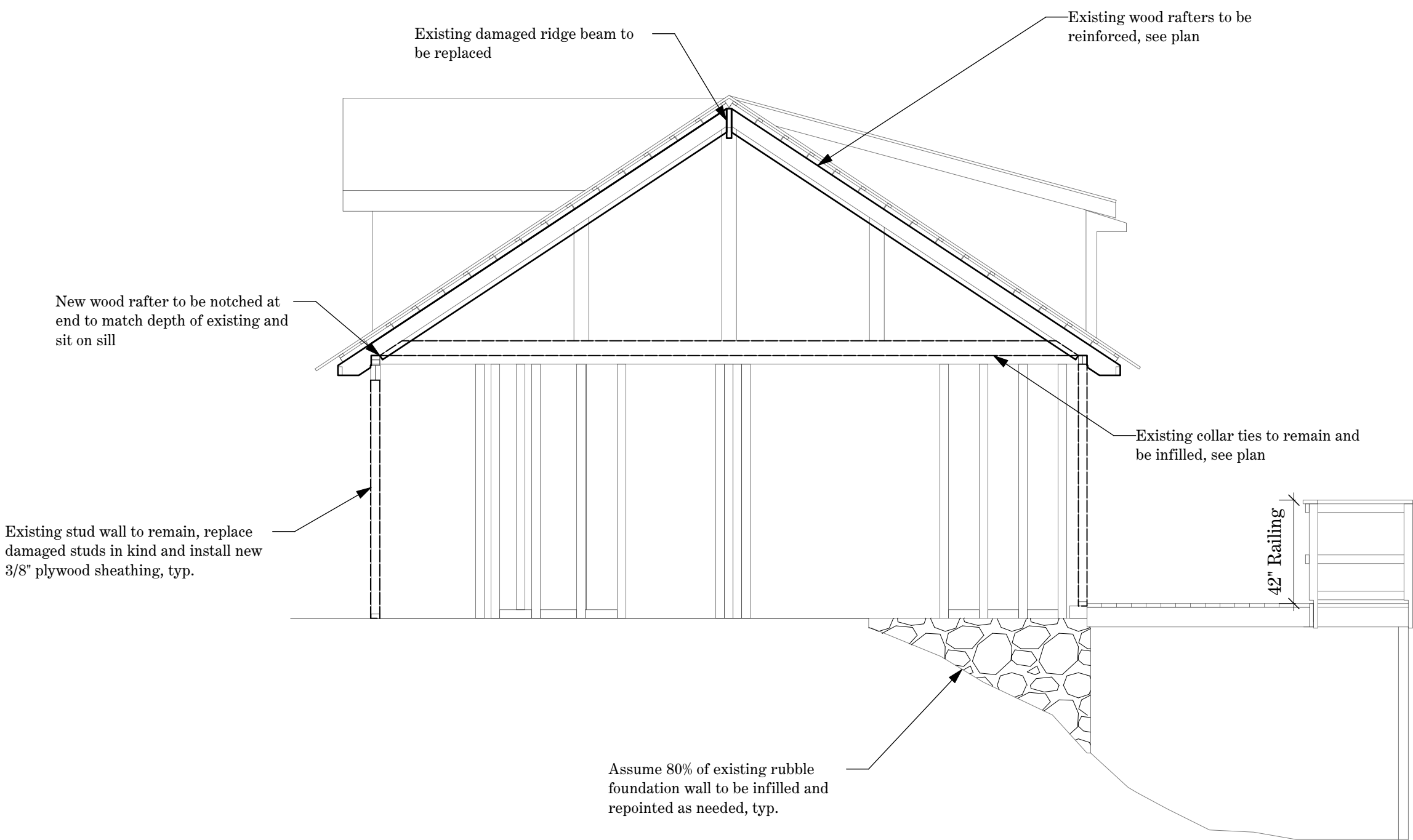
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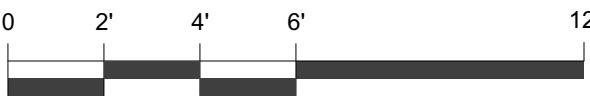
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Second Floor (Apt 4) Section
Scale: 1/4" = 1'-0"



First Floor (Apt 1) Section
Scale: 1/4" = 1'-0"



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00	04/07/2023	Preliminary Bid Set

Professional's Seal



[Marie Entis, P.E.]

Essex County Farmworker
Housing Renovation

Stables
10 Marks Road
Westport, NY 12993

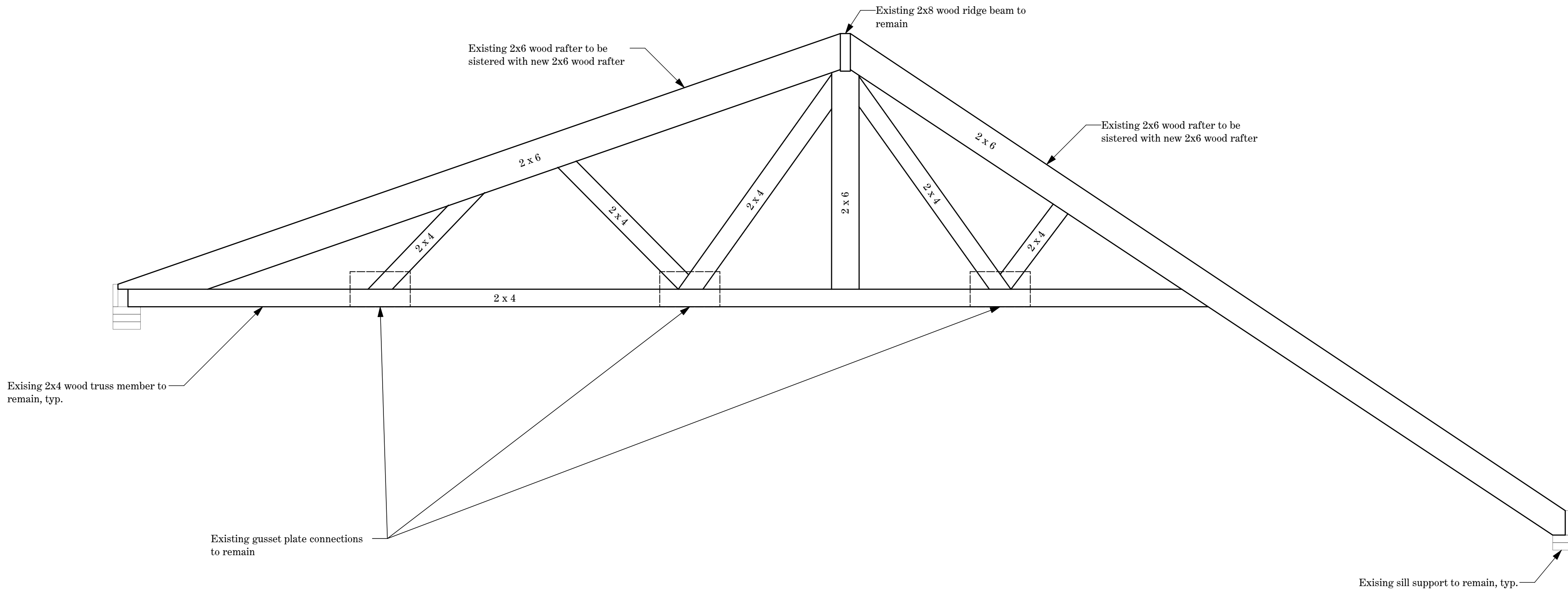
Typical Details

Scale: 3/4" = 1'-0"
Issue Date: April 07, 2023
Drawn by: MM
Project #: J5066.01

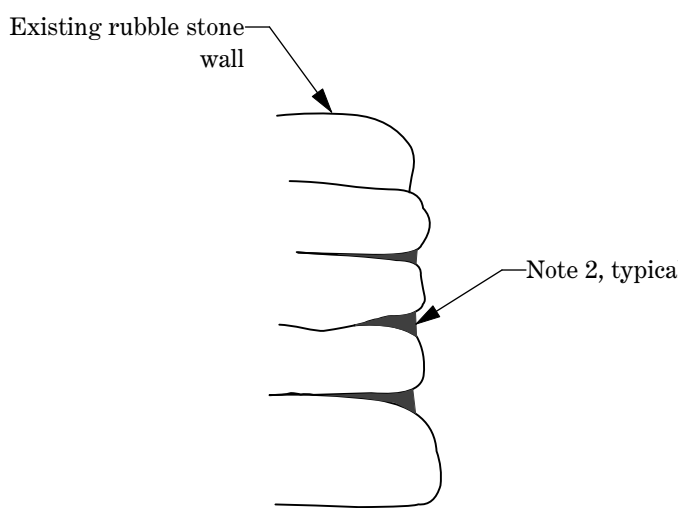
Drawing No.

S-301.00

Sheet 10 of 10

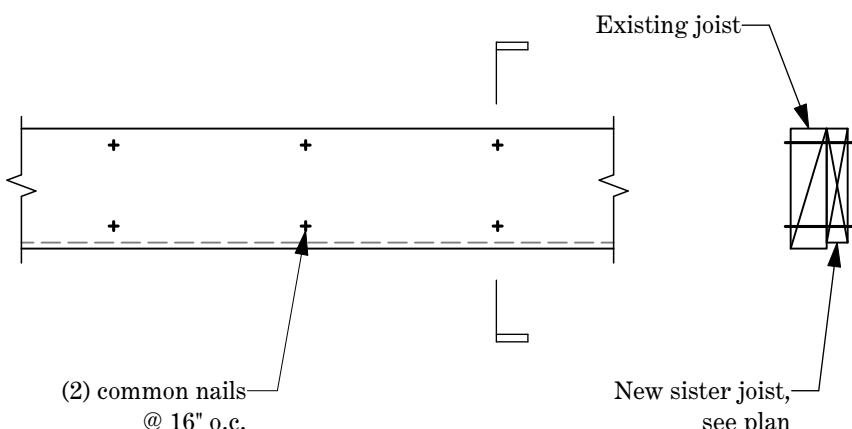


1 Typical Roof Truss
Scale: 3/4" = 1'-0"

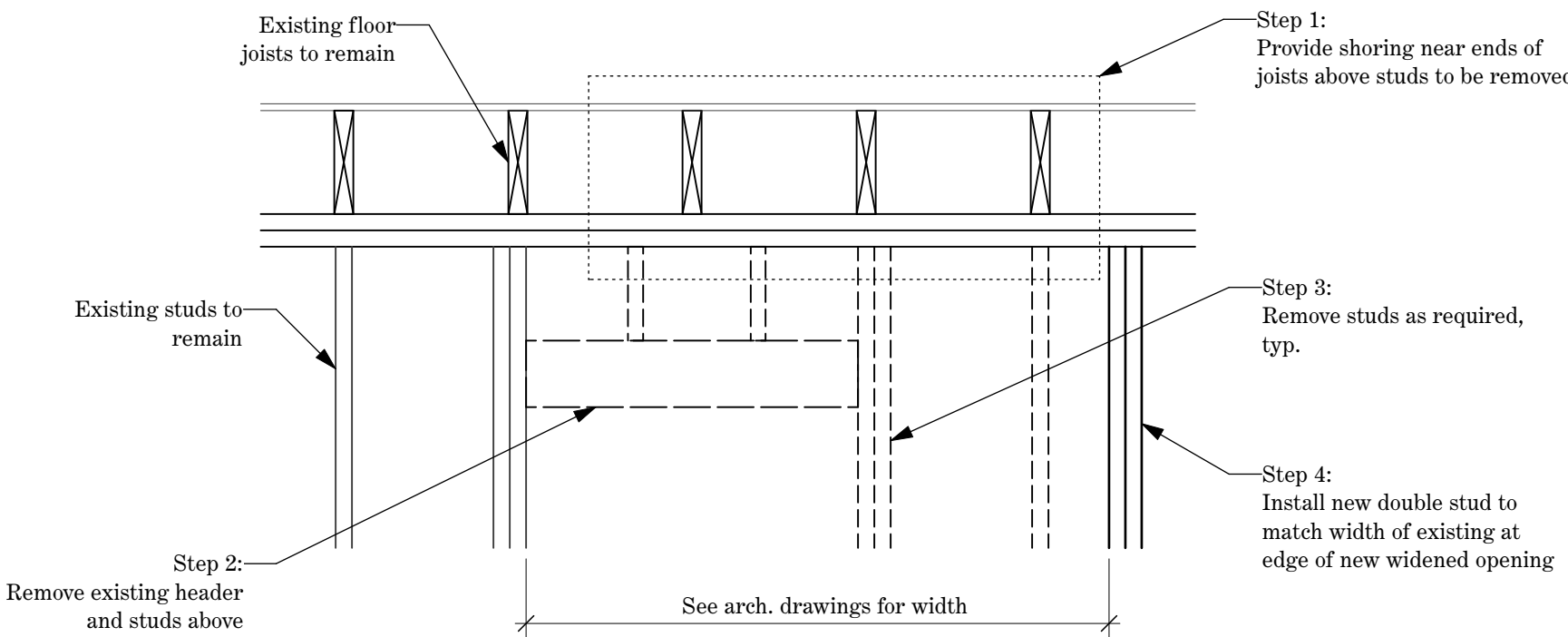


Note:
1. Remove all loose materials by hand and/or compressed air/water.
2. Inject new non-shrink quick set mortar (min. 4000 psi) in all voids.

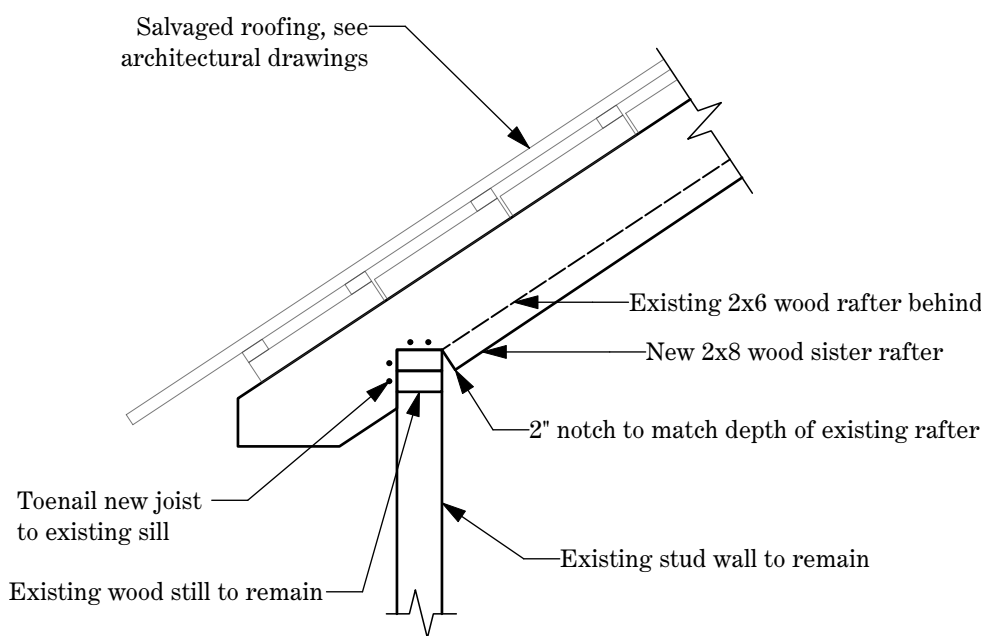
2 Rubble Stone Joint Repair
Scale: 3/4" = 1'-0"



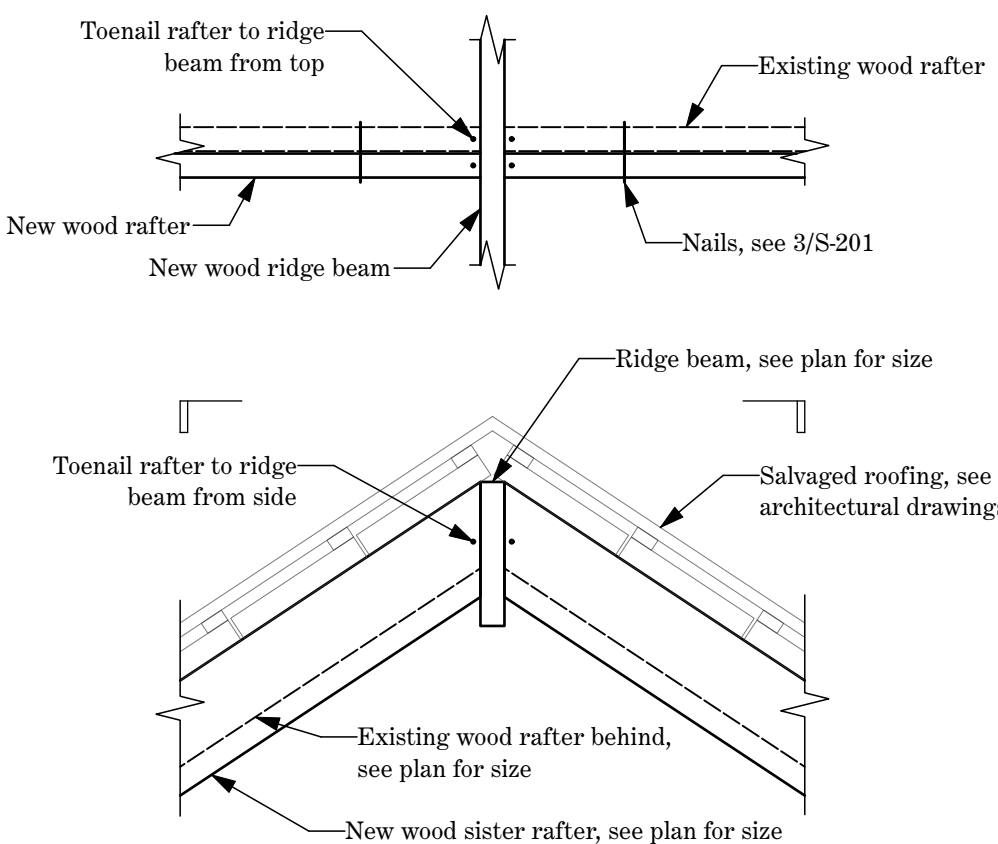
3 Sistered Rafters
Scale: 3/4" = 1'-0"



4 Widened Opening at Stud Wall
Not to Scale



5 Rafters at Stud Wall
3/4" = 1'-0"



6 Sistered Rafters
Scale: 3/4" = 1'-0"

LEGEND

	SINGLE LINE DUCTWORK – NEW
	SINGLE LINE DUCTWORK – EXISTING
	EXISTING DUCTWORK – DEMOLISH
	EQUIPMENT – NEW
	PIPING
	CONDENSATE PIPING
	DUCTWORK WITH ACOUSTIC LINING
	DUCT UNDER POSITIVE PRESSURE (SUPPLY AIR OR FAN DISCHARGE)
	DUCT UNDER NEGATIVE PRESSURE (RETURN, EXHAUST OR OUTSIDE AIR)
	VANED ELBOW (SEE DETAIL)
	RADIUS ELBOW
	BRANCH DUCT TAKE OFF
	DUCT FLEXIBLE CONNECTION
	10" BY 6" SUPPLY REGISTER 150 CFM SUPPLY AIR
	VOLUME DAMPER
	FIRE DAMPER AND ACCESS DOOR
	AUTOMATIC DAMPER (ELECTRIC)
	COMBINATION SMOKE AND FIRE DAMPER AND ACCESS DOOR
	POINT OF CONNECTION
	POINT OF DISCONNECTION
	TYPE A CEILING DIFFUSER 400 CFM SUPPLY AIR
	TYPE A CEILING REGISTER (CEILING GRILLE)
	SQUARE DIFFUSER WITH BLANKING PLATE
	THERMOSTAT
	TEMP SENSOR
	SMOKE DETECTOR
	STATIC PRESSURE SENSOR
	CARBON MONOXIDE DETECTOR
	CARBON DIOXIDE DETECTOR
	A – EQUIPMENT TYPE B – FLOOR/LOCATION C – EQUIPMENT DESIGNATION

ABBREVIATIONS

A/AMP	AMPERE	EQ	EQUAL	PD	PRESSURE DROP
ACCU	AIR COOLED CONDENSING UNIT	(ER)	EXISTING TO BE RELOCATED	PSIG	PSI GAUGE
AD	ACCESS DOOR	EWB	ENTERING WET BULB	(R)	RELOCATED
AHU	AIR HANDLING UNIT	'F	DEGREES FAHRENHEIT	RA	RETURN AIR
BTU	BRITISH THERMAL UNIT	FA	FREE AREA (SQ. FT.)	REF	REFRIGERANT
BTUH	BTU PER HOUR	FC	FLEXIBLE CONNECTION	RG	RETURN GRILLE
CAD	CONDENSER AIR DISCHARGE	FD	FIRE DAMPER	RL	REFRIGERANT LIQUID
CAI	CONDENSER AIR INTAKE	FT	FEET	RLA	RUNNING LOAD AMPS
CD	CEILING DIFFUSER	HD	HEAD	RS	REFRIGERANT SUCTION
CFM	CUBIC FEET PER MINUTE	HR	HOUR	RM	ROOM
CG	CEILING GRILLE	HT	HEIGHT	SA	SUPPLY AIR
CLG	CEILING	IN	INCH OR INCHES	SP	STATIC PRESSURE
COD	CABLE OPERATED DAMPER	KW	KILOWATT	SPEC	SPECIFICATION
COND	CONDENSATE	LAT	LEAVING AIR TEMPERATURE	TEMP	TEMPERATURE
CP	CONDENSATE PUMP	LBS	POUNDS	TD	TRANSFER DUCT
CR	CEILING REGISTER	LD	LINEAR DIFFUSER	TG	TRANSFER GRILLE
CU FT	CUBIC FEET	LDB	LEAVING DRY BULB TEMPERATURE	TV	TURNING VANES
DB	DRY BULB	MBH	THOUSAND BTU PER HOUR	TYP	TYPICAL
(DE)	EXISTING TO BE REMOVED	MIN	MINIMUM	V	VOLTS
DIAM	DIAMETER	NFA	NET FREE AREA (SQ. FT.)	W	WIDTH
DWG	DRAWING	NO.	NUMBER	W/	WITH
(E)	EXISTING TO REMAIN	NTS	NOT TO SCALE	W/O	WITHOUT
EXH	EXHAUST AIR	OA	OUTSIDE AIR	WB	WET BULB
EAT	ENTERING AIR TEMPERATURE	OAI	OUTSIDE AIR INTAKE	WMS	WIRE MESH SCREEN
EDB	ENTERING DRY BULB TEMPERATURE	P	PUMP		
ELEC	ELECTRIC	PC	PUMPED CONDENSATE		

HEATING/COOLING LOAD CALCULATION AND EQUIPMENT SIZING NOTE:

ALL THE MECHANICAL EQUIPMENT SPECIFIED IN THIS DRAWING SET HAS BEEN DESIGNED TO SUFFICIENTLY HEAT AND COOL THE OCCUPIABLE AREAS OF THE BUILDING. REQUIRED HEATING AND COOLING DEMANDS HAVE BEEN CALCULATED IN ACCORDANCE WITH ASHRAE/ACCA 183, AND TAKE INTO ACCOUNT ALL BUILDING ENVELOPE, LIGHTING, VENTILATION & OCCUPANCY LOADS BASED ON THE PROJECT DESIGN. EQUIPMENT SELECTIONS WERE MADE TO MEET THE SYSTEM PEAK LOADS (HEATING OR COOLING).

SCOPE OF WORK

MECHANICAL MODIFICATIONS TO INCLUDE HVAC REPLACEMENT AND REPLACEMENT OF ASSOCIATED DUCTWORK. NO CHANGE OF USE, OCCUPANCY OR EGRESS UNDER THIS APPLICATION.

ENERGY COMPLIANCE STATEMENT

THE PROPOSED MECHANICAL DESIGN REPRESENTED IN THIS DOCUMENT IS CONSISTENT WITH THE BUILDING PLANS, SPECIFICATIONS AND OTHER CALCULATIONS SUBMITTED WITH THIS PERMIT APPLICATION. THE PROPOSED MECHANICAL SYSTEMS HAVE BEEN DESIGNED TO MEET THE 2020 EECOCNYS AND TO COMPLY WITH THE MANDATORY REQUIREMENTS SET FORTH.

EP ENGINEERING SHALL NOT HAVE CONTROL OVER, CHARGE OF, OR RESPONSIBILITY FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, NOR SHALL THE CONSULTANT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. EP ENGINEERING HAS NO DUTY TO SPECIFY IN ITS DESIGN COVID 19 MEASURES, AND NO DUTY TO INVESTIGATE, OBSERVE, MONITOR OR REPORT ANY FAILURE OF ANY CONTRACTOR OR OTHER THIRD PARTY TO FOLLOW ALL COVID 19 GUIDELINES OR REQUIREMENTS ASSOCIATED WITH THE PROJECT.

2,000 SQFT HABITABLE AREA
4 BEDROOMS
100 CFM OF CONTINUOUS
AIRFLOW PROVIDED

DRAWING LIST

- M-100.00 MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS
- M-300.00 MECHANICAL CONSTRUCTION PLAN - 1ST FLOOR
- M-301.00 MECHANICAL CONSTRUCTION PLAN - 2ND FLOOR
- M-600.00 MECHANICAL SCHEDULES
- M-700.00 MECHANICAL DETAILS
- M-800.00 MECHANICAL SPECIFICATIONS (1 OF 3)
- M-801.00 MECHANICAL SPECIFICATIONS (2 OF 3)
- M-802.00 MECHANICAL SPECIFICATIONS (3 OF 3)

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ISSUES:

01 04.07.23 BID 01

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**ESSEX COUNTY FARMWORKER
HOUSING RENOVATION**
Stables
10 Marks Road
Westport NY 12993

M-100.00

MECHANICAL SYMBOLS, NOTES &
ABBREVIATIONS

SEAL | SIGNATURE:



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THE SCALE OF THIS DRAWING IS CORRECT WHEN PRINTED ON 24x36 SIZE PAPER. ALL OTHER PAPER SIZES WILL NOT SHOW THE CORRECT SCALE.

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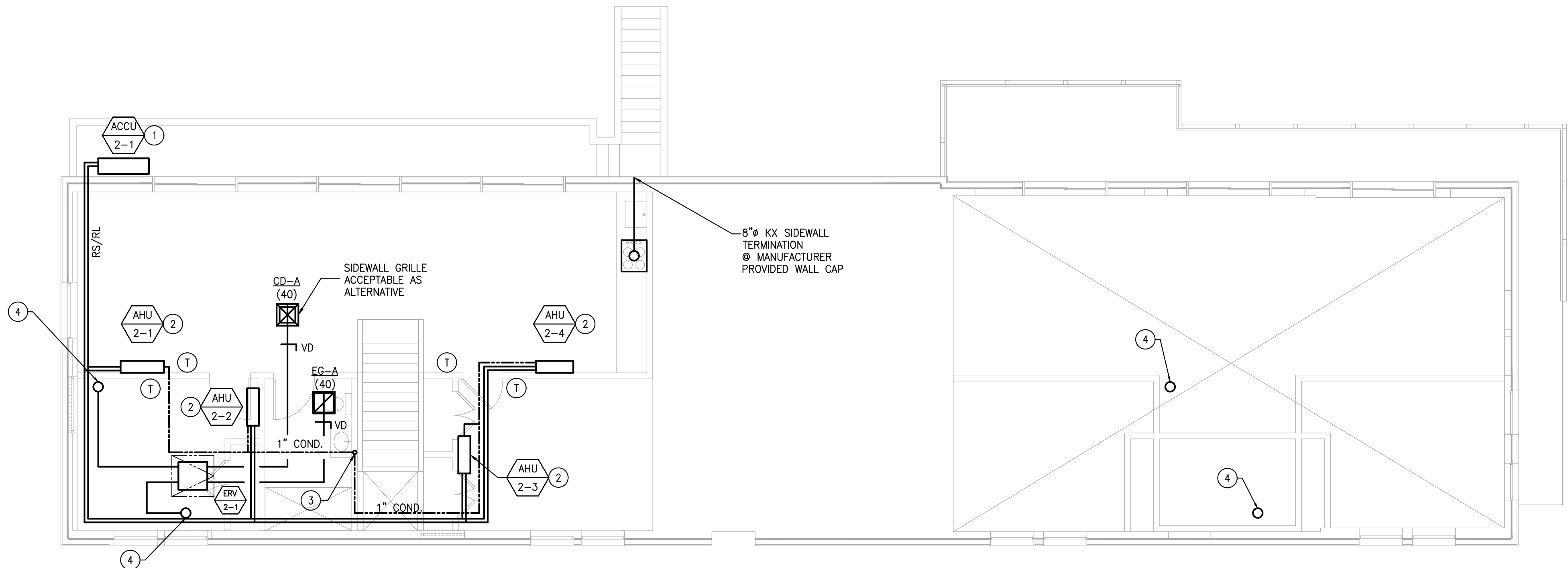
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1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
2. DRAWINGS ARE DIAGRAMMATIC. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT.
3. COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
4. NEITHER ACCURACY NOR COMPLETION OF SERVICES AND UTILITY LOCATIONS SHOWN ON DRAWINGS IS GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING SERVICES AND UTILITIES IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
5. MANUFACTURERS MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
6. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS RECOMMENDATIONS.
7. PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
8. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
9. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.
10. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. MECHANICAL CONTRACTOR TO NOTIFY OWNER PRIOR TO STARTING WORK TO VERIFY COMPLIANCE WITH BOND AND WARRANTY OF EXISTING ROOF.
11. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED AND CLEARED OF CEILING INSERTS
12. INSTALL THERMOSTATS AT 4" ABOVE FINISHED FLOOR OR ABOVE LIGHT SWITCH WHEN IN ENCLOSED ROOMS. COORDINATE FINAL LOCATION WITH ARCHITECT.
13. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.
14. ALL EXPOSED DUCTWORK SHALL BE SPIRAL OVAL WITH 1.5" INTERNAL INSULATION. COORDINATE FINISH WITH ARCHITECT.
15. INTERNAL AIRFLOW DIMENSIONS ARE SHOWN FOR DUCTS. INCREASE DUCT SIZE AS NECESSARY TO MAINTAIN FREE FLOW AREA INDICATED. USE FLAT TRANSVERSE SEAM FOR DUCTWORK WHERE SPACE AVAILABLE DICTATES.
16. PROVIDE 36" CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS ON MECHANICAL EQUIPMENT PER N.E.C. AND MFG. REQUIREMENTS.
17. DUCTWORK SHALL NOT RUN OVER ELECTRICAL PANELS. COORDINATE WITH ELECTRICAL DRAWINGS.
18. PROVIDE WELDED STAINLESS STEEL DRIP PAN BELOW ALL PIPING RUNNING ABOVE ELECTRICAL ROOM.
19. PITCH CONDENSATE PIPING 1/8" PER 12" IN DIRECTION OF FLOW.
20. PROVIDE TRAPS IN CONDENSATE LINES THAT EXTEND OVER 2'.
21. PROVIDE SHEET METAL AND PIPING SHOP DRAWINGS TO ENGINEER/ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWING SHALL BE FULLY COORDINATED WITH ALL EXISTING CONDITIONS AND NEW WORK FOR ALL TRADES.

- ① AIR COOLED CONDENSING UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, WITH MAINTENANCE CLEARANCES MAINTAINED AS SHOWN. UNITS SHALL BE MOUNTED ON STEEL DUNNAGE OR EQUIPMENT RAILS, WITH SPRING ISOLATORS SIMILAR TO MASON INDUSTRIAL'S SLR (1" DEFLECTION SPRING MOUNTS). SEE STRUCTURAL PLANS FOR MORE INFORMATION. UNITS SHALL BE INSTALLED ABOVE SNOW LINE, AT LEAST 12" ABOVE ROOF SURFACE (18" RECOMMENDED).
- ② WALL MOUNTED AIR HANDLING UNIT TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS. SIZE AND CONNECT INSULATED RS/R PER MANUFACTURER'S SPECIFICATIONS, BASED ON ACTUAL INSTALLATION. ROUTE 1" CO TO NEAREST INDIRECT WASTE LINE BEHIND SINK. CONDENSATE TO BE CPVC. FOR UNITS THAT CANNOT BE DRAINED BY GRAVITY, PROVIDE BLUE DIAMOND MICROBLUE CONDENSATE PUMP TO BE INSTALLED WITHIN UNIT CASING. COORDINATE INSTALLATION WITH MANUFACTURER. PROVIDE DRAIN PAN LEVEL SENSOR IN INTERNAL PAN WIRED TO SHUT DOWN UNIT UPON SENSING A LEAK.
- ③ PROVIDE INDIRECT DRAIN IN WALL BEHIND SINK FOR CONDENSATE DRAINAGE.
- ④ 6" DUCT UP TO GOOSENECK TERMINATION AT ROOF



MECHANICAL CONSTRUCTION PLAN - 2ND FLOOR

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M-301.00

MECHANICAL CONSTRUCTION PLAN
2ND FLOOR

SEAL | SIGNATURE

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SPLIT AIR-CONDITIONING UNIT SCHEDULE - BASED ON MITSUBISHI/TRANE																														
UNIT NO.	EVAPORATOR																CONDENSING UNIT													
	SUPPLY FAN			ELECTRICAL DATA			MOUNTING TYPE	EAT		TOTAL COOLING (MBH)	SOUND DATA (DBA) H/M/L			HEATING CAPACITY (MBH)	WEIGHT (LBS)	MODEL	DIMENSIONS LxHxW	UNIT NO.	ELECTRICAL DATA			COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	HEATING CAPACITY @ -11°F (MBH)	APPROX. WEIGHT (LBS)	SOUND DATA (DBA)	MODEL	EFFICIENCY		DIMENSION S LxHxW (INCHES)
																			V/PH/HZ	MCA	MOP							EER/SEER	COP	
	CFM RANGE	ESP	QTY	V/PH/HZ	MCA	MOP		DB (°F)	WB (°F)																					
AHU-1-4	440	—	1	208/1/60	0.2	15	WALL	80	67	18	46	40	31	20	28.4	TPKFYP018LM140A	36x12x10	ACCU-1-1	208/1/60	36	40	48	54	40.5	278	52	NTXMSH48A182AA	13.1/23.0	4.0	42x13x53
AHU-1-1	237	—	1	208/1/60	0.2	15	WALL	80	67	8	35	29	22	9	24.5	TPKFYP008LM140A	31x12x10													
AHU-1-2	237	—	1	208/1/60	0.2	15	WALL	80	67	8	35	29	22	9	24.5	TPKFYP008LM140A	31x12x10													
AHU-1-3	237	—	1	208/1/60	0.2	15	WALL	80	67	8	35	29	22	9	24.5	TPKFYP008LM140A	31x12x10													
AHU-2-1	440	—	1	208/1/60	0.2	15	WALL	80	67	18	46	40	31	20	28.4	TPKFYP018LM140A	36x12x10	ACCU-2-1	208/1/60	36	40	48	54	40.5	278	52	NTXMSH48A182AA	13.1/23.0	4.0	42x13x53
AHU-2-2	237	—	1	208/1/60	0.2	15	WALL	80	67	8	35	29	22	9	24.5	TPKFYP008LM140A	31x12x10													
AHU-2-3	237	—	1	208/1/60	0.2	15	WALL	80	67	8	35	29	22	9	24.5	TPKFYP008LM140A	31x12x10													
AHU-2-4	237	—	1	208/1/60	0.2	15	WALL	80	67	8	35	29	22	9	24.5	TPKFYP008LM140A	31x12x10													

NOTES:
1. INDOOR UNITS SHALL HAVE FACTORY WALL MOUNTED, PROGRAMMABLE THERMOSTATS, DISCONNECT SWITCHES, FACTORY SUPPLIED INTEGRAL DRIP PANS AND DRAIN PAN LEVEL SENSORS, INTEGRAL CONDENSATE PUMPS, AND HANGERS.
2. PROVIDE 7-YEAR WARRANTY ON COMPRESSOR AND 1-YEAR WARRANTY ON PARTS.
3. PROVIDE HEADERS AND OTHER REFRIGERANT PIPING ACCESSORIES AS REQUIRED BY THE MANUFACTURER.
4. ALL CONDENSERS TO BE PROVIDED WITH BASIN HEATERS.
5. ALL EQUIPMENT SHALL BE ENERGY STAR CERTIFIED.
6. CONDENSING UNITS SHALL BE MOUNTED ON STEEL DUNNAGE OR EQUIPMENT RAILS, WITH SPRING ISOLATORS SIMILAR TO MASON INDUSTRIES SLR (1" DEFLECTION SPRING MOUNTS).
SEE STRUCTURAL PLANS FOR MORE INFORMATION. UNITS SHALL BE INSTALLED ABOVE SNOW LINE, AT LEAST 18" ABOVE ROOF SURFACE.

7. TRANE/MITSUBISHI CONTACT: ERIC AZOULAY; 347.287.5970; ERIC.AZOULAY@TRANETECHNOLOGIES.COM

ENERGY RECOVERY VENTILATOR SCHEDULE - RENEWAIRE									
UNIT NO.	RENEWAIRE MODEL NUMBER	TYPE	THERMAL EFFECTIVENESS (%)		FLOW RATE (CFM)	ELECTRICAL DATA (SUPPLY/RETURN)		WEIGHT (LBS)	BASE UNIT DIMENSIONS HxWxD (IN)
			WINTER	SUMMER		V/PH/HZ	POWER (W)		
ERV-1/2-1	EV PREMIUM SH	CEILING	80	68	40	208/1/60	42	48	10x23x24
NOTES: 1. PROVIDE W/FLEXIBLE DUCT CONNECTIONS AND DISCONNECT SWITCH. 2. ERVS SHALL BE PROVIDED WITH BACKDRAFT & AUTOMATIC BALANCING DAMPER. 3. ERVS SHALL OPERATE CONTINUOUSLY DURING HOURS OF OPERATION.									

EQUIPMENT IS SPECIFIED AS BASIS OF DESIGN.
APPROVED ALTERNATIVES ARE ACCEPTABLE.

DIFFUSER SCHEDULE - BASED ON ANEMOSTAT								
DESIGNATION	FUNCTION	TYPE	MOUNTING	NECK SIZE INCHES	OVERALL DIMENSIONS	CFM RANGE	NOISE CRITERIA	MODEL
CD-A	SUPPLY	DIFFUSER	LAY-IN	6" Ø	18" X 18"	0 – 150	< 25 NC	PG PARAGON
				8" Ø		151 – 275		
				10" Ø		276 – 400		
				12" Ø		401 – 600		
EG-A	RETURN	DIFFUSER	LAY-IN	15" Ø	18" X 18"	—	< 25 NC	PG PARAGON
NOTES: 1. ARCHITECT TO APPROVE BORDER TYPE, STYLE, COLOR AND FINISH PRIOR TO PURCHASING. 2. ALL REGISTERS LOCATED IN ROOMS THAT WILL EXPERIENCE HIGH HUMIDITY SHALL BE ALUMINUM CONSTRUCTION. 3. EXHAUST AND RETURN GRILLES SHALL BE 45° DEFLECTION. 4. ALL AIR OUTLETS/INLETS TO BE PROVIDED WITH VOLUME DAMPERS. PROVIDE CABLE OPERATED DAMPERS FOR INACCESSIBLE CEILINGS. 5. ALL BLADES TO BE PARALLEL TO LONG DIMENSION. COORDINATE W/ ARCHITECT.								

DUCTWORK INSULATION SCHEDULE					
SERVICE	LOCATION	THICKNESS	MATERIAL	FINISH	MIN. R-VALUE
SUPPLY/RETURN	INDOOR	1-1/2"	D-1	VAPORSEAL	R-6
SUPPLY/RETURN	OUTDOOR	2"	D-2	VAPORSEAL	R-8
INTAKE	ALL	2"	D-3	VAPORSEAL	R-8
ERV INTAKE/EXHAUST (EXTERIOR SIDE)	INDOORS	2"	D-3	VAPORSEAL	R-8
ERV INTAKE/EXHAUST (INTERIOR SIDE)	OUTDOORS	2"	D-2	VAPORSEAL	R-8

NOTES:
1. ALL SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED
2. ALL EXPOSED DUCTWORK SHALL BE INTERNALLY LINED
3. ALL DUCTWORK UPSTREAM AND DOWNSTREAM OF AC'S & FANS SHALL BE INTERNALLY LINED FOR A MINIMUM 20 FT.
4. REFER TO M-800 SERIES DRAWING FOR EXTERIOR DUCT INSULATION.

PIPING INSULATION SCHEDULE											
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	FLUID TYPE	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)						FINISH	MATERIAL
		CONDUCTIVITY BTU-IN / (H-FT²-°F)	MEAN RATING TEMPERATURE (°F)	< 1	1 TO < 1½	1½ TO < 4	4 TO < 8	≥ 8			
> 350	STEAM	0.32 – 0.34	250	4.5	5.0	5.0	5.0	5.0	F-1	P-1	
251 – 350	STEAM	0.29 – 0.32	200	3.0	4.0	4.5	4.5	4.5	F-1	P-1	
201 – 250	STEAM	0.27 – 0.30	150	2.5	2.5	2.5	3.0	3.0	F-1	P-1	
141 – 200	HWS/R	0.25 – 0.29	125	1.5	1.5	2.0	2.0	2.0	F-1	P-1	
105 – 140	RL	0.21 – 0.28	100	1.0	1.0	1.5	1.5	1.5	F-1	P-6	
40 – 104	CWS/R, COND	0.21 – 0.27	75	0.5	0.5	1.0	1.0	1.0	F-1	P-1	
< 40	RS	0.20 – 0.26	50	0.5	1.0	1.0	1.0	1.5	F-1	P-6	

1. THICKNESS OF INSULATION MAY VARY BY MANUFACTURER. INSULATION MUST MATCH LISTED R-VALUE FOR ASSOCIATED SPACE.
2. REFER TO M-800 SERIES FOR FINISH AND MATERIAL WITHIN PIPING INSULATION SECTION.
3. INCREASE INSULATION BY 1" AND PROVIDE PVC UV JACKET FOR OUTDOOR PIPING.
4. CPVC CONDENSATE PIPING SHALL NOT REQUIRE INSULATION.

ISSUES:

01 04.07.23 BID 01

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ESSEX COUNTY FARMWORKER HOUSING RENOVATION

Stables
10 Marks Road
Westport NY 12993

M-600.00

MECHANICAL SCHEDULES

SEAL | SIGNATURE:



IT IS A VIOLATION FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM ON THIS PLAN IN ANY WAY PURSUANT TO NYS EDUCATION LAW, SECOND 7209(2). IF AN ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THIS ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

THE SCALE OF THIS DRAWING IS CORRECT WHEN PRINTED ON 24x36 SIZE PAPER. ALL OTHER PAPER SIZES WILL NOT SHOW THE CORRECT SCALE.

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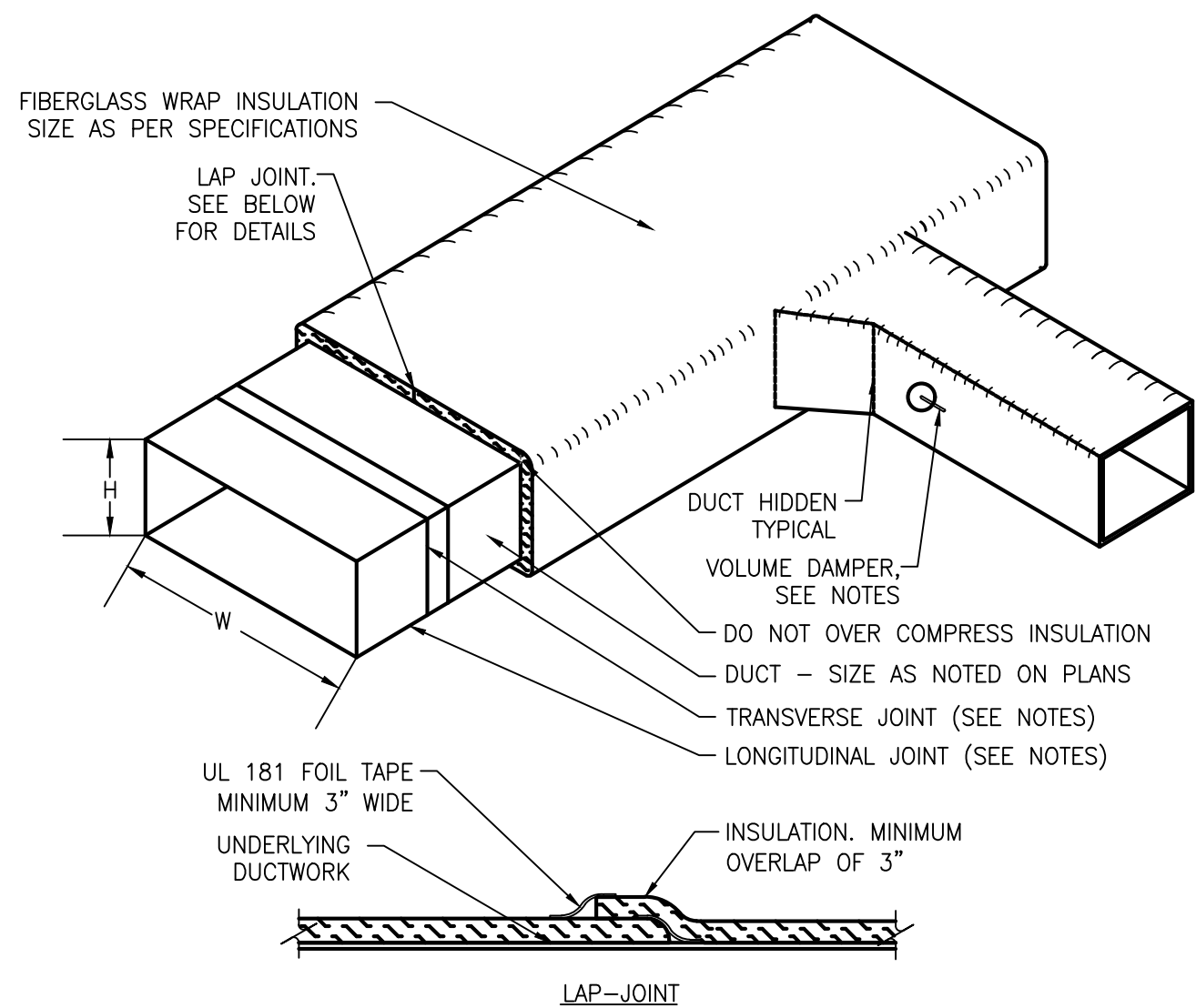
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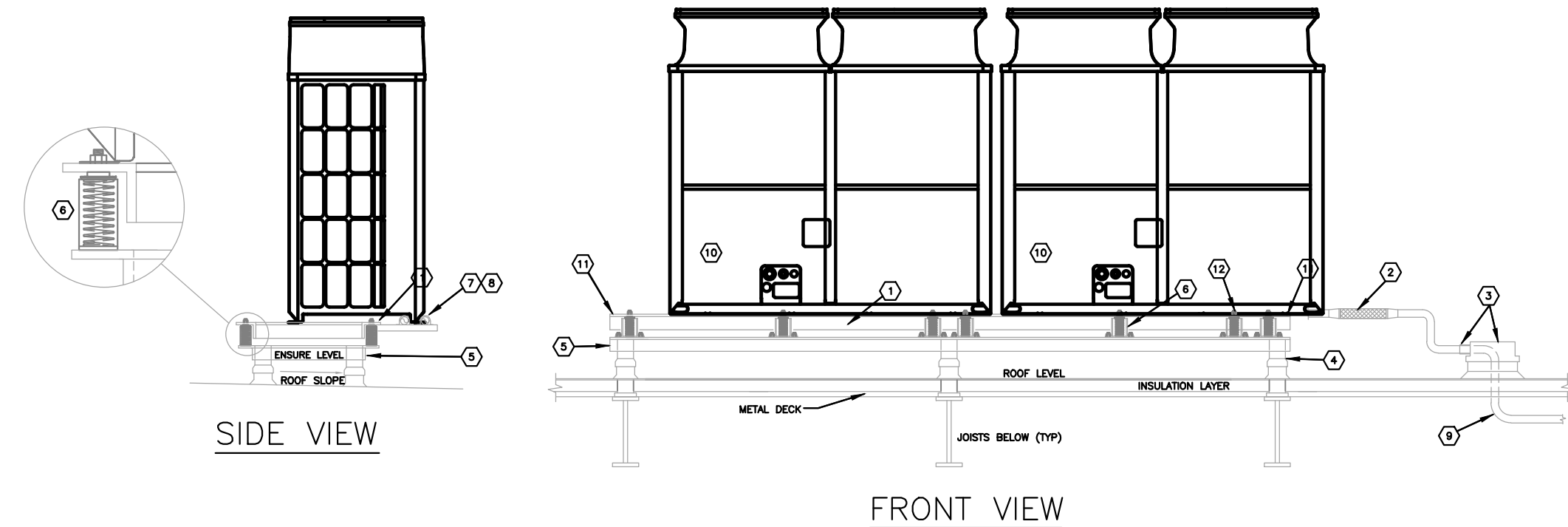
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New York NY 10038
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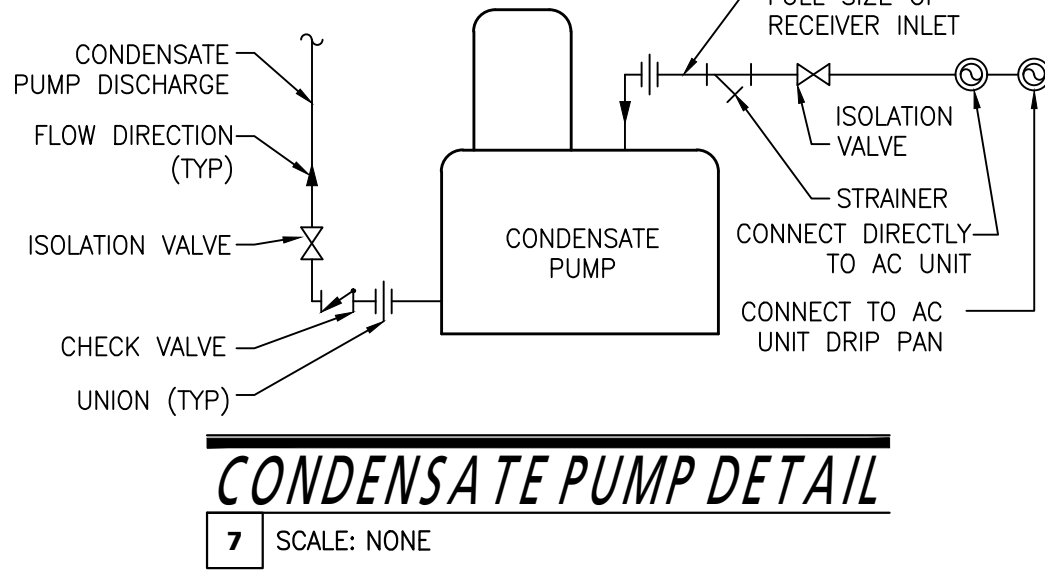
1. INSULATION SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS
2. DEVICES INSTALLED INSIDE DUCT SHALL NOT BE HIDDEN BY INSULATION
3. ACCESS DOORS AND VOLUME DAMPERS SHALL BE FULLY FUNCTIONAL AFTER INSULATION HAS BEEN INSTALLED
4. ALL TRANSVERSE AND LONGITUDINAL JOINTS AND SEAMS IN SUPPLY AIR DUCT SHALL BE SEALED AIR TIGHT WITH DAP CMC DUCT SEALER. JOINTS ALSO SHALL BE RIVETED OR CONNECTED WITH SHEET METAL SCREWS.
5. SOFT ELASTOMER BUTYL GASKETS WITH ADHESIVE BACKING SHALL BE USED TO SEAL FLANGED JOINTS.
6. INSULATION SHALL BE MINIMUM 1-1/2" THICK R-6 TO MEET MINIMUM ENERGY CODE VALUES.

5	SCALE: NONE
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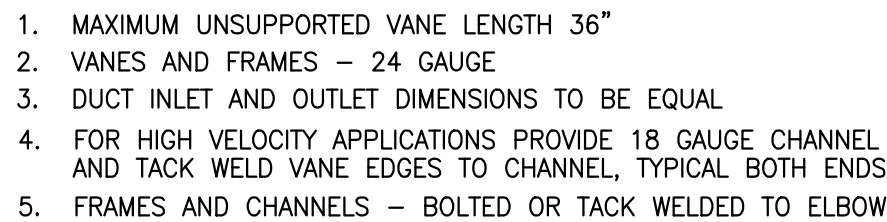


1. PROVIDE STRUCTURAL INTERSTITIAL ANGLE IRON MOUNTING MEMBER OR SIMILAR ATTACHED DIRECTLY TO BOTTOM OF UNIT MOUNTING FLANGE AND PROVIDE CROSS BRACING FOR RIGIDITY. ENSURE IT CARRIES FULL MOUNTING FOOT WIDTH ON UNIT. FINAL SPECIFICATION OF MEMBER BY STRUCTURAL ENGINEER OF RECORD.
2. PROVIDE BRAIDED COPPER FLEXIBLE CONNECTOR, R410A RATED, 650PSI MAX WORKING PRESSURE, PACKLESS INDUSTRIES OR EQUAL ON ALL MAIN PIPING DOWNSTREAM OF TWINNING KITS/CONVERGING FITTINGS PRIOR TO PENETRATION THROUGH ROOF.
3. PIPE ROOF CURB, FLASHED AND SEALED WATER TIGHT, PROVIDE FLEXIBLE WATER TIGHT COLLAR TO ALLOW FOR MOVEMENT WHERE PIPE ENTERS CURB. DO NOT ENTER PIPE CURB FROM VERTICAL DIRECTION.
4. TYPICAL BASE SUPPORT POSTS, SECURELY ANCHORED TO BUILDING STRUCTURE BELOW, QUANTITY, SIZE, AND CARRYING CAPACITY DETERMINED BY STRUCTURAL ENGINEER OF RECORD.
5. STRUCTURAL ANGLE IRON BASE MOUNTING FRAME WITH CROSS MEMBERS FOR RIGIDITY – FINAL FINISH BY STRUCTURAL ENGINEER OF RECORD.
6. VIBRATION SPRING SLR TYPE ISOLATORS (MASON INDUSTRIES OR EQUIV.) WITH RUBBER BASE PADS, SECURELY FASTENED TO STRUCTURAL BASE AND TO CONDENSING UNIT INTERSTITIAL SUPPORT STEEL. SPRING ISOLATOR TO PROVIDE MINIMUM 1" DEFLECTION OR 10 TIMES THE STATIC DEFLECTION OF THE ROOF DECK FROM EQUIPMENT WEIGHT – DETERMINED BY STRUCTURAL ENGINEER OF RECORD. AT A MINIMUM, PROVIDE SPRING ISOLATORS AT EACH EQUIPMENT BASE, MOUNTING HOLE CIRCUMFERENCE.
7. IF REQUIRED, ON SLR TYPE PIPING, PROVIDE PIPE EMANATING FROM CONDENSING UNIT CONNECTIONS BY CROSS MEMBER SUPPORT THAT IS ATTACHED DIRECTLY TO CONDENSING UNIT MOUNTING ANGLE IRON FRAME ABOVE SPRING ISOLATORS. DO NOT ATTACH ANY PIPING TO LOWER FIXED SUPPORT BASE.
8. USE NEOPRENE ISOLATION COLLARS ON PIPE CLAMS WHEN FASTENING PIPING TO SUPPORTS.
9. USE LONG RADIIUS SWEEPING COPPER ACUR TUBE PIPE BENDS WHERE PIPE ENTERS BUILDING AT FIRST ELBOW INTO CEILING SPACE TO MINIMIZE REFRIGERANT FLOW NOISE AND VIBRATION.
10. ALL ELECTRICAL CONNECTIONS TO UNITS TO BE VIA FLEXIBLE CONDUIT, PROVIDE SUFFICIENT SLACK TO ALLOW FOR UNIT MOVEMENT ON SPRING ISOLATORS.
11. ENSURE CROSS MEMBERS OF INTERSTITIAL FRAME AND BOTTOM SUPPORT FRAME ARE NOT DIRECTLY BELOW ENDS OF MODULES IN ALL LOCATIONS AND DO NOT BLOCK DRAINAGE WEEP HOLES IN BOTTOM OF UNIT CASING, FAILURE TO DO THIS MAY RESULT IN ICE DAMMING/BUILDUP BENEATH UNIT AND SUBSEQUENT BUILDUP OF ICE IN BOTTOM OF UNIT CASING BELOW COIL AND POTENTIAL DAMAGE TO BOTTOM OF COIL.
12. WHEN SELECTING SPRING ISOLATORS, CONSIDER SPRING WEIGHT DISTRIBUTION BY REFERENCE TO FORM AND CENTER OF GRAVITY. NEAR RIGHT ENDS OF UNITS (VIEWED FROM FRONT PANEL) SPRING WEIGHT CAPACITY MAY BE LARGER. IF HIGHER SPRING WEIGHT CAPACITY IS REQUIRED VS OTHER SPRING LOCATIONS, CONSIDER AN ADDITIONAL SPRING OF EQUAL "K" VALUE (lbs/in) NEAR RIGHT END OF LAST MODULE. IN GENERAL IT IS RECOMMENDED TO SELECT ALL MOUNTING SPRINGS OF EQUIVALENT "K" VALUE (lbs/in).

6 SCALE: NONE



7 SCALE: NONE



8	SCALE: NONE
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1. GENERAL	WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.	OR "CONCEALED" AS DEFINED ABOVE.	IN ADVANCE OF FIELD REQUIREMENTS. ALL SUBMITTALS TO BE COMPLETE AND CONTAIN ALL REQUIRED AND DETAILED INFORMATION. SHOP DRAWINGS WITH MULTIPLE PARTS SHALL BE SUBMITTED AS A PACKAGE.	C. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 INCH X 11 IN FORMAT. THE CONTRACTOR SHALL GIVE ONE COPY OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.	LEAKAGE CLASS 6 (RECTANGULAR METAL) OR CLASS 3 (ROUND).	ACCESS DOOR IN DUCT ADJACENT TO EACH FIRE DAMPER. SEE INSTALLATION ON DRAWING.	IT INTO COMPLIANCE AND SHALL RETEST IT UNTIL ACCEPTABLE LEAKAGE IS DEMONSTRATED. TESTS AND NECESSARY REPAIR SHALL BE COMPLETED AND A REPORT SHALL BE SUBMITTED TO AND APPROVED BY ENGINEER PRIOR TO CONCEALMENT OF DUCTS.
A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.		vii. "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.				K. COMBINATION FIRE/SMOKE DAMPERS:	
B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR, WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.	Q. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PRECATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE PREMIUM PORTION OF THE WAGES PAID.	2. SCOPE OF WORK	E. IF SUBMITTALS DIFFER FROM THE CONTRACT DOCUMENT REQUIREMENTS, MAKE SPECIFIC MENTION OF SUCH DIFFERENCES IN A LETTER OF TRANSMITTAL, WITH REQUEST FOR SUBSTITUTION, TOGETHER WITH REASONS FOR SAME.	D. THE INSTRUCTIONS SHALL BE ORGANIZED IN SECTIONS, WITH ONE SECTION PER SYSTEM. THE COVER OF THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND PHONE NUMBER OF THE PROJECT, ARCHITECT, ENGINEER/MECHANICAL CONTRACTOR AND SUBCONTRACTORS.	D. GENERAL FABRICATION REQUIREMENTS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE", LATEST EDITION, BASED ON INDICATED STATIC–PRESSURE CLASS UNLESS OTHERWISE INDICATED.	i. COMBINATION FIRE/SMOKE DAMPERS SHALL BE INSTALLED AS INDICATED ON DRAWING AND AS REQUIRED BY LOCAL CODES. DAMPERS TO BE UL 555S LATEST EDITION LISTED AND LABELED AND IN CONFORMANCE WITH NFPA.	9. AIR OUTLETS
C. INVESTIGATE EACH SPACE THROUGH WITCH EQUIPMENT MUST BE MOVED INCLUDING HALLWAYS, DOOR WIDTHS, ELEVATOR DIMENSIONS, ETC. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.	R. UNLESS OTHERWISE SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.	A. THE WORK UNDER CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.	F. ELECTRONIC COPIES OF ENGINEERING DRAWINGS:	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	i. THE FOLLOWING FITTING CONNECTIONS AND DUCT CONSTRUCTION GAUGES ARE NOT ACCEPTABLE	A. GENERAL:	
D. DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL OF ARCHITECT. COORDINATION WITH THE EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES IS REQUIRED.	S. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED. IT BE IN ACCORDANCE WITH BUILDING STANDARDS.	B. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.	G. SUBMISSIONS:	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	a) DRIVE SLIP [T–1, T–2] FITTING CONNECTIONS	ii. MARGIN TYPES, COLORS, FINISH AND METHODS OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING AND WALL DETAILS AND SPECIFICATIONS. FINISH SHALL MATCH COLOR SAMPLE AS APPROVED:	
E. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. SINGLE ROD SHALL BE SIMILAR TO GRINNELL FIG. 281. MULTI-ROD SHALL BE SIMILAR TO FEE & MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INSERT CAPABILITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER.	T. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING EQUIPMENT, ETC. WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON–SITE INSPECTION SHALL VERIFY EXISTING DUCTWORK, PIPING (SIZES, CLEARANCES, ETC.) AND CONDITIONS.	C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OF ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES, BY OWNER, INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.	H. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	b) 26 GAUGE DUCTWORK.	iii. PROVIDE ACCESS DOOR IN DUCT ADJACENT TO EACH FIRE/SMOKE DAMPER.	
F. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.	U. INSURANCE, IN ACCORDANCE WITH BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.	V. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.	I. PROVIDE ALL COORDINATION DRAWINGS, DUCTWORK AND PIPING SHOP DRAWINGS IN PDF FORMAT – PAPER SUBMISSIONS SHALL NOT BE ACCEPTED. THE ARCHITECT WILL FORWARD ALL SUBMISSIONS TO THE ENGINEER.	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ii. TRANSVERSE JOINTS: SELECT JOINT TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE," TRANSVERSE (GIRTH) JOINTS, FOR STATIC–PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT–SUPPORT INTERVALS, AND OTHER PROVISIONS IN SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE." FITTINGS AND/OR JOINTS OF TWO DIFFERENT GAUGES, CONNECTED JOINT RATING SHALL MEET MORE STRINGENT CONDITIONS.	iv. PROVIDE FIRE/SMOKE DAMPERS AS NOTED ON THE PLANS AND IN DUCTS AND OPENINGS IN SHAFTS, FLOORS, FIRE WALLS, FIRE–RESISTANCE PARTITIONS, FIRE RATED CEILINGS AND SMOKE BARRIERS.	
G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP THE WORK PROPOSAL.	V. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.	W. GUARANTEE:	J. SHEET METAL SHOP DRAWING (3/8 INCH SCALE)	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	c) DUCT CONSTRUCTION AS FOLLOWS FOR 2 INCH W.G. CLASS:	v. SUITABLE FOR OPERATION AT 20% EXCESS AND 20% LESS THAN NOTED CAPACITY FOR CONSTANT VOLUME SYSTEMS AND AT 20% EXCESS AND 60% LESS THAN NOTED CAPACITY FOR VARIABLE VOLUME SYSTEMS.	
H. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO ENSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.	W. GUARANTEE:		ii. SHEET METAL & PIPING SHOP STANDARDS	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	d) DUCT CONSTRUCTION AS FOLLOWS FOR 3 INCH W.G. CLASS:	vi. MANUFACTURER RESPONSIBLE FOR EXAMINING APPLICATION OF EACH OUTLET AND GUARANTEE THAT EACH WILL PROVIDE REQUIRED NC LEVELS AND COMFORT SPACE CONDITIONS WITHOUT DRAFTS THROUGHOUT OPERATING RANGE.	
I. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT.			iii. AC UNITS	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	e) DUCT CONSTRUCTION AS FOLLOWS FOR 4 INCH W.G. CLASS:	vii. ALL REGISTERS SHALL BE PROVIDED WITH OPPOSED BLADE VOLUME DAMPERS. DAMPER OPERATING LEVERS SHALL BE ACCESSIBLE AT THE FACE OF AIR OUTLETS. CEILING DIFFUSERS SHALL NOT HAVE BUTTERFLY DAMPERS WITHIN NECK.	
J. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.			iv. FANS	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	f) DUCT CONSTRUCTION AS FOLLOWS FOR 5 INCH W.G. CLASS:	viii. ONLY FOUR (4) WAY DIFFUSERS SHALL BE PROVIDED. PROVIDE SHEETMETAL BLANK OFF AS REQUIRED FOR 1 WAY, 2 WAY OR 3 WAY DIFFUSERS.	
K. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.			v. PIPING LAYOUT: DETAIL: AT 3/8 INCH SCALE PIPING LAYOUT WITH FITTINGS, VALVES AND EQUIPMENT, USE SINGLE LINE FOR PIPE SIZES 3 INCHES AND SMALLER, AND DOUBLE LINE FOR PIPE SIZES 4 INCHES AND GREATER. FABRICATION OF PIPES, ANCHORS, HANGERS, SUPPORTS FOR MULTIPLE PIPES, ALIGNMENT GUIDES, EXPANSION JOINTS AND LOOPS, AND ATTACHMENTS OF THE SAME TO THE BUILDING STRUCTURE. DETAIL LOCATION OF ANCHORS, ALIGNMENT GUIDES, AND EXPANSION JOINTS AND LOOPS SUBMIT ALL WELDING CERTIFICATES.	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	g) DUCT CONSTRUCTION AS FOLLOWS FOR 6 INCH W.G. CLASS:	ix. PROVIDE BLANKING FOR PROPER COVERAGE AND BLOW WITHOUT PRODUCING OBJECTIONABLE NOISE OR AIR MOTION AT OCCUPIED LEVEL.	
L. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL.			vi. VIBRATION ISOLATION	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	h) DUCT CONSTRUCTION AS FOLLOWS FOR 7 INCH W.G. CLASS:	x. MANUFACTURERS' SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:	
M. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.			vii. DAMPER AND VALVE ACTUATORS	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	i) DUCT CONSTRUCTION AS FOLLOWS FOR 8 INCH W.G. CLASS:	a) ANEMOSTAT PRODUCTS; A MESTEK COMPANY.	
N. ALL PRESENT MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT, WITH THE EXCEPTION OF SPECIFIC EQUIPMENT AND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.			viii. AUTOMATIC CONTROL SYSTEMS AND DEVICES	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	j) DUCT CONSTRUCTION AS FOLLOWS FOR 9 INCH W.G. CLASS:	b) TITUS.	
O. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.			ix. SEQUENCE OF OPERATIONS	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	k) DUCT CONSTRUCTION AS FOLLOWS FOR 10 INCH W.G. CLASS:	c) PRICE INDUSTRIES	
P. THE WORK IN THE BUILDING SHALL BE DONE			x. COORDINATION DRAWINGS: CONTRACTOR SHALL PROVIDE PLANS AT 3/4 INCH SCALE INDICATING COORDINATION BETWEEN THE TRADES USING INPUT FROM INSTALLERS OF THE ITEMS INVOLVED.	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	l) DUCT CONSTRUCTION AS FOLLOWS FOR 11 INCH W.G. CLASS:		
			i. DUCT AND PIPING INSTALLATION INDICATING COORDINATION WITH GENERAL CONSTRUCTION, BUILDING COMPONENTS, AND OTHER BUILDING SERVICES. INDICATE LOCATIONS AND SIZES OF ALL OPENINGS IN FLOOR, WALLS AND ROOF THAT MAY BE REQUIRED.	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	m) DUCT CONSTRUCTION AS FOLLOWS FOR 12 INCH W.G. CLASS:		
			ii. COORDINATION WITH SUSPENDED CEILING COMPONENTS, STRUCTURAL MEMBERS TO WHICH DUCT WILL BE ATTACHED, SIZE AND LOCATION OF INITIAL ACCESS MODULES FOR ACOUSTICAL TILE, PENETRATIONS OF SMOKE BARRIERS AND FIRE–RATED CONSTRUCTION, LIGHTING FIXTURES, AIR OUTLETS AND INLETS, SPEAKERS, SPRINKLERS, ACCESS PANELS, PERIMETER MOLDINGS SHALL BE PERFORMED.	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	n) DUCT CONSTRUCTION AS FOLLOWS FOR 13 INCH W.G. CLASS:		
			iii. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS, EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	o) DUCT CONSTRUCTION AS FOLLOWS FOR 14 INCH W.G. CLASS:		
			iv. AS–BUILTS AND EQUIPMENT OPERATION INSTRUCTIONS	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	p) DUCT CONSTRUCTION AS FOLLOWS FOR 15 INCH W.G. CLASS:		
			A. PROVIDE ALL COORDINATION DRAWINGS, DUCTWORK AND PIPING AS–BUILTS IN AUTOCAD 2013 AND PDF FORMAT. ALL CATALOG CUTS AND SUBMITTALS TO BE PROVIDED IN ELECTRONIC PDF FORMAT. THE ARCHITECT WILL FORWARD ALL SUBMISSIONS TO THE ENGINEER.	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	q) DUCT CONSTRUCTION AS FOLLOWS FOR 16 INCH W.G. CLASS:		
			B. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS, EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.	E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	r) DUCT CONSTRUCTION AS FOLLOWS FOR 17 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	s) DUCT CONSTRUCTION AS FOLLOWS FOR 18 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	t) DUCT CONSTRUCTION AS FOLLOWS FOR 19 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	u) DUCT CONSTRUCTION AS FOLLOWS FOR 20 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	v) DUCT CONSTRUCTION AS FOLLOWS FOR 21 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	w) DUCT CONSTRUCTION AS FOLLOWS FOR 22 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	x) DUCT CONSTRUCTION AS FOLLOWS FOR 23 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	y) DUCT CONSTRUCTION AS FOLLOWS FOR 24 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	z) DUCT CONSTRUCTION AS FOLLOWS FOR 25 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	aa) DUCT CONSTRUCTION AS FOLLOWS FOR 26 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ab) DUCT CONSTRUCTION AS FOLLOWS FOR 27 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ac) DUCT CONSTRUCTION AS FOLLOWS FOR 28 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ad) DUCT CONSTRUCTION AS FOLLOWS FOR 29 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ae) DUCT CONSTRUCTION AS FOLLOWS FOR 30 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	af) DUCT CONSTRUCTION AS FOLLOWS FOR 31 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ag) DUCT CONSTRUCTION AS FOLLOWS FOR 32 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ah) DUCT CONSTRUCTION AS FOLLOWS FOR 33 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ai) DUCT CONSTRUCTION AS FOLLOWS FOR 34 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	aj) DUCT CONSTRUCTION AS FOLLOWS FOR 35 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ak) DUCT CONSTRUCTION AS FOLLOWS FOR 36 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	al) DUCT CONSTRUCTION AS FOLLOWS FOR 37 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	am) DUCT CONSTRUCTION AS FOLLOWS FOR 38 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	an) DUCT CONSTRUCTION AS FOLLOWS FOR 39 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ao) DUCT CONSTRUCTION AS FOLLOWS FOR 40 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ap) DUCT CONSTRUCTION AS FOLLOWS FOR 41 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	aq) DUCT CONSTRUCTION AS FOLLOWS FOR 42 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ar) DUCT CONSTRUCTION AS FOLLOWS FOR 43 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	as) DUCT CONSTRUCTION AS FOLLOWS FOR 44 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	at) DUCT CONSTRUCTION AS FOLLOWS FOR 45 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	au) DUCT CONSTRUCTION AS FOLLOWS FOR 46 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	av) DUCT CONSTRUCTION AS FOLLOWS FOR 47 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	aw) DUCT CONSTRUCTION AS FOLLOWS FOR 48 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ax) DUCT CONSTRUCTION AS FOLLOWS FOR 49 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ay) DUCT CONSTRUCTION AS FOLLOWS FOR 50 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	az) DUCT CONSTRUCTION AS FOLLOWS FOR 51 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ba) DUCT CONSTRUCTION AS FOLLOWS FOR 52 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bb) DUCT CONSTRUCTION AS FOLLOWS FOR 53 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bc) DUCT CONSTRUCTION AS FOLLOWS FOR 54 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bd) DUCT CONSTRUCTION AS FOLLOWS FOR 55 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	be) DUCT CONSTRUCTION AS FOLLOWS FOR 56 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bf) DUCT CONSTRUCTION AS FOLLOWS FOR 57 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bg) DUCT CONSTRUCTION AS FOLLOWS FOR 58 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bh) DUCT CONSTRUCTION AS FOLLOWS FOR 59 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bi) DUCT CONSTRUCTION AS FOLLOWS FOR 60 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bj) DUCT CONSTRUCTION AS FOLLOWS FOR 61 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bk) DUCT CONSTRUCTION AS FOLLOWS FOR 62 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bl) DUCT CONSTRUCTION AS FOLLOWS FOR 63 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bm) DUCT CONSTRUCTION AS FOLLOWS FOR 64 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bn) DUCT CONSTRUCTION AS FOLLOWS FOR 65 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bo) DUCT CONSTRUCTION AS FOLLOWS FOR 66 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bp) DUCT CONSTRUCTION AS FOLLOWS FOR 67 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bq) DUCT CONSTRUCTION AS FOLLOWS FOR 68 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	br) DUCT CONSTRUCTION AS FOLLOWS FOR 69 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bs) DUCT CONSTRUCTION AS FOLLOWS FOR 70 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bt) DUCT CONSTRUCTION AS FOLLOWS FOR 71 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bu) DUCT CONSTRUCTION AS FOLLOWS FOR 72 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bv) DUCT CONSTRUCTION AS FOLLOWS FOR 73 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bw) DUCT CONSTRUCTION AS FOLLOWS FOR 74 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bx) DUCT CONSTRUCTION AS FOLLOWS FOR 75 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	by) DUCT CONSTRUCTION AS FOLLOWS FOR 76 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	bz) DUCT CONSTRUCTION AS FOLLOWS FOR 77 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ca) DUCT CONSTRUCTION AS FOLLOWS FOR 78 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	cb) DUCT CONSTRUCTION AS FOLLOWS FOR 79 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	cc) DUCT CONSTRUCTION AS FOLLOWS FOR 80 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	cd) DUCT CONSTRUCTION AS FOLLOWS FOR 81 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ce) DUCT CONSTRUCTION AS FOLLOWS FOR 82 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	cf) DUCT CONSTRUCTION AS FOLLOWS FOR 83 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	cg) DUCT CONSTRUCTION AS FOLLOWS FOR 84 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ch) DUCT CONSTRUCTION AS FOLLOWS FOR 85 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	ci) DUCT CONSTRUCTION AS FOLLOWS FOR 86 INCH W.G. CLASS:		
				E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.	cj) DUCT CONSTRUCTION AS FOLLOWS FOR 8		

EXPOSED SUPPLY DUCTWORK SHALL BE ACOUSTICALLY LINED IN LIEU OF EXTERNAL INSULATION.	FIRST SET OF AIR FILTERS ARE IN PLACE, WHENEVER FANS ARE RUNNING AND REPLACED WITH A NEW CLEAN SET OF FILTERS BEFORE TESTING IS COMMENCED.	CENTER. SECURE ALL SEAMS WITH FOIL VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE.	MANUFACTURED BY JOHNS MANVILLE; SUPER FIRETEMP M.	AND WHERE EXPOSED ON ROOF	TO THE OWNER AND/OR ENGINEER UPON REQUEST.	QUALIFIED CONTRACTOR WHO IS SPECIALIZED IN PERFORMING THIS TYPE OF WORK. CONTRACTORS NAME SHALL BE SUBMITTED TO THE OWNER, OWNER'S REPRESENTATIVE, BUILDING MANAGEMENT AND ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.	VALVES.
vii. ALSO WHERE NOTED ON A DRAWING.							d) SOLDER JOINT: WITH SOCKETS ACCORDING TO ASME B16.18.
C. SOUNDLINING IN DUCTWORK: FIBROUS GLASS, MINIMUM 3 LB DENSITY, 1-1/2 INCH THICKNESS, MAXIMUM 0.25 K FACTOR AT 75°F MEAN TEMPERATURE WITH ACRYLIC COATED FINISH FACTORY APPLIED EDGE COATING AND STENCILED IN ACCORDANCE WITH NFPA 90. FLAMESPREAD SHALL BE A MAXIMUM OF 25. LINING SHALL NOT SUPPORT MICROBIAL GROWTH AND SHALL BE TESTED IN ACCORDANCE WITH ASTM C 1071 AND ASTM G21/G22. SIMILAR TO MANVILLE PERMACOTE LINACOUSTIC.	iii. TEST, ADJUST, REPLACE SHEAVES, AND BALANCE ALL EQUIPMENT AND AIR DISTRIBUTION SYSTEMS TO PROVIDE AIR QUANTITIES INDICATED ON PLANS WITHIN PLUS OR MINUS 5 PERCENT.	ii. FIBERGLASS BOARD: SEAL JOINTS AND BREAKS IN FACING WITH 3 INCH WIDE TAPE TO MATCH FACING AND ADHERE WITH VAPOR SEAL ADHESIVE. APPLY 5 INCH WIDE TAPE AT CORNERS, WELD PINS ON TOP, SIDES AND BOTTOM.	B. FIRE-RATED BLANKET: HIGH-TEMPERATURE, FLEXIBLE, BLANKET INSULATION WITH FSX JACKET THAT IS TESTED AND CERTIFIED TO PROVIDE A 2-HOUR FIRE RATING BY A NRTL ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. MANUFACTURED BY JOHNS MANVILLE; FIRETEMP WRAP; FIREMASTER DUCT WRAP, 3M; FIRE BARRIER WRAP PRODUCTS, UNIFRAX CORPORATION; FIREWRAP.	i. ALL WATER PIPING OUTSIDE OF SHAFTS WITHIN 50 FEET OF CONNECTED ROTATING EQUIPMENT TO BE SUPPLIED WITH ISOLATORS.	v. ALL DEFECTIVE BRAZEMENTS SHALL BE CHIPPED OUT AND REPAIRED AT NO COST TO THE OWNER, BASED ON PROCEDURE TO BE SPECIFIED AT THE TIME.	iv. HOT (WET) TAP COUPON IS TO BE TURNED OVER TO BUILDING MANAGEMENT.	e) THREADED: WITH THREADS ACCORDING TO ASME B1.20.1.
D. ALL SOUNDLINING, ADHESIVES, FACES AND ACCESSORIES TO BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, EXCEPT AS OTHERWISE NOTED.	iv. TEST REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: a) FLOW, LEAKAGE CLASS, TEMPERATURE, STATIC PRESSURE OF AIR AT ALL TRUNK DUCTS SERVING AREAS OF WORK. b) TEMPERATURE OF AIR LEAVING OUTLETS AT TWO (2) TYPICAL AIR OUTLETS. c) QUANTITY OF AIR AT EACH AIR INLET AND OUTLET AFTER BALANCING. d) PROVIDE FOR ALL FANS, FAN MOTOR HP, AMPS, VOLTS, FAN RPM, CFM, INLET AND DISCHARGE STATIC PRESSURE, SHEAVE POSITION. e) PROVIDE FOR ALL AIR CONDITIONING UNITS, SUPPLY CFM, OUTSIDE AIR CFM, RETURN AIR CFM, MIXED AIR CFM. PROVIDE OUTSIDE AIR, MIXED AIR AND SUPPLY AIR TEMPERATURES (DRY BULB – COOLING AND HEATING, WET-BULB-COOLING.) INDICATE UNIT OPERATING MODE DURING TEST. f) CALIBRATE ALL NEW TERMINAL BOXES (VAV) AS REQUIRED TO MEET SPECIFIED MINIMUM/MAXIMUM CFM. g) LISTING OF DESIGN AND ACTUAL READINGS AS WELL AS ALL MANUFACTURER'S DATA FOR EQUIPMENT.	14. PIPING INSULATION A. INSULATE ALL PIPING IN ACCORDANCE WITH INSULATION SCHEDULE ON M-600 DRAWING EXCEPT AS OTHERWISE NOTED. B. PIPING, VALVES AND FITTINGS TO BE INSULATED: i. LOW TEMPERATURE PIPING SYSTEMS, 40 TO 100°F INCLUDING a) CHILLED WATER SUPPLY AND RETURN. b) CONDENSER WATER SUPPLY AND RETURN. c) GLYCOL WATER SUPPLY AND RETURN. d) CONDENSATE DRAIN PIPING. ii. LOW TEMPERATURE HOT PIPING SYSTEMS, 100 TO 250°F INCLUDING a) LOW TEMPERATURE HOT WATER SUPPLY AND RETURN. b) LOW PRESSURE STEAM SUPPLY TO 15 PSIG. c) LOW PRESSURE CONDENSATE RETURN, EXCEPT STEAM TRAPS AND TRAP ASSEMBLY AND RADIATION RUNOUTS CONCEALED IN RADIATION ENCLOSURES. d) PUMPED CONDENSATE DISCHARGE.	C. NYC PROJECTS: PRODUCT SHALL HAVE LISTING FOR THE PARTICULAR APPLICATION 16. VIBRATION ISOLATION A. FURNISH AND INSTALL ALL NECESSARY VIBRATION ISOLATORS, VIBRATION HANGERS, MOUNTING PADS, RAILS, ETC., TO ISOLATE VIBRATION AND SOUND FROM BEING TRANSMITTED TO THE BUILDING STRUCTURE. ALL VIBRATION PRODUCTS SHALL BE SPECIFICALLY DESIGNED FOR THEIR INTENDED USE. PROVIDE ISOLATION FOR MOTORIZED EQUIPMENT. B. MANUFACTURER OF THE VIBRATION ISOLATION EQUIPMENT SHALL HAVE THE FOLLOWING RESPONSIBILITIES i. SUBMIT TYPE, SIZE, DEFLECTION, LOCATION AND DETAILS INCLUDING FREE HEIGHT FOR EACH ISOLATOR PROPOSED FOR ITEMS IN THE SPECIFICATION AND ON THE DRAWINGS. ii. SUBMIT DETAILS OF ALL STEEL FRAMES AND CONCRETE INERTIA BASES TO BE USED IN CONJUNCTION WITH THE ISOLATION IN THIS SPECIFICATION AND IN THE DRAWINGS. iii. CLEARLY OUTLINE THE PROCEDURES FOR INSTALLING AND ADJUSTING THE ISOLATORS OR HANGERS. iv. GUARANTEE THE SPECIFIED ISOLATION SYSTEMS DEFLECTION AND THAT A MINIMUM OF 90% EFFICIENCY WILL BE OBTAINED.	N. FLOOR AND ROOF MOUNTING OF FACTORY ASSEMBLED AIR HANDLING UNITS, AIR CONDITIONING UNITS, HEAT EXCHANGERS AND CONDENSING UNITS. – SPRING ISOLATORS (ROOF MOUNTED EQUIPMENT TYPE SLR), OR (INDOOR EQUIPMENT TYPE SLF). O. PROVIDE FLEXIBLE CONNECTIONS BETWEEN ALL FANS AND DUCTWORK (REFER TO DUCTWORK SECTION FOR SPECIFICATIONS).	F. GASKETS i. PIPE-FLANGE GASKET MATERIALS: SUITABLE FOR CHEMICAL AND HIGH TEMPERATURES OF PIPING SYSTEM CONTENTS. ASME B16.21, NONMETALLIC, FLAT, ASBESTOS-FREE, 1/8-INCH MAXIMUM THICKNESS UNLESS THICKNESS OR SPECIFIC MATERIAL IS INDICATED. G. ALL PRESSURIZED HYDRONIC PIPING TO BE TESTED HYDROSTATICALLY TO 150 PSI OR 150% OF OPERATING PRESSURE, WHICHEVER IS GREATER, BUT NEVER EXCEED TEST PRESSURE ANSI B16.1 BASIS. TEST DURATION TO BE 2 HOURS WITH NO PRESSURE CHANGE CORRECTED FOR TEMPERATURE CHANGE. REPAIR OR REPLACE LEAKS OR DEFECTS WITHOUT ADDITIONAL COST. i. REFRIGERANT PIPING a) TEST REFRIGERANT PIPING FOR TIGHTNESS AND LEAKS UNDER PRESSURE OR VACUUM – COORDINATE WITH MANUFACTURER REQUIREMENTS. THE DURATION OF EACH TEST SHALL BE TWENTY-FOUR (24) HOURS. b) TEST JOINTS IN ACCORDANCE WITH ASHRAE 15-LATEST EDITION. THERE SHALL BE NO OBSERVABLE LEAKS OR CHANGES IN PRESSURE. IF EITHER IS OBSERVED, SEAL LEAKS, AND REPEAT TEST PROCEDURES	L. DRAIN DOWN FOR NEW PIPING CONNECTION INTO EXISTING: i. CONTRACTOR TO OBTAIN SCHEDULE AND COORDINATE WITH BUILDING MANAGEMENT FOR SYSTEM DRAIN DOWN AND CONNECTION INTO EXISTING BUILDING PIPING. ALL COSTS ASSOCIATED WITH DRAIN DOWN ARE TO BE INCLUDED AS PART OF BID. M. ALL INSTRUMENTATION (PRESSURE GAUGES AND THERMOMETERS) SHALL BE RATED FOR THE SAME PRESSURE AND TEMPERATURE AS PIPING SYSTEM AND RATED SPECIFICALLY FOR THE SAME SERVICE AS THE PIPING. PRESSURE GAUGES ARE TO BE LIQUID FILLED WITH 1% ACCURACY. SELECT GAUGES AND THERMOMETERS SO THAT THE MID-POINT IS AT THE WORKING PRESSURE AND TEMPERATURE. INSTRUMENTS TO BE MANUFACTURED BY WEISS INSTRUMENT, MILUOCO CORPORATION OR APPROVED EQUAL. i. PROVIDE THERMOMETERS IN PIPING AS INDICATED ON THE DRAWINGS AND AT THE INLET AND OUTLET OF EACH HYDRONIC COIL, HEAT EXCHANGER AND PIECE OF EQUIPMENT THAT INVOLVES A DIFFERENTIAL TEMPERATURE. THERMOMETERS TO BE ORGANIC LIQUID FILLED. ii. PROVIDE PRESSURE GAUGES IN PIPING AS INDICATED ON THE DRAWINGS AND AT SUCTIION AND DISCHARGE OF EACH PUMP AND AT INLETS AND OUTLETS OF EACH HYDRONIC COIL, HEAT EXCHANGER AND PIECE OF EQUIPMENT THAT INVOLVES A DIFFERENTIAL PRESSURE. N. PIPE SUPPORTS: i. PROVIDE ADEQUATE SUPPORT FOR PIPE AND CONTENTS TO PREVENT SAGGING, SLOTTING, OR SWAYING AND ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE STRUCTURE CANNOT SUPPORT POINT LOADS. ii. HORIZONTAL PIPING TO BE SUPPORTED BY FORGED STEEL ADJUSTABLE CLEVIS TYPE HANGER. MAXIMUM SPACING AS FOLLOWS: a) STEEL 1 INCH AND SMALLER: 6 FEET. b) STEEL 1-1/4 INCH AND LARGER: 10 FEET. c) COPPER 1 INCH AND SMALLER: 5 FEET. d) COPPER 1-1/2 IN TO 2-1/2 INCH: 8 FEET. e) COPPER 3 INCH: 10 FEET. f) PROVIDE ADDITIONAL SUPPORTS AT CHANGES IN DIRECTION, BRANCH PIPING AND RUNOUTS OVER 5 FEET AND CONCENTRATE LOADS DUE TO VALVES, STRAINERS AND OTHER SIMILAR ITEMS. iii. ROD SIZE a) PIPE 2 IN AND SMALLER: 3/8 IN b) PIPE 2-1/2 IN TO 3 IN: 1/2 IN c) PIPE 4 TO 8 IN: 3/4 IN iv. VERTICAL PIPING: a) BASE ELBOW SUPPORT WITH BEARING PLATE ON STRUCTURAL SUPPORT. b) GUIDES AT EVERY SECOND FLOOR (SPACING NOT TO EXCEED 25 FEET). c) TOP SUPPORT HANGER OR SADDLE IN HORIZONTAL CONNECTION WITH PROVISIONS FOR EXPANSION. d) INTERMEDIATE STEEL RISER CLAMP SUPPORT BOLTED AND WELDED TO PIPE BEARING ON STRUCTURAL STEEL OR BEARING PLATE AT FLOOR. e) FOR MULTIPLE PIPES, COORDINATE GUIDES, BEARING PLATES AND ACCESSORY STEEL. O. VALVES – GENERAL REQUIREMENTS i. VALVE PRESSURE AND TEMPERATURE RATINGS: NOT LESS THAN INDICATED AND AS REQUIRED FOR SYSTEM PRESSURES AND TEMPERATURES. ii. VALVE SIZES: SAME AS UPSTREAM PIPING UNLESS OTHERWISE INDICATED. iii. VALVE-END CONNECTIONS: a) FLANGED: WITH FLANGES ACCORDING TO ASME B16.1 FOR IRON VALVES b) FLANGED: WITH FLANGES ACCORDING TO ASME B16.5 FOR STEEL VALVES c) FLANGED: WITH FLANGES ACCORDING TO ASME B16.24 FOR BRONZE	iv. GENERAL-DUTY VALVE APPLICATIONS: UNLESS OTHERWISE INDICATED, USE THE FOLLOWING VALVE TYPES: a) SHUTOFF SERVICE EXCEPT STEAM: BALL, BUTTERFLY OR GATE VALVES. b) SHUTOFF SERVICE, STEAM: GATE VALVES. c) THROTTLING SERVICE EXCEPT STEAM: BALL, BUTTERFLY, PLUG VALVES. d) THROTTLING SERVICE, STEAM: GLOBE VALVES. v. INSTALL SHUTOFF DUTY VALVES AT EACH BRANCH CONNECTION TO SUPPLY MAINS, AT SUPPLY CONNECTION TO EACH PIECE OF EQUIPMENT, UNLESS ONLY ONE PIECE OF EQUIPMENT IS CONNECTED IN THE BRANCH LINE. INSTALL THROUGH DUTY VALVES AT EACH BRANCH CONNECTION TO RETURN MAINS, AT RETURN CONNECTIONS TO EACH PIECE OF EQUIPMENT, AND ELSEWHERE AS INDICATED. vi. INSTALL CALIBRATED BALANCING VALVES IN THE RETURN WATER LINE OF EACH HEATING OR COOLING ELEMENT AND ELSEWHERE AS REQUIRED TO FACILITATE SYSTEM BALANCING. vii. INSTALL SPRING LOADED CHECK VALVES AT EACH PUMP DISCHARGE AND ELSEWHERE AS REQUIRED TO CONTROL FLOW DIRECTION. viii. THREADED CONNECTIONS ARE NOT TO BE USED FOR GLYCOL SYSTEMS.
11. TESTING AND BALANCING A. ALL AIR AND WATER BALANCING SHALL BE BY AN INDEPENDENT CONTRACTOR NOT AFFILIATED WITH THE MECHANICAL CONTRACTOR AND IN ACCORDANCE WITH LOCAL STANDARDS. CONTRACTOR SHALL UTILIZE BASE BUILDING BALANCING CONTRACTOR OR APPROVED EQUAL, CONTACT BUILDING MANAGEMENT. B. CONTRACTOR TO BALANCE ENTIRE SYSTEM TO AIR AND/OR WATER QUANTITIES AS SHOWN ON ALL RELATED DRAWINGS FOR THIS JOB, AND AS DESCRIBED HEREIN. BALANCING MUST BE DONE IN THE PRESENCE OF A BUILDING ENGINEER. C. AIR BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF FANS AND BRANCH DAMPERS FOR MAJOR ADJUSTMENTS. AIR SUPPLY OUTLETS TO BE BALANCED TO A UNIFORM SUPPLY ACROSS ENTIRE FACE. ADJUSTMENT OF TERMINAL DAMPERS AND DEVICES SHALL BE FOR TRIM OR MINOR ADJUSTMENT ONLY. THIS SHALL BE DONE TO PERMIT THE LEAST NOISE GENERATION IN THE TERMINAL AREAS AND UTILIZE MINIMUM FAN ENERGY. D. WATER BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF BALANCING VALVES AT PUMPS FOR PROPER FLOW. ADJUST FLOW THROUGH COILS AS REQUIRED. E. UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL REBALANCE ANY EXISTING PORTIONS OF AIR DISTRIBUTION SYSTEM AND WATER DISTRIBUTION SYSTEM AFFECTED BY THE RENOVATION AND ALSO BALANCE ALL NEW WORK. F. IF DISCREPANCIES EXIST IN THE REPORT THAT REQUIRE FIELD VERIFICATION, THE TESTING AND BALANCING COMPANY IN THE PRESENCE OF THE ENGINEER SHALL VISIT THE JOB SITE FOR FIELD VERIFICATION OF THE REPORT. G. THE CONTRACTOR SHALL PROVIDE ALL LABOR, PRESSURE GAUGES, FLOW METERS, SHEAVES, AND BELTS REQUIRED TO BALANCE SYSTEMS. H. BALANCING REPORT SHALL BE PROVIDED ON NEBB OR AABC-TYPE FORMS. I. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY A CERTIFIED NEBB OR AABC TECHNICIAN. J. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY ONE OF THE FOLLOWING INDEPENDENT FIRMS SPECIALIZING IN TESTING AND BALANCING: i. INTERNATIONAL TESTING AND BALANCING ii. INDEPENDENT TESTING & BALANCING iii. MERENDINO ASSOCIATES. K. THE PERFORMANCE AND CAPACITY OF ALL SYSTEMS AND EQUIPMENT TO BE DEMONSTRATED BY THE CONTRACTOR. L. AFTER SUBMISSION OF THE FIELD VERIFIED BALANCING REPORT, THE AIR BALANCING COMPANY SHALL RETURN TO THE JOB SITE TO PERFORM TWO (2) OCCUPANT COMFORT BALANCES AS DIRECTED BY THE OWNER OR ENGINEER M. THE FINAL REPORT AFTER THE COMFORT BALANCE IS TO BE INCLUDED IN PROJECT OPERATING AND MAINTENANCE MANUAL TO OWNER AND ENGINEER. N. THE TESTING AND BALANCING AGENCY SHALL INCLUDE AS PART OF THEIR WORK AN EXTENDED WARRANTY OF 90 DAYS AFTER COMPLETION OF TEST AND BALANCE WORK. THE ENGINEER AT HIS DISCRETION DURING THE WARRANTY PERIOD MAY REQUEST A RECHECK, OR RESETTING OF ANY EQUIPMENT. THE MECHANICAL CONTRACTOR AND THE BALANCING CONTRACTOR SHALL PROVIDE THE NECESSARY TECHNICIANS TO FACILITATE THIS WORK. O. BALANCING AGENCY SHALL PERMANENTLY MARK ALL ADJUSTMENT DEVICES (VALVES, DAMPERS, ETC.) TO ENABLE THE SETTING TO BE RESTORED. P. AIR BALANCING: i. PRE-CONSTRUCTION AIR TESTING: MEASURE PRESSURE, TEMPERATURE, AND VOLUME OF AIR FROM EXISTING BASE BUILDING SYSTEM BEFORE STARTING WORK. TRAVERSE MAIN SUPPLY AND RETURN DUCTS BEFORE WORK TO OBTAIN TOTAL FLOW. SUBMIT REPORT TO ENGINEER IMMEDIATELY AFTER COMPLETION OF TEST. ii. HVAC CONTRACTOR SHALL ENSURE THAT A	12. INSULATION – GENERAL REQUIREMENTS A. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES ARE TO BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC. USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84), (ASA A2.5-1963). FLAMESPREAD: MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION FROM MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE. B. PRODUCTS SHALL NOT CONTAIN ASBESTOS, LEAD, MERCURY, OR MERCURY COMPOUNDS. C. DEFINITIONS: i. EXPOSED: INDOOR DUCTS, PIPING OR EQUIPMENT LOCATED IN MECHANICAL EQUIPMENT ROOMS AND IN AREAS WHICH WILL BE VISIBLE WITHOUT REMOVING CEILINGS OR OPENING ACCESS PANELS. ii. CONCEALED: INDOOR DUCTS, PIPING OR EQUIPMENT WHICH IS NOT EXPOSED. iii. OUTDOOR: DUCTS, PIPING OR EQUIPMENT WHICH IS EXPOSED TO THE WEATHER. 13. DUCTWORK INSULATION A. INSULATE ALL DUCTWORK IN ACCORDANCE WITH INSULATION SCHEDULE ON M-600 DRAWING EXCEPT AS OTHERWISE NOTED. B. REINSULATE ALL DUCTWORK AND PIPING WHICH IS EXISTING AND DAMAGED DURING CONSTRUCTION OR REQUIRED TO BE RELOCATED. INSULATE WITH SAME MATERIAL AND THICKNESS. C. NON-INSULATED DUCTWORK: i. WHERE SOUNDLINING IS OF MINIMUM THICKNESS SPECIFIED FOR INSULATION. ii. AIR CONDITIONING RETURN AIR DUCTWORK EXPOSED IN AIR CONDITIONED SPACES AND INSTALLED IN HUNG CEILINGS WHERE SPACE IMMEDIATELY ABOVE AND BELOW ARE BOTH AIR CONDITIONED. D. MATERIAL: i. TYPE D-1: MINIMUM 1-LB DENSITY FIBERGLASS BLANKET, MAXIMUM 0.28 K-FACTOR AT 75°F MEAN TEMPERATURE WITH FACTORY-APPLIED FOIL-SKIRM-KRAFT FACING SIMILAR TO MANVILLE MICROLITE. ii. TYPE D-2: 3 LB. FIBERGLASS BOARD, THE MAXIMUM K FACTOR SHALL BE 0.23 AT 75°F MEAN TEMPERATURE. WITH A MINIMUM DENSITY OF 3 LB. THE INSULATION SHALL BE PROVIDED WITH A FACTORY-APPLIED ALL PURPOSE OR ALL SERVICE FACING. SIMILAR TO MANVILLE 817 SPIN-GLAS AP. iii. TYPE D-3: MINIMUM 6 LB FIBERGLASS BOARD, MAXIMUM 0.22 K-FACTOR AT 75°F MEAN TEMPERATURE WITH FACTORY APPLIED ALL PURPOSE OR ALL SERVICE FACING. SIMILAR TO MANVILLE 817 SPIN-GLAS AP. E. INSTALLATION: i. FIBERGLASS BLANKET: 2 INCH LAP STRIPS AT ALL SEAMS. SECURE BOTTOM OF ALL DUCTS OVER 24 INCH WIDE WITH MIN. 2 ROWS OF WELD PINS 12 INCH ON	C. MATERIAL i. TYPE P-1: MINIMUM 4 LB DENSITY MOLDED FIBERGLASS, MAXIMUM 0.23 K-FACTOR AT 75°F MEAN TEMPERATURE WITH FACTORY-APPLIED FIRE-RETARDANT FOIL-SKIRM-KRAFT FACING. ALL SERVICE JACKET. SIMILAR TO OWENS-CORNING 650 ASJ. ii. TYPE P-4: MINIMUM 1 LB DENSITY FIBERGLASS FITTING INSERTS, MAXIMUM 0.28 K-FACTOR AT 75°F MEAN TEMPERATURE. SIMILAR TO MANVILLE HI-LO TEMP INSULATION INSERTS. iii. TYPE P-6: MINIMUM 6 LB MOLDED FOAMED PLASTIC. MAXIMUM 0.27 K-FACTOR AT 75°F MEAN TEMPERATURE. MAXIMUM 0.17 PERMEANCE. SIMILAR TO ARMSTRONG ARMAFLEX II. D. FINISH: i. TYPE F-1: FITTING COVER, MOLDED WHITE PVC JACKET, UL CLASS 1, MAXIMUM PERMEANCE 0.05 SIMILAR TO MANVILLE ZESTRON. ii. TYPE F-4: PVC JACKETING WITH MINIMUM 0.016 INCH WALL THICKNESS AND LONGITUDINAL JOINTS WITH LOCK SEAMS. E. OUTDOOR PIPING: i. FOR ALL PIPING, FITTINGS AND VALVES LOCATED OUTDOORS, INCREASE SCHEDULED INSULATION THICKNESS BY A MINIMUM OF 1 INCH AND PROVIDE F-4 FINISH. PROVIDE VAPORSEAL ON ALL OUTDOOR PIPES, VALVES AND FITTINGS SUBJECT TO CONDENSATION. ii. COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL HEAT TRACING REQUIREMENTS AND PIPING LENGTH REQUIREMENTS. ELECTRICAL TO PROVIDE CABLING AND THERMOSTAT. F. INSTALLATION: i. BEFORE APPLYING INSULATION ALL PRESSURE AND LEAK TESTS SHALL BE COMPLETED AND APPROVED. ii. ALL INSULATION SHALL BE BUTTED FIRMLY TOGETHER. PROVIDE 2 INCH LAMP STRIPS AT ALL SEAMS SECURED WITH ADHESIVE. USE VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE WHERE REQUIRED. STAPLES NOT PERMITTED. REFRIGERANT PIPING INSULATION SHALL HAVE MITERED FITTINGS. iii. ALL INSULATION AND VAPOR BARRIERS SHALL BE CONTINUOUS PASSING THROUGH SLEEVES, HANGERS, ETC., OR OTHER OPENINGS. PROVIDE SADDLES OR SHIELDS FOR PROTECTION. iv. INSULATION FOR STRAINERS OR OTHER FITTINGS OR ACCESSORIES REQUIRING SERVICING OR INSPECTION SHALL HAVE INSULATION REMOVABLE AND REPLACEABLE WITHOUT DAMAGE. 15. FIRE-RATED INSULATION SYSTEMS A. FIRE-RATED BOARD: STRUCTURAL-GRADE, PRESS-MOLDED, XONOLITE CALCIUM SILICATE, FIREPROOFING BOARD SUITABLE FOR OPERATING TEMPERATURES UP TO 1700°F. COMPLY WITH ASTM C 656, TYPE II, GRADE 6. TESTED AND CERTIFIED TO PROVIDE A 2-HOUR FIRE RATING BY A NRTL ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.	D. THE FOLLOWING ARE APPROVED MANUFACTURERS, PROVIDED THEIR SYSTEMS STRICTLY COMPLY WITH THE DESIGN INTENT FOR PERFORMANCE, DEFLECTION AND STRUCTURAL CAPACITY OF THIS SPECIFICATION. i. MASON INDUSTRIES, INC., HAUPPAUGE, NY ii. VIBRATION MOUNTINGS & CONTROLS, INC., BLOOMINGDALE, NJ iii. AMBER BOOTH, HOUSTON, TX iv. KINETICS NOISE CONTROL, INC D. PROVIDE INSTALLATION INSTRUCTIONS, DRAWINGS AND FIELD SUPERVISION TO ASSURE PROPER INSTALLATION AND PERFORMANCE. E. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS INCLUDING THE LOAD AND SPRING STATIC DEFLECTION FOR EACH FLOOR OR CEILING HUNG ISOLATOR. F. PROVIDE LEVELING DEVICES AND APPROVED RESILIENT DEVICES AS REQUIRED TO LIMIT EQUIPMENT AND PIPING MOTION IN EXCESS OF 1/4 INCH ISOLATORS SHALL HAVE CAPABILITY OF SUPPORTING EQUIPMENT AND PIPING AT A FIXED ELEVATION DURING INSTALLATION AND AT A SPECIFIED HEIGHT AFTER ADJUSTMENT. G. ALL SPRINGS SHALL HAVE AT LEAST 50% ADDITIONAL LOAD CAPACITY ABOVE DESIGN LOAD. H. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE EQUIPMENT CANNOT SUPPORT POINT LOADS. I. PROVIDE CORROSION PROTECTION FOR EQUIPMENT MOUNTED OUTDOORS. SPRING CORROSION RESISTANCE SHALL BE POWDER COATING OF THE SPRING WITH THE STEEL HOUSING HOT DIPPED GALVANIZED. ALL HARDWARE TO BE CADMIUM PLATED. J. CENTRIFUGAL FANS i. FLOOR MOUNTED AXIAL FANS, CABINET FANS, FAN SECTIONS, AIR HANDLING UNITS UTILIZE MASON TYPE SLF SPRING ISOLATORS OR EQUAL. ii. CEILING HUNG UTILIZE MASON TYPE 30 N OR EQUAL. iii. 3 HP AND LESS MOTOR TYPE B-1 BASE WITH SPRING ISOLATORS MASON TYPE SLF SPRING ISOLATORS OR EQUAL. iv. 24 INCH DIAMETER AND UP, WITH UP TO 40 HP MOTOR-TYPE B-1 BASE WITH MASON TYPE SLF SPRING ISOLATORS OR EQUAL. v. MOTOR SIZE – MINIMUM CONCRETE THICKNESS a) 5 TO 15 HP – 6 INCHES b) 20 TO 50 HP – 8 INCHES K. FLOOR MOUNTING OF PACKAGED AIR CONDITIONING UNIT WITH INTERNAL ISOLATION FOR COMPRESSORS – NEOPRENE IN SHEAR – TYPE SUPER W- BRIDGE BEARING. i. 50 PSI MAXIMUM LOADING. PROVIDE STEEL BEARING PLATE TO DISTRIBUTE LOAD WHERE REQUIRED. L. ROOFTOP AC UNITS – SPRING ROOF CURB – TYPE RSC AND/OR DUNNAGE STEEL WITH TYPE SLR WITH VERTICAL LIMIT STOPS. M. SUPPORT OF PIPING IN EQUIPMENT ROOMS	G. GASKETS: ONE PIECE RING TYPE 1/16 INCH MINIMUM THICKNESS KLINGER C4400 ONLY (OR APPROVED EQUAL, SUBMIT FOR APPROVAL BEFORE USE). D. WELDING i. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH ALL CODES APPLICABLE TO THE PARTICULAR SERVICE. WELDING FILLER METALS: COMPLY WITH AWS D10.12/D10.12M FOR WELDING MATERIALS APPROPRIATE FOR WALL THICKNESS AND CHEMICAL ANALYSIS OF STEEL PIPE BEING WELDED. ii. COMPLY WITH SECTION II, PART C OF THE ASME BOILER AND PRESSURE VESSEL CODE FOR WELDING MATERIALS APPROPRIATE FOR WALL THICKNESS AND FOR CHEMICAL ANALYSIS OF PIPE BEING WELDED. iii. QUALIFY PROCESSES AND OPERATORS ACCORDING TO ASME BOILER AND PRESSURE VESSEL CODE; SECTION IX, "WELDING AND BRAZING QUALIFICATIONS". COMPLY WITH PROVISIONS IN ASME B31 SERIES, "CODE FOR PRESSURE PIPING." iv. WELDERS SHALL BE QUALIFIED FOR ALL REQUIRED PIPE SIZES, MATERIAL, WALL THICKNESS, AND POSITION IN ACCORDANCE WITH THE AMERICAN SOCIETY OF MECHANICAL ENGINEERING (ASME) SECTION IX, BOILER AND PRESSURE VESSEL CODE. CERTIFY THAT EACH WELDER HAS PASSED AWS QUALIFICATION TESTS FOR WELDING PROCESSES INVOLVED AND THAT CERTIFICATION IS CURRENT. v. COPIES OF THE CERTIFIED WELDER QUALIFICATION REPORTS SHALL BE MAINTAINED BY THE RESPONSIBLE WELDING AGENCY AND THE COMPANY PERFORMING THE WELDING, AND SHALL BE SUBMITTED TO THE OWNER AND/OR ENGINEER UPON REQUEST. vi. ALL DEFECTIVE WELDS SHALL BE CHIPPED OUT AND REPAIRED AT NO COST TO THE OWNER, BASED ON PROCEDURE TO BE SPECIFIED AT THE TIME.	H. SYSTEM FILLING j. SYSTEMS OR PORTIONS OF SYSTEMS TO BE TESTED SHALL HAVE PROVISIONS FOR FILLING, VENTING (AIR REMOVAL), DRAINAGE AND TEST PRESSURE CONNECTION. ii. LIQUID USED FOR TESTING SHALL BE CLEAN CITY WATER MIXED WITH CHEMICALS SPECIFIED BY THE BASE BUILDING WATER TREATMENT CONTRACTOR. THE HVAC CONTRACTOR SHALL HIRE THE SERVICES OF THE BUILDING WATER TREATMENT CONTRACTOR AND PROVIDE ALL REQUIRED LABOR, PROVIDE TEMPORARY METERING AND MIXING DEVICES AS REQUIRED. THE HVAC CONTRACTOR SHALL OBTAIN ALL REQUIREMENTS FROM THE BUILDING MANAGEMENT. I. FLUSHING AND CLEANING AND TREATMENT i. AFTER COMPLETION OF HYDROSTATIC TESTS AND EMPTING, PROVIDE LABOR FOR INITIAL FLUSHING, CLEANING, AND PASSIVATING IN ACCORDANCE WITH THE OWNER'S WATER TREATMENT SPECIFICATION. THE HVAC CONTRACTOR SHALL HIRE THE SERVICES OF THE BASE BUILDING WATER TREATMENT CONTRACTOR. COORDINATE WITH THE OWNER'S WATER TREATMENT COMPANY AND PROVIDE ALL SPECIFICATION REQUIREMENTS AND REQUIRED LABOR. COORDINATE ALL REQUIREMENTS WITH BASE BUILDING MANAGEMENT FOR BASE BUILDING VENDOR. ii. PROVIDE ONE YEAR'S SUPPLY OF NECESSARY WATER TREATMENT CHEMICALS FOR NEW SYSTEM TO THE OWNER OR TENANT INCLUDING THE FOLLOWING: iii. CLOSED SYSTEM TREATMENT (CHILLED WATER, SECONDARY WATER, CLOSED CONDENSER WATER AND HOT WATER). PROVIDE AGENTS TO REDUCE SCALE DEPOSITS, TO ADJUST PH AND TO INHIBIT CORROSION. TREATMENT SHALL NOT CONTAIN ANY CHROMATE'S OR OTHER TOXIC SUBSTANCES. USE PROPER CHEMISTRY TO PROVIDE BACTERIA COUNTS BELOW 103/ COLONIES PER MILLILITER (AEROBIC & NON AEROBIC). PH LEVELS TO BE BETWEEN 7.0 AND 9.0. CORROSION RATE TO BE LESS THAN 1/2 MILS/YEAR STEEL, 1/10 MILS/YEAR COPPER. iv. OPEN SYSTEM TREATMENT (CONDENSER WATER) PROVIDE AGENTS TO REDUCE SCALE DEPOSITS, TO ADJUST PH AND TO INHIBIT CORROSION. TREATMENT SHALL NOT CONTAIN ANY CHROMATE'S OR OTHER TOXIC SUBSTANCES. USE PROPER CHEMISTRY TO PROVIDE BACTERIA COUNTS BELOW 105/ COLONIES PER MILLILITER (AEROBIC AND NON-AEROBIC). PH TO BE BETWEEN 7.5 AND 8.5. CORROSION RATES TO BE LESS THAN 1 MILS/YEAR –STEEL AND 1/10 MILS/YEAR COPPER. J. PROVIDE DIELECTRIC FITTINGS WHERE DISSIMILAR METALS ARE TO BE JOINED. K. HOT (WET) TAPS: i. PROVIDE NEW HOT (WET) TAP CONNECTIONS INTO PIPING SYSTEMS AS INDICATED ON THE PLANS. ii. PROVIDE ALL REQUIRED EQUIPMENT AND MATERIALS SUCH AS A TAPPING MACHINE, WELDING MACHINE, FLANGING MACHINE AND A PRESSURE CONTAINING FITTING. VALVE AND PRESSURE FITTING TO BE RATED FOR THE WORKING PRESSURE OF THE PIPING SYSTEM. iii. HOT TAP TO BE PERFORMED BY A	TO THE OWNER AND/OR ENGINEER UPON REQUEST. v. ALL DEFECTIVE BRAZEMENTS SHALL BE CHIPPED OUT AND REPAIRED AT NO COST TO THE OWNER, BASED ON PROCEDURE TO BE SPECIFIED AT THE TIME. F. GASKETS i. PIPE-FLANGE GASKET MATERIALS: SUITABLE FOR CHEMICAL AND HIGH TEMPERATURES OF PIPING SYSTEM CONTENTS. ASME B16.21, NONMETALLIC, FLAT, ASBESTOS-FREE, 1/8-INCH MAXIMUM THICKNESS UNLESS THICKNESS OR SPECIFIC MATERIAL IS INDICATED. G. ALL PRESSURIZED HYDRONIC PIPING TO BE TESTED HYDROSTATICALLY TO 150 PSI OR 150% OF OPERATING PRESSURE, WHICHEVER IS GREATER, BUT NEVER EXCEED TEST PRESSURE ANSI B16.1 BASIS. TEST DURATION TO BE 2 HOURS WITH NO PRESSURE CHANGE CORRECTED FOR TEMPERATURE CHANGE. REPAIR OR REPLACE LEAKS OR DEFECTS WITHOUT ADDITIONAL COST. i. REFRIGERANT PIPING a) TEST REFRIGERANT PIPING FOR TIGHTNESS AND LEAKS UNDER PRESSURE OR VACUUM – COORDINATE WITH MANUFACTURER REQUIREMENTS. THE DURATION OF EACH TEST SHALL BE TWENTY-FOUR (24) HOURS. b) TEST JOINTS IN ACCORDANCE WITH ASHRAE 15-LATEST EDITION. THERE SHALL BE NO OBSERVABLE LEAKS OR CHANGES IN PRESSURE. IF EITHER IS OBSERVED, SEAL LEAKS, AND REPEAT TEST PROCEDURES	QUALIFIED CONTRACTOR WHO IS SPECIALIZED IN PERFORMING THIS TYPE OF WORK. CONTRACTORS NAME SHALL BE SUBMITTED TO THE OWNER, OWNER'S REPRESENTATIVE, BUILDING MANAGEMENT AND ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK. iv. HOT (WET) TAP COUPON IS TO BE TURNED OVER TO BUILDING MANAGEMENT. L. DRAIN DOWN FOR NEW PIPING CONNECTION INTO EXISTING: i. CONTRACTOR TO OBTAIN SCHEDULE AND COORDINATE WITH BUILDING MANAGEMENT FOR SYSTEM DRAIN DOWN AND CONNECTION INTO EXISTING BUILDING

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01 04.07.23 BID 01

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HEATING/COOLING LOAD CALCULATION
AND EQUIPMENT SIZING NOTE:

ALL THE MECHANICAL EQUIPMENT SPECIFIED IN THIS DRAWING SET HAS BEEN DESIGNED TO SUFFICIENTLY HEAT AND COOL THE OCCUPIABLE AREAS OF THE BUILDING. REQUIRED HEATING AND COOLING DEMANDS HAVE BEEN CALCULATED IN ACCORDANCE WITH ASHRAE/ACCA 18.3, AND TAKE INTO ACCOUNT ALL BUILDING ENVELOPE, LIGHTING, VENTILATION & OCCUPANCY LOADS BASED ON THE PROJECT DESIGN. EQUIPMENT SELECTIONS WERE MADE TO MEET THE SYSTEM PEAK LOADS (HEATING OR COOLING).

ENERGY COMPLIANCE
STATEMENT

THE PROPOSED MECHANICAL DESIGN REPRESENTED IN THIS DOCUMENT IS CONSISTENT WITH THE BUILDING PLANS, SPECIFICATIONS AND OTHER CALCULATIONS SUBMITTED WITH THIS PERMIT APPLICATION. THE PROPOSED MECHANICAL SYSTEMS HAVE BEEN DESIGNED TO MEET THE 2020 EECOMYS AND TO COMPLY WITH THE MANDATORY REQUIREMENTS SET FORTH.

COMcheck Software Version 4.1.5.5
Mechanical Compliance Certificate

Project Information

Energy Code: 2020 NYStretch Energy Code - 2018 IECC
Project Title: Stables
Location: New York, New York
Climate Zone: 4a
Project Type: New Construction

Construction Site: 10 Marks RD
Westport, NY 12993

Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)
Credits: 1.0 Required 0.0 Proposed

Mechanical Systems List

Quantity	System Type & Description
2	ACCU-1/2-1 (Single Zone): VRF Condensing Unit, Air Cooled Heat Pump Heating Mode: Capacity = 54 kBtu/h Proposed Efficiency = 13.65 HSPF, Required Efficiency = 7.70 HSPF Cooling Mode: Capacity = 48 kBtu/h Proposed Efficiency = 23.00 SEER, Required Efficiency: 13.00 SEER Fan System: None
2	AHU-1-1/2-1 (Single Zone): Cooling: 1 each - VRF Zone Fan Unit, Capacity = 18 kBtu/h, Unknown Economizer No minimum efficiency requirement applies Fan System: Unspecified
6	AHU-1-1/2/3&2-2/3/4 (Single Zone): Cooling: 1 each - VRF Zone Fan Unit, Capacity = 8 kBtu/h, Unknown Economizer No minimum efficiency requirement applies Fan System: Unspecified

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represents a system consistent with the building plans, specifications, and other calculations submitted with this permit application. The mechanical systems have been designed to meet the 2020 NYStretch Energy Code - 2018 IECC requirements in compliance with version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

GIOVANNI E. MELENDEZ — PARTNER
Name - Title Signature Date 4/11/2023

Project Title: Stables Report date: 04/11/23
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck Page 1 of 11

COMcheck Software Version 4.1.5.5
Inspection Checklist

Energy Code: 2020 NYStretch Energy Code - 2018 IECC

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C406 [PR9] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.11 [PR38] ¹	New parking garages and new parking lots powered by the energy services for a building, and with 10 or greater parking spaces, provide either: 1. Panel capacity and conduit for the future installation of minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces; or 2. Minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.12 [PR39] ¹	New buildings comply with the provisions of Appendix CA : Solar Ready Zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Stables Report date: 04/11/23
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck Page 2 of 11

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.12.2 [F09] ¹	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature, future connection to controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Stables Report date: 04/11/23
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck Page 3 of 11

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] ¹	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6] ¹	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6] ¹	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.6.3 [PL7] ¹	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.6.3 [PL7] ¹	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.6.3 [PL7] ¹	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.7 [PL8] ¹	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.7 [PL8] ¹	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Stables Report date: 04/11/23
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck Page 4 of 11

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] ¹	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.11.3 [ME61] ¹	HVAC piping insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.11.3 [ME61] ¹	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.11.3 [ME61] ¹	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.8.1 [ME65] ¹	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. See the Mechanical Systems list for values.
C403.8.1 [ME65] ¹	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.8.1 [ME65] ¹	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. See the Mechanical Systems list for values.
C403.8.3 [ME117] ¹	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.8.3 [ME117] ¹	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.8.3 [ME117] ¹	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.12.1 [ME71] ¹	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.3 [ME55] ¹	HVAC equipment efficiency verified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.

Project Title: Stables Report date: 04/11/23
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck Page 5 of 11

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C405.8.1.1 [ME36] ¹	New traction elevators with a rise of 75 feet or more have a power conversion system that complies as follows: C405.8.1.1 Induction motors with a Class IE2 efficiency ratings are to be used. C405.8.1.2 Transmissions does not reduce the efficiency of the combined motor/transmission below that shown for the Class IE2 motor for elevators with capacities below 4,000 lbs. C405.8.1.3 Potential energy released during motion recovered with a regenerative drive that supplies electrical energy to the building electrical system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.10 [ME37] ¹	Commercial kitchen equipment shall comply with the minimum efficiency requirements of Tables C405.9(1) through table C405.9(5).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.2 [ME59] ¹	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capacity to reduce outdoor air supply to minimum per IMC Chapter 4.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.7.1 [ME59] ¹	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.7.2 [ME115] ¹	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.7.6 [ME141] ¹	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.7.4 [ME57] ¹	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.7.5 [ME116] ¹	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria. See section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.11.1 [ME60] ¹	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Stables Report date: 04/11/23
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck Page 6 of 11

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.4.3.3.2 [ME121] ¹	Closed-circuit cooling tower within heat pump loop have either automatic bypass valve or lower leakage positive closure dampers. Open-circuit tower within heat pump loop have automatic valve to bypass all heat pump water flow around the tower. Open- or closed-circuit cooling towers used in conjunction with a separate heat exchanger have heat loss by shutting down the circulation pump on the cooling tower loop. Open- or closed circuit cooling towers have a separate heat exchanger to isolate the cooling tower from the heat pump loop, and heat loss is controlled by shutting down the circulation pump on the cooling tower loop.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.4.1.4 [ME63] ¹	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 85F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.10, C403.10.1, C403.10.2 [ME123] ¹	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Stables Report date: 04/11/23
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ISSUES:

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ESSEX COUNTY FARMWORKER
HOUSING RENOVATION
Stables
10 Marks Road
Westport NY 12993

EN-200.00

ENERGY COMPLIANCE CERTIFICATES (1
OF 2)

SEAL | SIGNATURE:



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THIS PLAN IS APPROVED BY THE CITY ONLY FOR THE WORK INDICATED ON THE APPLICATION SHEET. ALL OTHER MATTERS ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.6 [EL26]?	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.7 [EL27]?	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.8.2 [EL28]?	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.9 [EL29]?	Total voltage drop across the combination of feeders and branch circuits <= 5%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Stables
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck
Report date: 04/11/23
Page 8 of 11

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [F18]?	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.3.1 [F127]?	HVAC systems and equipment capacity does not exceed calculated loads. See section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]?	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]?	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]?	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.4.1.2 [F138]?	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.4.1.3 [F120]?	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.4.2 [F139]?	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.2.1, C403.2.4.2.2 [F140]?	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.1.1 [F157]?	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Stables
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck
Report date: 04/11/23
Page 9 of 11

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Stables
Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck
Report date: 04/11/23
Page 10 of 11

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Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Stables COMCheck.cck
Report date: 04/11/23
Page 11 of 11

STABLES

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01 04.07.23 BID 01

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ESSEX COUNTY FARMWORKER HOUSING RENOVATION

Stables
10 Marks Road
Westport NY 12993

EN-201.00

ENERGY COMPLIANCE CERTIFICATES (2 OF 2)

SEAL | SIGNATURE:



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