

# 4 JOY STREET

## BOSTON, MA

### CIVIL ENGINEER

DECELLE-BURKE & ASSOCIATES, INC.  
1226 FURNACE BROOK PKWY., #401  
QUINCY, MASSACHUSETTS 02169  
TELEPHONE: 617-405-5100

### ARCHITECT



### STRUCTURAL ENGINEER

SOUZA, TRUE AND PARTNERS, INC.  
653 MOUNT AUBURN STREET  
WATERTOWN, MA 02472  
TELEPHONE: 617-926-6100 FAX: 617-924-4431

#### CIVIL

PLOT PLAN

#### LANDSCAPE

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FP2 FIRST FLOOR SPRINKLER PLAN

FP3 SECOND FLOOR SPRINKLER PLAN

FP4 THIRD FLOOR SPRINKLER PLAN

FP5 FOURTH AND FIFTH FLOOR SPRINKLER PLAN

#### CODE INFORMATION

ALL NOTES BELOW ARE PER BUILDING / LOT

Based upon 2009 I.B.C., Commonwealth of Mass. 8th Edition, 2009 I.E.B.C.; 2015 I.E.C.C. and 2017 Stretch Code

#### Occupancy (Per Building)

Existing: Offices (Appalachian Mtn. Club)

Proposed: R-2 Three Dwellings- Multi family residential

Occupants/Floor:

Garden Floor = 1400sf / 200sf/occ = 7 occupants

First Floor = 1350sf / 200sf/occ = 6 occupants

Second Floor = 1500sf / 200sf/occ = 7 occupants

Third Floor = 1350sf / 200sf/occ = 6 occupants

Fourth Floor = 1200sf / 200sf/occ = 6 occupants

Fifth Floor = 725sf / 200sf/occ = 3 occupants

Total Occupants per building = 35

Classification- (Level 3 alterations with additions per I.E.B.C.)

Exist. Construction: Type IIIB (non-combustible exterior walls, unprotected combustible frame, floors, roof)

Proposed Construction: Type IIIB (non-combustible exterior walls, unprotected combustible frame, floors, roof). As allowed by section 504.2 of MA. Amendment (sprinkler system increase) 4 story unlimited area per floor allowable

Assembly Rating for IIIB Construction - per table 601 - for all new work

(Non combustible Floors/Ceiling, Unprotected)

Elevator/Shfts: 2hr

Tenant Separations: 1/2 hr (Per 709.3.2)

Exit Access: 1/2 hr

Interior Non Bearing Partitions: 0 hr

Interior Bearing Walls : 0 hr

Floors, Roofs, Structural Members: 0 hr

Fire Walls/Party Walls: 3 hr

Non Bearing Front/Rear Exterior Walls: 0 hr (over 30' fire separation; 1 hr if 0'-30' fire separation.)

Load Bearing Exterior Walls: 2 hr

#### Fire Resistant Material/Construction

1. Windows in exterior walls: unprotected, no limit per 705.8 (more than 20' fire sep.) 25% allowable unprotected opening if 5' to 10' fire separation - 45% unprotected if 10'-15', 75% unprotected if 15'-20'

2. Fire separation assemblies (stair, elevator, dwelling separation and exit access walls) to run tight from floor to floor above.

3. Ducts penetrating 2 hour or greater walls need fire dampers (not required in 1 hour - sprinklered building per 716.5.2- 3

4. Provide shafts for ducts larger than 144 sq inches when passing through 2 or more floors- not required if fire stopped per ASTM

E8 14 - with 1 hour "F" rating.

5. Ceiling penetrations are allowed in G.W.B. if not exceeding

100 sq. inches in 10 sf.

6. Exterior walls with more than 10' fire separation to be rated for exposure from

inside only- both sides if less.

#### Fire Protection System

1. Provide full automatic fire suppression system in accordance with NFPA 13D per table 903.2 of MA amendments, note A and 903.3.1.3 (<12,000 SF and 3 dwellings in each separate building).

2. Standpipes not required for NFPA 13D fire suppression systems.

3. Provide new 2" fire service to each building

4. Provide fire alarm system per NFPA 72, with audible notification in all areas 5' from entrance to exit - each floor a zone with annunciator- flow switch a separate zone.

5. Visible alarm in common areas.

6. Manual fire alarm boxes not required per 907.2.9.1- 3

7. Audible alarm 15 DBA above ambient

sound in every occupied space - 70 DBA min.

8. Smoke detectors in common areas on building

system, on battery backup and unit smokes in

vicinity of bedrooms and within bedrooms.

9. Supervision by private company

#### Egress

1. Exit doors to be 2'-8" clear

2. One exit is allowed at Ground, 1st, 2nd, and 3rd floors per table 102.2

"Stories with one exit" when 4 dwelling units and 50' travel distance max (to an enclosed exit).

3. Each unit requires only 1 exit (less than 20 occupants per unit) as per

section 1021.4 (largest unit is 15 occupants).

4. 1 enclosed 1 hour rated new stair is provided- 36" minimum width per

1009.1.1 (exit stair enclosure connects less than 4 stories).

5. Exit doors can swing opposite direction of egress travel when serving

less than 50 occupants.

6. Connecting balconies exist for unit 3, though not required

#### Seismic Design:

1. Need to be equal to pre construction condition

per 3408.3.5

#### Zoning

H-2-65 Zone

See attached zoning computation form and F.A.R calculation drawing.

The building is not within the ground water conservation district

boundaries.

#### Energy Conservation

1. Building type: "Commercial" Per I.E.C.C.- definition (4 story or

greater above grade)

2. Building alterations to comply with section 401.5 of the Comm. of

Mass. 8th edition. ("Stretch Code") "Prescriptive option for

alterations, renovations or repairs"- see attached letter.

3. Please note- H.E.R.S. index rating is not required (over 3 stories in

height)

PERMIT SET: 08/21/2017



# CITY OF BOSTON

## THE ENVIRONMENT DEPARTMENT

Boston City Hall, Room 709 • Boston, MA 02201 • 617/635-3850 • FAX: 617/635-3435

October 13, 2017

BEACON HILL ARCHITECTURAL COMMISSION

Rob Gatnik  
3-5 Joy LLC  
60 Adams Street, 3<sup>rd</sup> Floor  
Milton, MA 02186

CERTIFICATE OF APPROPRIATENESS

### NOTICE OF DECISION

Application #: 17.800 BH  
Property: 4 Joy Street

Dear Mr. Gatnik:

At the May 18, 2017 public hearing, the Beacon Hill Architectural Commission (BHAC) reviewed your application for a Certificate of Appropriateness to perform exterior work at 4 Joy Street, one of a row of five Greek Revival style rowhouses designed by Cornelius Coolidge and built between 1832-1834. The proposed scope of work included replacing the rear yard addition; enlarging the oriel bay by one story; enlarging window openings to accommodate paired sashes; replacing the rear façade windows with six-over-six, double-hung windows with a black finish; removing a skylight and constructing a new rear dormer featuring a nine-lite sash, replacing the slate shingles in-kind on the front portion of the roof and replacing the asphalt (fiberglass) shingles at the rear roof in-kind, and installing vents on roof; restoring the entryway surround; modifying the front areaway and walkways; masonry and window restoration; replacing dormer windows; installing window screens, entry intercoms, light fixture, and fire protection systems, as described and shown in the presentation existing condition photographs, mock-up photographs, cutsheets, color renderings, and drawings labeled EC1, EC-2, EC-3, EC-4, EC-5, EC6, , dated issued January 4, 2017, drawings labeled EC-12 and EC-13, dated issued December 15, 2016, and drawings labeled EC-5, EC-5, EC-5, EC-10, dated issued May 11, 2016, all prepared by Grassi Design Group. The proposed work, as previously proposed and presented at the March 16, 2017 and April 20, 2017 included public hearing, included installing six-over-six, double-hung and nine-lite casement wood windows with a black finish at the rear façade; cladding the ell addition in white paneling; installing railings at the rear roof decks featuring two horizontal bars at the top and finials; enlarging a third floor window at the rear to accommodate paired sashes; painting the dormers off-white; and installing asphalt shingles at the rear side of the gabled roof.

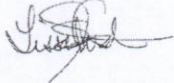
The Commission voted to approve your application as submitted with the following provisos be remitted to staff in revised 11x17 drawings:

1. That the windows on the rear façade be two-over-two, double-hung wood windows with a black painted finish;
2. That the oriel on the rear façade should not be enlarged and remain the size it currently is;
3. That the ell addition be clad in standing seam copper;
4. That the balconies/decks have a single horizontal bar at the top with no finials or raised posts;
5. That the proposed double width window opening be eliminated from the scope of work;
6. That the wood dormer panels have a dark painted finish with a dark sash;
7. And that synthetic slate be used at the rear roof.

Subsequently on August 22, 2017, staff received and reviewed revised synthetic slate cutsheets and drawings labeled A1-A7 and A9, dated issued August 21, 2017, prepared by Grassi Design Group, and found that the proposal approved by the Commission has been maintained.

This determination is based on documentation presented at the hearing. Statutory reviews by other agencies in conflict with this decision may affect the status of this certificate, which is valid for two (2) years from its date of issue. The applicant is required to inform the BHAC of any project changes, and failure to do so may affect the status of this certificate. Please bring a copy of this certificate with you when filing for permits from the Inspectional Services Department (1010 Massachusetts Avenue). Photographs of the completed project should be submitted in hard copy format to confirm compliance with the terms of this certificate.

Sincerely,



Lissa Schwab  
Preservation Planner  
Beacon Hill Architectural Commission

cc: Guy Grassi, Grassi Design Group

RECORD OF VOTE ON APPLICATION 17.800 BH

MOTION by: Taylor; SECOND by: Pierce

AFFIRMATIVE: Donnelly, Pierce, Taylor

NEGATIVE: (None)

December 05, 2017

Mr. Luis Santana – Plans Examiner  
Boston Inspectional Services Department  
1010 Massachusetts Avenue  
Boston, MA 02118

RE: 4 Joy Street

Dear Luis,

I am sending you this letter regarding your request for information letter on the above referenced project, Item 3, 521 CMR compliance in accordance with “Chapter 3 Section 3.3 Jurisdiction” and “Chapter 10 Public Use Spaces”.

Section 3.3, Jurisdiction does subject the renovations of this building to the provisions of 521 CMR. However, as these units will be sold as condominiums, and only 3 units are in the proposed building (less than 20) the unit interiors are exempt. Also, “townhouse” units (“2 levels or more”) are also exempt.

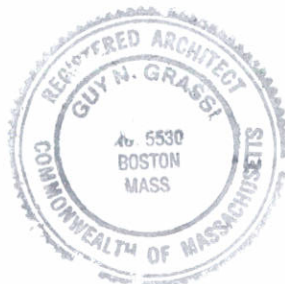
Chapter 10, “Public Use and Common Use Spaces” further exempts common use spaces for buildings with less than 12 units, or when the work is not new construction and has 3 or more units (see attached page). As this proposed building is an addition and renovation of an existing building, with 3 proposed units, the common areas and entrances are exempt from 521 CMR.

Please call me or email me if you have any further questions regarding this issue.

Sincerely,



Guy N. Grassi  
Grassi Design Group, Inc.



August 21, 2017

Plan Examiner  
Boston Inspectional Services Department  
1010 Massachusetts Avenue  
Boston, MA 02118

RE: 4 Joy Street energy code compliance

Dear Sir/Madame,

I am sending you this letter as a report to confirm that the above-referenced building fully complies with all energy code requirements, including the Massachusetts Building Code, 9<sup>th</sup> Edition (IECC 2015 with Mass. Amendments). The climate zone is 5A, and the building type is “commercial” (four stories or more in height as per the definitions in IECC of “residential” and “commercial”). Alterations must comply with the code for new construction with unaltered portions allowed to remain, per C503. Section C401 of the code allows for either the performance option method, or the prescriptive option for alterations and additions, which must comply with sections C402.2, C402.3, C402.4 and C402.5; and also comply with sections C403, C404 and C405 – we have chosen the latter for all altered or new exterior assemblies.

#### Prescriptive Method

This section requires the various components of the building must exceed all of prescriptive requirements for opaque assemblies and fenestration. The requirement and the proposed R or U values are as follows (for altered components): (based on tables 402.1.3 and 402.4)

<b><u>Assembly</u></b>	<b><u>Requirement</u></b>	<b><u>Proposed</u></b>
Wood doors and window frames (operable)	U = 0.45	U = 0.35
SHGC of glazing (PF<0.25)	U = 0.40 0.53 @ north	U = 0.40
Roof insulation above deck	R-30 (U-0.048)	R-30 (U-0.033)
Wood framed walls	R-20+ 3.8 C.I.	R-20 + R-4 cont. insul.
Mass wall	R-13.3 (U-0.080)	R-14
Floor over unheated space	R-30	R-10 (where new)
Unheated slabs	R-10 (24” down)	N/A
Existing Walls (C503.1.3)	Fill cavity w/ insul.	R-11

The other sections (C403, C404, and C405) require the following:

- Maximum fenestration less than 30%.
- Mechanical equipment must exceed 14 SEER (15 SEER minimum provided), and 3.3 COP minimum efficiency.
- Energy recovery ventilation not required per C403.2.7, exception 9.
- Water heater exceed efficiency per C404.2.
- Also, lighting power density requirements will be greatly exceeded through the use of LED and florescent lamping throughout. The requirements and actual provided LPD is as follows:

<u>Area</u>	<u>Max. Allowed</u>	<u>Actual</u>
Residential Areas	0.51 w/sf	0.2 w/sf

Please note an energy audit or res-check is not required when using this prescriptive compliance methodology. Also, please note a HERS index rating is not required, nor any other requirements of the stretch code, per section 101.2 (renovations of existing “commercial” buildings). Also, per section 808.1 of the IEBC, only the alterations to the existing building need to comply with the energy conservation requirements.

Sincerely,

Guy N. Grassi  
Grassi Design Group, Inc.



# Initial Construction Control Document

To be submitted with the building permit application by a

Registered Design Professional

for work per the 8<sup>th</sup> edition of the

Massachusetts State Building Code, 780 CMR, Section 107

Project Title: 4 JOY STREET, BOSTON MA. Date: 2/5/18

Property Address: 4 JOY STREET, BOSTON MA. 02114

Project: Check one or both as applicable:  New construction  Existing Construction

Project description: TWO STORY ADDITION AND ALTERATIONS TO EXISTING BUILDING FOR USE AS A 3 UNIT RESIDENCES

I GUY N. GRASSI MA Registration Number: 5530 Expiration date: JUNE 2018, am a registered design professional, and I have prepared or directly supervised the preparation of all design plans, computations and specifications concerning:

- Architectural
- Structural
- Mechanical
- Fire Protection
- Electrical
- Other

for the above named project and that to the best of my knowledge, information, and belief such plans, computations and specifications meet the applicable provisions of the Massachusetts State Building Code, (780 CMR), and accepted engineering practices for the proposed project. I understand and agree that I (or my designee) shall perform the necessary professional services and be present on the construction site on a regular and periodic basis to:

1. Review, for conformance to this code and the design concept, shop drawings, samples and other submittals by the contractor in accordance with the requirements of the construction documents.
2. Perform the duties for registered design professionals in 780 CMR Chapter 17, as applicable.
3. Be present at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the work and to determine if the work is being performed in a manner consistent with the approved construction documents and this code.

Nothing in this document relieves the contractor of its responsibility regarding the provisions of 780 CMR 107.

When required by the building official, I shall submit field/progress reports (see item 3.) together with pertinent comments, in a form acceptable to the building official.

Upon completion of the work, I shall submit to the building official a "Final Construction Control Document".

Enter in the space to the right a "wet" or electronic signature and seal:

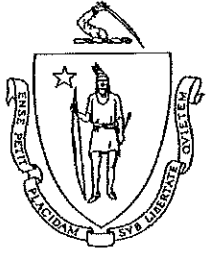


Phone number: 617.956.9992

Email: GUY.N.GRASSI@GRASSIDES.COM

Building Official Use Only

Building Official Name: \_\_\_\_\_ Permit No.: \_\_\_\_\_ Date: \_\_\_\_\_



# Initial Construction Control Document

To be submitted with the building permit application by a  
**Registered Design Professional**  
for work per the 8<sup>th</sup> edition of the  
Massachusetts State Building Code, 780 CMR, Section 107

Project Title: 4 Joy Street

Date: August 30, 2017

Property Address: 4 Joy Street, Boston, MA

Project: Check (x) one or both as applicable:  New construction  Existing Construction

Project description: Additions and renovations of existing residential construction

I, Lisa A Bohlin, MA Registration Number: 40418 Expiration date: 6/30/18, am a *registered design professional*, and I have prepared or directly supervised the preparation of all design plans, computations and specifications concerning<sup>1</sup>:

Architectural  
Fire Protection

Structural  
Electrical

Mechanical  
Other:

for the above named project and that to the best of my knowledge, information, and belief such plans, computations and specifications meet the applicable structural provisions of the Massachusetts State Building Code, (780 CMR), and accepted engineering practices for the proposed project. I understand and agree that I (or my designee) shall perform the necessary professional services and be present on the construction site on a regular and periodic basis to:

1. Review, for conformance to this code and the design concept, shop drawings, samples and other submittals by the contractor in accordance with the requirements of the construction documents.
2. Perform the duties for registered design professionals in 780 CMR Chapter 17, as applicable.
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Nothing in this document relieves the contractor of its responsibility regarding the provisions of 780 CMR 107.

When required by the building official, I shall submit field/progress reports (see item 3.) together with pertinent comments, in a form acceptable to the building official.

Upon completion of the work, I shall submit to the building official a 'Final Construction Control Document'.

Enter in the space to the right a "wet" or electronic signature and seal:



Phone number: 617 926-6100

Email: lbohlin@souzatrue.com

### Building Official Use Only

Building Official Name:      Permit No.:      Date:

Note 1. Indicate with an 'x' project design plans, computations and specifications that you prepared or directly supervised. If 'other' is chosen, provide a description.





April 18, 2017

Fire Prevention Officer  
Boston Fire Department  
Boston, MA

Subject: Fire Sprinkler Narrative for the  
4 Joy Street – 3 Unit Residence  
4 Joy Street  
Boston, MA

Dear Sir,

This letter will serve as confirmation that we have taken in consideration 780 CMR, 8th Edition, Section 903.1.1 with regard to the design of the automatic fire sprinkler system and compliance with applicable codes at the above referenced location.

Re: 780 CMR 903.1.1, item 1:

(1.a) Basis (Methodology) of Design

Section 1 – Building Description

- a. Building “Use” Group – R-2 – Residential
- b. Square footage to be constructed: 7,840 square feet (approx. gross)
- c. Building height – 49’-4”
- d. Number of floors above grade – 5 Stories with small basement
- e. Type of occupancies within the building – Residential
- f. Liquids and Hazardous material usage and storage – N/A
- g. High storage of commodities over 12 feet – N/A
- h. Site access for emergency vehicles – Refer to site plans –

## Section 2 – Applicable Laws, Regulations and Standards

- a. CMR 780, Commonwealth of Massachusetts Regulations (State Building Code), 8<sup>th</sup> Edition
- b. NFPA-13D, 2013 Edition (Sprinkler Systems)
- c. NFPA # 25, - 2014 Edition, “Inspection, Testing and Maintenance of Water-Based Fire Protection Systems”
- d. M.G.L. Chapter 146, Section 81 through 89 and CMR 528, Section 11 and 12, (Sprinkler Contractor and Fitters Licensing Laws and Regulations).
- e. M.G.L. Chapter 148, Section 26G (Building or Additions; Automatic Suppressant or Sprinkler Systems)

## Section 3 – Design Responsibility for Fire Protection Systems

- a. The Professional Engineer (PE) provides a partial design and specifies the design criteria to be used by the installing contractor, who finalizes the system layout, provides calculations to confirm the design criteria. The PE reviews and approves the installing contractor’s final layout (Shop Drawings) and calculations. The PE is considered the engineer of record and certifies system installation for code compliance at completion.

## Section 4 – Fire Protection Systems to be installed

- a. Fire mains – 2” Copper Domestic Service
- b. The design density for the residences is .05gpm per square foot over the two most remote sprinklers (per NFPA 13D)
- c. Sprinklers shall have a maximum coverage area of 324sq.ft.
- d. Automatic fire extinguishing systems – N/A
- e. Smoke control/management systems – N/A
- f. Kitchen cooking equipment and exhaust systems – N/A
- g. Emergency power equipment – N/A
- h. Hazardous material monitoring equipment – N/A

## Section 5 – Features used in design methodology

- a. Building occupant notification and evacuation procedures – Audiovisual alarm notification appliance devices shall be provided in accordance with NFPA # 72 and 780 CMR 917.0 and shall be automatically activated by smoke detectors, heat detectors, sprinkler water flow devices and manual fire alarm boxes.
- b. Emergency response personnel, site and system features – One single fire dept. connection located on each building to serve the sprinklers within the building.
- c. Method of future testing and maintenance of systems and documentation. The fire protection system shall be tested and maintained in accordance with the requirement of NFPA # 25, Standard for the Inspection, Testing and Maintenance of Water – Based Fire Protection Systems.

## Section 6 – Special Consideration and Description

- a. N/A

### (1.b) Sequence of Operation

#### Section 1

- a. Thermally sensitive automatic sprinklers connected to a fixed fire protection wet-pipe system connected to the public water supply are used in detecting a fire. When a fire occurs, the heat produced will fuse and operate sprinklers over the affected area, distributing water to control or extinguish the fire.
- b. All control, drain and test connections shall be provided with signs indicating their purpose. Sectional control valves shall have a sign indicating the portion of the system that is controlled by the valve.

### (1.c) Testing Criteria

- a. The Fire Protection Contractor shall be responsible for coordinating the final acceptance testing, which shall be witnessed by the head of the fire department or his designee.
- b. The contractor shall also be responsible for insuring, and attest in writing that all equipment and devices have been tested as an entire system where such devices are integrated with the Fire Protective Signaling System.
- c. The Contractor will provide verbal notification to all code officials and public utility companies and personnel as to the specific dates and times to perform all required testing as a system or individual component testing.

## Section 7 – Equipment and tools

- a. All piping shall be hydrostatically tested per the requirements of NFPA #13D
- b. All control valves shall be fully closed and opened under system water pressure to ensure proper operation.

## Approval Requirements

- a. Written approval is required by the Boston Fire Department that the system satisfy all operational code compliance requirements.
- b. When a portion of the system fails to operate satisfactorily, that portion shall be corrected and pre-tested prior to rescheduling final acceptance test.
- c. The installing contractor will provide properly executed Material, Test, Performance, and Completion Certificates.

Respectfully,



Nathaniel Phillips P.E.  
Registered Professional Fire Sprinkler Engineer

# HYDRAULIC CALCULATIONS for

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## Job Information

Project Name : 4 JOY STRET

Contract No. :

City: CHARLESTOWN, MA

Project Location: 4 JOY STREET

Date: 4/18/2017

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## Contractor Information

Name of Contractor: A&E FIRE PROTECTION, INC

Address: 25 NORTH STREET

City: CANTON, MA 02021

Phone Number: 781-329-9799

E-mail: KREITER@AEFIREINC.COM

Name of Designer: K.REITER

Authority Having Jurisdiction: NFD/ISD

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## Design

Remote Area Name	2
Remote Area Location	5TH FLOOR
Occupancy Classification	LH
Density (gpm/ft <sup>2</sup> )	1
Area of Application (ft <sup>2</sup> )	2
Coverage per Sprinkler (ft <sup>2</sup> )	17
Number of Calculated Sprinklers	2
In-Rack Demand (gpm)	0
Special Heads	
Hose Streams (gpm)	0
Total Water Required (incl. Hose Streams) (gpm)	34.2
Required Pressure at Source (psi)	66
Type of System	Wet
Volume - Entire System (gal)	13 gal



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## Water Supply Information

Date	MM/DD/YYYY
Location	
Source	W2

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## Notes

## Hydraulic Analysis for : 2

### Calculation Info

Calculation Mode	Demand
Hydraulic Model	Hazen-Williams
Fluid Name	Water @ 60F (15.6C)
Fluid Weight, (lb/ft <sup>3</sup> )	N/A for Hazen-Williams calculation.
Fluid Dynamic Viscosity, (lb-s/ft <sup>2</sup> )	N/A for Hazen-Williams calculation.

### Water Supply Parameters

Supply 1 : W2

Flow (gpm)	Pressure (psi)
0	72
792	68

### Supply Analysis

Node at Source	Static Pressure (psi)	Residual Pressure (psi)	Flow (gpm)	Available Pressure (psi)	Total Demand (gpm)	Required Pressure (psi)
W2	72	68	792	72	34.2	66

### Hoses

Inside Hose Flow / Standpipe Demand (gpm)

Outside Hose Flow (gpm)

Additional Outside Hose Flow (gpm)

Other (custom defined) Hose Flow (gpm)

-----  
 Total Hose Flow (gpm)

### Sprinklers

Ovehead Sprinkler Flow (gpm) 34.2

InRack Sprinkler Flow (gpm) 0

Other (custom defined) Sprinkler Flow (gpm) 0

-----  
 Total Sprinkler Flow (gpm) 34.2

### Other

Required Margin of Safety (psi) 0

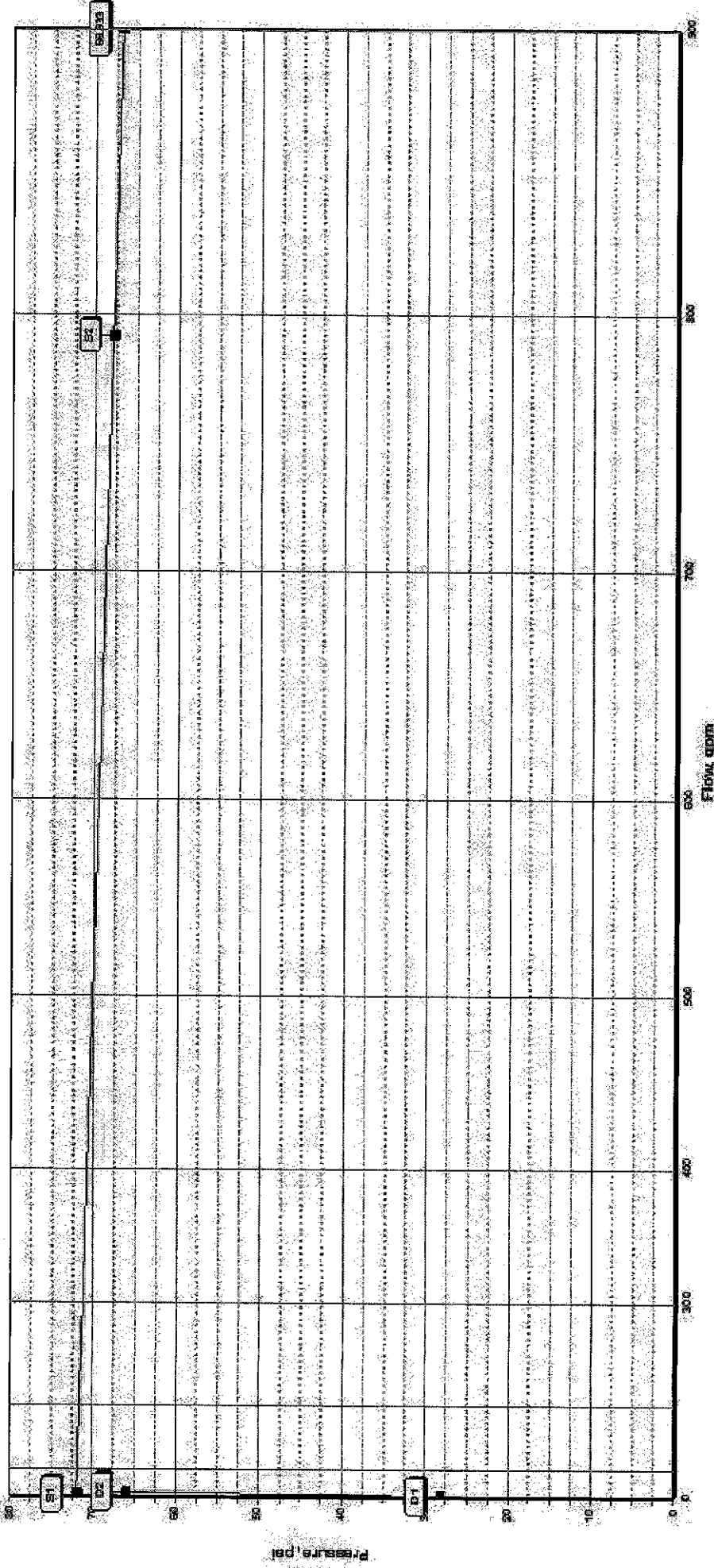
W2 - Pressure (psi) 66

W2 - Flow (gpm) 34.2

Demand w/o System Pump(s) N/A

# Hydraulic Analysis for : 2

Supply System Defined



## Hydraulic Analysis for : 2

### Graph Labels

Label	Description	Values	
		Flow (gpm)	Pressure (psi)
S1	Supply point #1 - Static	0	72
S2	Supply point #2 - Residual	792	68
D1	Elevation Pressure	0	28.2
D2	System Demand	34.2	66

### Curve Intersections & Safety Margins

Curve Name	Intersection		Safety Margin	
	Pressure (psi)	Flow (gpm)	Pressure (psi)	@ Flow (gpm)
Supply	72	37	6	34.2

### Open Heads

Head Ref.	Head Type	Coverage	K-Factor	Required			Calculated		
				Density	Flow	Pressure	Density	Flow	Pressure
		(ft <sup>2</sup> )	(gpm/psi <sup>1/2</sup> )	(gpm/ft <sup>2</sup> )	(gpm)	(psi)	(gpm/ft <sup>2</sup> )	(gpm)	(psi)
H201	Overhead Sprinkler	17	4.9	1	17	12	1.009	17.2	12.3
H202	Overhead Sprinkler	17	4.9	1	17	12	1	17	12



**Node Data**

Node# Elev	Type Hgroup	K-Fact. Open/Closed	Discharge Overdischarge	Coverage Density	Tot. Pres. Elev. Pres.	Req. Pres. Req. Discharge
ft		gpm/psi <sup>1/2</sup>	gpm gpm	ft <sup>2</sup> gpm/ft <sup>2</sup>	psi psi	psi gpm
H202 49	Overhead Sprinkler HEAD	4.9 Open	17 0	17 1	12 -28.2	12 17
H201 49	Overhead Sprinkler HEAD	4.9 Open	17.2 0.2	17 1.009	12.3 -28.2	12 17
002 49.5	Node NODE				12.8 -28.4	
027 39.5	Node NODE				33.9 -24	
059 -0.5	Node NODE				53.4 -6.7	
060-O -8.36	Node NODE				56.9 -3.3	
060-I -9.99	Node NODE				63 -2.6	
061 -16	Node NODE				65.8 0	
W2 -16	Supply SUPPLY		-34.2		66 0	

**PIPE INFORMATION**

Node 1 Node 2	Elev 1 Elev 2	K-Factor 1 K-Factor 2	Flow added (q) Total flow (Q)	Nominal ID Actual ID	Fittings quantity x (name) = length	L F T	C Factor Pf per ft	total (Pt) elev (Pe) frict (Pf)	NOTES
	(ft)	(gpm/psi <sup>1/2</sup> )	(gpm)	(in)	(ft)	(ft)	(psi)	(psi)	

**Path No: 1**

H202 002	49 49.5	4.9	17 17	1 1.101	1x(BM.Tee-Br)=5 1x(BM.90)=5	8.78 10 18.78	150 0.0502	12 -0.2 0.9	
002 027	49.5 39.5		17.2 34.2	1 1.101	4x(BM.90)=20 4x(BM.Tee-Run)=4 3x(BM.Tee-Br)=15	52.86 39 91.86	150 0.1826	12.8 4.3 16.8	
027 059	39.5 -0.5		0 34.2	1.5 1.598	2x(BM.90)=16 4x(BM.Tee-Run)=4 1x(BM.Tee-Br)=8	45.9 28 73.9	150 0.0298	33.9 17.3 2.2	
059 060-O	-0.5 -8.36		0 34.2	2 2.003	1x(coupling)=1.3	7.86 1.3 9.16	150 0.0099	53.4 3.4 0.1	
060-O 060-I	-8.36 -9.99		0 34.2	2 0		1.63 0 1.63	0 3.3505	56.9 0.7 5.4	Ames2000B ***
060-I 061	-9.99 -16		0 34.2	2 2.003	1x(us.90)=6.48	6.01 6.48 12.49	150 0.0099	63 2.6 0.1	
061 W2	-16 -16		0 34.2	2 1.959		17.1 0 17.1	150 0.011	65.8 0 0.2	
<b>W2</b>								<b>66</b>	

**Path No: 2**

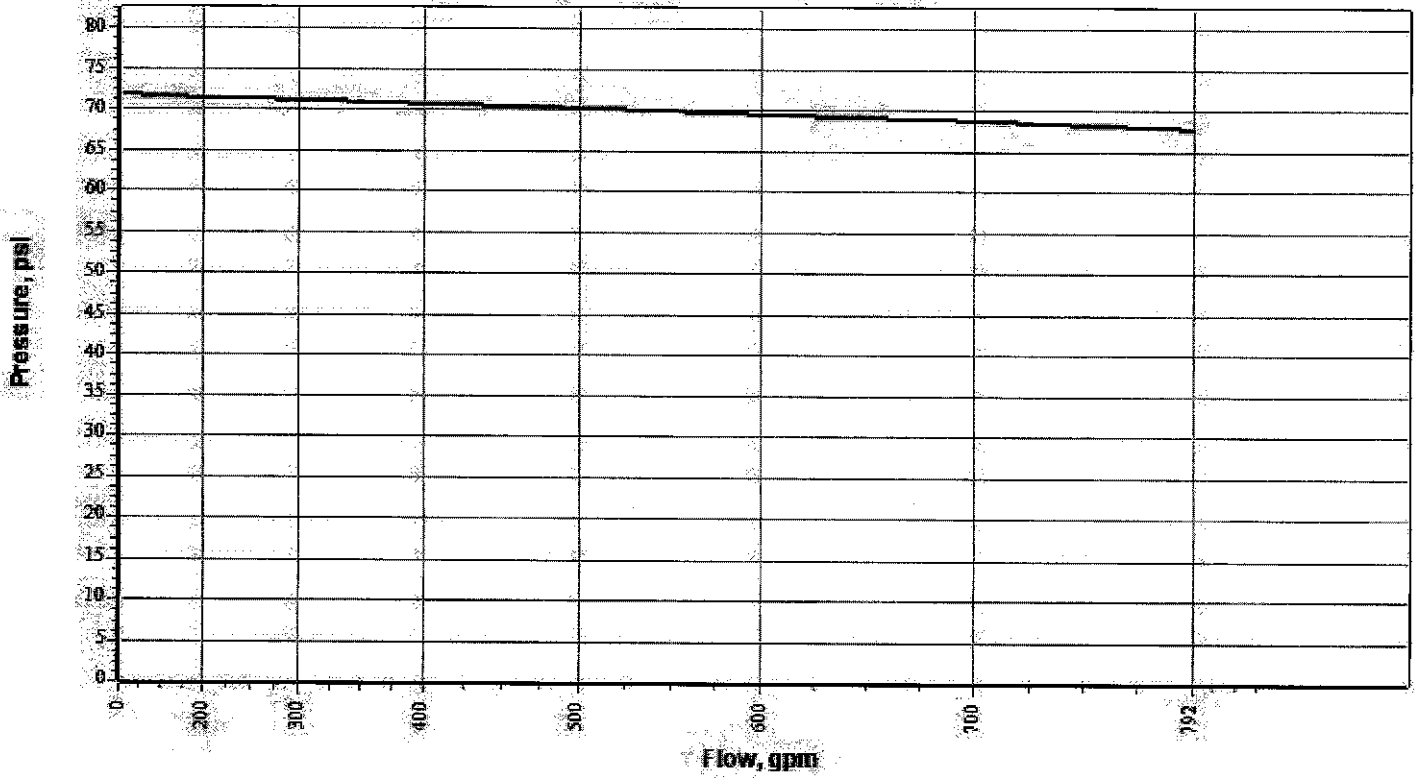
H201 002	49 49.5	4.9	17.2 17.2	1 1.101	1x(BM.Tee-Br)=5 1x(BM.90)=5	4.22 10 14.22	150 0.051	12.3 -0.2 0.7	
<b>002</b>								<b>12.8</b>	

\* Pressures are balanced to a high degree of accuracy. Values may vary by 0.1 psi due to display rounding.

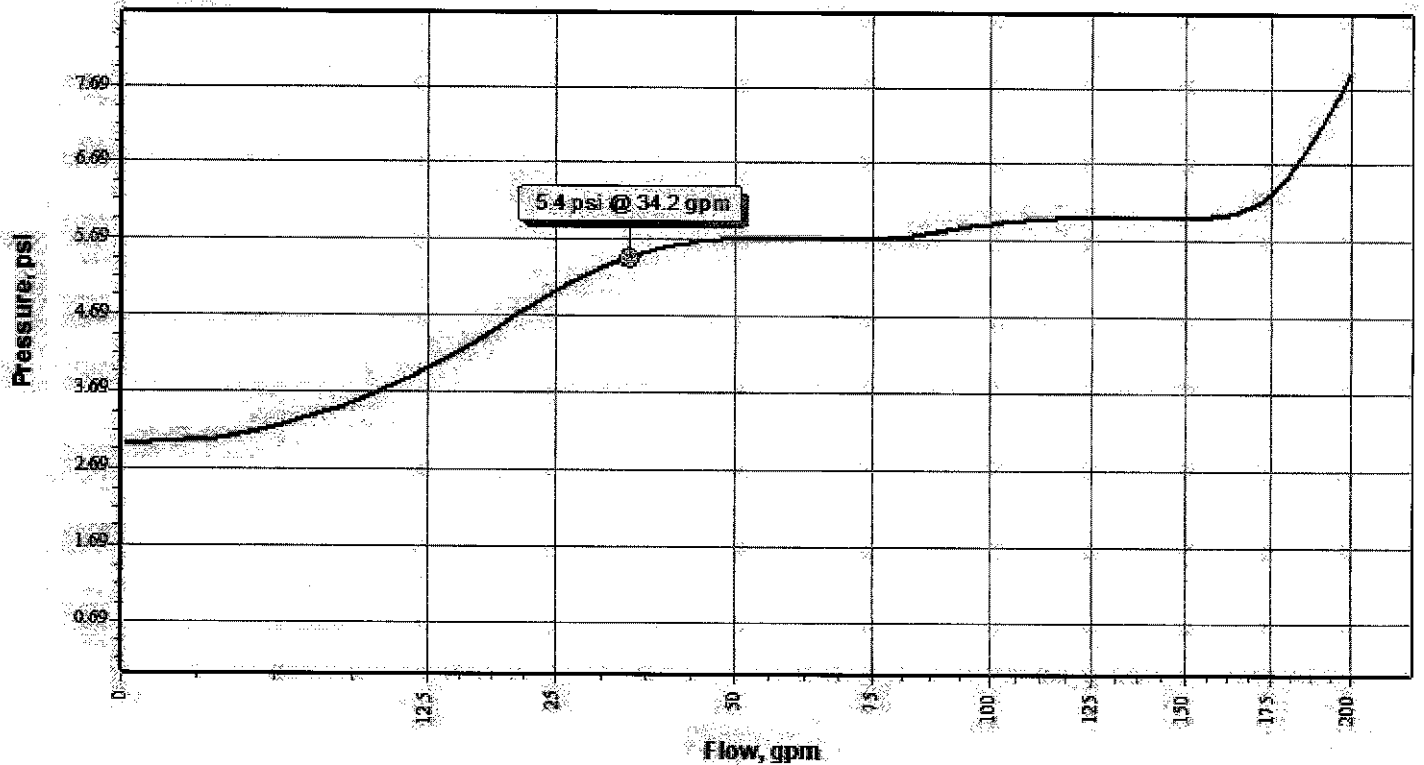
\* Maximum Velocity of 11.51 ft/s occurs in the following pipe(s): (027-002)

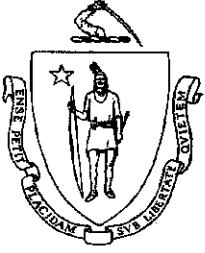
\*\*\* Device pressure loss (gain in the case of pumps) is calculated from the device's curve. If the device curve is printed with this report, it will appear below. The length of the device as shown in the table above comes from the CAD drawing. The friction loss per unit of length is calculated based upon the length and the curve-based loss/gain value. Internal ID and C Factor values are irrelevant as the device is not represented as an addition to any pipe, but is an individual item whose loss/gain is based solely on the curve data.

**Pressure vs. Flow Function**  
Design Area: 2; Supply Ref.: W2; Supply Name: W2



**Pressure Loss Function**  
Design Area: 2; BFP Ref.: 200 (Ames2000B, Size = 2); Inlet Node: 060-I; Outlet Node: 060-O





# Initial Construction Control Document

To be submitted with the building permit application by a  
**Registered Design Professional**  
for work per the 8<sup>th</sup> edition of the  
Massachusetts State Building Code, 780 CMR, Section 107

Project Title: 4 Joy Street – 3 Unit Residence Date:4/17/17

Property Address: 4 Joy Street, Boston, MA

Project: Check (x) one or both as applicable: X New construction Existing Construction

Project description: New fire sprinkler system to protect 3-unit building per NFPA 13D & ISD approved plans.

I Nathaniel Phillips MA Registration Number: 39650 Expiration date: 6/30/18 , am a *registered design professional*, and I have prepared or directly supervised the preparation of all design plans, computations and specifications concerning<sup>1</sup>:

Architectural	Structural	Mechanical
X Fire Protection	Electrical	Other:

for the above named project and that to the best of my knowledge, information, and belief such plans, computations and specifications meet the applicable provisions of the Massachusetts State Building Code, (780 CMR), and accepted engineering practices for the proposed project. I understand and agree that I (or my designee) shall perform the necessary professional services and be present on the construction site on a regular and periodic basis to:

1. Review, for conformance to this code and the design concept, shop drawings, samples and other submittals by the contractor in accordance with the requirements of the construction documents.
2. Perform the duties for registered design professionals in 780 CMR Chapter 17, as applicable.
3. Be present at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the work and to determine if the work is being performed in a manner consistent with the approved construction documents and this code.

Nothing in this document relieves the contractor of its responsibility regarding the provisions of 780 CMR 107.

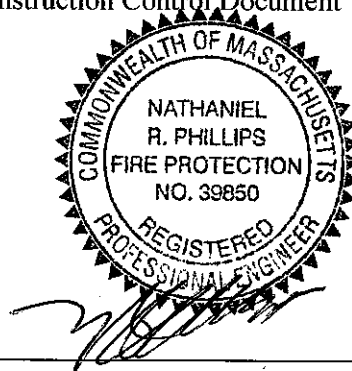
When required by the building official, I shall submit field/progress reports (see item 3.) together with pertinent comments, in a form acceptable to the building official.

Upon completion of the work, I shall submit to the building official a 'Final Construction Control Document'.

Enter in the space to the right a "wet" or electronic signature and seal:

Phone number: (339) 987-0375

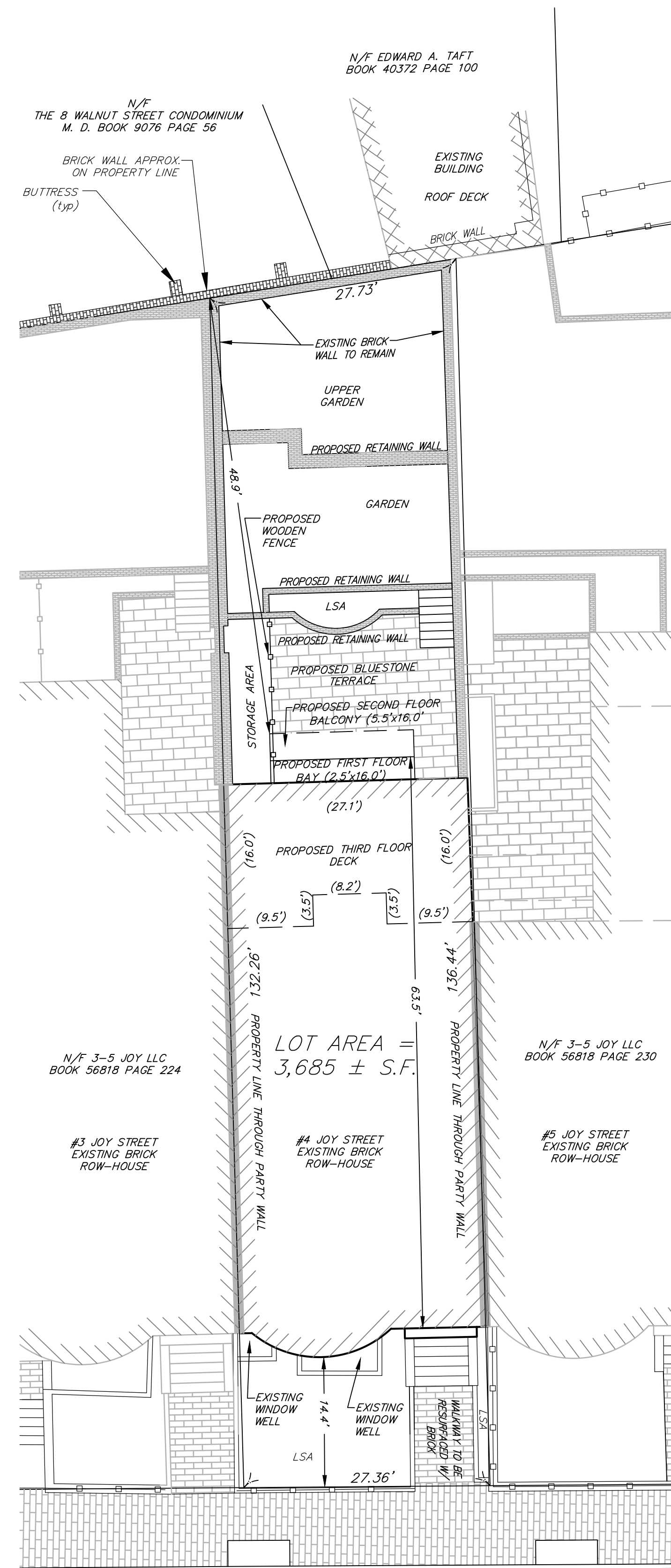
Email: phillipsfire.np@gmail.com



Building Official Use Only

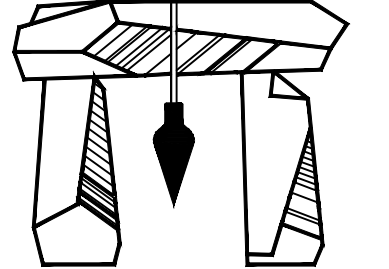
Building Official Name: Permit No.: Date:

Note 1. Indicate with an 'x' project design plans, computations and specifications that you prepared or directly supervised. If 'other' is chosen, provide a description.



JOY (Public-Variable Width) STREET

DeCELLE



BURKE

& Associates, Inc.  
1266 Furnace Brook Parkway, Suite 401 Quincy, MA 02169  
(617) 405-5100 (O) (617) 405-5101 (F)  
WWW.DECELLE-BURKE.COM

GENERAL NOTES:

- LOCUS:  
ASSESSORS: WARD 05, PARCEL 01601010  
RECORD OWNER: 3-5 JOY LLC  
DEED REFERENCE: BOOK 56818 PAGE 227  
PLAN REFERENCE: N/A
- THIS PLAN IS THE RESULT OF AN ON THE GROUND SURVEY PERFORMED BY THIS OFFICE IN OCTOBER AND NOVEMBER 2016.

PROJECT TITLE & LOCATION:

PLAN OF LAND  
4 JOY STREET  
BOSTON MA, 02116

PLAN TITLE:

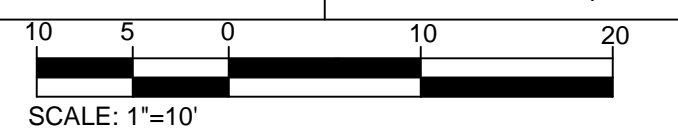
PROPOSED PLOT PLAN

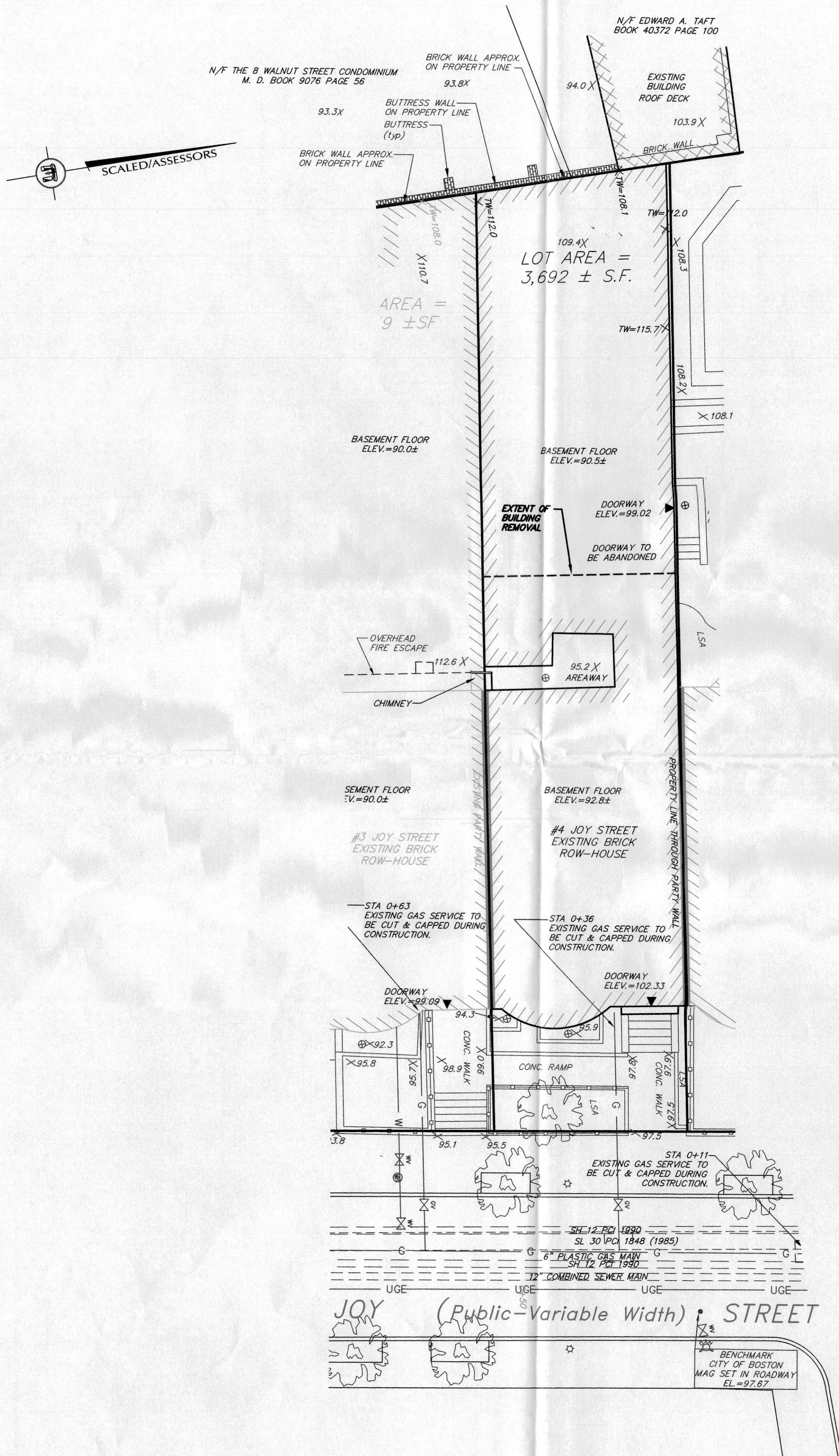
PREPARED FOR:

4 BEACON H, LLC  
60 ADAMS STREET, 3RD FLOOR  
MILTON, MA 02186

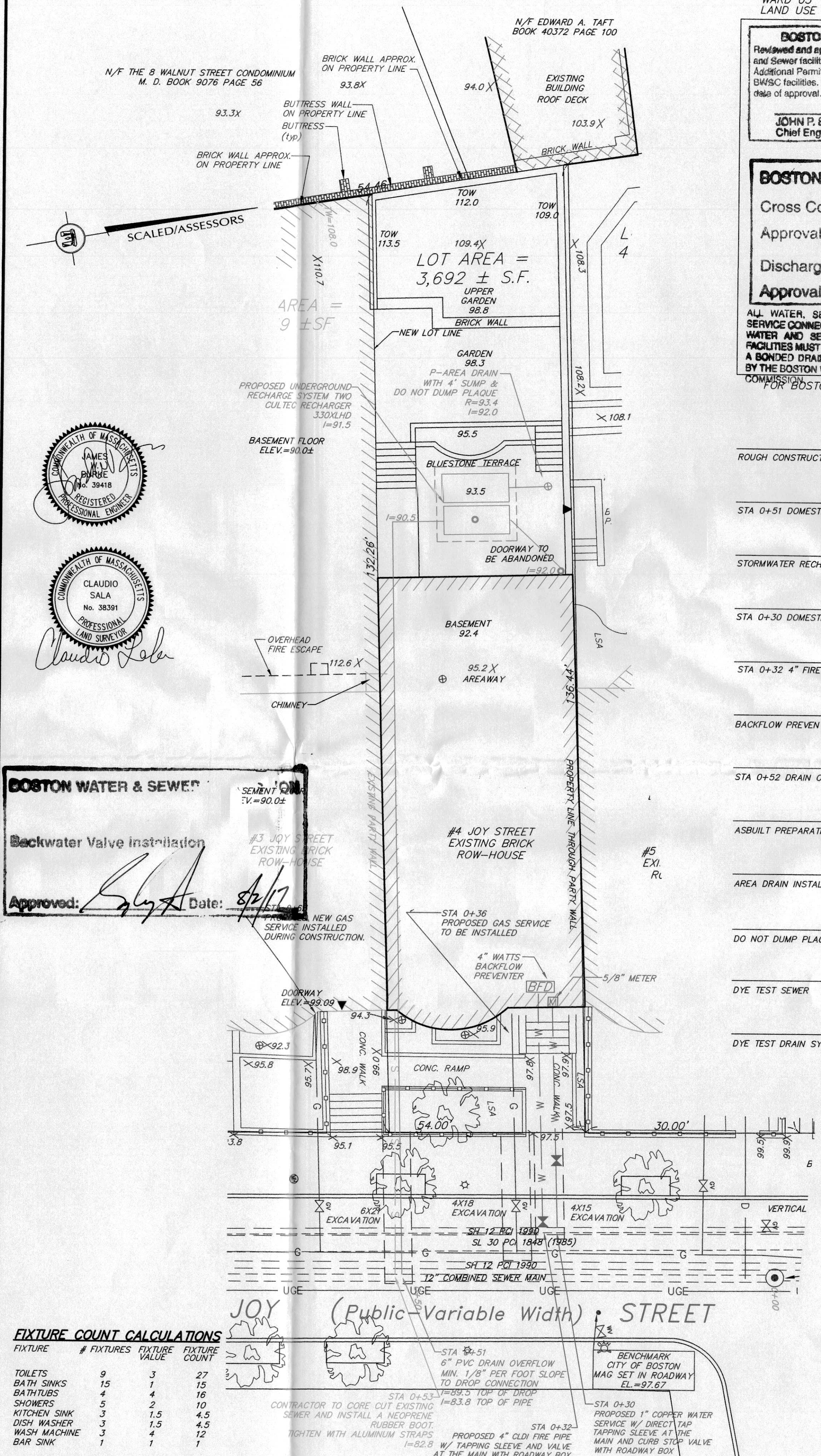
DATE: NOVEMBER 2, 2017

JOB NUMBER: 16.051 SHEET 1 OF 1





EXISTING CONDITIONS



PROPOSED CONDITIONS

**FIXTURE COUNT CALCULATIONS**

FIXTURE	# FIXTURES	FIXTURE VALUE	FIXTURE COUNT
TOILETS	9	3	27
BATH SINKS	15	1	15
BATH TUBS	4	4	16
SHOWERS	5	2	10
KITCHEN SINK	3	1.5	4.5
DISH WASHER	3	1.5	4.5
WASH MACHINE	3	4	12
BAR SINK	1	1	1
<b>TOTAL DEVELOPMENT FACTOR VALUE</b>			<b>90</b>
<b>35% DEMAND FACTOR</b>			<b>32</b>
<b>DEVELOPMENT FACTOR OF 32 REQUIRES A 5/8" METER</b>			

WARD 05 PARCEL # PENDING ACCOUNT # NEW LAND USE CODE: R3 RESIDENTIAL 3 UNIT

**BOSTON WATER AND SEWER COMMISSION**  
 Reviewed and approved as to proposed connection(s) to existing Water and Sewer facilities as shown. For issue of Building Permit Only. Additional Permits must be obtained from BWSJC prior to connection to BWSJC facilities. Site Plans are valid for a period of one (1) year from date of approval.  
 JOHN P. BULLIVAN, JR. P.E.  
 Chief Engineer

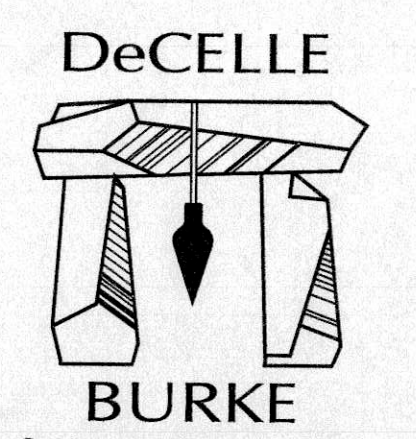
**BOSTON WATER & SEWER COMMISSION**  
 Cross Connection  
 Approval: [Signature] Date: 8/2/17  
 Discharge Enforcement  
 Approval: [Signature] Date: [Blank]

ALL WATER, SEWER AND DRAIN SERVICE CONNECTIONS TO BOSTON WATER AND SEWER COMMISSION FACILITIES MUST BE PERFORMED BY A BONDED DRAIN LAYER LICENSED BY THE BOSTON WATER & SEWER COMMISSION FOR BOSTON WATER & SEWER COMMISSION USE ONLY

ROUGH CONSTRUCTION	DATE
STA 0+51 DOMESTIC 6" SEWER SERVICE INSTALLATION INSPECTION	DATE
STORMWATER RECHARGE SYSTEM INSTALLATION	DATE
STA 0+30 DOMESTIC 1" WATER SERVICE INSTALLATION INSPECTION	DATE
STA 0+32 4" FIRE PIPE SERVICE INSTALLATION INSPECTION	DATE
BACKFLOW PREVENTER ASSEMBLY INSTALLATION	DATE
STA 0+52 DRAIN OVERFLOW INSTALLATION	DATE
ASBUILT PREPARATION FEE	DATE
AREA DRAIN INSTALLATION INSPECTION	DATE
DO NOT DUMP PLAQUE INSTALLATION INSPECTION	DATE
DYE TEST SEWER	DATE
DYE TEST DRAIN SYSTEM	DATE

**LEGEND:**

- EXISTING SEWER MANHOLE
- EXISTING DRAIN MANHOLE
- PROPOSED DRAIN MANHOLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- GAS VALVE
- LIGHT POLE
- ELECTRIC HAND HOLE
- ⊕ WATER SERVICE CONNECTION
- ◆ EXISTING FIRE HYDRANT
- ⊕ PROPOSED WATER METER



**DeCELLE & Associates, Inc.**  
 1266 Furnace Brook Parkway, Suite 401 Quincy, MA 02169  
 (617) 405-5100 (O) (617) 405-5101 (F)  
 WWW.DECELLE-BURKE.COM

- GENERAL NOTES:
- ALL WORK TO BE AS PER BOSTON WATER & SEWER COMMISSION STANDARD SPECIFICATIONS.
  - WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5' OF COVER AND ALL TRENCHING, BACKFILLED AND PAVEMENT PATCHING SHALL CONFORM TO CITY STANDARDS. PROPOSED WATER SERVICES AND TAP TO BE SUPPLIED BY THE CONTRACTOR. THE METER TO BE SUPPLIED BY B.W.S.C.
  - THE B.W.S.C. SHALL PROVIDE ONE METER PER STREET CONNECTION FOR UP TO A 2' METER. OTHER METERS TO BE SUPPLIED BY THE OWNERS.
  - PIPE MATERIALS SHALL BE AS FOLLOWS:  
 A. SEWER AND DRAIN ON SITE TO BE PVC ASTM D-3034-SDR-35  
 B. WATER TO BE TYPE K COPPER  
 C. FIRE PIPE TO BE DCL CL 58
  - A DYE TEST WILL BE PERFORMED BY A B.W.S.C. INSPECTOR BEFORE THE STRUCTURE IS OCCUPIED.
  - EXISTING UTILITIES SHOWN ON THIS PLAN ARE COMPILED FROM RECORD PLANS AND APPROXIMATE FIELD LOCATION AND THEREFORE ARE NOT CERTIFIED FOR CONSTRUCTION. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL NOTIFY DISSAFE @ 1-888-344-7233 FOR ACTUAL SITE MARKING. STATE LAWS REQUIRE A MINIMUM OF 72 HOUR NOTICE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION AND INVERTS PRIOR TO CONSTRUCTION.
  - THIS PLAN HAS BEEN PREPARED FOR APPROVAL OF WATER, SEWER AND DRAIN CONNECTIONS TO THE B.W.S.C. FACILITIES. IT IS UNDERSTOOD THAT THE RESPONSIBILITY OF THE OWNERSHIP AND MAINTENANCE OF THE CONNECTIONS ON PRIVATE PROPERTY AND/OR PRIVATE AND PUBLIC WAYS, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR THE OWNERS. IF THE CONNECTIONS CROSS OR ARE NEAR PROPERTY LINES, PROVISIONS MUST BE MADE TO ALLOW EACH OTHER TO MAINTAIN OR RECONSTRUCT THEIR RESPECTIVE CONNECTIONS. THIS FACT MUST BE INCORPORATED INTO ANY PURCHASE AND SALES AGREEMENT AND DEEDS RELATED TO THE TRANSFER OF OWNERSHIP OF THE PROPERTIES.
  - A ROUGH CONSTRUCTION SIGN-OFF SHALL BE OBTAINED FROM THE CITY OF BOSTON INSPECTORIAL SERVICES DEPARTMENT, TWENTY FOUR HOUR ADVANCE NOTICE IS REQUIRED FOR INSPECTION SCHEDULING. IF THE INSPECTION DATE IS SCHEDULED ON THE WEEKEND, HOLIDAYS OR AFTER REGULAR WORK HOURS, AND THE CONTRACTOR FAILS TO NOTIFY THE B.W.S.C. INSPECTORS OF CANCELLATION IN ADVANCE, AN ADDITIONAL INSPECTION FEE WILL BE CHARGED TO THE CONTRACTOR WHEN THE JOB IS SUBSEQUENTLY RESCHEDULED.
  - ALL ROOF DRAINS SHALL BE DISCHARGED INTO THE RECHARGE SYSTEM AS SHOWN.
  - UTILITY STATION 0+00 FOR JOY STREET IS LOCATED AT THE P.I. OF JOY STREET AND MOUNT VERNON STREET.
  - ANTICIPATED FLOW: 110 G.P.D. x 8 BEDROOMS = 880 G.P.D.

1. LOCUS:  
 ASSESSORS: WARD 5, PARCEL 1600  
 WARD 5, PARCEL 1601  
 RECORD OWNER: 3-5 JOY LLC  
 DEED REFERENCE: BOOK 56818 PAGE 224  
 BOOK 56818 PAGE 227  
 BOOK 56818 PAGE 230  
 PLAN REFERENCE: N/A

2. THIS PLAN IS THE RESULT OF AN ON THE GROUND SURVEY PERFORMED BY THIS OFFICE IN OCTOBER AND NOVEMBER 2016. ELEVATIONS REFER TO CITY OF BOSTON SEWER DATUM.

CITY OF BOSTON BENCHMARK: MAG SET IN ROADWAY EL=97.67

PROJECT TITLE & LOCATION:  
**BWSC SITE PLAN  
 4 JOY STREET  
 BOSTON MA, 02116**

PLAN TITLE:  
**SITE PLAN # 17146**

PREPARED FOR:  
**ROBERT GATNIK  
 3-5 JOY LLC  
 60 ADAMS STREET, 3RD FLOOR  
 MILTON, MA 02186  
 617-308-4889**

DATE: MARCH 28, 2017  
 REVISED: JUNE 21, 2017

JOB NUMBER: 16.051 SHEET 1 OF 2

SCALE: 1" = 10'

**Summary for Pond 2P: RECHARGE**

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.049 ac, 100.00% Impervious, Inflow Depth > 1.05"  
 Inflow = 0.06 cfs @ 12.07 hrs, Volume = 0.004 af  
 Outflow = 0.00 cfs @ 5.00 hrs, Volume = 0.000 af, Atten = 100%, Lag = 0.0 min

Routing by Stor-Ind method, Time Span = 5.00-20.00 hrs, dt = 0.05 hrs  
 Peak Elev = 91.50' @ 20.00 hrs Surf Area = 117 sf Storage = 187 cf

Plug-Flow detention time = (not calculated: initial storage exceeds outflow)  
 Center-of-Mass det. time = (not calculated: no outflow)

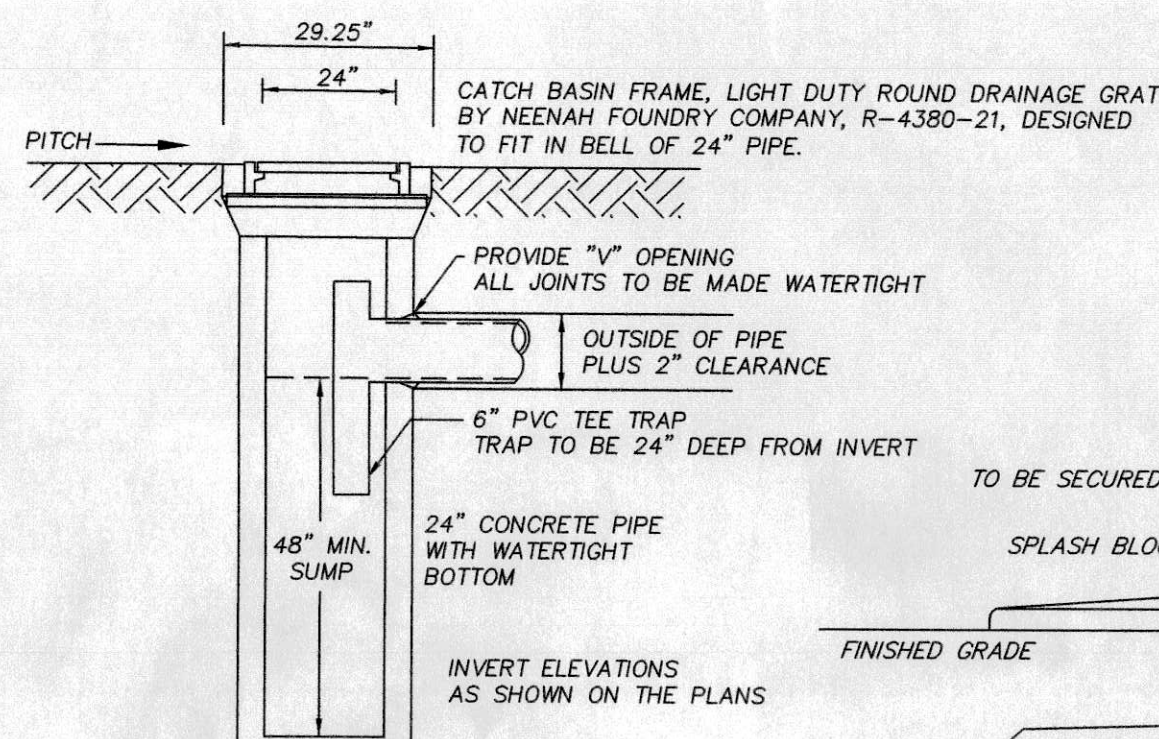
Volume	Invert	Avail. Storage	Storage Description
#1A	88.50'	104 cf	11.17'W x 10.50'L x 4.04'H Field A 474 of Overall - 127 of Embedded = 347 of x 30.0% Voids
#2A	89.50'	127 cf	CULTEC R-330XLHD x 2 Inset #1 Effective Size = 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size = 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment = +1.50' x 7.45 sf x 2 rows
			231 cf Total Available Storage

Storage Group A created with Chamber Wizard

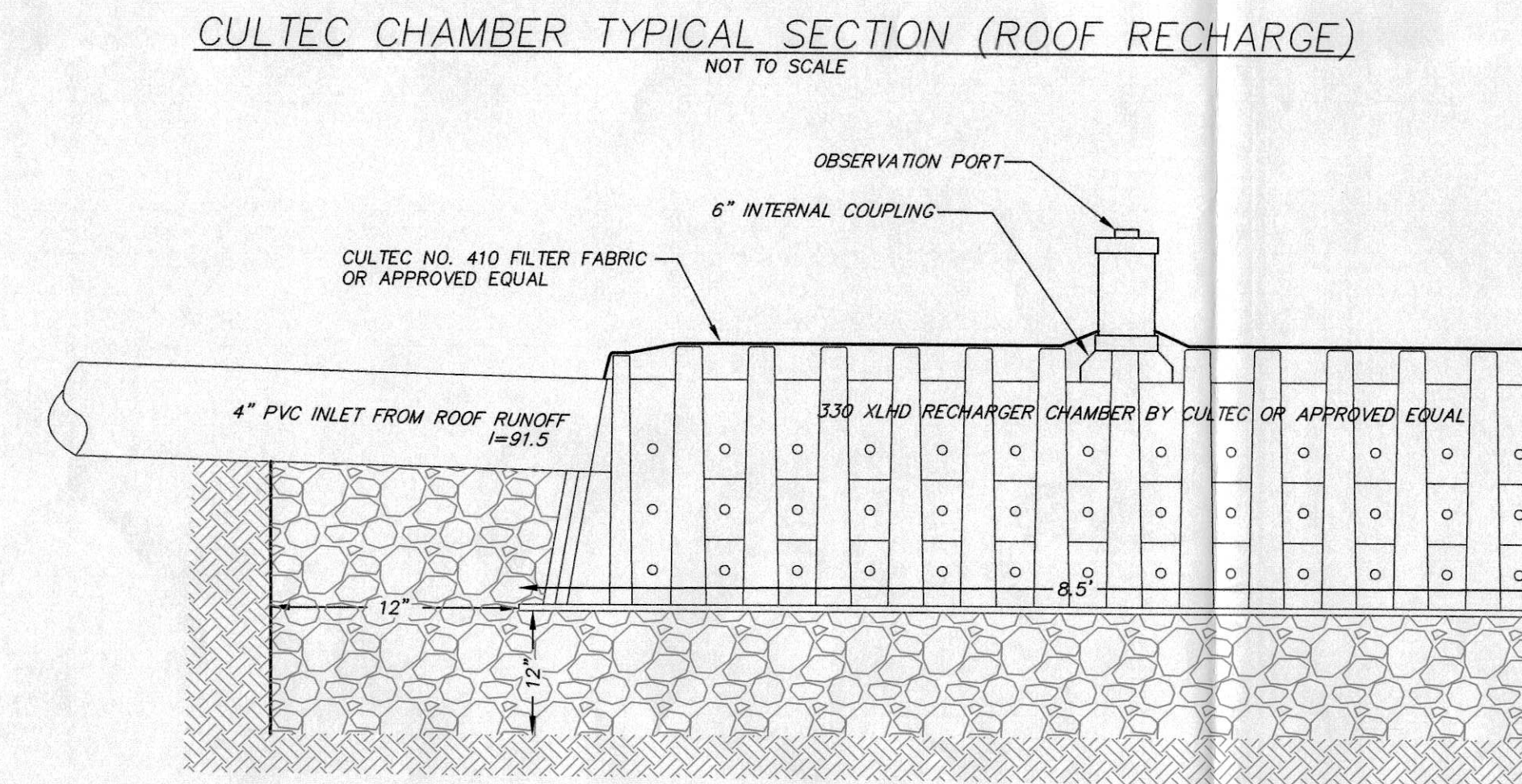
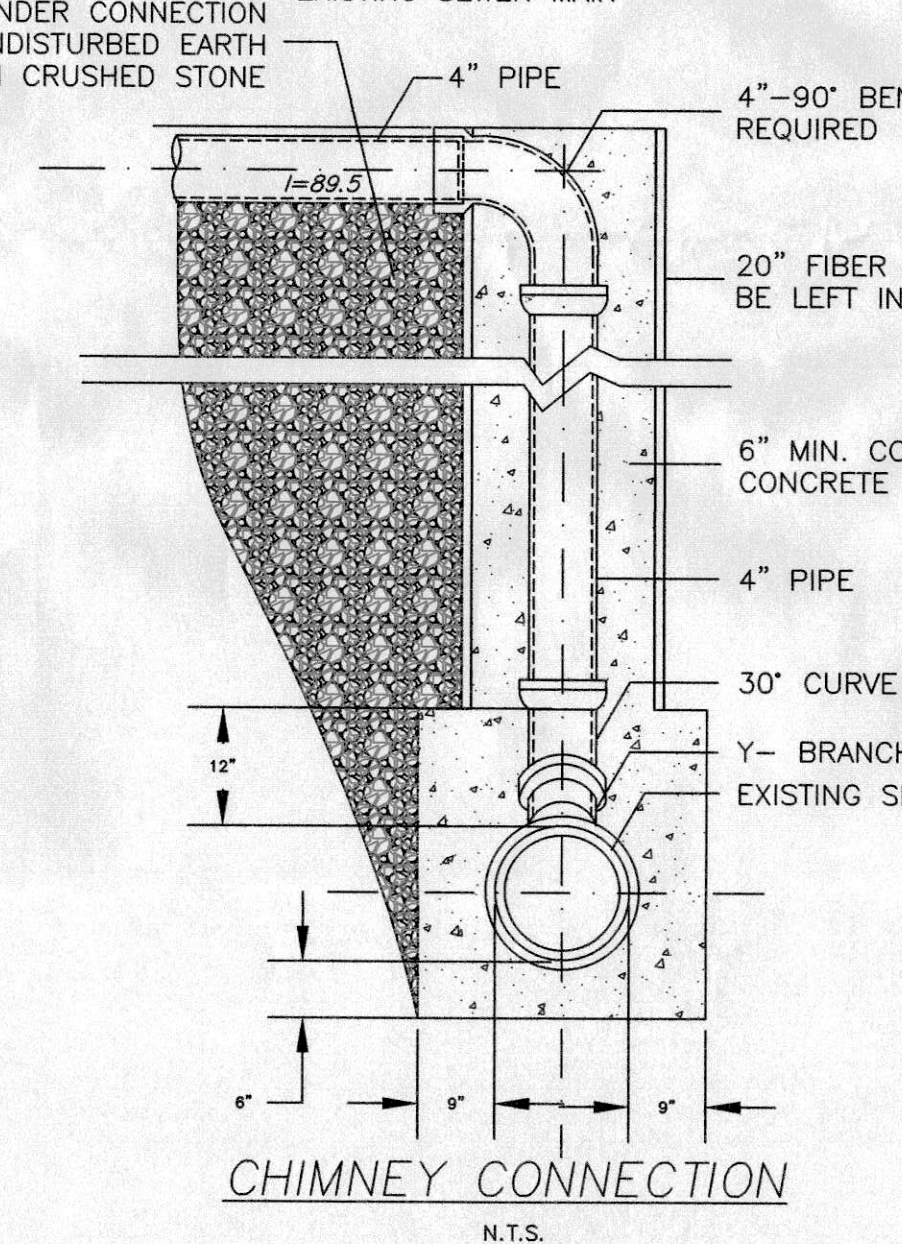
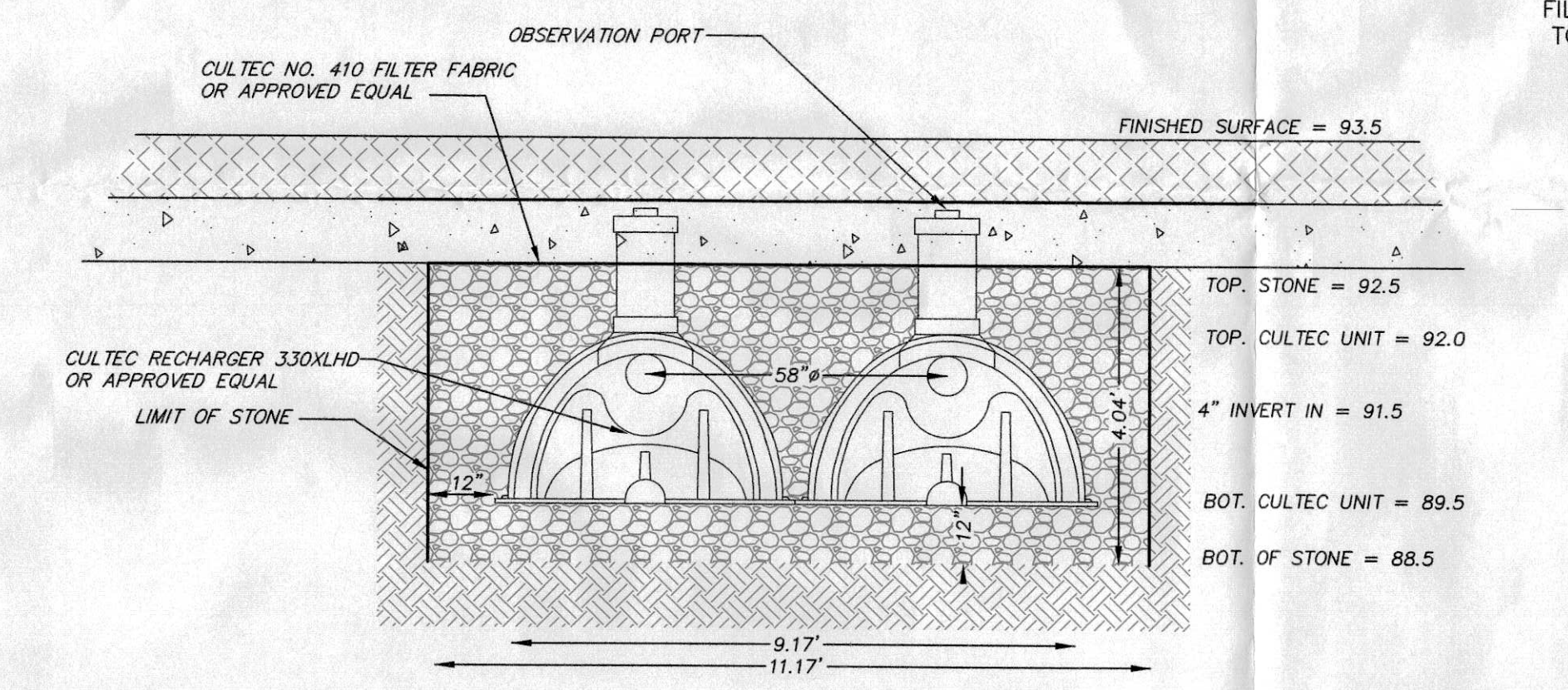
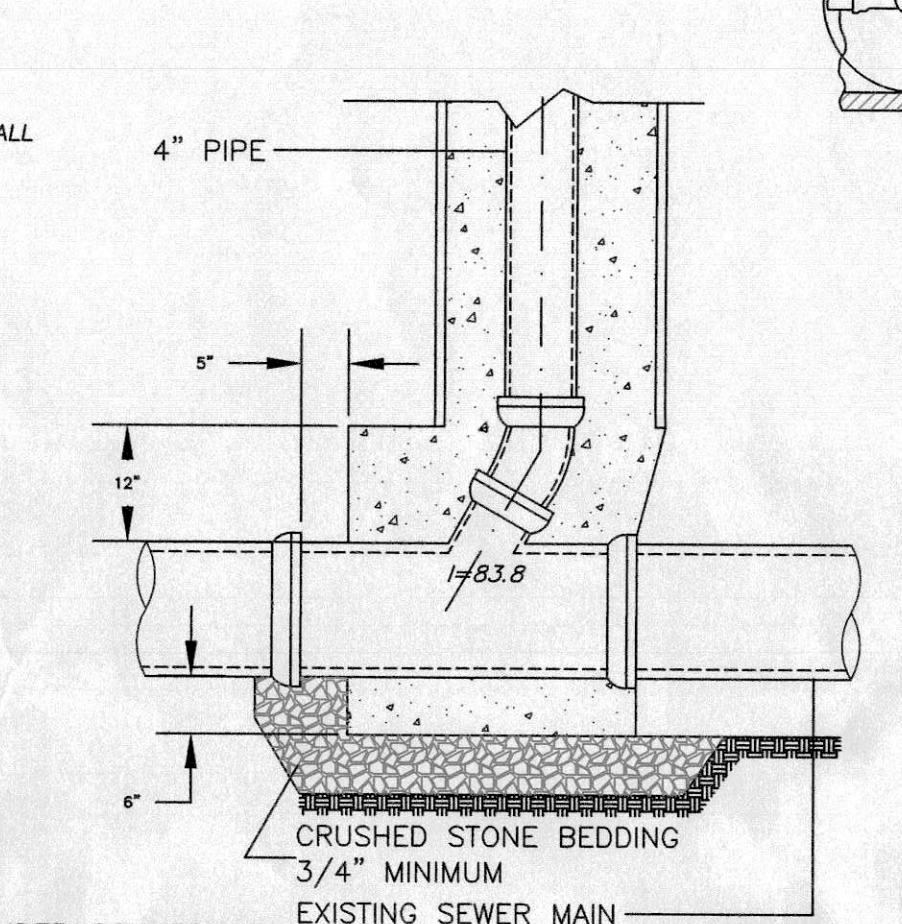
**STORMWATER RECHARGE CALCULATIONS -**

PROPOSED CULTEC RECHARGER 330XLHD SET IN GARDEN AREA  
 IMPERVIOUS AREA FOR LOT = 2,136 S.F.  
 RECHARGE VOLUME REQUIRED = 2,136 S.F. / 12" = 178 CF  
 RECHARGE VOLUME = 178 CF < 187 CF BELOW INVERT CHECKS OK

**HYDROCAD CALCULATIONS**



**TYPICAL ROOF DRAIN W/ OVERFLOW**  
NOT TO SCALE

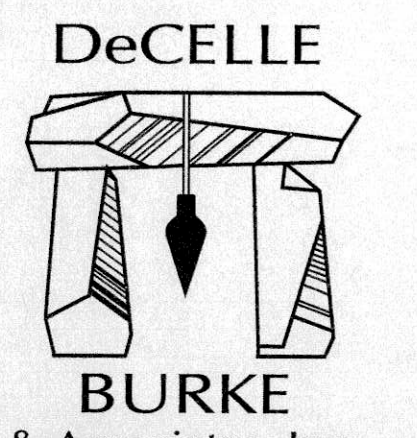
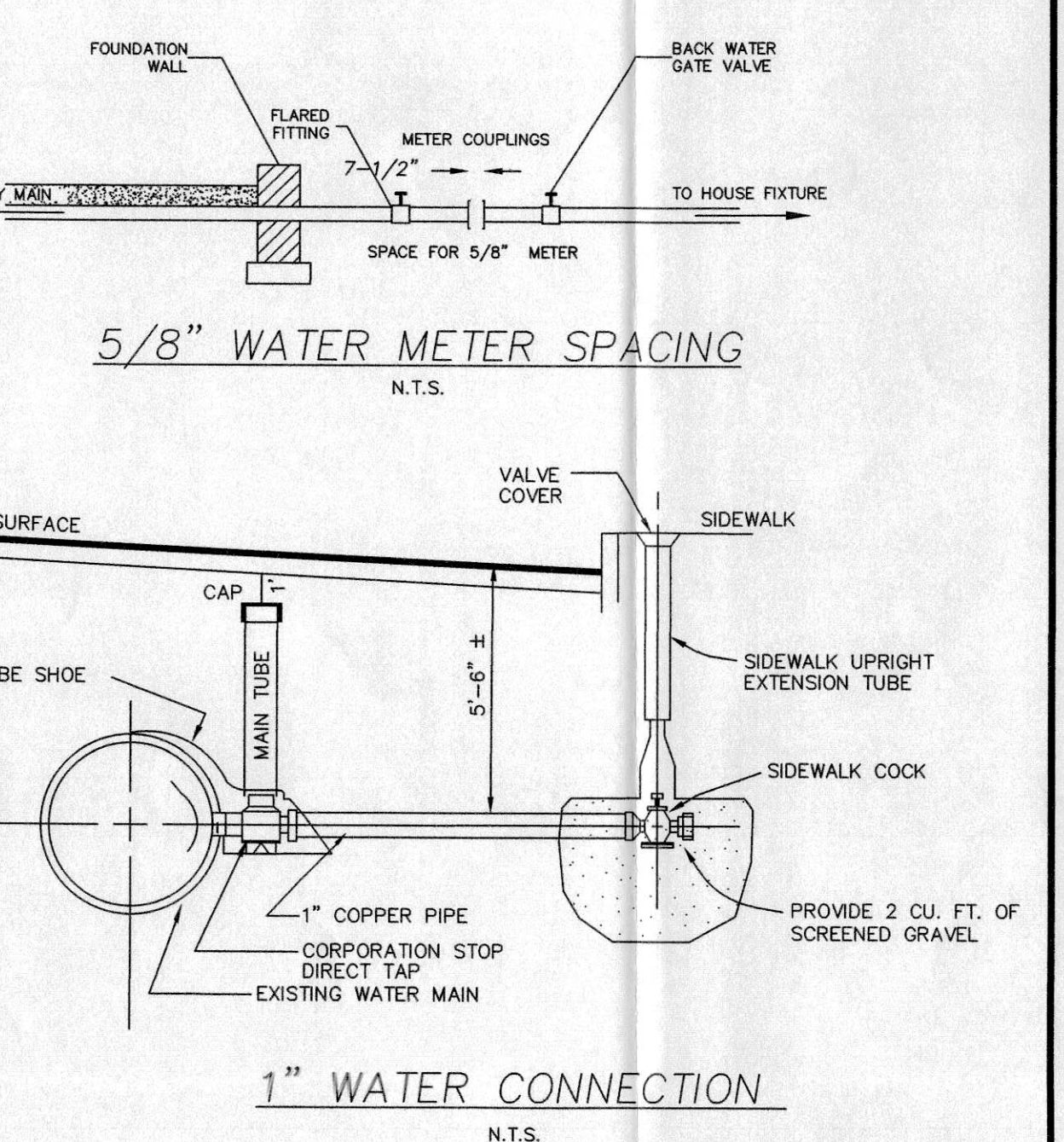
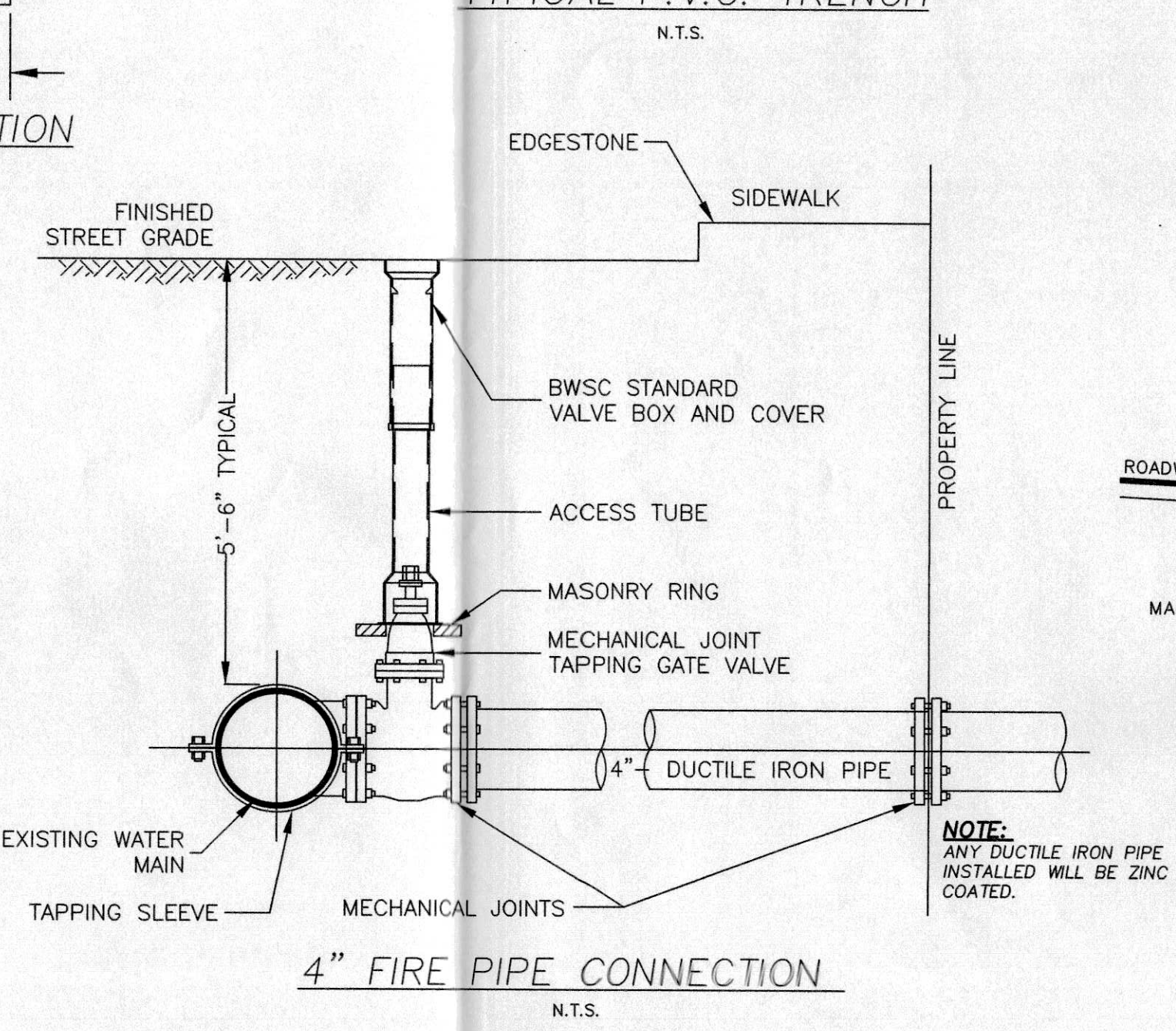
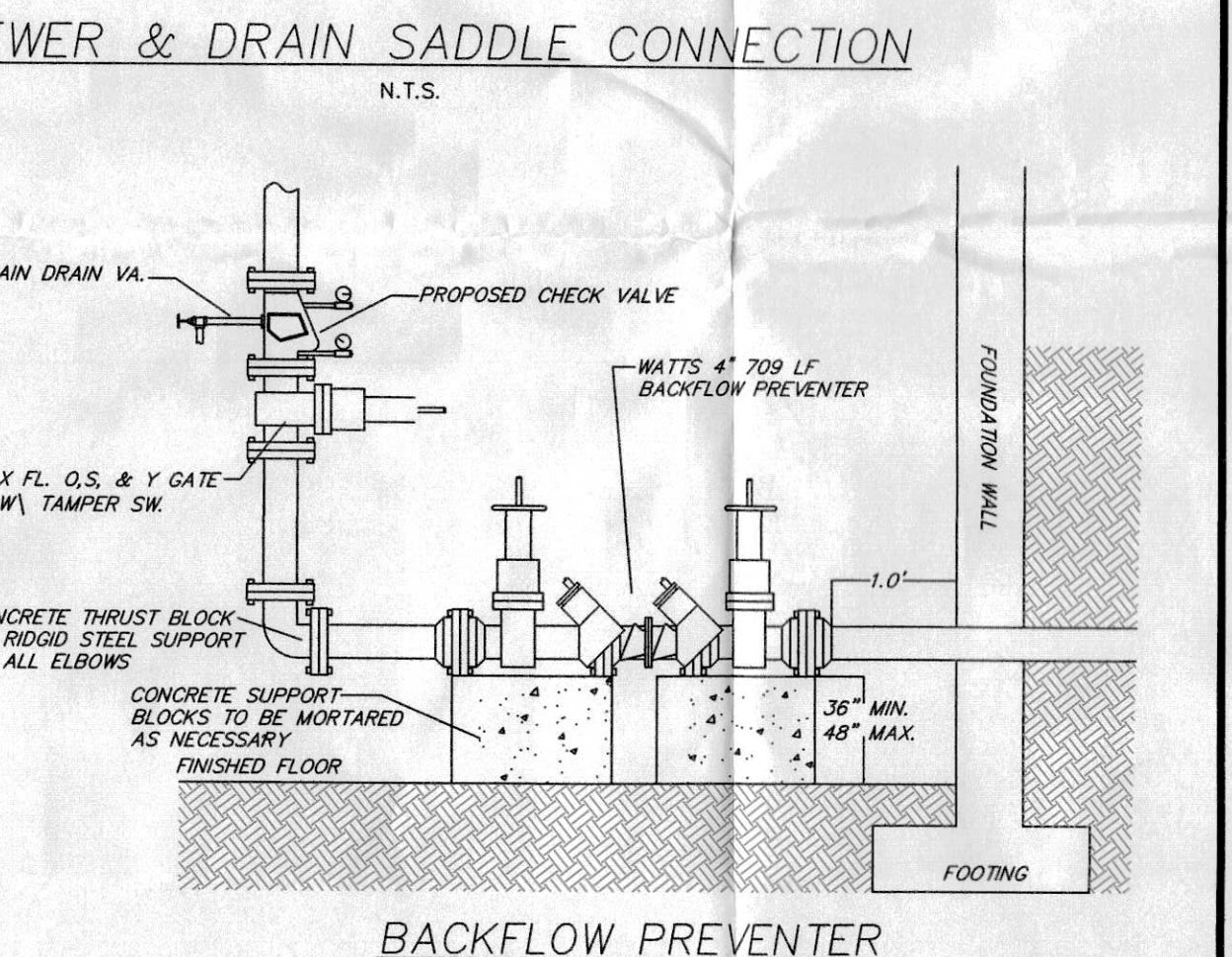
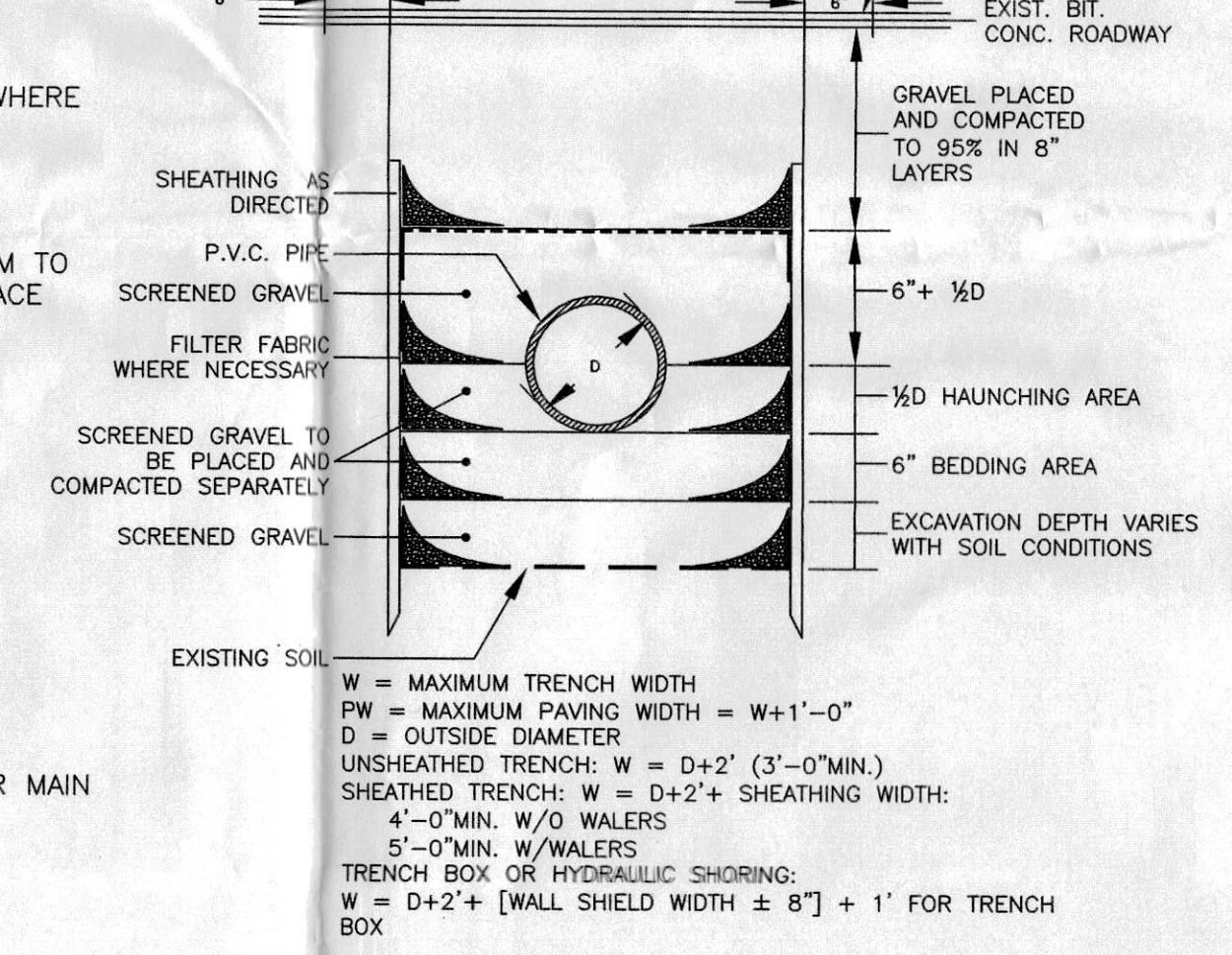
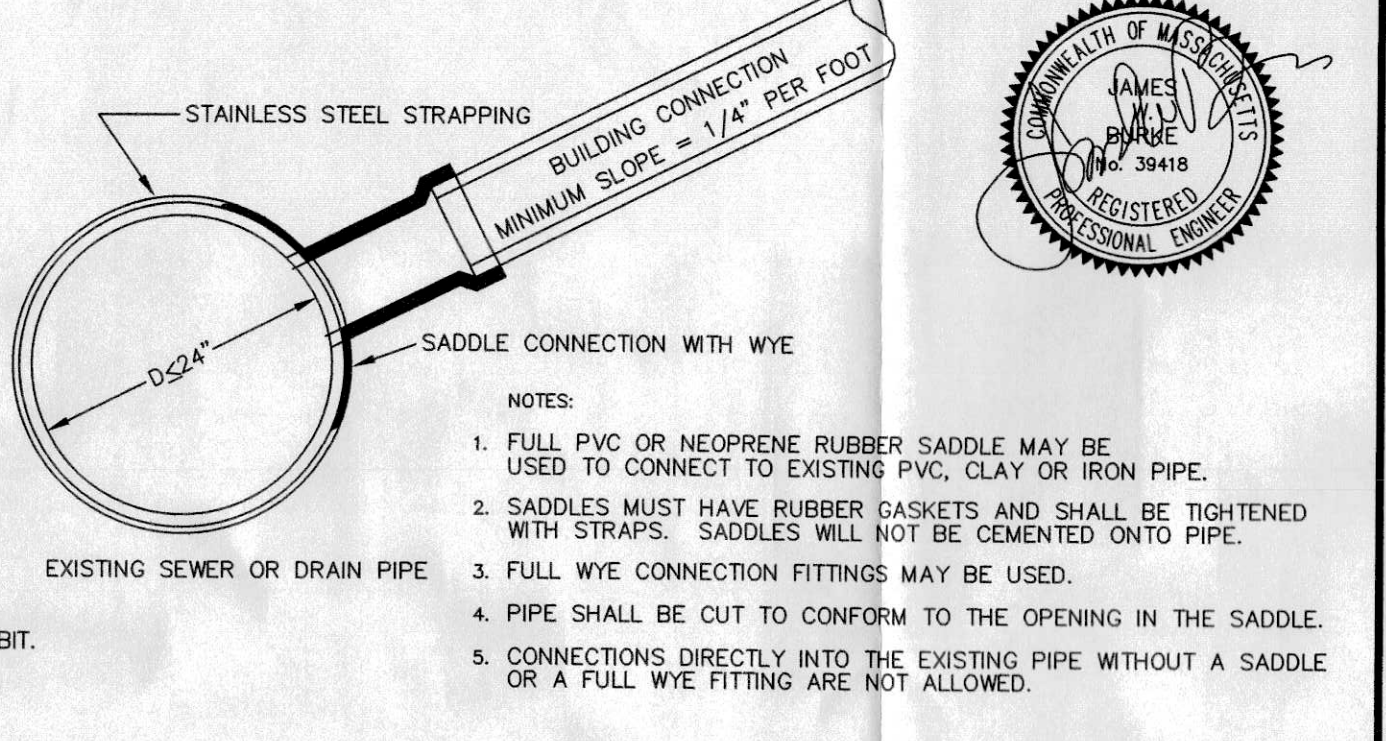
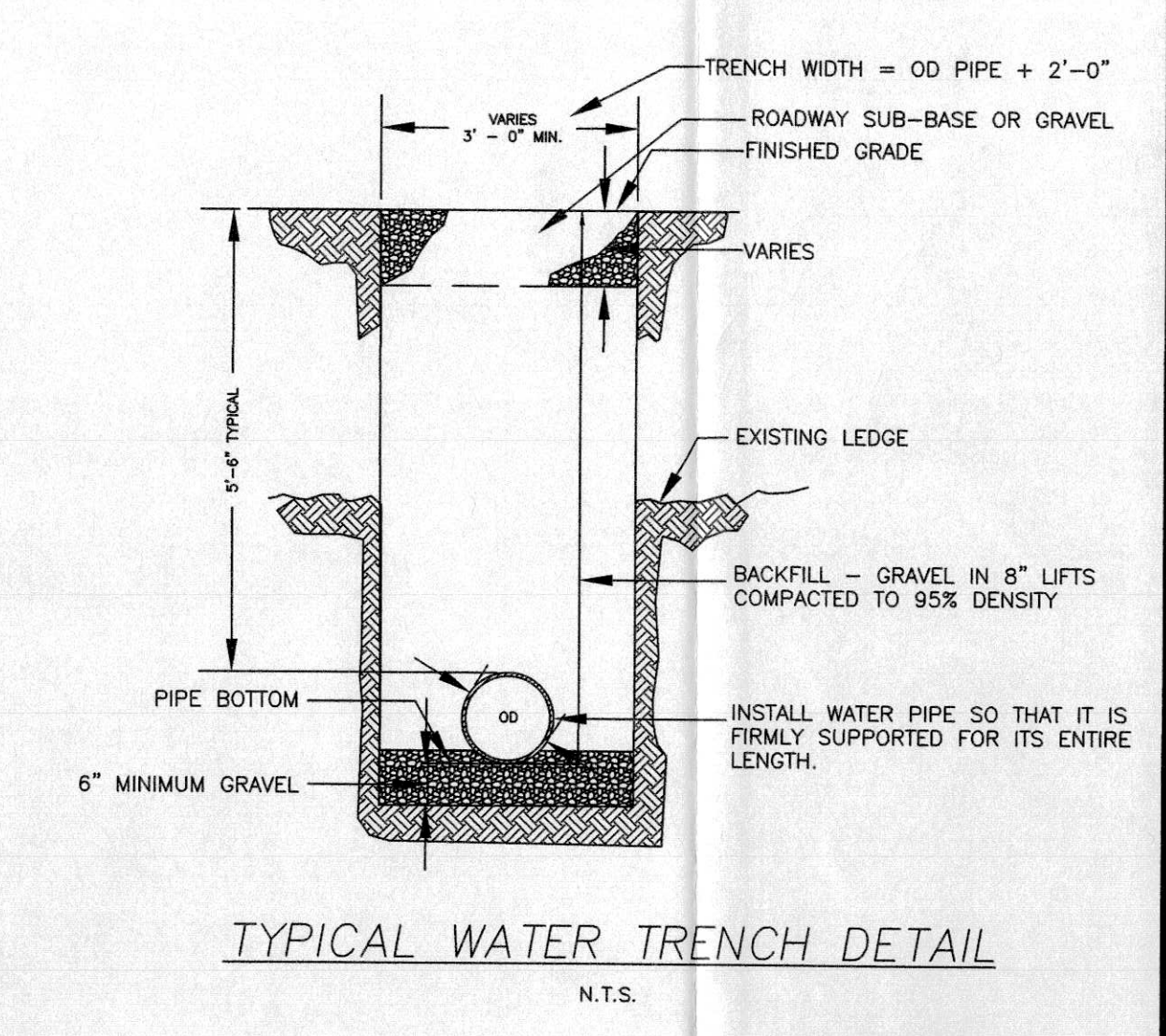
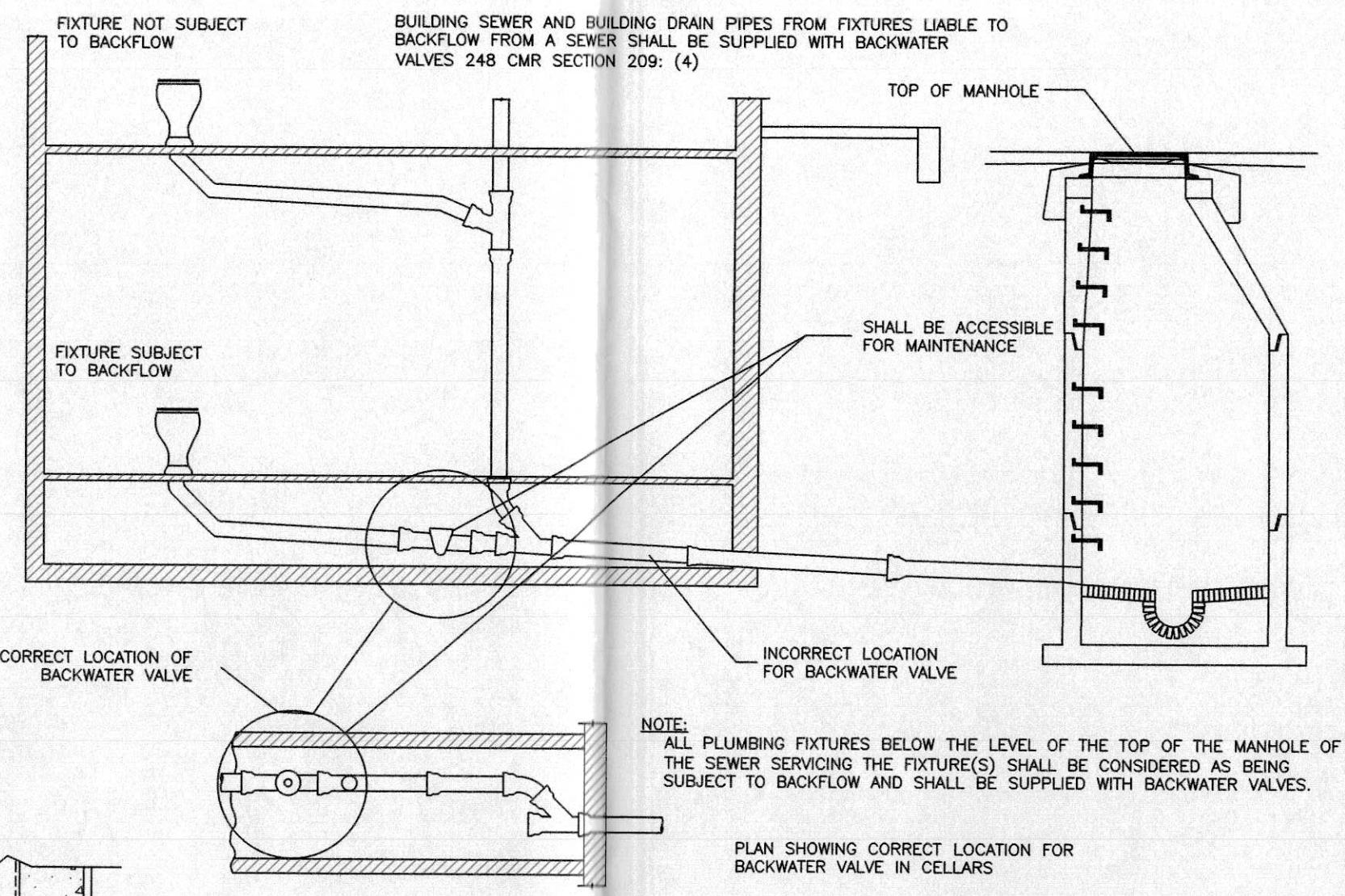


**OVER-EXCAVATION NOTES:**  
 THE CONTRACTOR SHALL REMOVE ALL TOPSOIL, SUBSOIL AND OTHER DELETERIOUS MATERIAL WITHIN 24" OF THE LIMIT OF THE STONE SURROUNDING THE CULTEC UNIT AS INDICATED ON THE PLANS.  
 THE REMOVED SOIL SHALL BE DISPOSED OF IN A LEGAL MANNER.  
 THE REMOVED SOIL SHALL BE REPLACED WITH CLEAN GRANULAR SAND CONFORMING TO THE FOLLOWING SIEVE ANALYSIS:

% PASSING	SIEVE SIZE	#4
100	#4	
10-100	#50	
0-20	#100	
0-5	#200	

**OBSERVATION PORT INSTALLATION NOTES:**  
 CONTRACTOR TO CUT 6" HOLE AT TOP OF CHAMBER IN THE CENTER OF THE UNIT.  
 INSERT A 6" INTERNAL COUPLING INTO INSPECTION PORT OPENING.  
 USE A 6" SCH.40 PVC PIPE TO BRING INSPECTION PORT TO WITHIN 6" OF FINISHED GRADE.  
 INSTALL A 6" SCH.40 END CAP OR PLUG.  
 BACKFILL IN ACCORDANCE WITH SPECIFICATIONS.

**CULTEC CHAMBER INSTALLATION NOTES:**  
 CONTRACTOR TO INSTALL CULTEC CHAMBERS IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.  
 CULTEC NO. 410 FILTER FABRIC OR APPROVED EQUAL TO BE PLACED OVER THE TOP OF THE DRAINAGE SYSTEM PRIOR TO BACKFILL.  
 CONTRACTOR TO REMOVE ALL LOAM, SUBSOIL AND ALL DELETERIOUS MATERIAL FROM EXCAVATION PRIOR TO PLACEMENT OF THE STONE BED.



**DeCELLE BURKE & Associates, Inc.**  
 1266 Furnace Brook Parkway, Suite 401 Quincy, MA 02169  
 (617) 405-5100 (C) (617) 405-5101 (F)  
 WWW.DECELLE-BURKE.COM

- GENERAL NOTES:
- ALL WORK TO BE AS PER BOSTON WATER & SEWER COMMISSION STANDARD SPECIFICATIONS.
  - WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5' OF COVER AND ALL TRENCHING, BACKFILL AND PAVEMENT PATCHING SHALL CONFORM TO CITY STANDARDS. PROPOSED WATER SERVICES AND TAP TO BE SUPPLIED BY THE CONTRACTOR. THE METER TO BE SUPPLIED BY B.W.S.C.
  - THE B.W.S.C. SHALL PROVIDE ONE METER PER STREET CONNECTION FOR UP TO A 2' METER. OTHER METERS TO BE SUPPLIED BY THE OWNERS.
  - PIPE MATERIALS SHALL BE AS FOLLOWS:  
 A. SEWER AND DRAIN ON SITE TO BE PVC ASTM D-3034-SDR-35  
 B. WATER TO BE TYPE K COPPER  
 C. FIRE PIPE TO BE DCL CL. 56
  - A DYE TEST WILL BE PERFORMED BY A B.W.S.C. INSPECTOR BEFORE THE STRUCTURE IS OCCUPIED.
  - EXISTING UTILITIES SHOWN ON THIS PLAN ARE COMPILED FROM RECORD PLANS AND APPROXIMATE FIELD LOCATION AND THEREFORE ARE NOT CERTIFIED FOR CONSTRUCTION. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL NOTIFY DIGSAFE @ 1-888-344-7233 FOR ACTUAL SITE MARKING. STATE LAWS REQUIRE A MINIMUM OF 72 HOUR NOTICE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION AND INVERTS PRIOR TO CONSTRUCTION.
  - THIS PLAN HAS BEEN PREPARED FOR APPROVAL OF WATER, SEWER AND DRAIN CONNECTIONS TO THE B.W.S.C. FACILITIES. IT IS UNDERSTOOD THAT THE RESPONSIBILITY OF THE OWNERSHIP AND MAINTENANCE OF THE CONNECTIONS ON PRIVATE PROPERTY AND/OR PRIVATE AND PUBLIC WAYS, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR THE OWNERS. IF THE CONNECTIONS CROSS OR ARE NEAR PROPERTY LINES, PROVISIONS MUST BE MADE TO ALLOW EACH OTHER TO MAINTAIN OR RECONSTRUCT THEIR RESPECTIVE CONNECTIONS. THIS FACT MUST BE INCORPORATED INTO ANY PURCHASE AND SALES AGREEMENT AND DEEDS RELATED TO THE TRANSFER OF OWNERSHIP OF THE PROPERTIES.
  - A ROUGH CONSTRUCTION SIGN-OFF SHALL BE OBTAINED FROM THE CITY OF BOSTON INSPECTIONAL SERVICES DEPARTMENT, TWENTY FOUR HOUR ADVANCE NOTICE IS REQUIRED FOR INSPECTION SCHEDULING. IF THE INSPECTION DATE IS SCHEDULED ON THE WEEKEND, HOLIDAYS OR AFTER REGULAR WORK HOURS, AND THE CONTRACTOR FAILS TO NOTIFY THE B.W.S.C. INSPECTORS OF CANCELLATION IN ADVANCE, AN ADDITIONAL INSPECTION FEE WILL BE CHARGED TO THE CONTRACTOR WHEN THE JOB IS SUBSEQUENTLY RESCHEDULED.
  - ALL ROOF DRAINS SHALL BE DISCHARGED INTO THE RECHARGE SYSTEM AS SHOWN.
  - UTILITY STATION 0+00 FOR JOY STREET IS LOCATED AT THE P.I. OF JOY STREET AND MOUNT VERNON STREET.
  - ANTICIPATED FLOW: 110 G.P.D. x 8 BEDROOMS = 880 G.P.D.

1. LOCUS:  
 ASSESSORS: WARD 5, PARCEL 1600  
 WARD 5, PARCEL 1601

RECORD OWNER: 3-5 JOY LLC  
 DEED REFERENCE: BOOK 58818 PAGE 224  
 BOOK 58818 PAGE 227  
 BOOK 58818 PAGE 230

PLAN REFERENCE: N/A

2. THIS PLAN IS THE RESULT OF AN ON THE GROUND SURVEY PERFORMED BY THIS OFFICE IN OCTOBER AND NOVEMBER 2016. ELEVATIONS REFER TO CITY OF BOSTON SEWER DATUM.

CITY OF BOSTON BENCHMARK: MAG SET IN ROADWAY  
 EL=97.67

PROJECT TITLE & LOCATION:  
**BWSC SITE PLAN  
 4 JOY STREET  
 BOSTON MA, 02116**

PLAN TITLE:  
**SITE PLAN # 17146**

PREPARED FOR:  
**ROBERT GATNIK  
 3-5 JOY LLC  
 60 ADAMS STREET, 3RD FLOOR  
 MILTON, MA 02186  
 617-308-4889**

DATE: MARCH 28, 2017  
 REVISED: JUNE 21, 2017

JOB NUMBER: 16.051 SHEET 2 OF 2

SCALE: 1" = 10'

## 4 JOY STREET

### Zoning Computation Form

02.01.2018

Zoning District: H2-65  
 Existing Use: Offices  
 Proposed Use: 3 Dwellings

	Use	Min. lot size	Lot area per D.U.	Min. lot width	F.A.R.	Max bldg. ht.	Open space per D.U.	Min. front yard	Min. rear yard	Min. side yard	Min. parapet setback	% of rear yard for acc. use	
						feet							stories
Required by Code	Allowed	None	None	None	2.0 7,370	65' Above grade plane	-	150 SF/D.U.	Modal	10 + L/120	0'	H+L/6	25%
Existing	Offices	3685 S.F.	N/A	27.36'	2.19 8074	58.5'	5+ Basement	N/A	13.5'	0'	0'	0'	0%
Proposed	3 D.U.	3685 S.F.	N/A	27.36'	2.19 8073	58.5'	5+ Basement	200 SF/D.U. (Min.)	13.5'	54'	0'	0'	0%

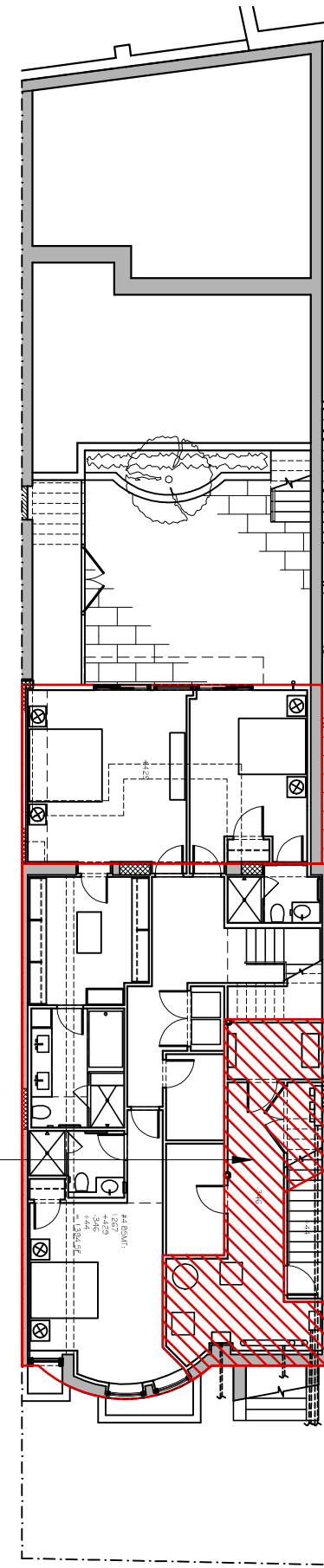
NOTE: SEE ATTACHED SHEET FOR FLOOR AREA CALCULATIONS

	Required by code	Existing	Proposed
Parking:	* 0.7/ D.U. 2.1	0	0 (0 Required if <2)
Loading:	0	0	0

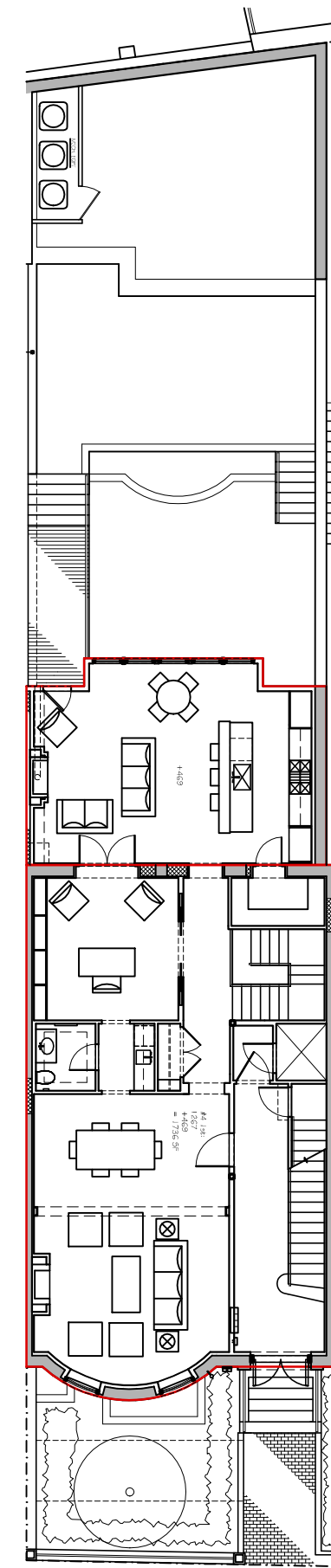
\* 0 SPACES REQUIRED BY CODE IF CODE REQUIREMENT IS 2 OR LESS AS PER 23-6(b), AFTER ROUNDING PER SECTION 38A



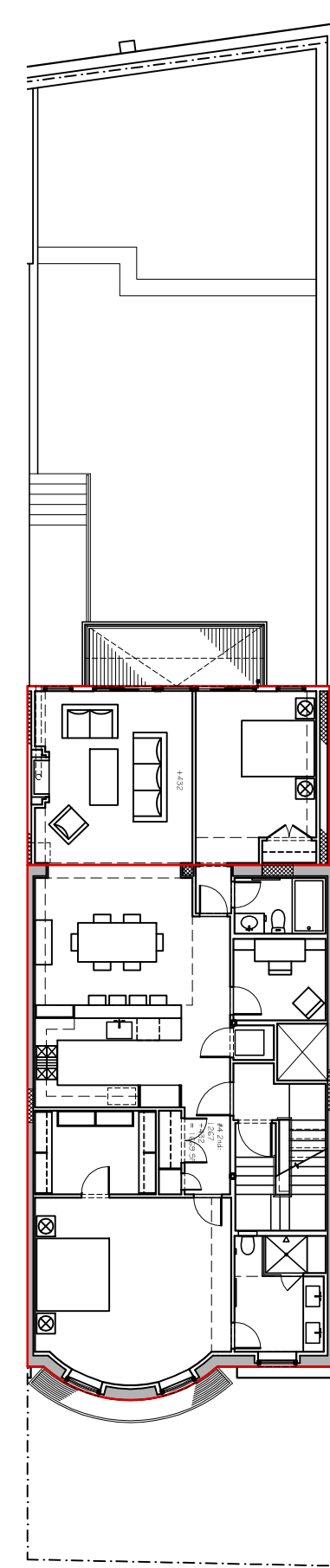
PROPOSED COMMON  
MECHANICAL / ELECTRICAL



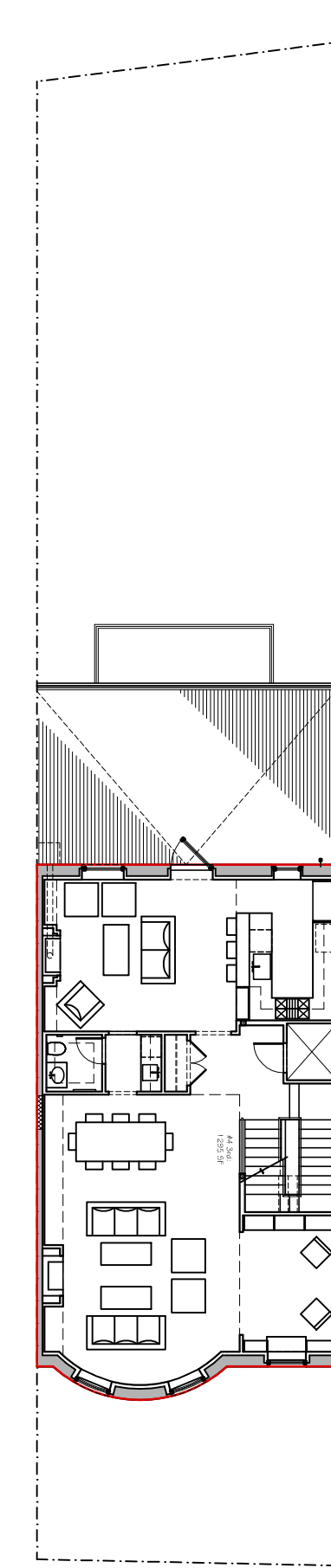
GARDEN FLOOR  
#4: 1,394



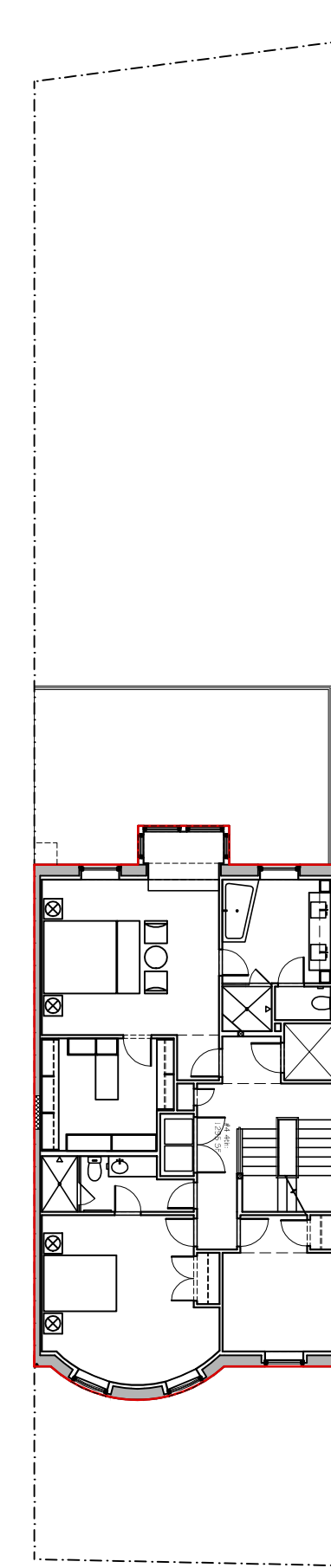
FIRST FLOOR  
#4: 1,736



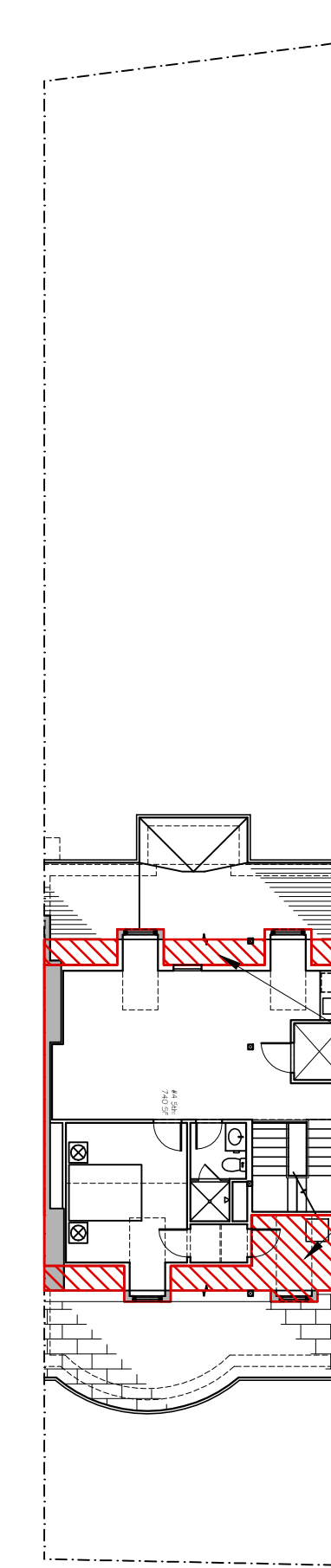
SECOND FLOOR  
#4: 1,669



THIRD FLOOR  
#4: 1,239



FOURTH FLOOR  
#4: 1,295

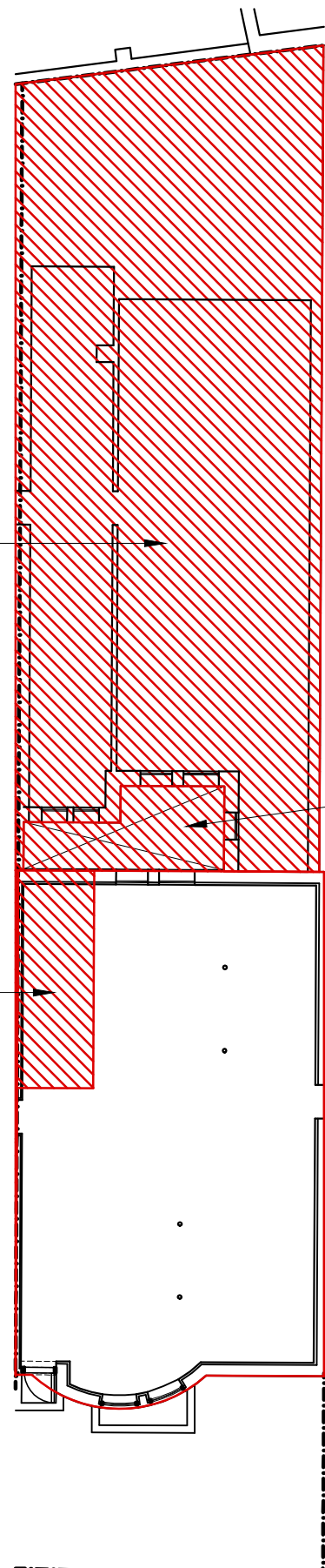


FIFTH FLOOR  
#4: 740

ATTIC  
SPACE

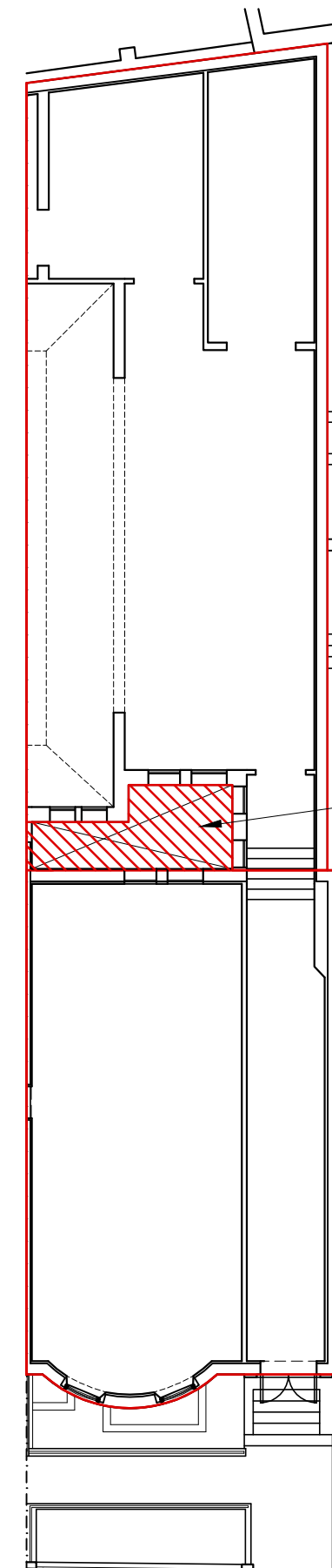
**PROPOSED GROSS FLOOR AREA**  
SCALE: NTS

(E) STORAGE  
ROOM



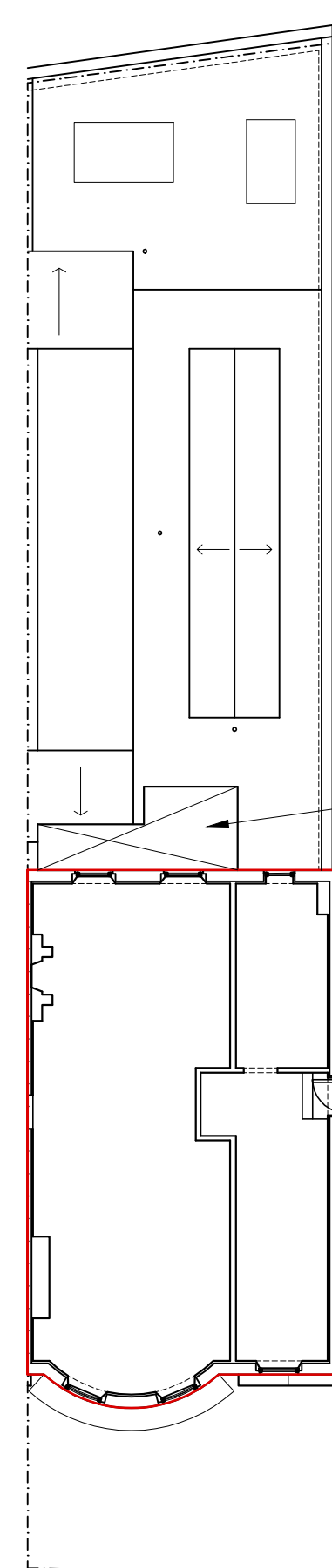
GARDEN FLOOR  
#4: 1,136

(E) AIR  
SHAFT



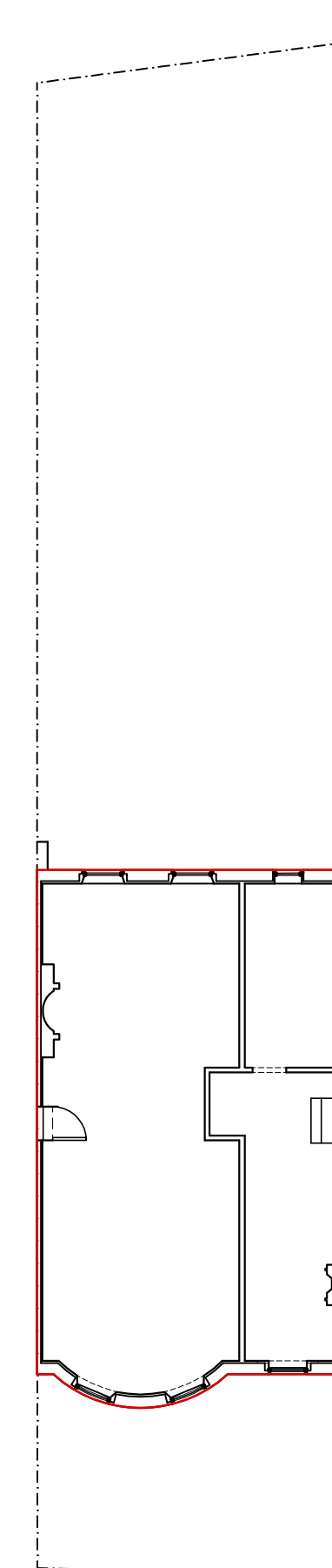
FIRST FLOOR  
#4: 3,109

(E) AIR  
SHAFT

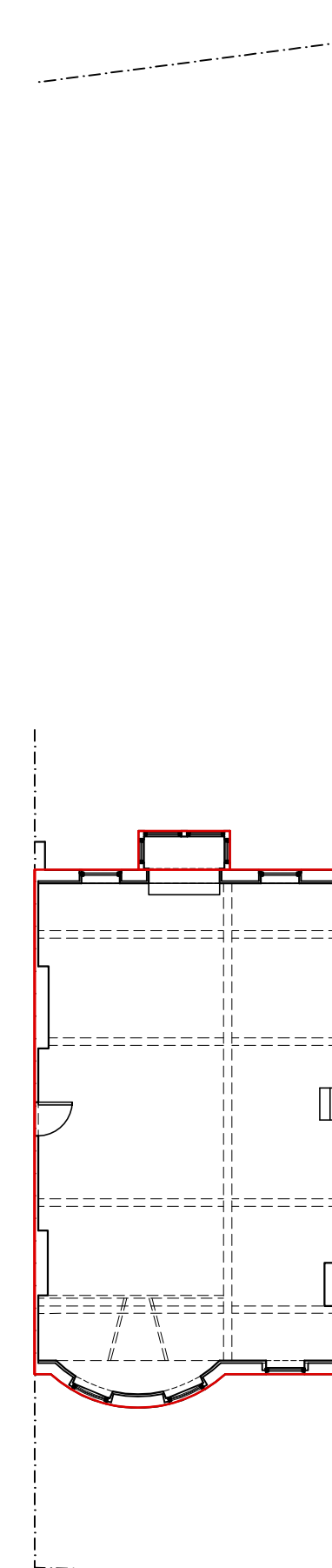


SECOND FLOOR  
#4: 1,267

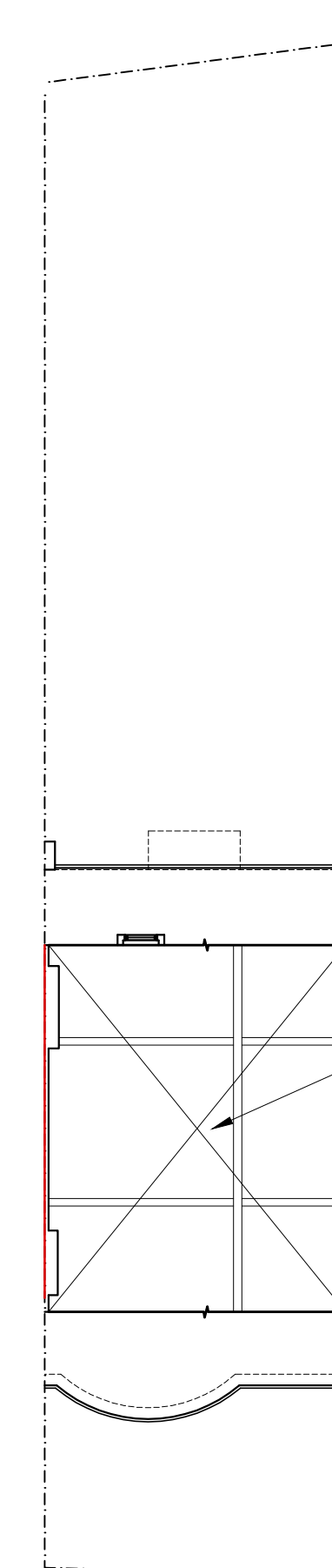
(E) AIR SHAFT  
BELOW



THIRD FLOOR  
#4: 1,267



FOURTH FLOOR  
#4: 1,295



FIFTH FLOOR  
#4: 0

OPEN TO  
BELOW

**EXISTING LOT SIZES**  
#4 JOY ST: 3,685 (x2 7,370)  
(ALLOWABLE FAR 2.0)

**GROSS FLOOR AREA  
BUILDING TOTALS**

PROPOSED:  
#4 JOY ST: 8,073  
EXISTING:  
#4 JOY ST: 8,074

**FAR LEGEND**

TOTAL PROPOSED: 24,470 SF  
TOTAL EXISTING: 24,082 SF

- AREA INCLUDED
- AREA EXCLUDED

**EXISTING GROSS FLOOR AREA**  
SCALE: NTS

JOB NO: 1606
SCALE: NTS
DATE: 02.01.18
REVISED

**4 JOY STREET**  
BOSTON, MA

**GROSS FLOOR AREA:  
EXISTING AND PROPOSED**

sixteen in a family day care home shall not exceed six, including participating children living in the dwelling unit. Family day care home shall not mean a dwelling unit used for an informal cooperative arrangement among neighbors or relatives, or the occasional care of children with or without compensation therefor.

(↑ As inserted on October 12, 1988)

(20) "Floor area ratio", the ratio of gross floor area of a structure to the total area of the lot.

(21) "Floor area, gross", the sum of areas of the several floors of the structure, as measured by the exterior faces of the walls, including fully enclosed porches and the like as measured by the exterior limits thereof, but excluding (a) garage space which is in the basement of a building or, in the case of garage space accessory to a dwelling, is at grade, (b) basement and cellar areas devoted exclusively to uses accessory to the operation of the structure, and (c) areas elsewhere in the structure devoted to housing mechanical equipment customarily located in the basement or cellar such as heating and air conditioning equipment, plumbing, electrical equipment, laundry facilities and storage facilities, provided, however, that in an H-2-45, H-2-65, H-3-65, L-2-65 or B-3-65 district no area in an existing structure previously included in gross floor area and no area in any addition to an existing structure, except areas not used or designed to be used for human occupancy, such as attics, basements, cellars or space under sloping eaves, shall be excludable from gross floor area as area for storage facilities or laundry facilities.

*PARKING & MEET (RE)CT - IN BSMT, MEET/RE)CT ON UPPER FLOOR OK TO REMOVE*

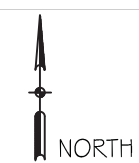
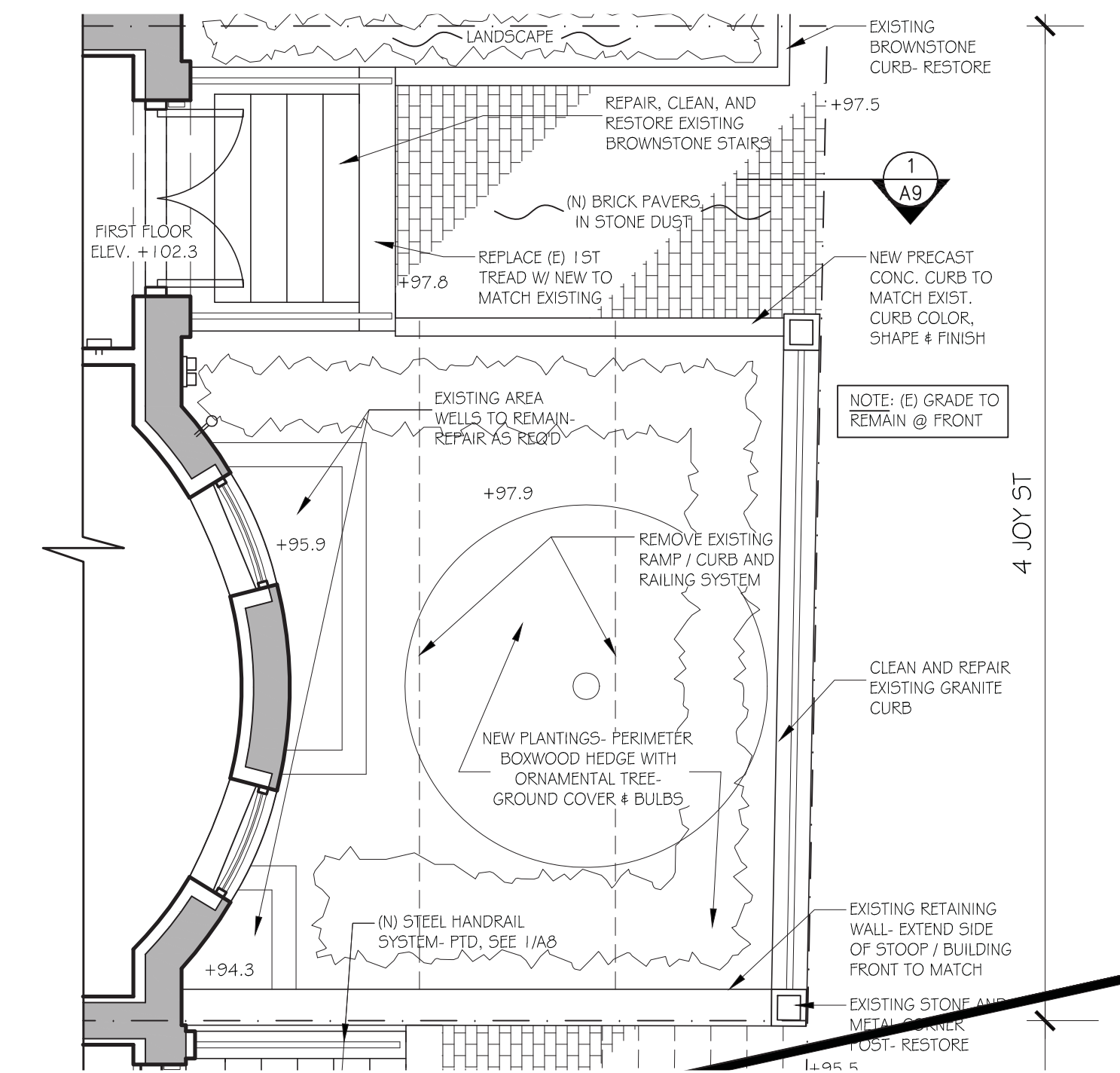
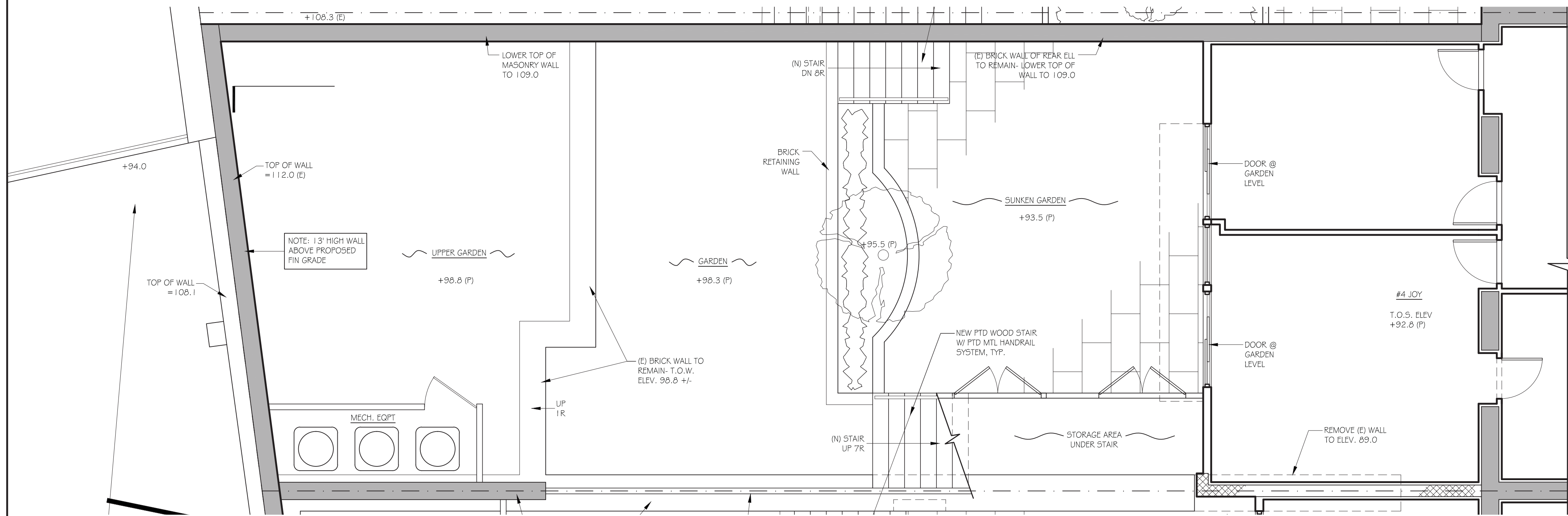
(↑ As amended on September 27, 1973, March 5, 1980, October 31, 1980, and June 16, 1982)

(22) "Grade", the average elevation of the nearest sidewalk at the line of the street or streets on which the building abuts, except as otherwise provided in Section 16-8 as such section pertains to the restricted roof structure district in the North End, or in the case of a building not abutting on a street, the average elevation of the ground between the building and the lot line or a line twenty (20) feet from the building, whichever is nearer; but in no event shall the average elevation of such ground be taken to be more than five (5) feet above or below the average elevation of the ground immediately contiguous to the building.

*NEARER TO WHAT? THE LOT OR THE BLDG?*

(↑ As amended on September 23, 1987 and March 30, 1989)

(22A) "Group care residence, general", premises for the residential care or supervision (but not including custodial care) of ex-alcoholics, ex-drug addicts, pre-release or post-release convicts or juveniles under seventeen years of age who are under the care of correctional agencies of the Commonwealth, but not including the residential care of mentally ill, mentally retarded, or physically handicapped

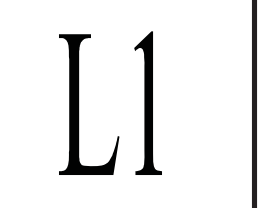


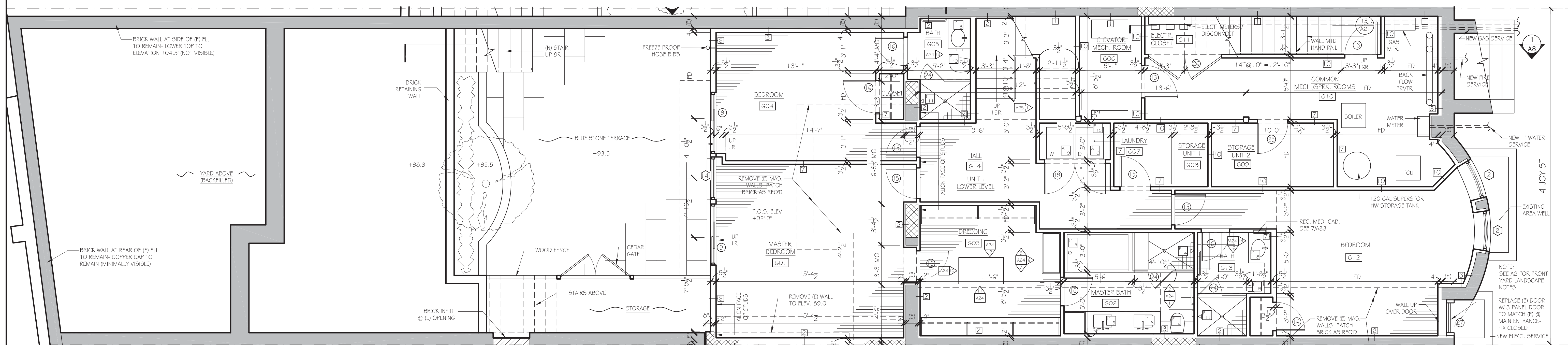
FRONT AND REAR YARD LANDSCAPE PLAN  
SCALE: 1/4"=1'-0"

JOB NO: 1606	SCALE: 1/4"=1'-0"
DATE: 08.21.17	REVISED

4 JOY STREET  
BOSTON, MA

FRONT AND REAR YARD  
LANDSCAPE PLAN

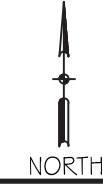
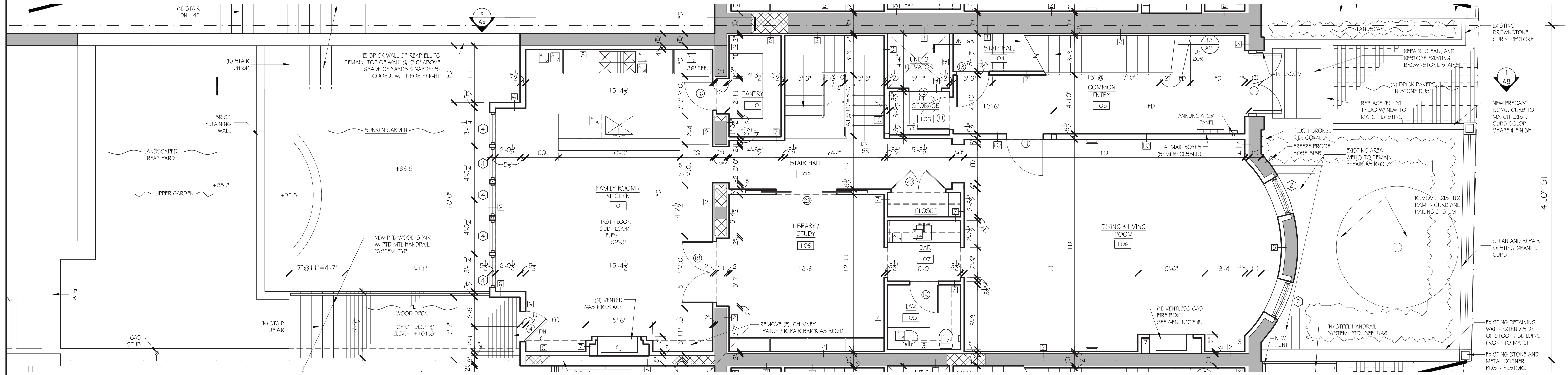




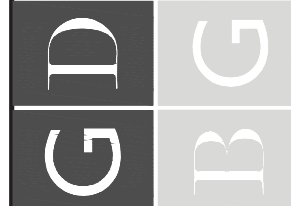
GARDEN FLOOR PLAN  
SCALE: 1/4"=1'-0"

WALL LEGEND	
	EXISTING WALL OR STUD FRAMING TO REMAIN - REFER TO WALL TYPE SCHEDULE ON A19 FOR FINISH MATERIALS
	NEW FRAMING - REFER TO WALL TYPE SCHEDULE ON A19 FOR FINISH MATERIALS

- GENERAL NOTES:
- INSTALL NEW VENTLESS FIREBOX MONESSEN #LCJF32 OR VENTED FIREBOX REAL Fyre #DVL30L WHERE NOTED ON PLANS - PROVIDE GAS LOG SETS
  - PROVIDE GALVANIZED STEEL PANS BENEATH ALL WASHERS & WASHER/DRYER STACKS - PROVIDE WATER BUG, WITH AUTOMATIC SHUT OFF VALVE AT WATER SUPPLY - TYPICAL ALL WASHERS / DRYERS - SEE DETAIL 16A34
  - ALL CLOSETS TO HAVE A SINGLE POLE/SHELF UNLESS NOTED OTHERWISE - SEE 5/A32
  - COORDINATE SIZE OF FINISH HOISTWAY, RAIL ATTACHMENTS, PIT DEPTH, ETC. W/ ELEVATOR SUBCONTRACTOR.



FIRST FLOOR PLAN  
SCALE: 1/4"=1'-0"

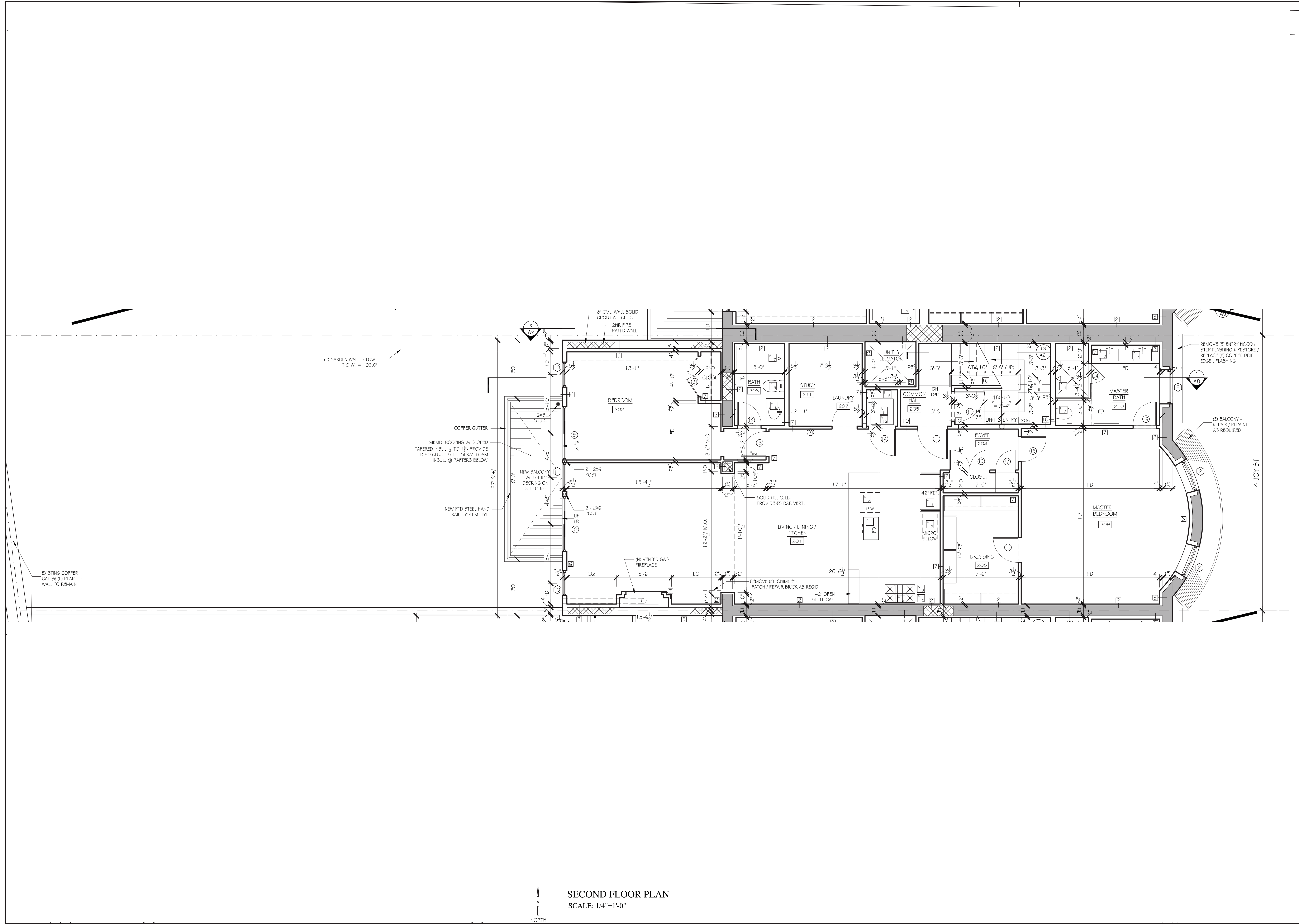


JOB NO: 1606	SCALE: 1/4"=1'-0"
DATE: 06.21.17	REVISED

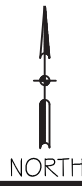
4 JOY STREET  
BOSTON, MA

FIRST FLOOR PLAN





SECOND FLOOR PLAN  
SCALE: 1/4"=1'-0"



A3

SECOND FLOOR PLAN

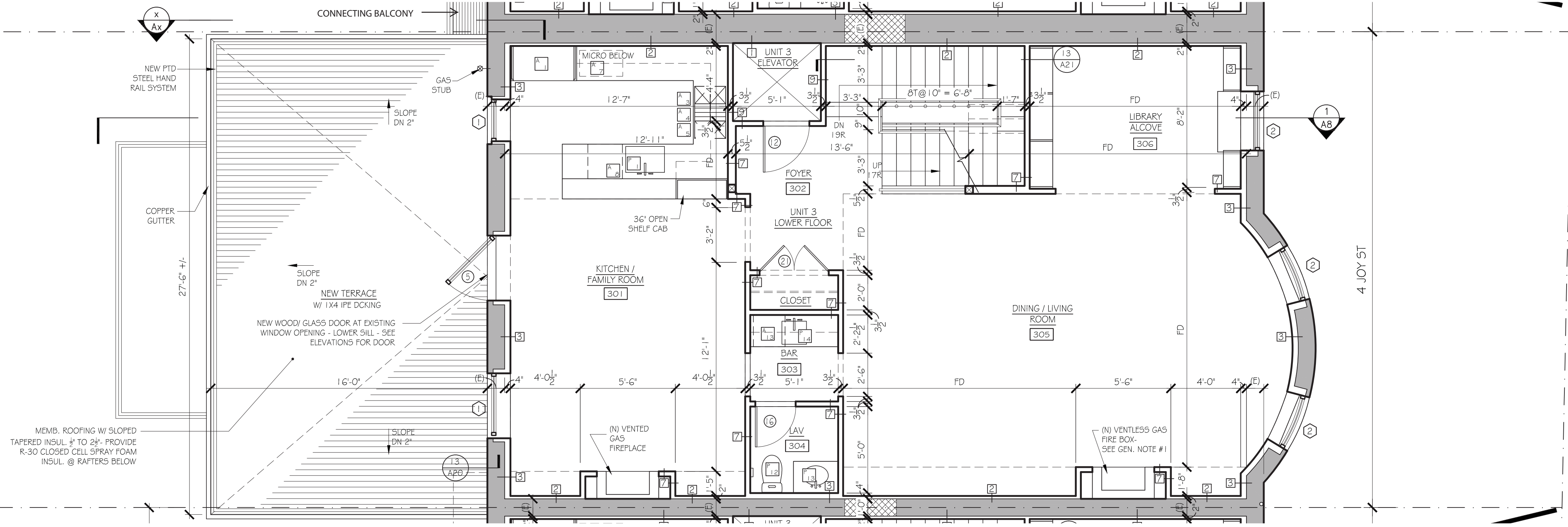
4 JOY STREET  
BOSTON, MA

JOB NO: 1606
SCALE: 1/4"=1'-0"
DATE: 08.21.17
REVISED

GD GRASSI DESIGN GROUP

BG BEAUCHEMIN GRASSI INTERIORS

46 Waltham Street, Suite 3A  
Boston, MA 02118  
Phone 617-956-9992  
Fax 917-956-9993



THIRD FLOOR PLAN  
SCALE: 1/4"=1'-0"

A4

THIRD FLOOR PLAN

4 JOY STREET  
BOSTON, MA

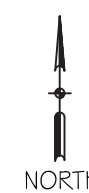
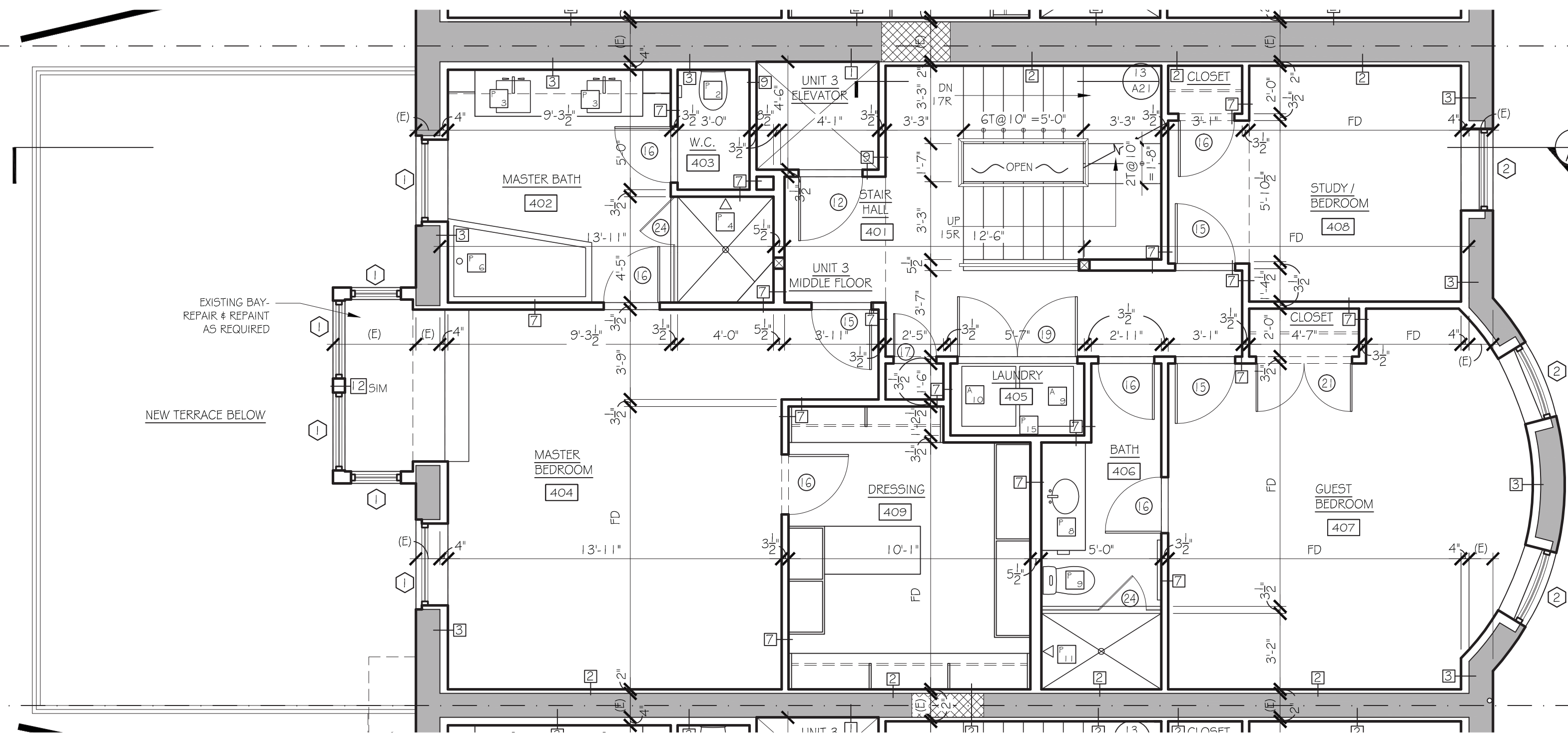
JOB NO: 1606
SCALE: 1/4"=1'-0"
DATE: 06.21.17
REVISED

GD  
BG

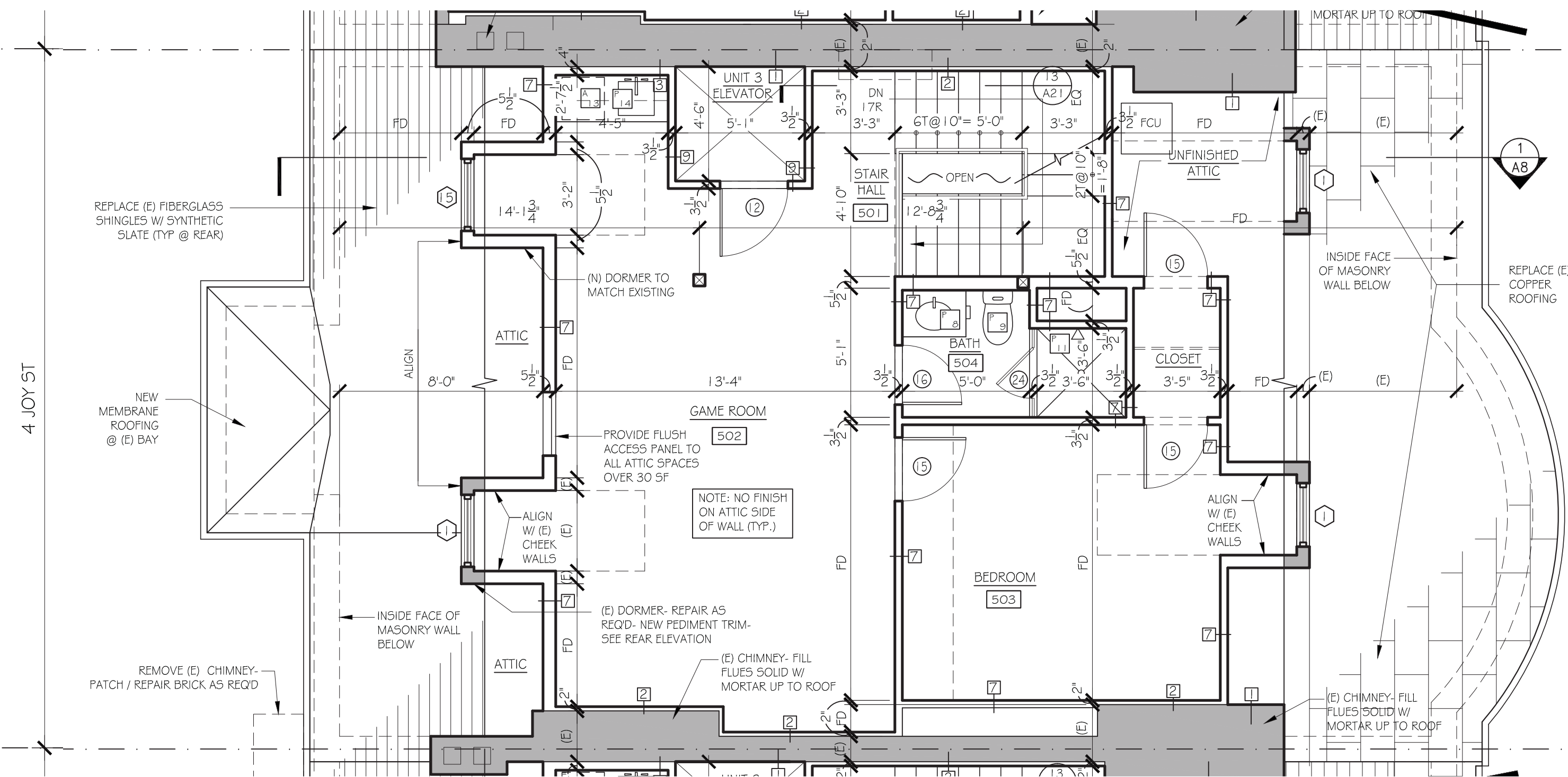
GRASSI DESIGN GROUP

BEAUCHEMIN GRASSI INTERIORS

46 Waltham Street, Suite 3A  
Boston, MA 02118  
Phone 617-956-9992  
Fax 917-956-9993

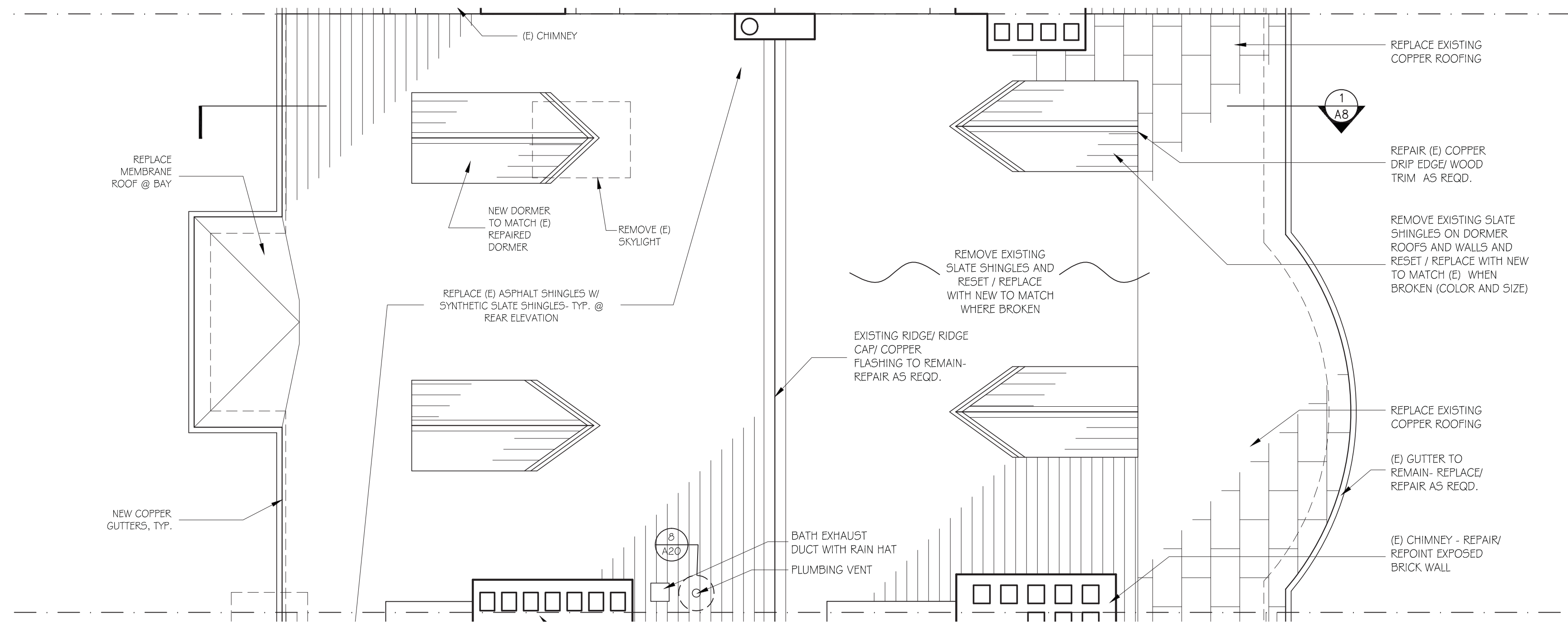


FOURTH FLOOR PLAN  
SCALE: 1/4"=1'-0"



FIFTH FLOOR PLAN  
SCALE: 1/4"=1'-0"





ROOF PLAN  
SCALE: 1/4"=1'-0"

46 Waltham Street, Suite 3A  
Boston, MA 02118  
Phone 617-956-9992  
Fax 917-956-9993

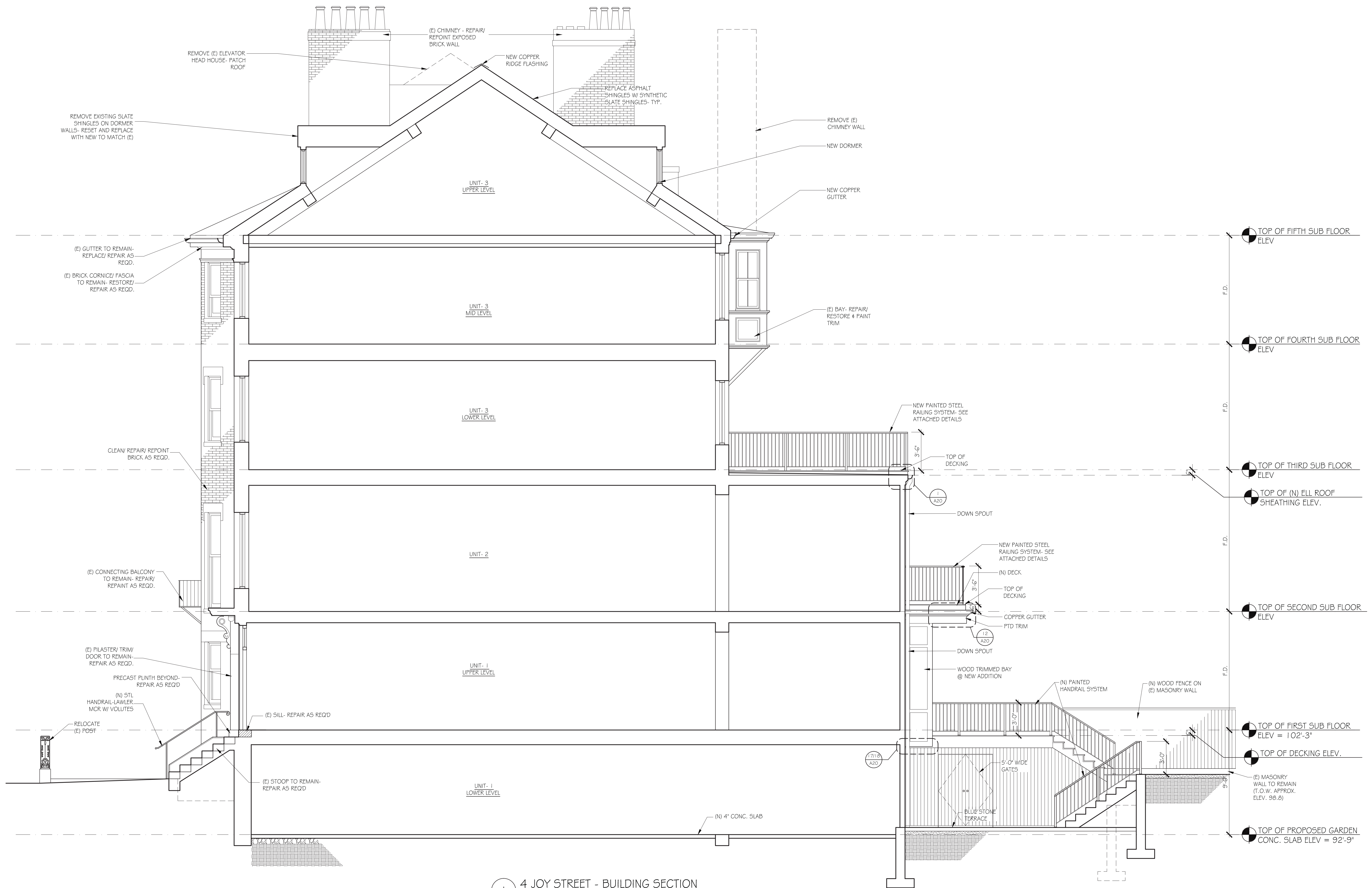
**GD** GRASSI DESIGN GROUP  
**BG** BEAUCHEMIN GRASSI INTERIORS

JOB NO.: 1606	SCALE: 1/4"=1'-0"
DATE: 06.21.17	REVISED

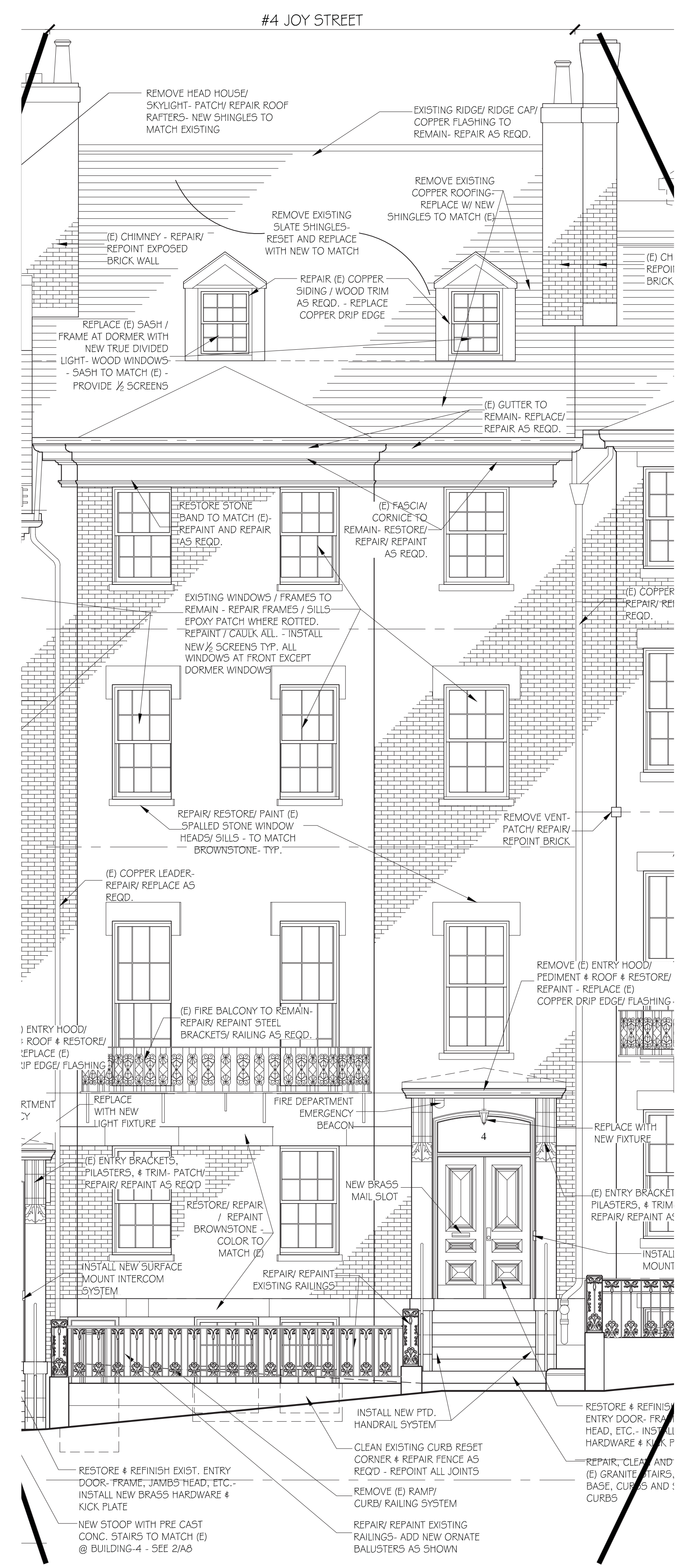
**4 JOY STREET**  
BOSTON, MA

**ROOF PLAN &  
ROOF DETAILS**

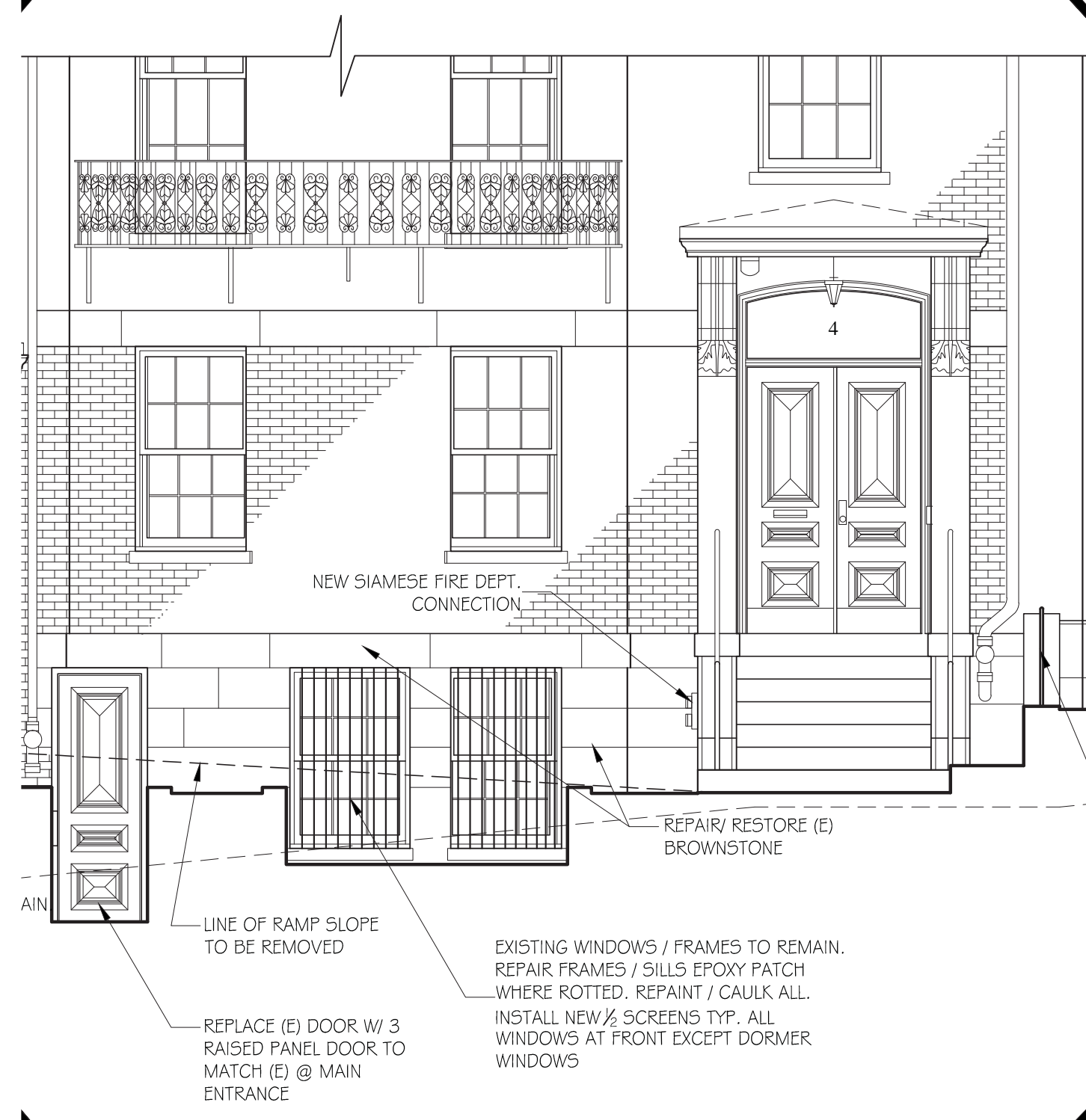
**A6**



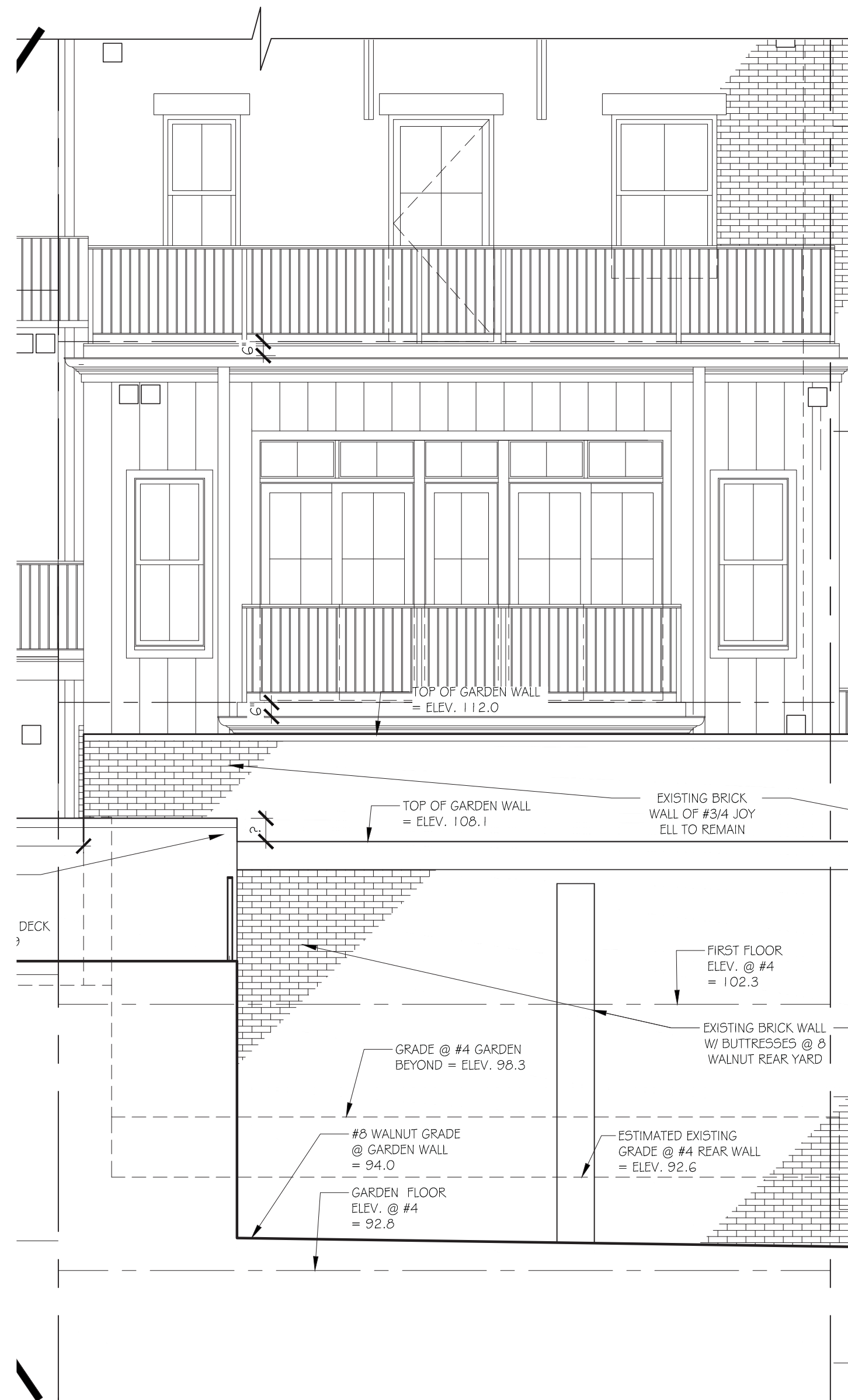
1 4 JOY STREET - BUILDING SECTION  
SCALE: 1/4" = 1'-0"



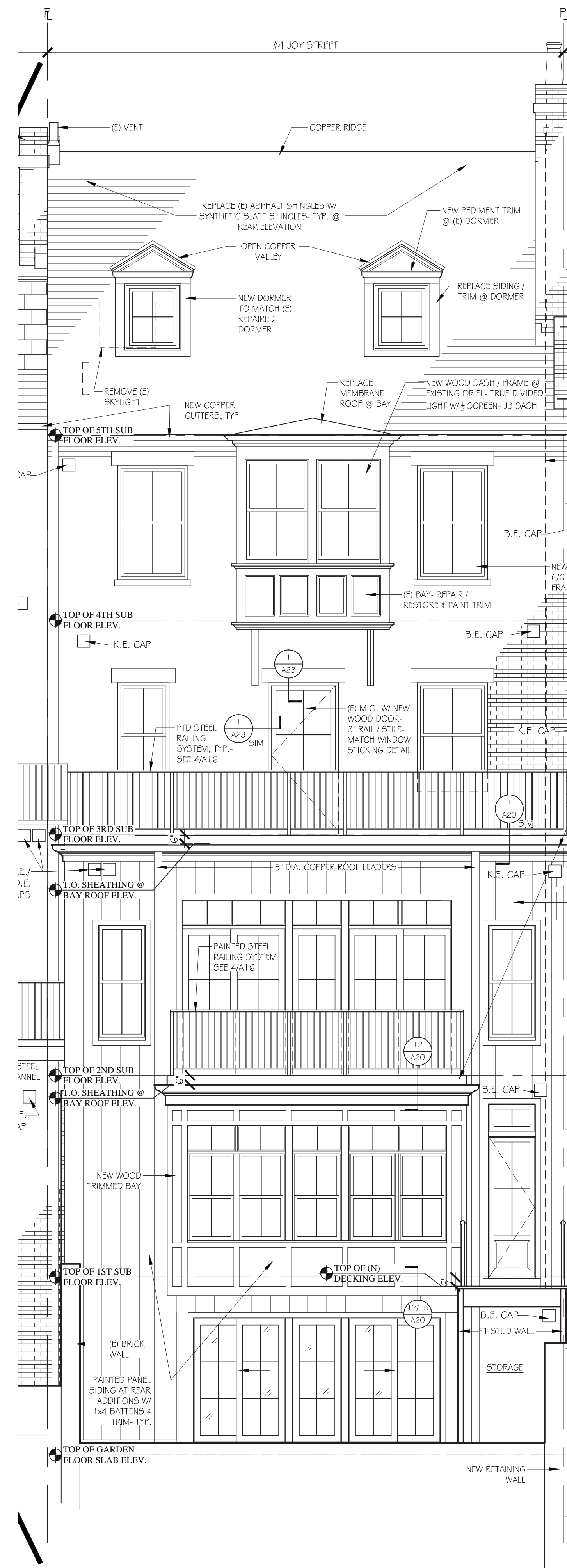
**4 JOY STREET FRONT ELEVATION**  
 SCALE: 1/4"=1'-0"



4 JOY STREET PARTIAL FRONT ELEVATION  
SCALE: 1/4"=1'-0"

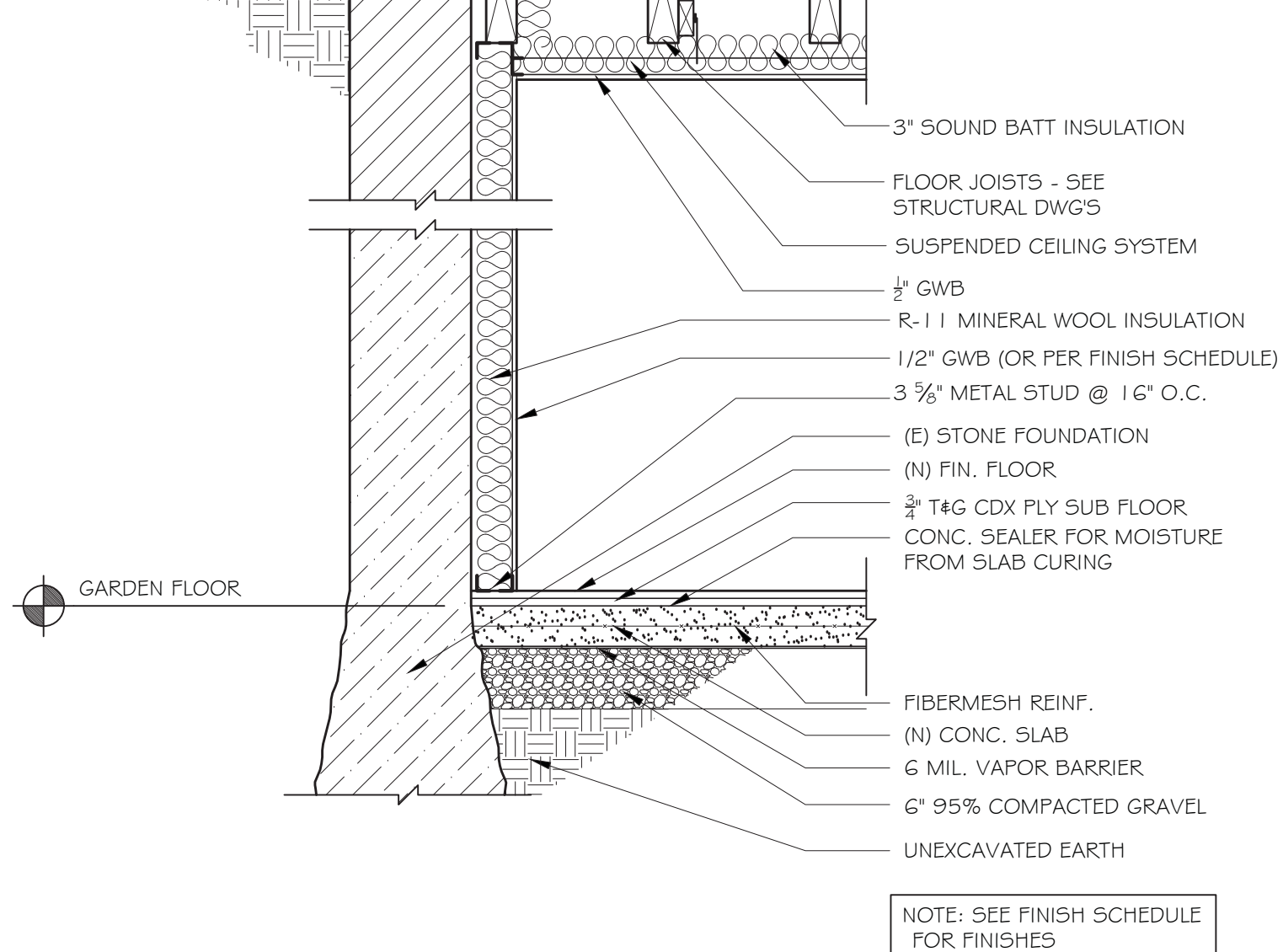
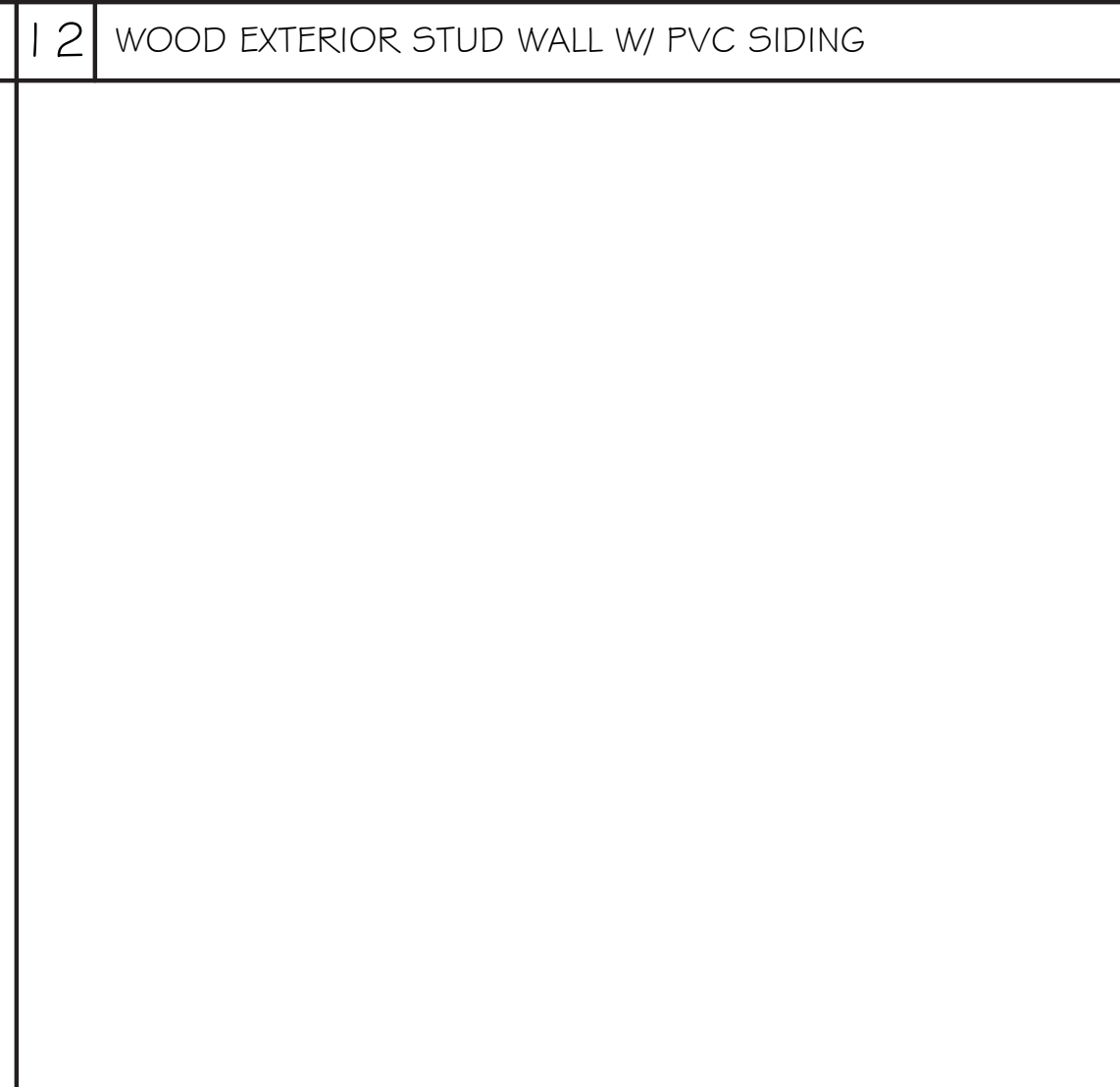
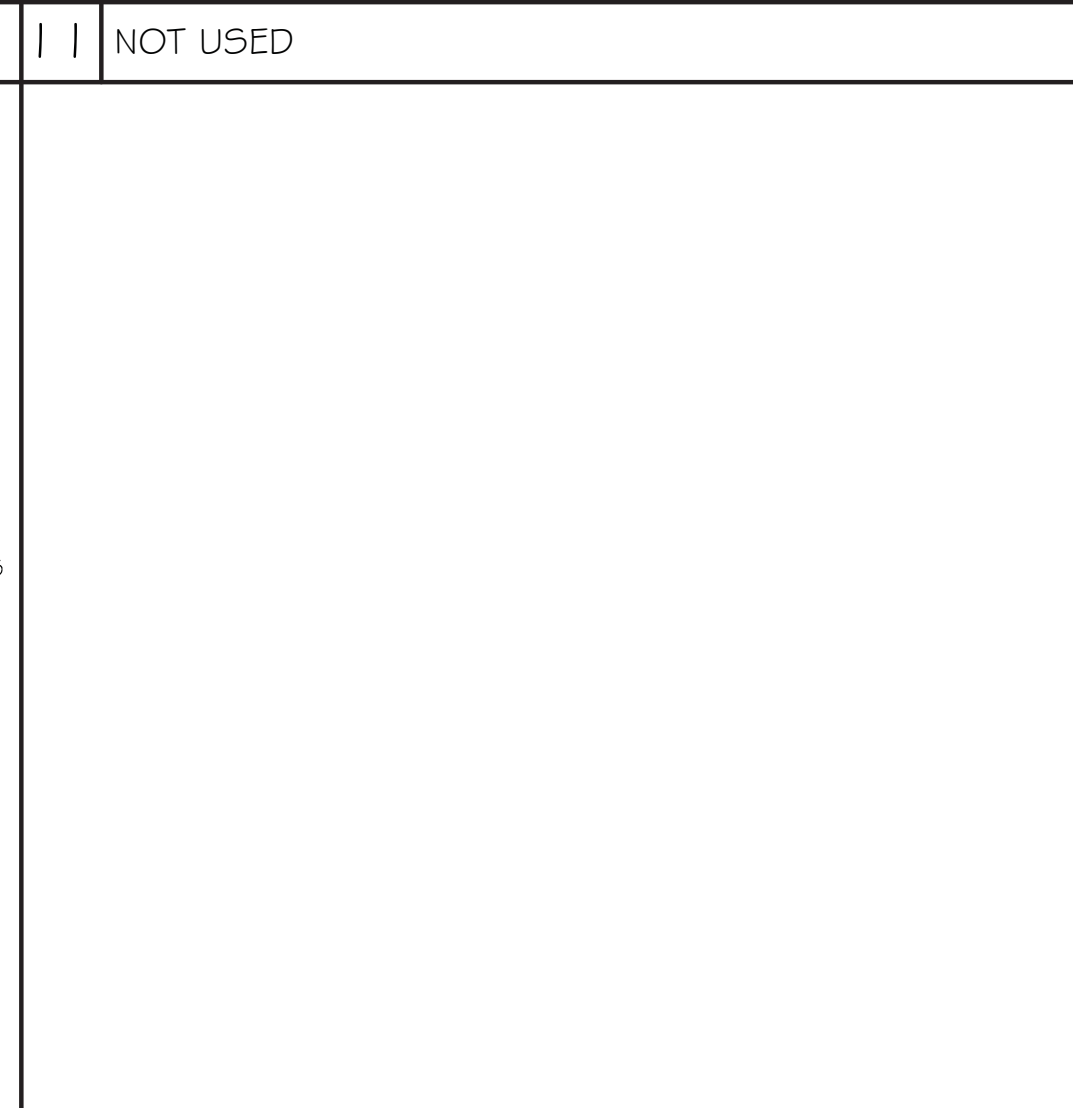
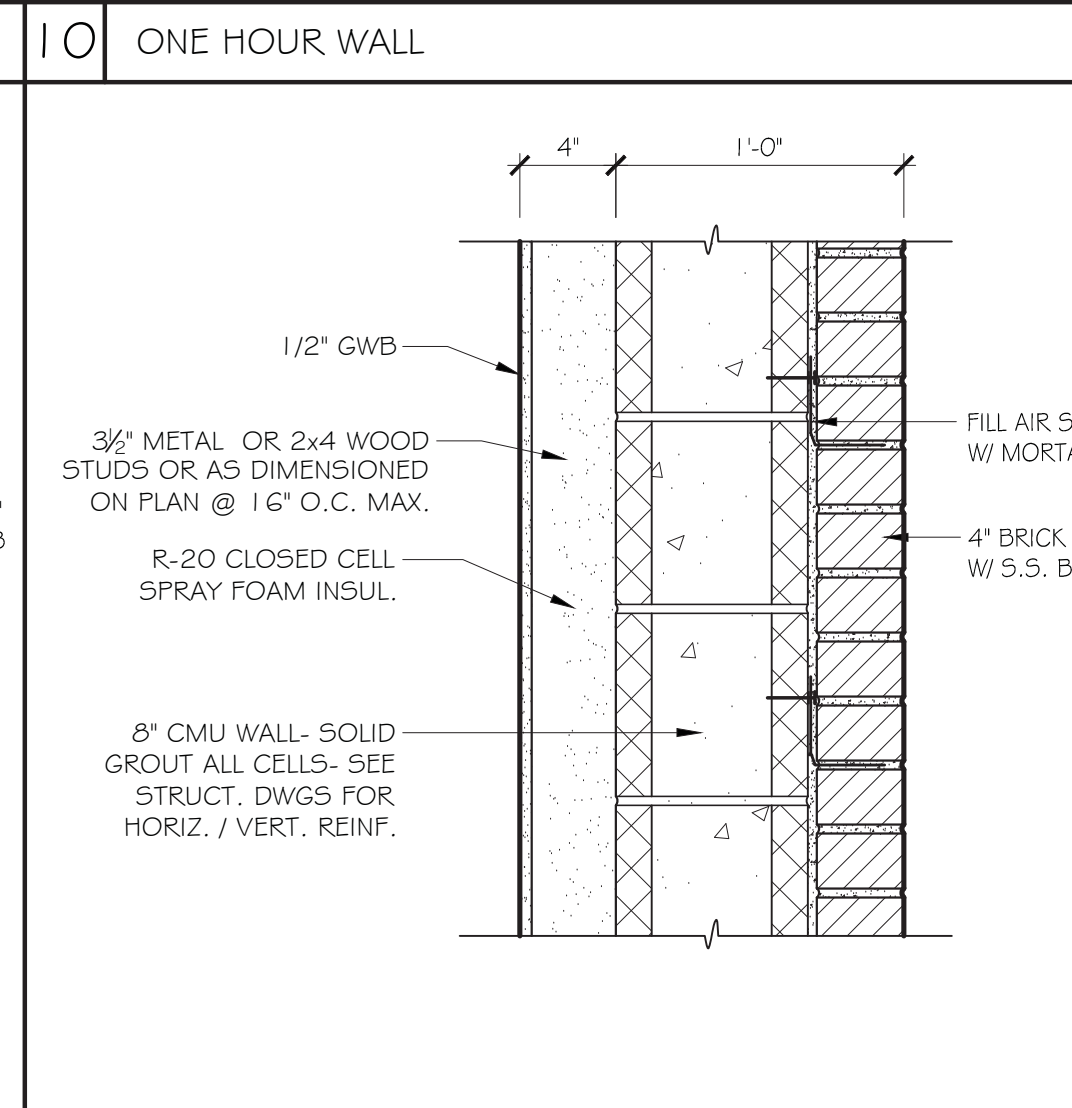
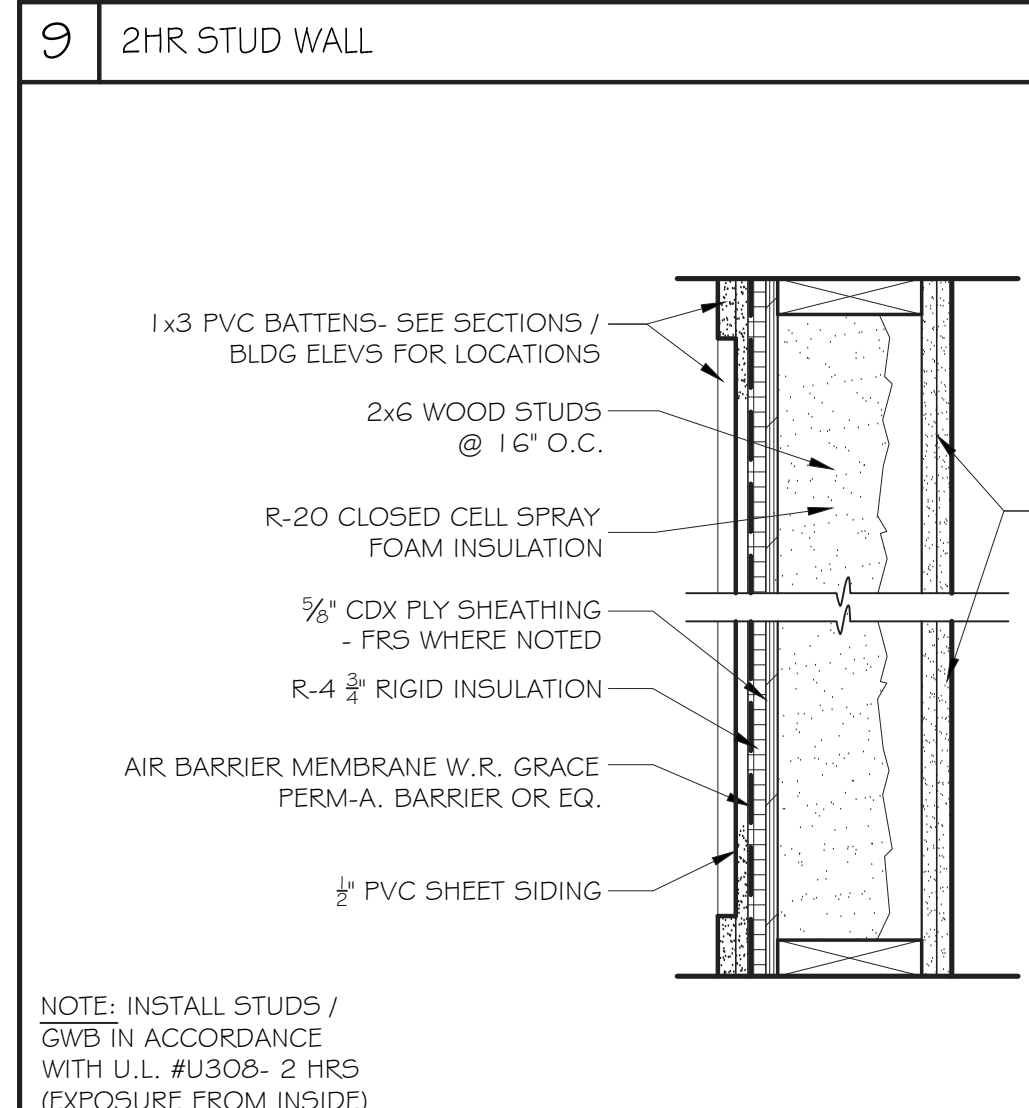
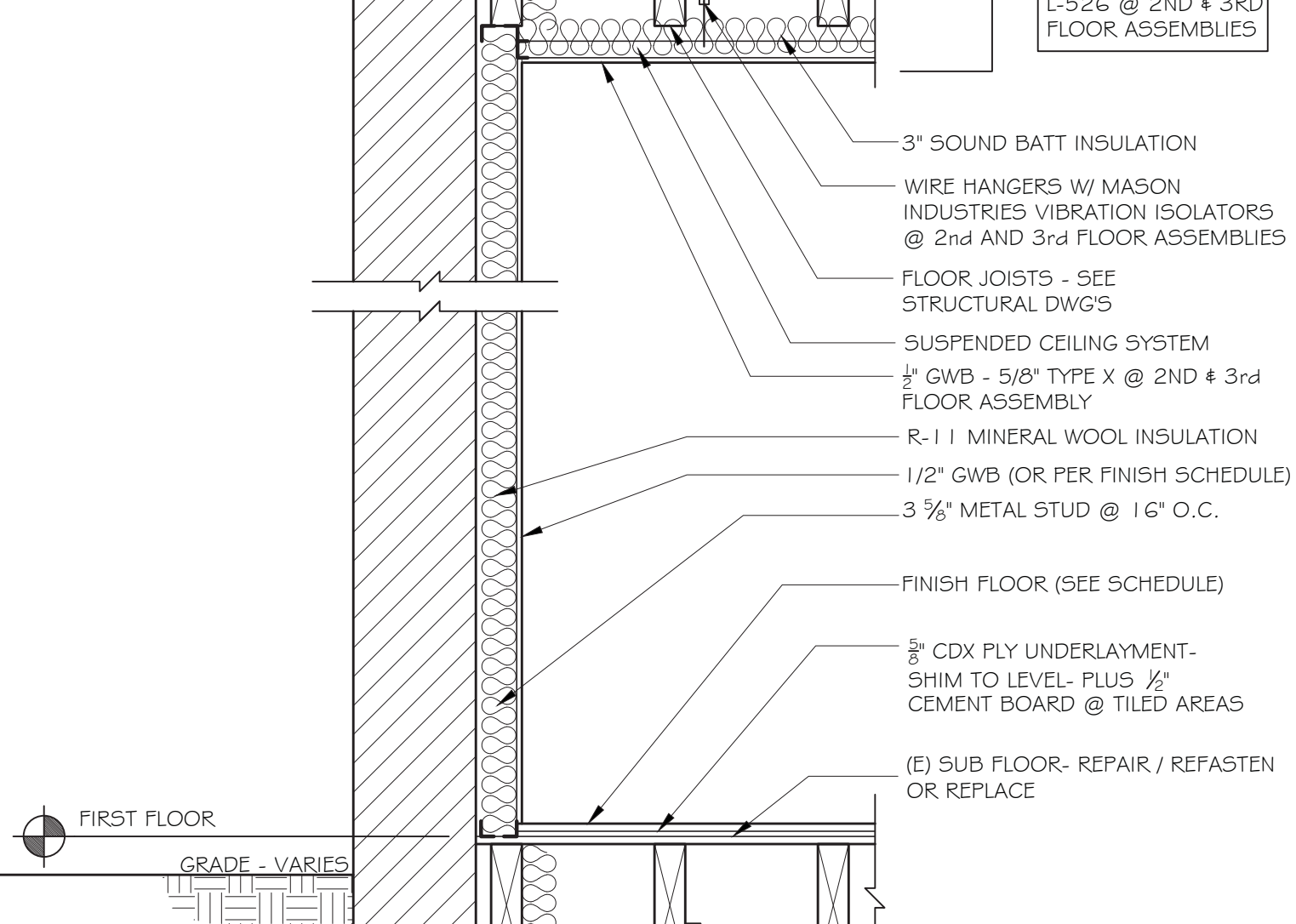
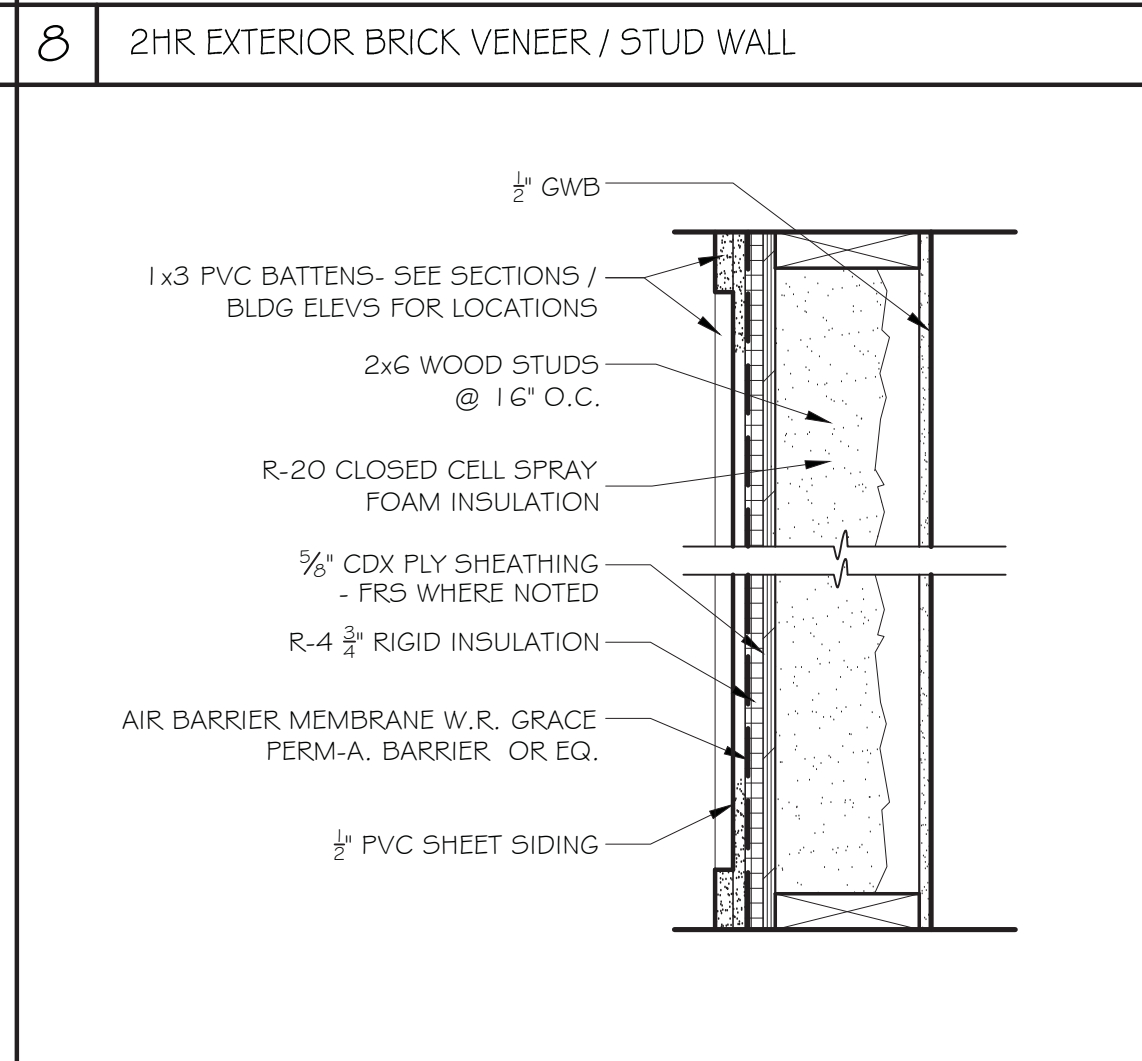
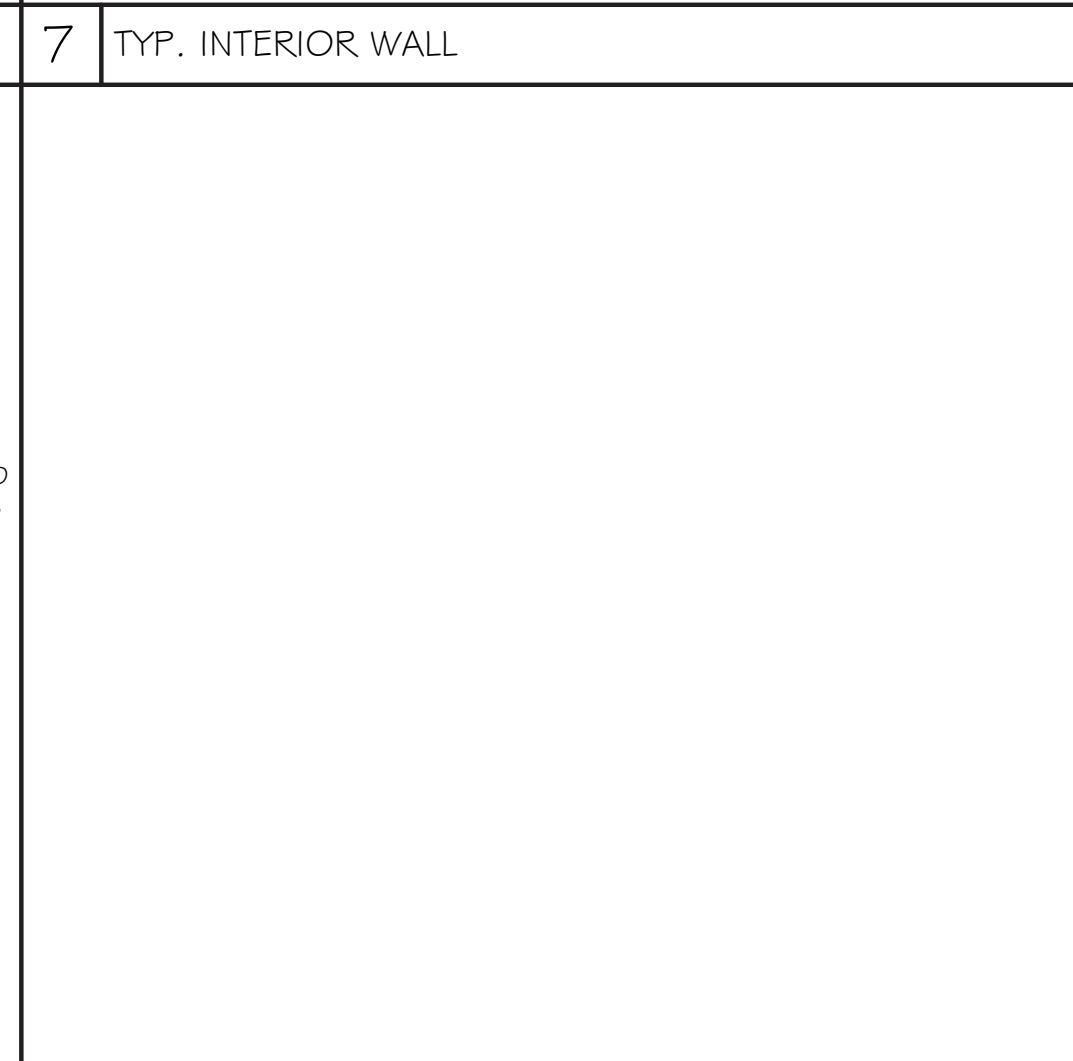
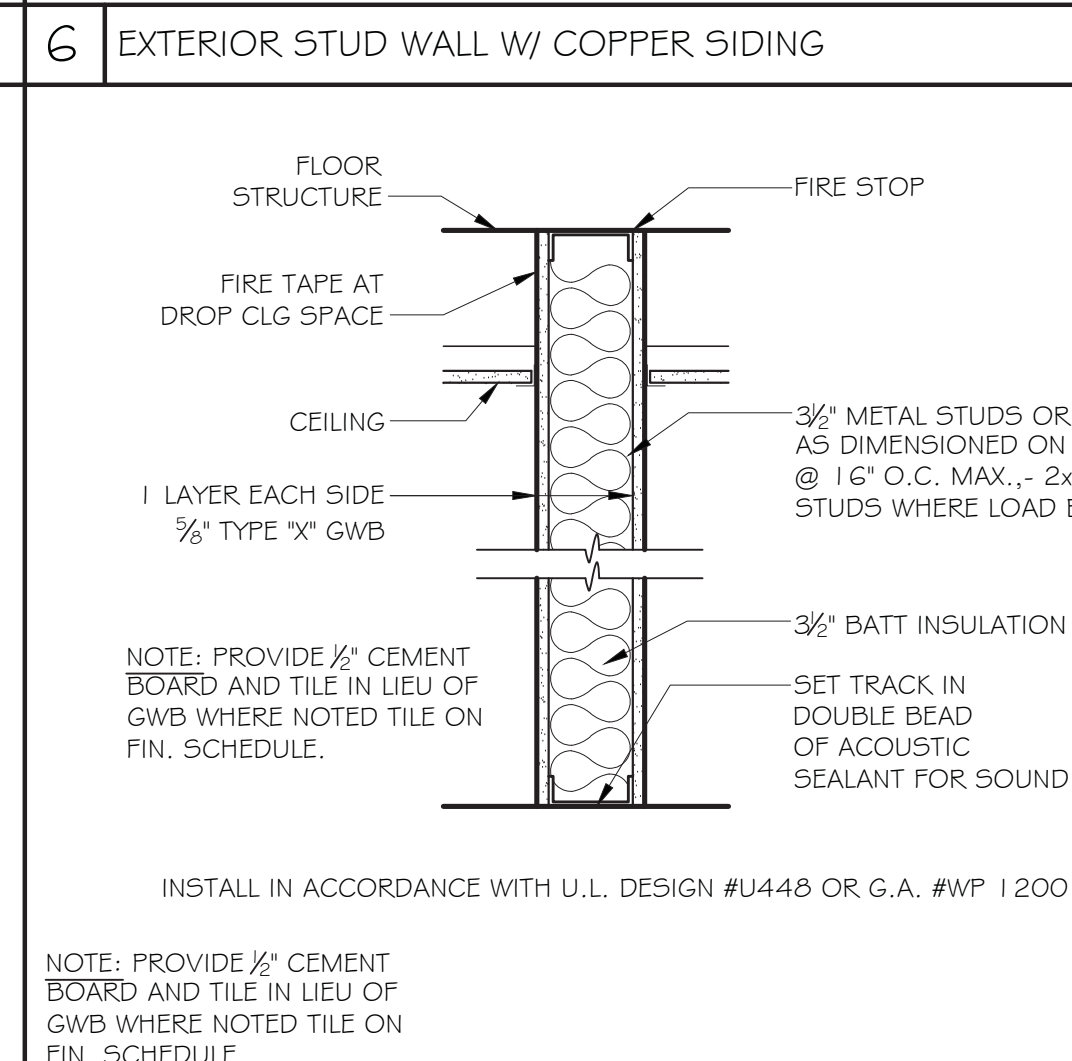
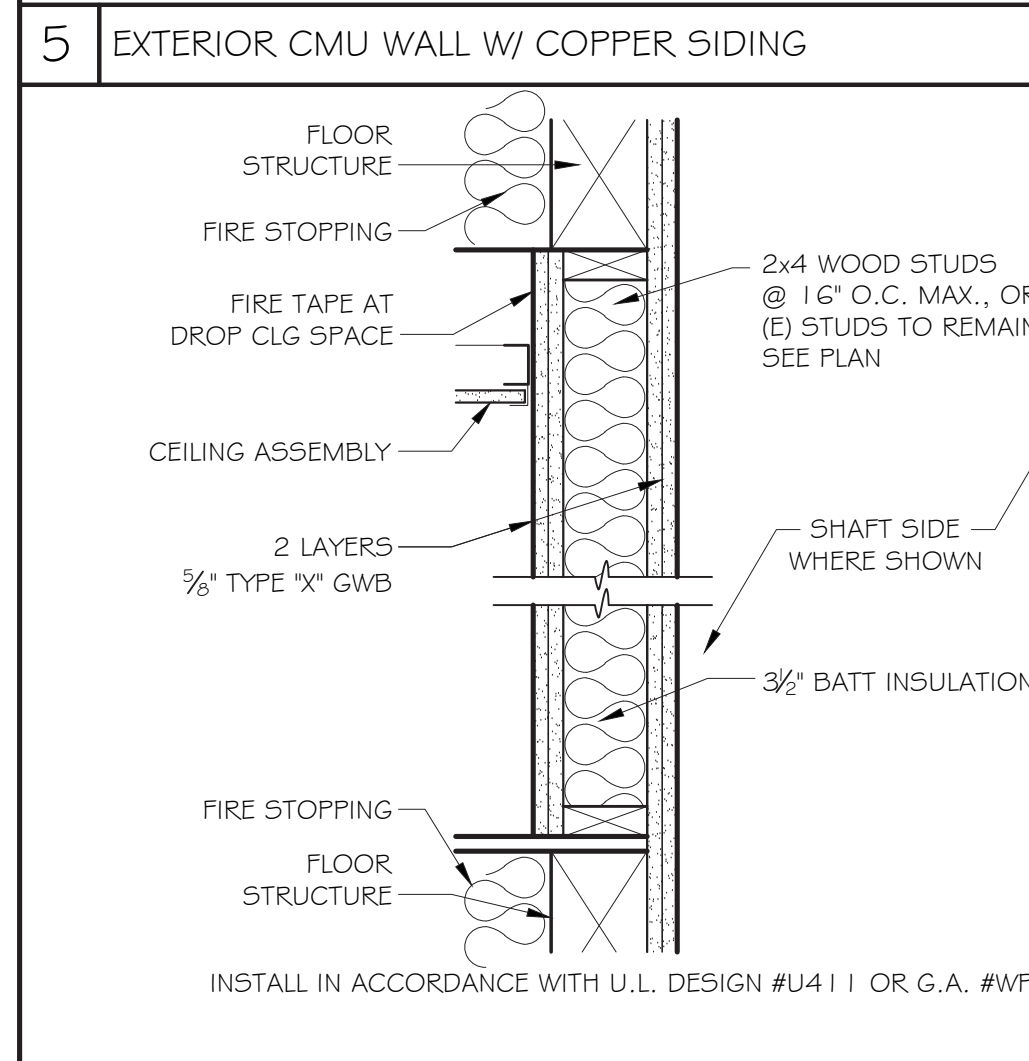
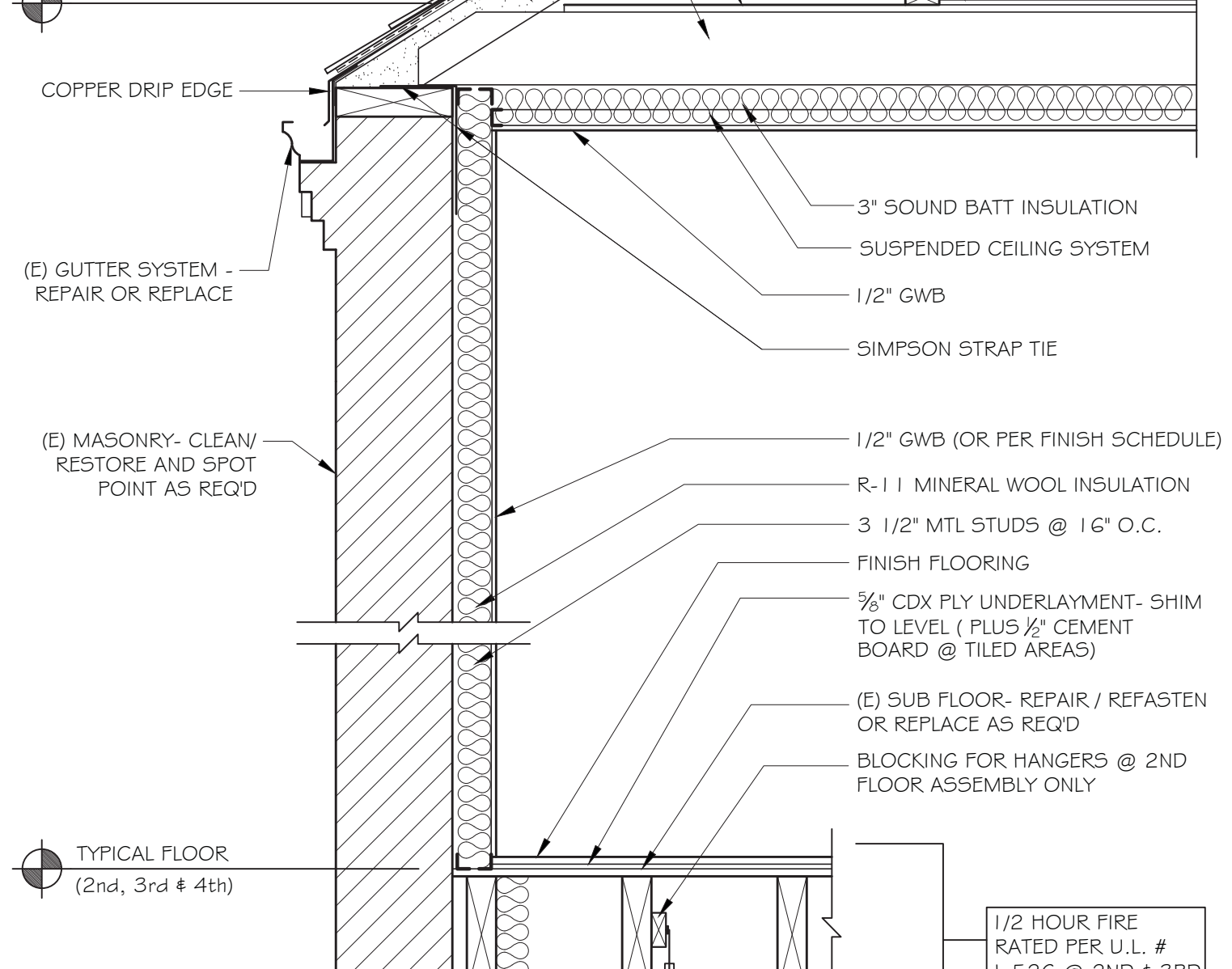
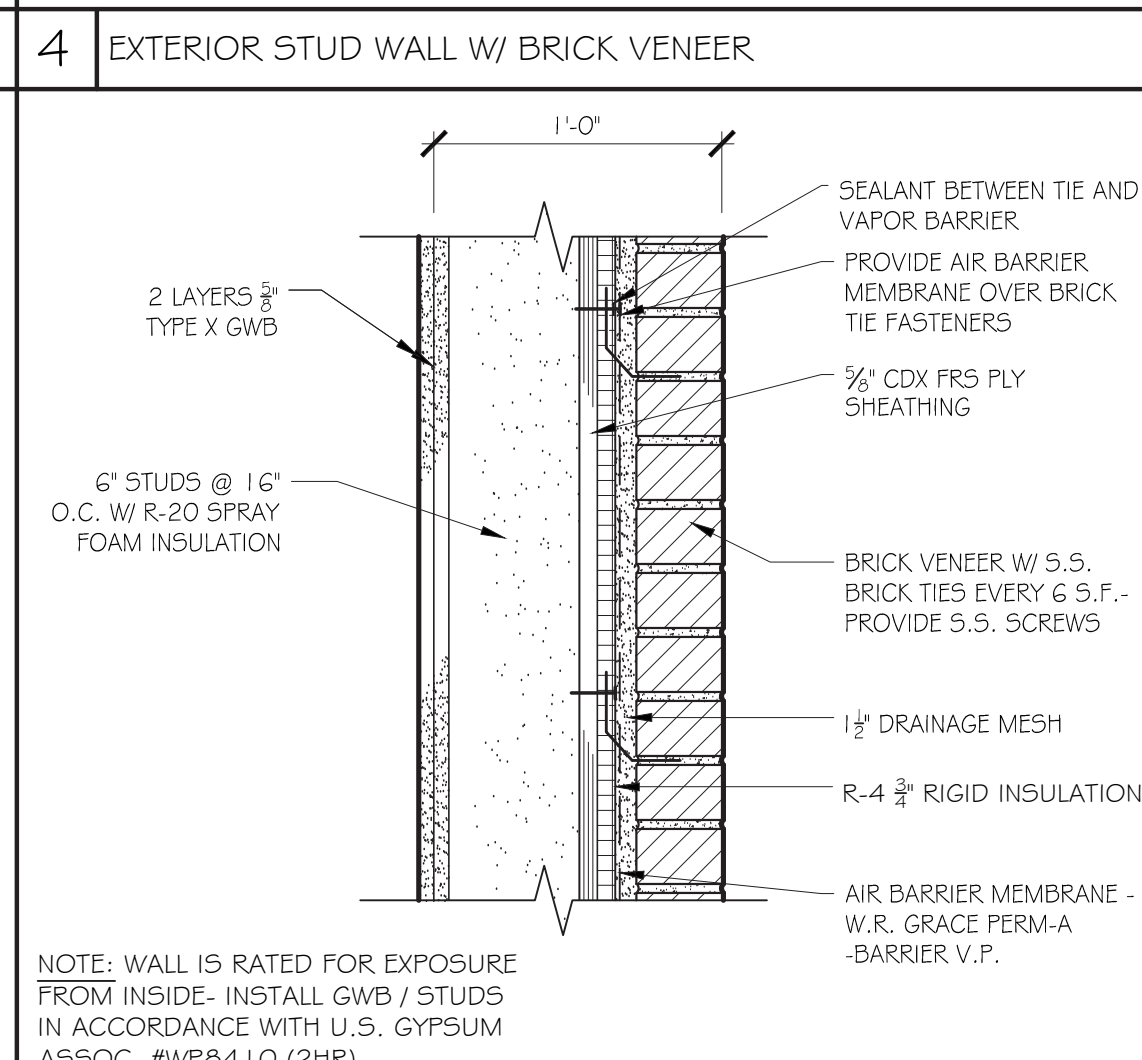
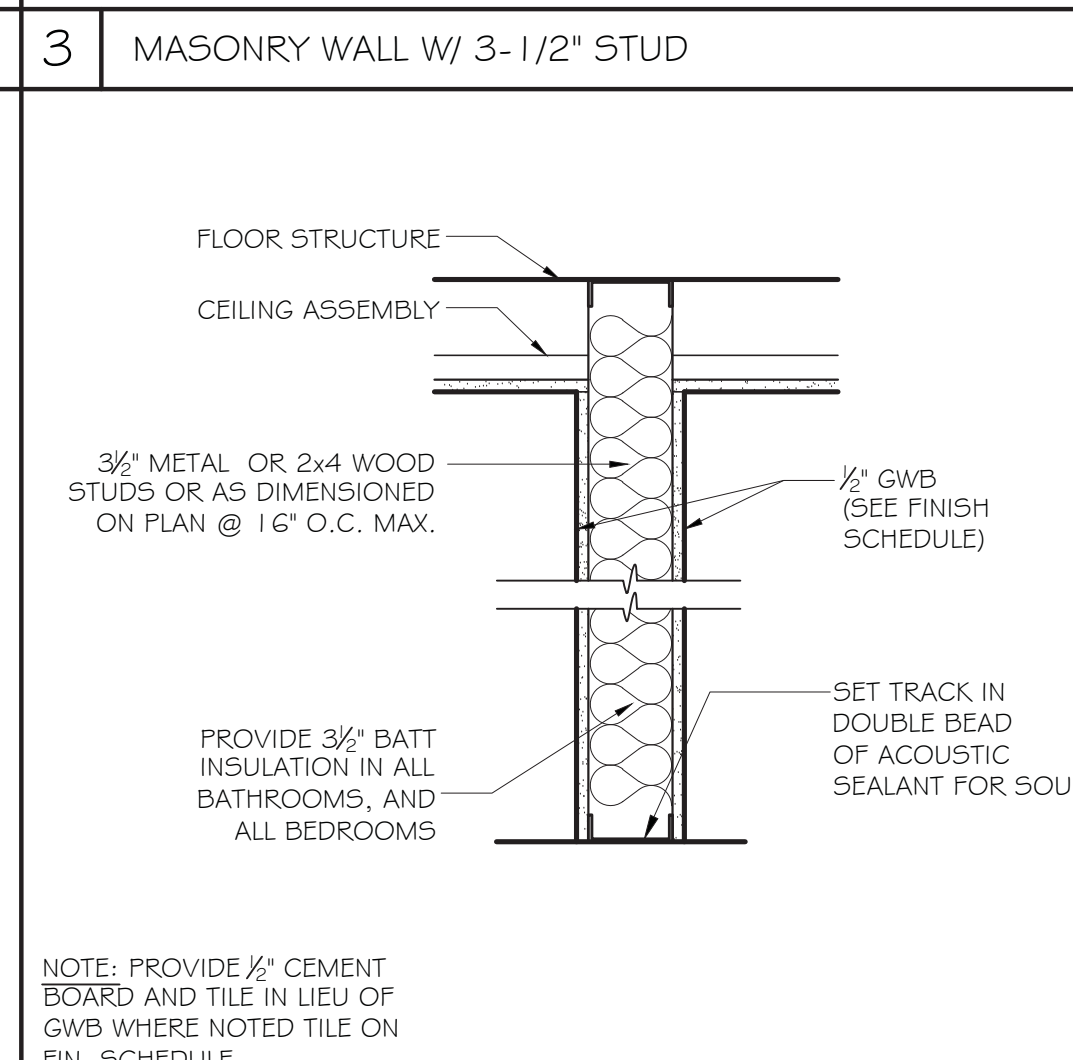
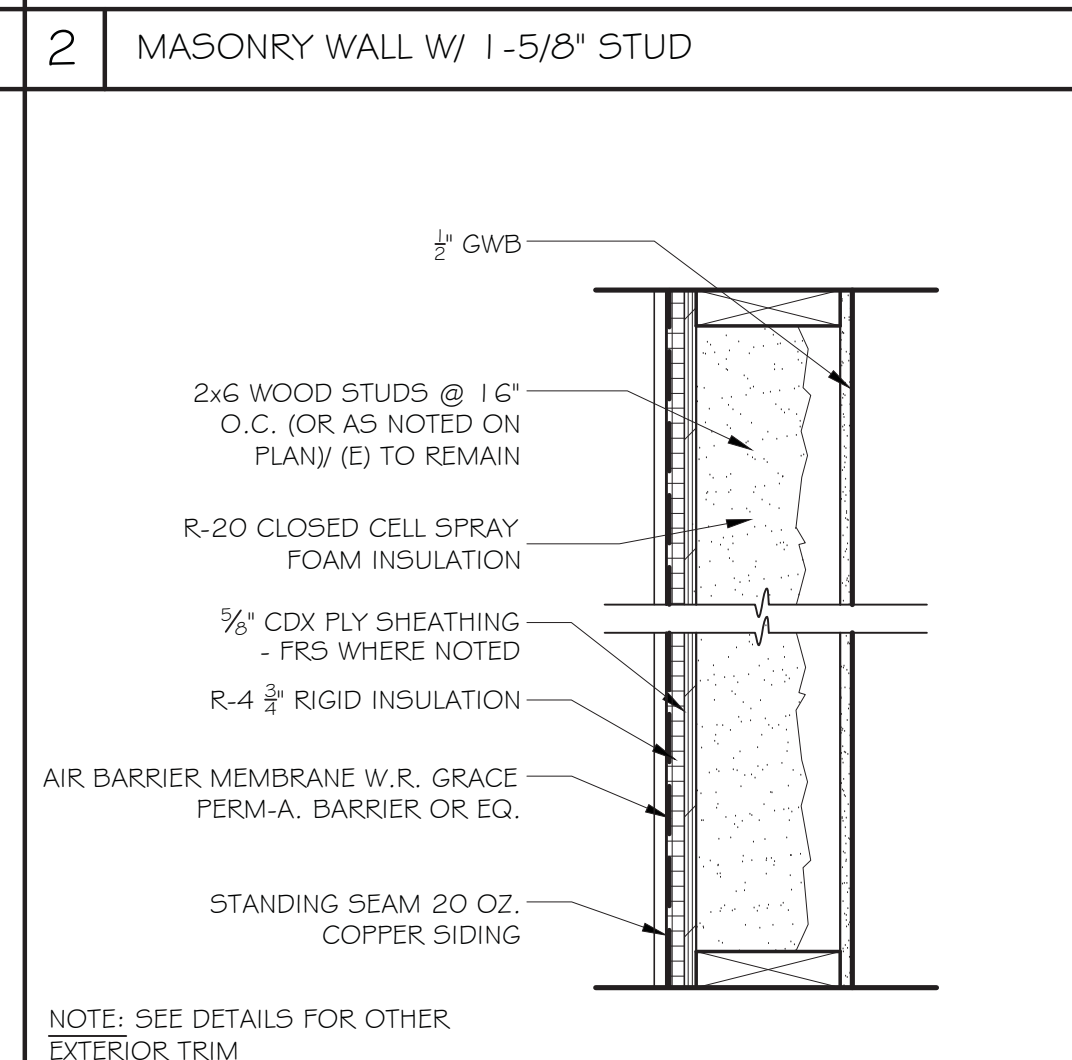
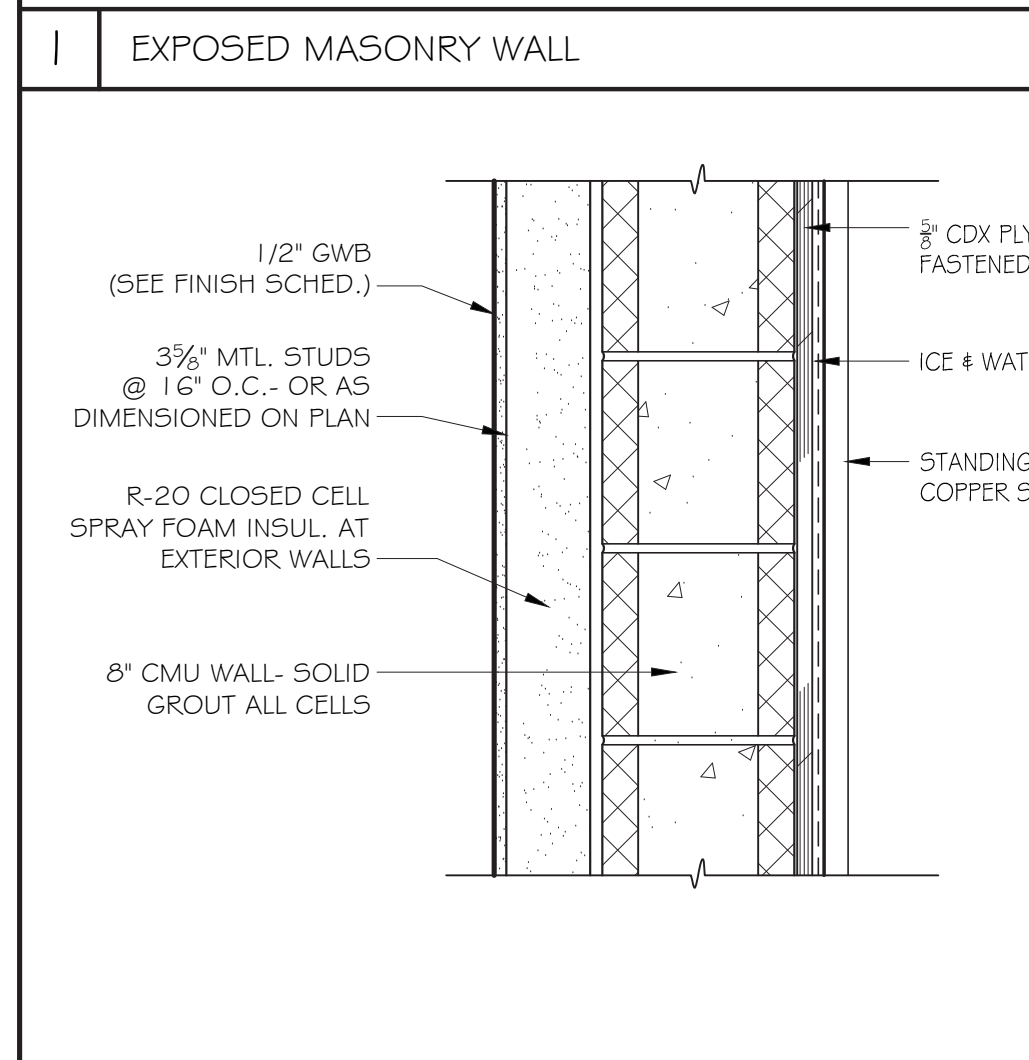
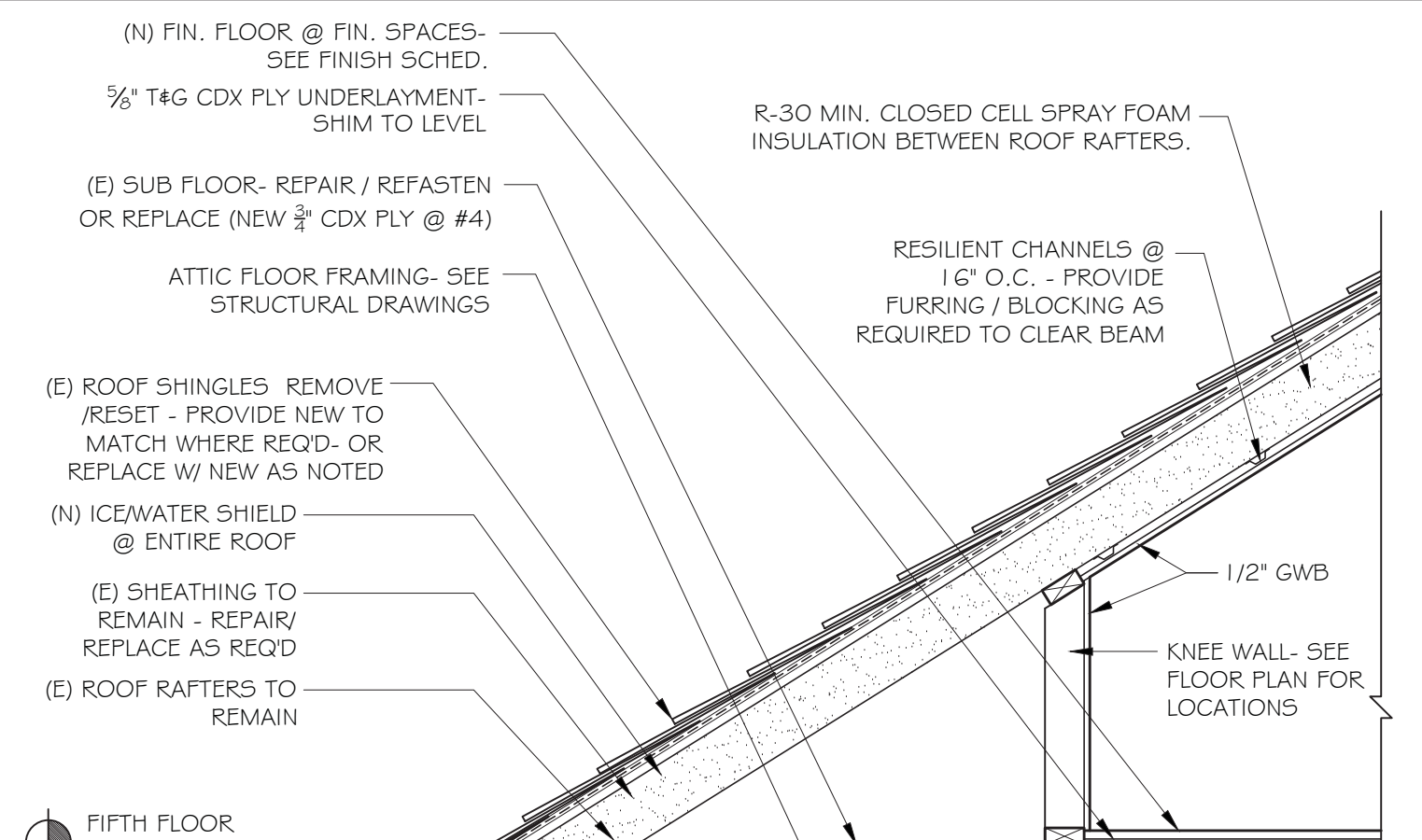
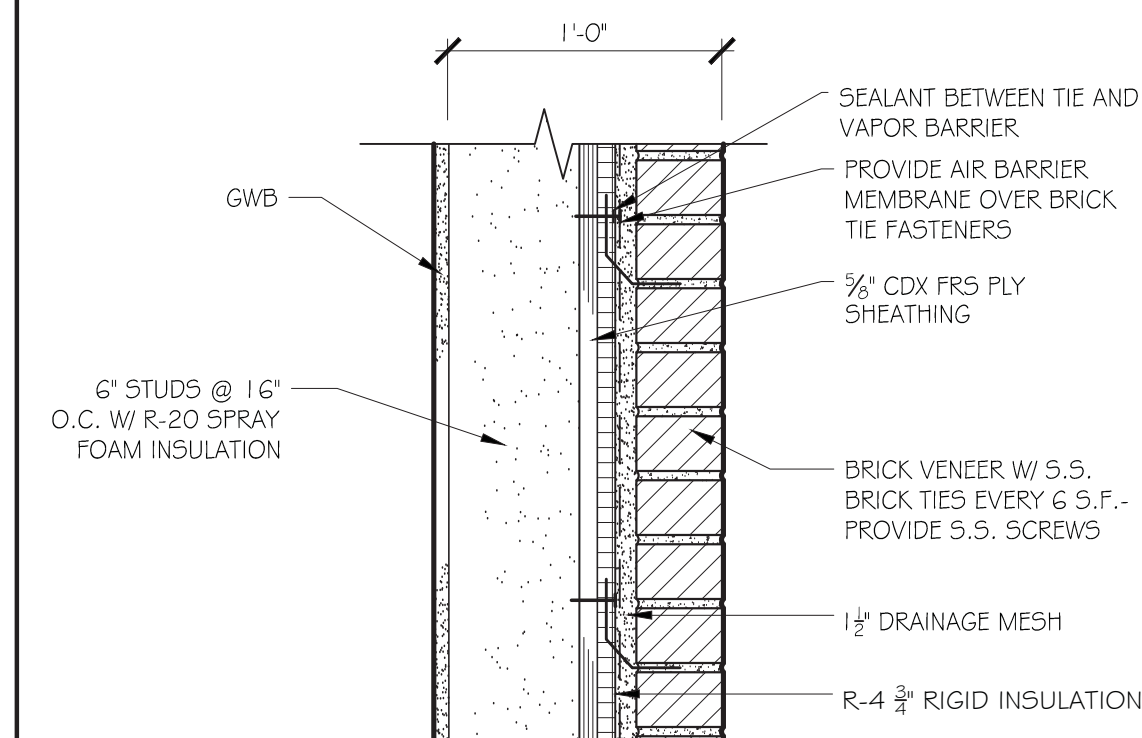
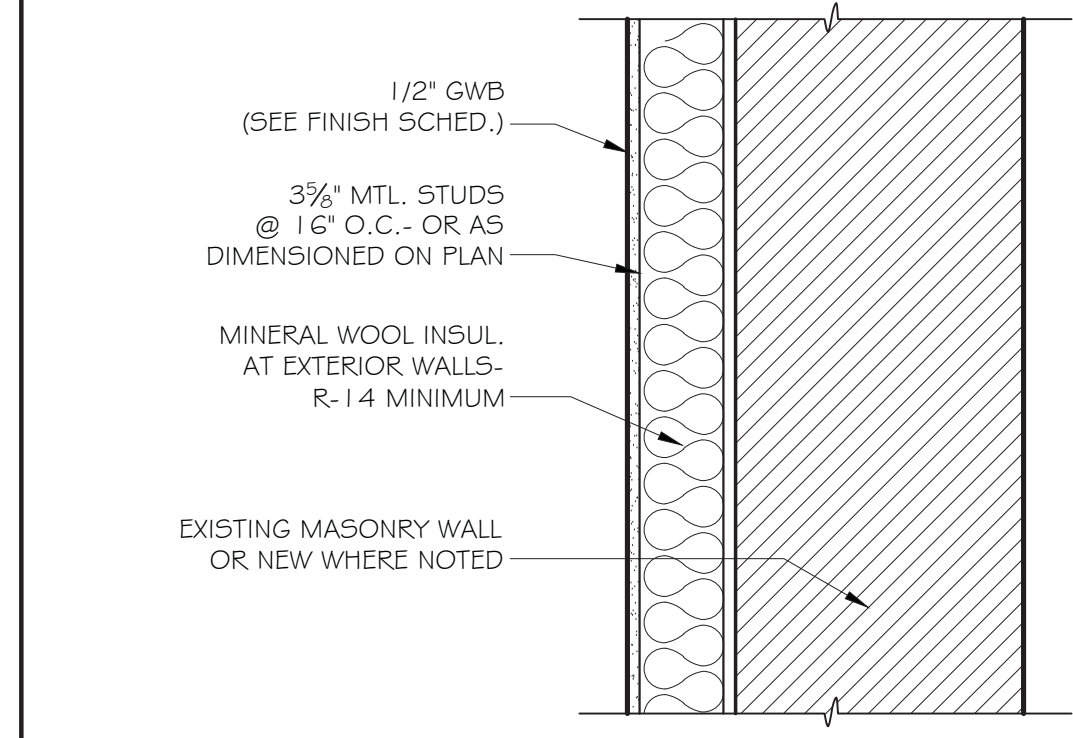
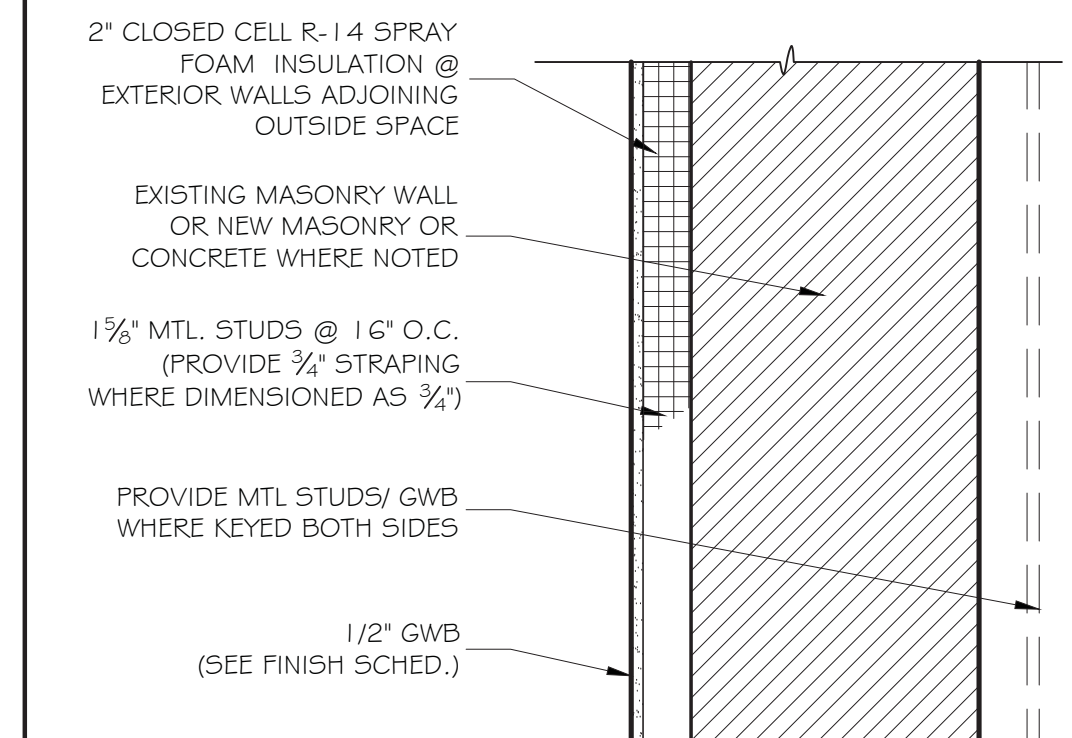
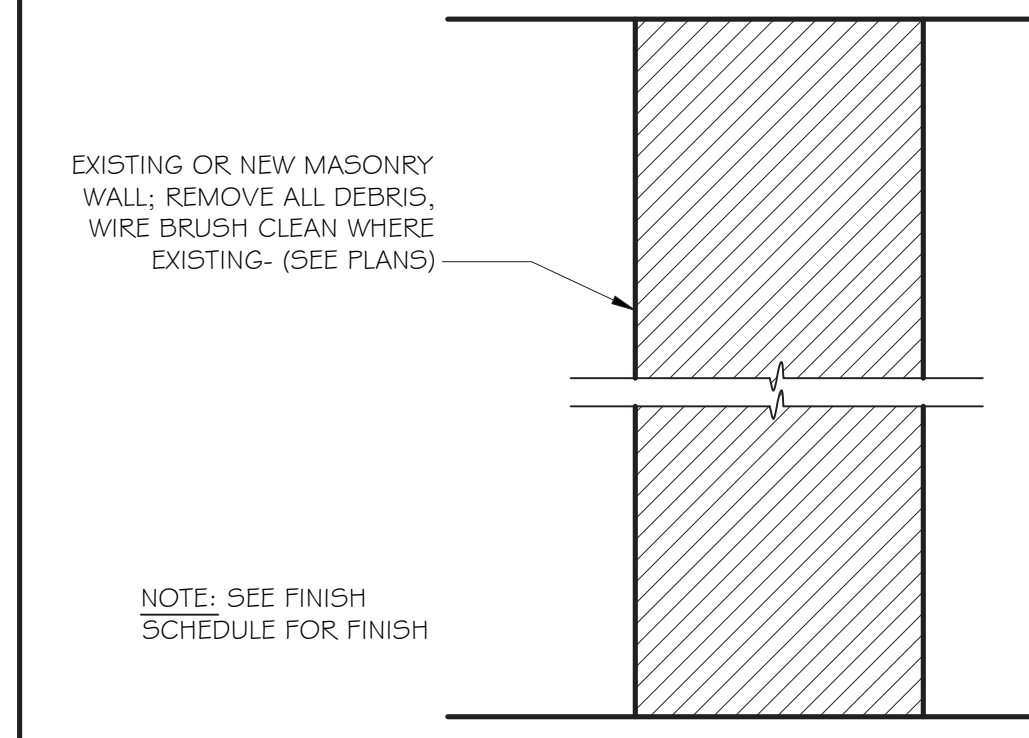


ELEVATION FROM 8 WALNUT REAR YARD  
SCALE: 1/4"=1'-0" (LOOKING EAST)



REAR BUILDING ELEVATION  
SCALE: 1/4"=1'-0" (FACING EAST)

WALL TYPE SCHEDULE (DETAILS 1-16, NOT TO SCALE)



13 2HR WOOD EXTERIOR STUD WALL WITH PVC SIDING

14 BRICK / CMU WALL W/ 4\"/>

15 NOT USED

16 NOT USED

17 TYPICAL EXTERIOR WALL SECTION @ EXISTING BUILDING 3/4\"/>

46 Waltham Street, Suite 3A  
Boston, MA 02118  
Phone 617-956-9992  
Fax 617-956-9993

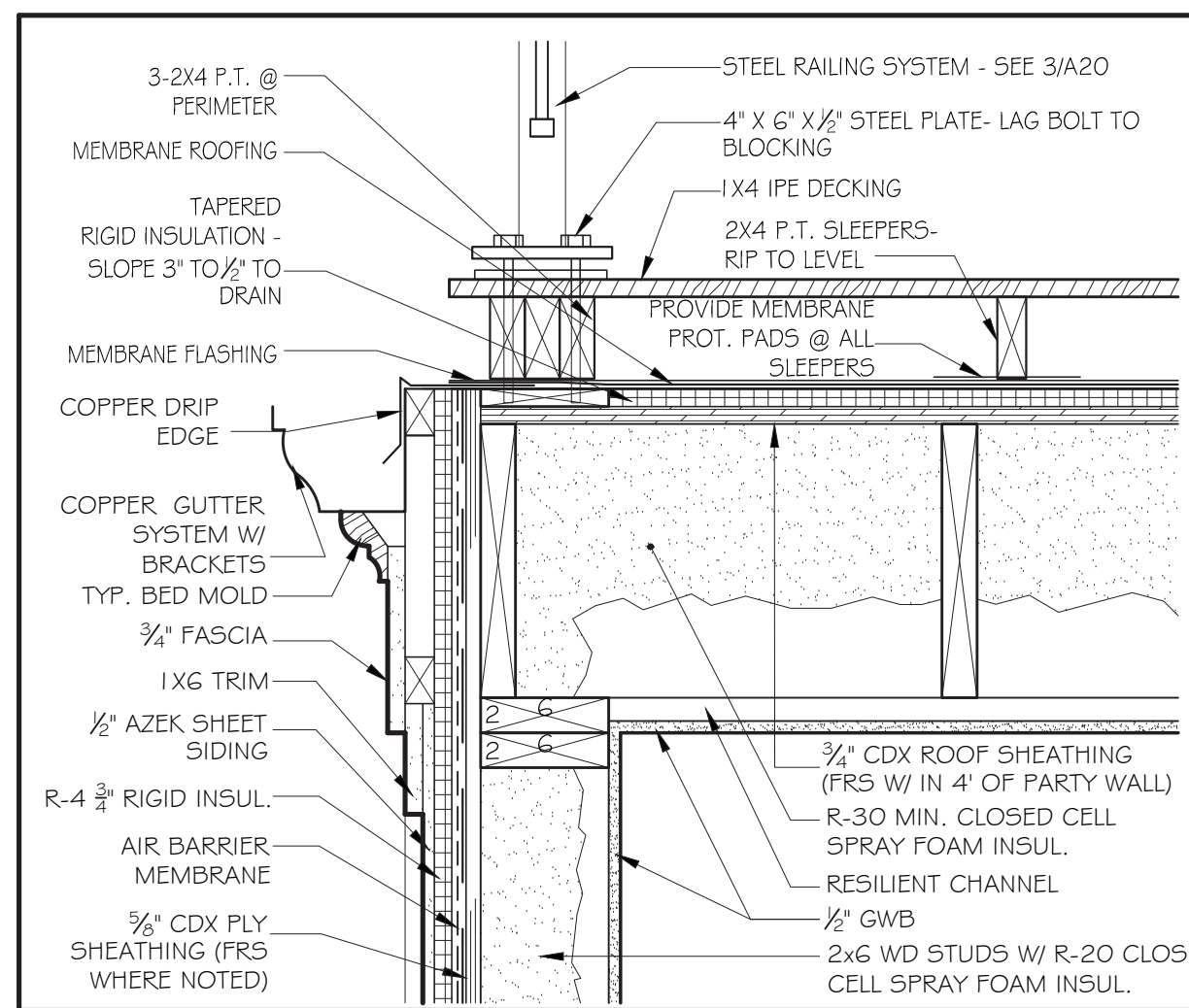
**GD** GRASSI DESIGN GROUP  
**BG** BEAUCHEMIN GRASSI INTERIORS

JOB NO.: 1606  
SCALE: AS NOTED  
DATE: 08.21.17  
REVISED

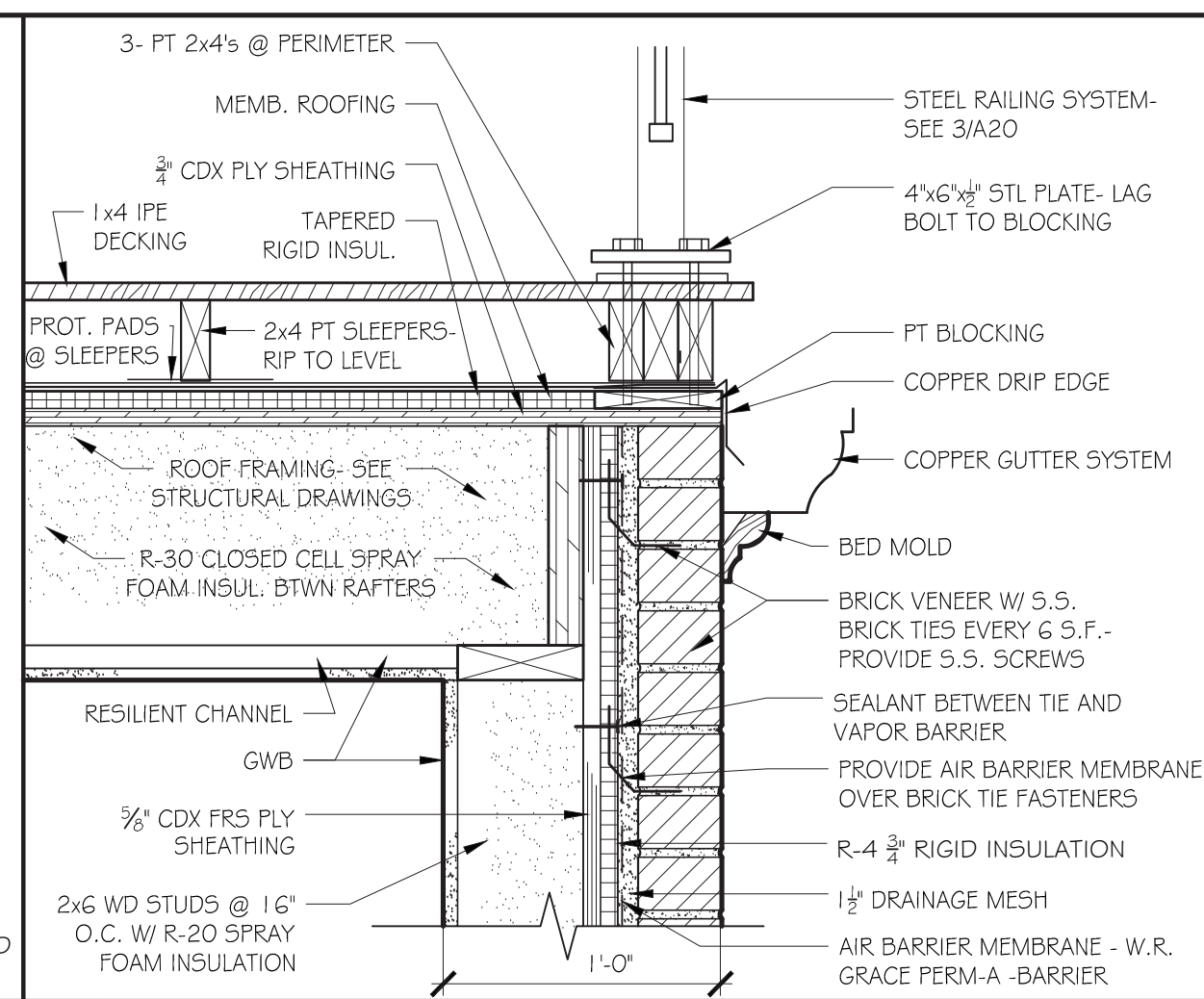
**4 JOY STREET**  
BOSTON, MA

**WALL TYPE SCHEDULE, AND TYP. WALL SECTION**

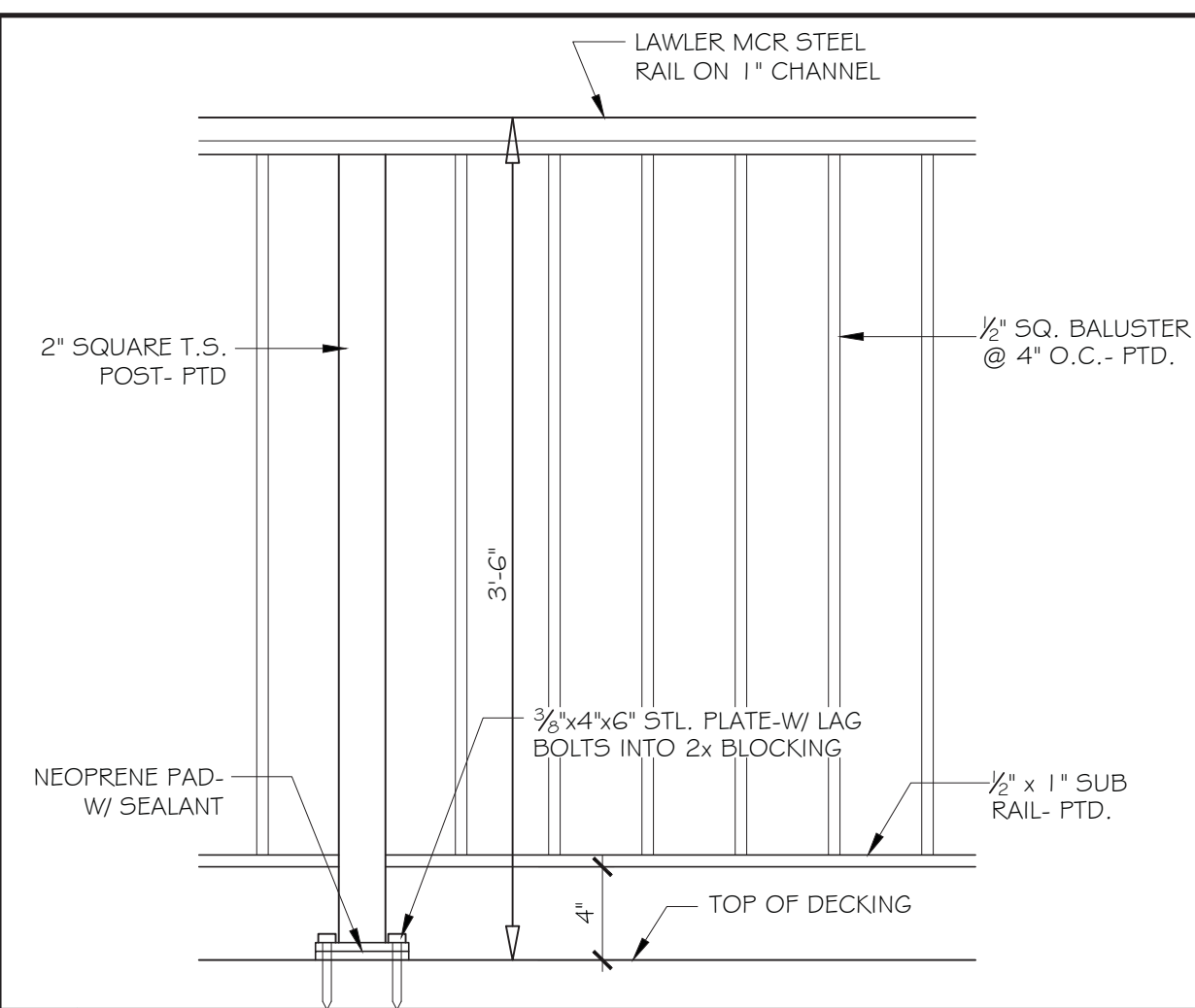
**A19**



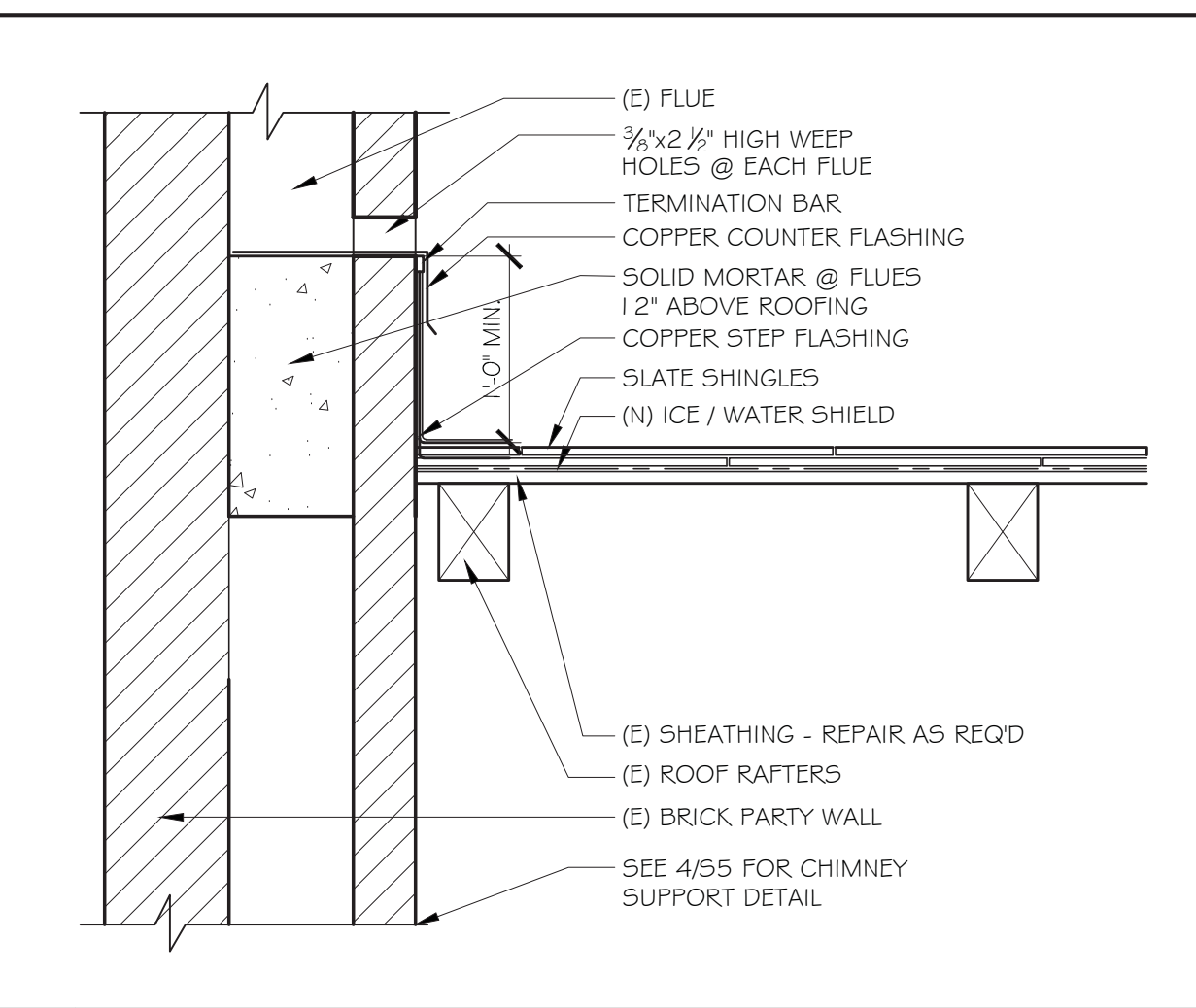
1 SECTION OF ADDITION STUD WALL @ ROOF 1-1/2" = 1'-0"



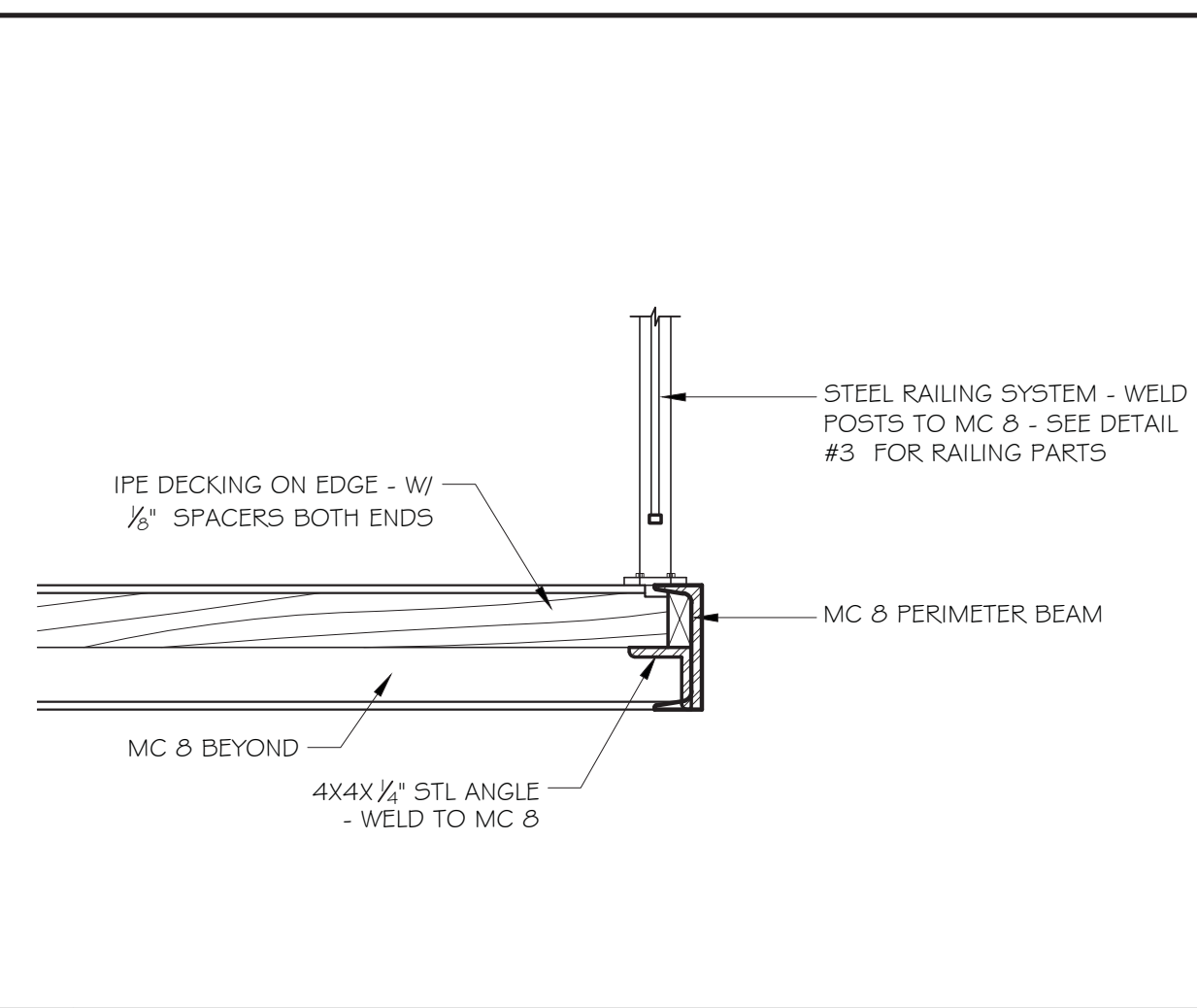
2 SECTION OF ADDITION BRICK VENEER WALL @ ROOF 1 1/2" = 1'-0"



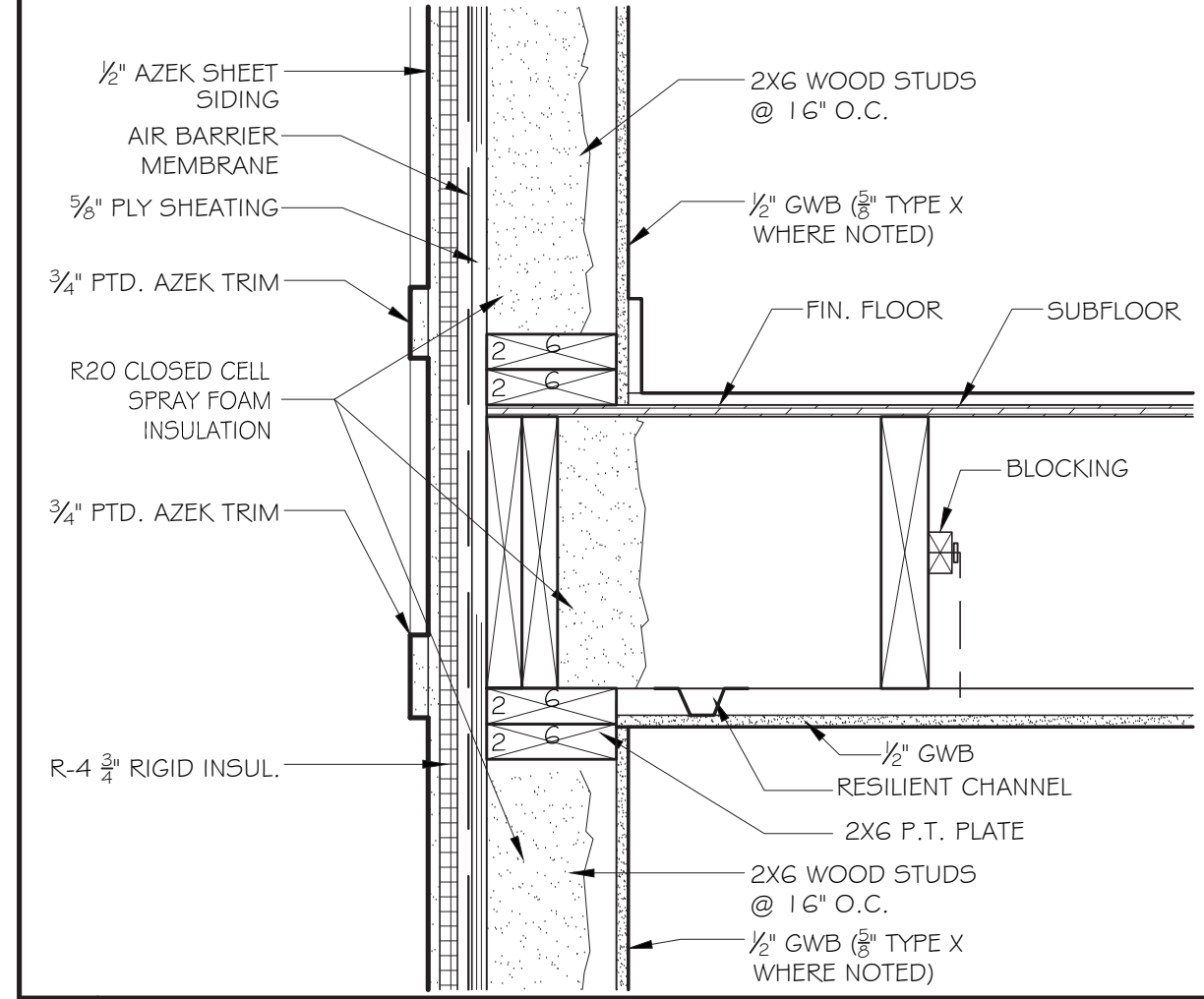
3 RAILING DETAIL @ DECK



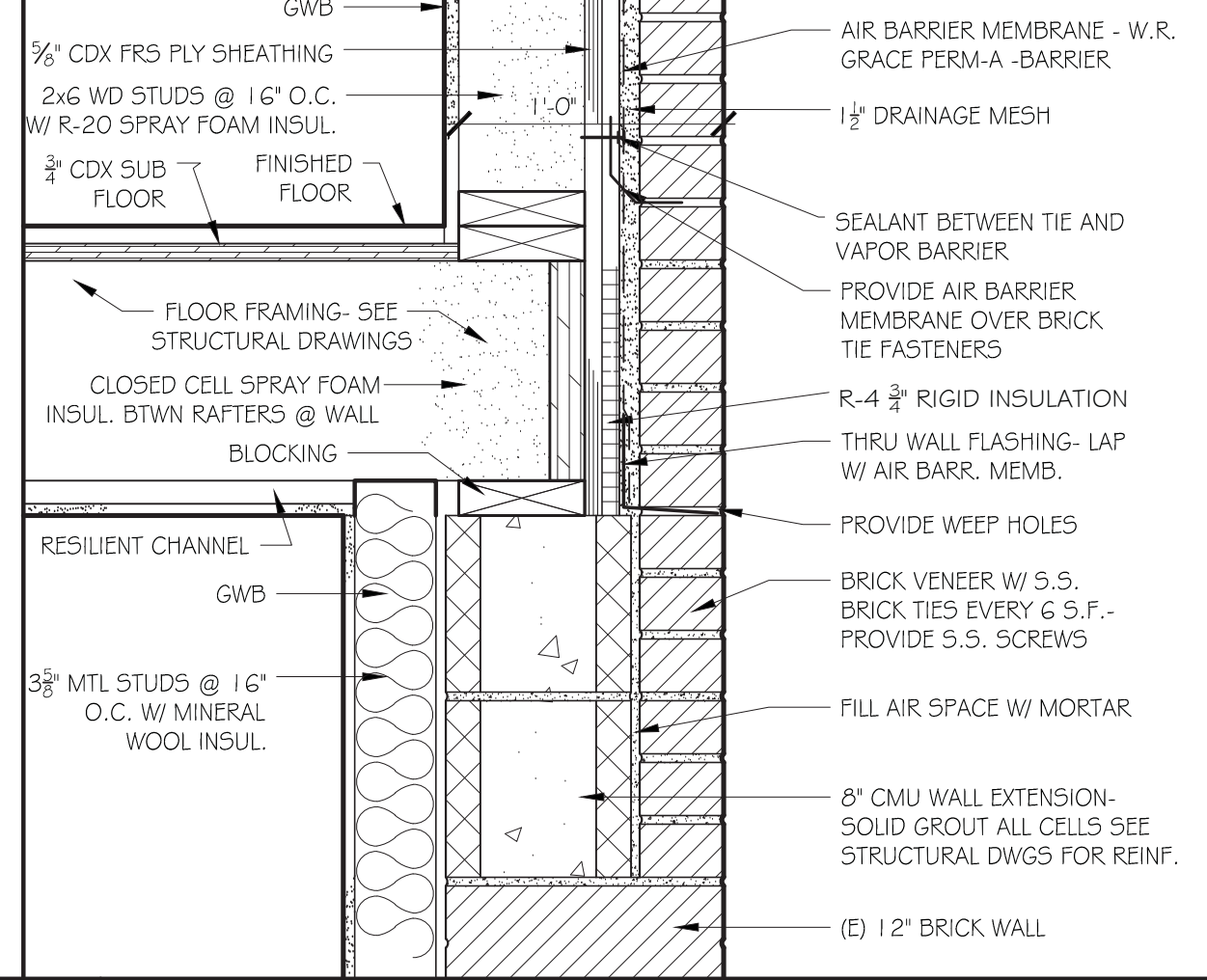
4 DISCONTINUED CHIMNEY DETAIL 1" = 1'-0"



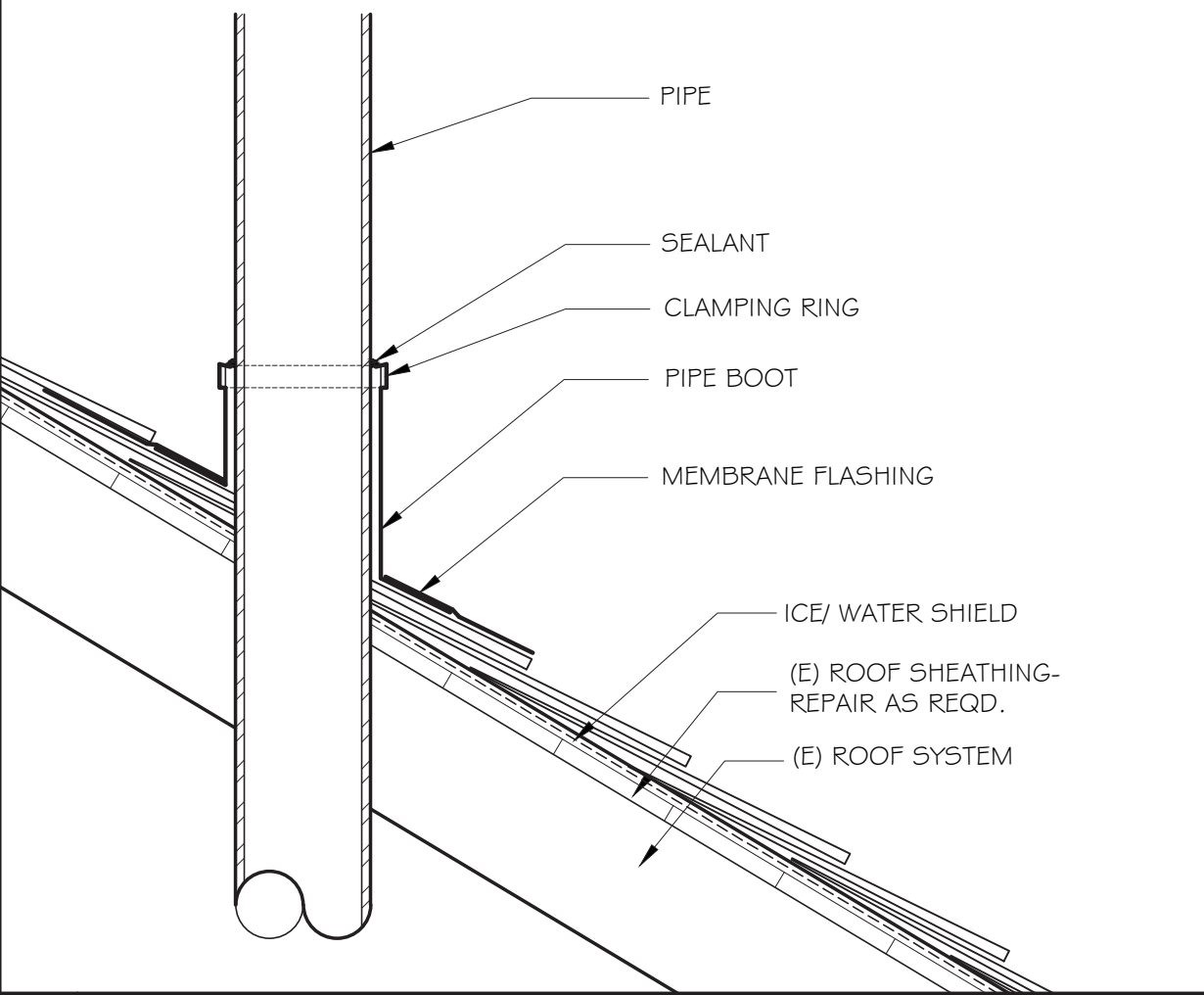
5 BALCONY @ EDGE DETAIL 1" = 1'-0"



6 SECTION OF ADDITION STUD WALL @ FLOOR 1-1/2" = 1'-0"



7 SECTION OF ADDITION BRICK VENEER WALL @ FLOOR 1 1/2" = 1'-0"



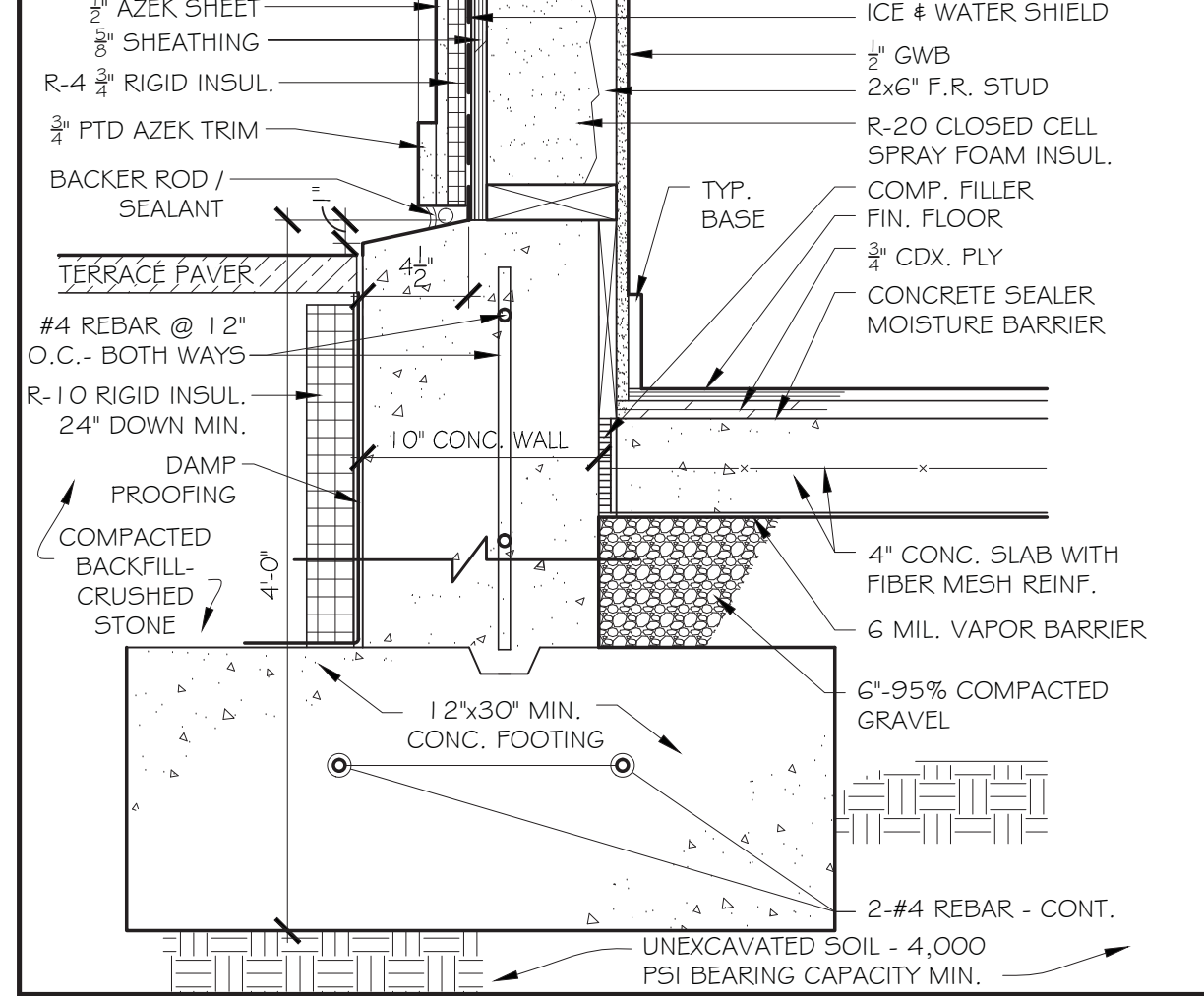
8 PIPE PENETRATION DETAIL 1 1/2" = 1'-0"



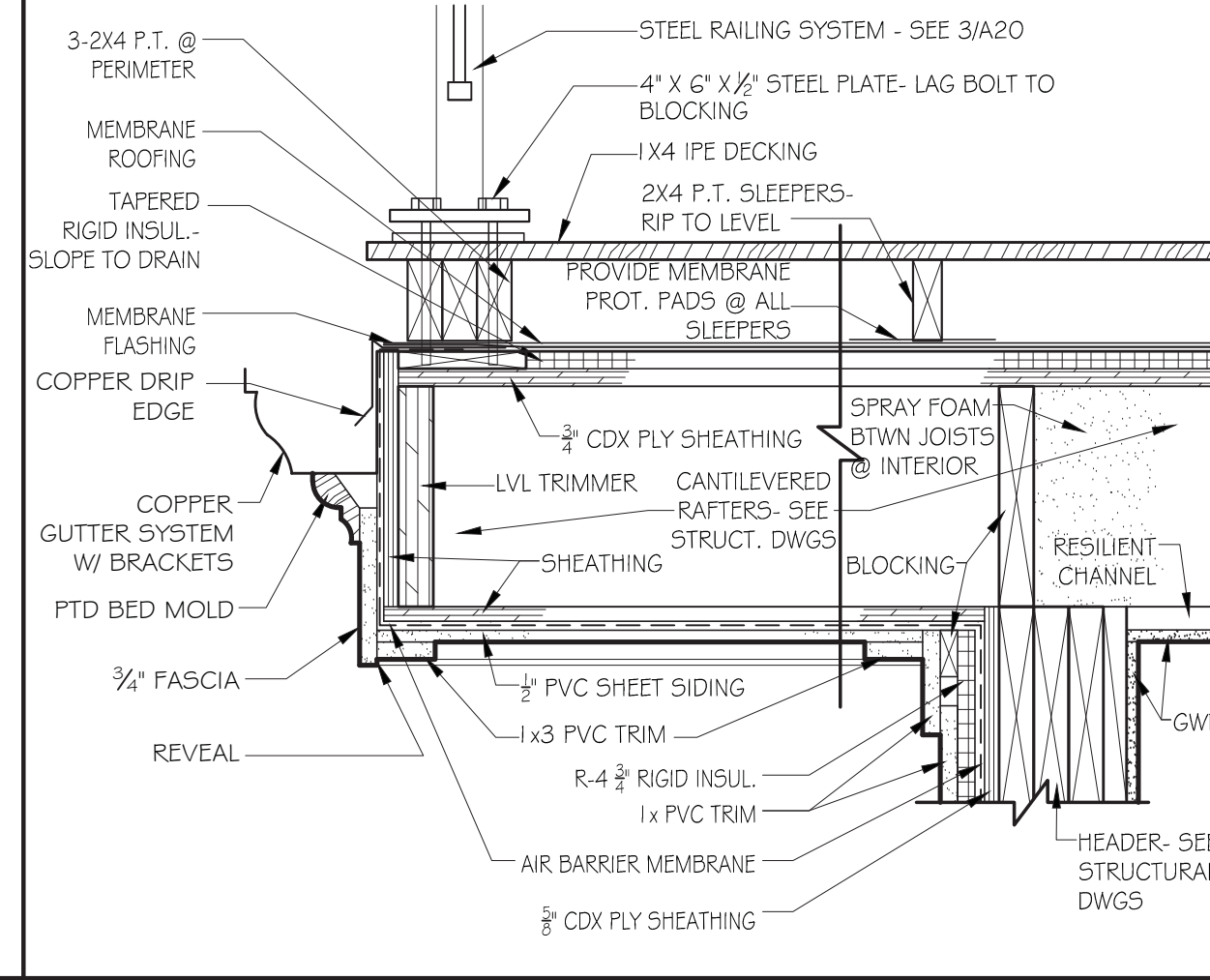
9 NOT USED



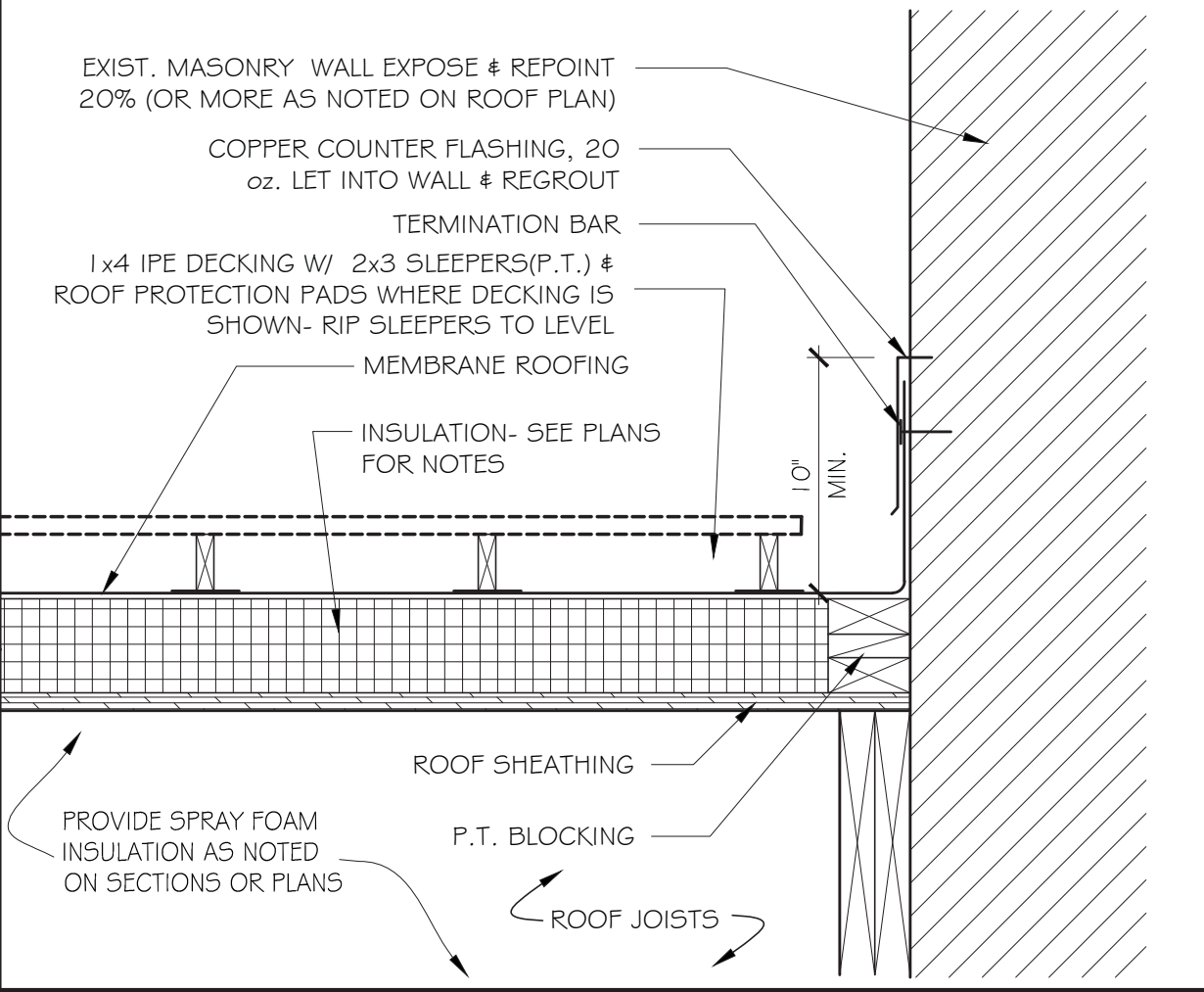
10 NOT USED



11 SECTION OF ADDITION STUD / PVC WALL @ GRADE 1-1/2" = 1'-0"



12 BAY ROOF @ DECK DETAIL 1 1/2" = 1'-0"



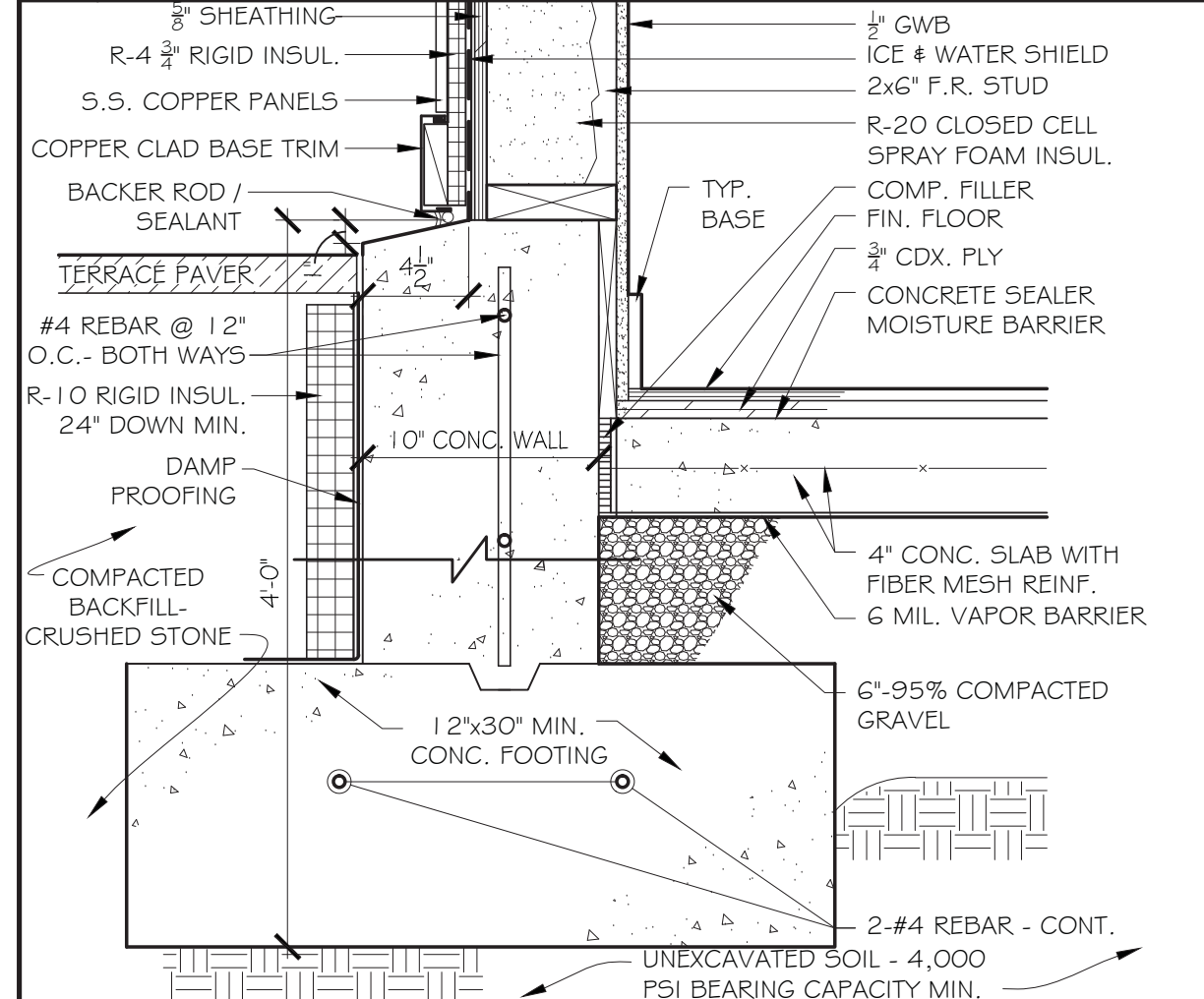
13 MEMBRANE ROOFING @ BRICK WALL 1 1/2" = 1'-0"



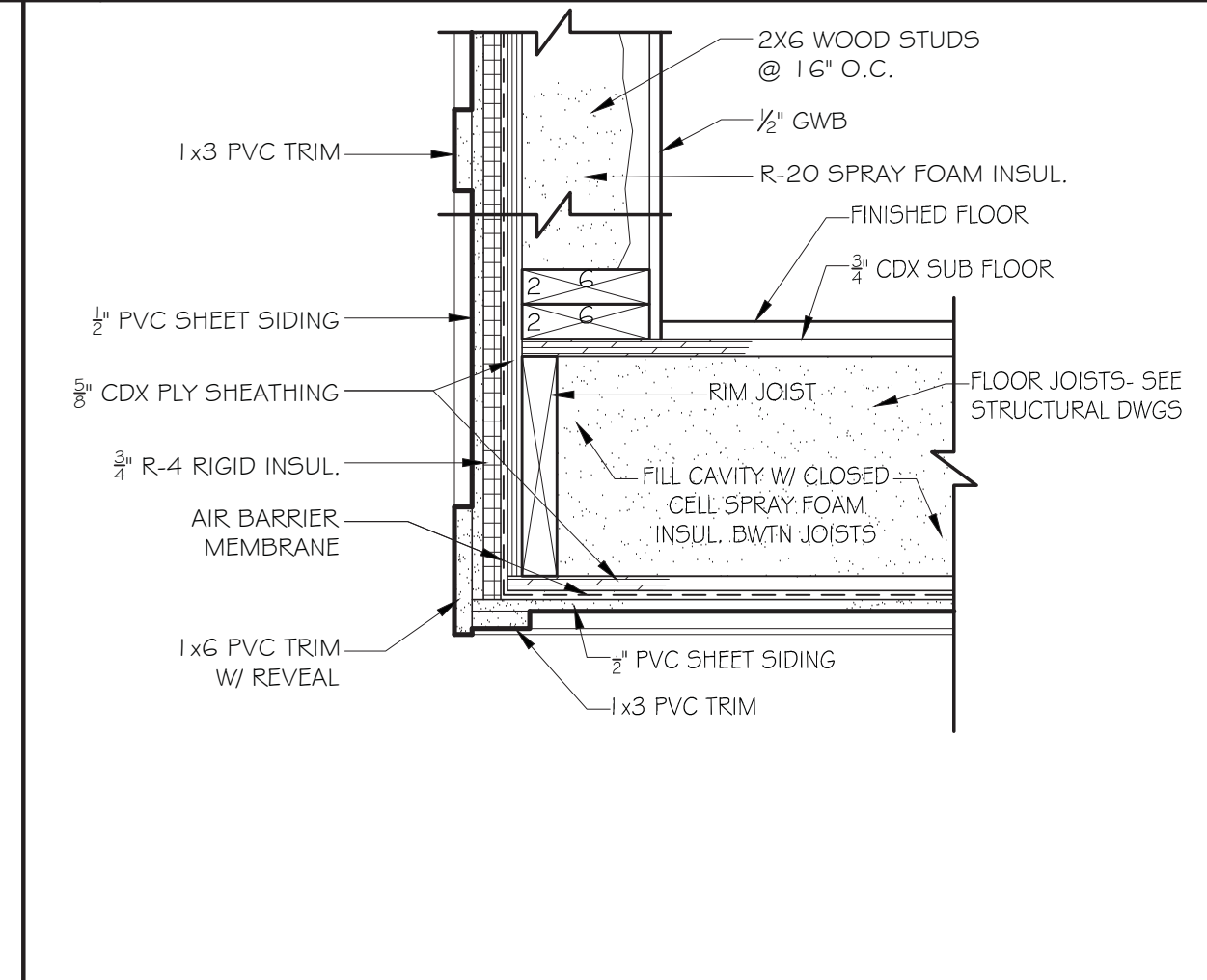
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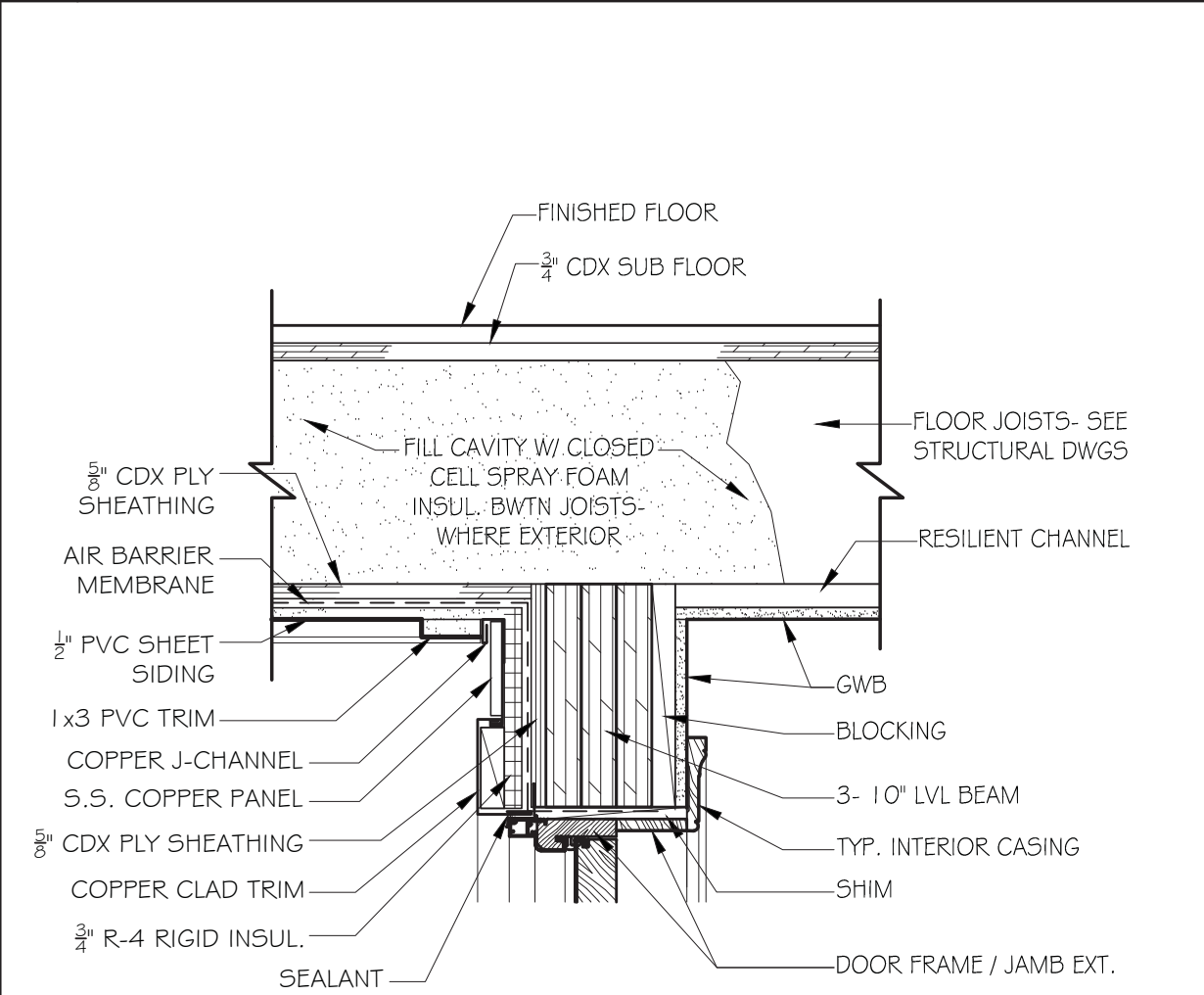
15 NOT USED



16 SECTION OF ADDITION STUD / COPPER WALL @ GRADE 1-1/2" = 1'-0"



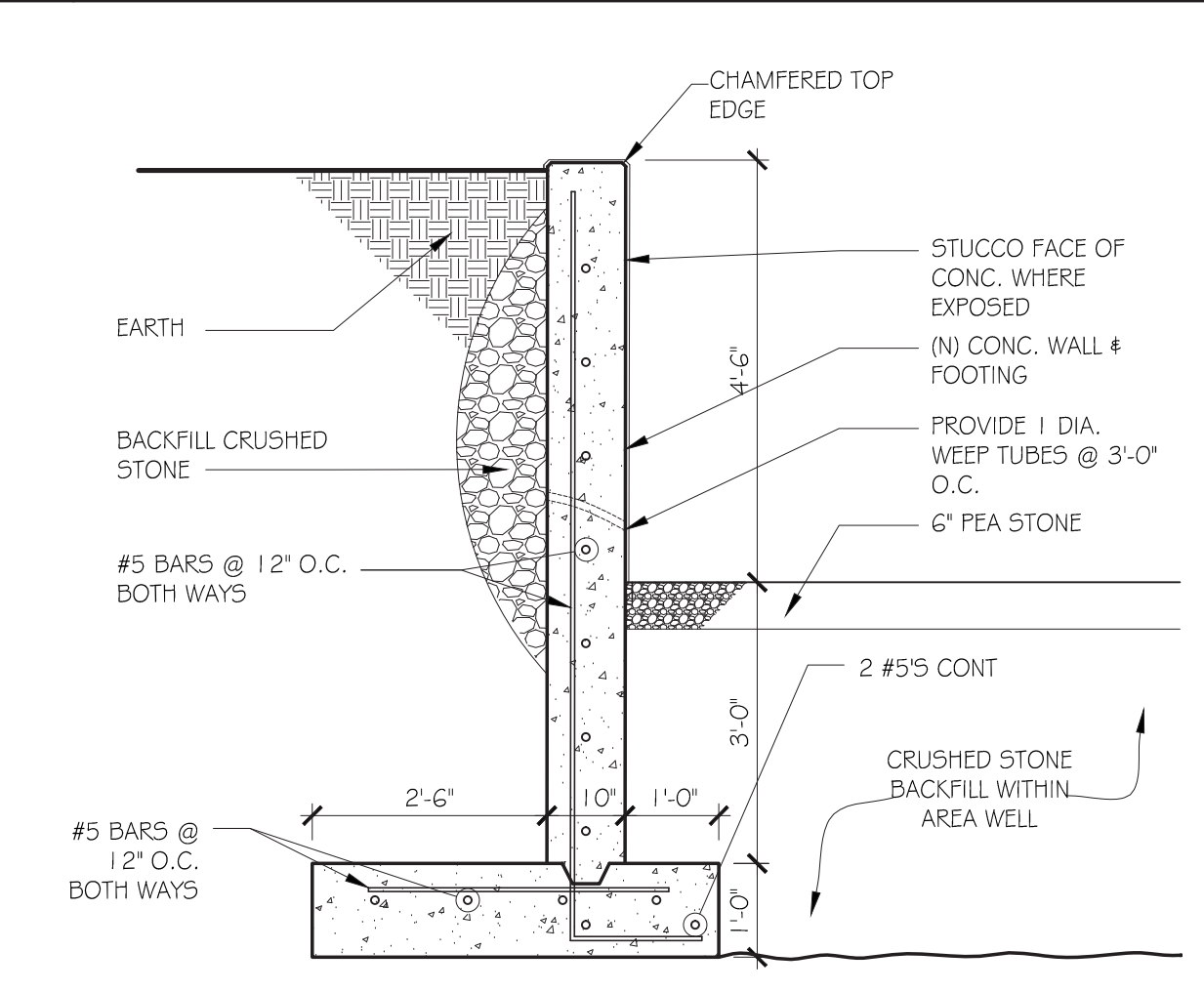
17 BAY FLOOR AT BOTTOM DETAIL 1 1/2" = 1'-0"



18 BAY FLOOR @ WALL BELOW DETAIL 1 1/2" = 1'-0"



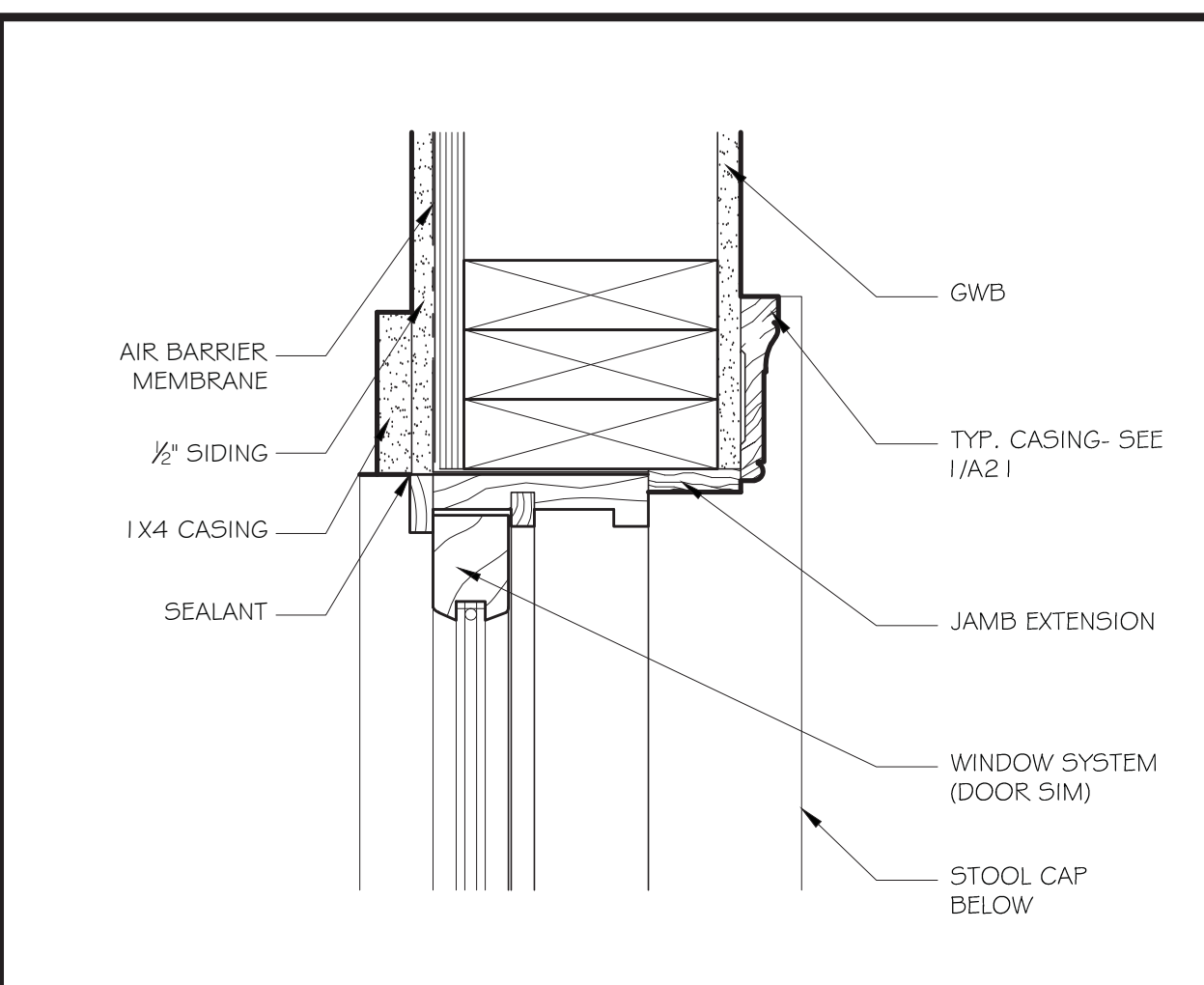
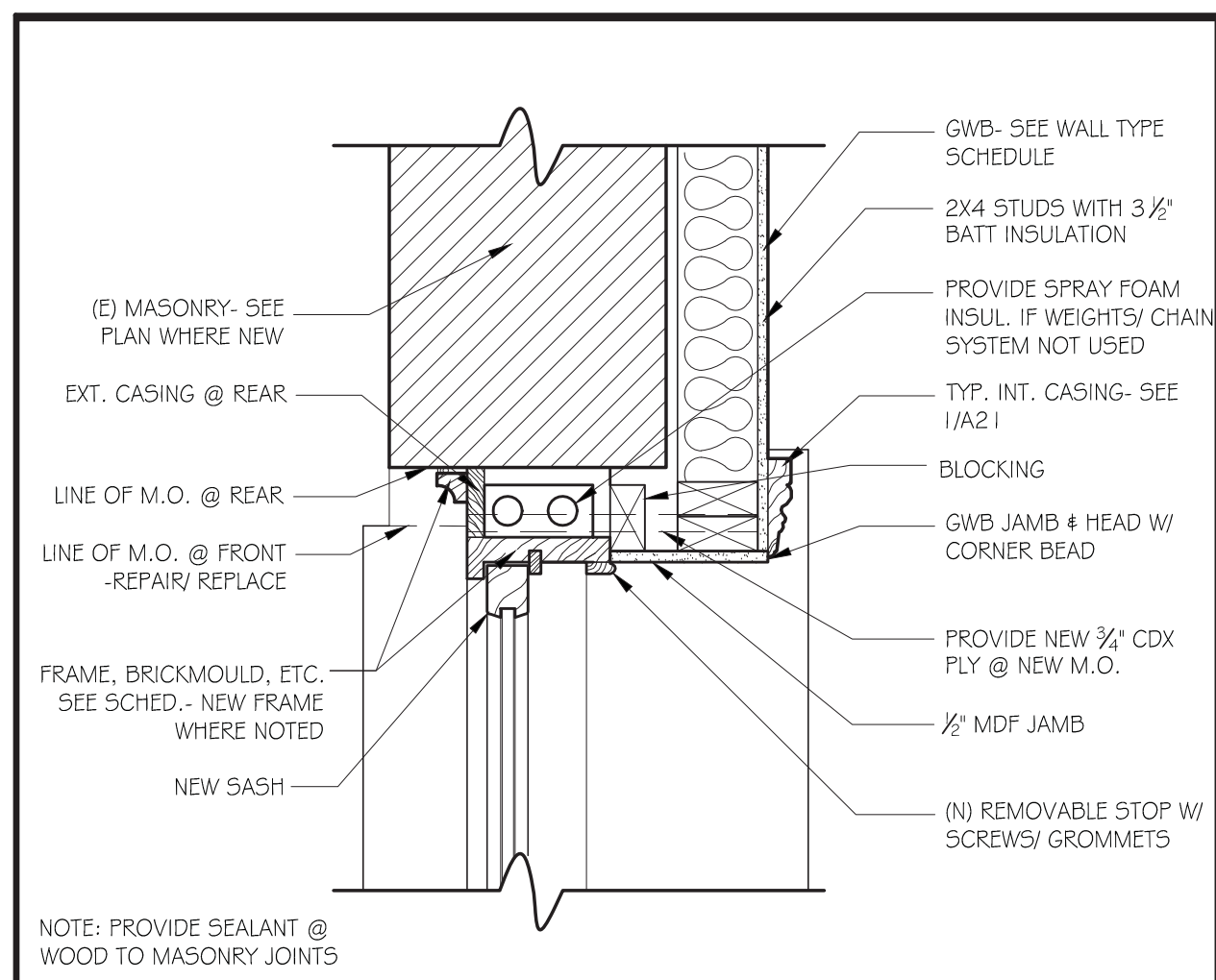
19 NOT USED



20 RETAINING WALL SECTION 1/2" = 1'-0"



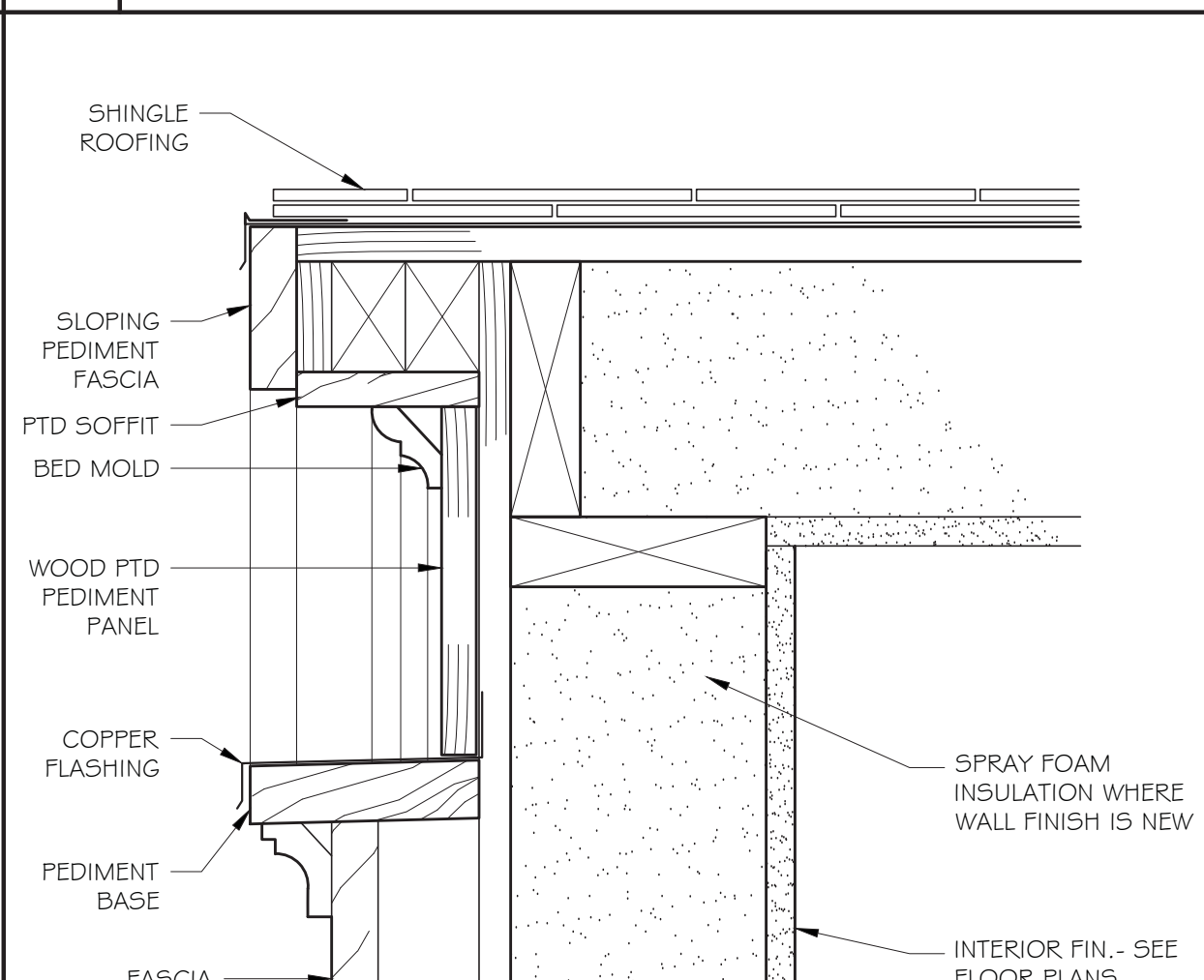
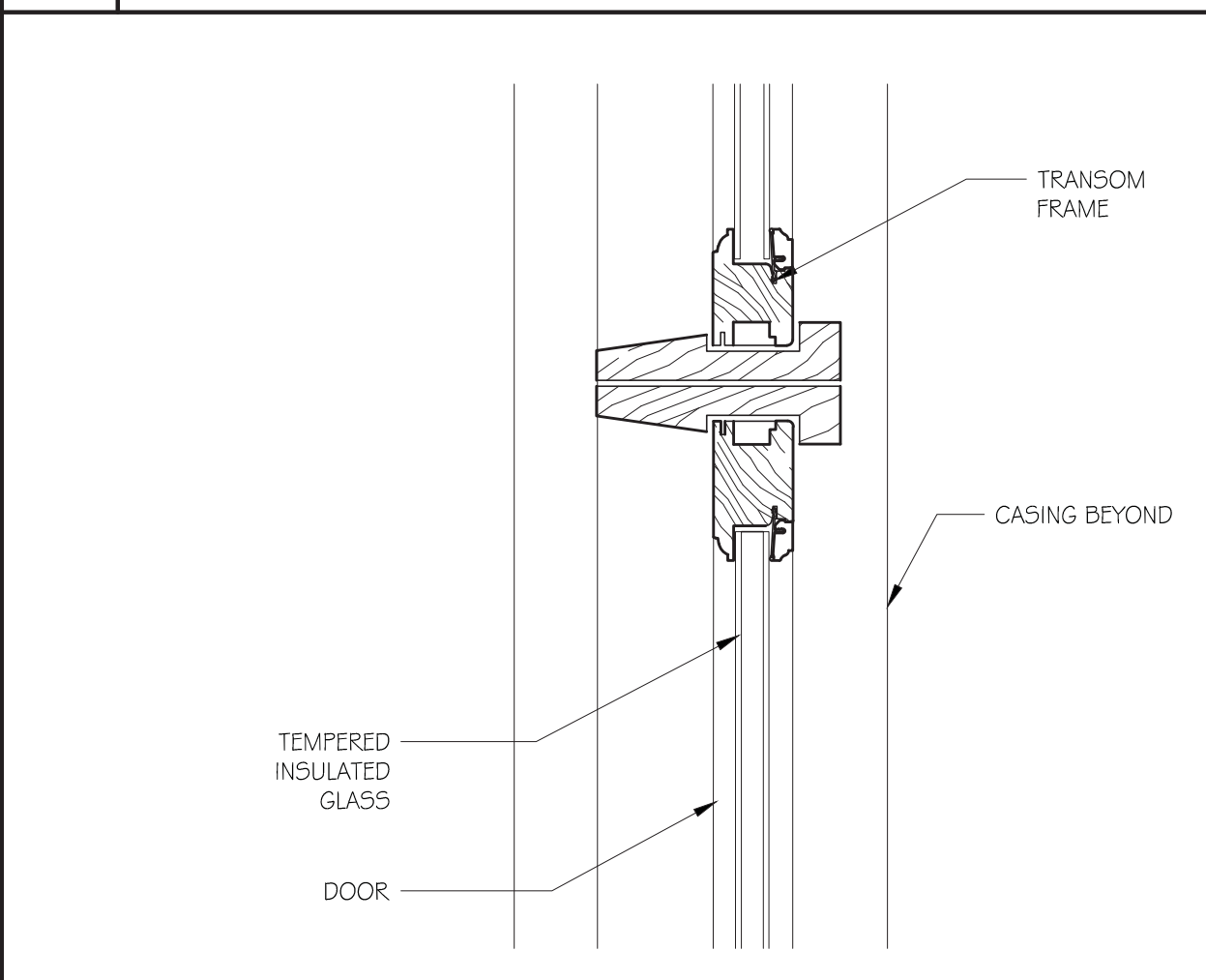
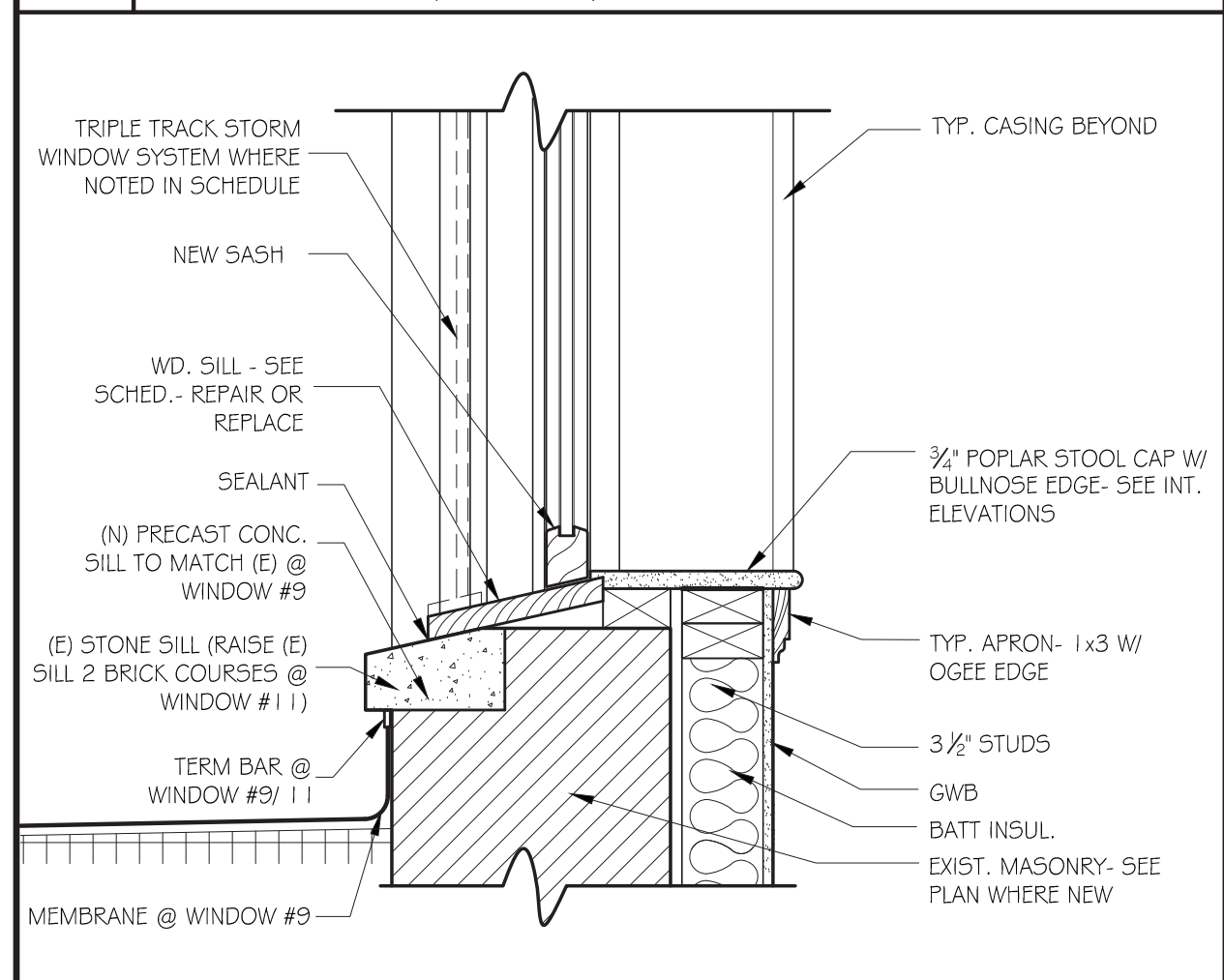




1 WINDOW JAMB DETAIL IN EXISTING MASONRY OPENING WITH NEW WINDOW (HEAD SIM.) 1 1/2" = 1'-0"

2 WINDOW HEAD DETAIL IN STUD WALL @ ADDITION (JAMB SIMILAR) 3" = 1'-0"

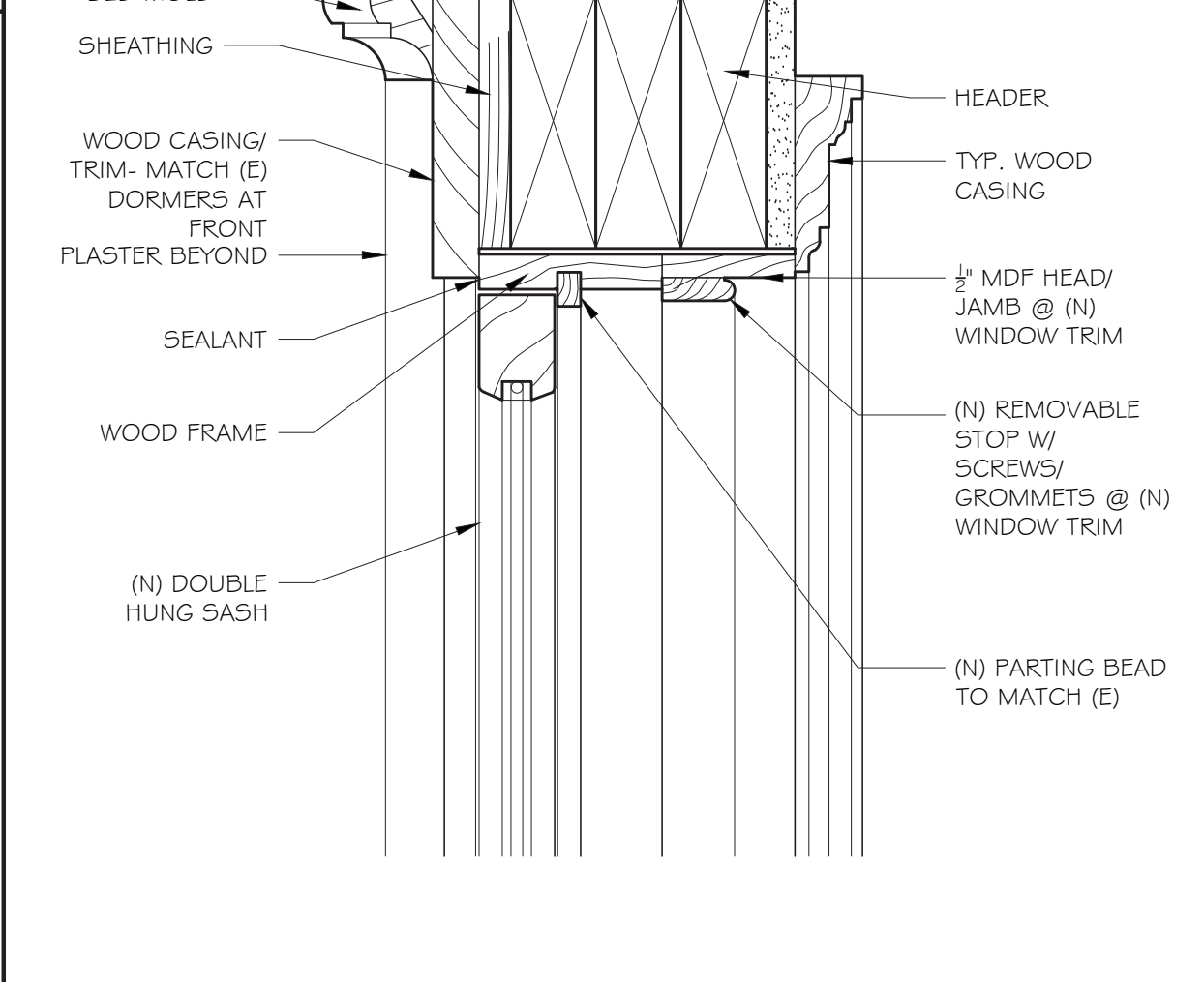
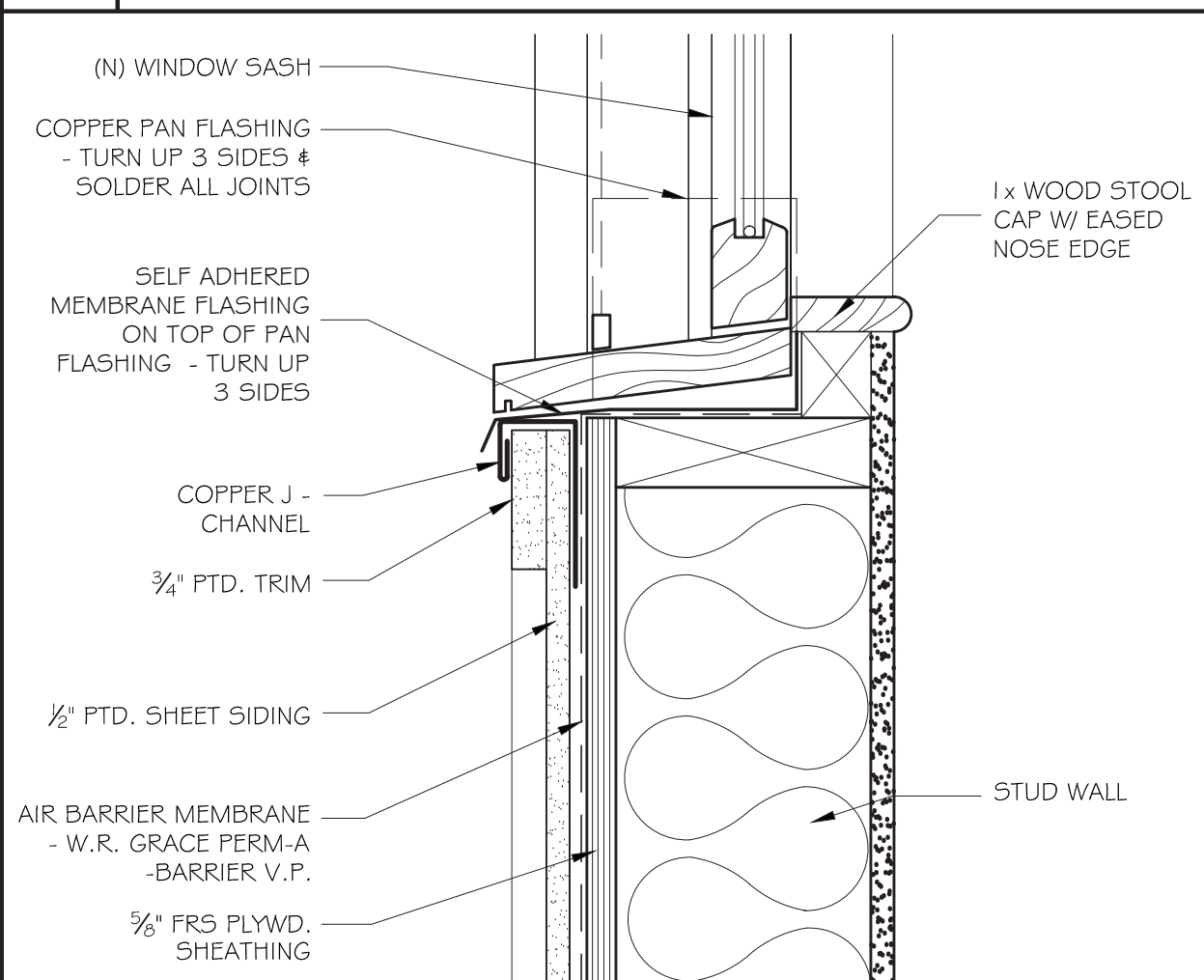
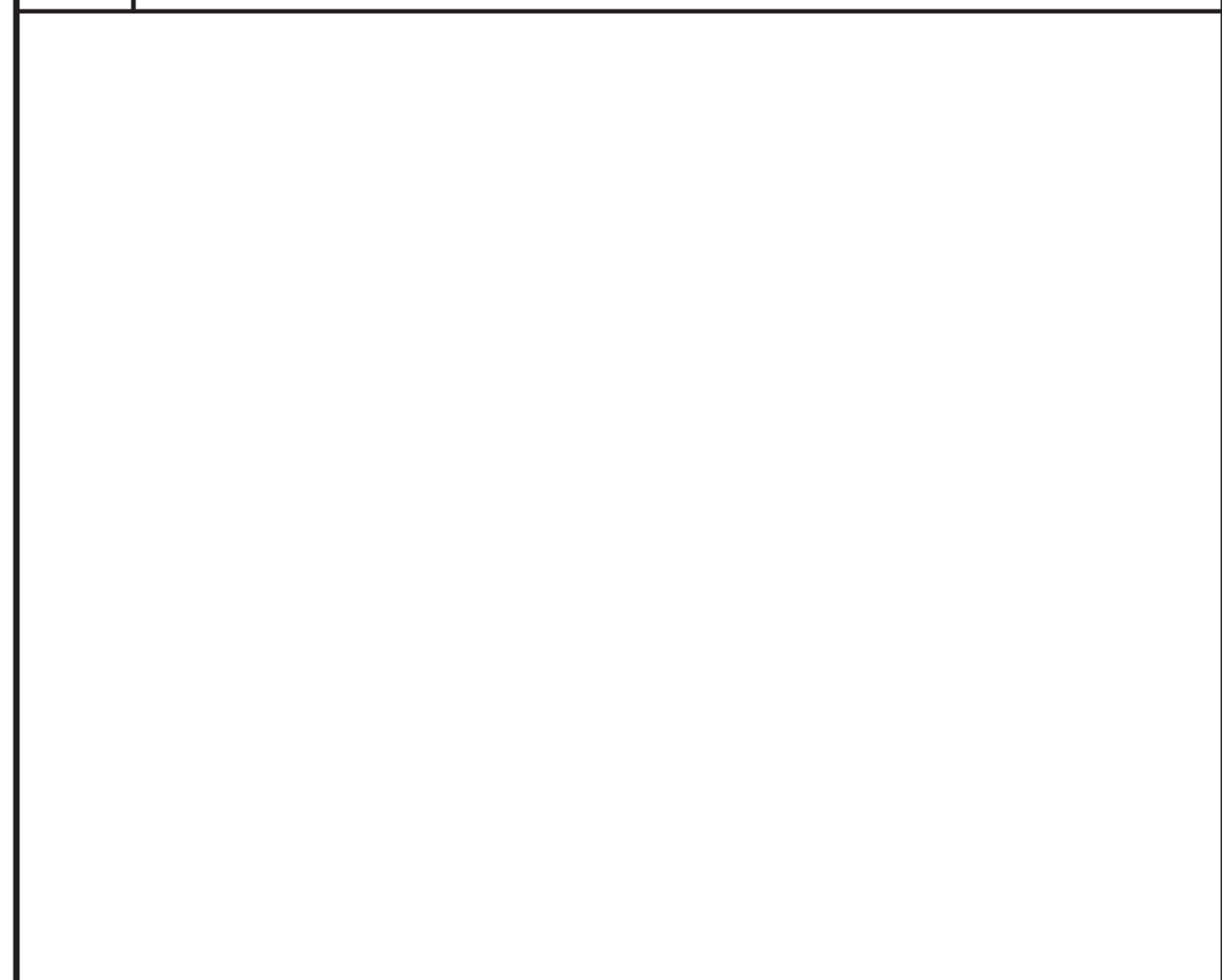
3 NOT USED



4 WINDOW SILL DETAIL IN (E) MASONRY OPENING WITH NEW WINDOW 1 1/2" = 1'-0"

5 EXTERIOR DOOR HEAD / TRANSOM DETAIL 3" = 1'-0"

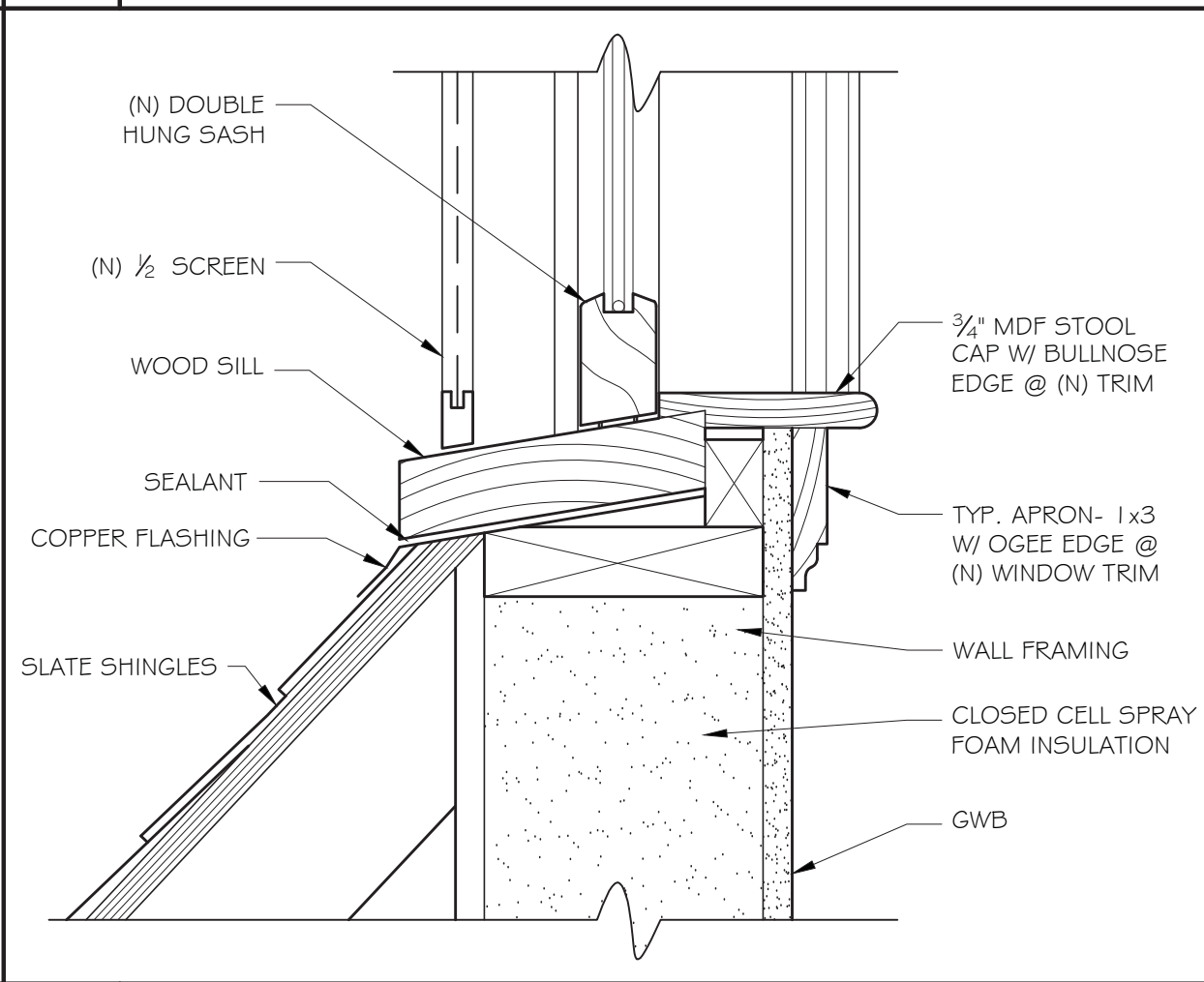
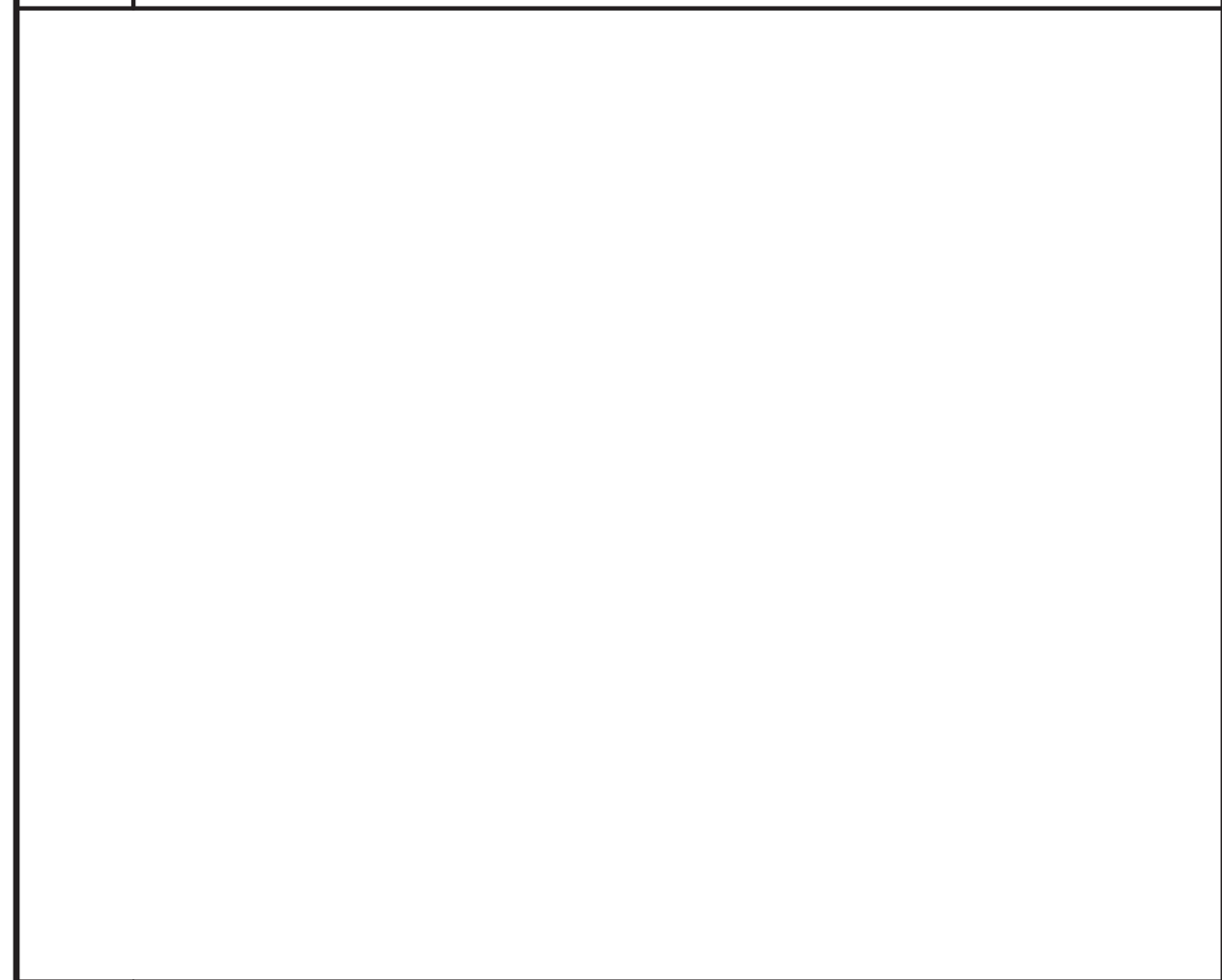
8 DORMER WINDOW HEAD DETAIL 3" = 1'-0"



6 NOT USED

7 WINDOW SILL @ ADDITION STUD WALL 3" = 1'-0"

8 DORMER WINDOW HEAD DETAIL 3" = 1'-0"



9 NOT USED

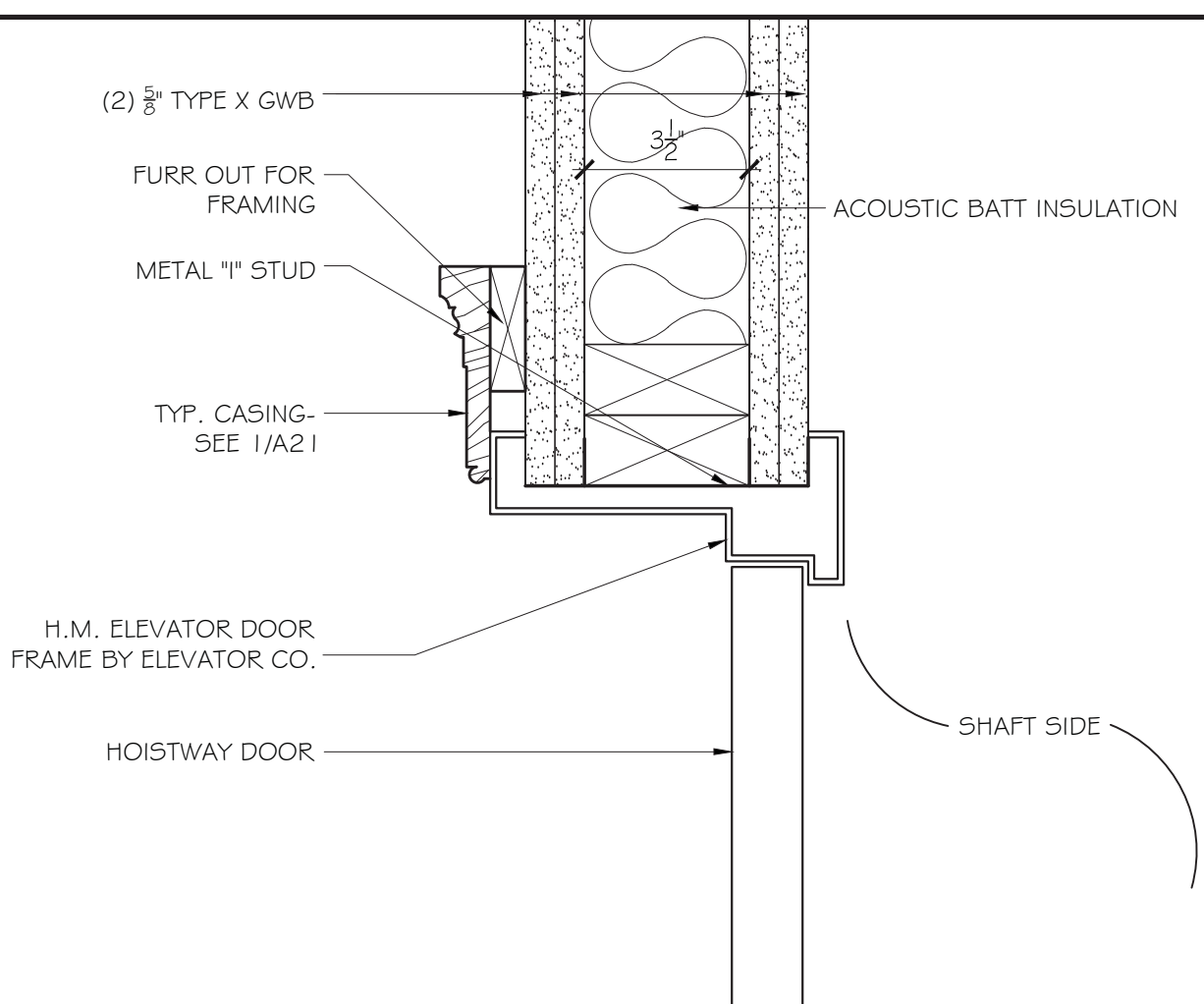
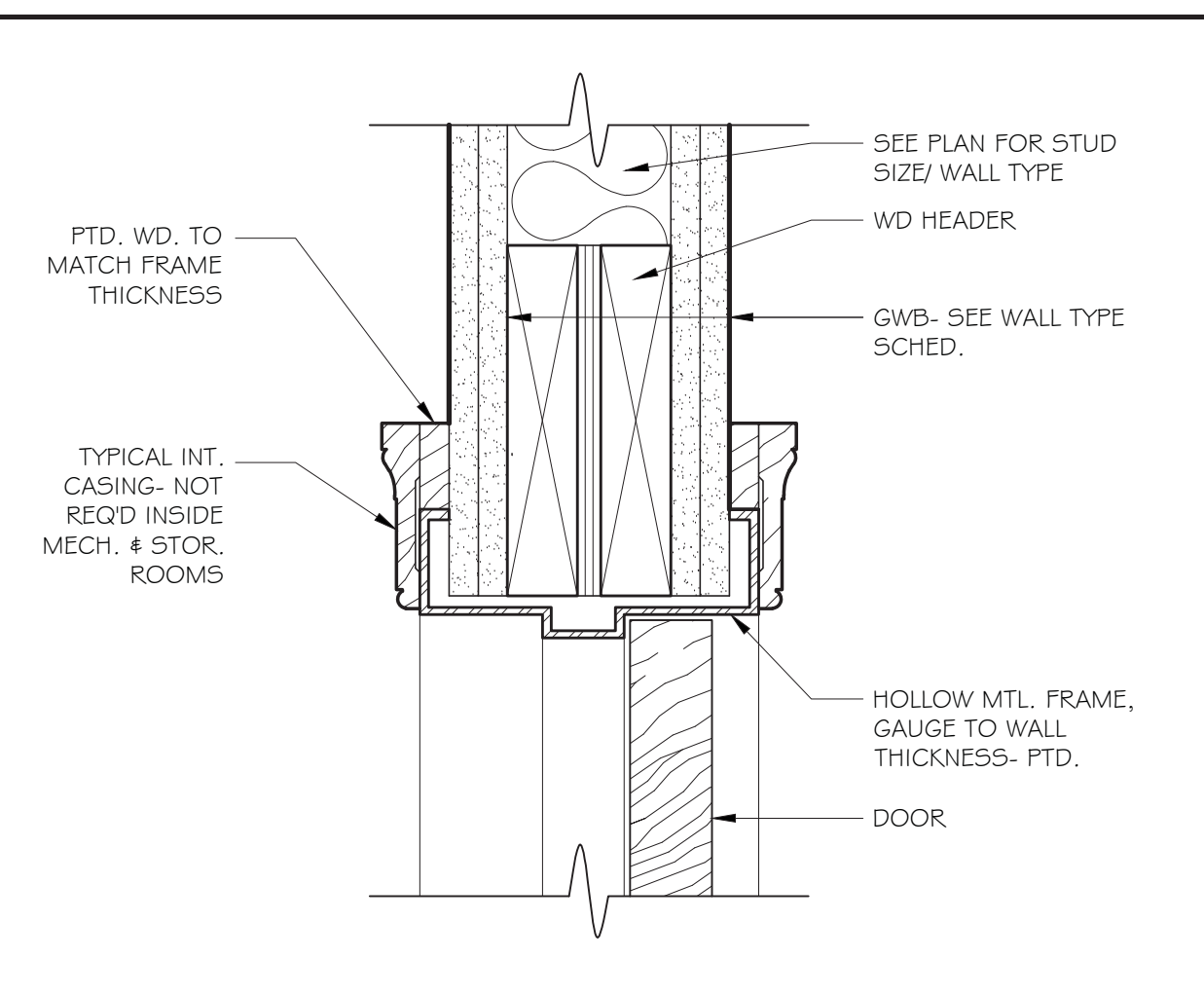
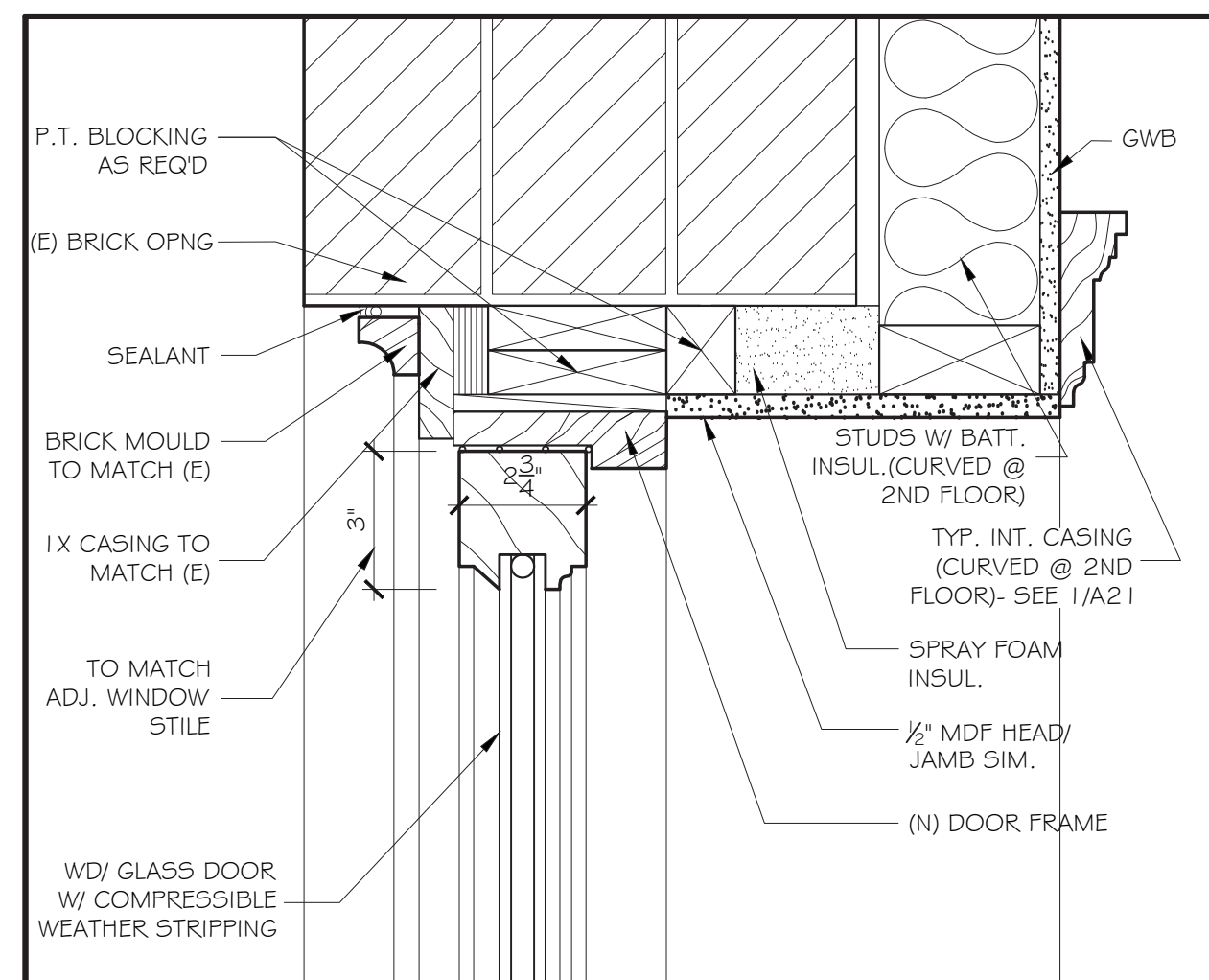
10 NOT USED

11 DORMER WINDOW SILL DETAIL 3" = 1'-0"

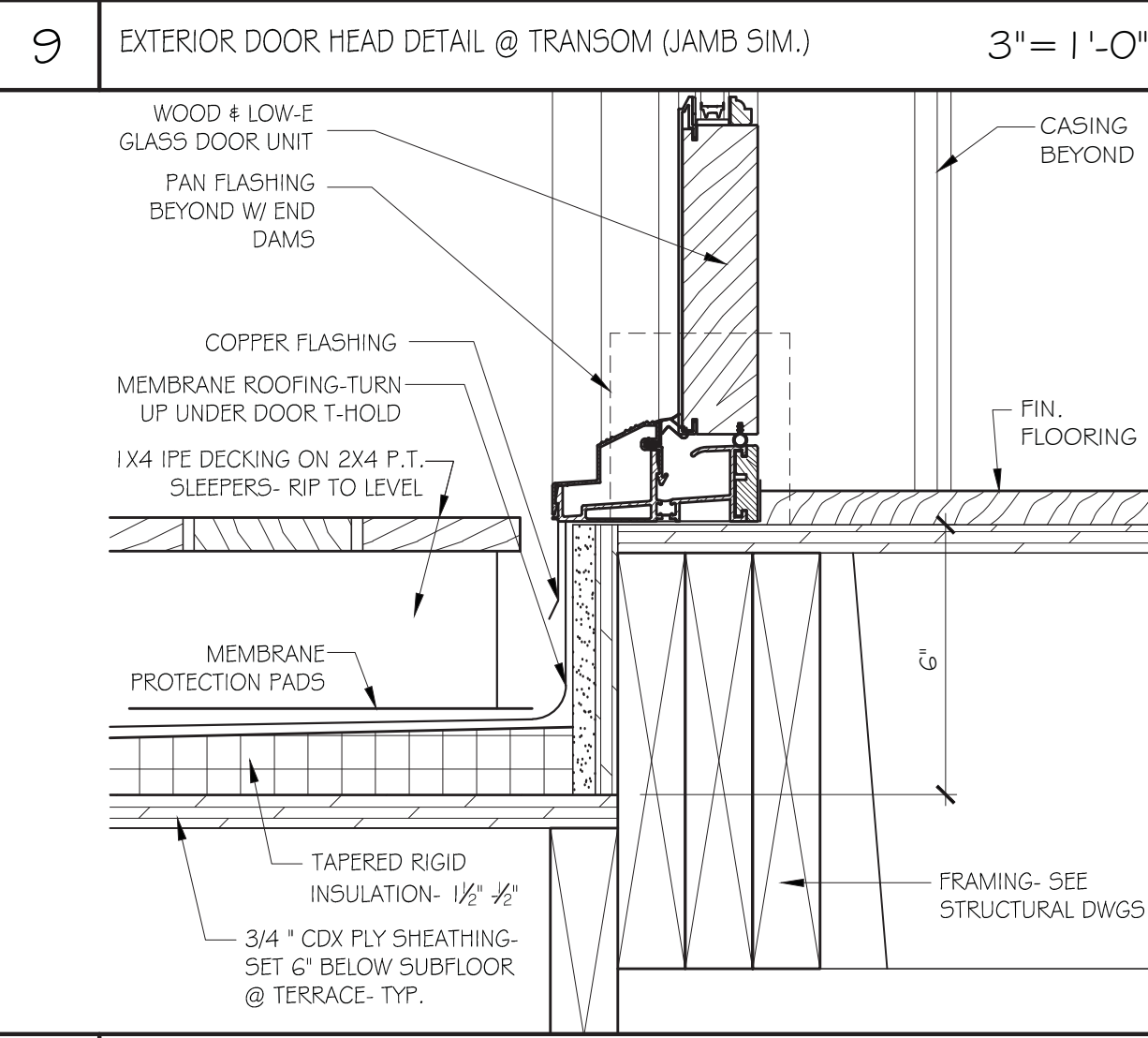
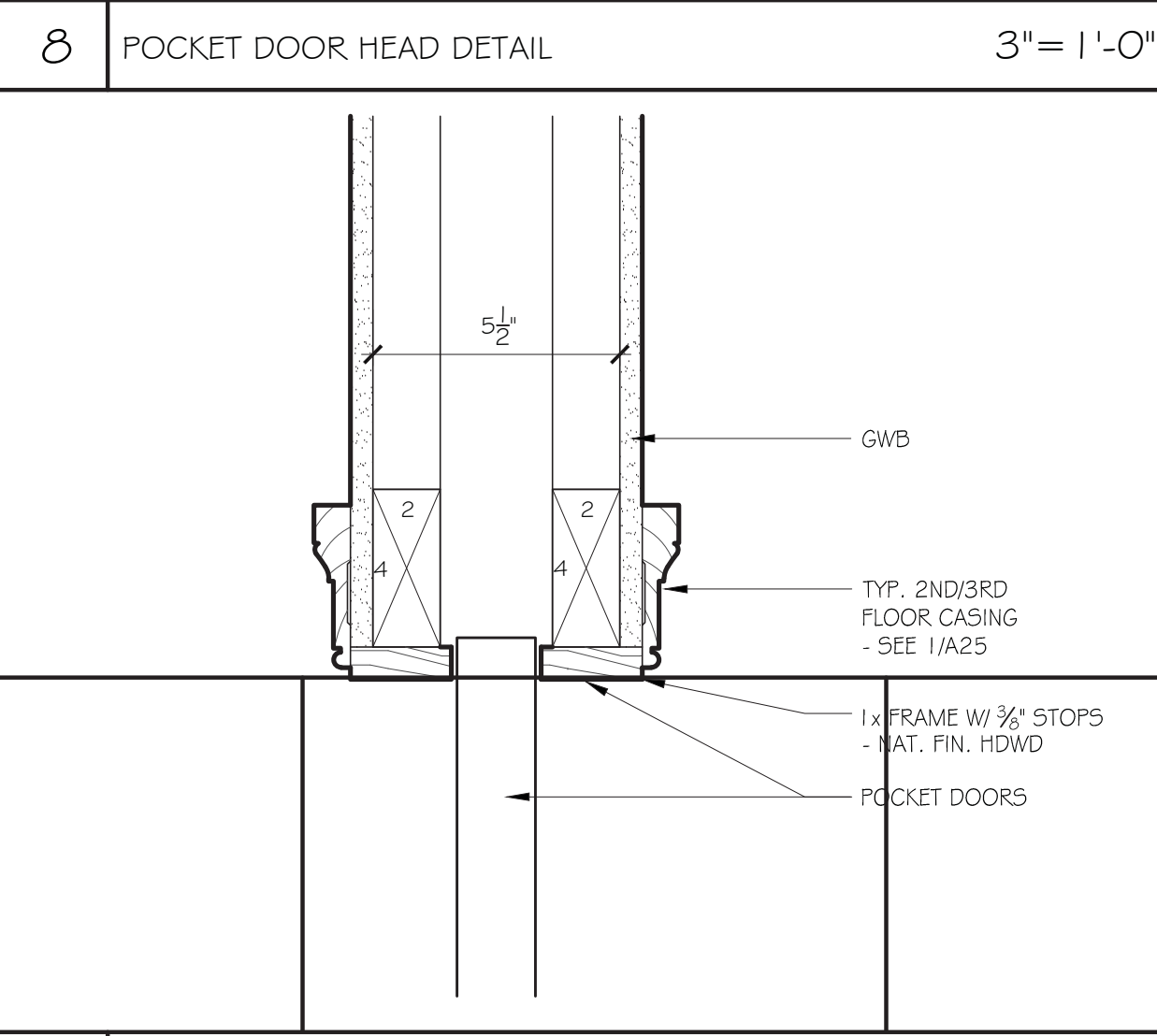
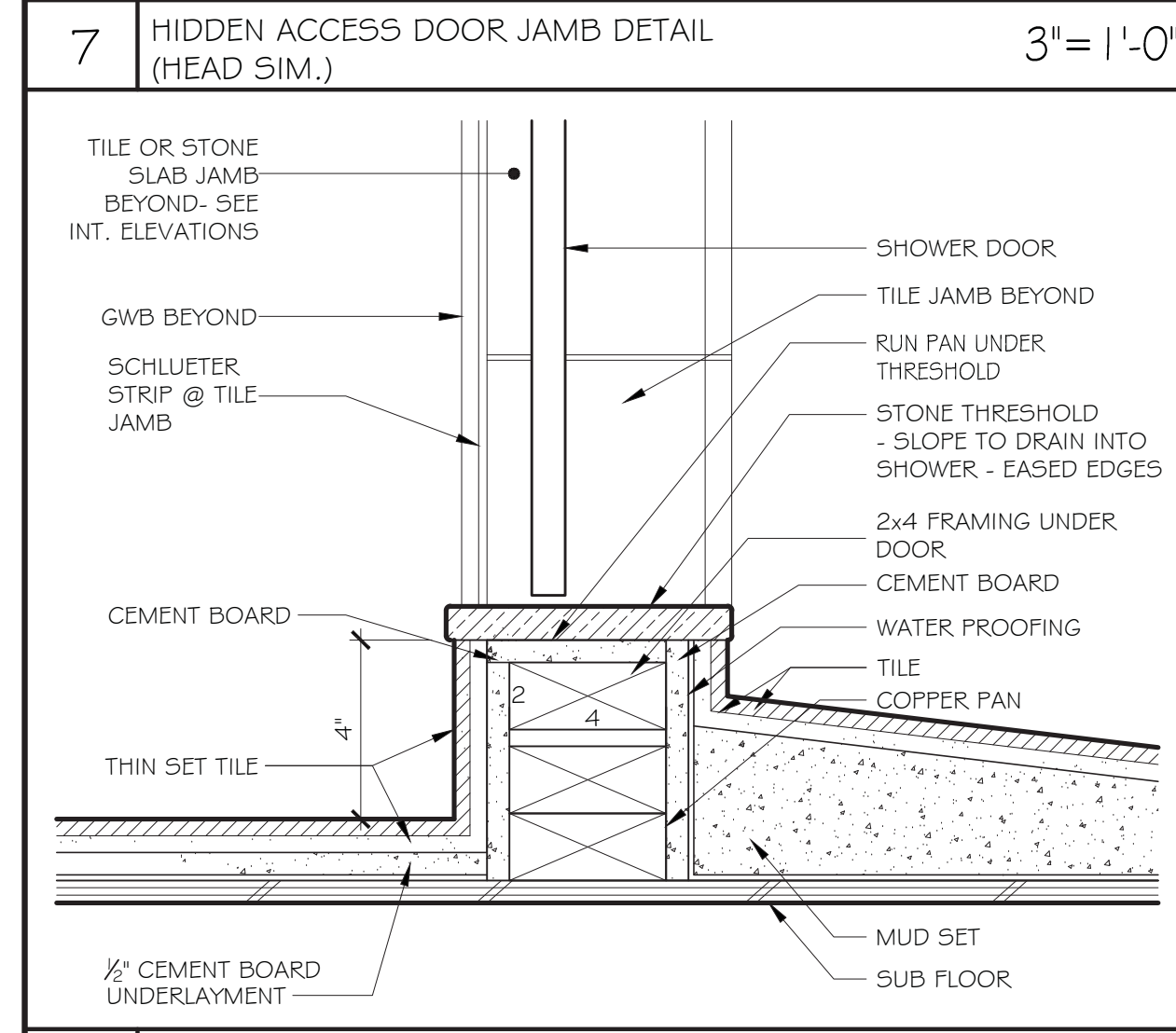
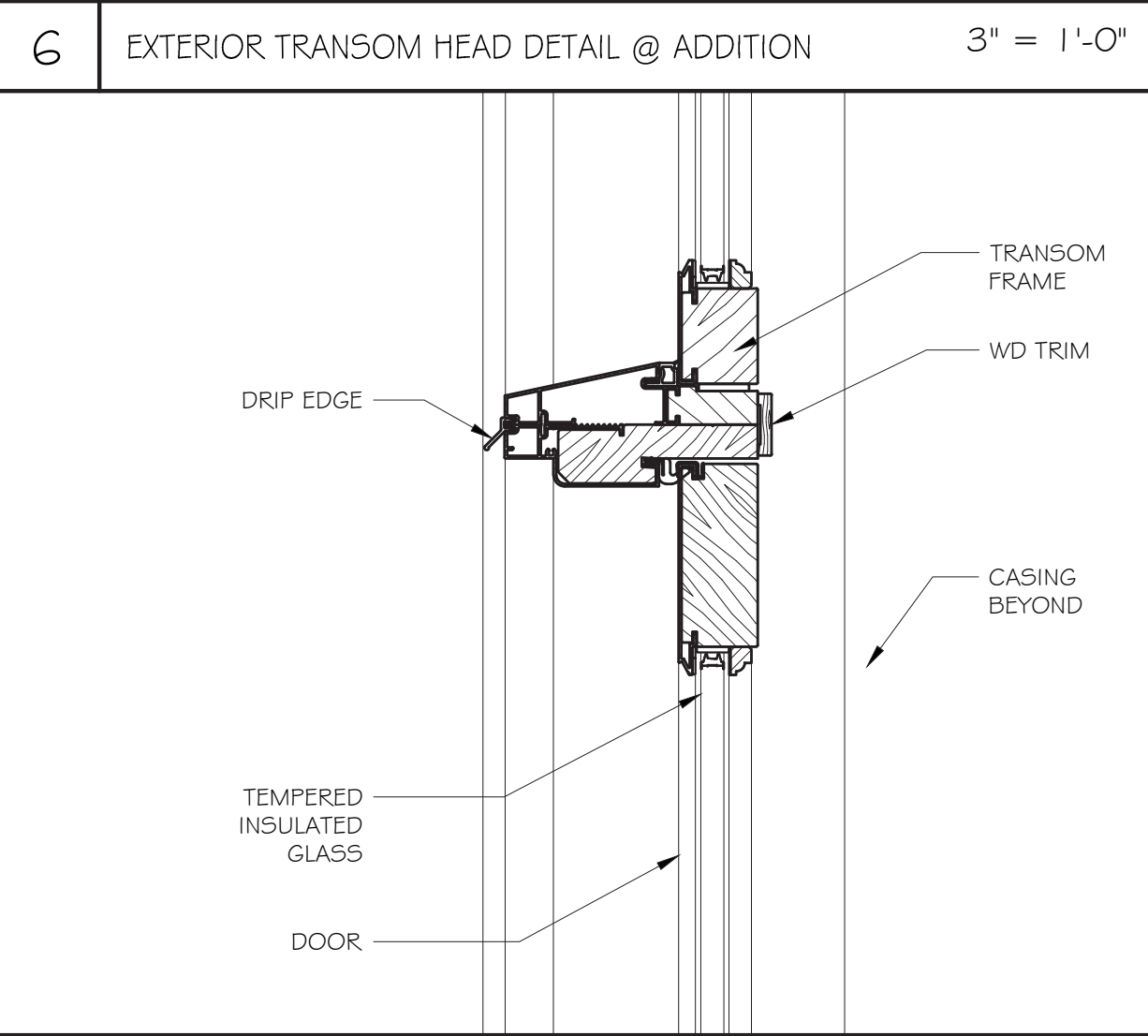
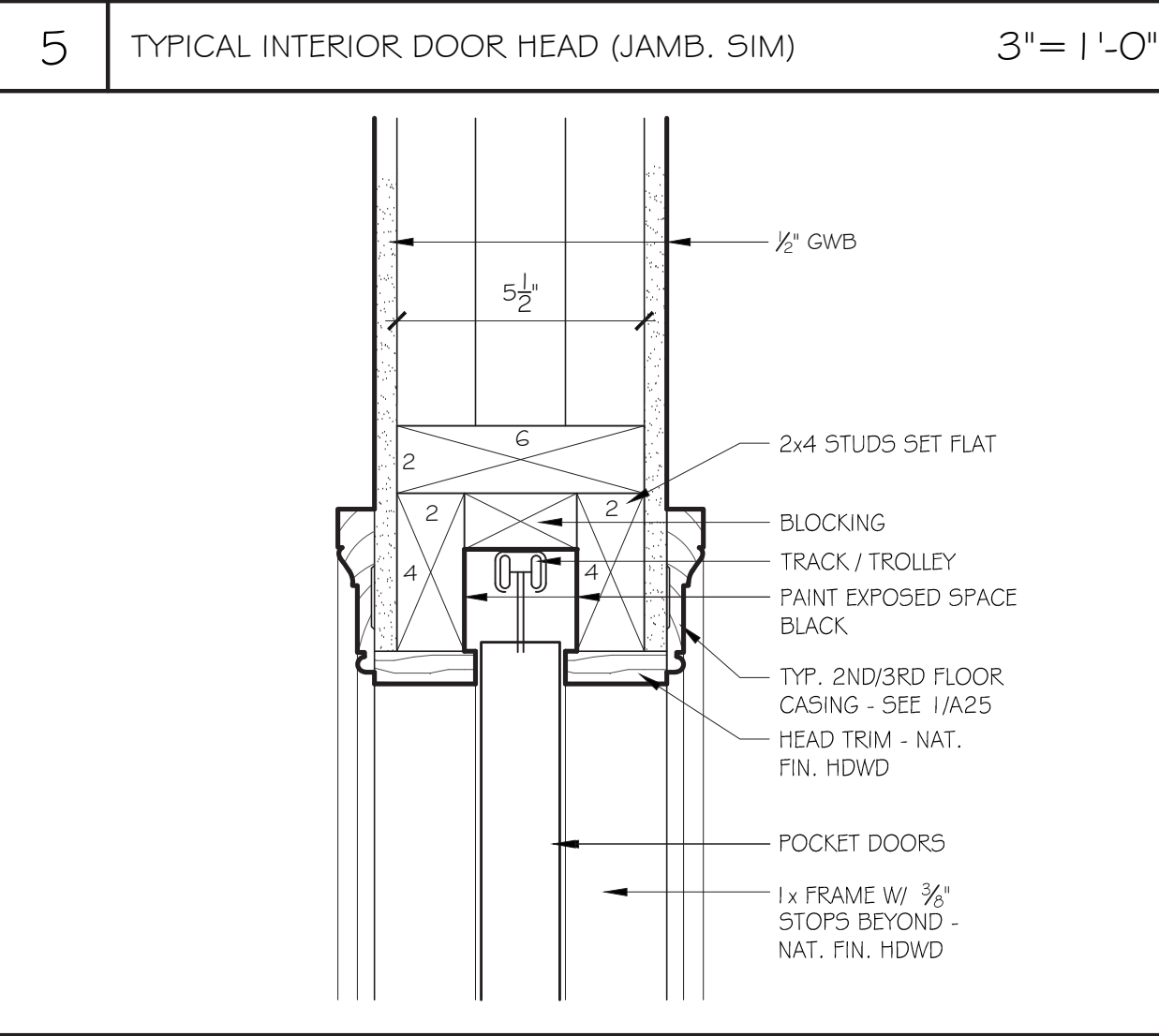
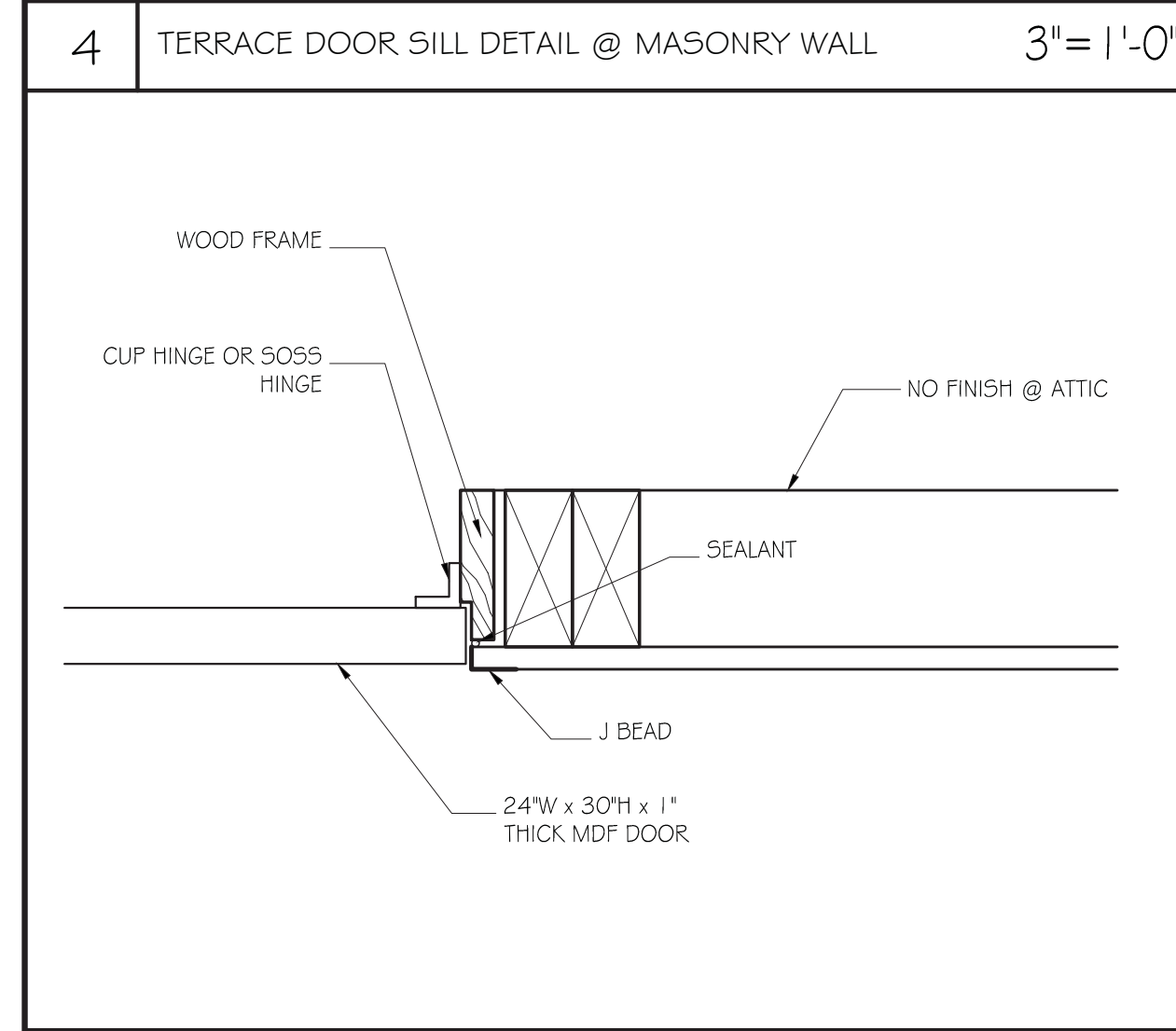
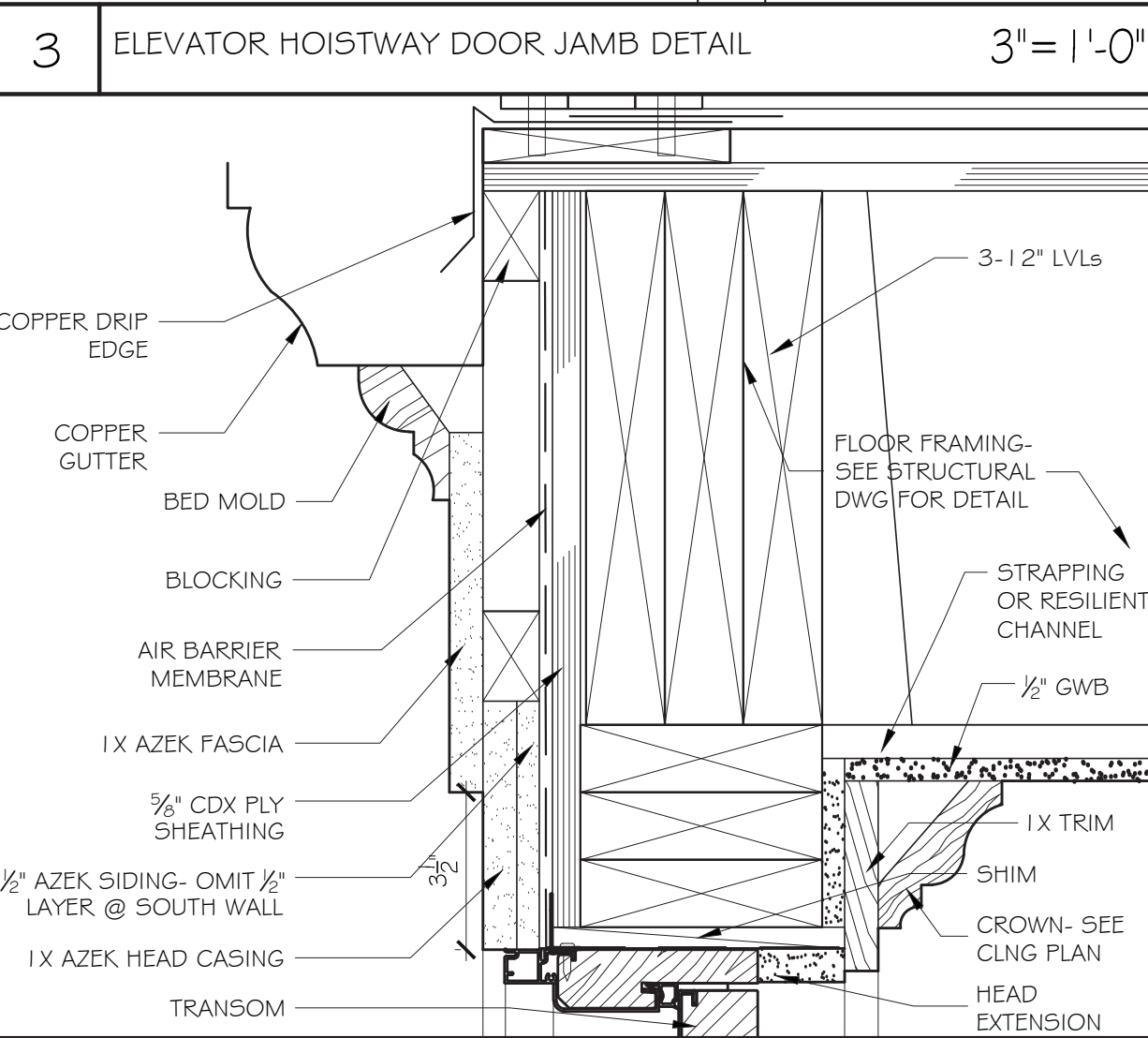
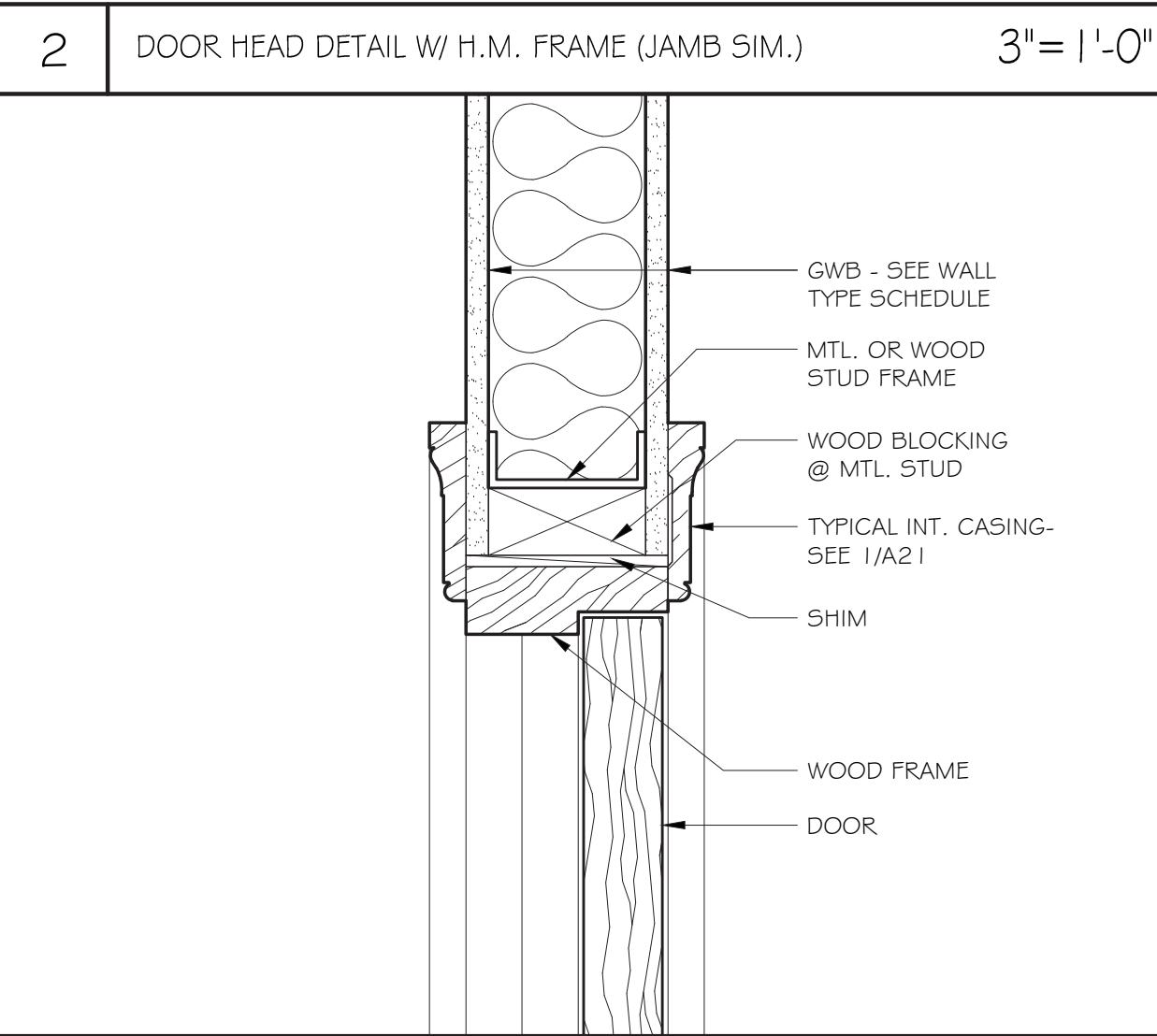
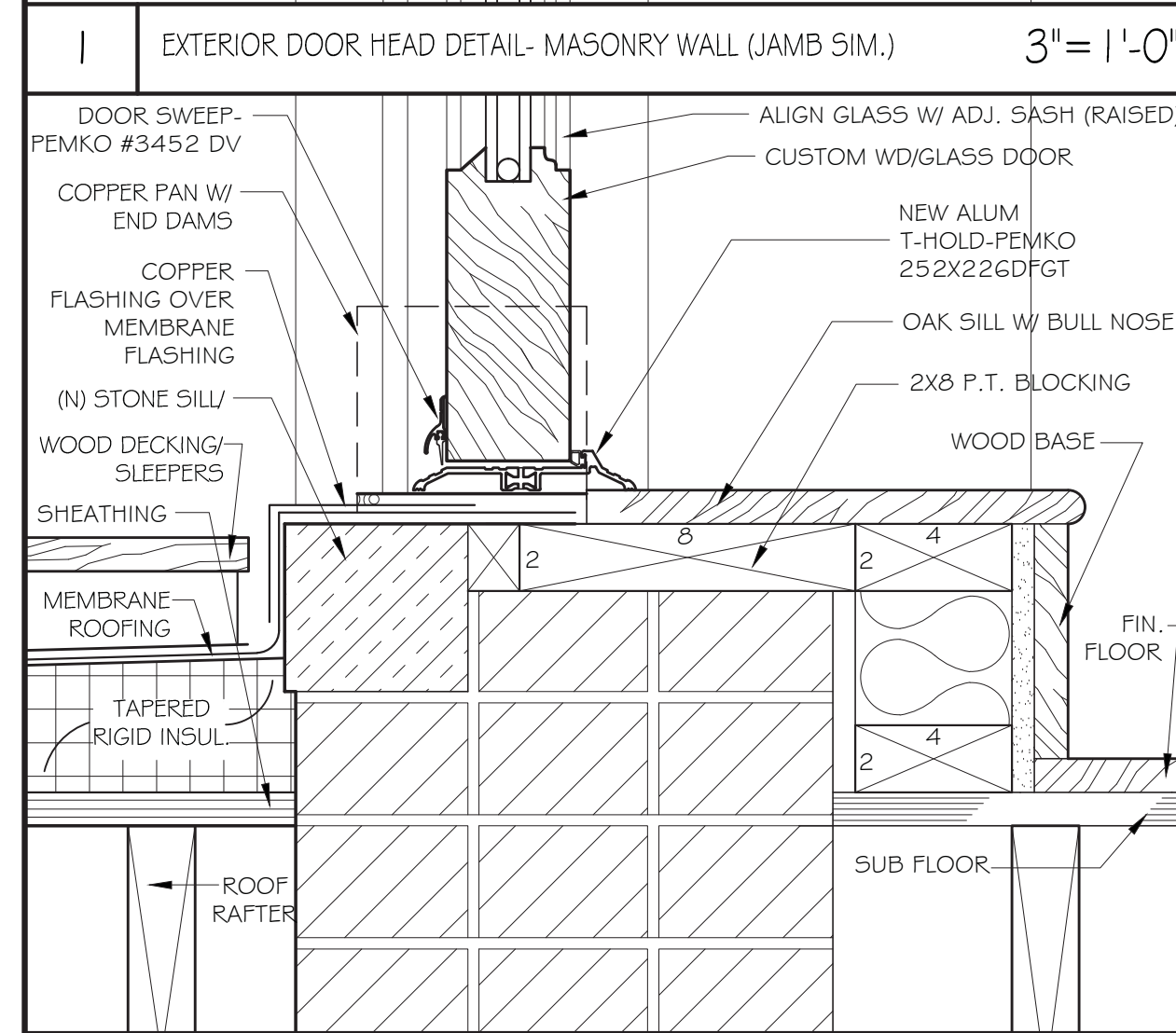
WINDOW SCHEDULE										
SYMBOL	M.O. / R.O.		HDR. HGT. ABOVE SUBFLR.	DETAILS			WINDOW TYPE/ MANUF.	REMARKS		
	W	H		H	L	S				
1	FD	FD	(E)	-	-	-	CUSTOM	(N) WOOD REPLACEMENT SASH IN (E) FRAME - TRUE DIVIDED LIGHT - W/ (N) 1/2" SCREEN - SEE ELEVATIONS FOR NOTES		
2	(E)	(E)	(E)	-	-	-	(E)	(E) FRAME & SASH TO REMAIN- INSPECT / REPAIR / CAULK AS REQUIRED		
3	6'-1" M.O.	2'-6" M.O.	7'-6"	-	-	-	PELLA - ARCHITECT SERIES FIXED WINDOW PAIR	PAIR OF RECTANGULAR FIXED WINDOWS- SDL- CUSTOM SIZE		
4	2'-4 1/2" R.O.	4'-1 0/8" R.O.	SEE REMARKS	-	-	-	PELLA - ARCHITECT SERIES DOUBLE HUNG	31.5x57.5- MULL TOGETHER WHERE SHOWN- SDL- PROVIDE 1/2" SCREEN- PROVIDE TRANSOM (HEIGHT 1'-5") WHERE SHOWN ON BUILDING SECTIONS AND ELEVATIONS. HDR. HEIGHT: BLDG #3 = 7'-4" @ G + 8'-8" @ 1ST (TRANS.), #4 = 8'-2" (TRANS.), #5 = 6'-1 0"		
5	3'-0 1/2" R.O.	6'-0 1/2" R.O.	9'-6" @ TRANS (8'-0" @ #3, 3rd FL)	-	-	-	PELLA - ARCHITECT SERIES DOUBLE HUNG	35.5x71.5- MULL TOGETHER WHERE SHOWN- SDL- WITH TRANSOM: HEIGHT 1'-5". PROVIDE (N) 1/2" SCREEN		
6	3'-6" R.O.	6'-0" R.O.	9'-6" (TRANSOM)	-	-	-	PELLA - ARCHITECT SERIES DOUBLE HUNG	41.5x71.5- SDL- W/ (N) 1/2" SCREEN- PROVIDE TRANSOM: HEIGHT 1'-5"		
7	3'-1" M.O.	4'-1" M.O.	8'-6"	-	-	-	PELLA - ARCHITECT SERIES DOUBLE HUNG	35.5x47.5- SDL- PROVIDE (N) 1/2" SCREEN- SEE REAR ELEV. FOR GRILL PATTERN		
8	3'-0 1/2" R.O.	4'-1 0/8" R.O.	8'-4" @ #5 8'-8" @ #3 (TRANSOM)	-	-	-	PELLA - ARCHITECT SERIES DOUBLE HUNG	35.5x57.5- SDL- W/ (N) 1/2" SCREEN- PROVIDE TRANSOM: HEIGHT 1'-5"		
9	-	-	-	-	-	-	-	NOT USED		
10	2'-8 1/2" R.O.	6'-0 1/2" R.O.	8'-0" @ #4 9'-6" @ #3 (TRANSOM)	-	-	-	PELLA - ARCHITECT SERIES DOUBLE HUNG	31.5x71.5- SDL PROVIDE (N) 1/2" SCREEN- PROVIDE TRANSOM (HEIGHT 1'-5") WHERE SHOWN- SEE REAR ELEV. FOR GRILL PATTERN		
11	2'-8" R.O.	8'-0" R.O.	9'-9" @ #4 (TRANSOM)	-	-	-	PELLA - DESIGNER SERIES FIXED PATIO DOOR	FIXED PATIO DOOR # 3196- PROVIDE TRANSOM: HEIGHT 1'-5"		
12	2'-6 1/2" R.O.	6'-0 1/2" R.O.	9'-6" (TRANSOM)	-	-	-	PELLA - ARCHITECT SERIES DOUBLE HUNG	29.5x71.5- SDL- W/ (N) 1/2" SCREEN- PROVIDE TRANSOM: HEIGHT 1'-5"		
13	3'-2" R.O.	6'-8 1/2" R.O.	7'-4"	-	-	-	PELLA - DESIGNER SERIES FIXED PATIO DOOR	FIXED PATIO DOOR # 378 I		
14	2'-7 1/2" R.O.	6'-8 1/2" R.O.	7'-4"	-	-	-	PELLA - DESIGNER SERIES FIXED PATIO DOOR	FIXED PATIO DOOR # 318 I		
15	FD	FD	FD	-	-	-	CUSTOM	(N) WOOD REPLACEMENT WINDOW TO MATCH ADJACENT (E) DORMER (SIZE AND DETAILS)- TRUE DIVIDED LIGHT - W/ (N) 1/2" SCREEN - SEE REAR ELEVATION FOR NOTES		

**WINDOW NOTES:**

- ALL NEW GLAZING @ CUSTOM WINDOW UNITS TO BE SINGLE GLAZED W/ 3/4" WIDE MUNTINS WHERE SHOWN- TRUE DIVIDED LITE- LOW E ARGON FILLED - SEE EXTERIOR ELEVATIONS FOR LOCATIONS. ALL NEW PELLA UNITS TO BE DOUBLE GLAZED WITH MODERN DIVIDED LIGHT W/ 3/4" WOOD COLONIAL MUNTIN - LOW E ARGON FILLED - SEE EXTERIOR ELEVATIONS FOR LOCATIONS.
- ALL WINDOWS TO BE PROVIDED WITH NECESSARY EXTENSION JAMBS TO ACCOMMODATE WALL ASSEMBLY.
- AT DOUBLE HUNG UNITS PROVIDE SOLID BRASS SASH LOCKS, CUP TYPE LIFTS (POL. NICKEL FINISH) AND NEW WEIGHT/ CHAIN BALANCE - OR INSTALL BLOCK/ TACKLE SYSTEM AND SPRAY FOAM FILL WEIGHT BOX
- PROVIDE NEW SCREENS @ ALL NEW OPERABLE PELLA
- ALL CUSTOM WINDOWS TO HAVE BRONZE SPRING TYPE WEATHER STRIPPING AT JAMBS- OR RUBBER GASKET SET INTO A REGLET (NO ADHESIVE)
- ALL NEW DOUBLE HUNG SASH IN (E) FRAMES TO MATCH EXISTING. ALL NEW SASH TO MATCH SIZE- RAIL/ STILE WIDTH, THICKNESS AND STICKING MOLDING DETAIL WITH SINGLE GLAZED TRUE DIVIDED LITE



DOOR SCHEDULE											
DOOR SYMBOL	DESCRIPTION	SIZE			FINISH	DETAILS			T-HOLD	HARDWARE	REMARKS
		WIDTH	HEIGHT	THKNS		HEAD	JAMB	SILL			
1	(E) BUILDING ENTRY TO REMAIN	(E)	(E)	(E)	PTD	(E)	(E)	(E)	WOOD	1	EXISTING TO REMAIN-RESTORE/ REPAIR/ REFINISH AS REQD. INSTALL NEW BRASS HARDWARE- INT. CASING TO BE TYP.
2	(N) BUILDING ENTRY	F.D.	F.D.	1 3/4"	PTD	-	-	-	WOOD	1	NEW DOOR TO MATCH (E) @ #28- REPAIR/ RESTORE (E) FRAME, SIDE LIGHTS + TRIM
3	EXT. SWING PAIR #3 @ 1ST	5'-7 1/2"	6'-8" R.O.	2 1/2"	PTD	G/Ø	-	-	BY MFC	3	PELLA DESIGNER SERIES- IN-SWING PAIR- PROVIDE TRANSOM, 1'-5" IN HEIGHT
4	EXT. SWING #4 @ 1ST	2'-9 1/2"	6'-8" R.O.	2 1/2"	PTD	G/Ø	-	-	BY MFC	3	PELLA DESIGNER SERIES- IN-SWING - #349G- PROVIDE TRANSOM, 1'-5" IN HEIGHT
5	EXT. SWING	F.D.	F.D.	2 3/4"	PTD	1	1 SIM.	4 SIM	ALUM/ WOOD	3	CUSTOM WOOD AND TEMP. INSUL. GLASS DOOR WITH NARROW RAIL AND STILE - IN MODIFIED MASONRY OPENING - LOWER (E) SILL + RAISE (E) STONE LINTEL
6	EXT. SLIDING DOOR	9'-0 3/4" R.O.	6'-8 1/2" R.O.	2 1/2"	-	-	-	-	-	BY DOOR MFC.	PELLA DESIGNER SERIES- CONTEMPORARY ALUM. CLAD WOOD SLIDING DOOR - #10881
7	EXT. SLIDING DOOR	9'-0 3/4" R.O.	6'-8" R.O.	2 1/2"	-	-	-	-	-	BY DOOR MFC.	PELLA DESIGNER SERIES- CONTEMPORARY ALUM. CLAD WOOD SLIDING DOOR
8	EXT. SLIDING DOOR	6'-0" R.O.	8'-0" R.O. (6'-0 1/2" @ #3) R.O.	2 1/2"	-	-	-	-	-	BY DOOR MFC.	PELLA DESIGNER SERIES- CONTEMPORARY ALUM. CLAD WOOD SLIDING DOOR- #7281- PROVIDE TRANSOM, 1'-5" IN HEIGHT WHERE SHOWN
9	EXT. SLIDING DOOR	5'-0" R.O.	8'-0" R.O. (6'-8 1/2" @ G)	2 1/2"	-	-	-	-	-	BY DOOR MFC.	PELLA DESIGNER SERIES- CONTEMPORARY ALUM. CLAD WOOD SLIDING DOOR- #609G (#6080 @ GARDEN LEVEL)- PROVIDE TRANSOM W/ 1'-5" HEIGHT WHERE SHOWN
10	EXT. SLIDING DOOR	9'-0 3/4" R.O.	8'-0" R.O.	2 1/2"	-	-	-	-	-	BY DOOR MFC.	PELLA DESIGNER SERIES- CONTEMPORARY ALUM. CLAD WOOD SLIDING DOOR- #1089G- PROVIDE TRANSOM W/ 1'-5" HEIGHT
11	UNIT ENTRY	3'-0"	7'-6"	1 3/4"	PTD	2	2 SIM.	-	OAK	5	FLUSH SOLID CORE WOOD DOOR IN H.M. FRAME- 45 MIN.- C LABEL- PROVIDE PANEL MOLDINGS TO SIMULATE 1 PANEL DOOR
12	ELEVATOR DOOR	2'-6"	6'-8"	1 3/4"	PTD	3 SIM	3	-	ALUM. SILL BY ELEV. SUB	2	FLUSH SOLID CORE WOOD DOOR IN H.M. FRAME- B LABEL- 90 MIN.- FRAME BY ELEV. CONTRACTOR- COORD. W/ ELEV. SUB.- PROVIDE PANEL MOLD. TO SIMULATE 1 PANEL DOOR
13	INT. SWING	2'-8"	6'-8"	1 3/4"	PTD	2	2 SIM	-	-	4	FLUSH SOLID CORE WOOD DOOR IN H.M. FRAME-45 MIN.- C LABEL- PROVIDE PANEL MOLDINGS TO SIMULATE 1 PANEL DOOR
14	INT. SWING	2'-8"	6'-8"	1 3/4"	PTD	5	5 SIM.	-	NONE	4/6	MDF DOOR IN WOOD FRAME
15	INT. SWING	2'-6"	6'-8"	1 3/4"	PTD	5	5 SIM.	-	NONE WOOD @ BEDRMS	6/7	MDF DOOR IN WOOD FRAME
16	INT. SWING	2'-4"	6'-8" 7'-6" @ 2ND FL	1 3/4"	PTD	5	5 SIM.	-	NONE WOOD @ BATH	6/7	MDF DOOR IN WOOD FRAME
17	INT. SWING	1'-6"	6'-8"	1 3/4"	PTD	5	5 SIM.	-	NONE	6	MDF DOOR IN WOOD FRAME
18	INT. SWING	2'-0"	6'-8"	1 3/4"	PTD	5	5 SIM.	-	NONE	6	MDF DOOR IN WOOD FRAME
19	INT. PAIR	2'-6" E.A.	6'-8"	1 3/4"	PTD	5	5 SIM.	-	NONE	8	PAIR OF MDF DOORS IN WOOD FRAME
20	INT. PAIR	2'-3" E.A.	6'-8"	1 3/4"	PTD	5	5 SIM.	-	NONE WOOD @ BEDRMS	8	PAIR OF MDF DOORS IN WOOD FRAME
21	INT. PAIR	2'-0" E.A.	6'-8"	1 3/4"	PTD	5	5 SIM.	-	NONE	8	PAIR OF MDF DOORS IN WOOD FRAME
22	INT. PAIR	1'-9" E.A.	7'-6"	1 3/4"	PTD	5	5 SIM.	-	NONE	8	PAIR OF MDF DOORS IN WOOD FRAME
23	POCKET DOOR PAIR	2'-4"	6'-8"	1 3/4"	PTD	12	12 SIM	-	NONE	9	FLUSH SOLID CORE WOOD DOOR IN WOOD FRAME
24	SHOWER DOOR	2'-0"	6'-0" *	1/2"	N.A.	-	-	10	STONE SLAB	BY MFC.	FRAMELESS, TEMP. GLASS DOOR W/ SIDELITES AND TRANSOMS WHERE SHOWN ON INTERIOR ELEVATIONS- CRL LAURENCE HARDWARE- HARDWARE FINISH TO MATCH BATH FITTINGS- 6'-8" HGT @ M.BATH 301 + M.BATH 309
25	STORAGE ROOM- INT. SWING	2'-6"	6'-8"	1 3/4"	PTD	2	2 SIM	NONE	ALUM	4	FLUSH SOLID CORE DOOR IN H.M. FRAME
26	INT. PAIR	2'-8"	6'-8"	1 3/4"	PTD	2	2 SIM	-	-	4	FLUSH H.M. DOOR IN H.M. FRAME- 1 1/2 HR - B LABEL
27	EXT. FIXED	FD	FD	1 3/4"	PTD	-	-	-	-	1	CUSTOM 3 PANEL WOOD DOOR TO MATCH (E) MAIN ENTRANCE- FIX CLOSED
28	EXT. SLIDING DOOR	6'-0" R.O.	6'-10" R.O.	2 1/2"	-	-	-	-	-	BY DOOR MFC.	PELLA DESIGNER SERIES- CONTEMPORARY ALUM. CLAD WOOD SLIDING DOOR- #7282- PROVIDE TRANSOM, 1'-5" IN HEIGHT WHERE SHOWN

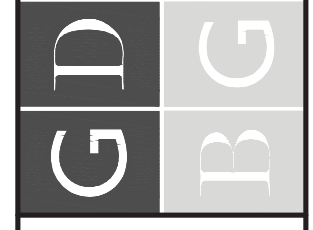


DOOR NOTES:  
 1. MDF DOORS TO BE AS MFC. BY TRUSTILE TS 1000-1 PANEL W/ OGEE STICKING + 3/8" FLAT PANEL- PROVIDE FIRE RATINGS AND SIZES AS NOTED  
 2. PELLA EXT. DOORS TO HAVE MODERN DIVIDED LIGHT (MDL) W/ COLONIAL STICKING - IN PATTERNS AS SHOWN ON ELEV. UNLESS NOTED OTHERWISE - ALL INSUL. TEMP. GLASS- LOW E ARGON FILLED  
 3. SIMULATED DIVIDED LIGHT DOORS TO HAVE 3/8" WIDE MUNTINS, APPLIED TO BOTH SIDES OF INSUL. TEMP. LOW E ARGON FILLED GLASS W/ SPACER BARS- MUNTINS TO BE SIM. TO ADJACENT WINDOW PROFILE

HARDWARE SCHEDULE						
HARDWARE SET NUMBER	FUNCTION	MANUFACTURER	LATCH SET	HINGES	CLOSER	REMARKS
1	FRONT ENTRY	BALDWIN	MORTISE LOCK- TBD- BRISTOL 6963 HANDLE SET- POL. BRASS	BUTTS	LCN SURFACE MOUNTED SMOOTHIE	PROVIDE ELECTRIC STRIKE- POLISHED BRASS FINISH
2	ELEV.	EMTEK	CYLINDER SET- TBD	BUTTS	FULLY CONCEALED CLOSER IN DOOR HEAD	COORD. W/ ELEV. CO.- LATCH SET PROVIDED BY ELEV. CO.- KNOB TO MATCH TYPE 6 - INTERLOCK BY ELEV. MFC.
3	TERRACE DOOR	HOPPE	MULTI POINT LATCH SET #HLS9000 W/ 1 3/8" BACKSET- VERONA LEVER M151	BUTTS	NONE	PROVIDE DEAD BOLT- BOTH TO HAVE NARROW 1 3/8" BACKSET- PROVIDE SURFACE BOLTS @ INACTIVE LEAF @ PAIR
4	STORE ROOM	EMTEK	PASSAGE CYLINDER SET	BUTTS- B.B.	PROVIDE SPRING HINGES	PROVIDE DEAD BOLT
5	APT. ENTRY	CORBIN	MORTISE LOCK ML 2010 W/ TUSCANY LEVER DSM	BUTTS- B.B.	PROVIDE SPRING HINGES	PROVIDE ACOUSTIC GASKET AND SWEEP
6	PASSAGE	EMTEK	CYLINDER SET	BUTTS	NONE	
7	PRIVACY	EMTEK	CYLINDER SET	BUTTS	NONE	
8	CLOSET PAIR	EMTEK	DUMMY PULLS	BUTTS	NONE	PROVIDE RECESSED ROLLER LATCH- ONE PER DOOR
9	HIDDEN DOOR	IVES OR EQUAL	PROVIDE FLUSH RING PULL	CONCEALED HINGES	NONE	PROVIDE 5055 HINGES OR 2 PAIR CUP HINGES

HARDWARE NOTES  
 1. PROVIDE ALL NECESSARY STRIKES, ROSES, PLATES, ESCUTCHEONS, ETC.  
 2. PROVIDE FLOOR MOUNTED STOP - IVE5 DOME TYPE, FOR ALL DOORS SWINGING WITHIN 20 DEGREES OF A WALL.  
 3. PROVIDE COMPRESSIBLE "V" TYPE BRONZE WEATHER STRIPPING AND SWEEP AT ALL EXTERIOR DOORS  
 4. PROVIDE 1 1/2" PAIR HINGES FOR ALL DOORS LESS THAN 7'-11" HIGH, 2 PAIR FOR DOORS OVER 7'-11" HIGH - ALL HINGES TO BE SOLID BRASS BUTTS, 4x4 OR 4 1/2x4 1/2, 5 KNUCKLE SQUARE CORNER - HAGAR OR EQUAL- PLATED TO MATCH HARDWARE FINISH  
 5. ALL HARDWARE FINISH TO BE SATIN NICKEL PLATED - SPLIT FINISH TO MATCH BATHROOM FITTING @ ALL BATHS- (SPLIT FIN.) UNLESS NOTED OTHERWISE  
 6. ALL FIRE RATED DOORS TO HAVE SELF-CLOSING MECHANISM.

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**GRASSI DESIGN GROUP**  
**GD** **BG**  
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 SCALE: AS NOTED  
 DATE: 08.21.17  
**4 JOY STREET**  
 BOSTON, MA  
**DOOR SCHEDULE, HARDWARE SCHEDULE AND DOOR DETAILS**  
**A23**



JOB NO: 1606	SCALE: AS NOTED	DATE: 06-21-17	REVISED
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### APPLIANCE SCHEDULE

SYMBOL	APPLIANCE	MANUFACTURER - MODEL NUMBER #	COLOR	ACCESSORIES	REMARKS
A1	REFRIGERATOR/ FREEZER	TBD	S.S.	TUBULAR HANDLES	42", PROVIDE WATER TO ICE MAKER
A2	REFRIGERATOR/ FREEZER	TBD	S.S.	TUBULAR HANDLES	36", PROVIDE WATER TO ICE MAKER
A3	COOKTOP	TBD	S.S.	-	36" GAS COOKTOP
A4	HOOD	TBD	S.S.	-	
A5	WALL OVEN	TBD	S.S.	-	ELECTRIC
A6	MICRO/ CONV. OVEN	TBD	S.S.	-	
A7	MICROWAVE	TBD	S.S.	-	
A8	DISHWASHER	TBD	S.S.	-	-
A9	WASHER	TBD	WHITE	-	PROVIDE FAN
A10	DRYER	TBD	WHITE	-	VENTED ELECTRIC
A11	WASHER	TBD	WHITE	-	STACKING- PROVIDE FAN
A12	DRYER	TBD	WHITE	-	STACKING- VENTED ELECTRIC
A13	UNDER COUTNER REF.	TBD	NONE		INTEGRATED WITH CAB. PANEL

### PLUMBING FIXTURE SHEDULE

SYMBOL	FIXTURE	MANUFACTURER- MODEL NUMBER	COLOR	FITTINGS	REMARKS
P1	KITCHEN SINK	TBD	S.S.		PROVIDE 1/2 H.P. CONT. FEED GARBAGE DISPOSAL - INSINKERATOR OR EQUAL
P2	WATER CLOSET @ MASTER BATHROOM	TBD	WHITE		SOFT CLOSE SEAT - RECESSED TANK IN WALL
P3	LAVATORY @ MASTER BATHROOM	TBD	WHITE		UNDERMOUNT
P4	SHOWER SET @ MASTER BATHROOM	TBD	POLISHE D NICKEL		
P5	TUB @ MASTER BATHROOM	TBD	WHITE		UNDERMOUNT
P6	TUB @ MASTER BATHROOM	TBD	WHITE		UNDERMOUNT
P7	TUB/ SHOWER @ GUEST BATH	TBD	WHITE		PROVIDE ALL REQUIRED ROUGH IN VALVES
P8	LAVATORY @ GUEST BATH	TBD	WHITE		UNDERMOUNT
P9	WATER CLOSET @ GUEST BATH	TBD	WHITE		PROVIDE SOFT-CLOSE SEAT, TRIP LEVER TO MATCH SINK FITTINGS IN THE ROOM
P10	WATER CLOSET @ GUEST BATH	TBD	WHITE		WALL MOUNTED
P11	SHOWER SET @ GUEST BATH	TBD	POLISHE D NICKEL		PROVIDE ALL REQUIRED ROUGH IN VALVES
P12	WATER CLOSET @ POWDER ROOM	TBD	WHITE		TRIP LEVER TO MATCH FITTINGS IN ROOM
P13	LAVATORY @ POWDER ROOM	TBD	WHITE		
P14	BAR SINK	TBD	S.S.		
P15	WASHER/ DRYER HOOK UP				PROVIDE WATER BUG IN VINYL PAN WITH AUTO SHUT OFF DEVICE FOR H/C WATER

# ELECTRICAL SCHEDULE

## POWER

SYMBOL	DESCRIPTION
Ⓢ	WALL MTD SWITCH - LEVITON ROCKER DECORA
Ⓢ <sub>2</sub>	WALL MTD DIMMER - LEVITON ROCKER NOVIA- COORDINATE W/ LED LIGHTS/ TRANSFORMERS TO NOT FLICKER
Ⓢ <sub>3</sub>	WALL MTD 3 WAY SWITCH - LEVITON ROCKER
Ⓜ	CEILING MOUNTED MOTION SENSOR SWITCH
Ⓢ/Ⓢ <sub>2</sub>	WALL MTD MOTION SENSOR PROGRAMMABLE DIMMER SWITCH - LIGHTOLIER INTELLISIGHT SENSOR # ITS2UW - PROVIDE REMOTE AT 3-WAY- ITSRB (M3)- OR LUTRON MEASTRO OCCUPANCY SENSOR CL DIMMER
Ⓢ	WALL OUTLET - DUPLEX 110V DECORA SERIES
Ⓢ	SWITCHED WALL OUTLET - DUPLEX 110V - DECORA SERIES
Ⓢ <sub>WP</sub>	SURFACE MOUNTED OUTLET - DUPLEX 110V - WATERPROOF
Ⓢ <sub>GF</sub>	WALL OUTLET - DUPLEX 110V W/ GROUND FAULT INTERRUPTER - WHITE
Ⓢ <sub>GD</sub>	GARBAGE DISPOSAL - TIED INTO SWITCH
Ⓢ <sub>220</sub>	WALL OUTLET - DUPLEX 220V - DECORA SERIES
Ⓢ	HARDWIRED SPECIAL PURPOSE CONNECTION -
J	J-BOX - CLG. MOUNTED WIRED TO WALL SWITCH - FASTENED TO SUPPORT 150 LB. FIXTURE.
PM	SURFACE MOUNTED UNDER CABINET PLUG MOULD.
I	INTERCOM LOCATION FOR VIDEO INTERCOM- PROVIDE SEIDLE SEMI-RECESSED VARIO ENTRY STATION WITH CAMERA, MIC, 2-CALL BUTTONS, NAME PLATE, SPEAKER MODULES - UNIT STATIONS W/ HAND SET/COLOR MONITOR - DOOR RELEASE - ALL WHITE
△	TELEPHONE JACK - 4 PAIR CAT 7 DATA CABLE- HOME RUNS TO TEL. PANEL
T.V.	CABLE T.V. JACK W/ WIRING - PROVIDE COAXIAL CABLE HOME RUNS TO STRUCTURED MEDIA PANEL
Ⓢ	BATH EXHAUST FAN - SUPPLIED BY OTHERS, WIRED BY ELECTRICAL SUBCONTRACTOR
Ⓢ	RECESSED CIRCUIT BREAKER PANEL (FLUSH MOUNT @ MAS, WALLS)
EBB	ELECTRIC BASEBOARD HEAT- CHROMALOX CAF 6 - IN WATTAGE AS NOTED - WHITE - WITH BUILT-IN THERMOSTAT 24" = 500 W 36" = 750 W 48" = 1000 W

## LIGHTING

SYMBOL	DESCRIPTION	MFC.	PART #	LAMP
Ⓢ <sub>F1</sub>	RECESSED LINE VOLTAGE DOWNLIGHT - WHITE BAFFLE - 3 3/4" Ø	LIGHTOLIER	2000IC/2013WH	GR20 LED 2700K - DIMMABLE
Ⓢ <sub>F2</sub>	RECESSED LOW VOLTAGE DN. LIGHT - WHITE BAFFLE - 3 3/4" Ø- PROVIDE MAGNETIC TRANSFORMER FOR LED DIMMING	LIGHTOLIER	2000LV/2013WH	50 MR16 LED 2700K DIMMABLE
Ⓢ <sub>F3</sub>	FLUSH LINE VOLTAGE OPALEX SHOWER LIGHT - TRANSLUCENT LEXAN	LIGHTOLIER	2000P1 W/ 2090 TRIM	R20 LED 2700K
Ⓢ <sub>F4</sub>	EXTERIOR SURFACE MTD. WALL LIGHT WITH PHOTO CELL WHERE NOTED			13W 4"IN TRIFLE TUBE
Ⓢ <sub>F5</sub>	SURFACE- MOUNTED INCAN. - PORCELAIN SOCKET	PROGRESS	P7520-30	A19 LED 7.5W 3000K
Ⓢ <sub>F6</sub>	SURFACE MTD. UNDER-CABINET LOW-VOLTAGE LED STRIP LIGHT - CUT TO LENGTH - PROVIDE DRIVER, CONNECTORS, ALUMINUM COVER.833.74.782	HAFFLE	LOOX LED 2015 833.73.400	3200K
Ⓢ <sub>F7</sub>	WALL-MOUNTED DECK/ TERRACE LIGHT- BLACK, (18" ABOVE DECK)	PROGRESS	P5223-31WB	13W T5
Ⓢ <sub>F8</sub>	INTERIOR WALL SCONCE ON J- BOX (OR MED. CAB. LIGHT)			
Ⓢ <sub>F9</sub>	SURFACE MTD. FLUORESCENT CLOSET LIGHT	PROGRESS	P7201- 30 WB	F15W- T8
Ⓢ <sub>F10</sub>	SLOPED CEILING TRIM- RECESSED INCANDESCENT DOWNLIGHT-WHITE BAFFLE-W/ 3 3/4" Ø	LIGHTOLIER	2000P11	75W -PAR16
Ⓢ <sub>F11</sub>	RECESSED UNDER-CABINET LOW-VOLTAGE LED SPOT LIGHT- PROVIDE DRIVER, CONNECTORS	HAFFLE	LOOX LED 3001 833.75.010	3200K
Ⓢ <sub>F12</sub>	INTERIOR WALL SCONCE AT FIREPLACE			
Ⓢ <sub>F13</sub>	PICTURE LIGHT AT BOOK CASES			
Ⓢ	SEMI-RECESSED EMERGENCY 2-HEAD LIGHT ON 90 MIN. REMOTE BATTERY BACKUP POWER			

## FIRE ALARM SCHEDULE

### FIRE ALARM

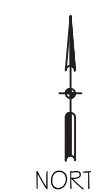
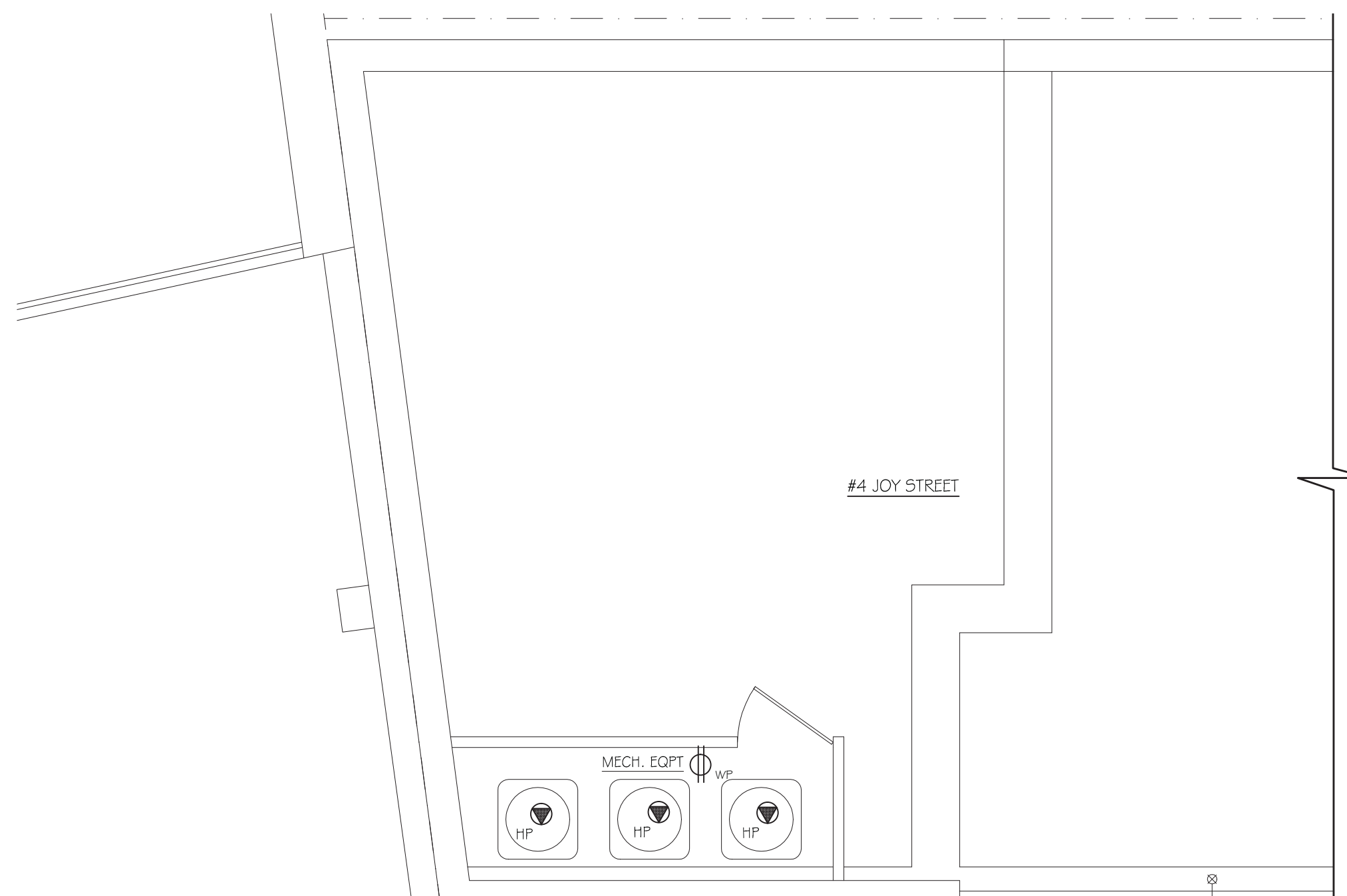
SYMBOL	DESCRIPTION
Ⓢ <sub>USD</sub>	UNIT-TYPE SMOKE DETECTOR CONNECTED TO APT. CIRCUITRY. WHERE MORE THAN ONE SD IS REQD IN AN APT, THEY SHALL BE INTERCONNECTED & SYNCHRONIZED
Ⓢ <sub>BSD</sub>	BUILDING ALARM SYSTEM SMOKE DETECTOR
Ⓢ <sub>BHD</sub>	BUILDING ALARM SYSTEM HEAT DETECTOR 135° RATE OF RISE
Ⓢ	BUILDING ALARM SYSTEM FIRE HORN AND STROBE (AUDIBLE/VISUAL ALARM)
Ⓢ	BUILDING ALARM SYSTEM FIRE HORN
Ⓢ <sub>UCS</sub>	UNIT-TYPE CARBON # SMOKE DETECTOR CONNECTED TO APT. CIRCUITRY. WHERE MORE THAN ONE SD IS REQD IN AN APT, THEY SHALL BE INTERCONNECTED & SYNCHRONIZED

### FIRE ALARM NOTES:

- FIRE ALARM DEVICES, FIXTURES & COMPONENTS ARE INTERCONNECTED ON A SEPARATE ELECTRICAL CIRCUIT & ALARM THROUGHOUT- ALL ON BATTERY BACKUP.
- PROVIDE ONE 5-LB. MULTI-PURPOSE FIRE EXTINGUISHER IN EACH UNIT.

### GENERAL ELECTRICAL NOTES

- SEE REFLECTED CEILING PLANS FOR SPECIFIC LOCATIONS OF CEILING DEVICES ALL NEW FIXTURES / DEVICES TO BE LOCATED IN EXISTING LOCATIONS WHERE FEASIBLE - IN ROOMS WHERE FINISHES ARE TO REMAIN, PROVIDE NEW WIRING AND DEVICES @ EXISTING LOCATIONS (TYP.)
- ALL NEW OUTLETS TO BE 12" A.F.F. UNLESS NOTED OTHERWISE, OR SHOWN ON INTERIOR ELEVATIONS IN BASE. SEE ELEVATIONS FOR SPECIFIC LOCATIONS IN ADDITION TO ELECTRICAL PLANS.
- ALL DEVICES TO BE WHITE EXCEPT BROWN IN NAT. FINISHED WOODWORK.
- PROVIDE POWER TO ALL HVAC EQUIPMENT, FANS, FAN COILS, PUMPS, ETC., AND ELEVATOR. SEE HVAC DRAWINGS.
- PROVIDE TRANSFORMER FOR ALL LOW VOLTAGE LIGHTING, TYP.
- PROVIDE FOR ANY OUTLETS OR DEVICES REQD PER CODE AND NOT NOTED IN PLANS



REAR YARD ELECTRICAL PLAN  
SCALE: 1/4"=1'-0"

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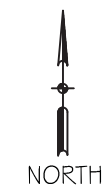
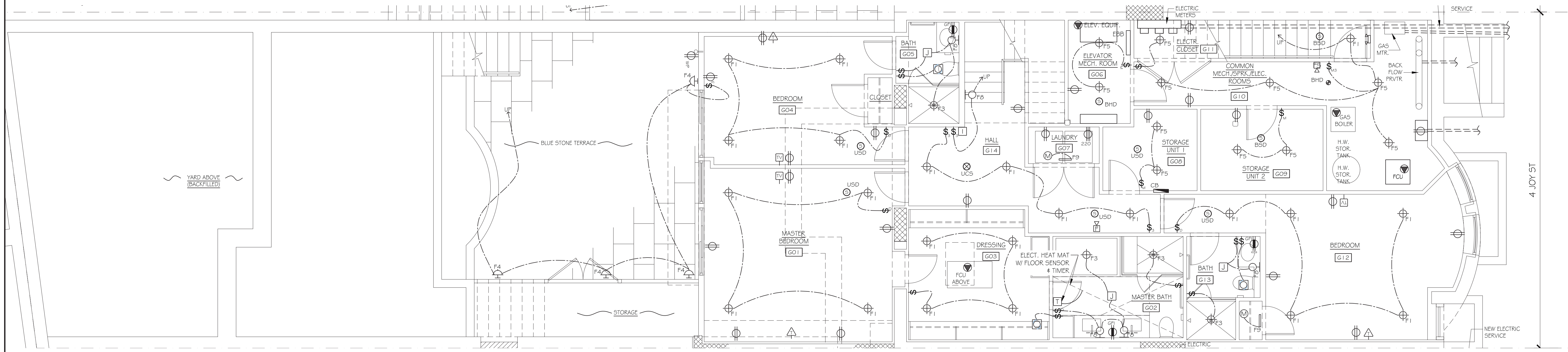
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4 JOY STREET  
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REAR YARD ELECTRICAL  
PLAN AND ELECTRICAL  
SCHEDULE

EI



GARDEN FLOOR ELECTRICAL PLAN  
SCALE: 1/4"=1'-0"

GARDEN FLOOR  
ELECTRICAL PLAN



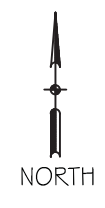
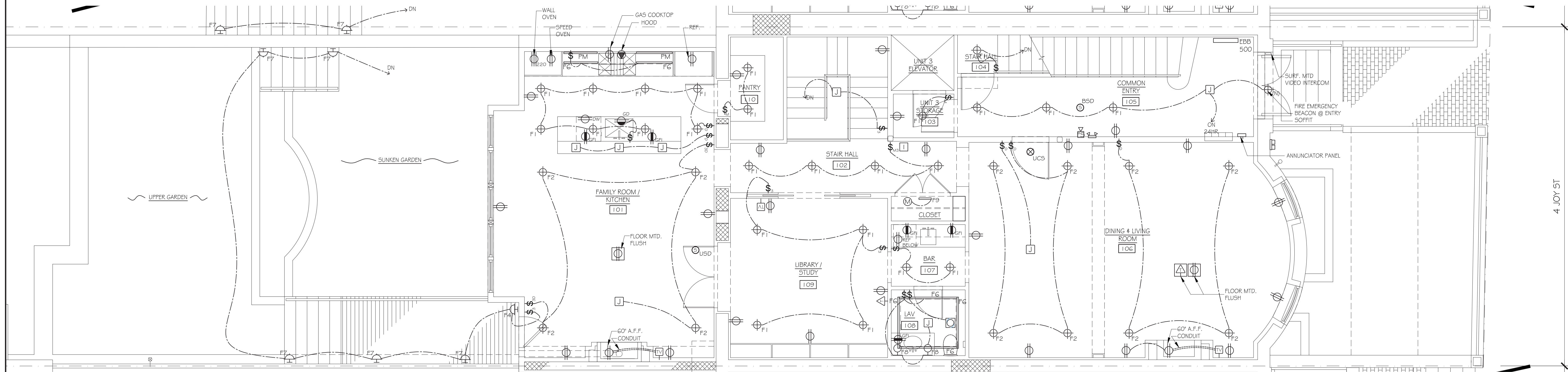
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FIRST FLOOR ELECTRICAL PLAN  
SCALE: 1/4"=1'-0"

4 JOY ST

FIRST FLOOR  
ELECTRICAL PLAN



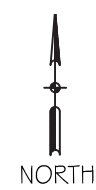
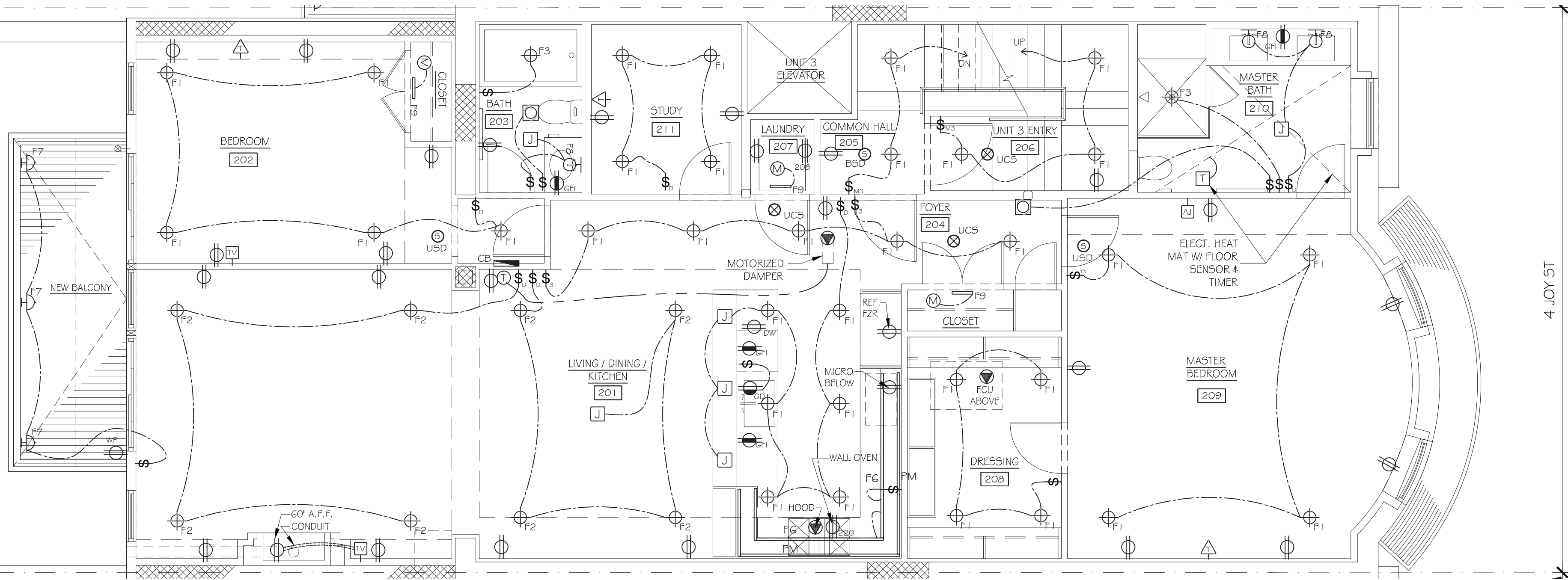
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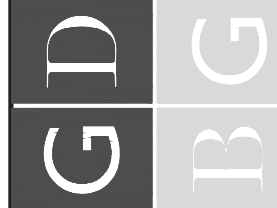
SECOND FLOOR ELECTRICAL PLAN  
SCALE: 1/4"=1'-0"

4 JOY ST

SECOND FLOOR  
ELECTRICAL PLAN

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BOSTON, MA

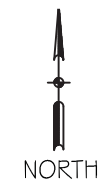
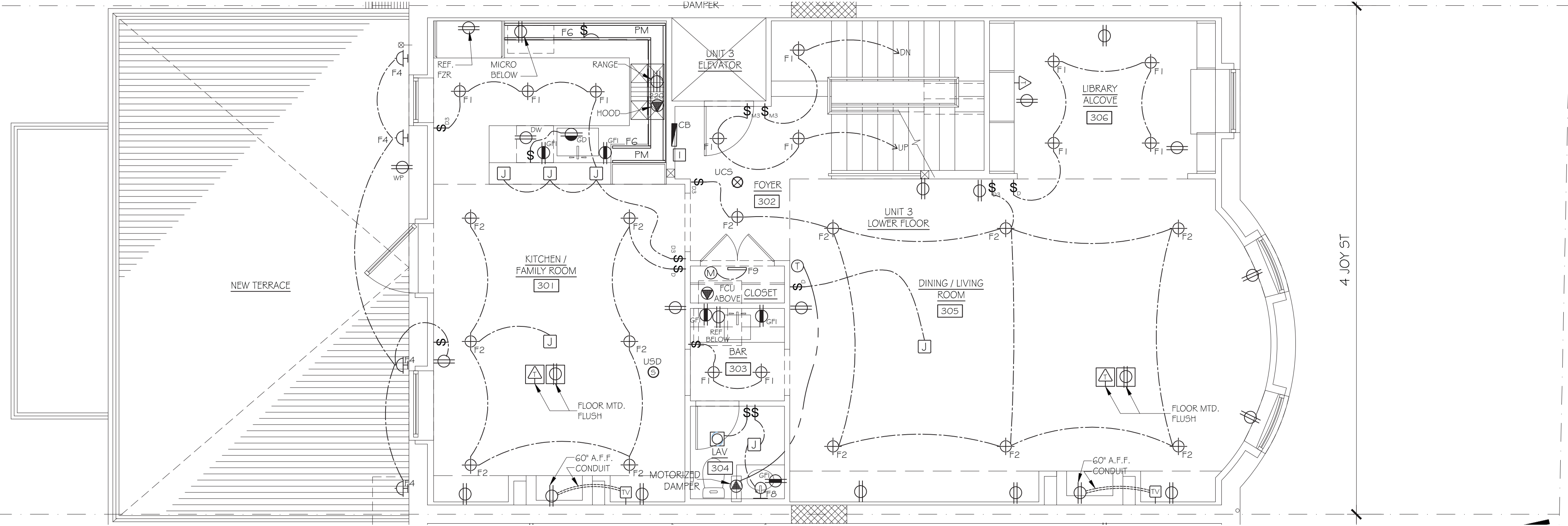
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**THIRD FLOOR ELECTRICAL PLAN**  
SCALE: 1/4"=1'-0"

**THIRD FLOOR  
ELECTRICAL PLAN**

**E5**

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BOSTON, MA

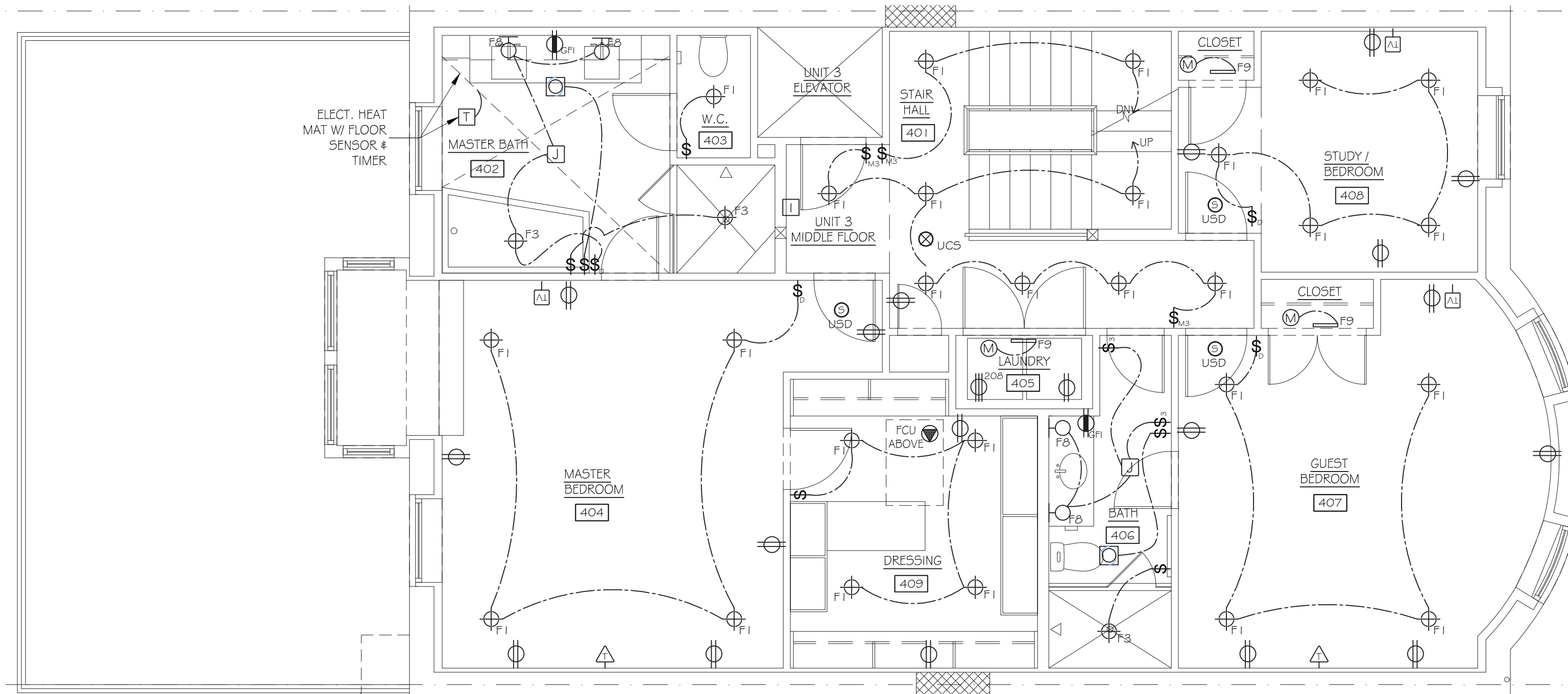
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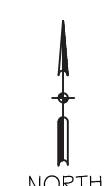
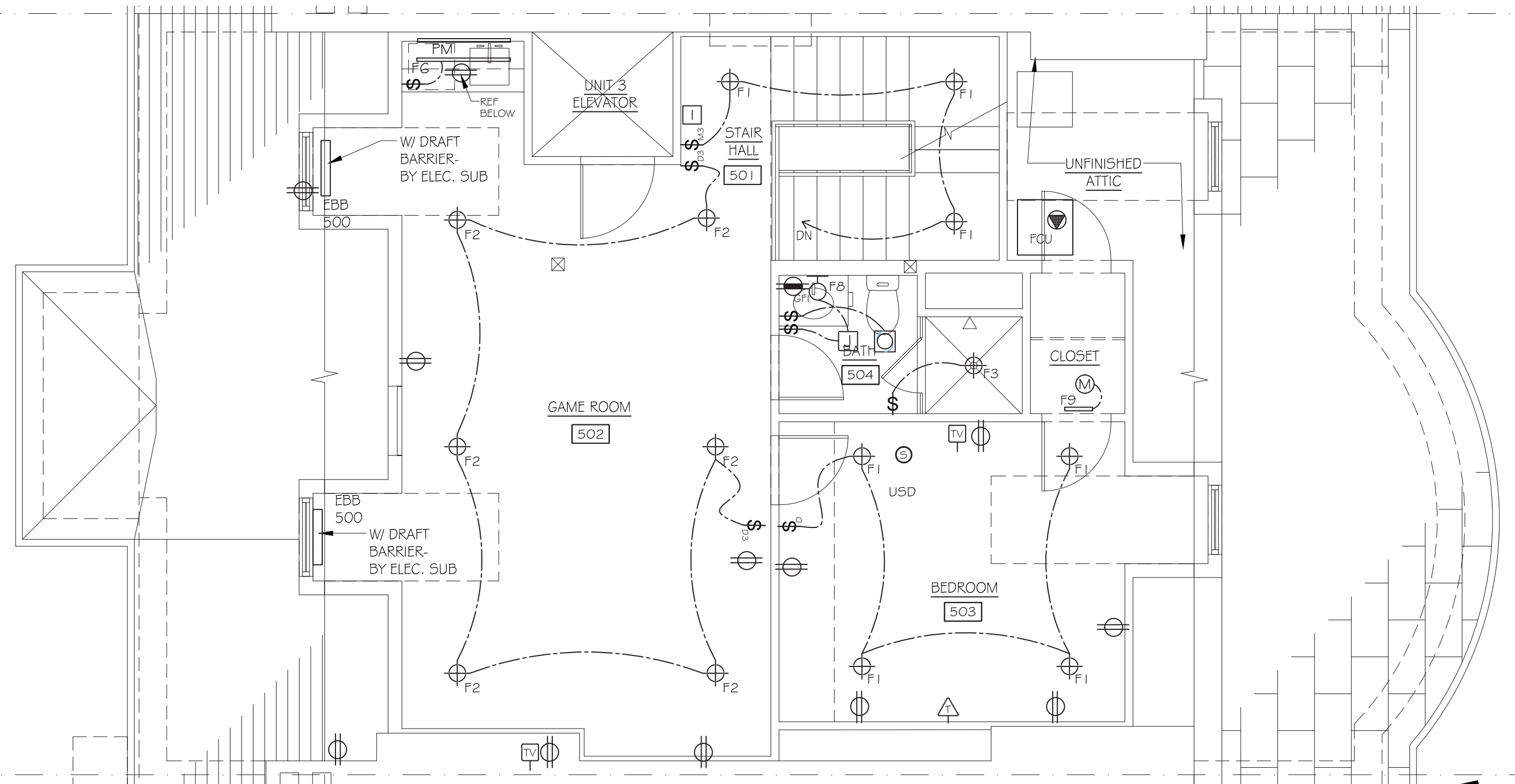
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4 JOY ST

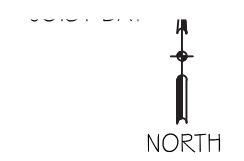
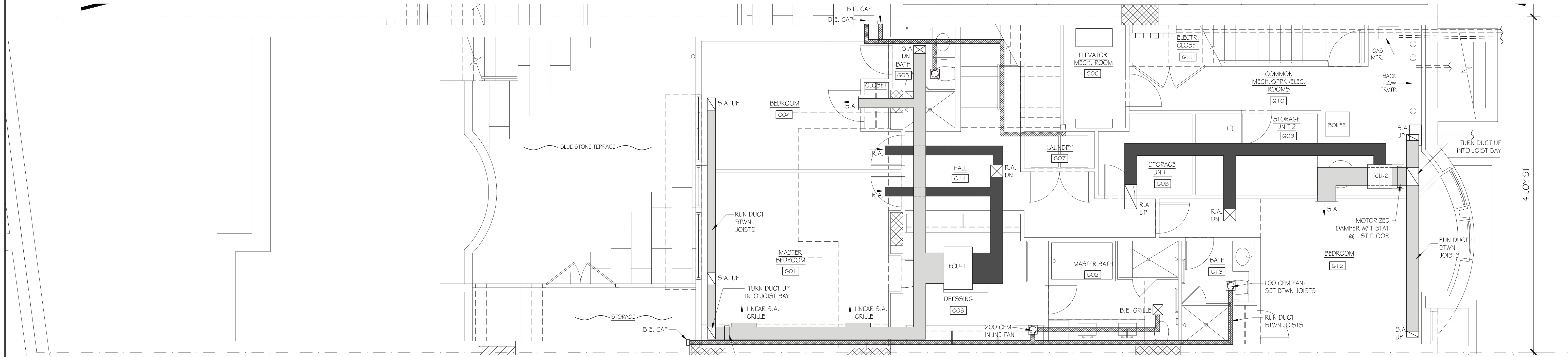


FOURTH FLOOR ELECTRICAL PLAN  
SCALE: 1/4"=1'-0"



FIFTH FLOOR ELECTRICAL PLAN  
SCALE: 1/4"=1'-0"

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<b>FOURTH AND FIFTH FLOOR ELECTRICAL PLANS</b>		
<b>E6</b>		



GARDEN FLOOR MECHANICAL PLAN  
SCALE: 1/4"=1'-0"

GARDEN FLOOR  
MECHANICAL PLAN

M1

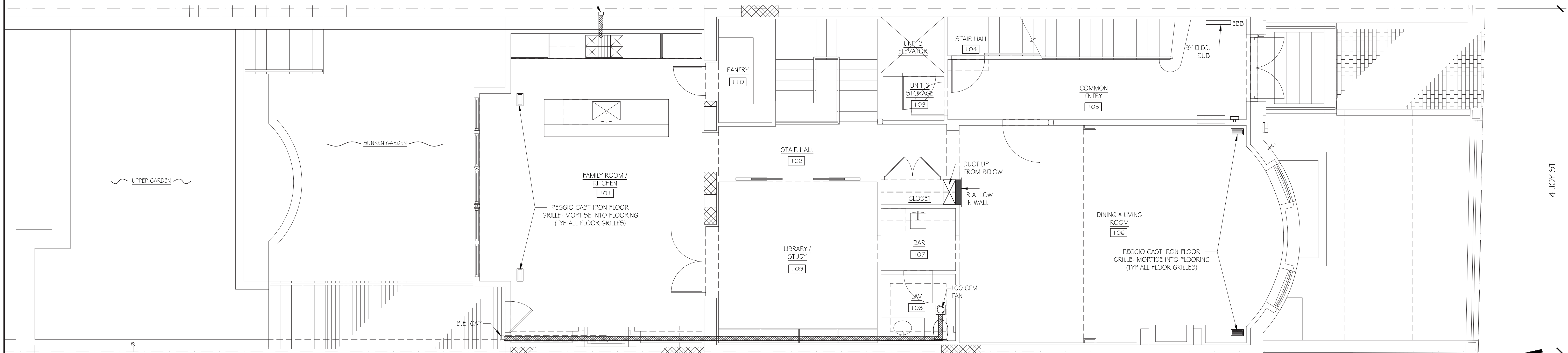
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FIRST FLOOR MECHANICAL PLAN  
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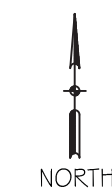
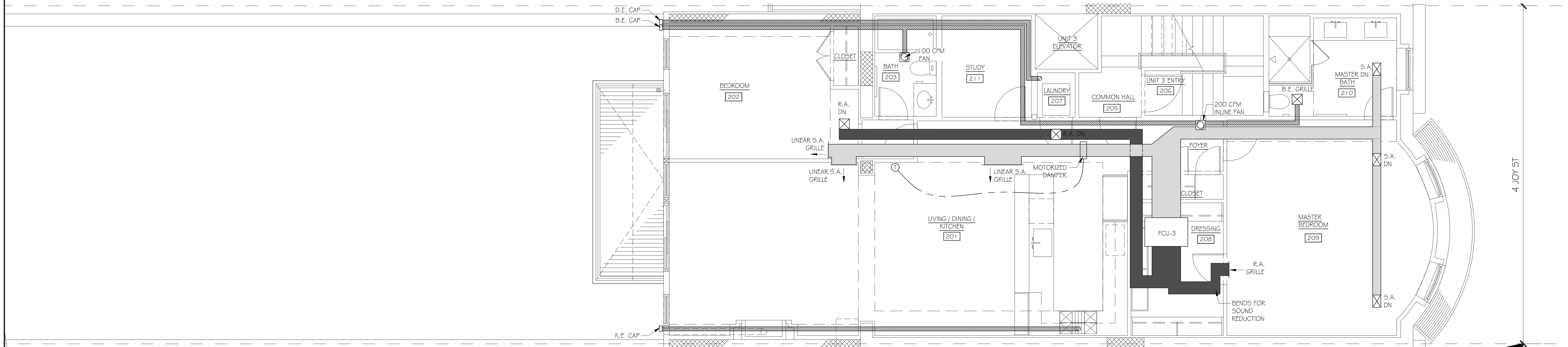
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**FIRST FLOOR  
MECHANICAL PLAN**



4 JOY ST

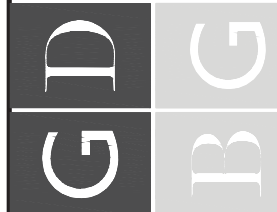


SECOND FLOOR MECHANICAL PLAN  
SCALE: 1/4"=1'-0"

SECOND FLOOR  
MECHANICAL PLAN

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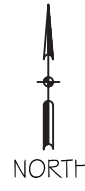
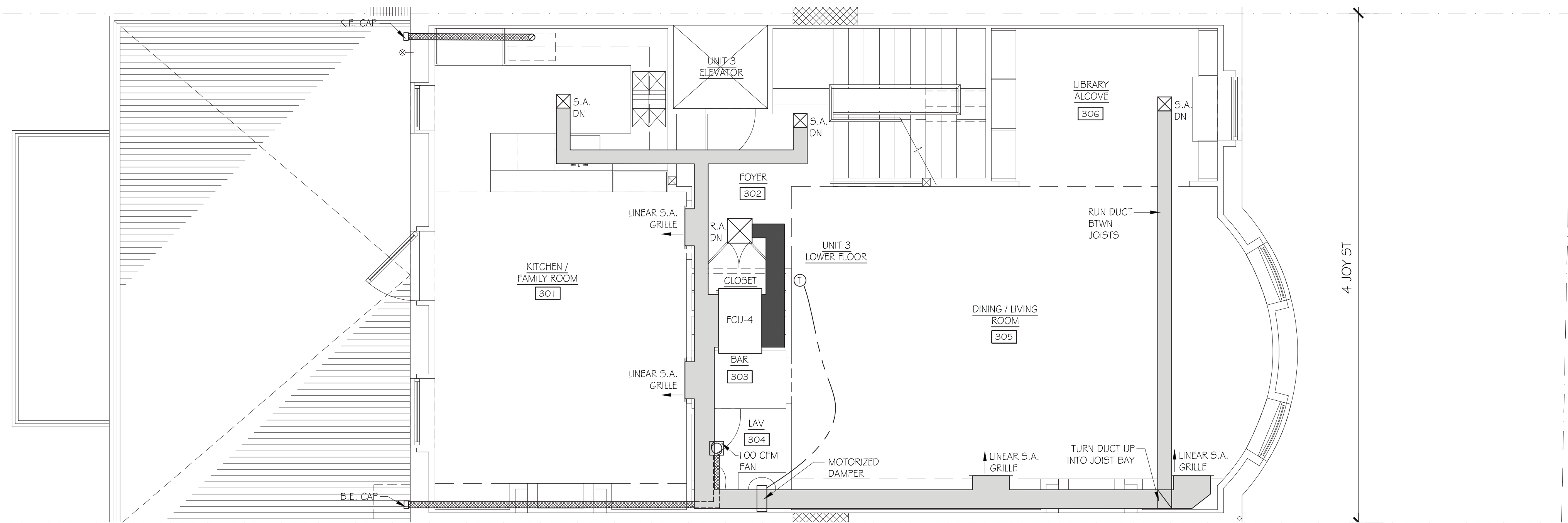
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M3



THIRD FLOOR MECHANICAL PLAN  
SCALE: 1/4"=1'-0"

THIRD FLOOR  
MECHANICAL PLAN

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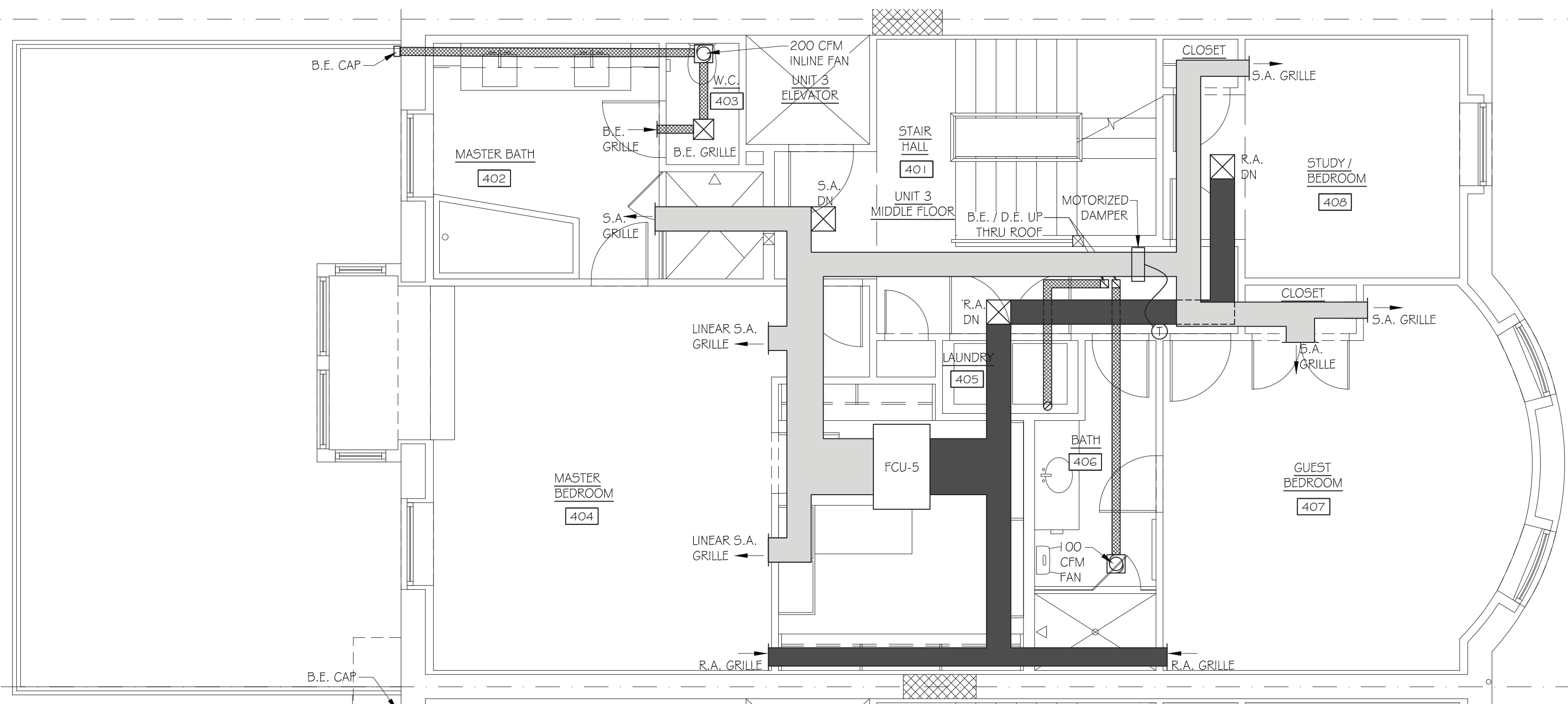
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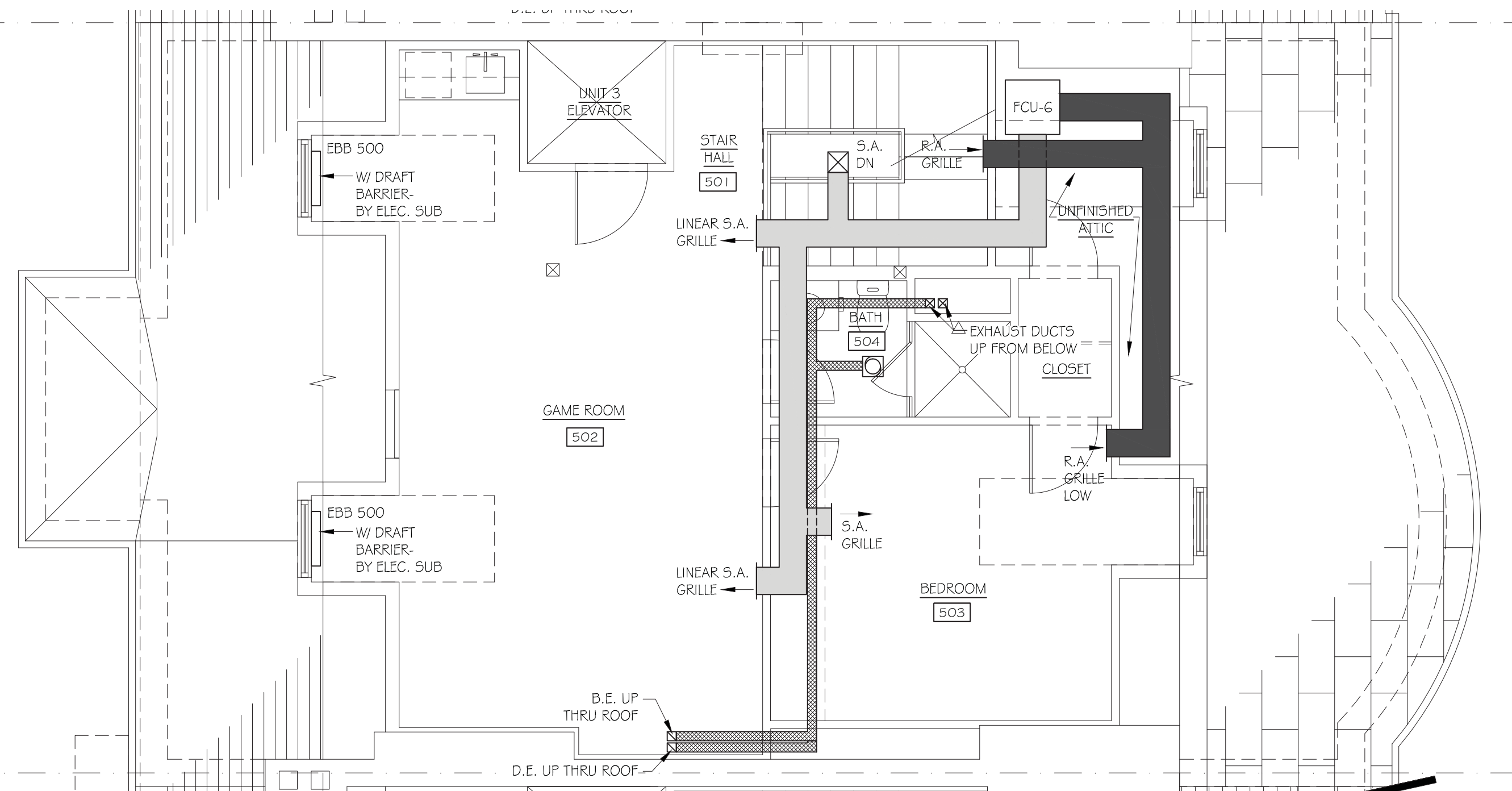
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M4



FOURTH FLOOR MECHANICAL PLAN  
SCALE: 1/4"=1'-0"

4 JOY ST



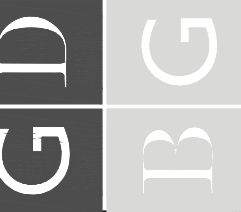
FIFTH FLOOR MECHANICAL PLAN  
SCALE: 1/4"=1'-0"

FOURTH AND FIFTH FLOOR  
MECHANICAL PLANS



4 JOY STREET  
BOSTON, MA

JOB NO: 1606	SCALE: 1/4"=1'-0"
DATE: 06.21.17	REVISED



GRASSI DESIGN GROUP  
BEAUCHEMIN GRASSI INTERIORS

46 Waltham Street, Suite 3A  
Boston, MA 02118  
Phone 617-956-9992  
Fax 617-956-9993

ROOF

FIFTH FLOOR

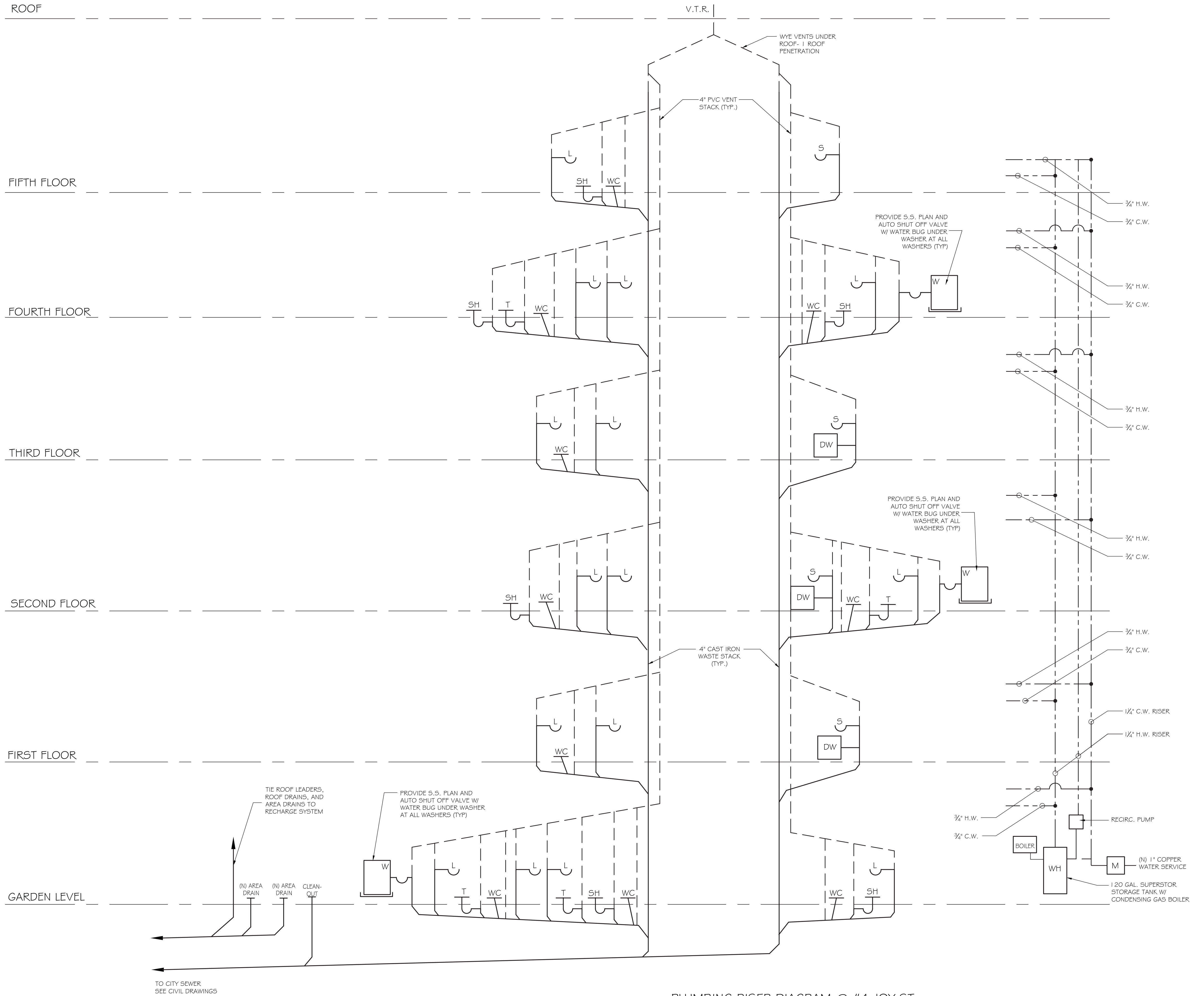
FOURTH FLOOR

THIRD FLOOR

SECOND FLOOR

FIRST FLOOR

GARDEN LEVEL



PLUMBING RISER DIAGRAM @ #4 JOY ST

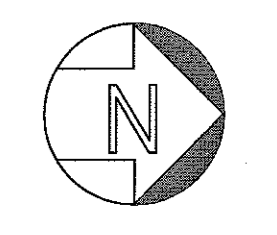
46 Waltham Street, Suite 3A  
 Boston, MA 02118  
 Phone 617-956-9992  
 Fax 917-956-9993

**GD** GRASSI DESIGN GROUP  
**BG** BEAUCHEMIN GRASSI INTERIORS

JOB NO: 1606	SCALE: N.A.	DATE: 08.21.17	REVISED
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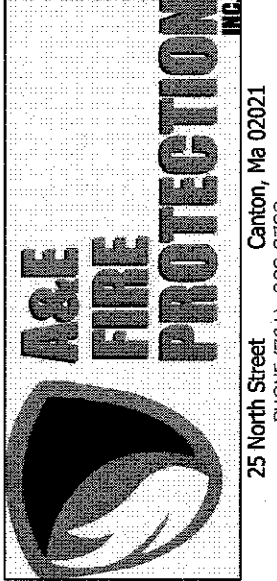
**4 JOY STREET**  
 BOSTON, MA

**PLUMBING RISER  
 DIAGRAM- BLDG #4**



Date:	
DESCRIPTION	
Rev:	

OCCUPANCY CLASSIFICATION	RESIDENTIAL
ENG:	K. REITER
DATE	4/18/17
CONTR. NO.	



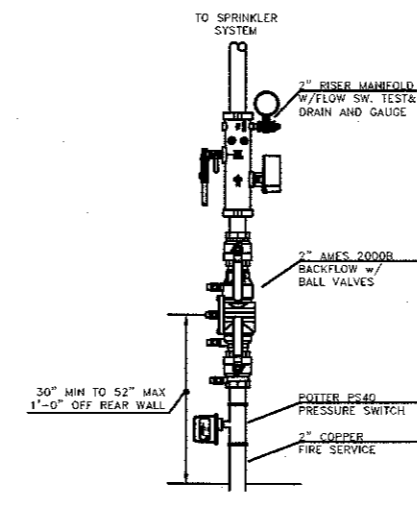
FIRE PROTECTION SYSTEM

4 JOY STREET  
BOSTON, MA

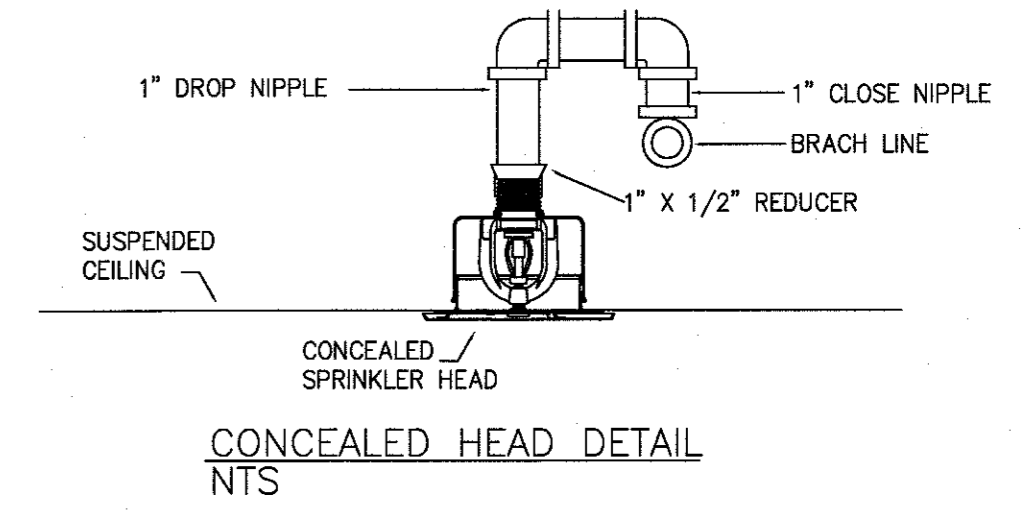
SCALE  
1/4" = 1'-0"  
FP1

**GENERAL NOTES**

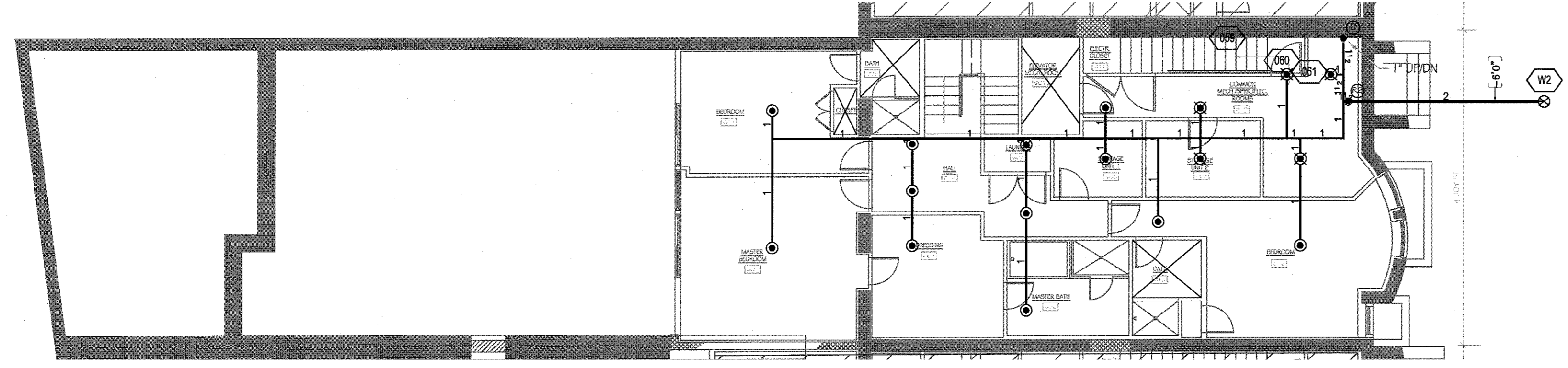
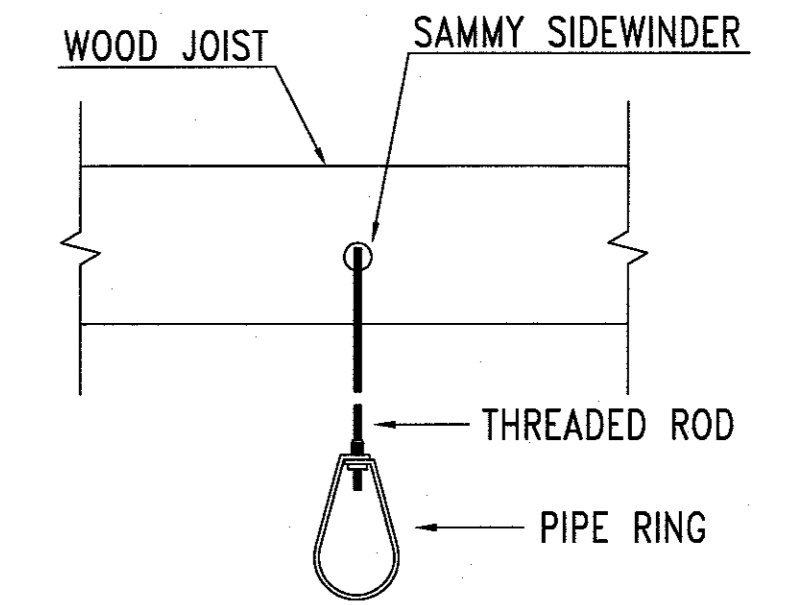
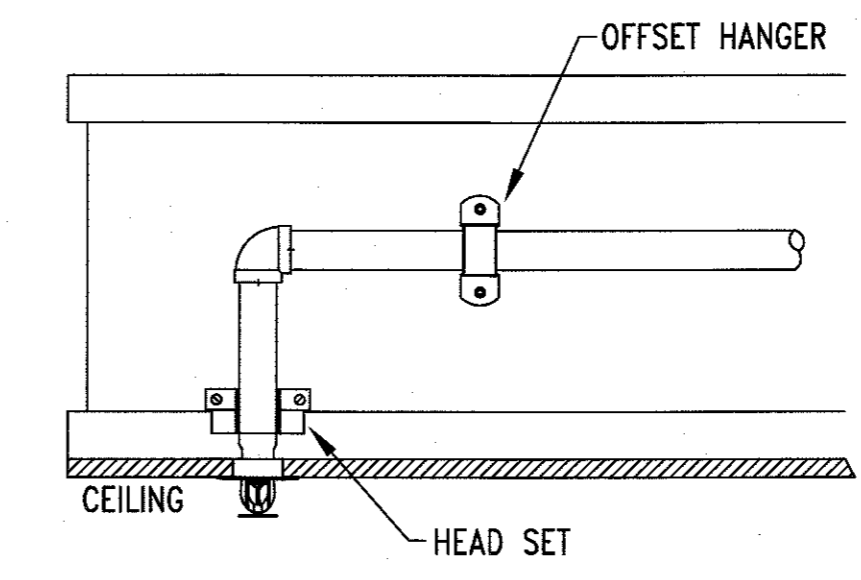
1. SYSTEM IS WET PIPE HYDRAULICALLY CALCULATED PER NFPA 13D (2013) & PER MASS-STATE BUILDING CODE 8TH EDITION  
-REMOTE AREA #3 IS CALCULATED UTILIZING THE 2 MOST REMOTE TYCO LFII 4.90 K FACTOR PENDANTS FLOWING 17 GALLONS AT 12 PSI WITH A MAX SPACING OF 18'x18'.
2. OCCUPANCY IS RESIDENTIAL
3. ALL 1" EXPOSED WET-SYSTEM PIPING WILL BE BLACK STEEL SCHEDULE 40 WITH THREADED FITTINGS. ALL 1" CONCEALED WET-SYSTEM PIPING WILL BE CPVC WITH CPVC FITTINGS.
4. SPRINKLERS SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES THAT DO NOT EXCEED 24 SQ. FT, THE LEAST DIMENSION DOES NOT EXCEED 3'-0" AND THE WALLS & CEILINGS ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIAL THAT ARE NOT USED OR INTENDED FOR LIVING PROCESS.
5. SPRINKLERS SHALL NOT BE REQUIRED IN ATTICS, CRAWL SPACES, AND OTHER CONCEALED SPACES THAT ARE NOT USED OR INTENDED FOR LIVING PROCESS.
6. IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN A TEMPERATURE AT OR ABOVE 40 DEGREES IN AREA WITH WET-PIPE SPRINKLER SYSTEM.



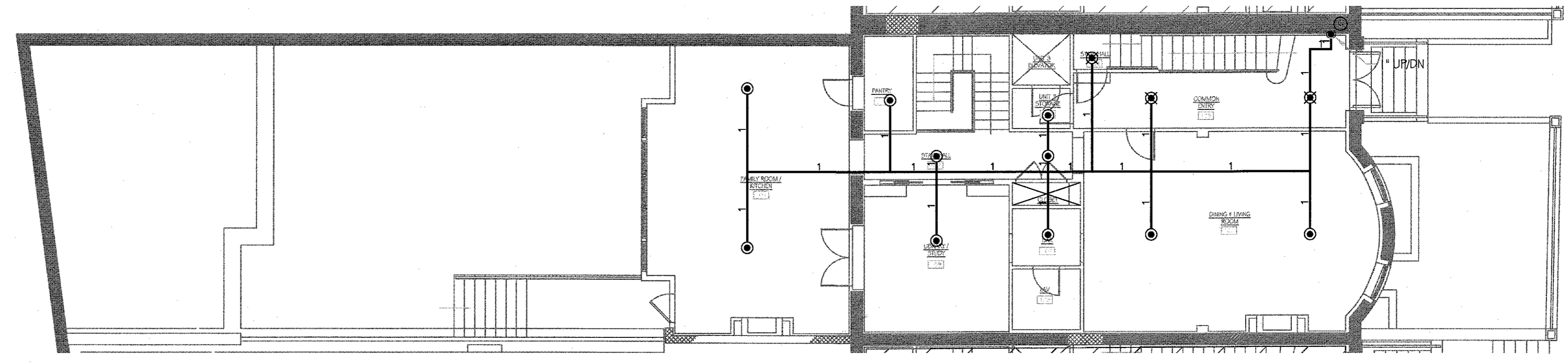
**RISER DETAIL**  
SCALE: 1/2" = 1'-0"



**CONCEALED HEAD DETAIL**  
NTS



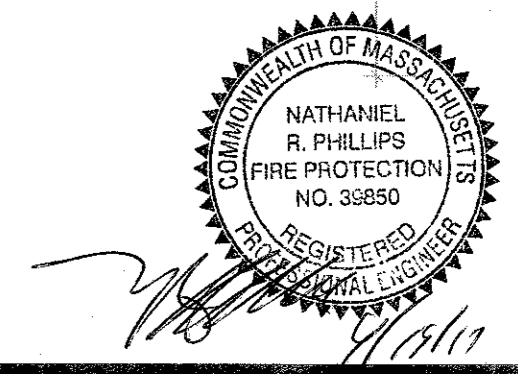
**GARDEN FP PLAN**  
SCALE: 1/4" = 1'-0"



**FIRST FLOOR FP PLAN**  
SCALE: 1/4" = 1'-0"

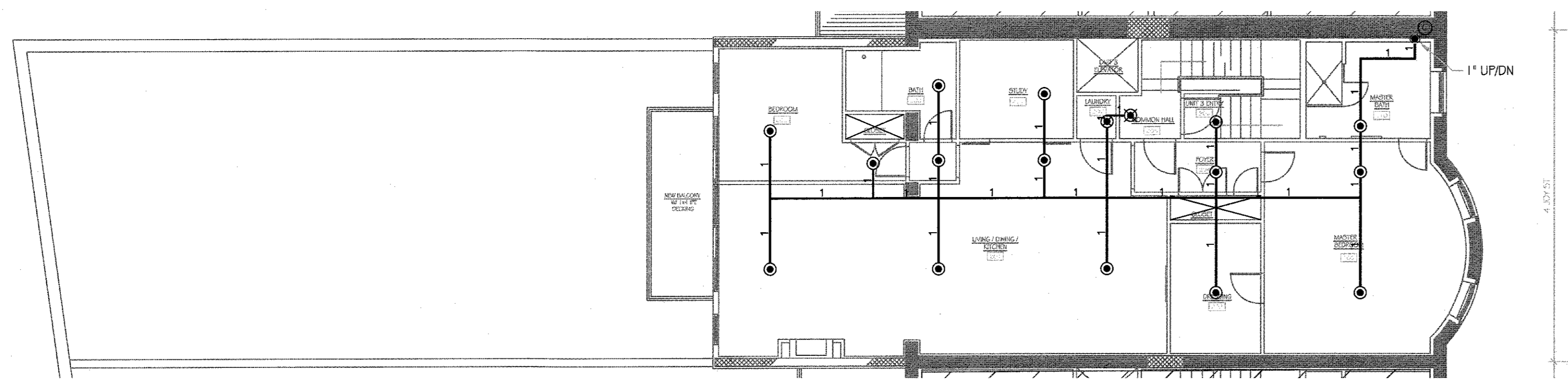
**HEAD BLOCK**

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#
●	58	PEND	WHITE	155	4.90	1/2"	TY2234	Tyco	LFII
●	3	PEND	WHITE	175	4.90	1/2"	TY2234	Tyco	LFII
⊗	9	PEND	WHITE	155	5.60	1/2"	TY3551	Tyco	RFLI

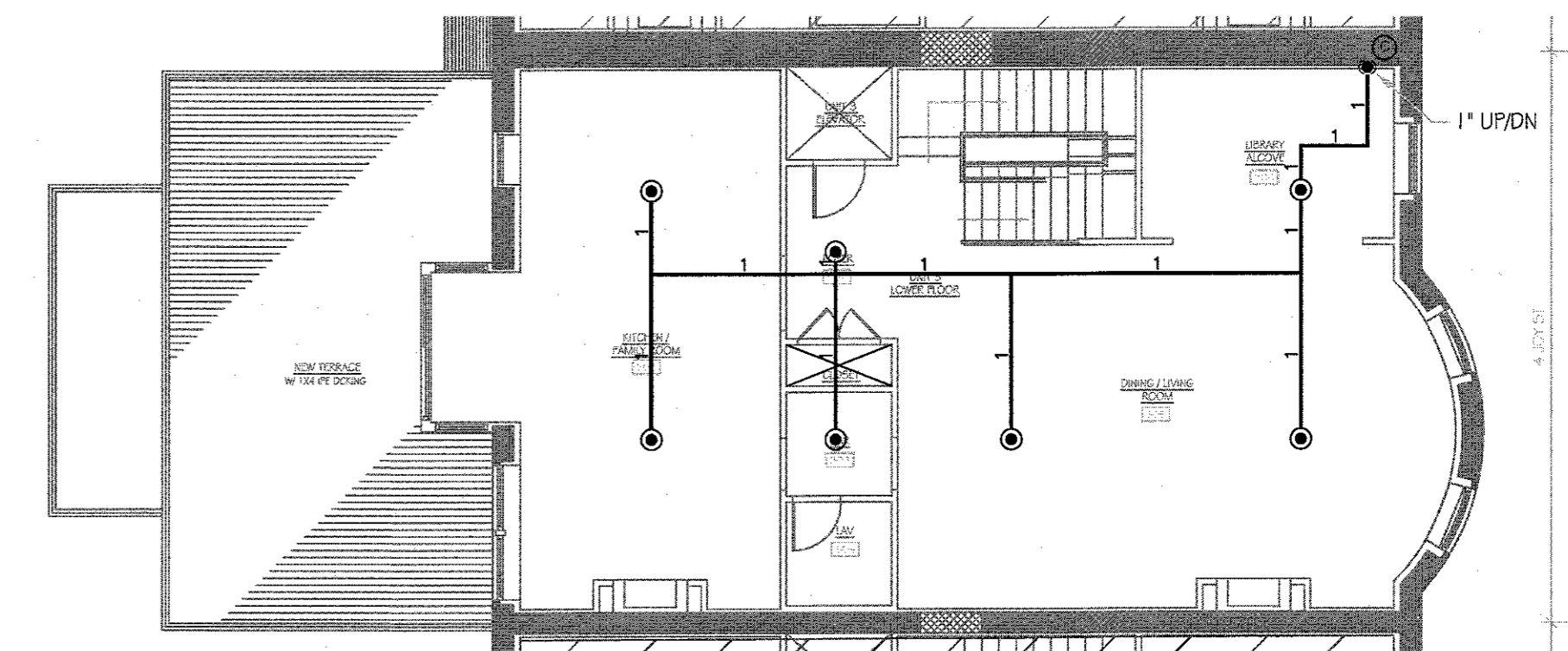


3 JOY STREET SPRINKLER DRAWINGS  
UNDER SEPARATE PERMIT





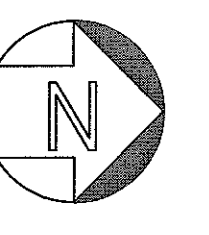
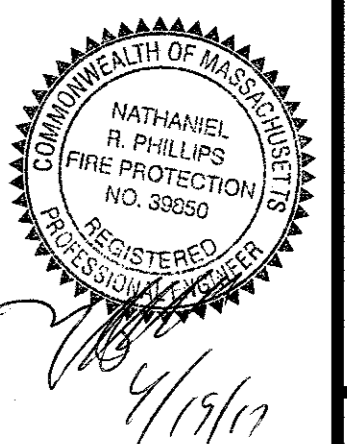
SECOND FLOOR FP PLAN  
SCALE: 1/4" = 1'-0"



THIRD FLOOR FP PLAN  
SCALE: 1/4" = 1'-0"

HEAD BLOCK

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#
●	58	PEND	WHITE	155	4.90	1/2"	TY2234	Tyco	LFII
●	3	PEND	WHITE	175	4.90	1/2"	TY2234	Tyco	LFII
●	9	PEND	WHITE	155	5.60	1/2"	TY3551	Tyco	RFLL

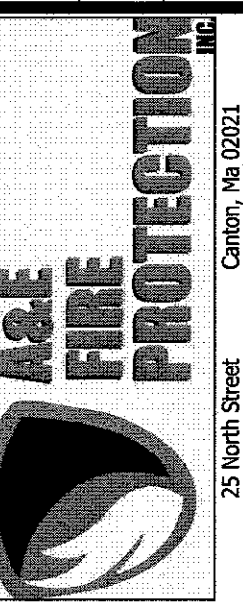


Date:

DESCRIPTION

Rev:

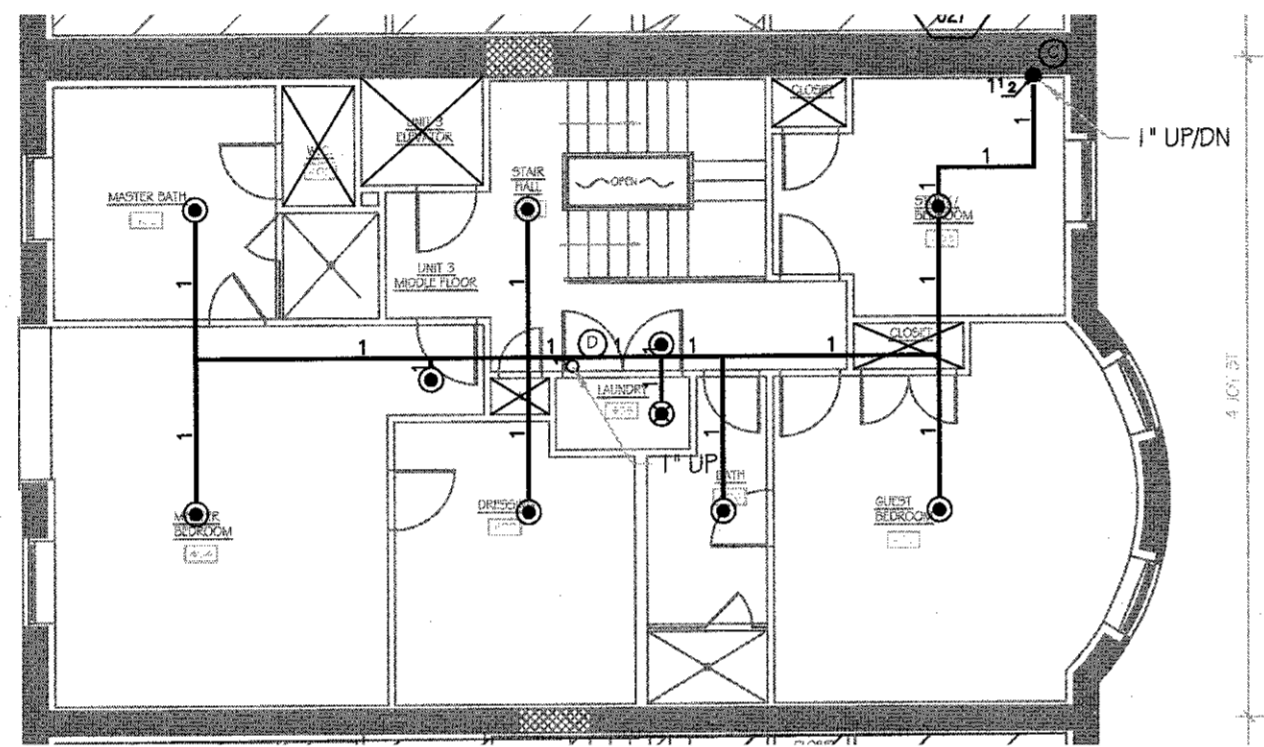
OCCUPANCY CLASSIFICATION  
RESIDENTIAL  
ENG: K. REITER  
DATE: 4/18/17  
CONTR. NO.



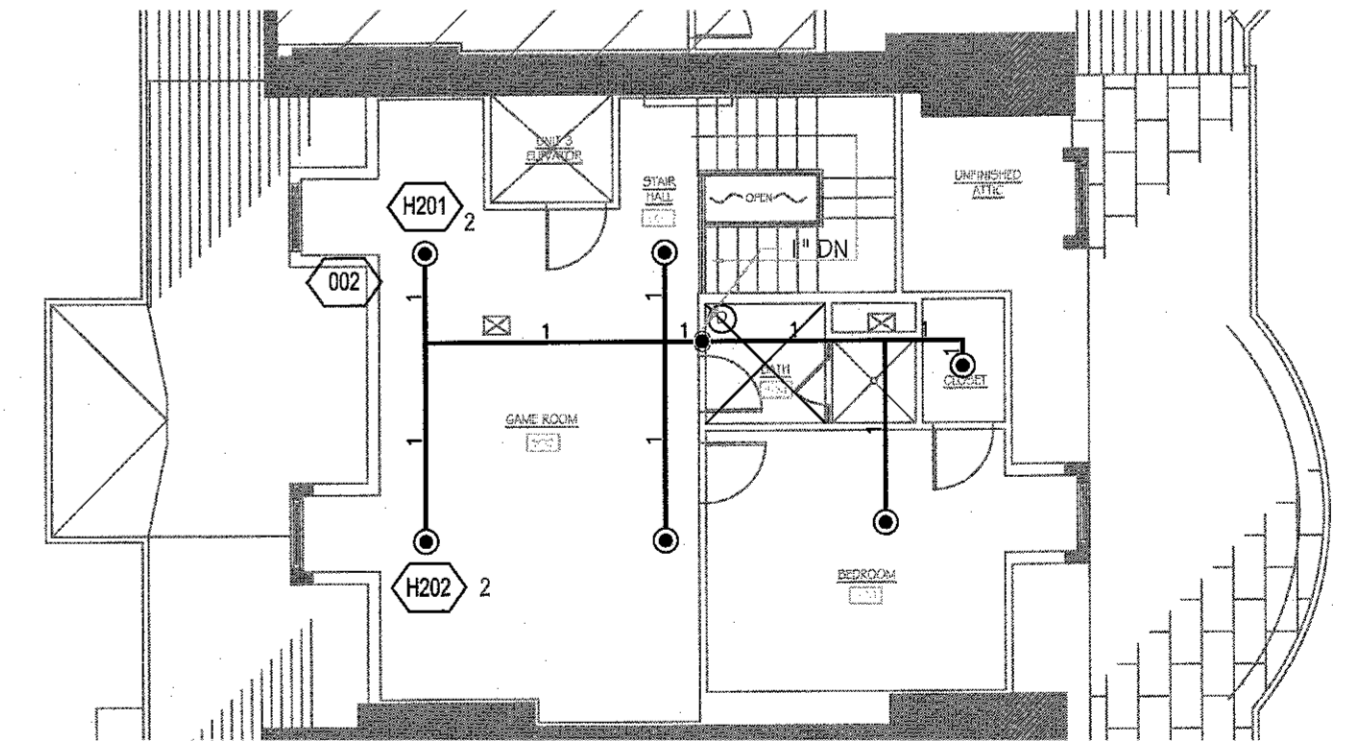
FIRE PROTECTION SYSTEM

4 JOY STREET  
BOSTON, MA

SCALE: 1/4" = 1'-0"  
FP2



FOURTH FLOOR FP PLAN  
SCALE: 1/4" = 1'-0"

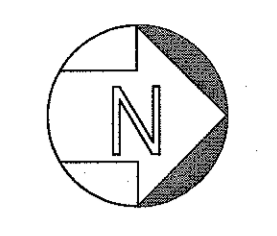
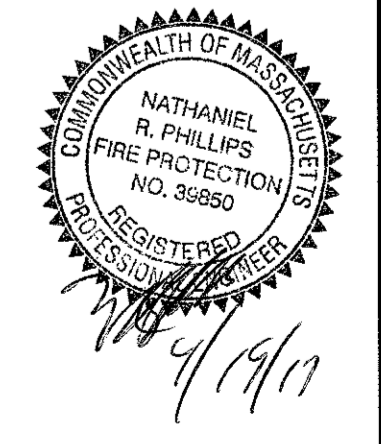


FIFTH FLOOR FP PLAN  
SCALE: 1/4" = 1'-0"

HEAD BLOCK

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#
58	PEND	WHITE	1.55	4.90	1/2"	TY2234	Tyco	LFII	
3	PEND	WHITE	1.75	4.90	1/2"	TY2234	Tyco	LFII	
9	PEND	WHITE	1.55	5.60	1/2"	TY3551	Tyco	RFLL	

HYDRAULIC DESIGN CRITERIA	
REMOTE AREA LOCATION: AREA #1	
HAZARD DESCRIPTION:	RESIDENTIAL
CALCULATED DENSITY:	0.05 GPM/SF
DESIGN AREA:	221 SF
MAX. AREA PER HEAD:	152 SF
# OF HEADS FLOWING:	2
K-FACTOR:	4.9
SPRINKLER DEMAND:	34 GPM
HOSE ALLOWANCE:	0 GPM
TOTAL SYSTEM DEMAND:	34 GPM W/ 66 PSI REQUIRED AT THE BASE OF RISER



Date:

DESCRIPTION

Rev:

OCCUPANCY CLASSIFICATION  
RESIDENTIAL  
ENG: K. REITER  
DATE: 4/1/17  
CONTR. NO.:



FIRE PROTECTION SYSTEM

4 JOY STREET  
BOSTON, MA

SCALE  
1/4" = 1'-0"  
FP3