LIST OF DRAWINGS

TS- LIST OF DRAWINGS, ZONING CHART, EXISTING AND PROPOSED SITE PLAN

PROPOSED SITE PLAN

EXISTING SITE PLAN

BWSC PLAN

A1- PROPOSED BASEMENT AND FIRST FLOOR PLAN

A2- PROPOSED SECOND AND THIRD FLOOR PLAN

A3- PROPOSED ROOF FLOOR PLAN, AND BUILDING SECTION

A4- PROPOSED FRONT, AND REAR ELEVATIONS

A5- PROPOSED SIDE ELEVATION

A6-PROPOSED SIDE ELEVATION

A7- BUILDING SECTIONS, WALL TYPES WINDOW AND DOOR SCHEDULE

A8- WALL SECTIONS ROOF DETAIL STAIR DETAIL

S1- FOUNDATION AND FIRST FLOOR FRAMING

S2- SECOND FLOOR AND THIRD FLOOR FRAMING

S3- ROOF FRAMING AND SECTIONS

S4- DETAILS

FA1- PROPOSED BASEMENT AND FIRST FLOOR PLAN FIRE ALARM

FA2- PROPOSED SECOND AND THIRD FLOOR PLAN FIRE ALARM

FA3- PROPOSED ROOF FLOOR PLAN FIRE ALARM AND DETAILS

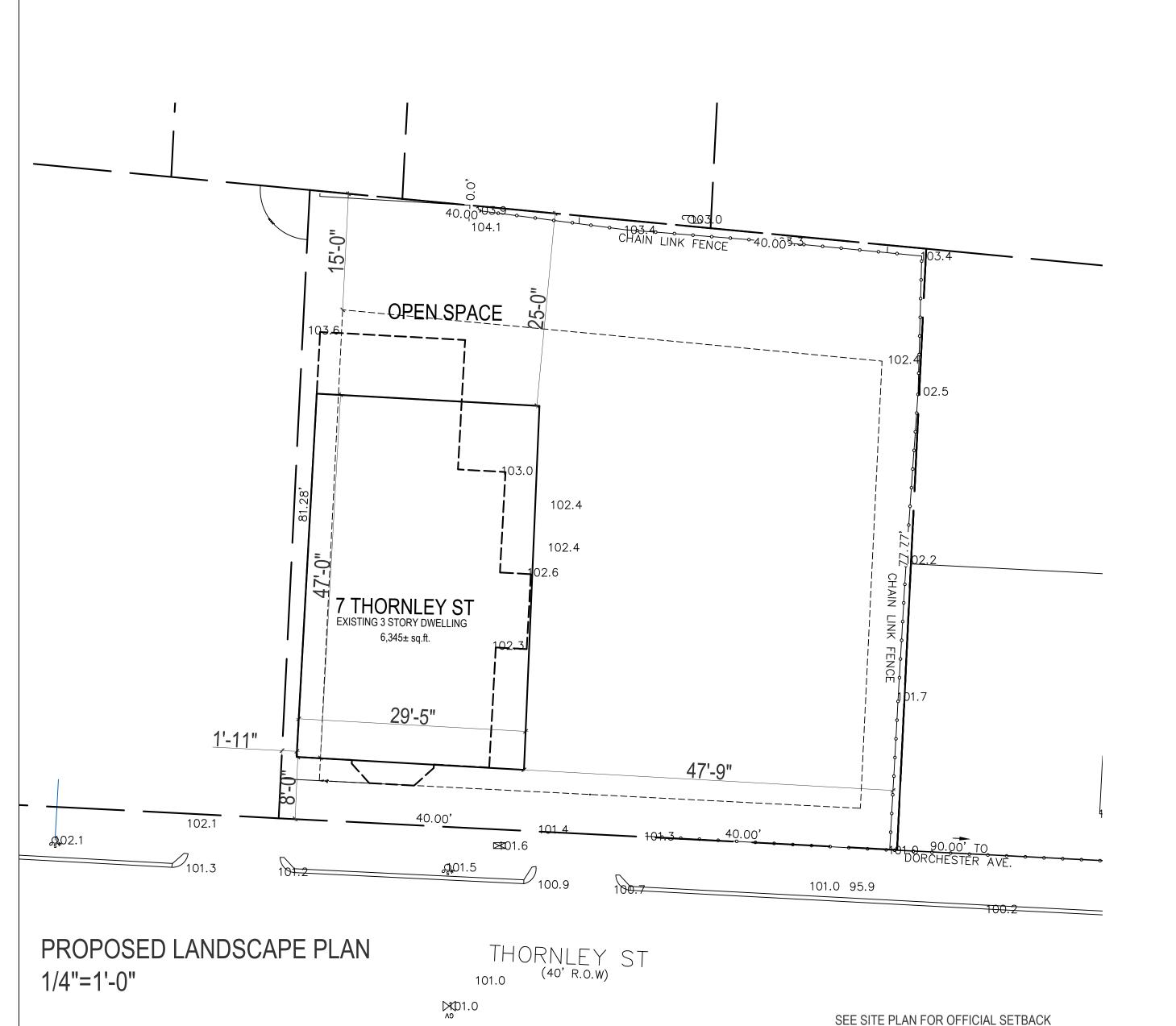
FP1- PROPOSED BASEMENT AND FIRST FLOOR PLAN FIRE PROTECTIONS

FP2- PROPOSED SECOND AND THIRD FLOOR PLAN PROTECTIONS

FP3- PROPOSED ROOF FLOOR PLAN FIRE PROTECTIONS DETAILS

ATTACHMENTS

HERS RATING



Di	Zoning Table 7 THORNLEY ST Zoning Tables mensional Requireme	
Dimensional Regulations	Requirements for Residential Subdistrict 3D-3000	EXISTING THREE FAMILY
Lot Area	3000 SF	6,345 sq ft
Lot Width	30	80.00
Lot Frontage (cannot be less than lot Width)	30	80.00
Floor Area Ratio (Max.)	1.3 3000 sf	.66 4,161 SF
Building height (stories)	3	3
Building height (feet)	40'-0"	36'-0"±
Usable Open Space per Dwelling Unit	300 SF PER UNIT	1260 SF
Front Yard Depth	5'-0"	8'-0" NO CHANGE
Side Yard Depth	5'-0"	(L)-1'-11"-min.* NO CHANG (R)-47'-9"- min.
Rear Yard Depth	15'-0"	25'-0"
Rear yard Max. Occ. by Accessory Buildings	.25	N/A

*Section 65-43. - Nonconformity as to Dimensional Requirements.

A Building or use existing on the effective date of this Article and not conforming to the applicable dimensional requirements specified in other provisions of this Article may nevertheless be altered or enlarged, provided that such nonconformity is not increased and that any enlargement itself conforms to such dimensional requirements.

TOTAL SQUARE FOOTAGE BREAKDOWN 7 THORNLEY

1ST: 1,387 SF OF LIVING AREA

2ND: 1,387 SF OF LIVING AREA

3RD: 1,387 SF OF LIVING AREA

TOTAL: 4,161 SF OF LIVING AREA

GENERAL NOTE-

-BUILDING WILL BE FULLY SPRINKLERED

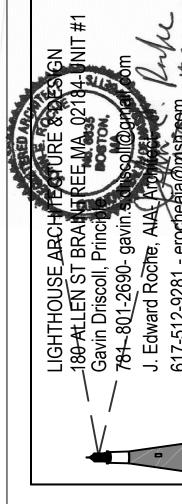
-SEE FIRE ALARM PLANS FOR DEVICES

-M.E.P.S ARE DESIGN BUILD BY THE OWNER AND G.C. AND WILL BE COORDINATED WITH THE ARCHITECT AND HERS RATER-

-SEE ATTACHED HERS RATING FOR INSULATION CALCULATIONS AND REQUIREMENT. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE PLANS AND SETTING UP THE INSPECTORS WITH THE HERS RATING

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS.NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.



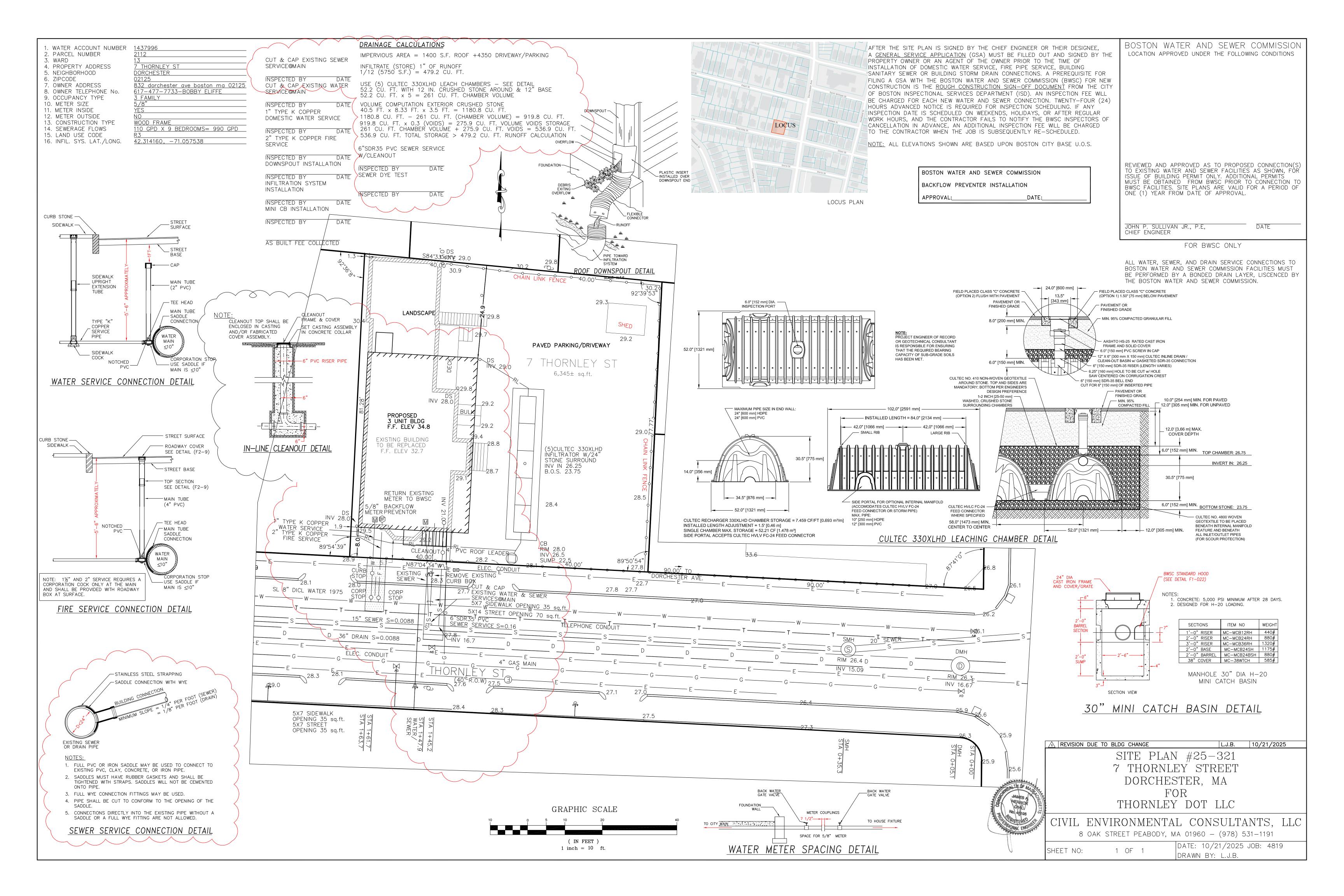
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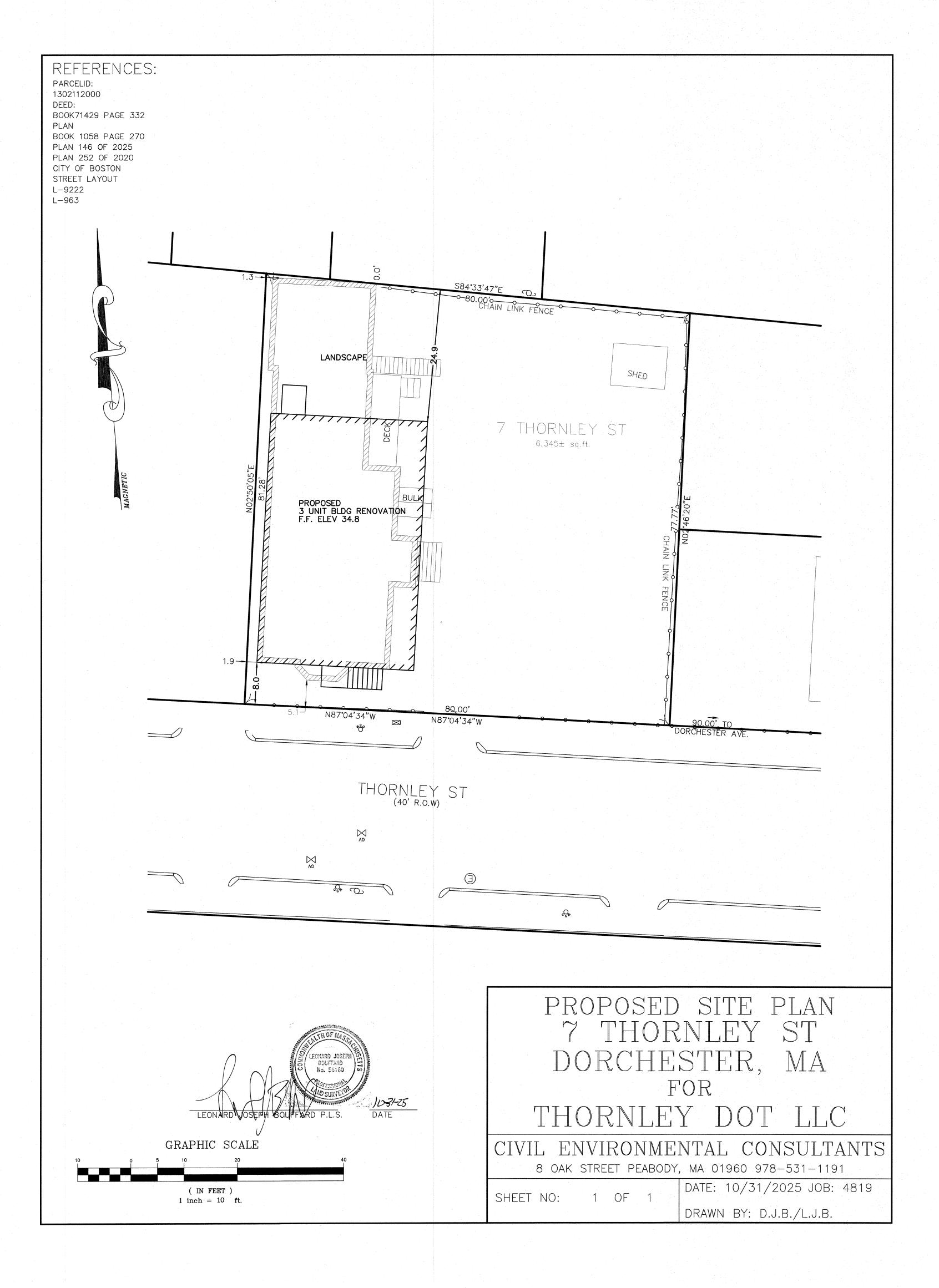
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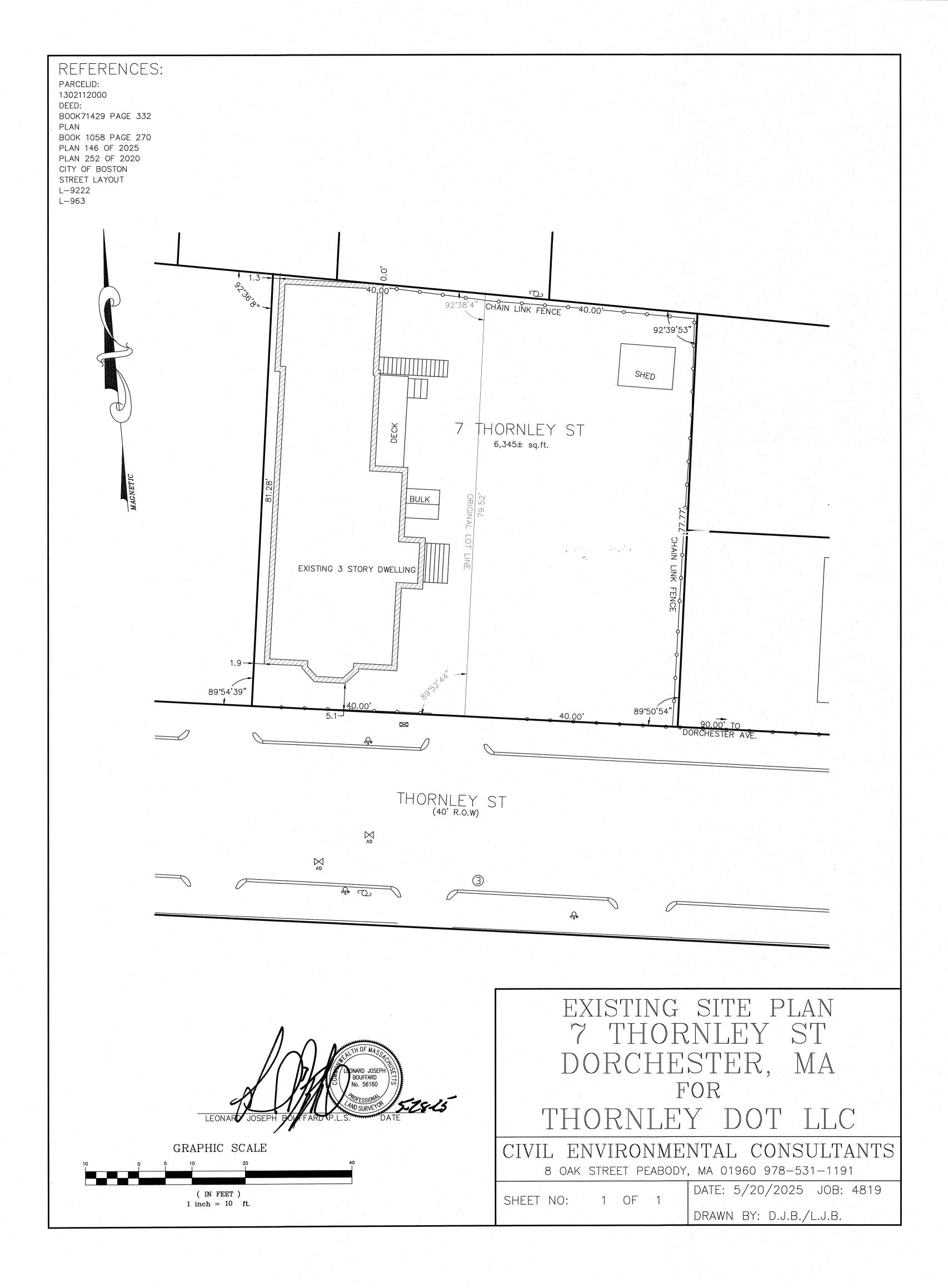
TITLE SHEET ZONING

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

TS





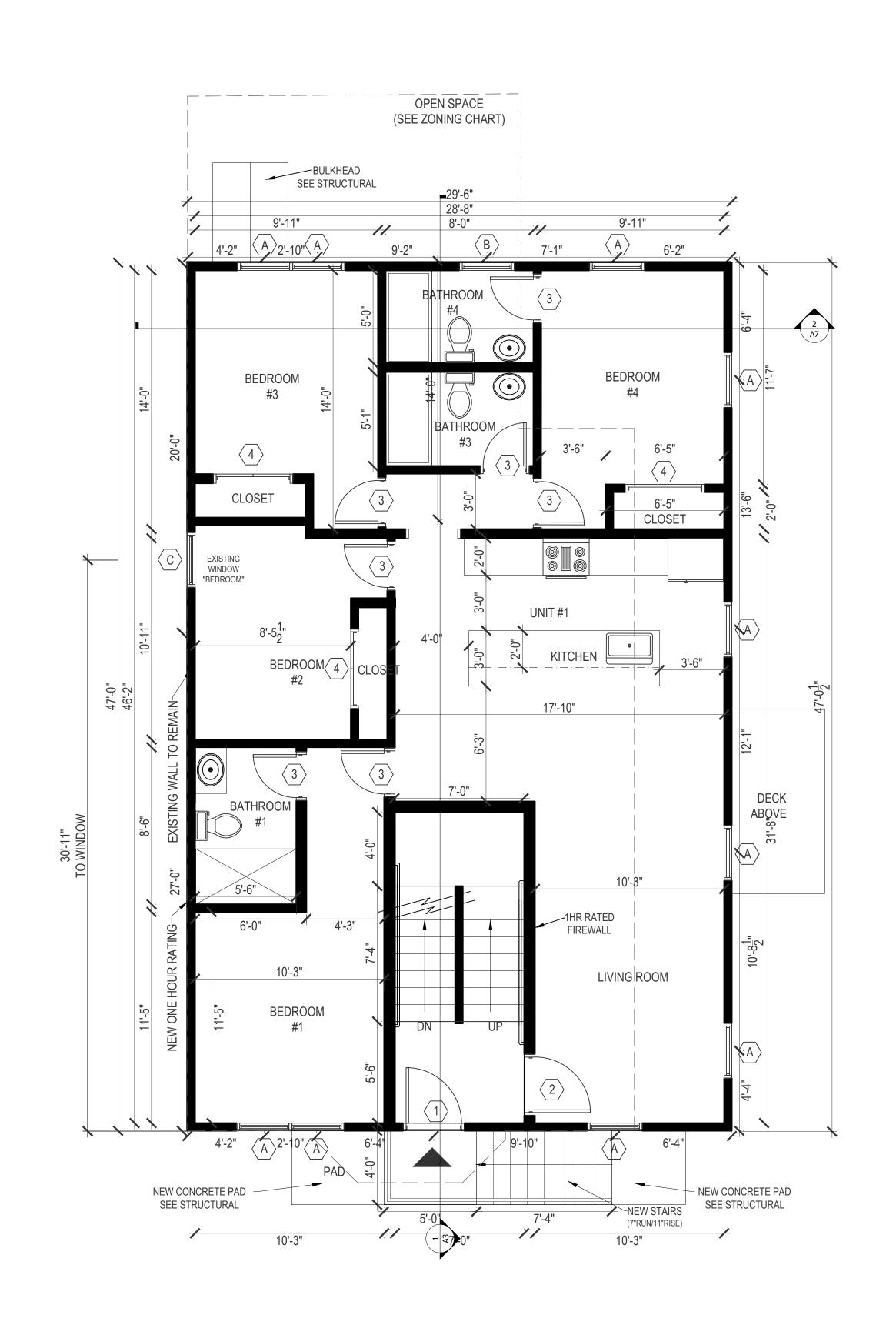


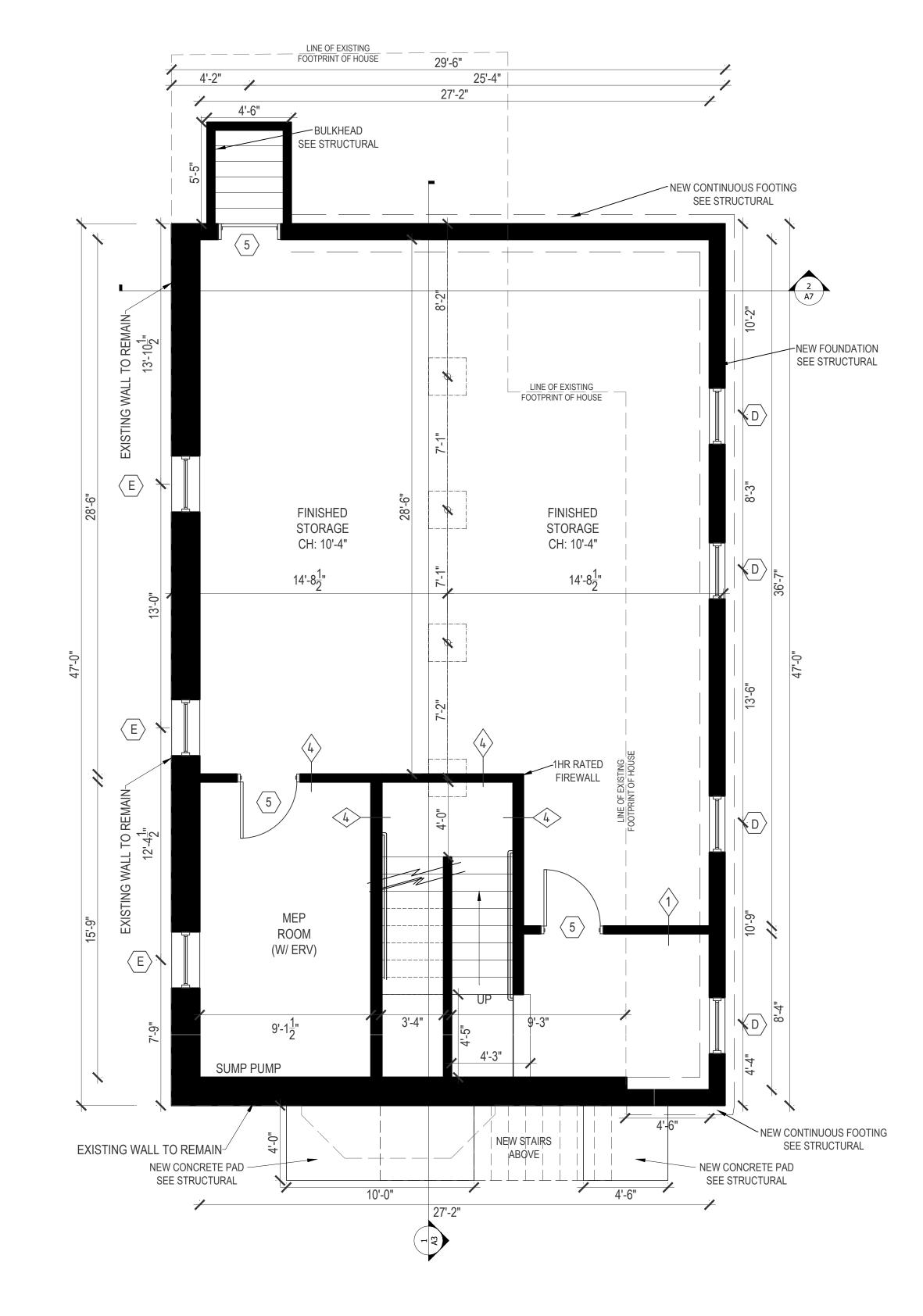


GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS.NOTIFY ARCHITECT OF ANY

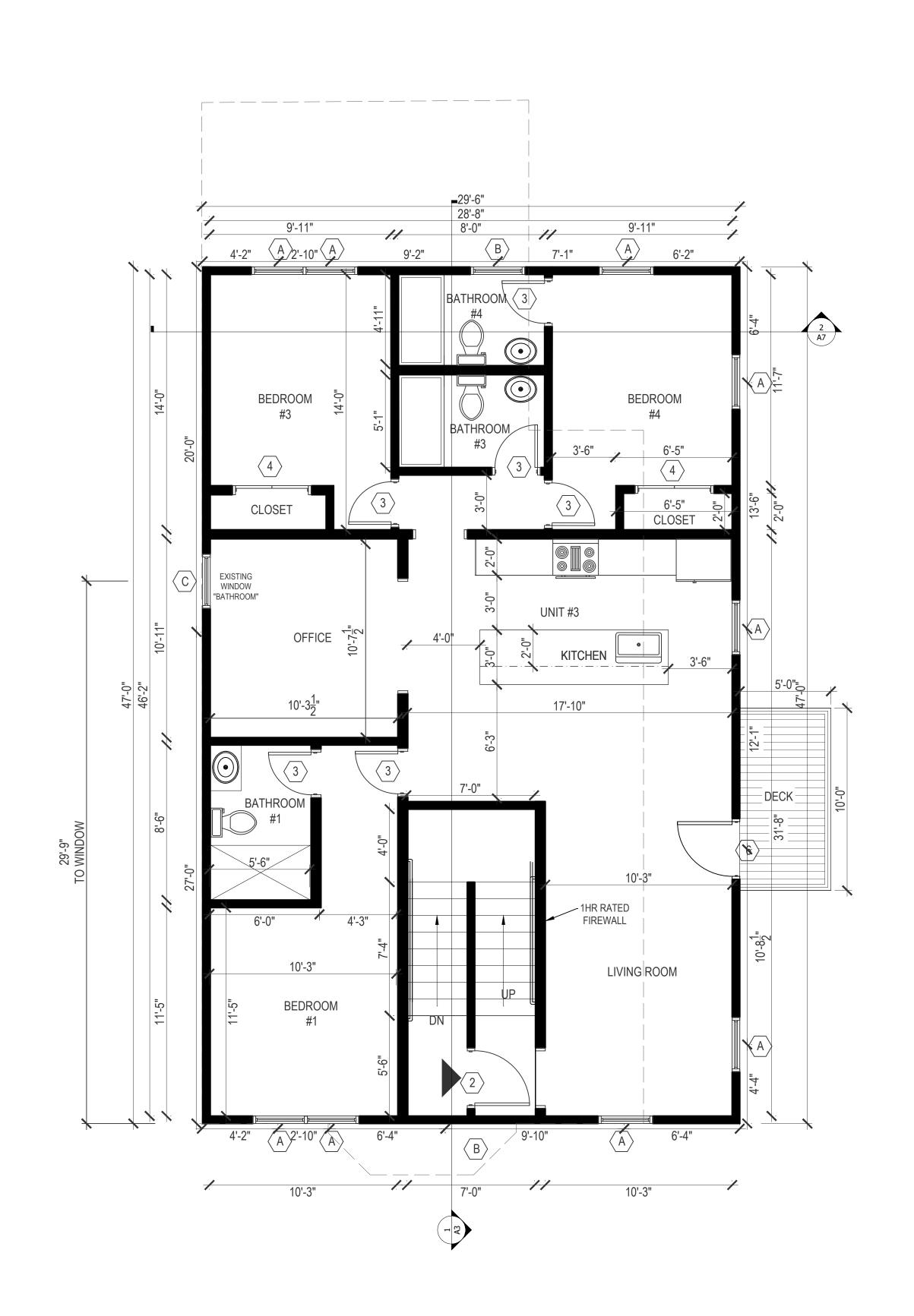
INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

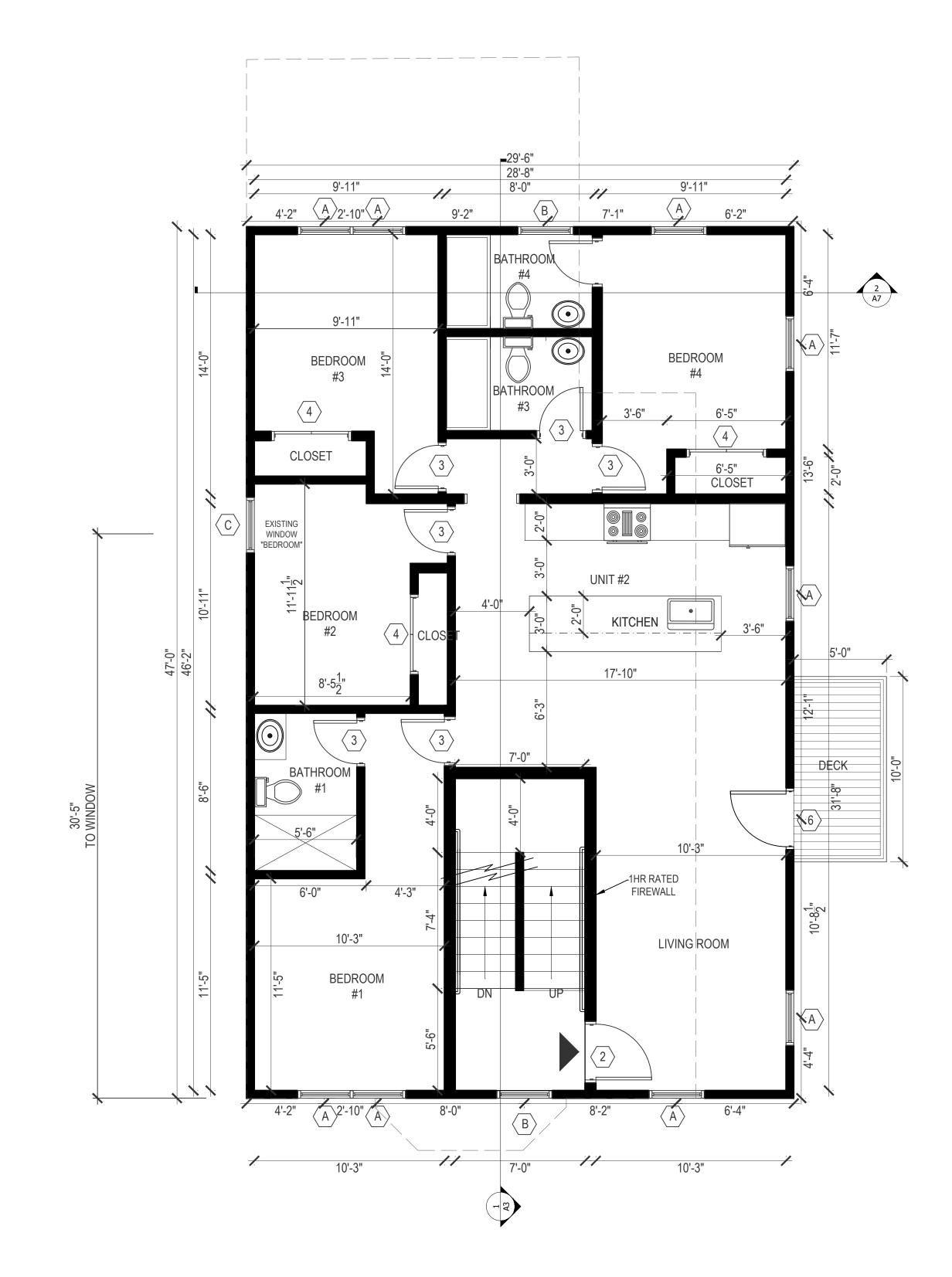




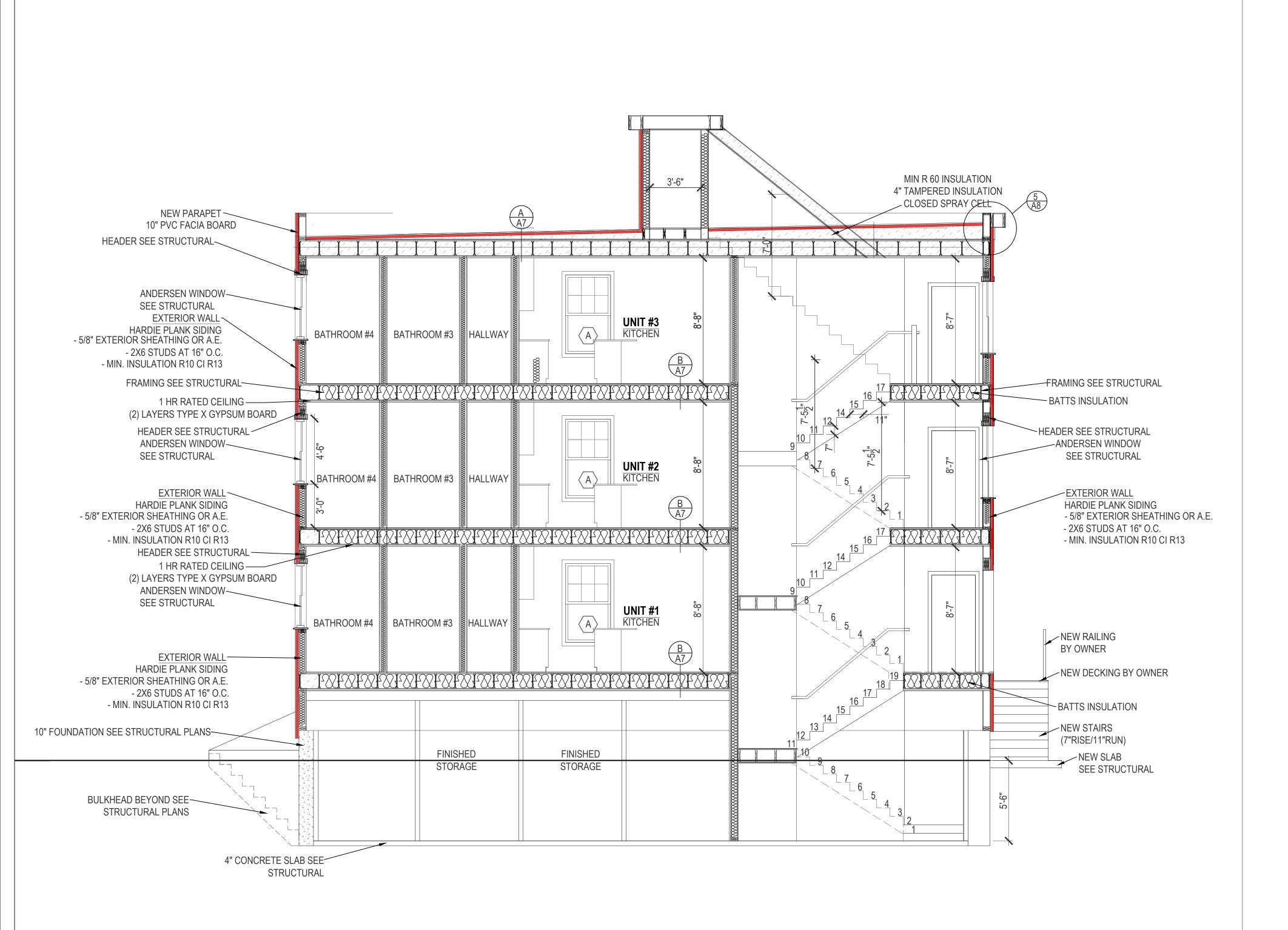
PROPOSED BASEMENT FLOOR PLAN- 1387 SF- STORAGE/MEP 1/4"=1'-0"





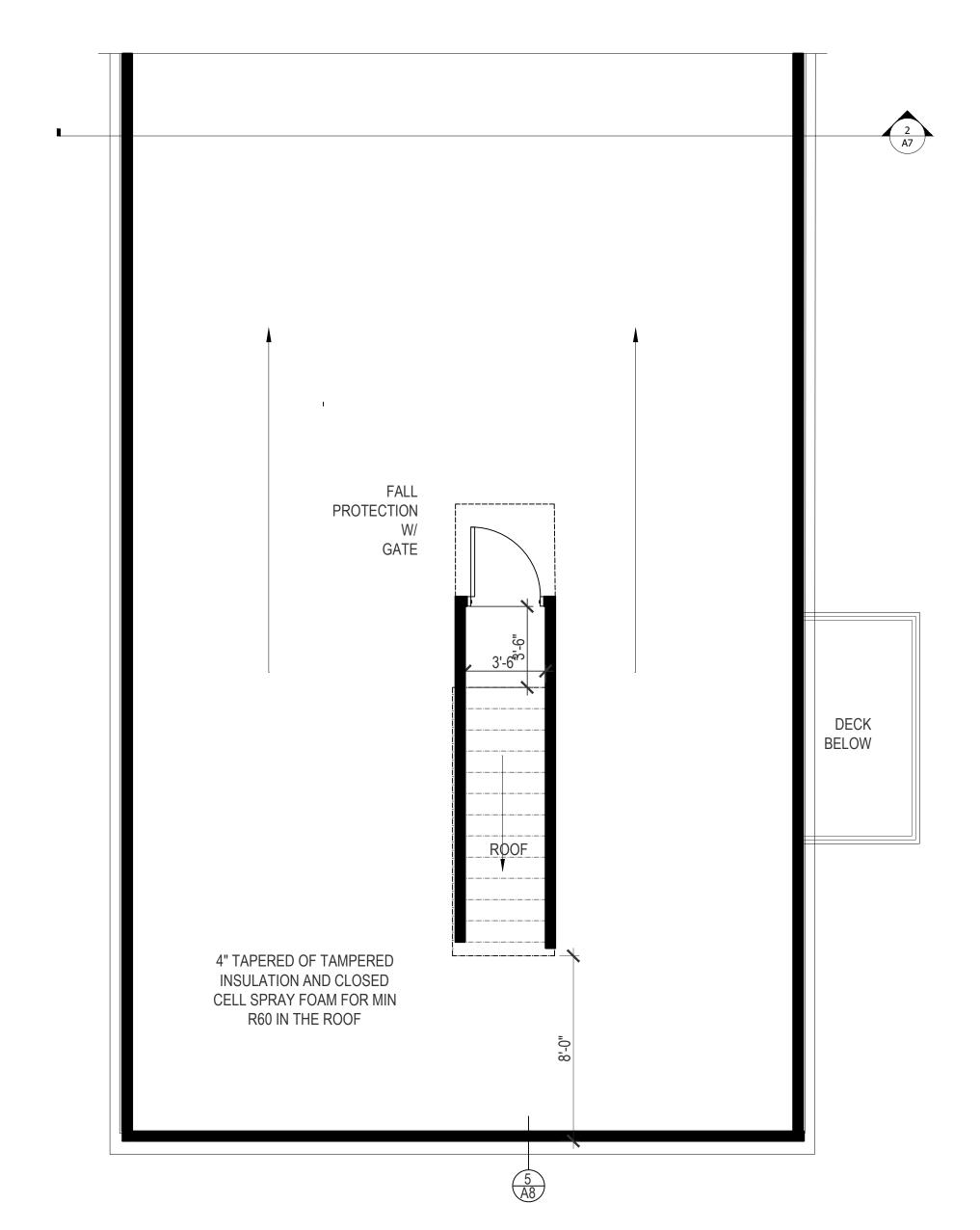


PROPOSED SECOND FLOOR PLAN- 1387 SF 1/4"=1'-0"



PROPOSED BUILDING SECTION 1

1/4"=1'-0"



PROPOSED ROOF FLOOR PLAN-1/4"=1'-0"

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS.NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

LIGHTHOUSE ARCHITECTURE & RESIGN 189 ALLEN ST BRAINTREE MA, 02184- INIT #1 Gavin Driscoll, Principle on 784-801-2690- gavin, shiscoll@grae.com J. Edward Roche, Alat Architect

10/30/25
AS NOTED
GSD
SY: JER

DATE:
SCALE:
DRAWN BY:
CHECKED BY:

PROPOSED ROOF PLAN PROPOSED SECTION

RENO OF EXISTING THREE FAMILY HOME
7 THORNLEY ST, DORCHESTER, MA 02125

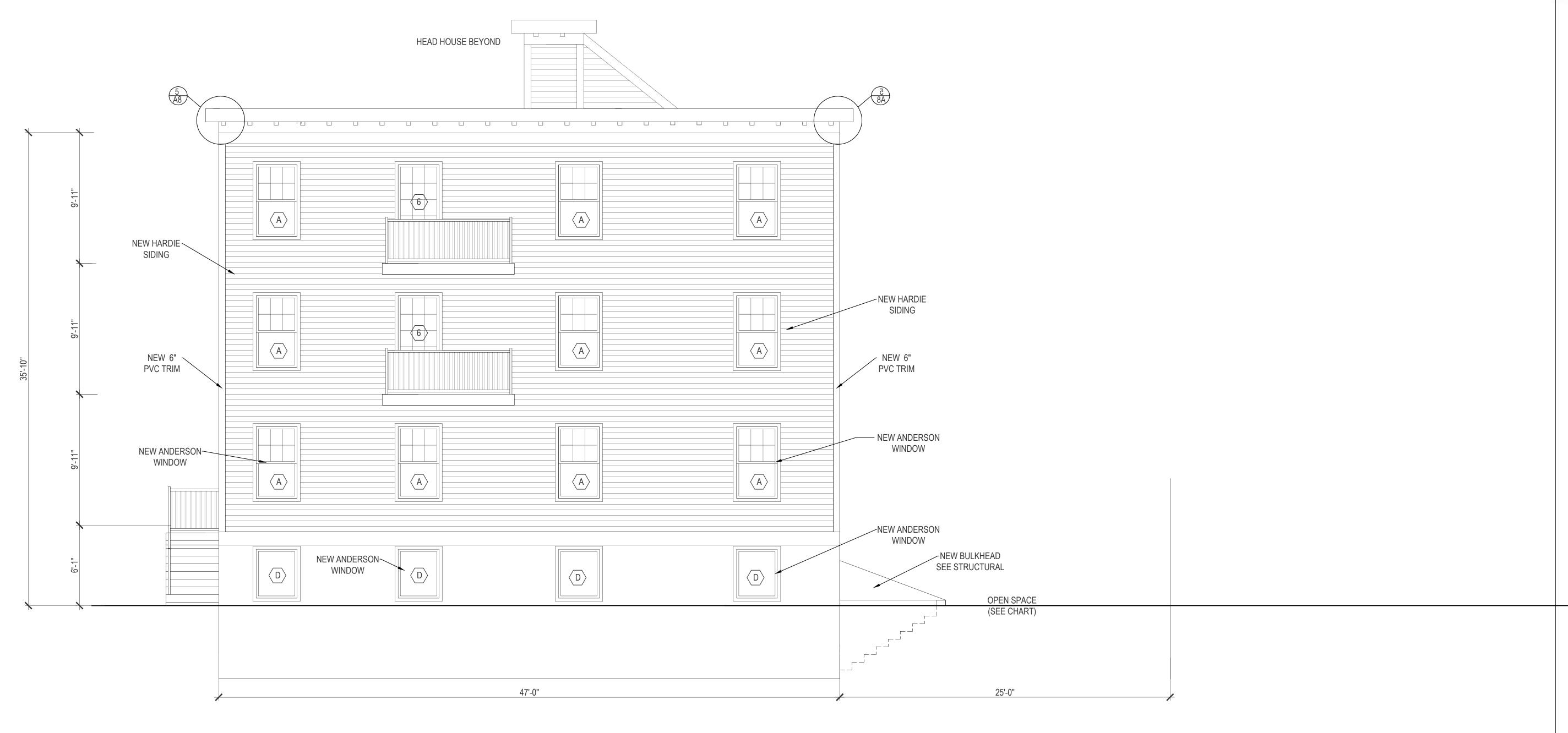
A3



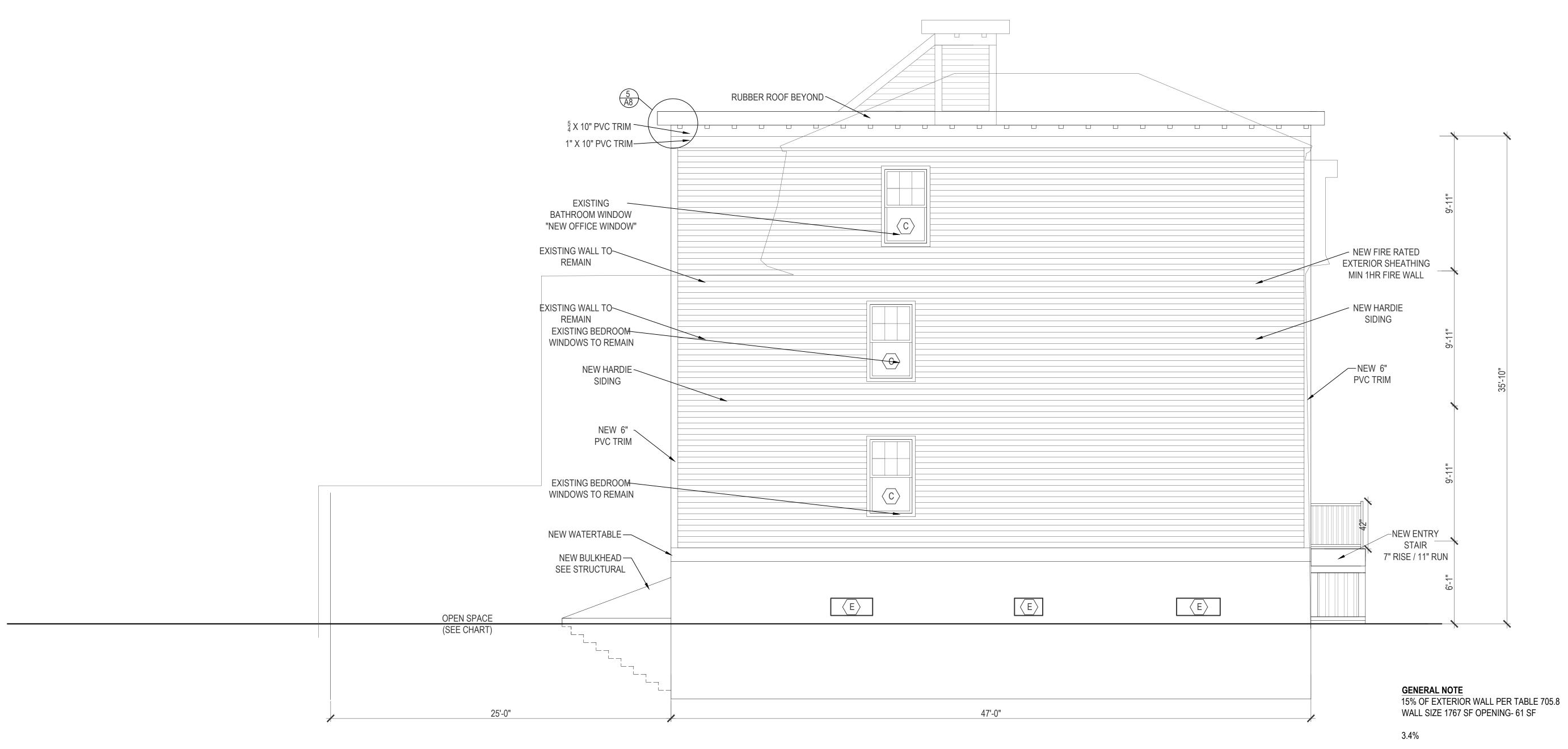
PROPOSED FRONT ELEVATION 1/4"=1'-0"

PROPOSED REAR ELEVATION 1/4"=1'-0"





PROPOSED RIGHT ELEVATION 1/4"=1'-0"



PROTECTED OPNG. PER SEC. 705.8.2, FIRE WINDOW ASSEMBLY SHALL COMPLY W/SEC. 716.6 • 1-HR RATED EXTERIOR WALL • 3/4 HR MIN. FIRE WINDOW ASSEMBLY RATING • FIRE RATED GLAZING OH-45 OR W-60

PROPOSED LEFT ELEVATION 1/4"=1'-0"

GENERAL NOTE:



LIGHTHOUSE ARCHITECTURE & DESIGN
180-Atlen St Braintree MA, 02184-UNIT #1
Gavin Driscoll, Principle
784-801-2690- gavin.s.driscoll@gmail.com
J. Edward Roche, Ala-Architect617-512-9281 - erocheaia@msn.com

AS NOTED

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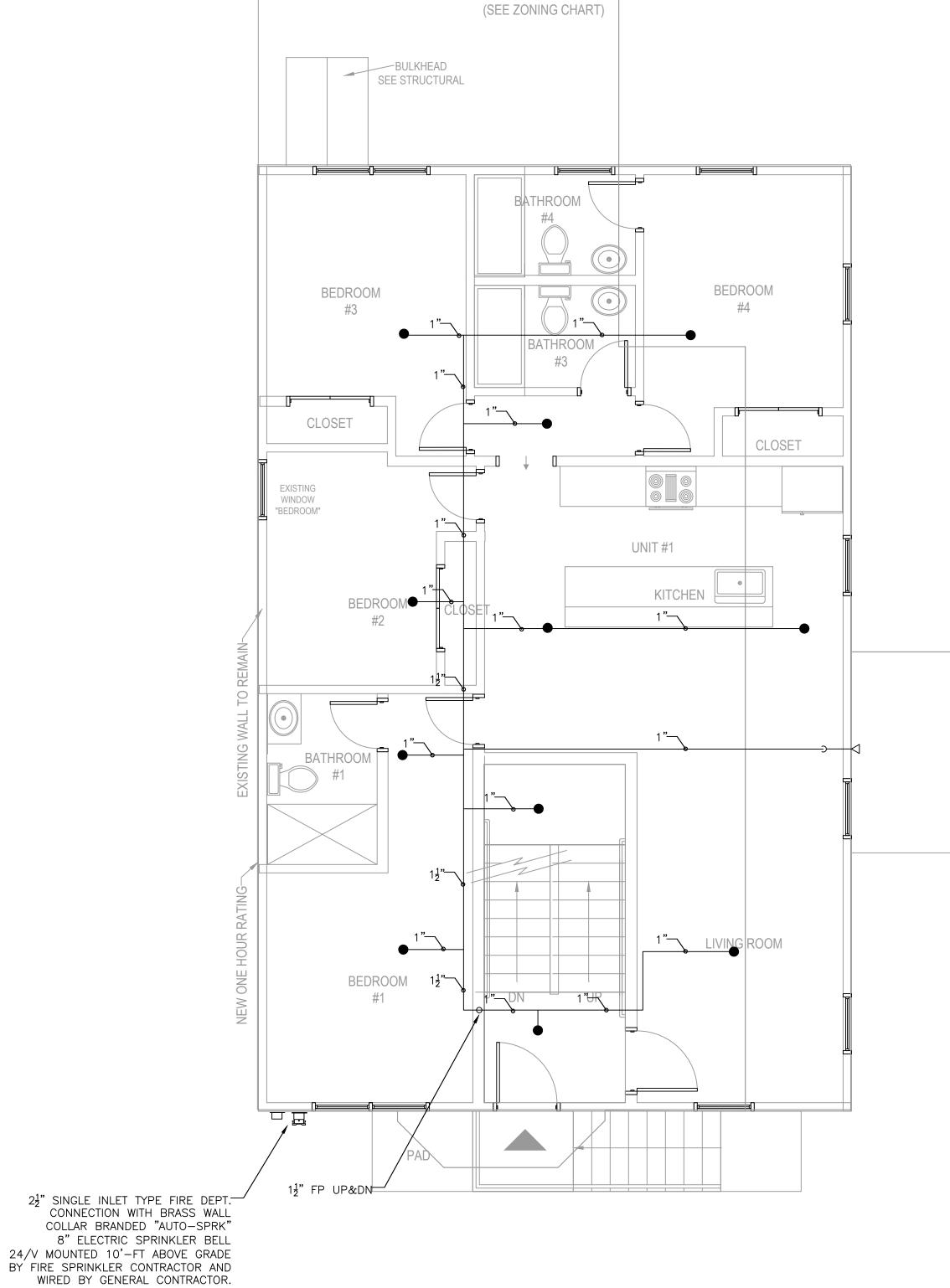
FIRE PROTECTION PROPOSED BASEMENT PLAN PROPOSED FIRST FLOOR

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

LINE OF EXISTING
FOOTPRINT OF HOUSE BULKHEAD SEE STRUCTURAL FLEXIBLE TYPE DRY— SIDEWALL SPRINKLER LINE OF EXISTING
FOOTPRINT OF HOUSE FINISHED FINISHED STORAGE STORAGE CH: 10'-4" CH: 10'-4" MEP ROOM (W/ ERV) **⊚** · · **>** · 2" CHECK VALVE TO FDC
2" BUTTERFLY VALVE W/ TAMPER __,
ALARM, NORMALLY CLOSED TO
FORWARD FLOW TEST BACKFLOW NEW CONTINUOUS FOOTING NEW STAIRS SEE STRUCTURAL ABOVE - NEW CONCRETE PAD 2" DCVA W/ LP SWITCHSEE STRUCTURAL SEE STRUCTURAL 2" WET RISER MANFOLD W/ SYSTEM FLOW SWITCH & 2" MAIN DRAIN PIPED SPILL OUTSIDE 2" CHECK VALVE TO FDC

 $\frac{\text{BASEMENT PLAN}}{1/4" = 1'-0"}$

2" FIRE SERVICE INSTALLED—/
PER NFPA, COORDINATE IN
FIELD PRIOR TO WORK



OPEN SPACE

 $\frac{\text{FIRST FLOOR PLAN}}{1/4" = 1'-0"}$

COORDINATE SIGNAGE WITH BFD

GENERAL NOTE:

LIGHTHOUSE ARCHITECTURE & DESIGN
180-Atlen St Braintree MA, 02184-UNIT #1
Gavin Driscoll, Principle
784-801-2690- gavin.s.driscoll@gmail.com
J. Edward Roche, AlA- Architect617-512-9281 - erocheaia@msn.com

/03/202 AS NOTED

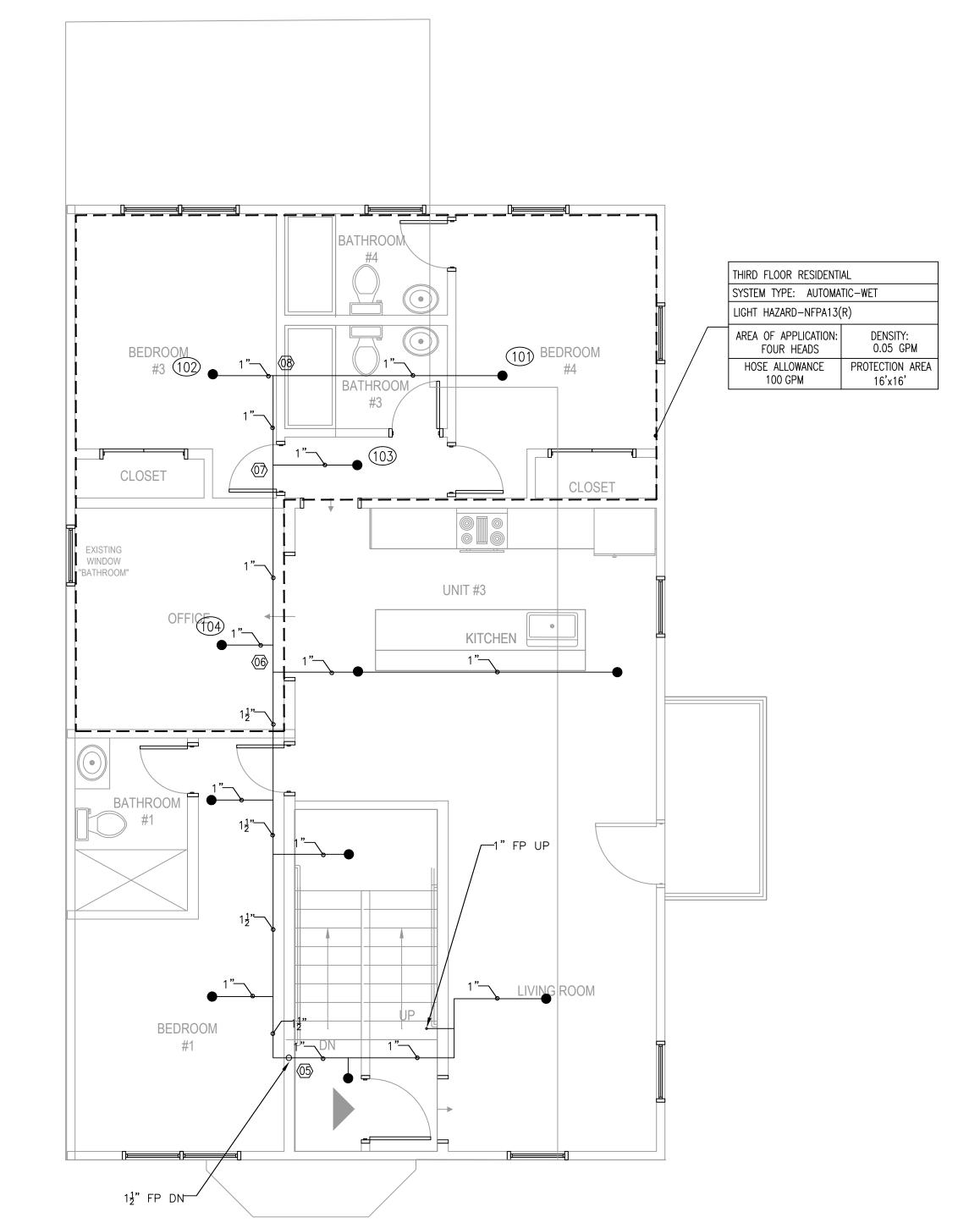
FIRE PROTECTION
PROPOSED SECOND F
PROPOSED THIRD FL(

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

BEDROOM BEDROOM ||BATHROOM / CLOSET CLOSET EXISTING WINDOW "BEDROOM" UNIT #2 BEDROOM KITCHEN FLEXIBLE TYPE DRY SIDEWALL SPRINKLER #2 1" BEDROOM #1

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

1½" FP UP&DN─



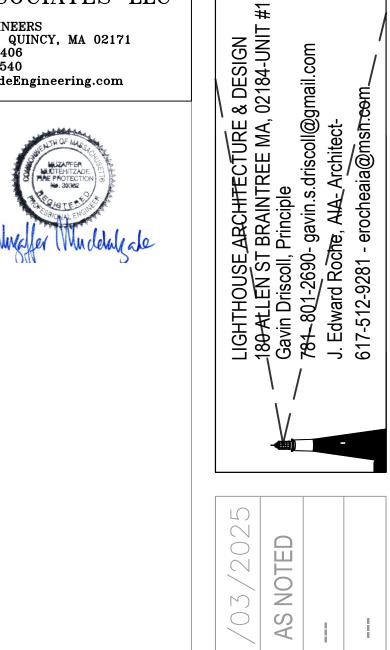
THIRD FLOOR PLAN

1/4" = 1'-0"

GENERAL NOTE:

ZADE ASSOCIATES LLC CONSULTING ENGINEERS
1 BILLINGS ROAD, QUINCY, MA 02171
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL: Zade@ZadeEngineering.com





ROOF	

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

FIRE PROTECTION
PROPOSED SECOND FLOOR PLAN
PROPOSED THIRD FLOOR PLAN

DATE:
SCALE:
DRAWN BY:
CHECKED BY:

2. SPRINKLER COVERAGE SHALL BE REQUIRED IN AREAS OF THE BUILDING PER NFPA-13R

PIPE, FITTINGS AND JOINTS

1. PIPE AND FITTINGS SHALL CONFORM TO THE LATEST ANSI, ASTM, NFPA AND AWWA STANDARDS INCLUDING LATEST AMENDMENTS

2. SPRINKLER MAINS AND BRANCHES MAY BE LIGHT WALL BLACK STEEL PIPE WITH ROLLED GROOVE TYPE MALLEABLE IRON PIPE COUPLINGS AND FITTINGS WITH GASKETS AND BOLTS AS APPROVED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND THE UNDERWRITERS' LABORATORIES. SCHEDULE 40 BLACK STEEL PIPE WITH STANDARD WEIGHT MALLEABLE IRON FITTINGS AS APPROVED BY NFPA AND UL MAY BE USED WITH, OR IN LIEU OF, THE SYSTEM DESCRIBED ABOVE. CPVC PIPING MAY BE USED WHERE ALLOWED BY LOCAL & NATIONAL LIFE SAFETY CODES

HANGERS AND SUPPORTS

1. HANGERS AND SWAY BRACING WHERE REQUIRED , SHALL BE INSTALLED TO MEET NFPA AND LOCAL STATE BUILDING CODE COMPLIANCE AS TO LOCATION, SPACING, AND MAXIMUM LOADS.

2. HANGER MATERIAL SHALL BE COMPATIBLE WITH PIPING MATERIALS WITH WHICH IT COMES INTO CONTACT.

3. HANGERS SHALL BE INSTALLED, IN ADDITION TO THE ABOVE, AT ALL CHANGES OF DIRECTION (HORIZONTAL AND VERTICAL), VALVES AND EQUIPMENT CONNECTIONS. HANGERS SHALL BE LOCATED SO THAT THEIR REMOVAL IS NOT REQUIRED TO SERVICE, ASSEMBLE OR REMOVE EQUIPMENT.

4. HORIZONTAL RUNS MAY USE BAND HANGERS UP TO 4" SIZE. PIPING LARGER THAN 4" SHALL BE PROVIDED WITH CLEVIS TYPE.

5. ALL RODS, CLAMPS, NUTS, WASHERS, SHIELDS AND HANGERS IN ALL AREAS SHALL BE ELECTRO-GALVANIZED COATED STEEL.

VALVES AND SUNDRIES

1. SHUTOFF VALVES ON THE ABOVEGROUND FIRE PROTECTION SYSTEM SHALL BE UL, FM BUTTERFLY OR OS&Y GATE VALVES, AS INDICATED, ON SIZES 2-1/2" AND LARGER, VALVES UP TO 2" SHALL BE UL, FM BALL VALVES. ALL ISOLATION / CONTROL VALVES SHALL BE MONITORED.

- 2. CHECK VALVES SHALL BE 175-POUND CLASS FOR FIRE PROTECTION.
- 3. VALVES SHALL BE PROVIDED WITH SEATS SUITABLE FOR THE SERVICE INTENDED
- 4. VALVES SHALL BE AS MANUFACTURED BY NIBCO, VICTAULIC, WALLWORTH, MILWAUKEE OR APPROVED EQUAL. MANUFACTURERS MODEL NUMBERS REFERENCED BELOW ARE USED TO INDICATE A TYPE, MATERIAL AND QUALITY TO BE PROVIDED.
- 5. ALL VALVES SPECIFIED HEREIN SHALL BE UL/FM APPROVED, 175 PSI MINIMUM WORKING PRESSURE. ALL CONTROL VALVES SHALL BE PROVIDED WITH TAMPER SWITCH.

<u>AUTOMATIC SPRINKLERS</u>

1. SPRINKLER HEADS: QUICK RESPONSE, BULB TYPE, AND STYLE AS INDICATED OR REQUIRED BY THE APPLICATION. UNLESS OTHERWISE INDICATED.

2. IN ALL OPEN AREAS, WHERE ELECTRICAL EQUIPMENT IS LOCATED, AN APPROVED TYPE SHIELD, TO KEEP WATER OFF THE ELECTRICAL EQUIPMENT, SHALL BE PROVIDED.

- 3. PROVIDE ALL SPRINKLER HEADS WITH PROTECTIVE CAGE.
- 4. PROVIDE IN THE VALVE ROOM, A FINISHED STEEL CABINET SUITABLE FOR WALL MOUNTING, WITH HINGED COVER AND SPACE FOR 6 SPARE SPRINKLER HEADS PLUS SPRINKLER HEAD WRENCH.

SPRINKLER SHOP DRAWINGS

1. CONTRACTOR SHALL SUBMIT ENGINEERED TIER II SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE DETAILED PER NFPA-13R REQUIREMENTS FOR WORKING DRAWINGS-FINAL AFFIDAVITS CANNOT BE ISSUED WITHOUT APPROVED SHOP DRAWINGS

2. HYDRAULIC CALCULATIONS SHALL ACCOUNT FOR ALL OFFSETS IN THE SYSTEM BASED ON A 100% COORDINATED SET. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL STRUCTURAL AND ARCHITECTURAL FEATURES PRESENT FLUSHING AND TESTING

1. ALL LABOR, MATERIALS, INSTRUMENTS, DEVICES AND POWER REQUIRED FOR TESTING SHALL BE PROVIDED BY THIS CONTRACTOR. THE TESTS SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF THE ENGINEER, GENERAL CONTRACTOR AND THE LOCAL FIRE DEPARTMENT AND SUCH OTHER PARTIES, AS MAY HAVE LEGAL JURISDICTION. NO PIPING IN ANY LOCATION SHALL BE CLOSED UP, FURRED IN, OR COVERED BEFORE TESTING.

2. WHERE PORTIONS OF PIPING SYSTEMS ARE TO BE COVERED OR CONCEALED BEFORE COMPLETION OF THE PROJECT, THOSE PORTIONS SHALL BE TESTED SEPARATELY IN THE MANNER SPECIFIED HEREIN FOR THE RESPECTIVE ENTIRE SYSTEM.

3. ANY PIPING OR EQUIPMENT THAT HAS BEEN LEFT UNPROTECTED AND SUBJECT TO MECHANICAL OR OTHER INJURY IN THE OPINION OF THE GENERAL CONTRACTOR SHALL BE RE TESTED IN PART OR IN WHOLE AS DIRECTED.

4. THE ENGINEER RETAINS THE RIGHT TO REQUEST A RECHECK OR RESETTING OF ANY PUMP OR INSTRUMENT BY THIS CONTRACTOR DURING THE GUARANTEE PERIOD AT NO ADDITIONAL COST TO THE CONTRACTOR.

5. REPAIR, OR IF DIRECTED, REPLACE ANY DEFECTIVE WORK WITH NEW WORK WITHOUT EXTRA CHARGE TO THE CONTRACT. REPEAT

TESTS AS DIRECTED. UNTIL THE WORK IS PROVEN TO MEET THE REQUIREMENTS SPECIFIED HEREIN. 6. RESTORE TO ITS FINISHED CONDITION ANY WORK, DAMAGED OR DISTURBED, PROVIDED BY OTHER CONTRACTORS AND ENGAGE THE

ORIGINAL CONTRACTOR TO DO THE WORK OF RESTORATION TO THE DAMAGED OR DISTURBED WORK.

7. THIS CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND ANY INSPECTORS HAVING JURISDICTION, A MINIMUM OF 48 HOURS IN ADVANCE OF MAKING ANY REQUIRED TESTS SO THAT ARRANGEMENTS MAY BE MADE FOR THEIR PRESENCE TO WITNESS HIS SCHEDULED TESTS.

8. TESTING SHALL BE IN ACCORDANCE WITH NFPA-13R "STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS".

9. EACH SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSI FOR TWO HOURS.

10. FLUSHING OF ALL BURIED SUPPLY PIPING SHALL BE PERFORMED AT A MINIMUM RATE OF 680 GPM FOR SYSTEMS WITH A 4"

11. ALL WATER FLOW DETECTING DEVICES AND CIRCUITS SHALL BE FLOW TESTED THROUGH THE INSPECTOR'S TEST CONNECTION AND ACTIVATE WITHIN FIVE MINUTES OF INITIATION.

12. FIRE PROTECTION CONTRACTOR SHALL OBTAIN RECENT HYDRANT FLOW TEST RESULTS FOR THE USE OF PREPARING WORKING DRAWINGS PER NFPA-13R

13. SPRINKLER FLOW TEST DISCHARGE AND FLUSHING WATER DISCHARGE SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND THE LOCAL FIRE DEPARTMENT OR PUBLIC WORKS AS TO ACCEPTABLE DISCHARGE POINTS PRIOR TO SCHEDULING OF FLUSHING AND TESTS. THIS CONTRACTOR SHALL PROVIDE ALL HOSE AND EQUIPMENT NECESSARY TO PERFORM THE REQUIRED TESTING AND

AS BUILT DRAWINGS AND CONTRACTOR CERTIFICATES

1. CONTRACTOR SHALL HAVE, ON HAND, AT TIME OF FINAL INSPECTION BY THE AUTHORITY HAVING JURISDICTION, FOR TEMPORARY / FINAL CERTIFICATE OF OCCUPANCY, ALL COMPLETED CERTIFICATES OF MATERIAL AND TESTING FOR ABOVEGROUND AND UNDERGROUND PIPING AS WELL AS THE AS- BUILT DRAWINGS OF THE FIRE PROTECTION INSTALLATION.

2. PROVIDE RED-LINE TIER III AS BUILT RECORD DRAWINGS TO ZADE ASSOCIATES FOR REVIEW & APPROVAL AS A CONDITION OF FINAL

PATCHING, REPLACEMENT AND MODIFICATION OF EXISTING WORK

1. AFTER INSTALLATION OF PIPELINES, THE CONTRACTOR SHALL NEATLY PATCH, REPAIR, AND/OR REPLACE EXISTING WORK WHERE DAMAGED, REMOVED OR ALTERED FOR PIPE LINE INSTALLATION. THIS WORK SHALL BE SIMILAR AND EQUAL IN QUALITY TO THE WORK REMOVED OR DAMAGED, UNLESS OTHERWISE SHOWN OR SPECIFIED. SUCH WORK SHALL INCLUDE PATCHING AND REPLACEMENT OF EXISTING PIPING AT POINTS OF CONNECTION TO NEW PIPING, PATCHING OF INSULATION, AND WHEREVER ANY SUCH PATCHING WORK IS INDICATED ON THE DRAWINGS OR OTHERWISE REQUIRED.

<u>INSTALLATION</u>

1. GENERAL: INSTALL FIRE PROTECTION SPECIALTY VALVES, FITTINGS, AND SPECIALTIES IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, NFPA-13R (2013) AND THE AUTHORITY HAVING JURISDICTION.

- 2. USE PROPER TOOLS TO PREVENT DAMAGE DURING INSTALLATIONS.
- 3. ALL PENDENT MOUNTED SPRINKLERS SHALL BE INSTALLED ON RETURN BENDS.
- 4. ALL SPRINKLERS INSTALLED IN ACOUSTICAL CEILING TILES SHALL BE CENTERED IN TILES WHERE APPLICABLE.
- 5. COORDINATE AND VERIFY DRAFT CURTAINS ARE INSTALLED AS REQUIRED BY SPRINKLER HEAD SPECIFICATIONS

FIRE PROTECTION SPECIFICATION

AUTHORITIES.

BEFORE BIDDING THE JOB, CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING CONDITIONS. REPORT ADVERSE CONDITIONS IN WRITING TO ARCHITECT/ENGINEER

2. SPRINKLER PIPING SHALL BE

- A. SCH.10/40 BLACK STEEL WITH 125 LB. CAST IRON THREADED/GROOVED JOINTS WHERE EXPOSED, USED FOR VALVE
- B. CPVC SHALL BE PERMITTED FOR USE WHERE INSTALLED CONCEALED AND IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS,

3. SPRINKLER HEADS IN COMMON AREAS SHALL BE QUICK RESPONSE CONCEALED TYPE MANUFACTURED BY VIKING OR EQUAL. WITHIN UNITS

4. APPLY AND OBTAIN PERMIT AND APPROVAL FROM LANDLORD'S

5. COORDINATE WITH ARCHITECT AND ARCHITECTURAL REFLECTED

6. COORDINATE SPRINKLER WORK WITH OTHER DISCIPLINES. SINCE ALL LIGHTING FIXTURE LOCATIONS AND TYPES AND OTHER

LEAKAGE WHEN THE SYSTEM IS SUBJECTED TO THE HYDROSTATIC PRESSURE TEST.

DATE OF ACCEPTANCE.

PREPARATION OF SHOP DRAWINGS:

PER 780CMR 901.2.1 SPRINKLER CONTRACTOR SHALL PREPARE TIER ii SHOP DRAWINGS INCLUDING PIPING & HYDRAULIC CALCULATIONS, AND SHALL SUBMIT TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF WORK. ENGINEER SHALL CERTIFY SYSTEM INSTALLATION FOR CODE COMPLIANCE AT PROJECT COMPLETION.

FLOW TEST DATA
STATIC 66 PSI RESIDUAL 62 PSI FLOW 2004 GPM
SPRINKLER CONTRACTOR SHALL OBTAIN A NEW AND RECENT HYDRANT FLOW TEST FOR THIS FEED MAIN PRIOR TO INSTALLATION

FIRE PROTECT	ION ABBREVIATIONS
DSW DCVA DIA DR ETR FHV IT FP FS SP GV GAL GALV GPM MAX	DRY SIDEWALL DOUBLE CHECK VALVE ASSEMBLY DIAMETER DRAIN EXISTING TO REMAIN FIRE HOSE VALVE INTERMEDIATE TEMPERATURE FIRE PROTECTION FLOW SWITCH STANDPIPE GATE VALVE GALLONS GALVANIZED GALLONS PER MINUTE MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
DN PSI PRV RV SPK TS UP VIF	PIPE DROP POUNDS PER SQUARE INCH PRESSURE REDUCING VALVE RELIEF VALVE SPRINKLER TAMPER SWITCH PIPE RISE VERIFY IN FIELD

FIRE	PROTECTION LEGEND
SYMBOL	DESCRIPTION
	SUPERVISED BUTTERFLY VALVE
ANTA	DOUBLE CHECK VALVE ASSEMBLY
内	SUPERVISED OS&Y GATE VALVE
₹FS	FLOW ALARM SWITCH
•	SPRINKLER ZONE CONTROL ASSEMBLY (SEE DETAIL)
•	PUMP (FIRE OR JOCKEY)
\Diamond	DRY ALARM VALVE
\bigcirc	WET ALARM VALVE
	CHECK VALVE
_	DRAIN VALVE
⋉ н	FIRE VALVE ASSEMBLY 2-1/2"W X 2-1/2" X 1-1/2"
⟨ ××⟩	HYDRAULIC JUNCTION POINT
(XXX)	HYDRAULIC DISCHARGE NODE
	BURIED SERVICE PIPING
	ABOVE GROUND FP SYSTEM PIPING

FIRE PROTECTION SPECIFICATION

TRIM, SYSTEM DRAINS OR OTHER ANCILLARY SYSTEM COMPONENT

BE LISTED FOR FIRE PROTECTION AND SHALL EMPLOY FITTINGS FROM THE SAME MANUFACTURER

THEY WILL BE RESIDENTIAL CONCEALED TYPE.

INSURANCE COMPANY, FIRE DEPARTMENT AND STATE AND LOCAL

CEILING PLAN FOR THE LOCATION OF SPRINKLER HEADS.

PERFORMANCE OF SPRINKLER SYSTEM IS AFFECTED BY OBSTRUCTIONS AND NOT OTHER WAY AROUND, THIS CONTRACTOR SHALL COORDINATE OBSTRUCTIONS PRIOR TO ANY WORK DONE.

. THE SYSTEM SHALL BE HYDROSTATICALLY TESTED AT NOT LESS THAN 200 PSI PRESSURE FOR 2 HOURS. THERE WILL BE NO VISIBLE

8. GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR FROM THE

Table 6.4.6.3.6.2 Positioning of Sprinklers to Avoid Obstructions to Discharge (Residential Upright and Pendent

No minimum

Elevation View

FIGURE 6.4.6.3.7.2(c) Positioning of Sprinkler to Avoid Ob-

struction Against Wall (Residential Sidewall Sprinklers).

Obstruction

Elevation View

FIGURE 6.4.6.3.7.2(b) Positioning of Sprinkler to Avoid Ob-

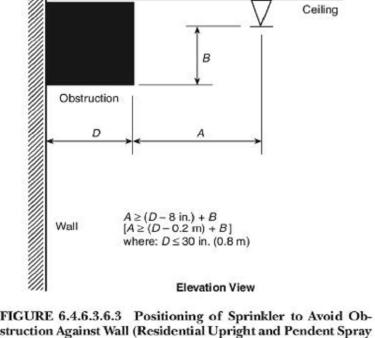
30 in. (760 mm)

struction Along Wall (Residential Sidewall Sprinklers).

Ceiling or roof

Distance from Sprinklers to Side of Obstruction (A)	Maximum Allowable Distance of Deflector Above Bottom of Obstruction (in.) (B)
Less than 1 ft	0
1 ft to less than 1 ft 6 in.	0
1 ft 6 in. to less than 2 ft	1
2 ft to less than 2 ft 6 in.	1
2 ft 6 in. to less than 3 ft	1
3 ft to less than 3 ft 6 in.	3
3 ft 6 in. to less than 4 ft	3
4 ft to less than 4 ft 6 in.	5
4 ft 6 in, to less than 5 ft	7
5 ft to less than 5 ft 6 in.	7
5 ft 6 in. to less than 6 ft	7
6 ft to less than 6 ft 6 in.	9
6 ft 6 in. to less than 7 ft	11
7 ft and greater	14

For SI units, 1 in. = 25.4 mm; 1 ft = 0.3048 m Note: For A and B, refer to Figure 6.4.6.3.6.2.



Maximum Allowable

Distance of Deflector

Above Bottom of

Obstruction (in.)

(B)

Not allowed

Maximum Allowable

Distance of Deflector

Above Bottom of

Obstruction (in.)

(B)

Distance from Sidewall

Sprinkler to Side of

Obstruction

For SI units, 1 in. = 25.4 mm; 1 ft = 0.3048 m.

Distance from Sidewall

Sprinkler to Side of

Obstruction

(A)

Less than 1 ft 6 in.

3 ft to less than 4 ft

1 ft 6 in. to less than 3 ft

4 ft to less than 4 ft 6 in.

4 ft 6 in. to less than 6 ft

6 ft to less than 6 ft 6 in.

6 ft 6 in. to less than 7 ft

7 ft to less than 7 ft 6 in.

Note: For A and B, refer to Figure 6.4.6.3.7.2(a).

Table 6.4.6.3.7.2(b) Positioning of Sprinklers to Avoid

Obstructions Along Wall (Residential Sidewall Sprinklers)

Less than 8 ft

8 ft to less than 10 ft

10 ft to less than 11 ft

11 ft to less than 12 ft

12 ft to less than 13 ft

13 ft to less than 14 ft

14 ft to less than 15 ft

15 ft to less than 16 ft

16 ft to less than 17 ft

17 ft or greater

sprinkler

on wall

Obstruction

30 in. (760 mm)

maximum

NFPA-13R OBSTRUCTION CHART

SCALE:N.T.S.

FIRE	SPRINKLEF SYMBOLS MAY NOT BE	R LEGEND used					
SYM	POSITION	FINISH	TEMP	K	NPT	SIN	NFPA-13R 2019 DESIGN CRITERIA
\odot	UPRIGHT	BRASS	155°	5.60	1/2"	EQ	
\boxtimes		BRASS	200°	5.60	1/2"	EQ	THE SPRINKLER SYSTEM SHALL PROVIDE AT LEAST THE FLOW RE TO PRODUCE A MINIMUM DENSITY OF 0.05 pgm/sf OR THE LIST
	PENDENT	CONCEALED	155°	5.60	1/2"	EQ	THE SPRINKLER HEAD WHICHEVER IS GREATER, TO THE DESIGN
•	RES PENDENT	CONCEALED	155°	5.80	1/2"	VK494/EQ	SPRINKLERS. THE NUMBER OF SPRINKLERS IN THE DESIGN AREA SHALL BE A
	RES PENDENT	CONCEALED	200°	5.80	1/2"	VK494/EQ	THE SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF
•	DRY PENDENT	CONCEALED	155°	5.60	1/2"	EQ	SPRINKLERS, THAT REQUIRE THE GREATEST HYDRAULIC DEMAND.
⁴ ▶	STD SIDEWALL	CONCEALED	155°	5.60	1/2"	EQ	
	RES SIDEWALL	CONCEALED	155°	4.00	1/2"	VK480	
\triangleright	DRY SIDEWALL	CONCEALED	155°	11.2	3/4"	TY5339	

NFPA-13R 2019 DESIGN CRITERIA THE SPRINKLER SYSTEM SHALL PROVIDE AT LEAST THE FLOW REQUIRED KITCHENS AND W/D TO PRODUCE A MINIMUM DENSITY OF 0.05 pgm/sf OR THE LISTING OF ROOMS TO BE 175 F THE SPRINKLER HEAD WHICHEVER IS GREATER, TO THE DESIGN SPRINKLERS. THE NUMBER OF SPRINKLERS IN THE DESIGN AREA SHALL BE ALL OF THE SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF FOUR

2. EXPOSED CPVC PROHIBITTED

SPRINKLER HEADS IN

RESIDENTIAL SPRINKLERS SPACED MAXIMUM 8' FROM ANY WALL

PIPE

SPRINKLER COVERAGE REQUIREMENTS BASED ON NFPA-13R

I) SPRINKLER SHALL NOT BE REQUIRED IN BATHROOMS OF 55 SF AND LESS. SPRINKLER SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRY THAT MEET THE FOLLOWING CONDITIONS:

A) THE AREA OF THE SPACE DOES NOT EXCEED 24 SF.

- B) THE SHORTEST DIMENSION DOES NOT EXCEED 3 FT. C) THE WALLS AND CEILINGS ARE SURFACED WITH NON-COMBUSTIBLE OR LIMITED COMBUSTIBLE AS DEFINED BY NFPA-220.
-) SPRINKLER SHALL NOT BE REQUIRED IN COVERED, UNHEATED PROJECTIONS OF THE BUILDING AT ENTRANCE/EXITS AS LONG AS THE DWELLING UNIT HAS ANOTHER MEANS OF EGRESS.
- ·) SPRINKLER SHALL NOT BE REQUIRED IN CLOSETS IN GARAGE AND EXTERIOR CLOSETS (REGARDLESS OF SIZE) LOCATED ON EXTERIOR BALCONIES, EXTERIOR BREEZEWAY/CORRIDORS, OR ACCESSED FROM OUTDOOR WHERE THE CLOSET DOES NOT HAVE DOORS OR UNPROTECTED PENETRATIONS DIRECTLY INTO THE DWELLING UNIT.
- 5) SPRINKLER SHALL BE INSTALLED IN ANY CLOSET USED FOR HEATING AND/OR AIR-CONDINONING EQUIPMENT, WASHERS AND/OR DRYERS, OR WATER HEATERS EXCEPT AS AS ALLOWED BY 8.3.8. (SEE NOTE #4 ABOVE)

6) SPRINKLERS SHALL NOT BE REQUIRED IN COMBUSTIBLE FLOOR/CEILING ASSEMBLIES

BURIED BUILDING FIRE SERVICE
RESIDENTIAL CROSS MAINS
RESIDENTIAL BRANCH LINES
ARM-OVER & DROPS
SPRINKLER DRAIN PIPE

. COMPONENT PRESSURE RATING PER MANUFACTURER

3. ALL PIPE NOT NORMALLY FILLED WITH WATER SHALL BE SCH. 40 BLACK

FIRE PROTECTION MATERIAL SCHEDULE

FITTINGS

JOINTS

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS.NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH

8 L 02,

ZADE ASSOCIATES LLC

1 BILLINGS ROAD, QUINCY, MA 02171

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CONSULTING ENGINEERS

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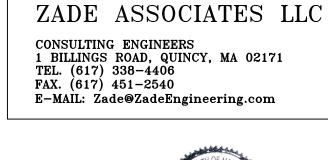
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HOME N 0212 E FAMILY PESTER, MA S шН

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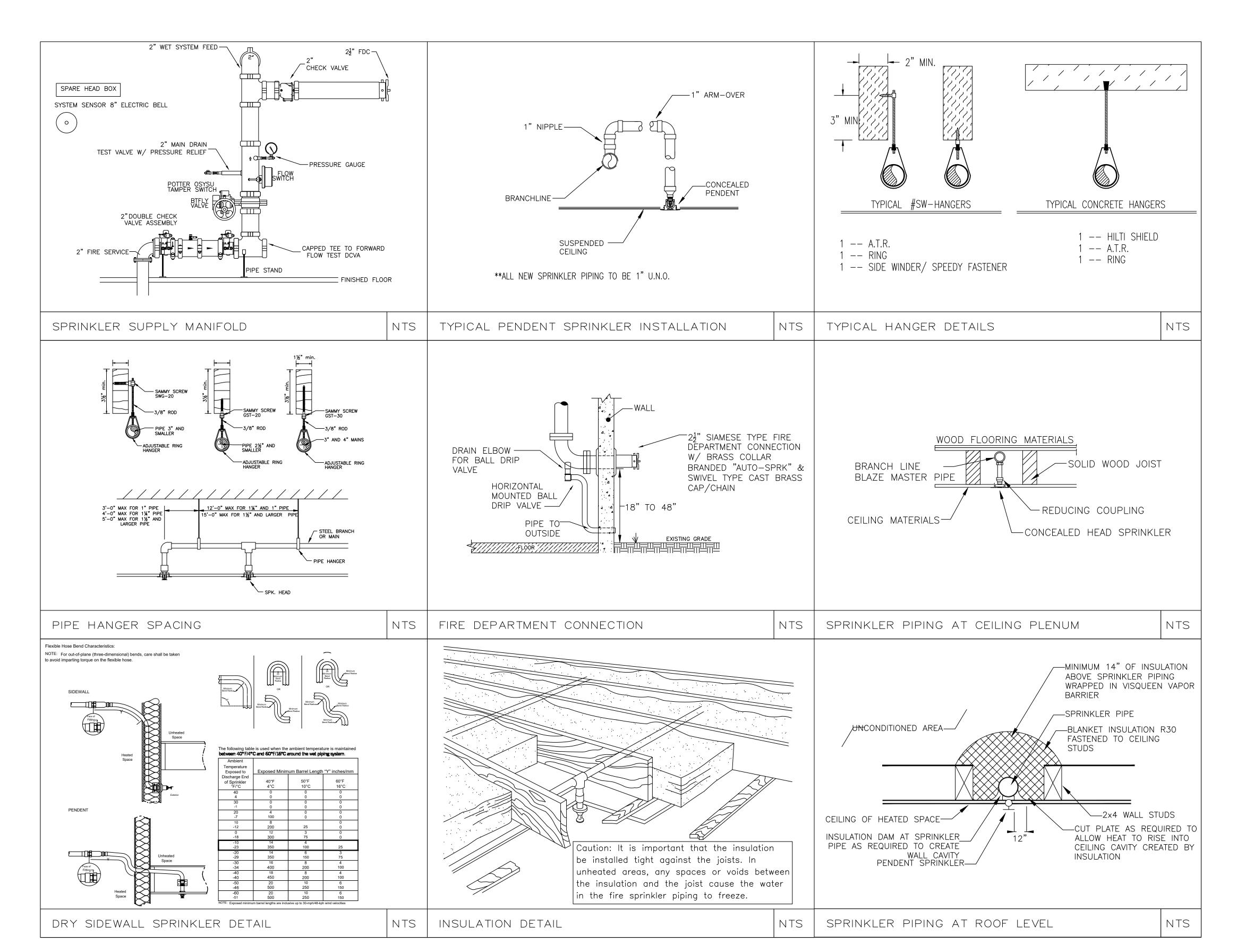






LLEN ST BRAINTREE MA, 02184-UNIT #
Driscoll, Principle

/03/202 AS NOTED





LIGHTHOUSE ARCHITECTURE & DESIGN
180-Atlen St Braintree MA, 02184-UNIT #1
Gavin Driscoll, Principle
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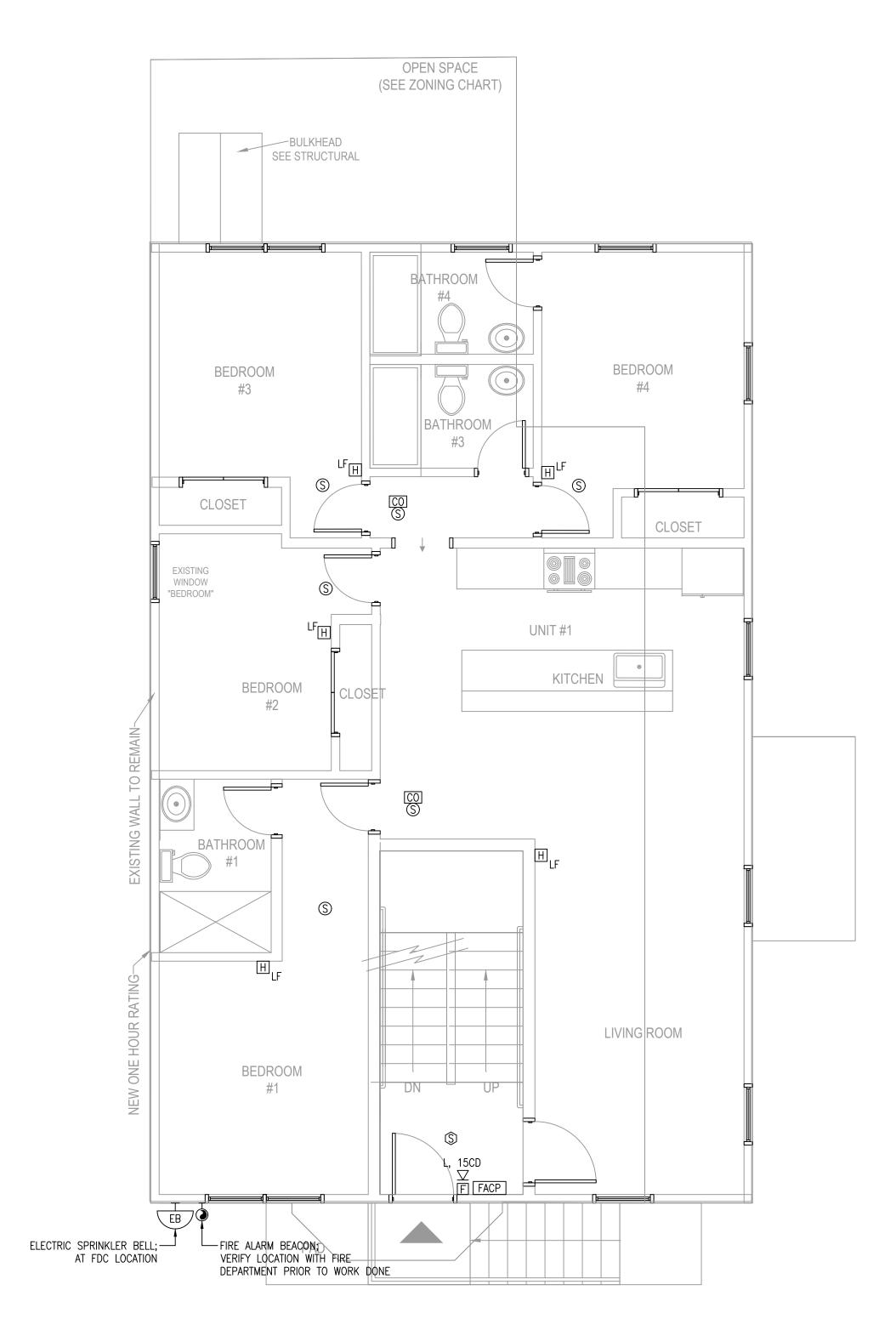
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ELECTRICAL PROPOSED BASEMENT PLAN PROPOSED FIRST FLOOR - FIRE ALARM

LINE OF EXISTING
FOOTPRINT OF HOUSE BULKHEAD SEE STRUCTURAL L, 75CD LINE OF EXISTING
FOOTPRINT OF HOUSE FINISHED FINISHED STORAGE STORAGE CH: 10'-4" CH: 10'-4" L, 15CD F, 15CD L, 15CD MEP ROOM (W/ ERV) TS PS/STS//TIS/FS//TIS NEW CONTINUOUS FOOTING
SEE STRUCTURAL NEW STAIRS ABOVE



NEW CONCRETE PAD — SEE STRUCTURAL



FIRST FLOOR PLAN

1/4" = 1'-0"

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

GENERAL NOTE:

- NEW CONCRETE PAD SEE STRUCTURAL

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS

SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS.NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

LIGHTHOUSE ARCHITECTURE & DESIGN
189 At LEN ST BRAINTREE MA, 02184-UNIT #1
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J. Edward Roche, AlA_Architect617-512-9281 - erocheaia@msn.com

/03/2025 AS NOTED

DATE:
SCALE:
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CHECKED BY:

ELECTRICAL
PROPOSED SECOND FLOOR PLAN
PROPOSED THIRD FLOOR PLAN
- FIRE ALARM

BATHROOM BEDROOM BEDROOM #4 #3 BATHROOM / CLOSET CLOSET EXISTING WINDOW "BEDROOM" UNIT #2 BEDROOM KITCHEN #2 (a) S LIVING ROOM BEDROOM #1

THIRD FLOOR PLAN

1/4" = 1'-0"

F, 15CD

\$

BATHROOM

BATHROOM

UNIT #3

KITCHEN

BEDROOM

CLOSET

BATHROOM #1

OFFICE

BEDROOM

#1

S

EXISTING WINDOW "BATHROOM"

BEDROOM

CLOSET

LIVING ROOM

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

ZADE ASSOCIATES LLC

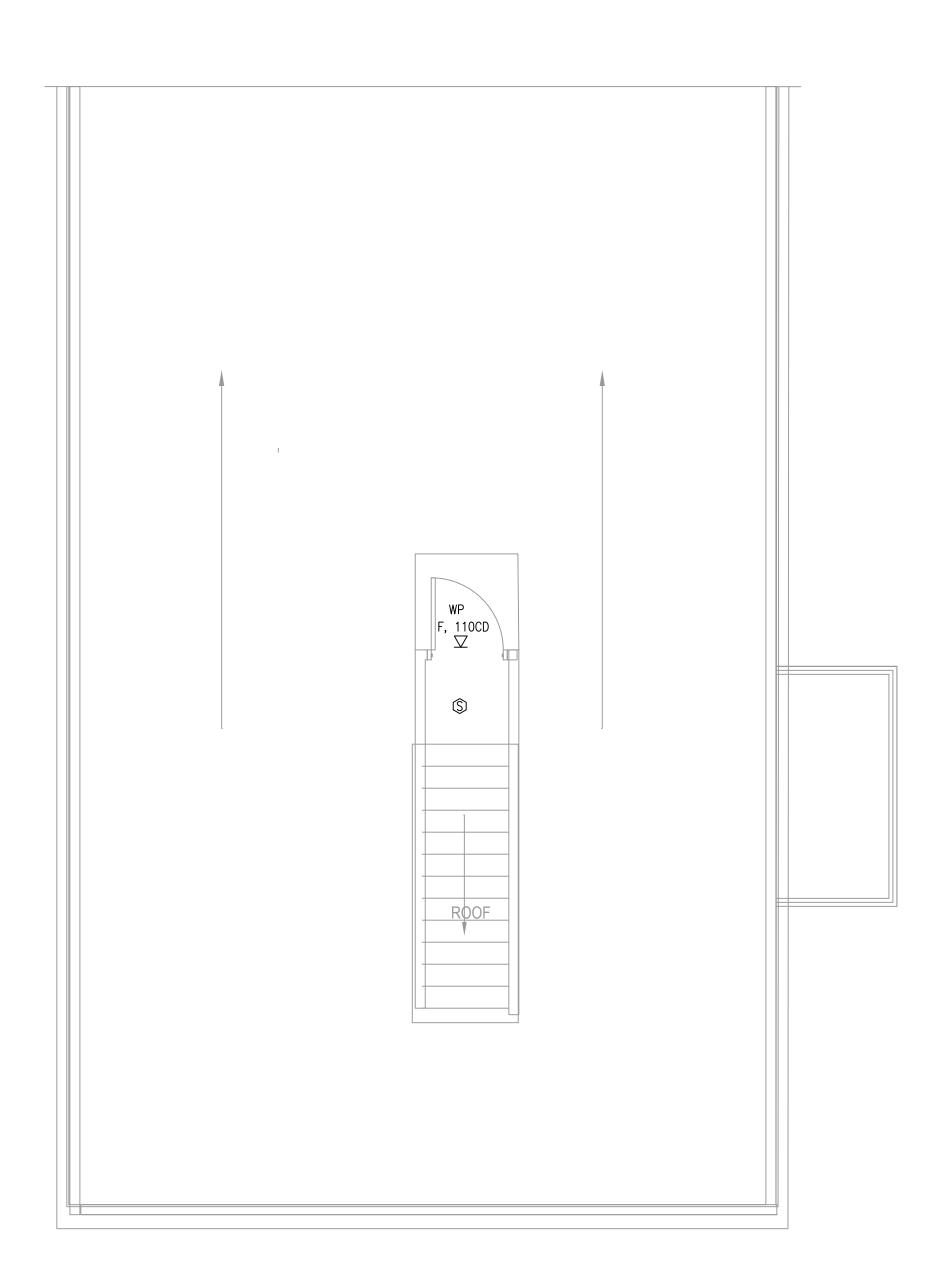
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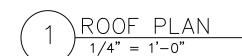


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RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

ELECTRICAL PROPOSED ROOF PLAN - FIRE ALARM

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& DESIGN , 02184-UNIT

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DATE: SCALE: DRAWN BY CHECKED F

ВУ

FIRE ALARM LEGEND SYSTEM TYPE SMOKE DETECTOR, ANALOG ADDRESSABLE TS TAMPER SWITCH SYSTEM TYPE DUCT SMOKE DETECTOR WITH REMOTE TEST SWITCH, FS FLOW SWITCH ANALOG ADDRESSABLE. TUBE WILL HAVE MINIMUM 10 HOLES. PRESSURE SWITCH SYSTEM TYPE HEAT DETECTOR, ANALOG ADDRESSABLE BDA ANTENNA SYSTEM TYPE CO DETECTOR ADDRESSABLE MONITOR MODULE FIRE ALARM PULL STATION ADDRESSABLE CONTROL MODULE 120V LOCAL TYPE SMOKE ALARM W/BATTERY. L-INDICATES BUILT-IN STROBE. INTERPOSING RELAY COMBINATION TYPE 120V LOCAL SMOKE/CO ALARM WITH 520Hz SOUNDER BASE BATTERY BACK UP. L-INDICATES BUILT-IN STROBE. MINI HORN/ TEMPORAL PER NFPA 72-18.4.5.3, FIRE ALARM BEACON LOW FREQUENCY IN BEDROOMS. ELECTRIC BELL FOR FIRE DEPARTMENT CONNECTION FIRE ALARM HORN/STROBE (SYCHRONIZED); SEE FLOOR PLAN FOR CANDELA RATING END OF LINE DEVICE FIRE ALARM STROBE ONLY (SYCHRONIZED); SEE FLOOR PLAN FOR CANDELA RATING CO/NO DETECTOR , (SM/CO) FIRE ALARM STROBE: 120V FOR LOCAL CO OR SMOKE ALARM AT ACCESSIBLE AND FIRE ALARM CONTROL PANEL HEARING IMPAIRED UNITS. FIRE ALARM ANNUNCIATOR PANEL CEILING MOUNTED A/V DEVICE DIALER BY E.C. WIRED TO UL LISTED ALARM CO. STROBE FOR INTERCOM ACCESSABLE AND HEARING IMPAIRED UNITS NAC BOOSTER PANEL

-DUCT SMOKE DETECTORS SHALL BE INSTALLED IN HEATED AREAS AT THE SUPPLY SIDE BEFORE THE FIRST TAKE OFF, MINIMUM 5FT AWAY FROM THE UNIT COIL. REMOTE TEST/INDICATOR LOCATIONS SHALL BE NEXT TO FACP PANEL, OR AS DIRECTED BY THE FIRE DEPARTMENT.

-A/V DEVICE LOCATIONS ARE SHOWN BASED ON DISTANCE REQUIREMENTS. CONTRACTOR SHALL COORDINATE PHYSICAL STRUCTURES SO THAT VISIBILITY WILI BE MAINTAINED. PROPOSED CHANGES SHALL BE FORWARDED TO ARCHITECT/ENGINEER FOR APPROVAL.

FOR EVERY SMOKE DAMPER SHOWN ON THE MECHANICAL DRAWINGS. PROVIDE A DUCT SMOKE DETECTOR IN THE DUCT TO OPERATE THE SMOKE DAMPER. PROVIDE 120V POWER TO SMOKE DAMPER FOR OPERATION. WHERE THE AIR SUPPLY FROM THE SHAFT DIRECTLY SERVES A CORRIDOR OR SPACE WHERE THERE ARE SMOKE DETECTORS PROVIDED FOR COMPLETE COVERAGE, NO DUCT SMOKE DETECTOR IS REQUIRED. INTERLOCK DAMPERS TO CLOSE UPON DUCT DETECTOR ACTIVATIONS.

SMOKE DETECTORS INSTALLED IN DUCTS AND OTHER LOCATIONS WITH AIR VELOCITIES GREATER THAN 300FT/MIN SHALL BE LISTED FOR THE VELOCITY CONDITIONS ANTICIPATED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS.

CONTROL UNIT ANN

HORN/STROBE DEVICES:

UNITS AND LOCATIONS.

THE ENTIRE STROBE LENS IS TO BE LOCATED NOT LESS THAN 80 INCHES A.F.F. AND NOT MORE THAN 96 INCHES A.F.F. DEVICES SHALL COMPLY WITH NFPA 72.

INITIATION LOOP #1 ◀

SPRINKLER BELL

PANEL HP

CARRY MINIMUM OF (1)FLOW AND (4)TAMPER SWITCH AT SPRINKLER SERVICE LOCATION AND (1) FLOW/TAMPER SWITCH

ALL AUDIO DEVICES LOCATED IN SLEEPING AREAS SHALL COMPLY WITH NFPA 72-18.4.5.3 IN REGARDS TO SIGNAL TYPE,

PROVIDE POWER BOOSTERS (NACs) AS REQUIRED; PROVIDE SMOKE DETECTOR AT EACH BOOSTER LOCATION AND FACP

24VDC ACCESSORY WIRING SHALL BE 2#16 FPLP CABLE (VERIFY THAT ALL DC ACCESSORY CIRCUITS ARE POWER LIMITED).

PROVIDE TIER 2 DRAWINGS WITH COMPLETE WIRING DIAGRAMS AND DEVICE ADDRESSES AS REQUIRED FOR FIRE

SIGNALING LINE CIRCUIT (SLC) AND INITIATING DEVICE CIRCUIT (IDC) WIRING SHALL BE 2#14 FPLP CABLE.

PRE-ACTION -

DIALER -

SPRINKLER FLOW/TAMPER SWITCHES

DOOR ACCESS SYSTEM ←

TO UL LISTED ALARM COMPANY VIA

PROVIDE ADDRESS MODULES FOR ALL FLOW & TAMPER SWITCHES.

SEE FLOOR PLANS FOR DETECTOR TYPES AND LOCATIONS AND QUANTITIES.

PER FLOOR PER STAIR AND TWO TAMPER SWITCH FOR STAND PIPE LOCATION.

PROVIDE MONITOR MODULES FOR ALL DETECTORS LOCATED IN COLD AREAS.

PROVIDE COMPLETE SIGNAL WIRING FOR DRY SYSTEM COMPRESSOR AND ALARM.

PROVIDE RADIO SIGNAL COVERAGE THROUGHOUT BUILDING AS REQUIRED PER 916.1.2&3.

SEE SPRINKLER DRAWINGS FOR FLOW/TAMPER SWITCH LOCATIONS AND QUANTITIES.

WIRELESS COMMUNICATOR AND POTS LINE,

TRANSMIT ALARM/SUPERVISORY/TROUBLE

PROVIDE MONITOR MODULES AT DRY ALARM VALVE.

PROVIDE LOW FREQUENCY DEVICES.

NAC WIRING SHALL BE 2#14 FPLP CABLE.

DEPARTMENT APPLICATION.

PROVIDE COMPLETE SIGNAL WIRING FOR DOOR RELEASE.

PROVIDE BATTERY CALCULATIONS AND ONE LINE WIRING DIAGRAM.

MANUAL PULL STATIONS SHALL BE INSTALLED NOT LESS THAN 42 INCHES A.F.F., AND NOT MORE THAN 48 INCHES A.F.F.

ALL BEDROOMS AND LIVING ROOMS SHALL BE WIRED FOR FUTURE STROBE.

ACCESSIBLE UNIT AND HEARING IMPAIRED FIRE ALARM NOTES NOTES SEE ARCHITECTURAL PLANS FOR NUMBER OF HANDICAP AND HEARING IMPAIRED

CARRY MINIMUM 5% OF TOTAL UNIT NUMBER. IN EACH UNIT, PROVIDE: -LOCAL TYPE SMOKE ALARM WITH BUILT IN STROBE/OR SEPARATE 120V STROBE

IN EACH BEDROOM, AND OUTSIDE BEDROOM FOR LOCAL SMOKE ALARM. -LOCAL TYPE STROBE IN EACH BEDROOM AND LIVING ROOM FOR CO ALARM. -SYSTEM TYPE STROBE IN EACH BEDROOM AND LIVING ROOM.

-SYSTEM TYPE STROBE IN EACH BATHROOM. -LOCAL TYPE STROBE IN EACH BATHROOM FOR LOCAL SMOKE ALARM.

-LOCAL TYPE STROBE IN EACH BATHROOM FOR CO ALARM. -LOCAL TYPE CO ALARMS OUTSIDE BEDROOMS AND EVERY HABITABLE FLOOR LEVEL, STROBES ARE TO BE LOCATED IN BEDROOMS AND HABITABLE SPACES.

FIRE ALARM CONSTRUCTION NOTES

-LOCAL SMOKE DETECTORS SHALL BE WIRED FROM ARC-FAULT CIRCUITS.

-BACK TO BACK OUTLETS ON FIRE RATED WALLS SHALL BE INSTALLED TO MAINTAIN FIRE RATINGS, IF NECESSARY, USE FIRE RATED OUTLET BOXES.

-ALL FLOOR PENETRATIONS BY CABLES AND CONDUITS SHALL BE SEALED TO MAINTAIN FIRE RATINGS.

-RECESSED LIGHT FIXTURES INSTALLED ON FIRE RATED CEILINGS SHALL HAVE FIRE RATED HOODS ON TOP TO MAINTAIN FIRE RATING. SEE ARCHITECTURAL DRAWINGS FOR FIRE RATED AREAS.

AUDIBLE DEVICES PROVIDED FOR THE SLEEPING AREAS TO AWAKEN OCCUPANTS SHALL PRODUCE A LOW FREQUENCY ALARM SIGNAL THAT COMPLIES WITH THE FOLLOWING: (1) THE ALARM SIGNAL SHALL BE A SQUARE WAVE OR PROVIDE EQUIVALENT AWAKENING ABILITY. (2) THE WAVE SHALL HAVE A FUNDAMENTAL FREQUENCY OF 520 HZ \pm /- 10

IN DWELLING UNITS, PROVIDE SMOKE ALARMS:

-INSIDE EACH SLEEPING AREA, BEDROOM, OFFICE, OR SIMILAR SPACE. -OUTSIDE OF EACH SLEEPING AREA, WITHIN 10' OF DOOR.

FIRE ALARM SYSTEM EQUIPMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY FIRE DEPARTMENT'S RULES AND REGULATIONS WHERE THE PROJECT IS LOCATED. CONTRACTOR MAY OBTAIN A COPY OF IT FROM THE CITY FIRE DEPARTMENT. THE PUBLICATION IS HEREBY MADE

M- TO RADIO MASTER BOX

VERIFY LOCATION W/ FD

NUMBERS AS SCROLLED ON THE ANN.

GREEN, SPRINKLER ROOM IN RED.

AND OWNERSHIP

KX KNOX BOX:

TIER 2 DRAWINGS SHALL COMPLY WITH

DIAGRAMS WITH DEVICE IDENTIFICATIONS

SHOW DEVICE LOCATIONS, WIRING

AND BATTERY CALCULATIONS.

GRAPHIC MAP: 18"X24", 1/16" SCALE LEXON COVER, WOOD FRAME.

GRAPHIC MAP WILL INDICATE ALL FIRE ALARM DEVICES WITH SAME

SHOW STAIRS IN YELLOW, ELEVATORS IN BLUE, ELECTRIC ROOM IN

PART OF THE CONTRACT DOCUMENTS.

—**()**→——ROTARY BEACON

ANALOG

ADDRESSABLE

SYNCHRONIZED

CLASS "A"

WIRING

TYPICAL FIRE ALARM SYSTEM RISER DIAGRAM

IN DWELLING UNITS, PROVIDE CARBON MONOXIDE ALARMS: -OUTSIDE EACH SLEEPING AREA, WITHIN 10' OF DOOR. -ON EVERY HABITABLE FLOOR.

-IN THE ROOM HOUSING THE GAS APPLIANCE. ALARMS SHALL BE UL LISTED, AND HARD WIRED WITH BATTERY BACK-UP.

LOCATION(S) OF SMOKE AND CO ALARMS WITHIN DWELLING UNITS SHALL BE PER

THE FOLLOWING: ROM BATHROOM DOOR: 3FT FROM HVAC DIFFUSERS: 3FT FROM TIP OF CEILING FAN BLADES: 3FT FROM COOKING EQUIPMENT: PHOTOELECTRIC TYPE - 6FT IONIZATION TYPE - 20FT

SMOKE ALARMS AND COMBINATION SMOKE/CO ALARMS IN EACH DWELLING UNIT SHALL BE INTERCONNECTED FOR MULTIPLE—STATION OPERATION WITHIN THAT DWELLING UNIT ONLY. INTERCONNECT WITH 2#16 FPLP CABLE.

ALL SYSTEM-TYPE CO DETECTORS MUST "LATCH" AT THE PANEL; THE RESPONDER TO A CO DETECTOR SUPERVISORY ALARM MUST BE LEAD TO MITIGATE THE CO ISSUE AT THE DETECTOR AND THEN CLEAR/RESET THE FIRE ALARM PANEL. THE CO SUPERVISORY ALARM CANNOT BE MITIGATED AT THE POINT LOCATION, BUT REQUIRES A COMPETENT RESPONDER TO ADDRESS THE PANEL IN THE FIRE COMMAND CENTER.

ALARM MONITORING SERVICE RECEIVES A SUPERVISORY CARBON MONOXIDE SIGNAL; THE WORDS "CARBON MONOXIDE" MUST BE PRESENT AT ALARM COMPANY, THE LETTERS "CO" ARE NOT ACCEPTABLE.

ı	
	ROOF ANTENNA, VERIFY LOC WITH FD
	FLOOR COAX CABLE ROOF BREAK
	FLOOR BREAK
	FLOOR COAX CABLE
	A FLOOR COAX CABLE
	BDA SYSTEM. TWO CHANNELS; FOR POLICE AND FIRE. AMPLIFIER AND POWER SUPPLY
	SCHEMATIC BDA SYSTEM DIAGRAM

CARRY THE COST OF THE BDA SYSTEM IN ITS ENTIRETY, WITH ALL NECESSARY

STRUCTURES AND RACEWAYS TO INSTALL A BDA SYSTEM PER IBC 916.1.2&3. UPON COMPLETION OF THE BUILDING, CONDUCT TEST BY THE MANUFACTURER TO SIZE

IF EQUIPMENT IS TO BE INSTALLED, IT WILL BE HOUSED IN A 2HR ENCLOSURE.

OBTAIN LATEST FIRE DEPARTMENT REQUIREMENTS PRIOR TO PRICING.

INSTALLATION SHALL COMPLY CITY FIRE DEPARTMENT REQUIREMENTS.

BE DETERMINED BY THE FD.

RUN CONDUITS IN 2HR RATED ENCLOSURE.

THE REPEATER CAPACITIES AND COVERAGE REQUIREMENTS TO INSTALL BDA SYSTEM

HEAD END EQUIPMENT TO MEET EMERGENCY SERVICES COMMUNICATION NEEDS, AS TO

		ACTUATE COMMON ALARM SIGNAL	ACTUATE AUDIBLE ALARM-GLOBAL	ACTUATE COMMON SUPERVISORY SIGNAL	ACTUATE AUDIBLE SUPERVISORY ALARM	ACTUATE COMMON TROUBLE SIGNAL	ACTUATE AUDIBLE TROUBLE SIGNAL	ACTUATE APPROPRIATE LOCATION INDICATO	ACTUATE ALL AUDIBLE EVACUATION SIGNAI	ACTUATE ALL VISIBLE ALARM SIGNALS	DISPLAY CHANGE OF STATUS	TRANSMIT ALARM SIGNAL TO SUPERVISORY	TRANSMIT TROUBLE SIGNAL TO SUPERVISC	TRANSMIT SUPERVISORY SIGNAL TO SUPEF	ACTUATE EXTERIOR BEACON	ACTUATE SPRINKLER BELL	I	I	I	ı
1	COMMON AREA SMOKE DETECTORS		P					P	P	P	P	P			P					
2	COMMON AREA HEAT DETECTORS		•									•								
3	COMMON AREA MANUAL PULL STATIONS											P								
4	SPRINKLER MAIN FLOW											P				•				
5	SPRINKLER FLOOR FLOW SWITCH											P				•				
6	SPRINKLER TAMPER SWITCH ACTUATION			•																
7	PRESSURE SWITCH ACTUATION			•																
8	DRY ALARM ACTUATION											٩		·						
9	BDA SYSTEM, IF PRESENT			•																
10	FIRE ALARM AC POWER FAILURE					•							P							
11	FIRE ALARM SYSTEM LOW BATTERY					•							P							
12	OPEN CIRCUIT OR GROUND FAULT					V							P							
13	-					Ì														
14	_																			
15	-																			
16	_																			

IG THREE FAMILY HOMEDORCHESTER, MA 02125 EXISTING EY ST, DO ШН

FIRE ALARM RISER & NOTES

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FIRE SAFETY SYSTEMS

CONTROLS

GENERAL NOTES:

CONTRACTOR RESPONSIBILITY-

CONTRACTOR IS SOLELY RESPONSIBLE FOR:

- 1. VIEWING SITE AND INCLUDING ANY SPECIAL CONDITIONS NECESSARY TO PERFORM THE WORK AS DESCRIBED IN THE DRAWINGS.
- 2. ESTABLISHING CONTROL OF THE SITE VIA SURVEY, AND LAYOUT.
- 3. OBTAINING AND PAYING FOR ALL PERMITS.
- 4. PAYING FOR ALL TEMPORARY UTILITIES AND FACILITIES.
- 5. CHECKING AND CONFIRMING ALL DIMENSIONS, AND LAYOUTS.
- 6. SCHEDULING AND SEQUENCING.
- 7. CONSTRUCTION MEANS, METHODS AND TECHNIQUES
- 8. FOLLOW CONSTRUCTION DRAWINGS OR MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS
- 9. MAINTAINING DRAWINGS AND PERMITS ON SITE.
- 10. JOB SITE SAFETY
- 11. COORDINATION BETWEEN TRADES, AND SUPPLIERS.
- 12. PROVIDE SCHEDULE TO OWNER AND ARCHITECT,
- 13. PROVIDE A SCHEDULE OF VALUES TO THE OWNER AND ARCHITECT.
- 14. TEMPORARY HEAT, ICE AND SNOWPLOWING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 15. SITE CLEANLINESS AND CONFORMANCE TO NFPA 241 REQUIREMENTS.
- 16. REPAIRING ANY WORK DAMAGED BY HIS FORCES WHILE PERFORMING THIS CONTRACT.
- 17. GIVING WARRANTY FOR HIS WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION.

REVIEW OF WORK BY DESIGNERS-

CONTRACTOR SHALL NOTIFY ARCHITECT BEFORE PROJECT STARTS.

CONTRACTOR SHALL NOTIFY ARCHITECT. ONE WEEK PRIOR TO:

18. POURING CONCRETE

19. INSULATING

20. INSTALLING DRYWALL

21. FINAL INSPECTION

SHOP DRAWINGS-

ALL SHOP DRAWINGS SHALL BE SUBMITTED 30 DAYS AFTER CONTRACT AWARD.

GENERAL CONTRACTOR SHALL APPROVE SHOP DRAWINGS, PRIOR TO SUBMITTING TO ARCHITECT OR ENGINEER.

NON SUBMISSION DOES NOT CONSTITUTE APPROVAL OF ANY WORK.

NO EXCEPTIONS TAKEN DOES NOT RELIEVE THE CONTRACTOR OF PERFORMING ANY OTHER WORK ON THE DRAWINGS.

CONTRACTOR SHALL EXPECT A MINIMUM OF 2 WEEKS FOR DESIGNERS' REVIEW TIME.

ANY VARIANCE FROM THE ORIGINAL DESIGN SHALL BE NOTED.

ANY SUBSTITUTION NOT INDICATED SHALL NOT CONSTITUTE APPROVAL OF A CHANGE.

SHOP DRAWINGS ARE NOT COORDINATION DRAWINGS.

DESIGNERS ARE NOT RESPONSIBLE FOR DIMENSIONS.

CONTRACTOR TO ENSURE MATERIALS AND ASSEMBLIES ARE COMPATIBLE AND ACCEPTABLE TO THE MANUFACTURER. ALL ASSEMBLY MATERIALS SHALL BE FROM A SINGLE SOURCE AS MUCH AS POSSIBLE.

REQUEST FOR INFORMATION -

ONLY RFI'S SENT THROUGH BY THE OWNER AND AWARDING CONTRACTOR WILL BE ANSWERED SUBCONTRACTORS MUST SUBMIT RFI'S THROUGH THE GENERAL CONTRACTOR.

BIDDING PHASE - OWNER AND AWARDING CONTRACTOR ARE RESPONSIBLE FOR COMPILING AND AGGREGATING RFI'S AND SUBMITTING TO THE ARCHITECT OR DESIGNER AT ONE TIME ONLY. ARCHITECT OR DESIGNER HAS ONE WEEK TO RESPOND. QUESTIONS MUST BE COMPLETE, NOT PIECEMEAL AND SHOULD BE SUBMITTED BY CSI DIVISION.

CHANGE ORDERS-

CONTRACTOR SHALL VISIT THE SITE AND BE THOROUGHLY ACQUAINTED WITH THE PROJECT PRIOR TO SUBMITTING A PRICE. ADDITIONAL MONEY WILL NOT BE GRANTED FOR WORK NOT CLARIFIED PRIOR TO BIDDING.

DESIGNER SHALL BE NOTIFIED OF ANY CHANGE TO THE DRAWINGS, UNFORESEEN FIELD CONDITIONS OR DISCREPANCIES PRIOR TO PERFORMING WORK.

ANY PROPOSED CHANGES SHALL BE ACCOMPANIED WITH A WRITTEN DESCRIPTION OR A SKETCH FOR CLARIFICATION.

ALL CHANGE ORDERS SHALL BE APPROVED PRIOR TO PERFORMING WORK.

CHANGE ORDERS SHALL BE PRICED EITHER LUMP SUM OR UNIT PRICE OR TIME AND MATERIALS.

ANY SUBSTITUTION REQUEST SHALL BE MADE VIA CHANGE ORDER, AND NOT VIA SHOP DRAWINGS UNLESS AGREED TO.

ANY CHANGE SHALL STATE THE CREDIT OR COST ADD AND/OR ANY CHANGE TO THE SCHEDULE.

REQUISITIONS-

ANY REQUISITION REQUIRED TO BE SIGNED BY THE ARCHITECT SHALL BE SUBMITTED A MINIMUM OF ONE WEEK PRIOR TO BEING SUBMITTED TO THE BANK FOR REVIEW.

CONTRACTOR SHALL PROVIDE RECEIPTS AND INSURANCE CERTIFICATES FOR ANY MATERIALS FOR PAYMENT FOR ANY UNINSTALLED MATERIALS.

FOUNDATION NOTES:

- 1. THE FOUNDATION HAS BEEN DESIGNED FOR 4000 PSF ALLOWABLE SOIL BEARING CAPACITY.
- ALL BACKFILL UNDER STRUCTURAL SLABS, MATS, AND FOOTINGS WILL BE ENGINEERED BACKFILL COMPACTED IN SPECIFIC LIFTS TO 95 PERCENT OF MAXIMUM DRY DENSITY, UNLESS OTHERWISE INDICATED OR SPECIFIED.
- 3. ALL EMBANKMENTS AND BACKFILL COMPACTED IN SPECIFIED LIFTS TO 90 PERCENT OF MAXIMUM DRY DENSITY, UNLESS OTHERWISE INDICATED OR SPECIFIED.
- 4. PROVIDE SHEETING, BRACING, AND UNDERPINNING AS REQUIRED TO PRESERVE ADJACENT STRUCTURES.
- 5. FOUNDATIONS SHALL NOT BE POURED IN WATER OR ON FROZEN GROUND.
- 6. VERIFY LOCATIONS AND REQUIREMENTS FOR INSERTS, SLEEVES, CONDUITS, EMBEDMENT AND PENETRATIONS WITH RESPECTIVE TRADES BEFORE PLACING CONCRETE.
- 7. DOWELS FROM FOUNDATIONS INTO PIERS, COLUMNS, BUTTRESSES OR WALLS SHALL BE THE SAME SIZE AND NUMBER AS REINFORCEMENT IN PIERS, COLUMNS, BUTTRESSES OR WALLS ABOVE, EXCEPT AS OTHERWISE SHOWN.
- 8. CONTRACTOR SHALL PROVIDE CONTINUOUS DRAINAGE BY MECHANICAL METHODS TO CONTROL SURFACE AND UNDERGROUND WATER, AS REQUIRED DURING CONSTRUCTION.
- 9. CONTRACTOR SHALL ENSURE THAT GROUND WATER LEVELS UNDER ADJACENT STRUCTURES AND PROPERTIES ARE NOT ALTERED.
- 10. ALL FOUNDATION UNITS (PIERS) SHALL BE CENTERED SUPPORT MEMBERS, UNLESS OTHERWISE NOTED ON PLANS.
- 11. COORDINATE UNDER FLOOR AND PERIMETER DRAIN REQUIREMENTS WITH ARCHITECTURAL, CIVIL AND PLUMBING DRAWINGS AND THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER.
- 12. ALL BEARING MATERIALS SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL DETERMINE THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED.
- 13. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BEAR A MINIMUM OF 4'-0" BELOW FINAL FINISHED GRADE FOR FROST PROTECTION.
- 14. FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES UNTIL FLOOR & SLAB AT TOP AND BOTTOM ARE IN PLACE.
- 15. WHERE FOUNDATION WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL
- 16. ALL FOOTING EXCAVATIONS ARE TO BE FINISHED BY HAND.
- 17. SEE THE REQUIREMENTS OF THE SPECIFICATIONS FOR BACKFILLING UNDER OR ADJACENT TO ANY PORTION OF THE BUILDING.
- 18. PROTECT IN-PLACE FOUNDATIONS, SLABS AND ADJACENT STRUCTURES, NEW CONSTRUCTION, STREET UTILITIES FROM FROST PENETRATION OR DAMAGE FROM CONSTRUCTION ACTIVITIES UNTIL THE PROJECT IS COMPLETED.
- 19. SLAB ON GRADE SHALL BEAR DIRECTLY ON A MIN. 12" THICK LAYER OF COMPACTED STRUCTURAL FILL, OR MIN. 6" THICK LAYER OF CRUSHED STONE, PLACED ABOVE PROOFROLLED AND COMPACTED EXISTING FILL, OR ABOVE UNDISTURBED NATURAL TILL. SHOULD BEDROCK BE ENCOUNTED AT OR WITHIN 12" OF BOTTOM OF SLAB, BEDROCK SHALL BE OVER EXCAVATED A MIN. OF 12" BELOW BOTTOM OF SLAB.
- 20. WHERE BEDROCK IS ENCOUNTED AT OR WITHIN 12" OF DESIGN FOOTING GRADE, IT SHOULD BE OVER EXCAVATED A MIN. OF 12" BELOW THE BOTTOM OF PROPOSED FOOTING. BEDROCK EXCAVATIONS SHOULD EXTEND A MIN. OF 12" BEYOND FOOTING EDGE. LOOSE ROCK PIECES SHOULD BE REMOVED WITHIN THE FOOTING BEARING ZONE, AND OPEN BEDROCK JOINTS SHOULD BE CHOKED WITH CRUSHED STONE OR FILLED WITH CONCRETE PRIOR TO PLACING THE SOIL CUSHION.

CONCRETE NOTES:

- 1. ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF:
- 3000 PSI FOR FOUNDATION WALL, EXTERIOR WALLS AND
- OTHER VERTICAL CONCRETE SURFACES EXPOSED TO THE WEATHER.
- 2. MAXIMUM SLUMP SHALL NOT EXCEED 3"; AND MAXIMUM; COARSE AGGREGATE SIZE SHALL NOT EXCEED 3/4" IN DIAMETER.

REINFORCING NOTES:

- 1. ALL REINFORCEMENT, EXCEPT FOR TIES AND STIRRUPS, SHALL CONFORM TO ASTM 615-60.
- 2. ALL REINFORCEMENT FOR TIES AND STIRRUPS SHALL CONFORM TO ASTM 615-40.
- 3. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185-70 SPECIFICATIONS.
- 4. ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE ARCHITECT OR HIS ENGINEER PRIOR TO THE PLACEMENT OF ANY CONCRETE.
- 5. THE CONTRACTOR SHALL SUBMIT FOUR PRINTS OF SHOP DRAWINGS: SHOWING ALL REINFORCING DETAILS, CHAIR BARS, HIGH CHAIRS, SLAB BOLSTERS, ETC. TO THE ARCHITECT FOR HIS APPROVAL. THE CONTRACTOR SHALL RECEIVE WRITTEN APPROVED SHOP DRAWINGS FROM THE ARCHITECT OR HIS ENGINEER PRIOR TO THE FABRICATION OF REINFORCEMENT.
- 6. CLEARANCES OF MAIN REINFORCING FROM ADJACENT CONCRETE SURFACES SHALL BE AS FOLLOWS:
- A. FOOTINGS
- 3 INCHES
- B. SIDES OF FOUNDATIONS WALLS. EXPOSED FACES OF FOUNDATIONS. SIDES OF COLUMNS/PIERS, SLABS ON GRADE FROM TOP SURFACE
- 2 INCHES
- C. INTERIOR FACES OF FOUNDATIONS, TOP REINFORCING IN SLABS EXPOSED TO THE WEATHER
 - 1-1/2 INCHES 1 INCHES
- D. TOP STEEL OF INTERIOR SLABS 1 INCHES
 7. MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE 1/4" OF SECTIONS 10" OR LESS, 1/2" FOR SECTIONS GREATER THAN 10".

WOOD NOTES:

- 1. ALL LUMBER SHALL HAVE A MOISTURE CONTENT OF NOT MORE THAN 19%.
- 2. ALL FRAMING LUMBER SHALL BE #2 SPF, OR BETTER, HAVING A MINIMUM.
 - FB=875 PSI, FV=135 PSI, E=1,300,000 PSI.
- 3. ALL JOIST SPANS SHALL HAVE ONE ROW OF 1" X 3: CROSS BRIDGING AT MID SPAN AND NOT MORE THAN 8'-O" O.C.
- 4. ALL STUD BEARING WALLS SHALL HAVE ONE ROW OF 2X HORIZONTAL BLOCKING AT 1/2 STUD HEIGHT, AND NOT MORE THAN 6'-O" O.C. MAXIMUM.
- 5. PROVIDE AND INSTALL ALL NECESSARY TIMBER CONNECTORS WITH ADEQUATE STRENGTH.
- 6. PROVIDE DOUBLE JOIST BELOW PARTITIONS PARALLEL TO JOIST FRAMING.
- 7. PROVIDE SOLID BRIDGING BELOW PARTITIONS PERPENDICULAR TO JOIST FRAMING.
- 8. PROVIDE SOLID BRIDGING BETWEEN JOIST FRAMING MEMBERS WHEN BEARING ON STUD PARTITIONS OR BEAMS.
- PROVIDE A CONTINUOUS BAND JOIST AT EXTERIOR STUD WALLS.
 PROVIDE DIAGONAL METAL STRAP BRACING AT ALL CORNERS AND
- WALL INTERSECTIONS, AT THE INSIDE FACE OF STUDS, FROM TOP PLATE TO FLOOR PLATE AT A 45 DEGREE ANGLE WITH A SIMPSON TYPE "RCWB" STRAP, OR EQUAL.
- 11. ALL BUILT-UP BEAMS SHALL BE BOLTED WITH $\frac{1}{2}$ " Ø THRU BOLTS, MEETING A307 STANDARDS, OR, AS NOTED ON DRAWINGS.
- 12. ALL STRUCTURAL FRAMING FOR STAIRS IS DONE BY OTHERS.

WOOD LINTEL SCHEDULE:

Lintels over openings in bearing walls shall be as follows; or as noted on drawings.

Span o	f opening:	Size: 2x6 studs	Size: 2x4
less tha	an 4'-0"	3 - 2x4	2 - 2x4
up to	6'-0"	3 - 2x6	2 - 2x6
up to	8'-0"	3 - 2x8	2 - 2x8
up to	10'-0"	3 - 2x10	2 - 2x10

DESIGN CRITERIA:

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE 10th EDITION OF THE MASSACHUSETTS BUILDING CODE.

DESIGN LIVE LOAD = 40 POUNDS PER SQUARE FOOT

- FLOORS

- PRIVATE DECK

DESIGN SNOW LOAD = 40 POUNDS PER SQUARE FOOT

WITH SNOW DRIFT
WHERE APPLICABLE

S1 = 0.069

ALL LUMBER SHALL BE #2 SPF, Fb= 875 PSI, Fv=135 PSI

WIND LOAD = 127 MILES PER HOUR SEISMIC: Ss = 0.127 Location

PROPOSED 3 FAMILY RENOVATION 7 THORNLEY STREET DORECHESTER, MA 0213



Description	Date				
	Description				

 Project No:
 2025132

 Scale:
 AS NOTED

 Date:
 07-18-2025

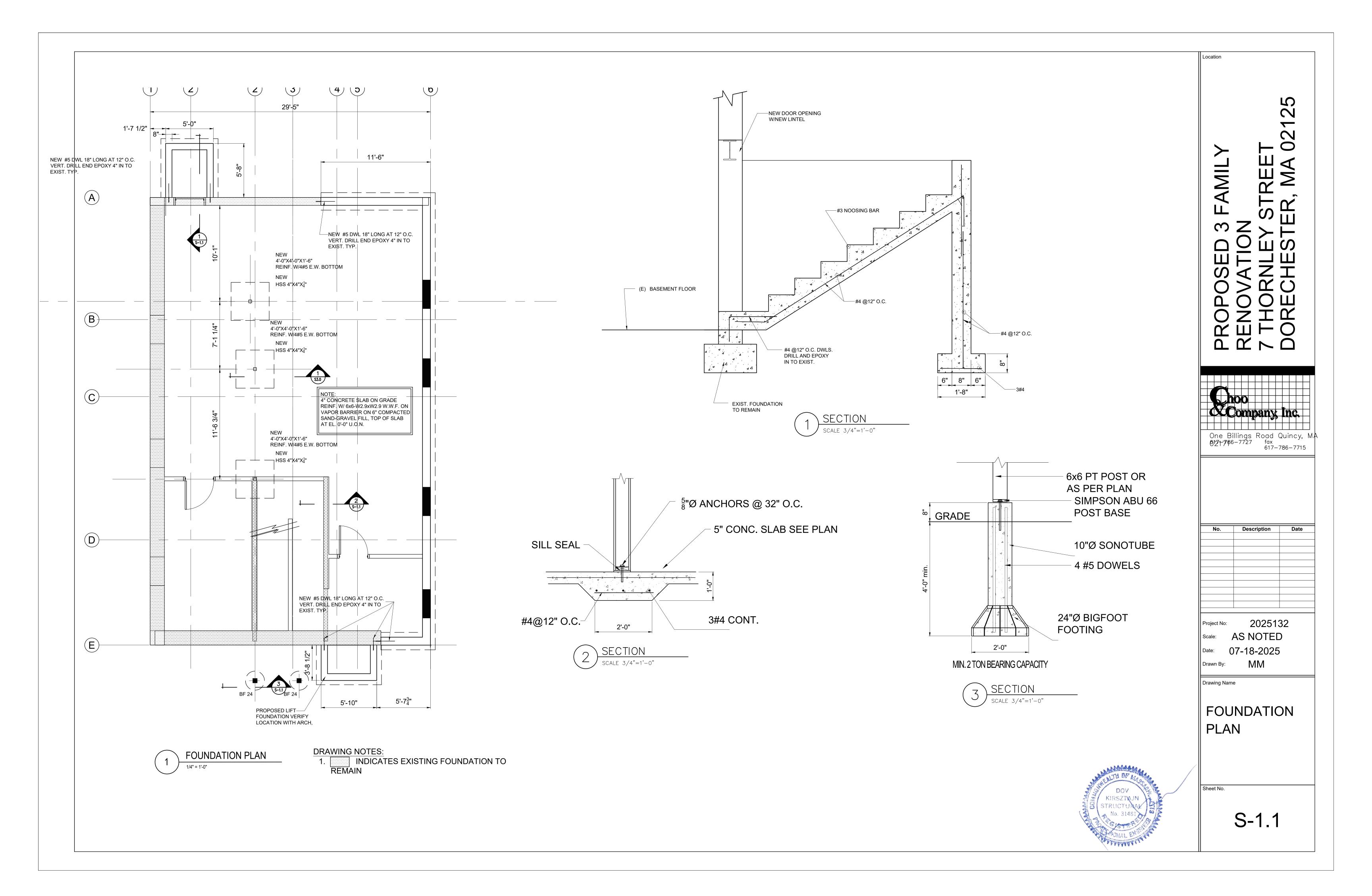
 Drawn By:
 MM

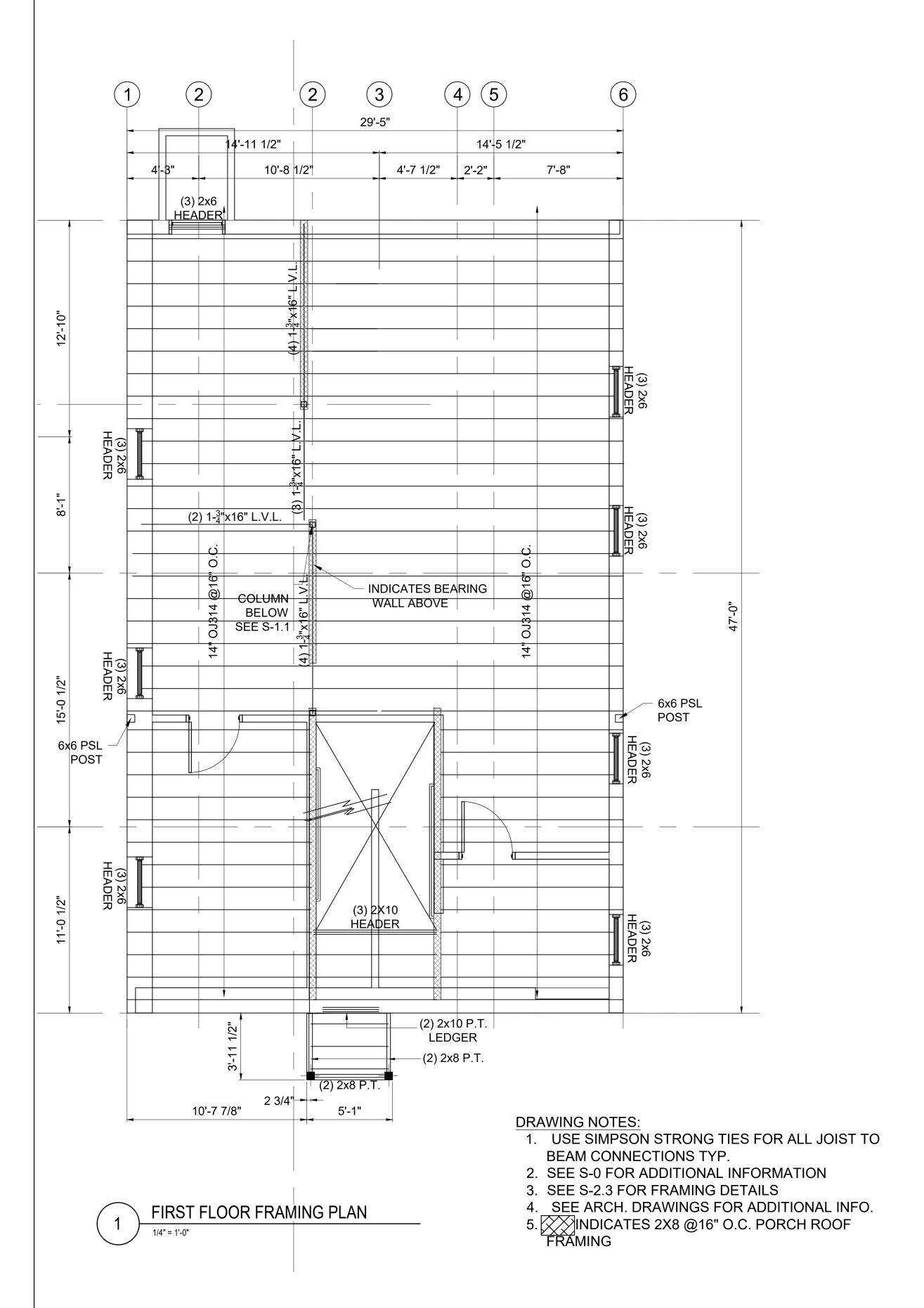
GENERAL NOTES

Drawing Name

Sheet No.







- 1. ALL FLOOR JOISTS TO BE 14" WOOD TRUSSES. WOOD TRUSSES DESIGNED AND PROVIDED BY TRUSS MANUFACTURER.
- 2. ALL WOOD POSTS SUPPORTING LVL BEAMS TO BE 6x6 VERSA-LAM POST UNLESS OTHERWISE NOTED.
- 3. INSTALL BLOCKING AT ALL EXTERIOR WALL SHEATHING JOINTS
- AND SHEAR WALL SHEATHING JOINTS. 4. ALL SHEAR WALLS SHEATHINGS SEE SCHEDULE 2/S-2.1.
- 5. HD = HOLDDOWN; HATCHED WALL XXXXXXXXXX INDICATES
- SHEAR WALL, ALL EXTERIOR STUD WALLS TO BE SHEAR WALLS. 6. INSTALL SOLID BLCOKINGS AT 8' ON CENTER ON ALL WOOD

INSTALL L4X6x8 RELIEVING ANGLES AROUND PERIMETER WHERE APPLICABLE, SEE DETAIL 3/S-2.3

BEARING WALL STUD SCHEDULE (INSTALL MIDDLE BLOCKING BETWEEN ALL STUDS)			
FLOOR	3RD FL	4TH FL	5TH FL
INTERIOR STUD SIZES (SINGLE OR DOUBLE 2X6 WALLS)	2x6 @ 12"O.C.	2x6 @ 16"O.C.	2x6 @16"O.C.
EXTERIOR STUD SIZES (SINGLE 2X6 WALLS)	2x6 @ 16"O.C.	2x6 @ 16"O.C.	2x6 @16"O.C.



No.	Description	Date

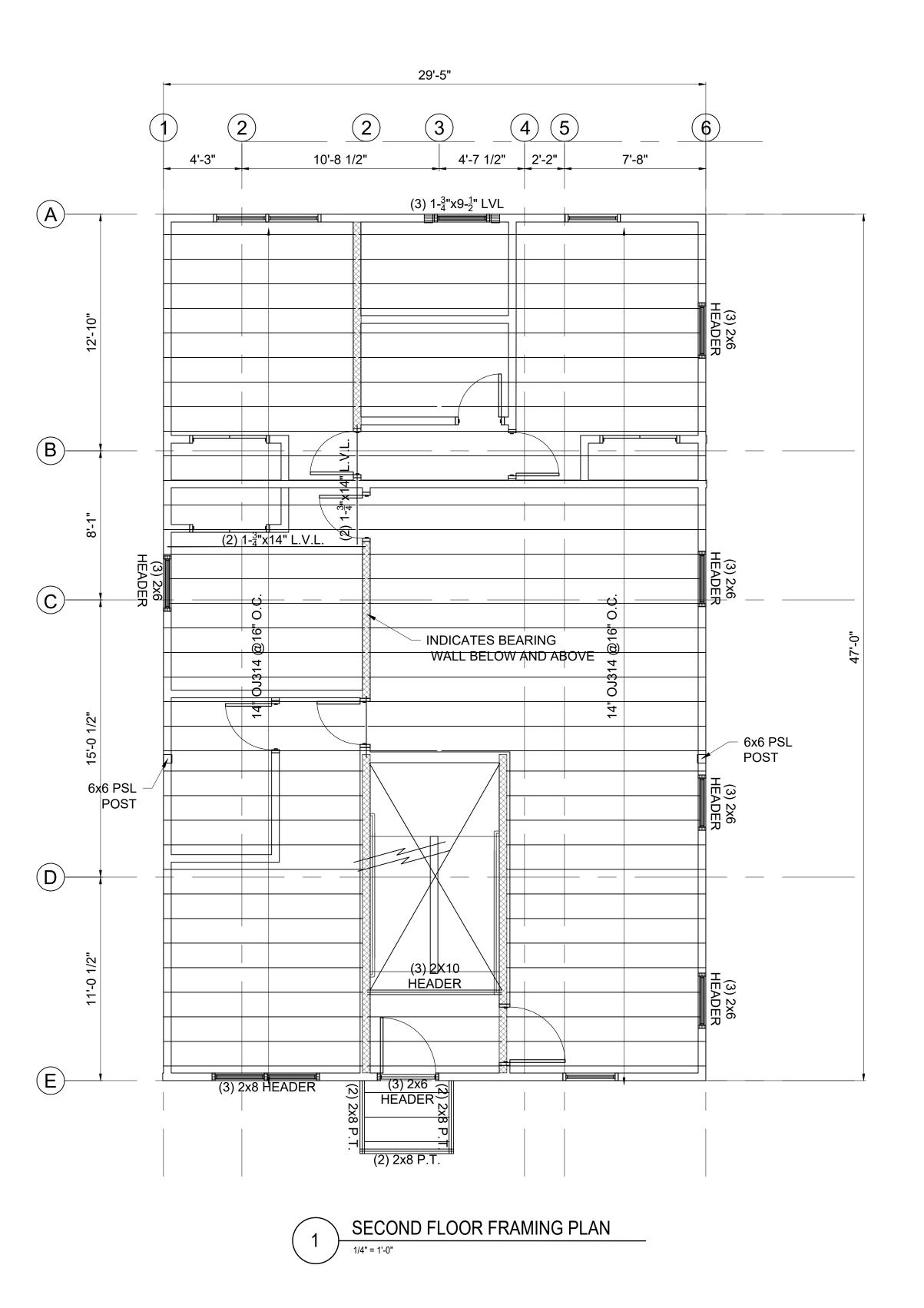
2025132 AS NOTED 07-18-2025 Drawn By:

Drawing Name

FIRST FLOOR FRAMING PLAN



Sheet No.



Location

RENOVATION 7 THORNLEY STREET DORECHESTER, MA 0212



No.	Description	Date

Project No: 2025132

Scale: AS NOTED

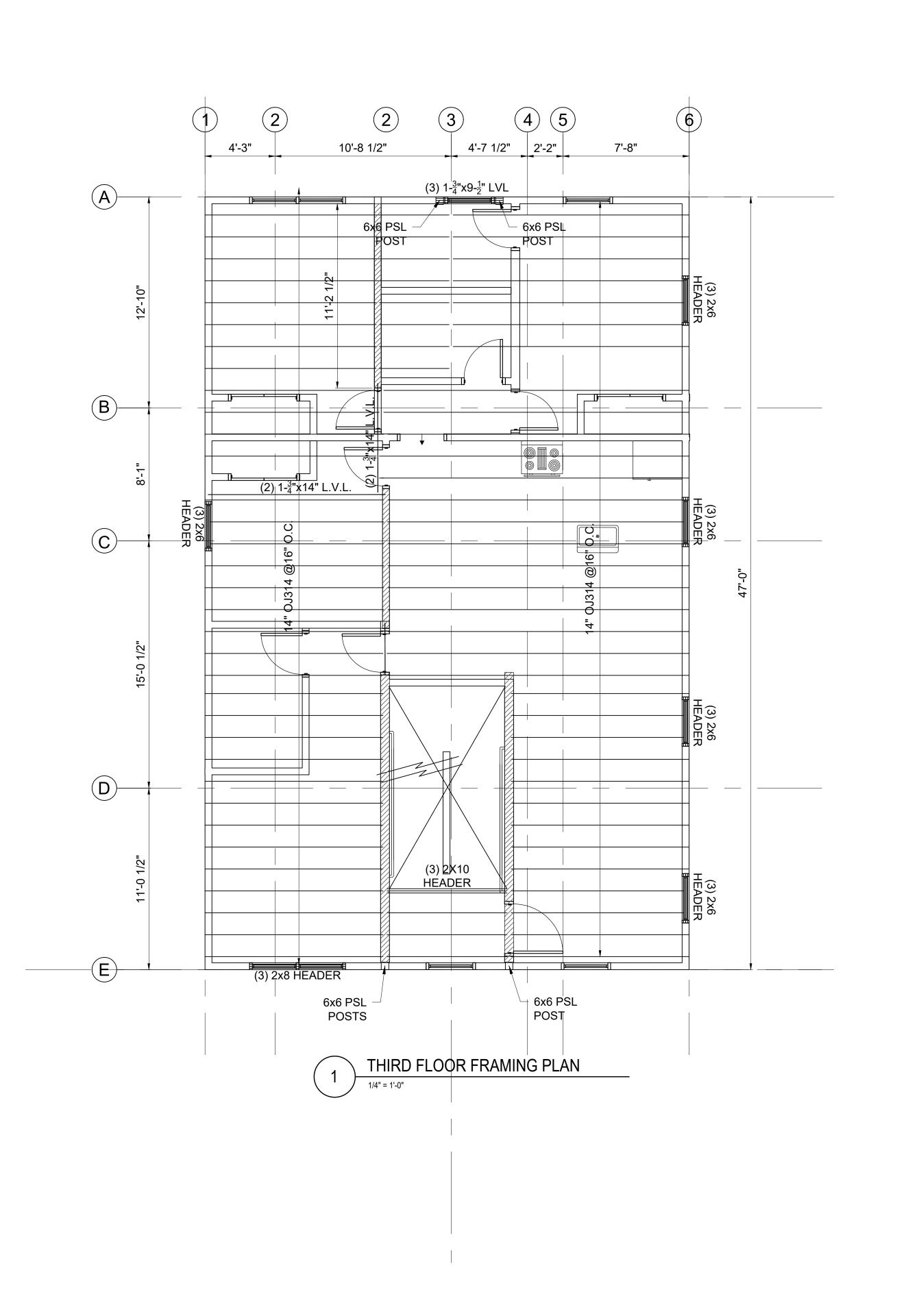
Date: 07-18-2025

Drawing Name

SECOND FLOOR FRAMING PLAN



Sheet No.



on

PROPOSED 3 FAMILY RENOVATION 7 THORNLEY STREET DORECHESTER, MA 02125



No.	Description	Date

Project No: 2025132

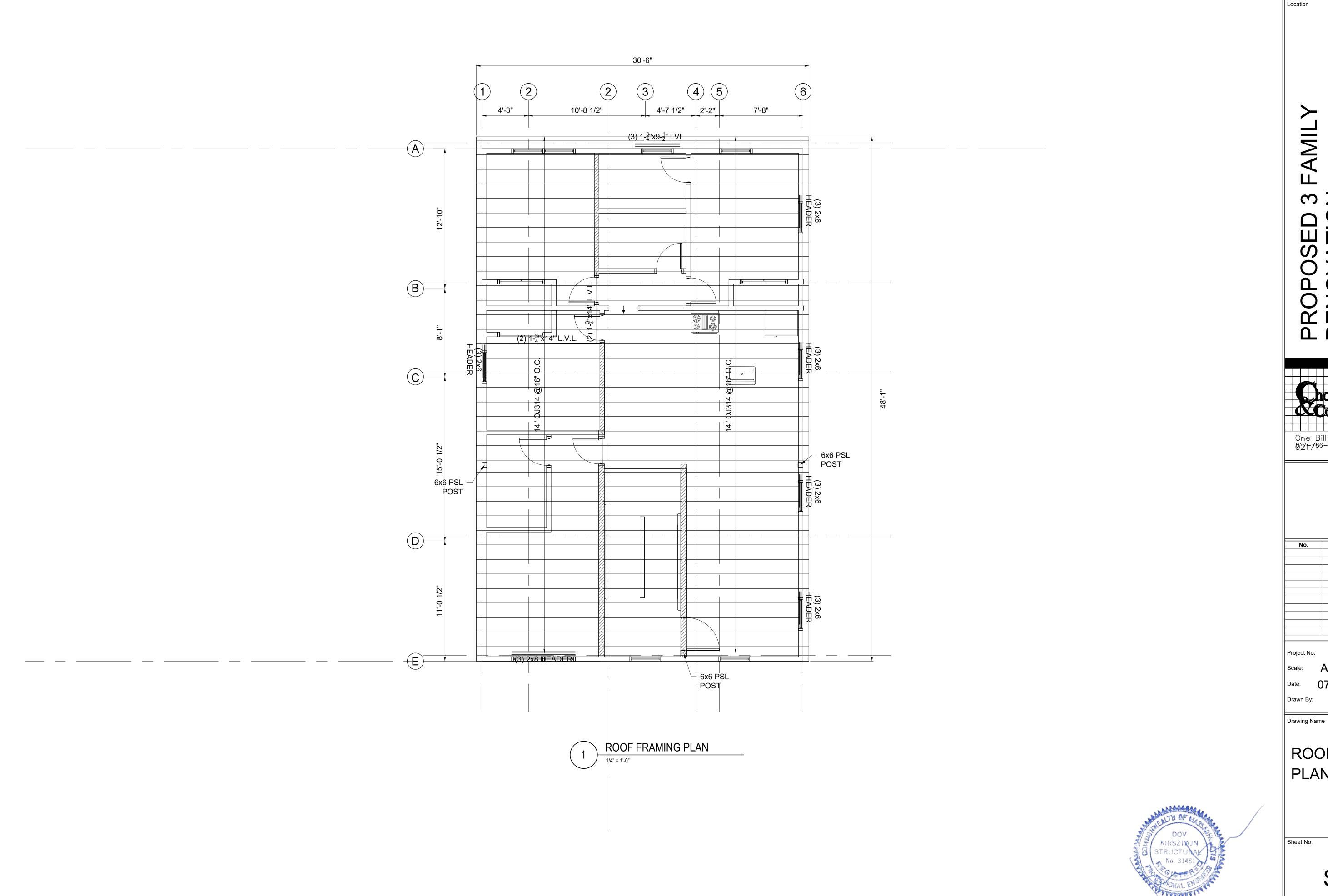
Scale: AS NOTED

Date: 07-18-2025

Drawing Name

THIRD FLOOR
FRAMING PLAN

Sheet No.



ON ON SY STREET STER MA 02125



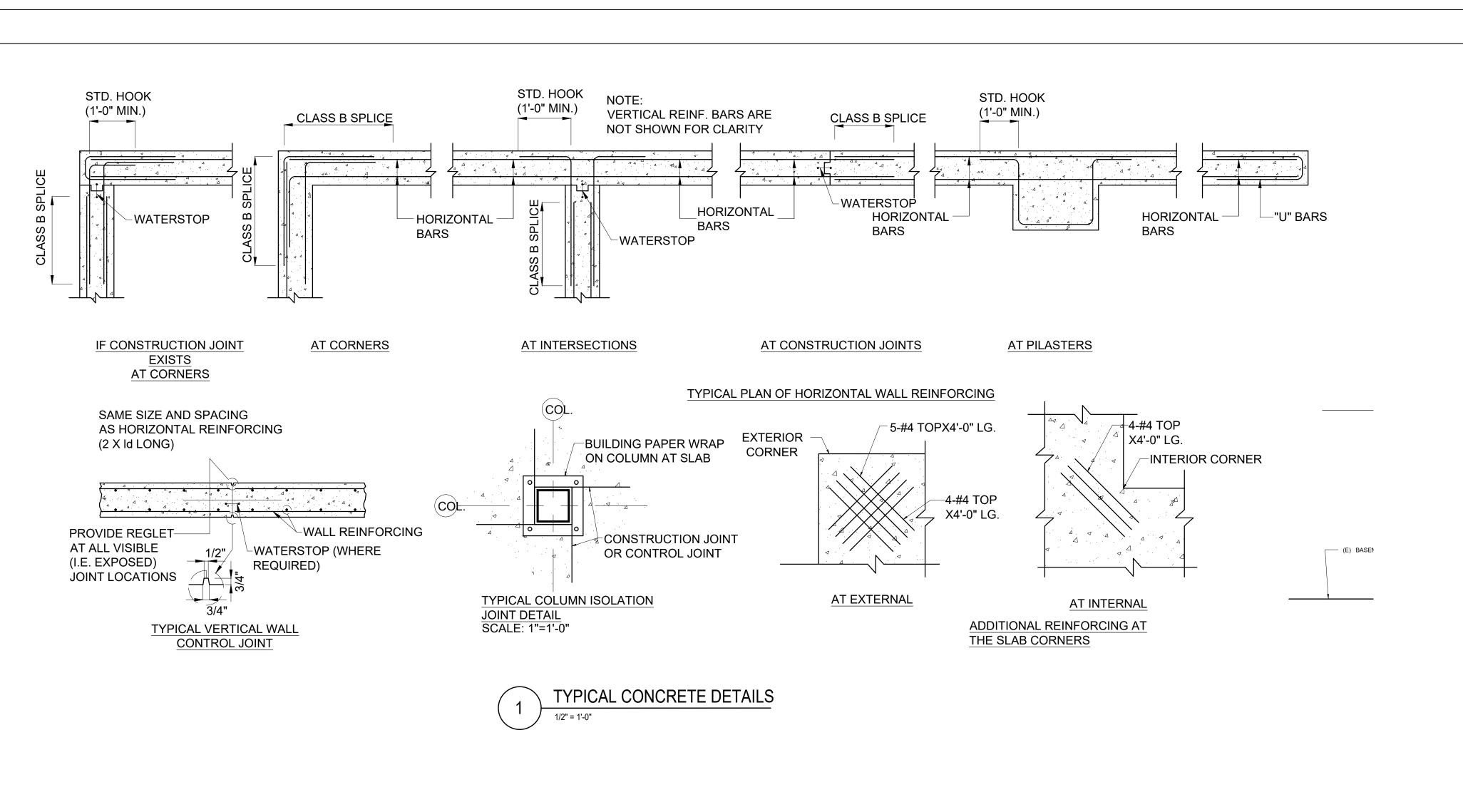
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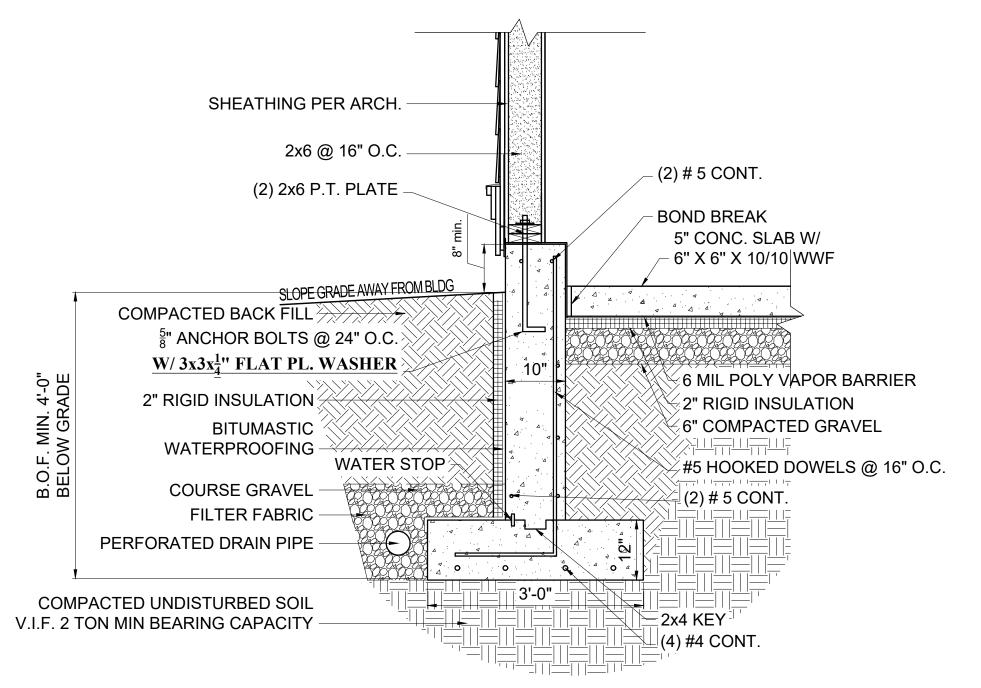
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Date: 07-18-2025

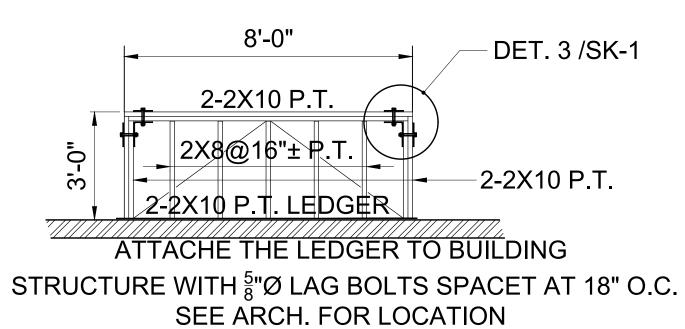
Drawn By: MM

ROOF FRAMING
PLAN

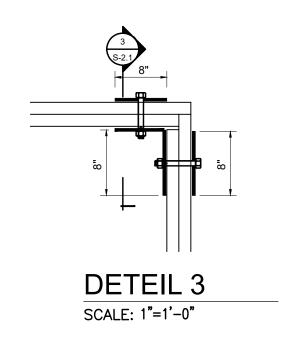


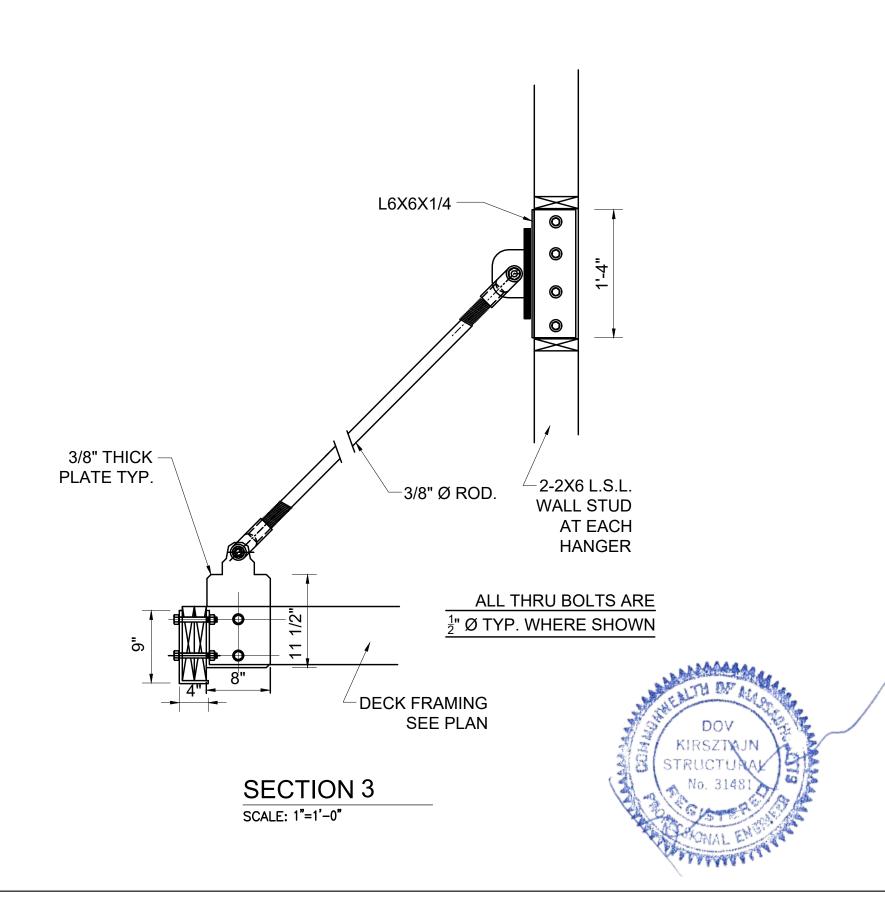




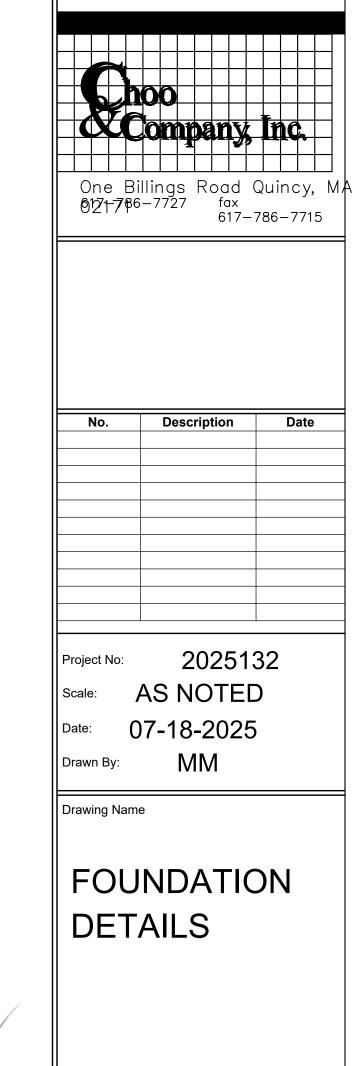


TYP. BALCONY FRAMING PLAN SCALE: 3/8"=1'-0"



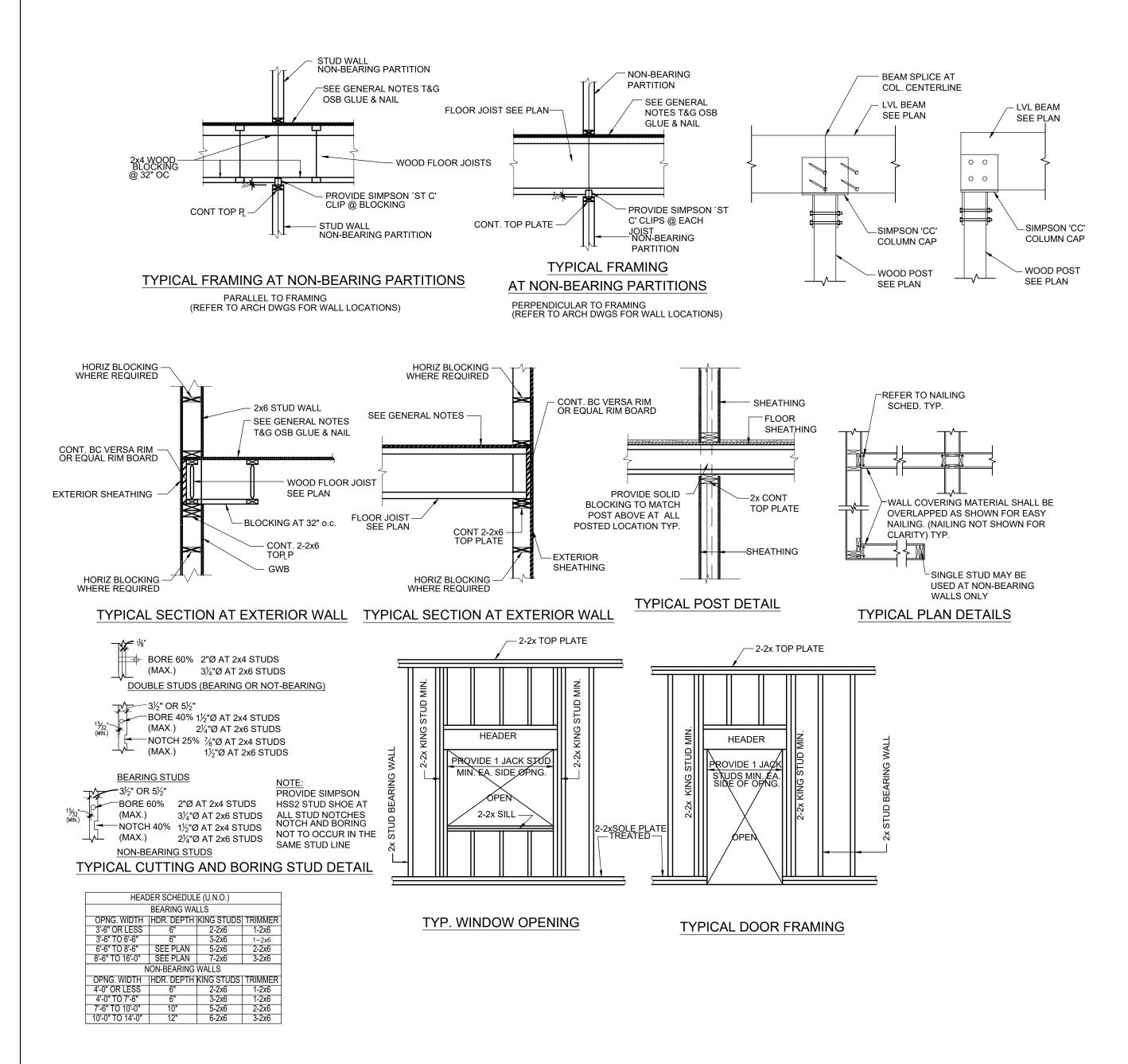


PROPOSED 3 FAMILY RENOVATION 7 THORNLEY STREET DORECHESTER, MA 02125



Sheet No.

S-2.1





RECOMMENDED FASTENING SCHEDULE **BUILDING ELEMENT** NAIL SIZE AND TYPE NUMBER AND LOCATION STUD TO SOLE PLATE 4 TOE-NAIL OR 2 DIRECT-NAIL 8D COMMON 16D COMMON 2 TOE-NAIL OR 2 DIRECT-NAIL STUD TO CAP PLATE 16D COMMON 10D COMMON 12" O.C. DIRECT DOUBLE STUDS CORNER STUDS 16D COMMON 24" O.C. DIRECT 16" O.C. SOLE PLATE TO JOIST OR BLOCKING 16D COMMON DOUBLE CAP PLATE 10D COMMON 16" O.C. DIRECT 10D COMMON 2 DIRECT-NAIL CAP PLATE LAPS RIBBON STRIP, 6" OR LESS 10D COMMON 2 EACH DIRECT BEARING 10D COMMON 3 EACH DIRECT BEARING RIBBON STRIP, 6" OR MORE **8D COMMON** 3 TOE-NAIL **ROOF RAFTER TO PLATE** JACK RAFTER TO RIDGE 16D COMMON 2 TOE-NAIL OR DIRECT-NAIL JACK RAFTER TO HIP 3 TOE-NAIL OR 2 DIRECT-NAIL 10D COMMON 16D COMMON 10D COMMON 5 DIRECT OR 3 DIRECT FLOOR JOISTS TO STUDS 10D COMMON (NO CEILING JOISTS) 10D COMMON 2 DIRECT FLOOR JOISTS TO STUDS (WITH CEILING JOISTS) FLOOR JOISTS TO SILL OR GIRDER 3D COMMON 3 TOE-NAIL 3 EACH DIRECT LEDGER STRIP 16D COMMON 3 TOE-NAIL 16D COMMON CEILING JOISTS TO PLATE CEILING JOISTS (LAPS OVER PARTITION) 10D COMMON 3 DIRECT-NAIL CEILING JOISTS (PARALLEL TO RAFTER) 3 DIRECT 10D COMMON COLLAR BEAM 10D COMMON 3 DIRECT BRIDGING TO JOISTS 8D COMMON 2 EACH DIRECT END DIAGONAL BRACE (TO STUD AND PLATE) 8D COMMON 2 EACH DIRECT BEARING TAIL BEAMS TO HEADERS 20D COMMON 1 EACH END 4 SQ. FT. FLOOR AREA (WHEN NAILING PERMITTED) HEADER BEAMS TO TRIMMERS 20D COMMON 1 EACH END 8 SQ. FT. FLOOR AREA 1" ROOF DECKING **8D COMMON** 2 EACH DIRECT RAFTER 8D COMMON 3 EACH DIRECT RAFTER (OVER 6" IN WIDTH) 1" SUBFLOORING (6" OR LESS) 8D COMMON 2 EACH DIRECT JOIST 1" SUBFLOORING (8" OR MORE) 8D COMMON 3 EACH DIRECT JOIST 2" SUBFLOORING 16D COMMON 2 EACH DIRECT JOIST 1" WALL SHEATHING (8" OR LESS IN WIDTH) 8D COMMON 2 EACH DIRECT STUD 1" WALL SHEATHING (OVER 8" IN WIDTH) **8D COMMON** 3 EACH DIRECT STUD PLYWOOD ROOF & WALL SHEATHING (1/2" OR LESS) 6" O.C. DIRECT EDGES & 12" O.C. INTERMEDIATE 6D COMMON **8D COMMON** 6" O.C. DIRECT EDGES & 12" O.C. INTERMEDIATE (5/8" OR GREATER) (5/16",3/8", OR 1/2") 16 GAUGE GALVANIZED WIRE STAPLES, 3/8" MINIMUM CROWN; LENGTH OF 1" PLUS 4" O.C. EDGES & 8" O.C. INTERMEDIATE SAME AS IMMEDIATELY ABOVE (OVER 6" IN WIDTH) 2 1/2" O.C. EDGES & 5" O.C. INTERMEDIATE PLYWOOD SUBFLOORING 6D COMMON OR 6D ANNULAR OR SPIRAL THREAD 6" O.C. DIRECT EDGES & 10" O.C. INTERMEDIATE (1/2") 8D COMMON OR 8D ANNULAR OR SPIRAL THREAD (3/8", 3/4") 6" O.C. DIRECT EDGES & 10" O.C. INTERMEDIATE (1", 1 1/8") 10D COMMON OR 8D RING SHANK OR 8D 6" O.C. DIRECT EDGES & 6" O.C. INTERMEDIATE ANNULAR OR SPIRAL THREAD (1/2")16D GALVANIZED WIRE STAPLES 4" O.C. EDGES & 7" O.C. INTERMEDIATE 3/8" MINIMUM CROWN; 1 3/8' LENGTH 2 1/2" O.C. EDGES & 4" O.C. INTERMEDIATE (3/8")BUILT-UP GIRDERS AND BEAMS 20D COMMON 32" O.C. DIRECT **8D COMMON** 4 TOE-NAIL CONTINUOUS HEADER TO STUD CONTINUOUS HEADER, TWO PIECES 16D COMMON 16" O.C. DIRECT 1 1/2" GALVANIZED ROOFING NAIL OR 16 GAUGE 3" O.C. EXTERIOR EDGE 6" O.C. INTERMEDIATE 1/2" FIBER BOARD SHEATHING STAPLE, 1 1/2" LONG WITH MIN. CROWN OF 7/16" 25/32" FIBER BOARD SHEATHING 1 3/4" GALVANIZED ROOFING NAIL OR 8D COMMON 3" O.C. EXTERIOR EDGE 6" O.C. INTERMEDIATE NAIL OR 16 GAUGE STAPLE, 1 1/2" LONG WITH MIN. CROWN OF 7/16" 12 GAUGE 1 3/4" LARGE HEAD CORROSION-**GYPSUM SHEATHING** 4" O.C. EDGE 8" O.C. INTERMEDIATE RESISTANT PARTICLE BOARD UNDERLAYMENT (1/4"-3/4") 6D ANNULAR THREADED 6" O.C. DIRECT EDGES 10" O.C. INTERMEDIATE PARTICLE BOARD ROOF AND WALL SHEATHING 6D COMMON 6" O.C. DIRECT EDGES 12" O.C. INTERMEDIATE 1/2" OR LESS 5/8" OR GREATER 8D COMMON 6" O.C. DIRECT EDGES 12" O.C. INTERMEDIATE PARTICLE BOARD SUBFLOORING 8D COMMON 6" O.C. DIRECT EDGES 12" O.C. INTERMEDIATE (5/8" OR GREATER) NO. 14 B&S GAGE CORROSION RESISTIVE SHINGLES, WOOD* 2 EACH BEARING WEATHER BOARDING **8D CORROSION** 2 EACH BEARING

NOTE *: SHINGLE NAILS SHALL PENETRATE NOT LESS THAN 3/4" INTO NAILING STRIPS, SHEATHING OR SUPPORTING CONSTRUCTION EXCEPT AS OTHERWISE

Location

PROPOSED 3 FAMILY RENOVATION 7 THORNLEY STREET DORECHESTER, MA 02129



No.	Description	Date

 Project No:
 2025132

 Scale:
 AS NOTED

 Date:
 07-18-2025

 Drawn By:
 MM

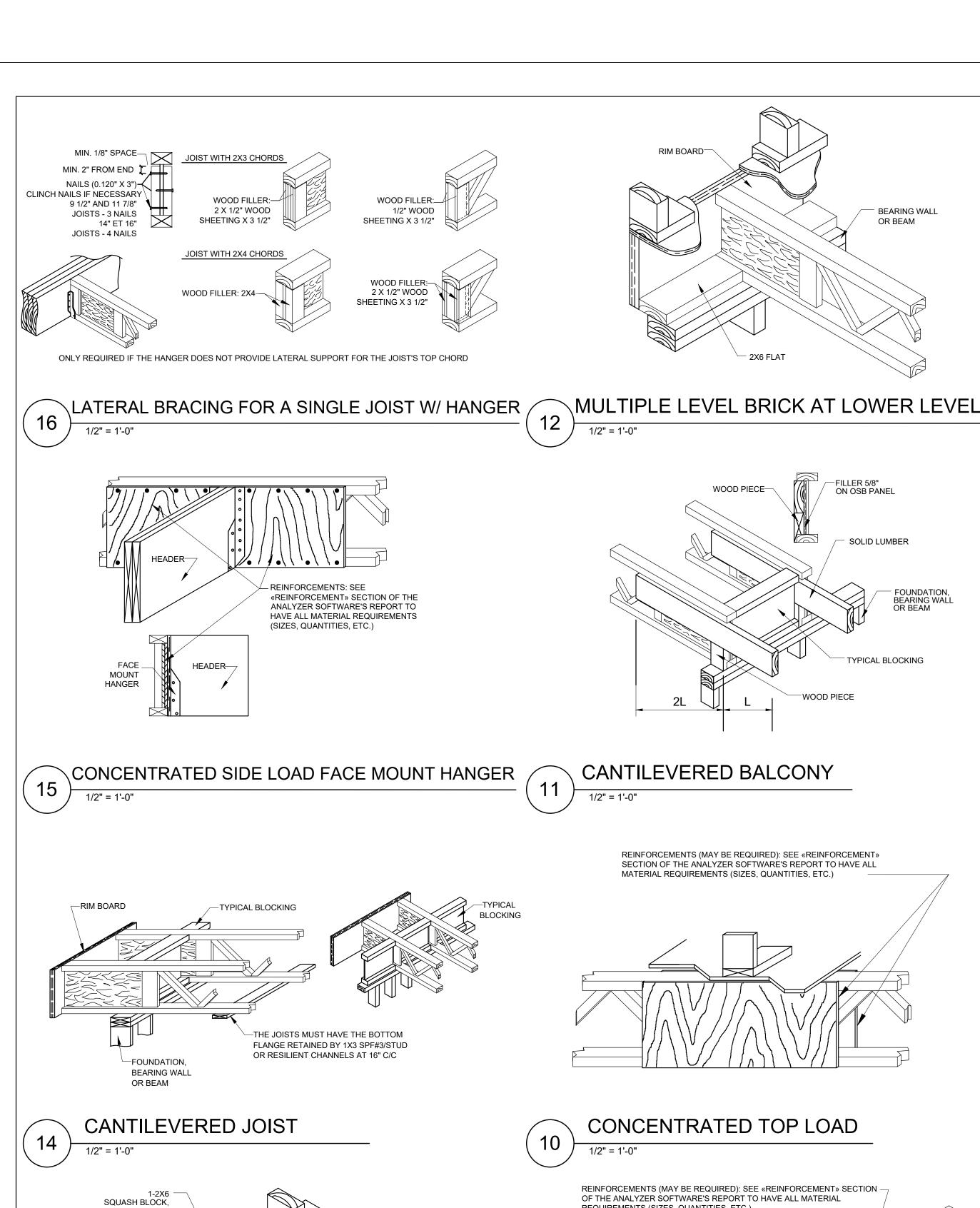
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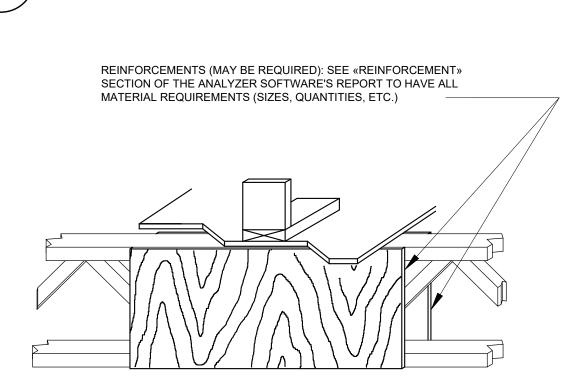
WOOD DETAILS

Sheet No.

S-2.2







WOOD PIECE-

RIM BOARD

BEARING WALL

OR BEAM

FILLER 5/8"

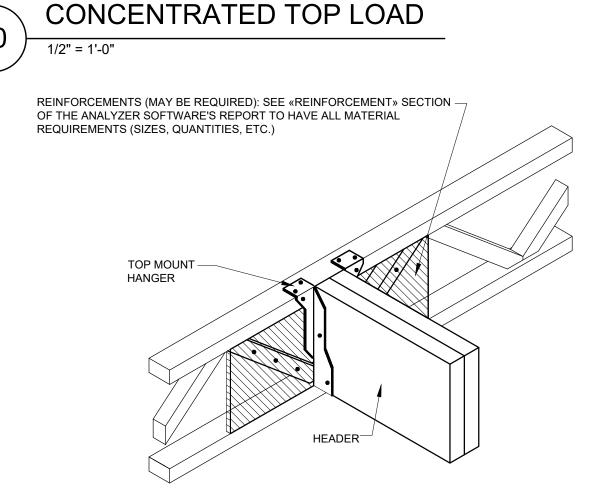
ON OSB PANEL

SOLID LUMBER

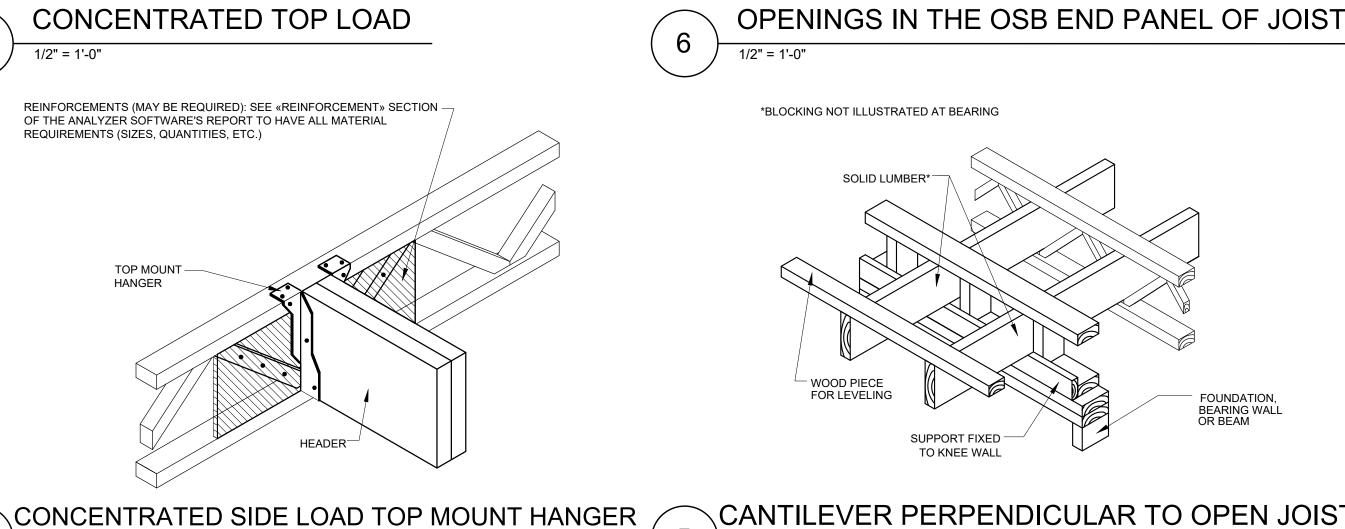
TYPICAL BLOCKING

WOOD PIECE

FOUNDATION, BEARING WALL



1/2" = 1'-0"



STEEL

1/2" = 1'-0"

BOTTOM PLATE FIXED TO BEAM

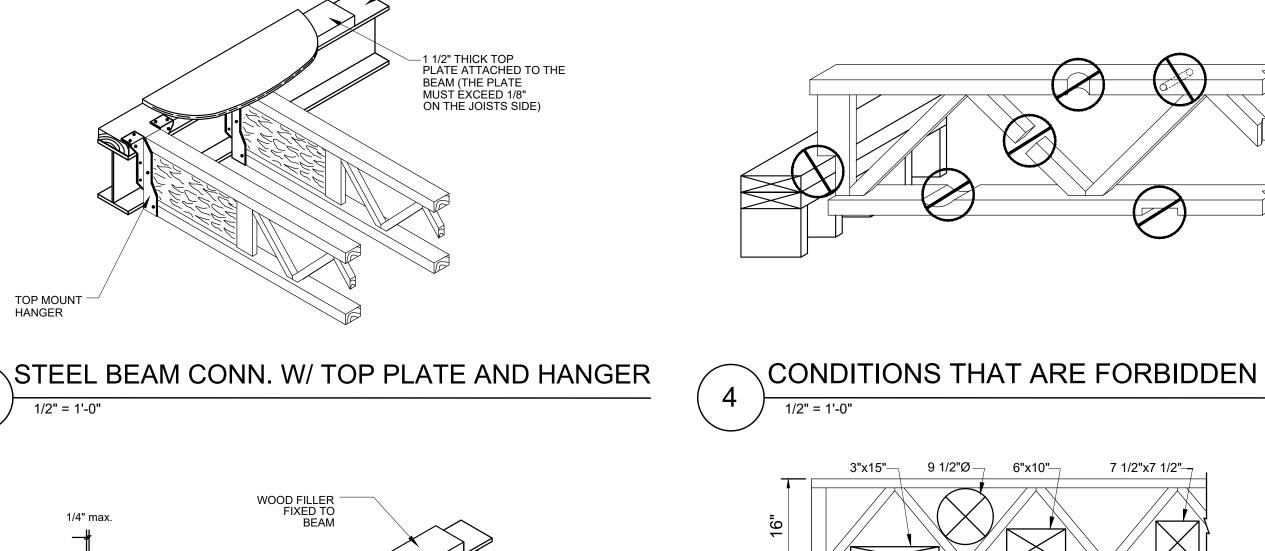
1. ONE (1) ROUND HOLE OF 1.5" OR LESS DIAMETER CAN BE MADE IN THIS ZONE WITHOUT ANY ADJUSTMENT OF THE JOIST CAPACITY.

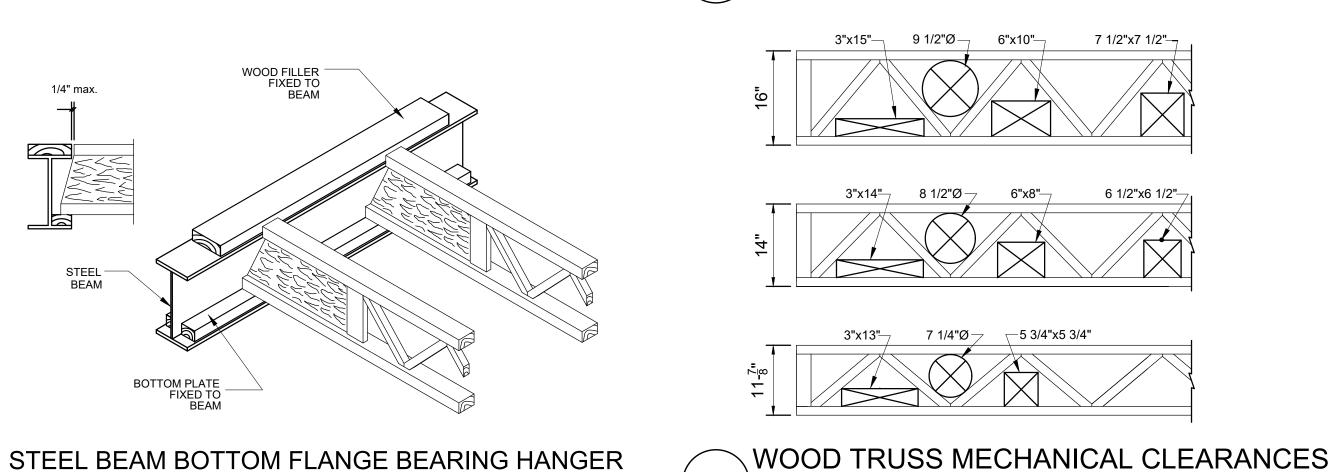
ZONE WHERE A ROUND

OPENING COULD BE MADE. SEE CONDITIONS ABOVE.

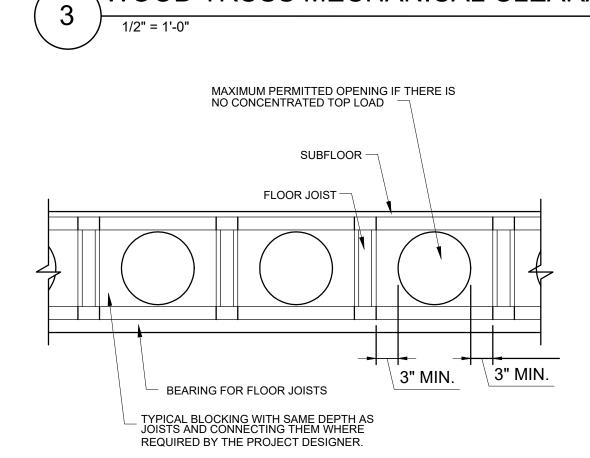
2. FOR ANY OTHER QUANTITY OR TYPE OF HOLE, THE JOIST CAPACITY

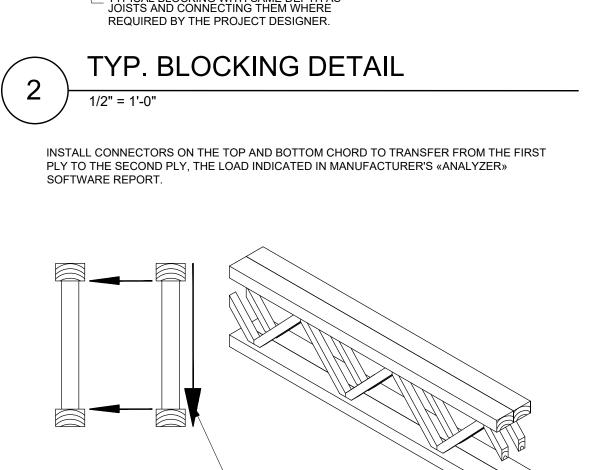
HAS TO BE ANALYZED USING TRIFORCE® ANALYZER SOFTWARE





NEVER NOTCH, CUT OR DRILL A JOIST MEMBER.

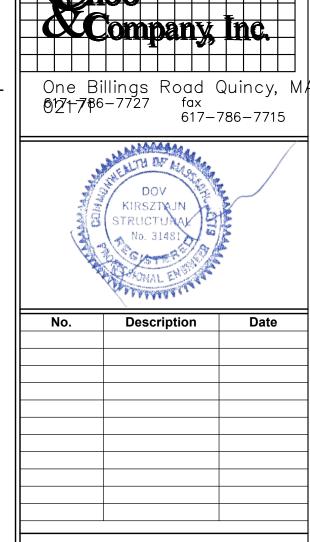






POINT LOAD— ON THE SIDE



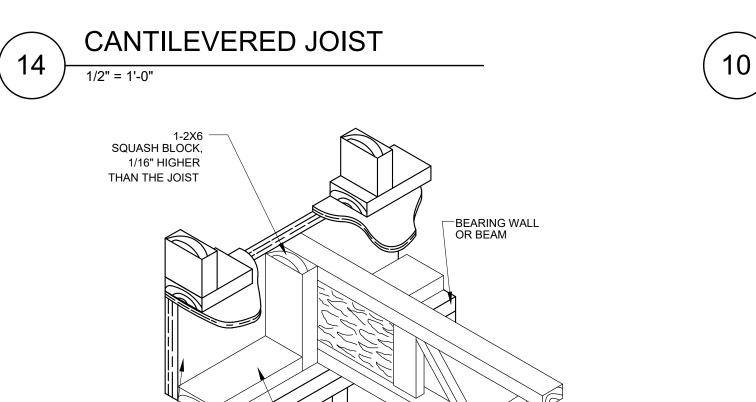


2025132 Project No: AS NOTED 08-08-2025 Drawing Name

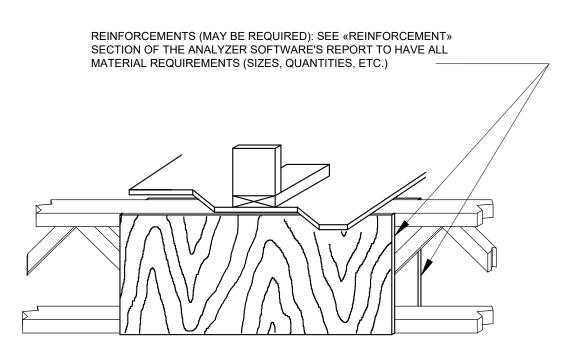
WOOD **DETAILS**

Sheet No.

S-2.3

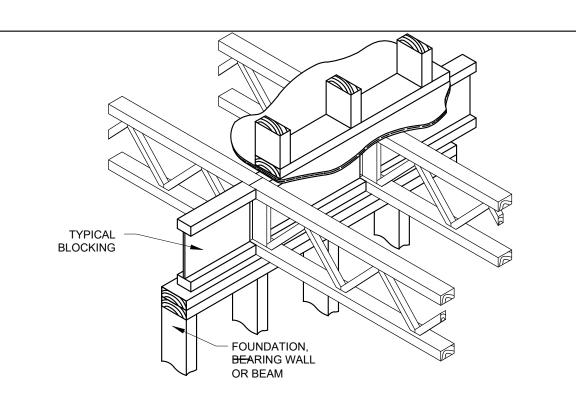




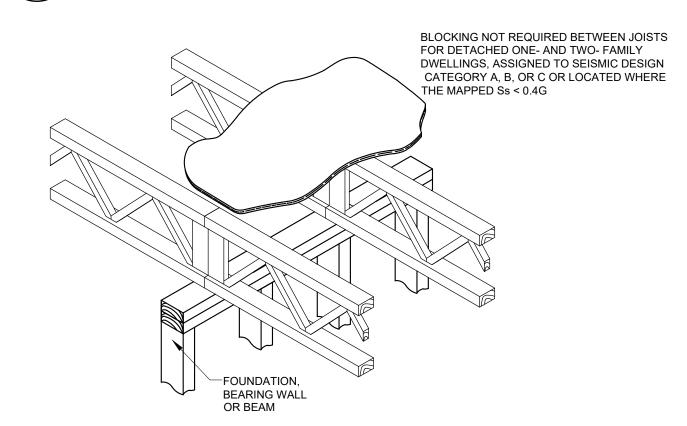




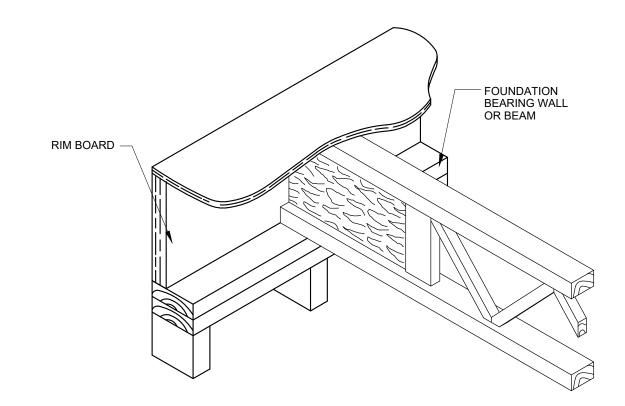
FOUNDATION, BEARING WALL OR BEAM



END TO END JOIST W/ BEARING WALL ABOVE

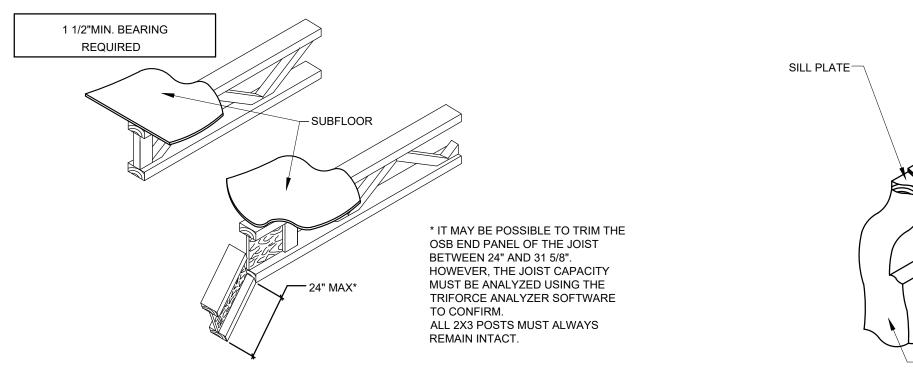


END TO END JOIST



BEARING WALL

1/2" = 1'-0"

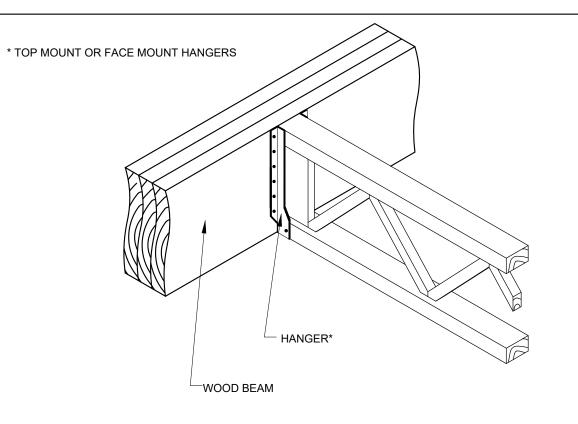


JOIST ADJUSTMENT TOLERANCE

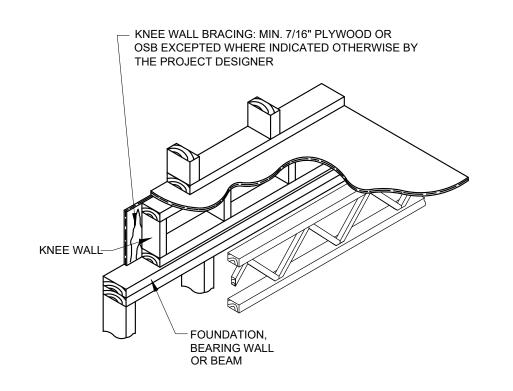
9 DROPPED IN FOUNDATION

1/2" = 1'-0"

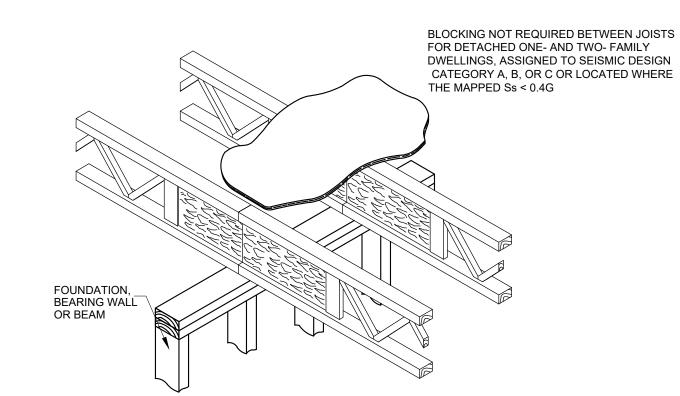
FOUNDATION



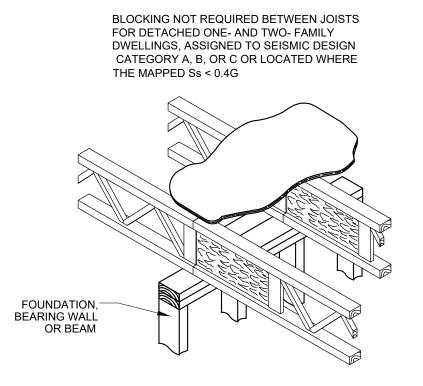
WOOD BEAM CONNECTIONS W/ HANGER



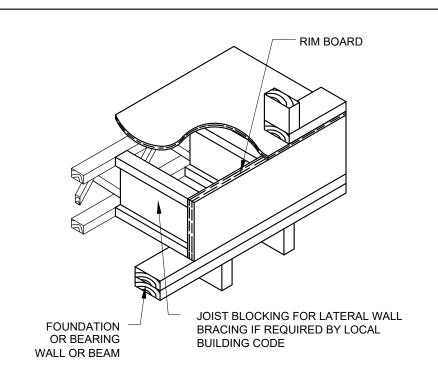
7 KNEE WALL



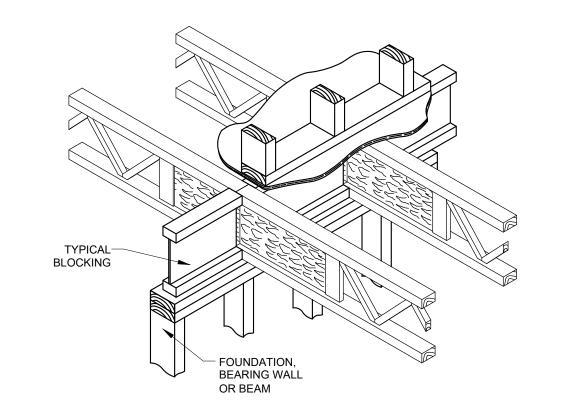
6 END TO END JOIST



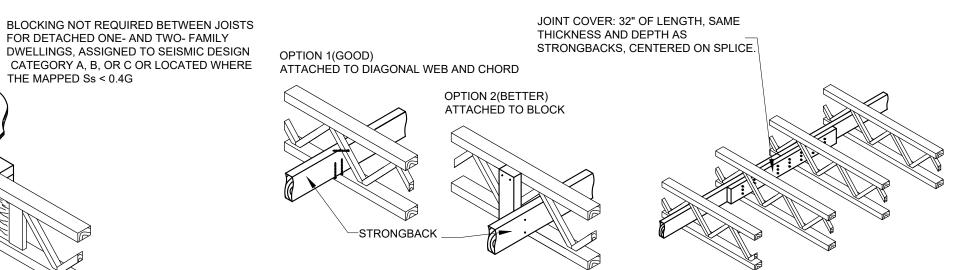
END TO END JOIST



RIM BOARD AND BLOCKING AT EXTERIOR WALL



END TO END JOIST W/ BEARING WALL ABOVE

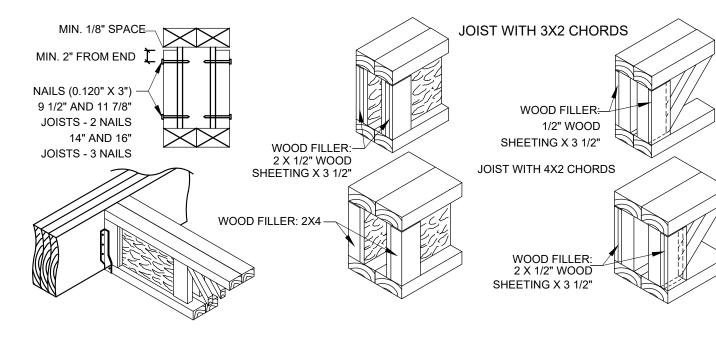


USE GUN NAILS 0.122" X 3.25" OR 3" SCREWS TO SECURE STRONGBACKS(S) AT MID SPAN OF JOIST. IF TWO STRONGBACKS ARE SPECIFIED, INSTALL THE SECOND ONE ADJACENT TO THE NEXT CLOSEST DIAGONAL WEB BAY.

USE DRY LUMBER FOR STRONGBACK

STRONGBACK BRACING OPTIONS

1/2" = 1'-0"



ONLY REQUIRED IF THE HANGER DOES NOT PROVIDE LATERAL SUPPORT FOR THE JOIST'S TOP CHORD

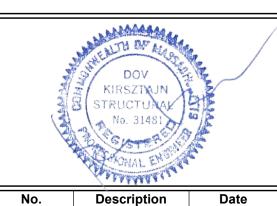
1 LATERAL BRACING FOR A DOUBLE JOIST W/ HANGER

PROPOSED 3 FAMILY
RENOVATION
7 THORNLEY STREET
DORECHESTER, MA 0212

Location



One Billings Road Quincy, MA <u>617</u>1-786-7727 fax 617-786-7715



00054	

 Project No:
 2025132

 Scale:
 AS NOTED

 Date:
 08-08-2025

 Drawn By:
 MM

Drawing Name

WOOD DETAILS

Sheet No.

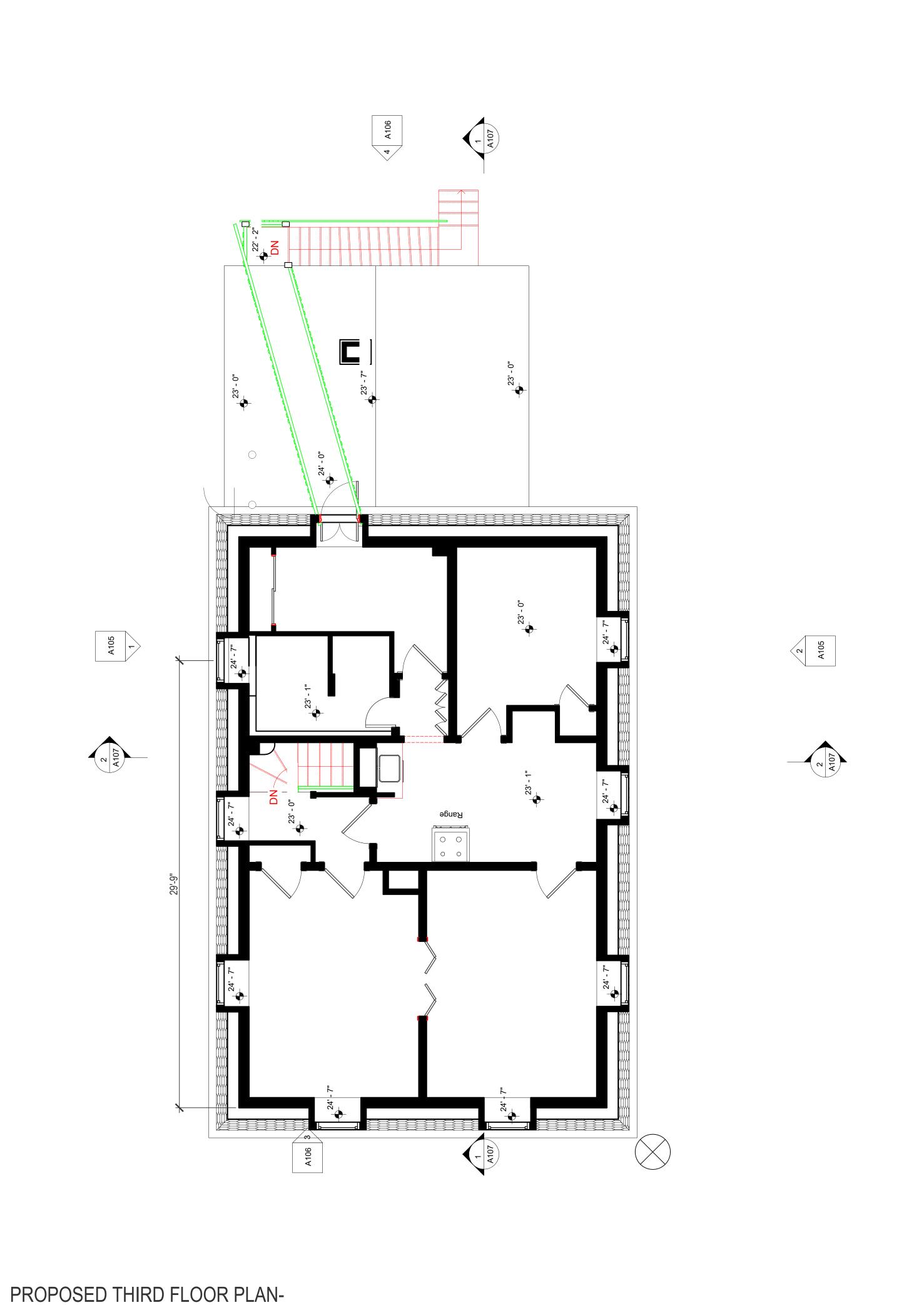
S-2.4



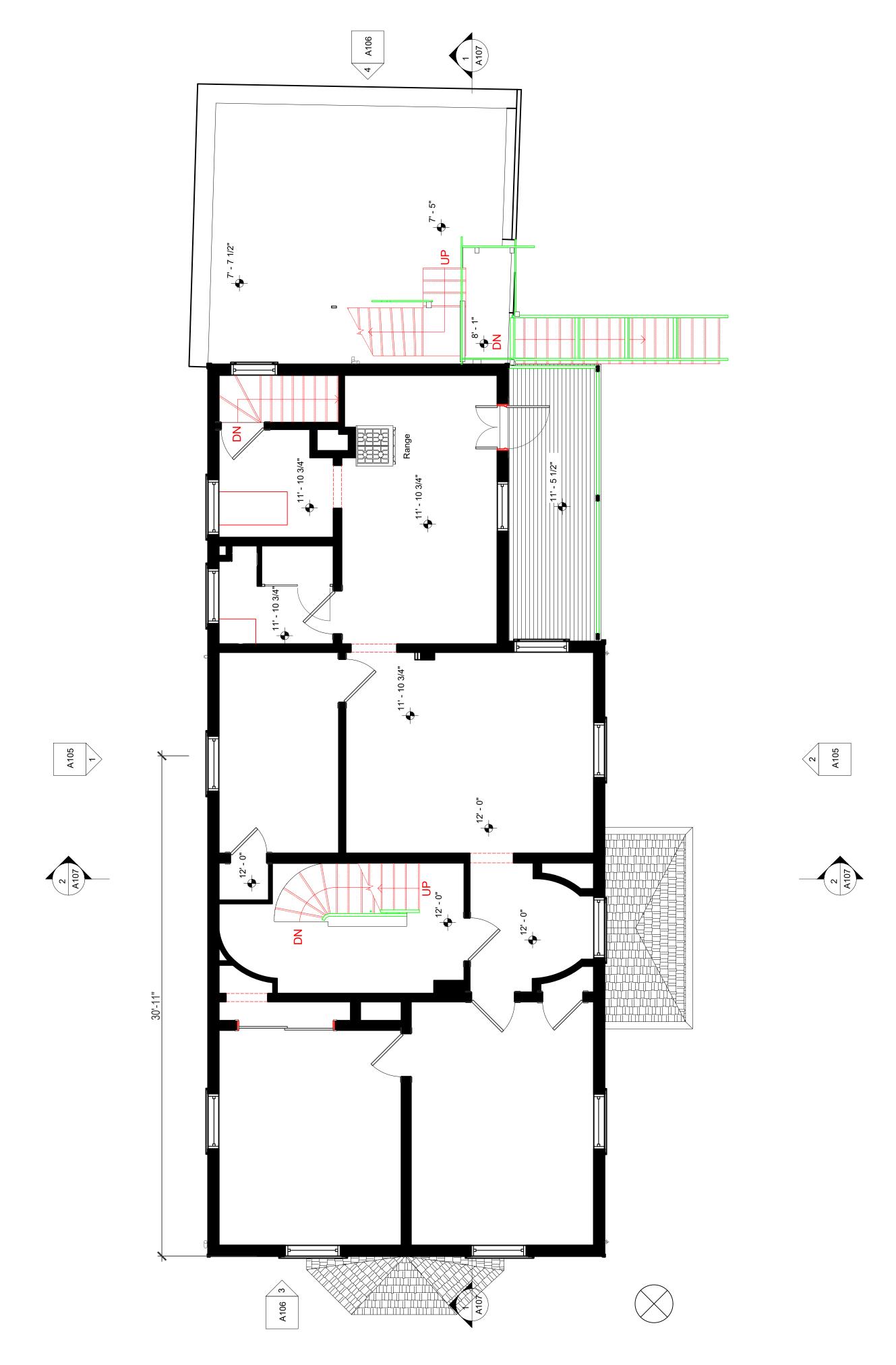
10/30/25 AS NOTED GSD JER

DATE:
SCALE:
DRAWN BY:
CHECKED BY:

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125



1/4"=1'-0"



PROPOSED SECOND FLOOR PLAN-1/4"=1'-0"

GENERAL NOTE:

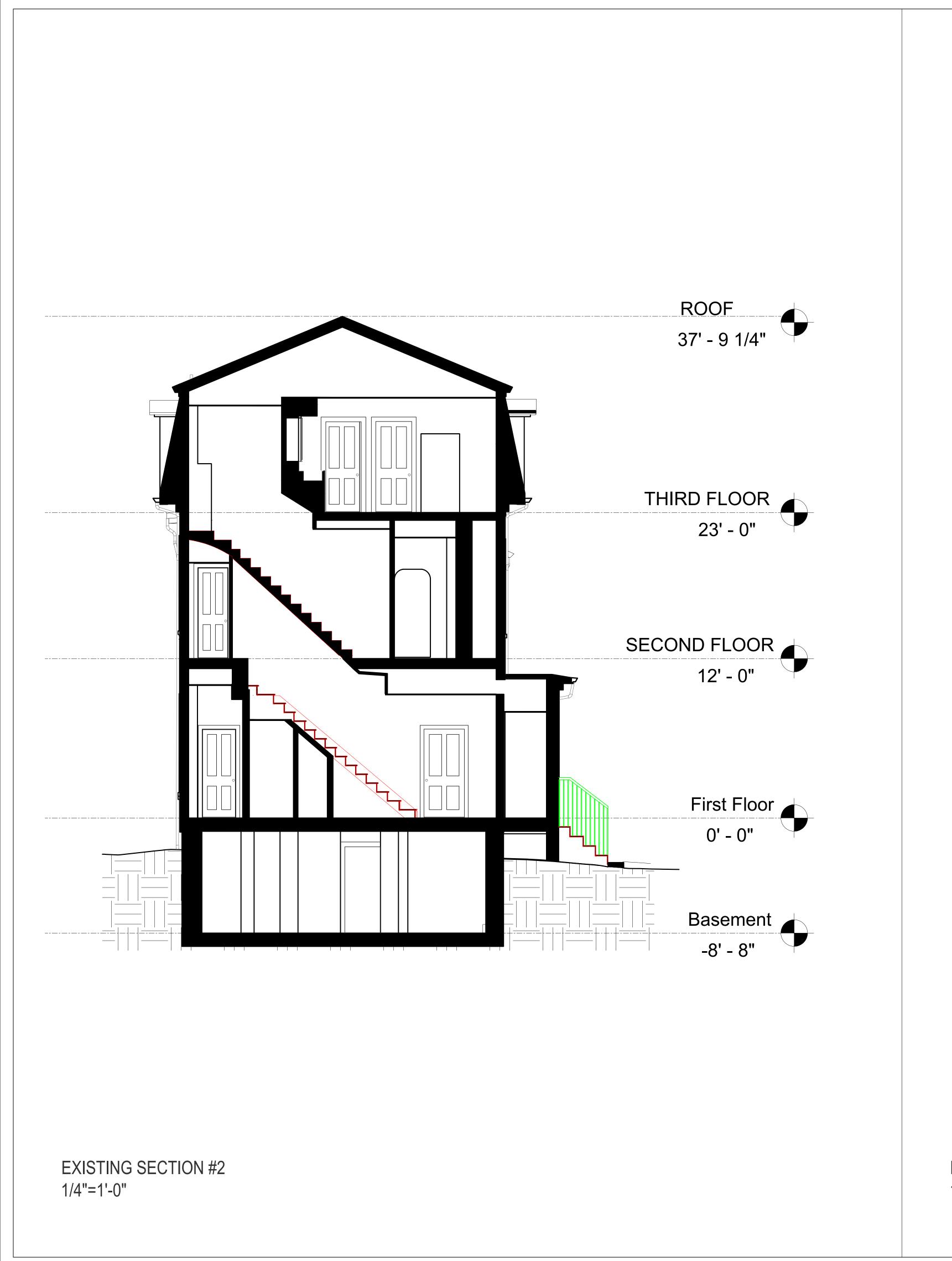
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS.NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

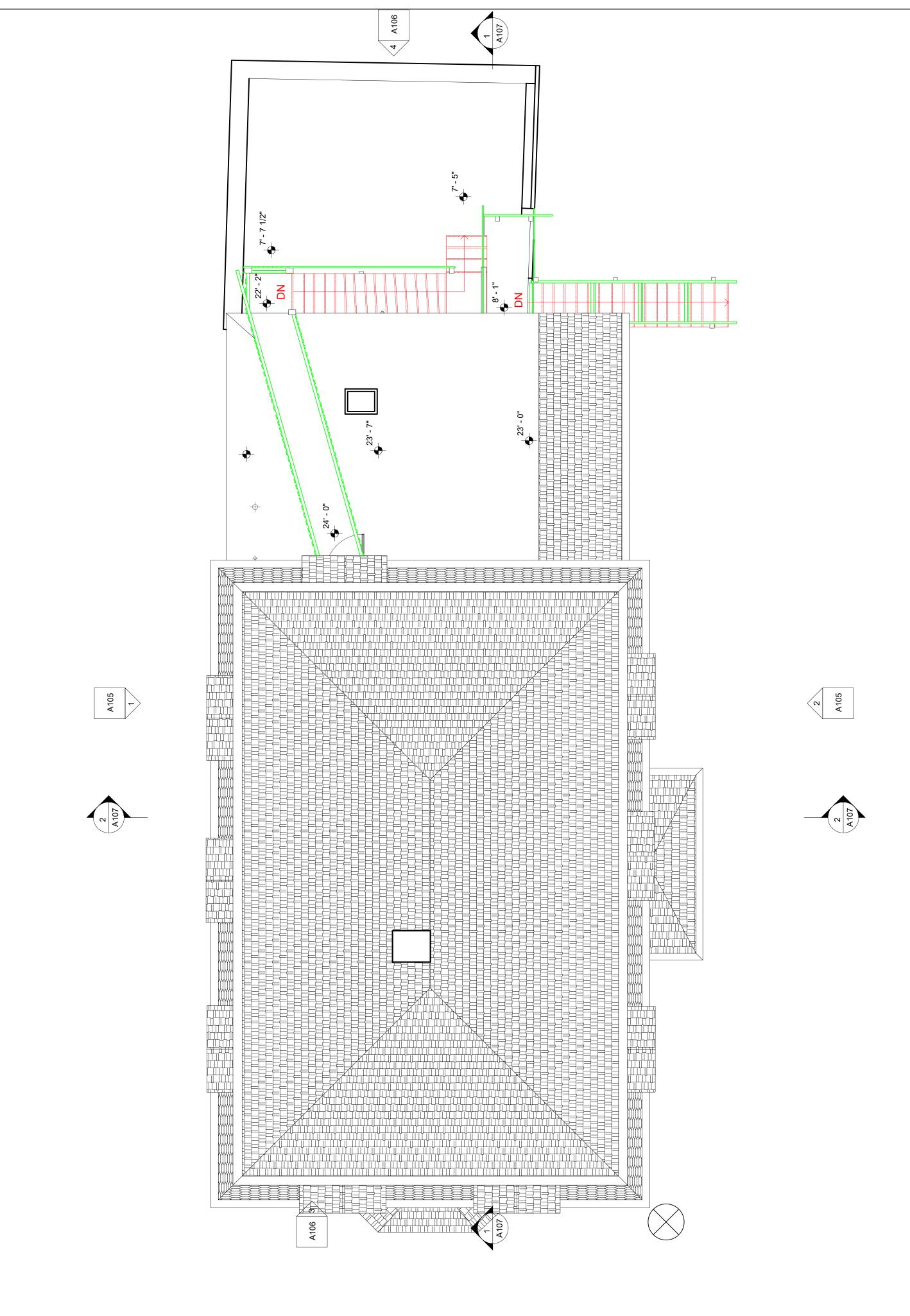
EX2

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

10/30/25 AS NOTED GSD JER

DATE:
SCALE:
DRAWN BY:
CHECKED BY:





EXISTING ROOF FLOOR PLAN-1/4"=1'-0"

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS.NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

EX3

10/30/25 AS NOTED GSD JER

DATE:
SCALE:
DRAWN BY:
CHECKED BY:

EXISTING ROOF PLAN EXISTING SECTION #2

RENO OF EXISTING THREE FAMILY HOME 7 THORNLEY ST, DORCHESTER, MA 02125

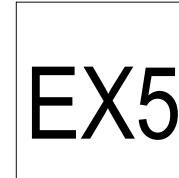




EXISTING FRONT ELEVATION 1/4"=1'-0"

EXISTING REAR ELEVATION 1/4"=1'-0"

GENERAL NOTE:





EXISTING RIGHT ELEVATION 1/4"=1'-0"



EXISTING LEFT ELEVATION 1/4"=1'-0"



EXISTING SECTION 1/4"=1'-0"

GENERAL NOTE:

INSPECTION SCHEDULE

Please be aware of the building code that is being enforced in your town. Reaching the mandatory infiltration rates are difficult and require advanced air sealing. As a builder, you need to make sure your sub and insulation contractors do the proper and adequate air sealing to help ensure that your building passes final blower door testing.

1. PRELIMINARY SITE INSPECTION - RECOMMENDED

This on-site visit is not required, but can be beneficial to identify any issues that could present a problem at the Final Inspection. Contact us when you anticipate the duct system being 100% roughed in. All duct systems must be tested to receive rebates - maximum total duct leakage is 4% regardless of system location.

Please retain 1 of each window type's NFRC label to properly model the fenestration values.

2. INSULATION INSPECTION - MANDATORY

In order to prevent issues at the final inspection which can delay obtaining your Certificate of Occupancy, contact our office to schedule the mandatory insulation inspection once the insulation work is complete, but before the wallboard goes up.

3. FINAL INSPECTION - MANDATORY

Contact our office to schedule the mandatory final inspection as your project nears completion. The Final Inspection includes a blower door, duct test (unless ducts have been previously tested), and flow test for all bath fans.

The following items must be present at the time of the final inspection:

- All insulation and major air sealing details completed
- Mechanical systems in place
- ERV/HRV installed and operational
- 24-HR bath fan control in place and power to the bath fans
- LEDs 75% energy efficient lighting
- Energy Star appliances in place
- EV Charging ready.
- Permanent utility meter(s) in place

Re-inspections are invoiced at \$250 per visit. Failure to comply with incentive program requirements will result in a \$350 incentive fee repayment. Home Energy Raters will be unable to facilitate any incentive applications if the insulation inspection was missed.

Building Specification Summary

Property

7 Thornley St Unit 1 Dorchester, MA 02125

Thornley St 7 Unit 1 - vwY1DxNL

Final

Organization

Home Energy Raters Chris Mazzola 508-833-3100

Builder

Walter Hunting Construction Inspection Status

Results are projected

Building Information

Conditioned Area [ft²] 1,275.00

Conditioned Volume [ft³] 14,232.00

Thermal Boundary Area [ft²] 4,615.83

Number Of Bedrooms 4

Housing Type Apartment, end unit

Rating

HERS ERI 42 HERS ERI w/o PV 42

Building Shell

Ceiling w/ Attic None
Vaulted Ceiling None
Above Grade Walls R23,FG+XPS,R13+2",6x16,G1; U-0.049
Found. Walls None
Framed Floors R15,MW,10x16,G1; R-15
Slabs None

Windows (largest) U-Value: 0.3, SHGC: 0.3

Window / Wall Ratio 0.11

Window / Floor Ratio 0.14

Infiltration 3 ACH50

Duct Lkg to Outside 52 CFM @ 25Pa (4.08 / 100 ft²)

Total Duct Leakage 52 CFM @ 25Pa (Post-Construction)

Mechanical Systems

Heating Furnace • Natural Gas • 95 AFUE

Cooling Air Conditioner • Electric • 14.7 SEER2

Water Heating Residential Water Heater • Natural Gas • 0.95 UEF

water Heating Residential Water Heater • Natural Gas • 0.95 OE

Programmable Thermostat Yes

Ventilation System 80 CFM • 44.6 Watts • ERV

Whole House Fan N/A

Lights and Appliances

Percent Interior LED 100%

Percent Exterior LED 100%

Refrigerator (kWh/yr) 691.0

Dishwasher Efficiency 270 kWh

Ceiling Fan None

Clothes Dryer Fuel Electric

Clothes Dryer CEF 3.4

Clothes Washer LER (kWh/yr) 284.0

Clothes Washer Capacity 4.2

Range/Oven Fuel Natural Gas

Property 7 Thornley St Unit 1 Dorchester, MA 02125

Thornley St 7 Unit 1 - vwY1DxNL

Organization Home Energy Raters Chris Mazzola 508-833-3100

Inspection Status Results are projected

Builder Walter Hunting Construction

Number Of Floors: 1
Has Electric Vehicle Ready Space: Yes
Conditioned Volume [cu. ft.]: 14,232
Residence Type: Apartment, end unit
Floor Number: 1
Community:
IECC 2021 Climate Zone: 5A

Envelope Components

Framed Floor									
Name	Library Type	Carpet R	Floor Grade	Surface Area	Location	Effective R-value			
Fir >Cond Bsmt	R15,MW,10x16,G1	0.68	Above Grade	1,275.0 ft²	Insulated Unconditioned Basement				

Rim Joist				
Name	Library Type	Surface Area	Location	Effective Insulation R-value
ambient	R21	365.0 ft²	Exposed Exterior	21.00

Wall						
Name	e Library Type	Surface Color	r Solar Absorptance	Surface Area	Location	Effective R-value
Wall >Amb	FG+XPS,R13+2",6x16,G1	Medium	0.75	1,265.3 ft²	Exposed Exterior	20.244
Wall >entry hall	R15,MW,6x16,G1	Medium	0.75	435.5 ft²	Conditioned Space (Adiabatic)	13.285

zing										
Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Are	
Back DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Northwest	43.2 ft²	
Front DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Southeast	61.7 ft	
Left DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Southwest	17.4 ft²	
Right DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Northeast	61.7 ft²	

Glazing Library List								
Name	Shgo	U-factor						
U:0.30,SHGC:0.30	0.3	0.300						

Opaque Do	Dpaque Door											
Nam	e Library Type	Wall Assignment	Foundation Wall Assignment	Emittance	Solar Absorptance	Surface Color	Surface Area	Location	Effective R- value			
Mair	nermaTru,Opaque	Wall >entry hall		0.9	0.6	Light	20.0 ft ²	Conditioned Space (Adiabatic)	7.143			

Property 7 Thornley St Unit 1 Dorchester, MA 02125 Project & Plan Thornley St 7 Unit 1 - vwY1DxNL Final Organization Home Energy Raters Chris Mazzola 508-833-3100 Inspection Status Results are projected Builder Walter Hunting Construction

Roof Insulati	Roof Insulation										
Name	Library Type	Attic Exterior Area [ft²]	Clay or Concrete Roof Tiles	Does the Roof have Eaves?	Effective R- Value after eaves	Surface Color	Solar Absorptance	Surface Area	Location		
Ceiling:1: ≯adiabatic	5,MW,10x16,G1	1,275	No	No	-	Light	0.6	1,275.0 ft²	Conditioned Space (Adiabatic)		

Roof Insulation	Library List		Whole House In	filtration	
Name	Has Radiant Barrier	Effective R-value	Infiltration	Measurement Type	Shelter Class
R15,MW,10x16,G1	No	16.798	3 ACH at 50 Pa	Blower-door tested	5

	Mechanicals, Lights & Water										
Mechanical V	echanical Ventilation										
Ventilation Typ	oe Ventilation Rate [ft³ / Minute]	Operational hours per day	Fan Watts	Runs once every three hours	Energy Recovery Percent	Model Number	Manufacturei				
ER'	V 80 CFM	24	44.6 Watts	Yes	78	BLP150E75NS-PC	Broan				
Lighting											

Lighting					
% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting		% Garage Fluorescent Lighting	% Garage LED Lighting
0	100	0	100	0	100

Conditioning Equipment										
Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location				
AC (1)	ACC,24k,14.7 SEER2		0%	100%	0%	Conditioned Space				
Furnace (1)	FURNACE,AFUE95.0,NG		100%	0%	0%	Conditioned Space				
Water Heater	ANTANEOUS,EF95.0,NG		0%	0%	100%	Conditioned Space				

Equipment Type: ACC,24k,14.7 SEER2			
Equipment Type	Air Conditioner		
Fuel Type	Electric		
Distribution Type	Forced Air		
Motor Type	PSC (Single Speed)		
Heat Pump System Type	Unspecified		
Cooling Efficiency	14.7 SEER2		
Cooling Capacity [kBtu/h]	24		

Equipment Type: FURNACE,AFUE95.0,NG			
Equipment Type	Furnace		
Fuel Type	Natural Gas		
Distribution Type	Forced Air		
Motor Type	PSC (Single Speed)		
Heating Efficiency	95 AFUE		
Heating Capacity [kBtu/h]	60		
Use default EAE	Yes		
EAE [kWh]	767		

Equipment Type: INSTANTANEOUS,EF95.0,NG			
Equipment Type	Residential Water Heater		
Fuel Type	Natural Gas		
Distribution Type	Hydronic Delivery (Radiant)		
Hot Water Efficiency	0.95 UEF		
Tankless?	Yes		

Property 7 Thornley St Unit 1 Dorchester, MA 02125 Project & Plan Thornley St 7 Unit 1 - vwY1DxNL Final

Distribution System	
Distribution Type	Forced Air
Heating Equipment	Furnace (1)
Cooling Equipment	AC (1)
Sq. Feet Served	1,275
# Return Grilles	5
Supply Duct R Value	6
Return Duct R Value	6
Supply Duct Area [ft²]	344.25
Return Duct Area [ft²]	318.75
Leakage to Outdoors	52 CFM @ 25Pa (4.08 / 100 ft²)
Total Leakage	52 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Basement (insulated basement ceiling)
Percent Supply Area	100
Percent Return Area	100

Organization Home Energy Raters Chris Mazzola 508-833-3100 Inspection Status Results are projected Builder Walter Hunting Construction

Water Distribution	
Water Fixture Type	Standard
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	50
At Least R3 Pipe Insulation?	Yes
Hot Water Recirculation System?	No
Drain Water Heat Recovery?	No

Appliances & Notes

Clothes Dryer				
Cef	3.37			
Fuel Type	Electric			
Field Utilization	Moisture Sensing			
Is Outside Conditioned Space	No			
Defaults Type	Custom			
Is Ventless	No			
Is Heat Pump	No			
Clothes Dryer Available	Yes			

Clothes Washer	
Label Energy Rating	284 kWh/Year
Annual Gas Cost	\$18.00
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Capacity	4.2
Imef	1.57
Defaults Type	Standard 2018+
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

Dishwasher				
Dishwasher Defaults Type	Custom			
Dishwasher Size	Standard			
Dishwasher Efficiency	270 kWh			
Annual Gas Cost	\$13.00			
Electric Rate	\$0.12/kWh			
Gas Rate	\$1.09/Therm			
Is Outside Conditioned Space	No			
Dishwasher Available	Yes			

Appliances and Controls	
Programmable thermostat?	Yes
Range/Oven Fuel	Natural Gas
Convection Oven?	Yes
Induction Range?	Yes
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	691 kWh/Year
Refrigerator Outside Conditioned Space?	No

Notes

Errors and Warnings have been Rater Reviewed

HERS target 65 Preliminary HERS to Builder -9.3.2025

Property 7 Thornley St Unit 1 Dorchester, MA 02125 Project & Plan Thornley St 7 Unit 1 - vwY1DxNL Final

Organization Home Energy Raters Chris Mazzola 508-833-3100 Inspection Status Results are projected Builder Walter Hunting Construction

Components Not Found: Foundation Wall, Foundation Wall, Library List, Slab, Slab Library List, Skylight, Onsite Generation, Solar Generation, Dehumidifier, Whole House Fan, Whole House Fan Library List, HVAC Grading (Not Conducted), Ceiling Fan

Building Specification Summary

Property

7 Thornley St Unit 2 Dorchester, MA 02125

Thornley St 7 Unit 2 - dq3kDGQ2

Final

Organization

Home Energy Raters Chris Mazzola 508-833-3100

Builder

Walter Hunting Construction

Inspection Status

Results are projected

Building Information

Conditioned Area [ft2] 1,275.00 Conditioned Volume [ft3] 14,232.00 Thermal Boundary Area [ft²] 4,615.83 **Number Of Bedrooms**

Housing Type Apartment, end unit Rating

HERS ERI 39 HERS ERI w/o PV 39

Building Shell

Ceiling w/ Attic | None Vaulted Ceiling | None Above Grade Walls | R23,FG+XPS,R13+2",6x16,G1; U-0.049 Found. Walls None Framed Floors | None Slabs | None

Windows (largest) U-Value: 0.3, SHGC: 0.3

Window / Wall Ratio 0.11 Window / Floor Ratio 0.14 Infiltration 3 ACH50

Duct Lkg to Outside | 52 CFM @ 25Pa (4.08 / 100 ft²) Total Duct Leakage | 52 CFM @ 25Pa (Post-Construction)

Mechanical Systems

Heating Furnace • Natural Gas • 95 AFUE Cooling Air Conditioner • Electric • 14.7 SEER2

Water Heating Residential Water Heater • Natural Gas • 0.95 UEF

Programmable Thermostat Yes

Ventilation System 80 CFM • 44.6 Watts • ERV

Whole House Fan N/A

Lights and Appliances

Percent Interior LED 100% Percent Exterior LED 100% Refrigerator (kWh/yr) 691.0 Dishwasher Efficiency 270 kWh Ceiling Fan None

Electric Clothes Dryer Fuel Clothes Dryer CEF 3.4 Clothes Washer LER (kWh/yr) 284.0 Clothes Washer Capacity 4.2 Range/Oven Fuel Natural Gas

Property 7 Thornley St Unit 2 Dorchester, MA 02125

Thornley St 7 Unit 2 - dq3kDGQ2 Final

Organization Home Energy Raters Chris Mazzola 508-833-3100

Inspection Status Results are projected

Builder Walter Hunting Construction

General Building Information		
Number Of Bedrooms: 4	Number Of Floors: 1	
Conditioned Floor Area [sq. ft.]: 1,275	Has Electric Vehicle Ready Space: Yes	
Unconditioned, attached garage? No	Conditioned Volume [cu. ft.]: 14,232	
Total Units in Building: 3	Residence Type: Apartment, end unit	
Number of Floors in Building: 3	Floor Number: 2	
Model: N/A	Community:	
RESNET/IECC 2006-2018 Climate Zone: 5A	IECC 2021 Climate Zone: 5A	

Envelope Components

Framed Floor						
Name	Library Type	Carpet R	Floor Grade	Surface Area	Location	Effective R-value
Flr >Adiabatic	R15,MW,10x16,G1	0.68	Above Grade	1,275.0 ft²	Conditioned Space (Adiabatic)	15.997

Rim Joist				
Name	Library Type	Surface Area	Location	Effective Insulation R-value
ambient	R21	365.0 ft²	Exposed Exterior	21.00

Wall						
Name	Library Type	Surface Color	Solar Absorptance	Surface Area	Location	Effective R-value
Wall >Amb	FG+XPS,R13+2",6x16,G1	Medium	0.75	1,265.3 ft²	Exposed Exterior	20.244
Wall >entry hall	R15,MW,6x16,G1	Medium	0.75	435.5 ft²	Conditioned Space (Adiabatic)	13.285

zing									
Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Are
Back DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Northwest	43.2 ft²
Front DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Southeast	61.7 ft
Left DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Southwest	17.4 ft²
Right DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Northeast	61.7 ft²

Glazing Library List					
Name	Shgc	U-factor			
U:0.30,SHGC:0.30	0.3	0.300			

Opaqu	e Doo	r							
	Name	Library Type	Wall Assignment		Solar Absorptance		Surface Area	Location	Effective R- value
	Mainne	rmaTru,Opaque	Wall >entry hall	0.9	0.6	Light	20.0 ft²	Conditioned Space (Adiabatic)	7.143

Property 7 Thornley St Unit 2 Dorchester, MA 02125 Project & Plan Thornley St 7 Unit 2 - dq3kDGQ2 Final Organization Home Energy Raters Chris Mazzola 508-833-3100 Inspection Status Results are projected Builder Walter Hunting Construction

Roof Insul	ation								
Nam	e Library Type	Attic Exterior Area [ft²]		Does the Roof have Eaves?			Solar Absorptance	Surface Area	Location
Ceiling ≽adiabati	15,MW,10x16,G1	1,275	No	No	-	Light	0.6	1,275.0 ft ²	Conditioned Space (Adiabatic)

Roof Insulation	Roof Insulation Library List				iltration	
Name	Has Radiant Barrier	Effective R-value		Infiltration	Measurement Type	Shelter Class
R15,MW,10x16,G1	No	16.798	3	3 ACH at 50 Pa	Blower-door tested	5

	Mechanicals, Lights & Water							
Mechanical \	/entilation	ı						
Ventilation Ty	pe Ventilation	Rate [ft³ / Minute]	Operational hours per day	Fan Watts	Runs once every three hours	Energy Recovery Percent	Model Number	Manufacture
EF	RV	80 CFM	24	44.6 Watts	Yes	78	BLP150E75NS-PC	Broan
Lighting								

% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting		% Garage Fluorescent Lighting	% Garage LED Lighting
0	100	0	100	0	100

Conditioning E	quipment					
Name	E Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location
AC (1)	ACC,24k,14.7 SEER2		0%	100%	0%	Conditioned Space
Furnace (1)	FURNACE,AFUE95.0,NG		100%	0%	0%	Conditioned Space
Water Heater	ANTANEOUS,EF95.0,NG		0%	0%	100%	Conditioned Space

Equipment Type: ACC,24k,14.7 SEER2				
Equipment Type	Air Conditioner			
Fuel Type	Electric			
Distribution Type	Forced Air			
Motor Type	PSC (Single Speed)			
Heat Pump System Type	Unspecified			
Cooling Efficiency	14.7 SEER2			
Cooling Capacity [kBtu/h]	24			

Equipment Type: FURNACE,AFUE95.0,NG				
Equipment Type	Furnace			
Fuel Type	Natural Gas			
Distribution Type	Forced Air			
Motor Type	PSC (Single Speed)			
Heating Efficiency	95 AFUE			
Heating Capacity [kBtu/h]	60			
Use default EAE	Yes			
EAE [kWh]	767			

Equipment Type: INSTANTANEOUS,EF95.0,NG				
Equipment Type	Residential Water Heater			
Fuel Type	Natural Gas			
Distribution Type	Hydronic Delivery (Radiant)			
Hot Water Efficiency	0.95 UEF			
Tankless?	Yes			

Property 7 Thornley St Unit 2 Dorchester, MA 02125 Project & Plan Thornley St 7 Unit 2 - dq3kDGQ2 Final

Distribution System	
Distribution Type	Forced Air
Heating Equipment	Furnace (1)
Cooling Equipment	AC (1)
Sq. Feet Served	1,275
# Return Grilles	5
Supply Duct R Value	6
Return Duct R Value	6
Supply Duct Area [ft²]	344.25
Return Duct Area [ft²]	318.75
Leakage to Outdoors	52 CFM @ 25Pa (4.08 / 100 ft²)
Total Leakage	52 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Conditioned Space
Percent Supply Area	100
Percent Return Area	100

Organization Home Energy Raters Chris Mazzola 508-833-3100 Inspection Status Results are projected Builder Walter Hunting Construction

Water Distribution	
Water Fixture Type	Standard
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	60
At Least R3 Pipe Insulation?	Yes
Hot Water Recirculation System?	No
Drain Water Heat Recovery?	No

Appliances & Notes

Clothes Dryer	
Cef	3.37
Fuel Type	Electric
Field Utilization	Moisture Sensing
Is Outside Conditioned Space	No
Defaults Type	Custom
Is Ventless	No
Is Heat Pump	No
Clothes Dryer Available	Yes

Clothes Washer	
Label Energy Rating	284 kWh/Year
Annual Gas Cost	\$18.00
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Capacity	4.2
Imef	1.57
Defaults Type	Standard 2018+
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

Dishwasher	
Dishwasher Defaults Type	Custom
Dishwasher Size	Standard
Dishwasher Efficiency	270 kWh
Annual Gas Cost	\$13.00
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Is Outside Conditioned Space	No
Dishwasher Available	Yes

Appliances and Controls	
Programmable thermostat?	Yes
Range/Oven Fuel	Natural Gas
Convection Oven?	Yes
Induction Range?	Yes
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	691 kWh/Year
Refrigerator Outside Conditioned Space?	No

Notes

Errors and Warnings have been Rater Reviewed

HERS target 65 Preliminary HERS to Builder -9.3.2025

Building Specification Summary

Property

7 Thornley St Unit 3 Dorchester, MA 02125

Thornley St 7 Unit 3 - Lz1B3qP2

Final

Organization

Home Energy Raters Chris Mazzola 508-833-3100

Builder

Walter Hunting Construction Inspection Status

Results are projected

Building Information

Conditioned Area [ft²] 1,275.00
Conditioned Volume [ft³] 14,232.00
Thermal Boundary Area [ft²] 4,615.83

Number Of Bedrooms 4

Housing Type Apartment, end unit

Rating

HERS ERI W/o PV 42

Building Shell

Ceiling w/ Attic None
Vaulted Ceiling |

R55,HDF+LDF+XPS,2"+8"+2",10x16,G1,C; U-0.021
Above Grade Walls | R23,FG+XPS,R13+2",6x16,G1; U-0.049
Found. Walls | None
Framed Floors | None

Windows (largest) U-Value: 0.3, SHGC: 0.3
Window / Wall Ratio 0.11

Window / Floor Ratio | 0.14 Infiltration | 3 ACH50

Duct Lkg to Outside 52 CFM @ 25Pa (4.08 / 100 ft²)

Total Duct Leakage 52 CFM @ 25Pa (Post-Construction)

Mechanical Systems

Heating Furnace • Natural Gas • 95 AFUE

Cooling Air Conditioner • Electric • 14.7 SEER2

Water Heating Residential Water Heater • Natural Gas • 0.95 UEF

Programmable Thermostat Yes

Slabs None

Ventilation System 80 CFM • 44.6 Watts • ERV

Whole House Fan N/A

Lights and Appliances

Percent Interior LED 100%

Percent Exterior LED 100%

Refrigerator (kWh/yr) 691.0

Dishwasher Efficiency 270 kWh

Ceiling Fan None

Clothes Dryer Fuel Electric
Clothes Dryer CEF 3.4
Clothes Washer LER (kWh/yr) 284.0
Clothes Washer Capacity 4.2
Range/Oven Fuel Natural Gas

Property 7 Thornley St Unit 3 Dorchester, MA 02125

Thornley St 7 Unit 3 - Lz1B3qP2

Organization Home Energy Raters Chris Mazzola 508-833-3100

Inspection Status Results are projected

Builder Walter Hunting Construction

Number Of Floors: 1
Has Electric Vehicle Ready Space: Yes
Conditioned Volume [cu. ft.]: 14,232
Residence Type: Apartment, end unit
Floor Number: 3
Community:
IECC 2021 Climate Zone: 5A

Envelope Components

Framed Floor						
Name	Library Type	Carpet R	Floor Grade	Surface Area	Location	Effective R-value
Flr >Adiabatic	R15,MW,10x16,G1	0.68	Above Grade	1,275.0 ft²	Conditioned Space (Adiabatic)	15.997

Rim Joist				
Name	Library Type	Surface Area	Location	Effective Insulation R-value
ambient	R21	365.0 ft²	Exposed Exterior	21.00

Wall						
Name	Library Type	Surface Color	Solar Absorptance	Surface Area	Location	Effective R-value
Wall >Amb	FG+XPS,R13+2",6x16,G1	Medium	0.75	1,265.3 ft²	Exposed Exterior	20.244
Wall >entry hall	R15,MW,6x16,G1	Medium	0.75	435.5 ft²	Conditioned Space (Adiabatic)	13.285

zing									
Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Are
Back DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Northwest	43.2 ft²
Front DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Southeast	61.7 ft
Left DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Southwest	17.4 ft²
Right DHJ:0	0.30,SHGC:0.30	Wall >Amb		Yes	0	0	0	Northeast	61.7 ft²

Glazing Library List		
Name	Shgc	U-factor
U:0.30,SHGC:0.30	0.3	0.300

Opaqu	e Doo	r							
	Name	Library Type	Wall Assignment		Solar Absorptance		Surface Area	Location	Effective R- value
	Mainne	rmaTru,Opaque	Wall >entry hall	0.9	0.6	Light	20.0 ft²	Conditioned Space (Adiabatic)	7.143

Property 7 Thornley St Unit 3 Dorchester, MA 02125

> % Interior Fluorescent Lighting

> > 0

Water Heater ANTANEOUS, EF95.0, NG

Project & Plan Thornley St 7 Unit 3 - Lz1B3qP2 Final

Organization Home Energy Raters Chris Mazzola 508-833-3100 Inspection Status Results are projected Builder Walter Hunting Construction

% Garage Fluorescent Lighting

0

100%

% Garage LED Lighting

Conditioned Space

100

Roof Insulation								
Name Library Type	Attic Exterior Area [ft²]	Clay or Concrete Roof Tiles	Does the Roof have Eaves?			Solar Absorptance	Surface Area	Location
Ceiling >roof8"+2",10x16,G1,C	1,275	No	No	-	Light	0.6	1,275.0 ft ²	Vaulted Roof

Roof Insulation	Library List		Whole House In	filtration	
Name	Has Radiant Barrier	Effective R-value	Infiltration	Measurement Type	Shelter Class
PS,2"+8"+2",10x16,G1,C	No	48.681	3 ACH at 50 Pa	Blower-door tested	5

Mechanicals, Lights & Water							
flechanical Ventilation							
Ventilation Type	Ventilation Rate [ft³ / Minute]	Operational hours per day	Fan Watts	Runs once every three hours	Energy Recovery Percent	Model Number	Manufacture
ERV	80 CFM	24	44.6 Watts	Yes	78	BLP150E75NS-PC	Broan
ighting.							

Condition	ing Equ	uipment					
	Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	
	AC (1)	ACC,24k,14.7 SEER2		0%	100%	0%	Conditioned Space
Fur	rnace (1)FL	IRNACE AFLIE95 0 NG		100%	0%	0%	Conditioned Space

0

% Exterior LED Lighting

0%

100

0%

Equipment Type: ACC,	24k,14.7 SEER2	Equipment Type: FURN	Equipment Type: FURNACE,AFUE95.0,NG		
Equipment Type	Air Conditioner	Equipment Type	Furnace		
Fuel Type	Electric	Fuel Type	Natural Gas		
Distribution Type	Forced Air	Distribution Type	Forced Air		
Motor Type	PSC (Single Speed)	Motor Type	PSC (Single Speed)		
Heat Pump System Type	Unspecified	Heating Efficiency	95 AFUE		
Cooling Efficiency	14.7 SEER2	Heating Capacity [kBtu/h]	60		
Cooling Capacity [kBtu/h]	24	Use default EAE	Yes		
		EAE [kWh]	767		

% Exterior Fluorescent Lighting

Equipment Type: INSTANTANEOUS,EF95.0,NG				
Equipment Type	Residential Water Heater			
Fuel Type	Natural Gas			
Distribution Type	Hydronic Delivery (Radiant)			
Hot Water Efficiency	0.95 UEF			
Tankless?	Yes			

% Interior LED Lighting

100

Property 7 Thornley St Unit 3 Dorchester, MA 02125 Project & Plan Thornley St 7 Unit 3 - Lz1B3qP2 Final

Distribution System	
Distribution Type	Forced Air
Heating Equipment	Furnace (1)
Cooling Equipment	AC (1)
Sq. Feet Served	1,275
# Return Grilles	5
Supply Duct R Value	6
Return Duct R Value	6
Supply Duct Area [ft²]	344.25
Return Duct Area [ft²]	318.75
Leakage to Outdoors	52 CFM @ 25Pa (4.08 / 100 ft²)
Total Leakage	52 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Conditioned Space
Percent Supply Area	100
Percent Return Area	100

Organization Home Energy Raters Chris Mazzola 508-833-3100 Inspection Status Results are projected Builder Walter Hunting Construction

Water Distribution				
Water Fixture Type	Standard			
Use Default Hot Water Pipe Length	No			
Hot Water Pipe Length [ft]	70			
At Least R3 Pipe Insulation?	Yes			
Hot Water Recirculation System?	No			
Drain Water Heat Recovery?	No			

Appliances & Notes

Clothes Dryer				
Cef	3.37			
Fuel Type	Electric			
Field Utilization	Moisture Sensing			
Is Outside Conditioned Space	No			
Defaults Type	Custom			
Is Ventless	No			
Is Heat Pump	No			
Clothes Dryer Available	Yes			

Dishwasher	
Dishwasher Defaults Type	Custom
Dishwasher Size	Standard
Dishwasher Efficiency	270 kWh
Annual Gas Cost	\$13.00
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Is Outside Conditioned Space	No
Dishwasher Available	Yes

Appliances and Controls	
Programmable thermostat?	Yes
Range/Oven Fuel	Natural Gas
Convection Oven?	Yes
Induction Range?	Yes
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	691 kWh/Year
Refrigerator Outside Conditioned Space?	No

Notes

Errors and Warnings have been Rater Reviewed

HERS target 65 Preliminary HERS to Builder - 9.3.2025



The industry's most versatile and advanced fresh air system, created to simplify the design, specification and installation process while delivering superior air quality in a compact design.

- Quickest installation in its category saving the installer up to 20 minutes per unit, thanks to the auto-balancing and self-adjusting VIRTUO™ technology*
- Airflow configuration can be swapped with the flip of an integrated selection switch**, eliminating the need for specifying different models to accommodate mirrored floor plans and providing simplicity throughout the design and installation processes
- Horizontal and wall mount options provide location flexibility to accommodate various application needs
- Integrated LCD screen provides intuitive CFM selection in 1 CFM increments throughout the airflow range providing real-time CFM and watt usage values
- Equipped with PMSM ECM motors for reliable and energy efficient operation
- Fault indicator display (FID) responding to filter maintenance, low airflow condition, and system sensor failures while providing real-time airflow and power usage.

*US Patent No. 11168916 - Canadian patent pending **Patent pending

Optional Controls







ADVANCED



There are 4 optional main controls and 2 optional auxiliary controls available. Refer to Wall Control specification sheet for more information.

***Speed selector control available only in the US.

PRODUCT SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Fresh Air Systems - 150 CFM

Part no. BLP150E75NS-HW (Hardwired) For plug connected applications, refer to BLP150E75NS-PC



35 to 146 CFM @ 0.4 in. w.g.







Parts/Motor/ERV Core

Visit Broan-NuTone.com for complete warranty text.

Unit Attributes

- SRE of 84% at 32°F (0°C) (36 CFM)
- Ports size: 6"
- Fan Efficacy: 2.1 CFM/Watt (64 CFM)
- Defrost operation will automatically activate to manage recovery core frost.
- Corrosion resistant galvanized steel door and cabinet
- One-piece molded insulation shell (expanded polystyrene; UL 94 HF-1 certified)
- VIRTUO[™] constant airflow and auto-balancing device
- Integrated motorized dampers within both supply and exhaust air stream (no additional backdraft dampers required).
- No condensate drain required
- Unit electrical characteristics: Volt:120/1 60 Hz, MCA: 2.4 A, MCOP: 15 A, Watts: 170

Recovery Core

• ERV polypropylene crossflow core and plastic covers, impact resistant, non washable

Dimensions: 12" x 24" x 8.5" (30.5 cm x 61 cm x 21.6 cm)

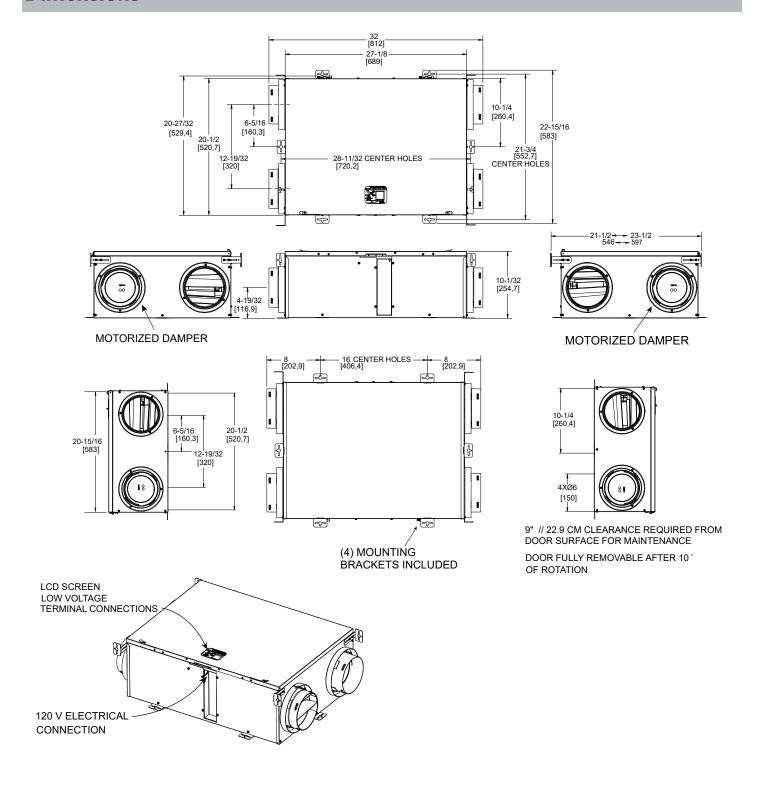
Filtration

- MERV 8 grade washable standard filter (included)
- Optional 2" thick MERV13 grade filter (disposable)

Exterior Termination Options

• Compatible with Tandem Terminations (part no. VTYIK1 and V14695) (airflow setting should be adjusted in accordance with application requirements)

Dimensions

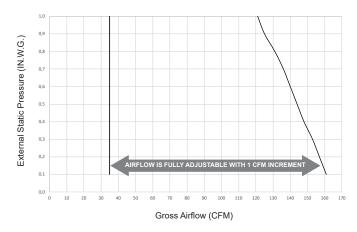


Fan Curves with VIRTUO™

Thanks to VIRTUO™ technology, no need to balance the unit manually. Both PMSM ECM motors are controlled by an artificial intelligence performing 120 readings per minute then processing this information to maintain the requested airflow.

For typical installation, VIRTUO™ will ensure a balanced ventilation at every selected speed regardless of the weather conditions, the type of connection, the variable speed furnace/AHU, the stack effect, the filter clogging and so on. This results in peace of mind for installers and users knowing that the unit will always remain balanced and that it will maintain its maximum heat/energy recovery efficiency.

STATIC PRESSURE (PA)	STATIC PRESSURE (IN. W.G.)	NET SUPPLY AIRFLOW (L/s)	NET SUPPLY AIRFLOW (CFM)	Gross Airflow Supply (L/s)	Gross Airflow Supply (CFM)	Gross Airflow Exhaust (L/s)	Gross Airflow Exhaust (cfm)
25	0.1	75	159	76	161	76	161
50	0.2	73	155	74	157	74	157
75	0.3	71	150	72	153	72	153
100	0.4	69	146	70	148	70	148
125	0.5	67	142	68	144	68	144
150	0.6	65	138	66	140	66	140
175	0.7	63	133	64	136	64	136
200	0.8	61	129	62	131	62	131
225	0.9	58	123	59	125	59	125
250	1.0	56	119	57	121	57	121



Energy Performance

Supply Temperature		NET AIRFLOW		Power Consumed	Sensible Recovery	SENISIRI E	Apparent Sensible	Total Recovery	Adjusted Total	LATENT RECOVERY /	
°C	°F	L/S	CFM	WATTS	EFFICIENCY	RECOVERY EFFICIENCY	FEECTIVENESS*		Recovery Efficiency	Moisture Transfer	
НЕАТ	ING										
0	32	17	36	17	84%	87%	88%	-	-	0.72	
0	32	30	64	31	78%	81%	82%	-	-	0.65	
0	32	52	110	70	70%	73%	74%	-	-	0.57	
Cool	ING										
35	95	17	36	20	-	-	82%	72%	75%	0.71	
35	95	30	64	32	-	-	74%	65%	68%	0.63	
35	95	52	110	75	-	-	65%	55%	58%	0.55	

^{*}Data not certified by HVI.

Fan Efficacy

The following data are not certified by HVI but come from measurement in accordance with CSA C439-18.

Airflow (CFM) ¹	Airflow (L/s) ¹	Power (watts)	FAN EFFICACY (CFM/W) ²	FAN EFFICACY (L/s/W) ²
35	17	16.5	2.1	1.00
40	19	18.6	2.1	1.01
45	21	20.8	2.1	1.02
50	24	23.0	2.1	1.03
55	26	25.3	2.1	1.03
60	28	27.7	2.1	1.02
65	31	30.2	2.1	1.02
70	33	32.9	2.1	1.00
75	35	35.8	2.1	0.99
80	38	39.0	2.0	0.97
85	40	42.4	2.0	0.95
90	42	46.1	1.9	0.92
95	45	50.1	1.9	0.90
100	47	54.4	1.8	0.87
105	50	59.1	1.8	0.84
110	52	64.2	1.7	0.81
115	54	69.8	1.7	0.78
120	57	75.8	1.6	0.75
125	59	82.3	1.5	0.72
130	61	89.3	1.5	0.69
135	64	96.9	1.4	0.66
140	66	105.0	1.3	0.63
145	68	113.7	1.3	0.60
150	71	123.1	1.2	0.58
155	73	133.1	1.2	0.55

¹ Gross airflow measured at 70°F/21°C sea level, supply and exhaust stream balanced and equivalent external differential pressure of 0.2" w.g. 50 Pa applied to each stream.

Requirements and Standards

- UL 1812 compliant (safety)
- Performance tested in accordance with CSA C439 Standard
- Compliant with Prop 65
- Can be used to comply with ASHRAE standard 62.2
- Can be used to comply with ASHRAE 90.1-2019 requirements
- Can be used to comply with International Energy Conservation Code (IECC) requirements
- Can be used to comply with California Title 24 2019 Part 6 Fault Indicator Display Requirements
- Can be used to earn WA energy code credits
- HVI certified

Project:		Remarks
Location:		
Part no.:		
Oty.:		
Submitted by:	Date:	

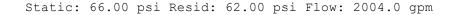


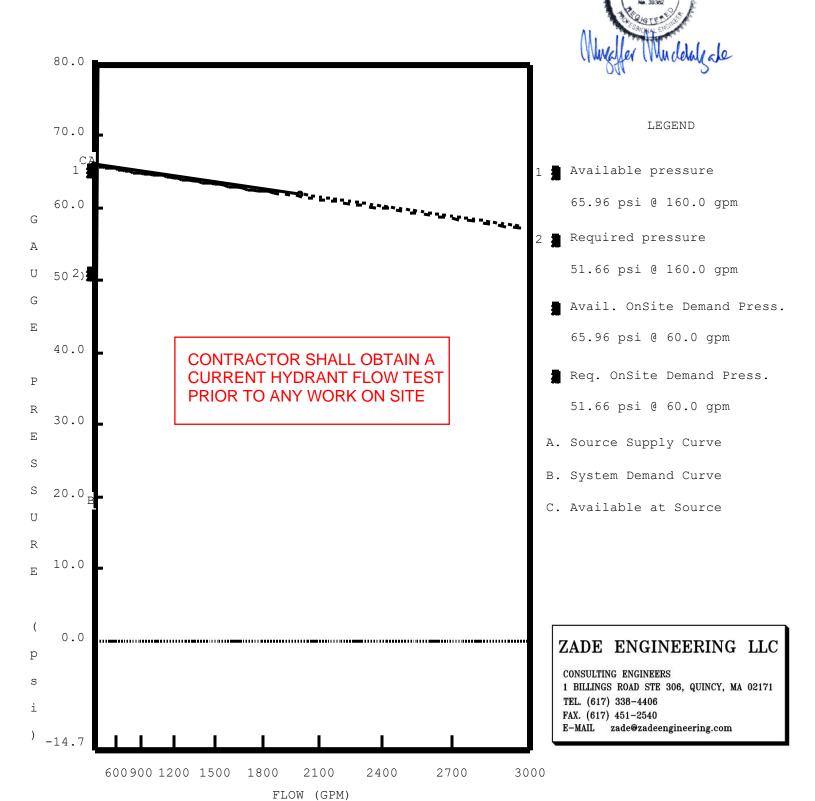
² Fan efficacy calculated from balanced gross airflow divided by measured power then rounded to one decimal for I-P units (CFM/W) or 2 decimals for SI units (L/s/W).

DATE: 8/22/2025 P:\M DRIVE\7 THORNLEY STREET\HYD CALC.SDF

JOB TITLE: 7 Thornley St. Boston, MA NFPA-13R Hyd Calc

WATER SUPPLY ANALYSIS





Note: (1) Dashed Lines indicate extrapolated values from Test Results

(2) On Site pressures are based on hose stream deduction at the source

DATE: 8/22/2025 P:\M DRIVE\7 THORNLEY STREET\HYD CALC.SDF JOB TITLE: 7 Thornley St. Boston, MA NFPA-13R Hyd Calc

NFPA WATER SUPPLY DATA

SOURCE	STATIC	RESID.	FLOW	AVAIL.	TOTAL	REQ'D
NODE	PRESS.	PRESS.	@	PRESS.	@ DEMAND	PRESS.
TAG	(PSI)	(PSI)	(GPM)	(PSI)	(GPM)	(PSI)
1	66.0	62.0	2004.0	66.0	160.0	51.7

AGGREGATE FLOW ANALYSIS:

TOTAL	FLOW	AT SOU	JRCE				160.0	GPM	
TOTAL	HOSE	STREAM	1 AL	LOWANCE	ΑT	SOURCE	100.0	GPM	
OTHER	HOSE	STREAM	1 AL	LOWANCES	3		0.0	GPM	
TOTAL	DISCH	HARGE E	ROM	ACTIVE	SPF	RINKLERS	60.0	GPM	

NODE	ANALYSIS DATA			
NODE	TAG ELEVATION	NODE TYPE	PRESSURE	DISCHARGE
	(FT)		(PSI)	(GPM)
1	-6.0	SOURCE	51.7	60.0
2	-8.0		50.7	
3	-8.0		45.7	
4	-2.0		42.1	
5	37.0		20.5	
6	37.0		15.7	
7	37.0		9.4	
8	37.0		7.6	
101	36.0	K = 4.90	7.0	13.0
102	36.0	K = 4.90	7.4	13.3
103	36.0	K = 4.90	9.0	14.7
104	36.0	K = 4.90	15.0	19.0

SPRINKLER SYSTEM HYDRAULIC ANALYSIS Page 3
DATE: 8/22/2025 P:\M DRIVE\7 THORNLEY STREET\HYD CALC.SDF
JOB TITLE: 7 Thornley St. Boston, MA NFPA-13R Hyd Calc

NFPA PIPE DATA 5

Pipe Tag Frm Node El (ft) To Node El (ft)	K-fac A	.dd Fl A	Add Fl T Node/	Nom ID	Fit: Eq.Ln.	L F	C Df/ft	(Pt) (Pe)
			DISCH	1100 10	(10.)			
Pipe: 1	Source	0.0			_ 10 0	50.00	140	
1 -6.0 2 -8.0	51.7	60.0	3	2.000	T:13.3 G: 1.3	14.63	0 007	-0.9
2 -8.0	50.7	60.0		2.067	G: 1.3	64.63	0.027	1.8
Pipe: 2 2 -8.0		0.0	Fix	ked Pres	sure Loss	Device		
			4	5.0	psi, 60	.1 gpm		
3 -8.0	45.7	60.1						
Pipe: 3	0.0	0.0			ETBG	6.00	120	3.6
3 -8.0	45.7	60.0	5	2.000		22.00		2.6
		60.0		2.067		28.00	0.037	1.0
Pipe: 4	0.0	0.0				40.00	150	21.6
4 -2.0	42 1	60.0	6	1 500	E: 6.0		130	16.9
		60.0	O		T:12.1		0 082	
0 07.0	20.0					00.10	0.002	2.,
		41.1				40.00	150	4.7
5 37.0	20.5	19.0		1.500	E: 6.0	18.13		-0.0
6 37.0	15.7	60.0		1.610	T:12.1	58.13	0.082	4.7
Pipe: 6	0.0	26.3	8			12.00	150	6.4
		14.7		1.000	T: 7.6	7.56		-0.0
7 37.0	9.4	41.1		1.049		19.56	0.326	6.4
Pipe: 7	0.0	0.0				5.00	150	1 8
=		26.3		1.000	T: 7.6			-0.0
	7.6	26.3		1.049			0.143	
	4 00	10.0				1.4.00	1.50	0 5
Pipe: 8				1 000	E: 3.0	14.00	150	
		0.0			E: 3.0 T: 7.6			-0.4
101 36.0	7.0	13.0		1.049	T: /.6	24.58	0.039	1.0
Pipe: 9	4.90	13.3	Disch			4.00	150	0.2
8 37.0		0.0			E: 3.0	10.58		-0.4
102 36.0	7.4	13.3		1.049	T: 7.6	14.58	0.041	0.6
Pipe: 10	4.90	14.7	Disch			5.00	150	0.3
=	9.4	0.0	DIBOII		E: 3.0		100	-0.4
103 36.0	9.0	14.7			T: 7.6		0.049	0.8
=	4.90	19.0	Disch			4.00	150	0.7
	15.7	0.0			E: 3.0		0 0 7 0	-0.4
104 36.0	15.0	19.0		1.049	T: 7.6	14.58	υ.078	1.1

DATE: 8/22/2025 P:\M DRIVE\7 THORNLEY STREET\HYD CALC.SDF

JOB TITLE: 7 Thornley St. Boston, MA NFPA-13R Hyd Calc

NOTES (HASS):

(1) Calculations were performed by the HASS 2023 D computer program in accordance with NFPA (2020) under license no. 64642423 granted by

HRS Systems, Inc.
208 Southside Square
Petersburg, TN 37144
(931) 659-9760

- (2) The system has been calculated to provide an average imbalance at each node of 0.013 gpm and a maximum imbalance at any node of 0.145 gpm.
- (3) Total pressure at each node is used in balancing the system. Maximum water velocity is 15.2 ft/sec at pipe 6.
- (4) Items listed in bold print on the cover sheet are automatically transferred from the calculation report.
- (5) Available pressure at source node 1 under full flow conditions is 65.96 psi with a flow of 174.36 gpm.

(6) PIPE FITTINGS TABLE

HASS Pipe Table Name: standard

PAGE: A	MATERIA:	L: S40	HWC:	120					
Diameter]	Equival	ent Fit	ting L	engths	in Feet	5		
(in)	E	T	L	С	В	G	A	D	N
	Ell	Tee L	ngEll C	hkVlv	BfyVlv	GatVlv	AlmChk	DPVlv	NTee
									-
	F								
	F45Ell								
1.049	2.00	5.00	2.00	5.00	6.00	1.00	10.00	2.00	5.00
	1.00								
1.610	4.00	8.00	2.00	9.00	6.00	1.00	10.00	10.00	8.00
	2.00								
2.067	5.00	10.00	3.00	11.00	6.00	1.00	10.00	10.00	10.00
	2.50								



ZADE ENGINEERING LLC

Consulting Engineers 1 Billings Rd. Quincy, MA. 02171

Suite 306

Phone: (617) 338-4406

Email: Zade@ZadeEngineering.com

Mohammed Zade Ph.D., P.E. Muzaffer Muctehitzade M.Sc., P.E.

FIRE PROTECTION SYSTEM NARRATIVE REPORT FOR:

AUGUST 22, 2025

7 THORNLEY ST. BOSTON MA 02128

SECTION 1-Building Description

- a) Building use group is R-2 Residential
- b) Building/Space new construction approx. 5,260 FT²
- c) Building Height is low-rise
- d) Construction type is (V-B)
- e) Number of floors above is (3)
- f) Number of floors below is (1)
- g) Types of occupancies within the building is Residential
- h) Hazardous Material usage and Storage is none
- i) High storage of commodities within building over 12ft is none.
- j) Site accesses arrangement for Emergency Response Vehicles are through Fire Lanes.

SECTION 2-Applicable Laws, regulations and Standards

Fire Protection Plans have been prepared based on following Code Requirements.

- a) IBC 2015 w/ 780 CMR 10th Ed. Including Sec. 901 (General), Sec. 903(Automatic Sprinkler Systems), Sec. 906 (Portable Fire Extinguishers), Sec. 907 (Fire Alar and Detection Systems), Sec. 912 (Fire Department Connections)
- b) NFPA 72,(2019 Ed. Fire Alarm Code), NFPA 70,(2023 Ed. NEC as amended by 527 CMR 12.00), NFPA 13R (2019 Ed. Automatic Sprinkler Installation), NFPA 10 (2018 Ed. Portable Fire Extinguishers)
- c) 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code, Massachusetts amendments to NFPA 1 (2021 Ed.)
- d) 524 CMR Board of Elevator Regulations
- e) Local by-laws or Ordinances, non-is present.
- f)Federal Laws, ADA, OSHA.

SECTION 3-Design Responsibility for Fire Alarm Systems:

a) Engineer whose PE Stamp bears on the Drawings is the professional engineer providing the full design and specified the design criteria to be used by the installing contractor who will finalizes the system layout. Installer will provide calculations to confirm the design criteria. Engineer will review and approve the installing contractor's final layout calculations. Design engineer whose PE Stamp is on the Drawings is the engineer of the record and will certify system installation for code compliance upon completion of the installation.



SECTION 4-Fire Protection Systems to be installed

Proposed Fire Protection Systems

- a) Fire Mains and Hydrants as required by 780 CMR, Art 913. (2" fire service)
- b) Automatic Sprinkler Systems as required by 780 CMR Art 903.2.8 for all R Buildings. (Sprinklers are provided per NFPA 13R)
- c) Dry pre-charged sprinklers heads to be provided at all combustible over hangs which exceed 4'-0 (780 CMR)
- d) Design Criteria is based on NFPA 13R (Light Hazard)
- e) Standpipe Systems as required by IBC for buildings where the floor level of the highest story is located more than 30' above the lowest level of fire department vehicle access. (not required)
- f) Fire Department Connection per 780 CMR Art 912 (provided at front of building)
- **g)** Fire Alarm System As required by 780 CMR Art 907.2.8 Smoke Detectors in all common areas (**Provided**)
- h) Automatic Fire Extinguishing System as required by for Kitchen Hood. (No grease hood present)
- i) Manual Suppression System as required by NFPA 10.
- j) Kitchen Cooking Equipment and Exhaust System as required by 780 CMR 904. (No grease hood present)
- **k)** Emergency Power as required by 780 CMR Art 1024.4 for Egress Routes.
- I) Local Type Photoelectric Smoke Detector inside each bedroom (Provided)
- m) Local type Smoke/Carbon Monoxide detector outside each bedroom (Provided)
- **n)** BDA system as required by 780 CMR 915 to provide approved Emergency Responder Radio Coverage **(TBD)**

Following systems are new, addition or expansion as listed.

Sprinkler System

Sprinkler System coverage will be 100% per NFPA 13R with the exceptions and specifics as described below. Sprinklers are provided in all areas of the building, in every room, space, and closet. Sprinkler Heads within residential areas will be Residential type with RTI less than 50, Sprinklers outside dwelling units shall be quick response.

- a) Sprinkler coverage is not required in bathrooms less than 55 FT²
- b) Sprinkler coverage is not required in closets less than 24 FT²
- c) Sprinkler coverage is not required in concealed combustible spaces that are not intended for living purposes or storage

Wet automatic sprinkler system is designed per area/density method in accordance with NFPA-13R. The system employs residential sprinklers fed from 2" backflow preventer assembly located in the basement. Wet sprinkler piping has been hydraulically calculated per NFPA-13R residential requirements to provide the minimum .05 gpm density over the 2 most demanding contiguous sprinklers.

The system is a single zone throughout the building

Fire Alarm System

System consists of Horn/Strobe type Analog Addressable Fire Alarm Panel.

System components consist of

Manual Pull Stations at every Stair Entrance and Building exit,

Large Common area outside the Apartments will have either Smoke or Heat Detector.

Audio/Visual Devices shall be Horn/Strobe or Strobe type only as shown on plans and located per NFPA 72 coverage.

Local smoke detectors within the unit will all activate upon sensing of smoke at any smoke detector within the unit. They will be all tandem wired.

Local CO detectors will be provided throughout each apartment outside each bedroom.

Local CO detectors within the unit will all activate upon sensing of CO condition at any CO detector within the unit. They will be all tandem wired

All designated bedrooms will be equipped with local sounding devices capable of forming low frequency waves to awaken building occupants

This system does not communicate with FACP.

Emergency Responder Radio Coverage

BDA system initially shall consist of infrastructure for future installation of the system upon determination of the need of BDA system when the building is closed in. A third party testing agency will be employed to test the system, passing test result will be submitted to fire department, otherwise BDA system will be installed utilizing the previously installed infrastructure before the final fire department walk through

SECTION 5-Features used in the design methodology

Purpose of the Design is to protect Lives and Property from Fire once the building is occupied.

For this purpose

- a) Building Occupants will be notified by way of Audio/Visual Devices,
- b) Emergency Response Personnel will be notified by way of Alarm Company Notification,
- c) Initial and Periodic Test Criteria will be provided for proper maintenance of the System.

SECTION 6-Special Considerations and Descriptions

No Special Consideration

SECTION 7-Sequence of Operation

- 1. Upon Activation of any automatic sprinkler head attached to this system;
 - a) Fusible link will allow water to flow
 - b) Main water flow switch will initiate fire alarm system
 - c) UL Listed Alarm Company will be notified via wireless communicator.
 - d) All Horn/mini horn and Strobe Devices will be activated.
 - e) Exterior Strobe Light & electric sprinkle bell will be activated.
- 2. Upon Activation of a Sprinkler Tamper Switch
 - a) Fire Alarm Panel will indicate supervisory signal and local sound.
 - b) Exterior Sprinkler Bell will be activated
 - c) UL Listed Alarm Company will be notified via wireless communicator.
- 3. Upon Activation of any Fire Alarm Device (Sprinkler Flow, Manual Pull Station, Smoke Detector, Heat Detector)
 - a) Fire Alarm Panel will be tripped.
 - b) UL Listed Alarm Company/fire Department will be notified via wireless communicator.
 - c) All Horn Strobe Devices will be activated.
 - d) Exterior Strobe Light will be activated.
 - e) All smoke dampers will be closed.

Detailed Sequence of Operations:

- 1. Activation of smoke detectors shall:
 - a. Sound alarm throughout building.
 - b. Identify the device activated and sound alarm at control panel.
 - c. Initiate audio/visual devices throughout building.
 - d. Notify local fire department via UL Listed Alarm Company.
- 2. Activation of sprinkler flow switches shall:
 - a. Sound alarm throughout building
 - b. Identify the device activated and sound alarm at control panel.
 - c. Initiate audio/visual devices throughout building.
 - d. Activate exterior sprinkler bell.
 - e. Notify local fire department via UL Listed Alarm Company.
- 3. Activation of any supervisory circuit shall: (tamper switch, sprinkler low pressure, open-short-ground circuit, low battery, power failure,)
 - a. Identify the location of supervisory condition at control panel.
 - b. Initiate supervisory audible/visual signal at control panel.
 - c. Notify UL Listed Alarm Company
- 4. Activation of trouble circuit shall:
 - a. Identify the location of trouble condition at control panel.
 - b. Initiate trouble audible/visual signal at control panel.
 - c. Notify UL Listed Alarm Company
- 5. All events shall be recorded at the fire alarm control panel and shall indicate time and date of occurrence and list device initiated.

SECTION 8-Testing Criteria

- a)System Installer will test the System %100 for Engineers review and conformance to Performance Criteria.
- b) UL Certified UL Listed Alarm Company will test the completed System for Performance of the System.
- c) Testing Agency will have a log of Fire Protection System Components and Devices and Test Results corresponding to each device. This Log will be submitted to Engineer for review and Approval.
- d) Upon Completion of the System to the satisfaction of the Engineer of the Record, Fire Department will be invited for Final Inspection.
- e) Testing of fire alarm system shall be per NFPA 72, chapter 14, per table 14.4.3.2
- f) Testing of sprinkler system shall be in accordance with NFPA-25, Standard for Inspection, Maintenance & Testing of Water Based Sprinkler Systems
- g) Emergency responder radio coverage shall be tested in accordance with NFPA-72 and local AHJ requirements

SECTION 9-Equipment and Tools

During the Preliminary and Final Testing of the System following Equipment and Tools will be provided at the site by the Contractor.

- a) Manufacturer's Instructions,
- b) Sound Meters
- c) Fire Hoses, nozzles
- d) Flow Measuring devices
- e) Pressure Gauges
- f) Voltage Meters
- g) Magnets
- h) Communication Radios (Min two)

SECTION 10-Testing and Installation Procedures

- 1)Prior to applying for certificate of occupancy the contractors shall complete the following;
 - 1. Fire Alarm
- i. Record of Completion
- ii. Inspection and Test Report
- iii. Engineer's Final Construction Control Affidavit
- 2. Sprinkler
- i. Aboveground Materials and Test Certificate
- ii. Engineer's Final Construction Control Affidavit

Fire Alarm

- 2) Fire Alarm System Installation shall be in accordance with NFPA 72 and NFPA 70.
- 3) Wiring shall be Class "A"
- 4) Fire Alarm System shall be tested according to NFPA 72. Table 7.2.2,

In general:

- a) Battery Test shall be done visually and by Discharge Test per Manufacturer's instructions.
- b) Stand-by Power Supply test shall be done by disconnecting the Primary Power Supply and testing the FACP as described above.
- c) Battery Test shall be done visually and by Discharge Test per Manufacturers instructions.
- d) Public Reporting System Test shall be done by testing the current, voltage across the conductors and to ground. Any variation above 10% from normal to be investigated and corrected.
- e) Transient Suppressors shall be tested per manufacturer's specifications.
- f) Control Panel Trouble Signals shall be tested shall be tested for operation and ring back feature, and off-premise signal transmission. Test of the operation under multiple fault conditions.
- g) Remote annunciator shall be tested for performance under a fault conditions.
- h) Conductors shall be tested for insulation integrity
- i) Heat detectors shall be tested mechanically and electrically.
- j) Smoke Detectors shall be tested with listed aerosol acceptable to the manufacturer.
- k) Tamper Switches shall be tested by verifying signals within the first two revolution of the wheel.
- I)Horn/Strobe devices shall be tested for sound levels with sound level meters.

Sprinkler System

All sprinkler piping is to be pressure tested to a minimum of 200 psi for 2 hours without showing leakage per NFPA-25. The contractor is responsible for providing the Engineer of Record with a copy of a completed NFPA "Above Ground Test Certificate" prior to system certification

SECTION 11-Approval Requirements

- a) Upon completion of successful performance of the System, Code official will issue a written Approval of the System.
- b) If the system fails to operate satisfactorily to the Fire Official, failed component or part of the System or function will be corrected immediately upon agreement of an acceptable correction period with the Fire Official
- c) At the Completion and proof of satisfactory operation of the Fire Protection System, Engineer of the record will submit to Fire Department/Building Official a "System Certification" stating that the Systems installed is in Compliance with all Laws, Regulations and Standards and perapproved Narrative Reports.

- d) Along with the above Certification, listing of Names, Addresses and Telephone Numbers of Personnel for Emergency Notification will be provided.
- e) The engineer of record must be invited to the site a minimum of two times during the construction process. It is the responsibility of the general contractor to notify the engineer of record when site visit is appropriate. If the engineer of record is not able to inspect the installation of the system no affidavit will be issued