

PROPOSED RESIDENTIAL BUILDING

17 KENSINGTON AVE SOMERVILLE, MA



ZONING SUMMARY

UR - URBAN RESIDENCE

	LOT WIDTH	LOT DEPTH	LOT COVERAGE	SETBACK FRONT	SETBACK REAR	SETBACK SIDE	FACADE BUILD-OUT MIN.	FLOOR PLATE MAX	GROUND STORY ELEVATION	BLDG. HEIGHT	FACADE FENESTRATION	OUTDOOR AMENITY SPACE	GREEN SCORE	SRI
REQUIRED BY ZONING	58'	90'	65%	10' MIN; 20' MAX	10'	5'	80%	7,000 SF	2'	4 ST	MIN. 15% MAX. 50%	1/DU	0.35 MIN	82 OR 3 YEAR AGED SOLAR REF. 64
PROPOSED	105.3'	95'	64.9%	10' MIN; 20' MAX	14' (bays 10')	5'	84%	6,343 SF	2'	4 ST	1st FLOOR = 17% UPPER LEVEL = 37%	1/DU	0.36	82 OR 3 YEAR AGED SOLAR REF. 64

PROPOSED BUILDING SUMMARY:

PROPOSED 19 RESIDENTIAL UNITS.
4-STORY BUILDING
4 UNITS ON THE 1ST FLOOR &
5 UNITS PER FLOOR ON THE UPPER FLOORS
4 UNITS ARE 1-BEDROOM UNITS
15 UNITS ARE 2-BEDROOM UNITS.
UNIT AREAS VARIES FROM 692 sf - 1,360 sf ±
BUILDING FOOTPRINT IS: 6, 264 sf.
BUILDING TOTAL GROSS AREA SQUARE-FOOTAGE: 25,293 sf ±

LOT COVERAGE:
LOT AREA: 10,006 sf
BLDG. COVERAGE: 6,264 sf (62.6%)
STOOP/ AREAWAY: 87 sf (0.8%)
PAVING STONES: 308 sf
(308 sf x 0.5 coeff. = 154 sf = 1.5%)
TOTAL LOT COVERAGE: 62.6+0.8+1.5 = **64.9%**

FACADE BUILD-OUT:
REQUIRED - 80% MIN.
LOT WIDTH: 105.3'
BUILDING FACADE LENGTH: 88.3'
BUILDING FACADE BUILD-OUT: 83.9%

FACADE COMPOSITION:
GROUND STORY FENESTRATION
REQUIRED: 15% MIN - 50% MAX.
1ST LEVEL FACADE WALL AREA: 1,061 sf
FACADE FENESTRATION AREA: 177.5 sf = **17%**
2nd, 3rd, 4th LEVEL FACADE WALL AREA: 884 sf (each level)
FACADE FENESTRATION AREA: 326 sf = **37%** (each level)
STAIR HEADHOUSE FACADE WALL AREA: 197 sf
FACADE FENESTRATION AREA: 65 sf = **33%**

ALL LEVELS HAVE A FENESTRATION OF MORE THAN 15% & LESS THAN 50%.

BUILDING DENSITY:
REQUIRED - 1,125 sf/ UNIT
BLDG. GROSS AREA ON UPPER FLOORS:
6,343 x 3 floors = 19,029 sf
1st FLOOR GROSS LIVING AREA: 5,813 sf
TOTAL BUILDING LIVING AREA: 24,842 sf
24,842 sf / 1,125 sf = 22 UNITS MAX
PROPOSED 19 UNITS

OUTDOOR AMENITY SPACE:
REQUIRED - 24 sf/ UNIT
UNIT 201, 301, & 401 HAVE A SHARED OUTDOOR AMENITY SPACE PROVIDED BY A 204 sf ROOF DECK. REQUIRED OUTDOOR AMENITY SPACE FOR 3 UNITS IS 72 sf < 204 sf PROVIDED.
ALL OF THE OTHER UNITS HAVE A BALCONY EACH, LARGER THAN 24 sf.

TABLE 10.4.1 GREEN SCORE CALCULATION

SOILS	CREDIT	MULTIPLIER	TOTAL
LANDSCAPED AREA WITH A SOIL DEPTH => 24 INCHES	3,124 ACTUAL SF	0.6	1,874
PERVIOUS PAVING WITH MORE THAN 24 INCHES OF SUBSURFACE SOIL OR GRAVEL	308 ACTUAL SF	0.5	154
GROUNDCOVERS			
TURFGRASS, MULCH, AND INORGANIC SURFACING MATERIALS	223 ACTUAL SF	0.1	22.3
PLANTS			
VEGETATION LESS THAN TWO (2) FEET TALL AT MATURITY	294 SF	0.2	58.8
VEGETATION AT LEAST TWO(2) FEET TALL AT MATURITY	504SF 12 SF/PLANT (42)	0.3	151
TREES			
SMALL TREE 500 SF	50 SF/TREE (10 TREES)	0.6	300
LARGE TREE 1, 800 SF	450 SF/TREE (4 TREES)	0.6	1080
			3,640

GREEN SCORE CALCULATION
3,640 / 10,006 = 0.36 > 0.35 OK

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SOMERVILLE, MA



One Billings Road Quincy, MA 02171
617-786-7727 fax 617-786-7715

No.	Revision Date
	10-10-24
	02-18-25

Project No: 2024169
Scale: AS NOTED
Date: 03-04-25
Drawn By: E.A.

Drawing Name
COVER SHEET

Sheet No.
A-0

BUILDING CODE SUMMARY

APPLICABLE CODES

BUILDING CODE:

- 780 CMR: MASSACHUSETTS STATE BUILDING CODE (MSBC), 10TH EDITION
- MASSACHUSETTS ADOPTS AND AMENDS THE INTERNATIONAL BUILDING CODE (IBC) 2021 EDITION

OTHER APPLICABLE CODES:

- FIRE PREVENTION: 527 CMR: MASSACHUSETTS COMPREHENSIVE FIRE SAFETY CODE (ADOPTED AND AMENDED NFPA 1 - 2021)
- ELECTRICAL: NFPA 70 - NATIONAL ELECTRICAL CODE (NEC), 2017 EDITION, AS ADOPTED AND AMENDED BY 527 CMR CHAPTER 12
- ENERGY: MA STRETCH ENERGY CODE, AMENDMENTS TO THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE
- MECHANICAL: INTERNATIONAL MECHANICAL CODE, 2015 EDITION AS ADOPTED AND AMENDED BY THE MSBC
- PLUMBING: 248 CMR: MASSACHUSETTS FUEL GAS AND PLUMBING CODE, 248 CMR
- ACCESSIBILITY: 521 CMR: MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) (JANUARY 2006)
FEDERAL FAIR HOUSING ACT DESIGN MANUAL (FHA)
AMERICANS WITH DISABILITIES ACT GUIDELINES (ADAAG) (2010 EDITION)

USE / OCCUPANCY

OCCUPANCY:

R-2 (RESIDENTIAL)

RESIDENTIAL DWELLING UNITS

OCCUPANT LOAD CALCULATION:

USE	AREA	LOAD FACTOR (SF/OCC)	OCCUPANT LOAD
LEVEL 1:			
RESIDENTIAL (R-2)	6,264 SF	200 GROSS	31
LEVEL 2:			
RESIDENTIAL (R-2)	6,331 SF	200 GROSS	31.7
LEVEL 3:			
RESIDENTIAL (R-2)	6,331 SF	200 GROSS	31.7
LEVEL 4:			
RESIDENTIAL (R-2)	6,331 SF	200 GROSS	31.7

TOTAL OCCUPANCY: 126 PEOPLE

CONSTRUCTION TYPE / GENERAL BUILDING LIMITATIONS

THE COMPLETE BUILDING WILL BE PROVIDED WITH AN AUTOMATIC SPRINKLER SYSTEM THROUGHOUT, DESIGNED IN ACCORDANCE WITH MASBC SECTION 903.3.1.1.

CONSTRUCTION TYPE:

5A - COMBUSTIBLE, PROTECTED

(IN ACCORDANCE WITH IBC 2021, SECTION 602)

BUILDING HEIGHT:

NOTE: BUILDING HEIGHT IN FEET IS MEASURED FROM THE AVERAGE GRADE AROUND THE BUILDING TO THE AVERAGE HEIGHT OF THE HIGHEST ROOF SURFACE

ALLOWABLE BUILDING HEIGHT:

5A: 4 STORIES / 70 FEET (R-2 OCCUPANCY)

(IN ACCORDANCE WITH IBC 2021 SECTION 504 & TABLES 504.3 & 504.4)

PROPOSED BUILDING HEIGHT:

5A: 4 STORY/ 42 FEET

BUILDING AREA:

PROPOSED AREA MODIFICATIONS FOR TYPE 5A CONSTRUCTION (MSBC SECTION 506.2.3, EQUATION 5-2)

$$A_a = [A_t + (NS \times I_f)] \times S_a$$

A_a (ALLOWABLE AREA)

A_t (TABULAR AREA PER TABLE 506.2) (5A / R-2 / SM)

36,000

NS (TABULAR ALLOWABLE AREA FOR NON SPRINKLERED BUILDING PER TABLE 506.2) (5A / R-2 / NS)

12,000

I_f (AREA FACTOR INCREASE DUE TO FRONTAGE PER SECTION 506.3)

0 (N/A)

S_a (ACTUAL NUMBER OF BUILDING STORIES ABOVE GRADE PLANE NOT TO EXCEED 4)

4

$$A_a = [36,000 + (12,000 \times 0)] \times 4$$

$$A_a = 144,000$$

ALLOWABLE BUILDING AREA:

5A: 144,000 SF (R-2 OCCUPANCY)

(IN ACCORDANCE WITH IBC 2021 SECTION 506 & TABLE 506.2)

PROPOSED BUILDING AREA:

5A: 6,331 SF (COMPLIANT)

EGRESS COMPONENTS:

RESIDENTIAL (R-2 USE):

TWO MEANS OF EGRESS IN COMPLIANCE WITH IBC 2021 CHAPTER 10.

FIRE RESISTANCE RATINGS OF BUILDING ELEMENTS:

FIRE RESISTANCE RATING ELEMENT (TYPE 5A):

FIRE RESISTANCE RATING ELEMENT (TYPE 5A):	REQUIRED	PROVIDED
PRIMARY STRUCTURAL FRAME	1 HOUR	1 HOUR
EXTERIOR BEARING WALL	1 HOUR	1 HOUR
INTERIOR BEARING WALL	1 HOUR	1 HOUR
EXTERIOR NON-LOAD BEARING WALL, < 5' F.S.D.	1 HOUR	1 HOUR
EXTERIOR NON-LOAD BEARING WALL, 10' - 30' F.S.D.	1 HOUR	1 HOUR
EXTERIOR NON-LOAD BEARING WALL, > 30' F.S.D.	0 HOUR	1 HOUR
INTERIOR NON-LOAD BEARING WALL	0 HOUR	0 HOUR
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	1 HOUR	1 HOUR
ROOF CONSTRUCTION AND SECONDARY MEMBERS	1 HOUR	1 HOUR
TYPICAL CORRIDOR WALLS	½ HOUR	1 HOUR
DWELLING UNIT TO DWELLING UNIT SEPARATION WALLS	1 HOUR	1 HOUR
EGRESS STAIR SHAFT WALLS	2 HOUR	2 HOUR

NOTE: EXTERIOR WALLS WITH A F.S.D OF 10 FEET OR LESS NEED TO BE RATED FROM BOTH SIDES.

EXTERIOR WALLS WITH A F.S.D. OF MORE THAN 10' CAN BE RATED FROM THE INTERIOR SIDE ONLY.

PROPOSED LEFT SIDE WALL, REAR WALL, AND RIGHT SIDE WALL (AS LABELED ON THE ELEVATIONS) TO BE RATED FROM BOTH SIDES.

EXTERIOR WALLS ALLOWED OPENINGS (IBC 2021 SECTION 705.8.1, TABLE 705.8) (SEE CIVIL DRAWING SET FOR FSD)

ALLOWED AREA FOR UNPROTECTED OPENINGS IN BUILDINGS EQUIPPED THROUGHOUT

WITH AN AUTOMATIC SPRINKLER SYSTEM:

FIRE SEPARATION DISTANCE (FEET):	ALLOWABLE AREA
0 TO LESS THAN 3	NOT PERMITTED
3 TO LESS THAN 5	15%
5 TO LESS THAN 10	25%
10 TO LESS THAN 15	45%
15 TO LESS THAN 20	75%
20 OR MORE	NO LIMIT

PROPOSED OPENING CALCULATIONS FOR LEFT SIDE WALL (SEE ELEVATIONS):

1ST FLOOR:

TOTAL WALL AREA: 809 SF
TOTAL OPENING AREA: 136.7 SF
25% ALLOWED OPENINGS FOR 5' FSD
809sf x 0.25 = 202.3 SF > 136.7 SF

2ND FLOOR (SAME FOR 3RD & 4TH FLOOR):

TOTAL WALL AREA: 809 SF
TOTAL OPENING AREA: 180.1 SF
25% ALLOWED OPENINGS FOR 5' FSD
809sf x 0.25 = 202.3 SF > 180.1 SF

PROPOSED OPENING CALCULATIONS FOR RIGHT SIDE WALL (SEE ELEVATIONS):

1ST FLOOR:

TOTAL WALL AREA (with 8' FSD): 332 SF
TOTAL OPENING AREA: 42 SF
25% ALLOWED OPENINGS FOR 8' FSD
332sf x 0.25 = 83 SF > 42 SF

2ND FLOOR (SAME FOR 3RD & 4TH FLOOR):

TOTAL WALL AREA: 332 SF
TOTAL OPENING AREA: 34.6 SF
25% ALLOWED OPENINGS FOR 8' FSD
332sf x 0.25 = 83 SF > 34.6 SF

TOTAL WALL AREA (with 11.9' FSD): 484 SF

TOTAL OPENING AREA: 51.9 SF

45% ALLOWED OPENINGS FOR 11.9' FSD

484sf x 0.45 = 217.8 SF > 51.9 SF

TOTAL WALL AREA: 484 SF

TOTAL OPENING AREA: 69.2 SF

45% ALLOWED OPENINGS FOR 11.9' FSD

484sf x 0.45 = 217.8 SF > 69.2 SF

PROPOSED OPENING CALCULATIONS FOR REAR WALL (SEE ELEVATIONS):

1ST FLOOR (SAME FOR 2ND, 3RD & 4TH FLOOR):

TOTAL WALL AREA: 843 SF
TOTAL OPENING AREA: 254.2 SF
45% ALLOWED OPENINGS FOR 10' FSD
843sf x 0.45 = 379.4 SF > 254.2 SF

THE BUILDING FACADE FACES THE STREET WITH A FSD OVER 20 FEET(FSD IS MEASURED TO THE CENTERLINE OF A STREET) THUS HAVING NO LIMIT ON UNPROTECTED OPENINGS.

ACCESSIBILITY

ALL UNITS TO COMPLY WITH GROUP 1 ACCESSIBLE DWELLING UNITS REQUIREMENTS, PER 521 CMR SECTION 9.3.

ENERGY CODE NARRATIVE:

IECC 2021 C401.2 APPLICATION:

PROPOSED DESIGN TO CONFORM WITH IECC PRESCRIPTIVE PATH OF THE IECC 2021 SECTION C401.2.1 PRESCRIPTIVE COMPLIANCE.

THE REQUIREMENTS OF SECTIONS C401.3, C402 THROUGH C406 AND C408 (EICC 2021) APPLY.

IECC 2021 C401.3, C402 - C406 (SEE COM-CHECK REPORT)

C408 MAINTENANCE INFORMATION AND SYSTEM COMMISSIONING. THE BUILDING OPERATION AND MAINTENANCE DOCUMENTS

SHALL BE PROVIDED TO THE OWNER. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE REGISTERED PROFESSIONAL AND PROVIDED TO THE BUILDING OWNER.

PROPOSED DESIGN IS IN COMPLIANCE WITH IECC 2021 C401.2 AND UTILIZES THE INSULATION COMPONENT

R-VALUE-BASED METHOD

(SEE COM-CHECK REPORT AND BUILDING DETAILS).

ENVELOPE VALUES:

FLOOR: R-30

EXTERIOR WALLS: R-20 CAVITY INSULATION + R-3.8 RIGID INSULATION

ROOF: R-61 (R-49 CAVITY INSULATION + R-12 RIGID INSULATION MIN. 4")

WINDOWS: U VALUE 0.27

DOOR (OPAQUE): U VALUE 0.17

FIRE PROTECTION / LIFE SAFETY SYSTEMS

- AUTOMATIC SPRINKLER SYSTEM PER NFPA 13
- FIRE DEPARTMENT CONNECTIONS PROVIDED AT FRONT PER 780 CMR Art 912
- MANUAL SUPPRESSION SYSTEM AS REQUIRED BY NFPA 10
- FIRE ALARM SYSTEM WITH MANUAL PULL STATIONS AT EACH STAIR EXIT AND BUILDING EXIT, AND AUDIBLE & VISUAL COMMUNICATION AS SHOWN ON PLANS AND LOCATED PER NFPA 72 COVERAGE
- EMERGENCY POWER AS REQUIRED BY 780 CMR
- LOCAL TYPE PHOTOELECTRIC SMOKE DETECTOR INSIDE EACH BEDROOM
- LOCAL TYPE SMOKE/CARBON MONOXIDE DETECTOR OUTSIDE EACH BEDROOM
- SMOKE DETECTORS IN ALL COMMON AREAS

Location

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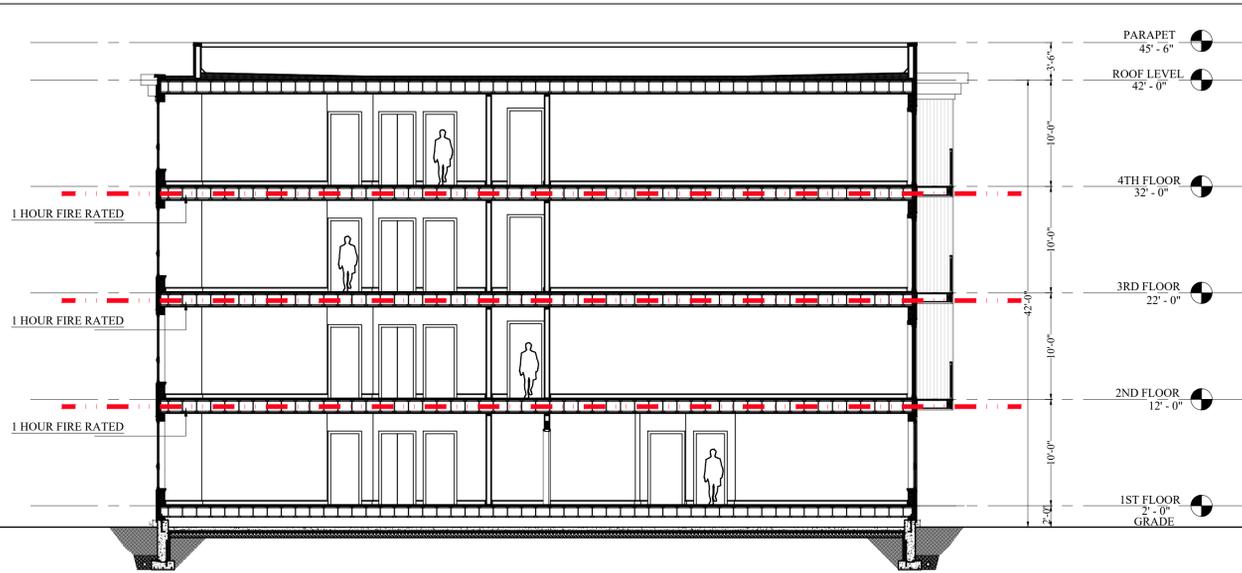
Drawn By: E.A

Drawing Name

**CODE
SUMMARY**

Sheet No.

A-1.0



1 BUILDING SECTION FIRE RATING DIAGRAM
1/8"=1'-0"

CONSTRUCTION ASSEMBLY RATINGS	
1HR SEPARATION	
2HR SEPARATION	
3HR SEPARATION	

MEANS OF EGRESS ILLUMINATION:

EGRESS CORRIDOR, BOTH STAIRCASES, AND THE BUILDING LOBBY SHALL BE ILLUMINATED AT ALL TIMES. THE MEANS OF EGRESS ILLUMINATION LEVEL SHALL BE NO LESS THAN 1 FOOTCANDLE AT THE WALKING SURFACE.

EXIT LIGHTING:

FOR MORE DETAILED EGRESS LIGHTING REFER TO ELECTRICAL LIGHTING PLANS PREPARED BY ZADE ENGINEERING.

EGRESS KEY

- LONG TRAVEL DISTANCE
- DIAGONAL EXIT SEPERATION
147.9'/3 = 49.3 MINIMUM REQUIRED
ACTUAL DISTANCE 91'
- EGRESS DOOR PANIC HARDWARE
- EMERGENCY LIGHT
- EXIT SIGN
- FIRE EXTINGUISHER

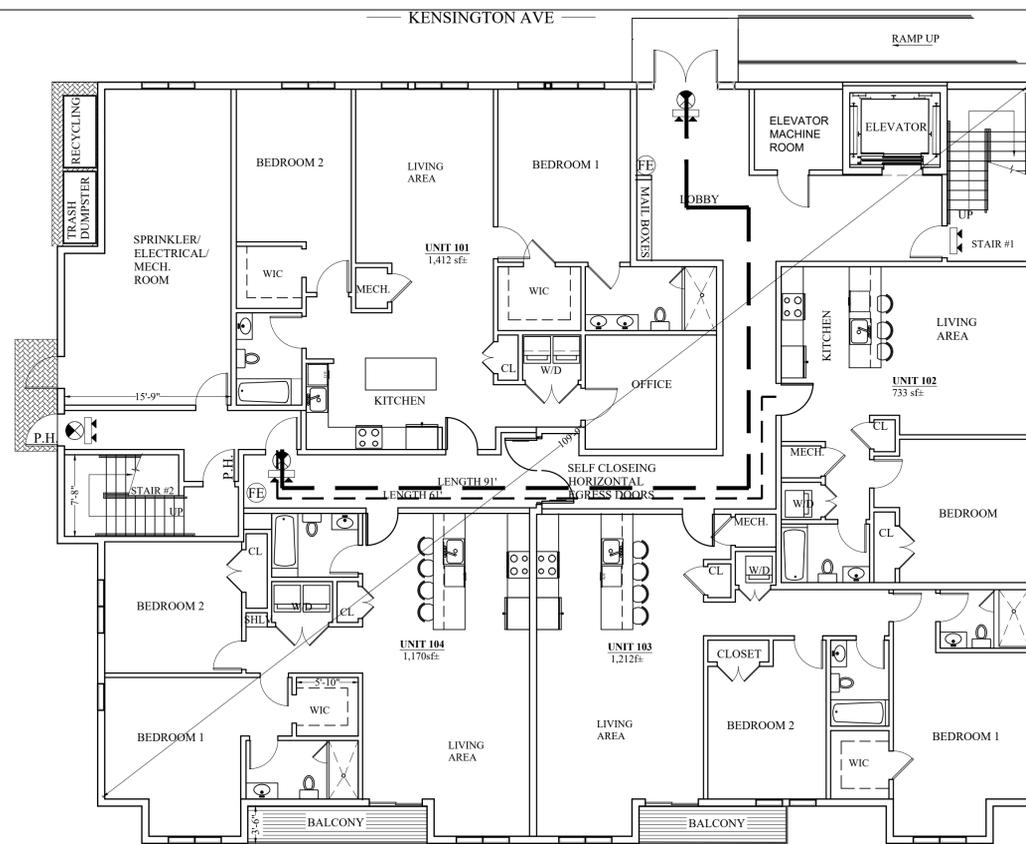
EGRESS COMPONENT CAPACITY:
(see occupancy calculation on code summary)

LEVEL 4 (31.7 OCCUPANTS):
EXIT DOORS WIDTH PROVIDED: 72" (2 stair doors x 36")
EGRESS LOAD FACTOR: 0.2"/OCC.
COMPONENT CAPACITY: 360
EXIT STAIR WIDTH PROVIDED: 92" (2 stairs x 46")
EGRESS LOAD FACTOR: 0.3"/OCC.
COMPONENT CAPACITY: 307
TOTAL EGRESS CAPACITY: 307 OCCUPANTS
307 > 32 (ACTUAL OCCUPANTS)

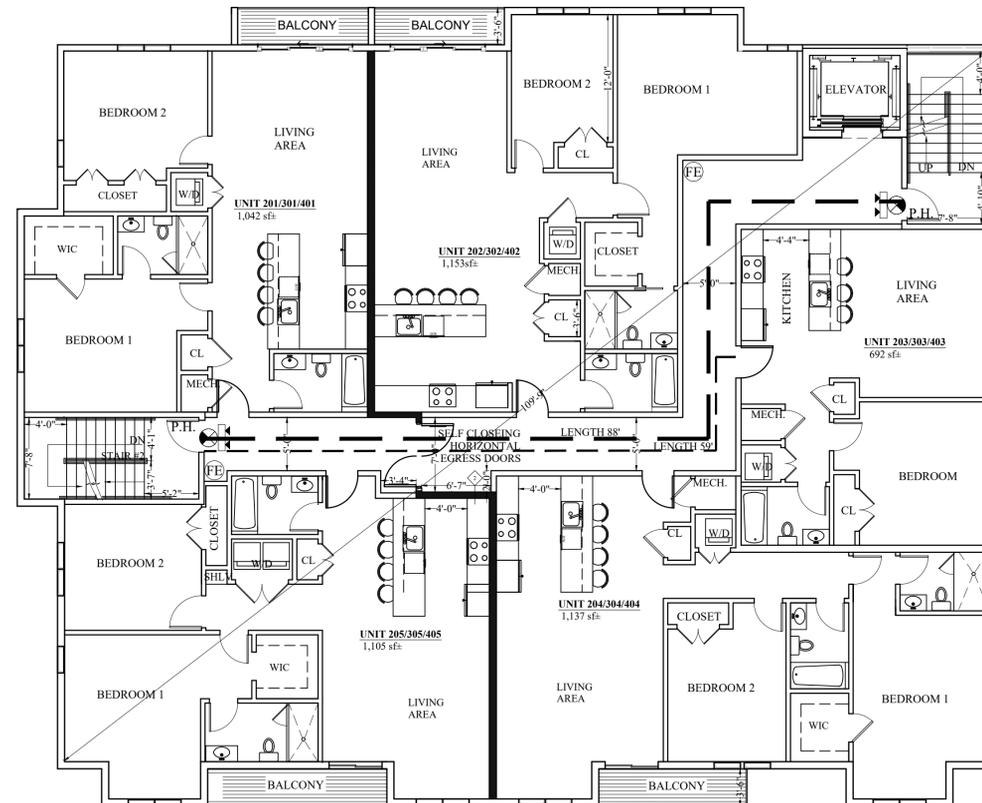
LEVEL 3 (31.7 OCCUPANTS):
EXIT DOORS WIDTH PROVIDED: 72" (2 stair doors x 36")
EGRESS LOAD FACTOR: 0.2"/OCC.
COMPONENT CAPACITY: 360
EXIT STAIR WIDTH PROVIDED: 92" (2 stairs x 46")
EGRESS LOAD FACTOR: 0.3"/OCC.
COMPONENT CAPACITY: 307
TOTAL EGRESS CAPACITY: 307 OCCUPANTS
307 > 64 (ACTUAL OCCUPANTS FOR BOTH FLOORS)

LEVEL 2 (31.7 OCCUPANTS):
EXIT DOORS WIDTH PROVIDED: 72" (2 stair doors x 36")
EGRESS LOAD FACTOR: 0.2"/OCC.
COMPONENT CAPACITY: 360
EXIT STAIR WIDTH PROVIDED: 92" (2 stairs x 46")
EGRESS LOAD FACTOR: 0.3"/OCC.
COMPONENT CAPACITY: 307
TOTAL EGRESS CAPACITY: 307 OCCUPANTS
307 > 95 (ACTUAL OCCUPANTS FOR 3 FLOORS)

LEVEL 1 (31 OCCUPANTS):
RESIDENTIAL AREA:
EXIT DOORS WIDTH PROVIDED: 108" (3 doors x 36")
EGRESS LOAD FACTOR: 0.15"/OCC. (sprinklered bldg.)
COMPONENT CAPACITY: 720
TOTAL EGRESS CAPACITY: 720 OCCUPANTS
TOTAL OCCUPANTS FROM ALL 4 FLOORS:
31.7x3(floors) + 31(1st floor) = 126
720 > 126 (ACTUAL OCCUPANTS)



2 1ST FLOOR LIFE SAFETY PLAN
1/8"=1'-0"



3 2ND - 5TH FLOOR LIFE SAFETY PLAN
1/8"=1'-0"

Location
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**Choo
& Company, Inc.**

One Billings Road Quincy, MA 02171
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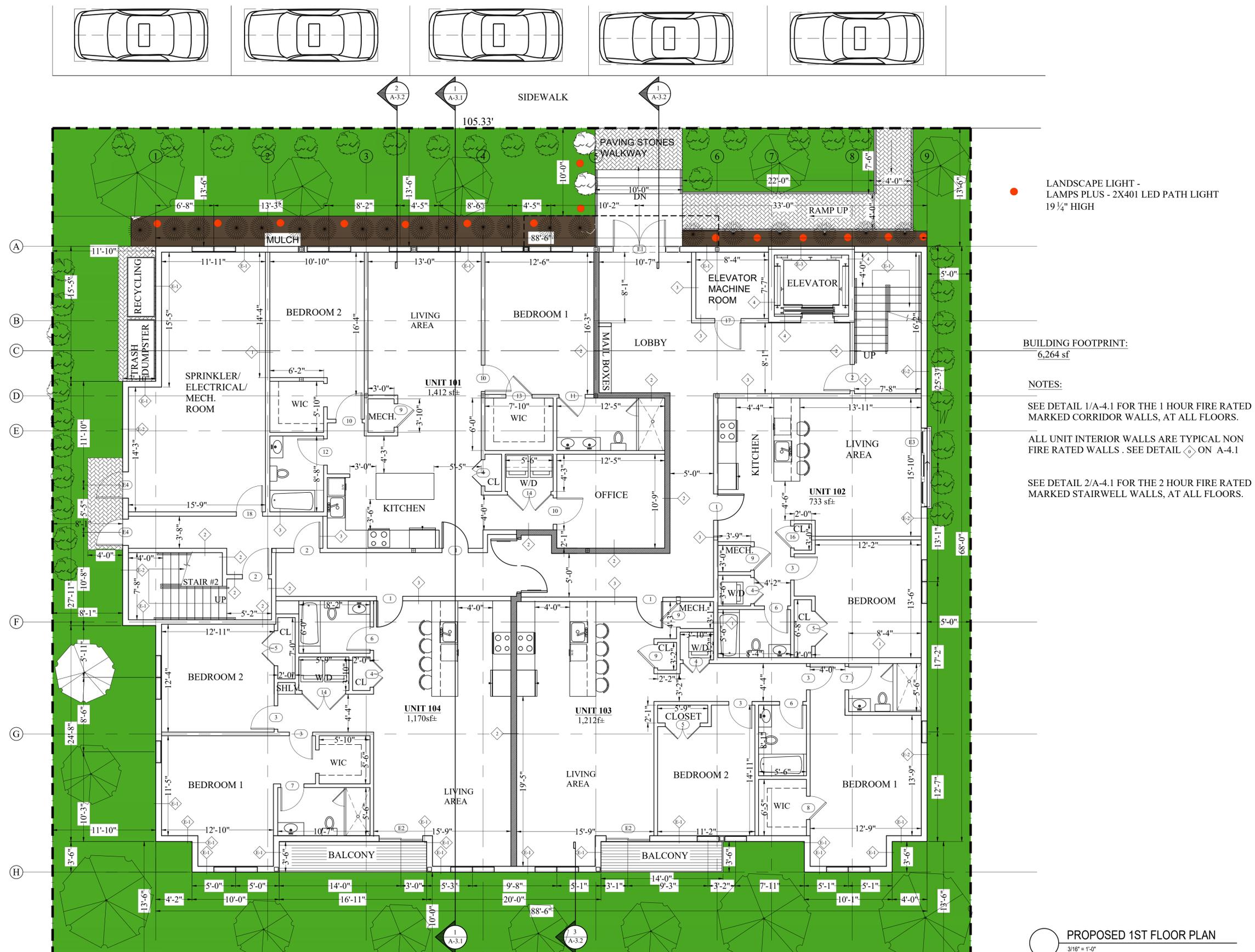
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	02-02-26

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Drawing Name
**LIFE
SAFETY
PLANS**

Sheet No.
A-1.01

KENSINGTON AVE



● LANDSCAPE LIGHT - LAMPS PLUS - 2X401 LED PATH LIGHT 19 1/4" HIGH

BUILDING FOOTPRINT:
6,264 sf

NOTES:
SEE DETAIL 1/A-4.1 FOR THE 1 HOUR FIRE RATED MARKED CORRIDOR WALLS, AT ALL FLOORS.
ALL UNIT INTERIOR WALLS ARE TYPICAL NON FIRE RATED WALLS . SEE DETAIL ◊ ON A-4.1
SEE DETAIL 2/A-4.1 FOR THE 2 HOUR FIRE RATED MARKED STAIRWELL WALLS, AT ALL FLOORS.

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**1ST FLOOR
PLAN**

○ PROPOSED 1ST FLOOR PLAN
3/16" = 1'-0"

A-1.1

Location

PROPOSED RESIDENTIAL BUILDING 17 KENSINGTON AVE SOMERVILLE, MA



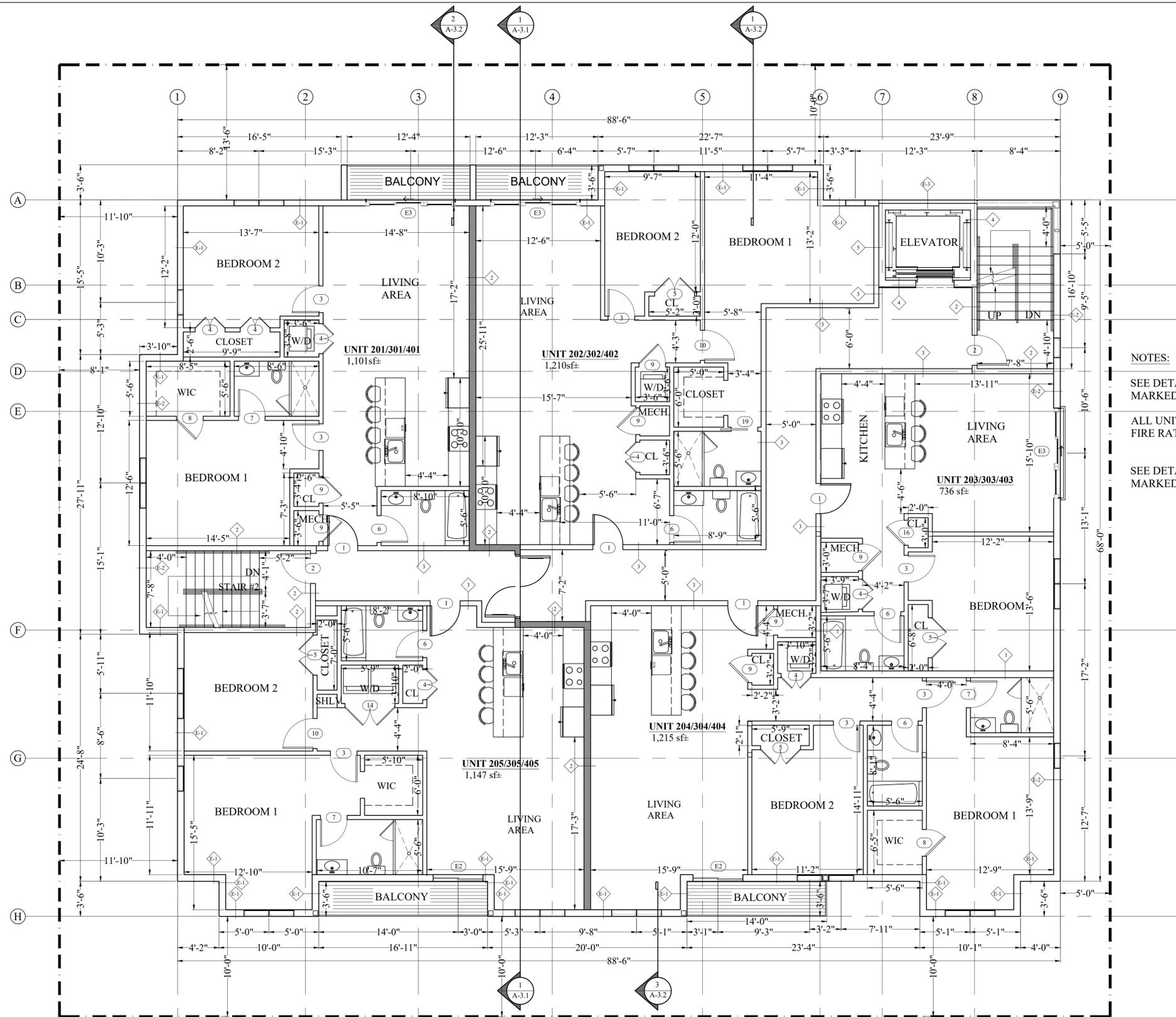
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Drawing Name
**TYPICAL
 FLOOR PLAN**

Sheet No.
A-1.2



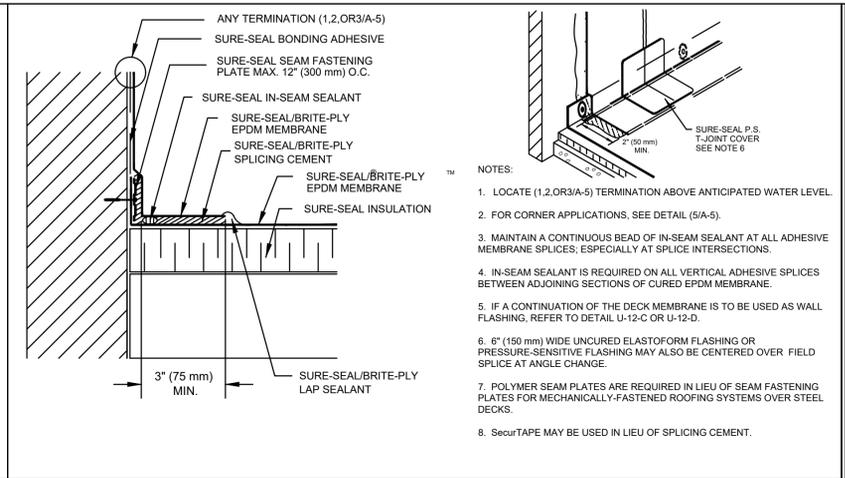
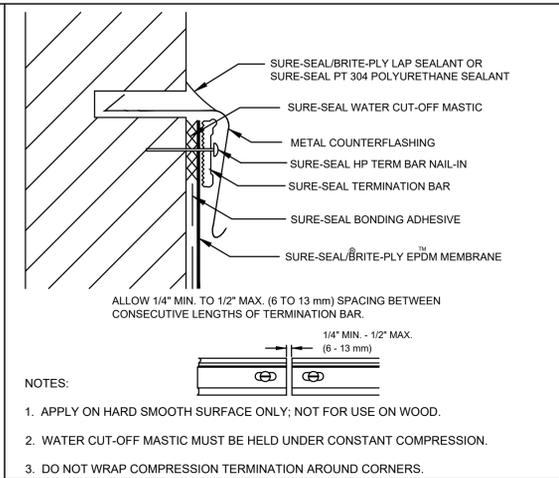
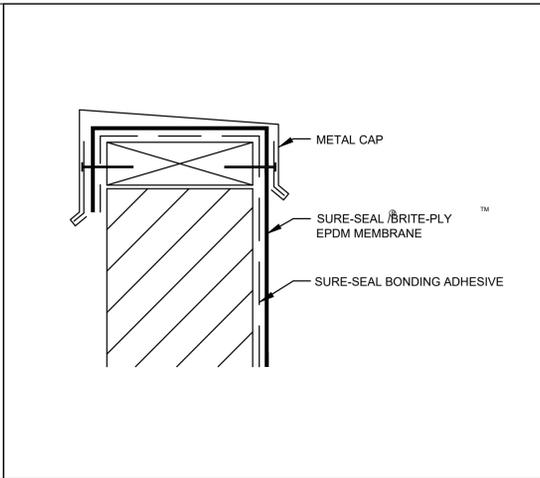
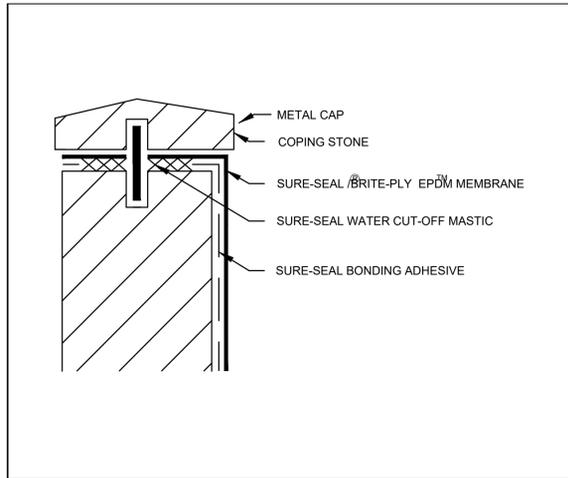
NOTES:

SEE DETAIL 1/A-4.1 FOR THE 1 HOUR FIRE RATED MARKED CORRIDOR WALLS, AT ALL FLOORS.

ALL UNIT INTERIOR WALLS ARE TYPICAL NON FIRE RATED WALLS . SEE DETAIL \diamond ON A-4.1

SEE DETAIL 2/A-4.1 FOR THE 2 HOUR FIRE RATED MARKED STAIRWELL WALLS, AT ALL FLOORS.

PROPOSED 2nd, 3rd & 4th FLOOR PLAN
 3/16" = 1'-0"



COPING STONE TERMINATION

1
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CAP FLASHING TERMINATION

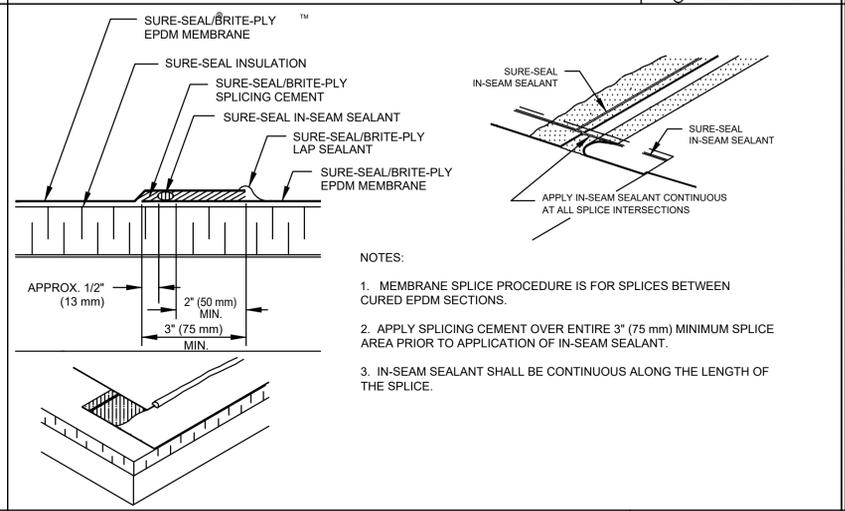
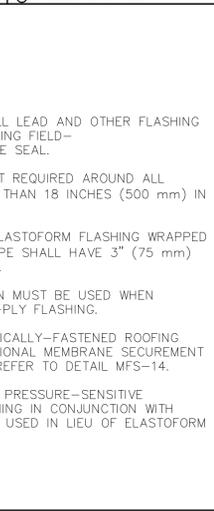
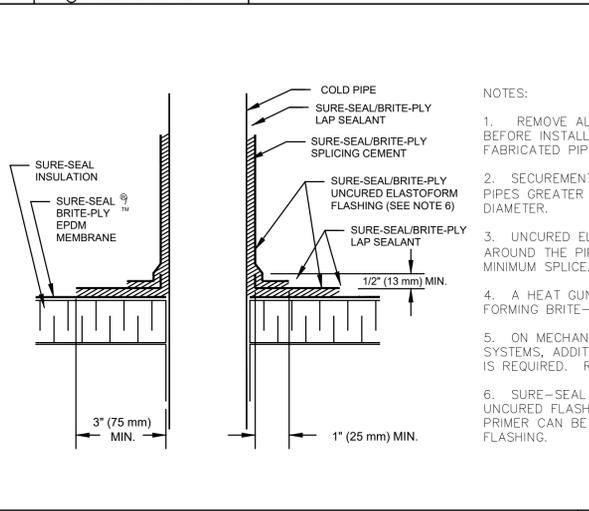
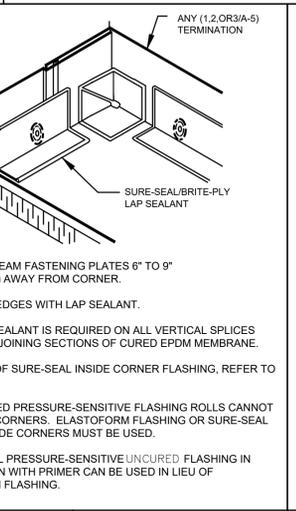
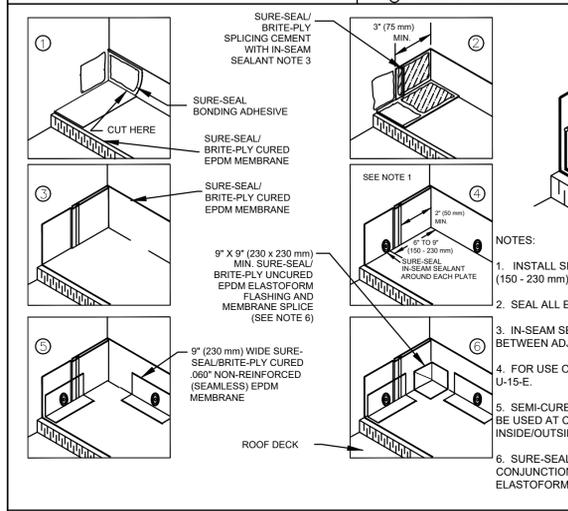
2
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COUNTERFLASHING TERMINATION

3
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PARAPET/CURB CURED EPDM

4
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INSIDE CORNER CONTINUOUS EPDM WALL FLASHING

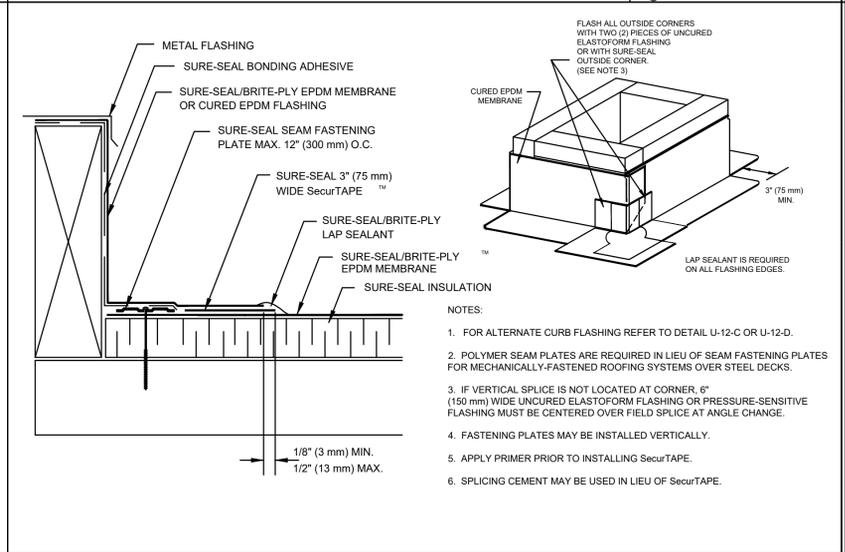
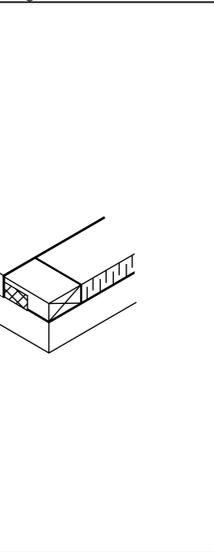
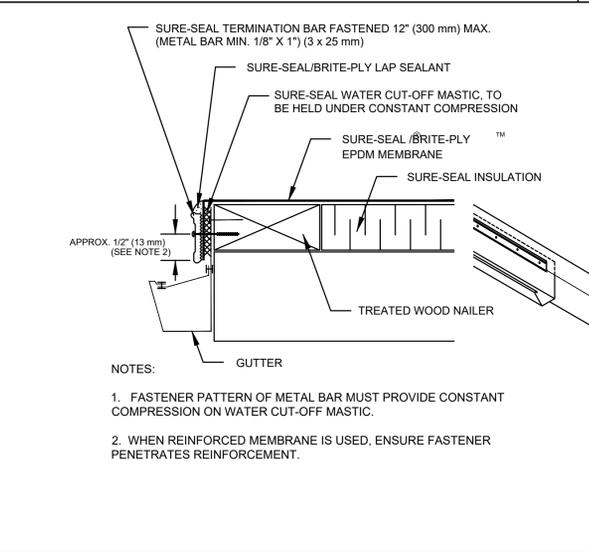
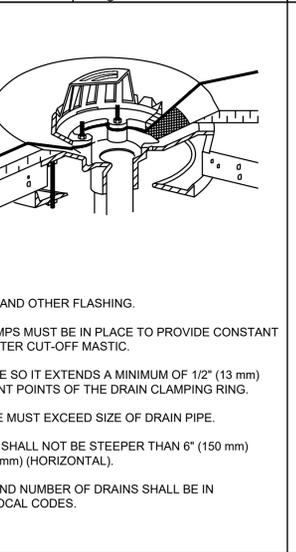
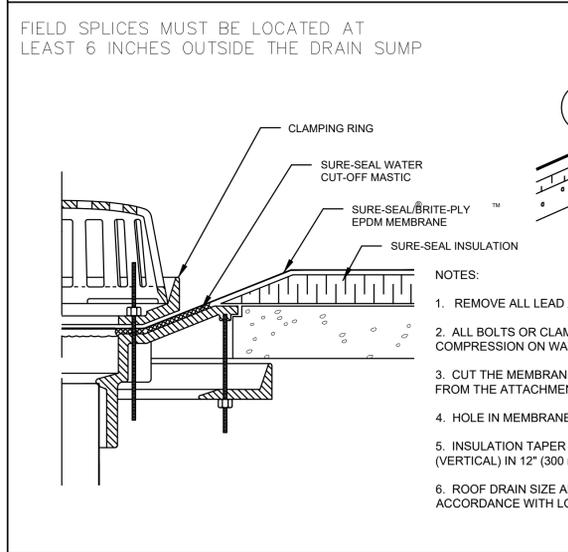
5
©2023 CARLISLE BYNTEC INCORPORATED

FIELD FABRICATED PIPE SEAL

6
©2023 CARLISLE BYNTEC INCORPORATED

MEMBRANE SPlice WITH SPlicing CEMENT

7
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ROOF DRAIN

8
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METAL BAR TERMINATION

9
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CURB FLASHING

10
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Location
**PROPOSED
RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA**

Choo & Company, Inc.
One Billings Road Quincy, MA 02171
617-786-7727 fax 617-786-7715

No.	Revision Date
	10-10-24

Project No: 2024169
Scale: AS NOTED
Date: 03-04-25
Drawn By: E.A

Drawing Name
**ROOF
DETAILS**

Sheet No.
A-1.4



BUILDING MATERIALS

FIBER CEMENT BOARD FCB-1

- NICHHA FIBER CEMENT
- VINTAGEWOOD
- REDWOOD

FIBER CEMENT BOARD FCB-2

- NICHHA FIBER CEMENT
- CONCRETE SERIES
- CORBOSA - SHADOW

FIBER CEMENT BOARD FCB-3

- NICHHA FIBER CEMENT
- DIMENSION SERIES
- RIBBED - IVORY

FIBER CEMENT BOARD FCB-4

- NICHHA FIBER CEMENT
- BRICK SERIES
- MODERNBRICK - MIDNIGHT

PROPOSED FRONT ELEVATION
3/16" = 1'-0"

Location
**PROPOSED
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& Company, Inc.**
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Drawing Name
**PROPOSED
ELEVATION**

Sheet No.
A-2.1

Location

**PROPOSED
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SOMERVILLE, MA**



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Drawing Name
**PROPOSED
ELEVATION**

Sheet No.
A-2.2

PROPOSED SIDE ELEVATION(LEFT)
3/16" = 1'-0"

BUILDING MATERIALS

FIBER CEMENT
BOARD FCB-1

- NICHHA FIBER CEMENT
- VINTAGEWOOD
- REDWOOD

FIBER CEMENT
BOARD FCB-2

- NICHHA FIBER CEMENT
- CONCRETE SERIES
- CORBOSA - SHADOW

FIBER CEMENT
BOARD FCB-3

- NICHHA FIBER CEMENT
- DIMENSION SERIES
- RIBBED - IVORY

FIBER CEMENT
BOARD FCB-4

- NICHHA FIBER CEMENT
- BRICK SERIES
- MODERNBRICK - MIDNIGHT



PROPOSED REAR ELEVATION
3/16" = 1'-0"

BUILDING MATERIALS

FIBER CEMENT BOARD FCB-1

- NICHIIA FIBER CEMENT
- VINTAGEWOOD
- REDWOOD

FIBER CEMENT BOARD FCB-2

- NICHIIA FIBER CEMENT
- CONCRETE SERIES
- CORBOSA - SHADOW

FIBER CEMENT BOARD FCB-3

- NICHIIA FIBER CEMENT
- DIMENSION SERIES
- RIBBED - IVORY

FIBER CEMENT BOARD FCB-4

- NICHIIA FIBER CEMENT
- BRICK SERIES
- MODERNBRICK - MIDNIGHT

Location
**PROPOSED
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17 KENSINGTON AVE
SOMERVILLE, MA**



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Drawing Name
**PROPOSED
ELEVATION**

Sheet No.
A-2.3



PROPOSED SIDE ELEVATION(RIGHT)
3/16" = 1'-0"

BUILDING MATERIALS

FIBER CEMENT BOARD FCB-1

- NICHHA FIBER CEMENT
- VINTAGEWOOD
- REDWOOD

FIBER CEMENT BOARD FCB-2

- NICHHA FIBER CEMENT
- CONCRETE SERIES
- CORBOSA - SHADOW

FIBER CEMENT BOARD FCB-3

- NICHHA FIBER CEMENT
- DIMENSION SERIES
- RIBBED - IVORY

FIBER CEMENT BOARD FCB-4

- NICHHA FIBER CEMENT
- BRICK SERIES
- MODERNBRICK - MIDNIGHT

Location
**PROPOSED
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Drawing Name
**PROPOSED
ELEVATION**

Sheet No.
A-2.4



Location

**PROPOSED
RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA**

**Choo
& Company, Inc.**

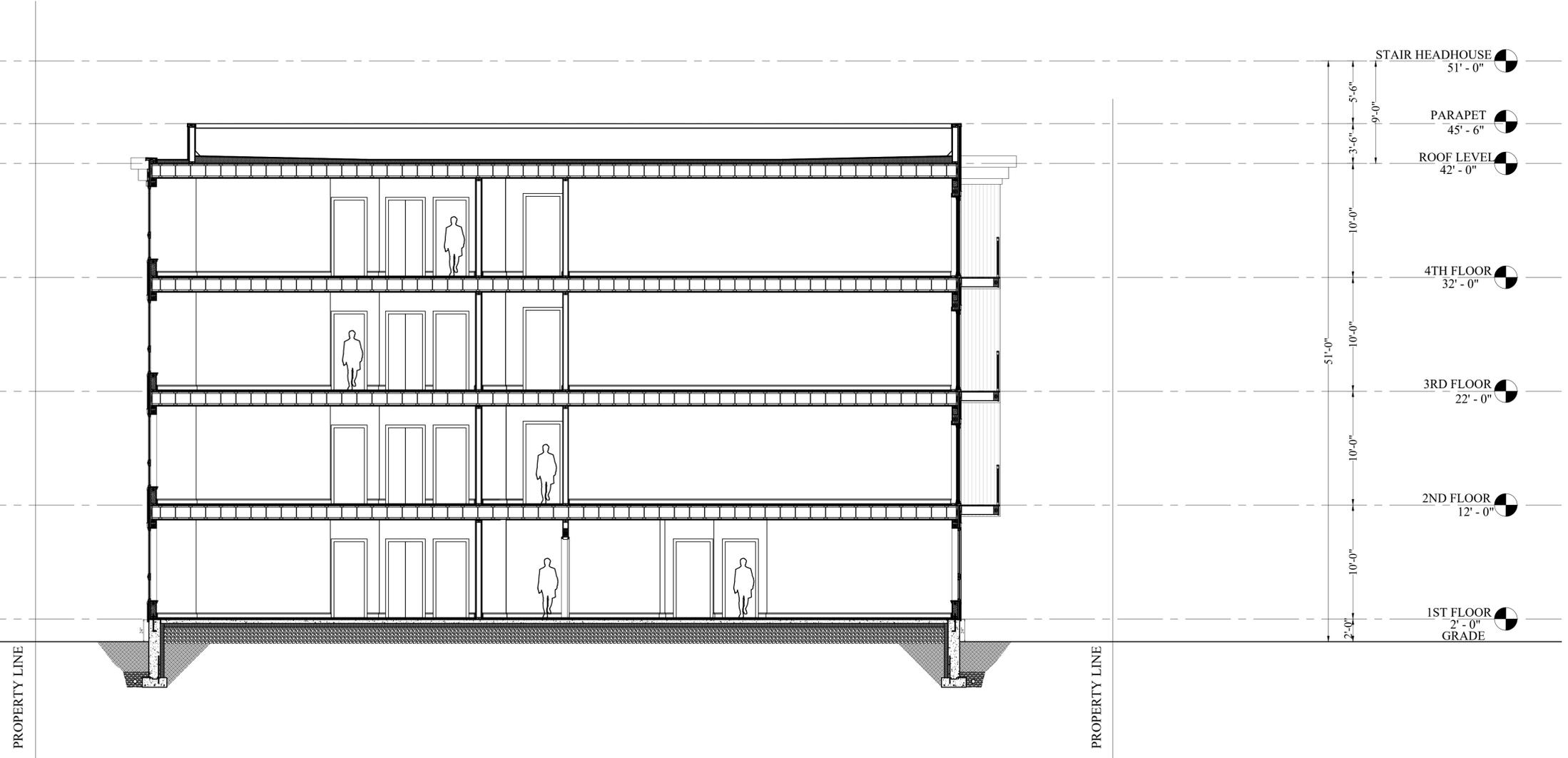
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Drawing Name
**PROPOSED
3D
PERSPECTIVES**

Sheet No.
A-2.5



○ PROPOSED BUILDING SECTION
3/16" = 1'-0"

Location

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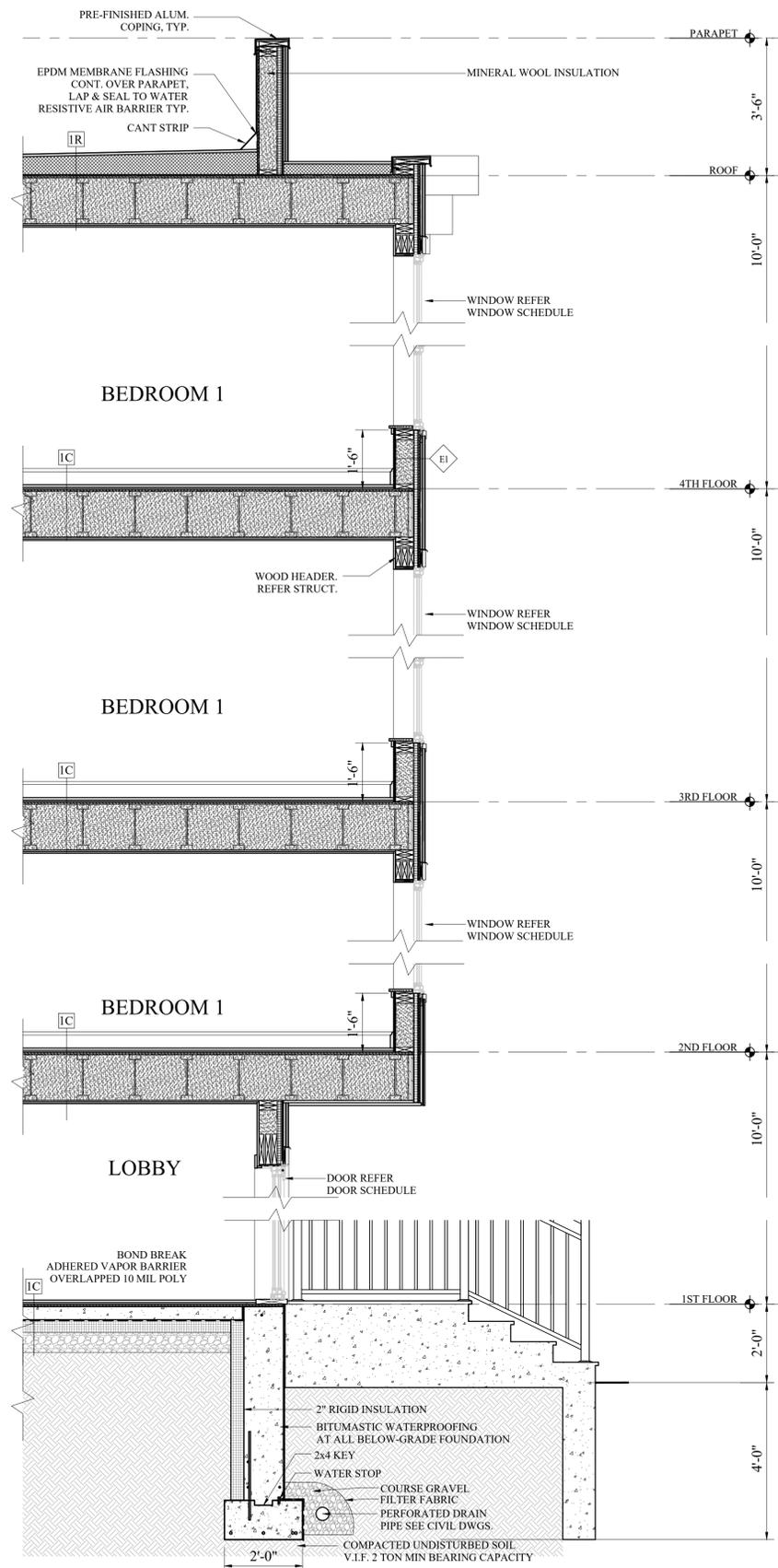
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Drawing Name

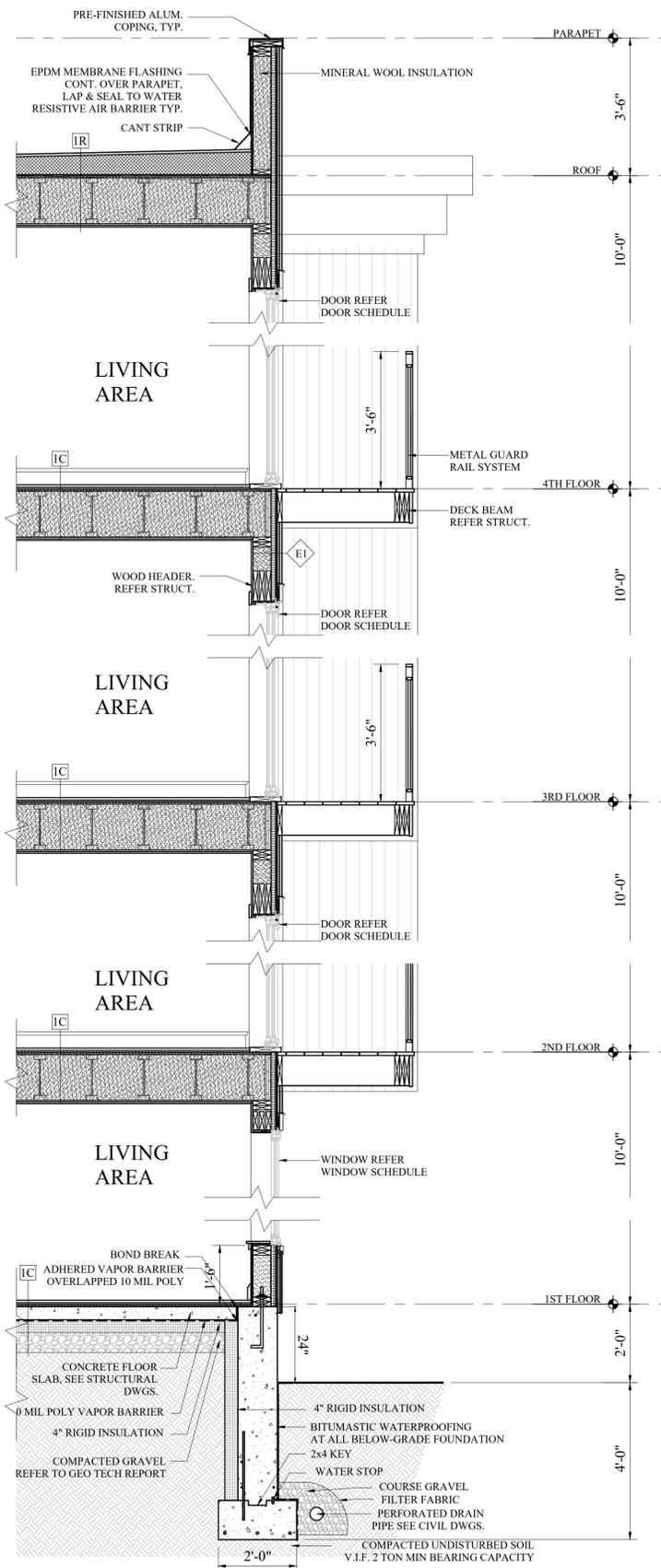
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SECTION**

Sheet No.

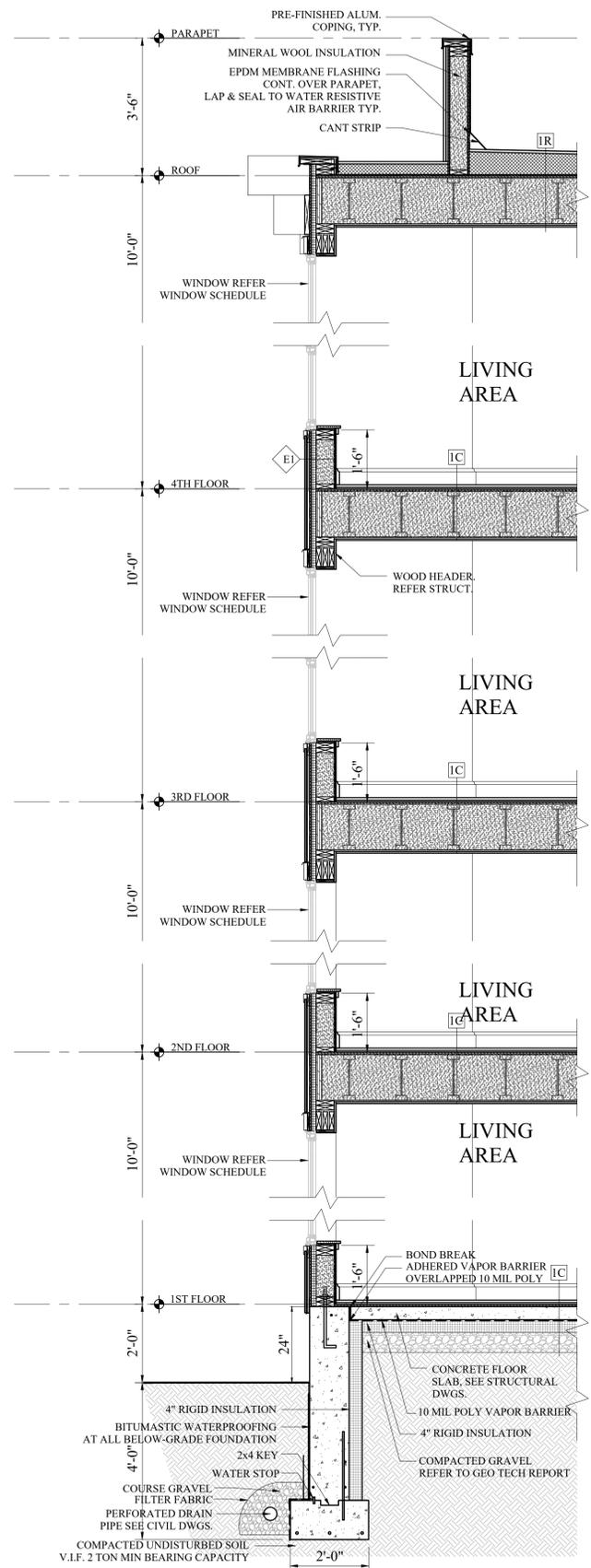
A-3.1



1 PROPOSED WALL SECTION
1/2" = 1'-0"



2 PROPOSED WALL SECTION
1/2" = 1'-0"



3 PROPOSED WALL SECTION
1/2" = 1'-0"

PROPOSED
RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA

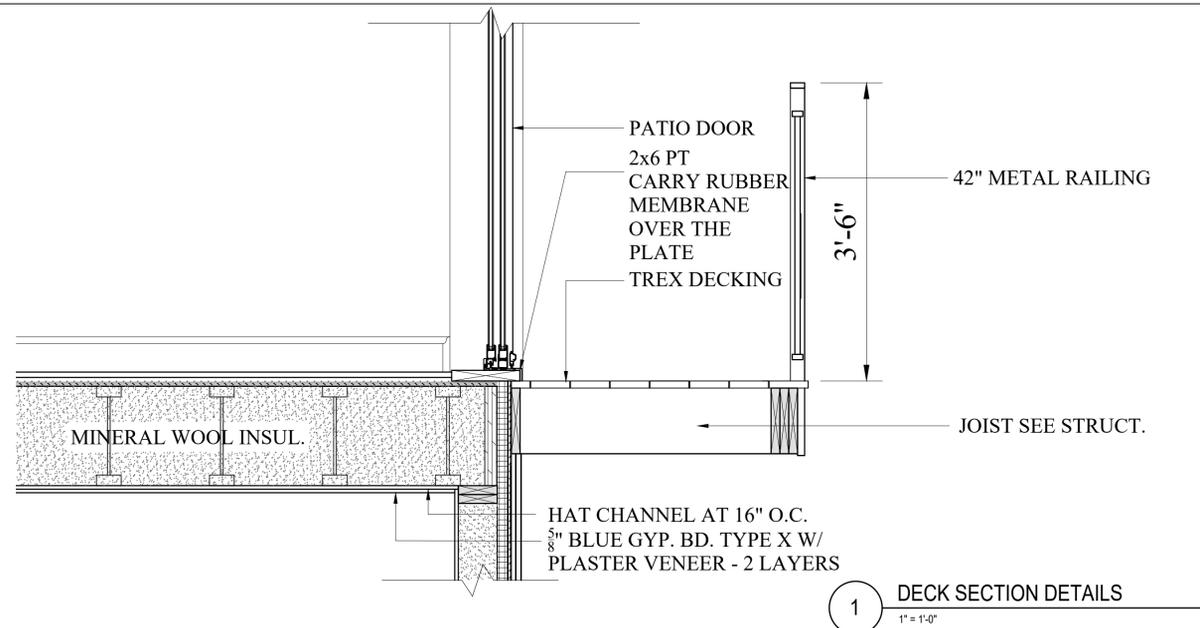
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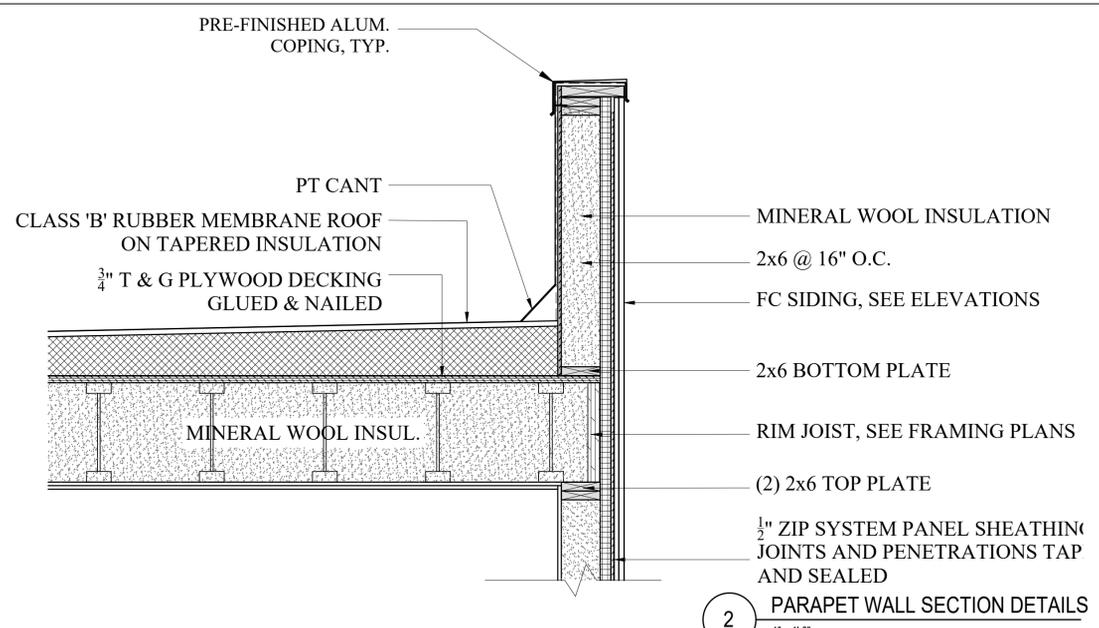
Project No: 2024169
Scale: AS NOTED
Date: 03-04-25
Drawn By: E.A

Drawing Name
PROPOSED WALL SECTIONS

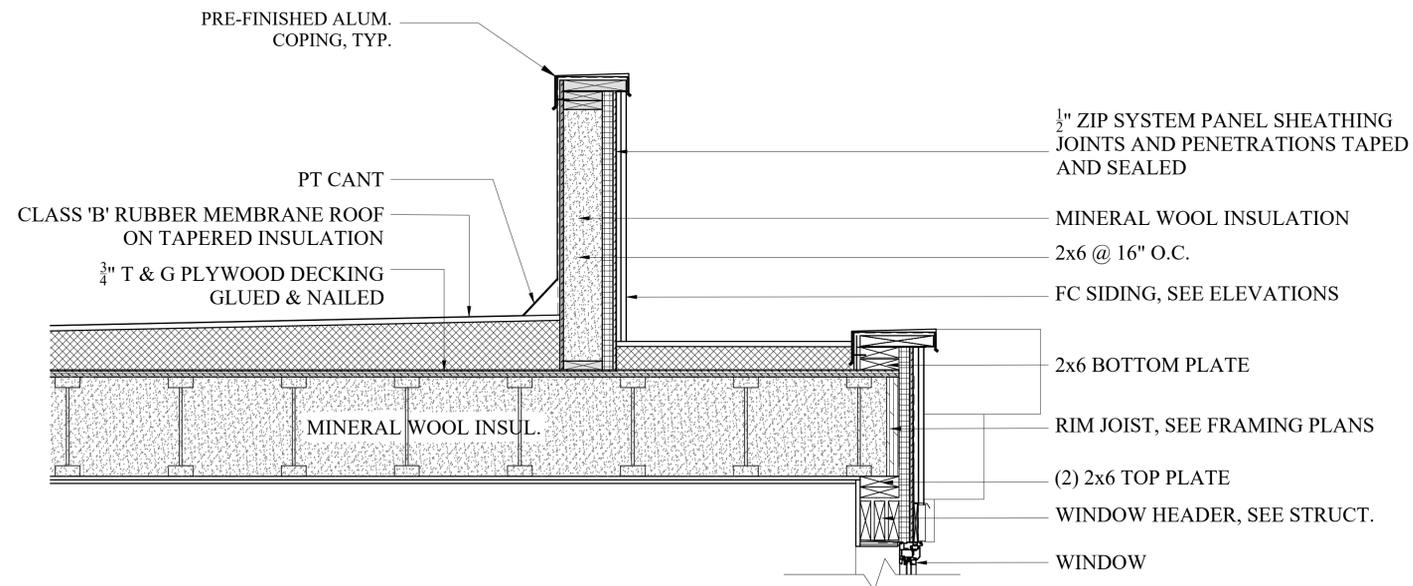
Sheet No.
A-3.2



1 DECK SECTION DETAILS
1" = 1'-0"



2 PARAPET WALL SECTION DETAILS
1" = 1'-0"



3 PARAPET WALL SECTION DETAILS
1" = 1'-0"

Location
**PROPOSED
RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA**

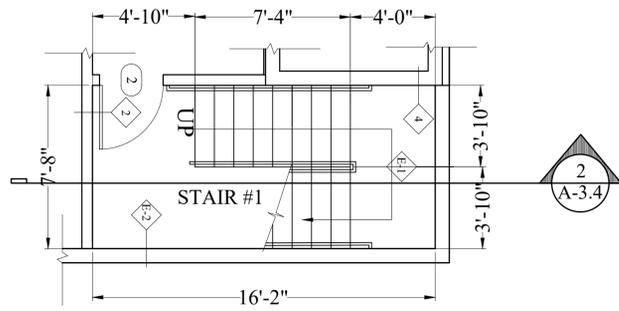
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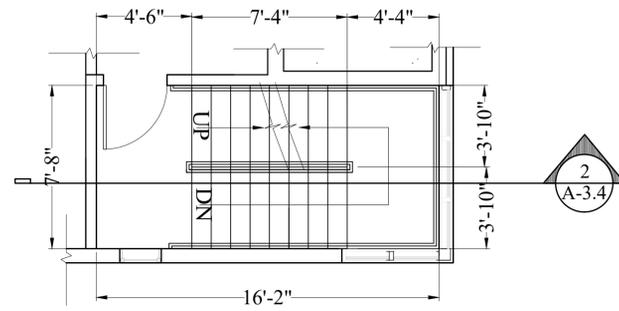
Project No: 2024169
Scale: AS NOTED
Date: 03-04-25
Drawn By: E.A.

Drawing Name
**PROPOSED
SECTION
DETAILS**

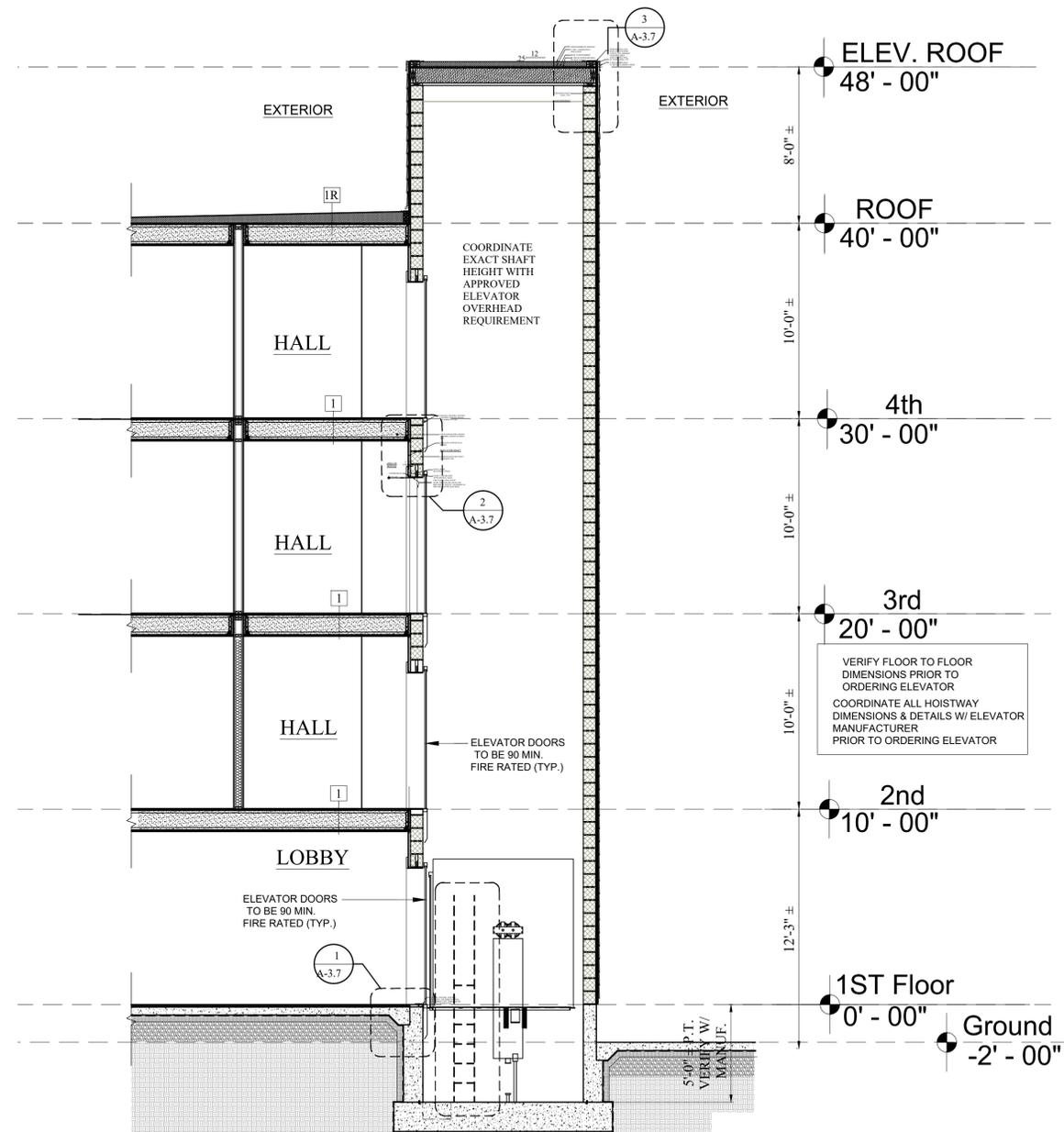
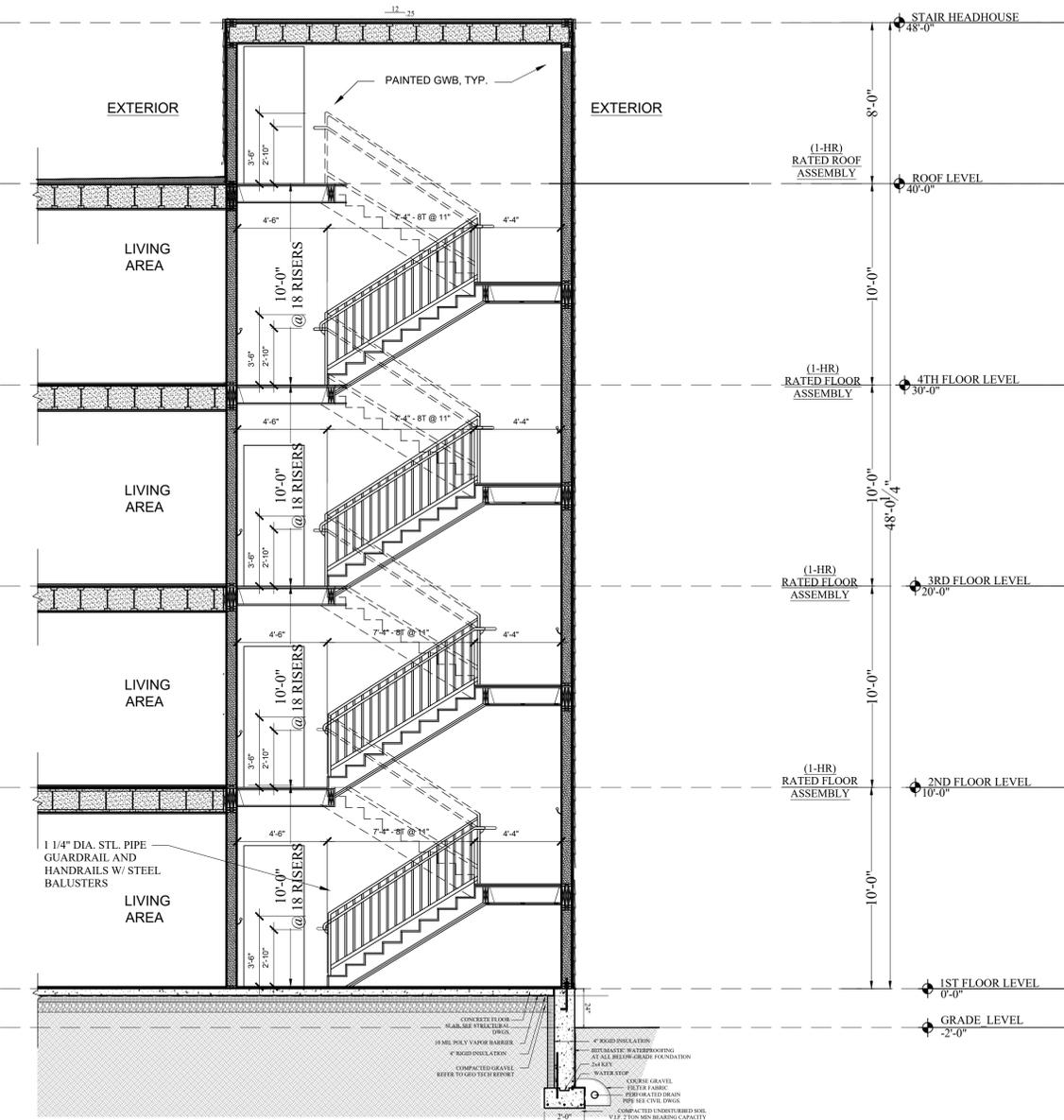
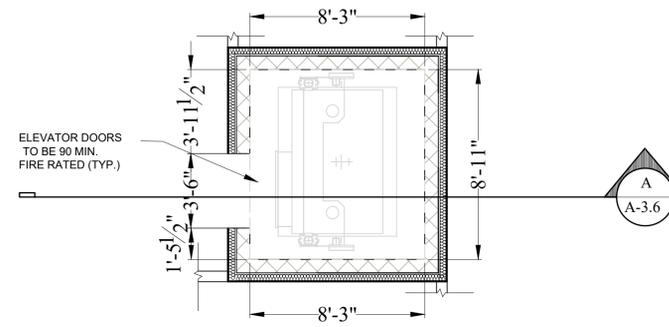
Sheet No.
A-3.3



STAIR #1
1ST -2ND FLOOR
18 RISERS 6.66" x 11" TREADS
WITH 36" HIGH HANDRAILS BOTH
SIDES



STAIR #1
2ND -4TH FLOOR
18 RISERS 6.66" x 11" TREADS
WITH 36" HIGH HANDRAILS BOTH
SIDES



Location
**PROPOSED
RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA**

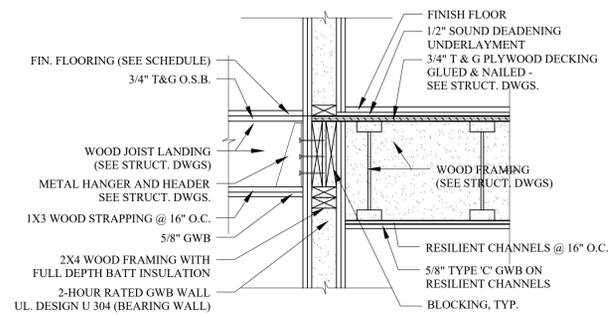
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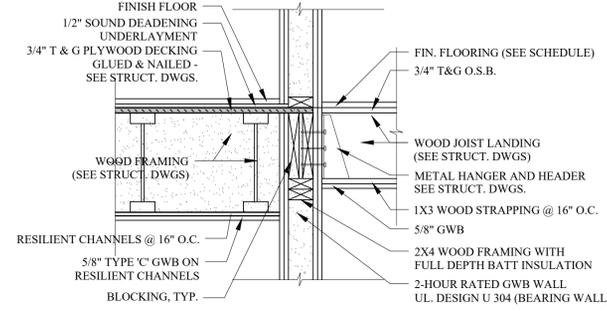
Project No: 2024169
Scale: AS NOTED
Date: 03-04-25
Drawn By: E.A.

Drawing Name
**STAIR &
ELEVATOR
PLANS &
SECTION**

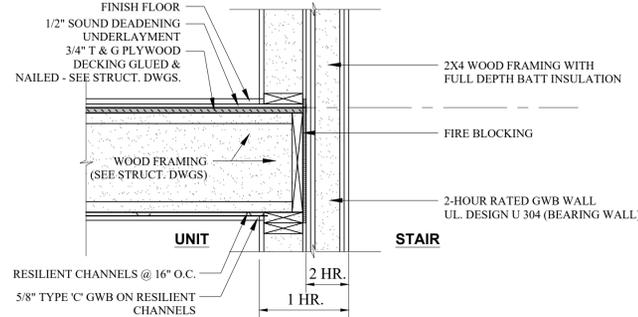
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A-3.4



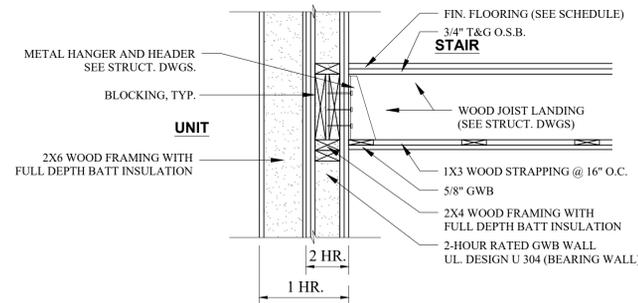
6 STAIR SECTION DETAIL AT LANDING
1"=1'-0"



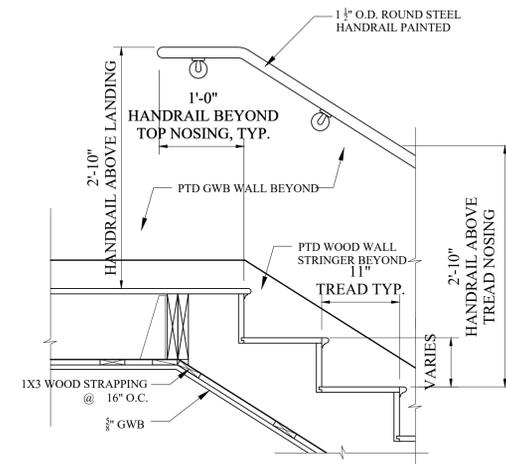
6 STAIR SECTION DETAIL AT LANDING
1"=1'-0"



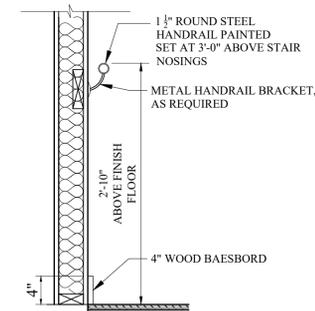
7 SECTION DETAIL AT STAIR WALL
1"=1'-0"



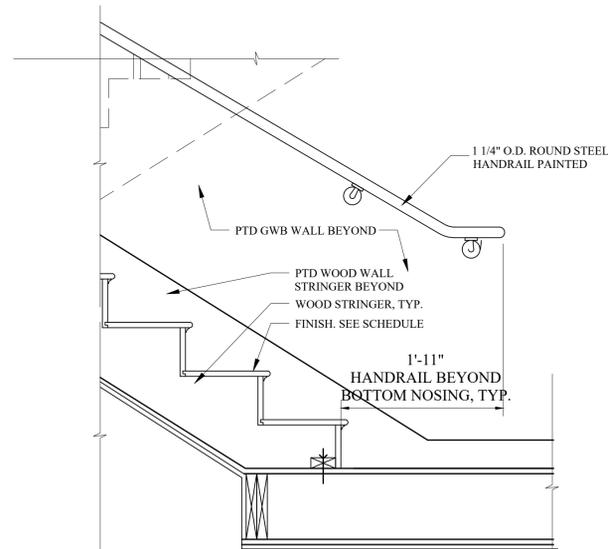
7 SECTION DETAIL AT LANDING
1"=1'-0"



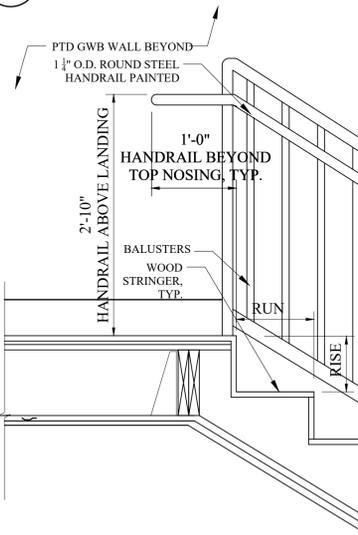
5 SECTION DETAIL
1"=1'-0"



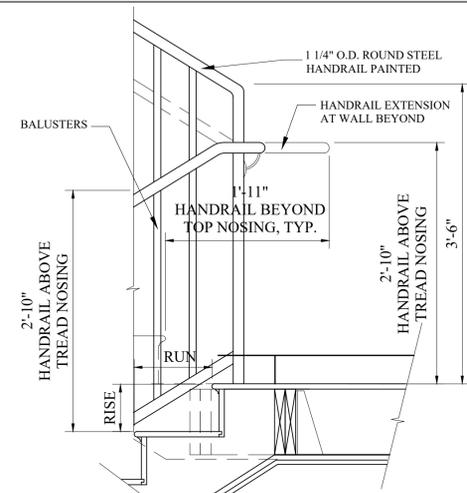
4 HANDRAIL DETAIL
1"=1'-0"



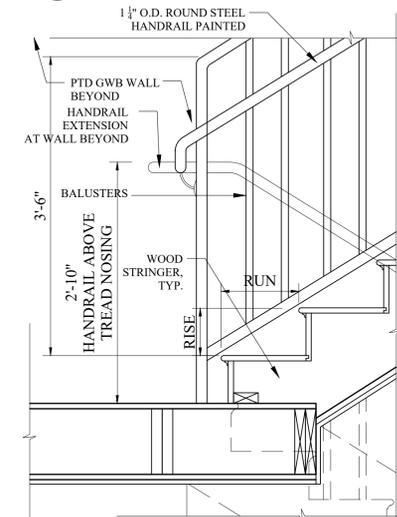
5 SECTION DETAIL
1"=1'-0"



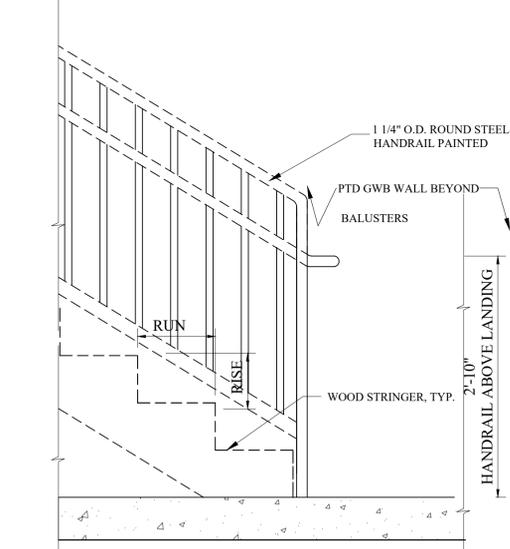
3 SECTION DETAIL
1"=1'-0"



3 SECTION DETAIL
1"=1'-0"



2 SECTION DETAIL
1"=1'-0"



1 SECTION DETAIL
1"=1'-0"

Location
**PROPOSED
RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA**

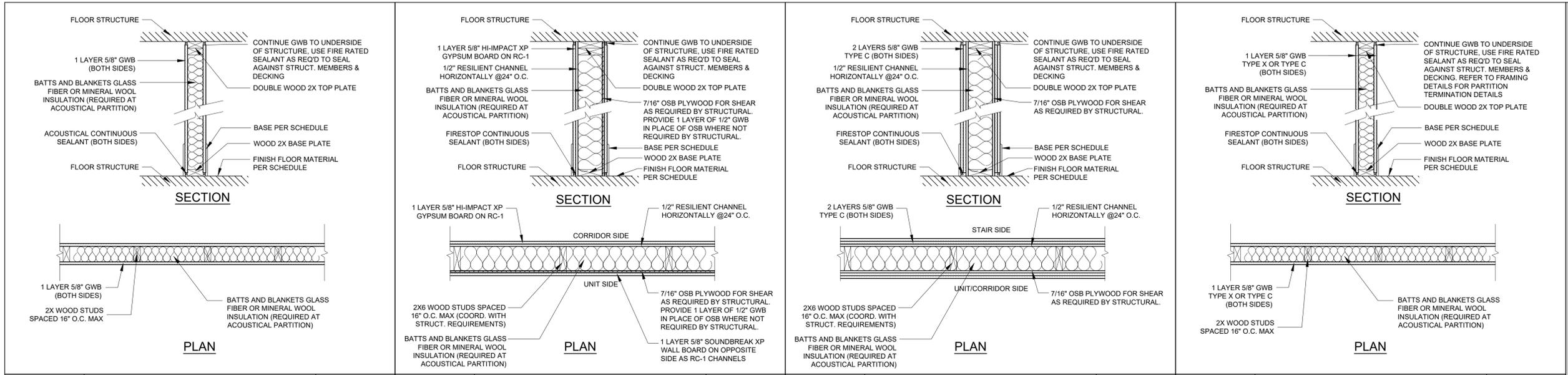
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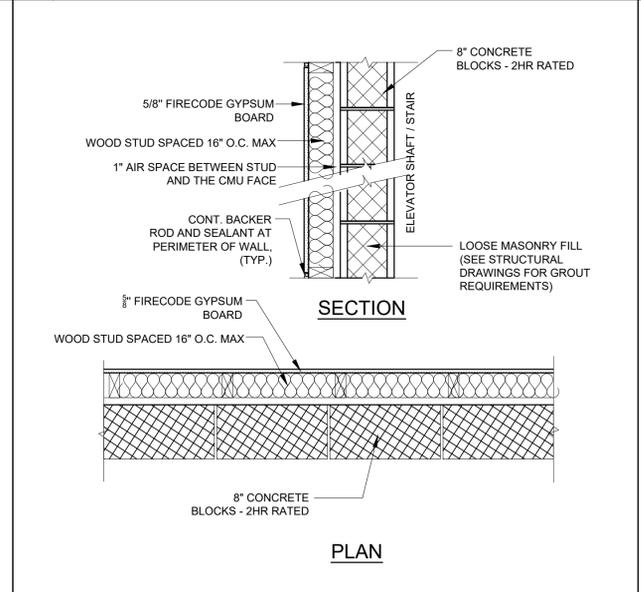
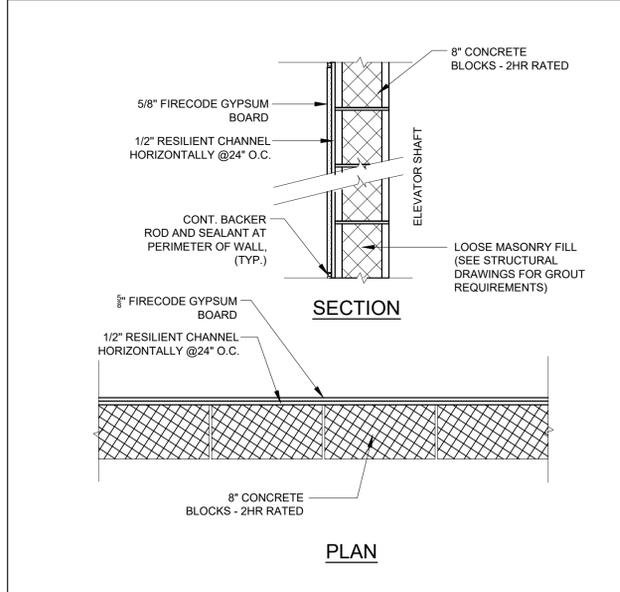
Project No: 2024169
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Drawn By: E.A.

Drawing Name
**STAIR
SECTION
DETAILS**

Sheet No.
A-3.5



0 HR	INTERIOR NON LOAD BEARING	N/A	1 HR	INTERIOR LOAD BEARING/ NON LOAD BEARING	UL #: U305	2 HR	INTERIOR LOAD BEARING/ NON LOAD BEARING	UL #: U301	1 HR	INTERIOR LOAD BEARING	UL #: U305
0	2X4 WOOD STUDS W/ SOUND BATTS (UNIT INTERIOR WALL)		1	2X6 WOOD STUDS W/ SOUND BATTS (UNIT SEPARATION WALL) 1HR. FIRE RATED STC 58 (NGC 2010080)		2	2X6 WOOD STUDS W/ SOUND BATTS (STAIR SHAFT WALL) 1HR. FIRE RATED (STC 56)		3	2X4 WOOD STUDS W/ SOUND BATTS (CORR./ELEVATOR MACHINE ROOM) 1HR. FIRE RATED STC 36 (NGC 2008029)	



2 HR	INTERIOR LOAD BEARING/ NON LOAD BEARING	UL #: U905	2 HR	INTERIOR LOAD BEARING/ NON LOAD BEARING	UL #: U905	1 HR	EXTERIOR LOAD BEARING/ NON LOAD BEARING	UL #: V302	1 HR	EXTERIOR LOAD BEARING/ NON LOAD BEARING	UL #: U364
4	8" CMU W/ RESILIENT CHANNEL (ELEVATOR SHAFT WALL) 2HR. FIRE RATED		5	8" CMU W/ 2X4 WOOD STUD (ELEVATOR SHAFT WALL) 2HR. FIRE RATED		E-1	EXTERIOR WOOD STUD WALL - FRONT & REAR WALLS 1 HR. FIRE RATED FROM INTERIOR SIDE ONLY (FSD > 10'-0")		E-2	EXTERIOR WOOD STUD WALL - SIDE WALLS 1 HR. FIRE RATED FROM BOTH SIDES (FSD < 10'-0")	

PARTITION NOTES

- ALL NON-BEARING WALLS TO BE PARTITION TYPE 0 UNLESS OTHERWISE NOTED.
- AT THE INTERSECTION OF PARTITIONS AND ASSEMBLIES, ALL PORTIONS OF THE HIGHER RATED PARTITION OR ASSEMBLY SHALL BE CONTINUOUS PAST THE LOWER OR NON-RATED ASSEMBLY/PARTITION.
- ALL PENETRATIONS AND OPENINGS IN PARTITIONS/ASSEMBLIES (INCLUDING ABOVE THE CEILING) ARE TO BE FILLED WITH INSULATION AND/OR SEALANT AS REQUIRED AT FIRE AND ACOUSTICAL RATED PARTITIONS TO MAINTAIN RATING. GC TO SUBMIT A PENETRATION FIRESTOPPING PACKAGE FOR APPROVAL.
- ALL PENETRATIONS THROUGH NON-RATED ASSEMBLIES ARE TO BE PROVIDED WITH ACOUSTICAL SEALANT.
- CONTRACTOR SHALL INSTALL PUTTY PACKS ON ALL BACK-TO-BACK OUTLETS, WALL BOXES, OR OTHER INSTALLATIONS THAT MAY COMPROMISE FIRE RATING, THERMAL, AND/OR ACOUSTICAL PERFORMANCE. OUTLETS TO BE STAGGERED AS TO NOT BE BACK TO BACK, WHERE POSSIBLE.
- INSTALL PERIMETER ACOUSTICAL SEALANT AT ALL INTERIOR ASSEMBLIES AND EXTERIOR WALLS.
- ALL UNIT DEMISING WALLS AND UNIT CORRIDOR WALLS TO ACHIEVE AND STC-50 RATING MINIMUM.
- AT ALL FIRE-RATED ASSEMBLIES, STUD SPACING SHALL COMPLY WITH THE UL REQUIREMENTS PER THE UL APPROVED LISTING. STUD SPACING IN UL ASSEMBLIES IS A MAX U.O.N., SEE STRUCTURAL DRAWINGS FOR THE ACTUAL STUD SPACING. GC SHALL REVIEW FRAMING SUBMITTALS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION OR INSTALLATION OF FRAMING.
- ARCHITECT TO BE NOTIFIED OF ANY CHANGES TO THE UL LISTED ASSEMBLIES MADE BY THE OWNER/CONTRACTOR PRIOR TO CONSTRUCTION.
- ALL GYPSUM WALL BOARD (GWB) IS 5/8" TYPE "X" U.O.N.
- SEAL ALL VAPOR BARRIER TERMINATIONS AND SEAMS PER MANUFACTURER'S REQUIREMENTS.
- ALL SEAMS BETWEEN DIFFERENTIAL EXTERIOR MATERIALS AND CONTROL JOINTS TO BE CAULKED ACCORDINGLY.

Location
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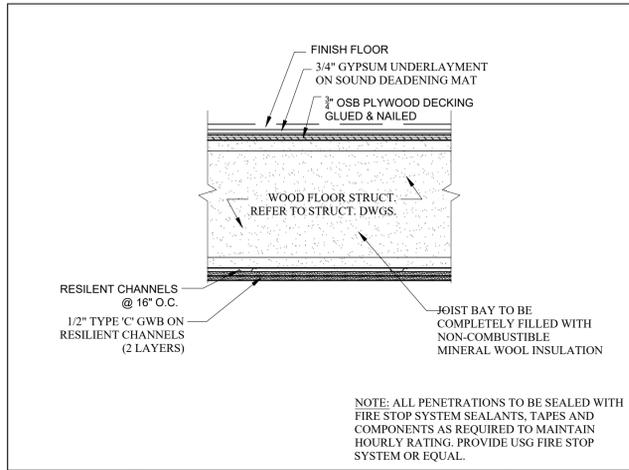
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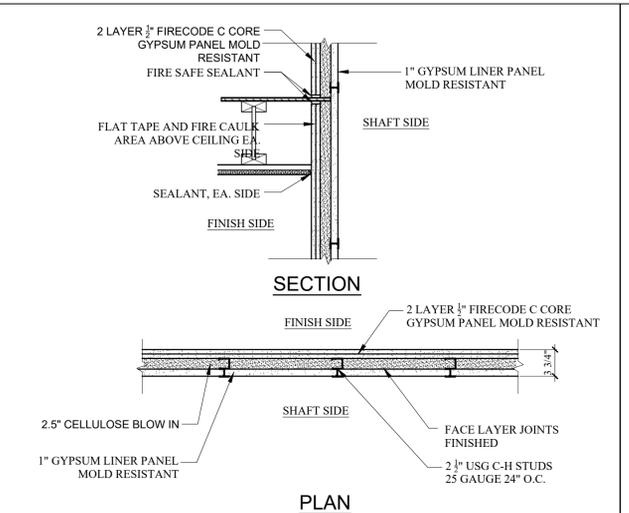
Drawing Name
WALL TYPES

Sheet No.
A-4.1

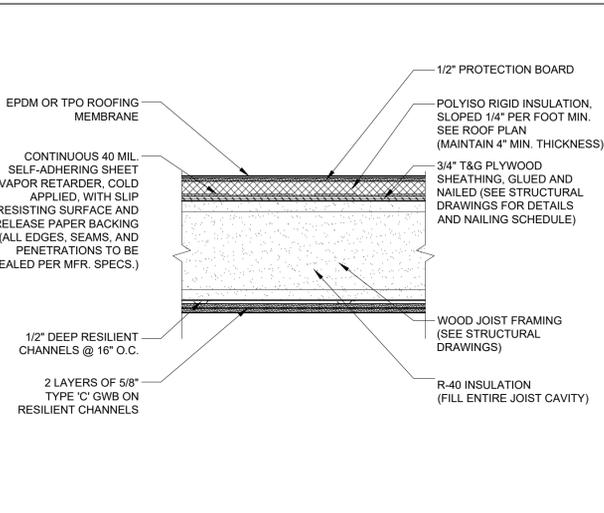


1 HR ENGINEERED JOIST FLOOR/CEILING ASSEMBLY UL L570

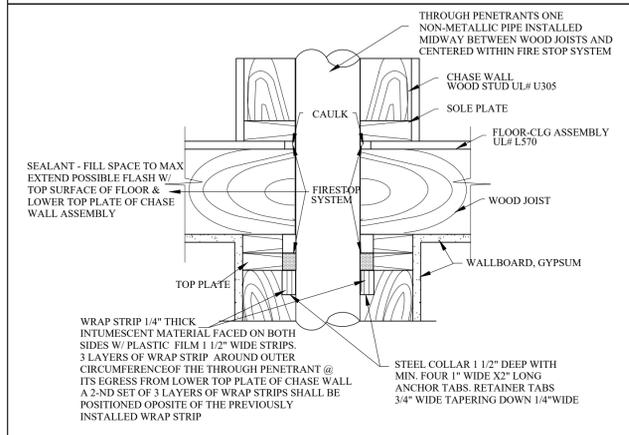
1C TYPICAL ENGINEERED WOOD JOIST FLOOR/CEILING 1HR. FIRE RATED - UL DES. L570 (STC 58 test NGC 5019076)



2S SHAFT WALL (MECHANICAL SHAFT WALL) 2HR. FIRE RATED - UL DES. U438

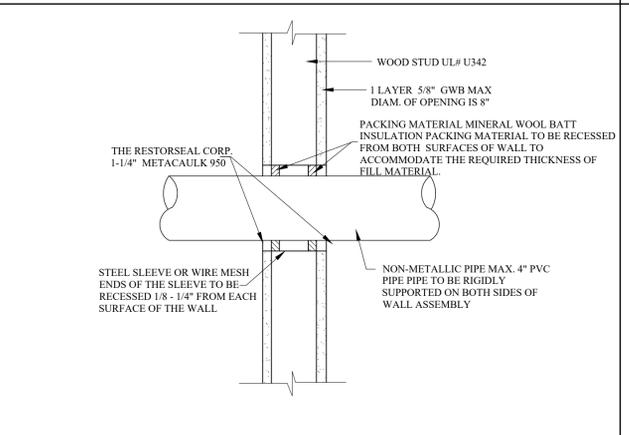


1R WOOD ROOF ASSEMBLY (ROOF ASSEMBLY) 1HR. FIRE RATED - UL DES. M548 (STC 61)



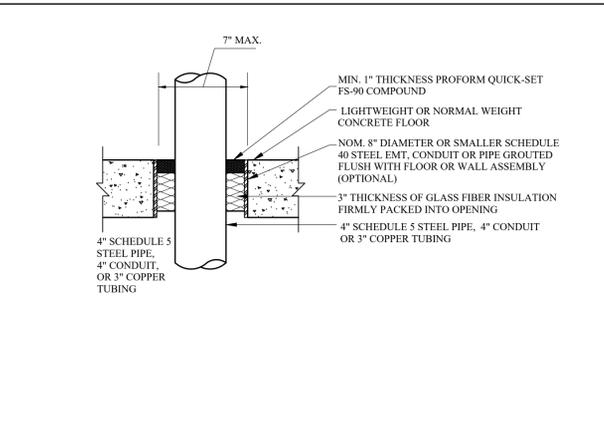
1 HR THROUGH PENETRATION FIRE STOPPING F-C-2054

2 TYPICAL 1 HOUR RATING THROUGH PENETRATION FIRESTOP SYSTEM # F-C-2054



1 HR WALL PENETRATION FIRE STOPPING W-L-2014

3 TYPICAL 1 HOUR RATING THROUGH PENETRATION FIRESTOP SYSTEM WALL ASSEMBLY # W-L-2014



1 HR FLOOR PENETRATION FIRE STOPPING C-AJ-3073

4 TYPICAL 1 HOUR RATING THROUGH PENETRATION FIRESTOP SYSTEM FLOOR ASSEMBLY # C-AJ-3073

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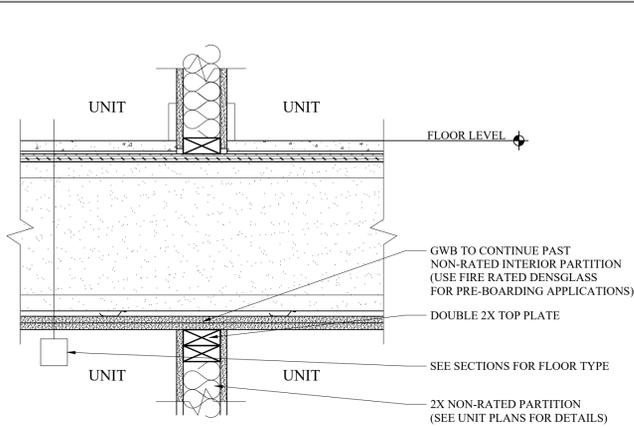
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	10-10-24
	02-02-26

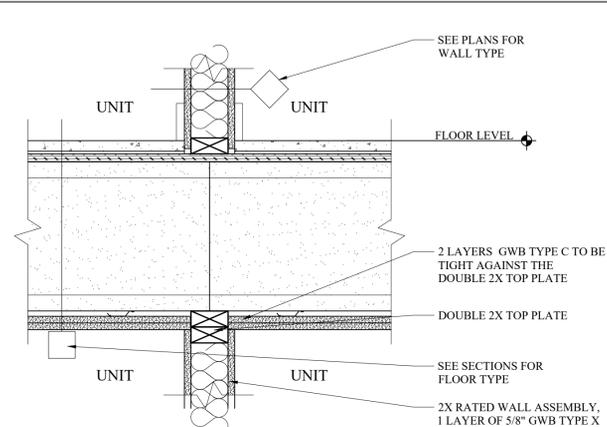
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Scale: AS NOTED
Date: 03-04-25
Drawn By: E.A.

Drawing Name
**ASSEMBLY
TYPES**

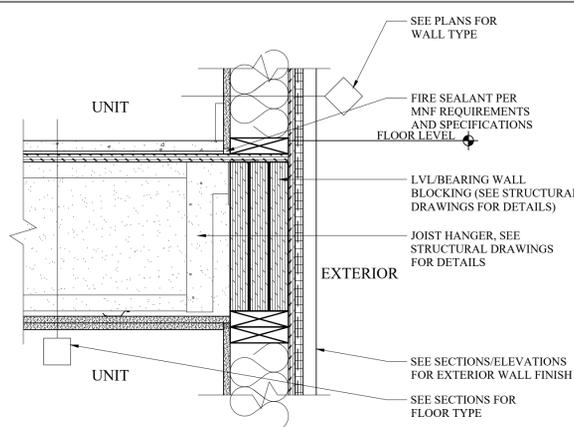
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A-4.2



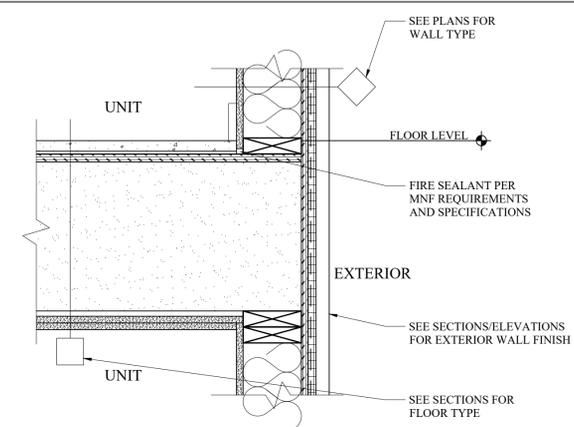
1 CEILING/FLOOR INTERSECTION
NON-RATED PARTITION DETAIL
SCALE: 1 1/2"=1'-0"



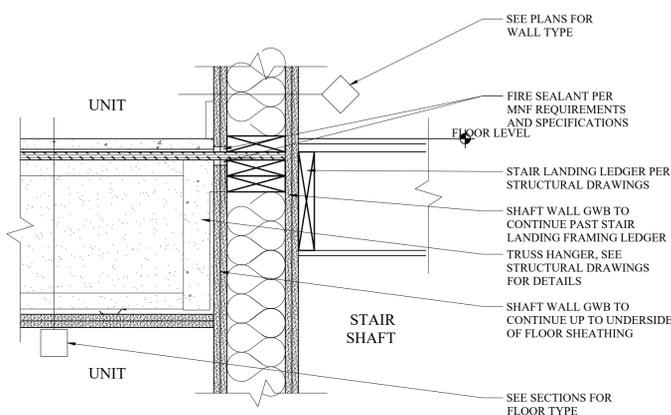
2 CEILING/FLOOR INTERSECTION
RATED PARTITION DETAIL
SCALE: 1 1/2"=1'-0"



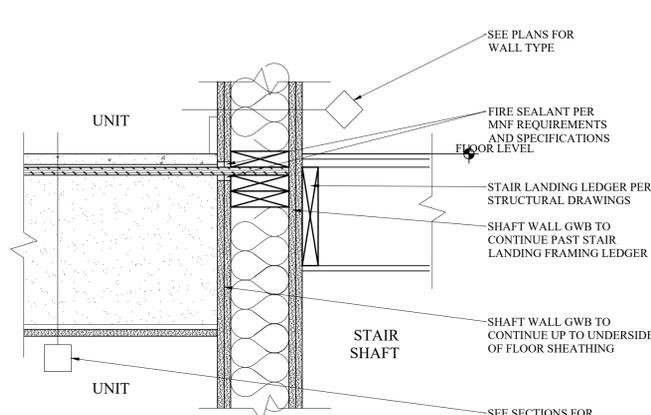
3 TYPICAL EXTERIOR WALL DETAIL
PERPENDICULAR JOIST
SCALE: 1 1/2"=1'-0"



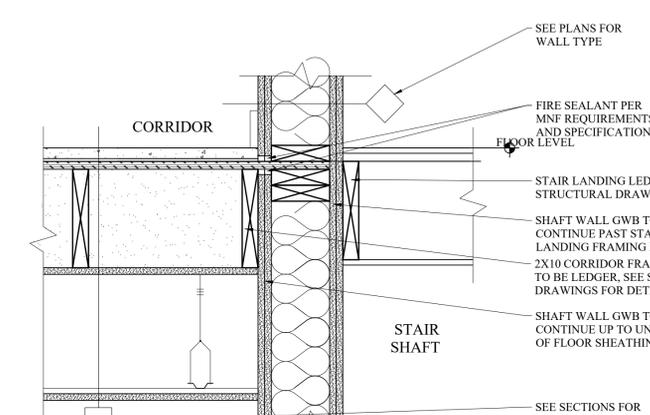
4 TYPICAL EXTERIOR WALL DETAIL
PARALLEL JOIST
SCALE: 1 1/2"=1'-0"



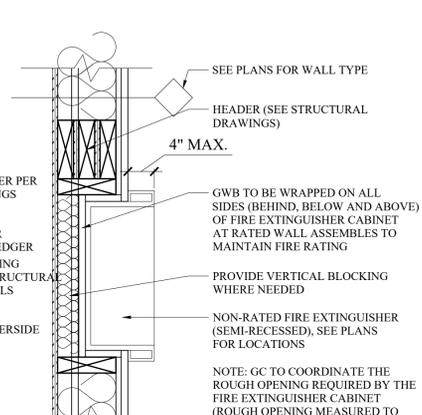
5 TYPICAL STAIR SHAFT DETAIL
PERPENDICULAR TRUSS
SCALE: 1 1/2"=1'-0"



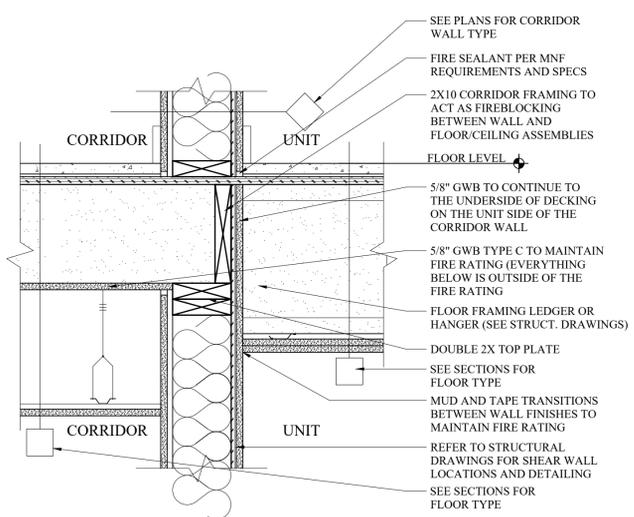
6 TYPICAL STAIR SHAFT DETAIL
PARALLEL TRUSS
SCALE: 1 1/2"=1'-0"



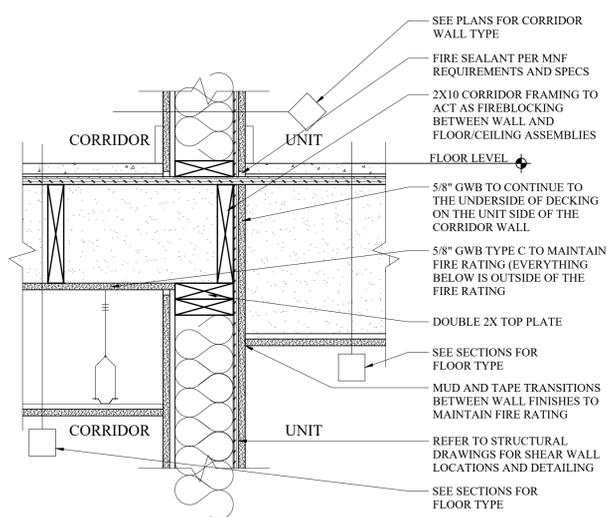
7 TYPICAL STAIR SHAFT DETAIL
AT CORRIDOR
SCALE: 1 1/2"=1'-0"



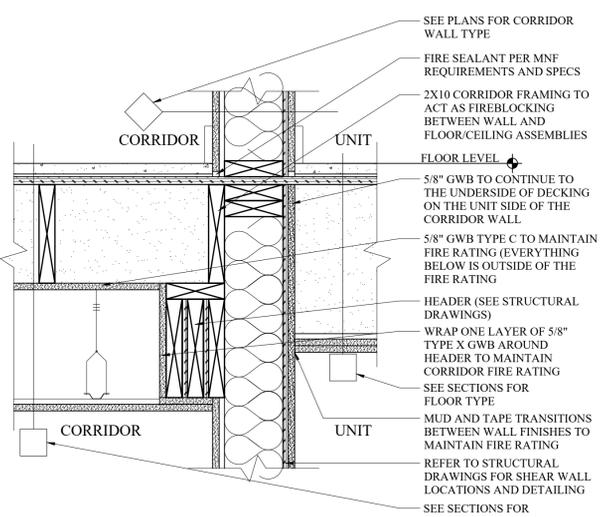
8 TYPICAL FIRE EXTINGUISHER
CABINET DETAIL
SCALE: 1 1/2"=1'-0"



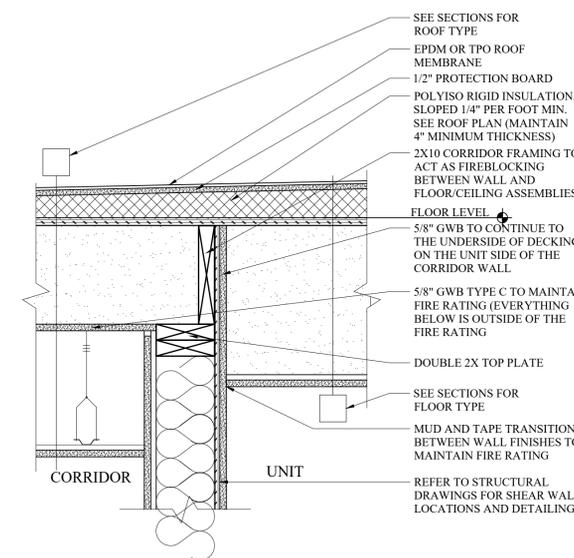
9 TYPICAL CORRIDOR WALL DETAIL
PERPENDICULAR JOIST
SCALE: 1 1/2"=1'-0"



10 TYPICAL CORRIDOR WALL DETAIL
PARALLEL JOIST
SCALE: 1 1/2"=1'-0"



11 TYPICAL CORRIDOR WALL DETAIL
ENTRY RECESS
SCALE: 1 1/2"=1'-0"



12 TYPICAL CORRIDOR WALL DETAIL
PARALLEL JOIST
SCALE: 1 1/2"=1'-0"

PROPOSED
RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA

Choo & Company, Inc.
One Billings Road Quincy, MA 02171
617-786-7727 fax 617-786-7715

No.	Revision Date
	10-10-24
Project No:	2024169
Scale:	AS NOTED
Date:	03-04-25
Drawn By:	E.A

ASSEMBLY
TYPES

Sheet No.
A-5.1

Location
**PROPOSED
 RESIDENTIAL BUILDING
 17 KENSINGTON AVE
 SOMERVILLE, MA**

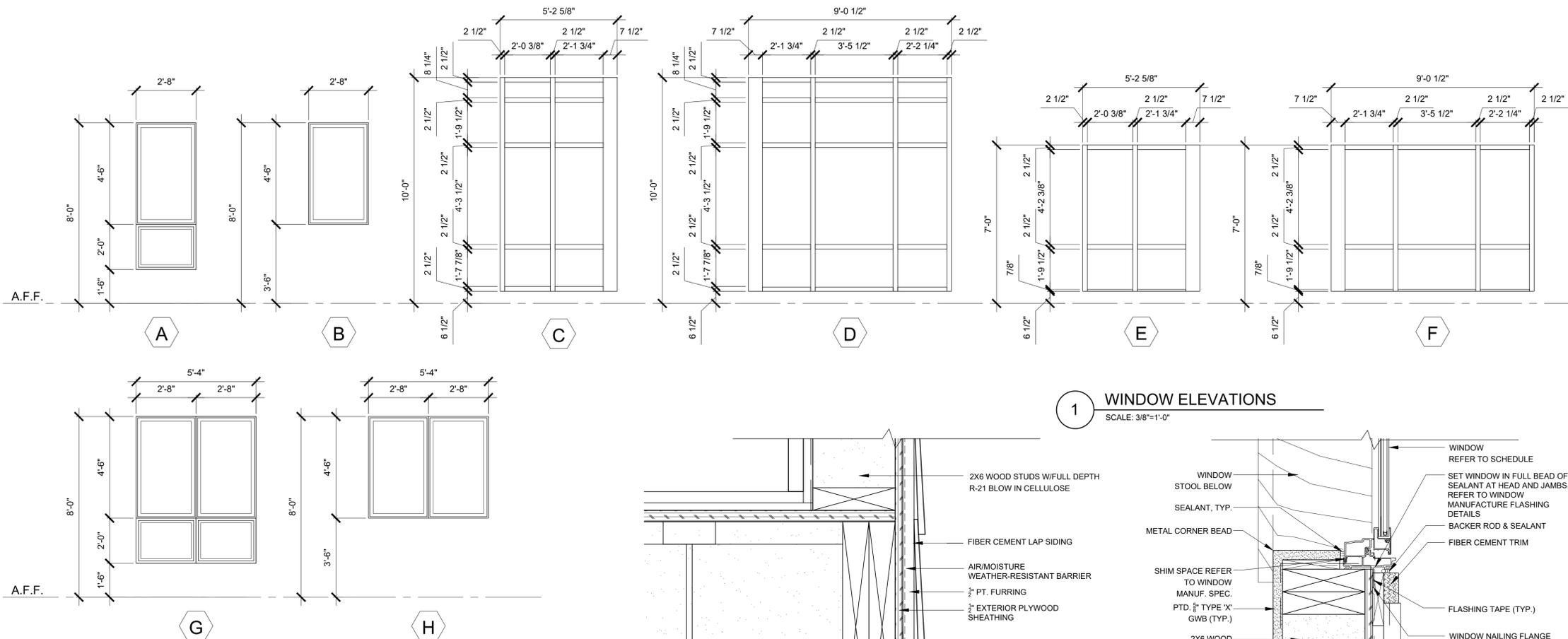
**Choo
 & Company, Inc.**
 One Billings Road Quincy, MA 02171
 617-786-7727 fax 617-786-7715

No.	Revision Date
	10-10-24
	02-02-26

Project No: 2024169
 Scale: AS NOTED
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 Drawn By: E.A.

Drawing Name
**WINDOW
 SCHEDULE**

Sheet No.
A-6.1

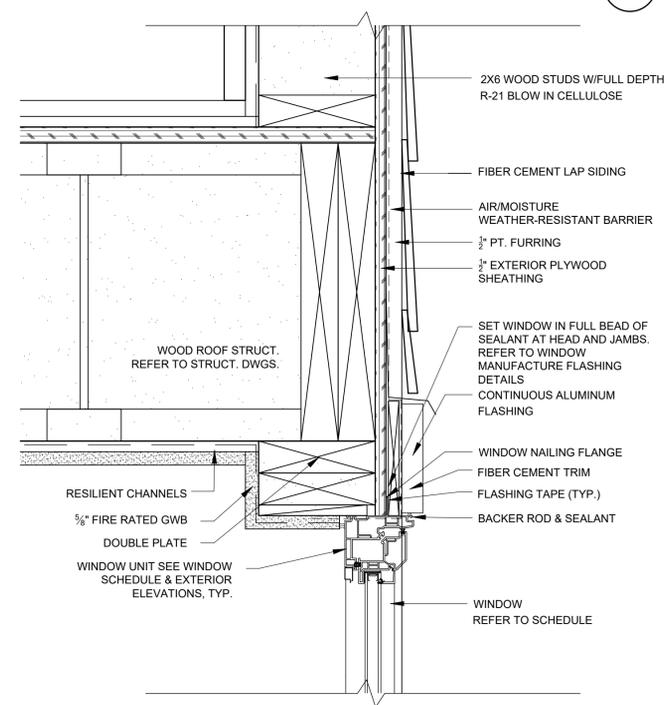


1 WINDOW ELEVATIONS
 SCALE: 3/8"=1'-0"

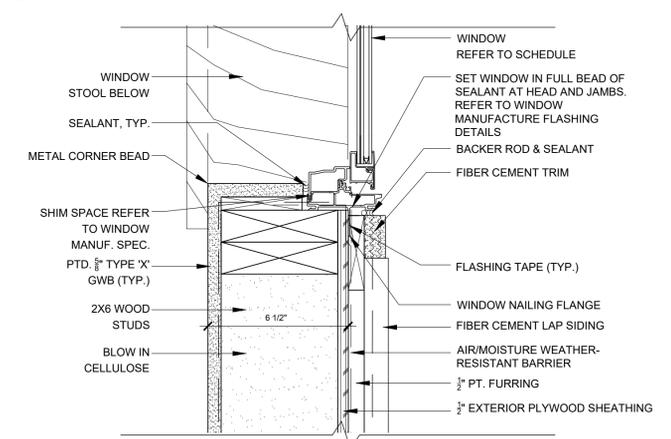
- WINDOW NOTES:**
1. ALL WINDOWS ARE BASED ON ALPEN TYROL OR EQUAL
 2. GLAZING TO BE LOW-E TYPE
 3. ALL WINDOWS TO BE TRIPLE PANE.
 4. ALL WINDOWS TO INCLUDE INSECT SCREENING PER MANUFACTURER.
 5. DIMENSIONS SHOWN ARE UNIT SIZE. G.C. TO COORDINATE ROUGH OPENING DIMENSIONS WITH WINDOW MANUFACTURERS THAT COMPLY W/ ASTM F2090.
 6. PROVIDE WINDOW OPENING CONTROL DEVICE.

* NOTE THIS SCHEDULE IS BASED ON STANDARD SIZES WHEN AVAILABLE.
 G.C. IS RESPONSIBLE TO CONFIRM WINDOW SIZES & QUANTITY

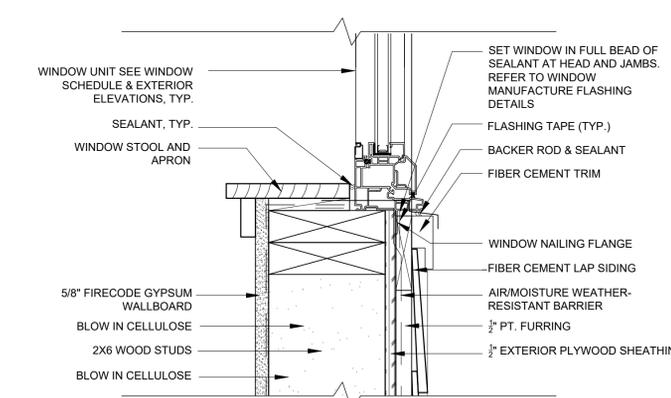
NO.	MANUFACTURER	MODEL	SIZE	REMARKS
A	ALPEN TYROL OR EQUAL	BY WINDOW MFR.	2'-8" X 6'-6"	2'-0" FIXED UNIT WITH 4'-6" TILT/TURN UNIT ABOVE
B	ALPEN TYROL OR EQUAL	BY WINDOW MFR.	2'-8" X 4'-6"	TILT/TURN UNIT
C	KAWNEER 1620 UT OR EQ.	BY WINDOW MFR.	5'-2 3/8" X 9'-5 1/2"	STOREFRONT / CURTAIN WALL
D	KAWNEER 1620 UT OR EQ.	BY WINDOW MFR.	9'-1/2" X 9'-5 1/2"	STOREFRONT / CURTAIN WALL
E	KAWNEER 1620 UT OR EQ.	BY WINDOW MFR.	5'-2 3/8" X 6'-5 1/2"	STOREFRONT / CURTAIN WALL
F	KAWNEER 1620 UT OR EQ.	BY WINDOW MFR.	9'-1/2" X 6'-5 1/2"	STOREFRONT / CURTAIN WALL
A	ALPEN TYROL OR EQUAL	BY WINDOW MFR.	5'-4" X 6'-6"	DOUBLE 2'-0" FIXED UNIT WITH 4'-6" TILT/TURN UNIT ABOVE
B	ALPEN TYROL OR EQUAL	BY WINDOW MFR.	5'-4" X 4'-6"	DOUBLE TILT/TURN UNIT



3 TYPICAL WINDOW HEAD DETAIL
 SCALE: 3"=1'-0"
 AT FIBER CEMENT LAP SIDING



2 TYPICAL WINDOW JAMB DETAIL
 SCALE: 3"=1'-0"
 AT FIBER CEMENT LAP SIDING



1 TYPICAL WINDOW SILL DETAIL
 SCALE: 3"=1'-0"
 AT FIBER CEMENT LAP SIDING

PROPOSED
RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA

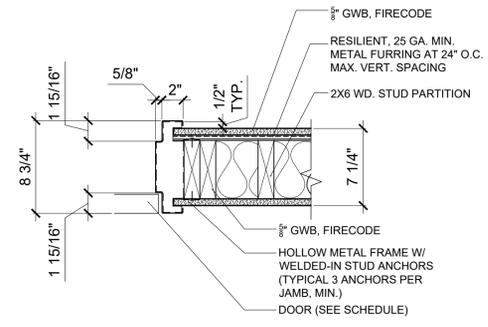
Choo & Company, Inc.
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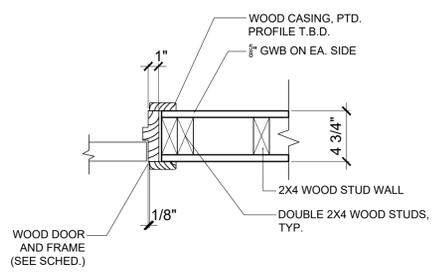
Project No: 2024169
Scale: AS NOTED
Date: 03-04-25
Drawn By: E.A.

DOOR
SCHEDULE

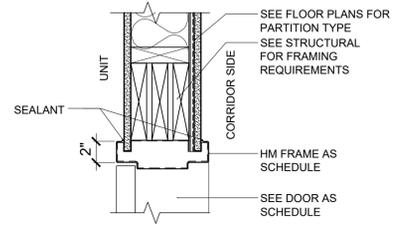
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A-6.2



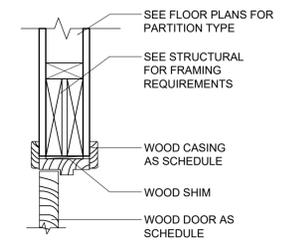
1 HM DOOR JAMB DETAIL
SCALE: 1 1/2"=1'-0"



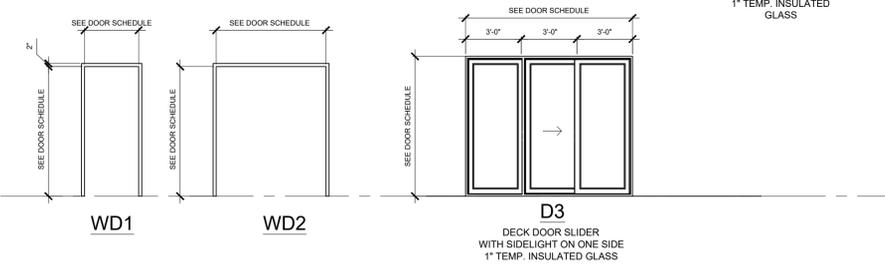
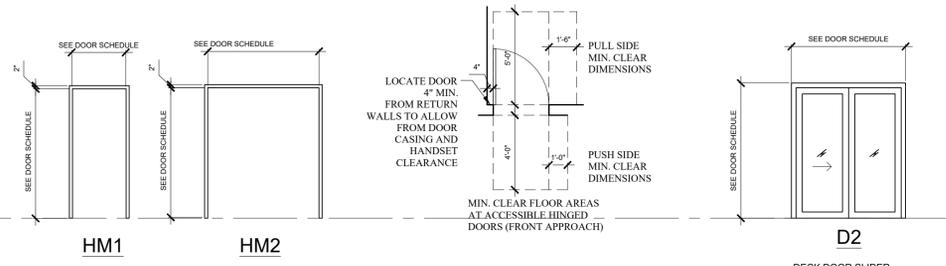
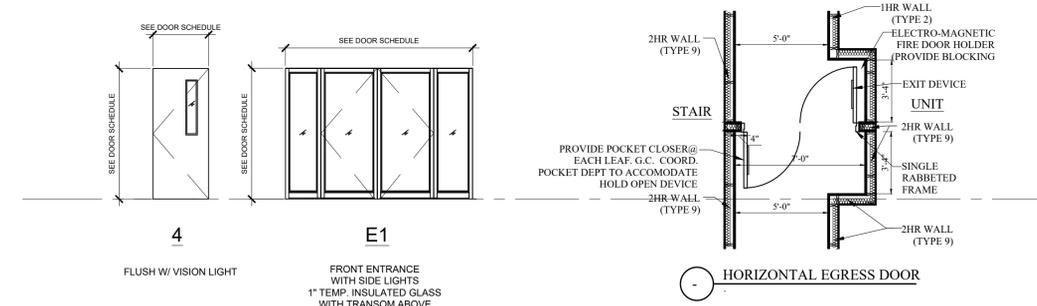
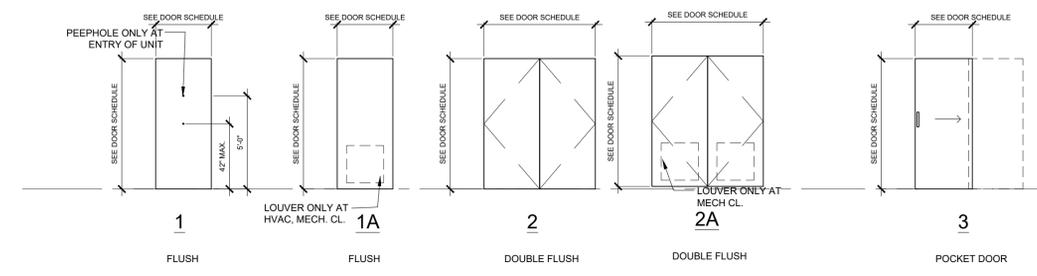
2 WD DOOR JAMB DETAIL
SCALE: 1 1/2"=1'-0"



3 HM DOOR AT CORRIDOR-HEAD DETAIL
SCALE: 1 1/2"=1'-0"



4 WD DOOR AND FRAME - HEAD DETAIL
SCALE: 1 1/2"=1'-0"



TYPICAL UNIT DOOR SCHEDULE

TYPE MARK	DOOR TYPE	TYPE	DOOR				FRAME				DETAIL No.		REMARKS				
			SIZE	THK.	MAT.	FINISH	RATING	GLAZING	DOOR CLOSERS	LOCK	FRAME TYPE	MAT.		FINISH	JAMB	HEAD	
1	UNIT ENTRY	1	3'-0"X7'-0"	1-3/4"	WD	PT	90 MIN.	-	-	8G05	LEVER KEY ENTRY	HM1	HM	PT	1	3	FLUSH
2	STAIR	4	3'-0"X7'-0"	1-3/4"	HM	PT	90 MIN.	TEMP.	SELF CLOSING 400 / 4400 SERIES	PASSAGE	NO LOCK	HM1	HM	PT	1	3	NARROW LITE
3	BEDROOM	1	2'-8"X6'-8"	1-3/8"	COMPOSITE	PT	-	-	-	8U65	PRIVACY	WD1	WD	PT	2	4	
4	CLOSET / WD	2	(2) 1'-6"X6'-8"	1-3/8"	WD	PT	-	-	-	8U15	NO LOCK	WD2	WD	PT	2	4	LOUVER @ MECH
5	CLOSET	2	(2) 2'-0"X6'-8"	1-3/8"	WD	PT	-	-	-	8U15	NO LOCK	WD2	WD	PT	2	4	
6	BATHROOM	1	2'-8"X6'-8"	1-3/8"	COMPOSITE	PT	-	-	-	8U65	PRIVACY	WD1	WD	PT	2	4	
7	PRIMARY BATHROOM	1	2'-8"X6'-8"	1-3/8"	COMPOSITE	PT	-	-	-	8U65	PRIVACY	WD1	WD	PT	2	4	
8	WIC	1	2'-8"X6'-8"	1-3/8"	WD	PT	-	-	-	8U15	NO LOCK	WD1	WD	PT	2	4	
9	W/D / MECH	1	2'-8"X6'-8"	1-3/8"	WD	PT	-	-	-	8U15	NO LOCK	WD1	WD	PT	2	4	LOUVER @ MECH
10	BEDROOM	1	3'-0"X6'-8"	1-3/8"	COMPOSITE	PT	-	-	-	8U65	PRIVACY	WD1	WD	PT	2	4	
11	PRIMARY BATHROOM	1	3'-0"X6'-8"	1-3/8"	COMPOSITE	PT	-	-	-	8U65	PRIVACY	WD1	WD	PT	2	4	
12	BATHROOM	1	3'-0"X6'-8"	1-3/8"	COMPOSITE	PT	-	-	-	8U65	PRIVACY	WD1	WD	PT	2	4	
13	WIC	1	3'-0"X6'-8"	1-3/8"	WD	PT	-	-	-	8U15	NO LOCK	WD1	WD	PT	2	4	
14	CLOSET / WD	2	(2) 2'-6"X6'-8"	1-3/8"	WD	PT	-	-	-	8U15	NO LOCK	WD2	WD	PT	2	4	LOUVER @ MECH
15	W/D	1	2'-0"X6'-8"	1-3/8"	WD	PT	-	-	-	8U15	NO LOCK	WD1	WD	PT	2	4	LOUVER @ MECH
16	CLOSET	1	2'-6"X6'-8"	1-3/8"	WD	PT	-	-	-	8U15	NO LOCK	WD1	WD	PT	2	4	
17	ELEV. MACH. RM.	1	3'-0"X7'-0"	1-3/4"	HM	PT	90 MIN.	TEMP.	SELF CLOSING 400 / 4400 SERIES	PASSAGE	NO LOCK	HM1	HM	PT	1	3	
18	MECH.	1	3'-0"X7'-0"	1-3/4"	HM	PT	90 MIN.	TEMP.	SELF CLOSING 400 / 4400 SERIES	PASSAGE	NO LOCK	HM1	HM	PT	1	3	
19	PRIMARY BATHROOM	1	2'-8"X6'-8"	1-3/8"	COMPOSITE	PT	-	-	-	8U65	PRIVACY	WD1	WD	PT	2	4	POCKET DOOR
E1	ENTRANCE DOOR	CW	6'-0"X8'-0"	1-3/4"	ALUM	-	-	-	-	-	-	HM2	ALUM	FF	-	-	(2) 36" DOORS WITH SIDELIGHT AT EACH SIDE - KAWNEER 500 UT
E2	DECK SLIDER	D2	5'-0"X7'-6"	1-3/8"	COMPOSITE	PT	-	-	-	-	-	HM2	HM	PT	-	-	SLIDING DOOR - INTUS TERRACE DOOR
E3	DECK SLIDER	D3	9'-0"X 7'-6"	1-3/8"	COMPOSITE	PT	-	TEMP	-	-	-	HM2	HM	PT	-	-	SLIDING DOOR WITH 3'-0" SIDELIGHT AT ONE SIDE - INTUS TERRACE DOOR
E4	ENTRANCE DOOR	1	3'-0"X7'-0"	1-3/4"	HM	PT	-	-	-	-	PRIVACY	HM1	HM	PT	-	-	ASSA ABLOY TRIO E DOOR WITH MERCURY TB FRAME

ALL UNITS TO BE GROUP 1.

- 9.5 DWELLING UNIT INTERIORS
- The interiors of all *Group 1* and *2 dwelling units*, except as exempted by **521 CMR 9.2.1**, shall comply with the following requirements: 521 CMR: ARCHITECTURAL ACCESS BOARD 1/27/06 521 CMR - 46
- 9.00: MULTIPLE DWELLINGS
- 9.5.1 Doorways: All doorways and all openings that allow passage in a *Group 2* unit must comply with **521 CMR 26.2, Double Leaf Doorways**, through **521 CMR 26.11, Door Hardware**. All doorways and all openings that allow passage in *Group 1* units shall be capable of complying, without *structural change*, with **521 CMR 26.2, Double Leaf Doorways**, through **521 CMR 26.11, Door Hardware**. For door types such as bifold, pocket, and accordion doors, the clear opening is measured when the door is in its most fully open position. See **Fig. 26b** and **26c**. For *Group 1 units*, only the common area and apartment entrance door hardware are required to comply with **521 CMR 26.11, Door Hardware**.
- 9.5.2 Every entry door to each *dwelling unit* shall have a means by which the resident can visually identify a visitor before opening the door. This may be achieved by any of the following means:
 - a. In *Group 1 and 2A units*, a peephole mounted 60 inches (60" = 1524mm) above the floor, a vision panel in the door with its bottom edge no higher than 60 inches (60" = 1524mm) above the floor, or a sidelight with its bottom edge no higher than 60 inches (60" = 1524mm) above the floor, shall be provided.
- 9.5.3 Buzzers/bells and intercoms: All buzzers/bells and intercom systems shall comply with **521 CMR 6.5, Forward Reach** or **521 CMR 6.6, Side Reach**. 521 CMR: ARCHITECTURAL ACCESS BOARD 1/27/06 521 CMR - 47
- 9.00: MULTIPLE DWELLINGS
- 9.5.4 Accessible routes: An accessible route at least 36 inches (36" = 914mm) wide shall be provided to all rooms and spaces in the *dwelling unit* including exterior decks, patios, balconies, attached garages, and storage closets. An accessible route shall be provided to mechanical spaces, only if the resident is expected to service, adjust or maintain the equipment therein.
 - a. Patios, Terraces, and Balconies: Where it is necessary to use a door threshold or a change in level between the interior and exterior, greater than ½ inch (½" = 13mm) to protect the integrity of the unit from water or snow damage, equivalent facilitation such as raised decking or a ramp shall be provided or capable of being provided.
- In *Group 2B Units*, the exterior deck, patio, balcony surfaces shall be either permanently installed at no more than ½ inch (½" = 13mm) below the floor level of the interior of the *dwelling unit* or a temporary raised surface, such as duckboards, that is no more than ½ inch (½" = 13mm) below the interior floor level shall be available upon request.
- 9.5.5 Laundry Facilities: If a washer or dryer is provided in a *Group 1 or Group 2A unit*, it shall be front loading or capable of being replaced with a front loading appliance. If a washer or dryer is provided in a *Group 2B dwelling unit*, it shall be front loading. Operating controls for washers and dryers shall be located within the *zone of reach*. If residents are expected to operate shut-off valves for the washer, the shut-off valves shall be located within the *zone of reach*. For common area laundry facilities, see **521 CMR 10.8, Laundry Facilities**.
- 9.5.6 Outlets: Electrical outlets, telephone outlets, cable TV jacks, and other wall outlets shall be located between 15 inches (15" = 381mm) and 48 inches (48" = 1219mm) above the floor, measured at the centerline of the lowest receptacle. All outlets shall be located no less than 18 inches (18" = 457mm) from interior corners. When outlets are located on walls above counters or other fixtures that are 22 inches (22" = 559mm) or greater in depth, they shall be no higher than 44 inches (44" = 1118mm). In *Group 1* and *2* units, at least one electrical outlet must be provided on the same wall as the telephone outlet and the door chime. Wherever exterior decks, patios, and balconies are provided, an exterior electrical outlet shall also be provided.
- In *Group 2B units*, all telephone outlets must have an electrical outlet located within 12 inches (12" = 305mm) for installation of a *TTY*.
- 9.5.7 Controls and alarms: In *Group 2A* and *2B units*, the operable portions of all controls and alarms, including but not limited to: intercoms, and heat and air controls, shall be located between 36 and 48 inches (36" to 48" = 914mm to 1219mm) above the floor, measured at the centerline of the operable portion in its highest position. Operable portions shall be located at least 24 inches (24" = 610mm) from interior corners. Controls and alarms in *Group 1* units may be located at other locations so long as sufficient wiring is provided to permit future location from 36 inches to 48 inches (36" to 48" = 914mm to 1219mm) above the floor.
- 9.00: MULTIPLE DWELLINGS
- 9.5.8 Closets/pantries and linen closets: Shall comply with the following:
 - a. Closet shelves/poles: Closet walls shall be structurally capable of supporting the installation of shelves and poles which are relocatable from 42 inches to 72 inches (42" to 72" = 1067mm to 1829mm) to the top of shelf or pole whichever is higher.
 - b. Closet depth: Where the interior depth of the closet exceeds 24 inches (24" = 610mm), the doorway must comply with **521 CMR 26.5, Width** so that a disabled person can enter the closet. The bottom track of the closet door must also be recessed with no more than ¼ of an inch (¼" = 6mm) change in finish material. For *Group 2 units*, when the interior depth of the closet is 24 inches (24" = 610mm) or less, it shall be open to the room to permit a person with a disability to reach all parts of the closet.

- 521 CMR 43.00: GROUP 1 KITCHENS
- 43.1 GENERAL
- In all *Group 1* Dwelling units, kitchens shall be designed so that when a unit is adapted a person in a wheelchair has access to the sink, cooking surface, refrigerator, and a food preparation surface and can turn around without having to leave the kitchen.
- 43.2 CLEAR FLOOR SPACE:
 - Shall be measured at the face of the base cabinets or appliances, (excluding cabinet hardware and appliance hardware) and shall be provided at the time of first occupancy as follows:
 - 43.2.1 L-shaped kitchens shall have a minimum *clear floor space* of 48 inches by 48 inches (48" x 48" = 1219mm x 1219mm). See **Fig. 43a**.
 - 43.2.2 U-shaped kitchens shall provide a minimum *clear floor space* of 48 inches (48" = 1219mm) between opposing base cabinets or appliances. See **Fig. 43b**.
 - 43.2.3 Galley kitchens shall provide a minimum *clear floor space* of 40 inches (40" = 1016mm) between opposing base cabinets or appliances.
- 43.00: GROUP 1 KITCHENS
- 43.3 SINKS
 - Shall comply with the following:
 - 43.3.1 Sink Cabinet: The base cabinet under the sink shall be capable of being removed to provide a knee space of 30 inches (30" = 762mm) in width.
 - 43.3.2 Sink Depth: The sink bowl shall not exceed 6½ inches (6½" = 165mm) in depth. Where more than one bowl is provided, only one bowl must meet this requirement.
- 43.4 COOKING UNITS
 - Shall comply with the following to ensure that both burners and ovens can be made functional and safe for a person in a wheelchair.
 - 43.4.1 In-Counter cooktops: If a cooktop is provided, its base cabinet shall be capable of being removed to provide future kneespace the width of the cooktop but not less than 30 inches (30" = 762mm) wide. Cooktops shall have controls located at the front or side of the unit.
 - 43.4.2 Wall Ovens: If a wall oven is provided, the floor of the wall oven shall be located 30 inches (30" = 762mm) above the floor.
- 43.5 WALL CABINETS
 - Walls shall be capable of structurally supporting wall cabinets at any location from 42 inches to 54 inches (42" to 54" = 1067mm to 1372mm) from the floor to the bottom of the inside of the cabinet.
- 43.6 BASE CABINETS
 - Each base cabinet shall be capable of being removed to provide kneespace for persons using wheelchairs. 521 CMR: ARCHITECTURAL ACCESS BOARD 1/27/06 521 CMR - 184
- 43.00: GROUP 1 KITCHENS
- 43.7 REFRIGERATORS
 - *Space* shall be provided so that the refrigerator can be located so that its doors can be opened to 180 degrees. If doors cannot be opened to 180 degrees, a minimum of 30 inches (30" = 762mm) of counter *space* next to the refrigerator shall be provided. 43.7.1 Where refrigerators are provided with less than nine cubic feet of capacity, **521 CMR 43.7, Refrigerators** shall not apply.
- 43.8 OUTLETS AND CONTROLS
 - Shall comply with **521 CMR 39.00: CONTROLS**.
- 43.9 ALARMS
 - Shall comply with **521 CMR 40.00: ALARMS**.

42.00: GROUP 1 BATHROOMS

- 42.4 DOORS
 - Shall be capable of complying with **521 CMR 26.5, Width** through **521 CMR 26.11, Door Hardware**.
 - 42.4.1 Operation: Doors may swing into the *bathroom* if the swing of the door does not impede *clear floor space*. If the door impedes the *clear floor space*, the doors shall be capable of being adapted to swing out, fold or slide.
- 42.5 WATER CLOSETS
 - Shall comply with the following:
 - 42.5.1 *Clear Floor Space*: As defined in **521 CMR 42.2, Clear Floor Space**, shall be provided or shall be capable of being provided without *structural change* in at least one of two specific locations at the water closet. One shall be beside the water closet with its short edge parallel to the wall behind the water closet. The other shall be in front of the water closet with its long edge parallel to the wall behind the water closet.
 - 42.5.2 Location:
 - a. When a water closet is located between a wall and a fixture, its centerline shall be 18 inches (18" = 457mm) from the wall. If the *clear floor space* is provided in front of the water closet, the centerline of the water closet shall be a minimum of 15 inches (15" = 381mm) from the closest edge of the fixture. See **Fig. 42c**.
 - b. When a water closet is located between two fixtures, its centerline shall be 18 inches (18" = 457mm) from a bathing fixture and a minimum of 15 inches (15" = 381mm) from other types of fixtures. See **Fig. 42c**. 521 CMR: ARCHITECTURAL ACCESS BOARD 1/27/06 521 CMR - 179 521 CMR: ARCHITECTURAL ACCESS BOARD 1/27/06 521 CMR - 180
- 42.00: GROUP 1 BATHROOMS
 - 42.5.3 Wall reinforcement: Walls adjacent to and behind the water closet shall be capable of structurally supporting the future installation of grab bars from 32 to 38 inches (32" to 38" = 813mm to 965mm) above the floor. The back wall shall have reinforcement from the interior corner to a distance of six inches (6" = 152mm) beyond the widest part of the water closet. The side wall shall have reinforcement from the interior corner to a distance of six inches (6" = 152mm) beyond the front edge of the water closet, unless interrupted by a door or other fixture, then the reinforcement shall be installed as far as possible. When the water closet is located between two fixtures, the wall reinforcement behind the water closet shall be extend at least six inches (6" = 152mm) beyond the widest part of the water closet.

42.6 SINKS

- At least one sink in a *bathroom* must meet the following:
 - 42.6.1 Vanity Cabinets: If a cabinet is provided under a sink, it shall be capable of being removed without structural change.
 - 42.6.2 Knee *Space* Width: The sink shall have or be capable of having a knee *space* of 30 inches (30" = 762mm) in width.
 - 42.6.3 Knee *Space* Depth: The front edge of the sink fixture, or the countertop in which a sink is located, shall be a minimum of 19 inches (19" = 482mm) from the back wall or shall be capable of being relocated to create a *space* of that depth under the sink.
 - 42.6.4 Height: The sink shall be capable of being relocated without structural change.
- 42.6.5 *Clear Floor Space*: Shall be provided at the sink, as defined in **521 CMR 42.2, Clear Floor Space** and shall be perpendicular to the face of the sink and may extend under the sink. See **Fig. 42d**. 521 CMR: ARCHITECTURAL ACCESS BOARD 1/27/06 521 CMR - 181

42.00: GROUP 1 BATHROOMS

- 42.7 BATHING FIXTURES
 - If more than one bathing fixture is provided in a *bathroom*, at least one must meet the requirements of 521 CMR 42.
 - 42.7.1 Bathtubs shall comply with the following:
 - a. *Size*: Bathtubs shall be at least a nominal 60 inches (60" = 1524mm) long.
 - b. *Clear Floor Space*: At the bathtub, as defined in **521 CMR 42.2, Clear Floor Space** shall be parallel to the face of the tub.
 - c. *Wall Reinforcement*: All tub walls shall be capable of structurally supporting the future installation of grab bars from six inches (6" = 152mm) above the tub rim to a height of 48 inches (48" = 1219mm) above the tub bottom and shall extend the length and width of the tub.
 - d. *Door Enclosure*: Tracks for sliding doors or enclosures mounted on the rim of a bathtub must be capable of removal to provide a smooth tub rim for transfer.
 - 42.7.2 Showers shall comply with the following:
 - a. *Size*: Shower stalls shall be a minimum, nominal dimension of 36 inches by 36 inches (36" x 36" = 914mm x 914mm).
 - b. *Minimum Clear Floor Space*: At the shower, as defined in **521 CMR 42.2, Clear Floor Space** shall be located parallel to and centered on the shower stall opening.
 - c. *Wall Reinforcement*: All shower walls shall be capable of structurally supporting the future installation of grab bars, seats, etc., from a height of six inches (6" = 152mm) to 48 inches (48" = 1219mm) above the floor and shall extend the full width and length of the shower stall. Grab bars shall not be located behind the seat.
 - d. *Door*: The opening of the shower stall must be 32 inches (32" = 813mm) wide. If a shower door is provided, it shall be capable of swinging open 180 degrees or capable of being removed.
 - e. *Seat*: If a wall mounted seat is provided, it shall be located on a wall adjacent to the opening. The seat shall be mounted with the edge as close as possible to the door opening to allow a safe transfer.
 - f. *Hardware Location*: Mixing valves shall be mounted on the wall opposite the seat. The centerline of the shower controls shall be located between 38 inches and 48 inches (38" to 48" = 965mm to 1219mm).
 - g. Where curbs are provided, they shall not exceed four inches (4" = 102mm) in height.
 - 42.7.3 Soap Tray shall not have a hand hold feature unless it can support 250 lbs for five minutes. Soap dispensers, holders, etc., shall be located within the *zone of reach* from the seat.
 - 42.7.4 Prefabricated Units: In prefabricated showers and tubs, structural reinforcement for grab bars must be in full contact with the surface of walls of the unit on which grab bars may be mounted as described in **521 CMR 42.7.1 (e)** and **521 CMR 42.7.2 (c)**. 521 CMR: ARCHITECTURAL ACCESS BOARD 1/27/06 521 CMR - 182
 - 42.00: GROUP 1 BATHROOMS
 - 42.8 OUTLETS AND CONTROLS Shall comply with **521 CMR 39.00: CONTROLS**.
 - 42.9 ALARMS - Shall comply with **521 CMR 40.00: ALARMS**.

Location

PROPOSED RESIDENTIAL BUILDING 17 KENSINGTON AVE SOMERVILLE, MA



One Billings Road Quincy, MA 02171
617-786-7727 fax 617-786-7715

No.	Revision Date
	10-10-24

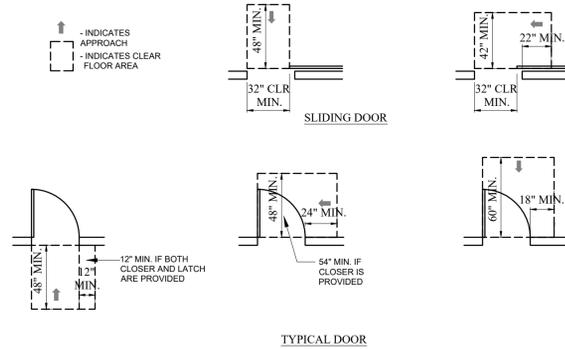
Project No: 2024169
 Scale: AS NOTED
 Date: 03-04-25
 Drawn By: E.A

Drawing Name
ACCESSIBILITY NOTES

Sheet No.
A-7.1

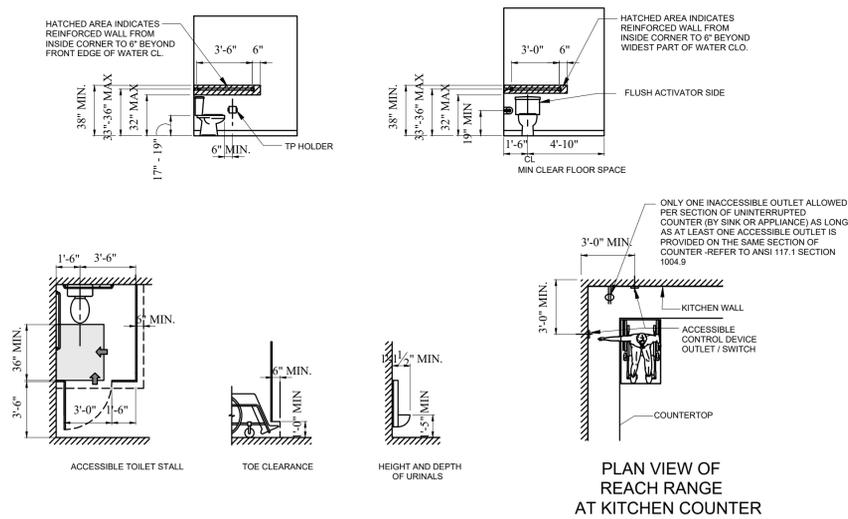
DOOR PUSH/PULL CLEARANCE LEGEND

NOTE: UNIT INTERIOR CLEAR FLOOR AREA IS ONLY REQUIRED AT UNIT ENTRY DOORS AND GROUP 2A BATHROOMS
 NOTE: ENSURE HARDWARE IS EXPOSED AND USABLE FROM BOTH SIDES WHEN DOORS ARE IN FULLY OPEN POSITION



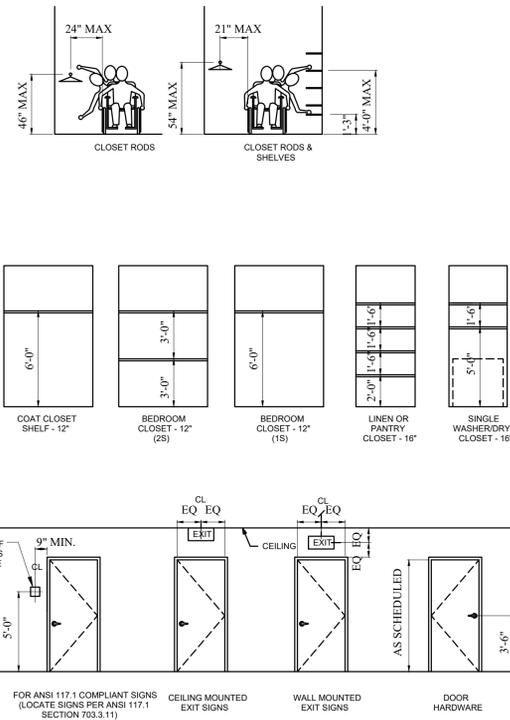
TYPICAL DOOR

TOILET AND PLUMBING ACCESSORIES



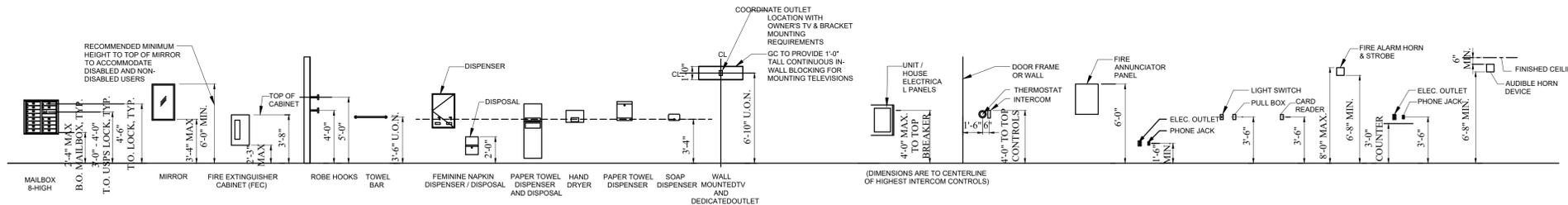
PLAN VIEW OF REACH RANGE AT KITCHEN COUNTER

CLOSET ACCESS & SIGNS



FOR ANSI 117.1 COMPLIANT SIGNS (LOCATE SIGNS PER ANSI 117.1 SECTION 703.3.11)

EQUIPMENT, CONTROLS & DISPENSERS



ELECTRICAL & FIRE PROTECTION DEVICES TYPICAL UNLESS NOTED OTHERWISE (ALL LOCATIONS TO BE COORDINATED WITH AND APPROVED BY THE ARCHITECT)

Location
**PROPOSED
 RESIDENTIAL BUILDING
 17 KENSINGTON AVE
 SOMERVILLE, MA**

Choo & Company, Inc.
 One Billings Road Quincy, MA 02171
 617-786-7727 fax 617-786-7715

No.	Revision Date
	10-10-24

Project No: 2024169
 Scale: AS NOTED
 Date: 03-04-25
 Drawn By: E.A.

ACCESSIBLE MOUNTING HEIGHTS

Sheet No.
A-7.2

28.1 General
In all multi-story buildings and facilities, each level including mezzanines, shall be served by a passenger elevator. If more than one elevator is provided, each passenger elevator shall comply with 521 CMR 28. Accessible elevators shall be on an accessible route and located within the space with which it is intended to serve. Elevators are not required under the following exceptions:
Buildings having only two levels may provide an interior accessible ramp complying with 521 CMR 24.00: RAMPS in lieu of an elevator.
Buildings having only two levels, in which each level serves an unrelated use and in which there is no internal stair, do not require an elevator if each level is accessible.
Freight elevators shall not be required to meet the requirements of 521 CMR 28.00 unless the only elevators provided are used as combination passenger and freight elevators for the public and employees.
Elevator pits, elevator penthouses, mechanical rooms, and piping or equipment catwalks shall not be required to meet the requirements for elevator access.
Where platform lifts are allowed to be installed in lieu of an elevator as per 521 CMR 28.12, Wheelchair Lifts/Limited Use Elevators. Multiple dwellings where all accessible rooms and all public use and common use spaces are on the accessible level.
Transient lodging facilities of less than three stories in height and where all accessible rooms and all public and common use spaces are on the accessible level.

28.1.2
The elevator exceptions set forth above do not obviate or limit in any way the obligation to comply with the other accessibility requirements of 521 CMR. For example, floors above or below the accessible ground floor must meet the requirements of 521 CMR except for elevator service. If toilet or bathing facilities are provided on a level not served by an elevator, then toilet or bathing facilities must be provided on the accessible ground floor.

28.1.3
A passenger elevator that provides service from a garage to only one level of a building or facility is not required to serve other levels.

28.2 Operation
Elevator operation shall be automatic.

28.2.1
Self-Leveling: Each car shall be equipped with a self-leveling feature that is automatic and independent of the operating device and shall correct any overtravel or undertavel.

28.2.2
The self-leveling feature shall bring the car to a position level with floor landings under all loading conditions from zero to the rated limit. A tolerance of 1/2 inch (12.7 mm) shall be permitted.

28.3 Hall Call Buttons
Shall comply with the following:

28.3.1
Call buttons in elevator lobbies and halls shall be centered at 42 inches (42" = 1067mm) above the floor. See Fig. 28a.

28.3.2
Such call buttons shall have visual signals to indicate when each call is registered and when each call is answered.

28.3.3
Call buttons shall be a minimum of 3/4 of an inch (3/4" = 19mm) in the smallest dimension. The button designating the up direction shall be on top. Buttons shall be raised or flush.

28.3.4
Objects mounted beneath hall call buttons shall not project into the elevator lobby more than four inches (4" = 102mm).
Note: The automatic door reopening device is activated if an object passes through either line A or line B. Line A and line B represent the vertical locations of the door reopening device not requiring contact.

28.4 Hall Lanterns
A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call. Lanterns shall comply with the following:

28.4.1
Hall lantern fixtures shall be mounted so that their centerline is at least 72 inches (72" = 1829mm) above the lobby floor. See Fig. 28a.

28.4.2
Audible signals shall sound once for the up direction and twice for the down direction or shall have verbal annunciators that say "up" and "down."

28.4.3
Visible signals shall have the following features:
Visual elements shall be at least 2 1/2 inches (2 1/2" = 64mm) in the smallest dimension.
Signals shall be visible from the vicinity of the hall call button. See Fig. 28a. In-car lanterns located in cars, visible from the vicinity of hall call buttons, and conforming to the above requirements, shall be acceptable.

28.5 Door Jamb Markings
Both jambs of all elevator hoistway entrances shall have raised and Braille floor designation markings that are visible from within the car and the elevator lobby.

28.5.1
The centerline of the characters shall be 60 inches (60" = 1524mm) above finished floor. See Fig. 28a.

28.5.2
Such characters shall be two inches (2" = 51mm) high and on a contrasting color background.

28.5.3
Permanently applied plates are acceptable if they are secured to the jambs.

28.6 Doors
Elevator doors shall open and close automatically and shall comply with the following:

28.6.1
Width: Elevator doors shall provide a clear opening that is at least 32 inches (32" = 813mm) wide.

28.6.2
Closing Speed: Doors shall close at a maximum speed of approximately one foot (1' = 305mm) per second.

28.6.3
Reopening Device: A door reopening device shall be provided that will stop and reopen a car door and an adjacent hoistway door automatically if the car door becomes obstructed by an object or person while closing.
The device shall be capable of completing these operations without requiring contact with the obstruction.
The reopening device shall detect possible obstructions passing through the opening at heights of five inches and of 29 inches (5" = 127mm and 29" = 737mm) above finished floor. See Fig. 28a.
Door reopening devices shall remain effective for at least 20 seconds. After such an interval, doors may close in accordance with the requirements of ASME A17.1-1990 and, if applicable, with 524 CMR: the Board of Elevator Regulations.

28.6.4
Door and Signal Timing for Hall Calls: Doors and signals shall be coordinated to comply with the following:
The minimum acceptable time from notification that a car is answering a call until the doors of that car start to close shall be calculated from the following equation:
 $T = D(1.5 \text{ ft/s})$
or
 $T = D(457 \text{ mm/s})$
T = total time in seconds
D = distance (in feet or millimeters) from a point in the lobby or corridor 60 inches (60" = 1524mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door. See Fig. 28b.

For cars within-car lanterns, "T" begins when the lantern is visible from the vicinity of hall call buttons and an audible signal is sounded. The minimum acceptable notification time shall be five seconds.

28.6.5
Door Delay for Car Calls: The minimum time for elevator doors to remain fully open in response to a car call shall be three seconds.

28.7 Elevator Car
The elevator cab shall be a minimum of 54 inches by 68 inches (54" x 68" = 1372mm x 1727mm) measured wall-to-wall and wall-to-door, or may be 60 inches by 60 inches, (60" by 60" = 1524mm wall-to-wall and wall to wall. The door can be located on any wall or walls.
Exception: In existing buildings, where existing shaft configuration prohibits strict compliance with 521 CMR 28.7, the maximum car size allowable for the existing shaft shall be provided, but in no case shall the inside car area be smaller than 48 inches by 48 inches, wall-to-wall and wall-to-door.

28.7.1
Hoistway Clearance: The horizontal clearance between the car platform sill and the edge of any hoistway landing shall be no greater than 1 1/4 inch (1 1/4" = 32mm).

28.7.2
Handrails shall be located on at least one wall in every elevator between 32 and 36 inches (32" and 36" = 813mm and 914mm) above the car floor, with a 1 1/2 inch (1 1/2" = 38mm) clearance from the wall.

28.7.3
Floor surface: Floor surfaces shall comply with 521 CMR 29.00: FLOOR SURFACES.

28.8 Car Controls
Elevator control panels shall have the following features:

28.8.1
Location: If cars have center opening doors, controls shall be located on the same wall or walls. If cars have side opening doors, controls shall be located at the side wall or at the front wall next to the door. See Fig. 28d.

28.8.2
Height: All floor buttons shall be no higher than 54 inches (54" = 1372mm) above the finish floor for side approach and 48 inches (48" = 1219mm) for front approach. Emergency controls, including the emergency alarm and emergency stop, shall be grouped at the bottom of the panel and shall have their centerlines no less than 35 inches (35" = 889mm) above the finish floor. See Fig. 28e and 28f.

28.8.3
Buttons: All control buttons shall be at least 3/4 of an inch (3/4" = 19mm) in their smallest dimension. They shall be raised or flush.

28.8 Car Controls
Elevator control panels shall have the following features:

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Location: If cars have center opening doors, controls shall be located on the same wall or walls. If cars have side opening doors, controls shall be located at the side wall or at the front wall next to the door. See Fig. 28d.

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28.8.3
Buttons: All control buttons shall be at least 3/4 of an inch (3/4" = 19mm) in their smallest dimension. They shall be raised or flush.

28.8.4
Tactile, Braille, and Visual Control Indicators: All control buttons shall be designated by Braille and by raised standard alphabet characters for letters, arabic numerals, or standard symbols as shown in Fig. 28c.
Raised and Braille characters and symbols shall comply with 521 CMR 41.00: SIGNAGE.
The call button for the main entry floor shall be designated by a raised star at the left side of the floor designation. See Fig. 28e.
All raised designations for control buttons shall be placed immediately to the left of the button to which they apply.
Applied plates, permanently attached, are an acceptable means to provide raised control designations.
Floor buttons shall be provided with visual indicators to show when each call is registered. The visual indicators shall be extinguished when each call is answered.

28.9 Car Position Indicators
In elevator cars, a visual car position indicator shall be provided in compliance with the following:

28.9.1
Location: The car position indicator shall be located above the car control panel or over the door to show the position of the elevator in the hoistway.

28.9.2
Visual and Audible: As the car passes or stops at a floor served by the elevators, the corresponding numerals shall illuminate and an audible signal shall sound.
Numerals shall be a minimum of 1 1/2 inch (1 1/2" = 38mm) high and shall be illuminated on a contrasting background.
The audible signal shall be no less than 20 decibels with a frequency no higher than 1500 Hz.
An automatic verbal announcement of the floor number at which a car stops or which a car passes may be substituted for the audible signal.

28.10 Emergency Communications
Where a service location is maintained in a building, a two-way emergency communication system shall be provided between the elevator car and the service location.

28.10.1
The highest operable part of a two-way communication system shall be a maximum of 48 inches (48" = 1219mm) from the floor of the car.

28.10.2
It shall be identified by a raised symbol and lettering complying with 521 CMR 41.00, SIGNAGE, and located adjacent to the device.

28.10.3
The emergency intercommunication system shall not require voice communication. Lights that indicate that emergency contact has been made and is being responded to would meet this requirement.

28.10.4
If the system uses a handset, the length of the cord from the panel to the handset shall be at least 29 inches (29" = 737mm). Said handsets shall be equipped with hearing amplification.

28.10.5
If the system is located in a closed compartment the compartment door hardware shall conform to 521 CMR 39.00, CONTROLS.

28.11 Illumination Levels
The level of illumination at the car controls, platform, car threshold and landing sill shall be at least five footcandles (53.8 lux).

41.1 General
The following types of signage shall be provided:

41.1.1
Signs that designate permanent rooms and spaces shall comply with 521 CMR 41.2, 41.5 and 41.6. These include toilet room signs, room numbers, stair signs, etc.
Exception: Building directories, menus, and all other signs that are temporary are not required to comply.

41.1.2
Other signs that provide direction to, or information about, functional spaces of the building shall comply with 521 CMR 41.3, 41.4, and 41.6.

41.1.3
Elements and spaces of accessible facilities which shall be identified by the International Symbol of Accessibility (See Fig. 41a) and which shall comply with 521 CMR 41.7, Symbols of Accessibility are:
Parking spaces designated as reserved for individuals with disabilities;
Accessible passenger loading zones;
Accessible entrances when not all are accessible (inaccessible entrances shall have directional signage to indicate the route to the nearest accessible entrance);
Accessible toilet and bathing facilities when not all are accessible.
Emergency egress signs, which are required to be illuminated.

41.2 Mounting Location and Height
Where permanent identification is provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall.

41.2.1
Mounting location shall allow a person to approach within three inches (3" = 76mm) of signage without encountering protruding objects or standing within the swing of a door.

41.2.2
Mounting height shall be 60 inches (60" = 1524mm) above the finish floor to the centerline of the sign.

41.3 Character Proportion
Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1, and a stroke-width-to-height ratio between 1:5 and 1:10.

41.4 Character Height
Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read.

41.4.1
The minimum height of suspended or overhead characters is three inches (3" = 76mm) and is measured using an upper case X.

41.4.2
Lower case characters are permitted.

41.5 Raised and Brailled Characters and Pictorial Symbol Signs
Shall comply with the following:

41.5.1
Letters and numerals shall be raised one thirty-second of an inch (1/32" = 0.8mm), upper case, sans serif or simple serif type.

41.5.2
Letters and/or numerals shall be accompanied with Grade 2 Braille.

41.5.3
Raised characters shall be at least e of an inch (e" = 16mm) high, but no higher than two inches (2" = 51mm).

41.5.4
Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram. The border dimension of the pictogram shall be six inches (6" = 152mm) minimum in height.

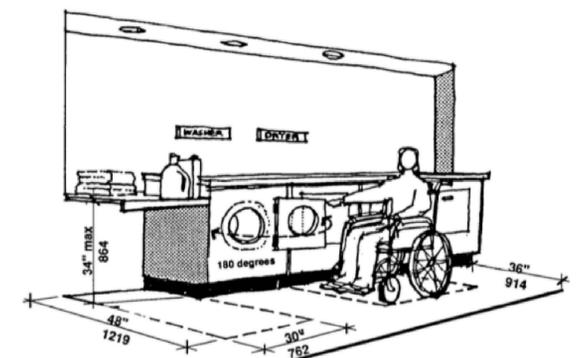
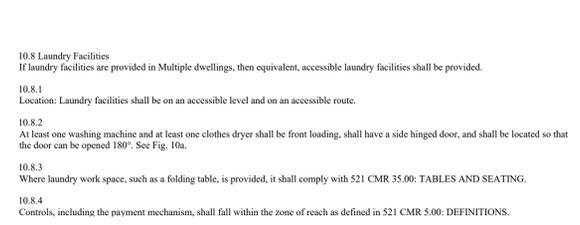
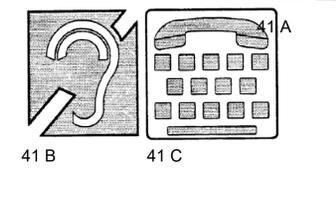
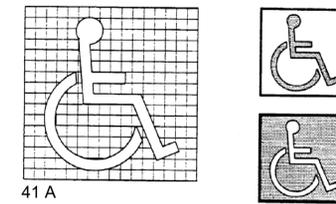
41.6 Finish and Contrast
The characters and background of signs shall be eggshell, matte, or other non-glare finish. Characters and symbols shall contrast with their background: either light characters on a dark background or dark characters on a light background.

41.7 Symbols of Accessibility
Facilities and elements required to be identified as accessible by 521 CMR 41.1.3 shall use the international symbol of accessibility. The symbol shall be displayed as shown in Fig. 41a.

41.8 Volume Control Telephones
Telephones required to have a volume control under 521 CMR 37.5, shall be identified by a sign containing a depiction of a telephone handset with radiating sound waves.

41.9 Text Telephones (TTY)
Text telephones (TTY) required by 521 CMR 37.8, Text Telephones shall be identified by the international TTY symbol (See Fig. 41c). In addition, if a facility has a public text telephone (TTY), directional signage indicating the location of the nearest text telephone (TTY) shall be placed adjacent to all banks of telephones that do not contain a text telephone (TTY). Such directional signage shall include the international TTY symbol. If a facility has no banks of telephones but a public text telephone (TTY) is available, the directional signage shall be provided at the entrance (e.g., in a building directory).

41.10 Assistive Listening Systems
In assembly areas where permanently installed assistive listening systems are required by 521 CMR 14.5, Assistive Listening Devices the availability of such systems shall be identified with signage that includes the international symbol of access for hearing loss. See Fig. 41b.



6.1 Wheelchair Passage Width
The minimum clear width for single wheelchair passage shall be 36 inches (36" = 914mm) except for a reduction to 32 inches (32" = 813mm) and that reduction shall not exceed a linear distance of 24 inches (24" = 610mm). See Fig. 6a.

6.2 Width for Wheelchair Passing
The minimum width for two wheelchairs to pass is 60 inches (60" = 1524mm) See Fig. 6b.

6.3 Wheelchair Turning Space
The space required for a wheelchair to make a 180-degree turn is a clear space of 60 inches (60" = 1524mm) diameter (See Fig. 6c) or a T-shaped space. See Fig. 6d.

6.4 Clear Floor or Ground Space for Wheelchairs
shall comply with the following:

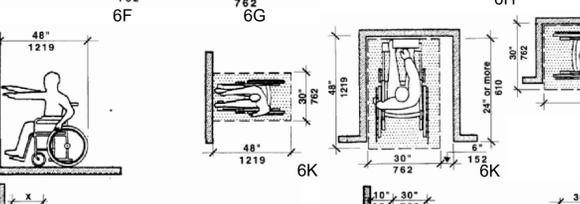
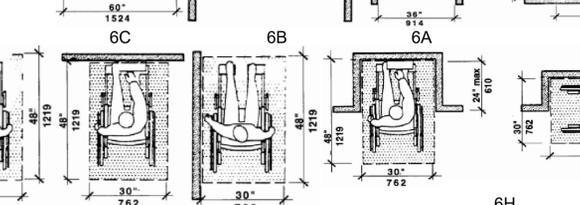
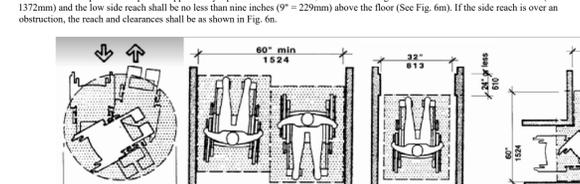
6.4.1
Size and Approach: The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 inches by 48 inches (30" x 48" = 762mm x 1219mm) (See Fig. 6e). The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object (See Fig. 6f and 6g). Clear floor or ground space for wheelchairs may be part of the knee space required under objects.

6.4.2
Relationship of Maneuvering Clearance to Wheelchair Spaces: One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjust another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances shall be provided as shown in Fig. 6h and 6j.

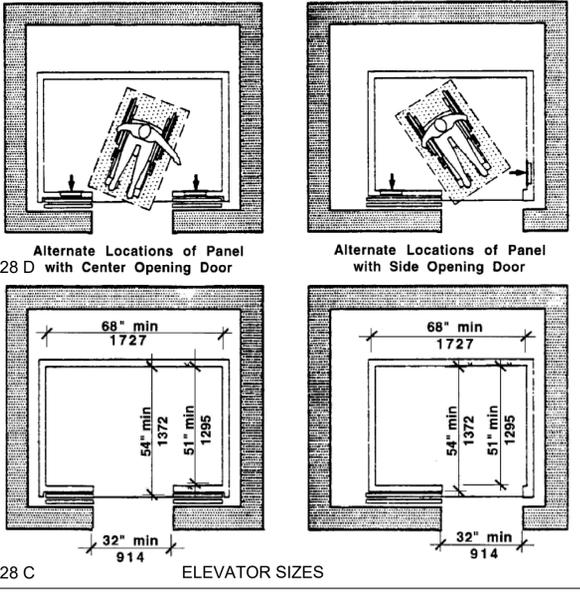
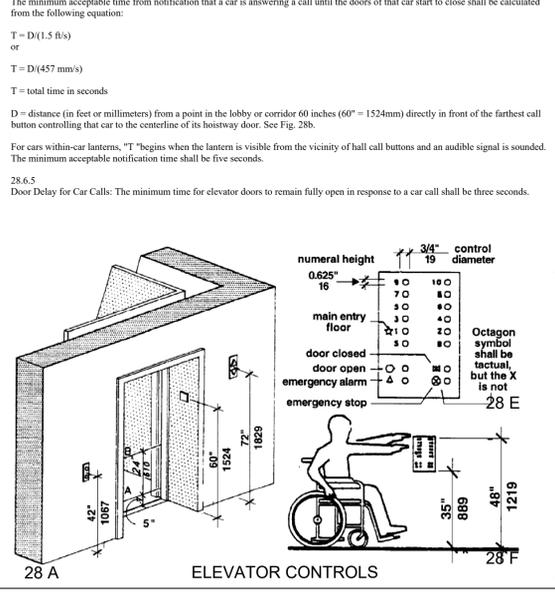
6.4.3
Surfaces for Wheelchair Spaces: Clear floor space for wheelchairs shall comply with 521 CMR 29, Floor Surfaces.

6.5 Forward Reach
If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 48 inches (48" = 1219mm) (See Fig. 6k). The minimum low forward reach is 15 inches (15" = 381mm). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Fig. 6l.

6.6 Side Reach
If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (54" = 1372mm) and the low side reach shall be no less than nine inches (9" = 229mm) above the floor (See Fig. 6m). If the side reach is over an obstruction, the reach and clearances shall be as shown in Fig. 6n.



NOTE: X shall be less than or equal to 25" (635 mm), Z shall be greater than X. When X is less than 20" (508 mm), then Y shall be 48" (1219 mm) max. When X is 20" to 25" (508 to 635 mm), then Y shall be 44" (1118 mm) max.



Location

**PROPOSED RESIDENTIAL BUILDING
17 KENSINGTON AVE
SOMERVILLE, MA**

Choo & Company, Inc.

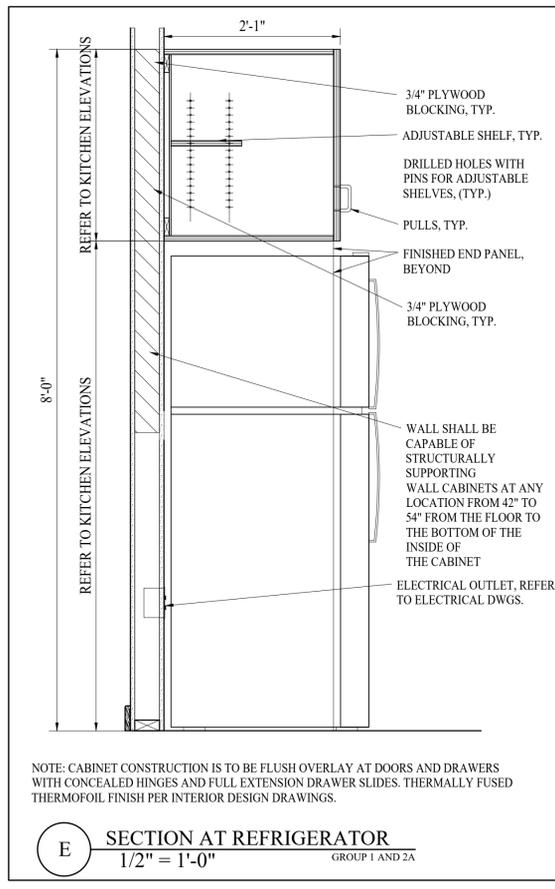
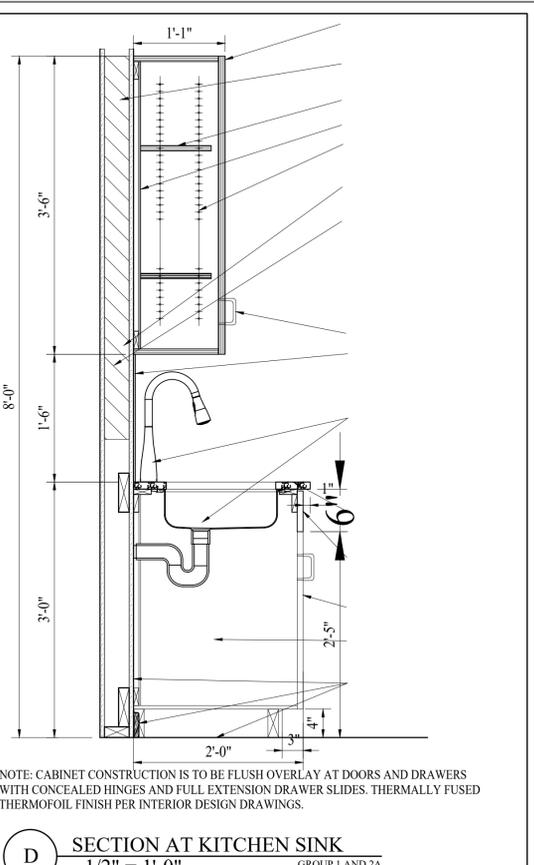
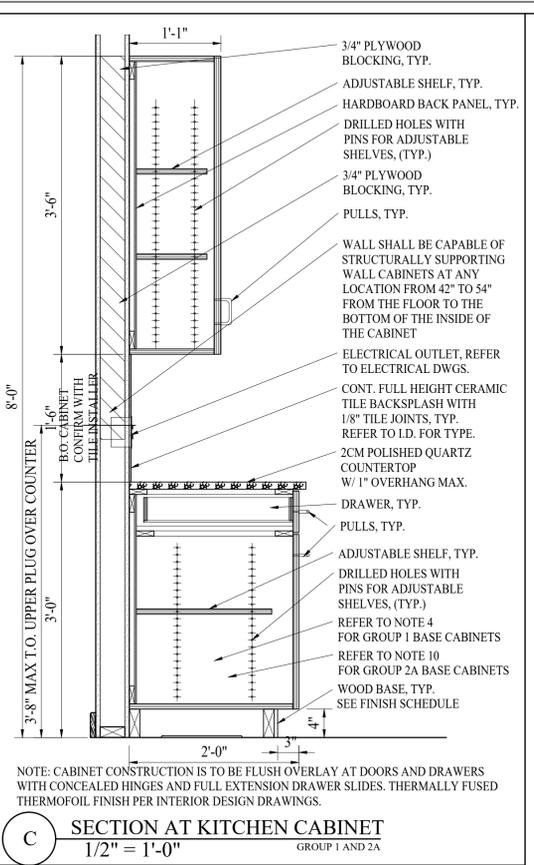
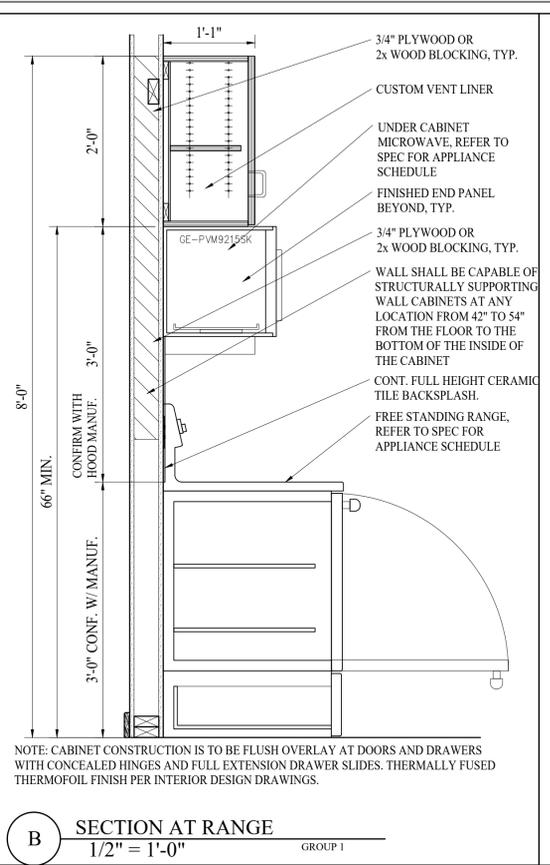
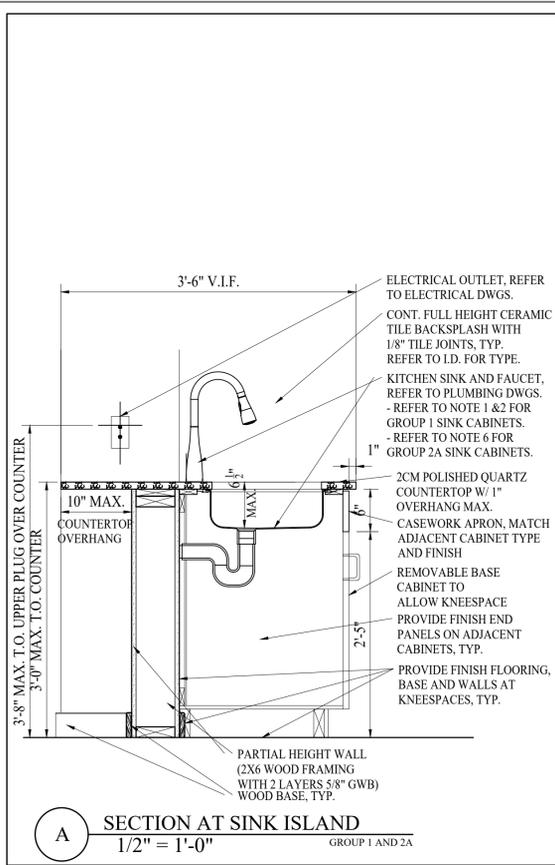
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