Multi-Family Build Out

275 Lafayette Street, Salem, MA

Owner:
MD Property Development, Corp
42 Lincoln Avenue
Lynnfield, MA 01940

Architect:
Seger Architects, Inc.
83 North Street
Salem, MA 01970
Phone: 978-744-0208

Structural:
McBrie, LLC
797 Trunpike Street, 2nd floor
North Andover, MA 01845
Phone: 978-646-0097

MEP:
Crossfield Engineering, Inc.
921 Salem St., Unit 1
Groveland, MA 01834
Phone: 978-372-8880

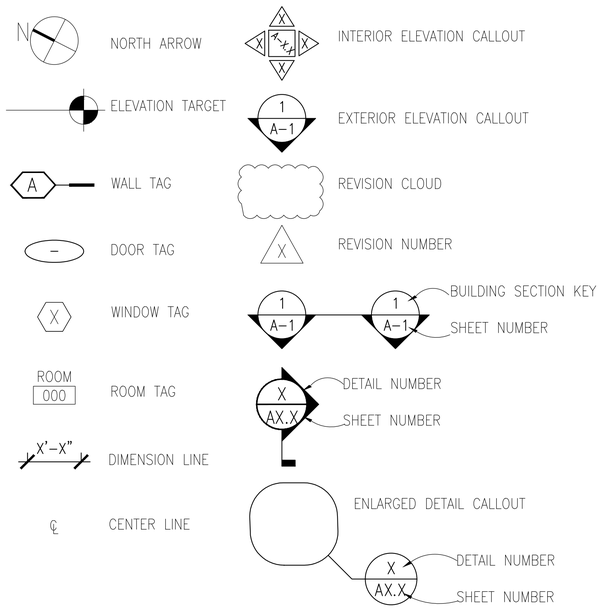
Civil:
Griffin Engineering Group
495 Cabot Street
Beverly, MA 0915
Phone: 978-972-5111

Landscape:
Seth Berkowitz
70 Park Street
Somerville, MA 02143

GENERAL NOTES

1. These documents are the property of the architect and shall not be copied, duplicated, altered, modified or revised in any way without the expressed written approval of the architect.
2. To the best of the architects' knowledge these construction documents are in conformance with the requirements of the building authorities having jurisdiction over this type of construction and occupancy.
3. It is the intent of the architect to delineate these documents as accurate as possible for the purpose of graphic representation. Do not "scale" these documents. The dimensions shown are to take precedence over scaling the documents. The general contractor shall take full responsibility for any incorrect work and any repair of said work as a result of scaling the documents.
4. All work performed by the general contractor shall comply and conform with local and state building codes, ordinances and regulations, along with all other authorities having jurisdiction. The general contractor is responsible to be aware of these requirements and governing regulations.
5. The general contractor shall thoroughly review and become familiar with these documents. Upon review, the general contractor shall document and notify the architect of any errors, omissions, discrepancies and / or inconsistencies prior to the start of any portion of the proposed work. The architect shall review the proposed corrections after the receipt of notification. The discovery of discrepancies and / or conflicts after the start of work shall be the full responsibility of the general contractor to repair or replace.
6. The general contractor shall accept the premises as is, in its current state. The owner shall assume no responsibility for the condition of the existing site, and its contents, at the time of bidding or thereafter.
7. The general contractor shall field verify all existing site conditions, along with dimensions, prior to the start of any portion of the work. All findings, discrepancies and concerns shall be brought to the owners' attention in written format.
8. The general contractor shall be responsible for all work and materials represented on these documents including the work and materials furnished by subcontractors and vendors.
9. Deviations from these documents in the construction phase shall be reviewed by the architect and the owner prior to the start of work in question. Any deviations from these documents without prior review, shall be the sole responsibility of the general contractor.
10. It is the sole responsibility of the general contractor to determine erection procedure, means and methods and sequence of construction.
11. The general contractor is responsible to produce and comply with an approved construction schedule acceptable to the owner's expectations.

SYMBOLS LEGEND



PROJECT INFORMATION

PROJECT:	MULTI-FAMILY CONVERSION AND ADDITION
LOCATION:	275 LAFAYETTE STREET, SALEM, MA
DESCRIPTION OF WORK:	CONSTRUCT OF NEW 3 STORY BUILDING WITH 5 RESIDENTIAL UNITS. PROVIDE A TOTAL OF 8 PARKING SPACES FOR THE 5 PROPOSED UNITS.
APPLICABLE CODES:	2015 IBC w/ MA STATE 9TH EDITION AMENDMENTS MA STATE ELECTRICAL CODE MA STATE PLUMBING CODE MA STATE MECHANICAL CODE
CONSTRUCTION TYPE:	TYPE 5B
ZONING DISTRICT:	R1/R3 – RESIDENTIAL ONE FAMILY/MULTI-FAMILY

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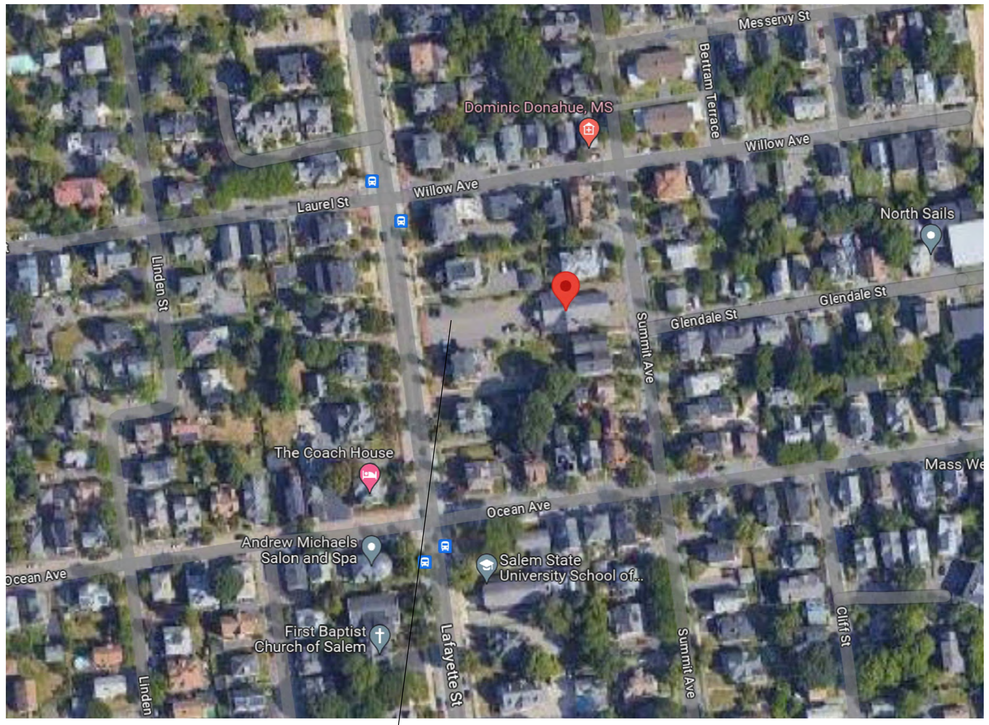

N
Locus Map
SCALE: N.T.S.

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PROJECT ARCHITECT

SEAL

STRUCTURAL ENGINEER:
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CIVIL:
Griffin Engineering Group
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Beverly, MA 01915
P: 978-927-5111

MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION:
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P: 978-372-8880

PROJECT CONSULTANTS

275 Lafayette Multi-Family Build Out

275 Lafayette St. Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

Job No.:	2022-020
Date:	Apr 19, 2024
Scale:	As Noted
Designed By:	DR
Drawn By:	JM
Checked By:	JAS
Approved By:	JAS

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COVER

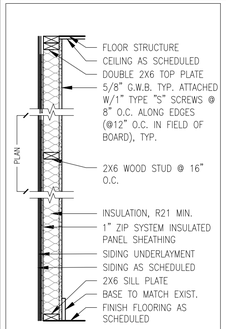
SHEET NAME

COVER

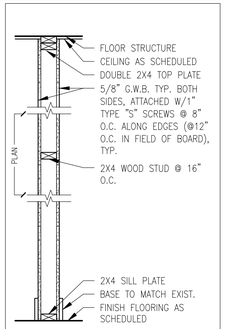
SHEET NO.

4/19/24 – PERMIT SET

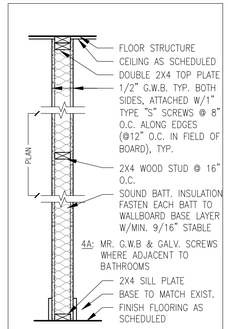
WALL PARTITION SCHEDULE



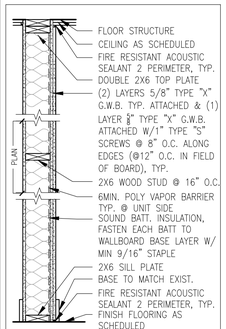
1 EXTERIOR PARTITION WALL	FIRE RATING	BASED ON UL RATING
	N/A	N/A



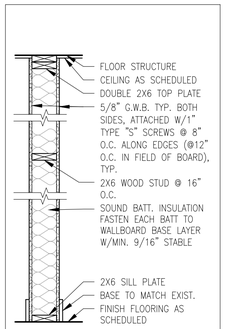
2 INTERIOR PARTITION WALL	FIRE RATING	BASED ON UL RATING
TYP. PARTITION	N/A	N/A



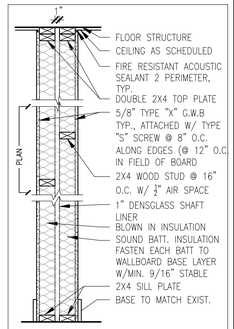
3 INTERIOR PARTITION WALL	FIRE RATING	BASED ON UL RATING
TYP. ACOUSTIC PARTITION	N/A	N/A
3A INTERIOR PARTITION WALL	FIRE RATING	BASED ON UL RATING
2X6 STUD @ BATHROOM	N/A	N/A



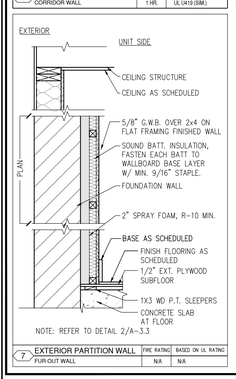
4 RATED PARTITION WALL	FIRE RATING	BASED ON UL RATING
CORRIDOR WALL	1 HR.	UL U419 (SIM.)



5 INTERIOR PARTITION WALL	FIRE RATING	BASED ON UL RATING
TYP. PLUMBING PARTITION	N/A	N/A



6 INTERIOR PARTITION WALL	FIRE RATING	BASED ON UL RATING
TYP. PLUMBING PARTITION	1 HR.	UL U341



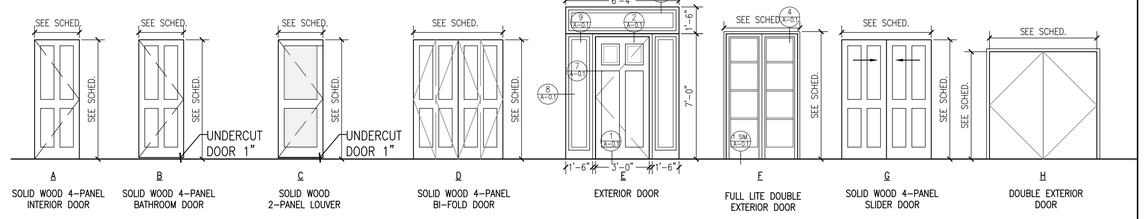
7 EXTERIOR PARTITION WALL	FIRE RATING	BASED ON UL RATING
FUR OUT WALL	N/A	N/A

DOOR SCHEDULE

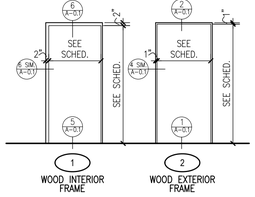
#	SIZE		DOOR TYPE	DOOR FRAME	THRESHOLD	HARDWARE	REMARKS
	WIDTH	HEIGHT					
001	2'-8"	6'-8"	A	1	–	PRIVACY	
002	4'-0"	6'-8"	D	1	–	DUMMY	
003	2'-6"	6'-8"	B	1	MARBLE	PRIVACY	
004	2'-10"	6'-8"	A	1	–	PASSAGE	
005	2'-4"	6'-8"	A	1	–	PASSAGE	
006	2'-4"	6'-8"	A	1	–	PASSAGE	
007	6'-0"	6'-8"	G	1	–	SLIDER	
008	6'-0"	6'-0"	H	2	ALUM.	ENTRY	
101	3'-0"	6'-8"	E	2	ALUM	ENTRY	
102	3'-0"	6'-8"	A	1	–	ENTRY	45 MIN. RATED
103	5'-0"	6'-8"	G	1	–	SLIDER	
104	2'-4"	6'-8"	B	1	MARBLE	PRIVACY	
105	2'-10"	6'-8"	A	1	–	PASSAGE	
106	3'-0"	6'-8"	A	1	–	PASSAGE	
201	3'-0"	6'-8"	A	1	–	ENTRY	45 MIN. RATED
202	4'-0"	6'-8"	F	1	ALUM	ENTRY	
203	2'-4"	6'-8"	B	1	MARBLE	PRIVACY	
204	2'-8"	6'-8"	A	1	–	PASSAGE	
205	2'-10"	6'-8"	A	1	–	PASSAGE	
206	2'-4"	6'-8"	A	1	–	PASSAGE	
207	2'-8"	6'-8"	A	1	–	PRIVACY	
208	2'-6"	6'-8"	A	1	–	SLIDER	
209	5'-0"	6'-8"	G	1	–	ENTRY	
301	3'-0"	6'-8"	A	1	–	ENTRY	45 MIN. RATED
302	2'-8"	6'-8"	A	1	–	PRIVACY	
303	2'-6"	6'-8"	B	1	MARBLE	PRIVACY	
304	2'-6"	6'-8"	G	1	–	SLIDER	
305	4'-0"	6'-8"	D	1	–	DUMMY	
306	2'-6"	6'-8"	A	1	–	PASSAGE	
307	2'-6"	6'-8"	A	1	–	PASSAGE	

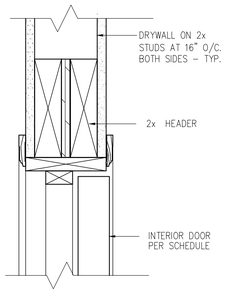
NOTE:

DOOR ELEVATION TYPES

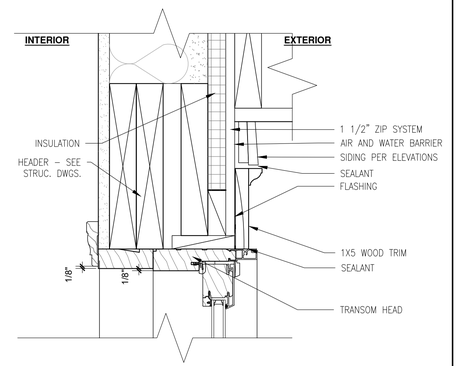


DOOR FRAMES & PRAMES

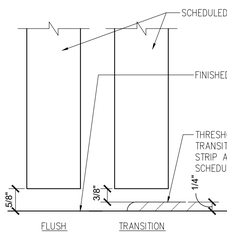




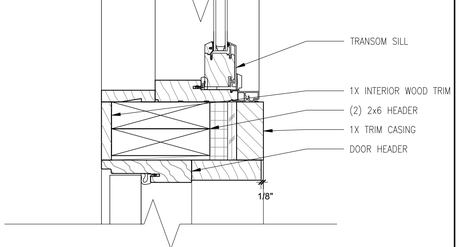
6 INT. DOOR HEAD
SCALE: 3" =1'-0" (JAMB SIM.)



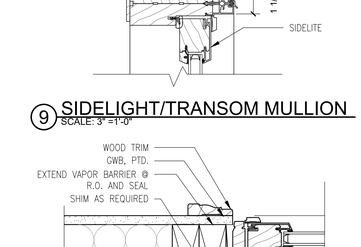
3 TRANSOM HEADER DETAIL
SCALE: 3" =1'-0"



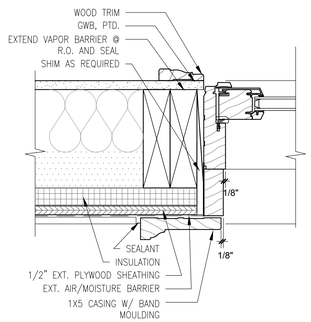
5 INT. DOOR SILLS
SCALE: 3" =1'-0"



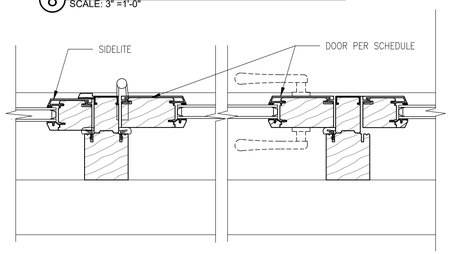
2 DOOR/TRANSOM DETAIL
SCALE: 3" =1'-0"



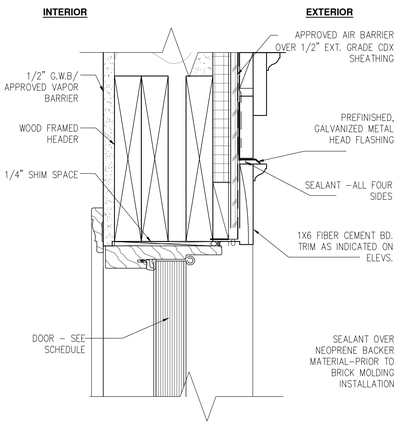
9 SIDELIGHT/TRANSOM MULLION
SCALE: 3" =1'-0"



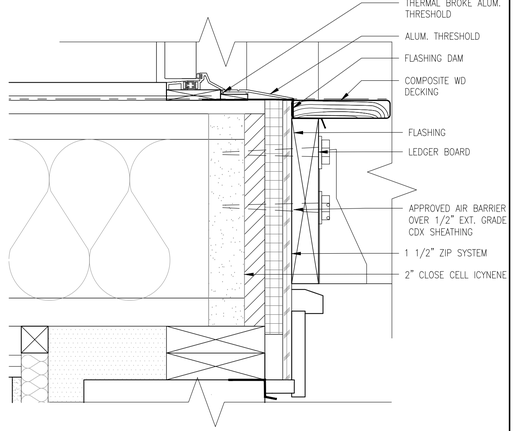
8 TYP. SIDELIGHT JAMB DETAIL
SCALE: 3" =1'-0"



7 DOOR/SIDELIGHT DETAILS
SCALE: 3" =1'-0"



4 EXTERIOR DOOR HEADER DETAIL
SCALE: 3" =1'-0"



1 DOOR SILL DETAIL
SCALE: 3" =1'-0"

ROOM FINISH SCHEDULE

	FLOOR FINISHES	BASES	WALL FINISHES	CEILING FINISHES	
	F1 – LVT F2 – TILE F3 – CARPET F4 – CONCRETE	B1 – PTD WOOD	W1 – PTD GWB W2 – PTD MR GWB	C1 – PTD GWB C2 – PTD MR GWB	

ROOM NAME / TYPE	FLOOR FINISH	BASE	WALL FINISH	CEILING FINISH	REMARKS
LOBBY	F1	B1	W1	C1	
LIVING ROOM	F1	B1	W1	C1	
DINING ROOM	F1	B1	W1	C1	
KITCHEN	F1	B1	W1	C1	
BATH	F2	B1	W2	C2	
BEDROOM	F1	B1	W1	C1	
LAUNDRY	F2	B1	W1	C1	
MECHANICAL	F1	B1	W1	C1	
SPRINKLER ROOM	F4	B1	W2	C2	

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PROJECT ARCHITECT
SEAL

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Groveland, MA 01834
P: 978–372–8880
PROJECT CONSULTANTS

275 Lafayette

275 Lafayette St.
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

Job No.:	2022–020
Date:	Apr 19, 2024
Scale:	As Noted
Designed By:	DR
Drawn By:	JM
Checked By:	JAS
Approved By:	JAS

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PARTITION TYPE, DOOR SCHEDULE, DETAILS

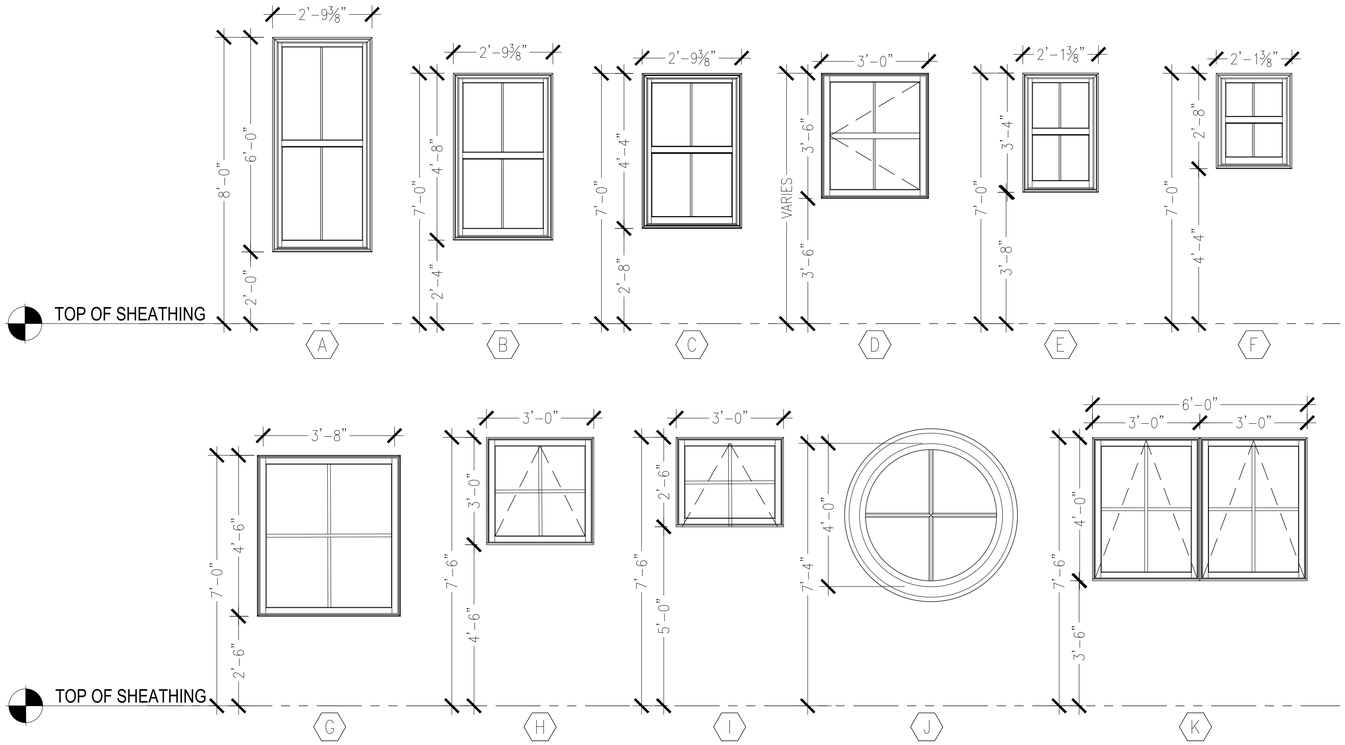
SHEET NAME

A-0.1

SHEET NO.

4/19/24 – PERMIT SET

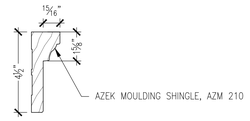
WINDOW ELEVATIONS



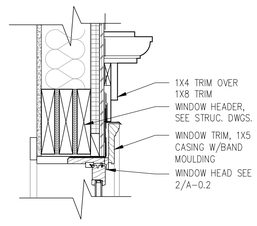
WINDOW SCHEDULE

NOTES:
1) VERIFY ALL OPENING DIMENSIONS PRIOR TO ORDERING.
2) CONTRACTOR TO PROVIDE AND INSTALL ALL FLASHING ACCORDING TO MANUFACTURER'S REQUIREMENTS.
3) WINDOWS SHALL BE JELDWEN SITELINE SDL OR EQUAL
4) G.C. TO VERIFY HEAD AND SILL HEIGHTS. REFER TO BUILDING SECTIONS.
5) ALL WINDOWS TO RECEIVE FIBERGLASS SCREENS

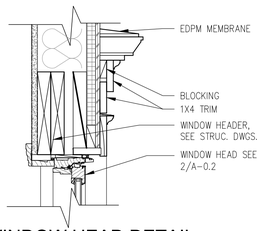
WIN ⬡	MODEL #	QTY.	TYPE	WINDOW DIMENSION (W) x (H)	HD. HT. (A.F.F.)	SILL	JAMB	HEAD
A	SWD3372	16	DOUBLE HUNG	2'-9 3/8" X 6'-0"	8'-0"	1/A-0.2	5/A-0.2	2/A-0.2
B	SWD3355	16	DOUBLE HUNG	2'-9 3/8" x 4'-8"	7'-0"	1/A-0.2	5/A-0.2	2/A-0.2
C	SWD3352	2	DOUBLE HUNG	2'-9 3/8" x 4'-4"	7'-0"	1/A-0.2	5/A-0.2	3/A-0.2
D	SQC3642	5	CASEMENT	3'-0" x 3'-6"	6'-8" / 7'-0" @ 2ND FLOOR	3/A-0.2	7/A-0.2	4/A-0.2
E	SWD2450	2	DOUBLE HUNG	2'-1 3/8" x 3'-4"	7'-0"	1/A-0.2	5/A-0.2	3/A-0.2
F	SWD2532	8	DOUBLE HUNG	2'-8" x 2'-1 3/8"	7'-0"	1/A-0.2	5/A-0.2	3/A-0.2
G	SCC4854	2	CASEMENT	3'-8" x 4'-6"	7'-0"	9/A-0.2	7/A-0.2	4/A-0.2
H	SWA3636	6	AWNING	3'-2" x 3'-0"	7'-6"	9/A-0.2	7/A-0.2	4/A-0.2
I	SWA3630	4	AWNING	2'-8" x 3'-0"	7'-6"	9/A-0.2	7/A-0.2	4/A-0.2
J		1	FIXED ROUND	4'-0"	7'-0"	–	–	–
K	(2) SWA3648	2	AWNING	(2)3'-0" x 4'-0"	7'-6"	9/A-0.2	7/A-0.2	4/A-0.2



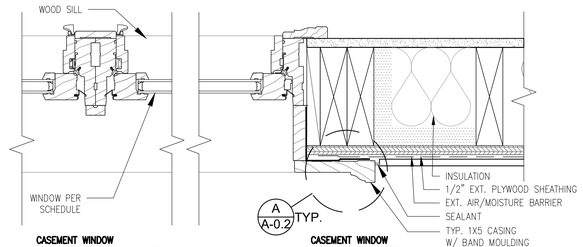
A TYP WINDOW/DOOR CASING
SCALE: 3" =1'-0"



11 WINDOW HEAD DETAIL
SCALE: 1 1/2" =1'-0"

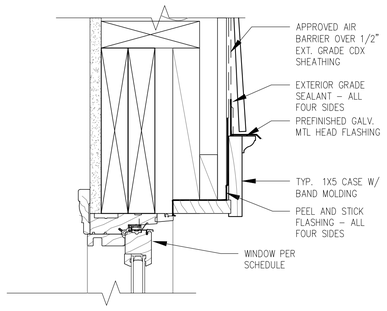


10 WINDOW HEAD DETAIL
SCALE: 1 1/2" =1'-0"

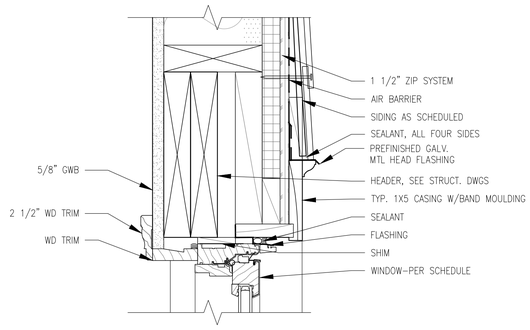


CASEMENT WINDOW
8 MULLION DETAIL
SCALE: 3" =1'-0"

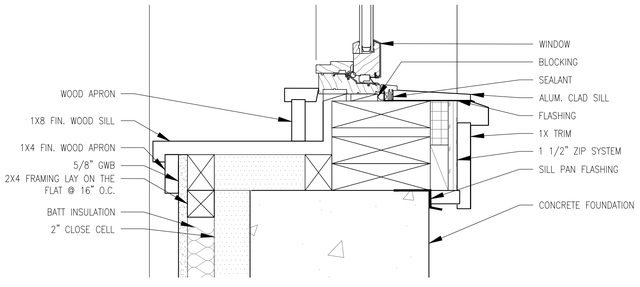
CASEMENT WINDOW
7 JAMB DETAIL
SCALE: 3" =1'-0"



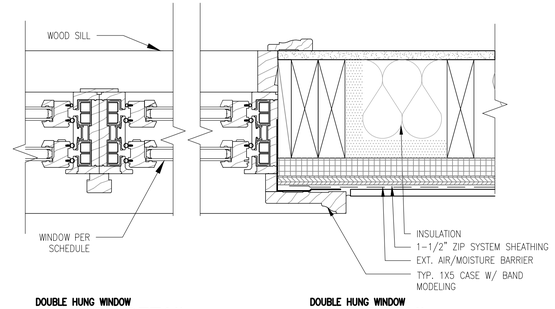
CASEMENT WINDOW
4 TYP. HEAD DETAIL
SCALE: 3" =1'-0"



DOUBLE HUNG WINDOW
2 TYP. HEAD DETAIL
SCALE: 3" =1'-0"

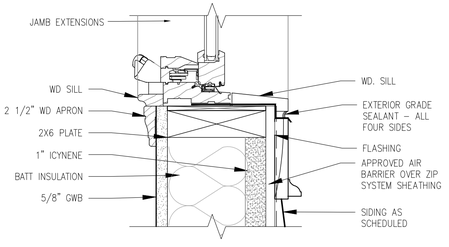


CASEMENT WINDOW
9 SILL DETAIL @ BASEMENT
SCALE: 3" =1'-0"

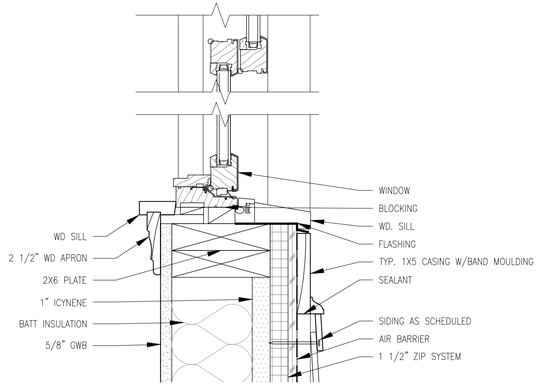


DOUBLE HUNG WINDOW
6 MULLION DETAIL
SCALE: 3" =1'-0"

DOUBLE HUNG WINDOW
5 JAMB DETAIL
SCALE: 3" =1'-0"



CASEMENT WINDOW
3 TYP. SILL DETAIL
SCALE: 3" =1'-0"



DOUBLE HUNG WINDOW
1 TYP. SILL DETAIL
SCALE: 3" =1'-0"

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PROJECT CONSULTANTS

275 Lafayette

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Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

Job No.:	2022–020
Date:	Apr 19, 2024
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Designed By:	DR
Drawn By:	JM
Checked By:	JAS
Approved By:	JAS

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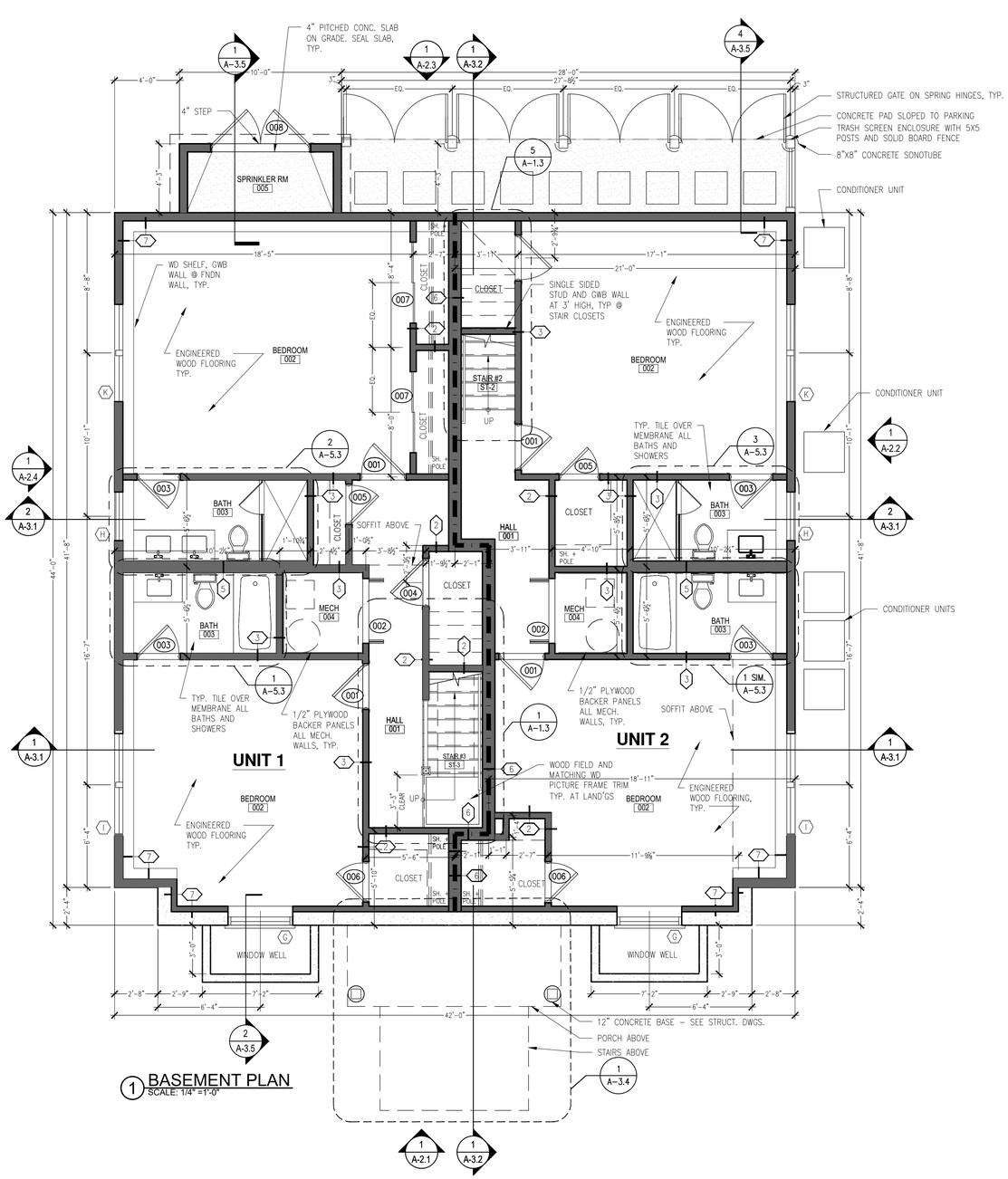
WINDOW SCHEDULE AND DETAILS

SHEET NAME

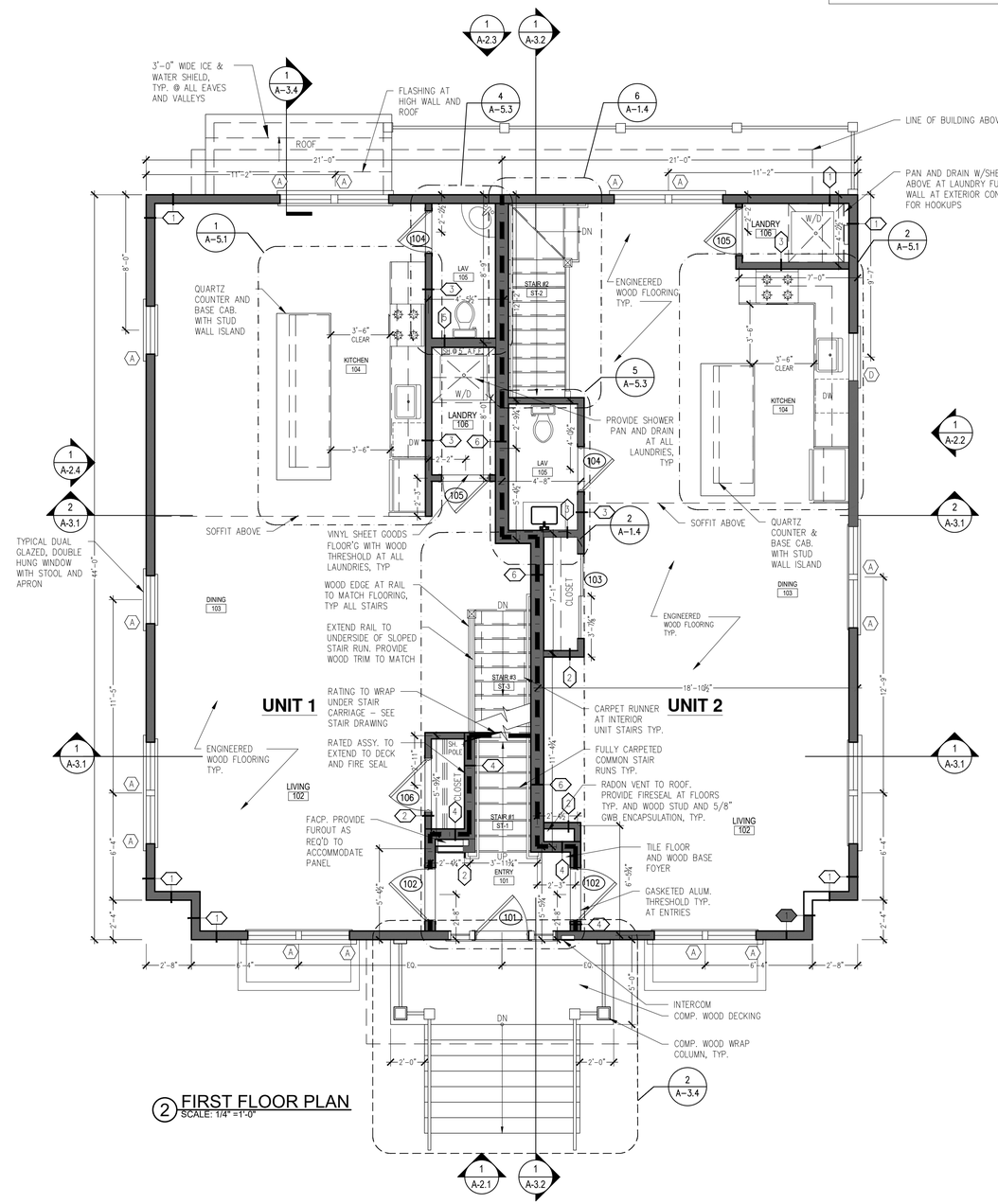
A-0.2

SHEET NO.

4/19/24 – PERMIT SET



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



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

WALL LEGEND

PROPOSED WALL

FIRE RATED DEMISING WALL

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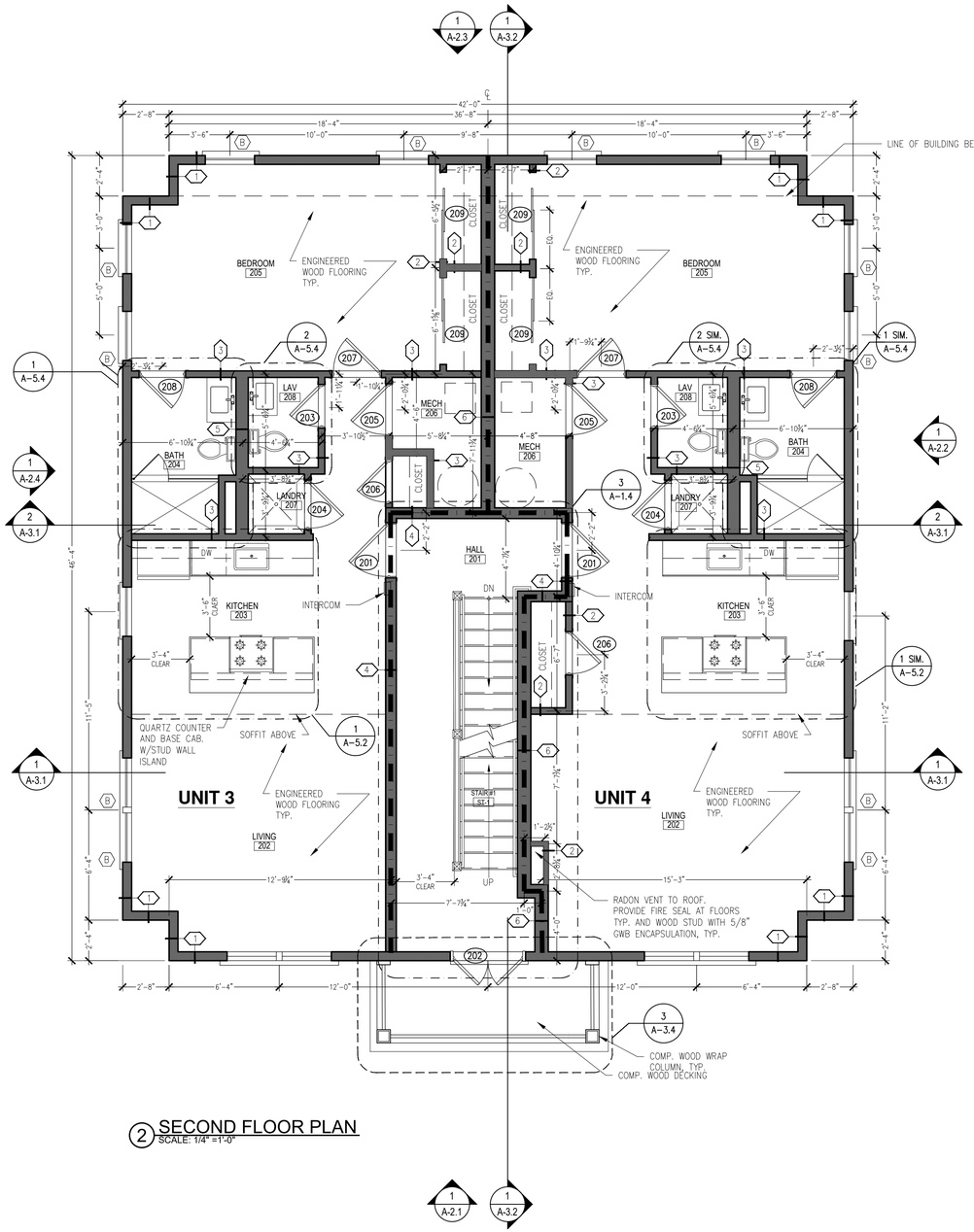
BASEMENT & FIRST FLOOR PLANS

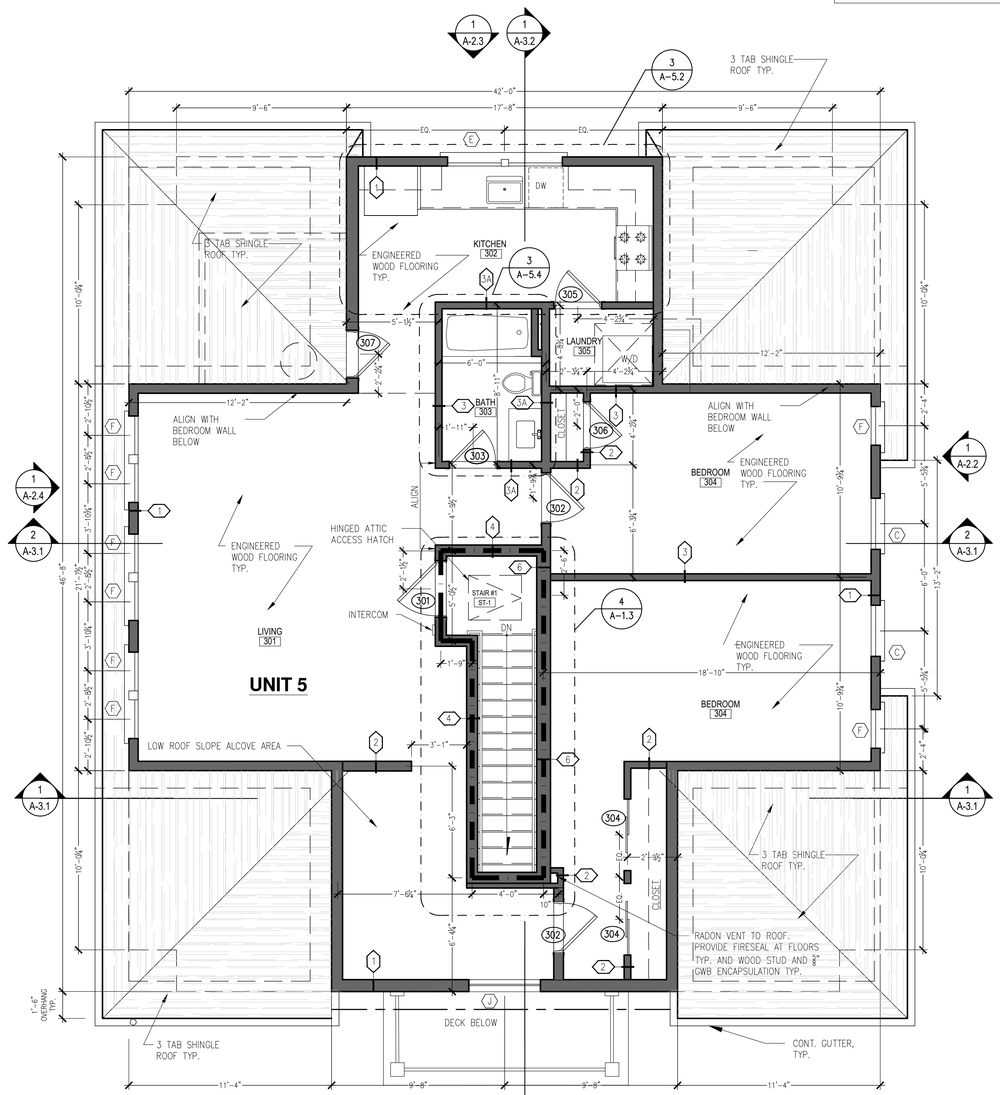
SHEET NAME

A-1.1

SHEET NO.



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



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

WALL LEGEND

PROPOSED WALL

FIRE RATED DEMISING WALL

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Approved By:	JAS

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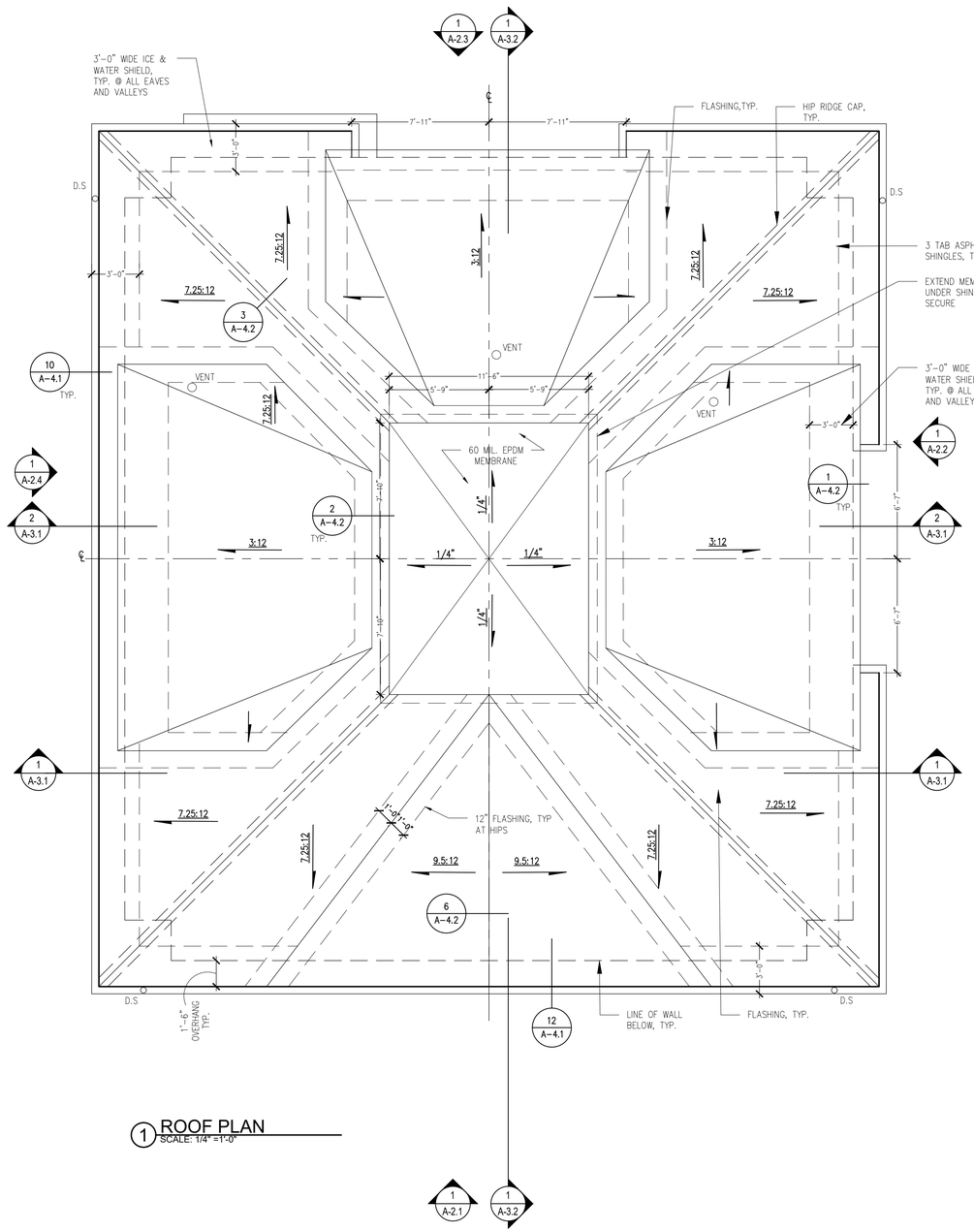
SECOND & THIRD FLOOR PLANS

SHEET NAME

A-1.2

SHEET NO.

4/19/24 – PERMIT SET



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

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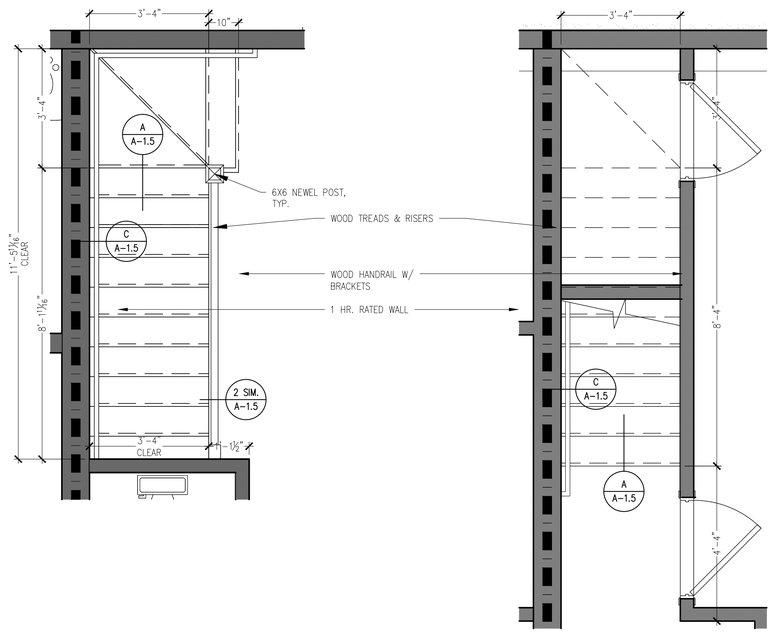
ROOF PLAN

SHEET NAME

A-1.3

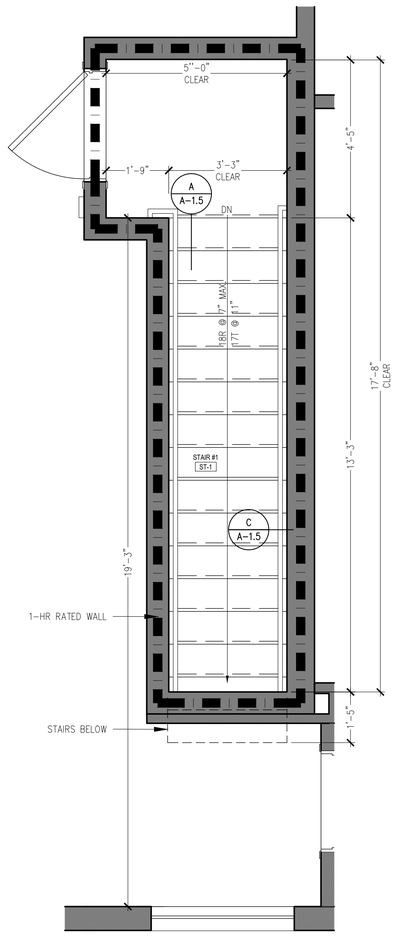
SHEET NO.

4/19/24 – PERMIT SET

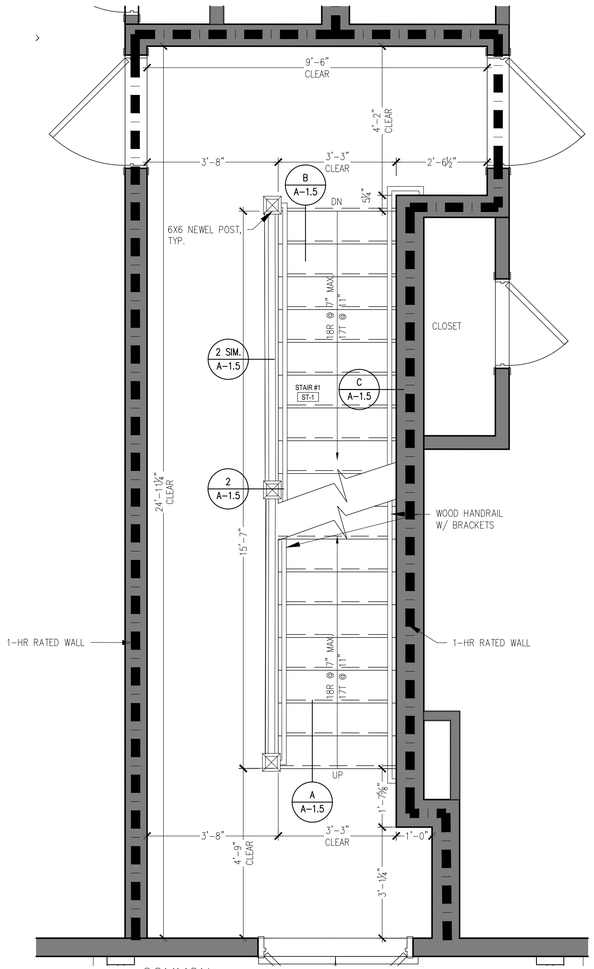


UNIT
6 ENLARGED FIRST FLOOR STAIR #2 PLAN
SCALE: 1/2" =1'-0"

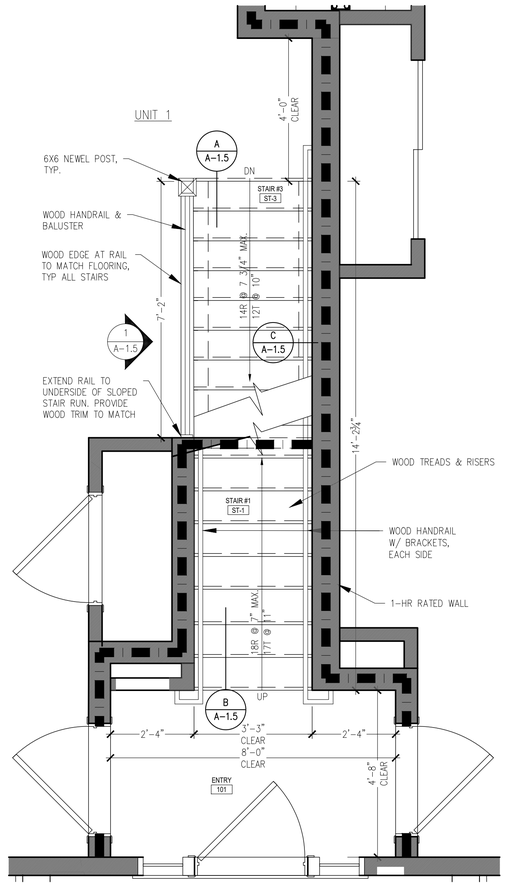
UNIT
5 ENLARGED BASEMENT STAIR #2 PLAN
SCALE: 1/2" =1'-0"



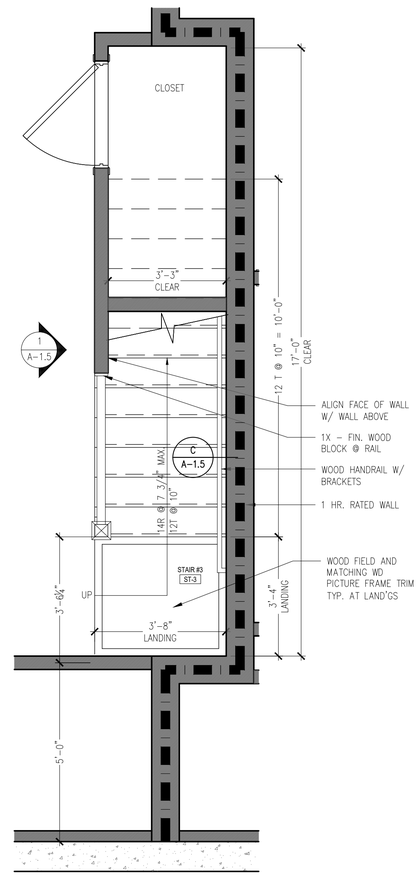
COMMON
4 STAIR #1 ENLARGED THIRD FLOOR PLAN
SCALE: 1/2" =1'-0"



COMMON
3 STAIR #1 ENLARGED SECOND FLOOR PLAN
SCALE: 1/2" =1'-0"



2 STAIR #1/#3 ENLARGED FIRST FLOOR PLAN
SCALE: 1/2" =1'-0"



UNIT
1 STAIR #3 ENLARGED BASEMENT PLAN
SCALE: 1/2" =1'-0"

4/19/24 – PERMIT SET

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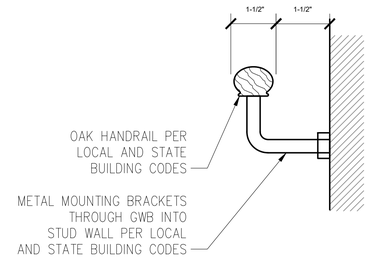
ENLARGED STAIR PLANS

SHEET NAME

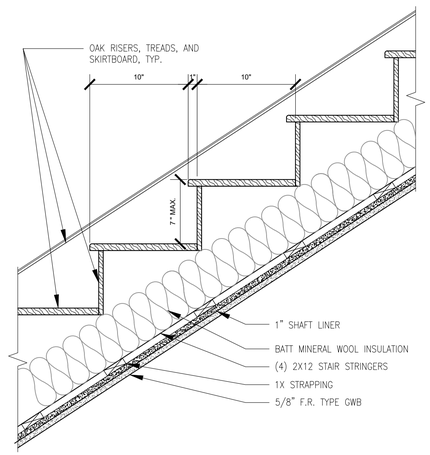
A-1.4

SHEET NO.



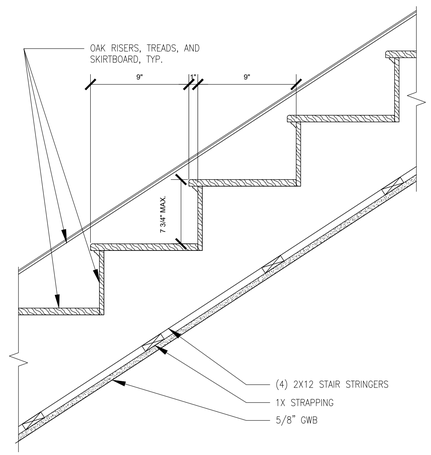
C TYP. STAIR HANDRAIL

SCALE: N.T.S.



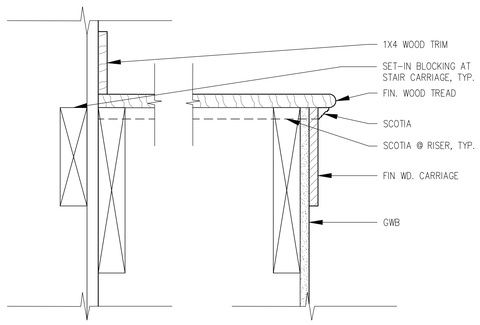
B COMMON @ UNIT STAIR SECTION

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



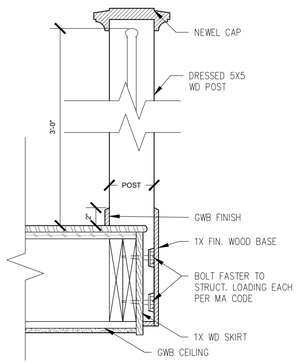
A TYP. UNIT STAIR SECTION

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



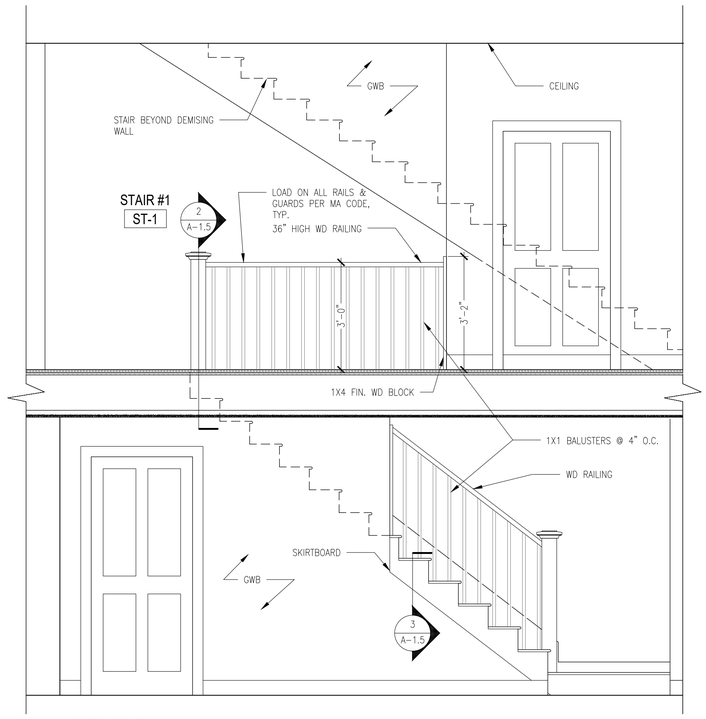
3 DETAIL @ TREAD/SKITBOARD

SCALE: 3" =1'-0"



2 POST DETAIL

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



1 STAIR ELEVATION

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

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Salem, MA

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ENLARGED STAIR ELEVATION AND DETAILS

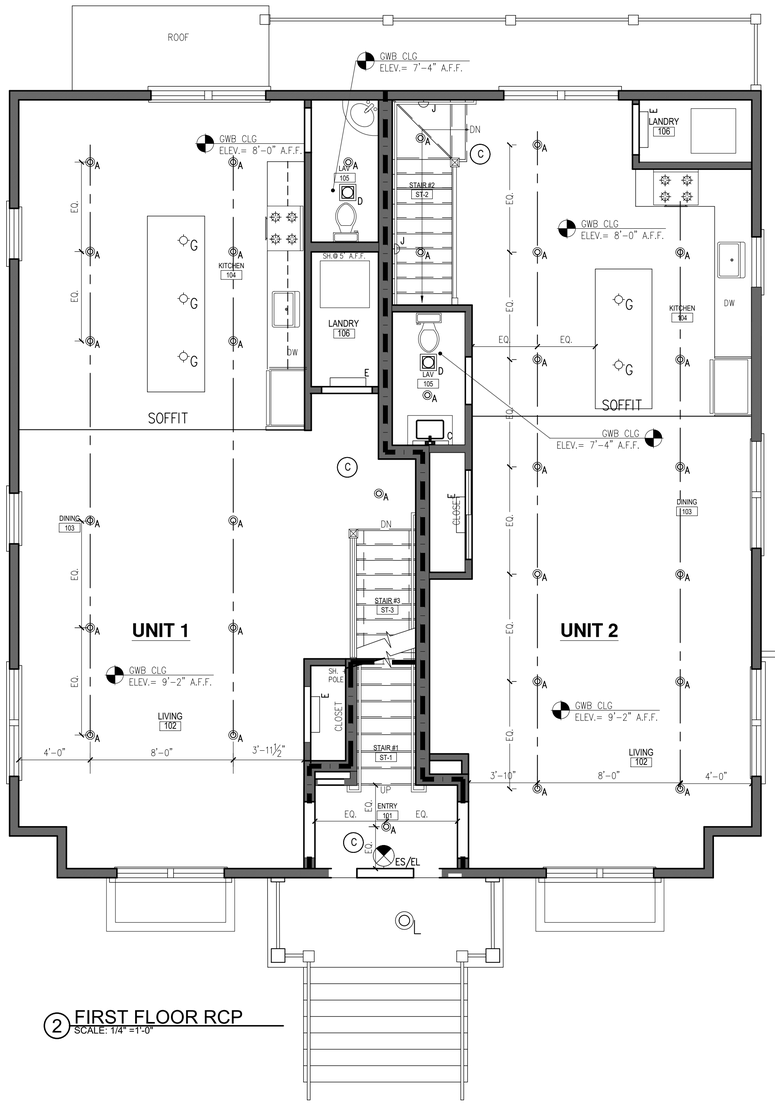
SHEET NAME

A-1.5

SHEET NO.

4/19/24 – PERMIT SET

1 BASEMENT RCP
SCALE: 1/4" =1'-0"



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

CEILING LEGEND

A	A	6" LED RECESSED FICTURE
	AE	EXTERIOR LED RECESSED FIXTURE
	AW	WET LOCATION RECESSED FIXTURE
B	B	SURFACE FIXTURE
C	C	DECORATIVE VANITY LIGHT
D	D	BATH EXHAUST FAN
E	E	CLOSET LIGHT
F	F	UTILITY LIGHT
G	G	DECORATIVE PENDANT FIXTURE
H	H	EXTERIOR WALL FIXURE
I	I	UNDER CABINET LIGHT
J	J	WALL SCONCE @ 6'-8" A.F.F.
K	K	WALL PACK-MOTION SENSOR
L	L	DECORATIVE EXTERIOR FIXTURE
M	M	LED UTILITY FIXTURE
	S	SMOKE DETECTOR
	C	COMOB SMOKE/CO DETECTOR
		EMERGENCY LIGHT
		EXIT SIGN DIRECTIONAL
	ES/EL	COMBO UNIT EXIT SIGN/EMERGENCY LIGHT
	EXT.	WALL SCONE EXTERIOR LITE @ 12' ABOVE GRADE MIN.
CEILING TYPE x'-x" A.F.F.		CEILING HEIGHT TAG

NOTE:
CENTER ALL LIGHTING FIXTURES IN ALL BEDROOMS

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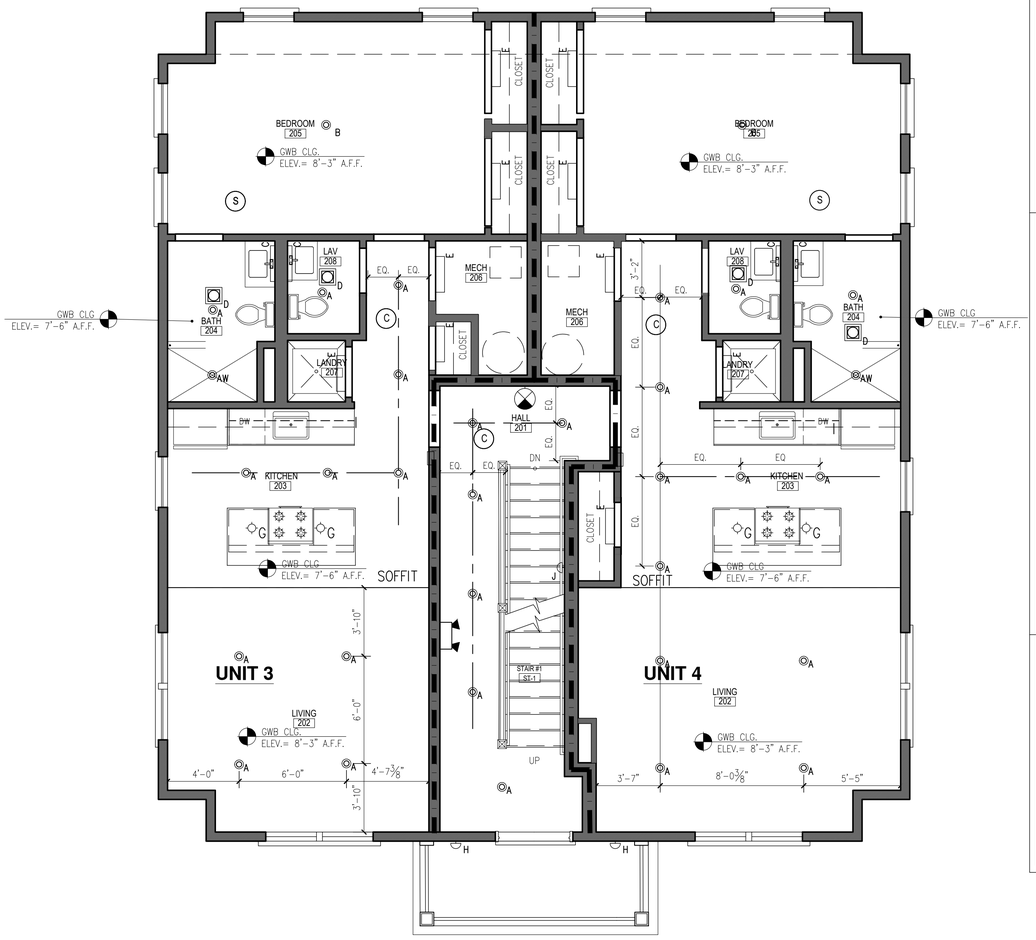
BASEMENT AND FIRST FLOOR RCP

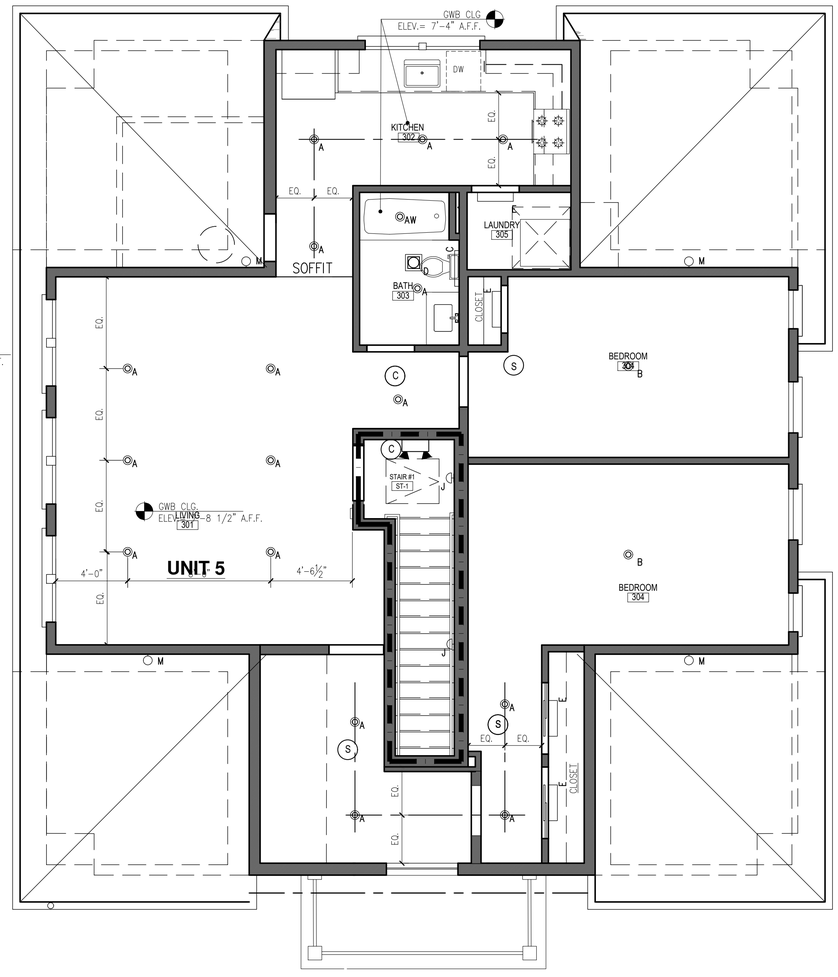
SHEET NAME

A-1.6

SHEET NO.



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



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

CEILING LEGEND

A	A	6" LED RECESSED FICTURE
	AE	EXTERIOR LED RECESSED FIXTURE
	AW	WET LOCATION RECESSED FIXTURE
B	B	SURFACE FIXTURE
C	C	DECORATIVE VANITY LIGHT
D	D	BATH EXHAUST FAN
E	E	CLOSET LIGHT
F	F	UTILITY LIGHT
G	G	DECORATIVE PENDANT FIXTURE
H	H	EXTERIOR WALL FIXURE
I	I	UNDER CABINET LIGHT
J	J	WALL SCONCE @ 6'-8" A.F.F.
K	K	WALL PACK-MOTION SENSOR
L	L	DECORATIVE EXTERIOR FIXTURE
M	M	LED UTILITY FIXTURE
	S	SMOKE DETECTOR
	C	COMOB SMOKE/CO DETECTOR
		EMERGENCY LIGHT
		EXIT SIGN DIRECTIONAL
	ES/EL	COMBO UNIT EXIT SIGN/EMERGENCY LIGHT
	EXT.	WALL SCONE EXTERIOR LITE @ 12' ABOVE GRADE MIN.
	CEILING TYPE x'-x" A.F.F.	CEILING HEIGHT TAG

NOTE:
CENTER ALL LIGHTING FIXTURES IN ALL BEDROOMS

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PROJECT ARCHITECT

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P: 978-646-0097

CIVIL:
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PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

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Drawn By:	JM
Checked By:	JAS
Approved By:	JAS

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SECOND AND THIRD FLOOR RCP

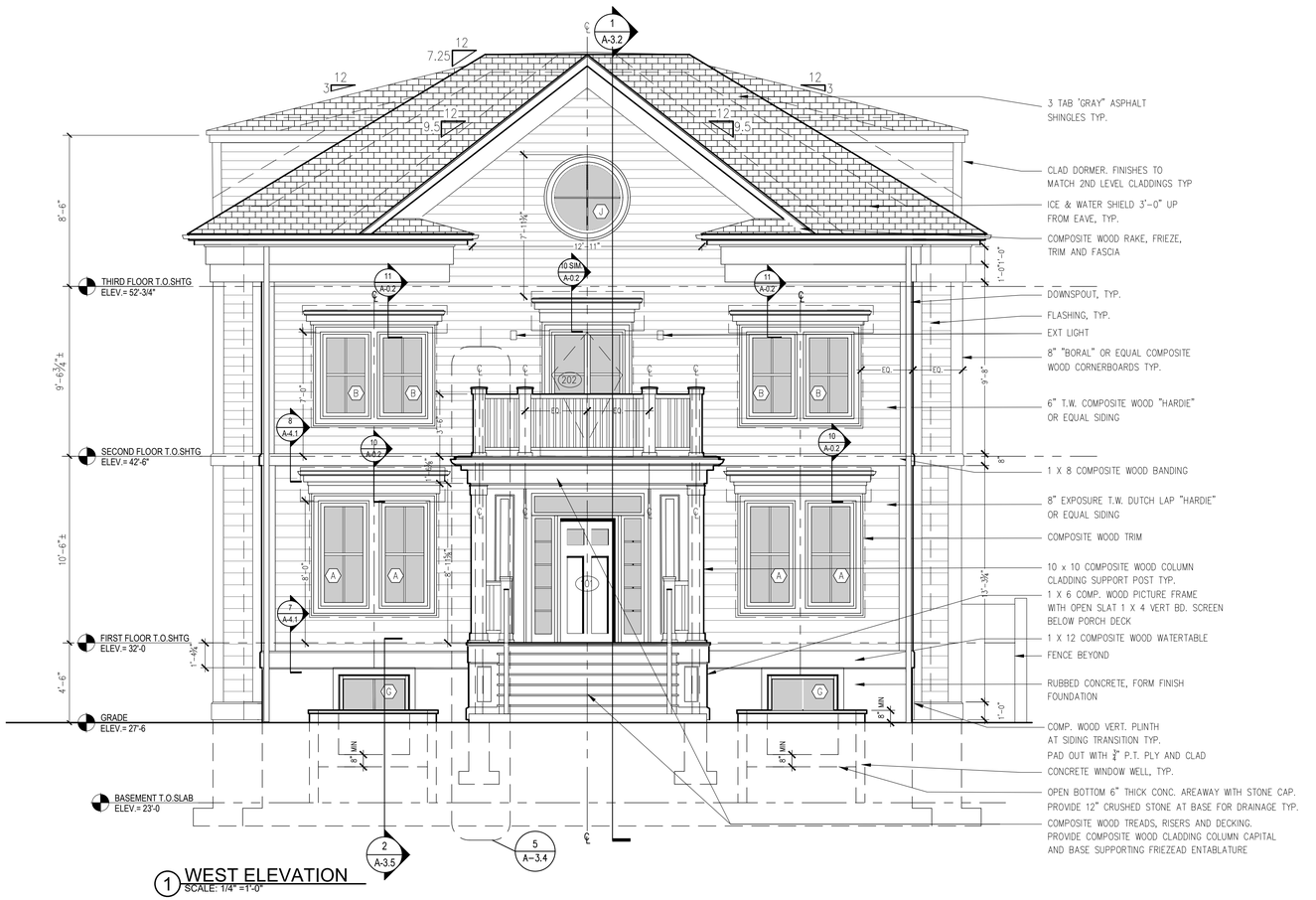
SHEET NAME

A-1.7

SHEET NO.

GENERAL NOTES:

1. FLASH ALL VALLEYS, HIPS AND HIGH WALLS AREAS 8" MIN. EACH LEG OF FLASHING.
2. PROVIDE CONT. AIR MOISTURE EXTERIOR BARRIER, TAPE ALL SEAMS OF "ZIP SYSTEM" AND SEAL TO OTHER BARRIERS FOR CONT. AIR/MOISTURE BARRIER SEALS



1 WEST ELEVATION
SCALE: 1/4" =1'-0"

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EXTERIOR ELEVATIONS

SHEET NAME

A-2.1

SHEET NO.

4/19/24 – PERMIT SET

GENERAL NOTES:

1. FLASH ALL VALLEYS, HIPS AND HIGH WALLS AREAS 8" MIN. EACH LEG OF FLASHING.
2. PROVIDE CONT. AIR MOISTURE EXTERIOR BARRIER, TAPE ALL SEAMS OF "ZIP SYSTEM" AND SEAL TO OTHER BARRIERS FOR CONT. AIR/MOISTURE BARRIER SEALS

1 SOUTH ELEVATION
SCALE: 1/4" =1'-0"

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EXTERIOR ELEVATIONS

SHEET NAME

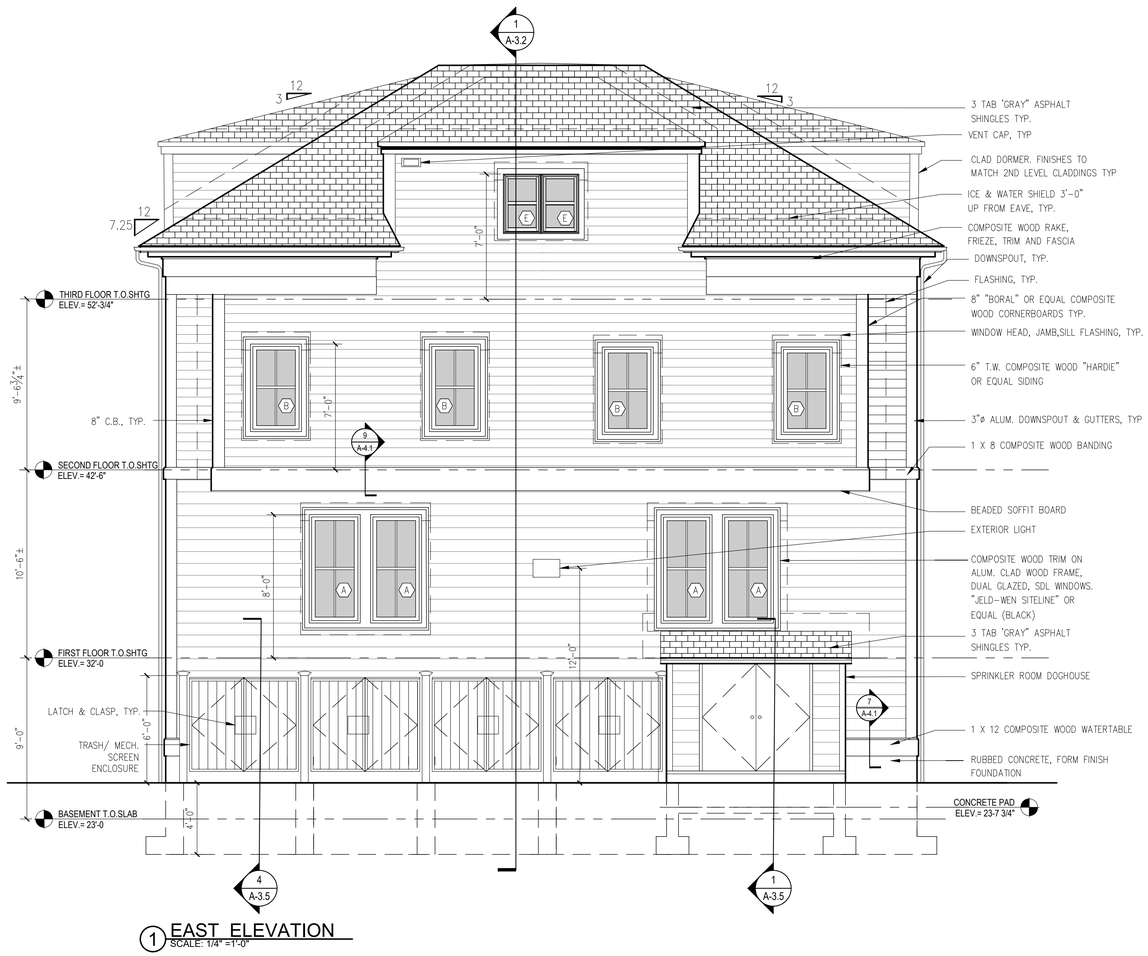
A-2.2

SHEET NO.

4/19/24 – PERMIT SET

GENERAL NOTES:

1. FLASH ALL VALLEYS, HIPS AND HIGH WALLS AREAS 8" MIN. EACH LEG OF FLASHING.
2. PROVIDE CONT. AIR MOISTURE EXTERIOR BARRIER, TAPE ALL SEAMS OF "ZIP SYSTEM" AND SEAL TO OTHER BARRIERS FOR CONT. AIR/MOISTURE BARRIER SEALS



1 EAST ELEVATION
SCALE: 1/4" =1'-0"

4/19/24 – PERMIT SET

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EXTERIOR ELEVATIONS

SHEET NAME

A-2.3

SHEET NO.

GENERAL NOTES:

1. FLASH ALL VALLEYS, HIPS AND HIGH WALLS AREAS 8" MIN. EACH LEG OF FLASHING.
2. PROVIDE CONT. AIR MOISTURE EXTERIOR BARRIER, TAPE ALL SEAMS OF "ZIP SYSTEM" AND SEAL TO OTHER BARRIERS FOR CONT. AIR/MOISTURE BARRIER SEALS

1 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

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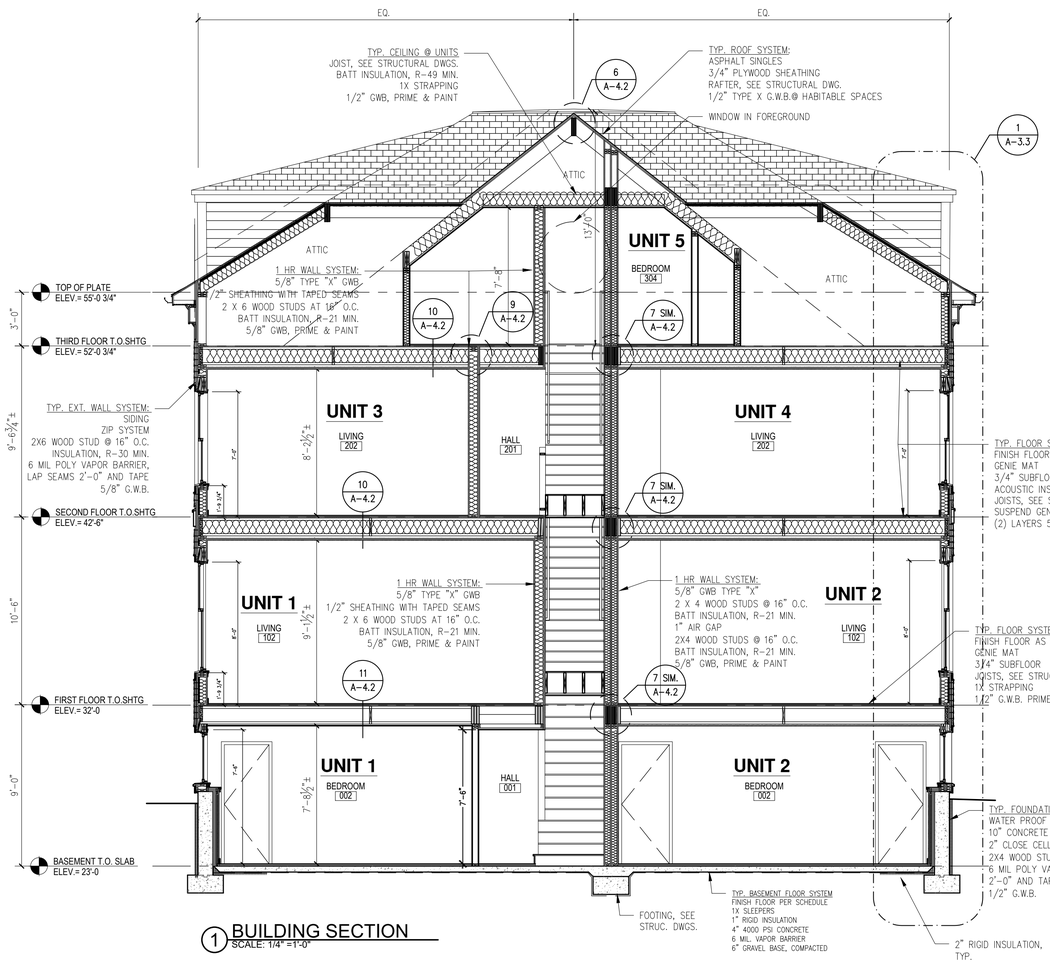
EXTERIOR ELEVATIONS

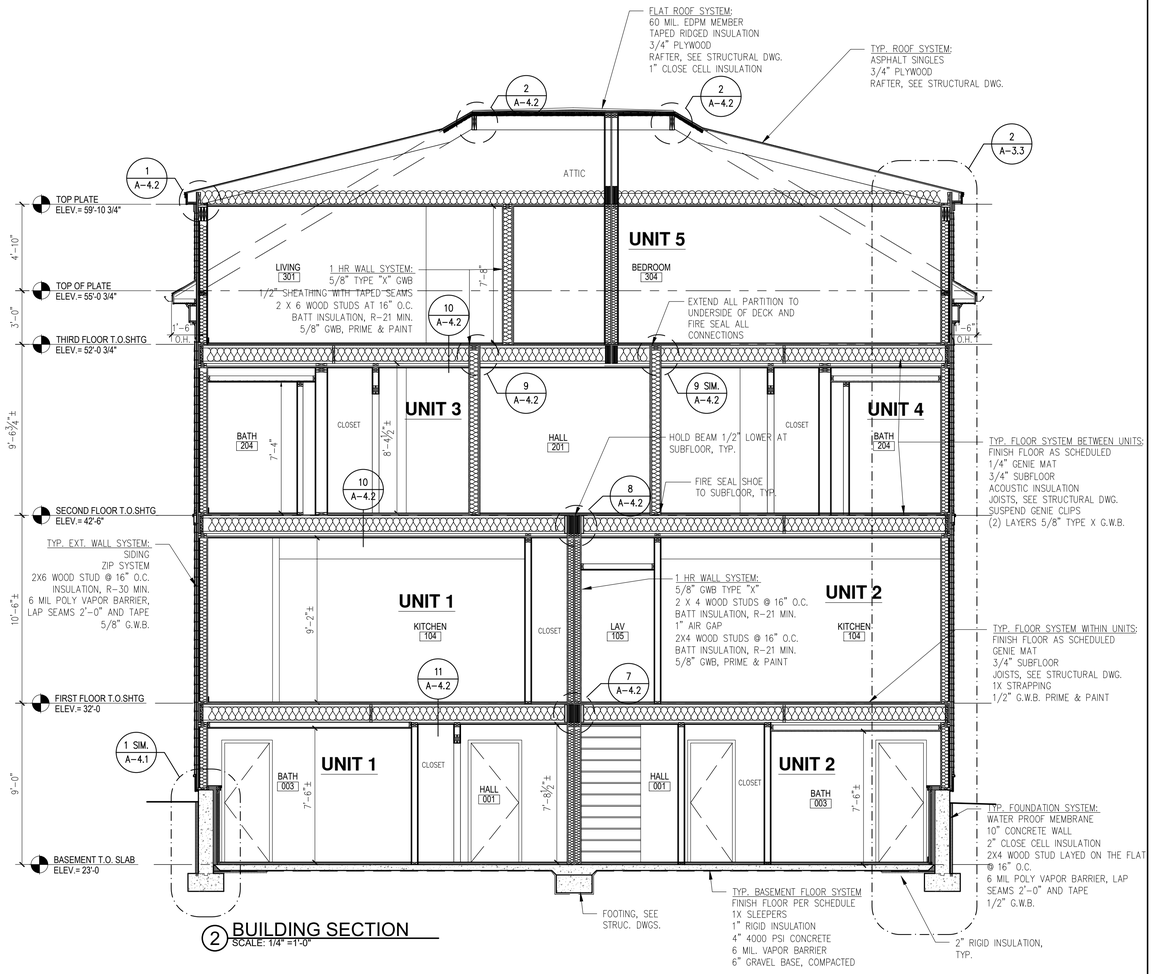
SHEET NAME

A-2.4

SHEET NO.



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



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

NOTE,
PROVIDE BLOCKING AT CEILING FOR ALL INTERIOR PARTITION WALLS

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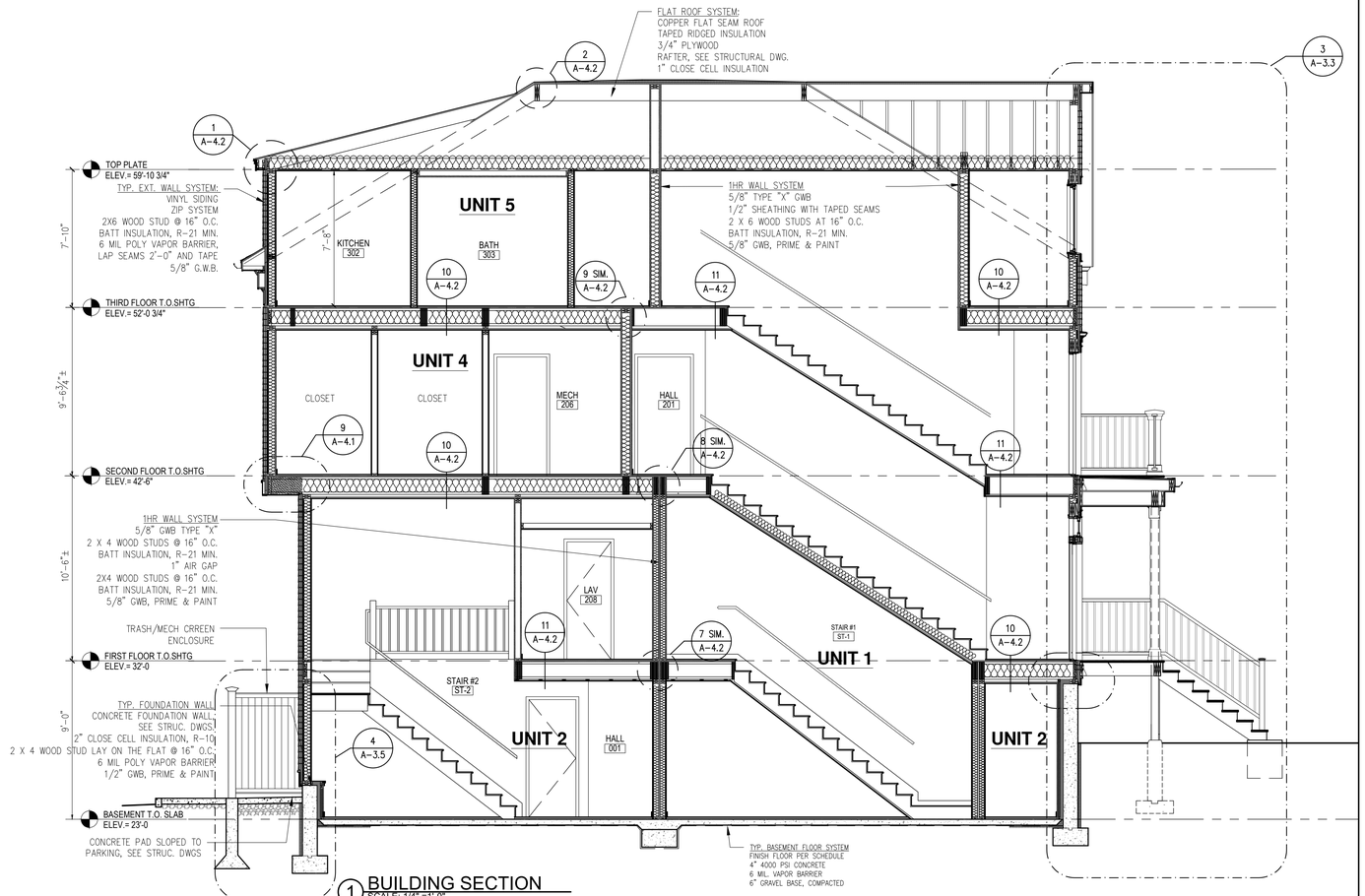
BUILDING SECTIONS

SHEET NAME

A-3.1

SHEET NO.

4/19/24 – PERMIT SET



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

4/19/24 – PERMIT SET

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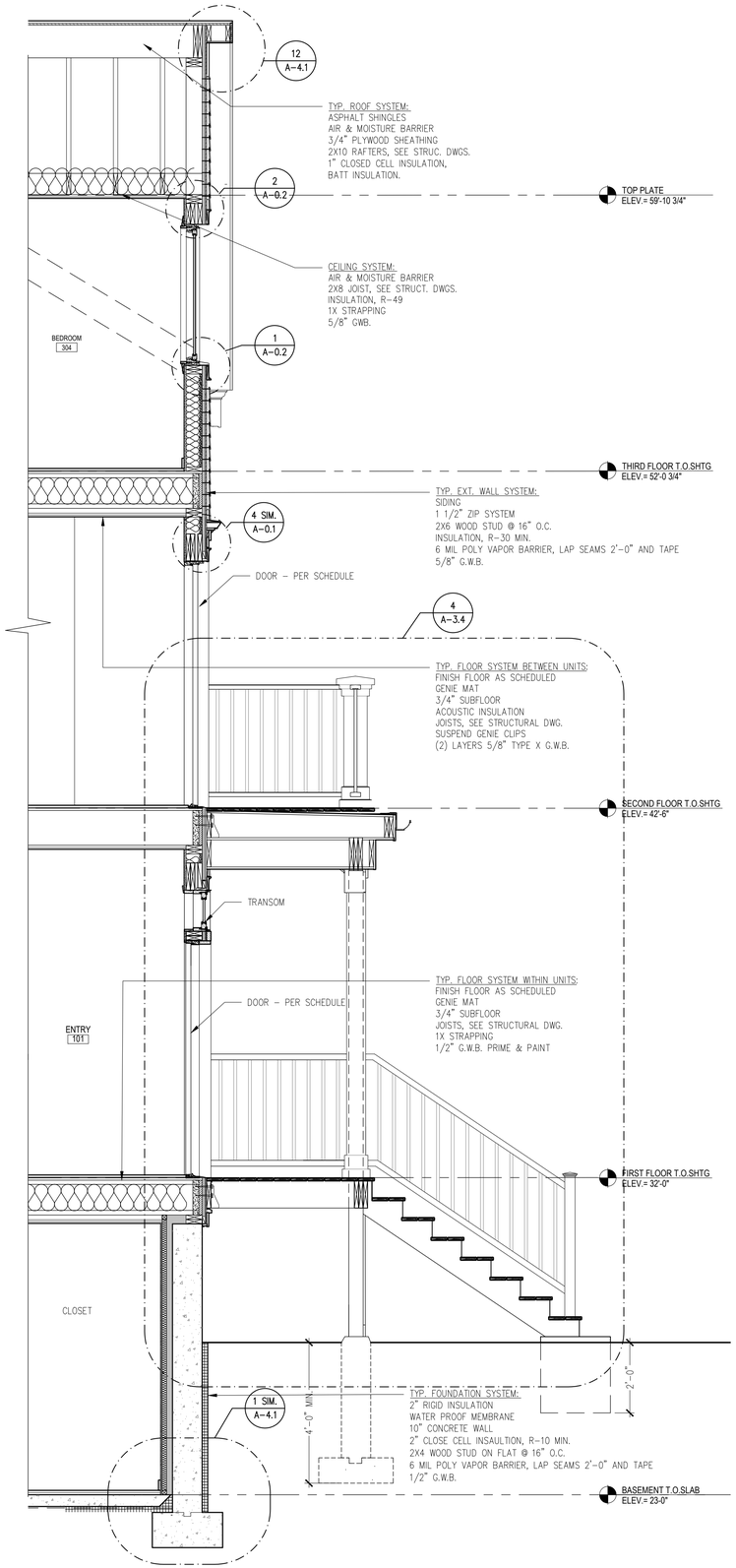
BUILDING SECTIONS

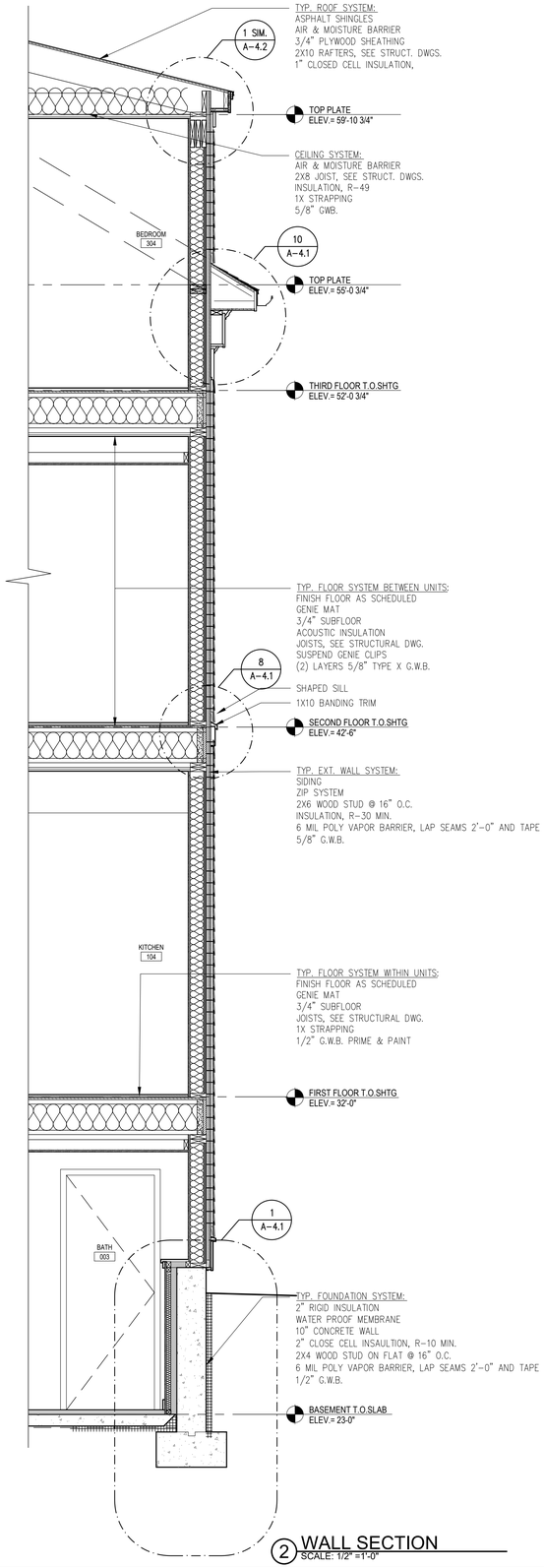
SHEET NAME

A-3.2

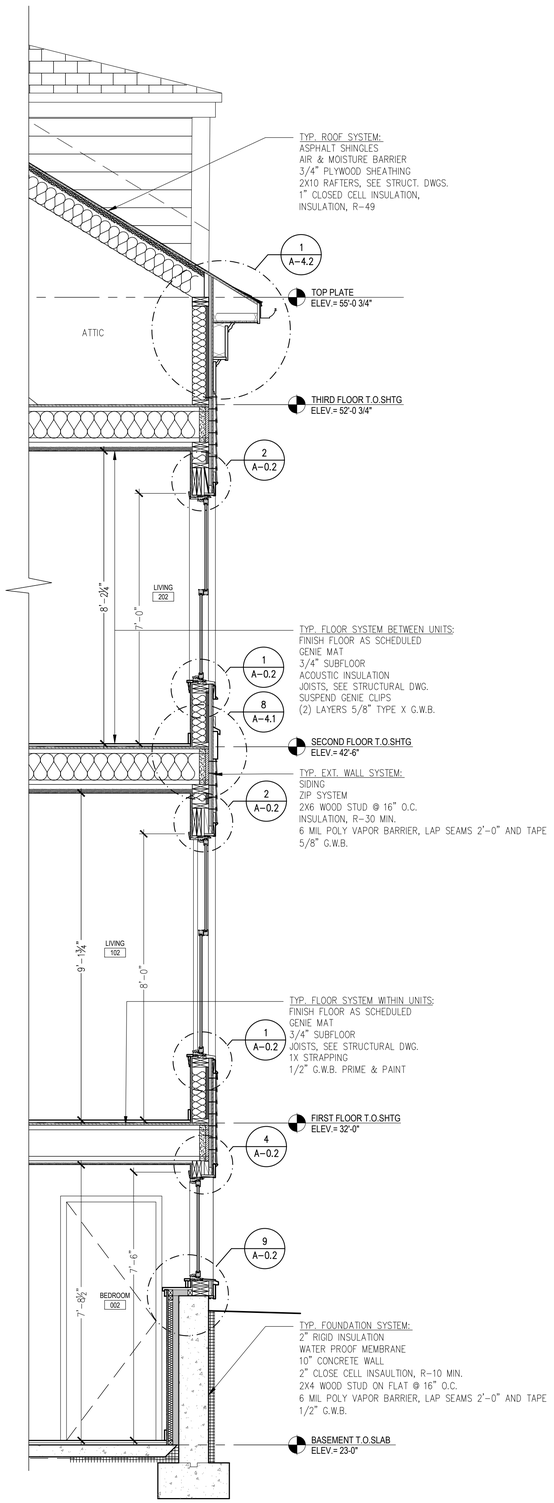
SHEET NO.



3 WALL SECTION
SCALE: 1/2" =1'-0"



2 WALL SECTION
SCALE: 1/2" =1'-0"



1 WALL SECTION
SCALE: 1/2" =1'-0"

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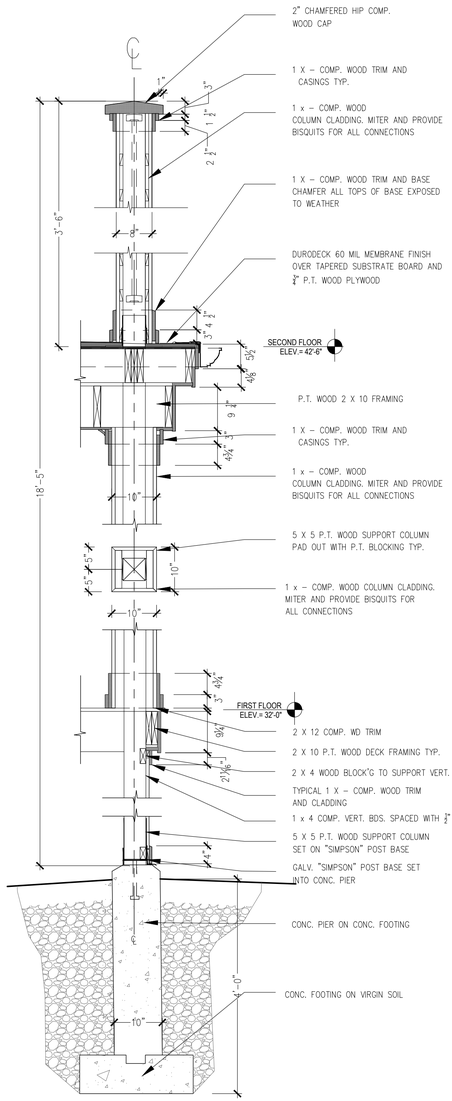
WALL SECTIONS

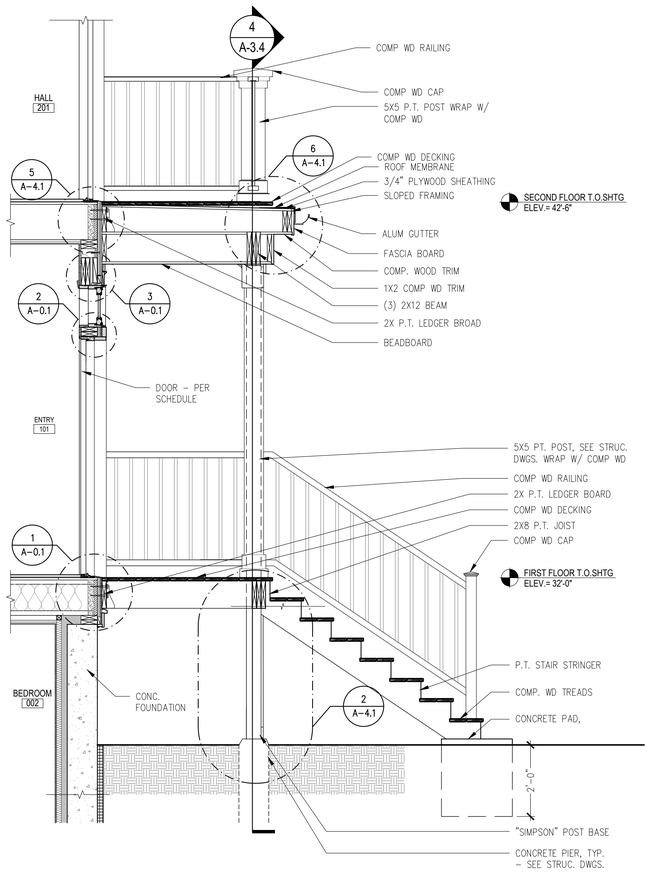
SHEET NAME

A-3.3

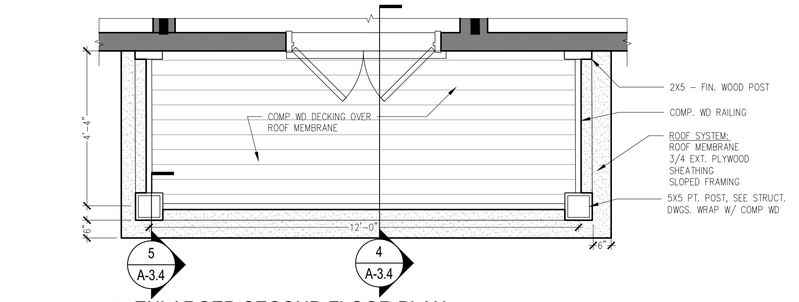
SHEET NO.



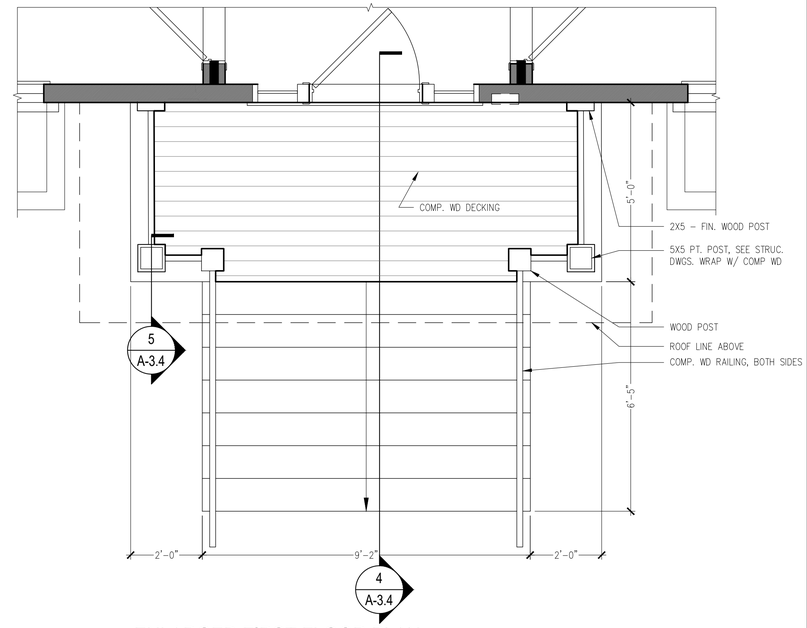
5 PORTICO SECTION
SCALE: 3/4" =1'-0"



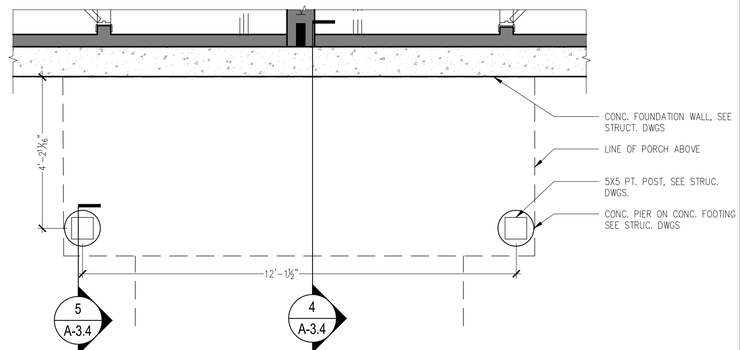
4 SECTION THRU FRONT PORCH
SCALE: 1/2" =1'-0"



3 ENLARGED SECOND FLOOR PLAN
SCALE: 1/2" =1'-0"



2 ENLARGED FIRST FLOOR PLAN
SCALE: 1/2" =1'-0"



1 ENLARGED BASEMENT PLAN
SCALE: 1/2" =1'-0"

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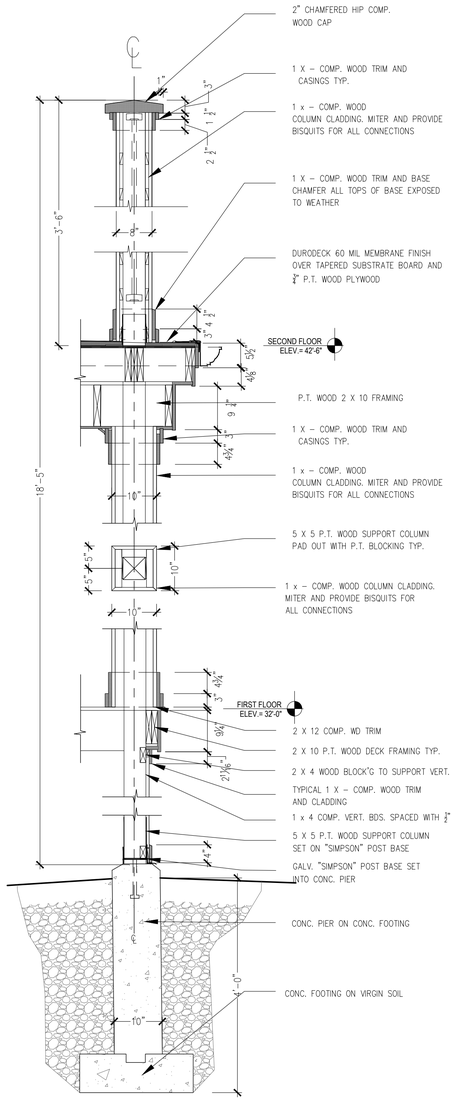
ENLARGED PORTICO PLANS AND SECTIONS

SHEET NAME

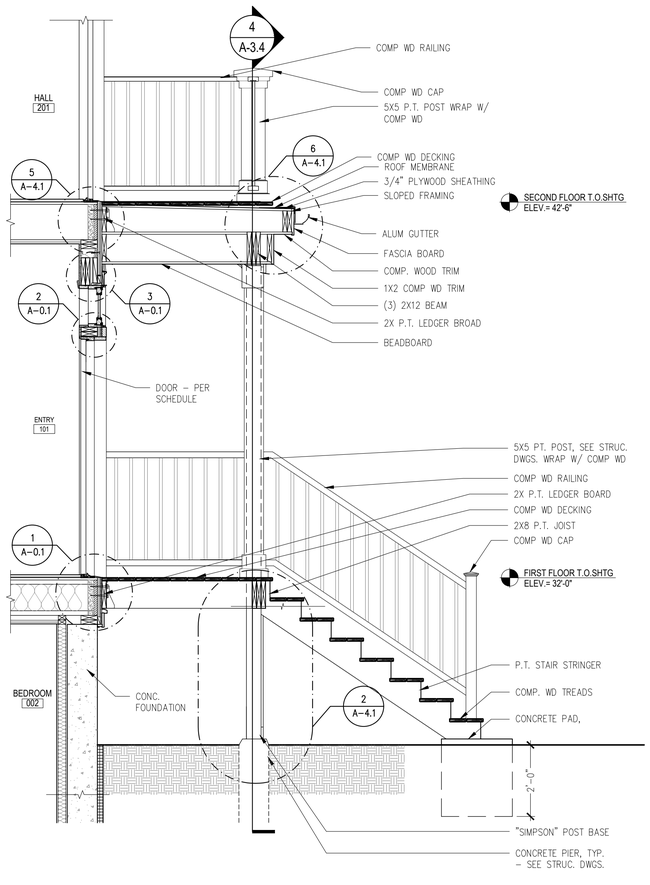
A-3.4

SHEET NO.

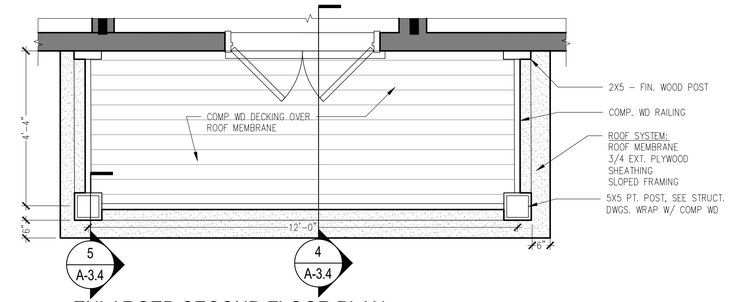
4/19/24 – PERMIT SET



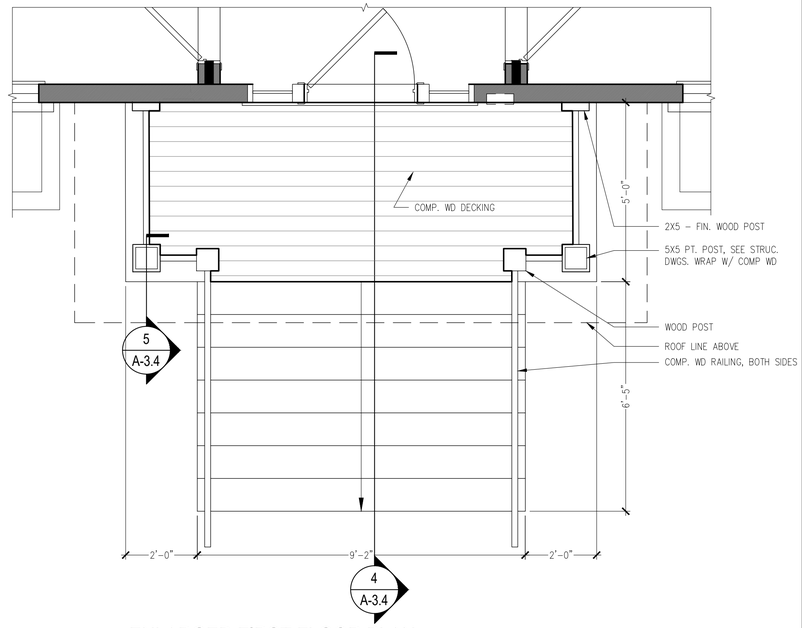
5 PORTICO SECTION
SCALE: 3/4" =1'-0"



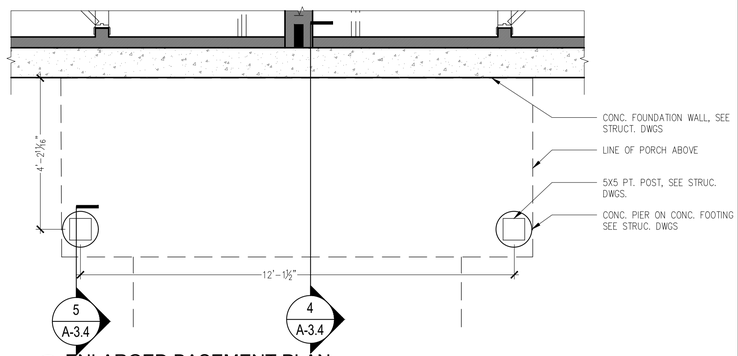
4 SECTION THRU FRONT PORCH
SCALE: 1/2" =1'-0"



3 ENLARGED SECOND FLOOR PLAN
SCALE: 1/2" =1'-0"



2 ENLARGED FIRST FLOOR PLAN
SCALE: 1/2" =1'-0"



1 ENLARGED BASEMENT PLAN
SCALE: 1/2" =1'-0"

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ENLARGED PORTICO PLANS AND SECTIONS

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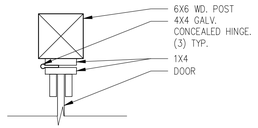
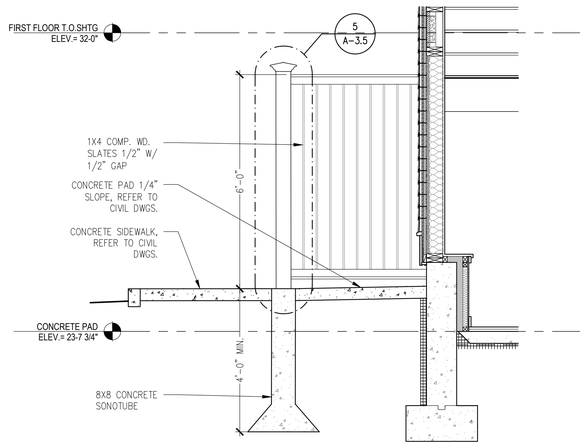
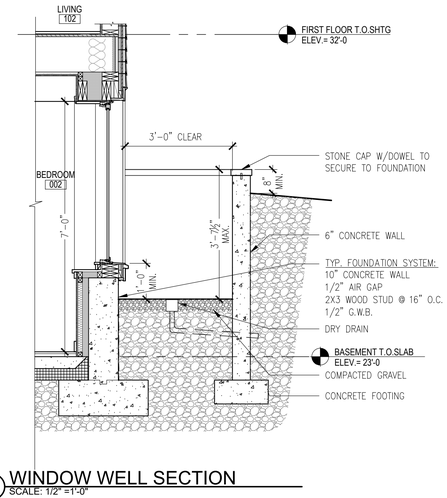


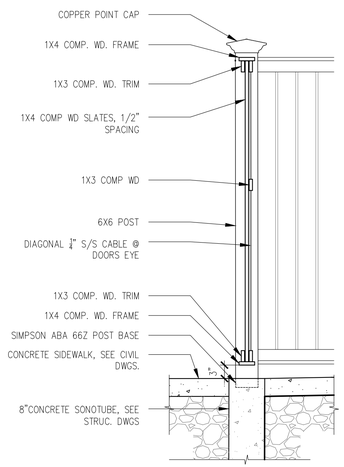
A PLAN VIEW @ DOOR DETAIL
SCALE: 1 1/2" =1'-0"



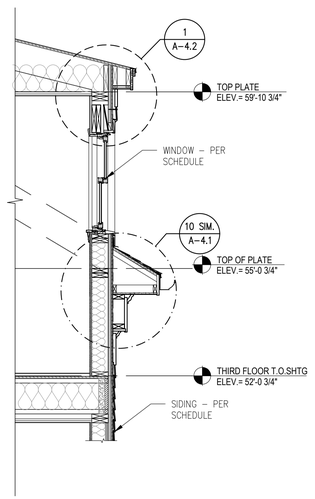
4 TRASH FENCE POST SECTION
SCALE: 1/2" =1'-0"



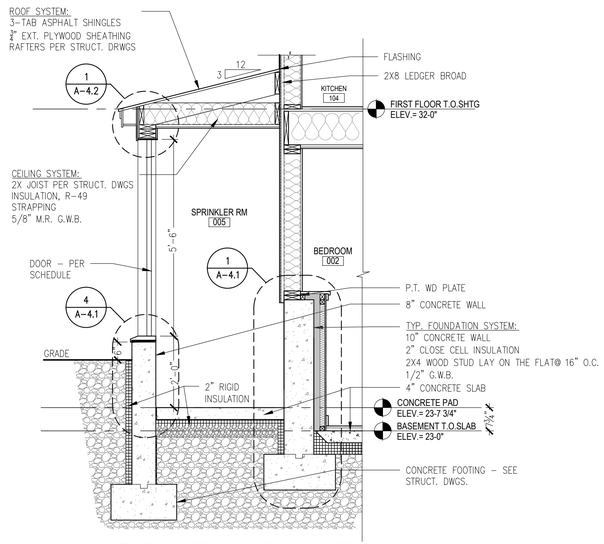
2 WINDOW WELL SECTION
SCALE: 1/2" =1'-0"



5 TRASH FENCE POST DETAIL
SCALE: 3/4" =1'-0"



3 PARTIAL WALL SECTION
SCALE: 1/2" =1'-0"



1 SECTION THRU SPRINKLER RM
SCALE: 1/2" =1'-0"

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PROJECT ARCHITECT

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STRUCTURAL ENGINEER:
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CIVIL:
Griffin Engineering Group
495 Cabot Street
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MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION:
Crossfeild Engineers, Inc.
921 Salem Street, Unit 1
Groveland, MA 01834
P: 978-372-8880

PROJECT CONSULTANTS

275 Lafayette

275 Lafayette St.
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

Job No.:	2022-020
Date:	Apr 19, 2024
Scale:	As Noted
Designed By:	DR
Drawn By:	JM
Checked By:	JAS
Approved By:	JAS

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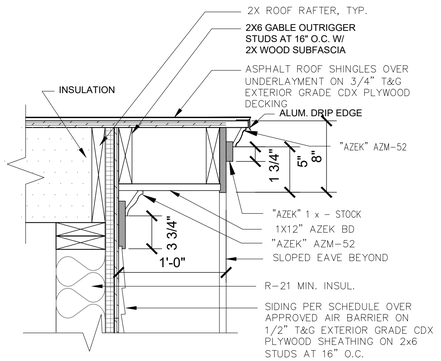
ENLARGED WALL SECTIONS

SHEET NAME

A-3.5

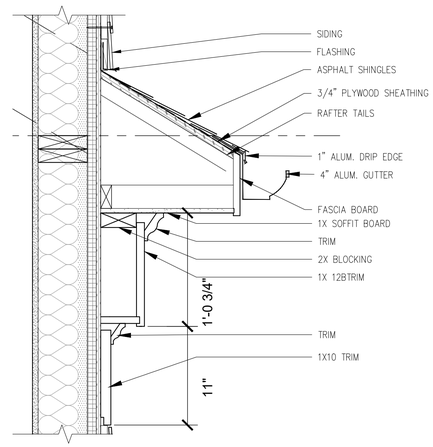
SHEET NO.

4/19/24 - PERMIT SET

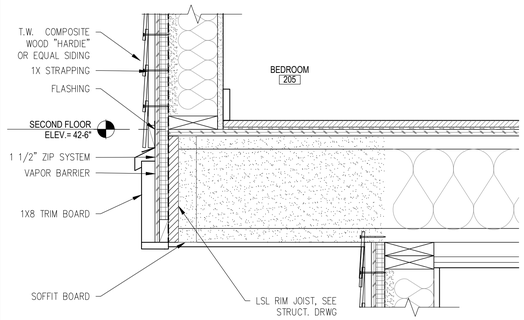


12 TYP. RAKE DETAIL
SCALE: 1 1/2" =1'-0"

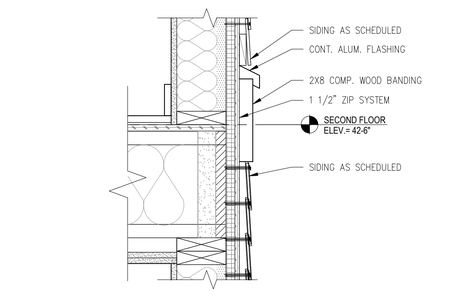
11 NOT USED
SCALE: 1 1/2" =1'-0"



10 DORMER/EAVE DETAIL
SCALE: 1 1/2" =1'-0"

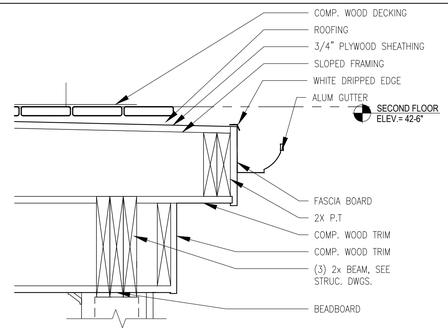


9 TYP. OVERHANG DETAIL
SCALE: 1 1/2" =1'-0"

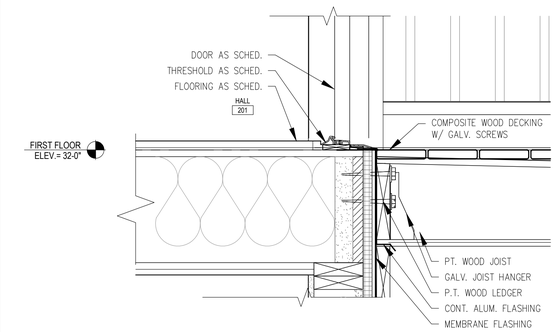


8 BANDING DETAIL
SCALE: 1 1/2" =1'-0"

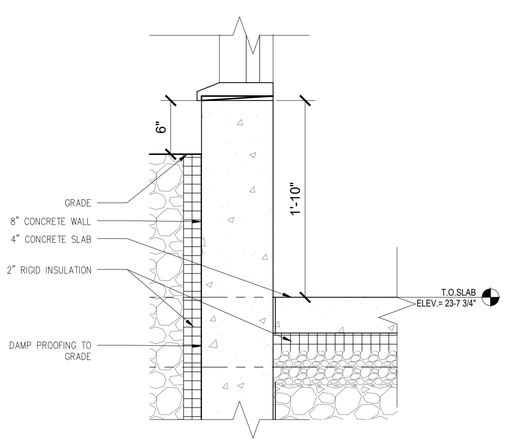
7 WATER TABLE DETAIL
SCALE: 1 1/2" =1'-0"



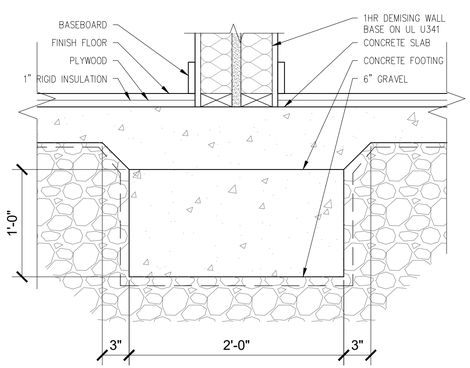
6 EDGE OF DECK DETAIL @ 2ND FLOOR
SCALE: 1 1/2" =1'-0"



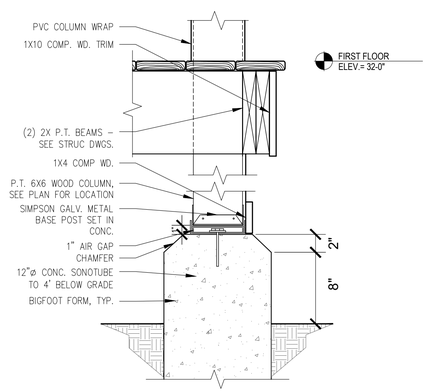
5 TYP. SILL @ WOOD DECK
SCALE: 1 1/2" =1'-0"



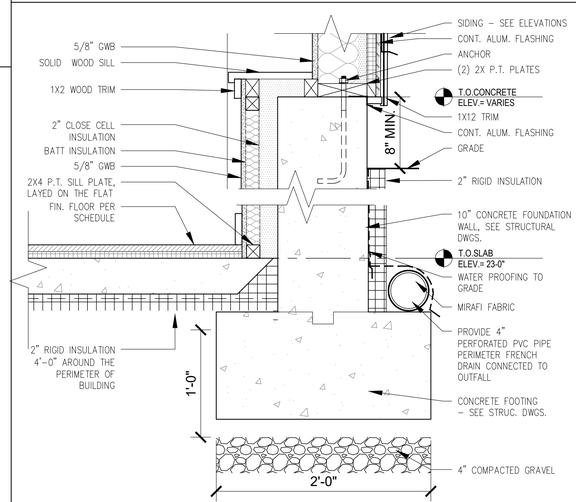
4 CONCRETE DETAIL @ SPRINKELER ROOM
SCALE: 1 1/2" =1'-0"



3 FOOTING DETAIL (SEE STRUC)
SCALE: 1 1/2" =1'-0"



2 TYP. DECK POST FOOTING DETAIL
SCALE: 1 1/2" =1'-0"



1 TYP. FOUNDATION DETAIL
SCALE: 1 1/2" =1'-0"

4/19/24 - PERMIT SET

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Approved By:	JAS

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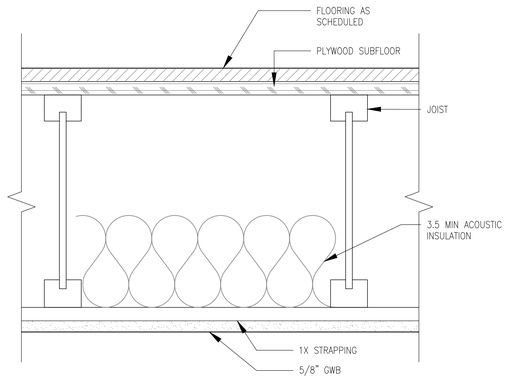
DETAILS

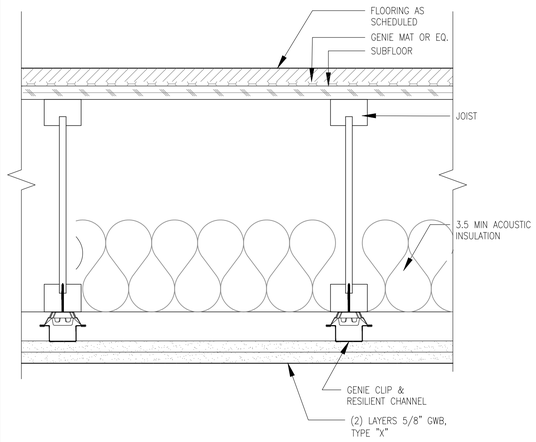
SHEET NAME

A-4.1

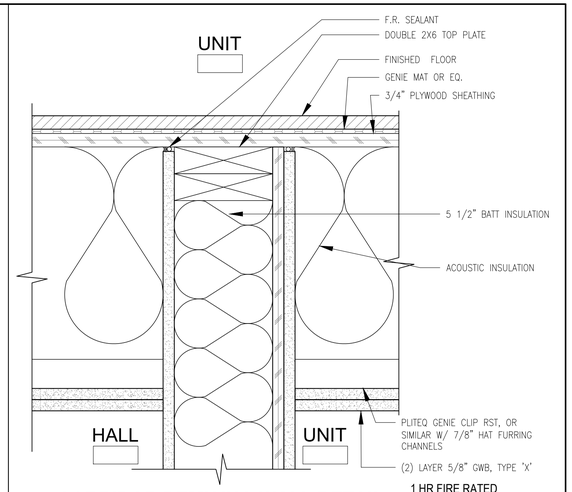
SHEET NO.



11 FLOOR SECTION WITHIN UNIT
SCALE: 3" = 1'-0"

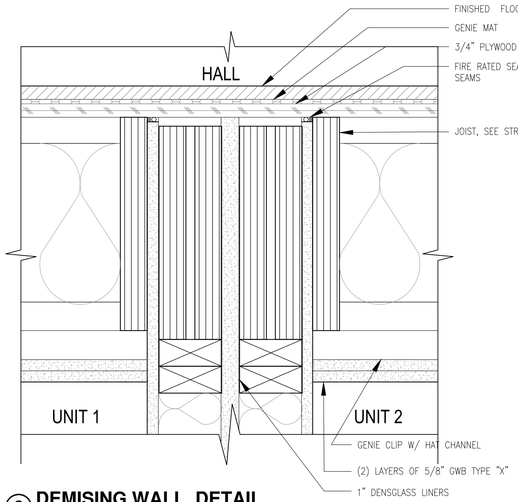


10 FLOOR SECTION BETWEEN UNITS
SCALE: 3" = 1'-0"

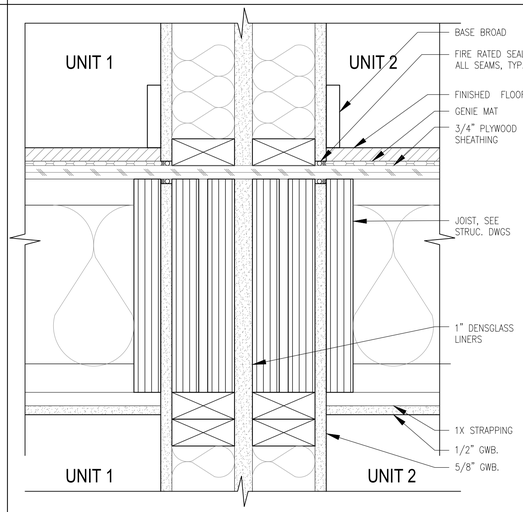


9 CORRIDOR DEMISING WALL DETAIL
SCALE: 1-1/2" = 1'-0"

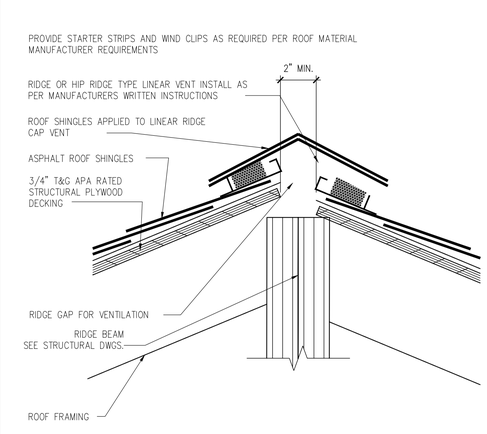
1 HR FIRE RATED
BASED ON UL U419



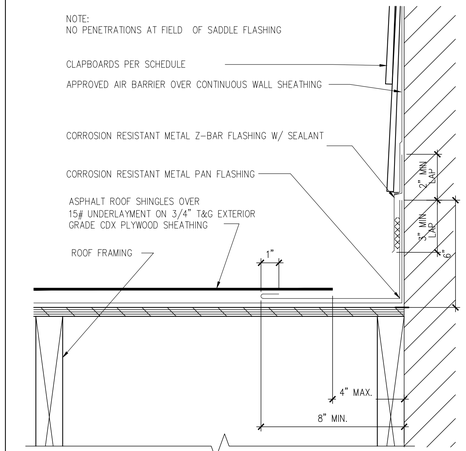
8 DEMISING WALL DETAIL
SCALE: 3" = 1'-0"



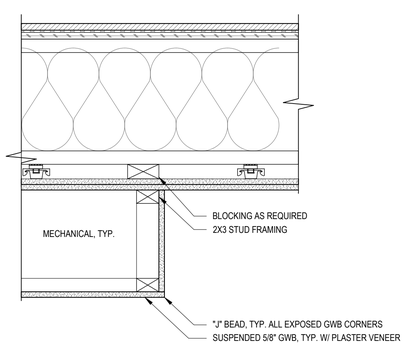
7 DEMISING WALL DETAIL
SCALE: 3" = 1'-0"



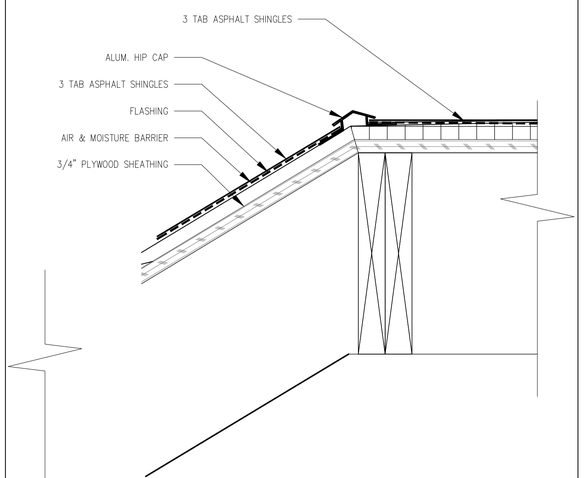
6 TYP. RIDGE VENT DETAIL
SCALE: 3" =1'-0"



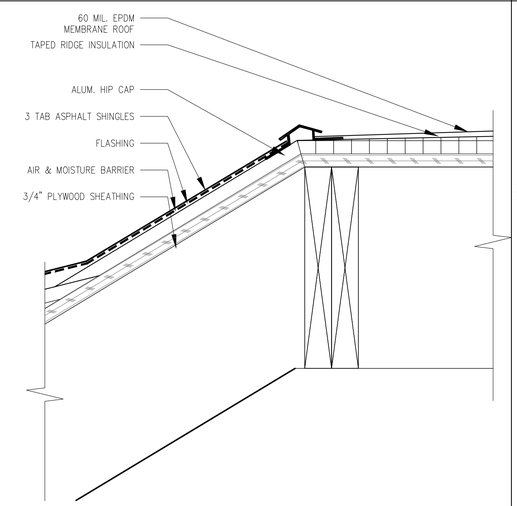
5 ROOF TO DORMER DETAIL
SCALE: 3" =1'-0"



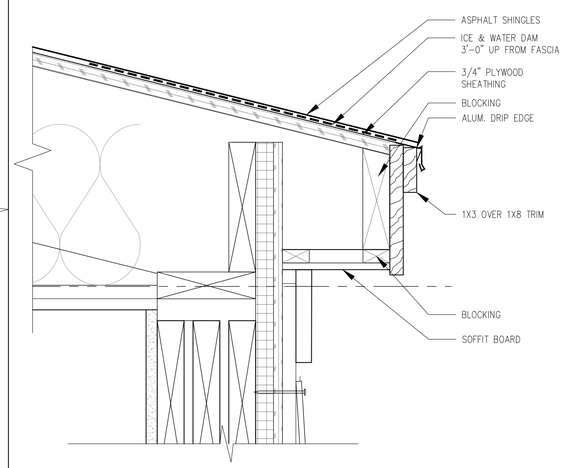
4 SOFFIT DETAIL
SCALE: 1-1/2" = 1'-0"



3 HIP CAP DETAIL
SCALE: 1 1/2" =1'-0"



2 COPPER TO ASPHALT ROOF DETAIL
SCALE: 1 1/2" =1'-0"



1 EAVE DETAIL @ DORMER
SCALE: 1 1/2" =1'-0"

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PROJECT CONSULTANTS

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PROJECT INFORMATION

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PROJECT REVISIONS

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Date:	Apr 19, 2024
Scale:	As Noted
Designed By:	DR
Drawn By:	JM
Checked By:	JAS
Approved By:	JAS

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DETAILS

SHEET NAME

A-4.2

SHEET NO.

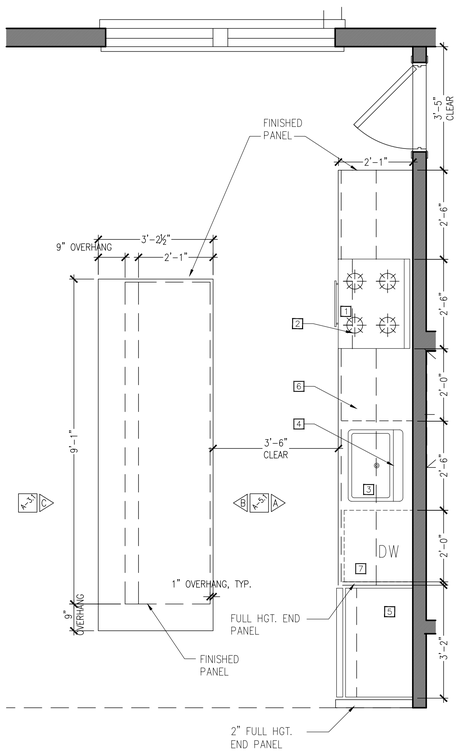
4/19/24 – PERMIT SET

KITCHEN FIXTURE SCHEDULE

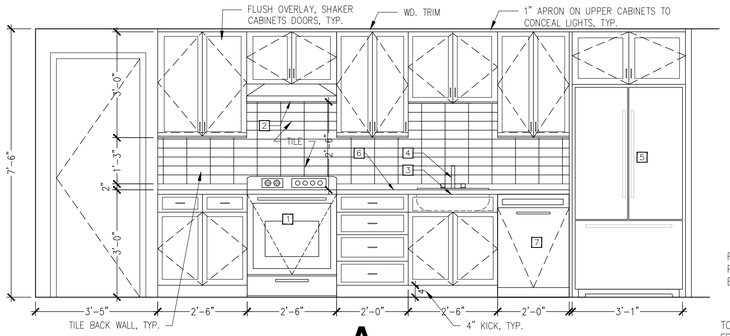
NOTES:
1) OWNER TO COORDINATE FINAL SELECTION OF ALL FIXTURES/FINISHES WITH CONTRACTOR.
2) VERIFY APPLIANCE DIMENSIONS BEFORE FABRICATING CABINETS.

TAG	COMPONENT	MANUFACTURER	FINISH / PART NUMBER	NOTES
☐				
1	RANGE	TBD	TBD	30" WIDE RANGE
2	HOOD	TBD	TBD	30" WIDE RE-CIRCULATING HOOD
3	STAINLESS STEEL SINK	TBD	TBD	30" SINK BASE
4	KITCHEN SINK FAUCET	TBD	TBD	
5	REFRIGERATOR (COUNTER DEPTH)	TBD	TBD	30" REFRIGERATOR SHOWN. WHEN ADJACENT TO WALL, LEAVE 3" SPACE AGAINST WALL ALLOWING REFRIGERATOR TO OPEN FULLY. 18"-24" UPPER CABINET ABOVE, PULLED FORWARD.
6	COUNTERTOP / BACKSPLASH	TBD	TBD	3" X2" BACKSPLASH ON COUNTERS ABUTTING WALLS
7	DISHWASH	TBD	TBD	24" DISHWASH
8	ISLAND HOOD	TBD	TBD	36" WIDE RE-CIRCULATING ISLAND HOOD
9	ISLAND RANGE	TBD	TBD	30" RANGE W/CONTROLS ON FACE OR TOP

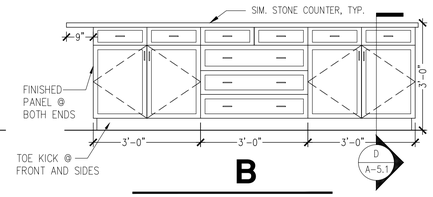
NOTES:
1. PROVIDE ALL FILLERS TO MATCH CABINETS AS REQUIRED
2. ALL DOORS TO HAVE DOOR PULLS, HINGES (SELF CLOSE), SILENCERS
3. ALL DRAWERS TO RECEIVE SELF-CLOSE GLIDES, PULLS



① ENLARGED KITCHEN PLAN - UNIT 1
SCALE: 1/2" =1'-0"



A
SCALE: 1/2" = 1'-0"



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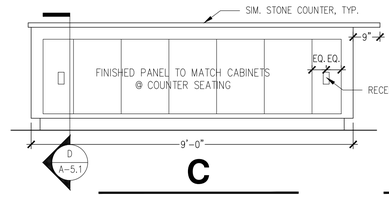

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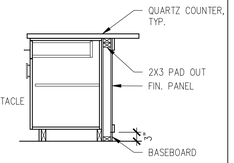
1/2" = 1'-0" SCALE:



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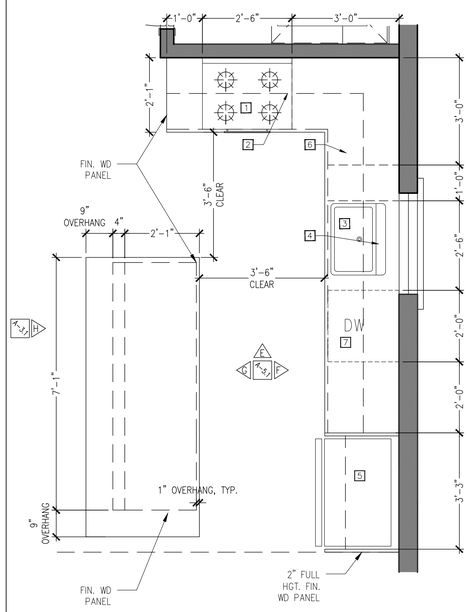
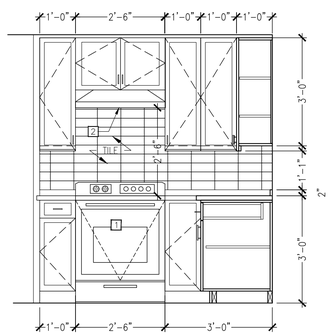


② ENLARGED KITCHEN PLAN - UNIT 2
SCALE: 1/2" =1'-0"



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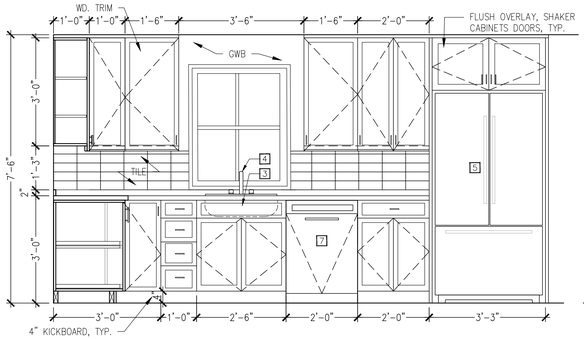

F
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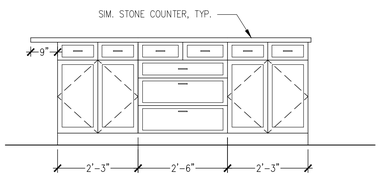

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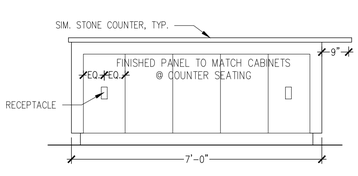
SCALE: 1/2" = 1'-0"



H
SCALE: 1/2" = 1'-0"

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PROJECT CONSULTANTS

275 Lafayette

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Salem, MA

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Approved By:	JAS

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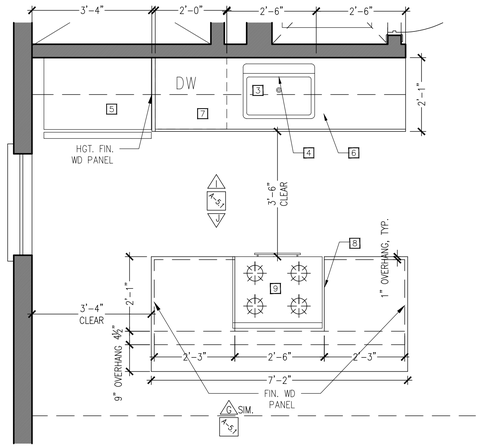
ENLARGED KITCHEN PLANS AND ELEVATIONS

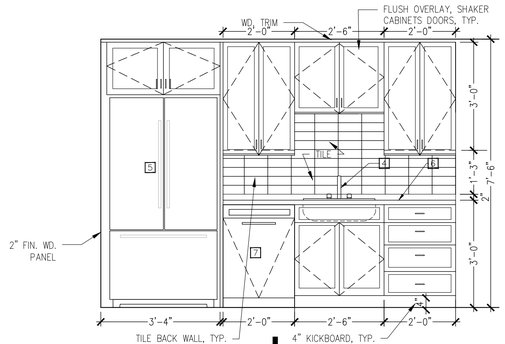
SHEET NAME

A-5.1

SHEET NO.

4/19/24 – PERMIT SET





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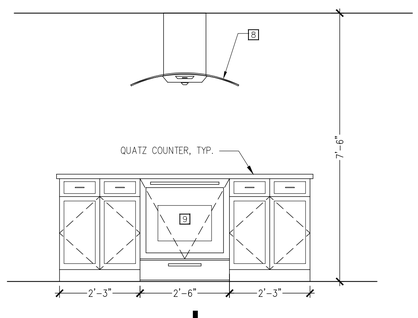
SCALE: 1/2" = 1'-0"



J

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

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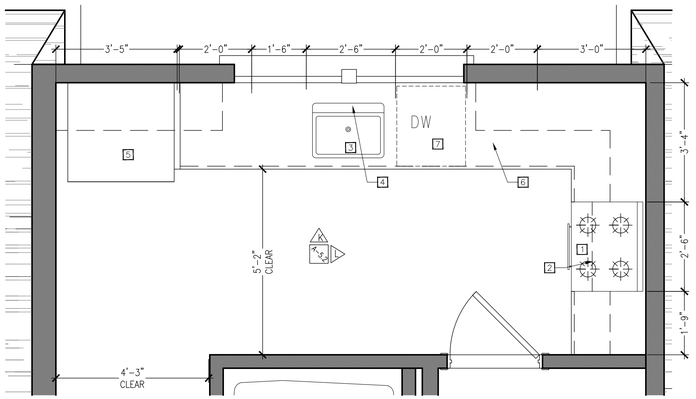
3. ALL DRAWERS TO RECEIVE SELF-CLOSE GLIDES, PULLS

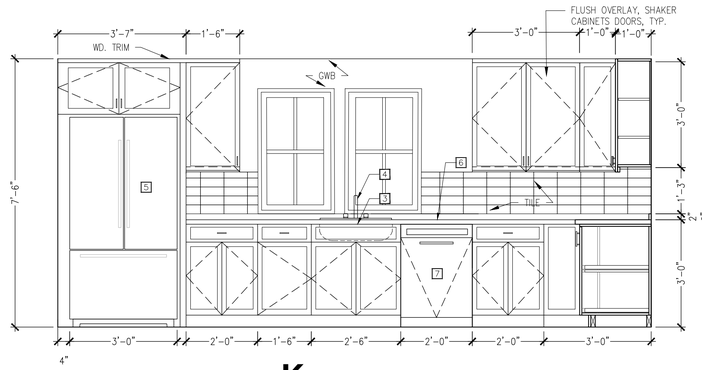
1 ENLARGED KITCHEN PLAN - UNIT 3

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



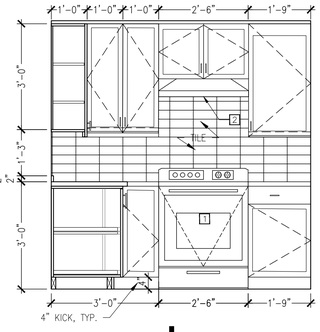
2 ENLARGED KITCHEN PLAN - UNIT 5

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



K

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



L

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

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PROJECT CONSULTANTS

275 Lafayette

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Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

Job No.:	2022-020
Date:	Apr 19, 2024
Scale:	As Noted
Designed By:	DR
Drawn By:	JM
Checked By:	JAS
Approved By:	JAS

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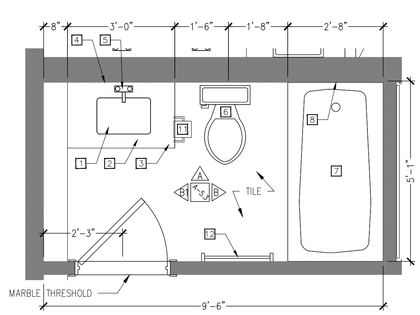
ENLARGED KITCHEN PLANS AND ELEVATIONS

SHEET NAME

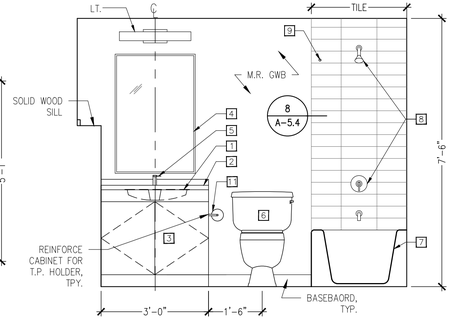
A-5.2

SHEET NO.



1 Enlarged Bath Plan - Unit 1 & 2

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



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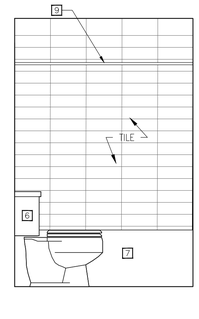

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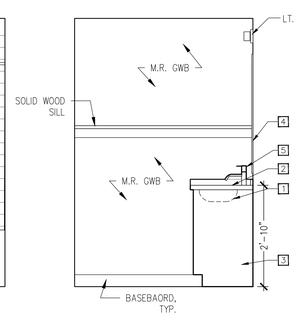

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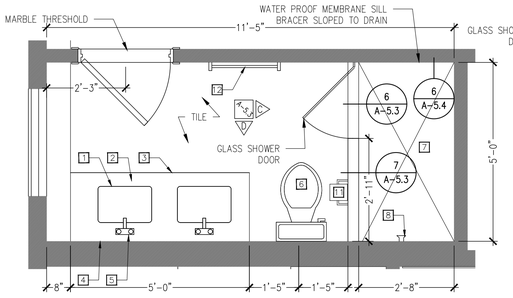
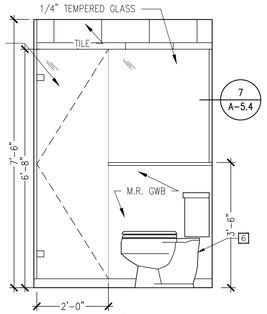


2 Enlarged Bath Plan - Unit 1

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



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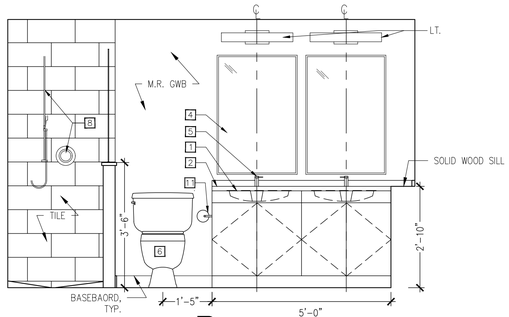

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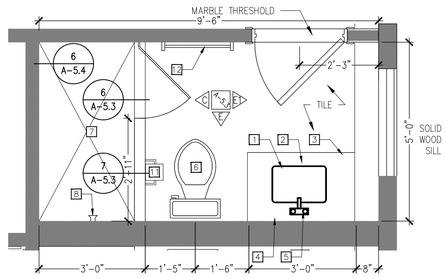
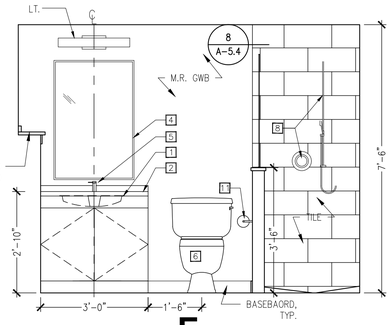
SCALE: 1/2" = 1'-0"



3 Enlarged Bath Plan - Unit 2

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



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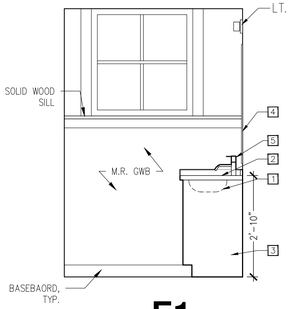

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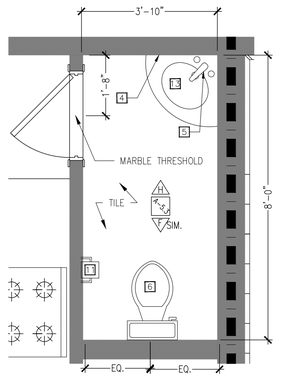
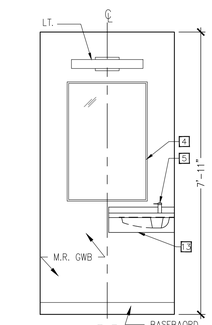
SCALE: 1/2" = 1'-0"



4 Enlarged Bath Plan - Unit 1

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



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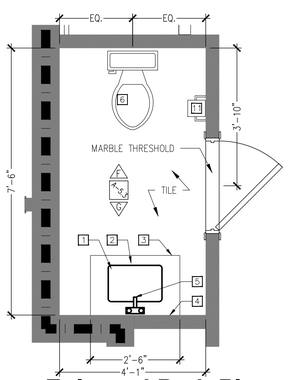
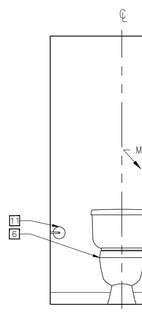
SCALE: 1/2" = 1'-0"



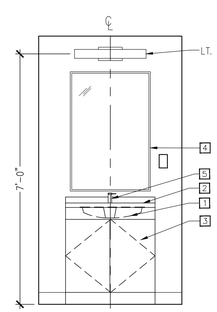
5 Enlarged Bath Plan - Unit 2

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



F

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



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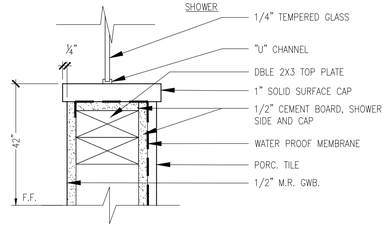
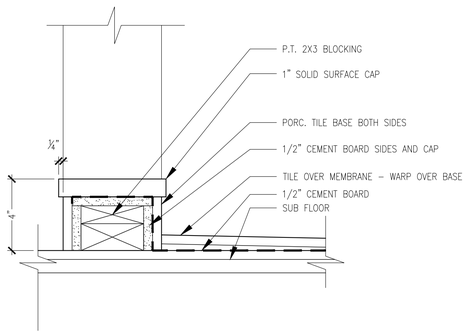
SCALE: 1/2" = 1'-0"



7 SHOWER WALL DETAIL

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



6 SHOWER CURB DETAIL

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

BATHROOM FIXTURE SCHEDULE

NOTES:
1) COORDINATE FINAL SELECTION OF ALL FIXTURES/FINISHES WITH CONTRACTOR.

TAG	COMPONENT	MANUFACTURER	FINISH / PART NUMBER	NOTES
1	UNDERCOUNTER SINK	TBD	TBD	
2	SOLID SURFACE COUNTERTOP	TBD	TBD	3" x 2" TALL BACKSPLASH @ BACK AND WALL SIDES
3	VANITY CABINET	TBD	TBD	IF < 36" USE 2-DOOR CABINET, IF 36"-54" USE 2-DOOR CABINET W/DRAWER STACK ON WALL SIDE,
4	MIRROR	TBD	TBD	24"-48" WIDE x 34"-40" TALL FRAMED MIRROR, 2" ABOVE BACKSPLASH, CENTERED ON VANITY
5	FAUCET	TBD	TBD	SINGLE LEVER HANDLE
6	TOILET	TBD	TBD	FLOOR MOUNTED, ELONGATED SEAT, FLUSH HANDLE ON VANITY SIDE. ACCESSIBLE TOILET MUST BE 30"-33" TALL
7	TUB/SHOWER	TBD	TBD	5' LONG. COORDINATE MODEL W/MANUFACTURER & CONFIRM IN FIELD
8	TUB/SHOWER CONTROLS AND HEAD	TBD	TBD	REFER TO MANUFACTURER'S SPECIFICATIONS
9	CURTAIN ROD	TBD	TBD	REFER TO MANUFACTURER'S SPECIFICATIONS
10	SHOWER SEAT	TBD	TBD	REFER TO MANUFACTURER'S SPECIFICATIONS
11	TOILET PAPER HOLDER	TBD	TBD	REFER TO MANUFACTURER'S SPECIFICATIONS
12	24" TOWEL BAR	TBD	TBD	
13	CORNER SINK	TBD	TBD	WALL HUNG

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PROJECT REVISIONS

Job No.:	2022-020
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Drawn By:	JM
Checked By:	JAS
Approved By:	JAS

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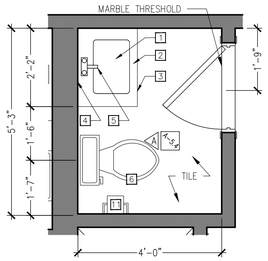
ENLARGED BATH PLANS AND ELEVATIONS

SHEET NAME

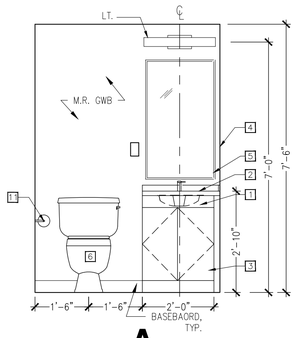
A-5.3

SHEET NO.



1 Enlarged Bath Plan - Unit 3 & 4

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



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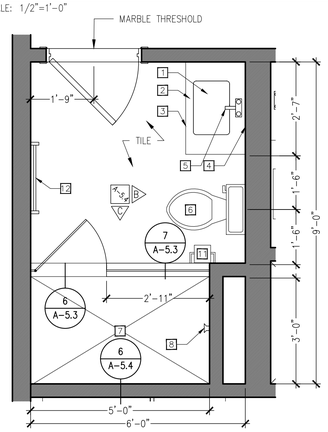
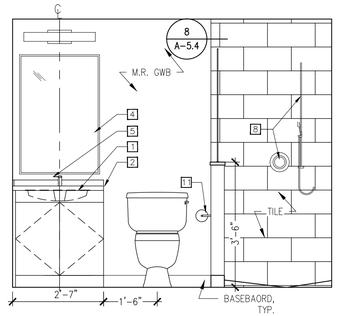
SCALE: 1/2" = 1'-0"



2 Enlarged Bath Plan - Unit 3 & 4

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



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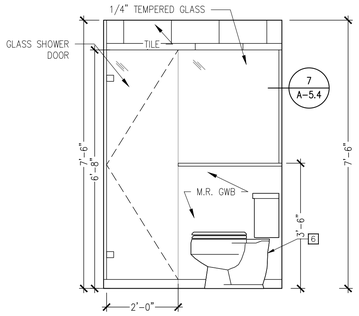
SCALE: 1/2" = 1'-0"



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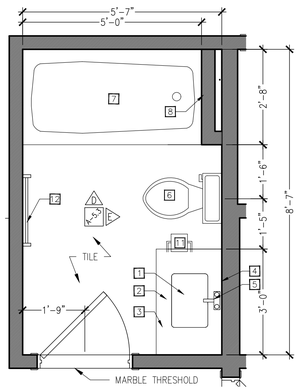
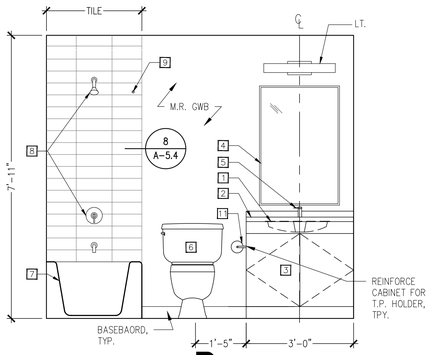
SCALE: 1/2" = 1'-0"



3 Enlarged Bath Plan - Unit 5

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



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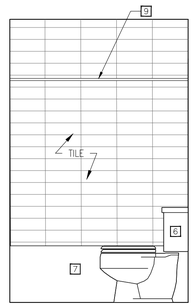
SCALE: 1/2" = 1'-0"



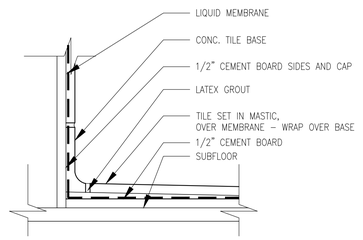
E

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

BATHROOM FIXTURE SCHEDULE

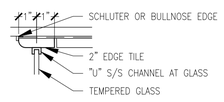
NOTES:
1) COORDINATE FINAL SELECTION OF ALL FIXTURES/FINISHES WITH CONTRACTOR.

TAG	COMPONENT	MANUFACTURER	FINISH / PART NUMBER	NOTES
1	UNDERCOUNTER SINK	TBD	TBD	
2	SOLID SURFACE COUNTERTOP	TBD	TBD	¾" x 2" TALL BACKSPLASH @ BACK AND WALL SIDES
3	VANITY CABINET	TBD	TBD	IF < 36" USE 2-DOOR CABINET, IF 36"-54" USE 2-DOOR CABINET W/DRAWER STACK ON WALL SIDE,
4	MIRROR	TBD	TBD	24"-48" WIDE x 34"-40" TALL FRAMED MIRROR, 2" ABOVE BACKSPLASH, CENTERED ON VANITY
5	FAUCET	TBD	TBD	SINGLE LEVER HANDLE
6	TOILET	TBD	TBD	FLOOR MOUNTED, ELONGATED SEAT, FLUSH HANDLE ON VANITY SIDE. ACCESSIBLE TOILET MUST BE 30"-33" TALL
7	TUB/SHOWER	TBD	TBD	5' LONG. COORDINATE MODEL W/MANUFACTURER & CONFIRM IN FIELD
8	TUB/SHOWER CONTROLS AND HEAD	TBD	TBD	REFER TO MANUFACTURER'S SPECIFICATIONS
9	CURTAIN ROD	TBD	TBD	REFER TO MANUFACTURER'S SPECIFICATIONS
10	SHOWER SEAT	TBD	TBD	REFER TO MANUFACTURER'S SPECIFICATIONS
11	TOILET PAPER HOLDER	TBD	TBD	REFER TO MANUFACTURER'S SPECIFICATIONS
12	24" TOWEL BAR	TBD	TBD	
13	CORNER SINK	TBD	TBD	WALL HUNG



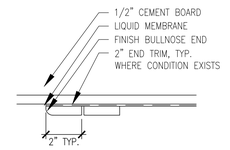
6 SHOWER BASE DETAIL

SCALE: 3" =1'-0"



7 SHOWER GLASS DETAIL @ TILE

SCALE: 3" =1'-0"



8 TILE END TRIM DETAIL

SCALE: 3" =1'-0"

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Checked By:	JAS
Approved By:	JAS

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ENLARGED BATH PLANS AND ELEVATIONS

SHEET NAME

A-5.4

SHEET NO.

4/19/24 - PERMIT SET

GENERAL NOTES

ALL WORK SHALL CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE, 9TH EDITION.

THE OWNER SHALL RETAIN THE SERVICES OF AN INDEPENDENT TESTING AGENCY TO PERFORM STRUCTURAL INSPECTIONS AS INDICATED ON THE DRAWINGS AND AS REQUIRED/INDICATED BY THE PROGRAM OF STRUCTURAL TESTS AND INSPECTIONS.

THE CONTRACTOR SHALL EXAMINE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR VERIFICATION, LOCATION AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD AND WITH THE ARCHITECTURAL DRAWINGS AND SHALL NOTIFY THE OWNER/ARCHITECT/ENGINEER OF ANY DISCREPANCY BEFORE PROCEEDING WITH THE WORK. EXISTING CONDITIONS SHOWN ARE NOT GUARANTEED.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING & SHORING UNTIL ALL STRUCTURAL WORK IS COMPLETE.

SHOP DRAWINGS, IN ADDITION TO THE SUBMITTALS REQUIRED BY THE PROJECT SPECIFICATIONS, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND COMMENTS PRIOR TO FABRICATION FOR THE FOLLOWING:

1) CONCRETE MIX & CURING METHOD
2) REINFORCING STEEL
3) EXPANSION BOLTS, ADHESIVE ANCHORS & HOLD-DOWN RODS
4) STRUCTURAL STEEL
5) TIMBER FRAMING

PROVIDE SEALANT AT ALL CONTROL JOINTS.
PROVIDE THERMAL BREAK WHERE SLAB-ON-GRADE ABUTS WALLS.

STRUCTURAL DESIGN NOTES

DESIGN LOADS:
- BASEMENT SLAB-ON-GRADE LIVE LOAD = 40 PSF
- 1ST - 3RD FLOOR LIVE LOAD = 40 PSF + ACTUAL PARTITION LOADS
- STAIRWAY LIVE LOAD = 100 PSF
- 2ND & 3RD FLOOR DEAD LOAD (FRAMING & CEILING/MISC.) = 15 PSF
- ROOF DEAD LOAD = 15 PSF

GROUND SNOW LOAD, Pg = 50 PSF (PER TABLE 1604.11) & Pf = 35 PSF
- SNOW LOAD IMPORTANCE FACTOR, Is = 1.0 (ASCE 7-10 TABLE 1.5-2)
- SNOW EXPOSURE FACTOR, Ce = 1.0 & THERMAL FACTOR, Ct = 1.1

RISK CATEGORY: II (PER ASCE 7 TABLE 1.5-1 & IBC TABLE 1604.5)
SURFACE ROUGHNESS PER ASCE 26.7.2 & IBC 1609.4.2 = D
EXPOSURE CATEGORY: D

WIND LOAD DESIGN DATA
- **Vult = 127 MPH (PER TABLE 1604.11)** & Vasd = 99 MPH
- Kd = 0.85 FOR BUILDINGS

COMPONENTS & CLADDING DESIGN WIND PRESSURES (ASCE 7-10 CHAPTER 30):

EFFECTIVE AREA:	10 SF	50 SF	100 SF
ROOF ZONE 1:	45 PSF/-50 PSF	42 PSF/-44 PSF	41 PSF/-41 PSF
ROOF ZONE 2:	45 PSF/-58 PSF	42 PSF/-52 PSF	41 PSF/-50 PSF
ROOF ZONE 3:	45 PSF/-58 PSF	42 PSF/-52 PSF	41 PSF/-50 PSF
WALL ZONE 4:	50 PSF/-54 PSF	44 PSF/-49 PSF	42 PSF/-46 PSF
WALL ZONE 5:	50 PSF/-66 PSF	44 PSF/-56 PSF	42 PSF/-51 PSF
ROOF OVERHANG ZONE 2:	-88 PSF	-82 PSF	-79 PSF
ROOF OVERHANG ZONE 3:	-88 PSF	-82 PSF	-79 PSF

SEISMIC DESIGN DATA:
- SEISMIC IMPORTANCE FACTOR, Ie = 1.0 (ASCE 7 TABLE 11.5-2)
- MAPPED SPECTRAL RESPONSE ACCELERATION - Ss: 0.240 & S1: 0.073 (PER TABLE 1604.11)
- SITE CLASS = D (UNKNOWN)
- SPECTRAL RESPONSE COEFFICIENTS - SDS: 0.256 & SD1: 0.117 (ASCE 7 SECTION 11.4.3)
- SEISMIC DESIGN CATEGORY = B
- DESIGN BASE SHEAR = 6 KIPS (ASCE 7 SECTION 12.8.1)
- SEISMIC RESPONSE COEFFICIENT, Cs = 0.043 (ASCE 7 SECTION 12.8.1.1)

SEISMIC FORCE-RESISTING SYSTEM: BEARING WALL SYSTEMS
- LIGHT-FRAMED (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE OR STEEL SHEETS
- RESPONSE MODIFICATION COEFFICIENT, R = 6½
- DEFLECTION AMPLIFICATION FACTOR, CD = 4

DEFLECTION CRITERIA:
- 1ST - 3RD FLOOR LIVE LOAD DEFLECTION: L/360
- 1ST - 3RD FLOOR TOTAL LOAD DEFLECTION: L/240
- ROOF SNOW LOAD DEFLECTION: L/360
- ROOF TOTAL LOAD DEFLECTION: L/240

STRUCTURAL INSPECTIONS

INSPECTION AND TESTING WILL BE PERFORMED PER CHAPTER 17 OF THE MASSACHUSETTS STATE BUILDING CODE & IBC 2015. THE OWNER WILL EMPLOY A TESTING AGENCY (SELECTED BY THE ENGINEER/OWNER) TO PERFORM STRUCTURAL TESTS AND INSPECTIONS AS INDICATED ON THIS SHEET. TEST REPORTS SHALL BE ADDRESSED TO THE OWNER & SENT DIRECTLY TO THE OWNER AND McBRIE, LLC FROM THE TESTING AGENCY.

THE CONTRACTOR SHALL COORDINATE WITH, NOTIFY, AND PROVIDE ACCESS AND A SAFE WORKING ENVIRONMENT FOR THE OWNER'S TESTING AGENCY BOTH IN THE SHOP AND IN THE FIELD.

ALL CONCRETE REINFORCING, CONCRETE PLACEMENT AND STRUCTURAL STEEL INSTALLATIONS SHALL BE INSPECTED/OBSERVED BY THE SER OR AN INDEPENDENT TESTING AGENCY. ANY WORK COMPLETED WITHOUT INSPECTIONS SHALL BE CONSIDERED AS UNACCEPTABLE AND SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.

AT A MINIMUM, THE FOLLOWING WILL BE INSPECTED:
1. REBAR PLACEMENT
2. CONCRETE PLACEMENT
3. STRUCTURAL STEEL
4. TIMBER FRAMING

GEOTECHNICAL/FOUNDATION DESIGN

FOUNDATION/FOOTING DESIGN IS BASED UPON AN ASSUMED BEARING CAPACITIES. BOTTOM OF FOOTING ELEVATION MAY BE ADJUSTED UPON APPROVAL FROM STRUCTURAL ENGINEER OF RECORD, IF NECESSARY, TO BEAR ON ENGINEERED FILL OVER FIRM MATERIAL CAPABLE OF SUPPORTING A MINIMUM SOIL BEARING CAPACITY OF 4,000 PSF.

ALL FOOTINGS SHALL BEAR ON A MINIMUM OF 1 FOOT LIFT OF STRUCTURAL FILL OVER EXISTING BEDROCK IF ENCOUNTERED. GEOTECHNICAL ENGINEER SHALL APPROVE ALL SUBGRADE SOILS PRIOR TO INSTALLATION OF FOOTING FORMS.

THE OWNER/CONTRACTOR SHALL HIRE THE SERVICES OF A REGISTERED GEOTECHNICAL ENGINEER IN THE STATE OF MA TO PROVIDE WRITTEN CONFIRMATION OF AN EVALUATION OF THE SUBGRADES FOR SOIL STIFFNESS AND DENSITY PRIOR TO PLACEMENT OF FOOTINGS. THE EVALUATION REPORT SHALL PROVIDE/INCLUDE THE ALLOWABLE BEARING CAPACITY OF THE SUBGRADE BASED UPON AN IN-PLACE TEST SIMILAR TO A CONE PENETROMETER TEST OR DYNAMIC CONE TEST.

THE CONTRACTOR HIRED GEOTECHNICAL ENGINEER SHALL ALSO PROVIDE THE PROGRAM OF STRUCTURAL TESTS AND INSPECTIONS FOR SUBGRADE PREPARATIONS AND ALL MA BUILDING CODE REQUIRED CONSTRUCTION OBSERVATIONS.

CONCRETE & REINFORCING

ALL CONCRETE WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14)" AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI 301).

ALL CONCRETE IN FOUNDATION WALLS AND FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. ALL CONCRETE IN SLABS-ON-GRADE AND ELEVATED SLABS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. ALL EXTERIOR CONCRETE/FOUNDATION WALLS SHALL HAVE BETWEEN 4 TO 6% AIR ENTRAINMENT AND 4" MAXIMUM SLUMP. NO CONCRETE SHALL BE CAST IN WATER OR ON FROZEN GROUND.

DOWELS SHALL BE PROVIDED IN CONCRETE FOUNDATION WALLS AS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THE DOWELS WITH THE PROPOSED CMU WALL VERTICAL REINFORCING WHERE APPLICABLE. ALL DOWELS ARE TO BE EPOXY GROUTED INTO EXISTING CONCRETE WITH HILTI HIT-HY 200-A EPOXY OR APPROVED EQUAL.

FOUNDATION WALLS SHALL HAVE CONSTRUCTION JOINTS AS DETAILED. REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS AS INDICATED ON THE DRAWINGS.

BACKFILL AGAINST WALLS SHALL BE PLACED ALTERNATELY ON EACH SIDE IN 12" MAXIMUM LIFTS. WALLS WITH UNBALANCED FILL AND WHERE TOP OF WALL IS SUPPORTED BY THE FLOOR FRAMING SHALL BE TEMPORARILY BRACED OR SHORED IF BACKFILLED BEFORE FRAMING IS COMPLETE.

NOTE WELL: ALL CONCRETE (FLOOR SLABS AND FOOTINGS OR FOUNDATION WALLS WHOSE FORMS ARE STRIPPED BEFORE 7 DAYS) MUST BE WET CURED FOR 7 DAYS UNLESS HIGH EARLY CONCRETE IS USED WHICH MUST BE WET CURED FOR 3 DAYS OR AN APPROVED CURING COMPOUND IS USED. REFER TO ACI 308.1-11, SPECIFICATION FOR CURING CONCRETE FOR ADDITIONAL INFORMATION.

COLD AND HOT WEATHER (BELOW 40° F AND ABOVE 90° F) CONCRETE PLACEMENT AND CURING PROCEDURES MUST BE SUBMITTED TO THE S.E.R. FOR APPROVAL PRIOR TO PLACEMENT.

REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING:
- (A) ASTM 615, GRADE 60 FOR DEFORMED BARS (Fy = 60,000 P.S.I.)
  - ASTM A775 FOR EPOXY-COATED STEEL REINFORCING BARS
  - ASTM ASTM A934 FOR EPOXY-COATED PREFABRICATED STEEL REINFORCING BARS
- (B) WELDED WIRE FABRIC (WWF) REINFORCEMENT: ASTM A185, A884 FOR EPOXY COATED

WELDED WIRE FABRIC (WWF) SHALL BE LAPPED 6" OR ONE SPACE, WHICHEVER IS LARGER, AND SHALL BE WIRED TOGETHER.

STRUCTURAL STEEL

STRUCTURAL STEEL WORK SHALL CONFORM TO PART 16 OF THE MANUAL OF STEEL CONSTRUCTION (AISC FOURTEENTH EDITION). ALL WELDING SHALL CONFORM TO AWS D1.1 AND BE PERFORMED BY APPROVED CERTIFIED WELDERS. ALL WELDS SHALL USE E70XX ELECTRODES BOTH IN THE SHOP AND IN THE FIELD.

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50ksi) FOR W-SHAPES, ASTM A36 FOR CHANNELS & OTHER ROLLED SHAPES, ASTM A500, GRADE B (Fy = 46ksi) FOR HSS TUBES AND PIPE COLUMNS. BOLTED CONNECTIONS SHALL BE MADE USING A MINIMUM OF 3/4"ø ASTM A325 HIGH STRENGTH BOLTS.

ALL STRUCTURAL STEEL TO RECEIVE ONE SHOP COAT OF STANDARD GRAY PRIMER U.N.O. OR UNLESS SPRAY-FIREPROOFED - COORDINATE WITH ARCHITECTURAL DRAWINGS. TOUCH UP ALL BARE AREAS AFTER ERECTION.

ALL ANCHOR BOLTS TO BE ASTM F1554, GRADE 36 U.N.O.
ALL THREADED RODS TO BE ASTM F1554 GRADE 55 U.N.O.
THREADED RODS EXPOSED TO WEATHER SHALL BE STAINLESS STEEL RODS ASTM F593 GRADE 45 MIN.

LEVELING/BEARING PLATES SHALL BE SET ON FULL BEDS OF NON-SHRINK, NONMETALLIC GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 3 DAYS.

TIMBER

ALL CARPENTRY WORK SHALL CONFORM TO THE LATEST AMERICAN WOOD COUNCIL STANDARDS USING:
- SPRUCE PINE FIR #2 KD, Fb = 875 PSI (2x12) & E = 1.4 x 10^6 PSI FOR DIMENSION LUMBER
- SOUTHERN PINE #1 KD, Fb = 1000 PSI (2x12) & E = 1.6 x 10^6 PSI FOR PRESSURE TREATED DIMENSION LUMBER U.N.O.
- Fb = 2,600 PSI (12" deep beams) & E = 2.0 x 10^6 PSI FOR LVLs
- Fb = 2,900 PSI (12" deep beams) & E = 2.0 x 10^6 PSI FOR PSLs
- Fb = 1,827 PSI (12" deep beams) & E = 1.46 x 10^6 PSI FOR PLUS PSLs (SERVICE LEVEL 2).
- TJI JOISTS SHALL BE AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUAL.
- NAILING PER TABLE 5602.3(1) OF THE MA STATE BUILDING CODE.

DOUBLE-UP JOISTS UNDER PARALLEL PARTITIONS UNLESS NOTED OTHERWISE. PROVIDE DOUBLE STUDS AT ALL DOUBLE JOISTS - TYPICAL.

PROVIDE CONTINUOUS ROWS OF BRIDGING BETWEEN JOISTS. LOCATE BRIDGING AT MIDSPAN OF JOISTS.

SUBFLOOR SHALL BE ¾" APA RATED SHEATHING OR STURD-I FLOOR WITH THE APPROPRIATE SPAN RATING FOR JOISTS SPACING. THE SUBFLOOR SHALL BE GLUED WITH CONSTRUCTION ADHESIVE CONFORMING TO APA SPECIFICATION AFG-01 OR ASTM D 3498 AND NAILED WITH 8D RING NAILS @ 12" O/C ALONG PANEL ENDS AND INTERMEDIATE SUPPORTS.

ALL POSTS SHALL BE CONTINUOUS/BLOCKED SOLID THROUGH FLOOR FRAMING AND BEAR DIRECTLY ON THE 2-2X6 SILL OR SUPPORTING BEAMS.

PROVIDE JOIST HANGERS AT ALL FLUSH FRAMING WITH FULL LENGTH NAILS. ALL METAL CONNECTORS/HANGERS SHALL BE AS INDICATED AS MANUFACTURED BY SIMPSON STRONG-TIE OR APPROVED EQUAL.

ALL WALL SHEATHING SHALL BE 15/32" THICK FIR APA RATED EXPOSURE 1 WITH APPROPRIATE SPAN RATING FOR STUD SPACING. FASTENED WITH 10D COMMON NAILS SPACED @ 6" O/C ALONG PANEL ENDS AND @ 12" O/C AT INTERMEDIATE SUPPORTS U.N.O.. 1⅜" MINIMUM FASTENER PENETRATION.

ALL ROOF SHEATHING SHALL BE APA RATED EXPOSURE 1 SHEATHING WITH APPROPRIATE SPAN RATING FOR RAFTER SPACING. GLUE AND FASTEN WITH 10D COMMON NAILS SPACED @ 6" O/C ALONG PANEL ENDS AND @ 12" O/C AT INTERMEDIATE SUPPORTS. 1⅝" MINIMUM FASTENER PENETRATION.

SHOP DRAWINGS SHALL BE SUBMITTED SHOWING ALL LVL BEAMS, LVL POST CONNECTIONS, HANGERS, AND BEAM TO BEAM CONNECTIONS.

INTENT OF THE STRUCTURAL DRAWINGS

THE INTENT OF THE STRUCTURAL DRAWINGS IS TO SHOW THE MAIN STRUCTURAL FEATURES AND STRUCTURAL DESIGN FOR THE PROJECT. ARCHITECTURAL DETAILS ARE SHOWN INCIDENTALLY ONLY AND NOT COMPLETELY. THEREFORE; ARCHITECTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS.

THE CONTRACTOR MUST NOTIFY McBRIE, LLC OF ANY CHANGES OR DEVIATIONS FROM THE STRUCTURAL PLANS PRIOR TO COMMENCEMENT OF THE WORK. McBRIE, LLC CANNOT BE RESPONSIBLE FOR ANY DEVIATIONS COMPLETED WITHOUT WRITTEN CONSENT FROM McBRIE, LLC. ADDITIONAL WORK MAY BE REQUIRED AT THE CONTRACTORS EXPENSE IF WORK IS PERFORMED WITHOUT McBRIE, LLC's CONSENT.

LEGEND / ABBREVIATIONS

ADD'L = ADDITIONAL
ALT. = ALTERNATE
APPROX. = APPROXIMATELY
ARCH. = ARCHITECT
BM. = BEAM
B.O.F. = BOTTOM OF FOOTING
B.O.S. = BOTTOM OF STEEL
BOTT. = BOTTOM
BRG. = BEARING
BRG. PL = BEARING PLATE
CLG = CEILING
CLR. = CLEARANCE
CMU = CONCRETE MASONRY UNIT
COL. = COLUMN
CONN. = CONNECTION
CONT. = CONTINUOUS (SINGLE MEMBER)
DBL = DOUBLE
DIM. = DIMENSION
DL = DEAD LOAD
DN = DOWN
D.O. = DITTO
DWGS = CONSTRUCTION DRAWINGS
E.F. = EACH FACE
EL. = ELEVATION
EMB. = EMBEDMENT
E.O.S. = EDGE OF SLAB
E.W. = EACH WAY
EX./EXIST. = EXISTING
EXT. = EXTERIOR
EXP. = EXPANSION
EQ. = EQUAL
FND. = FOUNDATION
FTG. = FOOTING
GA = GAUGE
GALV. = GALVANIZED
HOR. = HORIZONTAL
H.P. = HIGH POINT
K = KIP (1 KIP = 1000 lbs)
LG = LONG
LL = LIVE LOAD
LLH = LONG LEG HORIZONTAL
LLV = LONG LEG VERTICAL
L.P. = LOW POINT
MANUF. = MANUFACTURER
MAX. = MAXIMUM
MECH. = MECHANICAL
MIN. = MINIMUM
MIRR. = MIRROR IMAGE
MISC. = MISCELLANEOUS
N/A = NOT APPLICABLE
NOM. = NOMINAL
N.I.C. = NOT IN CONTRACT
N.T.S. = NOT TO SCALE
P.T. = PRESSURE TREATED
QC = QUALITY CONTROL
RDP = REGISTERED DESIGN PROFESSIONAL
REINF. = REINFORCING
SER = STRUCTURAL ENGINEER OF RECORD
SIM. = SIMILAR
S.S. = STAINLESS STEEL
STD HDR = STANDARD HEADER
STIFF. PL = STIFFENER PLATE
STR. SHTHG' = STRUCTURAL SHEATHING
T&B = TOP & BOTTOM
T&G = TONGUE & GROOVE
T.B.R. = TO BE REMOVED
T.O.C. = TOP OF CONCRETE
T.O.S. = TOP OF STEEL
T.O.W. = TOP OF WALL
TYP. = TYPICAL
U.N.O. = UNLESS NOTED OTHERWISE
VERT. = VERTICAL
V.I.F. = VERIFY IN FIELD
V.W.A. = VERIFY WITH ARCHITECTURAL DRAWINGS
V.W.O. = VERIFY WITH OWNER
WF = WIDE FLANGE
WP = WORKING POINT
WWF = WELDED WIRE FABRIC

PERMIT ISSUE
04/18/2024

CONTRACTOR TO CONTACT McBRIE, LLC AT 978-646-0097 FOR A FINAL FRAMING INSPECTION PRIOR TO INSULATION BEING INSTALLED

NO.	DATE	REVISIONS

PREPARED FOR:
JOHN SEGER
SEGER ARCHITECTS INC.
83 NORTH STREET
SALEM, MA 01970

MULTI-FAMILY BUILD OUT
275 LAFAYETTE STREET
SALEM, MA 01970
McBRIE, LLC PROJECT #23-139N

DRWN BY: WH/LL/MLP
CHK'D BY: LMB/RW/MLP
DATE: 04/18/24

McBrie, LLC
Structural Design & Sales
797 TURNPIKE ST.
2nd FLOOR
NORTH ANDOVER, MA 01845
TEL. 978-646-0097
FAX 978-646-0087
WWW.McBRIE.COM

COMMONWEALTH OF MASSACHUSETTS
MICHAEL L PERHAM
STRUCTURAL
No. 41143
REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES & SPECIFICATIONS

S1

PROGRAM OF STRUCTURAL TESTS AND INSPECTIONS

FOR COMPLIANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS AMENDED BY THE 9TH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE

THE OWNER WILL EMPLOY A TESTING AGENCY (SELECTED BY THE ENGINEER/OWNER) TO PERFORM STRUCTURAL TESTS AND INSPECTIONS AS INDICATED ON THIS SHEET. TEST REPORTS SHALL BE ADDRESSED TO THE OWNER & SENT DIRECTLY TO THE OWNER & MCBRIE, LLC FROM THE TESTING AGENCY.

OWNER:	PROPERTY DEVELOPMENT, CORP.
OWNER'S ADDRESS:	275 LAFAYETTE STREET, SALEM, MA 01970
ARCHITECT OF RECORD:	JOHN SEGER, SEGER ARCHITECTS, INC.
STRUCTURAL ENGINEER OF RECORD (SER):	MICHAEL PERHAM, MCBRIE, LLC

THE FOLLOWING FIRMS, AGENCIES, OR INDIVIDUALS (HEREINAFTER REFERRED TO COLLECTIVELY AS AGENTS) WILL PERFORM THE TESTS AND INSPECTIONS UNDER THE DIRECTION OF THE SER:

ABBREVIATION	AGENT
SER	STRUCTURAL ENGINEER OF RECORD (LISTED ABOVE)
OTS	OWNER'S TESTING SERVICE
N/A	NOT APPLICABLE FOR THIS PROJECT

THE ABBREVIATIONS WILL BE USED TO IDENTIFY WHICH AGENT IS PERFORMING THE PARTICULAR TESTS OR INSPECTIONS.

"IN ACCORDANCE WITH SPECIFICATIONS" IN THE ITEM/SCOPE SHALL INCLUDE THE MASSACHUSETTS STATE BUILDING CODE, CHAPTER 17 AND THE SPECIFICATION FOR EACH MATERIAL AS INDICATED IN THE NOTES ON THIS SHEET (S1) UNDER EACH MATERIAL HEADING

QUALITY ASSURANCE PROGRAM

1. THIS QUALITY ASSURANCE PROGRAM IS PREPARED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS AMENDED BY THE MASSACHUSETTS STATE BUILDING CODE.

2. ANY DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, STRUCTURAL ENGINEER AND ARCHITECT OF RECORD.

3. JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

4. MATERIALS AND ACTIVITIES TO BE INSPECTED ARE NOT TO INCLUDE THE CONTRACTOR'S EQUIPMENT OR METHODS USED TO ERECT OR INSTALL THE MATERIALS LISTED.

5. THE FOLLOWING CATEGORIES OF STRUCTURAL TESTS AND INSPECTIONS ARE INCLUDED IN THE PROGRAM FOR STRUCTURAL TESTS AND INSPECTIONS FOR THIS PROJECT. THE SPECIFIC TESTS AND INSPECTIONS REQUIRED FOR EACH CHECKED CATEGORY ARE LISTED IN DETAIL ON THIS SHEET:

- STRUCTURAL STEEL
- CAST-IN-PLACE CONCRETE
- WOOD CONSTRUCTION

6. THE FOLLOWING ITEMS ARE EXCLUDED FROM THIS QUALITY ASSURANCE PROGRAM SINCE THEY ARE DESIGNED BY OTHER RESPONSIBLE DESIGN PROFESSIONALS NOT UNDER THE AEGIS OF THE STRUCTURAL ENGINEER OF RECORD AND THE STRUCTURAL ENGINEER OF RECORD WAS NOT RETAINED TO PROVIDE PERFORMANCE SPECIFICATIONS FOR THEIR DESIGN. THESE OTHER RESPONSIBLE DESIGN PROFESSIONALS MUST BE ASSIGNED BY THE OWNER OR ARCHITECT, AS APPLICABLE, TO PREPARE A SEPARATE QUALITY ASSURANCE PROGRAM FOR THEIR RESPECTIVE DESIGNS.

- CONTROLLED STRUCTURAL FILL
- IN-SITU BEARING STRATA
- NON-STRUCTURAL ASSEMBLIES

WOOD CONSTRUCTION

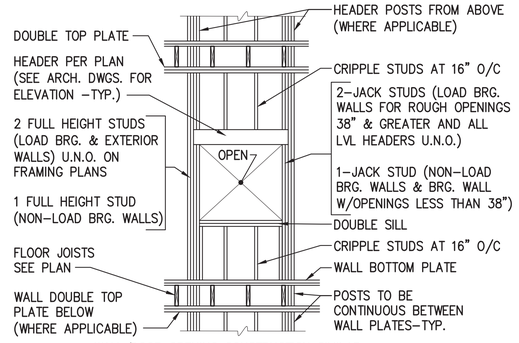
ITEM	AGENT	SCOPE	FREQUENCY
1. TRUSS FABRICATOR CERTICATION/QUALITY CONTROL PROCEDURES	SER, OTS	VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES WHICH CONFORM TO THE REQUIREMENTS OF THE TRUSS PLATE INSTITUTE (TPI) AND WOOD TRUSS COUNCIL OF AMERICA (WTFCA)	CONTINUOUS
2. MATERIAL GRADING	SER	-REVIEW SPECIES AND GRADES OF LUMBER USED TO ENSURE CONFORMANCE WITH CONSTRUCTION DOCUMENTS -REVIEW TRUSS MEMBERS TO ENSURE CONFORMANCE WITH TRUSS ENGINEERING AND SHOP DRAWINGS	CONTINUOUS
3. CONNECTIONS	SER	-VERIFY THAT ROOF TRUSS AND OTHER WOOD FRAME CONNECTIONS COMPLY WITH CONSTRUCTION DOCUMENTS AND SHOP DRAWINGS	CONTINUOUS
4. FRAMING DETAILS	SER	-VERIFY THE FRAMING CONFIGURATION AND ALIGNMENT OF WALL FRAMING BELOW FLOOR AND ROOF FRAMING IS AS SPECIFIED ON THE CONSTRUCTION DOCUMENTS -VERIFY PERMANENT TRUSS BRACING TO CONFORM WITH PROJECT REQUIREMENTS	CONTINUOUS
5. OTHER	SER	-VERIFY THAT FASTENING OF ALL LATERAL LOAD RESISTING ELEMENTS SUCH AS SHEAR WALLS AND DIAPHRAGMS ARE ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS	CONTINUOUS

CAST IN PLACE CONCRETE

ITEM	AGENT	SCOPE	FREQUENCY
1. CAST IN PLACE CONCRETE CONSTRUCTION QC REVIEW	OTS	REVIEW CONTRACTORS FIELD QC PROCEDURES. REVIEW FREQUENCY AND SCOPE OF FIELD TESTING	AT START OF PROJECT
2. MIX DESIGN	SER	REVIEW MIX DESIGNS PRIOR TO PLACEMENT. VERIFY USE OF REQUIRED MIX DESIGN	PRIOR TO CONCRETE PLACEMENT
3. MATERIAL CERTIFICATIONS	SER	REVIEW MATERIAL CERTIFICATIONS FOR CONFORMANCE TO SPECIFICATIONS.	CONTINUOUS
4. BATCHING PLANT	N/A	REVIEW PLANT QC PROCEDURES AND BATCHING AND MIXING METHODS	AT START OF PROJECT
5. REINFORCEMENT INSTALLATION	SER, OTS	INSPECT REINFORCEMENT FOR SIZE, QUANTITY, CONDITION AND PLACEMENT & GEOMETRY. VERIFY SIZE, SPACING, COVER AND TYING OF DOWELS	PRIOR TO EACH CONCRETE PLACEMENT
6. FORMWORK GEOMERTY	OTS	INSPECT FORMWORK FOR SHAPE, SIZE, LOCATION AND FOR PROPER SIZE OF CONCRETE MEMBERS.	PRIOR TO EACH CONCRETE PLACEMENT
7. ANCHOR RODS, CAST IN CONCRETE AND POST INSTALLED IN HARDENED CONCRETE	OTS	INSPECT RODS FOR SIZE, QUANTITY, TYPE, & EMBEDMENT	CONTINUOUS
8. CONCRETE PLACEMENT	OTS	OBSERVE CONCRETE PLACEMENT OPERATIONS, VERIFY CONFORMANCE TO SPECS, INCLUDING COLD AND HOT WEATHER PLACEMENT PROCEDURES. PERFORM SLUMP, DENSITY AND AIR CONTENT TESTS AT POINT OF DISCHARGE	DURING EACH CONCRETE PLACEMENT TEST ONCE EACH TIME CYLINDERS ARE TAKEN
9. EVALUATION OF CONCRETE STRENGTH	OTS	TEST AND EVALUATE IN ACCORDANCE WITH THE SPECIFICATIONS.	4 CYLINDERS PER BATCH ONCE EACH DAY BUT NOT LESS THAN ONCE FOR EACH 150 CUBIC YARDS OR 5000 SQ. FT. OF SLAB AREA.
10. CURING AND PROTECTION	OTS	OBSERVE PROCEDURES FOR CONFORMANCE TO THE DWGS. & SPECIFICATIONS.	CONTINUOUS
11. IN SITU CONCRETE STRENGTH	N/A	VERIFY STRENGTH OF IN SITU CONCRETE PRIOR TO FORM AND SHORE REMOVAL.	CONTINUOUS
12. ADHESIVE DOWELS & EXPANSION ANCHORS	OTS	ENSURE NO REINFORCING IS CUT DURING HOLE DRILLING. INSPECT RODS & ANCHORS FOR SIZE, QUANTITY, TYPE, AND EMBEDMENT. HOLE CLEANING PROCEDURE PER MANUF. INSTRUCTIONS. VERIFY EPOXY TYPE AND INSTALLATION.	CONTINUOUS
13. VAPOR RETARDER	OTS	INSPECT INSTALLATION OF VAPOR RETARDER FOR COMPLIANCE WITH APPROVED PROCEDURES AND, SPECS AND CONTRACT DOCUMENTS	PERIODIC

STRUCTURAL STEEL

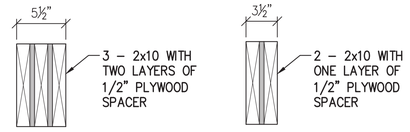
ITEM	AGENT	SCOPE	FREQUENCY
1. STEEL CONSTRUCTION QC REVIEW	SER, OTS	REVIEW CONTRACTORS FIELD QC PROCEDURES. REVIEW FREQUENCY AND SCOPE OF FIELD TESTING	AT START OF PROJECT
2. FABRICATION CERTIFICATION/QC PROCEDURES	OTS	REVIEW FABRICATORS QUALITY CONTROL PROCEDURES.	AT START OF PROJECT, PRIOR TO FABRICATION
3. IN-PLANT INSPECTION DURING FABRICATION	N/A	INSPECT IN-PLANT FABRICATION	PERIODIC
4. MATERIAL CERTIFICATION	SER	REVIEW MATERIAL CERTIFICATIONS FOR CONFORMANCE	PRIOR TO FABRICATION
5. BOLTING	OTS	TEST AND INSPECT BOLTED CONNECTIONS IN ACCORDANCE WITH SPECIFICATIONS. INSPECT SIZE, QUANTITY AND GRADE.	PERIODIC
6. WELDING	OTS	CHECK WELDER QUALIFICATIONS, VISUALLY INSPECT FILLET WELDS, AND TEST FULL PENETRATION FIELD WELDS IN ACCORDANCE WITH THE SPECIFICATIONS.	CONTINUOUS
8. STRUCTURAL FRAMING DETAILS AND ASSEMBLIES	OTS	INSPECT FOR SIZE, GRADE, CAMBER AND INSTALLATION OF CONNECTION DETAILS. CHECK AGAINST APPROVED SHOP DRAWINGS AND CONSTRUCTION DOCUMENTS.	ONGOING AS INSTALLATION PROGRESSES
10. EXPANSION & ADHESIVE ANCHORS	OTS	REVIEW INSTALLATION PROCEDURES FOR BOTH MECHANICAL ANCHORS & ADHESIVE ANCHORS. VERIFY THAT MATERIALS ARE SUITABLE FOR JOB CONDITIONS	DURING FIRST INSTALLATION FOR EACH SIZE/TYPE OF ANCHOR
12. FIELD CORRECTION OF FABRICATED ITEMS	OTS	REVIEW DOCUMENTATION OF RESPONSIBLE RDP APPROVED REPAIR AND VERIFY COMPLETION OF REPAIRS.	ONCE FOR EACH REPAIR



WALL/DOOR OPENING CONSTRUCTION SIMILAR

SEE PLAN FOR HEADER SIZE AND JACK STUD QUANTITY FOR LARGE OPENINGS

A ELEVATION – TYPICAL WINDOW FRAMING
NOT TO SCALE



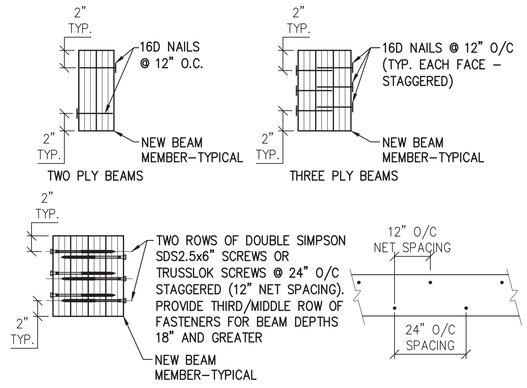
ALL 2x6 EXTERIOR & LOAD BEARING WALL HEADER

ALL 2x4 EXTERIOR & LOAD BEARING WALL HEADER

ABOVE DETAILS ARE TYPICAL AT ALL EXTERIOR AND LOAD BEARING WALL OPENINGS UNLESS OTHERWISE NOTED ON FRAMING PLANS

PROVIDE DOUBLE JACK STUDS FOR SUPPORT OF BEARING WALL HEADERS UNLESS OTHERWISE NOTED ON FRAMING PLANS

B STANDARD EXTERIOR & LOAD BEARING WALL HEADERS
SCALE: NOT TO SCALE



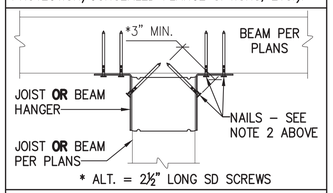
NOTE: ADD AN ADDITIONAL ROW TO ALL DETAILS FOR BEAMS DEEPER THAN 14"

C TYPICAL NAILING/BOLTING DETAILS FOR BUILT UP BEAMS
SCALE: NOT TO SCALE

SIMPSON STRONG-TIE METAL CONNECTOR/HANGER SCHEDULE

MEMBER SIZE	HANGER DESIGNATION
2x10/12 RAFTER	LRU210Z
2x8 JOIST	LUS28 (ALT. HU28Z)
2x10/12 JOIST	LUS210 (ALT. HU210Z)
2-2x10/12	HUS210-2/Z
3-2x10/12	HHUS210-3/Z
9½" TJI230 JOIST	IUS2.37/9.5
11⅞" TJI JOIST	IUS FOR FLANGE WIDTH
14"/16" TJI JOIST	IUS FOR FLANGE WIDTH
2-1¾"x7¼" LVLs	HHUS48
3-1¾"x7¼" LVLs	HU68-MAX
2-1¾"x9¼"/9½" LVLs	HHUS410
3-1¾"x9¼"/9½" LVLs	HHUS5.50/10
4-1¾"x9¼"/9½" LVLs	HHUS7.25/10
2-1¾"x11¼"/11⅞" LVLs	HHUS410
3-1¾"x11¼"/11⅞" LVLs	HHUS5.50/10
4-1¾"x11¼"/11⅞" LVLs	HHUS7.25/10
2-1¾"x14" LVLs	HHUS410
3-1¾"x14" LVLs	HHUS5.50/10
4-1¾"x14" LVLs	HHUS7.25/10
2-1¾"x16" LVLs	HGUS414
3-1¾"x16" LVLs	HGUS5.50/14
4-1¾"x16" LVLs	HGUS7.25/14
2-1¾"x18" LVLs	HGUS414
3-1¾"x18" LVLs	HGUS5.50/14
4-1¾"x18" LVLs	HGUS7.25/14
3-1¾"x20" LVLs	HGUS5.50/14
2-1¾"x24" LVLs	HGUS414
3-1¾"x24" LVLs	HGU5.62SDS H=24"

1. PROVIDE HANGERS AT ALL FLUSH FRAMED LOCATIONS-NOT ALL HANGERS SHOWN IN PLAN.
2. **NAILING PER MANUFACTURERS SPECIFICATIONS. DO NOT USE 1½" LONG NAILS UNLESS SPECIFICALLY REQUIRED BY SIMPSON STRONG TIE**
3. ABOVE NOTED HANGERS ARE TYPICAL U.N.O.
4. SPECIAL ORDER IF SKEW IS REQUIRED.
5. Z-MAX COATED HANGERS ARE TO BE USED WHERE ADD'L CORROSION PROTECTION IS REQ'D.
6. NOTIFY McBRIE, LLC FOR ALTERNATE DESIGNATIONS IF REQ'D (i.e. FOR ALT. CORROSION PROTECTION/CONCEALED FLANGE OPTIONS, ETC.).



TYP. JOIST & BEAM HANGER NAILING
SCALE: NONE

PERMIT ISSUE
04/18/2024

CONTRACTOR TO CONTACT McBRIE, LLC AT 978-646-0097 FOR A FINAL FRAMING INSPECTION PRIOR TO INSULATION BEING INSTALLED

NO.	DATE	REVISIONS

PREPARED FOR:
JOHN SEGER
SEGER ARCHITECTS INC.
83 NORTH STREET
SALEM, MA 01970

MULTI-FAMILY BUILD OUT
275 LAFAYETTE STREET
SALEM, MA 01970
McBRIE, LLC PROJECT #23-139N

DRWN BY: WH/LL/MLP
CHK'D BY: LMB/RW/MLP
DATE: 04/18/24

McBrie, LLC
Structural Design & Sales
797 TURNPIKE ST.
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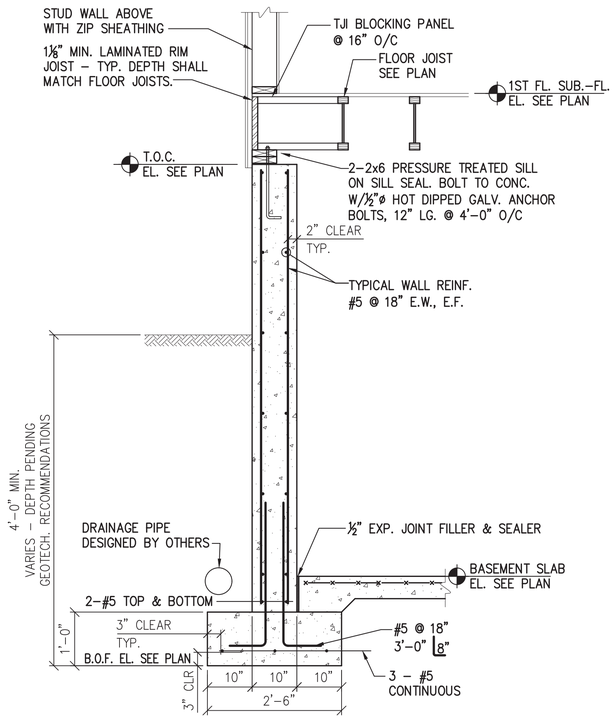
FAX 978-646-0087
WWW.MCBRIE.COM

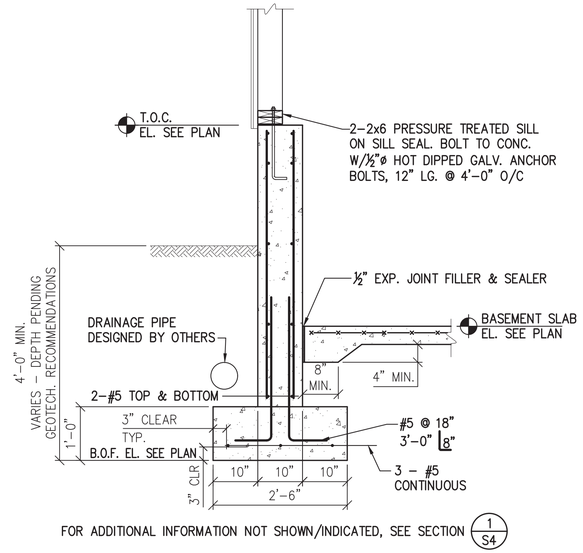
COMMONWEALTH OF MASSACHUSETTS
MICHAEL L PERHAM
STRUCTURAL
No. 41143
REGISTERED PROFESSIONAL ENGINEER

PROGRAM OF STRUCTURAL TESTS & SPECIAL INSPECTIONS & MISC. DETAILS

S2

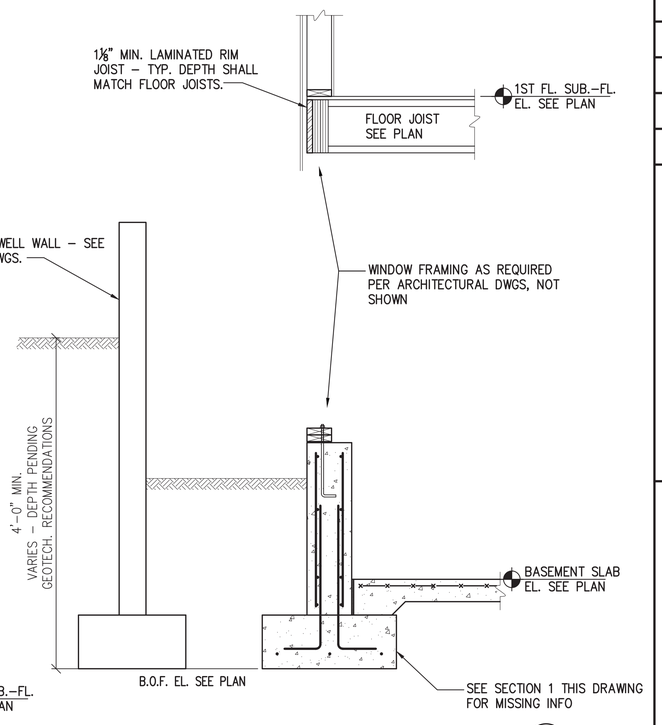


1 S4 TYPICAL FOUNDATION WALL SECTION
SCALE: ¾" = 1'–0"



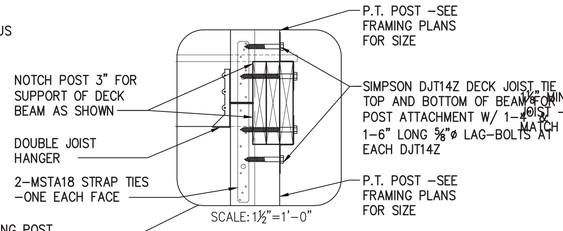
FOR ADDITIONAL INFORMATION NOT SHOWN/INDICATED, SEE SECTION 1 S4

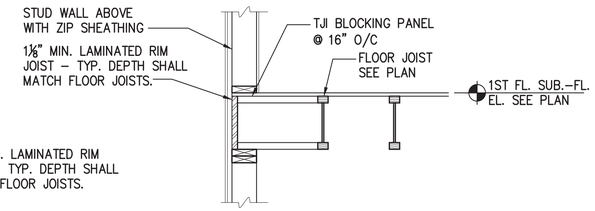
2 S4 TYPICAL FOUNDATION WALL SECTION
SCALE: ¾" = 1'–0"



FOR ADDITIONAL INFORMATION NOT SHOWN/INDICATED, SEE SECTION 1 S4

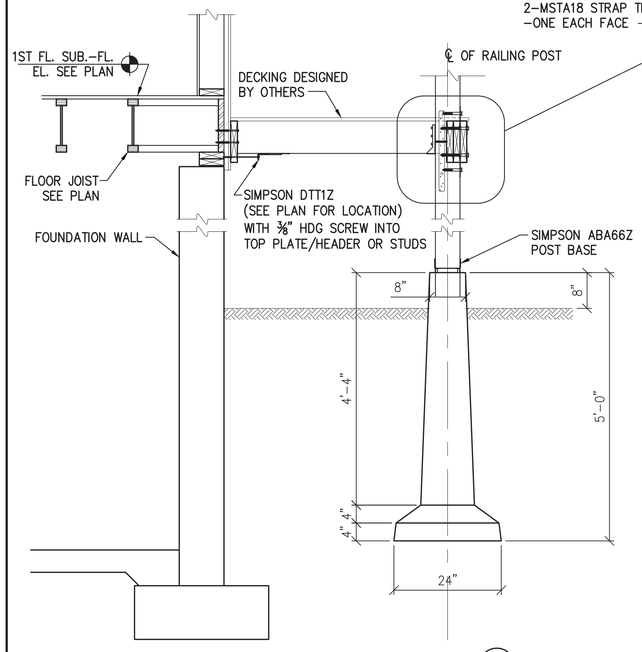
6 S3 TYPICAL FOUNDATION WALL SECTION
SCALE: ¾" = 1'–0"





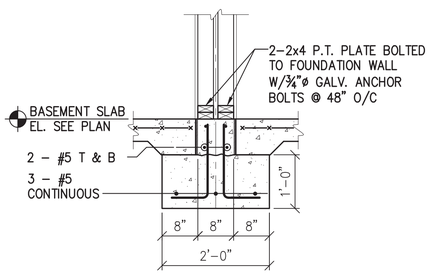
FOR ADDITIONAL INFORMATION NOT SHOWN/INDICATED, SEE SECTION 1 S4

3 S4 REAR WALL SECTION AT FIRST FLOOR
SCALE: ¾" = 1'–0"

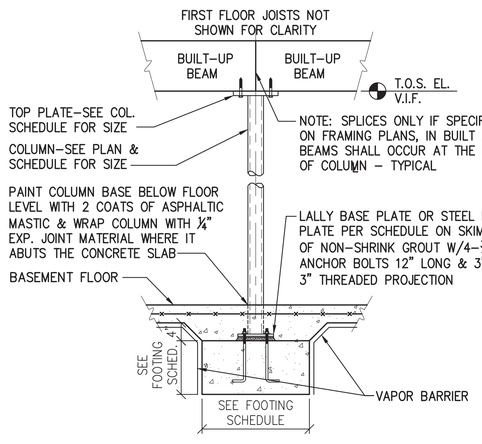


FOR ADDITIONAL INFORMATION NOT SHOWN/INDICATED, SEE SECTION 1 S4

5 S4 PRECAST FOOTING AT FRONT ENTRY
SCALE: ¾" = 1'–0"



4 S4 FND SECTION BEARING AT STAIRS
SCALE: ¾" = 1'–0"



SEE COLUMN SCHEDULE FOR TOP PLATE & BASE PLATE SIZES

7 S3/S4 ELEVATION – TYPICAL INTERIOR COLUMN
SCALE: NONE

I–JOIST EQUIVALENTS SCHEDULE

TJI WEYERHAEUSER DESIGNATION	BOISE AJS ALLJOIST DESIGNATION	BOISE BCI JOIST DESIGNATION	COASTAL FOREST PRODUCTS DESIGNATION	NORDIC JOIST DESIGNATION
TJI 230	AJS 20	BCI 60s	–	NI–40X
TJI 360	AJS 25	BCI 60s	–	NI–80
TJI 560	NO EQUIVALENT	BCI 90s	CPI–90	NI–90

NOTE WELL: THE ABOVE TABLE ONLY APPLIES IF NO ALTERNATES ARE CALLED OUT ON THE FRAMING PLANS. NOTIFY McBRIE, LLC IF ALTERNATES ARE REQUIRED DUE TO AVAILABILITY.

SHEAR WALL SHEATHING & FASTENING SCHEDULE

WALL TYPE	SHEATHING TYPE	SIDES	NAIL TYPE	NAIL SPACING EDGE	NAIL SPACING FIELD
1 ALL EXTERIOR WALLS U.N.O.	APPROVED ZIP SYSTEM SHEATHING (R–6 SHEATHING)	EXTERIOR	10d COMMON **(1½" MIN INTO WALL STUDS)**	**4**	12
2	15/32" STRUCTURAL SHEATHING	ONE SIDE	8d COMMON	6	12
3	GYPSUM PER ARCH. DRAWINGS	ONE SIDE	#6 TYPE S OR TYPE W SCREW	7	7

1. **ALL SHEAR & EXTERIOR WALLS SHALL BE BLOCKED AT HORIZONTAL PLYWOOD SEAMS.**
2. BLOCK & FASTEN ALL SHEAR WALLS W/BLOCKING & ADD'L FRAMING MEMBERS AS REQ'D PER IRC FIGURE R602.10.8(1) & FIGURE R602.10.8(2) (P. 196 OF IRC 2015)
3. ALL NAILS USED ARE TO BE 8d COMMON (8d COMMON = 0.131"ø x 2½" LONG). 16d x 2½" LONG (0.162"ø x 2½") NAILS CAN BE USED AS A SUBSTITUTE.
4. NO SINKER NAILS OR WIRE NAILS ARE TO BE USED FOR ANY WALL SHEATHING–TYP.
5. SEE ARCH. DRAWINGS FOR FINISH SCHEDULES.

PERMIT ISSUE
04/18/2024

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JOHN SEGER
SEGER ARCHITECTS INC.
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SALEM, MA 01970

MULTI–FAMILY BUILD OUT

275 LAFAYETTE STREET
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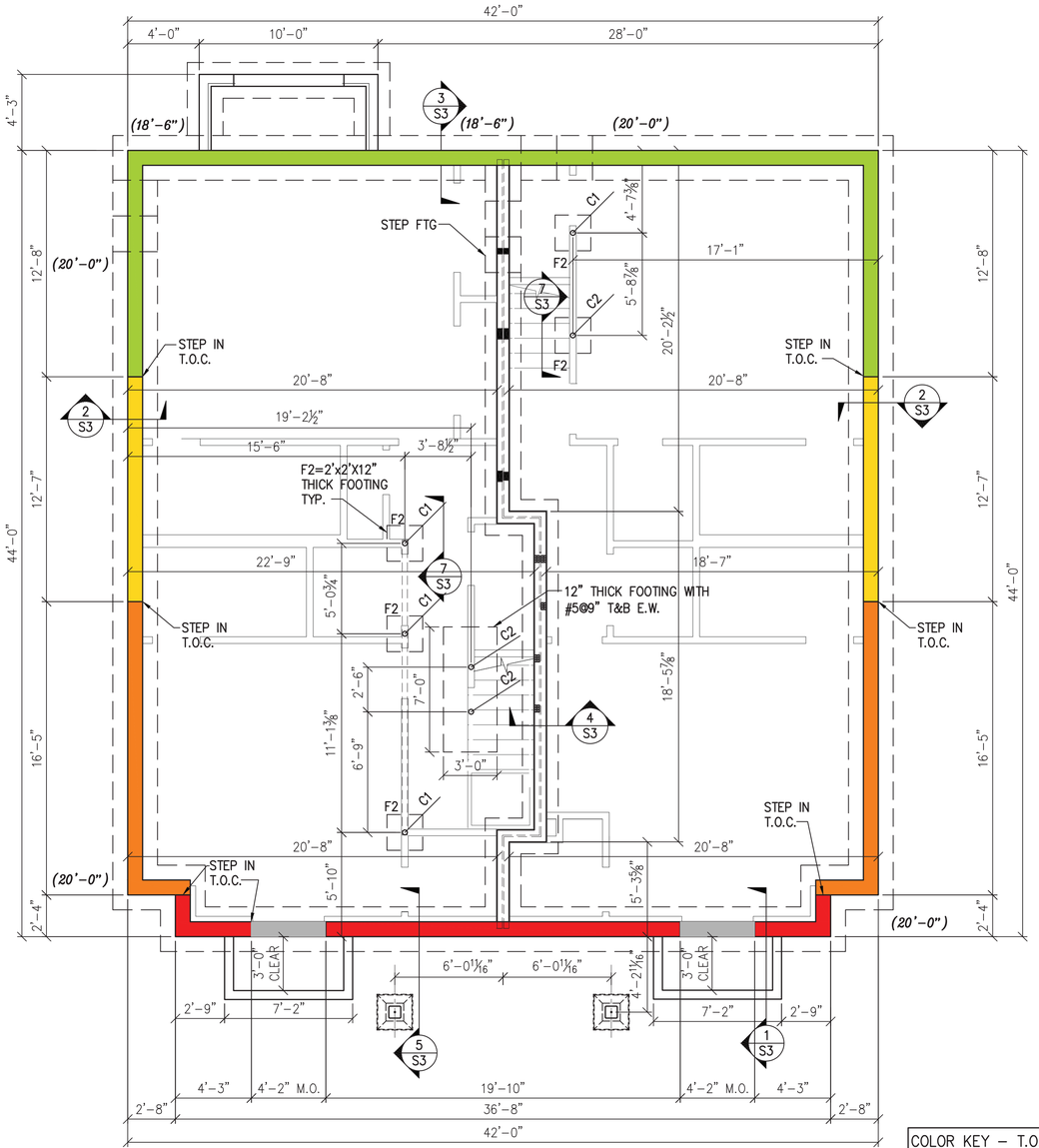
WWW.McBRIE.COM

COMMONWEALTH OF MASSACHUSETTS
MICHAEL L. PERHAM
STRUCTURAL
No. 41143
REGISTERED PROFESSIONAL ENGINEER

FOUNDATION DETAILS

S3



BASEMENT TOP OF SLAB ELEVATION = 23'-0" (V.W.A.)

TOP OF CONCRETE ELEVATIONS ARE TO BE SET IN FIELD AND SHALL BE APPROVED BY THE ARCHITECT & OWNER PRIOR TO THE INSTALLATION OF THE FORMS. **NOTE WELL: THIS DRAWING IS TO BE PRINTED IN COLOR (NOT BLACK AND WHITE) TO DISPLAY THE TOP OF CONCRETE ELEVATIONS. IF THIS DRAWING IS NOT PRINTED IN COLOR, PLEASE CONTACT McBRIE, LLC OR THE ARCHITECT PRIOR TO THE INSTALLATION OF FORMS.**

ELEVATIONS NOTED AS *(XX.X)* INDICATE THE BOTTOM OF FOOTING ELEVATION.

PREPARATION OF SUBGRADE SHALL BE PER OWNER HIRED GEOTECHNICAL ENGINEER.

BASEMENT FLOOR SLAB SHALL BE 4" CONCRETE SLAB-ON-GRADE WITH 6X6-W2.1x2.1 WWF SET 2" FROM THE TOP, SUBGRADE AND VAPOR BARRIER PER OWNER HIRED GEOTECHNICAL ENGINEER.

SEE SHEET S1 FOR CONCRETE NOTES AND S2 & S3 FOR GENERAL DETAILS AND SECTIONS NOT SHOWN ON THIS SHEET.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS INDICATED WITH THE ARCHITECTURAL DRAWINGS BEFORE COMMENCEMENT OF WORK.

FOUNDATION PLAN

SCALE: ¼" = 1'-0"

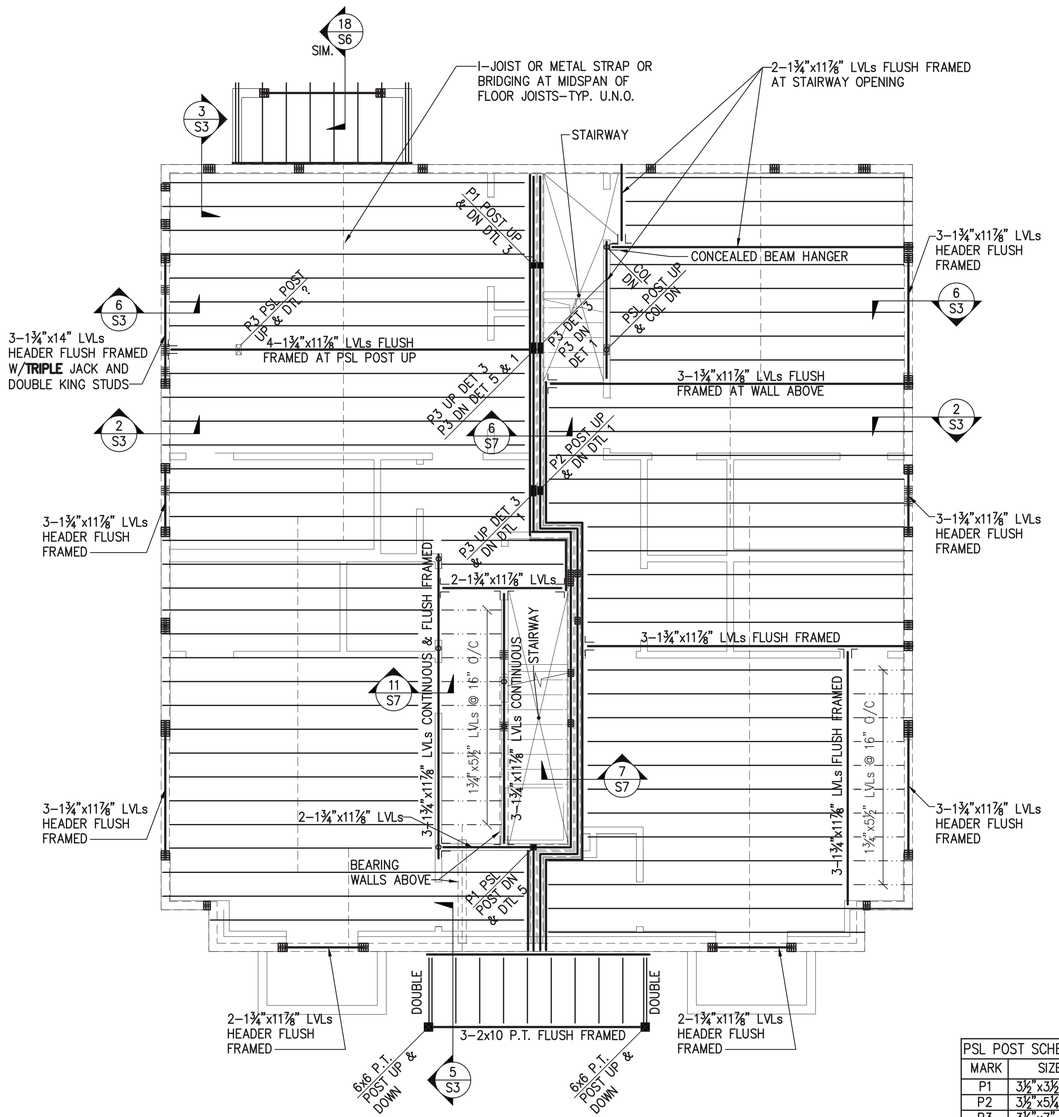
COLOR KEY – T.O.C. ELEVATIONS
= EL. 30'-8⅜"
= EL. 27'-8"
= EL. 26'-11"
= EL. 26'-4¼"
= EL. V.W.A.

COLUMN SCHEDULE				
MARK	COLUMN SIZE	BASE PLATE	TOP PLATE	ALT. COLUMN CAP
C1	3½" O.D. LALLY	5x5 LALLY CAP	SPRINGFIELD PL.	SIMPSON LCC
C2	4" O.D. LALLY	5x5 LALLY CAP	SPRINGFIELD PL.	SIMPSON LCC

TOP PLATES FOR COLUMNS SUPPORTING BEAMS FRAMING INTO STAIRWAY WALLS ARE TO BE OFFSET AS NEEDED TO AVOID STEEL OR STRUCTURE IN ANY FINISHED SPACES – TYPICAL.

COLUMN CAPS AND BASES LISTED ABOVE APPLY FOR ALL LOCATIONS U.N.O. ON THE PLANS

ALTERNATE COLUMN CAPS ARE MANUFACTURED BY SIMPSON STRONG TIE.



TOP OF FIRST FLOOR SUBLFLOOR EL. = 32'-0" (V.W.A.)

FIRST FLOOR JOISTS SHALL BE 11 7/8" TJI® 360 @ 16" O/C U.N.O. ON FRAMING PLANS

ENTRY PORCH JOISTS SHALL BE 2x8 P.T. (MIN.) @ 16" O/C U.N.O.

PROVIDE JOIST HANGERS AT ALL FLUSH FRAMED LOCATIONS

▦ = HEADER POSTS SHALL BE PER S2 AND SUPPORT POSTS SHALL BE PER TABLE S2 UNLESS OTHERWISE NOTED (ALL POSTS SHALL BE EQUAL TO OR WIDER THAN BEAM WIDTH). ALL POSTS SHALL BE CONTINUOUS (BLOCKED SOLID) BETWEEN WALL PLATES AT FLOOR FRAMING/SUPPORTING BEAM. DETAIL NUMBER INDICATES PSL POST CONSTRUCTION DETAIL AS INDICATED ON SHEET S8.

▨ = INTERIOR LOAD BEARING WALL

SEE DETAILS A & B ON S2 FOR ALL HEADERS NOT INDICATED ON PLAN.

FIRST FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

PSL POST SCHEDULE	
MARK	SIZE
P1	3½"x3½" PSL
P2	3½"x5¼" PSL
P3	3½"x7" PSL
P4	5¼"x5¼" PSL
P5	5¼"x7" PSL
P6	7"x7" PSL

PERMIT ISSUE
04/18/2024

CONTRACTOR TO CONTACT McBRIE, LLC AT 978-646-0097 FOR A FINAL FRAMING INSPECTION PRIOR TO INSULATION BEING INSTALLED

NO.	DATE	REVISIONS

PREPARED FOR:
JOHN SEGER
SEGER ARCHITECTS INC.
83 NORTH STREET
SALEM, MA 01970

MULTI-FAMILY BUILD OUT

275 LAFAYETTE STREET
SALEM, MA 01970
McBRIE, LLC PROJECT #23-139N

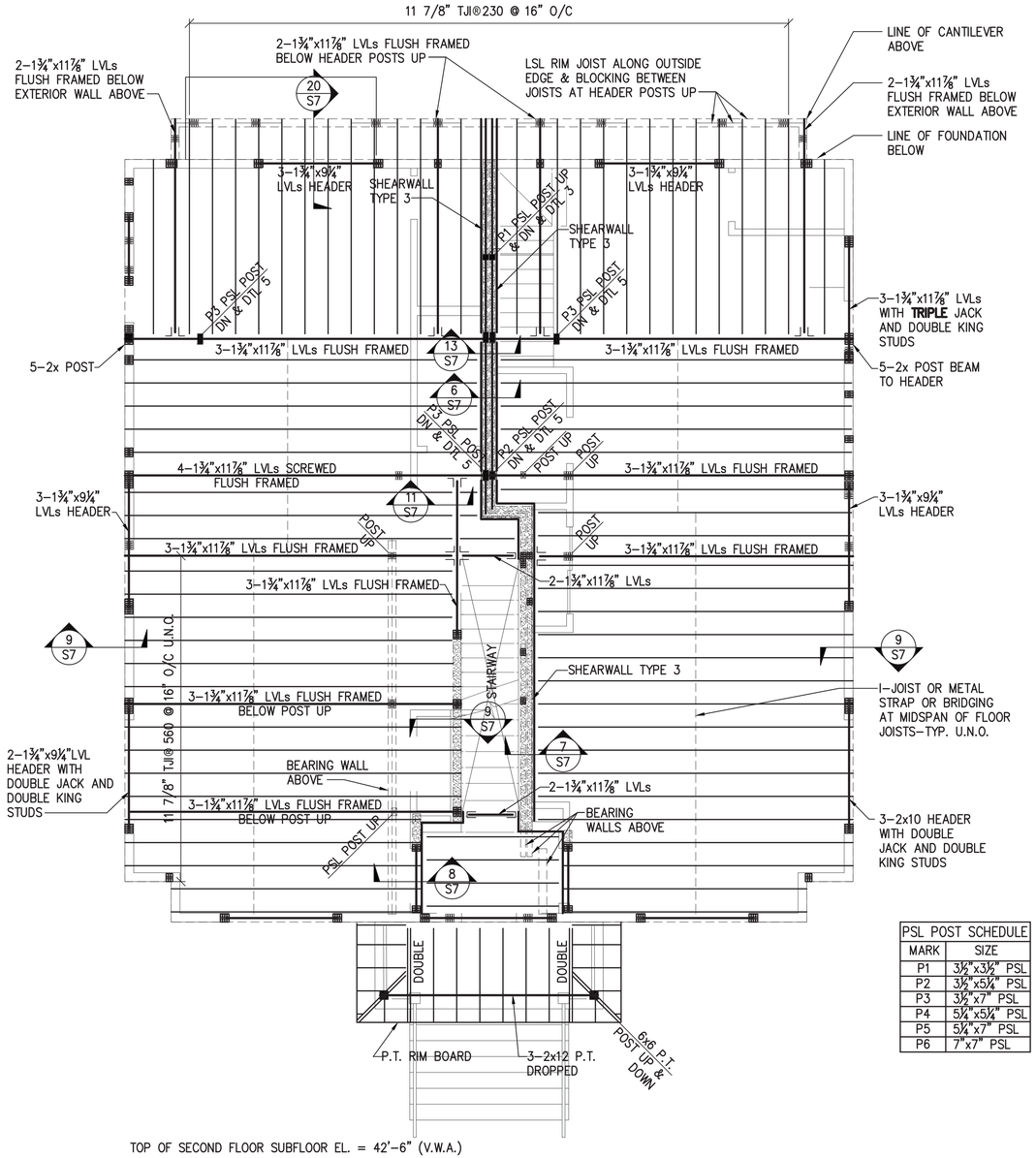
DRWN BY: WH/LL/MLP
CHK'D BY: LMB/RW/MLP
DATE: 04/18/24

McBrie, LLC
Structural Design & Sales
797 TURNPIKE ST.
2nd FLOOR
NORTH ANDOVER, MA 01845
TEL: 978-646-0097
FAX: 978-646-0087
WWW.McBRIE.COM

COMMONWEALTH OF MASSACHUSETTS
MICHAEL L. PERHAM
STRUCTURAL
No. 41143
REGISTERED PROFESSIONAL ENGINEER

FOUNDATION & FIRST FLOOR FRAMING PLANS

S4



PSL POST SCHEDULE	
MARK	SIZE
P1	3½"x3½" PSL
P2	3½"x5¼" PSL
P3	3½"x7" PSL
P4	5¼"x5¼" PSL
P5	5¼"x7" PSL
P6	7"x7" PSL

TOP OF SECOND FLOOR SUBFLOOR EL. = 42'–6" (V.W.A.)

SECOND FLOOR JOISTS SHALL BE 11 7/8" TJI® 360 @ 16" O/C U.N.O. ON FRAMING PLANS

LOW ROOF DECK JOISTS SHALL BE 2x10 P.T. @ 16" O/C U.N.O.

PROVIDE JOIST HANGERS AT ALL FLUSH FRAMED LOCATIONS

▦ = HEADER POSTS SHALL BE PER S2 AND SUPPORT POSTS SHALL BE PER TABLE S2 UNLESS OTHERWISE NOTED (ALL POSTS SHALL BE EQUAL TO OR WIDER THAN BEAM WIDTH). ALL POSTS SHALL BE CONTINUOUS (BLOCKED SOLID) BETWEEN WALL PLATES AT FLOOR FRAMING/SUPPORTING BEAM. DETAIL NUMBER INDICATES PSL POST CONSTRUCTION DETAIL AS INDICATED ON SHEET S8

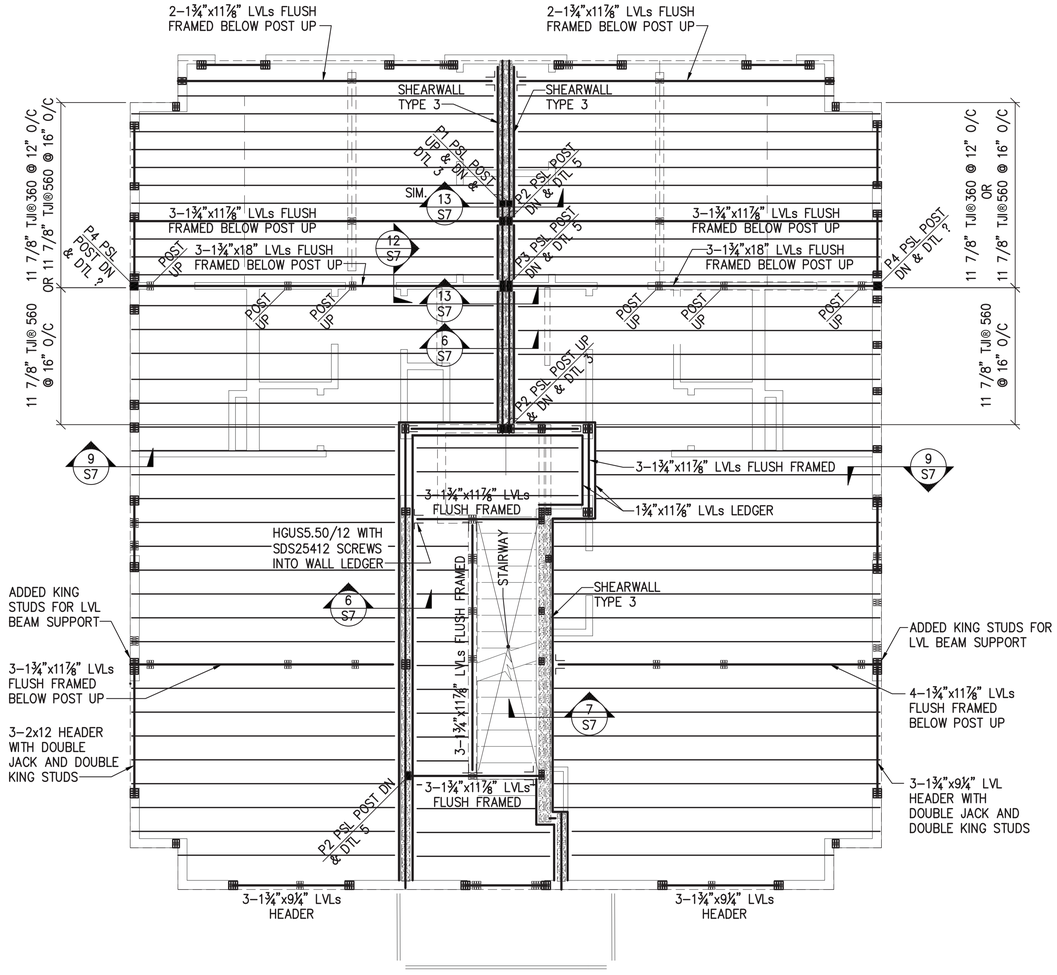
▨ = INTERIOR LOAD BEARING WALL

▨ = INTERIOR SHEAR WALL – SEE "SHEAR WALL SHEATHING & FASTENING SCHEDULE" ON SHEET S3. ALL EXTERIOR WALLS SHALL BE SHEAR WALL TYPE 1 U.N.O. ON FRAMING PLAN.

SEE DETAILS A & B ON S2 FOR ALL HEADERS NOT INDICATED ON PLAN.

SECOND FLOOR FRAMING PLAN

SCALE: ¼" = 1'–0"



TOP OF THIRD FLOOR SUBFLOOR EL. = 52'–0¾" (V.W.A.)

THIRD FLOOR JOISTS SHALL BE 11 7/8" TJI® 360 @ 16" O/C U.N.O. ON FRAMING PLANS

PROVIDE JOIST HANGERS AT ALL FLUSH FRAMED LOCATIONS

▦ = HEADER POSTS SHALL BE PER S2 AND SUPPORT POSTS SHALL BE PER TABLE S2 UNLESS OTHERWISE NOTED (ALL POSTS SHALL BE EQUAL TO OR WIDER THAN BEAM WIDTH). ALL POSTS SHALL BE CONTINUOUS (BLOCKED SOLID) BETWEEN WALL PLATES AT FLOOR FRAMING/SUPPORTING BEAM. DETAIL NUMBER INDICATES PSL POST CONSTRUCTION DETAIL AS INDICATED ON SHEET S8

▨ = INTERIOR LOAD BEARING WALL

▨ = INTERIOR SHEAR WALL – SEE "SHEAR WALL SHEATHING & FASTENING SCHEDULE" ON SHEET S3. ALL EXTERIOR WALLS SHALL BE SHEAR WALL TYPE 1 U.N.O. ON FRAMING PLAN.

SEE DETAILS A & B ON S2 FOR ALL HEADERS NOT INDICATED ON PLAN.

THIRD FLOOR FRAMING PLAN

SCALE: ¼" = 1'–0"

PERMIT ISSUE
04/18/2024

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SEGER ARCHITECTS INC.
83 NORTH STREET
SALEM, MA 01970

MULTI–FAMILY BUILD OUT

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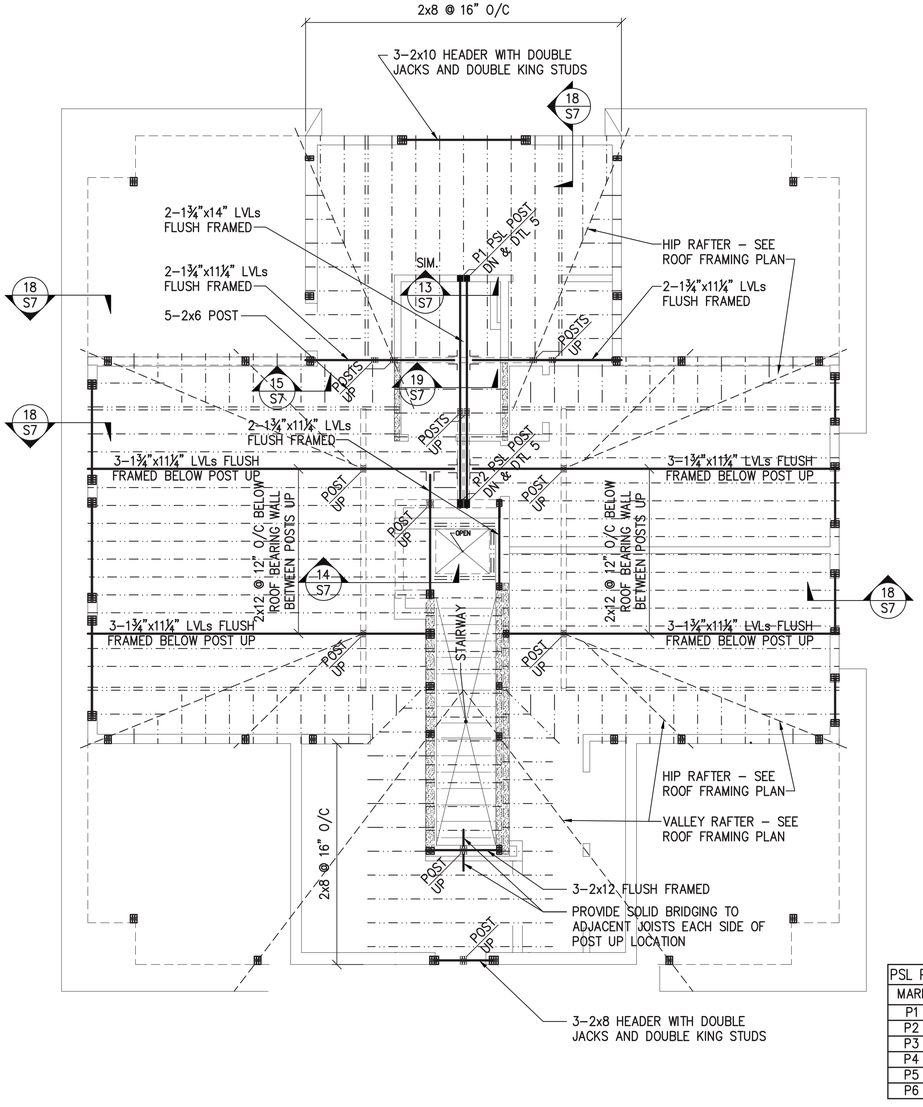
COMMONWEALTH OF MASSACHUSETTS
MICHAEL L PERHAM
STRUCTURAL
No. 41143
REGISTERED PROFESSIONAL ENGINEER

SECOND AND THIRD FLOOR FRAMING PLANS

S5



PSL POST SCHEDULE	
MARK	SIZE
P1	3½"x3½" PSL
P2	3½"x5¼" PSL
P3	3½"x7" PSL
P4	5¼"x5¼" PSL
P5	5¼"x7" PSL
P6	7"x7" PSL

ATTIC JOISTS SHALL BE 2x12 @ 16" O/C U.N.O. ON FRAMING PLANS

PROVIDE JOIST HANGERS AT ALL FLUSH FRAMED LOCATIONS

▦ = HEADER POSTS SHALL BE PER S2 AND SUPPORT POSTS SHALL BE PER TABLE S2 UNLESS OTHERWISE NOTED (ALL POSTS SHALL BE EQUAL TO OR WIDER THAN BEAM WIDTH). ALL POSTS SHALL BE CONTINUOUS (BLOCKED SOLID) BETWEEN WALL PLATES AT FLOOR FRAMING/SUPPORTING BEAM. DETAIL NUMBER INDICATES PSL POST CONSTRUCTION DETAIL AS INDICATED ON SHEET S8.

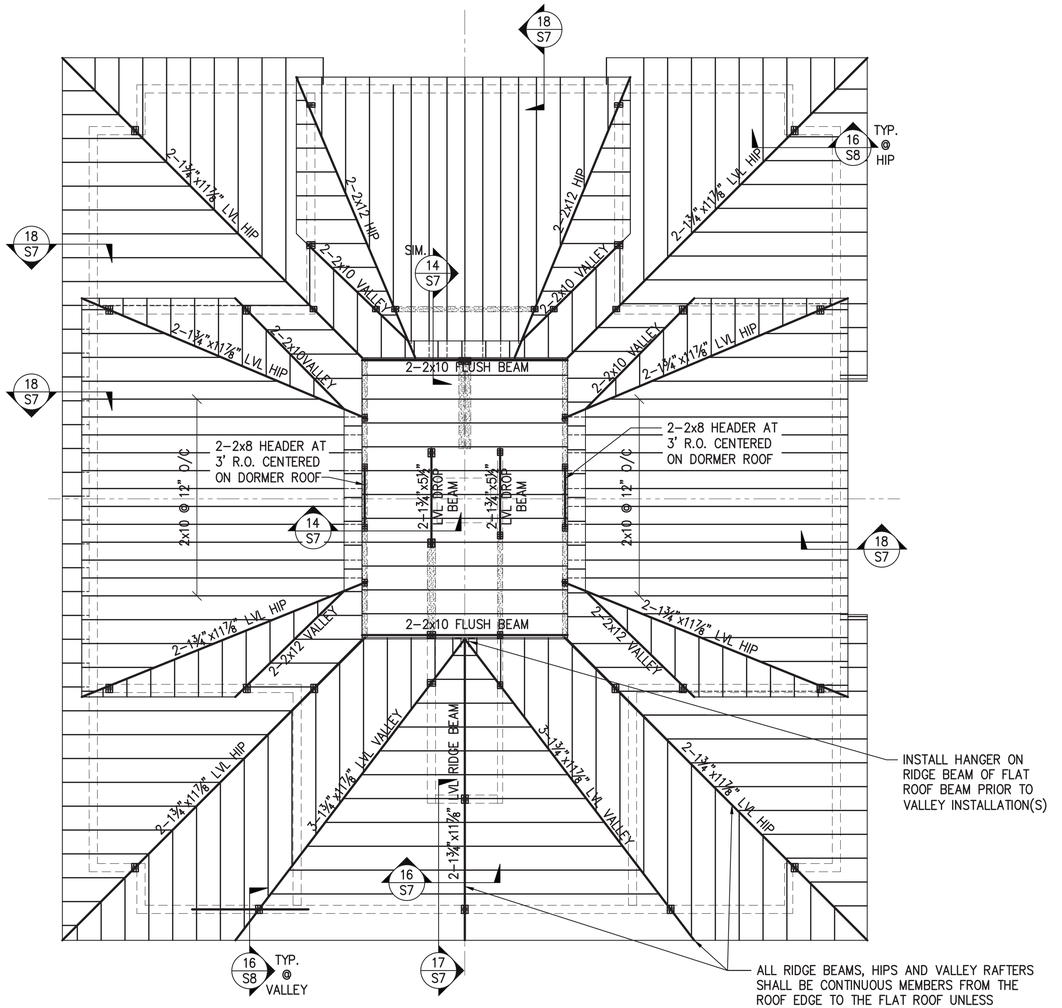
▨ = INTERIOR LOAD BEARING WALL

▨ = INTERIOR SHEAR WALL - SEE "SHEAR WALL SHEATHING & FASTENING SCHEDULE" ON SHEET S3. ALL EXTERIOR WALLS SHALL BE SHEAR WALL TYPE 1 U.N.O. ON FRAMING PLAN.

SEE DETAILS A & B ON S2 FOR ALL HEADERS NOT INDICATED ON PLAN.

ATTIC FRAMING PLAN

SCALE: ¼" = 1'-0"



ROOF RAFTERS SHALL BE 2x10 @ 16" O/C U.N.O. ON FRAMING PLANS

PROVIDE JOIST HANGERS AT ALL FLUSH FRAMED LOCATIONS,

▦ = HEADER POSTS SHALL BE PER S2 AND SUPPORT POSTS SHALL BE PER TABLE S2 UNLESS OTHERWISE NOTED (ALL POSTS SHALL BE EQUAL TO OR WIDER THAN BEAM WIDTH). ALL POSTS SHALL BE CONTINUOUS (BLOCKED SOLID) BETWEEN WALL PLATES AT FLOOR FRAMING/SUPPORTING BEAM. DETAIL NUMBER INDICATES PSL POST CONSTRUCTION DETAIL AS INDICATED ON SHEET S8.

▨ = FULL HEIGHT STUD WALLS

▨ = INTERIOR LOAD BEARING WALLS

PROVIDE 2x6 COLLAR TIES - - - @ 48" MAX. O/C (EVERY THIRD RAFTER) AT ALL OPPOSING RAFTER PAIRS IN THE UPPER THIRD OF THE RAFTER SPAN.

PROVIDE SIMPSON H2.5A HURRICANE TIES AT ALL RAFTER TO TOP PLATE CONNECTIONS

SEE DETAILS A & B ON S2 FOR ALL HEADERS NOT INDICATED ON PLAN.

ROOF FRAMING PLAN

SCALE: ¼" = 1'-0"

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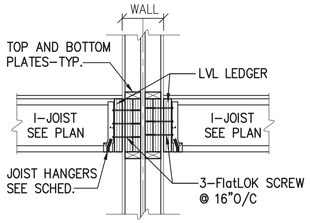
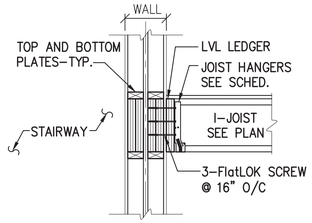
ATTIC AND ROOF FRAMING PLANS

S6



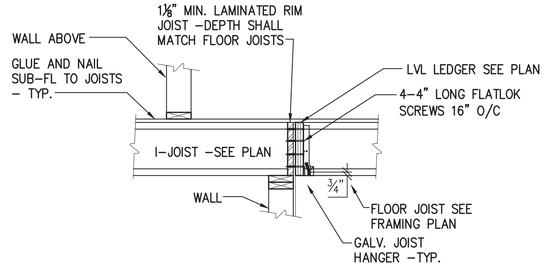
VERIFY DETAIL WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK

6 / S5 TYPICAL DETAIL @ DOUBLE DEMISING WALL
SCALE: ¾" = 1'–0"

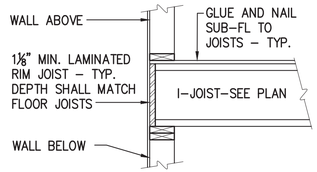


VERIFY DETAIL WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK

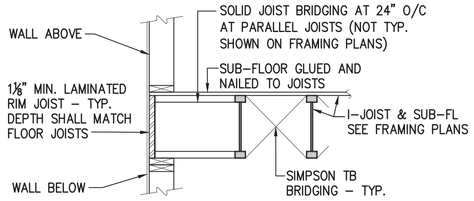
7 / S5 STAIRWAY DETAIL @ DOUBLE DEMISING WALL
SCALE: ¾" = 1'–0"



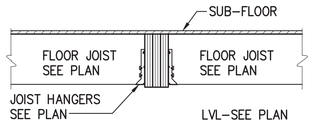
8 / S5 SECTION AT STAIR LANDING
SCALE: NONE



9 / S5 I–JOIST WALL DETAIL
SCALE: NONE

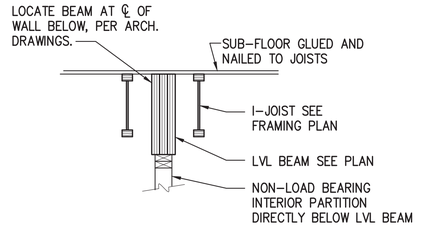


10 / S5 I–JOIST PARALLEL WALL DETAIL TYP.
SCALE: NONE

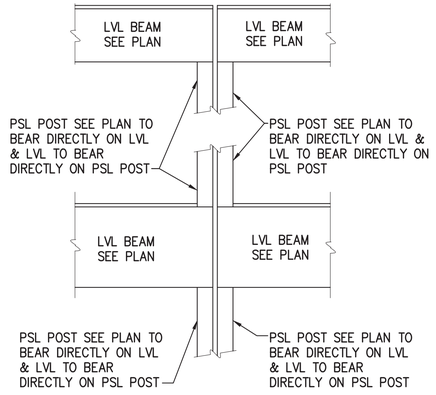


NOTES:
1. STRAPPING FOR CEILING SHALL EXTEND 1/4" MIN. BELOW BOTTOM OF LVLs.
2. DO NOT ATTACH STRAPPING TO BOTTOM OF LVLs

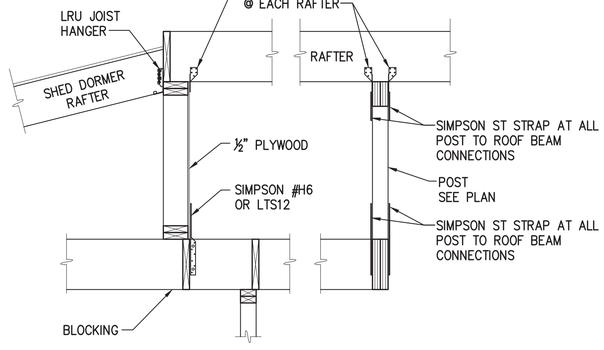
11 / S4/S5 SECTION AT FLUSH FRAMED LVL
SCALE: NONE



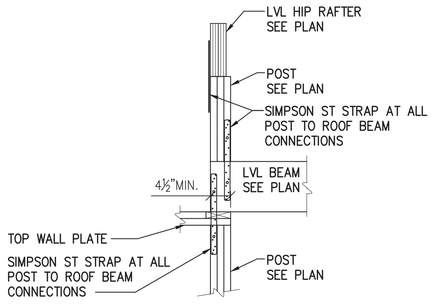
12 / S5 LVL BEAM AT NON LOAD BEARING WALL
SCALE: NONE



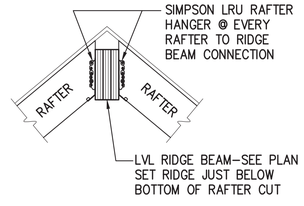
13 / S5/S6 LVL BEAM AT NON LOAD BEARING WALL
SCALE: NONE



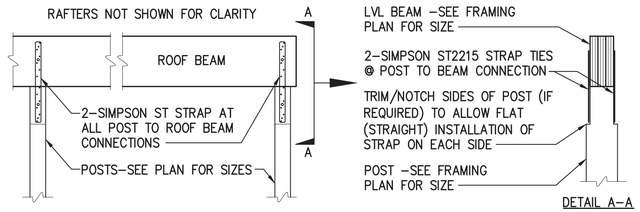
14 / S6 LVL BEAM AT NON LOAD BEARING WALL
SCALE: NONE



15 / S6 HIP RAFTER LVL BEAM TO POST CONN. DETAIL
SCALE: NONE

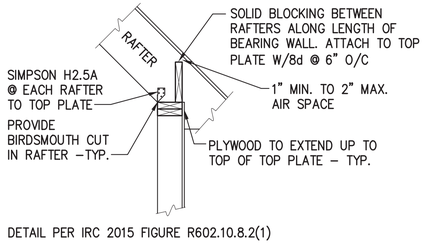


16 / S6 TYP. RIDGE BEAM SECTION
SCALE: NONE



USE AT ALL POST LOCATIONS EXCEPT WHERE CCQ/ECCQ CAPS ARE SPECIFIED

17 / S6 TYPICAL RIDGE/ROOF BEAM TO POST CONNECTION
SCALE: NONE

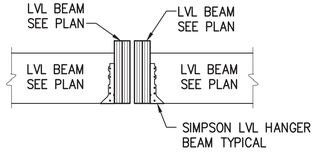


DETAIL PER IRC 2015 FIGURE R602.10.8.2(1)

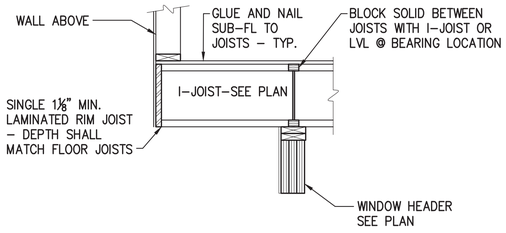
BLOCKING IS NOT REQUIRED OVER DOOR AND WINDOW OPENINGS

CEILING JOISTS (IF APPLICABLE) ARE NOT SHOW FOR CLARITY

18 / S6 TYPICAL RAFTER TO TOP PLATE DETAIL
SCALE: NONE



19 / S6 ATTIC LVL BEAM AT UNIT SEPARATION WALL
SCALE: NONE



20 / S5 I–JOIST CANTILEVER OVER WALL DETAIL
SCALE: NONE

PERMIT ISSUE
04/18/2024

CONTRACTOR TO CONTACT McBRIE, LLC AT 978–646–0097 FOR A FINAL FRAMING INSPECTION PRIOR TO INSULATION BEING INSTALLED

NO.	DATE	REVISIONS

PREPARED FOR:
JOHN SEGER
SEGER ARCHITECTS INC.
83 NORTH STREET
SALEM, MA 01970

MULTI–FAMILY BUILD OUT
275 LAFAYETTE STREET
SALEM, MA 01970
McBRIE, LLC PROJECT #23–139N

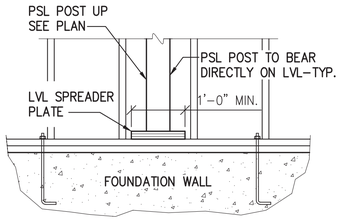
DRWN BY: WH/LL/MLP
CHK'D BY: LMB/RW/MLP
DATE: 04/18/24

McBrie, LLC
Structural Design & Sales
797 TURNPIKE ST.
2nd FLOOR
NORTH ANDOVER, MA 01845
TEL. 978–646–0097
FAX 978–646–0087
WWW.McBRIE.COM

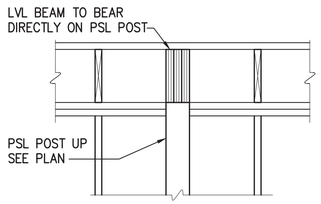
COMMONWEALTH OF MASSACHUSETTS
MICHAEL L PERHAM
STRUCTURAL
No. 41143
REGISTERED PROFESSIONAL ENGINEER

FRAMING DETAILS I

S7

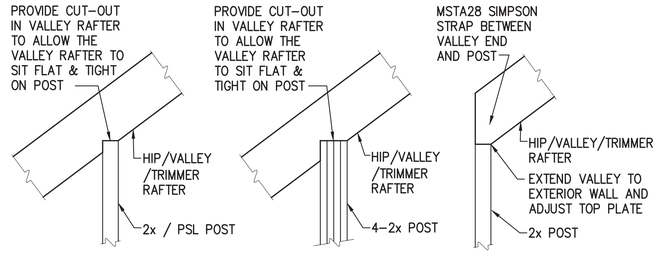


1 S8 TYPICAL PSL POST UP AT FOUNDATION WALL
SCALE: NONE

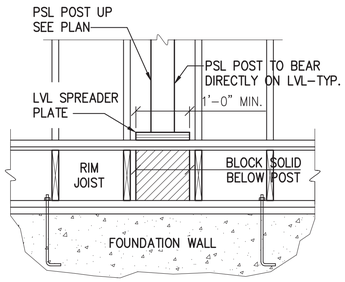


TO BE USED WHERE SPECIFIED ON FRAMING PLANS
THAT LVL BEAM TO BEAR DIRECTLY ON POST

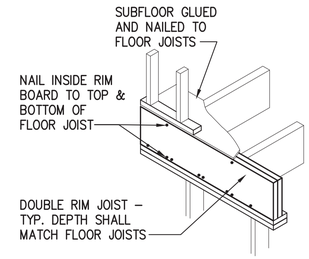
5 S8 TYPICAL PSL POST UNDER LVL BEAM
SCALE: NONE



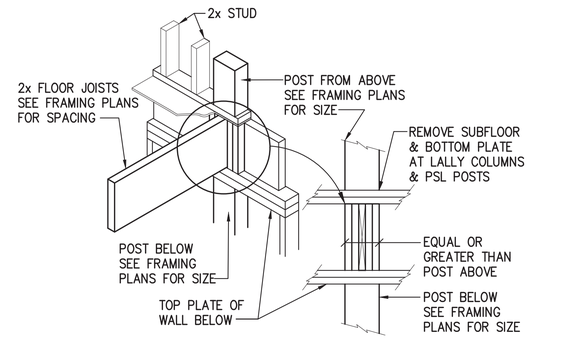
16 S8 TYPICAL HIP/VALLEY/TRIMMER RAFTER TO POST CONNECTION DETAILS
SCALE: NONE



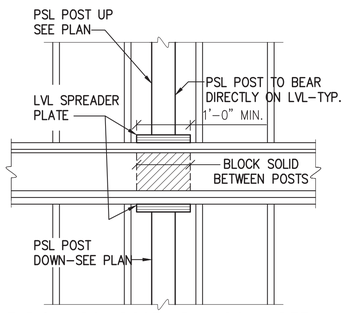
2 S8 TYPICAL PSL POST UP AT FOUNDATION
SCALE: NONE



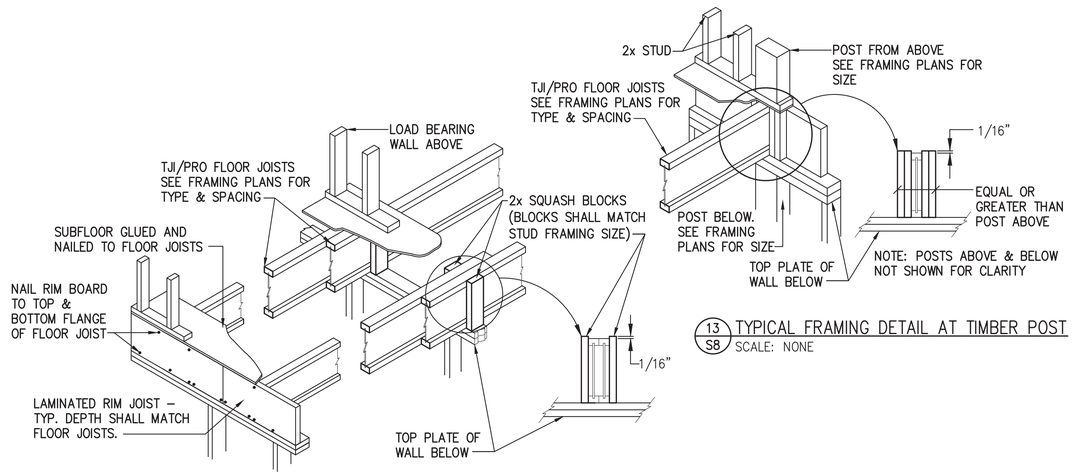
9 S8 RIM JOIST INSTALLATION DETAIL
SCALE: NONE



10 S8 TYPICAL FRAMING DETAIL AT NON–PSL TIMBER POST
SCALE: NONE



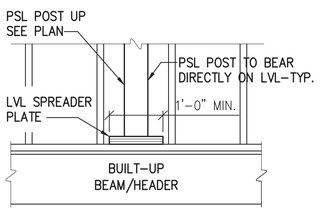
3 S8 TYPICAL PSL POST UP & DOWN DETAIL
SCALE: NONE



13 S8 TYPICAL FRAMING DETAIL AT TIMBER POST
SCALE: NONE

11 S8 RIM JOIST INSTALLATION DETAIL
SCALE: NONE

12 S8 TYPICAL FRAMING DETAIL @ LOAD BEARING WALL
SCALE: NONE



4 S8 TYPICAL PSL POST UP AT BUILT–UP 2x BEAM
SCALE: NONE

PERMIT ISSUE
04/18/2024

CONTRACTOR TO CONTACT McBRIE, LLC AT 978–646–0097 FOR A FINAL FRAMING INSPECTION PRIOR TO INSULATION BEING INSTALLED

NO.	DATE	REVISIONS

PREPARED FOR:
JOHN SEGER
SEGER ARCHITECTS INC.
83 NORTH STREET
SALEM, MA 01970

MULTI–FAMILY BUILD OUT
275 LAFAYETTE STREET
SALEM, MA 01970
McBRIE, LLC PROJECT #23–139N

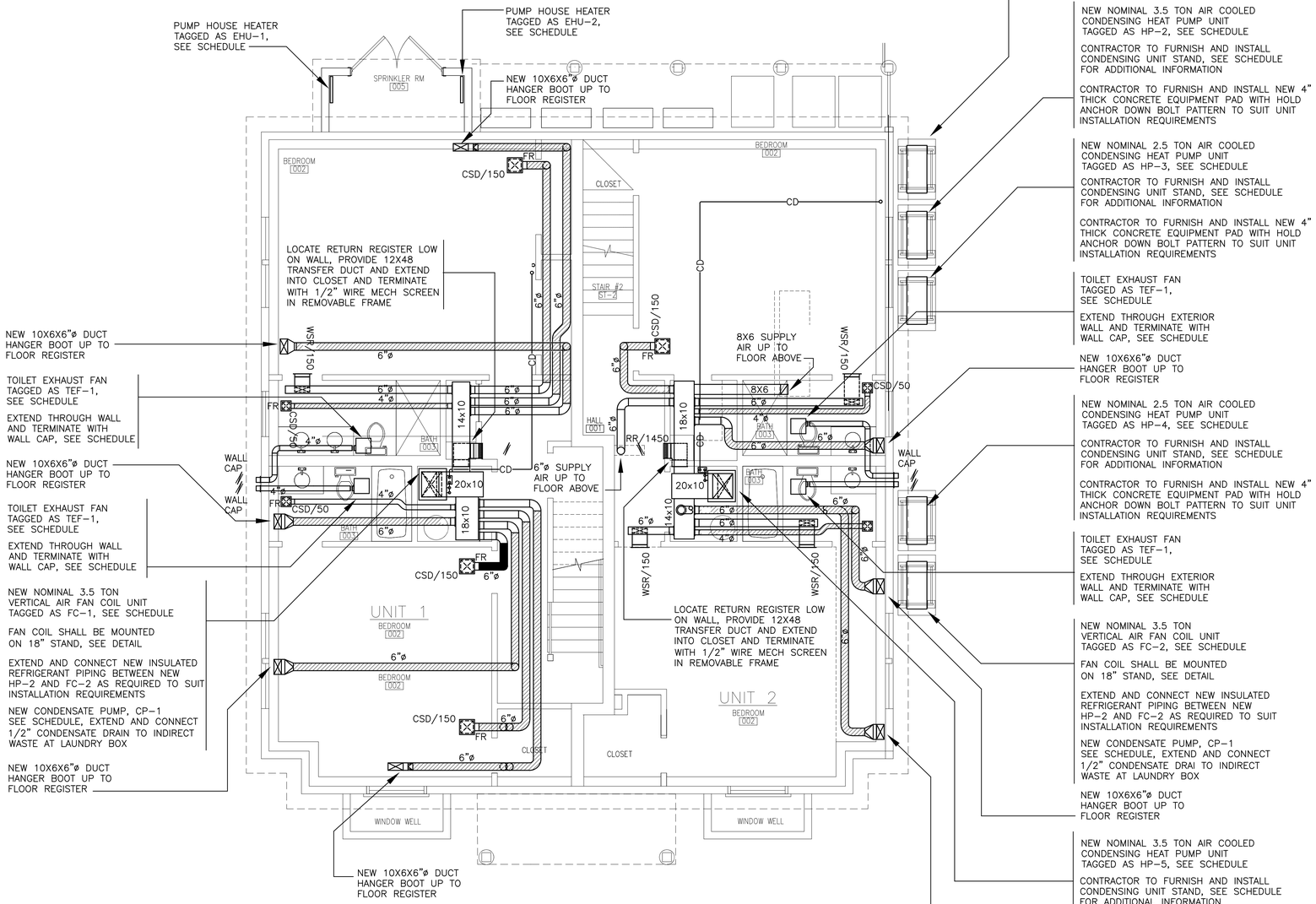
DRWN BY: WH/LL/MLP
CHK'D BY: LMB/RW/MLP
DATE: 04/18/24

McBrie, LLC
Structural Design & Sales
797 TURNPIKE ST.
2nd FLOOR
NORTH ANDOVER, MA 01845
TEL. 978–646–0097
FAX 978–646–0087
WWW.MCBRIE.COM

COMMONWEALTH OF MASSACHUSETTS
MICHAEL L PERHAM
STRUCTURAL
No. 41143
PROFESSIONAL ENGINEER

FRAMING DETAILS II

S8



MECHANICAL PLAN - BASEMENT

SCALE 1/4"=1'–0"

GENERAL NOTES

1. DRAWING IS DIAGRAMMATIC IN INTENT AND DOES NOT INDICATE ALL WORK REQUIRED TO COMPLETE JOB.
2. FOR ADDITIONAL INFORMATION REFER TO THE MECHANICAL ALL PLANS, NOTES, SCHEDULES AND DETAILS
3. EXACT LOCATION OF ALL NEW MATERIAL AND EQUIPMENT TO BE DETERMINED IN THE FIELD TO AVOID CONFLICTS WITH EXISTING SITE CONDITIONS AND OTHER TRADES.
4. ALL AUTOMATIC CONTROLS SHALL FURNISHED AND INSTALLED WITH ALL NECESSARY CONTROL DEVICES, SENSORS AND APPURTENANCES REQUIRED TO ENABLE ALL NEW MECHANICAL EQUIPMENT INSTALLED UNDER THIS CONTRACT FULLY OPERATIONAL.
5. THIS CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION
6. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED LICENSEES, PERMITS AND FEES
7. THIS CONTRACTOR SHALL MINIMIZE DIRT AND DUST ACCUMULATION CAUSED BY THIS CONTRACTORS CONSTRUCTION ACTIVITIES. ACTIVITIES.
8. THIS CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER OR HIS REPRESENTITIVE FOR ACCESS TO BUILDING AND AREAS OF CONSTRUCTION. THE CONTRACTOR AND PERSONNEL SHALL ADHERE TO ALL OWNERS REGULATIONS FOR ACCESS AND EXITING FOR PERSONNEL AND EQUIPMENT
9. THIS CONTRACTOR SHALL PATCH, TOUCH UP, PAINT AND REPAIR ALL DAMAGED OR DISTURBED AREAS OF FLOORS, WALL OR CEILINGS CAUSED BY THIS CONTRACTORS WORK
10. THIS CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE AND REPORT ANY DISCREPANCY TO THE ENGINEER BEFORE ORDERING MATERIAL AND PROCEEDING WITH THE PROPOSED WORK
11. ELECTRICAL REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION

DUCT CONSTRUCTION

THE FOLLOWING SPECIFICATIONS PERTAIN TO NEW DUCTWORK LOCATED ABOVE CEILINGS

A. DUCT CLASSIFICATION, FOR PURPOSES OF CONSTRUCTION, SHALL BE DEPENDENT ON STATIC PRESSURE AND VELOCITY, AS FOLLOWS:
   1. LOW VELOCITY: DUCT VELOCITY BELOW 2,000 FEET PER MINUTE AND/OR STATIC PRESSURE UP THROUGH TWO INCHES WATER GAUGE.

B. LOW VELOCITY DUCTWORK: CONSTRUCTION SHALL BE IN ACCORDANCE WITH "LOW PRESSURE DUCT CONSTRUCTION STANDARDS" LATEST EDITION, AS PUBLISHED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
   1. SHEET METAL: EXCEPT AS OTHERWISE INDICATED, FABRICATE DUCTWORK FROM GALVANIZED SHEET STEEL COMPLYING WITH ANSI/ASTM A 527, LOCK FORMING QUALITY, WITH ANSI/ASTM A525, G90 ZINC COATING; MILL PHOSPHATIZED FOR EXPOSED LOCATIONS.
   2. DUCTWORK SHALL CONFORM TO THE FOLLOWING SCHEDULE:
      A. UP TO 12" – #24 GAUGE
      B. 13" TO 30" – #22 GAUGE
      C. 31" TO 60" – #18 GAUGE
      D. 61" TO 96" – #16 GAUGE
   3. PROVIDE MISCELLANEOUS MATERIALS AND PRODUCTS OF TYPES AND SIZES INDICATED AND, WHERE NOT OTHERWISE INDICATED, PROVIDE TYPE AND SIZE REQUIRED TO COMPLY WITH DUCTWORK SYSTEM REQUIREMENTS.
   4. DUCT SEALANT: NON–HARDENING, NON–MIGRATING MASTIC OR LIQUID ELASTIC SEALANT (TYPE APPLICABLE FOR FABRICATION/ INSTALLATION DETAIL) AS COMPOUNDED AND RECOMMENDED BY MANUFACTURER SPECIFICALLY FOR SEALING JOINTS AND SEAMS IN DUCTWORK.
   5. DUCT CEMENT: NON–HARDENING MIGRATING MASTIC OR LIQUID NEOPRENE BASED CEMENT (TYPE APPLICABLE FOR FABRICATION/ INSTALLATION DETAIL) AS RECOMMENDED BY MANUFACTURER SPECIFICALLY FOR CEMENTING FITTING COMPONENTS OR LONGITUDINAL SEAMS IN DUCTWORK.
   6. DUCTWORK SUPPORT MATERIALS: EXCEPT AS OTHERWISE INDICATED, PROVIDE HOT–DIPPED GALVANIZED STEEL FASTENERS, ANCHORS, RODS, STRAPS, TRIM AND ANGLES FOR SUPPORT OF DUCTWORK.
   7. ALL ROUND DUCT CONNECTIONS SHALL BE MADE WITH BELLMOUTH ENTRY FITTINGS WITH INTEGRAL VOLUME DAMPERS AS MANUFACTURED BY BUCKLEY OR APPROVED EQUAL.

PROJECT ARCHITECT

COMMONWEALTH OF MASSACHUSETTS
STEVEN R. HOULE
No. 39511
REGISTERED ARCHITECT
PROFESSIONAL ENGINEER

SEAL

PROJECT CONSULTANTS

MULTI-FAMILY BUILD OUT
275 LAFAYETTE STREET
SALEM, MA
01970

NEW BUILDING

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date
1	ISSUED FOR PERMIT	4-19-24

PROJECT REVISIONS

Job No.:	023-23
Date:	4-19-24
Scale:	As Noted
Designed By:	MDM
Drawn By:	MDM
Checked By:	MAT/SRH
Approved By:	MAT/SRH

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PROPOSED BASEMENT MECHANICAL FLOOR PLAN

SHEET NAME

M-1

SHEET NO.

ELECTRIC BASEBOARD RADIATION TAGGED AS EBB–2, SEE SCHEDULE

TOILET EXHAUST FAN TAGGED AS TEF–1, SEE SCHEDULE

4"ø EXHAUST DUCT, EXTEND THROUGH WALL AND TERMINATE WITH WALL CAP, SEE SCHEDULE

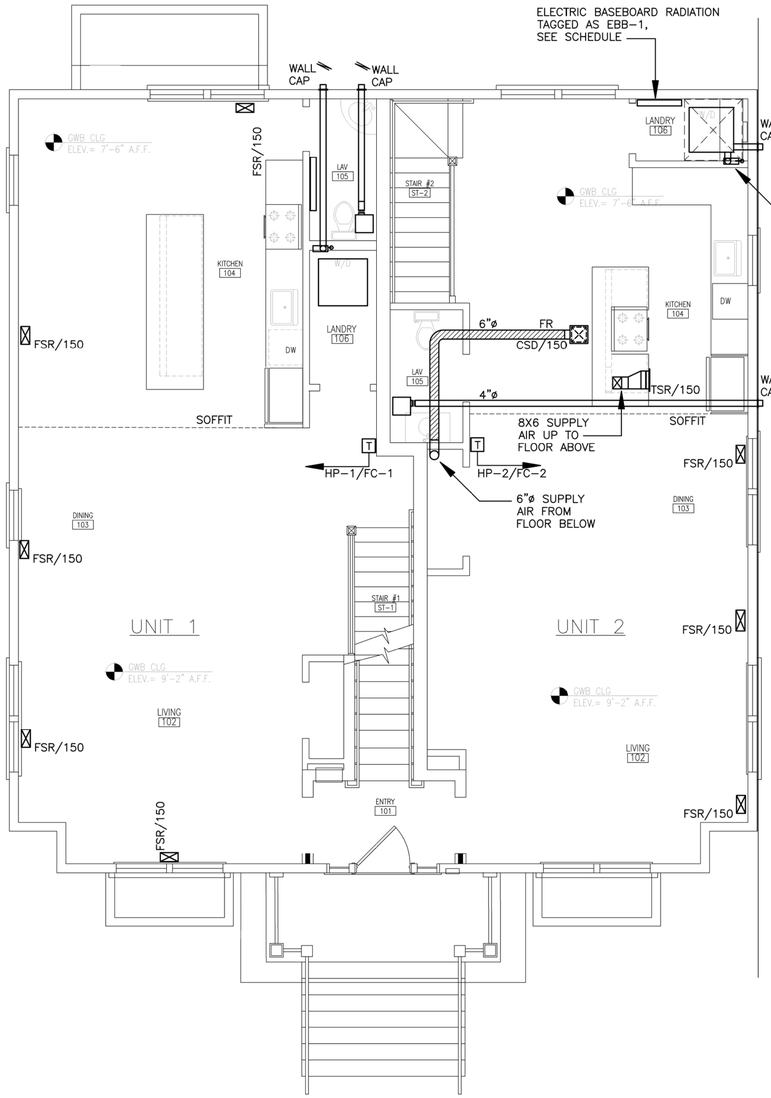
RECESSED DRYER EXHAUST WALL BOX SEE SCHEDULE

FURNISH AND INSTALL 4"ø FLEXABLE DRYER CONNECTOR BETWEEN DRYER AND NEW EXHAUST WALL BOX

4"ø SHEETMETAL DRYER EXHAUST DUCT, SEE DUCT CONSTRUCTION NOTES

EXTEND THROUGH WALL AND TERMINATE WITH WALL CAP, SEE SCHEDULE

ELECTRIC BASEBOARD RADIATION TAGGED AS EBB–1, SEE SCHEDULE



FIRST FLOOR - MECHANICAL PLAN

SCALE 1/4"=1'–0"

PROJECT ARCHITECT

COMMONWEALTH OF MASSACHUSETTS
STEVEN R. HOULE
No. 49161
REGISTERED PROFESSIONAL ENGINEER

SEAL

PROJECT CONSULTANTS

MULTI-FAMILY BUILD OUT
275 LAFAYETTE STREET
SALEM, MA
01970

NEW BUILDING

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date
1	ISSUED FOR PERMIT	4-19-24

PROJECT REVISIONS

Job No.:	023-23
Date:	4-19-24
Scale:	As Noted
Designed By:	MDM
Drawn By:	MDM
Checked By:	MAT/SRH
Approved By:	MAT/SRH

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PROPOSED FIRST FLOOR MECHANICAL FLOOR PLAN

SHEET NAME

M-2

SHEET NO.

NEW NOMINAL 2.5 TON
VERTICAL AIR FAN COIL UNIT
TAGGED AS FC-3, SEE SCHEDULE

FAN COIL SHALL BE MOUNTED
ON 18" STAND, SEE DETAIL

EXTEND AND CONNECT NEW INSULATED
REFRIGERANT PIPING BETWEEN NEW HP-3
AND FC-3 AS REQUIRED TO SUIT
INSTALLATION REQUIREMENTS

NEW CONDENSATE PUMP, CP-1
SEE SCHEDULE, EXTEND AND CONNECT
1/2" CONDENSATE DRAI TO INDIRECT
WASTE AT LAUNDRY BOX

TOILET EXHAUST FAN
TAGGED AS TEF-1,
SEE SCHEDULE

EXTEND THROUGH WALL
AND TERMINATE WITH
WALL CAP, SEE SCHEDULE

TOILET EXHAUST FAN
TAGGED AS TEF-1,
SEE SCHEDULE

EXTEND THROUGH WALL
AND TERMINATE WITH
WALL CAP, SEE SCHEDULE

RECESSED DRYER
EXHAUST WALL BOX
SEE SCHEDULE

PROVIDE 4" DRYER
FLEXABLE CONNECTOR
TO NEW DRYER EXHAUST
WALL BOX

4"ø DRYER EXHAUST WITH
SECONDARY LINT TRAP,
SEE SCHHEDULE

NEW NOMINAL 2.5 TON
VERTICAL AIR FAN COIL UNIT
TAGGED AS FC-4, SEE SCHEDULE

FAN COIL SHALL BE MOUNTED
ON 18" STAND, SEE DETAIL

EXTEND AND CONNECT NEW INSULATED
REFRIGERANT PIPING BETWEEN NEW HP-4
AND FC-4 AS REQUIRED TO SUIT
INSTALLATION REQUIREMENTS

NEW CONDENSATE PUMP, CP-1
SEE SCHEDULE, EXTEND AND CONNECT
1/2" CONDENSATE DRAI TO INDIRECT
WASTE AT LAUNDRY BOX

TOILET EXHAUST FAN
TAGGED AS TEF-1,
SEE SCHEDULE

EXTEND THROUGH WALL
AND TERMINATE WITH
WALL CAP, SEE SCHEDULE

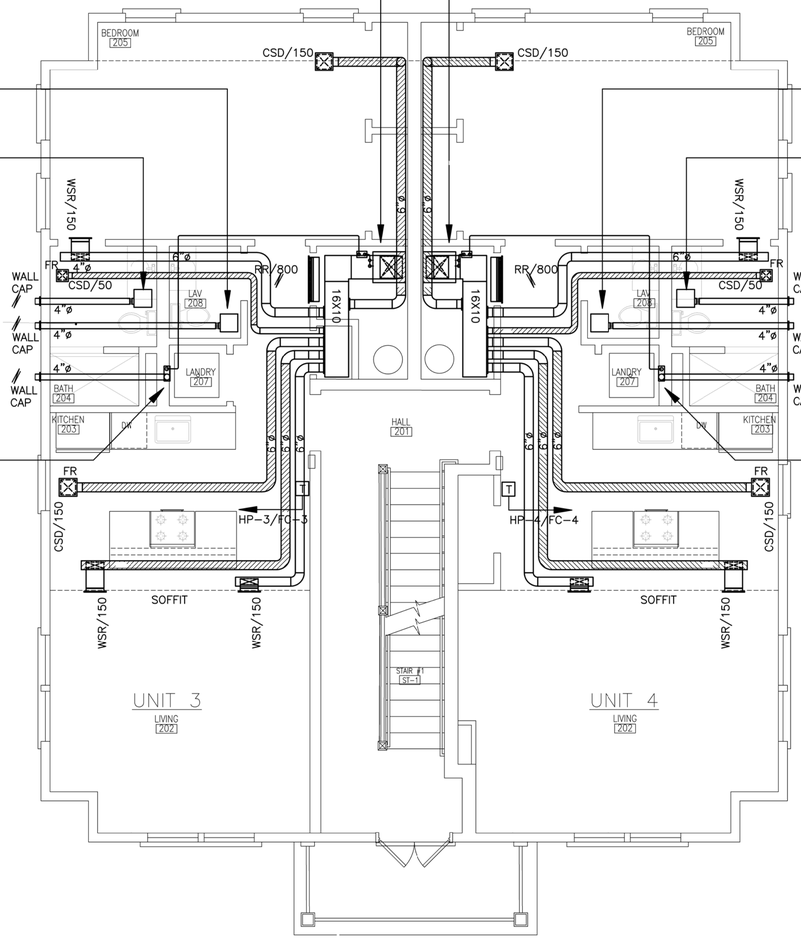
TOILET EXHAUST FAN
TAGGED AS TEF-1,
SEE SCHEDULE

EXTEND THROUGH WALL
AND TERMINATE WITH
WALL CAP, SEE SCHEDULE

RECESSED DRYER
EXHAUST WALL BOX
SEE SCHEDULE

PROVIDE 4" DRYER
FLEXABLE CONNECTOR
TO NEW DRYER EXHAUST
WALL BOX

4"ø DRYER EXHAUST WITH
SECONDARY LINT TRAP,
SEE SCHHEDULE



SECOND FLOOR - MECHANICAL PLAN

SCALE 1/8"=1'-0"

PROJECT ARCHITECT

STEVEN R. HOULE
No. 34612
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

SEAL

PROJECT CONSULTANTS

MULTI-FAMILY BUILD OUT
275 LAFAYETTE STREET
SALEM, MA
01970

NEW BUILDING

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date
1	ISSUED FOR PERMIT	4-19-24

PROJECT REVISIONS

Job No.:	023-23
Date:	4-19-24
Scale:	As Noted
Designed By:	MDM
Drawn By:	MDM
Checked By:	MAT/SRH
Approved By:	MAT/SRH

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PROPOSED
SECOND FLOOR
MECHANICAL
FLOOR PLAN

SHEET NAME

M-3

SHEET NO.

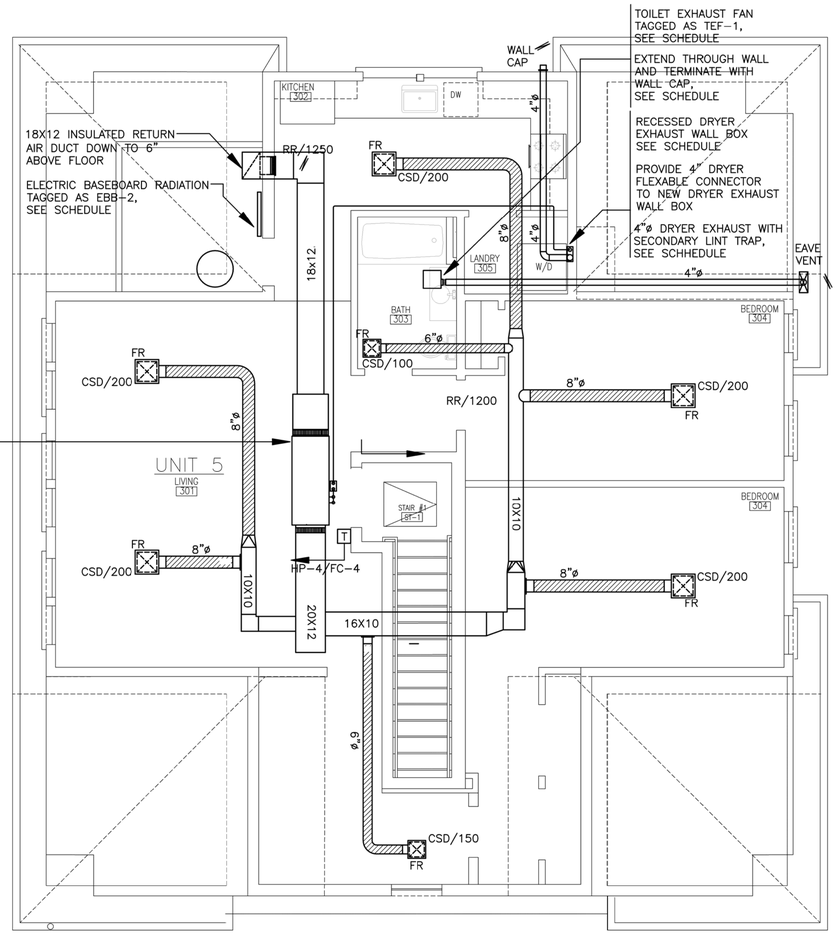
NEW NOMINAL 3.5 TON VERTICAL AIR FAN COIL UNIT TAGGED AS FC-5, SEE SCHEDULE

FAN COIL SHALL BE MOUNTED ON 18" STAND, SEE DETAIL

EXTEND AND CONNECT NEW INSULATED REFRIGERANT PIPING BETWEEN NEW HP-5 AND FC-5 AS REQUIRED TO SUIT INSTALLATION REQUIREMENTS

NEW CONDENSATE PUMP, CP-1 SEE SCHEDULE, EXTEND AND CONNECT 1/2" CONDENSATE DRAI TO INDIRECT WASTE AT LAUNDRY BOX

FURNISH AND INSTALL NEW 24X24X24 INSULATED RETURN AIR PLENUM WITH DUCT COLLER TO SUIT



PROJECT ARCHITECT

SEAL

PROJECT CONSULTANTS

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PROPOSED THIRD FLOOR MECHANICAL FLOOR PLAN

SHEET NAME

M-4

SHEET NO.

SUPPLY AIR FLOOR REGISTER SCHEDULE

UNIT TYPE	INSTALLATION ARRANGEMENT	MAX CFM	S.P.	NECK SIZE	MATERIAL	FINISH	BASED ON		REMARKS
							MANUFACTURER	MODEL	
FSR/CFM	FLOOR REGISTER	50	0.10"	4"X8"	STEEL	STD. WHITE	HART AND COLLEY	421	
FSR/CFM	FLOOR REGISTER	100	0.10"	4"X10"	STEEL	STD. WHITE	HART AND COLLEY	421	
FSR/CFM	FLOOR REGISTER	150	0.10"	6"X10"	STEEL	STD. WHITE	HART AND COLLEY	421	
FSR/CFM	FLOOR REGISTER	200	0.10"	6"X14"	STEEL	STD. WHITE	HART AND COLLEY	421	

SUPPLY AIR SIDEWALL REGISTER SCHEDULE

UNIT TYPE	INSTALLATION ARRANGEMENT	MAX CFM	S.P.	NECK SIZE	MATERIAL	FINISH	BASED ON		REMARKS
							MANUFACTURER	MODEL	
SWR/CFM	FLOOR REGISTER	150	0.10"	12"X4"	ALUMINUM	STD. WHITE	HART AND COLLEY	A6180B	

SUPPLY AIR CEILING DIFFUSER SCHEDULE

UNIT TYPE	INSTALLATION ARRANGEMENT	MAX CFM	S.P.	NECK SIZE	MATERIAL	FINISH	BASED ON		
							MANUFACTURER	MODEL	
CSD/CFM	FIRE RATED CEILING ASSEMLY	50	0.10"	6"X6"	ALUMINUM	STD. WHITE	HEART AND COOLEY	A500	REFER TO FLOOR PLANS FOR CEILING DIFFUSER BLOW PATTERN A501–1WAY, A502–2 WAY, A503–3 WAY, 504–4 WAY A505–2 WAY CORNER
CSD/CFM	FIRE RATED CEILING ASSEMLY	100	0.10"	8"X8"	ALUMINUM	STD. WHITE	HEART AND COOLEY	A500	
CSD/CFM	FIRE RATED CEILING ASSEMLY	150	0.10"	10"X10"	ALUMINUM	STD. WHITE	HEART AND COOLEY	A500	SUPPLY AIR REGISTERS FOR INSTALLATION IN 1 HOUR FIRE RATED CEILING ASSEMBLY SHALL BE FURNISHED AND INSTALLED WITH CEILING RADIATION DAMPER SEE CEILING RADIATION DAMPER SCHEDULE FOR ADDITIONAL REQUIREMENTS
CSD/CFM	FIRE RATED CEILING ASSEMLY	200	0.10"	12"X12"	ALUMINUM	STD. WHITE	HEART AND COOLEY	A500	
									PROVIDE ALL NECESSARY MATERIAL TO MOUNT DIFFUSER TO SUIT INSTALLATION REQUIREMENTS

RETURN AIR REGISTER SCHEDULE

UNIT	INSTALLATION ARRANGEMENT	MAX CFM	S.P.	NECK SIZE	MATERIAL	FINISH	DAMPER	BASED ON		REMARKS
								MANUF	MODEL	
RR/CFM	WALL MOUNTED FILTER GRILLE	800	0.10"	30"X12"	ALUMINUM	STD. WHITE	OPPOSED BLADE	TITUS	350RLF1	CONTRACTOR TO FURNISH AND INSTALL 1" DISPOSABLE FILTER TO SUIT FIELD INSTALLATION REQUIREMENTS
RR/CFM	WALL MOUNTED FILTER GRILLE	1450	0.10"	12"X48"	ALUMINUM	STD. WHITE	OPPOSED BLADE	TITUS	350RSF1	WALL MOUNTED RETURN AIR REGISTERS TO BE FURNISH AND INSTALLED WITH WALL SLEEVE AND REMOVABLE 5/8" WIRE MECH SCREEN ON INTERIOR SIDE OF ASSEMBLY
RR/CFM	CEILING MOUNTED FILTER GRILLE	1200	0.10"	22"X22"	ALUMINUM	STD. WHITE	OPPOSED BLADE	TITUS	350RLF1	CEILING MOUNTED RETURN AIR REGISTERS TO BE FURNISH AND INSTALLED WITH RECESSED PLASTER FRAME, 1/4" WIRE MECH SCREEN AND RADIATION DAMPER TO SUIT
										CONTRACTOR TO FURNISH AND INSTALL FULL REGISTER DUCT COLLAR SIZED TO SUIT INSTALLATION REQUIREMENTS OF SPECIFIED REGISTER

TOILET EXHAUST FAN SCHEDULE

WORKING TAG	SERVICE	CONTROL	CFM	E.S.P.	ELECTRIC DATA					BASED ON		REMARKS
					VOLTS	PHASE	Hz	WATTS	AMPS	MANUF	MODEL	
TEF–1	RESIDENTAIL TOILET EXHAUST	MULTI FUNCTION WALL SWITCH	100	0.20"	120	1	60	80	1.14	GREENHECK	SP–B80L	PROVIDE ALL NECESSARY CONTROL, WIRING, INTERLOCKS AND SAFETY DEVICES
												FURNISH AND INSTALL WITH FLEX CONNECTION AT DUCT COLLAR
												COORDINATE ALL SWITCHING REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR
												MOTOR RATED FOR CONTINUOUS USE MOTOR WITH THERMAL OVERLOAD MOTOR
												FAN SHALL BE UL LISTED, SOLID STATE SPEED CONTROL, 8W DIMMABLE LIGHT, FROSTED LENS, FACTORY CEILING RADIATION DAMPER, ROUND DUCT CONNECTION, FACTORY ISOLATION KIT AND MOUNTING BRACKET, ENERGY STAR CERTIFIED

ELECTRIC HEATING UNIT SCHEDULE

UNIT	LOCATION	CONTROL	HEATING DATA			ELECTRICAL DATA					BASED ON		REMARKS
			WATTS	AMPS	BTUH	FAN DATA CFM	FAN DATA HP	V	P	Hz	MANUF	MODEL	
EHU–1	EXTERIOR SPRINKLER ROOM	INTEGRAL	376	1.8	1284	---	---	208	1	60	QMARK	WHT500	1. ENCLOSURE: THE HEATER SHALL BE FABRICATED OF 24–GAUGE GALVANIZED STEEL, COMPLETELY WELDED, THEN COATED WITH A CORROSIVE RESISTANT POLYESTER POWDER PAINT COATING.
EHU–2	EXTERIOR SPRINKLER ROOM	INTEGRAL	376	1.8	1284	---	---	208	1	60	QMARK	WHT500	2. HEATING ELEMENT: THE HEATING ELEMENT SHALL BE OF NON–GLOWING DESIGN CONSISTING OF SPECIAL RESISTANCE WIRE ENCLOSED IN A STEEL SHEATH TO WHICH ALUMINUM FINS ARE MECHANICALLY CRIMPED.
													3. THE CONTROL BOX: SHALL SHALL ISOLATE ALL LIVE ELECTRICAL PARTS FROM THE HEATER.
													4. THE INTEGRAL THERMOSTAT HAS A TEMPERATURE RANGE OF 40 DEG. F TO 70 DEG. F

ELECTRIC BASEBOARD RADIATION SCHEDULE

UNIT	SERVICE	CONTROL	HEATING DATA			ELECTRICAL DATA				BASED ON		REMARKS
			WATTS	BTUH	LENGTH	V	P	Hz	AMPS	MANUF	MODEL	
EBB–1	FIRST FLOOR LAUNDRY 106	FCTORY INTEGRAL THERMOSTAT	500	1706	28"	120	1	60	4.7	QMARK	HBB500	1. NEW ELECTRIC BASEBOARD HEATERS SHALL BE FURNISHED AND INSTALLED WITH ALL FACTORY STANDARD CONTROLS AND SAFETY DEVICES
EBB–2	THIRD FLOOR WTR. HTR. RM	FCTORY INTEGRAL THERMOSTAT	500	1706	28"	120	1	60	4.7	QMARK	HBB500	2. CONTRACTOR SHALL COORDINATE ALL MOUNTING REQUIREMENTS FOR NEW ELECTRIC HEATERS TO SUIT FACTORY RECOMMENDED INSTALLATION REQUIREMENTS
												3. ALL NEW ELECTRIC BASEBOARD HEATERS SHALL BE FURNISHED AND INSTALLED WITH ALL NECESSARY COMPONENTS AND ACCESSORIES TO PROVIDE A COMPLETE OPERATIONAL ELECTRIC BASEBOARD HEATER
												4. ALL NEW ELECTRIC BASEBOARD HEATERS SHALL BE FURNISHED AND INSTALLED WITH QMARK MODEL M602W LINE VOLTAGE THERMOSTAT

ELECTRICAL WORK NOTES

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST ISSUES OF THE NEC AND IN ADDITION IT SHALL MEET ALL OTHER REQUIREMENTS OF ANY OTHER LOCAL AUTHORITY HAVING JURISDICTION OVER THIS WORK.
2. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHER TRADES SO THAT IT WILL AVOID ANY CONFLICTS OF INTERFERENCE AND BE PERFORMED IN A TIMELY MANNER MEETING THE PROJECT OVERALL SCHEDULE OF COMPLETION.
3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR HIS WORK AND SHALL BE RESPONSIBLE FOR ALL APPLICABLE FEES RELATING THEREOF.
4. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING FEEDERS AND DISCONNECT SWITCHES FOR ALL EQUIPMENT TO BE REMOVED. REMOVE FEEDERS BACK TO MDP PANEL
5. COORDINATE ANY REQUIRED SHUT DOWN OF BUILDING FIRE ALARM SYSTEM AND DISABLE SPECIFIC ZONES AS NECESSARY TO PERFORM SPECIFIED WORK IN EACH AREA OF THE BUILDING REACTIVATE THE FIRE ALRM SYSTEM AT COMPLETION OF EACH DAYS WORK.
6. ALL EXISTING CONTROL WIRING SERVING EQUIPMENT TO BE REMOVED SHALL BE DISCONNECTED, PULLED BACK TO JUNCTION BOX AND REMOVED
7. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT AND RELOCATE ALL ELECTRICAL CONDUITS AND DEVICES TO CLEAR THE ROUTE FOR THE MOVE IN LOCATION AND INSTALLATION OF THE NEW EQUIPMENT; EXACT SCOPE OF THIS WORK SHALL BE FIELD DETERMINED AT THE SITE.
8. ALL ELECTRICAL WORK SHALL BE PERFORMED IN A TIMELY MANOR AND THE AREA SHALL BE LEFT CLEAN AT ALL TIMES.
9. STANDARD LOCK–OUT/TAG–OUT PROCEDURES SHALL BE FOLLOWED AT ALL TIMES.
10. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID TO FAMILIARIZE HIMSELF WITH THE SCOPE OF THE WORK, THE EXISTING SITE CONDITIONS, LOCATION OF NEW AND EXISTING
11. EQUIPMENT AND ALL ELECTRICAL REQUIREMENTS NECESSARY TO PROVIDE A FULLY FUNCTIONAL ELECTRICAL POWER SYSTEM TO SUPPORT ALL NEW WORK UNDER THIS CONTRACT

WORK REQUIREMENT NOTES

1. FIRE PROTECTION AND PREVENTION
   a. THE GENERAL CONTRACTOR SHALL DEVELOP AND MAINTAIN AN EFFECTIVE FIRE PROTECTION AND PREVENTION PROGRAM AT THE JOB SITE THROUGH OUT ALL PHASES OF WORK INCLUDING DEMOLITION, ALTERATION, REPAIR, AND CONSTRUCTION WORK THROUGHOUT THE BUILDING.
   b. THE GENERAL CONTRACTOR APPLY AND PAY FOR ALL NECESSARY PERMITS AS REQUIRED BY THE CITY OF CAMBRIDGE MASSACHUSETTS, ORIGINALS SHALL BE SUBMITTED TO OWNER AND COPIES POSTED ON SITE AS REQUIRED FOR DEMOLITION, ALTERATION, REPAIR, AND CONSTRUCTION WORK THROUGHOUT THE BUILDING.
   c. GENERAL CONTRACTOR SHALL INSURE THE ACCESSIBILITY AND AVAILABILITY OF SUFFICIENT FIRE PROTECTION AND SUPPRESSION EQUIPMENT IN ALL AREAS OF CONSTRUCTION ACTIVITY.
   d. SMOKING IS NOT PERMITTED IN THE BUILDING, SMOKING IS ONLY PERMITTED ONLY IN DESIGNATED AREAS OUTSIDE.
2. FIRE SAFETY REQUIREMENTS
   a. GENERAL CONTRACTOR SHALL CARRY ALL COSTS TO PROVIDE FIRE WATCH FOR ALL HOT WORK WITHIN THE BUILDING WHERE NECESSARY. GENERAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS WITH THE LOCAL FIRE DEPARTMENT AND/OR AUTHORITY HAVING JURISDICTION.
   b. FIRE WATCH PERSONNEL SHALL BE PROVIDED BY THE GENERAL CONTRACTOR IN SUFFICIENT NUMBER TO CONTINUOUSLY MONITOR ALL LOCATIONS WHERE WORK REQUIRING A FIRE PERMIT IS BEING CONDUCTED.
   c. FIRE WATCH PERSONNEL SHALL CONTINUOUSLY MONITOR ALL LOCATIONS WHERE WORK REQUIRING A FIRE PERMIT IS BEING CONDUCTED.
   d. THE FIRE WATCH PERSONNEL SHALL REMAIN ON THE JOB AT LEAST THIRTY MINUTES AFTER SUCH OPERATIONS ARE COMPLETED.
   e. NONCOMBUSTIBLE SHIELDS OR COVERS SHALL BE PROVIDED BY THE CONTRACTOR ON TABLES, FLOORS, WALLS, AROUND THE HOT WORK AREA AND OVER EQUIPMENT TO PROTECT BUILDING STRUCTURES, EQUIPMENT AND PERSONNEL FROM SPARKS AND FRAGMENTS OF HOT METAL.
   f. ALL SUBCONTRACTOR SHALL ALSO TAKE THESE PRECAUTIONS TO PROTECT AGAINST SPARKS AND HOT METALLIC OXIDES GENERATED BY GRINDING, DRILLING OR SAWING OPERATIONS

DRYER EXH DUCT CONSTRUCTION

DRYER EXHAUST DUCT SHALL BE CONSTRUCTED WITH SMOOTH INTERIOR SURFACE AND CONSTRUCTED OF RIGID GALVANIZED STEEL NOT LESS THAN 0.016 THICK. CONTRACTOR TO FURNISH AND INSTALL ALUMINUM FLEXABLE DUCT BETWEEN THE DRYER OUTLET AND RIGID EXHAUST DUCT

DRYER EXHAUST DUCT SHALL BE CONSTRUCTED WITHOUT THE USE OF SHEET METAL SCREWS OR SCREENS. OVERLAPPED JOINTS SHALL EXTEND IN THE DIRECTION OF AIR FLOW. CONTRACTOR SHALL PROVIDE DUCT TEE FOR CONNECTING FLEXIBLE DUCT TO DRYER.

CEILING RADIATION DAMPER

FOR USE AT CEILING SUPPLY AIR DIFFUSERS
BASED ON GREENHECK MODEL CRD–1WT UL CLASSIFIED CEILING RADIATION DAMPER FOR INSTALLATION IN WOOD TRUSS CEILING CONSTRUCTION WITH RATINGS UP TO 1 HOUR.

THE CRD–1WT PROVIDES THE CEILING RADIATION DAMPER WITH A PLASTER FLANGE ATTACHED AROUND THE PERIMETER OF THE DAMPER. THE DAMPER IS POSITIONED ABOVE THE CEILING FOR GRILLE INSTALLATION. THE CRD–1WT DAMPER SHALL BE FURNISHED AND INSTALLED WITH FACTORY PLENUM.

FLEX DUCT SCHEDULE

FOR USE IN SUPPLYING CONDITIONED AIR ABOVE CEILINGS

BASED ON BUCKLEY ASSOCIATES,
MODEL FLEXMASTER TYPE 4P INSULATED FLEXIBLE DUCT DUCT SHALL BE CONSTRUCTED OF TRILAMINATE ALUMINUM MECHANICALLY LOCKED TO OUTSIDE OF GALVANIZED STEEL HELIX, INSULATION SHALL BE 1–1/2" THICK R–6.0 FIBERGLASS WITH FIRE RETARDENT POLYETHYLENE OUTER JACKET ENTIRE ASSEMBLY SHALL BE UL LISTED ENTIRE ASSEMBLY SHALL COMPLY WITH NFPA 90A AND 90B

PROJECT ARCHITECT

COMMONWEALTH OF MASSACHUSETTS
STEVEN R. HOULE
REGISTERED PROFESSIONAL ENGINEER

SEAL

PROJECT CONSULTANTS

MULTI-FAMILY BUILD OUT
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PROPOSED MECHANICAL EQUIPMENT SCHEDULES

SHEET NAME

M-5

SHEET NO.

SINGLE ZONE AIR COOLED CONDENSING UNIT SCHEDULE

UNIT NUMBER	SERVICE	DESIGN CONDIDIONS			ELECTRIC DATA													BASED ON		REMARKS
		AMB. O.A.T. EDB	INDOOR		COMPRESSOR		NOMINAL COOLING MBH	MBH HEATING		VOLTAGE			BKR	MCA	SEER	EER	HSPF	MANUF	MODEL	
			DB	WB	NOM TONS	TYPE		@47°F	@17°F/@5°F	VOLT	PH	Hz								
HP-1	UNIT 1 HEAT/COOL	95	80	67	3.5	DC INVERTER	42,000	48.0	31.4/26.8	208	1	60	25A	25.0	18.0	10.1	9.3	MITSUBISHI	PUZ-A42NKA7-BS	
HP-2	UNIT 2 HEAT/COOL	95	80	67	3.5	DC INVERTER	42,000	48.0	31.4/26.8	208	1	60	25A	25.0	18.0	10.1	9.3	MITSUBISHI	PUZ-A42NKA7-BS	
HP-3	UNIT 3 HEAT/COOL	95	80	67	2.5	DC INVERTER	30,000	34.0	20.7/17.2	208	1	60	25A	19.0	19.0	10.0	10.0	MITSUBISHI	PUZ-A30NHA7-BS	
HP-4	UNIT 4 HEAT/COOL	95	80	67	2.5	DC INVERTER	30,000	34.0	20.7/17.2	208	1	60	25A	19.0	19.0	10.0	10.0	MITSUBISHI	PUZ-A30NHA7-BS	
HP-5	UNIT 5 HEAT/COOL	95	80	67	3.5	DC INVERTER	42,000	48.0	31.4/26.8	208	1	60	25A	25.0	18.0	10.1	9.3	MITSUBISHI	PUZ-A42NKA7-BS	

SINGLE ZONE DX FAN COIL SCHEDULE

UNIT NUMBER	SERVICE	NOMANAL TONS	ARRANGEMENT	CONTROL	WEIGHT LB's	EVAP FAN DATA		NOMINAL PERFORMANCE DATA			ELECTRIC DATA					BASED ON	
						CFM	SPEED	REFRIG	MBH COOLING	MBH HEATING	V	P	Hz	MCA	FLA	MANUF	MODEL
FC-1	UNIT 1 HEAT/COOL	3.5	VERTICAL DUCTED	WIRED THERMOSTAT	175	1450	MULTI	R410A	42.0	48.0	208	1	60	5.5	4.5	MITSUBISHI	PVA-A42AA7
FC-2	UNIT 2 HEAT/COOL	3.5	VERTICAL DUCTED	WIRED THERMOSTAT	175	1450	MULTI	R410A	42.0	48.0	208	1	60	5.5	4.5	MITSUBISHI	PVA-A42AA7
FC-3	UNIT 3 HEAT/COOL	2.5	VERTICAL DUCTED	WIRED THERMOSTAT	145	800	MULTI	R410A	30.0	34.0	208	1	60	4.1	3.3	MITSUBISHI	PVA-A30AA7
FC-4	UNIT 4 HEAT/COOL	2.5	VERTICAL DUCTED	WIRED THERMOSTAT	145	800	MULTI	R410A	30.0	34.0	208	1	60	4.1	3.3	MITSUBISHI	PVA-A30AA7
FC-5	UNIT 5 HEAT/COOL	3.5	VERTICAL DUCTED	WIRED THERMOSTAT	175	1250	MULTI	R410A	42.0	48.0	208	1	60	5.5	4.5	MITSUBISHI	PVA-A42AA7

1. FURNISH AND INSTALL ALL STANDARD FEATURES, CONTROLS, INTERLOCKS AND SAFETY DEVICES AS REQUIRED.

PIPE INSULATION SCHEDULE

TYPE OF SERVICE	TEMPERATURE RANGE	CONDUCTIVITY "K" VALUE IECC C403.2.8	MINIMUM R VALUE	TYPE	PIPE SIZE			
					<1"	1" TO 1.5"	1.5" TO <4"	4" TO <8"
REFRIGERANT (H.P.)	110°F-180°F	0.25-0.29	R-3	R.T.	1.0"	1.0"	1.5"	1.5"
REFRIGERANT (L.P.)	45°F-53°F	0.21-0.27	R-3	R.T.	0.5"	0.5"	1.0"	1.0"
CONDENSATE DRAIN	<55°F	---	R-3	F.G.	0.5"	0.5"	---	---

2018 IECC C403.11.3

NOTE: THE ENTIRE INSULATION INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH THE MASSACHUSETTS STATE BUILDING AND ENERGY CONSERVATION CODE.

NOTE: FIBERGLASS PIPE INSULATION; GLASS FIBER PIPE INSULATION: ASTM C547; CLASS 1; "K" VALUE SHALL CONFORM TO LATEST EDITION OF THE MASSACHUSETTS STATE MECHANICAL CODE FOR HOT WATER PIPING; INSULATION SHALL BE NON-COMBUSTIBLE WITH REINFORCED FOIL VAPOR BARRIER JACKET WITH SELF-SEALING ADHESIVE JOINTS.

NOTE: RUBBER TUBE INSULATION FOR INSTALLATION ON NEW REFRIGERANT LIQUID AND SUCTION LINES RUNNING BETWEEN NEW DIRECT EXPANSION COOLING COIL AND NEW OUTDOOR AIR COOLED CONDENSING UNIT

1. REFRIGERANT PIPE INSULATION SHALL BE AEROCELL SPLIT TUBE CLOSED CELL EPDM RUBBER BASED ELASTOMERIC TUBE INSULATION AS MANUFACTURED BY AEROFLEX
2. REFRIGERANT PIPE FITTING INSULATION SHALL BE AEROFIT SPLIT TUBE CLOSED CELL EPDM RUBBER BASED ELASTOMERIC TUBE INSULATION AS MANUFACTURED BY AEROFLEX
3. REFRIGERANT PIPE AND PIPE FITTING INSULATION SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE MANUFACTURERS REQUIREMENTS AND RECOMMENDATIONS
4. SHEET AND TUBE INSULATION SHALL MEET THE REQURMENTS OF THE 2015 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE (2015 IECC)

WALL CAP SCHEDULE

TOILET EXHAUST

BASED ON SEIHO MODEL CFXC-4P
6"ø ALL ALUMINUM CONSTRUCTION WITH HOOD, BACKDRAFT DAMPER AND INSECT SCTREEN 0.08 S.F. FREE AREA. CONTRACTOR TO PROVIDE CONNECTOR PIECE THROUGH EXTERIOR WALL AND TRANSITION TO SUIT

DRYER EXHAUST

BASED ON SEIHO MODEL CFXC-6P
6"ø ALL ALUMINUM CONSTRUCTION WITH HOOD, BACKDRAFT DAMPER,
0.08 S.F. FREE AREA. CONTRACTOR TO PROVIDE CONNECTOR PIECE THROUGH EXTERIOR WALL AND TRANSITION TO SUIT

DRYER EXH WALL BOX SCHEDULE

NEW RECESSED DRYER EXHAUST WALL BOX BASED ON DRYERBOX MODEL DB-350
BOX SHALL BE CONSTRUCTED WITH 22 GAUGE ALUMINIZED STEEL WEIGHING 4.03 POUNDS.
TOP DUCT CONNECTION IS 4 15/16" X 3 5/32" OVAL SHAPE
OVERALL MEASUREMENTS: 21" H X 12 1/2" W X 4 3/8" DEEP
INSIDE MEASURES 9 1/2" WIDE X 18 1/4" TALL

1. FURNISH AND INSTALL DRYER EXHAUST WALL BOX AT EACH DRYER
2. FURNISH AND INSTALL HIGH TEMP FLEXIBLE DUCT PER MANUFACTURERS REQUIREMENTS BETWEEN DRYER AND SHEETMETAL CONNECTOR AT DRYER WALL BOX
3. DRYER EXHAUST FLEXIBLE TRANSITION DUCT SHALL BE UL LISTED AND LABELED FOR THIS APPLICATION

CONDENSATE PUMP SCHEDULE

CONDENSATE PUMP TAGGED AS CP-1
BASED ON ASURITY MODEL CP-22, 0.7 GPM AT 20 FEET LIFT
WITH FACTORY VIBRATION DAMPENING FEET AND MOTOR MOUNTS, METAL MOUNTING TABS, FOUR INLET HOLES, 3 INDICATORS, FLOAT SWITCH AND DUCKBILL-STYLE CHECK VALVE, LED INSTALLATION INSTRUCTIONS.
TWO TERMINALS ARE PROVIDED ALLOWING THE INSTALLER FLEXIBILITY TO CONNECT AIR-HANDLER SHUT-DOWN

INSULATION SCHEDULE

THE FOLLOWING SPECIFICATIONS PERTAIN TO NEW SUPPLY DUCTWORK LOCATED ABOVE CEILINGS

BASED ON JOHNS MANVILLE
MICROLITE XG, TYPE 75
1.5" THICK, 6 R VALUE
INSULATION SHALL BE FORMALDEHYDE FREE BLANKET
TYPE WITH FSK ALUMINUM FACING
ENTIRE INSTALLATION SHALL CONFORM TO MANUFACTURERS INSTRUCTIONS

THE FOLLOWING SPECIFICATIONS PERTAIN TO NEW DRYER EXHAUST DUCTWORK LOCATED AIN ATTIC

BASED ON JOHNS MANVILLE
MICROLITE XG, TYPE 75
1.5" THICK, 6 R VALUE
INSULATION SHALL BE FORMALDEHYDE FREE BLANKET
TYPE WITH FSK ALUMINUM FACING
ENTIRE INSTALLATION SHALL CONFORM TO MANUFACTURERS INSTRUCTONS

ENTIRE ASSEMBLY SHALL BE UL LISTED AND SHALL COMPLY WITH NFPA 90A AND 90B AND ASSEMBLY SHALL CONFORM TO THE 2018 INTERNATIONAL MECHANICAL CODE SECTION 604 AND THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE SECTION C403.11.1 WHICH STATES THAT THE INSULATION SHALL NOT BE NOT LESS THAN R6.

THE ENTIRE ASSEMBLY SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURES RECOMMENDATIONS AND PRACTICES

PROJECT ARCHITECT

SEAL

PROJECT CONSULTANTS

MULTI-FAMILY BUILD OUT
275 LAFAYETTE STREET
SALEM, MA
01970
NEW BUILDING

PROJECT INFORMATION

OWNER INFORMATION

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1	ISSUED FOR PERMIT	4-19-24

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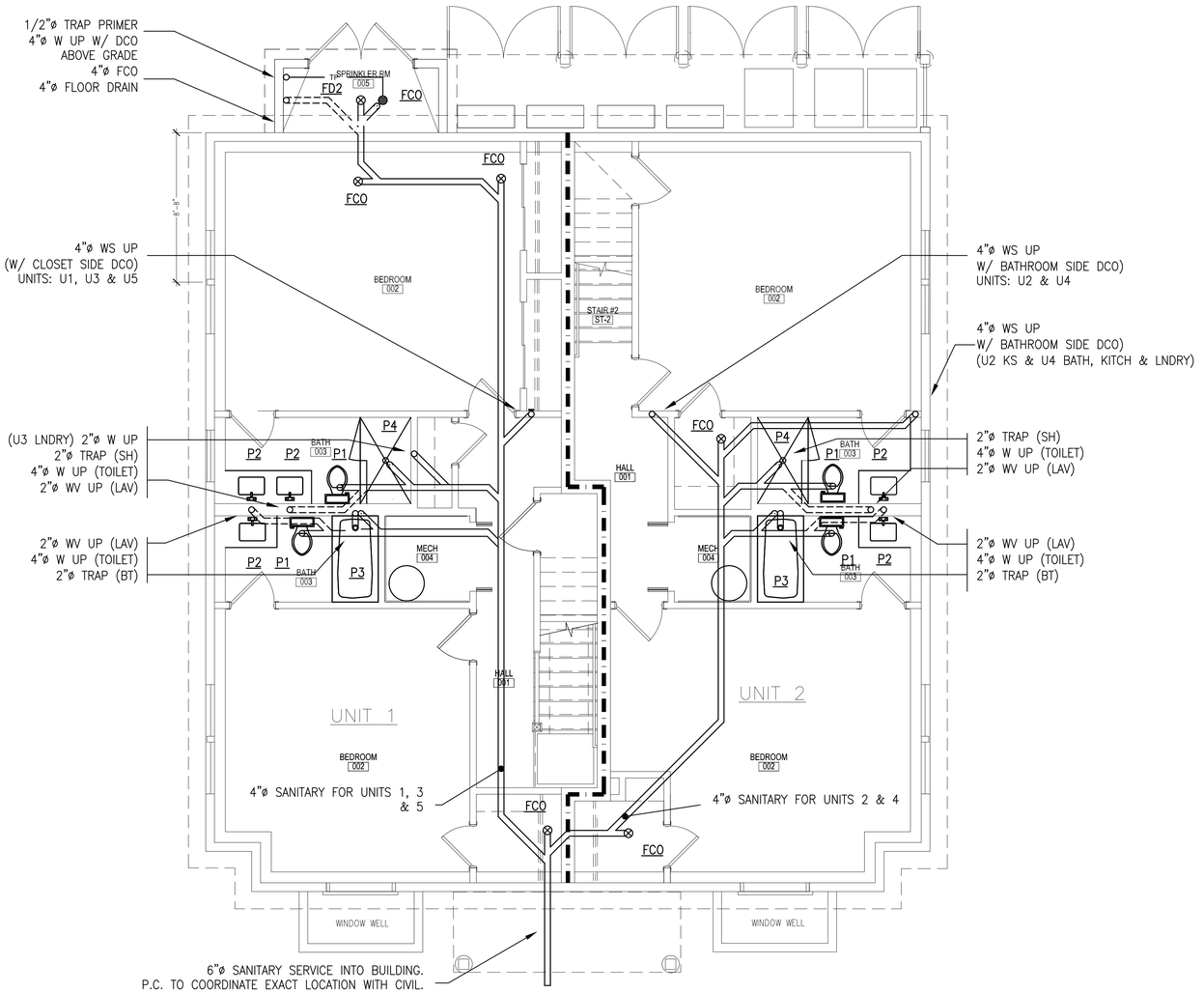
PROPOSED MECHANICAL EQUIPMENT SCHEDULES

SHEET NAME

M-6

SHEET NO.



PLUMBING UNDERGROUND
BASEMENT PLAN

Seger architects, inc

PROJECT ARCHITECT

SEGER ARCHITECTS, INC.
83R North Street
Salem, MA 01970

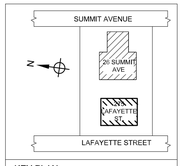
SEAL

PROJECT CONSULTANTS

CROSSFIELD ENGINEERING, INC.
ENGINEERING CONSULTANTS
921 SALEM STREET
GROVELAND, MA 01834
TEL: 978-372-8880
FAX: 978-372-8889

SEAL

COMMONWEALTH OF MASSACHUSETTS
STEVEN R. HOULE
No. 37881
REGISTERED PROFESSIONAL ENGINEER



KEY PLAN

Multi-Family Build Out
275 Lafayette St.
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

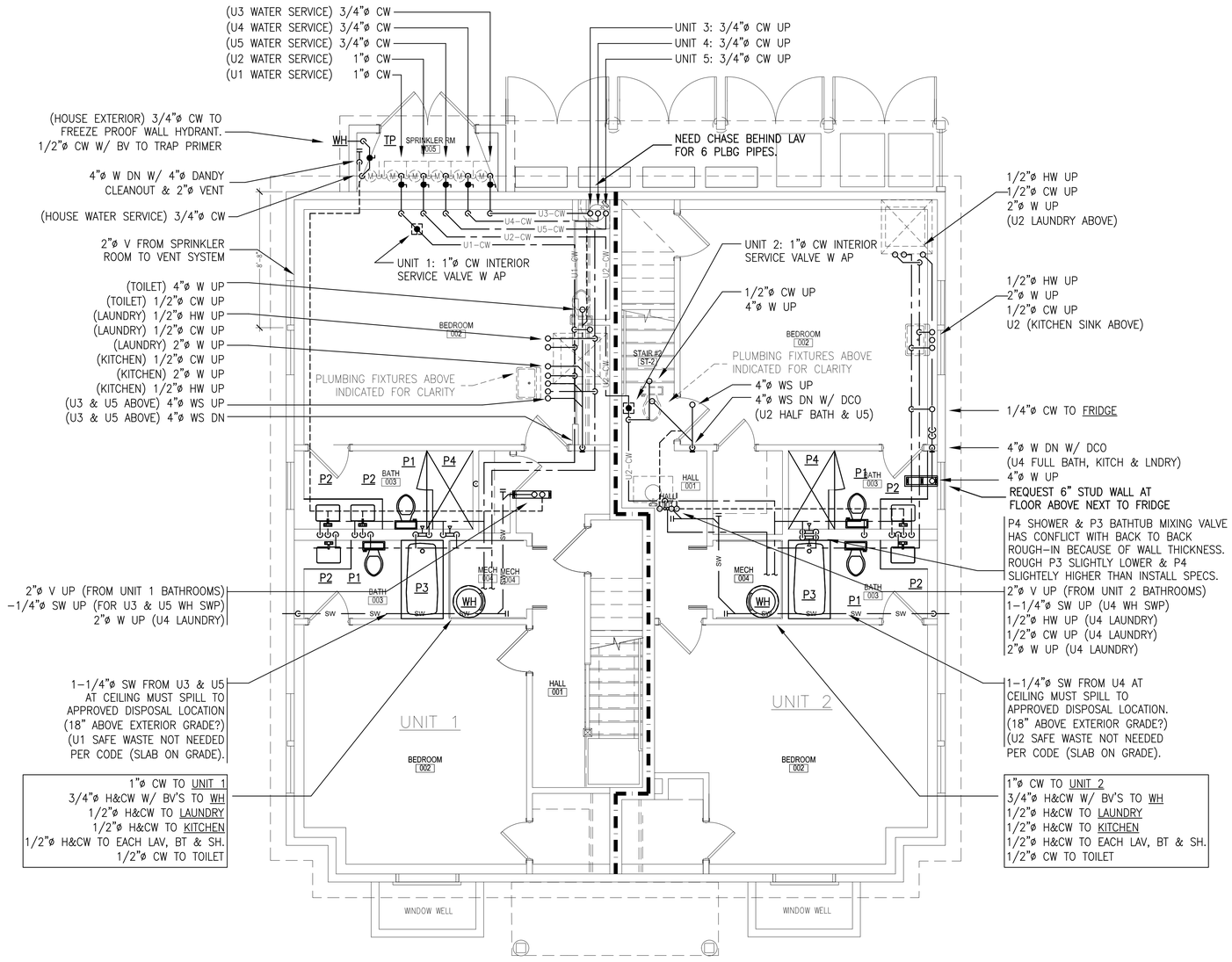
SAI Job # 2022-020	CEI Proj # 022-23
Date:	PERMIT SET: 04/19/24
Scale:	1/4"=1'-0"
Designed By:	DCN
Drawn By:	DCN
Checked By:	MAT/SRH
Approved By:	MAT/SRH

PLUMBING UNDERGOUND FLOOR PLAN

SHEET NAME

P1

SHEET NO.



PLUMBING BASEMENT
BASEMENT PLAN

04/19/24 PERMIT SET

Seger architects, inc

PROJECT ARCHITECT

SEGER ARCHITECTS, INC.
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Salem, MA 01970

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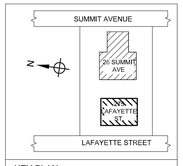
SEAL

COMMONWEALTH OF MASSACHUSETTS
STEVEN R. HOULE
No. 34974
REGISTERED PROFESSIONAL ENGINEER



KEY PLAN

Multi-Family Build Out
275 Lafayette St.
Salem, MA

PROJECT INFORMATION

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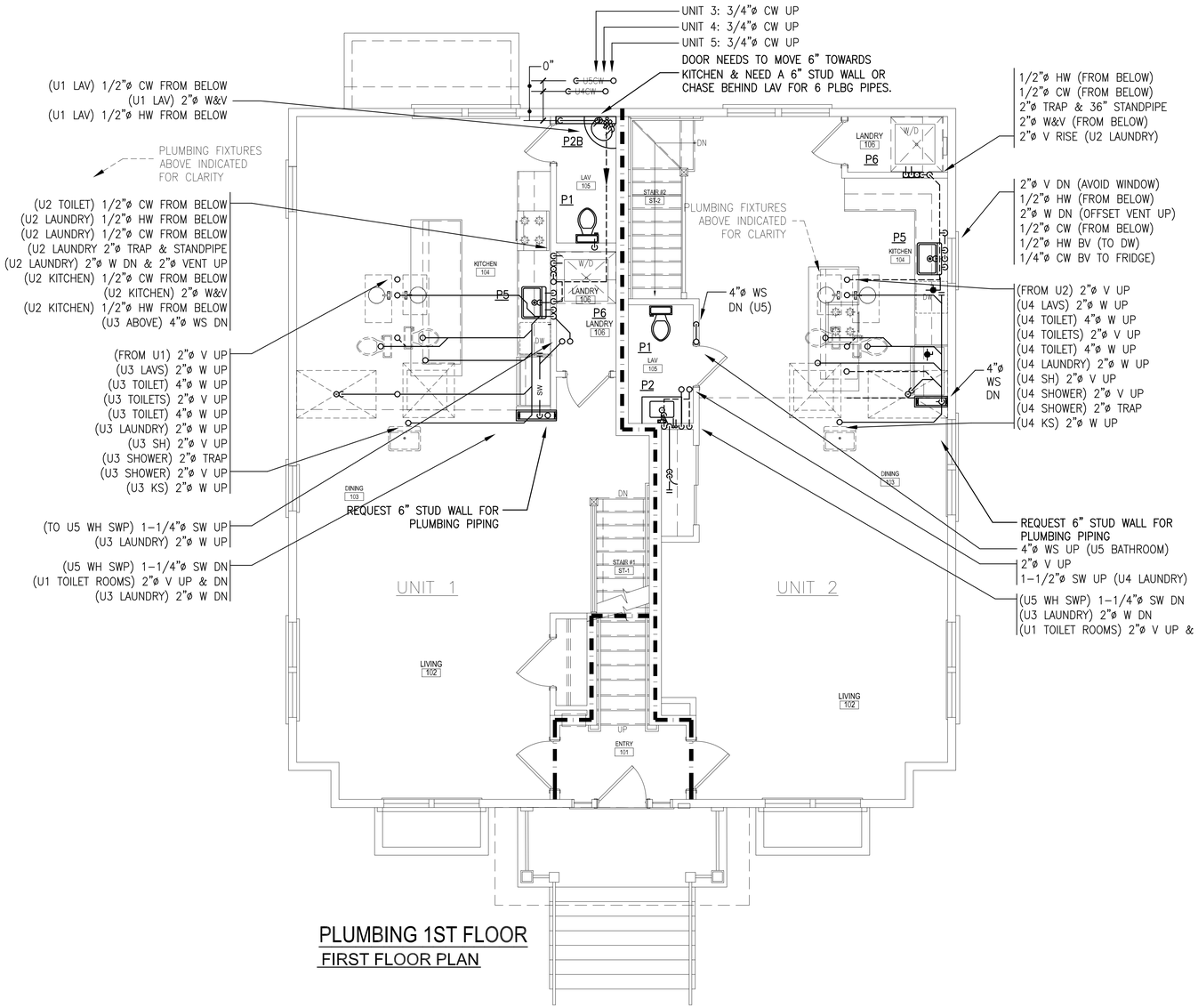
Checked By:	MAT/SRH
Approved By:	MAT/SRH

PLUMBING BASEMENT FLOOR PLAN

SHEET NAME

P2

SHEET NO.



PLUMBING 1ST FLOOR

FIRST FLOOR PLAN

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PROJECT ARCHITECT

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Salem, MA 01970

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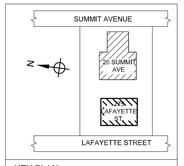
SEAL

STEVEN R. HOULE — No. 47662 — REGISTERED PROFESSIONAL ENGINEER — COMMONWEALTH OF MASSACHUSETTS



KEY PLAN

Multi-Family Build Out
275 Lafayette St.
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

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Checked By:	MAT/SRH
Approved By:	MAT/SRH

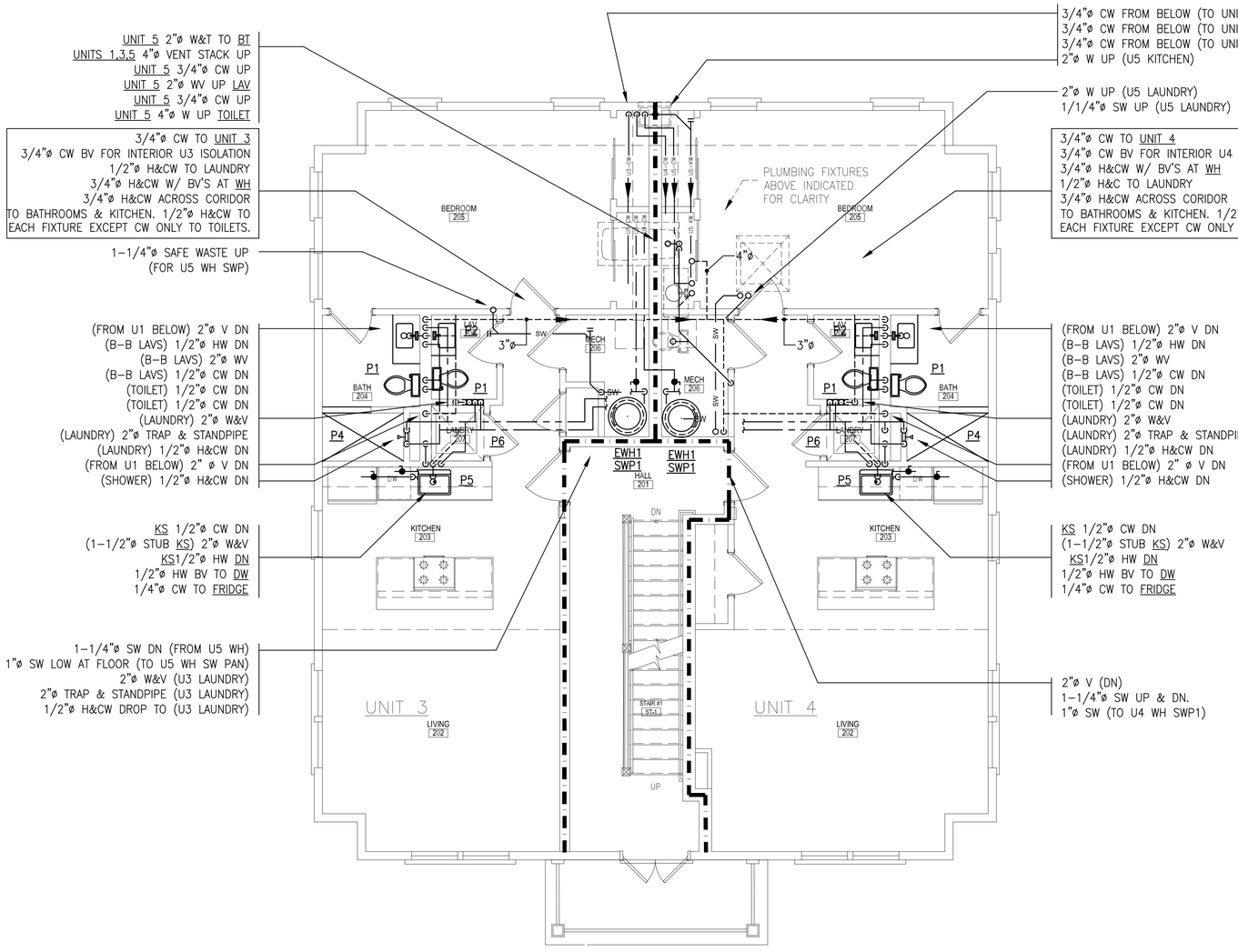
PLUMBING
FIRST FLOOR
PLAN

SHEET NAME

P3

SHEET NO.

04/19/24 PERMIT SET



PLUMBING 2ND FLOOR

SECOND FLOOR PLAN

Seger architects, inc

PROJECT ARCHITECT

SEGER ARCHITECTS, INC.
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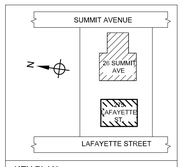
SEAL

COMMONWEALTH OF MASSACHUSETTS
STEVEN R. HOULE
No. 34,
REGISTERED PROFESSIONAL ENGINEER



KEY PLAN

Multi-Family Build Out
275 Lafayette St.
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

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PROJECT REVISIONS

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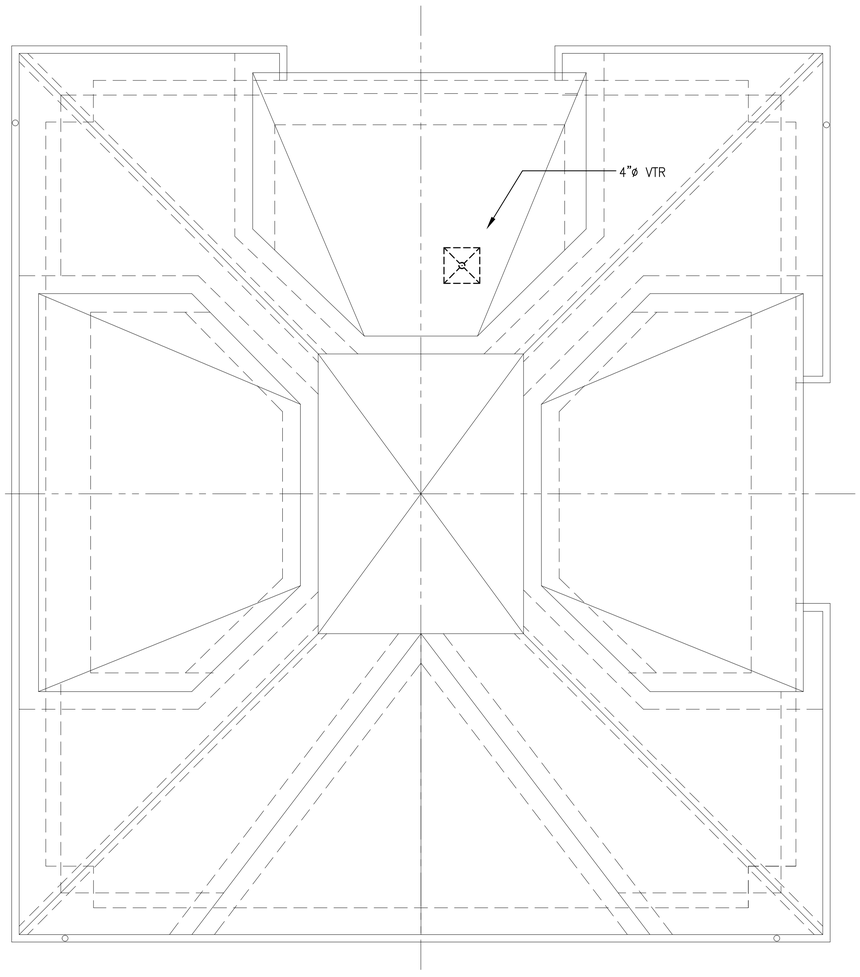
Checked By:	MAT/SRH
Approved By:	MAT/SRH

PLUMBING
SECOND FLOOR
PLAN

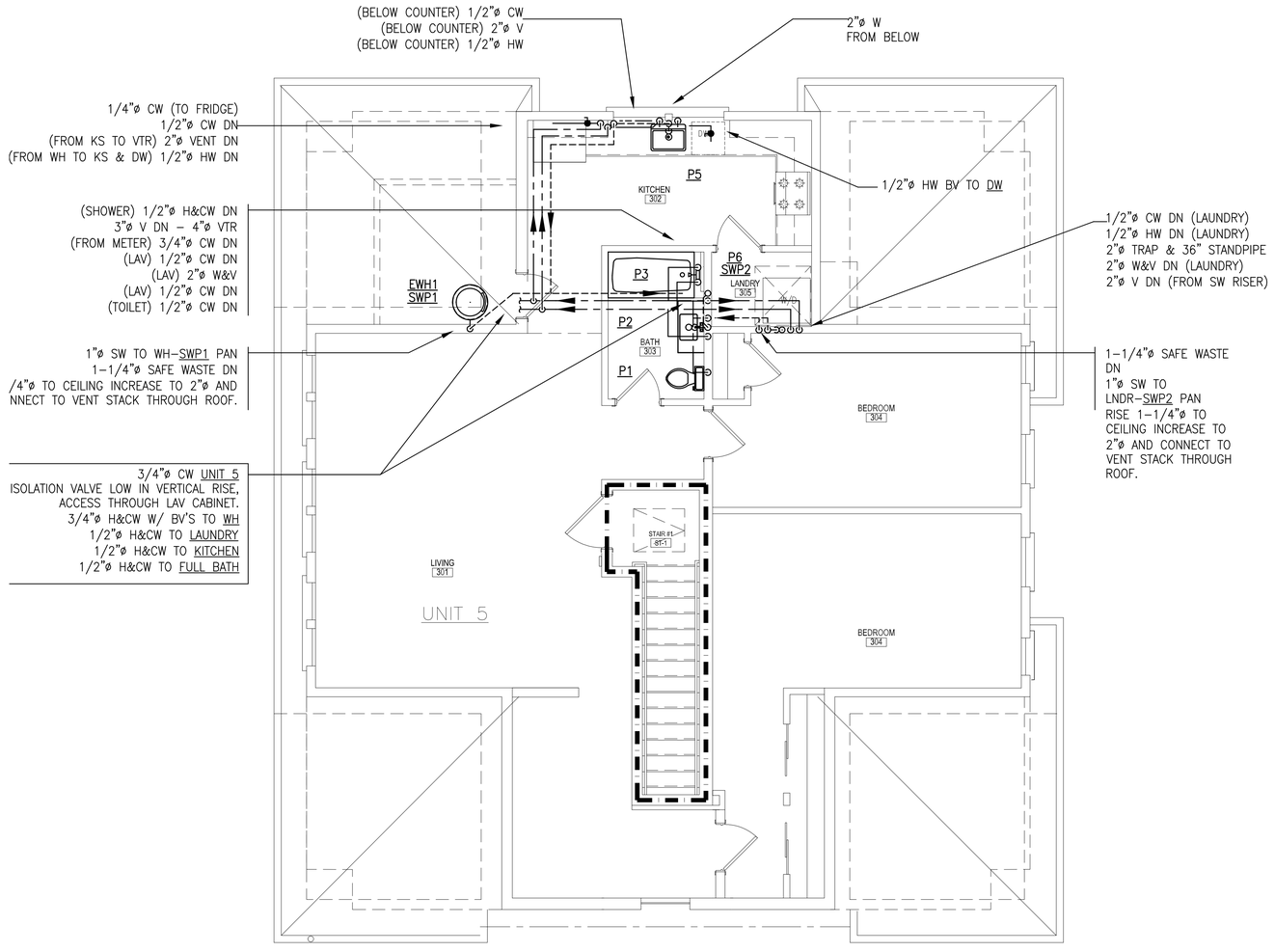
SHEET NAME

P4

SHEET NO.



PLUMBING ROOF
ROOF PLAN



PLUMBING 3RD FLOOR
THIRD FLOOR PLAN

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Salem, MA 01970

SEAL

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SEAL

KEY PLAN

Multi-Family Build Out
275 Lafayette St.
Salem, MA

PROJECT INFORMATION

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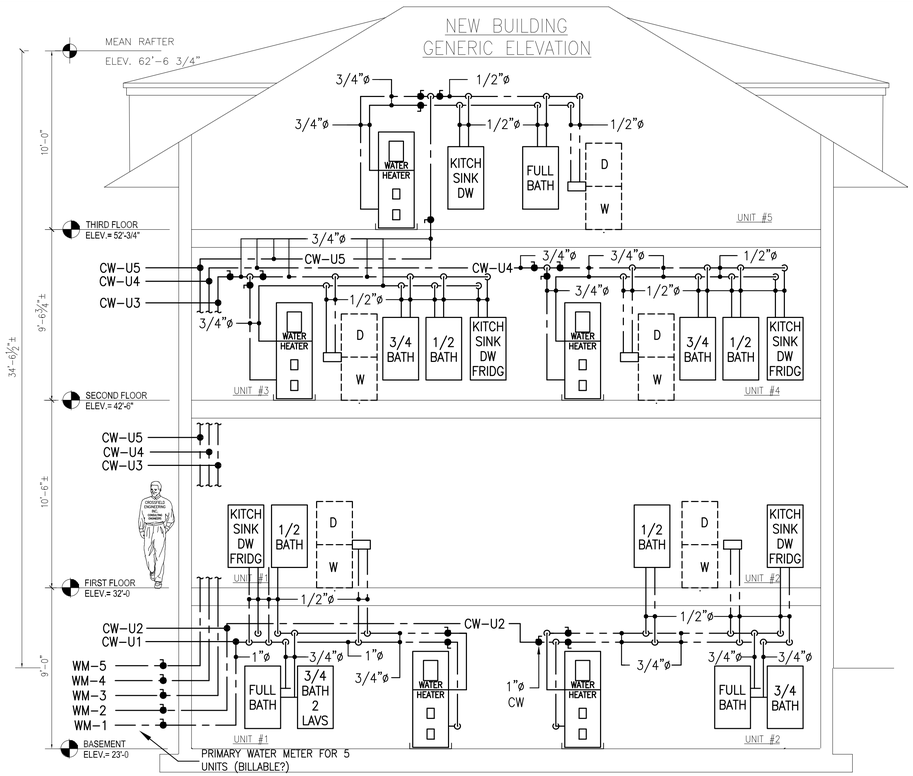
Drawn By:	DCN
Checked By:	MAT/SRH
Approved By:	MAT/SRH

PLUMBING
THIRD FLOOR
& ROOF PLAN

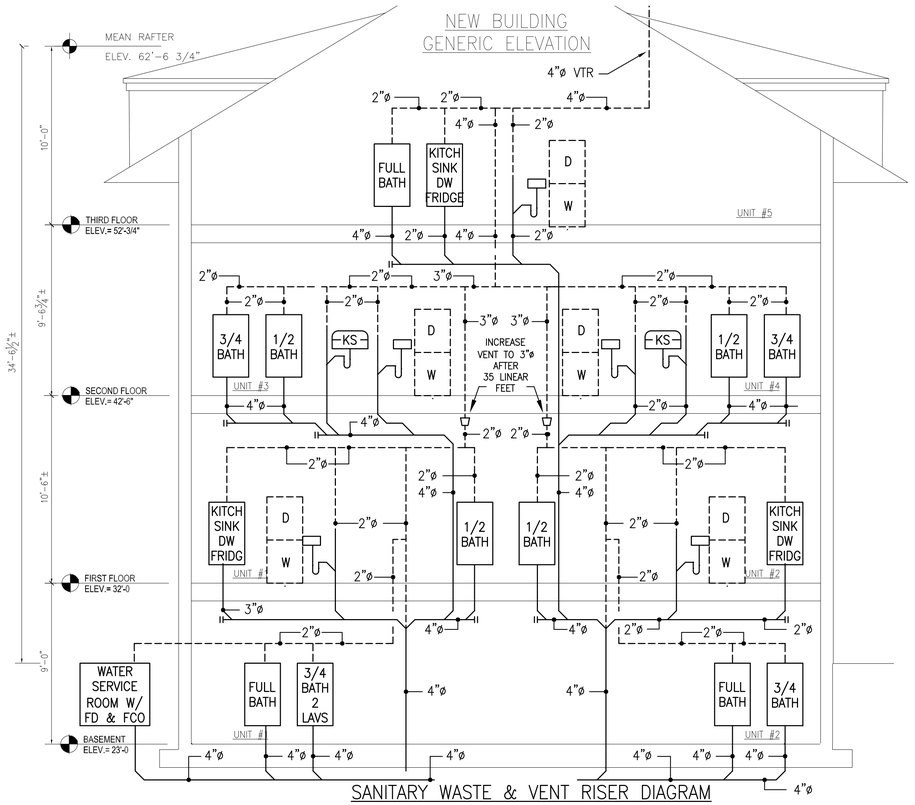
SHEET NAME

P5

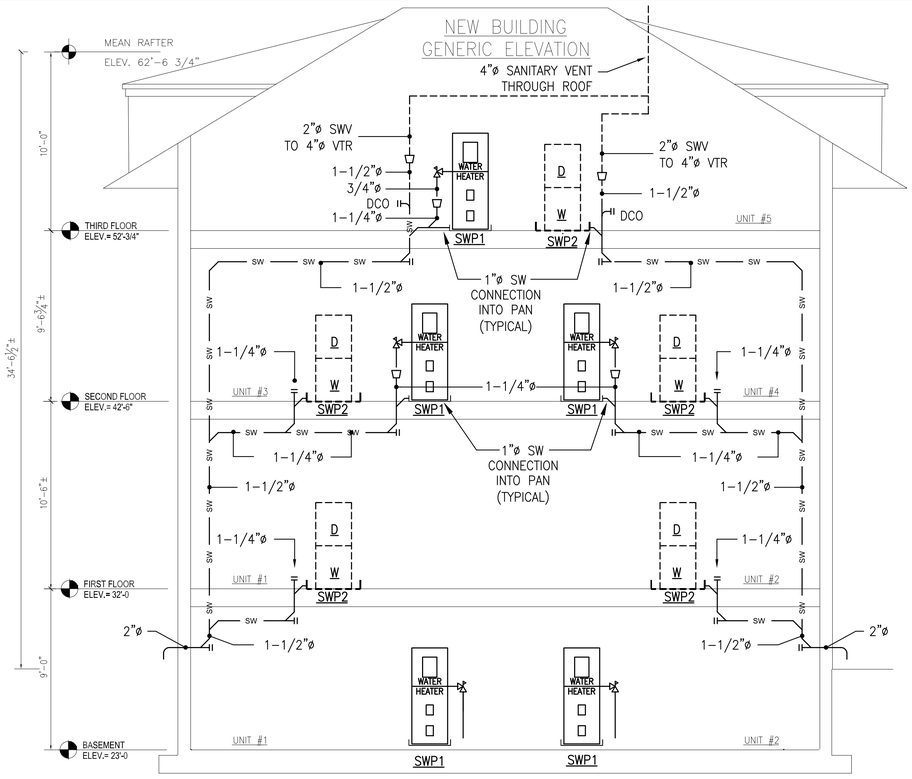
SHEET NO.



DOMESTIC WATER AT UNITS



SANITARY WASTE & VENT RISER DIAGRAM



SAFE WASTE RISER DIAGRAM

248 CMR 10.14 TABLE 3 CAPACITY VALUES FOR SERVICE, MAIN, RISERS AND/OR BRANCHES

PIPE SIZE	CAPACITY VALUE
3/8"ø	1
1/2"ø	1.1 – 4
3/4"ø	4.1 – 9
1"ø	9.1 – 16.5
1-1/4"ø	16.6 – 28
1-1/2"ø	28.1 – 55
2"ø	55.1 – 107.5
2-1/2"ø	107.6 – 182.5
3"ø	182.6 – 287.5
3-1/2"ø	287.6 – 425
4"ø	425.1 – 700
5"ø	700.1 – 1100
6"ø	100.1 – 1300

DOMESTIC WATER PIPE SIZING TO INDIVDUAL FIXTURES:
TOILET: 1/2"ø CW
LAVATORY: 1/2"ø H&CW
SHOWERS: 1/2"ø H&CW
BATHTUBS: 1/2"ø H&CW
KITCHEN SINK: 1/2"ø H&CW
ICE MAKER: 1/4"ø CW W/ BV &
8' TYPE 'L' COPPER COIL PIPING
DISH WASHER: 1/2"ø HW W/ BV & S.S. HOSE

UNIT 1

UNIT #1 PLUMBING CALCULATIONS:
(1) FULL BATH W/2 LAVS, (1) 3/4 BATH,
(1) HALF BATH, WITH KITCHEN & LAUNDRY

FIXTURES & AMOUNTS		WASTE			WATER CAPACITY VALUES			
FIXTURE TYPE	#	SAN FU	TOTAL FIX UNIT		WTR CV	CW CV	HW CV	TOTAL CAP VAL
TOILET	3	X1=	3	X1=	3	–		3
LAVS	4	X1=	4	X1=	4	4		8
BATH/SHR	2	X2=	4	X2=	4	4		8
KS(*)	1	X2=	2	X2=	2	2		2
DW	1	X2=	2	X2=	–	2		2
W/D	1	X2=	2	X2=	2	2		4
(*)W/WTR FOR FRIDGE								
TOTALS	12	–	17		15	14		29
WATER 35% DIVERSITY				→	5.25	5.32		13.65
WATER PIPE ø" SIZE				→	3/4	3/4		1

UNIT 2

UNIT #2 PLUMBING CALCULATIONS:
(1) FULL BATH, (1) 3/4 BATH, (1) HALF BATH
WITH KITCHEN & LAUNDRY

FIXTURES & AMOUNTS		WASTE			WATER CAPACITY VALUES			
FIXTURE TYPE	#	SAN FU	TOTAL FIX UNIT		WTR CV	CW CV	HW CV	TOTAL CAP VAL
TOILET	3	X1=	3	X1=	3	–		3
LAVS	3	X1=	3	X1=	3	3		6
BATH/SHR	2	X2=	4	X2=	4	4		8
KS(*)	1	X2=	2	X2=	2	2		4
DW	1	X2=	2	X2=	–	2		2
W/D	1	X2=	2	X2=	2	2		4
(*)W/WTR FOR FRIDGE								
TOTALS	11	–	16		14	13		27
WATER 35% DIVERSITY				→	4.9	4.55		9.45
WATER PIPE ø" SIZE				→	3/4	3/4		1

UNIT 3

UNITS #3 PLUMBING CALCULATIONS:
(1) FULL BATH, (1) 3/4 BATH,
WITH KITCHEN & LAUNDRY

FIXTURES & AMOUNTS		WASTE			WATER CAPACITY VALUES			
FIXTURE TYPE	#	SAN FU	TOTAL FIX UNIT		WTR CV	CW CV	HW CV	TOTAL CAP VAL
TOILET	2	X1=	2	X1=	2	–		2
LAVS	2	X1=	2	X1=	2	2		4
BATH/SHR	2	X2=	4	X2=	4	4		8
KS(*)	1	X2=	2	X2=	2	2		4
DW	1	X2=	2	X2=	–	2		2
W/D	1	X2=	2	X2=	–	2		2
TOTALS	9	–	14		10	12		22
WATER 35% DIVERSITY				→	3.5	4.2		7.7
(**) WATER PIPE ø" SIZE				→	3/4	3/4		3/4
(*)W/WTR FOR FRIDGE								
(**)UP-SIZED CW TO 3/4"								

UNIT 4

UNITS #4 PLUMBING CALCULATIONS:
(1) FULL BATH, (1) 3/4 BATH
WITH KITCHEN & LAUNDRY

FIXTURES & AMOUNTS		WASTE			WATER CAPACITY VALUES			
FIXTURE TYPE	#	SAN FU	TOTAL FIX UNIT		WTR CV	CW CV	HW CV	TOTAL CAP VAL
TOILET	2	X1=	2	X1=	2	–		2
LAVS	2	X1=	2	X1=	2	2		4
BATH/SHR	2	X2=	4	X2=	4	4		8
KS(*)	1	X2=	2	X2=	2	2		4
DW	1	X2=	2	X2=	–	2		2
W/D	1	X2=	2	X2=	–	2		2
TOTALS	9	–	14		10	12		22
WATER 35% DIVERSITY				→	3.5	4.2		7.7
(**) WATER PIPE ø" SIZE				→	3/4	3/4		3/4
(*)W/WTR FOR FRIDGE								
(**)UP-SIZED CW TO 3/4"								

UNIT 5

UNIT #5 PLUMBING CALCULATIONS
(1) FULL BATH, WITH KITCHEN & LAUNDRY

FIXTURES & AMOUNTS		WASTE			WATER CAPACITY VALUES			
FIXTURE TYPE	#	SAN FU	TOTAL FIX UNIT		WTR CV	CW CV	HW CV	TOTAL CAP VAL
TOILET	1	X1=	1	X1=	1	–	–	1
LAVS	1	X1=	1	X1=	1	1		2
BATH/SHR	1	X2=	2	X2=	2	2		4
KS(*)	1	X2=	2	X2=	2	2		4
DW	1	X2=	2	X2=	–	2		2
W/D	1	X2=	2	X2=	–	2		4
TOTALS	6	–	10		8	9		17
WATER 35% DIVERSITY				→	2.8	3.42		8.5
(**) WATER PIPE ø" SIZE				→	3/4	3/4		3/4
(*)W/WTR FOR FRIDGE								
(**)UP-SIZED CW TO 3/4"								

Seger architects, inc

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SEAL

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COMMONWEALTH OF MASSACHUSETTS
STEVEN R. HOULE
No. 34,017
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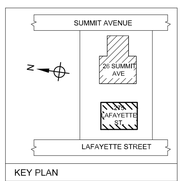

KEY PLAN

Multi-Family Build Out
275 Lafayette St.
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

SAI Job # 2022-020	CEI Proj # 022-23
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Approved By:	MAT/SRH

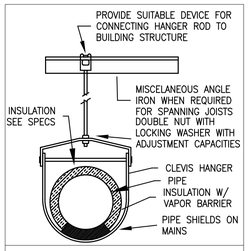
PLUMBING RISER DIAGRAMS & CALCULATIONS

SHEET NAME

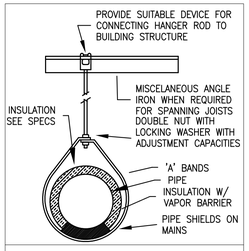
P6

SHEET NO.

04/19/24 PERMIT SET



CLEVICE HANGER DETAILS



A BAND HANGER DETAILS

EQUIPMENT PROVIDED BY OTHERS REQUIRING PLUMBING CONNECTIONS

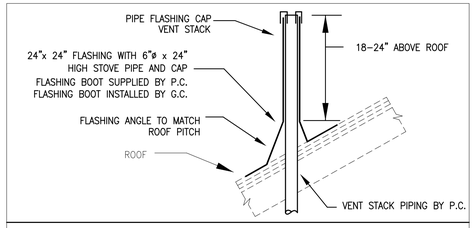
TAG	DESCRIPTION	LOCATIONS	FURNISHED AND SET IN PLACE	PLUMBING CONNECTIONS	PLUMBING –	W	COND DR	SAFE W	CW	HW	DESCRIPTION
CW	CLOTHES WASHER	LAUNDRY CLOSET EACH RESIDENCE	GENERAL CONTRACTOR	SEE COMMENTS	–	2	–	1–1/4	1/2	1/2	P.C. PROVIDES P–6 FIXTURE (VALVE BOX) & SWP2 (SAFE WASTE PAN) AND PLUMBING HARD PIPED SERVICES. WATER HOSES AND DRAIN HOSES FROM EQUIPMENT TO SERVICE CONNECTIONS BY G.C.
CD	CLOTHES DRYER	LAUNDRY CLOSET EACH RESIDENCE	GENERAL CONTRACTOR	NO	–	–	COND DRAIN BY M.C.	–	–	–	CLOTHES DRYER IS VENTLESS. CONDENSATE DRAIN FROM DRYER TO WASHER IS PROVIDED (INTEGRALLY) WITH EQUIPMENT. NO PLBG WORK REQUIRED.
O/R	OVEN/ RANGE TOP	KITCHEN EACH RESIDENCE	GENERAL CONTRACTOR	NO	–	–	–	–	–	–	NO GAS IN BUILDING. RANGE IS ELECTRIC.
R ICE	REFRIGERATOR W/ ICE MAKER	KITCHEN EACH RESIDENCE	GENERAL CONTRACTOR	YES	–	–	–	–	3/8	–	P.C. TO PROVIDE 3/8" ICE MAKER VALVE BOX IN WALL AT EACH KITCHEN REFRIGERATOR. PROVIDE WITH SUFFICENT AMOUNT OF 1/4"ø FLEXIBLE TUBING TO INSTALL AND REMOVE REFRIGERATORS. P.C. TO MAKE FINAL CONNECTIONS.
DW	DISHWASHER	KITCHEN EACH RESIDENCE	GENERAL CONTRACTOR	YES	–	SEE KITCH SINK	–	–	–	1/2	P.C. TO PROVIDE 1/2" BALL VALVE & COPPER TUBING UNDER SINK AND MAKE FINAL CONNECTION. P.C. MAKE FINAL CONNECTION OF DISHWASHER DISCHARGE HOSE TO DISPOSER CONNECTION. DW DISCHARGE HOSE ASSUMED BY EQUIP MFG.
HP	HEAT PUMP	EACH RESIDENCE	MECHANICAL CONTRACTOR	SEE COMMENTS	–	–	COND DRAIN BY M.C.	–	–	–	M.C. TO PROVIDE CONDENSATE DRAIN SYSTEM IN ITS ENTIRETY INCLUDING ROUTING TO DISPOSAL LOCATION AND FINAL CONNECTIONS.

NOTES

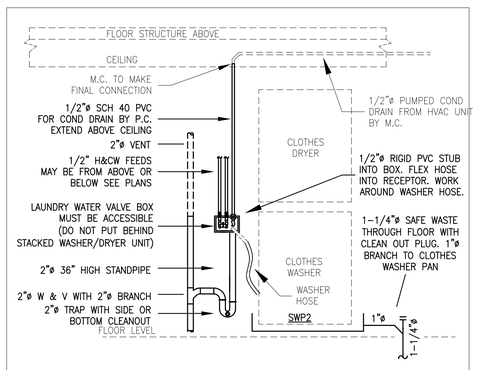
1. PLUMBING CONTRACTOR TO FURNISH AND INSTALL WASTE, WATER AND GAS ROUGHING (INCLUDING ISOLATION VALVES) TO ALL EQUIPMENT REQUIRING SAME.
2. PLUMBING CONTRACTOR TO FURNISH AND INSTALL WASTE, WATER AND GAS FINAL CONNECTIONS TO ALL EQUIPMENT REQUIRING SAME. THIS SHALL INCLUDE FIXTURE STOPS, GAS COCKS, TRAPS, FLEX CONNECTIONS, UNIONS OR DISCONNECTS.
3. PLUMBING CONTRACTOR FURNISHED TRAPS, STOPS, ISOLATION VALVES, GAS COCKS AN DEVICES TO BE PER PLUMBING SPECIFICATIONS.
4. NEW EQUIPMENT SUPPLIED AND SET IN PLACE BY PURCHASING CONTRACTOR OR THEIR REPRESENTATIVE (G.C.).
5. NEW ACCESSORIES ARE SUPPLIED AND SET IN PLACE BY PURCHASING CONTRACTOR OR THEIR REPRESENTATIVE (G.C.).

PLUMBING EQUIPMENT

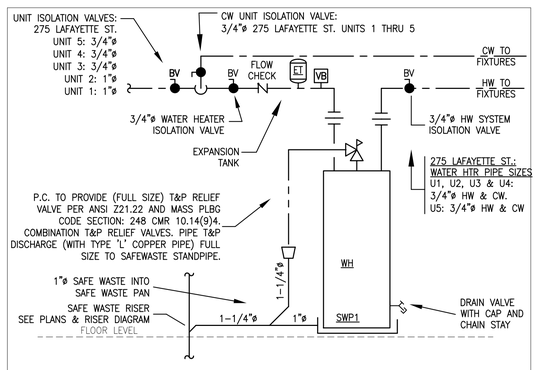
TAG	EQUIPMENT	LOCATION AND SERVICE AREA	CW	HW	DRAIN	ELECTRICAL OR OTHER DESCRIPTION	
EWH1	ELECTRIC WATER HEATER	SERVING EACH UNIT	3/4	3/4	3/4	208/1/60	WATER HEATER: HTP EVERLAST RESIDENTIAL ELECTRIC WATER HEATER MODEL EVR052C2X055N. 55 GALLON STORAGE. NOMINAL. DOE RATED CAPACITY 48 GALLONS. 25 GPM RECOVERY @ 90°F TEMP RISE. 110°F MINIMUM DELIVER, 150°F MAXIMUM, 170°F HIGH LIMIT TEMP. STAINLESS STEEL TANK CONSTRUCTED OF HIGH–QUALITY, LIGHTWEIGHT STAINLESS STEEL. TITANIUM HEATING ELEMENTS TWO LOW–WATTAGE DENSITY ELEMENTS . MIXING REDUCING DEVICE STRATEGICALLY DESIGNED TO KEEP THE INCOMING COLD WATER IN THE LOWEST PART OF THE TANK TO REDUCE MIXING IN THE TANK AND INCREASE. PERFORMANCE AND EFFICIENCY. INLET DIPTUBE INJECTS COLD WATER INTO THE BOTTOM OF THE TANK TO ENSURE ONLY THE HOTTEST WATER IS DRAWN FROM THE TOP OF THE TANK. FULLY AUTOMATIC SURFACE MOUNTED THERMOSTATS FOR CONTROLLING THE TEMPERATURE, COMBINED WITH A AUTOMATIC ENERGY CUT–OFF TO PREVENT OVERHEATING.TEMPERATURE AND PRESSURE RELIEF VALVE – FACTORY INSTALLED. DURABLE BRASS DRAIN VALVE – FACTORY INSTALLED FOR FAST AND EASY DRAINING. . UP TO .94 UEF RATING UP TO 62 GALLON FIRST HOUR RATING (FHR) , 240 VOLTS, 5500–WATT INPUT . ENVIRONMENTALLY SAFE NON–CFC FOAM 2+ INCHES OF SUPER FOAM INSULATION FOR LOW STANDBY LOSS MEETS ALL EFFICIENCY REQUIREMENTS OF THE DOE. AHRI CERTIFIED AND LISTED. NAECA III COMPLIANT QUALITY: 316L STAINLESS STEEL TANK. NO ANODE ROD NEEDED. LIMITED LIFETIME TANK WARRANTY* / 6 YEAR COMPONENTS.
ET1 ET2	EXPANSION TANK	ET1 AT UNIT WATER HEATER ET2 POINT OF USE	3/4	–	–	FLEXCON FLEX PRO 2 PH–5 FOR POTABLE WATER.	ET EXPANSION TANK FLEXCON FLEX PRO 2 PH–5 FOR POTABLE WATER. 2.1 GALLON CAPACITY. NON ASME TANK: 16 GAUGE COLD ROLLED STEELFINISH: APPLIANCE QUALITY PAINT FOR INDOOR OR OUTDOOR INSTALLATION WATER CHAMBER: 100% BUTYL RUBBER, LINED WITH POLYPROPYLENE CONNECTION: STAINLESS STEEL TESTING: HIGH PRESSURE, SEAM WELD, HELIUM, FINAL PRECHARGE CHECK AIR VALVE: BRASS VALVE WITH O–RING SEAL WARRANTY: 1 YEAR LIMITED
MV1 MV2	MIXING VALVE	MV1 AT UNIT WATER HEATER MV2 AT POINT OF USE WATER HEATER	3/4 INLET	3/4 INLET	3/4 OUTLET	POWES LFLM491–1	THERMOSTATIC TEMPERING VALVE SHALL BE CONSTRUCTED USING LEAD FREE* BRASS MATERIAL WHICH SHALL COMPLY WITH STATE CODES AND STANDARDS, WHERE APPLICABLE, REQUIRING REDUCED LEAD CONTENT. THE VALVE SHALL FEATURE ADVANCED PARAFFIN–BASED ACTUATION TECHNOLOGY AND UNION CONNECTIONS FOR EASE OF MAINTENANCE. ALL INTERNAL COMPONENTS SHALL BE CORROSION–RESISTANT. VALVE SHALL FEATURE INTEGRAL CHECKS TO PREVENT CROSS–FLOW AND INLET SCREENS TO FILTER OUT DEBRIS. THE VALVE SHALL BE CSA B125 CERTIFIED AND ASSE 1017 AND IAPMO UPC LISTED.CAPACITY OF THE VALVE SHALL BE 23.0 GPM (87.0 LPM) AT 45PSI (310 KPA) DIFFERENTIAL. VALVE SHALL PERFORM TO A MINIMUM FLOW OF 0.5 GPM (2 LPM) TO ASSE 1017–2003. CONTROL TEMPERATURE SHALL BE ADJUSTABLE BETWEEN 90–160°F. THE VALVE SHALL FEATURE A VANDAL–RESISTANT LOCKABLE HANDLE TO PREVENT TAMPERING.THE VALVE SHALL BE A POWERS HYDROGUARD MODEL LFLM491–1, 3/4"ø UNION CONNECTIONS. ANY ALTERNATE MUST HAVE A WRITTEN APPROVAL PRIOR TO BIDDING.
SWP1	SAFE WASTE PAN	AT EACH WH WATER HEATER	–	–	1–1/4"ø	24"ø X 2" HIGH	KILIARNY SAFE WASTE PAN: MANUFACTURED FROM A SINGLE 18 GA GALVANIZED STEEL STEEL BLANK, AND FORMED INTO SHAPE. MEANING ZERO SEAM CONSTRUCTION, 24" DIAMETER X 2"H. ZERO SEAM CONSTRUCTION, MADE IN the USA.WITH PRE–DRILLED SIDE OUTLET TO INCLUDE ALL DRAIN FITTINGS AND ACCESSORIES..
SWP2	SAFE WASTE PAN	AT EACH CLOTHES WASHER	–	–	1–1/4"ø	RECTANGLE OR SQUARE TO FIT WASHER	KILIARNY SAFE WASTE PAN: MANUFACTURED FROM A SINGLE 18 GA GALVANIZED STEEL STEEL BLANK, AND FORMED INTO SHAPE. MEANING ZERO SEAM CONSTRUCTION, . ZERO SEAM CONSTRUCTION, MADE IN THE USA. WITH PRE–DRILLED SIDE OUTLET TO INCLUDE ALL DRAIN FITTINGS AND ACCESSORIES. RECTANGLE OR SQUARE SIZED TO FIT SPECIFIC CLOTHES WASHER. P.C. TO COORDINATE EXACT SIZE AND CONFIGURATION WITH G.C. OR ARCHITECT ON ORDERING.



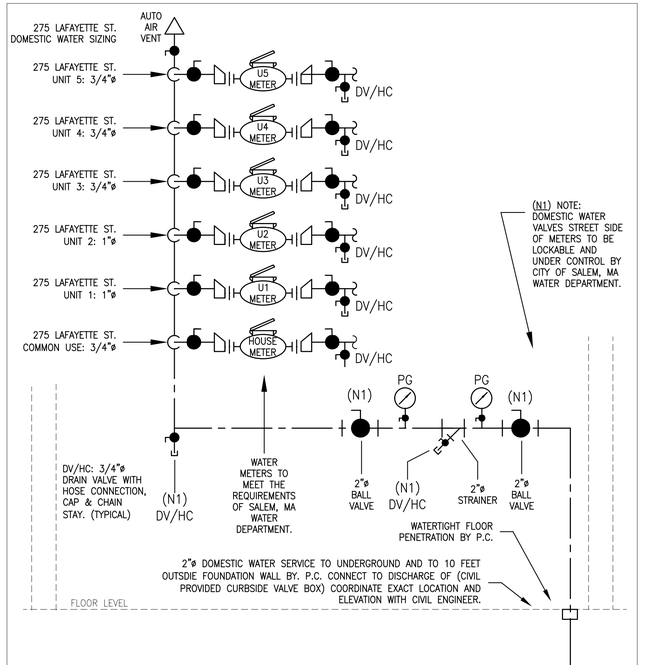
VTR – SANITARY VENT THRU ROOF DETAIL



P–6: LAUNDRY BOX DETAIL



WH DOMESTIC WATER HEATER & ET EXP TANK DETAIL



WATER SERVICE DETAIL TYPICAL AT EACH BUILDING

Seger architects, inc

PROJECT ARCHITECT

SEGER ARCHITECTS, INC.
83R North Street
Salem, MA 01970

SEAL

PROJECT CONSULTANTS

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ENGINEERING CONSULTANTS
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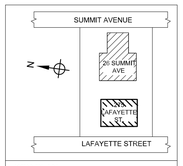
SEAL

COMMONWEALTH OF MASSACHUSETTS
STEVEN R. MOULE
No. 49417
REGISTERED PROFESSIONAL ENGINEER



KEY PLAN

Multi-Family Build Out
275 Lafayette St.
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

SAI Job # 2022-020	CEI Proj # 022-23
Date:	PERMIT SET: 04/19/24
Scale:	NONE
Designed By:	DCN
Drawn By:	DCN
Checked By:	MAT/SRH
Approved By:	MAT/SRH

PLUMBING LEGEND SCHEDULE & NOTES SHEET 1

SHEET NAME

P7

SHEET NO.

04/19/24 PERMIT SET

PLUMBING FIXTURES

TAG	FIXTURE	ADA	GENERAL LOCATION SEE PLANS	FIXTURE MANUFACTURER, MAKE MODEL AND/OR DESCRIPTION	W	V	HW	CW	DESCRIPTION
P-1	WATER CLOSET		STANDARD APARTMENT LOCATIONS	FIXTURE: KOHLER K-3998-RA SEAT: KOHLER K-4636 SERIES TRIM & ACCESSORIES: ALL INCLUSIVE	4	2	–	1/2	FIXTURE: KOHLER WELLWORTH CLASS FIVE TOILET K-3998-RA VITREOUS CHINA.TWO-PIECE TOILET. REGULAR HEIGHT ELONGATED BOWL. CLASS FIVE FLUSHING SYSTEM. INCLUDES RIGHT-HAND POLISHED CHROME TRIP LEVER.1.28 GPF. 2-1/8" FULLY GLAZED TRAPWAY 12" ROUGH-IN, 11-1/4" X 8-1/4" WATER AREA. 30" X 18" X 29-1/4". FLOOR MOUNT / FLOOR OUTLET. ACCESSORIES: K- 7637 ANGLE SUPPLY WITH STOP (SINGLE) COMPONENTS CODES/STANDARDS PRODUCT INCLUDES: K- 4198 ELONGATED BOWL K- 4467-RA TOILET TANK TO INCLUDE TANK COVER, TRIP LEVER, BOLT CAP ACCESSORY PACK, AND TANK ACCESSORY PACK. ASME A112.19.2/CSA B45.1 DOE – ENERGY POLICY ACT 1992 EPA WATERSENSE KOHLER ONE-YEAR LIMITED WARRANTY SEE WEBSITE FOR DETAILED WARRANTY INFORMATION. SEAT: KOHLER GRIP-TIGHT CACHET Q3 TOILET SEAT K-4636 SOLID POLYPROPYLENE PLASTIC. ELONGATED CLOSED-FRONT. CONTOURED SEAT FOR USER COMFORT. QUIET-CLOSE™ LID AND RING PREVENTS SLAMMING. QUICK-RELEASE HINGE CAPS SNAP OPEN AND SEAT PULLS FORWARD FOR REMOVAL. QUICK-ATTACH STAINLESS STEEL FASTENER ALLOWS FOR TOP-MOUNT SCREW DRIVER INSTALATION. GRIP TIGHT BUMPERS HOLD SEAT FIRMLY IN PLACE.
P-2	LAVATORY		STANDARD APARTMENT LOCATIONS	FIXTURE: KOHLER K20000 UNDER MOUNT WITH ALL CLAMPING HARDWARE FAUCET: SYMMONS MODEL: SLS6712-PP-STN 1.5 GPM AERATOR TRIM: C.P. TRAP & STOPS	2" WET VENT 1-1/2" TRAP		1/2	1/2	FIXTURE: KOHLER K-20000 VITREOUS CHINA, UNDER-MOUNT, WITH OVERFLOW, TO INCLUDE 1193643 CLAMP ASSEMBLY. 19-1/4" X 16-1/4", WITH K- 8998 P-TRAP. AND (2) CHROME PLATED WATER STOPS. FAUCET: SYMMONS IDENTITY SINGLE HANDLE LAVATORY FAUCET INCLUDES SINGLE HANDLE LAVATORY FAUCET FEATURES SINGLE HOLE MOUNT, CERAMIC CARTRIDGE WITH TEMPERATURE LIMIT STOP, 20" BRAIDED HOSE CONNECTIONS, STANDARD 1.0 GPM (3.8 L/ MIN) FLOW RESTRICTOR, FAUCET CONSTRUCTED FROM BRASS, PLATED IN STANDARD POLISHED CHROME FINISH. 10 YEAR COMMERCIAL WARRANTY. ASME A112.18.1/CSA B125.1, NSF/ANSI 61.9, NSF/ANSI 376, WATERSENSE 1.0 GPM COMPLIANT, LEVER HANDLE MEETS ADA REQUIREMENTS FOR OPERATION. AVAILABLE OPTIONS: "05 – 0.5 GPM (1.9 L/MIN) FLOW RESTRICTOR", "DP4 – 4" DECK PLATE FOR SINGLE HOLE MOUNT FAUCETS", "STN – SATIN NICKEL FINISH", "MB – MATTE BLACK FINISH", "BBZ – BRUSHED BRONZE FINISH".
P-3	BATHTUB		STANDARD APARTMENT LOCATIONS	FIXTURE: KOHLER K-715/716 (RH/LH) FAUCET: SYMMONS S3502-CYL-B-1.5 1.5 GPM SHOWER HEAD DRAIN: SYMMMONS K-7213 CLEARFLO 27" CABLE BATH DRAIN	2	2	1/2	1/2	FIXTURE: 'VILLAGER' CAST IRON ENAMELED TUB WITH SAFEGUARD FINISH AND INTEGRAL APRON, 60" X 30-1/4" X 14" HIGH. (SEE ARCH. PLANS FOR LEFT & RIGHT HAND UNITS) FAUCET: SYMMONS BATHTUB FAUCET S-3502-CYL-B-C-1.5. TUB-SHOWER SYSTEM WITH SYMMONS TEMPTROL® MIXING VALVE P/N S-4002-BODY. SYMMONS TUB-SHOWER SYSTEM WITH SYMMONS TEMPTROL® PRESSURE-BALANCING MIXING VALVE WITH ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. SCREWLESS BRASS ESCUTCHEON (-B) . CYLINDER (-CYL) STYLE LEVER HANDLE. SHOWERHEAD, SINGLE MODE #352SH. MOUNTING BRACKET AND FLANGE FOR SHOWERHEAD. TUB-SPOUT 7 INCHES #067. POLISHED CHROME FINISH (STANDARD) . CHECK STOPS: TEMPTROL® MIXING VALVE INCLUDES INTEGRAL CHECK STOPS. 1.5 GPM FLOW RESTRICTOR.STANDARDS / CERTIFICATIONS. ASME A112.18.1; CSA B125.1. AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANT. BATHTUB DRAIN: SYMMONSCLEAFLO K-7213 27" CABLE BATH DRAIN FOR BATHS 14" (356 MM) TO 21" (533 MM) DEEP FROM THE CENTER OF THE BATH OVERFLOW OUTLET TO THE CENTER OF THE BATH DRAIN OUTLET. EXTERNAL 27" (686 MM) LENGTH CABLE. NO INTERNAL LINKAGES TO MINIMIZE THE POTENTIAL FOR CLOGGING. INCLUDES SCHEDULE 40 PVC TUBING.
P-4	SHOWER		STANDARD APARTMENT SHOWERS	FIXTURE BASE: BY OTHERS FAUCET SYMMONS: S-3501-CYL-B-1.5 GPM FIXTURE DRAIN: OATEY 130 SERIES MODEL 32237 FOR TILE INSTALLATION	2	2	1/2	1/2	FIXTURE: BY OTHERS. FAUCET: SYMMONS SHOWER SYSTEM: MODEL #S-3501-CYL-B-CHKS-1.5 GPM. SHOWER SYSTEM WITH SYMMONS TEMPTROL MIXING VALVE/N 4000-BODY. SHOWER SYSTEM WITH SYMMONS TEMPTROL PRESSURE-BALANCING MIXING VALVE WITH ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. SCREW LESS BRASS ESCUTCHEON (-B). CYLINDER (CYL) STYLE LEVER HANDLE. SHOWER HEAD, SINGLE MODE #352SH. MOUNTING BRACKET AND FLANGE FOR SHOWER HEAD. FLOW RATE IS 1.5 GPM FLOW RESTRICTOR. POLISHED CHROME FINISH (STANDARD). CHECK STOPS: TEMPTROL MIXING VALVE INCLUDES INTEGRAL CHECK STOPS. DRAIN: OATEY K-7213
P-5	KITCHEN SINK WITH ACCESSORIES DISHWASHER CONN ICE MAKER WTR BOX GARBAGE DISPOSER DW AIR GAP FITTING		STANDARD APARTMENT LOCATIONS	FIXTURE: ELKAY (LUSTERTONE CLASSIC) MODEL #ELUH 2115 FAUCET: ELKAY LKAV-3031-1-CR TRIM #:1 GARBAGE DISPOSER: INSINKERATOR EVOLUTION ESSENTIAL TRIM #2: OATEY 38600 SERIES WATER VALVE BOX FOR FRIDGE TRIM #3: DISHWASHER AIR GAP FITTING BRASSCRAFT #4BC9441SS TRIM #4: 1/2" BV & FLEX FOR DW	2	2	1/2	1/2	FIXTURE: ELKAY LUSTERTONE® CLASSIC STAINLESS STEEL, 23-1/2" X 18-1/4" X 7-1/2" SINGLE BOWL UNDER MOUNT SINK. SINK IS MANUFACTURED FROM 18 GAUGE 304 STAINLESS STEEL WITH A LUSTROUS SATIN FINISH, REAR CENTER DRAIN PLACEMENT, AND SIDES AND BOTTOM PADS.. FAUCET: ELKAY AVADO SINGLE HOLE KITCHEN FAUCET WITH PULL-DOWN SPRAY AND FORWARD ONLY LEVER HANDLE. FAUCET HAS A FLOW RATE OF 1.8 GPM, AND IS MADE OF BRASS MATERIAL, WITH A CERAMIC DISC VALVE. FAUCET REQUIRES 1 FAUCET HOLES TRIM #1: FOOD WASTE DISPOSER(S) SHALL BE INSINKERATOR MODEL EVOLUTION ESSENTIAL® WITH MULTIGRIND® AND SOUNDSEAL® TECHNOLOGIES, 3/4 HP MOTOR, STAINLESS STEEL GRIND CHAMBER AND COMPONENTS. TRIM #2: METAL ICE MAKER VALVE BOX WITH SUFFICIENT LENGTH OF 1/4"ø COILED COPPER TUBING (APPROX 10 FEET) TO MOVE FRIDGE IN AND OUT AND MAKE FINAL CONNECTION. TRIM #3: DISHWASHER AIR GAP FITTING. TRIM #4: 1/2" BALL VALVE WITH (3-4'±) S.S. FLEXIBLE BRAIDED TUBING FOR DISHWASHER CONNECTION.
P-6	LAUNDRY BOX W/ SAFE WASTE PAN SEE DETAIL		STANDARD APARTMENT SHOWERS	FIXTURE: LAUNDRY WALL BOX WATTS MODEL: A2C-SC-WB WITH INTELLIFLOW CONTROL WITH: 1/2"ø CW, 1/2"ø HW & 2"ø WASTE CONNECTIONS. TO INCLUDE SAFE WASTE PAN SWP1	THE CONTRACTOR SHALL INSTALL AN ELECTRICALLY ACTUATED WASHING MACHINE SHUTOFF VALVE ON THE HOT AND COLD WATER SUPPLY AS INDICATED ON THE DRAWINGS. THE ELECTRICALLY ACTUATED WASHING MACHINE VALVE SHALL BE NORMALLY CLOSED. THE ELECTRICALLY ACTUATED WASHING MACHINE VALVE SHALL CONTAIN AN INTEGRAL ELECTRICAL OUTLET CAPABLE OF RECEIVING A STANDARD THREE-PRONG 120 VAC WASHING MACHINE POWER CABLE. THE VALVE SHALL ACTUATE BOTH THE HOT AND COLD WATER VALVES SIMULTANEOUSLY UPON DETECTION OF CURRENT FLOW AT THE INTEGRAL ELECTRICAL OUTLET WHICH SHALL REMAIN ACTUATED UNTIL THE DETECTION OF THE INTERRUPTION OF CURRENT FLOW AT THE INTEGRALEL ECTRICAL OUTLET. THE VALVE SHALL BE EQUIPPED WITH A 6 FT. TYPE SJT 14 AWG ELECTRICAL CORD. THE VALVE SHALL BE RATED FOR 120 VAC, 60 HZ WITH A MAXIMUM STANDBY CURRENT DRAW OF LESS THAN ONE (1) AMPERE AND A MAXIMUM APPLIANCE CURRENT DRAW OF 15 AMPERES. THE VALVE SHALL HAVE A MAXIMUM PRESSURE RATING OF 150PSI (10.3 BAR) AND A MAXIMUM TEMPERATURE RATING OF 180°F (82°C). THE VALVE SHALL BE UL LISTED FOR APPLIANCE CONTROLS. THE ELECTRICALLY OPERATED WASHING MACHINE SHUTOFF VALVE SHALL BE EQUIPPED WITH A LEAK SENSOR. UPON DETECTION OF WATER AT THE LEAK SENSOR, CURRENT FLOW TO BOTH THE HOT AND COLD WATER VALVES SHALL BE IMMEDIATELY INTERRUPTED. THE VALVE SHALL BE A WATTS INTELLIFLOW MODEL A2C-SC SURFACE MOUNT UNIT OR MODEL A2C-SC-WB WALL BOX UNIT.				
P-7	JANITOR SINK		CHURCH BUILDING MECH ROOM	FIAT FIXTURE: MSB-2424 FIAT FAUCET: 830-AA, FIAT HOSE 832-CC	3	2	1/2	1/2	24"x 24"x 10" HIGH MOLDED STONE SERVICE BASIN. FACTORY INSTALLED S.S. DRAIN BODY W/ S.S. FLAT STRAINER. PROVIDE COMPLETE WITH FAUCET, V.B., HOSE & HOSE BRACKET, MOP BRACKET AND TWO STAINLESS STEEL WALL GUARDS (FOR CORNER INSTALLATION).
P-1A	TOILET	♿	ADA APARTMENT SHOWERS	FIXTURE: KOHLER K-3989-RA SEAT: KOHLER K-4636 SERIES TRIM & ACCESSORIES: ALL INCLUSIVE	4	2	–	1/2	FIXTURE: P-1A ADA TOILET KOHLER MODEL HIGHLINE CLASS FIVE DUAL FLUSH MODEL K-3989 TWO-PIECE TOILET. ELONGATED BOWL. COMFORT HEIGHT 16-1/2" FEATURE OFFERS A CHAIR-HEIGHT SEAT THAT MAKES SITTING DOWN AND STANDING UP EASIER FOR MOST ADULTS. LEFT-HAND NESTED TRIP LEVER OFFERS A CHOICE OF 1.1 OR 1.6 GALLONS PER FLUSH (GPF). 2-1/8-INCH GLAZED TRAPWAY. WITH K-7637 ANGLE SUPPLY WITH STOP ,K-9237 DUAL-FLUSH TRIP LEVER AND ALL MOUNTING HARDWARE.
P-2A	LAVATORY	♿	ADA APARTMENT LAVATORIES	FIXTURE: KOHLER "BRYANT® MODEL: K-2699-1 FAUCET: SAME AS P2 LAV (E.A.N.) TRIM: ADA OFFSET TRAP & STOPS (U.O.N.)	2" WET VENT 1-1/2" TRAP		1/2	1/2	FIXTURE: 20-1/4" OVAL DROP-IN BATHROOM SINK, VITRIOUS CHINA, WITH OVERFLOW,SINGLE HOLE FOR FAUCET. FAUCET: SAME AS P2 FAUCET (E.A.N.) IF TRIM IS EXPOSED BELOW FIXTURE GET FAUCET LESS LIFTING ROD & LESS POP-UP DRAIN AND PROVIDE WITH OFFSET DRAIN GRID STRAINER. TRIM: SAME AS PR (E.A.N.) IF TRIM IS EXPOSED BELOW SINK, PRO-WRAP ALL PIPES UNDER FIXTURE.
P-4A	SHOWER	♿	ADA APARTMENT SHOWERS	FIXTURE: BY OTHERS FLOOR DRAIN: SAME AS P4 SYMMONS FAUCET COMPONENTS: FAUCET BODY: S-46-2X-BODY-CHKS FAUCET TRIM: S3508-B-1.5 GPM	2	2	1/2	1/2	FAUCET: S-46-2X-BODY & TRIM S3508-B-CHKS-CHKS-1.5 GPM. SYMMONS TEMPTROL TUB-SHOWER MIXING VALVE WITH INTEGRAL DIVERTER, INTEGRAL CHECK STOPS. SHOWER/HAND SHOWER TRIM REQUIRES TEMPTROL® PRESSURE BALANCING TUB/SHOWER VALVE, INTEGRAL DIVERTER CONTROL, METAL LEVER HANDLE, 30" SLIDE BAR FOR HAND SHOWER WAND, DUAL CHECKS FOR BACKFLOW PROTECTION, 60" FLEXIBLE METAL HOSE, 1 MODE HAND SHOWER WAND, 1 MODE SHOWERHEAD, 1.5 GPM FLOW RESTRICTOR. TUB SPOUT NOT INCLUDED. COMPONENTS SHALL BE METAL AND NONMETALLIC CONSTRUCTION, PLATED IN STANDARD POLISHED CHROME FINISH. PROVIDE WITH TA-10 FLOW CONTROL SPINDLE AND T-12A CAP ASSEMBLY FOR TEMPTROL VALVE BODIES INSTALLED WITH TEST CAP (ORDER P/N S3508BTRMTC).
P-5A	KITCHEN SINK	♿	ADA APARTMENT KITCHENS	ELKAY FIXTURE: LRAD2522 SERIES FAUCET & TRIM: SAME AS P5 (E.A.N.) SEE GD NOTE FOR DISPOSER MOUNTING	2	2	1/2	1/2	FIXTURE: 'LUSTERTONE' 18 GAGE TYPE 304 NICKEL BEARING STAINLESS STEEL SELF RIMMING, SINGLE BOWL KITCHEN SINK. 25" X 22" X 5" DEEP W/ OFFSET DRAIN FOR ADA APPLICATION, FULLY UNDERCOATED. FAUCET: SAME AS P5. TRIM & ACCESSORIES SAME AS P5. TRIM: PRO-WRAP ALL PIPES UNDER FIXTURE., GD NOTE: SINK DRAIN IS OFFSET. DISPOSER MOUNTING INTERFERES WITH ROLL UNDER CAPABILITIES. TO BE REVIEWED BY ARCHITECT.
P-6A	LAUNDRY BOX	♿	ADA APARTMENT KITCHENS	SAME AS P6 BUT MOUNTED AT ADA HEIGHT TO INCLUDE SAFE WASTE PAN SWP2. SEE COMMENTS.	2	2	1/2	1/2	SAME AS P6 EXCEPT MOUNTED FOR ADA WHEELCHAIR ACCESS.

2018 IECC (page C4-88) CODE & COMMENTARY

TABLE C403.11.3
MINIMUM PIPE INSULATION THICKNESS (in inches) a.c.

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (in inches)				
	Conductivity Btu*in./(h * ft² * °F) b	Mean Rating Temperature, °F	< 1	1 to < 1.5	1.5 to < 4	4 to < 6	≥ 8
> 350	0.32 – 0.34	250	4.5	5.0	5.0	5.0	5.0
251 – 350	0.29 – 0.32	200	3.0	4.0	4.5	4.5	4.5
201 – 250	0.27 – 0.30	150	2.5	2.5	2.5	3.0	3.0
141 – 200	0.25 – 0.29	125	1.5	2.0	2.0	2.0	2.0
105 – 140	0.21 – 0.28	100	1.0	1.0	1.5	1.5	1.5
40 – 60	0.21 – 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 – 0.26	50	0.5	1.0	1.0	1.0	1.5

For SI: 1 inch = 25.4 mm, °C = [(°F) – 32] / 1.8.
a. For piping smaller than 1-1/2 inches and located in partitions within conditioned spaces, reduction of these thicknesses by 1 inch shall be permitted (before thickness adjustment required in footnote b) but not to a thickness less than 1 inch.
b. For insulation outside the stated condutivity range, the minimum thickness (T) shall be determined as follows:
$T = r [(1 + t/r)^{ka} - 1]$
where:
T = minimum insulation thickness
r = actual outside radius of pipe.
t = insulation thickness listed in the table for applicable fluid temperature and pipe size,
K = conductivity of alternate material at a mean rating temperature indicated for the applicable fluid temperature (Btu * in/h * °F) and
k = the upper value of the condutivity range listed in the table for the applicable fluid temperature.
c. For direct – buired heating and hot water system piping, reduction of these thicknesses by 1-1/2 inches (38 mm) shall be permitted (before thickness adjustment required in footnote b but not to thicknesses less than 1 inch.

DRAINAGE SPECIALTIES

TAG NUMBER	ITEM DESCRIPTION AND AREA SERVED	MANUFACTURER AND MODEL NUMBER	DESCRIPTION AND/OR ACCESSORIES
FD1	WATER SERVICE ROOM	ZURN Z-415 SERIES	Z-415 CAST IRON BODY WITH FLASHING DEVICE WITH ADJUSTABLE TYPE 'B' POLISHED NICKEL BRONZE STRAINER WITH ROUND TOP AND ALL MOUNTING HARDWARE AND DEVICES. NON-SHOWER DRAINS TO HAVE TRAP PRIMER CONNECTION W/ TP1
FCO	FLOOR CLEANOUTS GENERAL AREAS: LIGHT DUTY MECH. ROOMS: MEDIUM DUTY	FLOOR CLEANOUTS LIGHT DUTY: ZURN ZN-1400 MEDIUM DUTY: ZURN Z-1400	ZURN 1400 SERIES 'LEVEL-TROL' ADJUSTABLE FLOOR CLEANOUT, DURA-COATED CAST IRON BODY WITH GAS AND WATER TIGHT ABS TAPERED THREAD PLUG AND ROUND SCORIATED SECURED TOP. ADJUSTABLE TO FINISHED FLOOR. LIGHT DUTY: NICKEL BRONZE TOP. MEDIUM DUTY: DURA COATED CAST IRON TOP.
DCO OR WCO	DANDY CLEANOUT OR WALL CLEANOUT	ZURN ZN1447 CLEANOUT TEE WITH ACCESS COVER AND FRAME.	ZURN CLEANOUT TEE, DURA-COATED CAST IRON, GAS AND WATER TIGHT ABS TAPERED THREAD PLUG, AND SQUARE, SMOOTH NICKEL BRONZE SECURED WALL ACCESS COVER AND FRAME.
WH	WALL HYDRANT OUTSIDE AND FREEZE PRONE AREAS	ZURN Z1300 SERIES WITH OPTIONS	ZURN Z1300 ENCASED ECOLOTROL "ANTI-SYPHON" AUTOMATIC DRAINING WALL HYDRANT FOR FLUSH INSTALLATION. COMPLETE WITH NON-FREEZE TYPE INTEGRAL BACKFLOW PREVENTER, BRONZE CASING, ALL BRONZE INTERIOR PARTS, NON-TURNING OPERATING ROD WITH FREE FLOATING COMPRESSION CLOSURE VALVE, REPLACEABLE BRONZE SEAT AND SEAT WASHER AND COMBINATION 3/4" FEMALE OR 1" MALE STRAIGHT IP INLET. NICKEL BRONZE BOX AND HINGED COVER WITH OPERATING KEY LOCK AND "WATER" CAST ON COVER.
RPBFP1	BACKFLOW PREVENTOR MAKE UP WATER RPBFP1: 1"ø IRRIGATION	WATTS 909 SERIES MODEL # UC-909-QT W/ 909-AG-C AIR GAP	THE ASSEMBLY SHALL BE A WATTS REGULATOR COMPANY SERIES UC-909QT. (U) UNION, (C) CLEAN AND CHECK STRAINER, (QT) QUARTER-TURN BALL VALVES. BODY, BRONZE; CHECK SEATS, 909 CELCON®; RELIEF VALVE SEATS, STAINLESS STEEL 909HW; TEST COCKS, BRONZE. BACKFLOW PREVENTOR TO BE 36"-42" ABOVE FLOOR AND 12" OFF WALL. WITH 3' OF CLEARANCE IN FRONT (AS CODE REQUIRES). PROVIDE FUNNEL OF SUFFICIENT SIZE AND DRAIN CONNECTION WITH AIR GAP AND PIPE TO APPROVED DISPOSAL POINT.

GENERAL PLUMBING NOTES

1. ALL PLUMBING SHALL BE IN ACCORDANCE WITH THE LATEST FEDERAL, STATE, LOCAL, ENVIRONMENTAL AND ENERGY CODES IN EFFECT.

2. IT IS NOT THE INTENT TO SHOW ALL PIPING ON THESE DOCUMENTS. ALL DRAWINGS, PLANS, SCHEDULES, RISERS, DETAILS, SPECIFICATIONS AND CODES SHALL BE UTILIZED TO PRODUCE COMPLETE PLUMBING SYSTEMS AS REQUIRED BY THE PROJECT.

3. FIXTURE NOTES AND COMMENTS:
3A. ALL TOILETS, LAVATORIES AND BATHTUB FIXTURES TO BE WHITE UNLESS OTHERWISE NOTED. BOLT CAPS ON TOILETS TO MATCH FIXTURE COLOR.
3B. ALL EXPOSED PIPING TO BE CHROM PLATED. PIPING BELOW LAVATORIES AND KITCHEN COUNTERS WITH DOORS NEED NOT BE CHROME PLATED.
3C. BATHROOM GROUPS OF FAUCETS, SHOWER HANDLES, SPOUTS, TUB FILLS, ETC TO BE OF MATCHING TYPES AND CHROME PLATED.
3D. TOWEL RACKS, SOAP DISHES AND OTHER ACCESSORIES OR TRIM NOT SPECIFIED IN PLUMBING DOCUMENTS TO BE PROVIDED BY OTHERS.

4. PLUMBING FIXTURES MOUNTED IN COUNTERS:
4A. P.C. TO COORDINATE FIXTURE HEIGHTS PRIOR TO ROUGHING.
4B. P.C. TO FURNISH (TO G.C.) FIXTURE CUTOUT TEMPLATES FOR COUNTER MOUNTED FIXTURES.
5C. P.C. TO MAKE ALLOWANCES OR PROVIDE FOR QUALIFIED PERSONNEL TO MAKE ALL PLUMBING RELATED COUNTER CUT OUTS.

5. PIPE, INSULATION AND FINISHES:
5A. ALL WATER PIPING (CW & HW) TO BE INSULATED PER PIPE INSULATION TABLE C403.11.3 MINIMUM PIPE INSULATION THICKNESS WITH VAPOR BARRIER (SEE SCHEDULE ON THIS DRAWING).
HW: PER ENERGY CODE
CW: TO PREVENT SWEATING
5B. GENERAL PIPING, TRIM AND ACCESSORIES (FAUCETS, HANDLES, SPOUTS, SERVICE STOPS, ETC. EXPOSED IN LIVING SPACES TO BE CHROME PLATED (SEE 3B ABOVE) OR AS SPECIFIED IN FIXTURE SCHEDULES.
5C. PIPING IN MECHANICAL ROOMS, LAUNDRY AND WATER HEATER CLOSETS NEED NOT BE CHROME PLATED.
5D. PIPING BELOW LAVATORIES AND KITCHEN COUNTERS WITH DOORS NEED NOT BE CHROME PLATED BUT AESTHETICS MUST BE CONFIRMED WITH ARCHITECT. PROVIDE AS INDICATED ON FIXTURE SCHEDULE UNLESS OTHERWISE DIRECTED.
5E. ANY PIPING (OR INSULATION) THAT MAY BE VISIBLE BY TENANTS MAY BE PAINTED (SEE ARCHITECT) PAINTING BY OTHERS. P.C. SHALL ENSURE PIPE INSULATION AND PIPE SURFACES ARE FREE OF GREASE, RUST, CONSTRUCTION DEBRIS, ETC AND LEFT REASONABLY CLEAN AND SUITABLE FOR PAINTING. APPLY PIPE IDENTIFICATION AFTER ANY PAINTING IS DONE.

6. PROVIDE DOMESTIC WATER VALVES AT THE FOLLOWING POINTS:
6A. INTO EACH WATER METER (TOWN OF SALEM CONTROLLED).
6B. OUT OF EACH METER (MAINTENANCE CONTROL).
6C. CW FEED TO EACH CONDO INSIDE UNIT (FOR RESIDENT CONTROL).
6D. INTO AND OUT OF EACH PIECE OF EQUIPMENT.
(PROVIDE ACCESS PANELS IF VALVES ARE CONCEALED).
6D. ALL SYSTEMS SHALL BE PIPED AND VALVED IN SUCH A MANOR THAT OTHER UNITS ARE NOT AFFECTED WHEN SERVICE IS REQUIRED.

7. PROVIDE HOSE END DRAIN VALVES WITH BRASS CAP AND CHAIN STAY AT EACH LOW POINT.
8. PROVIDE 24" HIGH AIR CHAMBERS AT EACH BATHROOM GROUP ON COLD AND HOT WATER.

9. PROVIDE INSULATION ON ALL WATER PIPING. SEE SCHEDULE THIS DRAWING

10. PROVIDE VACUUM BREAKERS AT ALL FIXTURES, FAUCETS AND DEVICES AS REQUIRED PER CODE. (WALL HYDRANTS & JAN SINK)

11. PROVIDE BACK FLOW PREVENTER AS REQUIRED PER LOCAL CODES FOR DOMESTIC MAKE UP SYSTEMS. (LAWN SPRINKLERS)

12. DOMESTIC WATER SYSTEM MATERIAL:
12A. BURIED DOMESTIC WATER SERVICE PIPE SHALL A BE TYPE 'K' COPPER PIPE WITH SILVER SOLDERED JOINTS.
12B. ABOVE GRADE DOMESTIC COLD WATER PIPING SHALL BE SCHEDULE 40 CPVC (EXCEPT AS NOTED IN 12D).
12C. ABOVE GRADE DOMESTIC HOT WATER PIPING SHALL BE SCHEDULE 40 CPVC (EXCEPT AS NOTED IN 12D).
12D. DOMESTIC WATER PIPING NOTE (WPN):
WPN1: WATER PIPE INSIDE WATER HEATER CLOSETS & MECHANICAL ROOMS TO BE TYPE 'L' COPPER WITH 95-5 SOLDERED JOINTS.
WPN2: WATER PIPE INSIDE WATER METER ROOM TO BE TYPE 'L' COPPER OR IRON SIZE BRASS INTO & OUT OF WATER METERS. CARRY METALIC PIPE INTO RESIDENTIAL SPACE, THEN TRANSITION TO CPVC.

13B. SANITARY WASTE AND VENT ABOVE AND BELOW GRADE:
TO BE SCHEDULE 40 PVC SOLID CORE.
13A. SANITARY WASTE & SANITARY VENT INSIDE CONDOMINIUMS"
TO BE SCHEDULE 40 PVC SOLID CORE OR DWV COPPER.

14. SAFE WASTE SYSTEM:
TO BE SCHEDULE 40 PVC DRAINAGE FITTINGS, SOLID CORE.

15. ALL PIPE HANGERS AND SUPPORTS IN BASEMENTSHALL BE GALVANIZED STEEL. TO INCLUDE HANGERS, INSERTS, NUTS, BOLTS, WASHERS, HANGER RODS AND ALL MISCELLANEOUS SUPPORTS.

15. FIRE SAFE ALL FLOOR AND WALL PENETRATIONS TO MAINTAIN FIRE RATED ENVELOPE BETWEEN PARKING LEVEL AND RESIDENCES ABOVE.

LEGEND

———	COLD WATER	CW
- - - -	HOT WATER	HW
———	WASTE	W
- - - -	VENT	V
═══	WASTE – BURIED	W
═ ═ ═	VENT – BURIED	V
═══	RAINWATER – BURIED	RWL
— NPW —	NON-POTABLE WATER	NPW
— SW —	SAFE WASTE	SW
	END CLEANOUT	ECO
	FLOOR CLEANOUT	FCO
	DANDY CLEANOUT	DCO
	BALL VALVE	
	UNION	
	DRAIN VALVE/ HOSE BIBB WITH CAP & CHAIN STAY	DV/HB
	PIPE UP	
	PIPE DOWN	

ADA	THE AMERICAN WITH DISABILITIES ACT	♿
A.F.F.	ABOVE FINISHED FLOOR	
BTU	BRITISH THERMAL UNIT	
CFH	CUBIC FEET PER HOUR	
CONC.	CONCRETE	
DIA.	DIAMETER	
DCO	DANDY CLEAN OUT	
ELEV.	ELEVATION	
ECO	ECO CLEAN OUT	
E.A.N.	EXCEPT AS NOTED	
°F	DEGREES FAHRENHEIT	
FBO	FURNISH BY OTHERS	
F&I	FURNISH AND INSTALL	
FD	FLOOR DRAIN	
FCO	FLOOR CLEAN OUT	
FF	FINISHED FLOOR	
FSSD	FIRE SERVICE STANDPIPE DRAIN	
G.C.	GENERAL CONTRACTOR	
GPH	GALLONS PER HOUR	
GPM	GALLONS PER MINUTE	
HB	HOSE BIB	
HWR	HOT WATER RECIRULATING	
INV.	INVERT	
I.W.	INDIRECT WASTE	
LAV	LAVATORY	
MBH	BTU/HR x 1000	
NO.	NUMBER	
NTS	NOT TO SCALE	
N.I.C.	NOT IN CONTRACT	
P.C.	PLUMBING CONTRACTOR	
PH	PHASE	
RD	ROOF DRAIN	
RPBFP	REDUCED PRESSURE BACK FLOW PREVENTER	
V	VENT	
VB	VACUUM BREAKER	
VTR	VENT THRU ROOF	
W	WASTE	
WC	WATER CLOSET	
WH	WALL HYDRANT	
WH	WATER HEATER	
WV	WET VENT	

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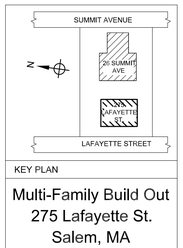
SEAL



KEY PLAN

Multi-Family Build Out
275 Lafayette St.
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

SAI Job # 2022-020	CEI Proj # 022-23
Date:	PERMIT SET: 04/19/24
Scale:	NONE
Designed By:	DCN
Drawn By:	DCN
Checked By:	MAT/SRH
Approved By:	MAT/SRH

PLUMBING LEGEND SCHEDULE & NOTES SHEET 2

SHEET NAME

P8

SHEET NO.

04/19/24 PERMIT SET

ELECTRICAL LEGEND

⊗	CEILING MOUNTED EXIT SIGN
⊗	WALL MOUNTED EXIT SIGN
	EMERGENCY LIGHT
	EXIST SIGN / EMERGENCY LIGHT COMBINATION
J	JUNCTION BOX
GFI/WP	DUPLEX RECEPTACLE, 20AMP, 125V, NEMA 5-20 GFI = GROUND FAULT INTERRUPTER WP = WEATHERPROOF D = DISHWASHER G = GARBAGE DISPOSAL
	QUADRAPLEX RECEPTACLE, 20AMP, 125V
	RANGE/STOVE TOP DRYER SPECIALTY RECEPTACLE
EV	EV CHARGER- 40A, 240V CHARGING STATION
	COMBINATION TEL/CATV OUTLET
	CATV OUTLET
SA	ELECTRIC SERVICE SURGE ARRESTER
SP	PANELBOARD SURGE PROTECTION
IC	VIDEO INTERCOM
SW*	DISCONNECT SWITCH 3R = DENOTES NEMA 3-R ENCLOSURE 6-POLE = SIX POLE DISCONNECT SWITCH
	ELECTRIC BASEBOARD
'P1'	PANELBOARD `P1'
100A	CIRCUIT BREAKER, 100AMP
P1-3	HOMERUN TO PANELBOARD `P1', CIRCUIT NO. 3 WITH 1/2"C, 2#12, 1#12 GND. UNLESS OTHERWISE NOTED
3/4"C 2#12 1#12GND	CONDUIT, 3/4" CONDUIT, 2#12 AWG, 1 #12GND

GENERAL NOTES

1. EXISTING BUILDING ELECTRICAL EQUIPMENT SHALL BE DISCONNECTED AND REMOVED.
3. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS, DIMENSIONS, AND LOCATIONS OF ALL DEVICES.
4. COLOR OF ALL WIRING DEVICES AND DEVICE PLATES SHALL BE DETERMINED BY THE ARCHITECT.
5. CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. ACTUAL CIRCUIT NUMBERS SHALL BE DETERMINED IN THE FIELD. CONTRACTOR SHALL BALANCE PANELBOARD LOADS TO WITHIN 10% OF EACH PHASE IN THE FIELD. UPDATE PANEL SCHEDULES AND INDICATE ACTUAL CIRCUIT NUMBERS ON 'AS-BUILT' DRAWINGS.
6. CONTRACTOR SHALL VERIFY SIZES OF ALL COMPONENTS SERVING HVAC EQUIPMENT (CIRCUIT BREAKERS, CONDUCTORS, DISCONNECT SWITCHES) WITH NAMEPLATE REQUIREMENTS OF SUCH EQUIPMENT. THE CONTRACTOR SHALL ADJUST COMPONENT SIZES AS NECESSARY TO MEET THE REQUIREMENTS OF PURCHASED EQUIPMENT.
7. CONTRACTOR SHALL FURNISH DISCONNECT SWITCHES AT ALL MOTOR LOCATIONS AS REQUIRED BY THE MASSACHUSETTS ELECTRICAL CODE.
8. REFER TO MECHANICAL DRAWINGS FOR ACTUAL LOCATIONS OF ALL MECHANICAL EQUIPMENT.
9. REFER TO MECHANICAL DRAWINGS FOR ACTUAL LOCATIONS AND RATINGS OF ALL ELECTRIC DUCT HEATERS. CONTRACTOR SHALL ADJUST SIZES OF ALL COMPONENTS (CIRCUIT BREAKERS, CONDUCTORS, DISCONNECT SWITCHES) TO MATCH RATINGS ON MECHANICAL DRAWINGS.

ELECTRICAL SPECIFICATIONS

1. FURNISH AND INSTALL ALL LABOR, MATERIALS, APPLIANCES, EQUIPMENT TOOLS, TRANSPORTATION, SUPERVISION AND SERVICES REQUIRED TO ELECTRICAL WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
2. THE ELECTRICAL WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FURNISHIING OF MATERIALS AND INSTALLATION OF THE FOLLOWING IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES.
   - A. WIRING DEVICES
   - B. LIGHTING SYSTEMS
   - C. CONDUIT, WIREWAYS, RACEWAYS, ETC.
   - D. BRANCH CIRCUIT WIRING
   - E. PANELBOARD
   - F. POWER WIRING
   - G. GROUNDING SYSTEM
   - H. WIRE AND CABLE
   - I. FIRE ALARM SYSTEM
   - J. ELECTRICAL SERVICE AND METERING
   - K. TWO (2) EV CHARGING STATION
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE MEC, MASSACHUSETTS STATE BUILDING CODE, OSHA, ADA, ALL LOCAL CODES AND LOCAL UTILITY CO. STANDARDS & SPECIFICATIONS
4. CONTRACTOR SHALL PAY FOR ALL INSPECTION FEES, LICENSES AND PERMITS.
5. COORDINATE ANY REQUIRED POWER INTERRUPTIONS AND PERFORM WORK AT TIME CONVENIENT TO OWNER. INCLUDE COSTS FOR REQUIRED PREMIUM TIME.
6. SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT FOR APPROVAL BEFORE PURCHASING SAME. ALL EQUIPMENT SHALL BEAR THE LABEL OF A NATIONALLY-RECOGNIZED TESTING LABORATORY.
7. PANELBOARDS
   - A. FURNISH AND INSTALL THE PANELBOARD FOR LIGHTING AND POWER AS INDICATED AND AS SCHEDULED ON THE DRAWINGS.
   - B. PANELBOARDS SHALL BE OF DEAD FRONT CONSTRUCTION WITH THERMAL MAGNETIC CIRCUIT BREAKERS AND SHALL CONFORM TO THE REQUIREMENTS OF NEMA AND MEC. PANELBOARD SHALL BE UL APPROVED AND LABELED.
   - C. PANELBOARDS SHALL CONSIST OF CIRCUIT BREAKERS, CODE GAUGE STEEL CABINET OR BACKBOARD, BUS ASSEMBLY, TRIM WITH CODE GAUGE GALVANIZED STEEL DOORS. GUTTER SPACE SHALL BE A MINIMUM OF 4" ON ALL SIDES.
   - D. CIRCUIT BREAKERS OF OF THE QUICK-MAKE, QUICK BREAK TRIP FREE THERMAL MAGNETIC TYPE WITH CHARACTERISTICS AS SCHEDULED. AUTOMATIC TRIPPING SHALL BE CLEARLY INDICATED BY THE OPERATING HANDLE ASSUMING A MID-POSITION BETWEEN ON AND OFF. TWO AND THREE POLE BREAKERS SHALL HAVE COMMON TRIP. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE.
   - E. PANELBOARDS SHALL BE PROVIDED WITH SOLID NEUTRALS. IN ADDITION, GROUNDING BUS WITH LUGS SHALL BE PROVIDED ON ALL PANELBOARDS MEETING UL AND NEMA STANDARDS. ALL BUSSWORK SHALL BE COPPER.
   - F. TWO MILLED TYPE KEYS SHALL BE PROVIDED WITH PANEL AND ALL PANEL LOCKS SHALL BE KEYED ALIKE.
   - G. BUS ARRANGEMENTS SHALL BE SEQUENCE PHASED SUCH THAT ADJACENT SINGLE POLE BREAKERS SHALL BE CONNECTED TO OPPOSITE PHASES IN SUCH A MANNER, SUCH THAT ANY TWO OR THREE POLE BREAKERS COULD BE INSTALLED ANYWHERE IN THE PANELBOARD.
8. LIGHTING
   - A. FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED ON THE DRAWINGS. THE LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE EITHER USING RODS, CHAIN HANGERS, WIRE, OR MECHANICAL SUSPENSION CHANNEL.
9. MECHANICAL SUSPENSION CHANNEL
   - A. MECHANICAL SUSPENSION CHANNEL SHALL BE FURNISHED AND INSTALLED TO SUPPORT ELECTRICAL EQUIPMENT (PANELBOARDS, DISCONNECT SWITCHES, STARTERS, ETC.).
   - B. CHANNEL SHALL BE DESIGNED BY UNISTRUT TYPE P3000. ALL FASTENERS AND FITTINGS SHALL BE SUPPLIED TO PROVIDE A COMPLETE INSTALLATION AS REQUIRED.
   - C. ALL CHANNEL AND FITTINGS SHALL BE FURNISHED WITH THE MANUFACTURERS STANDARD RUSTPROOF FINISH.
10. GROUNDING
    - A. PROVIDE GROUNDING FOR ALL ELECTRICAL EQUIPMENT AND DEVICES IN ACCORDANCE WITH THE OWNERS STANDARDS AND THE APPLICABLE REQUIREMENTS OF THE MASSACHUSETTS ELECTRICAL CODE AND AS INDICATED ON THE DRAWINGS.
    - B. BONDING JUMPERS SHALL BE INSTALLED AT ALL LOCATIONS REQUIRED BY MEC.
    - C. A GREEN GROUNDING CONDUCTOR OF PROPER SIZE SHALL BE INSTALLED AND CONNECTED WITH THE FEEDER CIRCUIT CONDUCTORS TO ALL PANELBOARDS, MOTOR FRAMES, ETC. CONNECTIONS TO THE EQUIPMENT MAY BE BOLTED OR SCREWED USING CORROSION RESISTING BOLTS, SCREWS. A GREEN GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL BRANCH AND FEEDER CIRCUITS.
    - D. ALL EXPOSED CONNECTIONS SHALL BE MADE BY GROUNDED GROUNDING CLAMPS. ALL EXTERIOR CONNECTIONS SHALL BE MADE BY CADWELD WELDING PROCESS.
13. PHOTOCELL
    - A. CONTRACTOR SHALL FURNISH AND INSTALL A PHOTOCELL AS INDICATED AND AS SPECIFIED ON THE DRAWINGS.
14. RACEWAYS
    - A. TYPE "MC" CABLE SHALL BE USED FOR CONCEALED BRANCH LIGHTING AND RECEPTACLE CIRCUIT RUNS AS PERMITTED BY THE MASSACHUSETTS ELECTRICAL CODE.
    - B. ALL INDOOR WIRING SHOWN RUN IN CONDUIT ON THE DRAWINGS SHALL BE INSTALLED IN ELECTRIC METALLIC CONDUIT. EXPOSED CONDUIT RUNS IN FINISHED AREAS REQUIRE ARCHITECT'S APPROVAL.
    - C. ALL EXPOSED EXTERIOR CONDUIT RUNS OUTSIDE THE BUILDING SHALL BE HOT DIPPED GALVANIZED STEEL CONDUIT.
    - D. UNDERGROUND CONDUIT SHALL BE SCHEDULE-40 PVC.
    - E. LIQUID-TITE FLEXIBLE METAL CONDUIT SHALL BE USED FOR CONNECTION TO MOTORIZED EQUIPMENT, WITH AN INTERWOVEN GROUND CONDUCTOR (1 1/4" MAXIMUM DIAMETER).
    - F. SET SCREW-TYPE CONNECTORS AND COUPLINGS FOR METAL CONDUIT WILL NOT BE ALLOWED.
15. HANGERS & SUPPORTS
    - A. PROVIDE ALL REQUIRED HANGERS, SUPPORTS, SLEEVES, CLAMPS, ETC., AS REQUIRED AND AS INDICATED ON THE DRAWINGS.
16. OUTLET BOXES
    - A. OUTLET BOXES SHALL BE ONE PIECE GALVANIZED CONSTRUCTION MEETING MEC REQUIREMENTS, OF PROPER SIZE AND SUITABLE FOR LOCATION INDICATED ON THE DRAWINGS.
    - B. BOXES FOR EXTERIOR WORK SHALL BE FS OR FD SERIES, WITH CADMIUM PLATED COVERS. STEEL BOXES WILL NOT BE PERMITTED.
17. PULL & JUNCTION BOXES
    - A. PULL BOXES SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL AND SHALL BE INSTALLED AT POINTS WHETHER INDICATED ON THE DRAWINGS OR NOT. MINIMUM DIMENSION SHALL NOT BE LESS THAN MEC REQUIREMENTS.
18. FEEDER & BRANCH CIRCUIT CONDUCTORS
    - A. ALL FEEDER, BRANCH CIRCUIT, REMOTE CONTROL, SIGNAL CIRCUIT AND INTERLOCK WIRING SHALL BE MANUFACTURED OF COPPER AND RATED 600 VOLTS.
    - B. MINIMUM SIZE WIRE FOR BRANCH CIRCUIT AND POWER WIRING SHALL BE #12 AWG.
    - C. INSULATION TYPE SHALL BE XHHW FOR FEEDERS AND POWER WIRING: THHN/THWN FOR LIGHTING, REMOTE CONTROL, AND SIGNAL CIRCUITS.
    - D. INSULATION TYPE SHALL BE XHHW FOR FEEDERS AND POWER WIRING: THHN/THWN FOR LIGHTING, REMOTE CONTROL, AND SIGNAL CIRCUITS.
    - E. ALL WIRING SHALL CONFORM TO THE MASSACHUSETTS ELECTRICAL CODE FOR CONSTRUCTION AND USE.
19. WIRING DEVICES
    - A. FURNISH AND INSTALL WIRING DEVICES, AND SPECIFICATION GRADE, COMPLETE WITH ALL ACCESSORIES AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREUNDER. ALL WIRING DEVICES SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER EXCEPT WHERE SPECIFICALLY STATED OTHERWISE.
    - B. DUPLEX RECEPTACLES SHALL BE NYLON SPECIFICATION GRADE, U-GROUND, RATED FOR 125VAC, 20A -MANUFACTURED BY BRYANT CAT. NO. 5362-I OR EQUAL.
    - C. SWITCHES SHALL BE NYLON SPECIFICATION GRADE, AC TYPE, RATED 20 AMPS FOR 120/277 VOLTS, BRYANT CAT. NUMBERS 4901-I, 4903-I, 4904-I
    - D. DUPLEX RECEPTACLES WITH GROUND FAULT INTERRUPTER CHARACTERISTICS SHALL BE INSTALLED WHERE SPECIFIED ON THE DRAWINGS. ALL WET AREAS SHALL BE GROUND FAULT TYPE WHETHER INDICATED ON THE DRAWINGS OR NOT. GROUND FAULT RECEPTACLES SHALL BE NYLON MANUFACTURED BY BRYANT CAT. NO. 5362-IGI OR EQUAL.
    - E. COLOR OF ALL WIRING DEVICES SHALL BE SELECTED BY ARCHITECT.
20. DEVICE PLATES
    - A. DEVICE PLATES SHALL BE BRUSHED FINISH STAINLESS STEEL.
    - B. DEVICE PLATE SCREWS SHALL MATCH PLATES.
21. FIRE ALARM SYSTEM
    - A. FURNISH AND INSTALL FIRE ALARM SYSTEM WIRING AND DEVICES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
    - B. THE FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH LOCAL FIRE DEPARTMENT STANDARDS AND REGULATIONS, NFPA, AND ADA (AMERICANS WITH DISABILITIES ACT) REGULATIONS.
22. FURNISH AND INSTALL NAMEPLATES ON ALL ELECTRICAL EQUIPMENT (SCREW ON TYPE).
23. ALL EQUIPMENT EXPOSED TO MOISTURE SHALL BE OF THE APPROPRIATE (NEMA) WEATHERPROOF TYPE. SEAL ALL CONDUITS THAT PENETRATE EXTERIOR WALLS.
24. PERFORM ALL TESTS REQUIRED AND VERIFY CORRECT ROTATION OF ALL MOTORIZED EQUIPMENT. PHASE BALANCE ALL PANELBOARDS IN THE FIELD.
    - A. COMPLETE TEST AND INSPECTION RECORDS SHALL BE MADE AND TESTED. ALL READINGS TAKEN SHALL BE RECORDED. TEST REPORTS SHALL BE SUBMITTED TO THE OWNER'S APPROVAL.
    - B. FURNISH NECESSARY METERS, INSTRUMENTS, TEMPORARY WIRING AND LABOR TO PERFORM ALL REQUIRED TESTS AND ADJUSTMENTS OF EQUIPMENT AND WIRING INSTALLED AND/OR CONNECTED UNDER THIS CONTRACT, INCLUDING ELECTRICAL EQUIPMENT FURNISHED BY OTHERS, TO DETERMINE PROPER POLARITY, PHASING, FREEDOM FROM GROUND AND SHORTS AND OPERATION OF EQUIPMENT. ALL MEASURING INSTRUMENTS SHALL BE PROPERLY CALIBRATED.
    - C. ALL MATERIALS AND MANNER OF INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF STATE AND LOCAL AUTHORITIES, THE UTILITY COMPANY AND THE CODES OF NATIONAL BOARD OF FIRE UNDERWRITERS.
    - D. WHENEVER ANY OF THE AFOREMENTIONED CODES, LAWS, ETC., REQUIRE THAT ANY WORK BE TESTED OR APPROVED, THE CONTRACTOR SHALL PROVIDE PROPER FACILITIES FOR ACCESS AND FOR INSPECTION, ALL AT HIS OWN EXPENSE.
    - E. WIRING
      - a. THE CONTRACTOR SHALL CORRECT OR REPLACE ANY NOMINAL CURRENT-CARRYING CIRCUIT WHICH IS DEFECTIVE OR GROUNDED AND HE SHALL ALSO CORRECT ALL OTHER TROUBLES ENCOUNTERED BY THESE TESTS. ALL DEFECTS WHETHER THROUGH FAULTY WORKMANSHIP OR MATERIAL FURNISHED SHALL BE CORRECTED UNDER THIS SECTION AT THE CONTRACTOR'S EXPENSE
    - F. GROUNDING SYSTEM
      - a. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS REQUIRED TO TEST THE GROUNDING NETWORK AND SUBMIT TO THE ENGINEER COPIES OF TEST DATA.
      - b. MEGGER, VIBROGROUND, OR EQUIVALENT FOR EARTH-RESISTANCE TESTING SHALL BE USED. THE INSTRUMENT'S PROCEDURES FOR THE FALL-OF-POTENTIAL METHOD OR THREE-TERMINAL TEST SHALL BE FOLLOWED.
      - c. EARTH RESISTANCE AND CONTINUITY TESTING SHALL BE CONDUCTED UNDER THE OBSERVATION OF THE ENGINEER. TEST SHALL BE CONDUCTED ON GROUND NET.
      - d. WHEN THE WORK ON THIS PROJECT HAS BEEN COMPLETED AND IS READY FOR FINAL INSPECTION, SUCH INSPECTION WILL BE MADE. AT THIS TIME, THE CONTRACTOR FOR THE WORK OF THIS SECTION SHALL DEMONSTRATE THAT THE REQUIREMENTS OF THESE SPECIFICATIONS HAVE BEEN MET. WRITTEN RESULTS FOR ALL TESTS SHALL BE SUBMITTED TO THE ENGINEER.
    - G. FIRE ALARM SYSTEM
      - a. UPON COMPLETION, THE CONTRACTOR SHALL CONDUCT A FUNCTIONAL TEST OF THE FIRE ALARM SYSTEM FOR THE OWNER, ARCHITECT, ENGINEER, AND LOCAL FIRE DEPARTMENT.
25. ALL ELECTRICAL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. DEFECTS SHALL BE CORRECTED WITHOUT CHARGE, INCLUDING ALL PATCHING, PAINTING AND OTHER INCIDENTAL REPAIRS AND REPLACEMENTS. COORDINATE ALL WORK WITH OTHER TRADES. FURNISH AND INSTALL ALL POWER AND CONTROL WIRING FOR A COMPLETE INSTALLATION.
26. FOR EXACT LOCATION OF MECHANICAL EQUIPMENT SEE MECHANICAL DRAWINGS.
27. ALL ELECTRICAL EQUIPMENT, MATERIALS, ETC. STORED ON SITE SHALL BE STORED IN SUCH A MANNER THAT IT IS SAFE FROM DAMAGE BY MOISTURE, IMPACT, ETC.
28. ELECTRICAL CONTRACTOR SHALL PERFORM HIS WORK IN A NEAT AND ORDERLY, WORKMANLIKE MANNER. ALL REFUSE, DIRT, AND DEBRIS RESULTANT FROM HIS WORK SHALL BE REMOVED AND PROPERLY DISPOSED OF AT THE END OF THE DAY.
    - A. ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT APPEARANCE WHEN COMPLETED, AND SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM INCLUDING ANY DEMOLITION, PANELBOARDS, CIRCUIT BREAKERS, LIGHTING FIXTURES, FIRE ALARM EQUIPMENT, TRANSFORMERS, CONDUITS, RACEWAYS, WIRING, JUNCTION BOXES, RECEPTACLES, SWITCHES, SUPPORTS, AND ALL OTHER NECESSARY APPURTENANCES REQUIRED FOR A COMPLETE OPERATIONAL SYSTEM, INCLUDING THE HANGING AND LAMPING OF ALL FIXTURES.
29. ELECTRICAL CONTRACTOR IS REQUIRED TO COORDINATE HIS WORK WITH ALL UTILITIES INVOLVED. ALL UTILITIES INVOLVED.
30. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND DIRECTIONS FOR ALL EQUIPMENT AND MATERIALS USED.
31. IF CONFLICTS ARISE FROM EQUIPMENT INSTALLATION, SCHEDULING, ETC., THESE SHALL BE RESOLVED AS DIRECTED BY THE OWNER TO THE ENTIRE SATISFACTION OF THE OWNER. THESE SHALL BE RESOLVED AS DIRECTED BY THE OWNER TO THE ENTIRE SATISFACTION OF THE OWNER. ENTIRE SATISFACTION OF THE OWNER.
32. UPON COMPLETION OF THE WORK, THE ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO DEMONSTRATE PROPER OPERATION OF ALL SYSTEMS AND EQUIPMENT IN THE PRESENCE OF THE OWNER AND THE ENGINEER PRIOR TO ACCEPTANCE BY THE OWNER. WRITTEN RESULTS FOR ALL TESTS AND OPERATIONS SHALL BE SUBMITTED TO THE OWNER OR OWNER'S AGENT (ENGINEER).
33. ALL MATERIALS SHALL BE NEW (UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS) AND SHALL CONFORM TO THE NEMA, MASSACHUSETTS ELECTRIC CODE (MEC) AND UNDERWRITERS LABORATORIES INC. STANDARDS IN EVERY CASE WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THE PARTICULAR TYPE OF MATERIAL IN QUESTION.
34. ANY MATERIAL, ITEM OR WORK NOT SHOWN ON THE DRAWINGS BUT MENTIONED ON THE SPECIFICATIONS OR VICE-VERSA, OR ANY ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION SHALL BE INCLUDED IN THE CONTRACTORS BID, AND SUCH ITEMS SHALL NOT BE A CAUSE FOR EXTRA WORK OR EXTRA COST TO OWNER.
35. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO MAKE HIMSELF AWARE OF THE EXISTING CONDITIONS AND EXISTING EQUIPMENT.
36. TEMPORARY ELECTRIC SERVICE
    - A. CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRICAL SERVICE FOR POWER TOOLS, ILLUMINATION, ETC., ELECTRICAL ENERGY WILL BE PAID FOR BY THE OWNER.
    - B. CONTRACTOR SHALL PROVIDE ALL TEMPORARY LIGHTING REQUIRED DURING THE PROGRESS OF THE WORK TO ADEQUATELY ILLUMINATE WORKING AREA.
    - C. ALL TEMPORARY ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS BIDDING, BUT ONLY AS VOLUNTARY ALTERNATES AND THEY MUST MEET THE LETTER AND INTENT OF THE MASSACHUSETTS ELECTRICAL CODE, OSHA, AND ANY LOCAL REGULATIONS. CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS, CHARGES, ETC..
    - D. THE TEMPORARY ELECTRICAL SERVICE AS WELL AS ALL LIGHT FIXTURES, RECEPTACLES, CABLES ETC. SHALL BE REMOVED AFTER CONSTRUCTION IS COMPLETE.
37. RECORD DRAWINGS
    - A. DRAWINGS & SUBMIT THEM TO THE ARCHITECT FOR APPROVAL. CONTRACTOR SHALL PREPARE A COMPLETE SET OF RECORD CONSTRUCTION
37. SUBMIT SHOP DRAWINGS AND PRODUCT DATA WITHIN 10 DAYS AFTER AWARD OF CONTRACT. CHECK, STAMP, AND MARK SUBMITTALS WITH PROJECT NAME BEFORE TRANSMITTING TO THE ARCHITECT.
38. WHERE MATERIAL IS CALLED OUT IN THE LEGEND, FIXTURE SCHEDULE, NOTES, SPECIFICATIONS, OR ELSEWHERE BY MANUFACTURER, TYPE OR CATALOG NUMBER, SUCH DESIGNATIONS ARE TO ESTABLISH STANDARDS OF DESIRED QUALITY. ACCEPTANCE OR REJECTIONS OF PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO THE APPROVAL THE ARCHITECT.
39. FINAL INSPECTION
    - A. WHEN THE WORK ON THIS PROJECT HAS BEEN COMPLETED AND IS READY FOR FINAL INSPECTION, SUCH INSPECTION WILL BE MADE. AT THIS TIME, THE CONTRACTOR FOR THE WORK OF THIS SECTION SHALL DEMONSTRATE THAT THE REQUIREMENTS OF THESE SPECIFICATIONS HAVE BEEN MET. WRITTEN RESULTS FOR ALL TESTS SHALL BE SUBMITTED TO THE ENGINEER.

ISSUED FOR PERMIT 04/19/24

PROJECT ARCHITECT

SEGER ARCHITECTS, INC.
83R North Street
Salem, MA 01970

SEAL

PROJECT CONSULTANTS

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COMMONWEALTH OF MASSACHUSETTS
RONALD W. BUIA
No. 23334
REGISTERED
PROFESSIONAL ENGINEER

275 LAFAYETTE MULTI-FAMILY BUILD OUT

Lafayette Street
Salem, MA

PROJECT INFORMATION

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

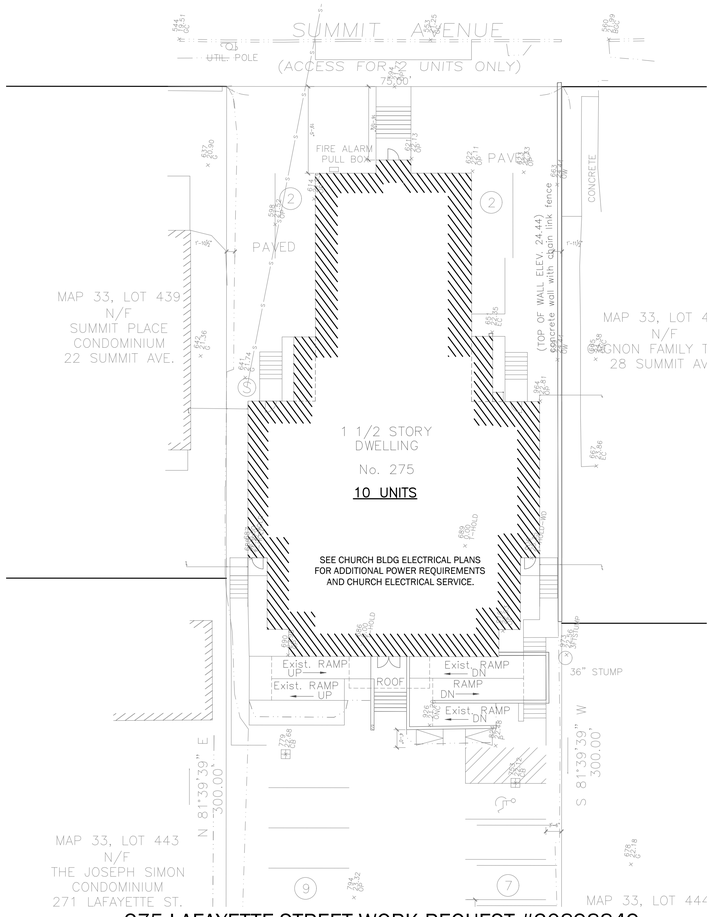
SAI Job # 2022-020	CEI Proj # 022-23
Date:	PERMIT 4/19/24
Scale:	AS NOTED
Designed By:	KML
Drawn By:	KML
Checked By:	RWB
Approved By:	RWB

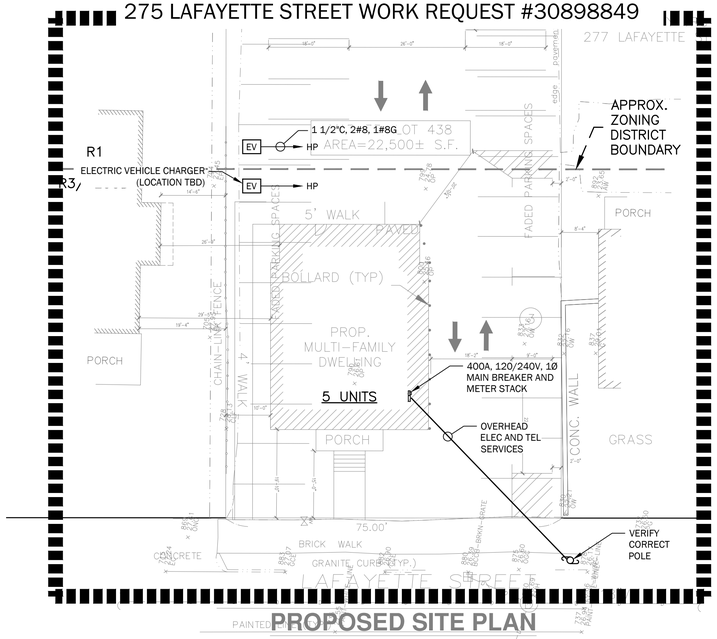
ELECTRICAL LEGEND & SCHEDULES

SHEET NAME

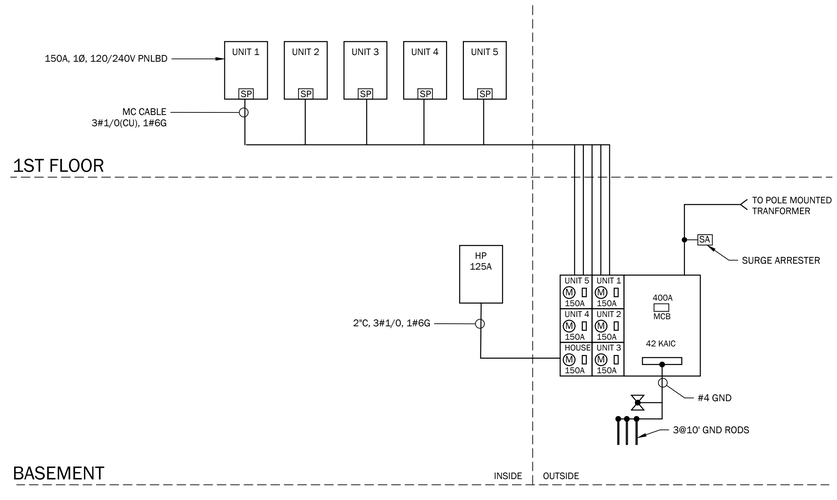
E1.0

SHEET NO.





ELECTRICAL SERVICE AND SITE LIGHTING PLAN
SCALE: 1/16"=1'-0"



PROPOSED ELECTRICAL RISER DIAGRAM
NOT TO SCALE

ISSUED FOR PERMIT 04/19/24

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275 LAFAYETTE MULTI-FAMILY BUILD OUT

Lafayette Street
Salem, MA

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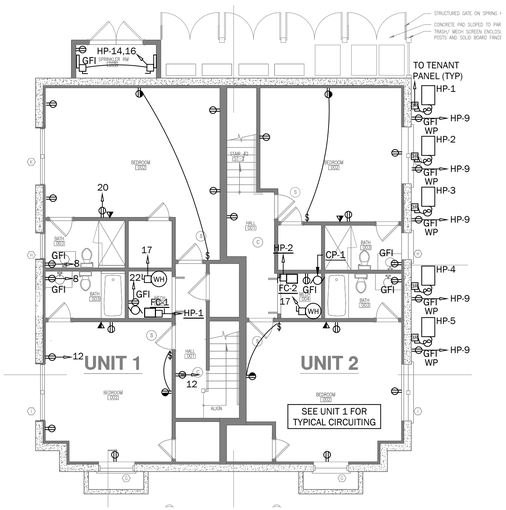
ELECTRICAL SERVICE & SITE LIGHTING PLAN & DETAILS

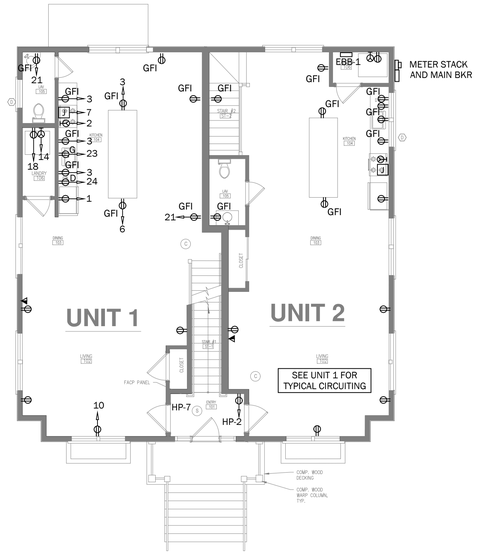
SHEET NAME

E-2

SHEET NO.



BASEMENT POWER PLAN
SCALE: 1/8"=1'-0"



1ST FLOOR POWER PLAN
SCALE: 1/8"=1'-0"

TYPICAL UNIT PANEL

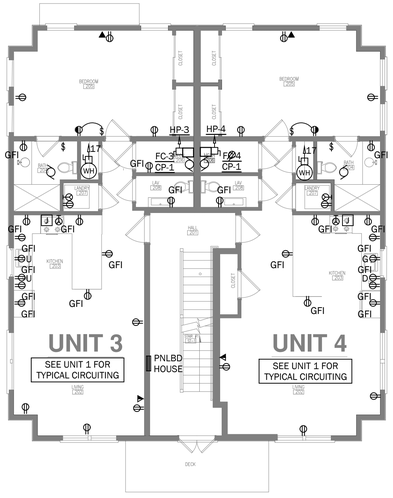
VOLTS	PHASE	AMPS	WIRE	MTG	RATING
120/240V	1Ø	150A MLO	3	SURFACE	SERIES RATED

SPECIFICATIONS: PANELBOARD SHALL INCLUDE COPPER BUSES, GROUND BUS BONDED TO ENCLOSURE, SURGE PROTECTION
ADDITIONAL NOTES:

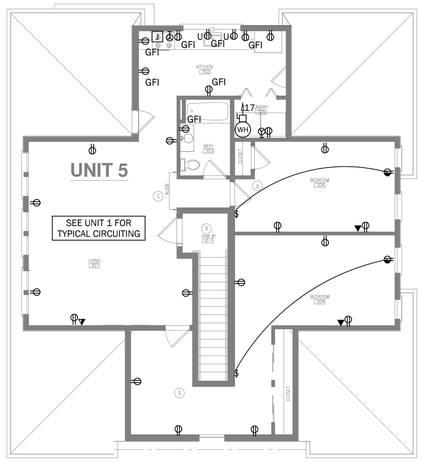
			LOAD		BKR	CKT	Ø	CKT	BKR	LOAD				
DESCRIPTION	NOTE	WIRE	A	B	TRIP	NO		NO	TRIP	A	B	WIRE	NOTE	DESCRIPTION
REFRIGERATOR	AF/GFI	#12	800.		20	1	A	2	30	1500.		#12		STOVE
KITCHEN COUNTER	AF	#12		1000.	20	3	B	4			1500.	#12		
SMOKE/CARBON/LIGHT	AF	#12	1000.		20	5	A	6	20	1000.		#12	AF	KITCHEN COUNTER
HOOD/MICRO	AF/GFI	#12		800.	20	7	B	8	20		500.	#12	AF	BATHROOM EF & LIGHT
HP		#10	2500.		25*	9	A	10	20	1200.		#12	AF	LR RECEPTACLES
				2500.		11	B	12	20		800.	#12	AF	BEDRM RECEPTACLES
EBB			500.		15**	13	A	14	30	3000.		#10		DRYER
SPARE						15	B	16			3000.			
WH		#10	2500.		30	17	A	18	20	500.		#12	AF/GFI	WASHER
				2500.		19	B	20	20		800.	#12	AF	BEDRM RECEPTACLES
DINING AREA RECPT	AFCI	#12	800.		20	21	A	22	20	500.				CP-1
GARBAGE DISPOSAL	AF			500.	20	23	B	24	20		800.		AF/GFI	DISHWASHER
SPARE					20	25	A	26	20					SPARE
SPARE					20	27	B	28	22					SPARE
SPARE					20	29	A	30	20					SPARE
		^	8100.	7300.		A		B		7700.	7400.	^		
						15800		14700						

TOTAL WATTS
30500
TOTAL AMPS
127

*UNIT 1 HP-1 W/ 35A BREAKER **UNITS W/EBB: UNIT-1
AF - ARC FAILT BREAKER GFI - GFI BREAKER AF/GFI - COMBINATION ARC FAULT GFI BREAKER
CIRCUIT BREAKER RATINGS: ALL CIRCUIT BREAKERS ARE 1P/20A SWITCHING DUTY BOLT ON UNLESS NOTED OTHERWISE
ALL CIRCUIT BREAKERS FOR HVAC EQUIPMENT SHALL BE `HACR' TYPE



2ND FLOOR POWER PLAN
SCALE: 1/8"=1'-0"



3RD FLOOR POWER PLAN
SCALE: 1/8"=1'-0"

HOUSE PNLBD (ADDITION)

VOLTS	PHASE	AMPS	WIRE	MTG	RATING
120/240V	1Ø	150A MLO	3	SURFACE	SERIES

SPECIFICATIONS: PANELBOARD SHALL INCLUDE COPPER BUSES, GROUND BUS BONDED TO ENCLOSURE, SURGE PROTECTION
ADDITIONAL NOTES:

			LOAD AMPS		BKR	CKT	Ø	CKT	BKR	LOAD AMPS				
DESCRIPTION	NOTE	WIRE	A	B	TRIP	NO		NO	TRIP	A	B	WIRE	NOTE	DESCRIPTION
COMMON AREA LIGHTING	AFCI		1200.		20	1	A	2	20	1200.		#12	AFCI	COMMON AREA RECP
EV		#8		4800.	40	3	B	4	20	1200.	1200.	#12	AFCI	EXTERIOR RECPS
			4800.			5	A	6	40	4800.		#8		EV
FACP	AFCI				20	7	B	8			4800.			
SPARE					20	9	A	10	20				AFCI	EXTERIOR LIGHTING
SPARE					20	11	B	12	20	1200.		#12	AFCI	EXTERIOR RECPS
SPARE					20	13	A	14	20					SPARE
SPARE					20	15	B	16	20					SPARE
SPARE					20	17	A	18	20					
					20	19	B	20	20					SPARE
					20	21	A	22	20					SPARE
					20	23	B	24	20					
					20	25	A	26	20					
					20	27	B	28	20					
					20	29	A	30	20					
					20	31	B	32	20					
					20	33	A	34	20					
					20	35	B	36	20					
					20	37	A	38	20					
					20	39	B	40	20					
					20	41	A	42	20					
		^	6000.	4800.		A		B		8400.	6000.	^		
						14400		10800						

TOTAL WATTS
25200
TOTAL AMPS
105

AF - ARC FAILT BREAKER GFI - GFI BREAKER AF/GFI - COMBINATION ARC FAULT GFI BREAKER
CIRCUIT BREAKER RATINGS: ALL CIRCUIT BREAKERS ARE 1P/20A SWITCHING DUTY BOLT ON UNLESS NOTED OTHERWISE
ALL CIRCUIT BREAKERS FOR HVAC EQUIPMENT SHALL BE `HACR' TYPE

ISSUED FOR PERMIT 04/19/24

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SEAL

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COMMONWEALTH OF MASSACHUSETTS
RONALD W. BUIA
No. 29339
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PROFESSIONAL ENGINEER

275 LAFAYETTE MULTI-FAMILY BUILD OUT

Lafayette Street
Salem, MA

PROJECT INFORMATION

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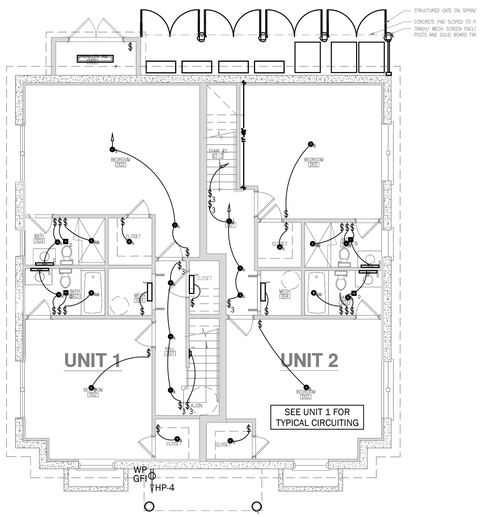
POWER PLANS

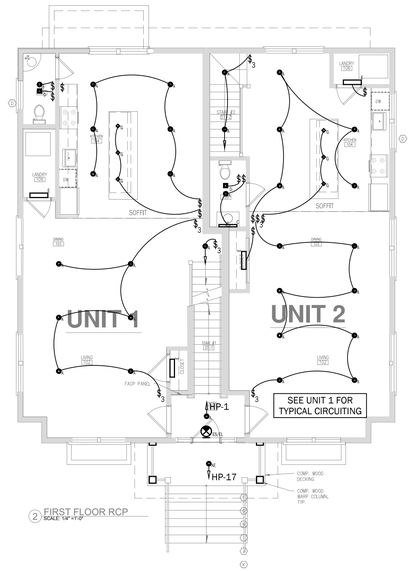
SHEET NAME

E-3

SHEET NO.

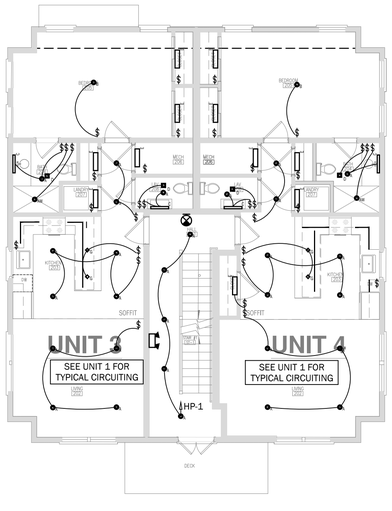


BASEMENT LIGHTING PLAN
SCALE: 1/8"=1'-0"

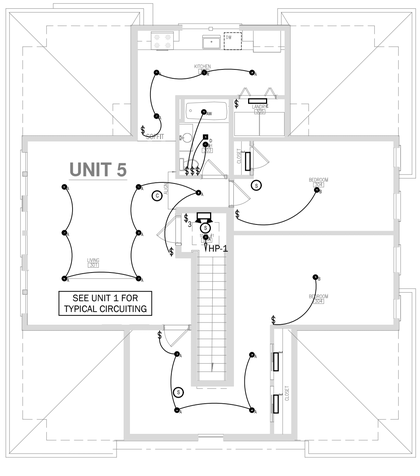


1ST FLOOR LIGHTING PLAN
SCALE: 1/8"=1'-0"

FIXTURE SCHEDULE			
SYMBOL + DESIGNATION	DESCRIPTION	CAT NO	NOTES
A	LED RECESSED DOWNLIGHT	PROGRESS LIGHTING CAT NO. P807001-028-30	
AE	LED RECESSED DOWNLIGHT - EXTERIOR	PROGRESS LIGHTING CAT NO. P800005-028-30	
AW	LED RECESSED DOWNLIGHT - SHOIWER	PROGRESS LIGHTING CAT NO. P800005-028-30	
B	LED SURFACE FIXTURE MERIDIAN 13" MATTE BLACK 2-LIGHT CEILING LIGHT	SAVOY HOUSE CAT NO. 711E9	
C	LED VANITY FIXTURE MATTE BLACK FOUR-LIGHT CLEAR GLASS SHADES	PROGRESS LIGHTING CAT NO.**PG236169**	
D	BATHROOM EXHAUST WHITE 120CFM BATHROOM EXHAUST FAN	MQJINC CAT NO. MQJPF0213	
E	24" LED CLOSET LIGHT	LITHONIA CAT NO CLX 24 1500LM SEF FDL	
F	48" LED STRIP LIGHT	LITHONIA CAT NO CLX 48 4000LM SEF WDL	
G	LED MINI PENDANT CONIC MINI DISTRESSED KOA	GEORGE KOVACS CAT NO. GK0716932	
H	LED WALL SCONCE - EXTERIOR	VISUAL COMFORT CAT NO 700WSPIT	
I	LED UNDERCABINET LIGHT	JUNO CAT NO UOLD * 3000 WH	*SIZES AS NECESSARY
J	LED WALL SCONCE	GEORGE KOVACS CAT NO. R117273	
	EMERGENCY LIGHTING UNIT	PROGRESS LIGHTING CAT NO PE2EU-30	WITH SELF CONTAINED BATTERY
	EXIT SIGN	PROGRESS LIGHTING CAT NO PE TPE U R 30	WITH SELF CONTAINED BATTERY
ES/EL	COMBINATION EXIT / EMERGENCY UNIT	PROGRESS LIGHTING CAT NO PECUE	WITH SELF CONTAINED BATTERY



2ND FLOOR LIGHTING PLAN
SCALE: 1/8"=1'-0"



3RD FLOOR LIGHTING PLAN
SCALE: 1/8"=1'-0"

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275 LAFAYETTE
MULTI-FAMILY
BUILD OUT

Lafayette Street
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PROJECT INFORMATION

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LIGHTING PLANS

SHEET NAME

E-4

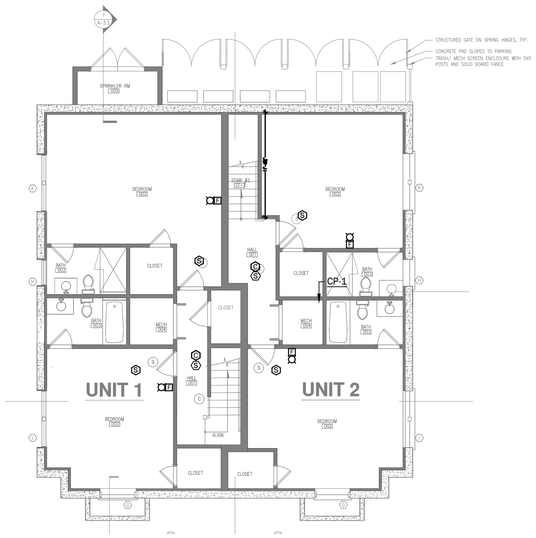
SHEET NO.

FIRE ALARM LEGEND

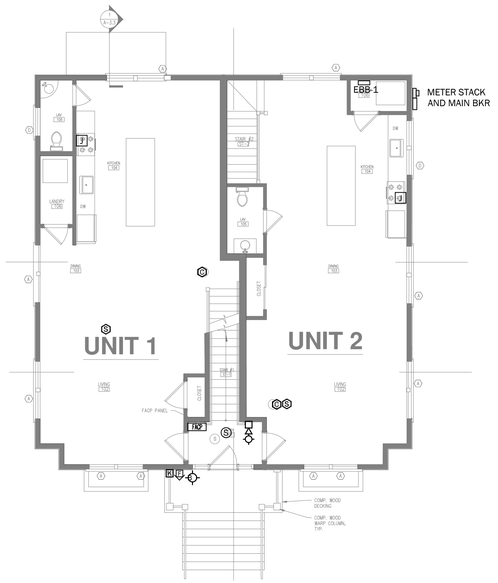
FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL MIRCOM OR EQUAL
	FIRE ALARM SPEAKER/STROBE LIGHT (ADA)
	MINI FIRE ALARM SPEAKER/STROBE LIGHT (ADA)
	FIRE ALARM STROBE LIGHT (ADA)
B	FIRE ALARM BEACON
	SIG COM FIRE RADIO ALARM MASTER BOX
P	FIRE ALARM PULL STATION (ADA MTG HEIGHT)
K	FIRE DEPT KNOX BOX
S	SYSTEM PHOTOELECTRIC SMOKE DETECTOR
C	SYSTEM CARBON MONOXIDE DETECTOR
SC	LOCAL COMBINATION PHOTOELECTRIC SMOKE/ CARBON MONOXIDE DETECTOR

FIRE ALARM PLAN NOTES

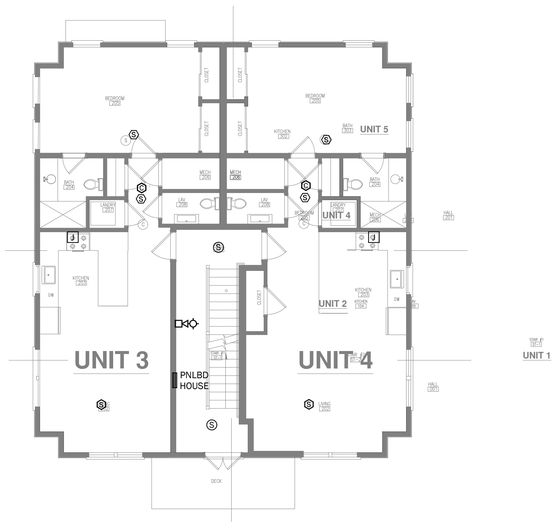
1. ALL SYSTEM WIRING SHALL BE CLASS "A" TYPE AND SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. REFER TO SPECIFICATIONS.
2. ALL WIRING SHALL BE INSTALLED IN CONDUIT (MINIMUM 1/2"). OR ARMORED FIRE ALARM CABLE IN ACCORDANCE WITH THE MASSACHUSETTS ELECTRICAL CODE.
3. ALL WIRING SHALL BE IN ACCORDANCE WITH APPROVED MANUFACTURERS WIRING SCHEMATICS.
4. ALL COMPONENTS, WIRING, AND SYSTEM COMPONENTS SHALL BE IN ACCORDANCE WITH LOCAL FIRE DEPT REQUIREMENTS.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING HEIGHTS AND LOCATIONS OF ALL HORN/LIGHT UNITS
6. FA DEVICES SHALL MATCH EXISTING FA SYSTEM.



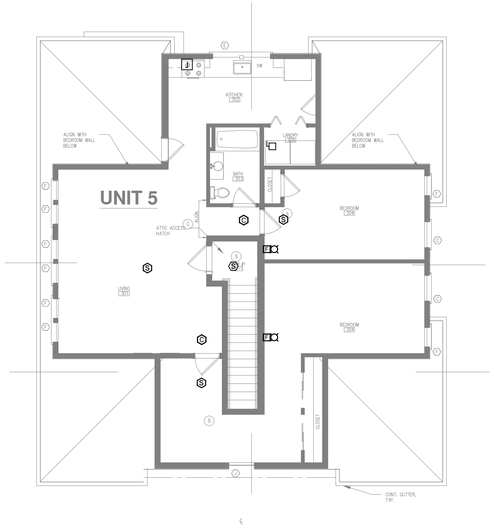
BASEMENT FIRE ALARM PLAN
SCALE: 1/8"=1'-0"



1ST FLOOR FIRE ALARM PLAN
SCALE: 1/8"=1'-0"



2ND FLOOR FIRE ALARM PLAN
SCALE: 1/8"=1'-0"



3RD FLOOR FIRE ALARM PLAN
SCALE: 1/8"=1'-0"

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FIRE ALARM PLANS

SHEET NAME

FA-1

SHEET NO.