

PROPOSED 4 CONDO UNITS FOR:

# 338 LAKE SHORE DR

338 LAKE SHORE DR  
VILLAGE OF SOUTH BLOOMING GROVE  
ORANGE COUNTY, NEW YORK

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- SP-01 SPECIFICATIONS
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## RELEASE DATE:

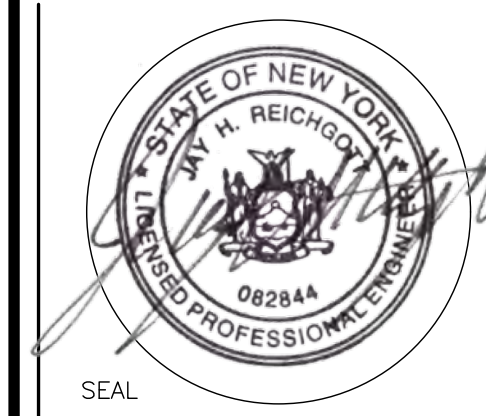
9-3-2024  
1-6-2025 REVISED FOR B.D. COMMENTS  
7-16-2025 REVISED PER CLIENT  
11-13-2025 REVISED PER CLIENT



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412 N. MAIN STREET. SUITE 301  
MONROE NY 10950 845-781-4222  
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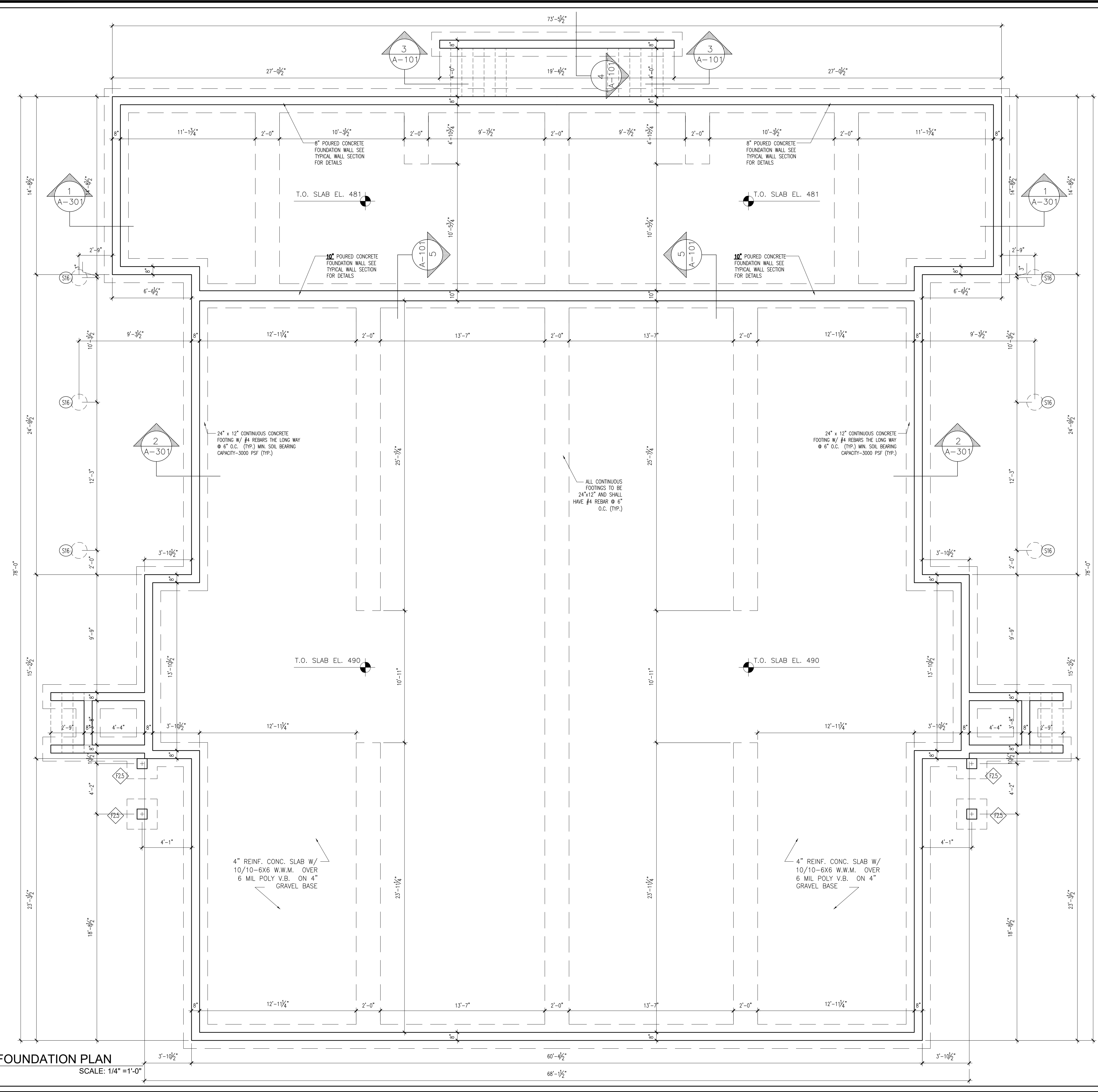
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WRITTEN STATEMENT  
TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE AND THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AS CURRENTLY IN EFFECT.

Project No. INDV2101  
Drawn By: LH  
Reviewed By: JHR  
Date: SEP. 3, 2024

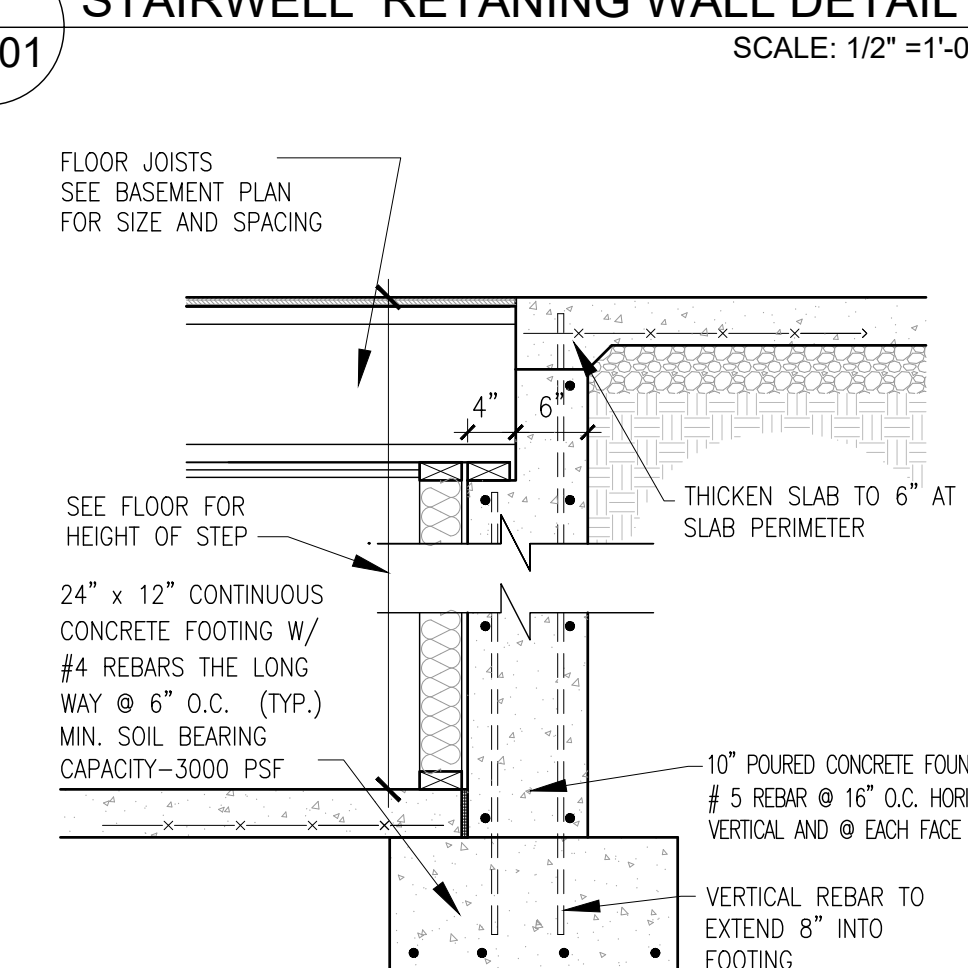
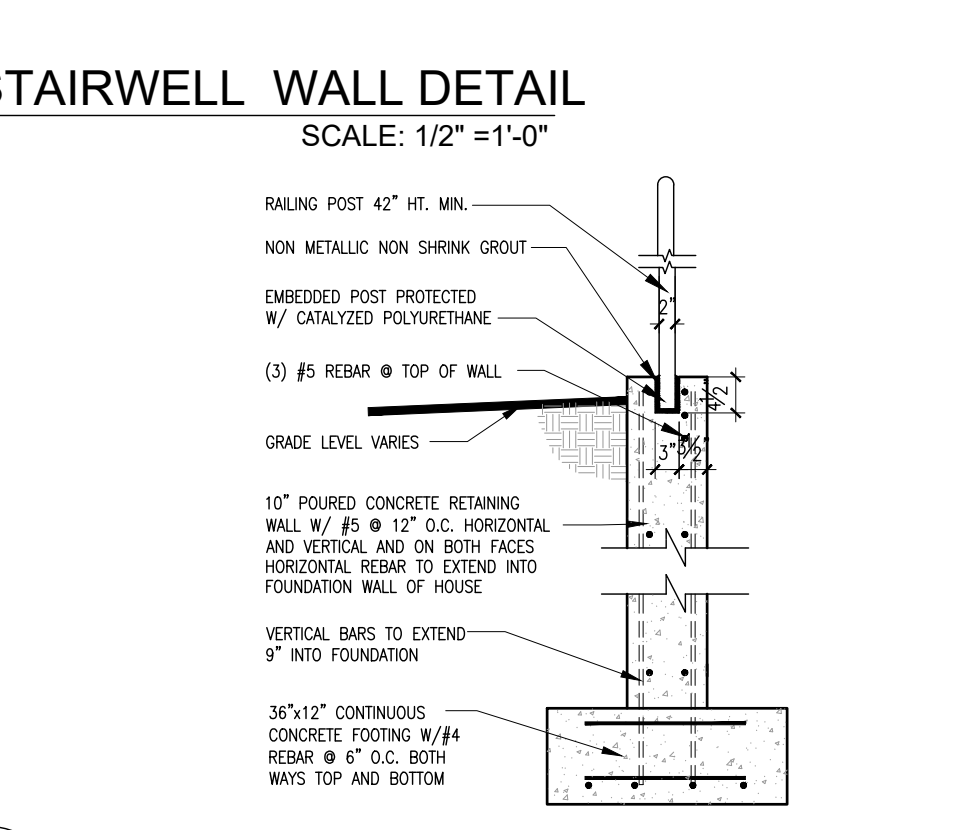
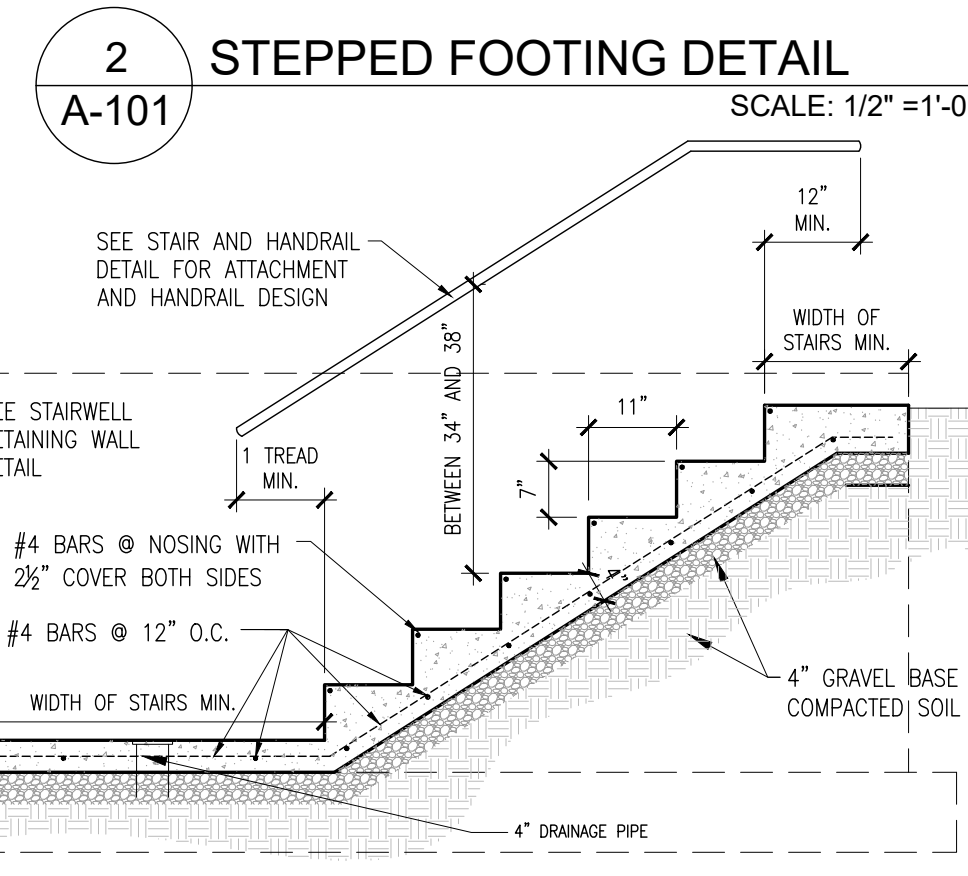
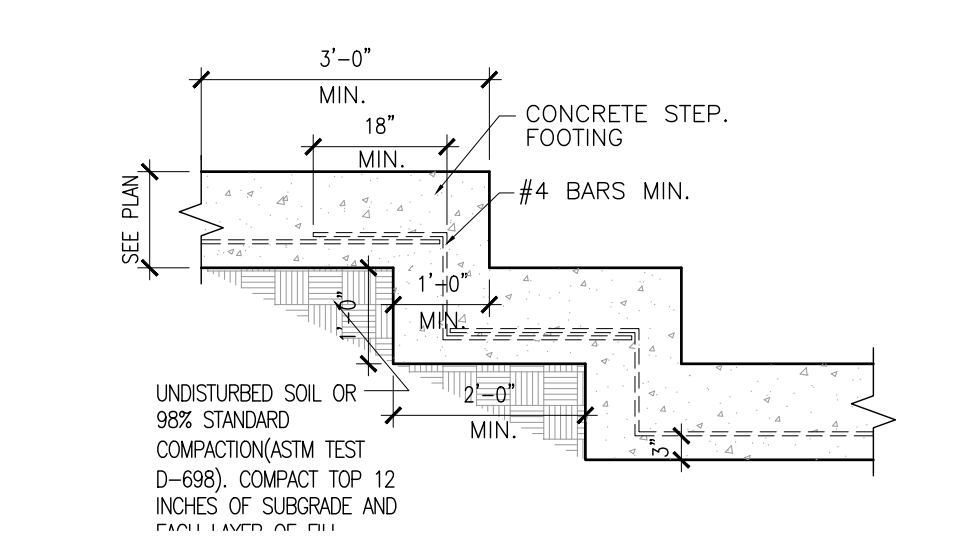
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**A-101**



**FOOTING LEGEND**

F20	2'-0" x 2'-0" BY 12" THICK W/ #4 REBARS @ 6" O.C. BOTH WAYS BOTTOM
F25	2'-6" x 2'-6" BY 12" THICK W/ #4 REBARS @ 6" O.C. BOTH WAYS BOTTOM
S16	16" SONO TUBE 3'-6" BELOW GRADE W/ (4) #4 REBAR (TYP.)



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

**5 STEPPED SLAB DETAIL**  
SCALE: 3/4" = 1'-0"



LICENSE NO: 082844

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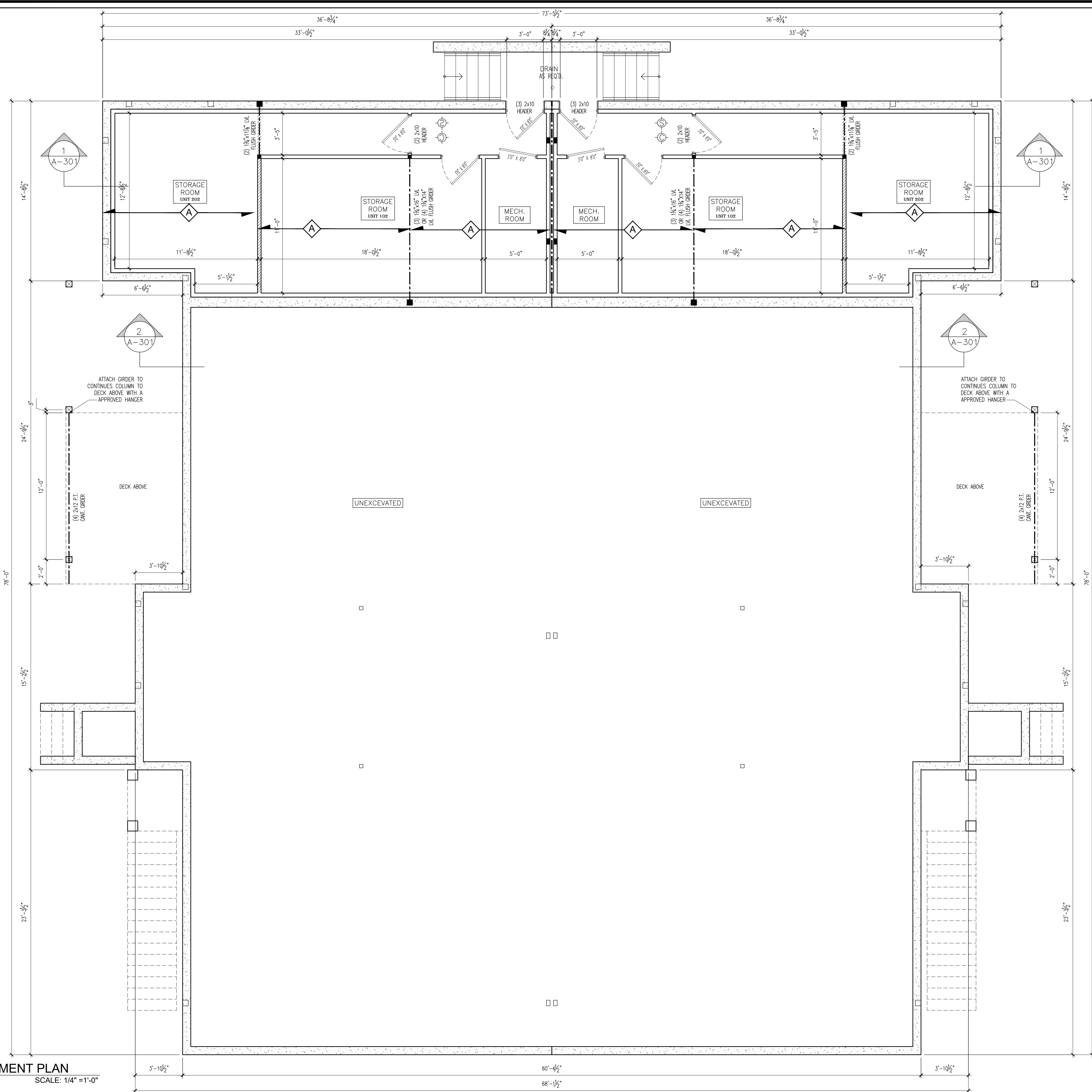
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11/8" TRIFORME QJ314 OPEN FLOOR JOIST ABV. @ 16" O.C.  
BRIDGE & BLOCK AS PER MANUF. SPEC.  
(HORIZONTAL FIRE RATING "D" SEE DETAIL ON SHEET A-301)

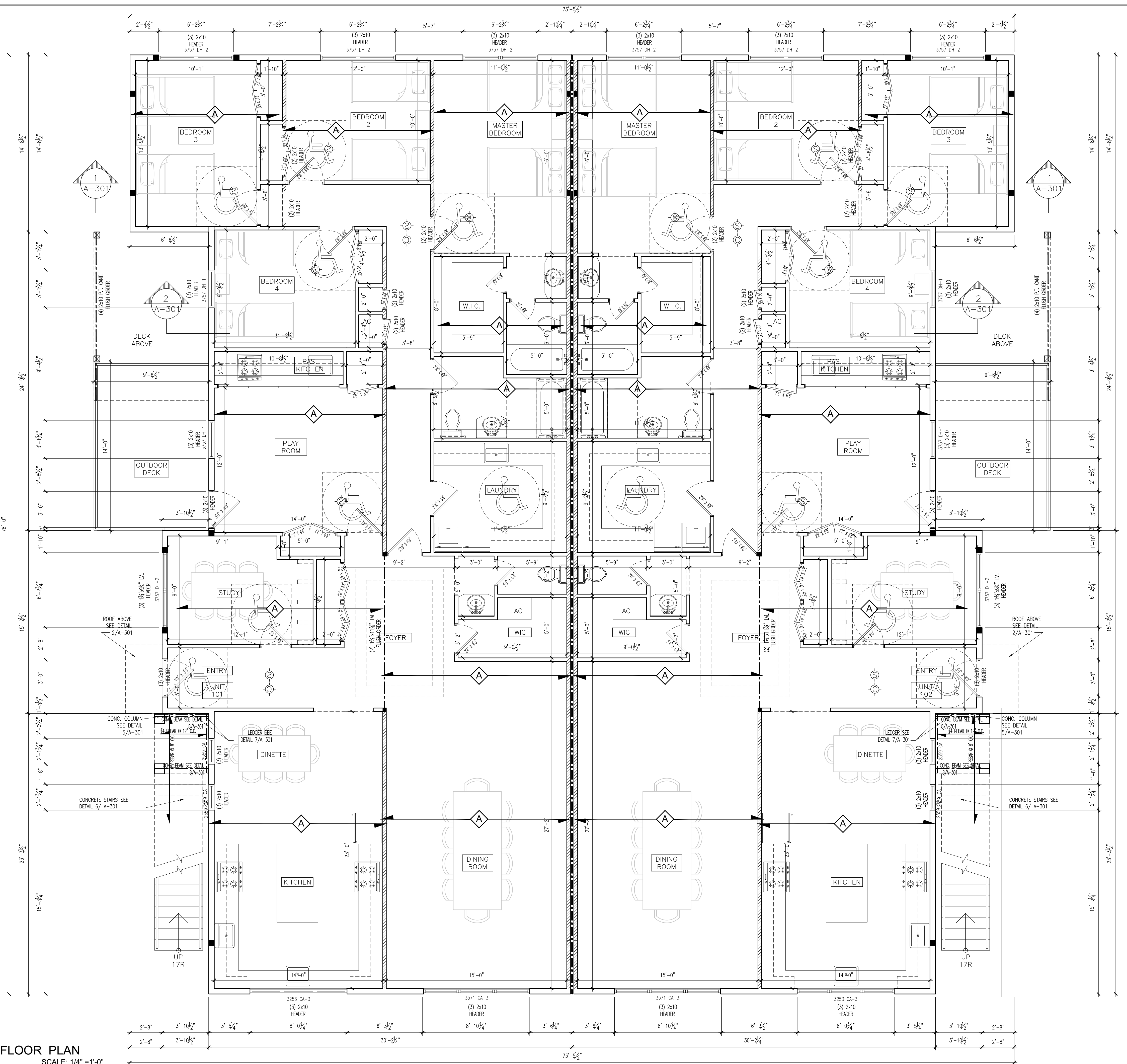
**WALL LEGEND**  
2x4 WALL FOR INTERIOR AND  
2x6 FOR EXTERIOR WALL  
BEARING PARTITION  
(UNLESS OTHERWISE NOTED ON PLAN)  
2x4 WALL FOR INTERIOR AND  
2x6 FOR EXTERIOR  
■ - WOOD POST IN A WALL  
□ - POINT LOAD FROM ABOVE

◆ - HARD WIRED SMOKE DETECTOR  
CEILING MOUNTED  
◇ - CARBON MONOXIDE DETECTOR  
CEILING MOUNTED

**MECHANICAL EQUIPMENT NOTE:**  
HEAT-PRODUCING EQUIPMENT AND APPLIANCES SHALL BE INSTALLED TO MAINTAIN THE REQUIRED CLEARANCES TO COMBUSTIBLE CONSTRUCTION AS SPECIFIED IN THE LISTING AND MANUFACTURER'S INSTRUCTIONS. CLEARANCES TO COMBUSTIBLES SHALL INCLUDE SUCH CONSIDERATIONS AS DOOR SWING, DRAWER PULL, OVERHEAD PROJECTIONS OR SHELVING AND WINDOW SWING.  
ALL FURNACES AND HOT WATER HEATERS TO BE 6" AWAY FROM EACH OTHER OR TO ANY COMBUSTIBLE MATERIAL OR THE REQUIRED CLEARANCES AS SPECIFIED IN THE LISTING AND MANUFACTURER'S INSTRUCTIONS, ACCORDING TO SECTION G2408.5 OF THE 2020 RCNYS INSTRUCTIONS.  
ALL APPLIANCES TO HAVE A 30"x30" WORKING SPACE IN FRONT OF THE CONTROL SIDE TO SERVICE APPLIANCE AND 3" ALONG ALL OTHER SIDES  
**MECHANICAL ROOMS COMBUSTION AIR FOR EACH UNIT**  
**MECHANICAL ROOM 101 & 102**  
92,000 BTU/H  
1 SQ INCH PER 2,000 BTU/H = 46 SQ. INCHES  
DUCT REQUIRED COMBUSTION AND EXHAUST  
**MECHANICAL ROOM 201 & 202**  
54,000 BTU/H  
1 SQ INCH PER 2,000 BTU/H = 27 SQ INCHES  
DUCT REQUIRED COMBUSTION AND EXHAUST



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



1 1/2" TRIFORCE QJ314 OPEN FLOOR JOIST ABV. @ 16" O.C.  
BRIDGE & BLOCK AS PER MANUF. SPEC.  
(HORIZONTAL FIRE RATING "D" SEE DETAIL ON SHEET A-301)

**WALL LEGEND**

2x4 WALL FOR INTERIOR AND 2x6 FOR EXTERIOR WALL BEARING PARTITION (UNLESS OTHERWISE NOTED ON PLAN)

2x4 WALL FOR INTERIOR AND 2x6 FOR EXTERIOR

■ - WOOD POST IN A WALL

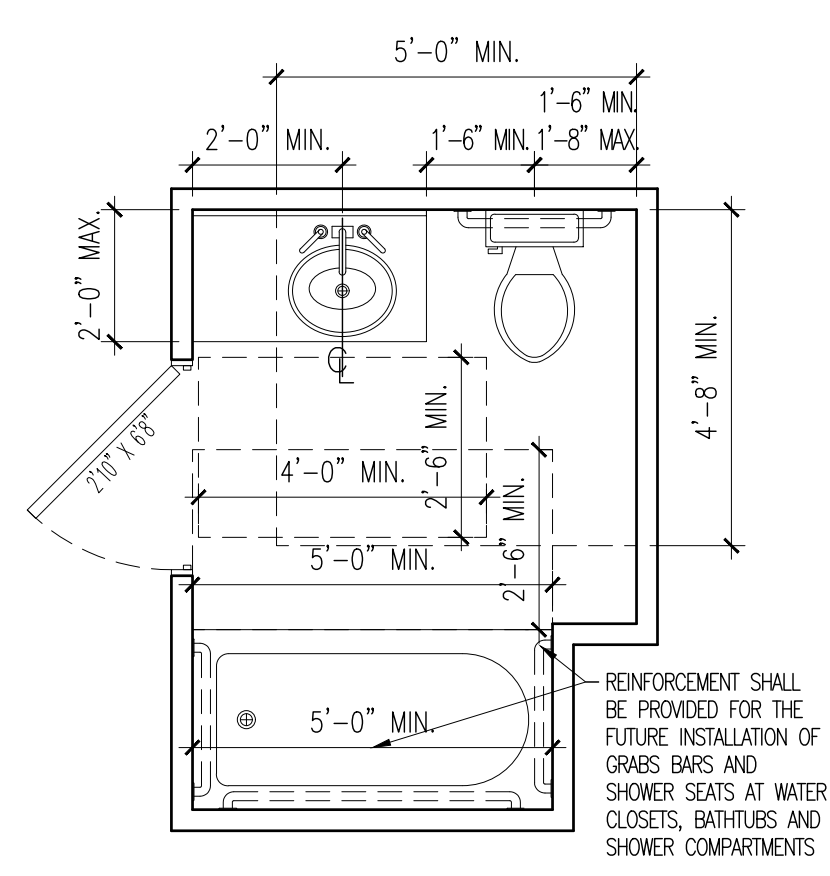
□ - POINT LOAD FROM ABOVE

◆ - HARD WIRED SMOKE DETECTOR CEILING MOUNTED

◇ - CARBON MONOXIDE DETECTOR CEILING MOUNTED

**SQUARE FOOTAGE:**

UNIT 101	2,509 S.F.
UNIT 102	2,509 S.F.
UNIT 201	2,509 S.F.
UNIT 202	2,509 S.F.
<b>TOTAL FINISHED</b>	<b>10,036 S.F.</b>



2 TYP. ADA BATHROOM  
A-103 SCALE: 3/8" = 1'-0"

1 FIRST FLOOR PLAN  
A-103 SCALE: 1/4" = 1'-0"

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LARRY@HARTMANDESIGN.COM

STATE OF NEW YORK  
LARRY A. REICHOFF  
082844  
LICENSED PROFESSIONAL ENGINEER  
SEAL  
LICENSE NO: 082844

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Project No: INDV2101  
Drawn By: LH  
Reviewed By: JHR  
Date: SEP. 5, 2024

Revisions:  
1-6-2025 REVISED AS PER B.D.  
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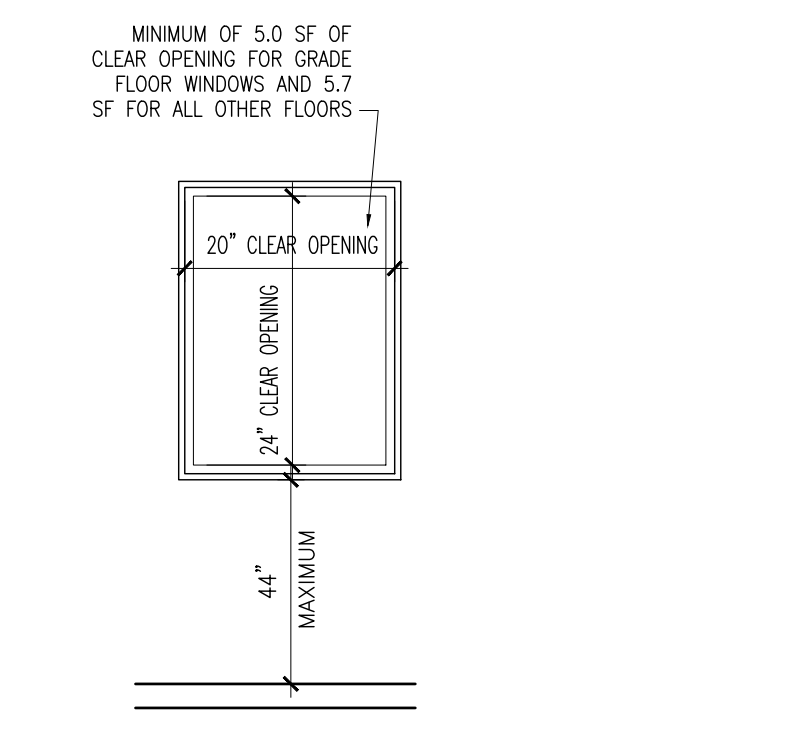
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**WALL LEGEND**

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	2x4 WALL FOR INTERIOR AND 2x6 FOR EXTERIOR
	WOOD POST IN A WALL
	POINT LOAD FROM ABOVE

- HARD WIRED SMOKE DETECTOR CEILING MOUNTED
- CARBON MONOXIDE DETECTOR CEILING MOUNTED



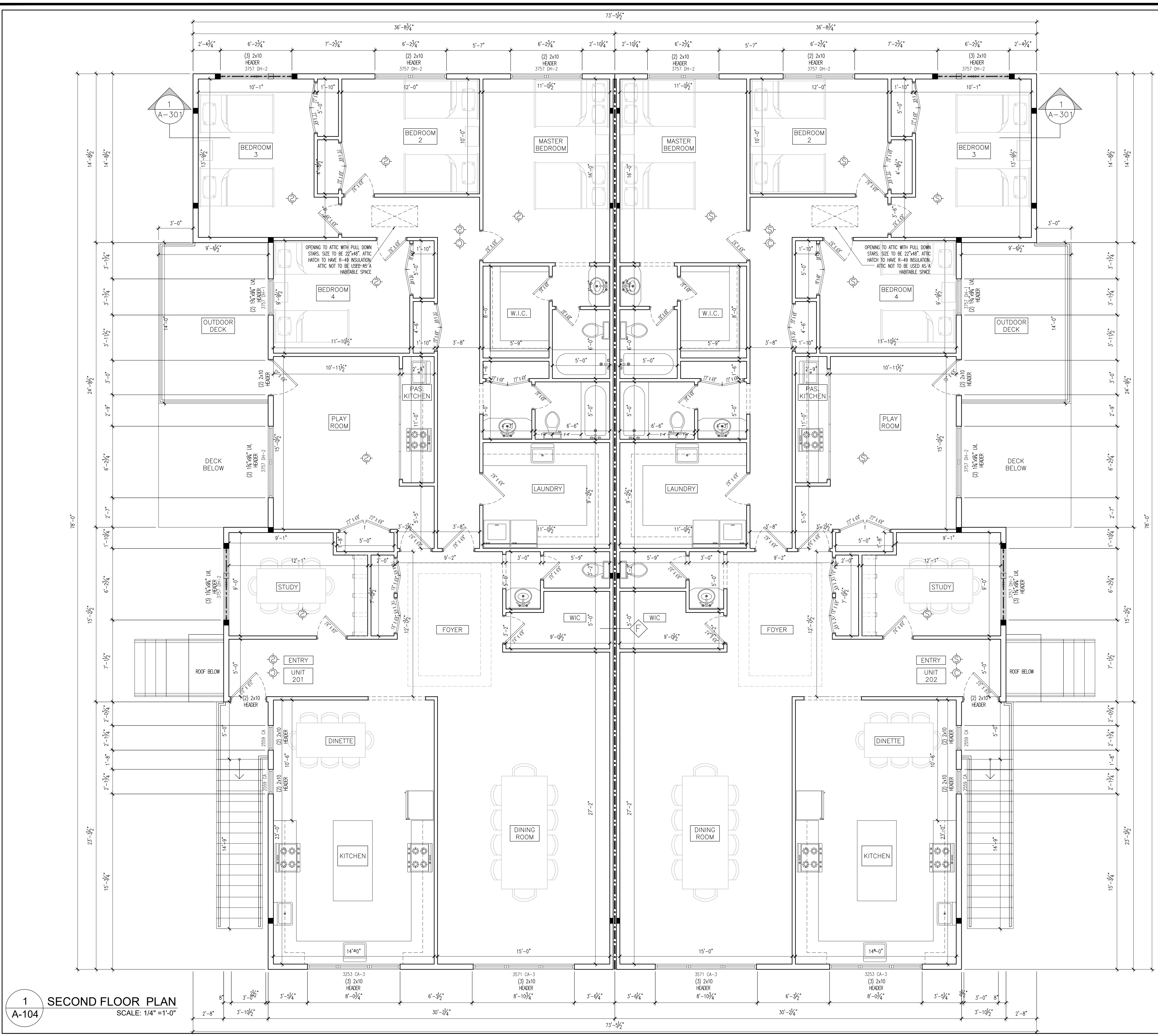
**2** EGRESS WINDOW DETAILS  
A-104 SCALE: 3/8"=1'-0"

- FRAMING NOTES:
- ALL POSTS WITHIN A WALL (NOT SPECIFIED ON PLAN THE AMOUNT OF STUDS) SUPPORTING A BEAM ABOVE TO HAVE AT LEAST A MIN. OF 3 2X4. IF BEAM IS WIDER THAN 4.5" ADD 2X TO COVER FULL WIDE OF BEAM ABOVE.
  - ALL BEARING WALLS TO HAVE BLOCKING WITH A MAX SPACING OF 4'-0".
  - ALL FLUSH BEAMS TO BE ATTACHED TO PERPENDICULAR BEAMS AND JOISTS WITH PROPER FULL HEIGHT SIMPSON STRONG-TIE HANGERS.
  - PROVIDE DOUBLE JACK STUDS UNDER ALL HEADERS THAT ARE 48" LONG OR LONGER.
  - ALL DECK LUMBER TO BE PRESSURE TREATED.
  - ALL PRESSURE TREATED WOOD FASTENERS TO BE HOT DIP GALVANIZED OR STAINLESS STEEL.
  - PROVIDE SOLID BLOCKING BETWEEN JOIST FOR ALL CONCREATED LOADS FROM ABOVE CONTINUING DOWN IN WALL BELOW.

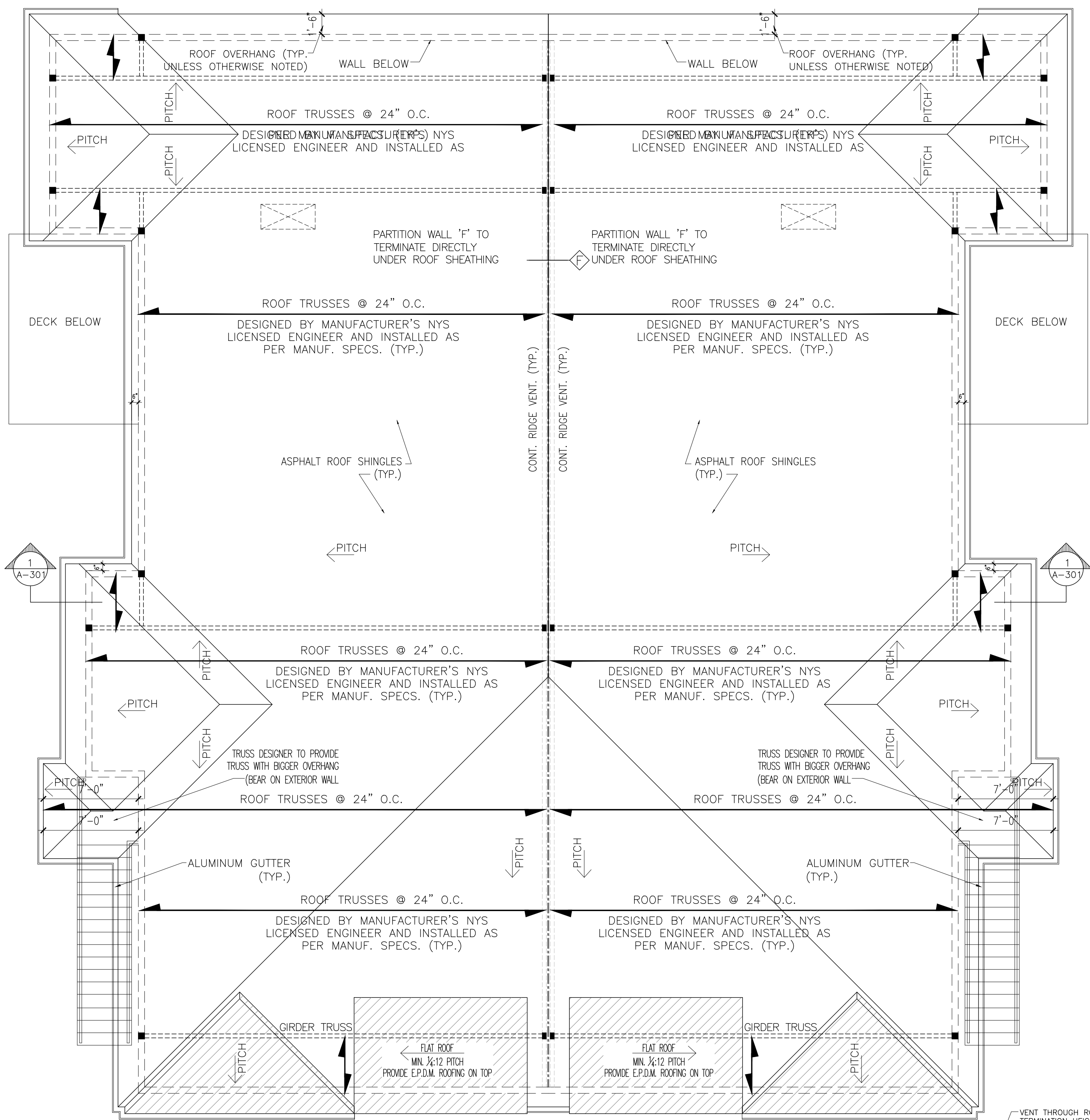
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**1** SECOND FLOOR PLAN  
A-104 SCALE: 1/4"=1'-0"

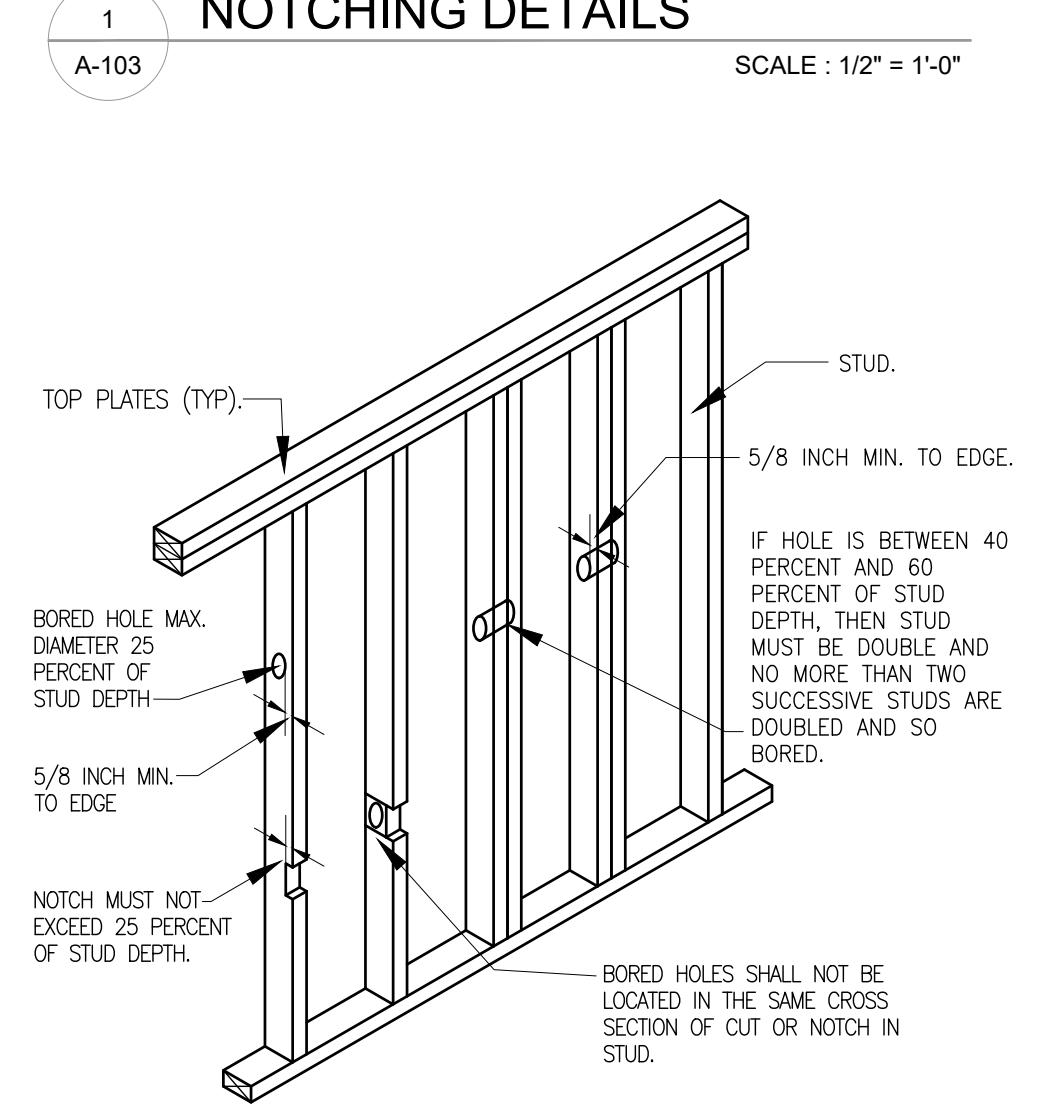
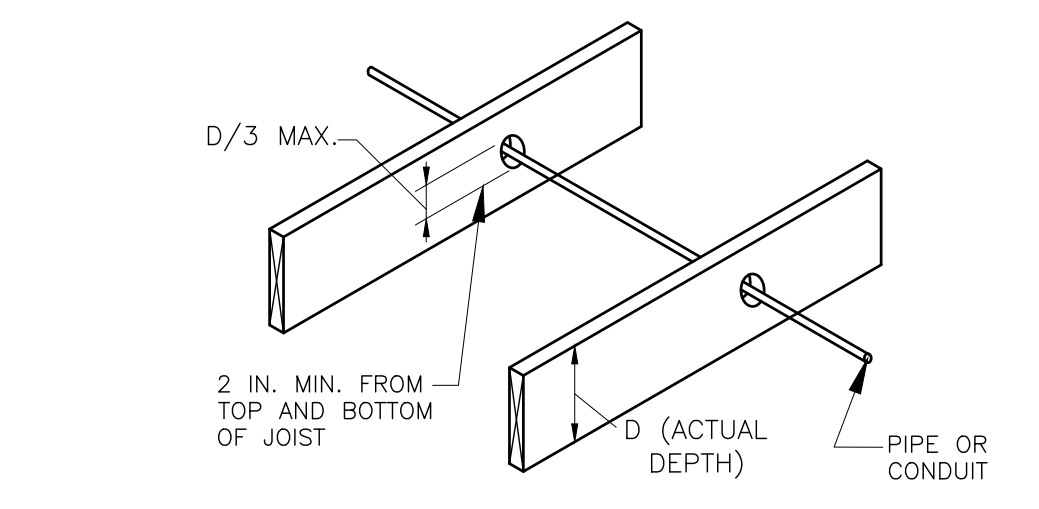
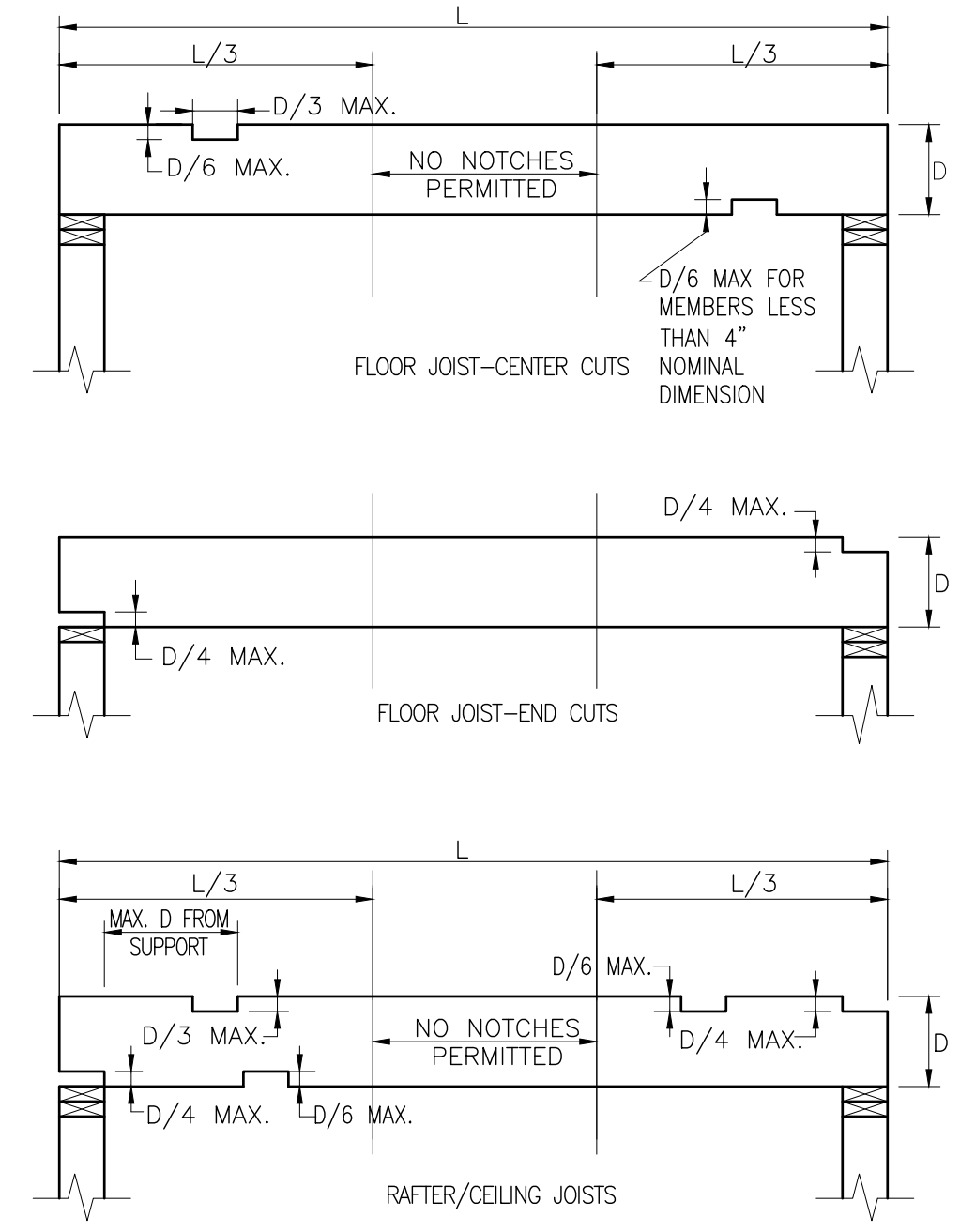


### WINDOW SCHEDULE

DESIGNATION	VENT SQ. FT.	GLASS SQ. FT.	ROUGH WIDTH	OPENING HEIGHT	MANUFACTURER	SERIES
3571 CA-3	43.5	38.4	107 1/4"	71 3/4"	PELLA	PROLINE
3757 DH-2	11.8	22.6	75 1/2"	57 3/4"	PELLA	PROLINE

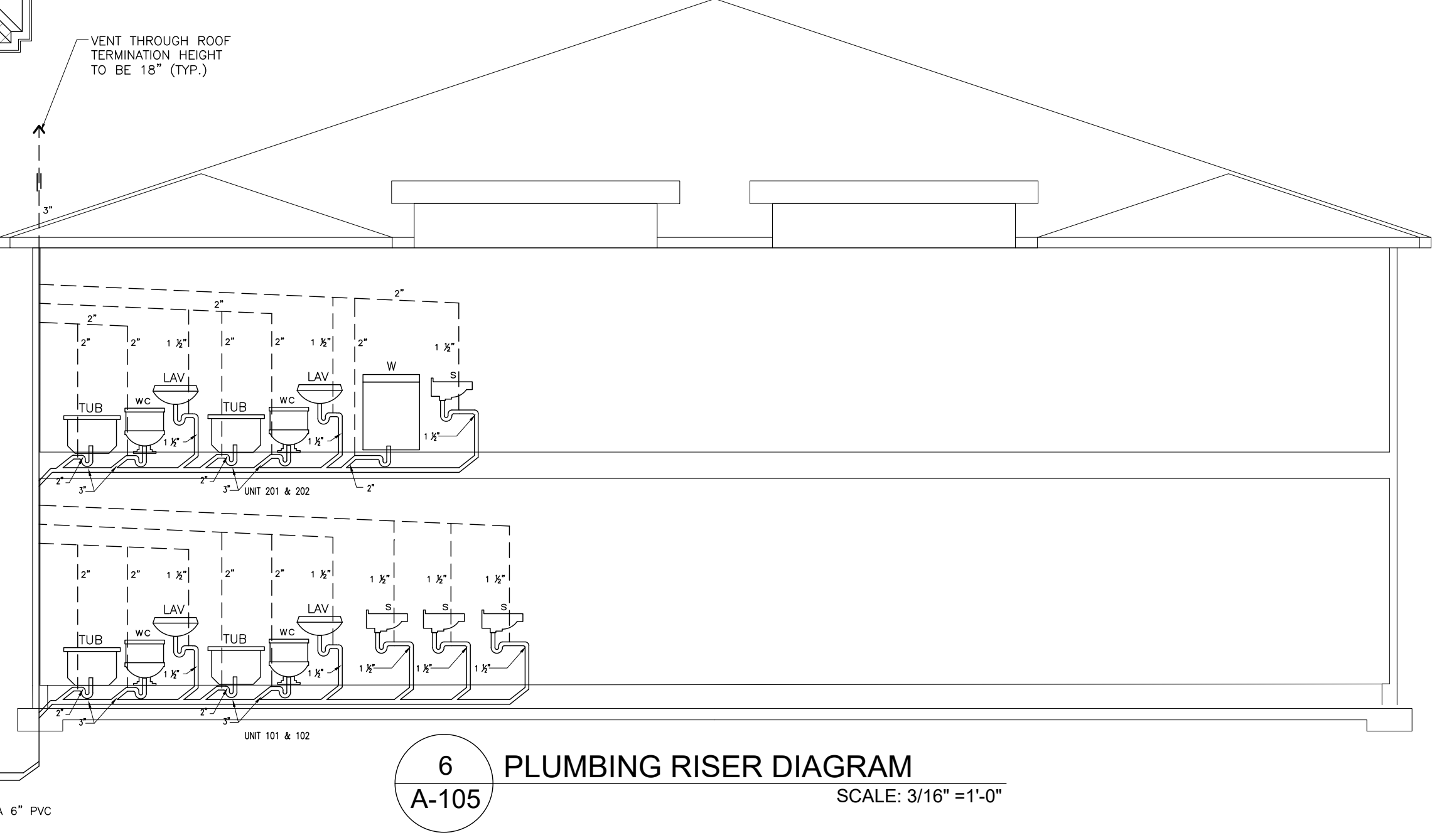
### LIGHT & VENTILATION REQUIREMENTS

ROOM	SQ. FT.	LIGHT REQ'D 8%	LIGHT PROVIDED	VENT REQ'D 4%	VENT PROVIDED
UNITS 101-102-201-202					
DINING ROOM	407	32.6	38.4	16.3	43.5
KITCHEN/ DINETTE	322	25.8	49.6	12.9	43.6
STUDY	103	8.2	22.6	4.1	11.8
PLAY ROOM	181	14.5	35.0	7.3	24.2
MASTER BEDROOM	177	14.1	22.6	7.1	11.8
BEDROOM #2	120	9.6	22.6	4.8	11.8
BEDROOM #3	147	11.7	22.6	5.9	11.8
BEDROOM #4	116	9.3	22.6	4.7	11.8



4 ROOF PLAN SCALE: 3/16" = 1'-0"

5 ATTIC HATCH DETAIL SCALE: 1/4" = 1'-0"



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Drawn By: LH  
Reviewed By: BRK  
Date: 02/25/2024

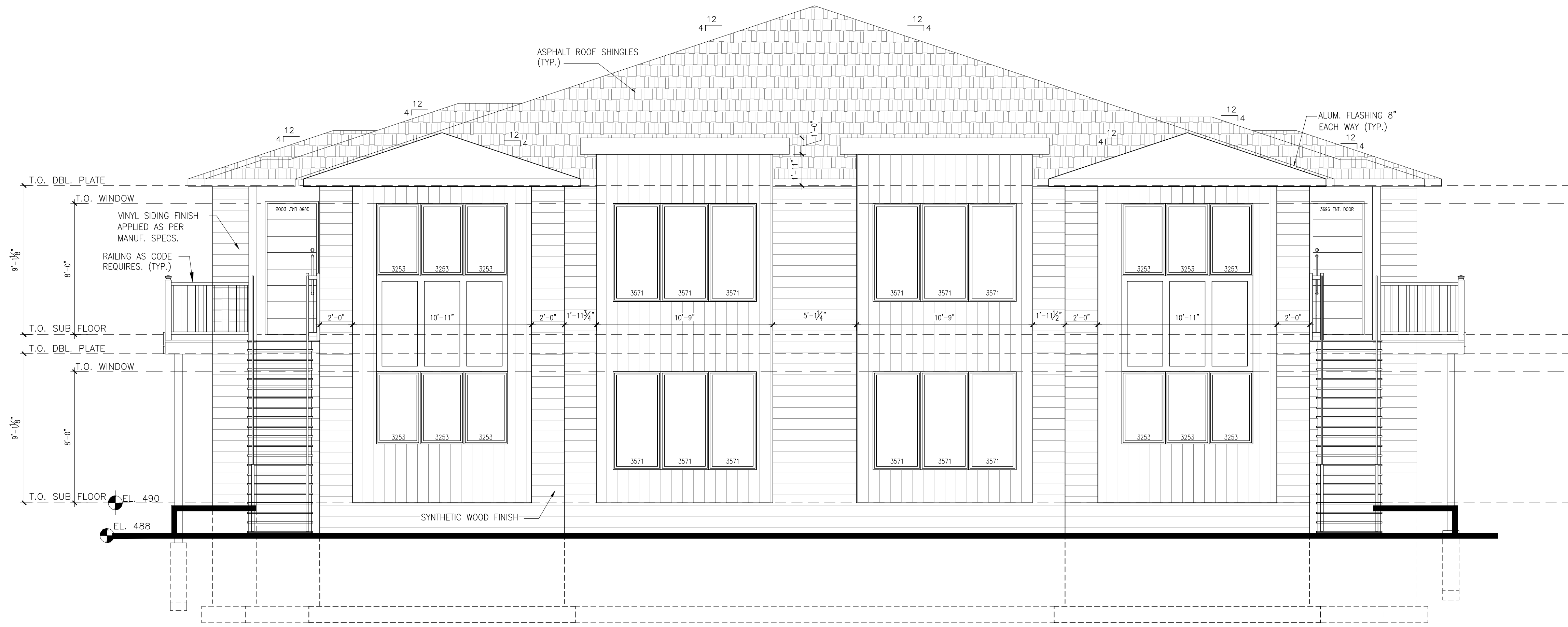
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**A-105**



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1 FRONT ELEVATION  
A-201 SCALE: 1/4" = 1'-0"



2 RIGHT ELEVATION  
A-201 SCALE: 3/16" = 1'-0"

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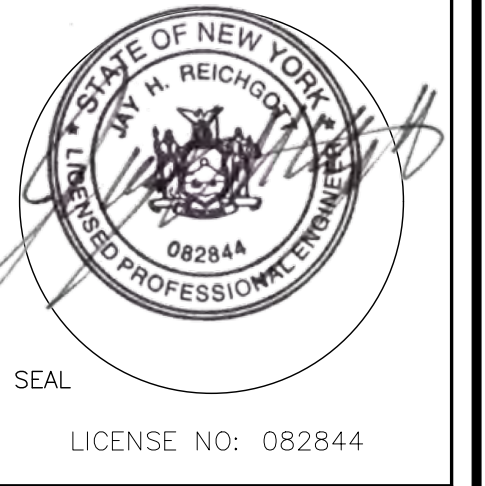
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1 REAR ELEVATION  
SCALE: 1/4" = 1'-0"



2 LEFT ELEVATION  
SCALE: 3/16" = 1'-0"



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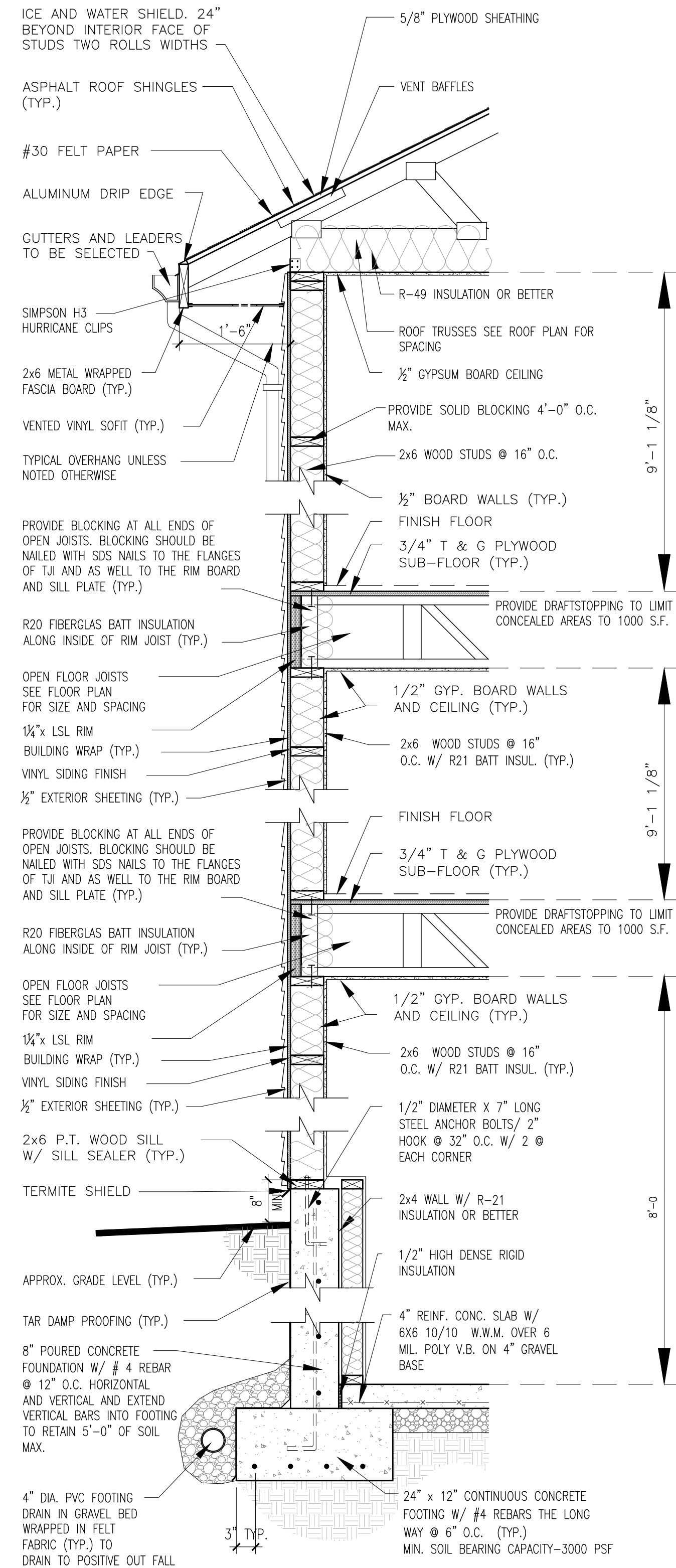


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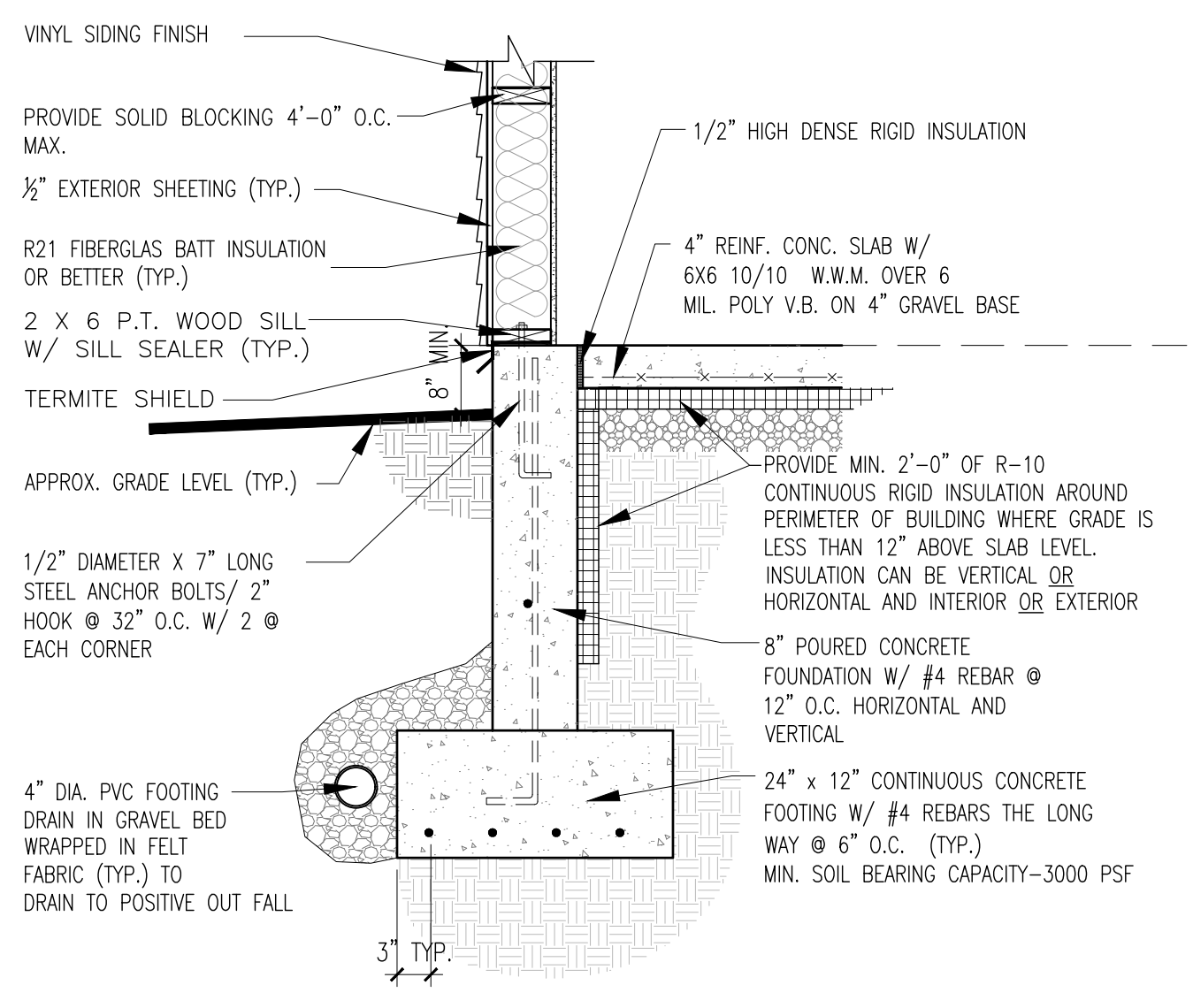
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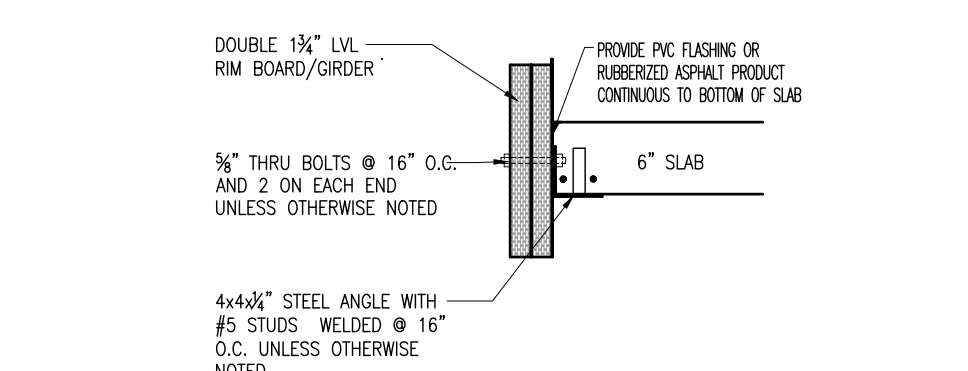
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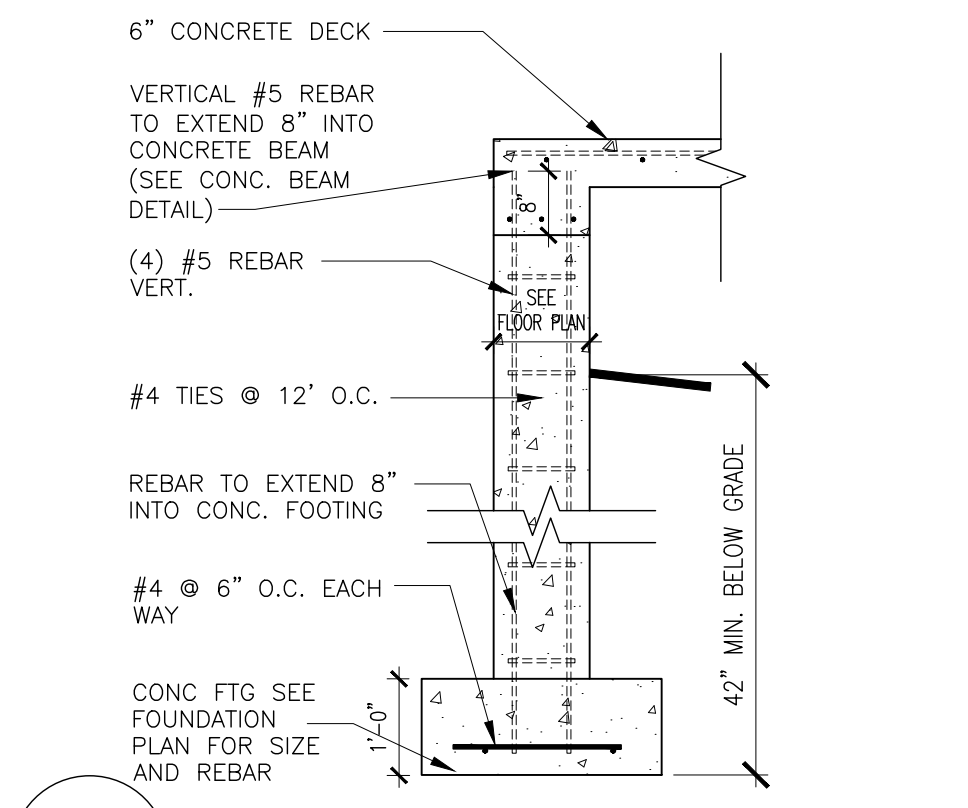
**1 TYPICAL WALL SECTION**  
A-301 SCALE: 3/4" = 1'-0"



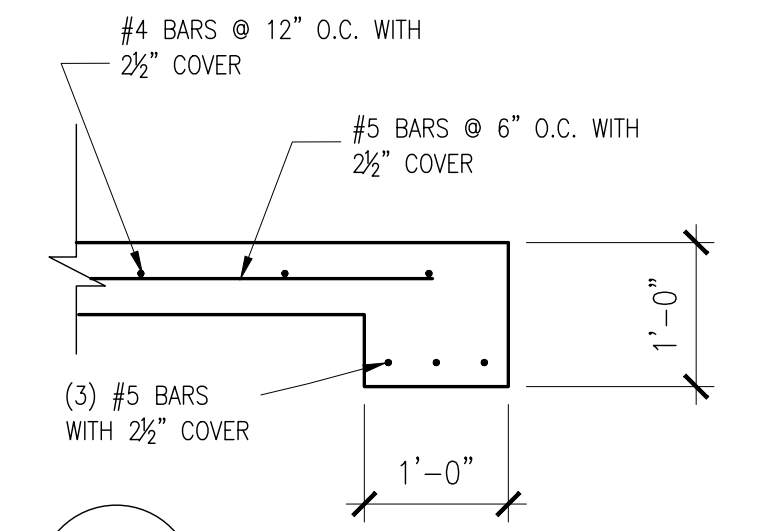
**2 TYPICAL WALL SECTION @ SLAB ON GRADE**  
A-301 SCALE: 3/4" = 1'-0"



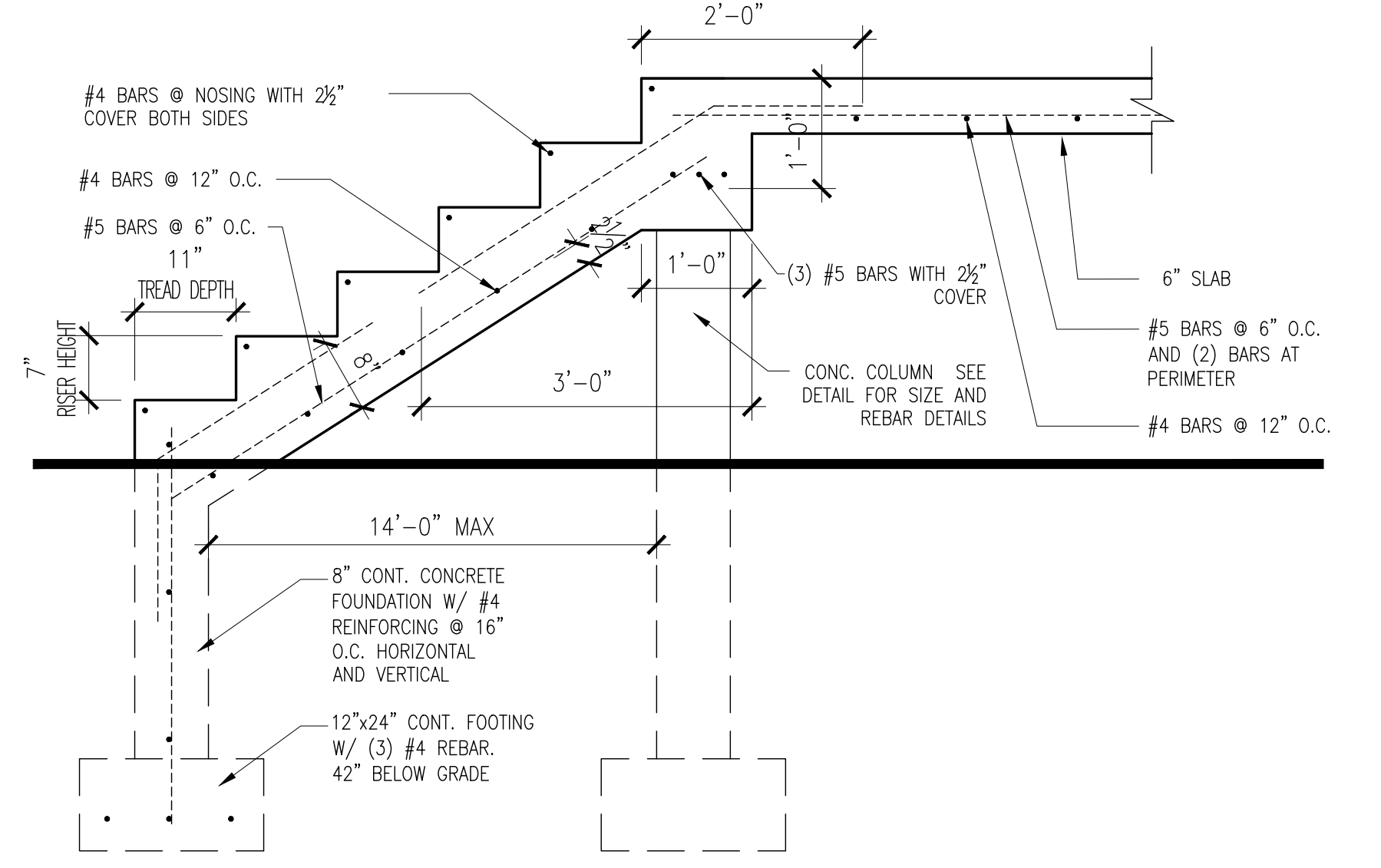
**7 LEDGER @ CONC. SLAB DETAIL**  
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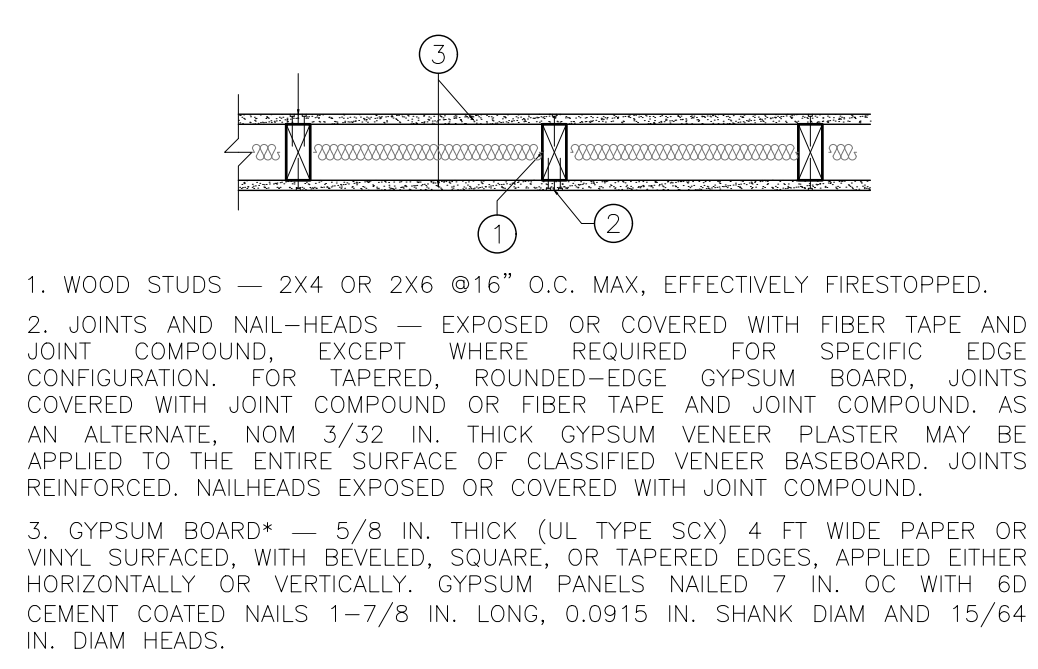
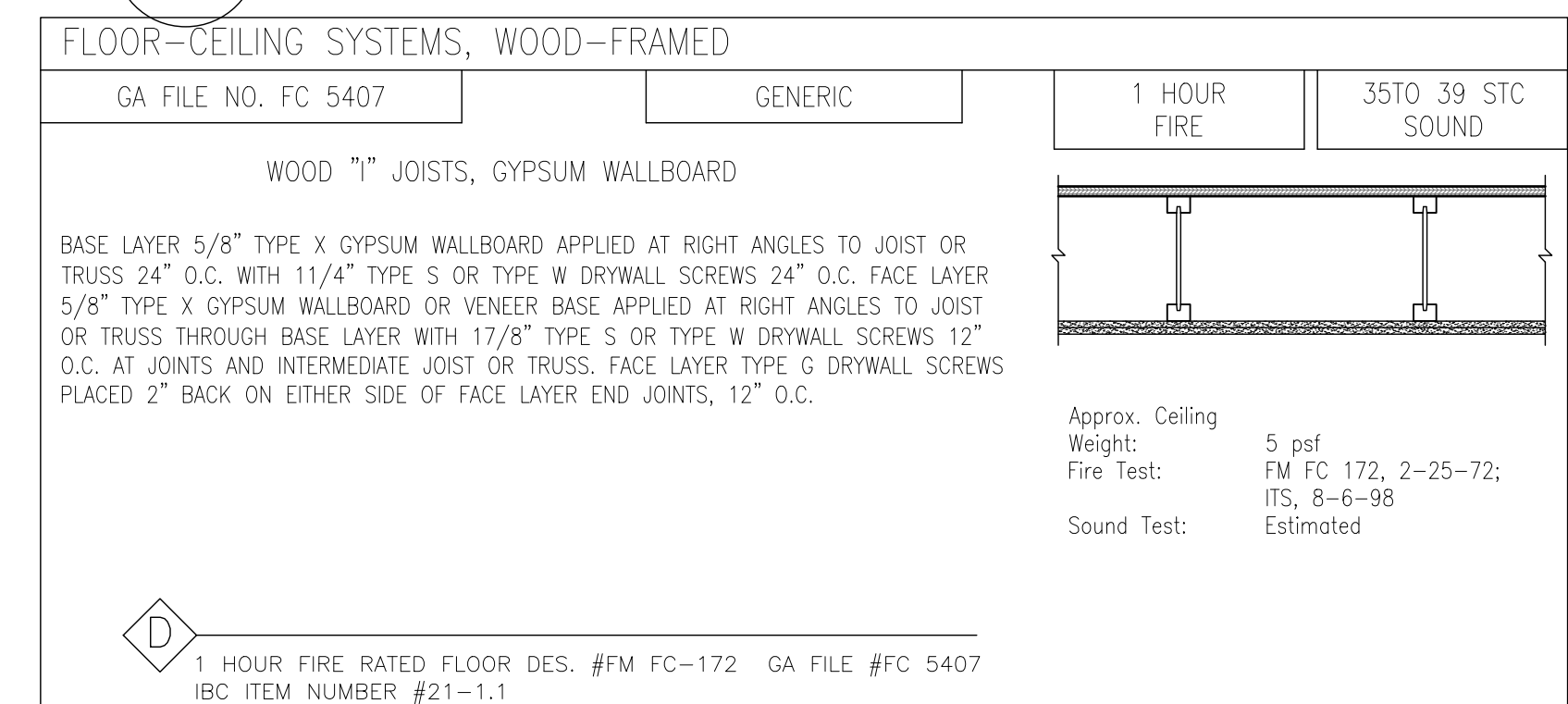
**5 CONC. STAIR PIER DETAIL**  
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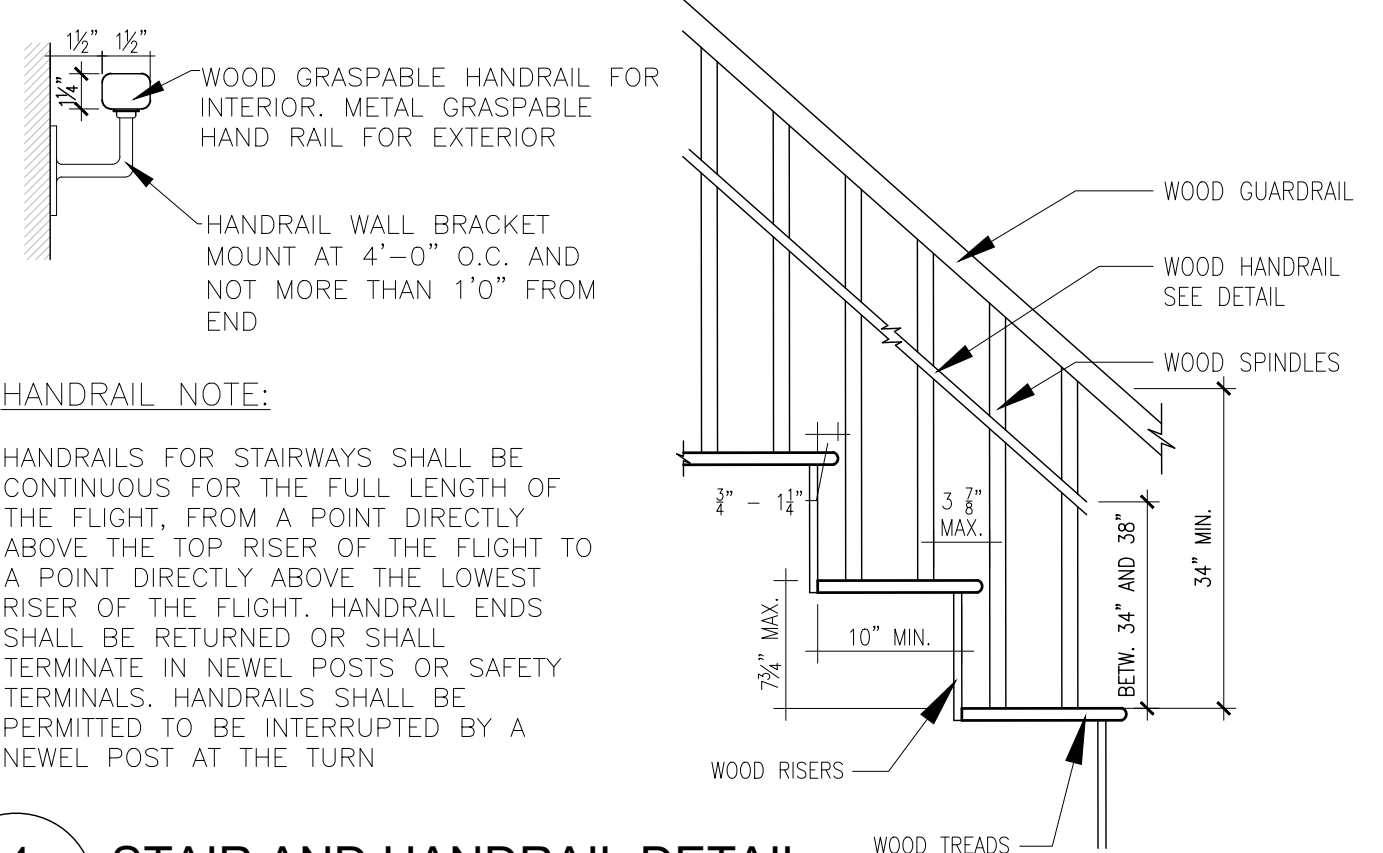
**8 CONC. BEAM DETAIL**  
A-301 SCALE: 3/4" = 1'-0"



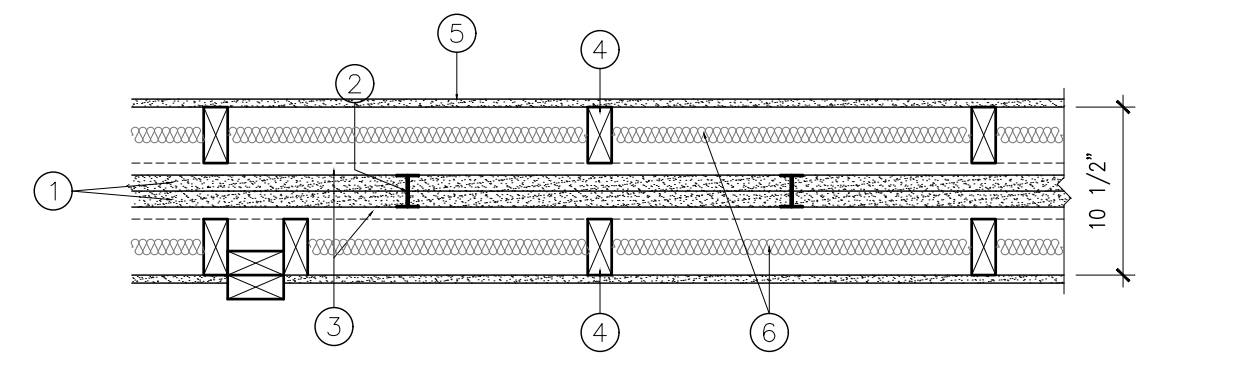
**6 CONC. STAIR DETAIL**  
A-301 SCALE: 3/4" = 1'-0"



**B SEPARATION WALL UNIT**  
1 HR FIRE RATED IBC ITEM NUMBER #14-1.3 32 STC SOUND TRANSFER



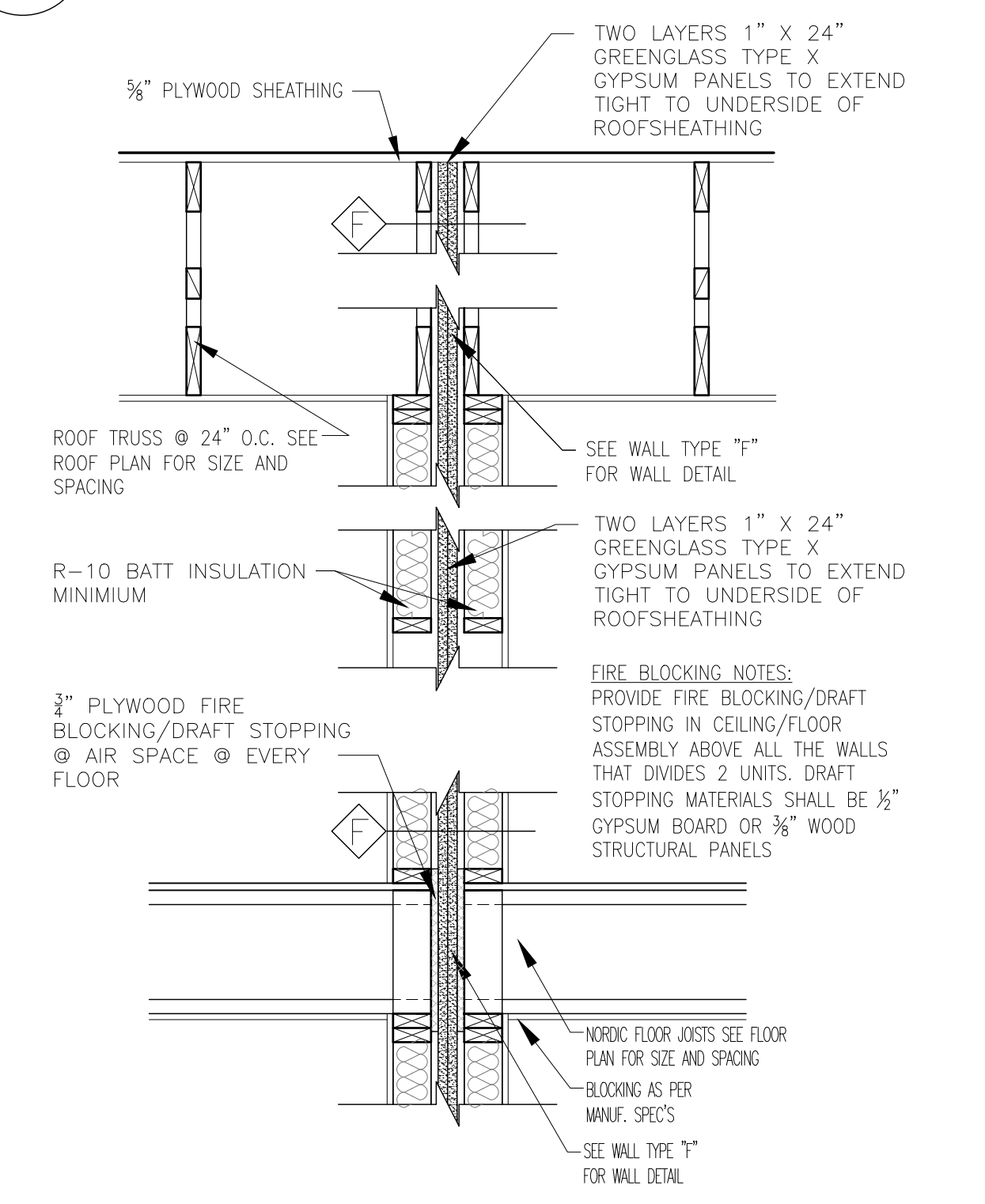
**4 STAIR AND HANDRAIL DETAIL**  
A-301 SCALE: 1" = 1'-0"



**3 DWELLING UNIT FIRE SEPARATION DETAIL**  
A-301 SCALE: 1/4" = 1'-0"



**F UNIT SEPARATION WALL**



**9 "F" WALL AND FIRE-BLOCKING DETAIL**  
A-301 SCALE: 3/4" = 1'-0"

WIND AND CLIMATIC DESIGN CRITERIA										
CLIMATE ZONE	GROUND SNOW LOAD	WIND SPEED (mph)	SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM				WINTER DESIGN TEMP	ICE SHIELD UNDERLAYMENT REQUIRED	FLOOD HAZARDS
				WEATHERING	FROST LINE DEPTH	TERMITE	DECAY			
5	30	115	B	MODERATE	42"	MODERATE TO HEAVY	SLIGHT TO MODERATE	6	YES	

ROOF LIVE LOAD =21 LB / SQ FT / DEAD LOAD =15 LB / SQ FT  
WIND EXPOSURE =B

## CODE:

ALL CONSTRUCTION MEANS AND METHODS SHALL CONFIRM TO THE LATEST EDITION OF THESE BUILDING CODES.

020 BUILDING CODE OF NEW YORK STATE (BCNYS)  
020 ENERGY CONSERVATION CODE OF NEW YORK STATE (ECCONYS)  
020 NYS PLUMBING CODE, MECHANICAL CODE,  
FIRE CODE AND FUEL GAS CODE

### CHAPTER 3 BCNYS

USE AND OCCUPANCY: R-2 RESIDENTIAL GROUP

### CHAPTER 5&6 BCNYS (TYPE Vb WITH SPRINKLER)

MAXIMUM BUILDING HEIGHT ALLOWED = 60'-0"  
MAXIMUM STORIES ALLOWED = 3-STORIES  
MAXIMUM AREA ALLOWED (PER FIRE AREA) = 21,000 SF

BUILDING ELEMENT	TYPE V
STRUCTURAL FRAME INCLUDING COLUMNS, GIRDER AND TRUSSES	b
BEARING WALLS EXTERIOR INTERIOR	0
NONBEARING WALLS AND PARTITIONS EXTERIOR	SEE TABLE 602
NONBEARING WALLS AND PARTITIONS INTERIOR	0
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	0
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	0

## FOUNDATION NOTES

CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT SITE PRIOR TO COMMENCEMENT OF WORK. AT SITE PRIOR TO COMMENCEMENT OF WORK.

CONCRETE MATERIAL, READY MIXED CONCRETE SHALL HAVE A 28 DAYS COMPRESSIVE STRENGTH (F'c) OF 4000 PSI UNLESS OTHERWISE NOTED

CONCRETE SLUMP SHALL BE NO MORE THAN 5" BEFORE ADDITION OF WATER REDUCING ADJUSTURES.

ALL FOOTINGS TO BE MIN. 3'-6" BELOW GRADE ON LEVEL UNDISTURBED SOIL OR ENGINEERED FILLS.

REINF. BARS SHALL BE OF DEFORMED BILLET STEEL NOT LESS THAN 60,000 P.S.I. (GRADE 60)

ALL SPLICES OF REINF. BARS SHALL NOT BE LAPPED LESS THAN 30 BAR DIAMETERS.

ALL SPLICES OF WELDED WIRE FABRIC SHALL BE LAPPED BY (2) SPACINGS OF CROSS WIRE. COVERING OF 2".

ALL W.W.F. SHALL CONFORM TO THE LATEST A.S.T.M. SPECIFICATIONS FOR WELDED WIRE FABRIC.

ALL REINF. STEEL SHALL HAVE A MIN. CONCRETE COVER OF 2".

1. PROVIDE INSULATION UNDER ALL SILL PLATES.

2. MIN. SOIL BEARING CAPACITY - 3000 P.S.F.

3. ALL CONCRETE FORMWORK IS TO REMAIN IN PLACE FOR A MINIMUM OF 24 HOURS AFTER POUR.

4. FOOTING SHOULD BE STEPPED WHERE THE SLOPE OF THE BOTTOM SURFACE OF THE FOOTING WOULD EXCEED 10% (1 VERTICAL: 10 HORIZONTAL.)

5. SLAB THICKNESS TO BE MINIMUM 4" (UNLESS NOTED OTHERWISE.)

6. SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH ANCHOR BOLTS AT 32" O.C. MIN. WITH A BOLT LOCATED WITHIN 12" OF THE END OF EACH PLATE SECTION. BOLTS SHOULD BE MIN. 1/2" DIAMETER AND SHALL EXTEND AT LEAST 12" INTO MASONRY/CONCRETE.

7. ANCHOR STRAPS MAY BE USED IF THEY ARE SPACED APPROPRIATELY TO PROVIDE EQUIVALENT ANCHORAGE TO ANCHOR BOLTS

8. BRAINS SHALL BE PROVIDED AROUND ALL CONCRETE OR MASONRY FOUNDATIONS THAT RETAIN EARTH AND ENCLOSE HABITABLE OR USEABLE SPACE LOCATED BELOW DRAINS SHALL BE INSTALLED AT OR BELOW THE AREA TO BE PROTECTED AND SHALL DISCHARGE BY GRAVITY OR MECHANICAL MEANS INTO AN APPROVED DRAINAGE SYSTEM. GRAVEL OR CRUSHED STONE DRAINS SHALL EXTEND AT LEAST 12" BEYOND THE OUTSIDE EDGE OF THE FOOTING AND 6" ABOVE THE TOP OF THE FOOTING AND BE COVERED WITH AN APPROVED FILTER MEMBRANE MATERIAL. (DRAINAGE SYSTEM IS NOT REQUIRED WHEN FOUNDATION IS INSTALLED ON WELL-DRAINED GROUND ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM, GROUP 1 SOILS.)

## BACK-FILL

MAXIMUM UNBALANCED BACKFILL BEFORE FIRST FLOOR FRAMING IS DONE TO BE NO MORE THAN 6'-0" UNLESS NOTED OTHERWISE

## FRAMING NOTES

1. ALL POSTS WITHIN A WALL TO HAVE AT LEAST 1 STUD FOR EACH LVL IN BEAM ABOVE AND A MIN. OF 3

2. ALL BEARING WALLS TO HAVE BLOCKING WITH A MAX SPACING OF 4'-0".

3. ALL FLUSH BEAMS TO BE ATTACHED TO PERPENDICULAR BEAMS AND JOISTS WITH PROPER FULL HEIGHT SIMPSON STRONG-TIE HANGERS

4. PROVIDE DOUBLE JACK STUDS UNDER ALL HEADERS THAT ARE 48" LONG OR LONGER

5. ALL DECK LUMBER TO BE PRESSURE TREATED

6. ALL PRESSURE TREATED WOOD FASTENERS TO BE HOT DIP GALVANIZED OR STAINLESS STEEL

7. PROVIDE SOLID BLOCKING BETWEEN JOIST FOR ALL CONSECUTED LOADS FROM ABOVE CONTINUING DOWN IN WALL BELOW 8. ALL WOOD IN CONTACT W/ CONC. OR GRADE TO BE NO. 2 GRADE SOUTHERN YELLOW PINE AND BE PRESSURE TREATED. (WOLMANIZED OR OSMOSE) TO PREVENT AGAINST TERMITES AND DECAY.

9. ALL EXTERIOR DECKING AND POSTS SHALL BE PRESSURE TREATED (WOLMANIZED OR OSMOSE). 10. ALL STUDS, SILL, AND POSTS SHALL BE SPRUCE-PINE-FIR ALLOWING 75% NO.1 AND 25% NO. 2 GRADE

11. ALL BEAMS, JOISTS, RAFTERS, AND HEADERS SHALL BE KD-NO. 1 DOUGLAS-FIR 19% MAXIMUM MOISTURE CONTENT. DENSE NO. 2 GRADE OR BETTER (UNLESS DRAWING CALLS FOR ENGINEERED LUMBER)

12. OTHER FRAMING LUMBER TO BE NO. 2 SPF 13. ALL INTERIOR DOOR HEADERS IN NON-BEARING WALLS TO BE BUILT WITH (2) 2X8 AND ALL DOOR HEADERS IN BEARING WALLS TO BE BUILT WITH (2) 2X10. (UNLESS NOTED OTHERWISE.)

14. ALL JOIST UNDERNEATH ALL BATHTUBS TO BE DOUBLED.

15. EXTERIOR WALLS TO BE 2X6 WOOD STUDS @ 16" O.C. (UNLESS NOTED OTHERWISE.)

16. EXTERIOR SHEATHING TO BE 1/2" CDX EXTERIOR PLYWOOD (UNLESS NOTED OTHERWISE.)

17. ALL INTERIOR WALLS TO BE 2X4 STUDS WITH 1/2" THICK GYPSUM WALL BOARD - (UNLESS NOTED OTHERWISE.)

18. HEADER OR GIRDER THAT HAVE A STEEL OPTION, IF USED THE SUPPORT 1 STEEL COLUMN. (UNLESS NOTED OTHERWISE.) TO BE A HSS 4x4x 4

19. ALL STUDS, SILL, AND POSTS SHALL BE SPRUCE-PINE-FIR ALLOWING 75% NO.1 AND 25% NO. 2 GRADE

12. ALL BEAMS, JOISTS, RAFTERS, AND HEADERS SHALL BE KD-NO. 1 DOUGLAS-FIR 19% MAXIMUM MOISTURE CONTENT. DENSE NO. 2 GRADE OR BETTER (UNLESS DRAWING CALLS FOR ENGINEERED LUMBER)

13. OTHER FRAMING LUMBER TO BE NO. 2 SPF

14. ALL INTERIOR DOOR HEADERS IN NON-BEARING WALLS TO BE BUILT WITH (2) 2X8 AND ALL DOOR HEADERS IN BEARING WALLS TO BE BUILT WITH (2) 2X10. UNLESS OTHERWISE NOTED

15. ALL JOIST UNDERNEATH ALL BATHTUBS TO BE DOUBLED

16. EXTERIOR WALLS TO BE 2x6 WOOD STUDS @ 16" O.C. UNLESS NOTED OTHERWISE

17. EXTERIOR SHEATHING TO BE 1/2" CDX EXTERIOR PLYWOOD UNLESS NOTED OTHERWISE

18. EXTERIOR SIDING SHALL BE (SELECTED BY OWNER) UNLESS NOTED OTHERWISE.

19. ALL INTERIOR WALLS TO BE 2x4 STUDS WITH 1/2" THICK GYPSUM WALL BOARD UNLESS NOTED OTHERWISE.

20. ALL WET WALLS SHALL BE WATER RESISTANT GYPSUM WALL BOARD.

21. PROVIDE 5/8" TYPE "X" GYPSUM WALL BOARD WHERE INDICATED FOR FIRE RATING.

22. PROVIDE A MINIMUM OF 3/4" GYPSUM BOARD TO UNDERSIDE OF ALL FLOOR FRAMING MEMBERS (EVEN IN UNFINISHED SPACES) AS REQUIRED BY CODE

23. ALL EXTERIOR DECKING AND POSTS SHALL BE PRESSURE TREATED (WOLMANIZED OR OSMOSE).

24. ALL WOOD IN CONTACT W/ CONC. OR GRADE TO BE NO. 2 GRADE SOUTHERN YELLOW PINE AND BE PRESSURE TREATED. (WOLMANIZED OR OSMOSE) TO PREVENT AGAINST TERMITES AND DECAY.

25. CABINETS/CASEWORK TO BE DESIGNED BY OTHERS. CABINET DESIGNER SHOULD FIELD MEASURE AREA OF WORK AFTER DRYWALL INSULATION FOR PROPER FITTING.

26. ALL SELECTIONS OF FINISHED MATERIALS, STAINS, COLORS, ETC. TO BE SELECTED BY OWNER UNLESS NOTED OTHERWISE.

27. ALL WALL AND CEILING FINISHES SHALL COMPLY WITH TABLE 803.13 OF THE 2020 BCNYS FOR FLAME SPREAD.

28. MOISTURE CONTROL IN ALL FRAMED WALLS, FLOORS AND ROOF/CEILING COMPRISING ELEMENTS OF THE BLDG. THERMAL ENVELOPE, A VAPOR RETARDER SHALL BE INSTALLED ON THE WARM IN WINTER SIDE OF THE INSULATION.

29. PROVIDE A HARD-WIRED SMOKE DETECTOR AT THE FOLLOWING LOCATIONS:  
A. IN EACH SLEEPING ROOM.  
B. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM.  
C. ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS

30. PROVIDE A HARD-WIRED CARBON MONOXIDE ALARM OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN ALL DWELLINGS THAT CONTAIN A FUEL FIRED APPLIANCE OR IS ATTACHED TO A GARAGE THAT HAS AN OPENING TO THE DWELLING.

31. ALL HABITABLE ROOMS SHALL HAVE NATURAL LIGHT NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS. AND NOT LESS THAN 4 PERCENT OF NATURAL VENTILATION.

32. SECTION 903.2.8 AN AUTOMATIC SPRINKLER SYSTEM INSTALLED ACCORDING TO SECTION 903.3 SHALL BE PROVIDED THROUGHOUT ALL BUILDINGS WITH A GROUP "R" FIRE AREA

## ENERGY NOTES

BUILDING TO COMPLY WITH THE 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (ECCONYS).

SECTION R401.3 CERTIFICATE A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL AND POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM OR AN APPROVED LOCATION INSIDE THE BUILDING, WHERE LOCATED ON AN ELECTRICAL PANEL, THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST THE PREDOMINANT R-VALUES OF INSULATION INSTALLED IN OR ON CEILING/ROOF, WALLS, FOUNDATION (SLAB, BASEMENT WALL, CRAWLSPACE WALL AND FLOOR) AND DUCTS OUTSIDE CONDITIONED SPACES; U-FACTORS FOR PENETRATION AND THE SOLAR HEAT GAIN COEFFICIENT (SHGC) OF PENETRATION, AND THE RESULTS FROM ANY REQUIRED DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING DONE ON THE BUILDING, WHERE THERE IS MORE THAN ONE VALUE FOR EACH COMPONENT, THE CERTIFICATE SHALL LIST THE VALUE COVERING THE LARGEST AREA. THE CERTIFICATE SHALL LIST THE TYPES AND EFFICIENCIES OF HEATING, COOLING AND SERVICE WATER HEATING EQUIPMENT, WHERE A GAS-FIRED UNVENTED ROOM HEATER, ELECTRIC FURNACE OR BASEBOARD ELECTRIC HEATER IS INSTALLED IN THE RESIDENCE, THE CERTIFICATE SHALL LIST "GAS-FIRED UNVENTED ROOM HEATER," "ELECTRIC FURNACE" OR "BASEBOARD ELECTRIC HEATER," AS APPROPRIATE. AN EFFICIENCY LABEL NOT LISTED FOR GAS-FIRED UNVENTED ROOM HEATERS, ELECTRIC FURNACES OR ELECTRIC BASEBOARD HEATERS.

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.

SECTION 402 BUILDING THERMAL ENVELOPE

ALL VALUES INDICATED ARE THE PRESCRIPTIVE METHOD FOR CLIMATE ZONE 5. IF A RESCHECK IS PROVIDED WITH SUBSTITUTED VALUES, THAN THE RESCHECK SHALL BE FOLLOWED.

ALL R-VALUES ARE ACCORDING TO TABLE R402.1.2, AND U-FACTOR VALUES ARE ACCORDING TO TABLE R402.1.4.

CEILING TO HAVE R-49 INSULATION

R-38 SHALL BE DEEMED TO SATISFY THE REQUIREMENT FOR R-49 WHEREVER THE FULL HEIGHT OF UNCOMPRESSED R-38 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES (100% OF THE CEILING AREA)

WOOD FRAMED WALLS OF BUILDING TO HAVE R-20 CAVITY INSULATION OR R-13 CAVITY INSULATION + R-5 CONTINUOUS INSULATION

MASS WALLS ABOVE GROUND (IF APPLICABLE) TO HAVE R-13 INSULATION OR R-17 IF MORE THAN HALF OF THE INSULATION IS ON THE INTERIOR OF THE MASS WALL

BASEMENT WALLS SHALL HAVE MINIMUM OF R-15 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE BASEMENT WALL OR A MINIMUM OF R-19 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL.

BASEMENT WALLS ASSOCIATED WITH CONDITIONED BASEMENTS SHALL BE INSULATED FROM THE TOP OF THE BASEMENT WALL DOWN TO 10 FEET BELOW GRADE OR TO THE BASEMENT FLOOR, WHICHEVER IS LESS. WALLS ASSOCIATED WITH UNCONDITIONED BASEMENTS SHALL MEET THIS REQUIREMENT UNLESS THE FLOOR OVERHEAD IS INSULATED

FLOORS TO HAVE R-30 INSULATION OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY, R-19 MINIMUM.

PENETRATION OF BUILDING TO HAVE A U-FACTOR OF 0.30 (EXCLUDING SKYLIGHTS).

SLAB ON GRADE (IF APPLICABLE) TO HAVE R-10 INSULATION FOR A DEPTH OF 2 FEET.

SLAB-ON-GRADE FLOORS WITH A FLOOR SURFACE LESS THAN 12 INCHES (305 MM) BELOW GRADE SHALL BE INSULATED WITH R-10 INSULATION. THE INSULATION SHALL EXTEND DOWNWARD FROM THE TOP OF THE SLAB ON THE OUTSIDE OR INSIDE OF THE FOUNDATION WALL. INSULATION LOCATED BELOW GRADE SHALL BE EXTENDED 2'-0" BY ANY COMBINATION OF VERTICAL INSULATION.

CRAWL SPACE SHALL HAVE MINIMUM R-15 OF CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE WALL OR MINIMUM OF R-19 OF CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL.

SKYLIGHTS TO HAVE A U FACTOR OF 0.55.

MAXIMUM PENETRATION U-FACTOR AND SHGC

THE AREA-WEIGHTED AVERAGE MAXIMUM FENESTRATION U-FACTOR PERMITTED USING TRADEOFFS FROM SECTION R402.1.5 OR R405 SHALL BE 0.48. FOR VERTICAL FENESTRATION, AND 0.75 FOR SKYLIGHTS.

FIRE SEPARATION WALLS BETWEEN WELING UNITS IN TWO-FAMILY DWELLINGS AND MULTIPLE SINGLE-FAMILY DWELLINGS (TOWNHOUSES) SHALL BE INSULATED TO NO LESS THAN R-10 AND THE WALLS SHALL BE AIR SEALED IN ACCORDANCE WITH SECTION 402.4

THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE. THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION.

THE COMPONENTS OF THE BUILDING THERMAL ENVELOPE SHALL COMPLY WITH TABLE R402.4.1.1 OF THE 2020 ECCONYS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE CRITERIA INDICATED IN TABLE R402.4.1.1, AS APPLICABLE TO THE METHOD OF CONSTRUCTION.

WINDOWS, SKYLIGHTS AND SLIDING GLASS DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.3 CFM PER SQUARE FOOT (1.5 L/S/M2), AND SWINGING DOORS NO MORE THAN 0.5 CFM PER SQUARE FOOT (2.6 L/S/M2), WHEN TESTED ACCORDING TO NFRC 400 OR AAMA/WOMA/CSA 101/1.5.2/A440 BY AN ACCREDITED, INDEPENDENT LABORATORY AND LISTED AND LABELED BY THE MANUFACTURER

VAPOR BARRIER TO BE ON HEATED OR LIVING SIDE IN FLOORS, WALLS AND CEILING (WHERE APPLICABLE)

FIBERGLASS SILL PLATE INSULATION TO BE USED UNDER ALL SILL PLATES, WHETHER ON CRAWL SPACE WALLS OR SLABS.

TESTING BUILDING ENVELOPE SHALL BE TESTED ACCORDING TO SECTION R402.4.1.2

THE BUILDING OR DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE NOT EXCEEDING THREE AIR CHANGES PER HOUR IN CLIMATE ZONES 3 THROUGH 8. TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM E 779 OR ASTM E 1827 AND REPORTED AT A PRESSURE OF 0.2 INCH W.G. (50 PASSELS). TESTING SHALL BE PERFORMED AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING THERMAL ENVELOPE.

SECTION R403 SYSTEMS BUILDING MECHANICAL SYSTEMS SHALL COMPLY WITH SECTION R403 OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (ECCONYS)

EACH UNIT TO HAVE AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR EACH SEPARATE HEATING AND COOLING

CONTROLLING THE PRIMARY HEATING OR COOLING SYSTEM OF THE DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY. THIS THERMOSTAT SHALL INCLUDE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C). THE THERMOSTAT SHALL INITIALLY BE PROGRAMMED BY THE MANUFACTURER WITH A HEATING TEMPERATURE SET POINT NO HIGHER THAN 70°F (21°C) AND A COOLING TEMPERATURE SET POINT NO LOWER THAN 78°F (26°C).

HEAT PUMPS HAVING SUPPLEMENTARY ELECTRIC-RESISTANCE HEAT SHALL HAVE CONTROLS THAT, EXCEPT DURING DEFROST, PREVENT SUPPLEMENTAL HEAT OPERATION WHEN THE HEAT PUMP COMPRESSOR CAN MEET THE HEATING LOAD.

ALL SUPPLY AND RETURN DUCTS IN ATTICS SHALL BE INSULATED TO A MINIMUM OF R-8 WHERE 3 INCHES IN DIAMETER AND GREATER AND R-6 WHERE LESS THAN 3 INCHES IN DIAMETER. SUPPLY AND RETURN DUCTS IN OTHER PORTIONS OF THE BUILDING SHALL BE INSULATED TO A MINIMUM OF R-6 WHERE 3 INCHES IN DIAMETER OR GREATER AND R-4.2 WHERE LESS THAN 3 INCHES IN DIAMETER.

EXCEPTION: DUCTS OR PORTIONS THEREOF LOCATED COMPLETELY INSIDE THE BUILDING THERMAL ENVELOPE.

SEALING: DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE INTERNATIONAL MECHANICAL CODE OR INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE.

EXCEPTIONS:

1. AIR-IMPERMEABLE SPRAY FOAM PRODUCTS SHALL BE PERMITTED TO BE APPLIED WITHOUT ADDITIONAL JOINT SEALS.

2. FOR DUCTS HAVING A STATIC PRESSURE CLASSIFICATION OF LESS THAN 2 INCHES OF WATER COLUMN (500 PA), ADDITIONAL CLOSURE SYSTEMS SHALL NOT BE REQUIRED FOR CONTINUOUSLY WELDED JOINTS AND SEAMS, AND LOCKING-TYPE JOINTS AND SEAMS OF OTHER THAN THE SNAP-LOCK AND BUTTON-LOCK TYPES.

ALL DUCTS TO BE TESTED FOR LEAKAGE ACCORDING TO SECTION R403.3.3 OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (ECCONYS)

BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS

ALL DUCTS TO COMPLY WITH SECTION R403.3 OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (ECCONYS)

ALL MECHANICAL SYSTEM PIPING INSULATION TO COMPLY WITH SECTION R403.4 OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (ECCONYS)

SERVICE HOT WATER SYSTEMS TO COMPLY WITH SECTION R403.5 OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (ECCONYS)

HEATED WATER CIRCULATION SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION R403.5.1.1 HEAT TRACE TEMPERATURE MAINTENANCE SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION R403.5.1.2. AUTOMATIC CONTROLS, TEMPERATURE SENSORS AND PUMPS SHALL BE ACCESSIBLE.

MANUAL CONTROLS SHALL BE READILY ACCESSIBLE.

R403.5.1.1 CIRCULATION SYSTEMS: HEATED WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMOSYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.

R403.5.1.2 HEAT TRACE SYSTEMS: ELECTRIC HEAT TRACE SYSTEMS SHALL COMPLY WITH IEEE 515.1 OR ILL 515. CONTROLS FOR SUCH SYSTEMS SHALL AUTOMATICALLY ADJUST THE ENERGY INPUT TO THE HEAT TRACING TO MAINTAIN THE DESIRED WATER TEMPERATURE IN THE PIPING IN ACCORDANCE WITH THE TIMES WHEN HEATED WATER IS USED IN THE OCCUPANCY

R403.6.3 EQUIPMENT SIZING AND EFFICIENCY RATING. HEATING AND COOLING EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH ACCA MANUAL S BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL J OR OTHER APPROVED HEATING AND COOLING CALCULATION METHODOLOGIES. NEW OR REPLACEMENT HEATING AND COOLING EQUIPMENT SHALL HAVE AN EFFICIENCY RATING EQUAL TO OR GREATER THAN THE MINIMUM REQUIRED BY FEDERAL LAW FOR THE GEOGRAPHIC LOCATION WHERE THE EQUIPMENT IS INSTALLED.

R403.8 SYSTEMS SERVING MULTIPLE DWELLING UNITS. SYSTEMS SERVING MULTIPLE DWELLING UNITS SHALL COMPLY WITH SECTIONS C403 AND C404 OF THE ECCONYS - COMMERCIAL

R403.9 SNOW MELT AND ICE SYSTEM CONTROLS. SNOW- AND ICE-MELTING SYSTEMS, SUPPLIED THROUGH ENERGY SERVICE TO THE BUILDING, SHALL INCLUDE AUTOMATIC CONTROLS CAPABLE OF SHUTTING OFF THE SYSTEM WHEN THE PAVEMENT TEMPERATURE IS ABOVE 50°F (10°C), AND NO PRECIPITATION IS FALLING AND AN AUTOMATIC OR MANUAL CONTROL THAT WILL ALLOW SHUTOFF WHEN THE OUTDOOR TEMPERATURE IS ABOVE 40°F (4.8°C).

SECTION R404 ELECTRICAL POWER AND LIGHTING SYSTEMS A MINIMUM OF 90 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS. FUEL GAS SYSTEMS SHALL NOT HAVE CONTINUOUSLY BURNING PILOT LIGHTS.

IN ALL BUILDINGS HAVING INDIVIDUAL DWELLING UNITS, PROVISIONS SHALL BE MADE TO DETERMINE THE ELECTRICAL ENERGY CONSUMED BY EACH UNIT BY SEPARATELY METERING OR MONITORING INDIVIDUAL DWELLING UNITS.

THE REMAINING PORTIONS OF THE JOISTS OR TRUSS BOTTOM CHORDS SHALL BE DESIGNED FOR A UNIFORMLY DISTRIBUTED CONCURRENT LIVE LOAD OF NOT LESS THAN 10 POUNDS PER SQUARE FOOT.

K. ATTIC SPACES SERVED BY STAIRWAYS OTHER THAN THE FALL-DOWN TYPE SHALL BE DESIGNED TO SUPPORT THE MINIMUM LIVE LOAD SPECIFIED FOR HABITABLE ATTICS AND SLEEPING ROOMS.

Z. HANDRAILS AND GUARDS SHALL BE DESIGNED TO RESIST A LINEAR LOAD OF 50 POUNDS PER LINEAR FOOT (PLF) (0.73 kN/M) IN ACCORDANCE WITH SECTION 4.5.1.1 OF ASCE 7. GLASS HANDRAIL ASSEMBLIES AND GUARDS SHALL COMPLY WITH SECTION 2407.

HANDRAILS AND GUARDS SHALL BE DESIGNED TO RESIST A CONCENTRATED LOAD OF 200 POUNDS (89 kN) IN ACCORDANCE WITH SECTION 4.5.1.1 OF ASCE 7.

INTERMEDIATE RAILS (ALL THOSE EXCEPT THE HANDRAIL), BALUSTERS AND PANEL FILLERS SHALL

## WALL CONSTRUCTION

1. ALL STUDS SHALL BE 16" O.C. AND SHALL BE TOE NAILED UNLESS OTHERWISE NOTED

2. DOUBLE TOP PLATES SHALL BE LAPPED AT CORNERS WITH END JOINTS BEING OFFSET AT LEAST 24"

3. STUDS MAY BE NOTCHED MAX 25% OF ITS WIDTH IN A BEARING WALL, MAX 40% OF ITS WIDTH IN A NON-BEARING WALL.

4. ANY STUD MAY BE DRILLED/BORED TO A MAX OF 40% OF ITS WIDTH IF A MIN. OF 5/8" IS MAINTAINED FROM STUD FACE, AND HOLE IS NOT LOCATED IN THE SAME SECTION AS A NOTCH/CUT

5. FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:

A) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:  
A.1) VERTICALLY AT THE CEILING AND FLOOR LEVELS.  
A.2) HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET

B) AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILING AND COVE CEILING.

C) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN, ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION 718.2.4

D) AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION, THE MATERIAL FILLING THIS ANNULAR SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E 136 REQUIREMENTS.

E) FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE BCNYS SECTION 2111.13

F) FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

6. FIRE BLOCKING SHALL CONSIST OF 2X LUMBER OR UNFACED FIBERGLASS BATT INSULATION USED AS FIRE BLOCKING SHALL FILL THE ENTIRE CROSS SECTION OF THE WALL CAVITY TO A MINIMUM HEIGHT OF 16 INCHES (406 MM) MEASURED VERTICALLY. WHEN PIPING, CONDUIT OR SIMILAR OBSTRUCTIONS ARE ENCOUNTERED, THE INSULATION SHALL BE PACKED TIGHTLY AROUND THE OBSTRUCTION.

7. DRAFTSTOPPING SHALL BE PROVIDED WHERE CEILING IS SUSPENDED UNDER THE FLOOR FRAMING OR FLOORS FRAMING IS CONSTRUCTED OF TRUSS-TYPE OPEN-WEB AND THERE IS A USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE.

8. DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1000 SQUARE FEET. DRAFTSTOPPING SHALL COMPLY WITH SECTION 718.2.4

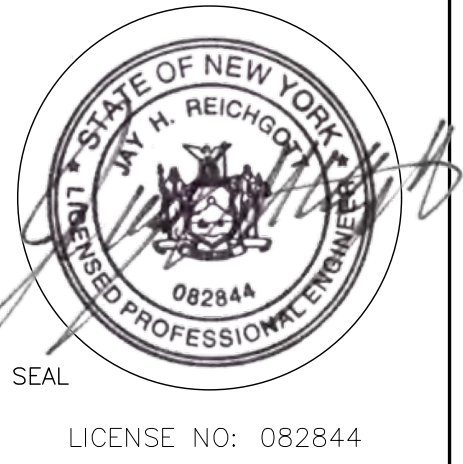
9. EXTERIOR SHEATHING SHALL BE EITHER

TABLE 2304.10.1 FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
Roof		
1. Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common (21/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common (21/2" x 0.131") 2-3" x 0.131" nails 2-3" 14 gage staples	Each end, toenail
	2-16d common (31/2" x 0.162") 3-3" x 0.131" nails 3-3" 14 gage staples	End nail
Flat blocking to truss and web filler	16d common (31/2" x 0.162") @ 6" o.c. 3" x 0.131" nails @ 6" o.c. 3" x 14 gage staples @ 6" o.c.	Face nail
2. Ceiling joists to top plate	3-8d common (21/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each joist, toenail
3. Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common (31/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
4. Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail
5. Collar tie to rafter	3-10d common (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
6. Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10 common (3" x 0.148"); or 3-16d box (31/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Toenail
7. Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common (31/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown; or	End nail
	3-10d common (3" x 0.148"); or 4-16d box (31/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Toenail
Wall		
8. Stud to stud (not at braced wall panels)	16d common (31/2" x 0.162");	24" o.c. face nail
	10d box (3" x 0.128"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	16" o.c. face nail
9. Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d common (31/2" x 0.162"); or	16" o.c. face nail
	16d box (31/2" x 0.135"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	12" o.c. face nail
10. Built-up header (2" to 2" header)	16d common (31/2" x 0.162"); or	16" o.c. each edge, face nail
11. Continuous header to stud	16d box (31/2" x 0.135")	12" o.c. each edge, face nail
12. Top plate to top plate	4-8d common (21/2" x 0.131"); or 4-10d box (3" x 0.128")	Toenail
13. Top plate to top plate, at end joints	16d common (31/2" x 0.162"); or	16" o.c. face nail
	10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	12" o.c. face nail
14. Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	8-16d common (31/2" x 0.162"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails; or 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of end joint)
	16d common (31/2" x 0.162"); or	16" o.c. face nail
15. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	16d box (31/2" x 0.135"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	12" o.c. face nail
	2-16d common (31/2" x 0.162"); or 3-16d box (31/2" x 0.135"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16. Stud to top or bottom plate	4-8d common (21/2" x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown; or	Toenail
	2-16d common (31/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	End nail
17. Top plates, laps at corners and intersections	2-16d common (31/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Face nail
18. 1" brace to each stud and plate	2-8d common (21/2" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Face nail
19. 1" x 6" sheathing to each bearing	2-8d common (21/2" x 0.131"); or 2-10d box (3" x 0.128")	Face nail
20. 1" x 8" and wider sheathing to each bearing	3-8d common (21/2" x 0.131"); or 3-10d box (3" x 0.128")	Face nail
Floor		
21. Joist to sill, top plate, or girder	3-8d common (21/2" x 0.131"); or floor 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Toenail
22. Rim joist, band joist, or blocking to top plate, sill or other framing below	8d common (21/2" x 0.131"); or 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	6" o.c., toenail
23. 1" x 6" subfloor or less to each joist	2-8d common (21/2" x 0.131"); or 2-10d box (3" x 0.128")	Face nail
24. 2" subfloor to joist or girder	2-16d common (31/2" x 0.162")	Face nail
25. 2" planks (plank & beam — floor & roof)	2-16d common (31/2" x 0.162")	Each bearing, face nail

26. Built-up girders and beams, 2" lumber layers	10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	24" o.c. face nail at top and bottom staggered on opposite sides	
	And: 2-20d common (4" x 0.192"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Ends and at each splice, face nail	
27. Ledger strip supporting joists or rafters	3-16d common (31/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Each joist or rafter, face nail	
28. Joist to band joist or rim joist	3-16d common (31/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	End nail	
29. Bridging or blocking to joist, rafter or truss	2-8d common (21/2" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Each end, toenail	
Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing			
30. 3/8" — 1/2"	6d common or deformed (2" x 0.113") (subfloor and wall)	Edges (inches) 6 Intermediate supports (inches) 12	
	8d common or deformed (21/2" x 0.131") (roof) or RRSR-01 (23/8" x 0.113") nail (roof)	6 12	
	23/8" x 0.113" nail (subfloor and wall)	6 12	
	13/4" 16 gage staple, 7/16" crown (subfloor and wall)	4 8	
	23/8" x 0.113" nail (roof)	4 8	
31. 19/32" — 3/4"	13/4" 16 gage staple, 7/16" crown (roof)	3 6	
	8d common (21/2" x 0.131"); or 6d deformed (2" x 0.113") (subfloor and wall)	6 12	
32. 7/8" — 1 1/4"	8d common or deformed (21/2" x 0.131") (roof) or RRSR-01 (23/8" x 0.113") nail (roof)	6 12	
	23/8" x 0.113" nail; or 2" 16 gage staple, 7/16" crown	4 8	
33. 1/2" fiberboard sheathing <sup>b</sup>	Other exterior wall sheathing		
	11/2" galvanized roofing nail (7/16" head diameter); or 11/4" 16 gage staple with 7/16" or 1" crown	3 6	
34. 5/8" fiberboard sheathing <sup>b</sup>	13/4" galvanized roofing nail (7/16" diameter head); or 11/2" 16 gage staple with 7/16" or 1" crown	3 6	
	Wood structural panels, combination subfloor underlayment to framing		
35. 3/4" and less	8d common (21/2" x 0.131"); or 6d deformed (2" x 0.113")	6 12	
36. 7/8" — 1"	8d common (21/2" x 0.131"); or 8d deformed (21/2" x 0.131")	6 12	
37. 1 1/8" — 1 1/4"	10d common (3" x 0.148"); or 8d deformed (21/2" x 0.131")	6 12	
38. 1/2" or less	Panel siding to framing		
	6d corrosion-resistant siding (17/8" x 0.108"); or 6d corrosion-resistant casing (2" x 0.099")	6 12	
39. 5/8"	8d corrosion-resistant siding (23/8" x 0.128"); or 8d corrosion-resistant casing (21/2" x 0.113")	6 12	
	Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing		
40. 1/4"	4d casing (11/2" x 0.080"); or 4d finish (11/2" x 0.072")	6 12	
41. 3/8"	6d casing (2" x 0.099"); or 6d finish (Panel supports at 24 inches)	6 12	

- For S1: 1 inch = 25.4 mm.
- Nails spaced at 6 inches at intermediate supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.
  - Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
  - Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafter shall be permitted to be reduced by one nail.
  - RRSR-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.



WARNING: IT IS A VIOLATION OF NY STATE EDUCATION LAW, ARTICLE 145, SECTION 7209 FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT, TO ALTER THESE DOCUMENTS IN ANY WAY. IF ALTERED, THE ALTERING ENGINEER/ARCHITECT SHALL AFFIX HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

**PROPOSED 4 CONDO UNITS FOR:**  
**338 LAKE SHORE DR**  
**VILLAGE OF SOUTH BLOOMING GROVE**  
**ORANGE COUNTY, NEW YORK**

WRITTEN STATEMENT  
TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE AND THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AS CURRENTLY IN EFFECT.

Project No. WEN1201  
Drawn By: LH  
Reviewed By: BRB  
Date: 02/19/2024

Revisions:  
1-6-2025 REVISED AS PER B.D.  
7-16-2025 REVISED PER CLIENT  
11-13-2025 REVISED PER CLIENT



1 800 263-7265  
www.openjoisttriforce.com



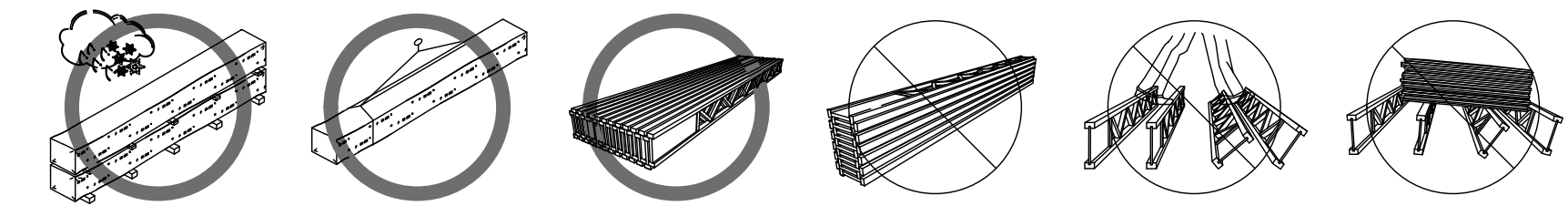
This Installation Guide is intended to provide general information for a proper TRIFORCE® open joist installation. This Installation Guide must be used in conjunction with the manufacturer's Specifier Guide or Placement Guide. For further information or assistance, contact a Barrette Structural Distribution representative. In keeping with its ongoing commitment to product development, Barrette Structural Distribution periodically updates its literature. Please visit our website (www.openjoisttriforce.com) to confirm that this version is the most recent.

**Storage and Handling**

1. Keep TRIFORCE® open joist bundles wrapped until the time of installation to protect them from bad weather.
2. Use wood filler to separate bundles.
3. Always store, stack and handle TRIFORCE® open joist vertically and level—never flat.
4. Do not store TRIFORCE® open joist in direct contact with the ground.

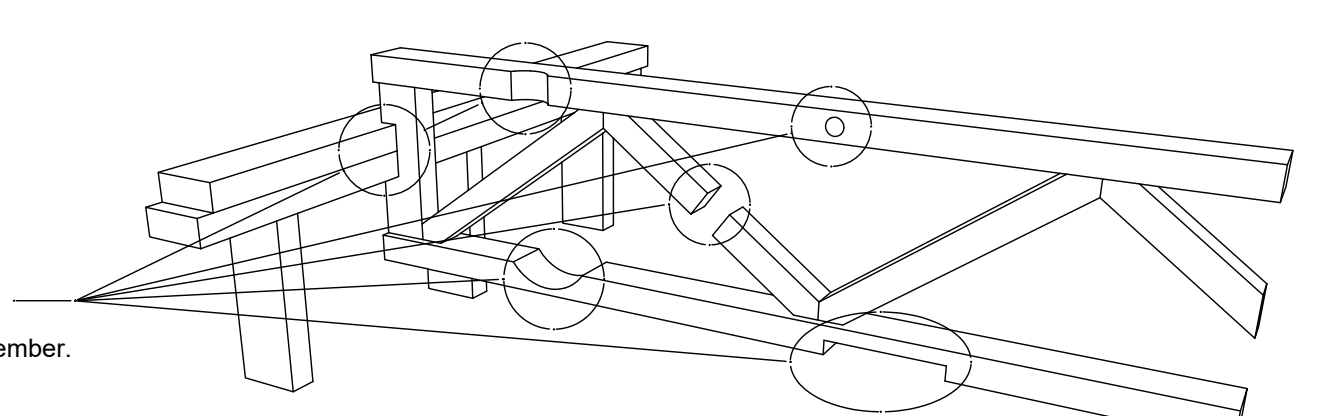
**Installation Instructions**

1. Except for trimming the joist length on the OSB end panel, chords should never be cut, drilled or notched.
2. Install TRIFORCE® open joist so that top and bottom flanges are within 1/2" of true vertical alignment.
3. Joists must be restrained at the ends to prevent rollover.
4. Apply concentrated loads only on top flanges. Do not suspend concentrated loads from bottom flanges, except for light loads such as ceiling fans or light fixtures.
5. TRIFORCE® open joists must be protected from bad weather prior to installation.
6. Joists should be used in dry conditions only.
7. Never install a damaged TRIFORCE® open joist.
8. If optional strongbacks are installed, they must be made of dry lumber.
9. End bearing must be a minimum of 1 1/2". Placement Guide may specify longer bearings.
10. To transfer a vertical load applied above the joist to a bearing, it may be necessary to add a rim board, squish blocks or blocking panels.
11. Joists must not be in direct contact with masonry or concrete.
12. DO NOT WALK ON JOISTS until properly braced. Serious injury may occur.
13. DO NOT PILE construction materials on joists until they are fully installed, braced and have subfloor installed.
14. When nailing into the joist flange, nails must be spaced at least 2 1/2" o.c.
15. Details on the following pages show only the installation requirements specific to TRIFORCE® open joists. For other installation requirements, refer to the building code or manufacturer's instructions.
16. Adhesives used for floor systems should comply with ASTM D3499-03 Standard Specification for Field-Gluing Plywood to Lumber Framing for Floor Systems. When gluing the subfloor to the joists, follow the instructions of the adhesive manufacturer.

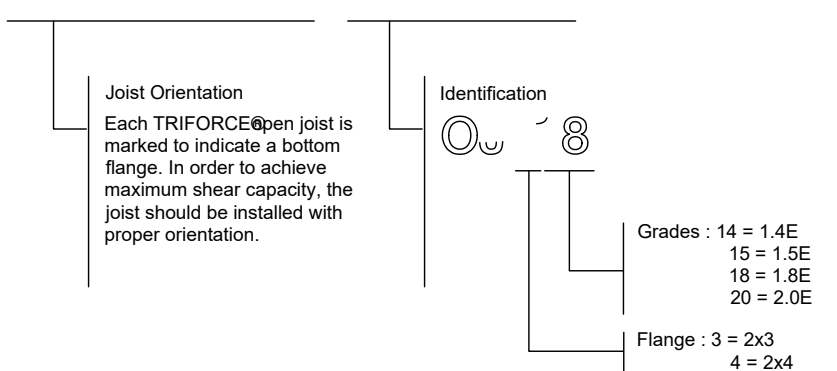


**Not Permitted**

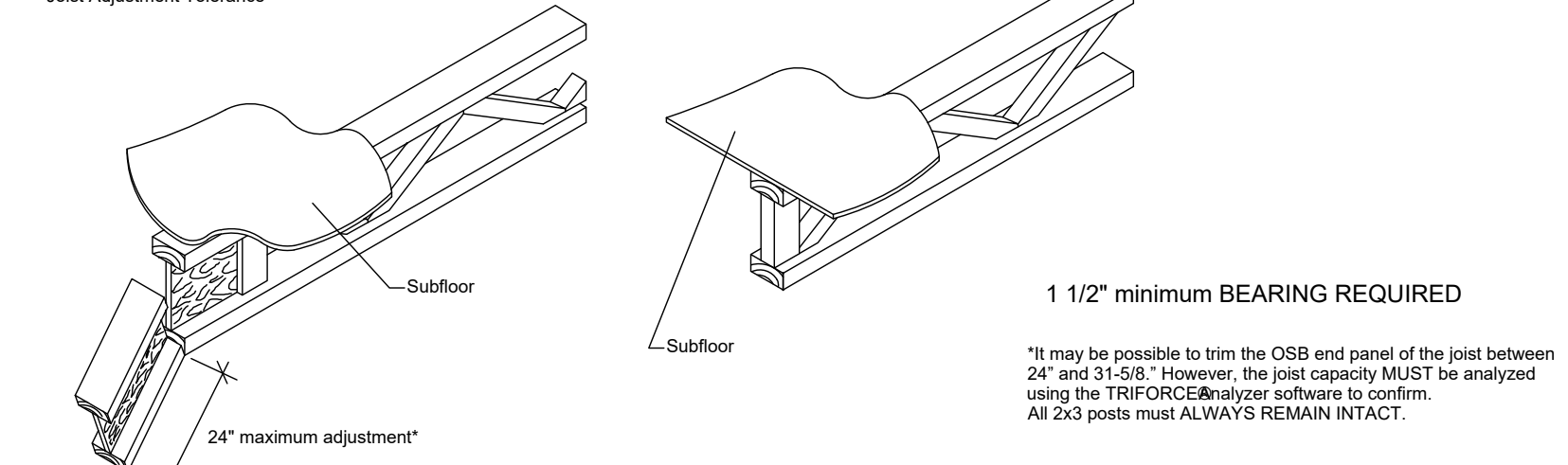
Never notch, cut or drill a joist member.



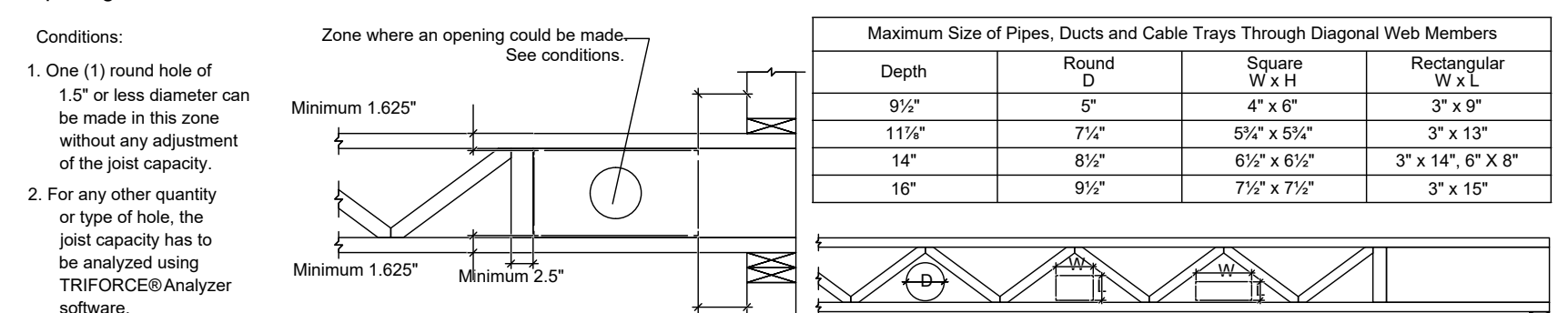
**Joist Identification and Orientation**



**Detail 1**

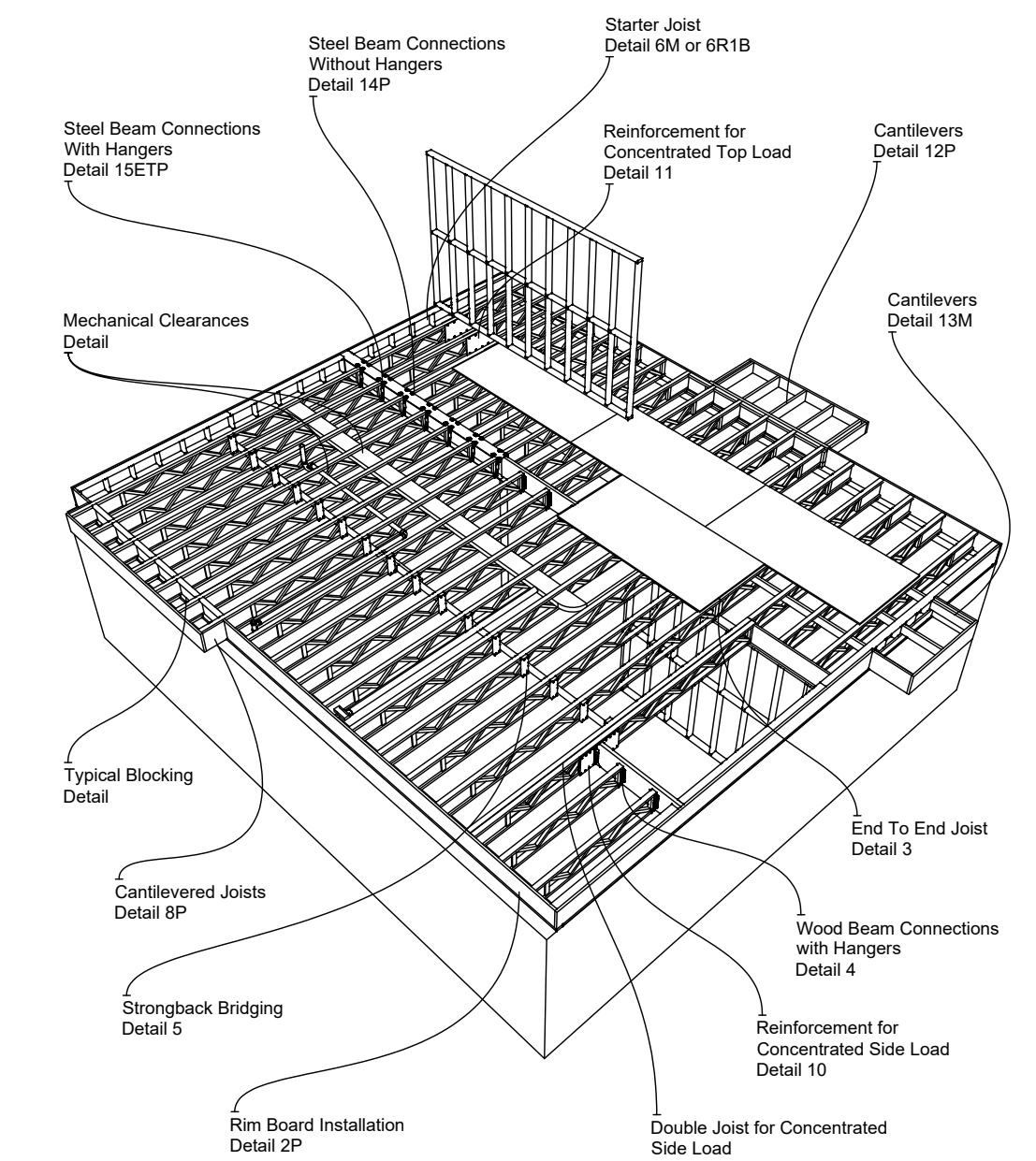


**Openings in the OSB End Panel of a Joist**



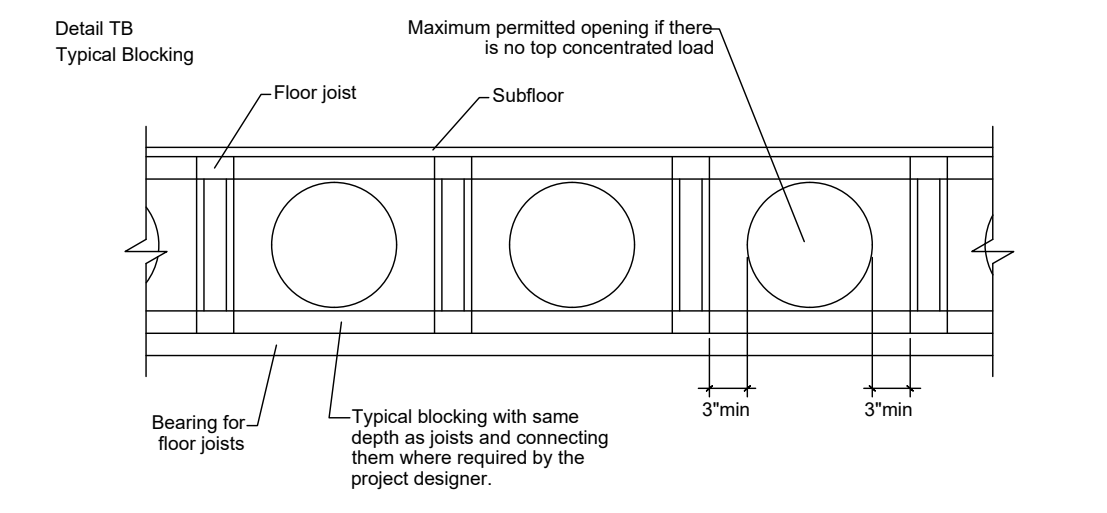
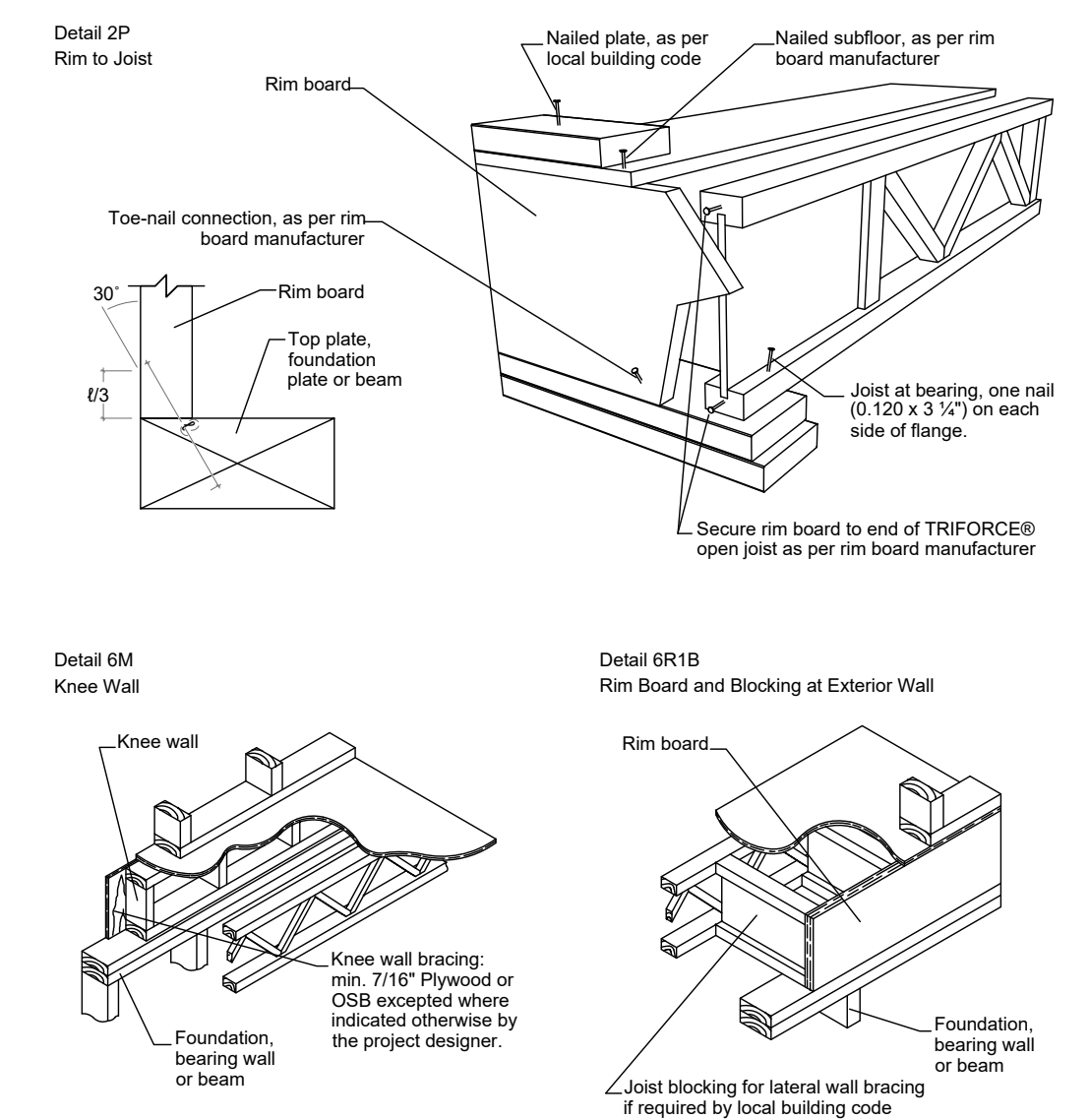
**Standard Details**

This section provides standard details for normal framing situations. For loads that are not uniformly distributed and/or for joists supported by bearings other than end bearings, joist capacity must be verified using the manufacturer's Analyzer software. The project designer and/or general contractor is responsible for determining if standard details apply.



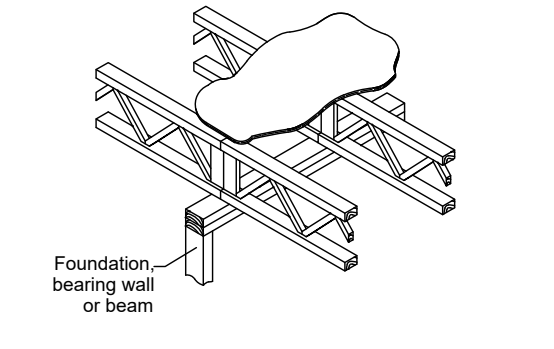
**Rim Board Installation**

Standard Rim Board Sizes  
Depth (inches): 9 1/4, 11 1/4, 14, 16.  
A structural rim board is required when TRIFORCE® open joists are installed perpendicular to bearing walls.  
TRIFORCE® open joists should not be used as solo starter joists on exterior walls.  
The vertical and/or horizontal loads to be transferred must be verified using the manufacturer's proprietary capacities.



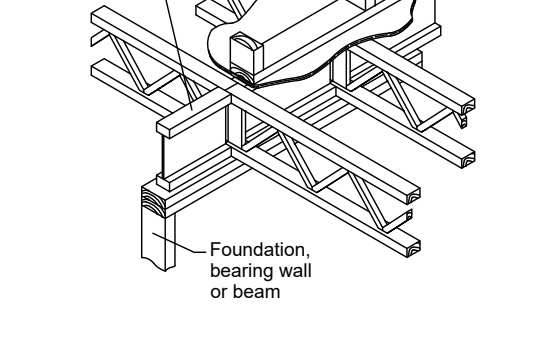
**Detail 3**

End to End Joist  
Blocking not required between joists for detached one- and two-family dwellings, assigned to Seismic Design Category A, B or C or located where the mapped S<sub>s</sub> ≤ 0.4g



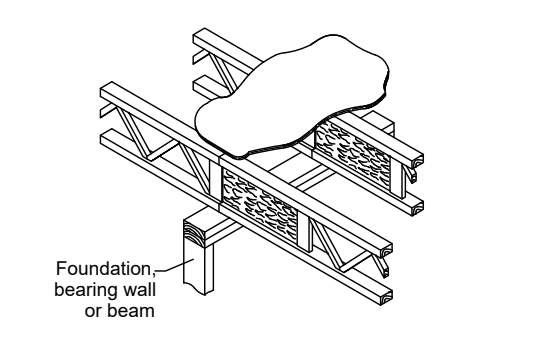
**Detail 3B**

End to End Joist with Bearing Wall Above  
Typical Blocking



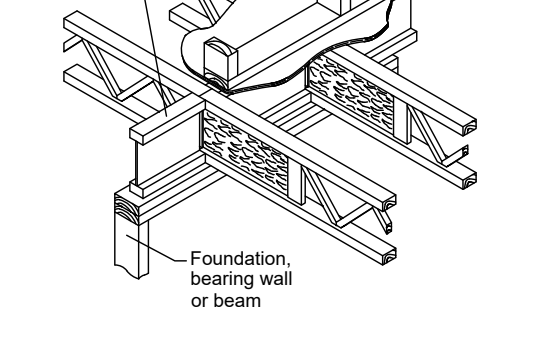
**Detail 3P1**

End to End Joist  
Blocking not required between joists for detached one- and two-family dwellings, assigned to Seismic Design Category A, B or C or located where the mapped S<sub>s</sub> ≤ 0.4g



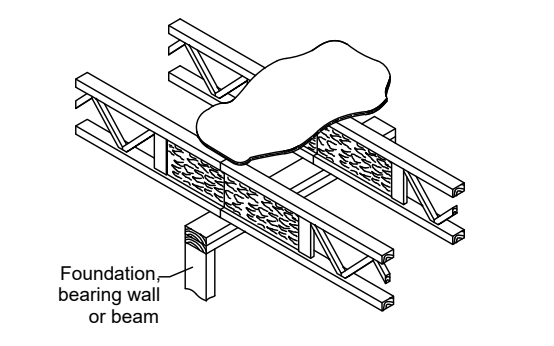
**Detail 3P1B**

End to End Joist with Bearing Wall Above  
Typical Blocking



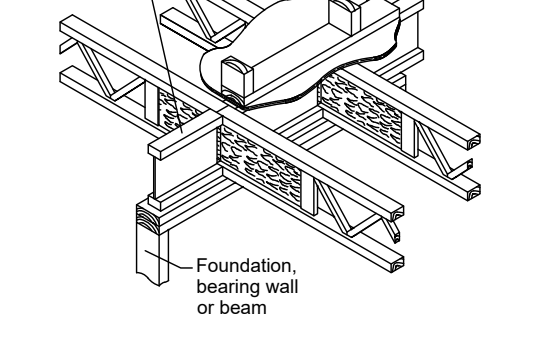
**Detail 3P2**

End to End Joist  
Blocking not required between joists for detached one- and two-family dwellings, assigned to Seismic Design Category A, B or C or located where the mapped S<sub>s</sub> ≤ 0.4g



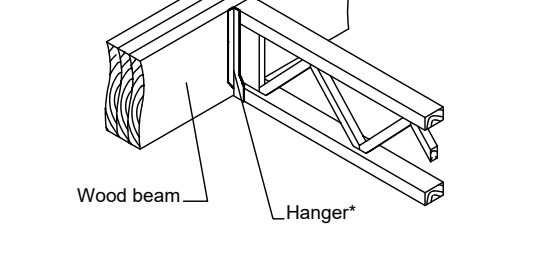
**Detail 3P2B**

End to End Joist with Bearing Wall Above  
Typical Blocking



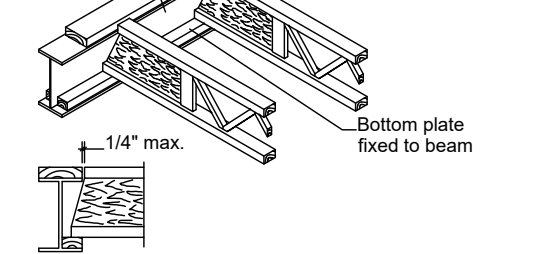
**Detail 4**

Wood Beam Connections with Hangers  
\* top mount or face mount hangers



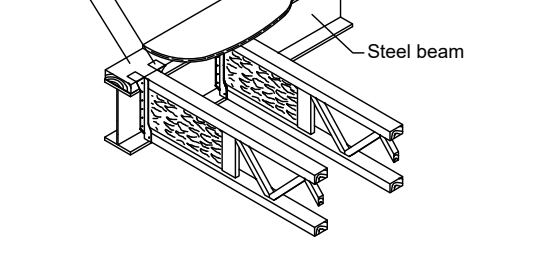
**Detail 14P**

Steel Beam Bottom Flange Bearing  
Wood filler fixed to beam



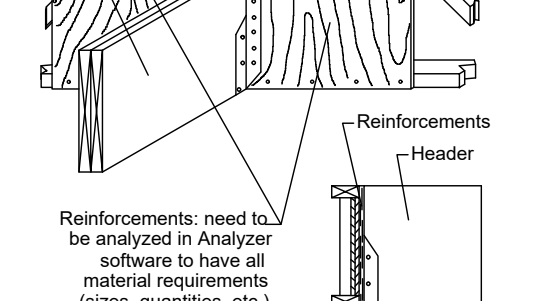
**Detail 15ETP**

Steel Beam Connections With Top Plate and Hanger  
1 1/2" thick top plate attached to the beam (the plate must exceed 1/2" on the joist side)



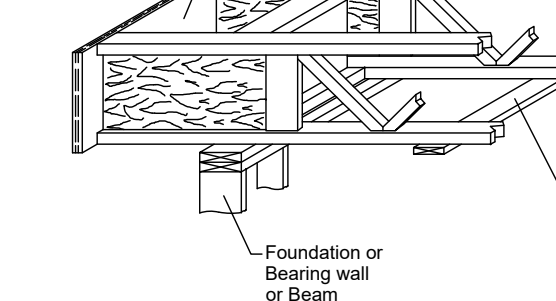
**Detail 10**

Reinforcement for a Concentrated Side Load  
Reinforcements need to be analyzed in Analyzer software to have all material requirements (sizes, quantities, etc.)



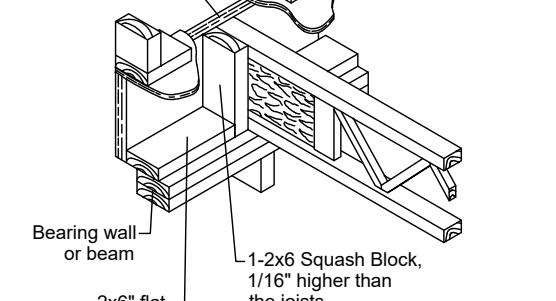
**Detail 8P**

Cantilevered Joist  
Rim Board  
Typical Blocking



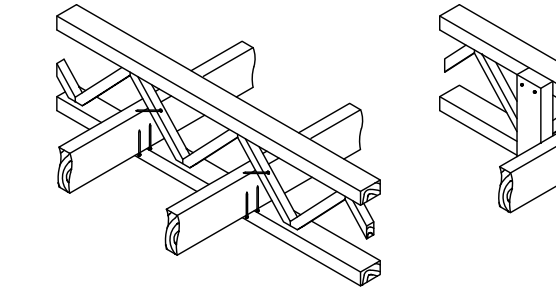
**Detail 8BDG**

Multiple Level Brick at Lower Level  
Rim Board  
Bearing wall or beam



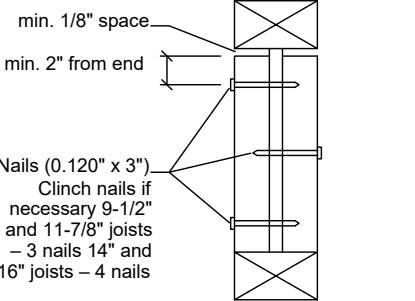
**Detail 5**

Strongback Bridging  
Use gun nails 0.122"x3.25" or 3" screws to secure strongback at mid span of joist.



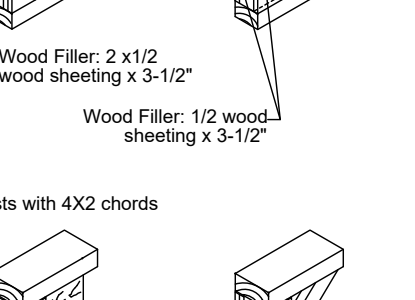
**Lateral Bracing for a Single Joist with Hanger**

Only required if the hanger does not provide lateral support for the joist's top chord.



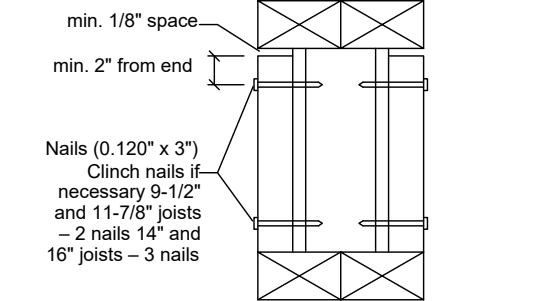
**Lateral Bracing for a Double Joist with Hanger**

Only required if the hanger does not provide lateral support for the joist's top chord.



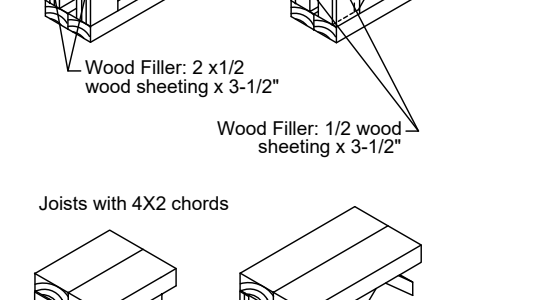
**Detail DJ**

Doubled Joist Load Transfer  
Use load distribution brackets (multi-joist connectors or the equivalent) having the capacity to transfer load as indicated in manufacturer's Analyzer software report.



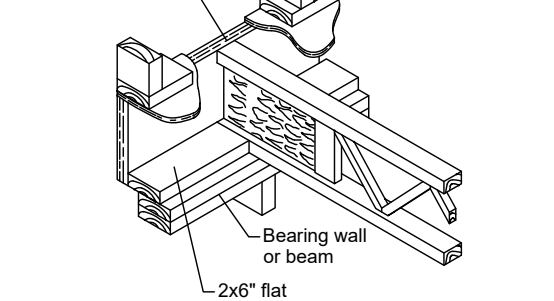
**Detail 11**

Reinforcement for a Concentrated Top Load  
Reinforcements need to be analyzed in Analyzer software to have all material requirements (sizes, quantities, etc.)



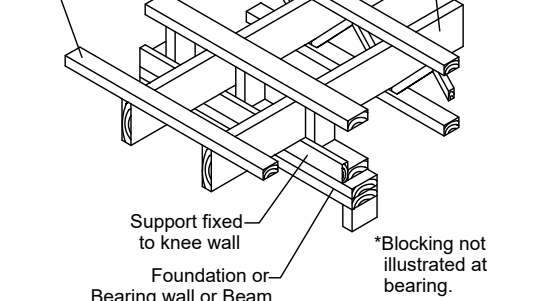
**Detail 8B0**

Multiple Level Brick at Lower Level  
Rim Board  
Bearing wall or beam



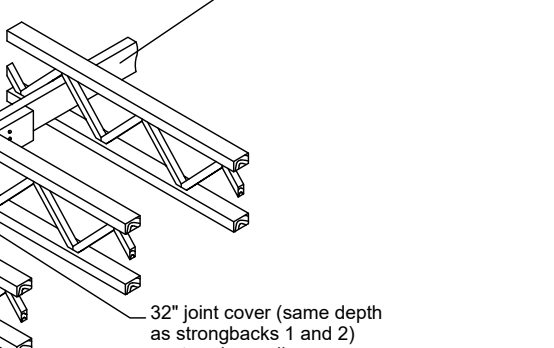
**Detail 12P**

Cantilevered Balcony  
Solid lumber  
Typical Blocking  
Bearing wall or beam



**Detail 13M**

Cantilever Perpendicular to Open Joist  
Wood piece for leveling  
Solid lumber  
Support fixed to bearing wall or beam  
Blocking not illustrated at bearing



Barrette Structural Distribution Inc. Manufacturer's Product Warranty

Products manufactured by Barrette Structural Distribution Inc. (hereafter: "Barrette Structural Distribution") are guaranteed for the life of the structure against all manufacturing defects and faulty materials, for which manufacturer's original warranty applies.

This limited lifetime warranty is applicable if the products manufactured by Barrette Structural Distribution have been correctly stored, protected from climatic conditions such as sunlight, humidity, rain or wind, installed and used in accordance with the relevant product manufacturer's guidelines and applicable standards and codes, either as floor joists or roof trusses, whichever is the case.

This warranty does not cover perceived problems of design or defects caused by: prolonged exposure to water or climatic conditions, including but not limited to fire, flooding, natural disasters or any other cause beyond the control of Barrette Structural Distribution; defective structures due to several factors, including but not limited to, poor construction practices, and incorrect installation methods; damage to the structure before, during or after installation; failure to respect installation instructions, current building codes and norms, and best practices installation techniques; the modification of joists or roof trusses after the proceed original installation; the presence of mold, spore, rot or termites or any other element likely to degrade the installed product; the application of a preservative treatment or any other coating not approved by Barrette Structural Distribution; defective ventilation, repeated exposure to water or humid conditions; excessive loads or tension not allowed for by Barrette Structural Distribution or abnormal or non-compliant use of the product contrary to the use to which it was intended or use contrary to Barrette Structural Distribution's guidance and/or instructions, or under abnormal conditions of use or under unforeseeable conditions by Barrette Structural Distribution.

IN THE CASE OF PROBLEMS WITH MANUFACTURING FAULTS COVERED BY THIS WARRANTY, BARRETTE STRUCTURAL DISTRIBUTION WILL PAY REASONABLE COSTS FOR LABOUR AND MATERIALS TO REPAIR OR REPLACE ONLY THE PRODUCT UNDER ITS WARRANTY. THESE COSTS MUST NOT EXCEED BY MORE THAN THREE TIMES THE INITIAL PURCHASE COST OF THE PRODUCT INVOLVED IN THE CLAIM. THESE REMEDIES ARE THE SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY. TO THE MAXIMUM EXTENT PERMITTED BY LAW, BARRETTE STRUCTURAL DISTRIBUTION IS NOT RESPONSIBLE FOR ANY DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY.

IN THE EVENT OF A CLAIM, THE RESPONSIBILITY OF BARRETTE STRUCTURAL DISTRIBUTION IS LIMITED TO THAT WHICH HAS BEEN OUTLINED IN THIS WARRANTY. BARRETTE STRUCTURAL DISTRIBUTION MAY NOT BE HELD RESPONSIBLE FOR ANY OTHER DAMAGE WHATSOEVER. THIS WARRANTY SUPERSEDES ALL OTHER WARRANTIES AND REPRESENTATIONS ABOUT THE PRODUCT.

Warranty claims must be made in writing as soon as the manufacturing defect is discovered and in any case not more than thirty (30) days after such discovery.

BARRETTE STRUCTURAL DISTRIBUTION INC.  
555, rue Saint-Malo, Trois-Rivières (Québec) G8V 0A8 CANADA

To obtain further information, please contact your representative.

**TRIFORCE**

PROPOSED 4 CONDO UNITS FOR:  
**338 LAKE SHORE DR**  
VILLAGE OF SOUTH BLOOMING GROVE  
ORANGE COUNTY, NEW YORK

WRITING STATEMENT

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE AND THE NEW YORK STATE ENERGY CONSERVATION CODE, AS CURRENTLY IN EFFECT.

Project No. INDI0101  
Drawn By: LH  
Reviewed By: JHR  
Date: SEP. 3, 2024

Revisions:

1-6-2025 REVISED AS PER B.D.  
7-16-2025 REVISED PER CLIENT  
11-13-2025 REVISED PER CLIENT

Barrette Structural Distribution Inc. 555, rue Saint-Malo, Trois-Rivières (Québec) G8V 0A8 CANADA

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