

# UPLANDS TOWNHOMES

DEVELOPED BY THE HOUSING AUTHORITY OF PUEBLO

PROJECT NO.: I.F.B 17-524-RAD

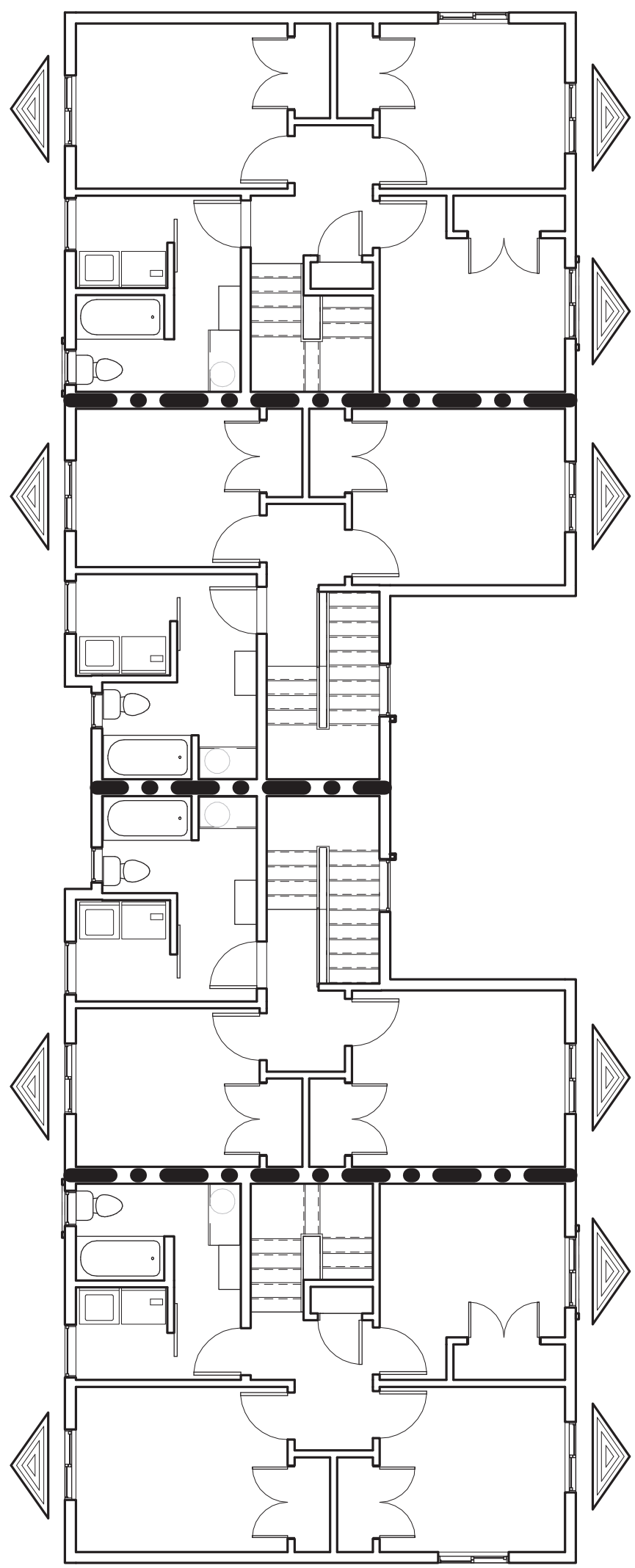
ACERO AVE. and SPRAGUE AVE., PUEBLO, COLORADO 81004

BLDG. A CODE STUDY SUMMARY			
APPLICABLE CODES:	2018 INTERNATIONAL BUILDING CODES APARTMENT FEATURES - ACCESSIBILITY STANDARDS		
PROJECT DESCRIPTION:	NEW CONSTRUCTION - APARTMENT BUILDING		
OCCUPANCY CLASSIFICATION:	R-2 RESIDENTIAL - APARTMENT BUILDINGS		
2018 IBC CHAPTER 3	TYPE OF CONSTRUCTION:		
2018 IBC TABLE 601	TYPE V-B WITH 3 FT. FIRE SEPARATION DISTANCE OF 10'-0"		
2018 IBC TABLE 601	FIRE RESISTANCE RATINGS REQ. FOR FLOORS, ELEVATORS:		
2018 IBC TABLE 601	2018 IBC TABLE 601		
2018 IBC TABLE 601	2018 IBC TABLE 601		
TABULAR ALLOWABLE AREA PER FLOOR:	R2 BULK A1	1000	R2 ACTUAL AREA: 2897 SQ. FT. 140K (IN FL.)
2018 IBC TABLE 603.2			
TABULAR ALLOWABLE HEIGHT AND STORIES:	R2 BULK 60 FEET - 3 STORY		R2 ACTUAL HEIGHT: 3 STORY, 26 FEET
2018 IBC TABLE 603.3 AND 604.4			
FLOOR AREA, GROSS:	FIRST FLOOR:	2817 SQ. FT.	
2018 IBC SECTION 202 - DEFINITIONS	SECOND FLOOR:	2026 SQ. FT.	
2018 IBC SECTION 202 - DEFINITIONS	2018 IBC TABLE 604.1.2		
OCCUPANT LOAD:			
OCCUPANCY:			
FUNCTION OF SPACE:	BLK	LOAD FACTOR (per code)	GROSS NET
STORAGE - 1K FT.	GROU5		27
RESIDENTIAL - 1K FT.	GROU5	0.79	ACCOMMODATE LEAS 1989 100 SF
RESIDENTIAL - 2K FT.	GROU5	1.53	
RESIDENTIAL - 3K FT.	GROU5		
RESIDENTIAL - 4K FT.	GROU5		
RESIDENTIAL - 5K FT.	GROU5		
RESIDENTIAL - 6K FT.	GROU5		
RESIDENTIAL - 7K FT.	GROU5		
RESIDENTIAL - 8K FT.	GROU5		
RESIDENTIAL - 9K FT.	GROU5		
RESIDENTIAL - 10K FT.	GROU5		
RESIDENTIAL - 11K FT.	GROU5		
RESIDENTIAL - 12K FT.	GROU5		
RESIDENTIAL - 13K FT.	GROU5		
RESIDENTIAL - 14K FT.	GROU5		
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RESIDENTIAL - 21K FT.	GROU5		
RESIDENTIAL - 22K FT.	GROU5		
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RESIDENTIAL - 92K FT.	GROU5		
RESIDENTIAL - 93K FT.	GROU5		
RESIDENTIAL - 94K FT.	GROU5		
RESIDENTIAL - 95K FT.	GROU5		
RESIDENTIAL - 96K FT.	GROU5		
RESIDENTIAL - 97K FT.	GROU5		
RESIDENTIAL - 98K FT.	GROU5		
RESIDENTIAL - 99K FT.	GROU5		
RESIDENTIAL - 100K FT.	GROU5		

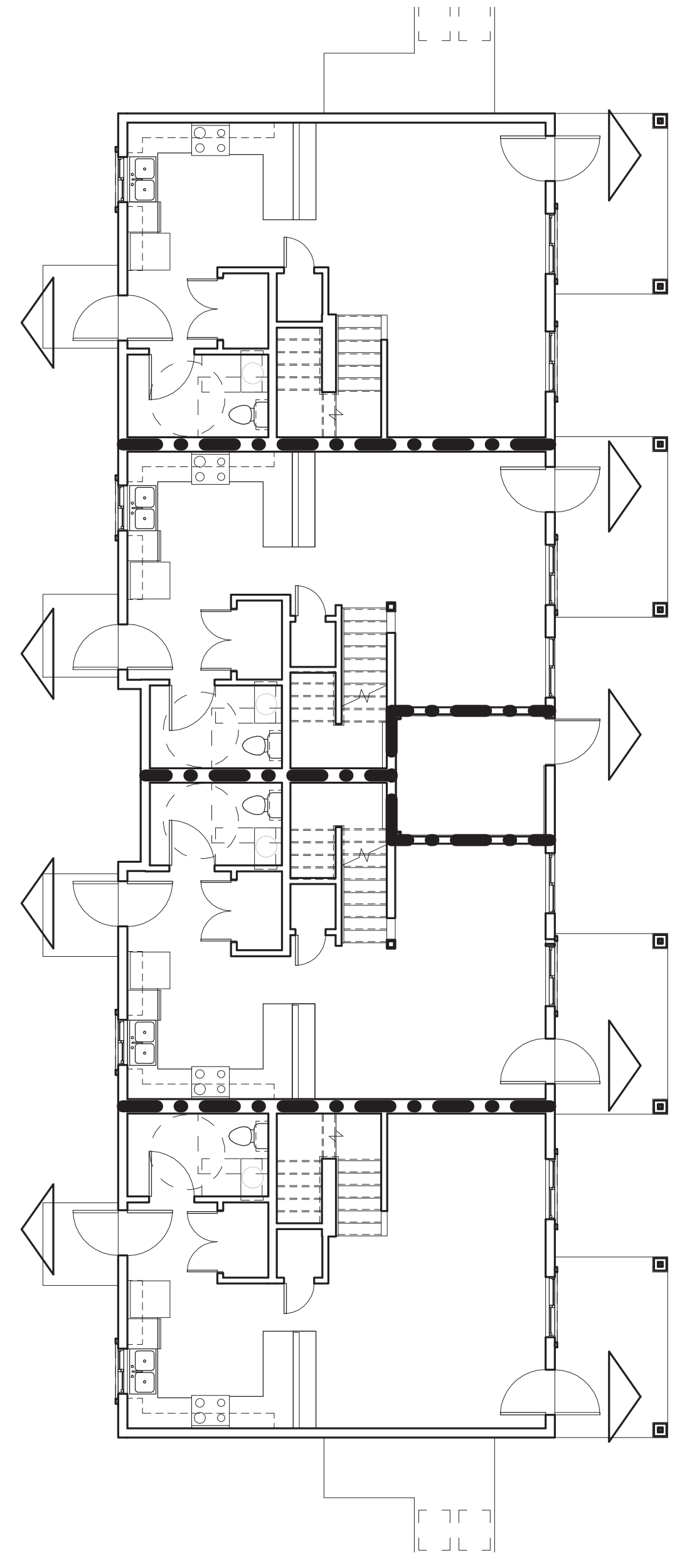
CODE STUDY LEGEND			
1 HR RATED FIRE PARTITION - SEPARATION	•••••		
BUILDING EXIT	▲		
EGRESS/ESCAPE WINDOW	▲		
W.C. SINKS	1 PER DWELLING UNIT	4	* OF FEATURES PROVIDED
LAVATORIES	1 PER DWELLING UNIT	4	8
BATHROOMS	1 PER DWELLING UNIT	4	4
OTHER FIXTURES	1 KIT SINK, 1 PER DWELLING UNIT 1 CLOTHES WASHER CONNECTION PER 30 UNITS	4 KIT SINK 4 CLOTHES WASHER CONNECTION	4 KIT SINK 4 CLOTHES WASHER CONNECTIONS

**GENERAL NOTES**

- THIS PROJECT SHALL MEET THE 2018 ENTERPRISE GREEN COMMUNITIES CRITERIA
- COORDINATE ALL WORK WITH ALL DISCIPLINES INCLUDING, BUT NOT LIMITED TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FINISHES.
- DOOR HOURS, CLOSET SHELVES, TOILET ACCESSORIES, GRAB BARS, VANITY COUNTERTOPS, WALL AND BASE CABINETS, and TELE/DATA BOARD.
- PROVIDE 3/4" RADIUS BULLNOSE CORNER BEAD AT ALL EXPOSED GYP. BD. OUTSIDE WALL CORNERS ON INTERIOR OF BUILDING.
- BUILDINGS SHALL BE PROVIDED WITH AUTOMATIC FIRE SUPPRESSION SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13B
- EACH UNIT SHALL HAVE AN EXHAUST FAN INSTALLED ON THE FIRST FLOOR. EACH STORAGE ROOM AND WATER ENTRY SHALL HAVE AN EXHAUST FAN INSTALLED IN THE ROOM.
- NORTH ARROW NOT SHOWN ON FLOOR PLANS.
- THE PORCH ELEVATIONS OF ALL BUILDINGS SHALL BE ORIENTED TO FACE THE STREET.



2nd FLOOR CODE STUDY -  
2 BLDG. A  
SC: 1/8" = 1'-0" REA21A



1st FLOOR CODE STUDY -  
1 BLDG. A  
SC: 1/8" = 1'-0" REA21A

**BUILDING A SHEET INDEX**

G1.0A	BUILDING A COVER, CODE STUDY, INDEX
A1.1A	BUILDING A FLOOR PLANS
A1.2A	BUILDING A REFLECTED CEILING AND ROOF PLANS
A2.1A	BUILDING A ELEVATIONS
A2.2A	BUILDING AXX ELEVATIONS
A3.1A	BUILDING A WALL SECTIONS
A3.2A	BUILDING A WALL SECTIONS
A4.1A	BUILDING A DOOR AND WINDOW SCHEDULES, ELEVATIONS and
A5.1A	BUILDING A FINISH SCHEDULE and INTERIOR ELEVATIONS
S1A	FOUNDATION AND MAIN FLOOR FRAMING PLANS
S2A	UPPER LEVEL AND ROOF FRAMING PLANS
S3A	DETAILS AND GENERAL NOTES
M0.1A	DRAWING INDEX, GENERAL NOTES, LEGENDS AND SCHEDULES
M1.1A	FIRST AND SECOND FLOOR (BUILDING A - HVAC
PO.1A	DRAWING INDEX, GENERAL NOTES AND LEGENDS
PO.2A	SCHEDULES AND DIAGRAMS
PI.1A	CRUISE SPACE FLOOR (BUILDING A - PLUMBING
PI.2A	FIRST AND SECOND FLOOR PLANS (BUILDING A - PLUMBING
E1.0A	BLDG A - ELECTRICAL LEGENDS AND SERVICE DIAGRAMS
E1.1A	BLDG A - ELECTRICAL PLANS

**PROJECT TEAM**

OWNER:  
HOUSING AUTHORITY OF PUEBLO  
201 S. VICTORIA  
PUEBLO, CO 81003  
PH: 719-542-9230

ARCHITECT:  
HGF ARCHITECTS, INC.  
1415 S. VICTORIA  
PUEBLO, COLORADO 81003  
PH: 719-543-7600  
FX: 719-545-2910

ELECTRICAL ENGINEER:  
KONNERT ELECTRICAL ENGINEERS  
1000 S. SPRAGUE AVE.  
COLORADO SPRINGS, CO 80906  
PH: 719-633-2637

MECHANICAL ENGINEER:  
AE ASSOCIATES  
328 FILLMORE, SUITE 200  
COLORADO SPRINGS CO 80907  
PH: 719-262-9430

STRUCTURAL ENGINEER:  
SUNSHINE CONSULTANTS  
415 N. GREENWOOD  
PUEBLO, CO 81003  
PH: 719-542-9230

CIVIL ENGINEER:  
ALTMIDALE LAND CONSULTANTS  
1000 S. SPRAGUE AVE.  
COLORADO SPRINGS, CO 80903  
PH: 719-231-3993

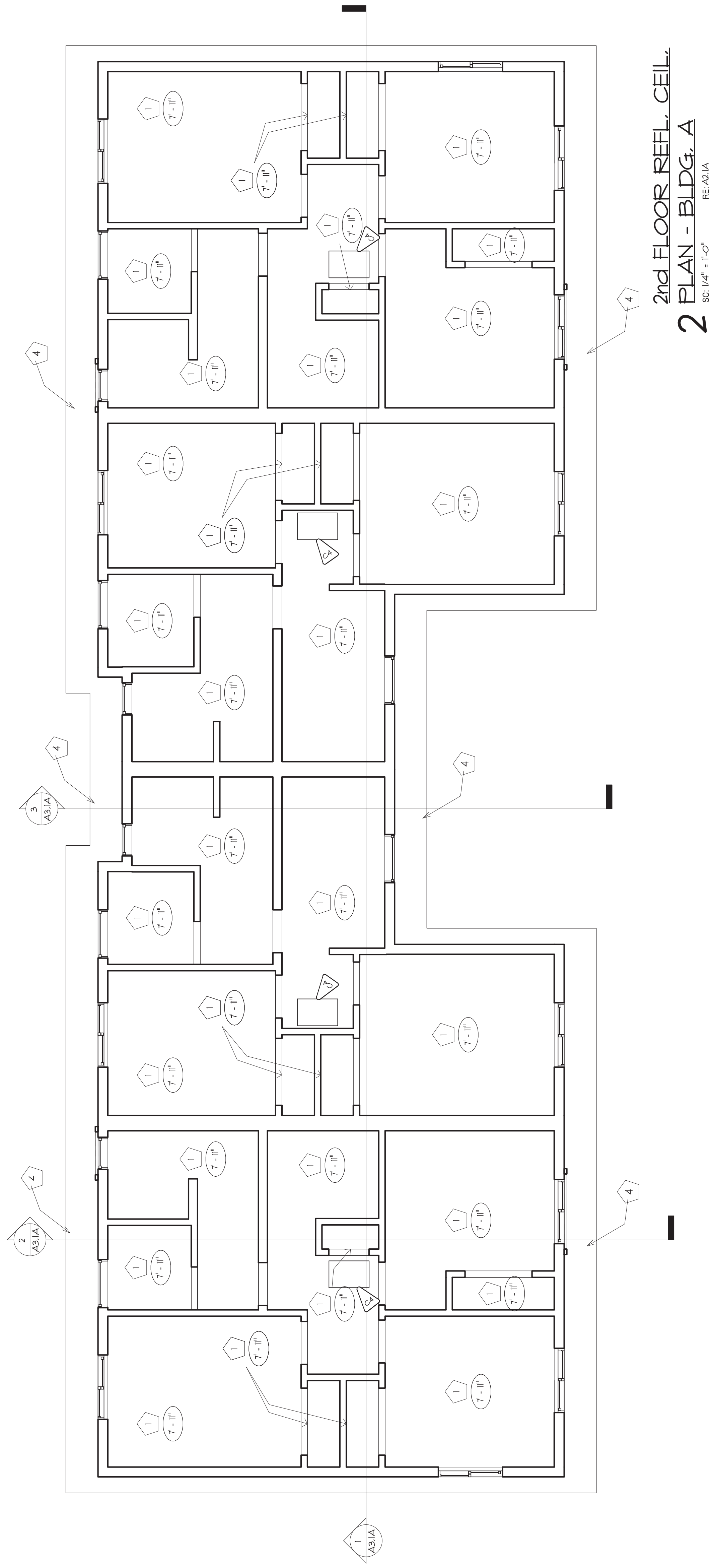
**DRAWING LEGEND**

DOOR TAG	□
WINDOW TAG	◇
WALL TYPE TAG	▭
FLAG NOTE	▽
ROOM NAME	Room name
ROOM NAME AND NUMBER TAG	Room name
CEILING TYPE TAG	○
CEILING HEIGHT TAG	○

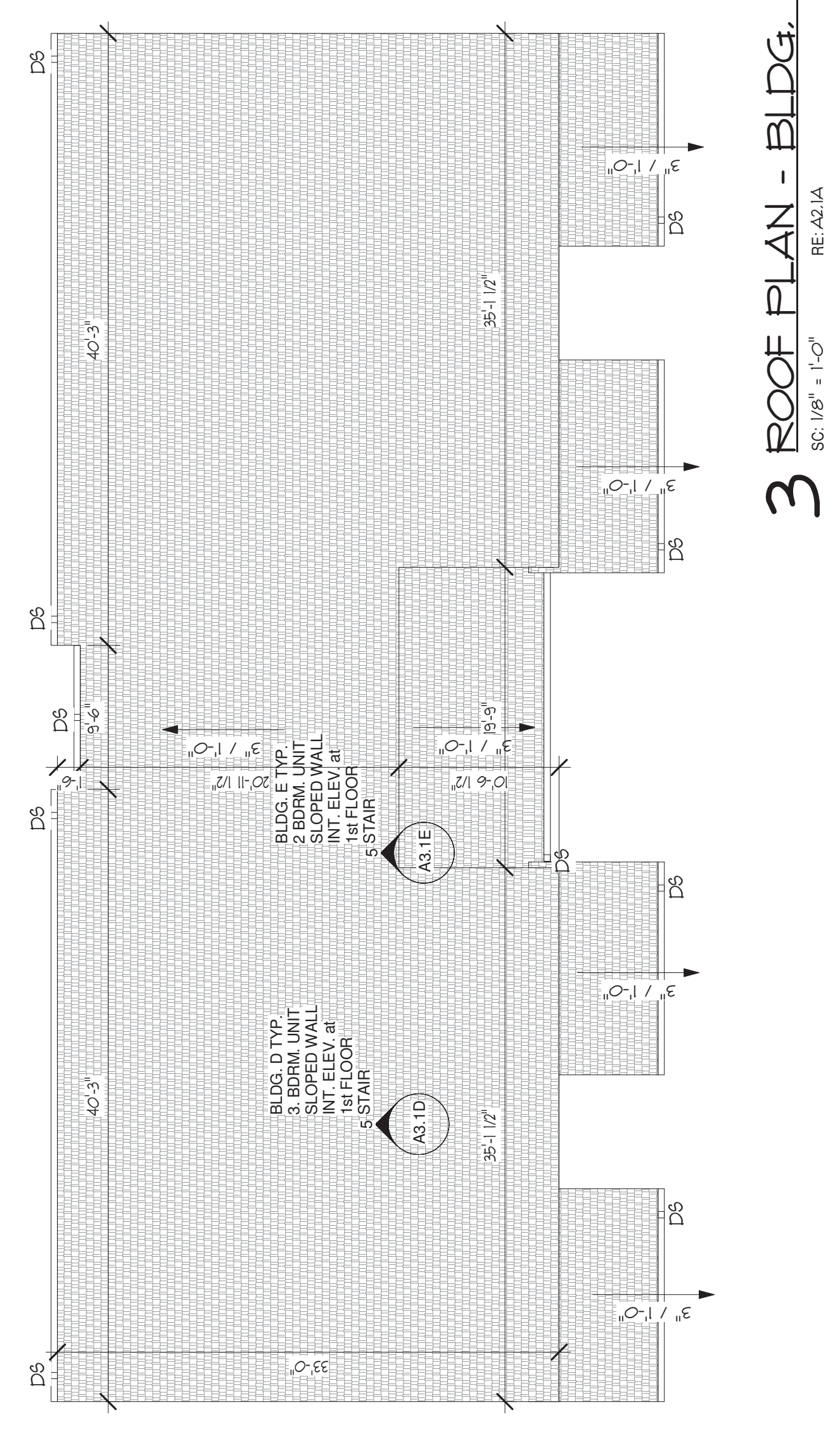








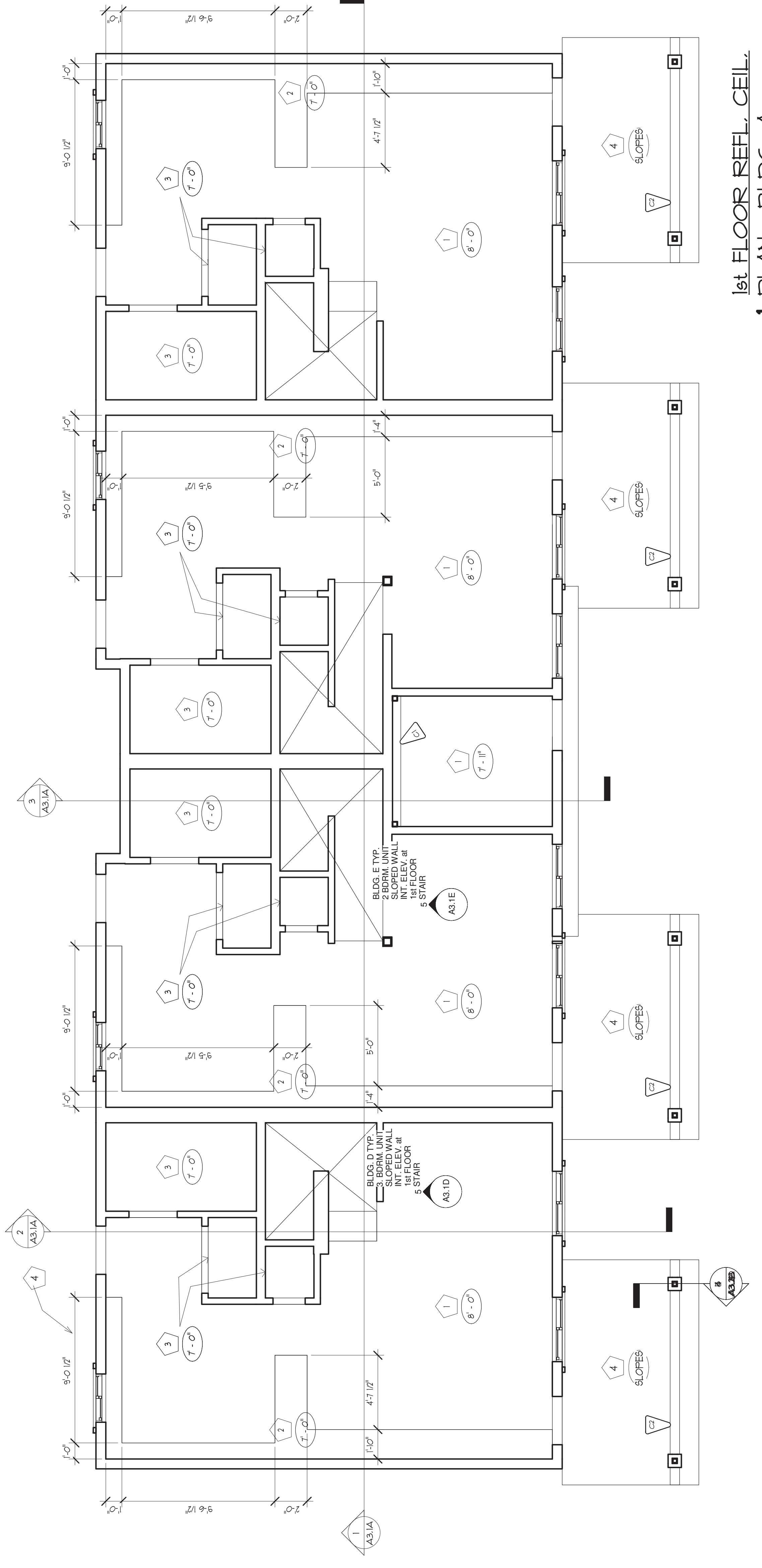
2nd FLOOR REFL. CEIL. PLAN - BLDG. A  
SC: 1/4" = 1'-0"  
RE: A2.1A



3rd FLOOR PLAN - BLDG. A  
SC: 1/8" = 1'-0"  
RE: A2.1A

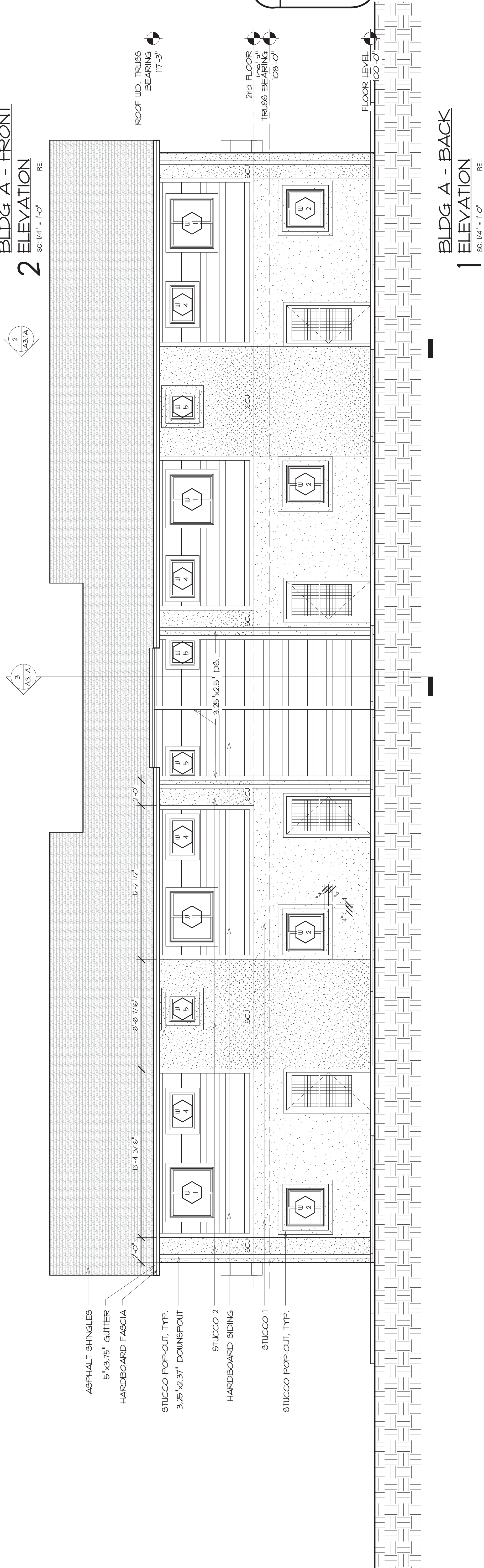
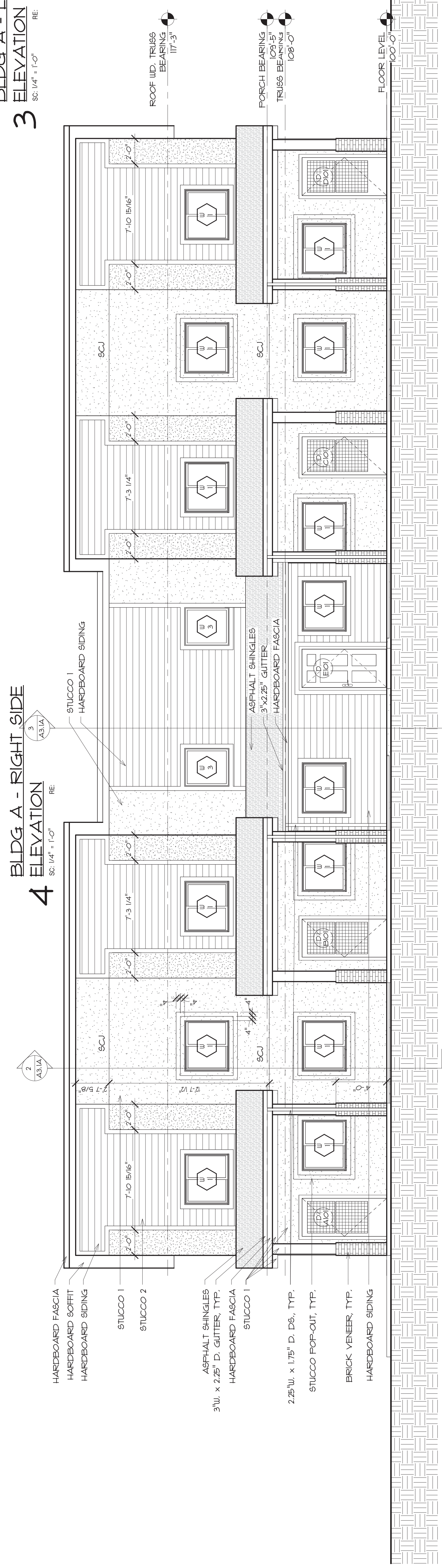
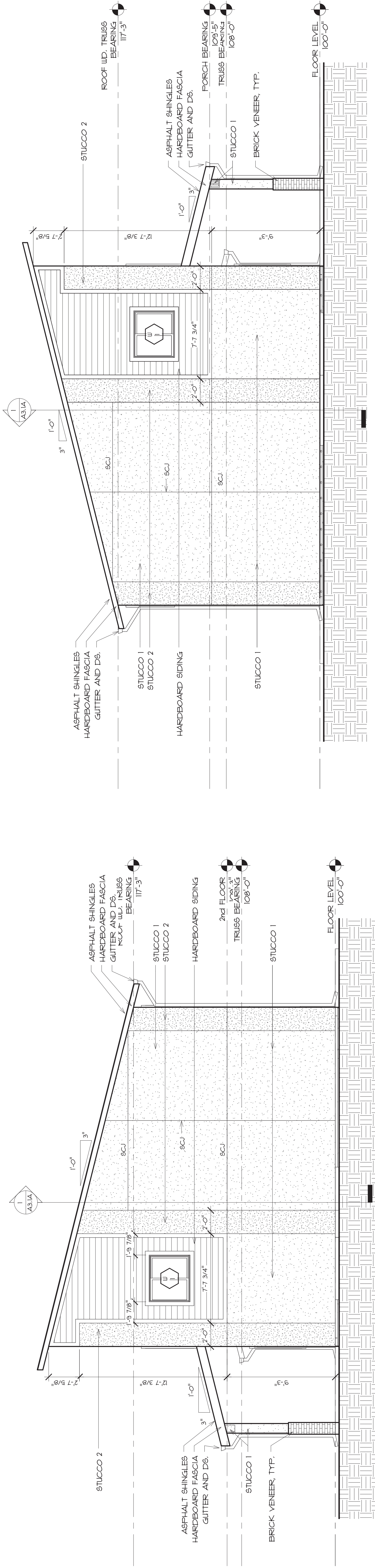
Type Mark	Description
1	5/8" TYPE "X" GYP. BD. ON ATTACHED TO INSIDE OF FLOOR/ROOF FRG.
2	INSIDE SOFFIT 5/8" TYPE "X" GYP. BD. ATTACHED TO INSIDE OF ROOF FRG.
3	SUSPENDED GYP. BD. CEILING 5/8" TYPE "X" GYP. BD. ATTACHED TO 2" LD. FRG. AT 16" O.C., HANG FROM STRUCTURE ABOVE. XXXXXX
4	MIN. 20"x30" ATTIC ACCESS HATCH SOFFIT ATTACHED TO INSIDE OF ROOF FRAMING

Flag	Note
C1	URAF BEAM WITH 5/8" TYPE "X" GYP. BD.
C2	URAF BEAM AT PORCH WITH PORTLAND CEMENT PLASTERED (3) COAT STUCCO SYSTEM ON H/L DIAMOND MESH WITH 1/2" METAL ANCHOR
C3	PRE-FABRICATED METAL ANCHOR
C4	MIN. 20"x30" ATTIC ACCESS HATCH



1st FLOOR REFL. CEIL. PLAN - BLDG. A  
SC: 1/4" = 1'-0"  
RE: A2.1A



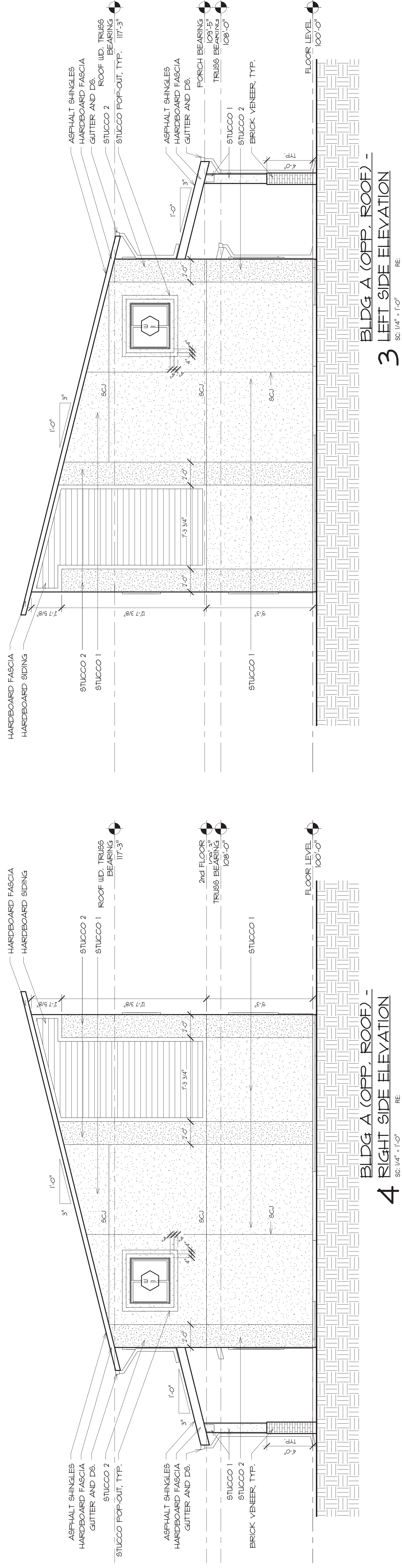


**ELEVATION GENERAL NOTES:**

1. PROVIDE AND INSTALL EXPANSION JOINT AND CAULK CONTINUOUSLY AT ALL STUCCO TO HARDBOARD SIDING JOINTS. RE SPECIFICATIONS.
2. PROVIDE AND INSTALL STUCCO CONTROL JOINT (SCJ) EVERY 12'-0" VERTICALLY AND HORIZONTALLY BETWEEN STUCCO COLOR CHANGES, AND AT EVERY OTHER LOCATION INDICATED. RE SPECIFICATIONS.

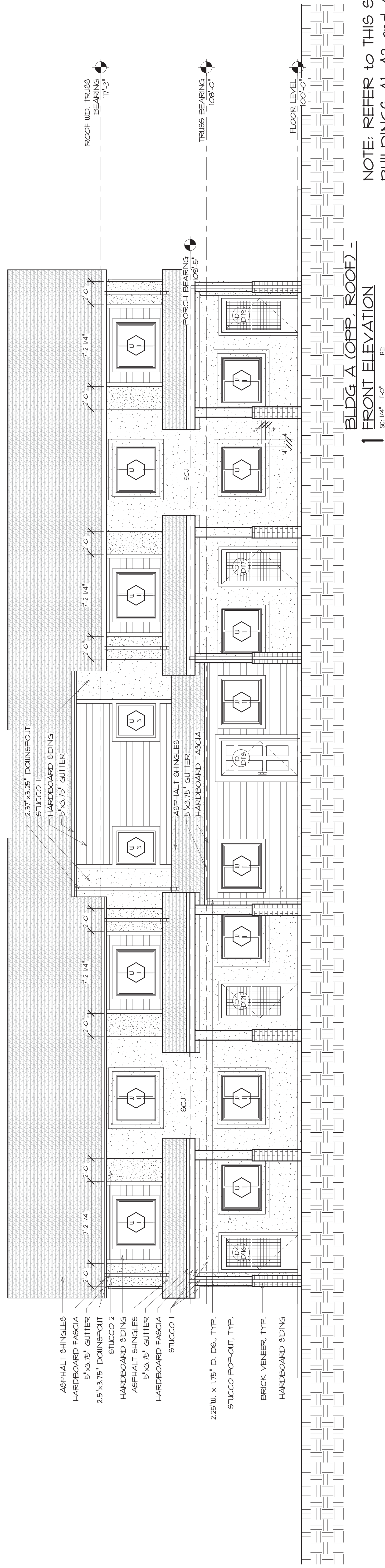
NOTE: REFER TO THIS SHEET FOR BUILDINGS A4, A5, and A6 FOR ELEVATIONS, RE: SITE PLAN





**ELEVATION GENERAL NOTES:**

1. PROVIDE AND INSTALL EXPANSION JOINT AND CALLS CONTINUOUSLY AT ALL STUCCO TO HARDBOARD SIDING JOINTS. RE: SPECIFICATIONS.
2. PROVIDE AND INSTALL STUCCO CONTROL JOINT (SCJ) EVERY 2'-0" VERTICALLY AND HORIZONTALLY BETWEEN STUCCO COLOR CHANGES, AND AT EVERY OTHER LOCATION INDICATED. RE: SPECIFICATIONS.



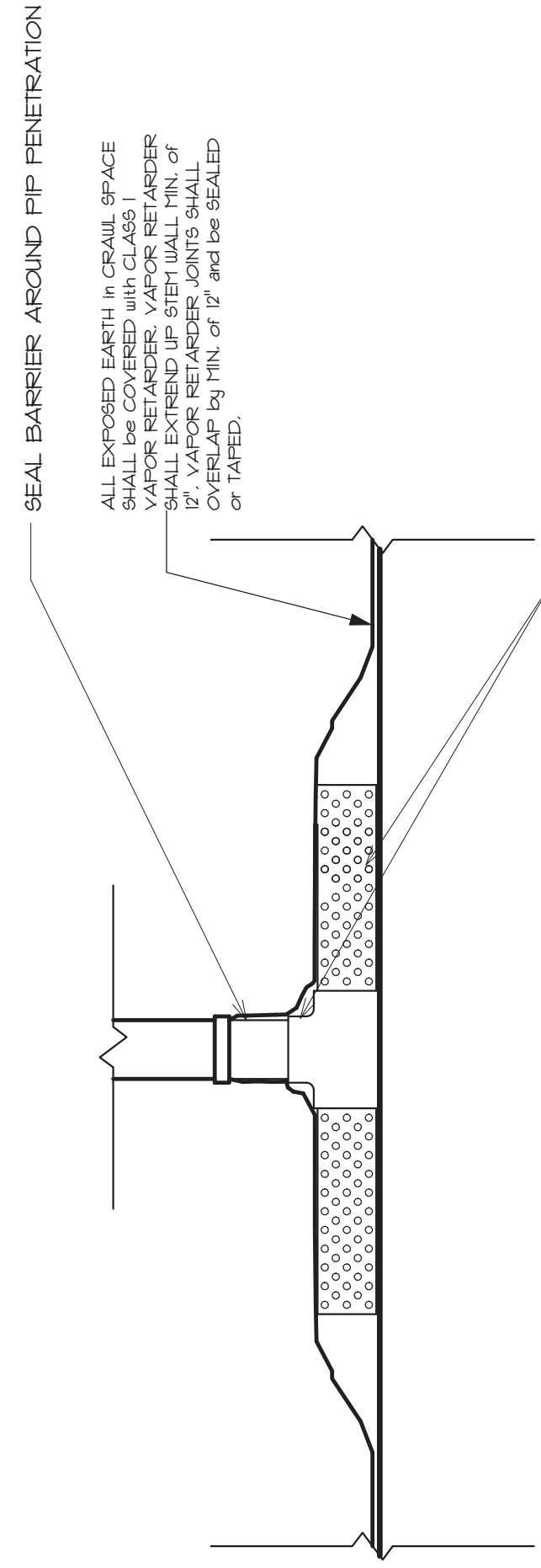
NOTE: REFER TO THIS SHEET FOR BUILDINGS A1, A2, and A3 FOR ELEVATIONS. RE: SITE PLAN



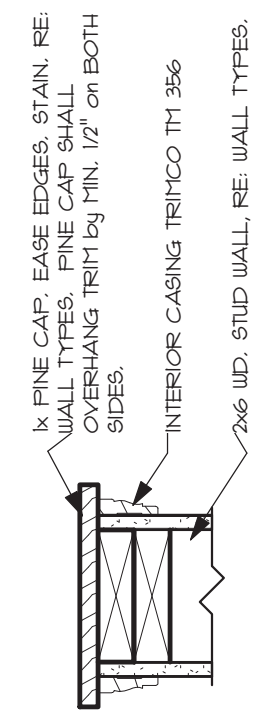




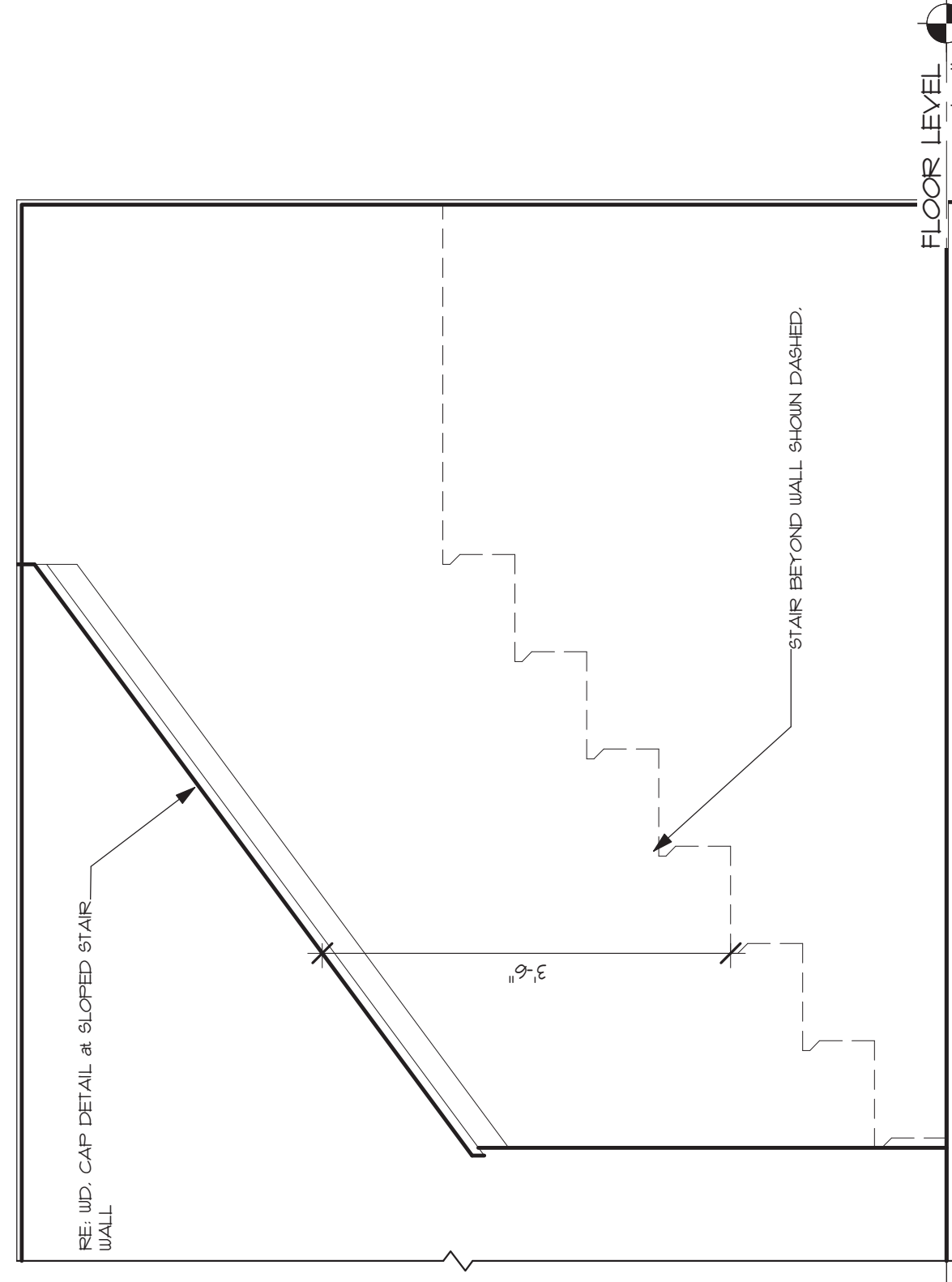
NOTE: WALL SECTIONS THIS SHEET are SHOWN THROUGH BUILDINGS A4, A5 and A6. 2nd STORY ROOF SLOPES OPPOSITE in BUILDINGS A1, A2 and A3. RE: ELEVATIONS and SITE PLAN.



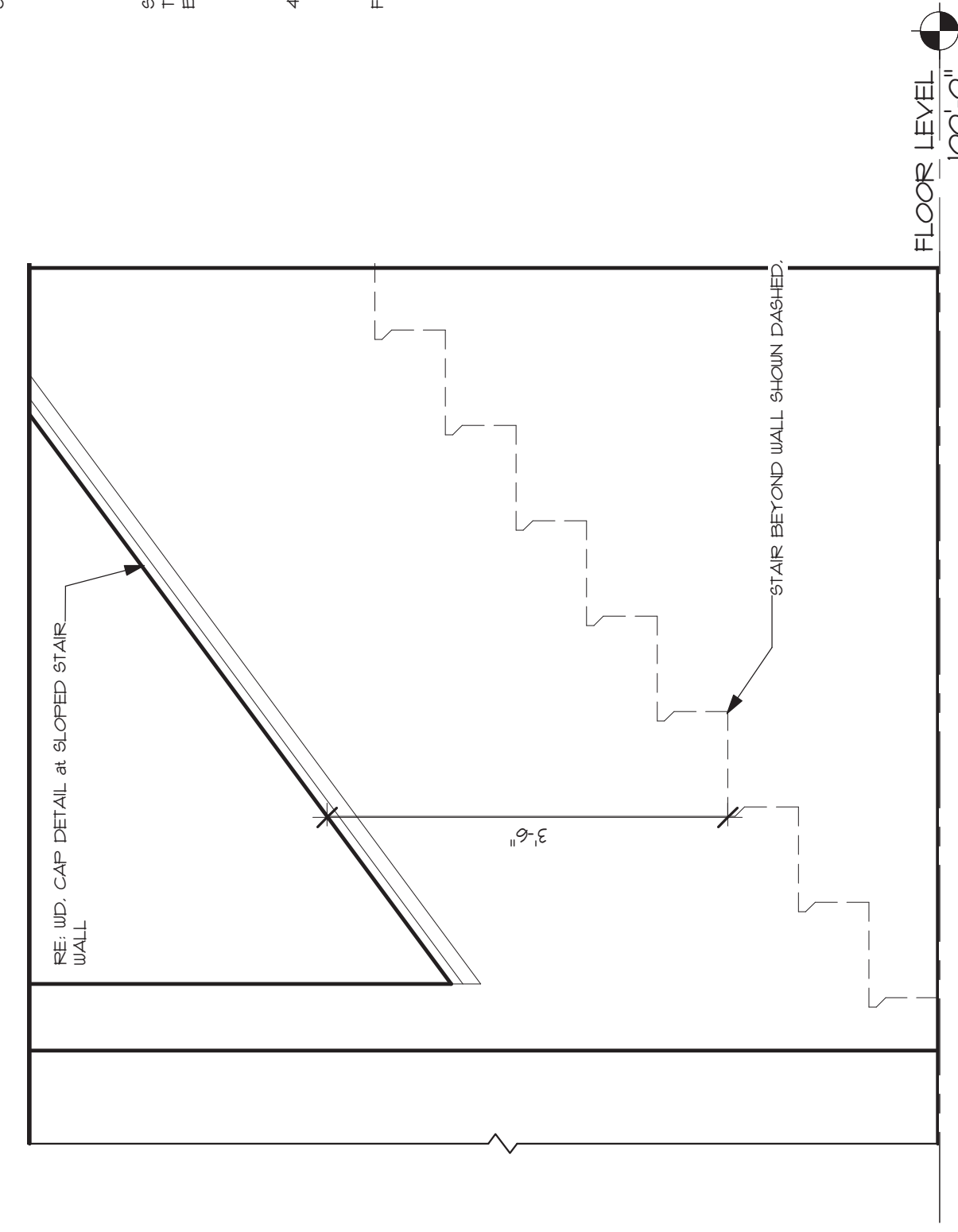
**8** BLDG. A TYP. RADON VENT at CRAWL SPACE  
SC: 1/4" = 1'-0"



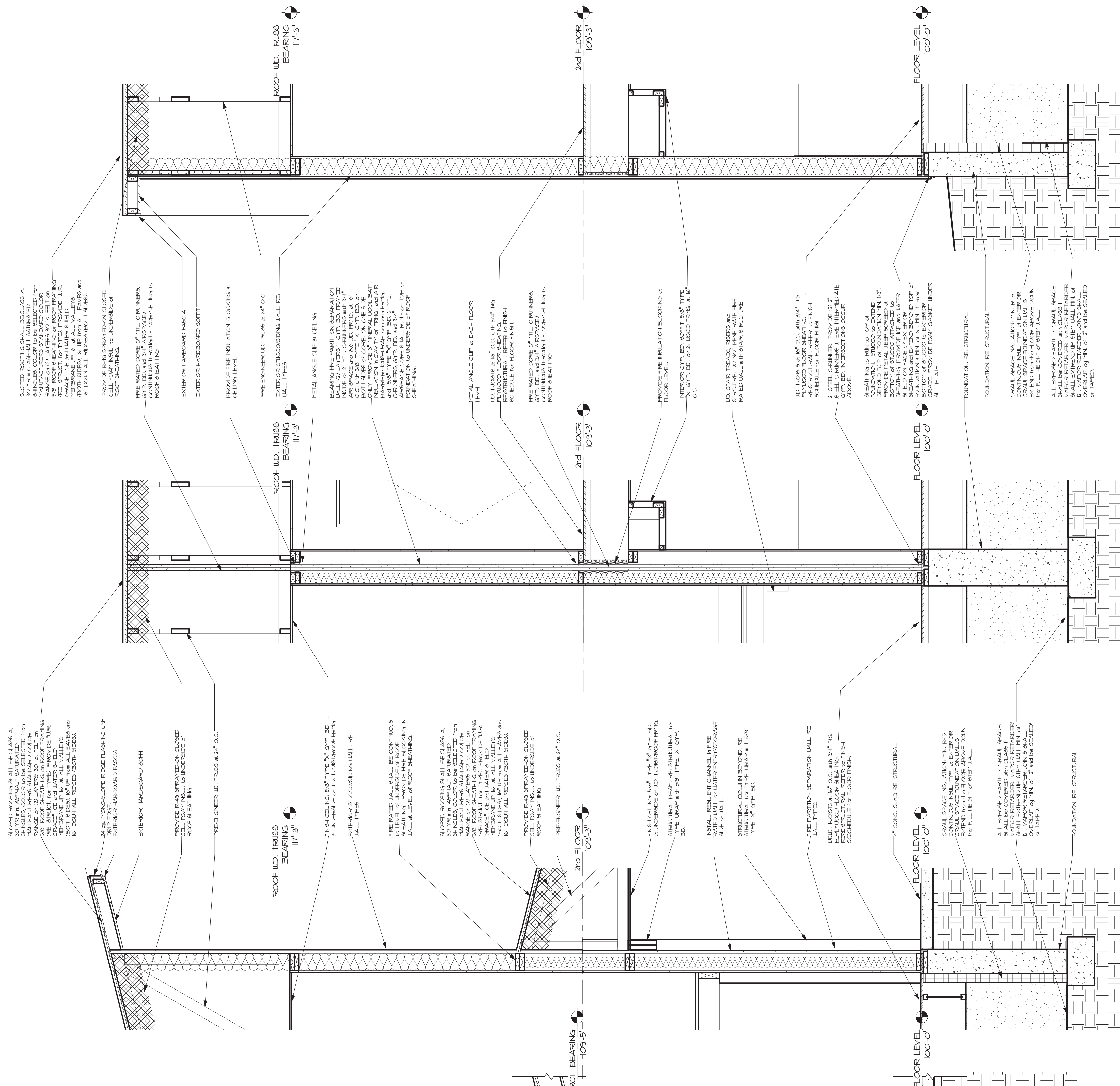
**7** BLDG. A W.D. CAR DETAIL at SLOPED STAIR WALL  
SC: 1/2" = 1'-0"



**6** BLDG. A TYP. 3. BDRM. UNIT SLOPED WALL INT. ELEV. at 1st. FLOOR STAIR  
SC: 3/4" = 1'-0"



**5** BLDG. A TYP. 2. BDRM. UNIT SLOPED WALL INT. ELEV. at 1st. FLOOR STAIR  
SC: 3/4" = 1'-0"



**4** COLUMN DETAIL  
SC: 3/4" = 1'-0"

**3** BLDG. A WALL SECTION - 3  
SC: 3/4" = 1'-0"

**2** BLDG. A WALL SECTION - 2  
SC: 3/4" = 1'-0"

**1** BLDG. A WALL SECTION - 1  
SC: 3/4" = 1'-0"

RE: A3.1A

RE: A3.1A

RE: A3.1A

RE: A3.1A

RE: A3.1A



DOOR SCHEDULE BUILDING TYPE A

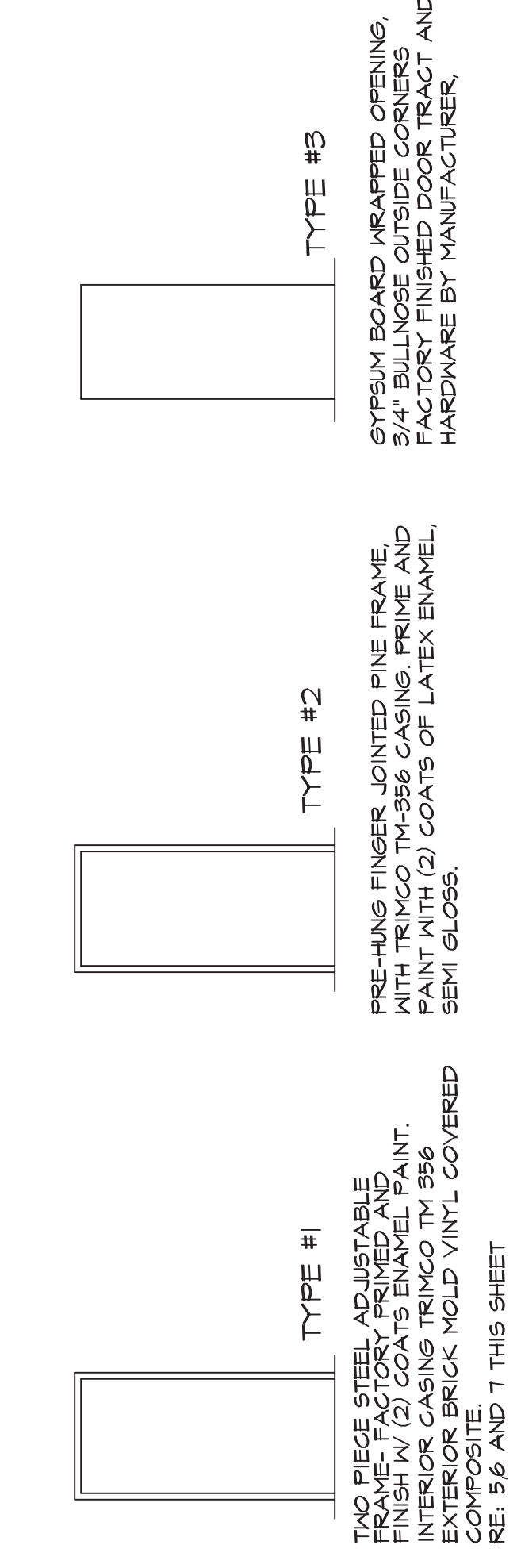
DOOR	SIZE	TYPE	MATERIAL	FINISH	HARDWARE	FRAME	TYPE	MATERIAL	FINISH	NOTES
D1	FIRST FLOOR UNIT TYPE 'A'	AG01	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG02	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG03	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG04	4'-0" X 6'-8" X 1 3/8" (PAIR)	HC HARD BOARD	LE-1	C	2	WOOD	LE-1	
		AG05	2'-0" X 6'-8" X 1 3/8"	HC HARD BOARD	LE-1	B	2	WOOD	LE-1	
D2	SECOND FLOOR UNIT TYPE 'A'	AG06	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG07	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG08	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG09	4'-0" X 6'-8" X 1 3/8" (PAIR)	HC HARD BOARD	LE-1	C	2	WOOD	LE-1	
		AG10	2'-0" X 6'-8" X 1 3/8"	HC HARD BOARD	LE-1	B	2	WOOD	LE-1	
D3	FIRST FLOOR UNIT TYPE 'B'	AG11	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG12	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG13	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG14	4'-0" X 6'-8" X 1 3/8" (PAIR)	HC HARD BOARD	LE-1	C	2	WOOD	LE-1	
		AG15	2'-0" X 6'-8" X 1 3/8"	HC HARD BOARD	LE-1	B	2	WOOD	LE-1	
D4	SECOND FLOOR UNIT TYPE 'B'	AG16	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG17	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG18	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG19	4'-0" X 6'-8" X 1 3/8" (PAIR)	HC HARD BOARD	LE-1	C	2	WOOD	LE-1	
		AG20	2'-0" X 6'-8" X 1 3/8"	HC HARD BOARD	LE-1	B	2	WOOD	LE-1	
D5	FIRST FLOOR UNIT TYPE 'C'	AG21	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG22	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG23	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG24	4'-0" X 6'-8" X 1 3/8" (PAIR)	HC HARD BOARD	LE-1	C	2	WOOD	LE-1	
		AG25	2'-0" X 6'-8" X 1 3/8"	HC HARD BOARD	LE-1	B	2	WOOD	LE-1	
D6	SECOND FLOOR UNIT TYPE 'C'	AG26	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG27	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG28	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG29	4'-0" X 6'-8" X 1 3/8" (PAIR)	HC HARD BOARD	LE-1	C	2	WOOD	LE-1	
		AG30	2'-0" X 6'-8" X 1 3/8"	HC HARD BOARD	LE-1	B	2	WOOD	LE-1	
D7	FIRST FLOOR UNIT TYPE 'D'	AG31	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG32	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG33	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG34	4'-0" X 6'-8" X 1 3/8" (PAIR)	HC HARD BOARD	LE-1	C	2	WOOD	LE-1	
		AG35	2'-0" X 6'-8" X 1 3/8"	HC HARD BOARD	LE-1	B	2	WOOD	LE-1	
D8	SECOND FLOOR UNIT TYPE 'D'	AG36	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG37	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG38	9'-0" X 6'-8" X 1 3/4"	HV/SD METAL	ENH	A	1	METAL	ENH	
		AG39	4'-0" X 6'-8" X 1 3/8" (PAIR)	HC HARD BOARD	LE-1	C	2	WOOD	LE-1	
		AG40	2'-0" X 6'-8" X 1 3/8"	HC HARD BOARD	LE-1	B	2	WOOD	LE-1	

**DOOR HARDWARE**  
SET A (FRONT, BACK ENTRY DOORS)  
SET B (BEDROOMS CLOSET WITH SINGLE DOOR)  
SET C (TOILET & BATH ROOMS)  
SET D (CLOSETS WITH DOUBLE DOORS)  
SET E (EXTERIOR STORAGE AND WATER ENTRY DOORS)  
SET F (BARN DOOR)  
RE: INTERIOR DOOR TYPES  
AT DOORS, STOP, ROCKWOOD 1/2"  
BASE DOKE STOP #442, 605,  
UNLESS CALLED OUT OTHERWISE.

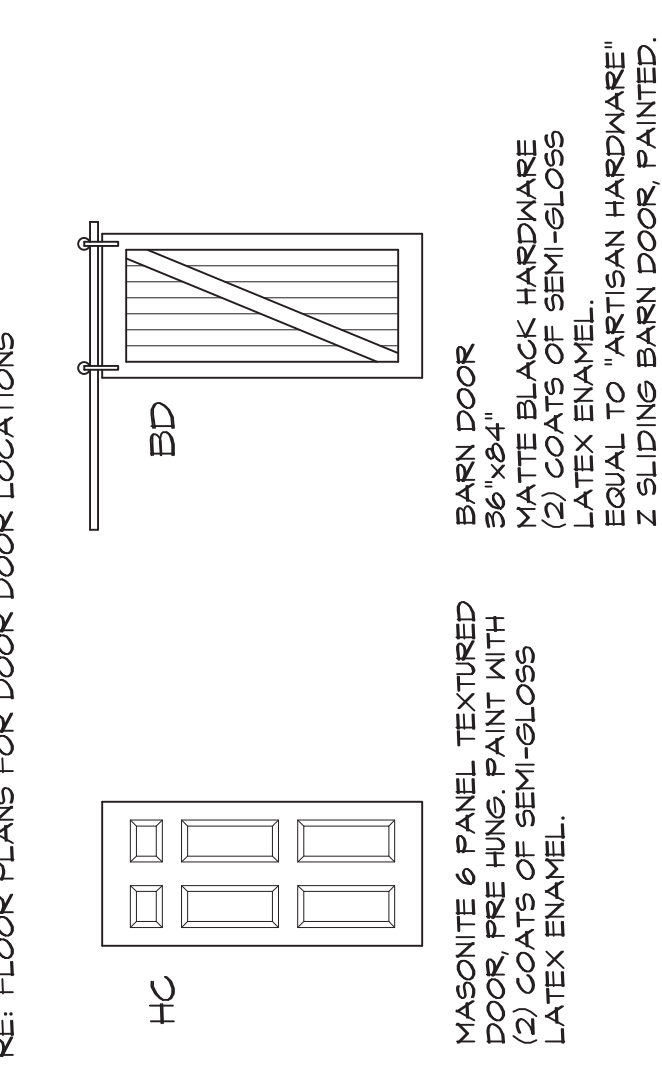
**DOOR FINISHES**  
ENH ENAMEL (EN)  
LE-1 LEADERSHIP  
RE: SPECIFICATIONS  
FROM THE MANUFACTURERS TOTAL COLOR RANGE.

**DOOR HARDWARE**  
SET A (FRONT, BACK ENTRY DOORS)  
SET B (BEDROOMS CLOSET WITH SINGLE DOOR)  
SET C (TOILET & BATH ROOMS)  
SET D (CLOSETS WITH DOUBLE DOORS)  
SET E (EXTERIOR STORAGE AND WATER ENTRY DOORS)  
SET F (BARN DOOR)  
RE: INTERIOR DOOR TYPES  
AT DOORS, STOP, ROCKWOOD 1/2"  
BASE DOKE STOP #442, 605,  
UNLESS CALLED OUT OTHERWISE.

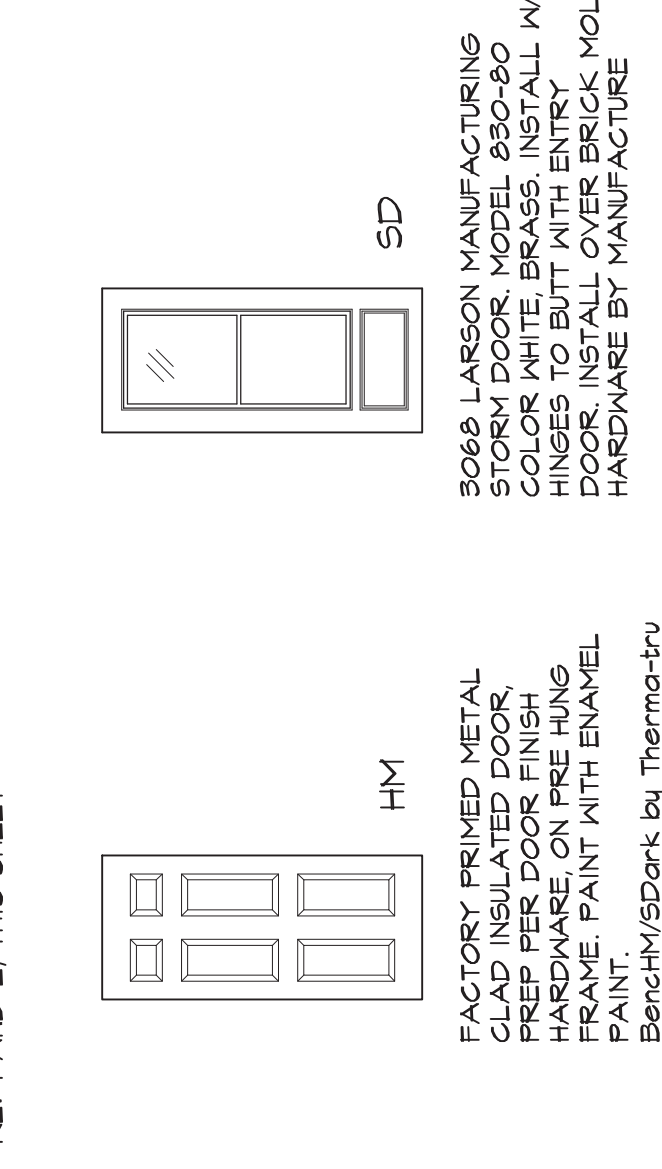
DOOR FRAME TYPES:



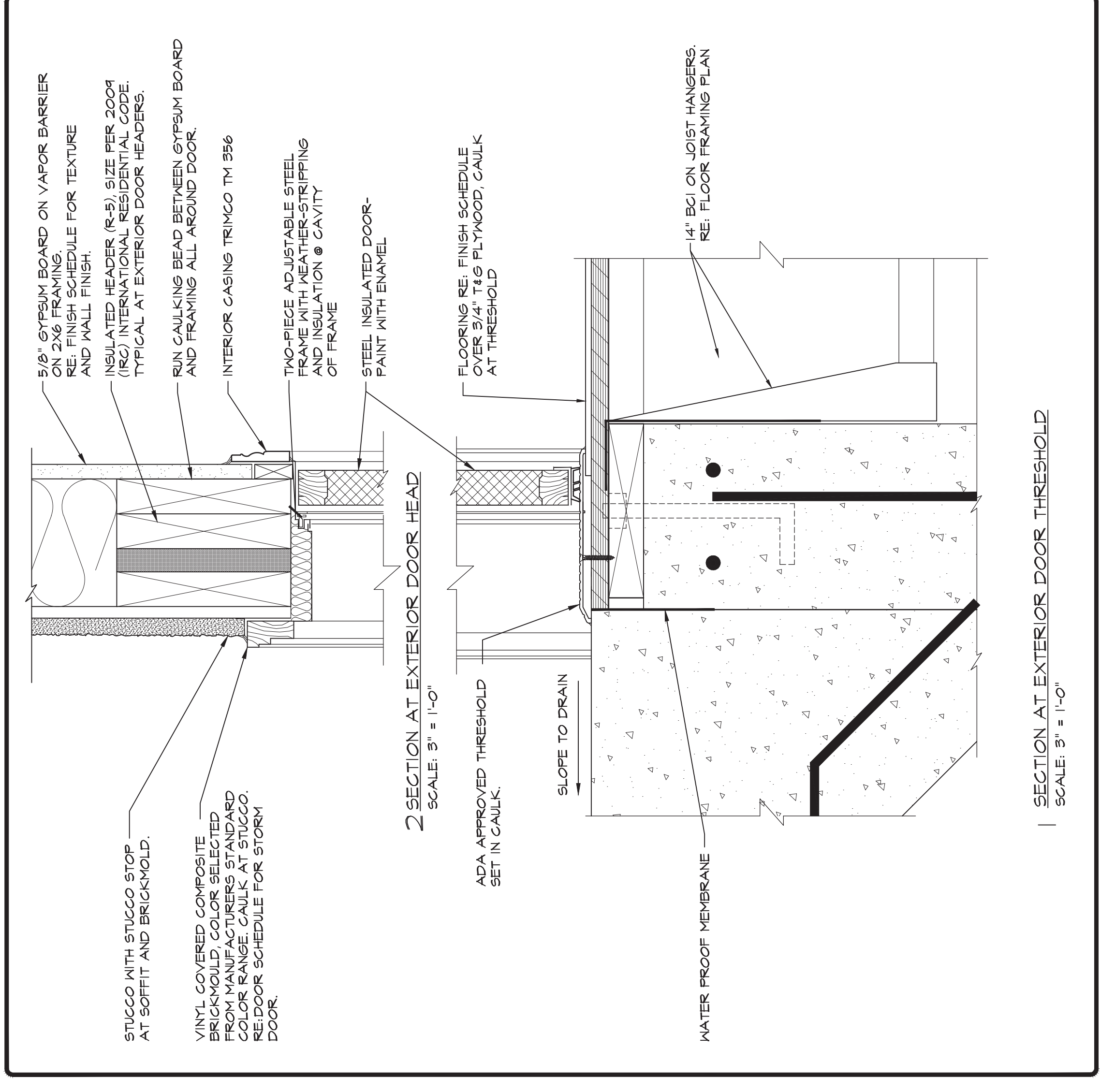
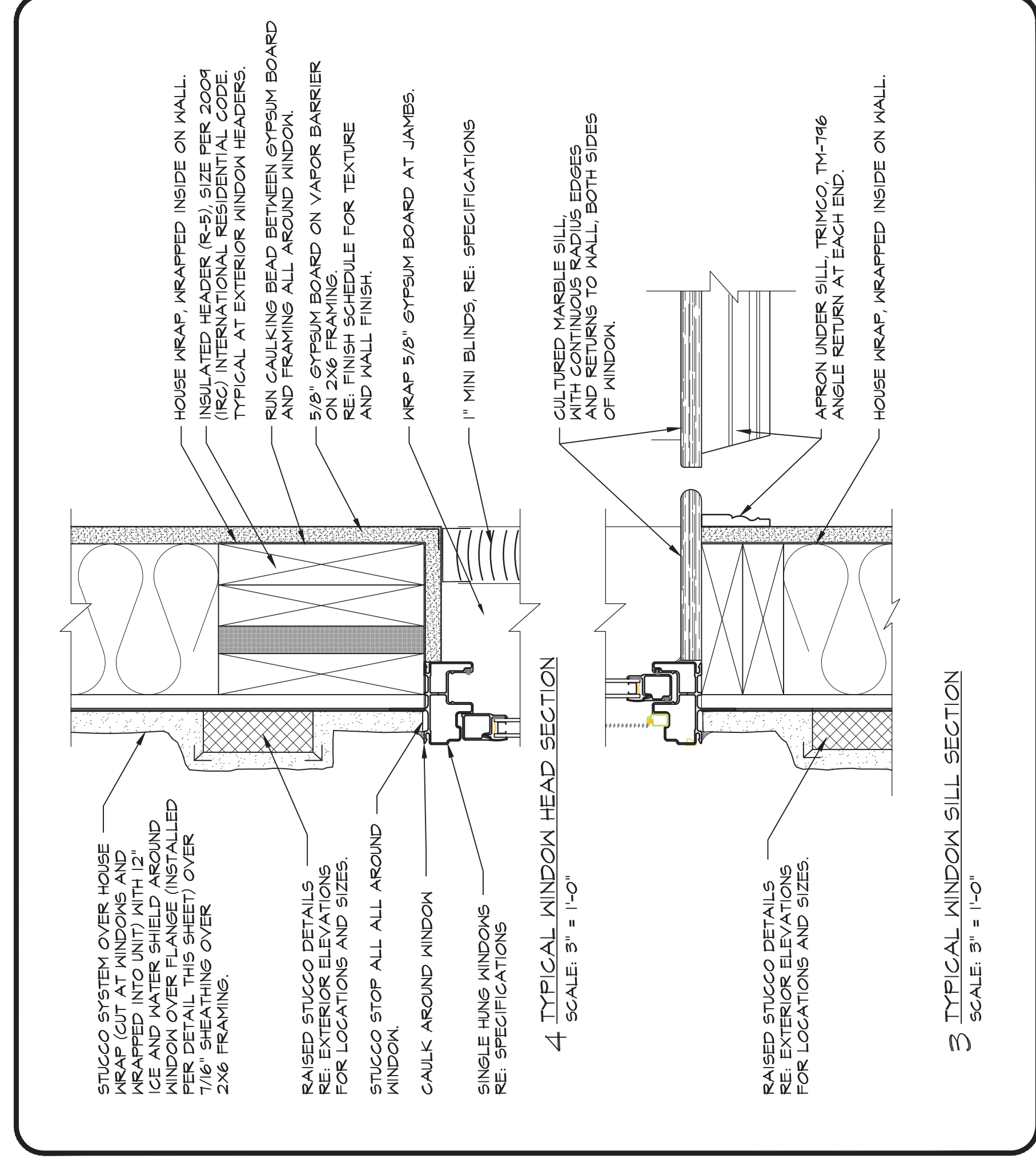
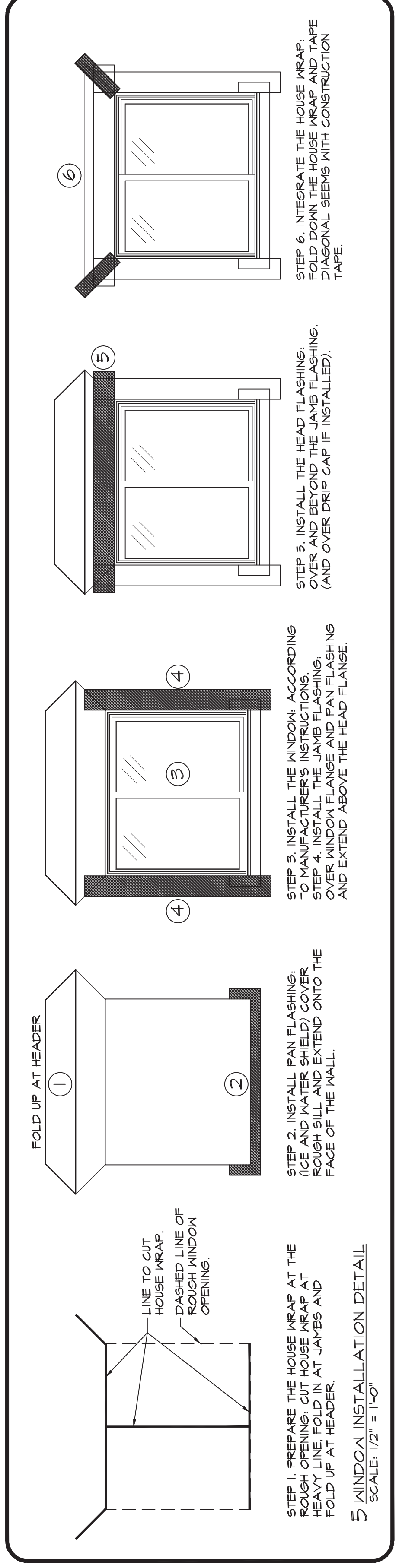
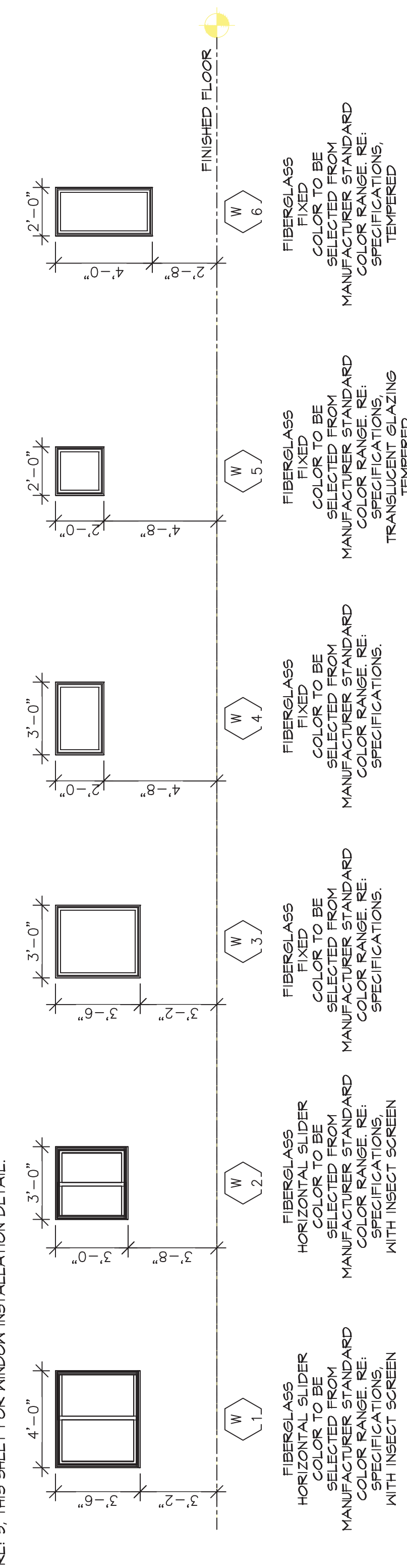
INTERIOR DOORS TYPES:



EXTERIOR ENTRY DOORS TYPES:



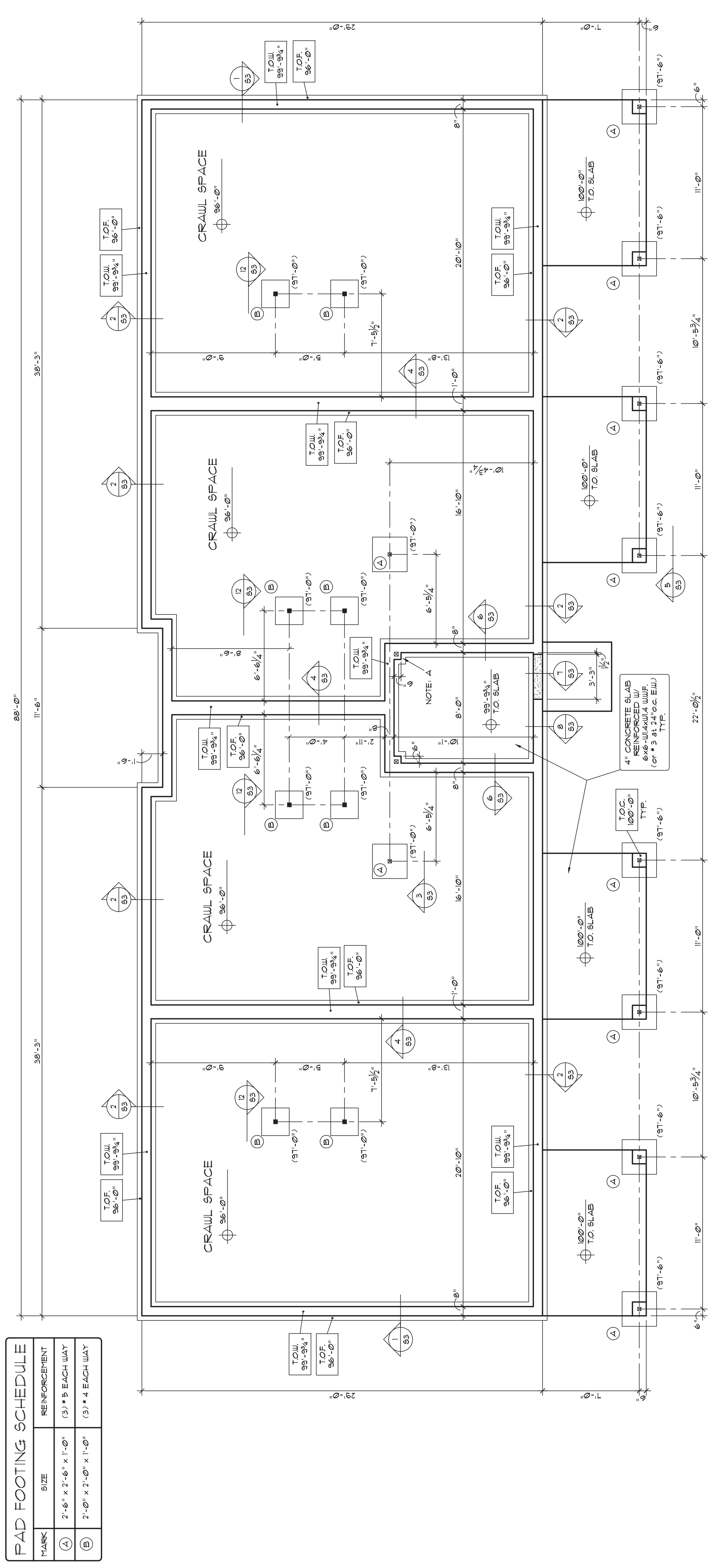
WINDOW TYPES:









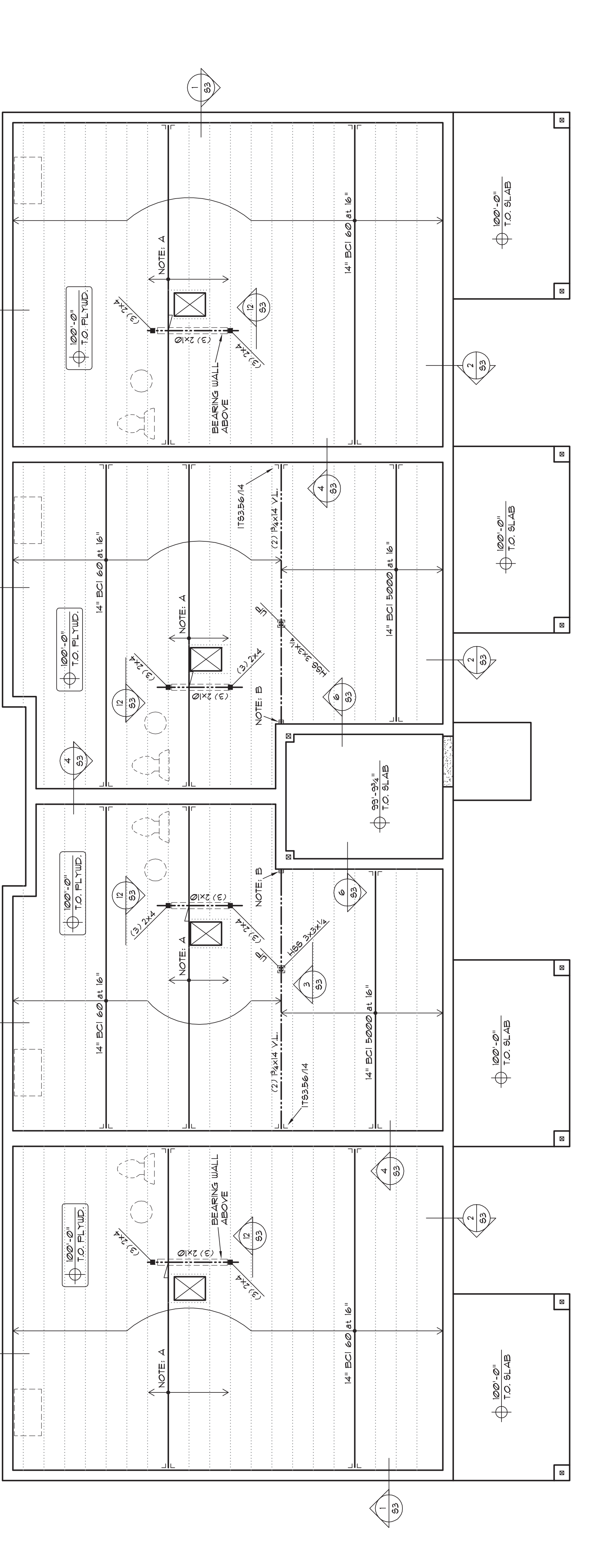


FLOOR DECK  
 3/4" x 1/2" G APA RATED STUDS - 1-FLOOR EXTERIOR IDENTIFICATION NO. 24 GLUE PANEL EDGES AND 10/056 IN FIELD (0.55 IS ACCEPTABLE)

NOTES:  
 A) 14" BCI 5000 @ 16"  
 B) BEAR BEAT ON (7) 2x6 TREATED BEAR ON FOOTING AND ATTACH TO WALL W/ POWER DRIVEN NAILS

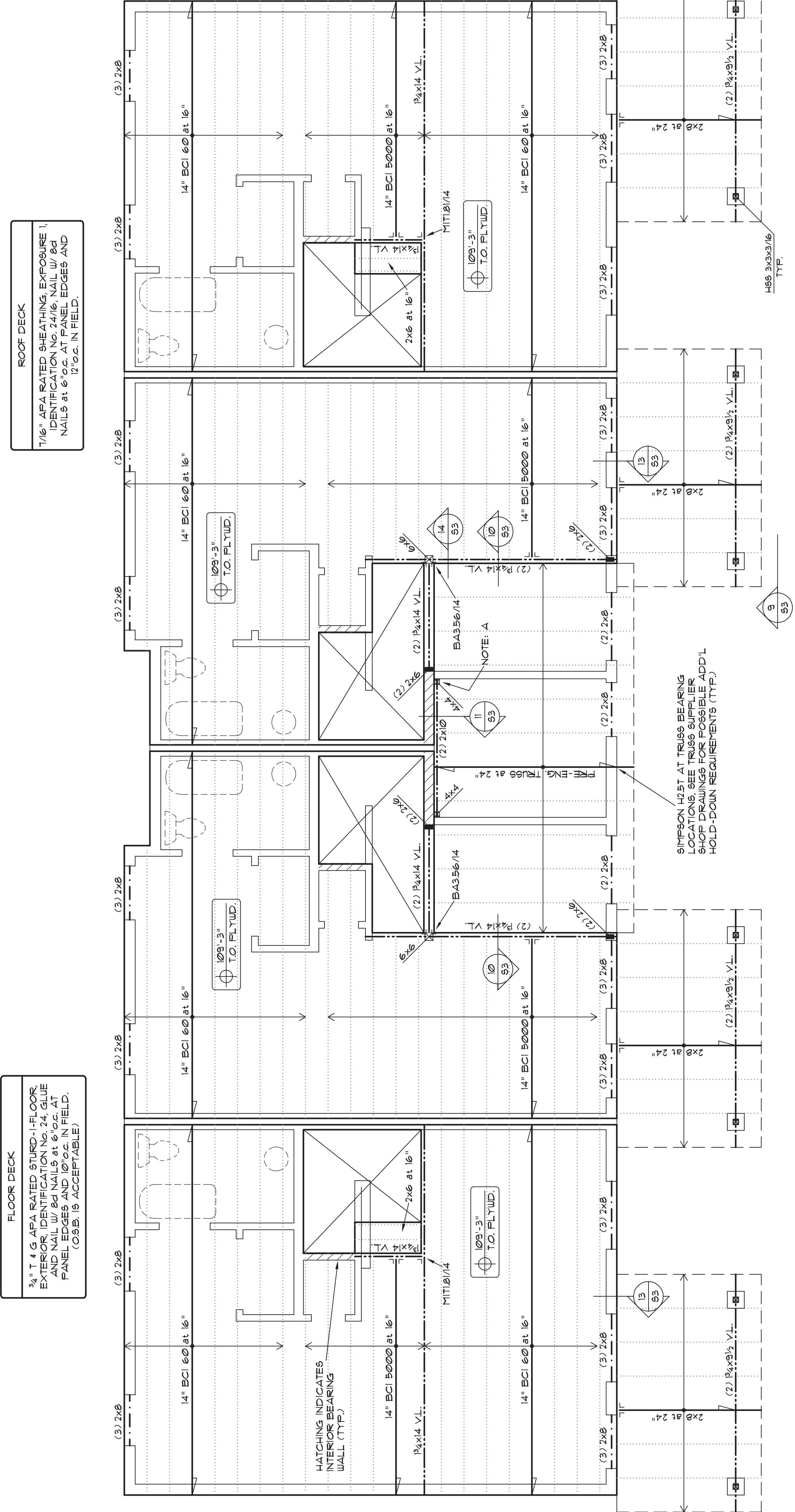
NOTES:  
 A) 14" BCI 5000 @ 16"  
 B) BEAR BEAT ON (7) 2x6 TREATED BEAR ON FOOTING AND ATTACH TO WALL W/ POWER DRIVEN NAILS

NOTES:  
 A) 14" BCI 5000 @ 16"  
 B) BEAR BEAT ON (7) 2x6 TREATED BEAR ON FOOTING AND ATTACH TO WALL W/ POWER DRIVEN NAILS

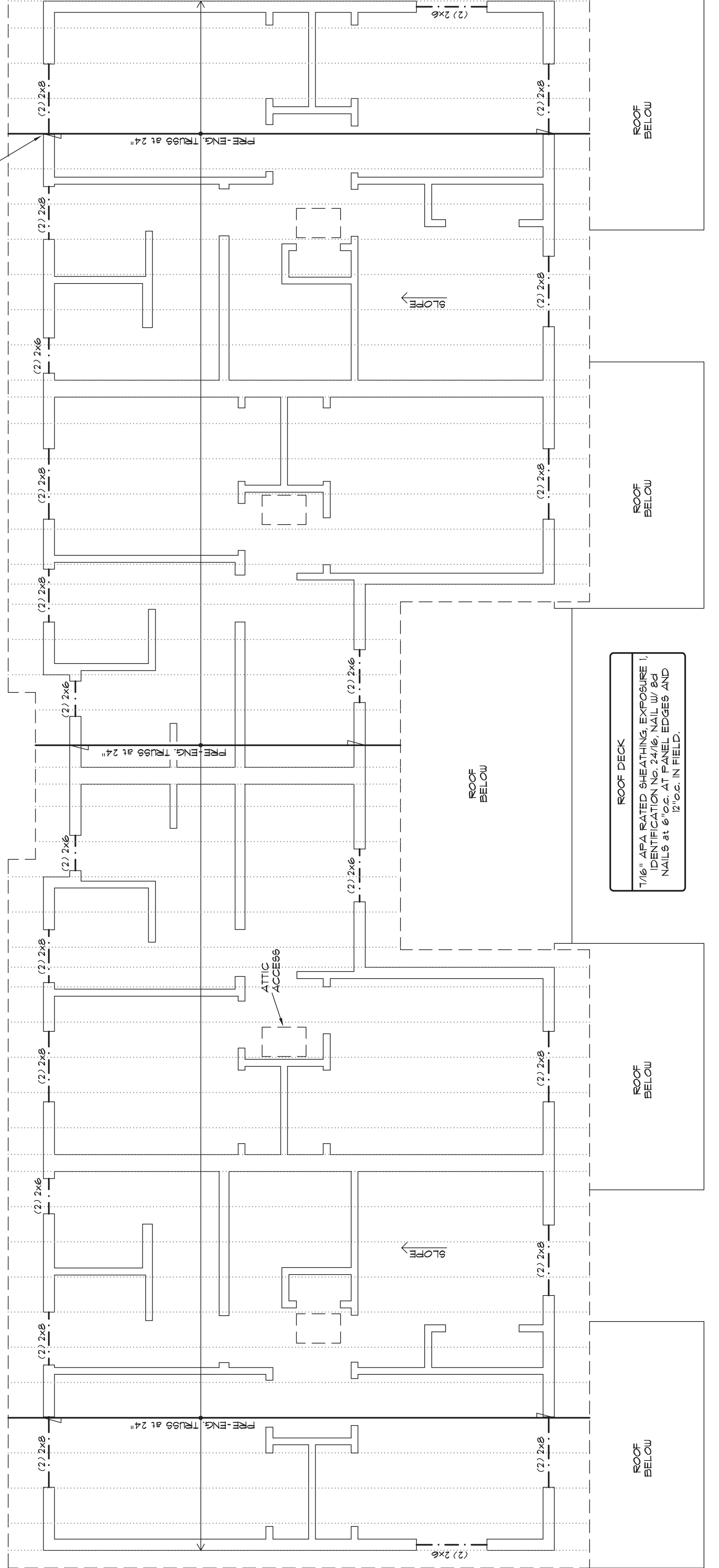


**MAIN FLOOR FRAMING PLAN**  
 SCALE: 1/4"=1'-0"





**UPPER FLOOR / LOW ROOF FRAMING PLAN**  
 SCALE: 1/4"=1'-0"

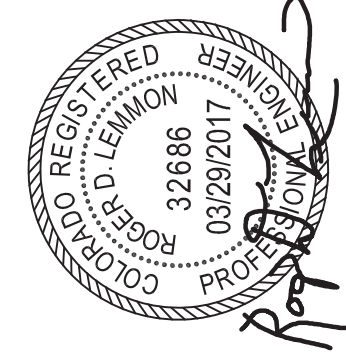


**HIGH ROOF FRAMING PLAN**  
 SCALE: 1/4"=1'-0"









**DRAWING INDEX**

NUMBER	DRAWING TITLE	DATE	BY	CHK	APP
MO.1A	DRAWING INDEX, GENERAL NOTES, LEGENDS AND SCHEDULES	02/23/2011	KSL		
MO.1A	FIRST AND SECOND FLOOR - BUILDING A - HVAC	02/23/2011	KSL		

**DUCT SYSTEM NOTES**

- ALL DUCTWORK UNLESS SPECIFICALLY INDICATED SHALL BE GALVANIZED SHEET METAL INSTALLED IN ACCORDANCE WITH THE SHADNA DUCT CONSTRUCTION STANDARDS. SEAL CLASS B. PRESURE SHOW ARE NET CLEAR INSIDE DIMENSIONS. ALLOWANCES MUST BE MADE FOR DUCT LINER WHERE CALLED FOR. DIMENSIONS SHOWN ARE NET CLEAR INSIDE DIMENSIONS.
- ALL SUPPLY DUCTWORK SHALL HAVE ALL JOINTS SEALED WITH "HARDCAST" OR EQUAL DUCT SEALER/MASTIC.
- ALL CONCEALED ROUND SUPPLY AIR DUCTS 12" AND SMALLER SHALL BE GALVANIZED SHEET METAL SNAP-LOCK, ROUND SUPPLY DUCT GREATER THAN 12" SHALL BE GALVANIZED SHEET METAL SPIRAL, PROVIDE 1" FIBERGLASS INSULATION UNLESS OTHERWISE SPECIFIED. INSULATED FLEXIBLE DUCT MAY BE USED FOR THE CONNECTION TO THE AIR OUTLET PROVIDED THE LENGTH OF THE FLEXIBLE DUCT DOES NOT EXCEED 6' LINEAR FEET.
- FACTORY MADE AIR DUCTS SHALL CONFORM TO UL 181 AND INCLUDE APPROPRIATE LABEL. FLEXIBLE DUCTWORK SHALL BE APPROVED CLASS 0 OR CLASS 1, LENGTH NOT TO EXCEED 6'-0".
- ALL BRANCH DUCT CONNECTIONS TO AIR OUTLETS AND AIR INLETS SHALL BE THE SAME SIZE AS THE DEVICE NECK UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- ALL ENVIRONMENTAL AIR EXHAUST DUCTS SHALL BE SEALED WITH "HARDCAST" OR EQUAL.
- DUCT HANGERS SHALL BE A MINIMUM 1/2" X 26 GAUGE GALVANIZED STEEL.
- PROVIDE SINGLE THICKNESS TURNING VANES IN ALL SQUARE AND RECTANGULAR ELBOUS IN SUPPLY, RETURN SYSTEMS.
- ALL FIRE DAMPERS SHALL BE LABELED FOR USE IN DYNAMIC SYSTEMS UNLESS OTHERWISE SPECIFIED.

**GENERAL NOTES - HVAC**

- RESOLVE ALL QUESTIONS OR CONFLICTS WITH ENGINEER BEFORE ANY EQUIPMENT IS ORDERED, MATERIALS FABRICATED OR SYSTEMS INSTALLED.
- COORDINATE THE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES ESPECIALLY STRUCTURAL, PLUMBING, ELECTRICAL AND ARCHITECTURAL CEILING HEIGHTS.
- COORDINATE ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS WITH THE GENERAL CONTRACTOR.
- COORDINATE AND VERIFY THAT ALL OPENINGS IN WALLS ABOVE CEILING / DOOR LOUVERS / DOOR UNDERCUTS ARE PROVIDED AS INDICATED ON THESE DRAWINGS.
- LEVEL ALL EQUIPMENT CURBS / BASES PRIOR TO INSTALLATION OF ANY EQUIPMENT. INSTALL FULL SIZE CONDENSATE DRAIN WITH TRAP SEAL AT EACH CURB. PROVIDE 1/2" MINIMUM CLEARANCE FROM CURB TO EQUIPMENT. PROVIDE 1/2" MINIMUM CLEARANCE FROM CURB TO EQUIPMENT. PROVIDE 1/2" MINIMUM CLEARANCE FROM CURB TO EQUIPMENT. PROVIDE 1/2" MINIMUM CLEARANCE FROM CURB TO EQUIPMENT.
- ALL BUILDING EXHAUSTS VENTS TO BE MINIMUM 10'-0" FROM BUILDING VENTILATION INTAKES.
- SEAL ALL ROOF PENETRATIONS WATER TIGHT WITH SEALANT/CALKING OR SYSTEM COMPATIBLE WITH ROOFING.
- ALL PIPING PENETRATIONS THROUGH FLOORS SHALL BE SEALED WATER TIGHT BY GROUTING FEMTER GAP BETWEEN PIPE AND FLOOR AND APPROVED SEALANT.
- MATERIALS EXPOSED IN PLUMBING SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 100.
- BIRD SCREEN UNLESS OTHERWISE SPECIFIED SHALL BE 1/4" STEEL MESH.
- INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2005 INTERNATIONAL MECHANICAL CODE APPLICABLE SECTIONS OF THE INTERNATIONAL BUILDING CODE AND APPLICABLE SECTIONS OF THE PUEBLO BUILDING CODE.

**CONDENSING UNIT AND DX COOLING COIL SCHEDULE**

NOTES: 1) PROVIDE REFRIGERATION PIPING ACCORDING TO MANUFACTURERS RECOMMENDATIONS. 2) SCROLL COMPRESSOR. 3) 1/8" BEER. 4) R-410A REFRIGERANT. 5) CURVED LOUVER PANELS. 6) LIQUID LINE 3/8". SUCTION LINE 3/4".

TAG	MANUFACTURER	CU MODEL	NOMINAL TONS	ELECTRICAL VOLTS/PH	MCA	MOP	WEIGHT (LBS)	SERVES	NOTES
CU-01	CARRIER	24ANB630A0003	15	230/1	11.1	20	84	FC-01, 04	1, 2, 3, 4, 5, 6, 7
CU-02	CARRIER	24ANB644A0003	2.0	230/1	11.5	25	186	FC-02, 05	1, 2, 3, 4, 5, 6, 7
CU-03	CARRIER	24ANB630A0003	2.5	230/1	18	25	193	FC-03, 06	1, 2, 3, 4, 5, 6, 7

**EXHAUST FAN SCHEDULE**

NOTES: 1) INCLUDES WHITE PLASTIC GRILLE. 2) MEETS ENERGY STAR RATINGS AND ASHRAE STD 62.2. 3) BACKDRAFT DAMPER. 4) INCLUDE MULTI-SPEED MODULE. 5) SWITCH WITH LIGHT SWITCH. 6) CONTINUOUS VENTILATION.

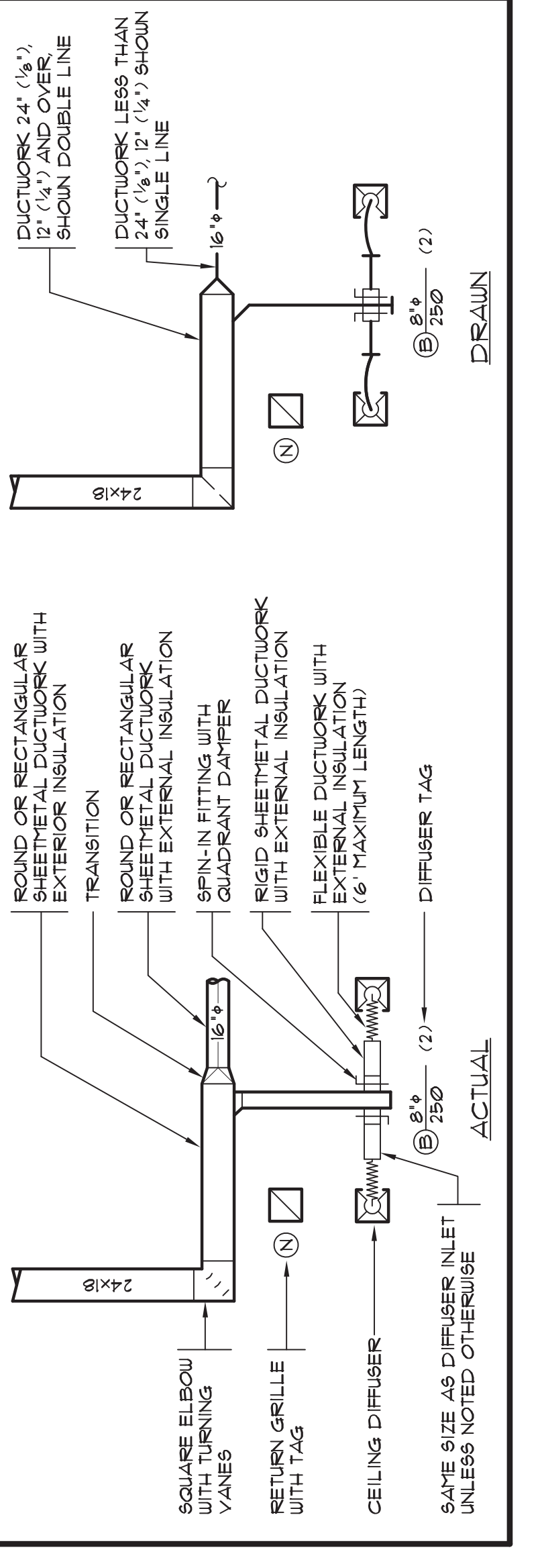
TAG	MANUF.	MODEL	CFM	ESP "/100	TYPE	DRIVE	SONES	WATTS	NOTES
EF-01	PANASONIC	FV-05-TV1K1	30/80	0.40	CEILING	DIRECT	5	25	1, 2, 3, 4, 5, 6

**RANGE HOOD SCHEDULE**

NOTES: 1) INCLUDE BACKDRAFT DAMPER. 2) 30" WIDTH. 3) 75 WATT LIGHT. 4) 2-SPEED. 5) OWNER TO CHOOSE COLOR.

TAG	MANUFACTURER	MODEL	TYPE	CFM	SONES	VOLTS/PH	MCA	NOTES
RH-01	BROAN	41300	TVA VENTED	190	6.0	120/1	2.9	1, 2, 3, 4, 5

**DUCTWORK LEGEND - CONSTANT VOLUME SYSTEMS**



**LEGEND** (NOT ALL ITEMS WILL BE USED)

SYMBOL	DESCRIPTION
HUB	HOT WATER SUPPLY AND RETURN PIPING
CHUB	CHILLED WATER SUPPLY AND RETURN PIPING
CHS, CHR	UNION FLANGE BLIND FLANGE
N	SOX GATE VALVE BALL VALVE GLOBE VALVE BUTTERFLY VALVE
W	CHECK VALVE STRAINER
G	LUBRICATED PLUS VALVE, BALANCING VALVE
X	PIPE ELBOW DOWN, PIPE TEE DOWN, PIPE TEE UP, PIPE ELBOW UP
Y	PIPE ANCHOR, PIPE GUIDE, PIPE SLEEVE
Z	FLEX CONNECTION, PIPE EXPANSION JOINT
AA	SQUARE DUCT ELBOW WITH TURNING VANES
BB	DOWN AND BACK UP UNDER BEAM OR OBSTACLE
CC	SUPPLY AIR RETURN/OUTSIDE AIR AND EXHAUST AIR
DD	DUCTWORK UNLINED AND DUCTWORK LINED
EE	FLEXIBLE AND RIGID ROUND DUCT
FF	DUCTWORK TO BE REMOVED
GG	FIRE SMOKE, COMBINATION FIRE AND SMOKE, RADIATION SMOKE AND RADIATION DAMPERS
HH	BAROMETRIC, MOTORIZED AND MANUAL DAMPERS, SMOKE DETECTOR
II	PRESSURE DIFFERENTIAL SWITCH
JJ	THERMOSTAT, HUMIDISTAT, TEMPERATURE TRANSMITTER, CARBON MONOXIDE OR CARBON DIOXIDE SENSOR
KK	WORK NOTE 1, REVISION NO. 1, DEPOLITON NOTE 1, POINT OF CONNECTION
LL	SUPPLY AIR RETURN, AIR EXHAUST, AIR FLOW, AIR FLOW ARROWS
MM	SUPPLY AIR RETURN, AIR EXHAUST AIR, OUTSIDE AIR
NN	SECTION A ON SHEET M-1
OO	DIAGRAM 1 ON SHEET M-1
PP	RESER 1 ON SHEET M-1
QQ	EQUIPMENT TAG
RR	EQUIPMENT TYPE
SS	EQUIPMENT NUMBER

**FAN COIL SCHEDULE**

NOTES: 1) UPELOW CONFIGURATION. 2) DOWN FLOW CONFIGURATION. 3) DISPOSABLE FILTER. 4) 1/2" EC MOTOR ON BLOWER. 5) MICRO-PROCESSOR CIRCUIT BOARD. 6) FACTORY THERMOSTAT. 7) 1/2" DOWN FLOW. 8) 1/2" DOWN FLOW. 9) 1/2" DOWN FLOW. 10) 1/2" DOWN FLOW. 11) 1/2" DOWN FLOW. 12) 1/2" DOWN FLOW. 13) 1/2" DOWN FLOW. 14) 1/2" DOWN FLOW. 15) 1/2" DOWN FLOW. 16) 1/2" DOWN FLOW. 17) 1/2" DOWN FLOW. 18) 1/2" DOWN FLOW. 19) 1/2" DOWN FLOW. 20) 1/2" DOWN FLOW. 21) 1/2" DOWN FLOW. 22) 1/2" DOWN FLOW. 23) 1/2" DOWN FLOW. 24) 1/2" DOWN FLOW. 25) 1/2" DOWN FLOW. 26) 1/2" DOWN FLOW. 27) 1/2" DOWN FLOW. 28) 1/2" DOWN FLOW. 29) 1/2" DOWN FLOW. 30) 1/2" DOWN FLOW. 31) 1/2" DOWN FLOW. 32) 1/2" DOWN FLOW. 33) 1/2" DOWN FLOW. 34) 1/2" DOWN FLOW. 35) 1/2" DOWN FLOW. 36) 1/2" DOWN FLOW. 37) 1/2" DOWN FLOW. 38) 1/2" DOWN FLOW. 39) 1/2" DOWN FLOW. 40) 1/2" DOWN FLOW. 41) 1/2" DOWN FLOW. 42) 1/2" DOWN FLOW. 43) 1/2" DOWN FLOW. 44) 1/2" DOWN FLOW. 45) 1/2" DOWN FLOW. 46) 1/2" DOWN FLOW. 47) 1/2" DOWN FLOW. 48) 1/2" DOWN FLOW. 49) 1/2" DOWN FLOW. 50) 1/2" DOWN FLOW. 51) 1/2" DOWN FLOW. 52) 1/2" DOWN FLOW. 53) 1/2" DOWN FLOW. 54) 1/2" DOWN FLOW. 55) 1/2" DOWN FLOW. 56) 1/2" DOWN FLOW. 57) 1/2" DOWN FLOW. 58) 1/2" DOWN FLOW. 59) 1/2" DOWN FLOW. 60) 1/2" DOWN FLOW. 61) 1/2" DOWN FLOW. 62) 1/2" DOWN FLOW. 63) 1/2" DOWN FLOW. 64) 1/2" DOWN FLOW. 65) 1/2" DOWN FLOW. 66) 1/2" DOWN FLOW. 67) 1/2" DOWN FLOW. 68) 1/2" DOWN FLOW. 69) 1/2" DOWN FLOW. 70) 1/2" DOWN FLOW. 71) 1/2" DOWN FLOW. 72) 1/2" DOWN FLOW. 73) 1/2" DOWN FLOW. 74) 1/2" DOWN FLOW. 75) 1/2" DOWN FLOW. 76) 1/2" DOWN FLOW. 77) 1/2" DOWN FLOW. 78) 1/2" DOWN FLOW. 79) 1/2" DOWN FLOW. 80) 1/2" DOWN FLOW. 81) 1/2" DOWN FLOW. 82) 1/2" DOWN FLOW. 83) 1/2" DOWN FLOW. 84) 1/2" DOWN FLOW. 85) 1/2" DOWN FLOW. 86) 1/2" DOWN FLOW. 87) 1/2" DOWN FLOW. 88) 1/2" DOWN FLOW. 89) 1/2" DOWN FLOW. 90) 1/2" DOWN FLOW. 91) 1/2" DOWN FLOW. 92) 1/2" DOWN FLOW. 93) 1/2" DOWN FLOW. 94) 1/2" DOWN FLOW. 95) 1/2" DOWN FLOW. 96) 1/2" DOWN FLOW. 97) 1/2" DOWN FLOW. 98) 1/2" DOWN FLOW. 99) 1/2" DOWN FLOW. 100) 1/2" DOWN FLOW.

TAG	MANUF.	MODEL	CFM	ESP "/100	HYDRONIC HEAT COIL MBH/OUT	BLOWER HP	INLET WATER HP	MCA	VOLTS/PH	MAX RISE	WEIGHT LBS	NOTES
FC-01	AIR-MARK	GPH 18/15	650	0.3	30.5	1/3	1/40	14.0	4.1	15/1	15	100
FC-02	AIR-MARK	GPH 24/25	800	0.3	35.3	1/3	1/40	14.0	4.1	15/1	15	100
FC-03	AIR-MARK	GPH 30/31	1050	0.3	39.1	1/2	1/40	14.0	7.4	15/1	20	120
FC-04	AIR-MARK	GPH 18/15	650	0.3	30.5	1/3	1/40	14.0	4.1	15/1	15	100
FC-05	AIR-MARK	GPH 24/25	800	0.3	35.3	1/3	1/40	14.0	4.1	15/1	15	100
FC-06	AIR-MARK	GPH 30/31	1050	0.3	39.1	1/2	1/40	14.0	7.4	15/1	20	120

**ELECTRIC HEATER SCHEDULE**

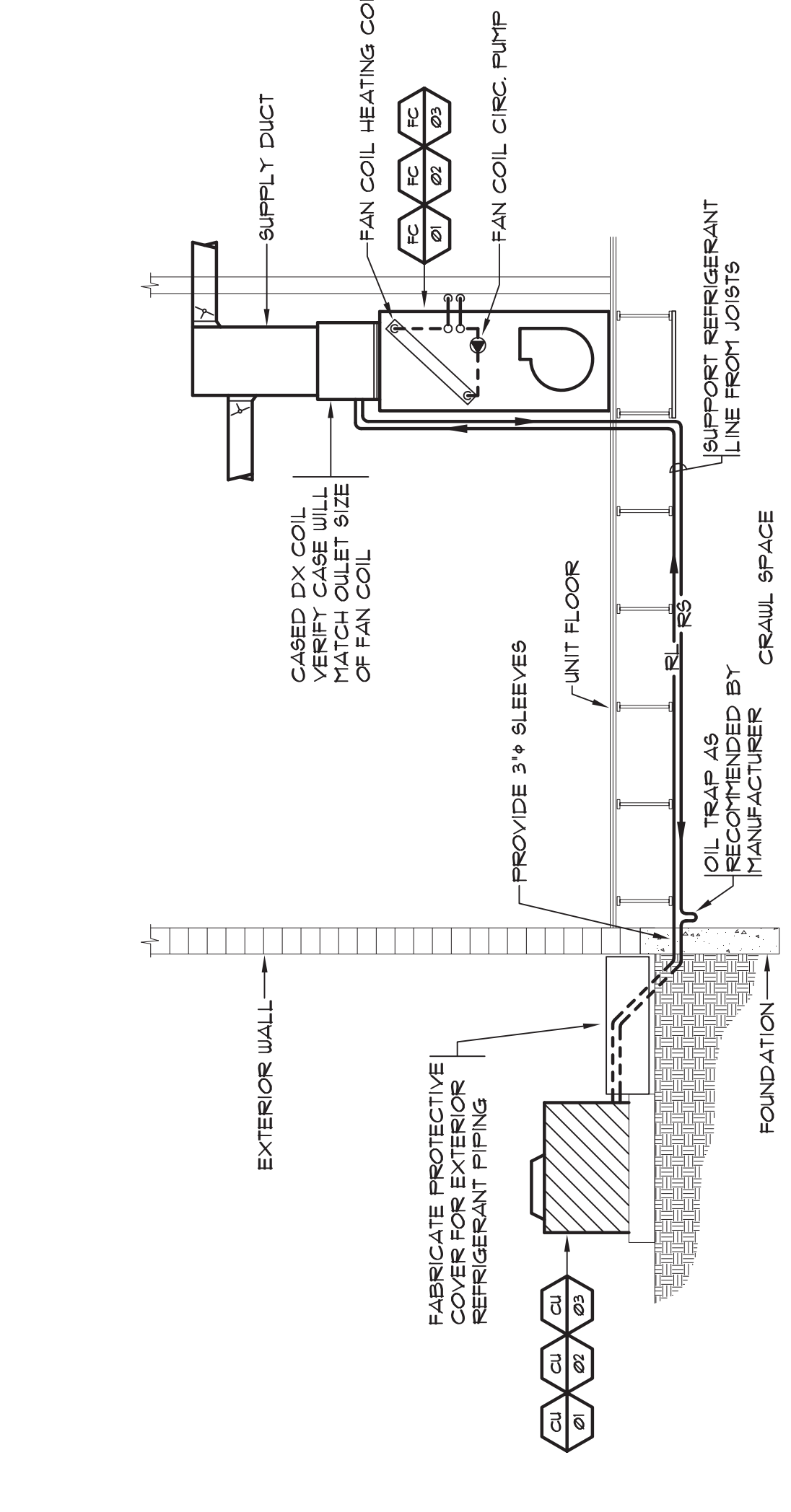
NOTES: 1) INTEGRAL THERMOSTAT. 2) 80W/RECEIVED MOUNT. 3) DISCONNECT SWITCH. 4) MOUNT 12" AFF. 5) HEAVY DUTY GRILLE.

TAG	MANUFACTURER	MODEL	KW	BTU	VOLTS/PH	NOTES
EH-01	RATWALL	E3321D-RP	15	5100	120/1	1, 2, 3, 4

**GRILLE, REGISTER, AND DIFFUSER SCHEDULE**

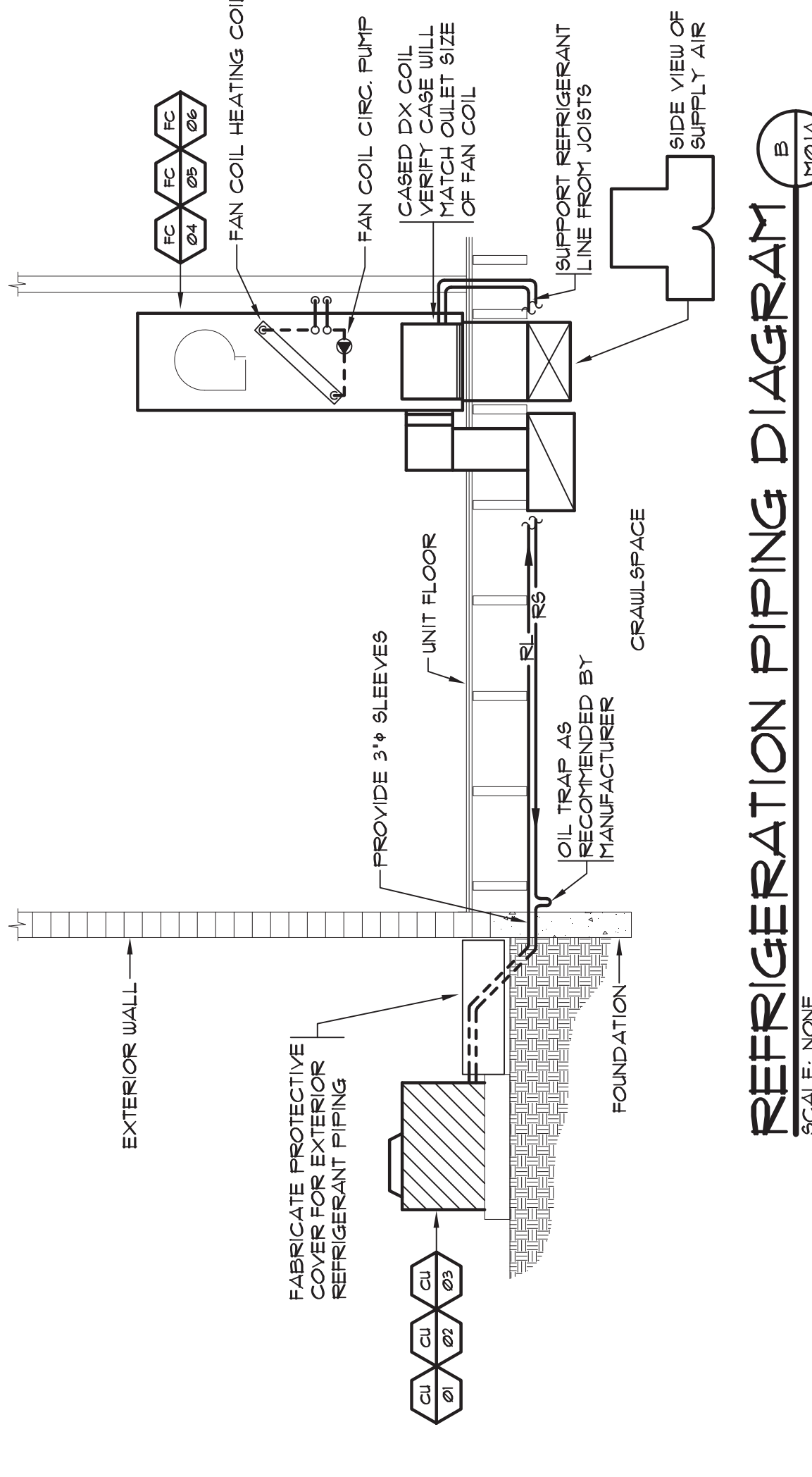
NOTES: 1) STANDARD FACTORY BROUW FINISH. 2) VOLUME DAMPER. 3) SEE DRAWINGS FOR NECK SIZE AND AIR QUANTITY.

TAG	MANUF.	MODEL	DESCRIPTION	NOTES
A	HART & COOLEY	4120/41	SUPPLY DIFFUSER, 9" STEEL CONSTRUCTION, FLOOR MOUNT	1, 2, 3
B	HART & COOLEY	650	RETURN GRILLE, 35" DEFLECTION, 1/2" SPACING, STEEL CONSTRUCTION, SIDEWALL MOUNT	1, 3



**REFRIGERATION PIPING DIAGRAM**

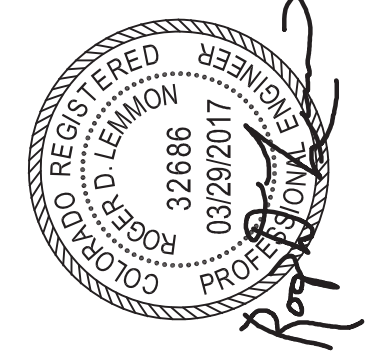
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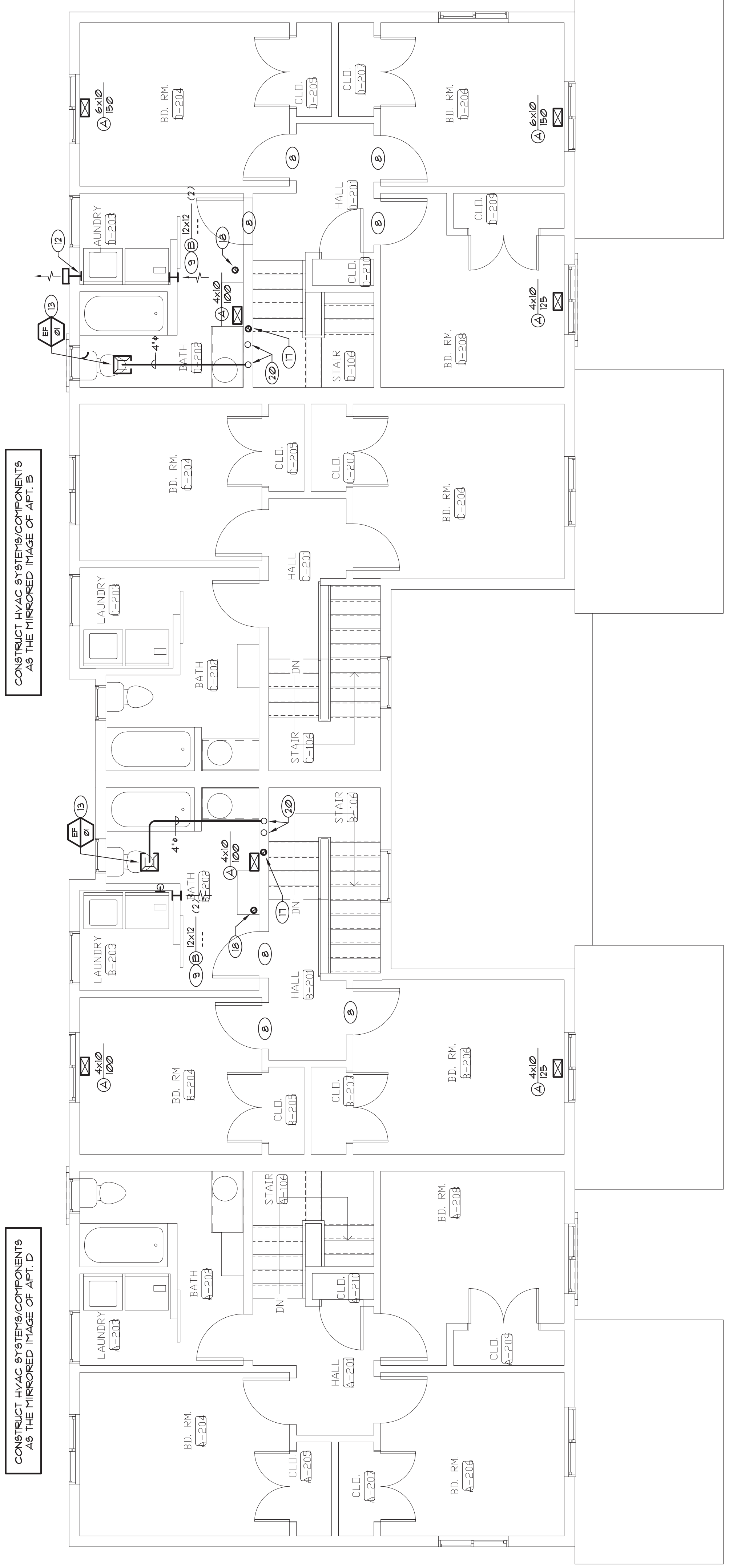
**REFRIGERATION PIPING DIAGRAM**

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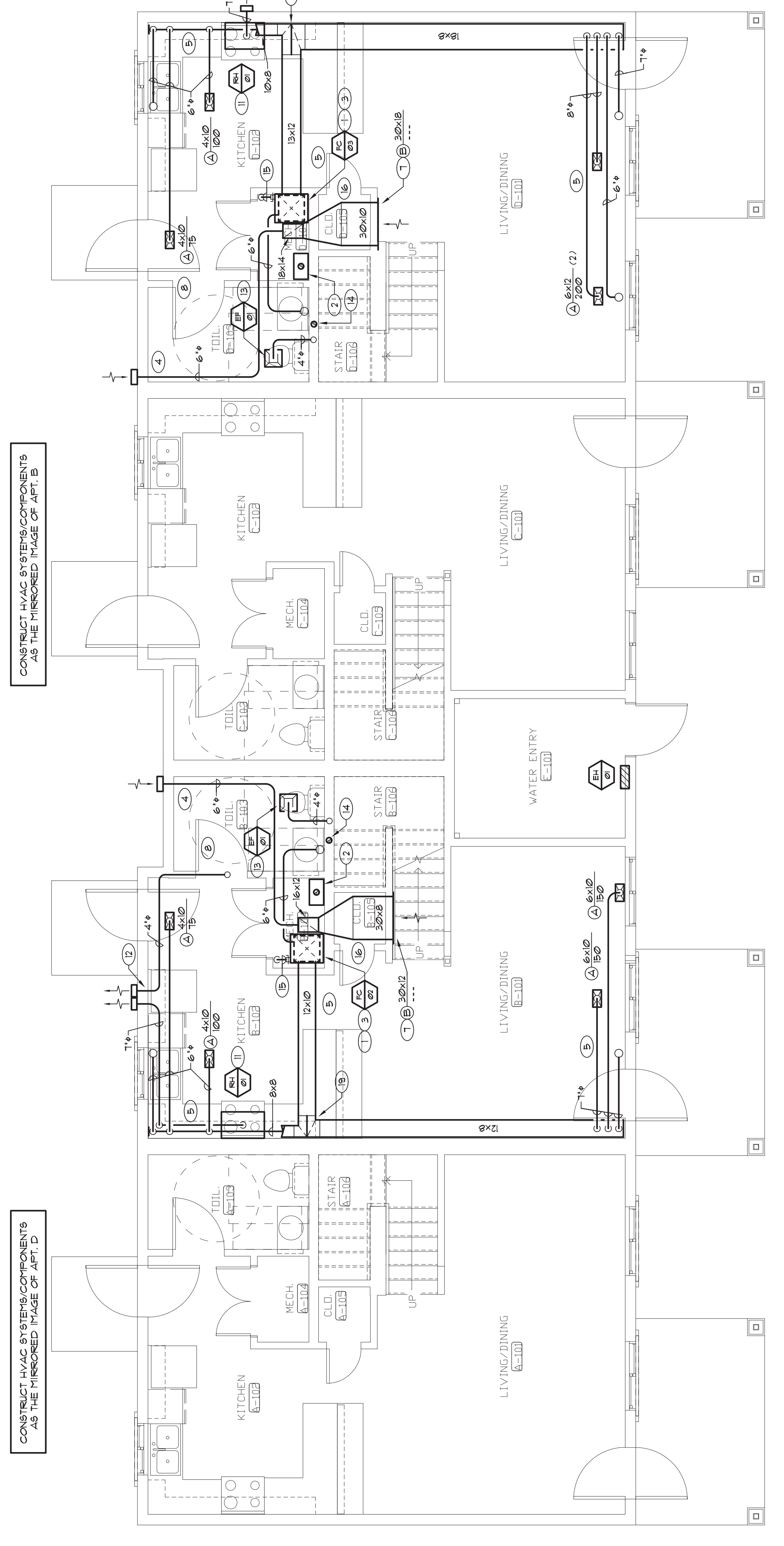




- WORK NOTES (THIS SHEET ONLY)**
- RAN COIL UNIT TO BE SUPPLIED BY MECHANICAL (HVAC) CONTRACTOR. COORDINATE WITH PLUMBING CONTRACTOR FOR PIPING CONNECTIONS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
  - TANKLESS WATER HEATER TO BE VENTED THROUGH THE ROOF BY PLUMBING CONTRACTOR. INSTALL CONCENTRIC VENT THROUGH ROOF. PLUMBING CONTRACTOR TO VERIFY VENTING ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
  - RAN COIL UNIT HAS A HYDRONIC HEATING COIL. SEE PIPING DIAGRAM AND PLUMBING DRAWINGS FOR CONNECTION REQUIREMENTS TO TANKLESS WATER HEATER.
  - 6" INSULATED OA DUCT RUNNING HIGH TO THE OUTSIDE WALL. TERMINATE WITH A WEATHER CAP. THIS MUST BE 10 FEET AWAY FROM ANY EXHAUST.
  - ALL SA AND RA DUCTWORK TO BE ROUTED HIGH BETWEEN JOISTS WHERE POSSIBLE.
  - NOT USED.
  - POINT RA GRILLE HIGH IN WALL.
  - UNDERCUT DOOR BY APPROXIMATELY 1".
  - DIAO TRANSFER AIR DUCT FOR DRYER. LOCATE HIGH IN WALL.
  - NOT USED.
  - INSTALL RANGE HOOD WITH DUCT TERMINATING HIGH ON OUTSIDE WALL WITH WEATHER CAP.
  - RAN DRYER 4" VENT THROUGH THE WALL. TERMINATE WITH DRYER VENT CAP.
  - INSURE ALL REFRIGERANTS ACCORDING TO COORDINATE WITH MECHANICAL CONTRACTOR. REFRIGERANTS COORDINATE WITH ELECTRICAL FOR WALL SWITCH. RANS CONTINUOUSLY ON LOW BUT WILL INCREASE TO HIGH WITH SWITCH.
  - INSTALL A 4" ROUND DUCT FROM THE CRAWL SPACE TO THE ROOF.
  - DROP A 4" DUCT INTO THE CRAWL SPACE FOR APPROXIMATELY 30" CPH.
  - RAN RA DUCT UP AGAINST STRUCTURE THEN FLAIR TO FIT RA GRILLE.
  - 4" DUCT FROM BELOW TO ROOF. TERMINATE WITH A ROOF CAP.
  - T-CONCENTRIC VENT FROM TANKLESS WATER HEATER TO ROOF. TERMINATE FLUE WITH (UBENK) VENT, PART NO. 184167P. RAN VENT THROUGH CABINET.
  - RAN DUCTWORK IN JOIST SPACE THEN DROP DOWN TO RAN IN 80FFIT.
  - RAN 4" EA DUCT UP THROUGH ROOF. TERMINATE WITH A ROOF CAP.
  - SET THE CONDENSING UNIT ON A 3" LEVEL EQUIPMENT PAD.
  - REMOVE LINE LENS, 8" RISERS, HANGERS, BRACES, RECOMMENDATIONS. COVER BOTH LIQUID AND SUCTING LINES WITH CLOSED CELL INSULATION THEN WRAP WITH WATER PROOF COVER WHERE LINES ARE BURIED. SLEEVES APPROXIMATELY 8" BELOW GRADE WITH 1/2" DIAMETER PIPES.



**2nd FLOOR - BLDG A - HVAC**  
SCALE: 1/4" = 1'-0"



**1st FLOOR - BLDG A - HVAC**  
SCALE: 1/4" = 1'-0"



**LEGEND** (NOT ALL ITEMS WILL BE USED)

ABBR	SYMBOL	DESCRIPTION
8U, CU, NP	— 8U —	SOFT, COLD AND NON-POTABLE WATER PIPING
F	— F —	FIRE PROTECTION PIPING
HU, HUC	— (H07F) —	HOT WATER AND HOT WATER CIRCULATING PIPING
G	— G (B F81G) —	PRESSURE GAS PIPING
V, FOY	— V —	VENT AND FUEL OIL VENT PIPING
SS, GSS	— SS —	SANITARY SEWER AND GREASE SANITARY SEWER PIPING
SD, ORD	— SD —	STORY DRAIN AND OVERFLOW STORY DRAIN PIPING
RD, ORD	— RD —	FLOOR DRAIN LEADER, OVERFLOW DRAIN LEADER
FCO, WCO, COTG	— FCO —	FLOOR CLEANOUT, WALL CLEANOUT AND CLEANOUT TO GRADE PIPING TO BE REMOVED
	— FCO —	UNION FLANGE BLIND FLANGE
	— FCO —	SOY GATE VALVE BALL VALVE, GLOBE VALVE, BUTTERFLY VALVE
	— FCO —	CHECK VALVE, STRAINER
	— FCO —	PLUG VALVE, CALIBRATED AND DYNAMIC BALANCING VALVES
	— FCO —	LUBRICATED PLUG VALVE
FRV	— FRV —	PRESSURE REDUCING VALVE
	— FRV —	THREE WAY CONTROL VALVE, SOLENOID AND TWO-WAY / MOTORIZED CONTROL VALVE
RFBP	— RFBP —	REDUCED PRESSURE BACKFLOW PREVENTER
	— RFBP —	ANGLE RELIEF VALVE, GAUGE AND COCK, THERMOMETER
	— RFBP —	TEST PLUG
AAV / HAV, HEV	— AAV —	HOSE END DRAIN VALVE, AUTOMATIC AIR / MANUAL AIR VENT
HB, WH	— HB —	HOSEBIBB, FROSTPROOF WALL HYDRANT, DOWN SPOUT NOZZLE
	— HB —	PIPE ELBOW, DOWN PIPE TEE, DOWN PIPE TEE UP, PIPE ELBOW UP
	— HB —	PIPE ANCHOR, PIPE GUIDE, PIPE SLEEVE
YTR	— YTR —	FLEX CONNECTION, PIPE EXPANSION JOINT
IE	— IE —	VENT THRU ROOF
E, R, N	— E —	INVERT ELEVATION
	— E —	EXISTING, RELOCATED, AND NEW
	— E —	WORK NOTE 1, REVISION NO. 1, DEMOLITION NOTE 1, POINT OF CONNECTION
	— E —	SECTION A ON SHEET M-1
	— E —	DIAGRAM 1 ON SHEET M-1
	— E —	RISER R-1 ON SHEET M-1
	— E —	FIXTURE OR EQUIPMENT TAG
	— E —	FIXTURE/EQUIPMENT NUMBER

**DRAWING INDEX**

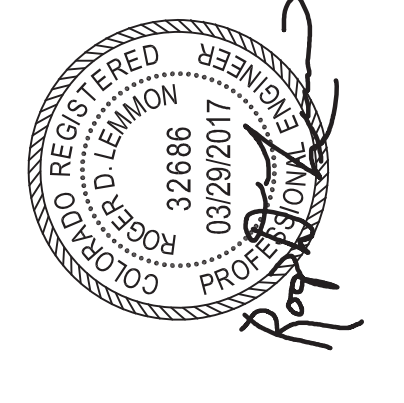
NUMBER	DRAWING TITLE	REVISIONS
		<ul style="list-style-type: none"> <li>● ISSUED FOR CONSTRUCTION</li> <li>○ ISSUED FOR REFERENCE ONLY, NOT FOR CONSTRUCTION</li> </ul>
PO1A	DRAWING INDEX, GENERAL NOTES AND LEGENDS	
PO2A	SCHEDULES AND DIAGRAMS	
PI1A	CRAWL SPACE FLOOR - BUILDING A - PLUMBING	
PI2A	FIRST AND SECOND FLOOR PLANS - BUILDING A - PLUMBING	

**GENERAL NOTES - PLUMBING**

- COORDINATE THE INSTALLATION OF PLUMBING SYSTEMS WITH OTHER TRADES. OFFSET PIPING AS NECESSARY TO AVOID CONFLICTS WITH OTHER WORK AND STRUCTURAL ABOVE CEILING AND/OR BELOW FLOOR.
- VERIFY EXACT LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES AT SITE PRIOR TO INSTALLATION OF ANY PIPING SYSTEMS.
- RESOLVE ALL QUESTIONS OR CONFLICTS WITH THE ENGINEER BEFORE ANY EQUIPMENT IS ORDERED. MATERIALS FABRICATED OR SYSTEMS INSTALLED.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION OF THE PLUMBING FIXTURES.
- SEAL ROOF PENETRATIONS WATER-TIGHT WITH ROOF SYSTEM COMPATIBLE WITH ROOFING.
- ALL PIPING PENETRATIONS THROUGH FLOORS SHALL BE SEALED WATER TIGHT BY GROUTING PERIMETER GAP BETWEEN PIPE AND FLOOR STRUCTURE, OR BY USING APPROVE UL SLEEVE AND SEALER SYSTEM. PENETRATIONS OF RATED WALLS SHALL USE SLEEVE WITH UL APPROVED FIRE SEALANT.
- DOMESTIC WATER PIPING LOCATED IN CRAWL SPACE OF BUILDINGS SHALL BE TYPE "L" HARD COPPER WITH UROUGHT COPPER FITTINGS. NO LEAD SOLDER OR "PROGRESS" TO BE USED FOR FITTINGS THROUGHOUT.
- PIPING WITHIN UNIT CONNECTING FIXTURES FROM POINT IN MECHANICAL CLOSETS INDICATED ON PLANS SHALL BE CROSS LINKED PEX PIPING WITH SPECIFIC MANUFACTURER FITTINGS.
- INSULATE ALL DOMESTIC WATER PIPING PER INSULATION SCHEDULES SHOWN IN PROJECT SPECIFICATIONS.
- WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC DWV WITH SOLVENT CEMENTED FITTINGS. SLOPE ALL WASTE PIPING AT 1/4" PER FOOT MINIMUM UNLESS OTHERWISE NOTED. PVC PIPING SHALL NOT BE USED IN RETURN AIR FLEETS.
- MAINTAIN THE UNIFORM SLOPE SHOWN ON THE PLANS FOR THE SANITARY SEWER, STORY DRAIN, AND CONDENSATE DRAIN PIPING SYSTEMS.
- SUPPORT ALL CAST IRON SOIL PIPE, PVC PIPING, COPPER PIPE AND STEEL PIPE RISERS AT EVERY STORY MINIMUM.
- ALL SANITARY VENTS SHALL BE LOCATED MINIMUM 10'-0" FROM BUILDING OUTSIDE AIR INTAKES.
- INSTALLATION SHALL CONFORM TO 2019 INTERNATIONAL PLUMBING CODE, APPLICABLE SECTIONS OF THE INTERNATIONAL BUILDING CODE AND APPLICABLE SECTIONS OF THE PUEBLO BUILDING CODE.

**FIRE PROTECTION NOTES**

- PROVIDE A NEW HYDRAULICALLY CALCULATED FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH THE LATEST EDITIONS OF IBC, UPC, AND NFPA 13. COVERAGE WILL INCLUDE LIVING SPACES, MECHANICAL SPACES AND ATTIC SPACES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE SYSTEM AND SHALL FURNISH TO THE ARCHITECT ALL DESIGN CALCULATIONS, SCHEDULES OF THE SYSTEM, AND CATALOG DATA OF ALL EQUIPMENT AS PART OF REQUIRED SUBMITTAL DATA IN SPECIFICATIONS. REFER TO SHEETS P-3 AND P-4.
- SHOP DRAWINGS SHALL INDICATE THE LOCATION OF ALL SPRINKLER HEADS AND PIPING COORDINATED WITH THE LOCATION OF ALL STRUCTURAL MEMBERS. HVAC EQUIPMENT, LIGHT FIXTURES, CEILING DIFFUSERS, REGISTERS AND PIPING.
- THE EXISTING OPERATIONAL INSTALLATION OF THE PROTECTION SYSTEMS IS A TRADE. THESE AND SHALL BE RESPECTED ONLY BY FULLY SATELLED EXPERIENCED AND REPUTABLE PARTIES. THE LOCATION OF FIRE PROTECTION INSTALLATION SHALL BE REQUIRED TO SHOW TO THE SATISFACTION OF THE ARCHITECT, SUCH SKILL, EXPERIENCE, AND RESPONSIBILITY.
- RESPECT WORK IN STRICT COMPLIANCE WITH THESE SPECIFICATIONS AND DRAWINGS. THE REQUIREMENTS OF THE STATE CERTIFIED SUPERVISION INSPECTOR AND ALL APPLICABLE CODES, ORDINANCES, STANDARDS, AND STATUTES IN EFFECT AT THE BUILDING SITE.
- ADHERE TO THE MOST RECENT EDITION OF THE FOLLOWING PUBLICATIONS, TOGETHER WITH THE LATEST REVISIONS, SUPPLEMENTS, AND AMENDMENTS THEREOF:
  - NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD 13.
  - INTERNATIONAL FIRE CODE (IFC).
  - CITY OF PUEBLO FIRE AUTHORITY.
- OBTAIN AND PAY FOR ALL NECESSARY PERMITS PRIORS TO STARTING WORK. OBTAIN CERTIFICATES, APPROVALS, AND/OR ACCEPTANCES OF ALL INTERESTED PARTIES AND AUTHORITIES HAVING JURISDICTION.
- PIPING TO BE INSTALLED SHALL BE TYPE "L" HARD COPPER OR GALVANNEAL STEEL PIPE. FITTINGS SHALL BE APPROVED FOR USE WITH THE INSTALLED SPRINKLER PIPING, WITH A MINIMUM WORKING PRESSURE OF 175 PSI.
- NOTIFY OWNER, ARCHITECT, AND ALL AUTHORITIES HAVING JURISDICTION NOT LESS THAN SEVENTY-TWO (72) HOURS PRIOR TO FINAL TESTING. DO NOT COMPLETE TESTING UNTIL ALL TESTING IS COMPLETED. CONDUCT ALL TESTS IN ACCORDANCE WITH NFPA STANDARDS AND ALL APPLICABLE CODES AND ORDINANCES. PROVIDE ALL NECESSARY PERSONNEL, CORRECT ALL DEFECTS, DEFICIENCIES, REPAIR ALL LEAKS AND RE-TEST AS REQUIRED.



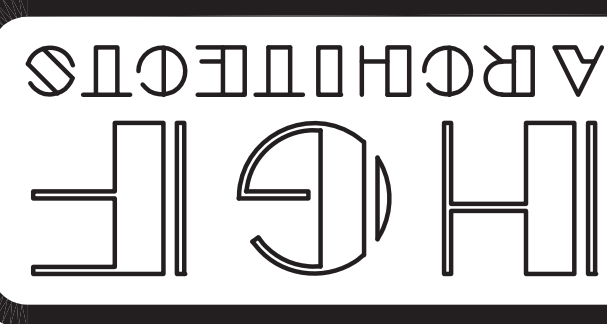






**WORK NOTES (THIS SHEET ONLY)**

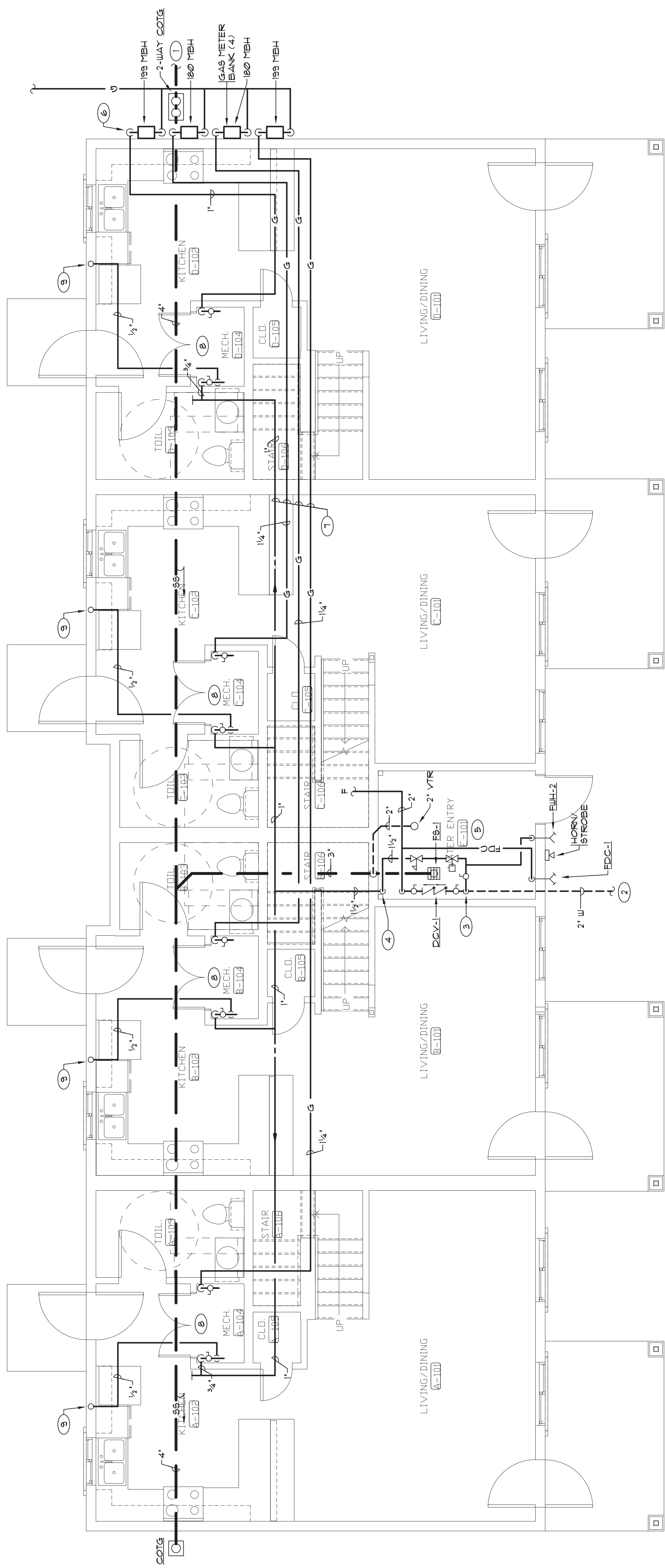
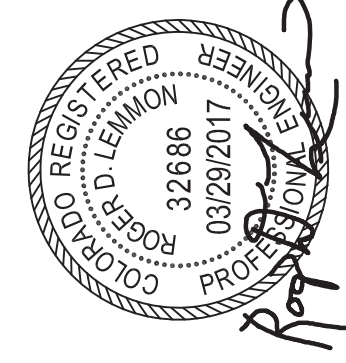
- 1 REFER TO CIVIL PLANS TO COORDINATE THE ACTUAL BUILDING TYPE AND FINISHES. THE SANITARY FLOOR DIRECTION MAY NOT BE THE SAME FOR EACH OF THIS BUILDING TYPE.
- 2 REFER TO CIVIL FOR CONTINUATION.
- 3 FIREPROTECT WATER ENTRIES WATER ENTRY ROOF FROST BELOW GROUND.
- 4 DOMESTIC WATER SERVICE DOWN AND INTO CRAWL SPACE. WATER PIPING IN CRAWL SPACE TO BE TYPE "L" COPPER.
- 5 WATER AND FIRE RISERS LOCATED IN WATER ENTRY ROOM. SEE RISER DIAGRAMS ON SHEET P02.A.
- 6 INDIVIDUAL GAS METERS FOR EACH UNIT. SERVICE TO METERS BY UTILITY CONTRACTOR.
- 7 GAS AND WATER BRINGS IN CRAWL SPACE. COORDINATE WITH HVAC WORK.
- 8 GAS AND WATER TO BE RUN INTO UNIT MECHANICAL ROOM. BACK TO CRAWL SPACE FOR WALL HYDRANT.
- 9 1/2" UP TO RHH-1.



UPLANDS TOWNHOMES  
 DEVELOPED BY THE HOUSING AUTHORITY OF PUEBLO  
 PROJECT No. I.F.B. T-624-PA-0  
 ACERO AVE. and SPRAGUE AVE., PUEBLO, COLORADO 81004

DATE	02/23/2011
DRAWN	
CAD	
PROJECT	NO. 024
REVISIONS:	

SHEET  
**P1.1A**



**CRAWL SPACE FLOOR - BLDG A - PLUMBING**  
 SCALE: 1/4" = 1'-0"

Drawing Limits: 43 30  
 Plot Scale: 1:1  
 Drawing No: 0201070200 P1A







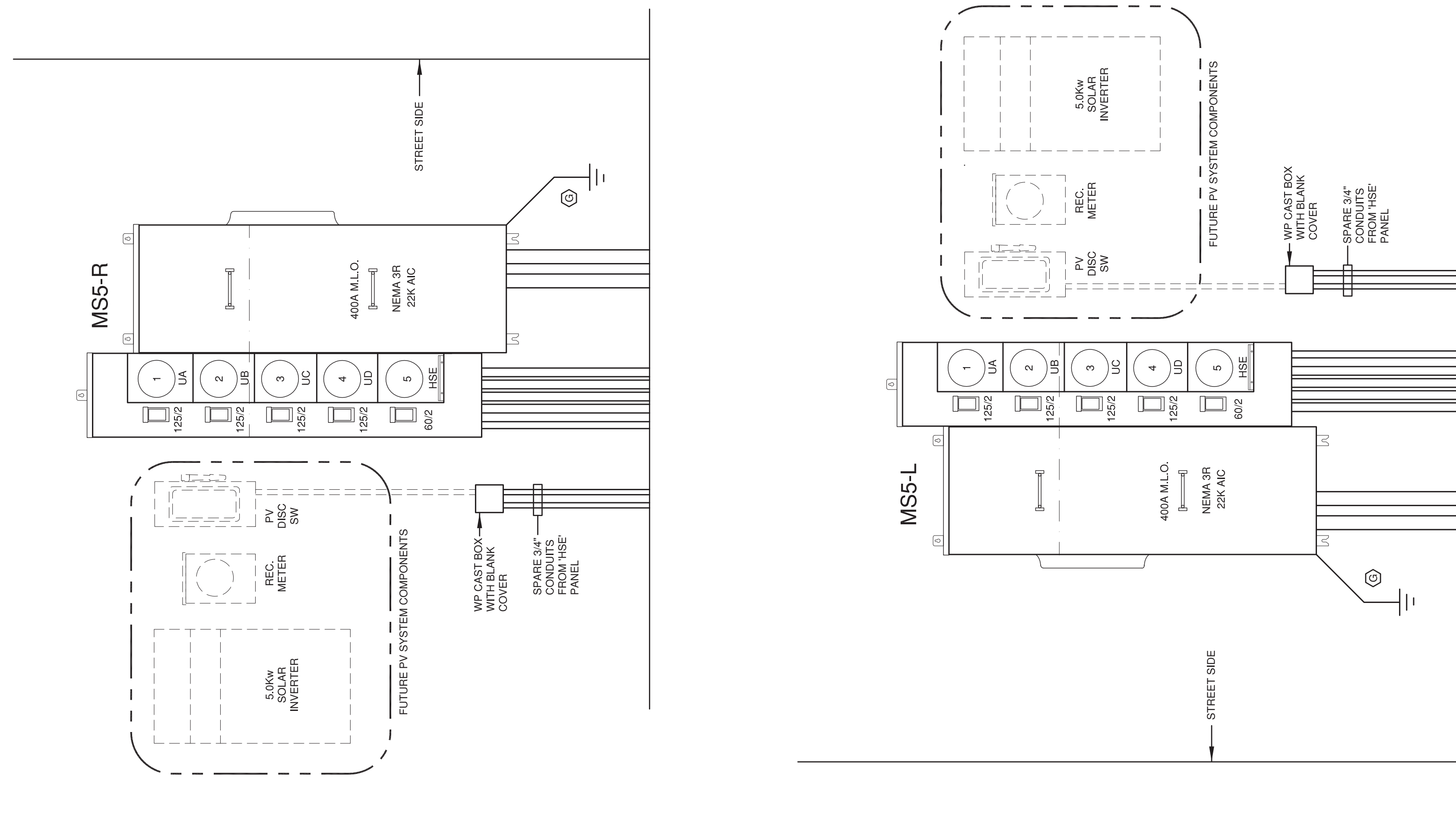
**Meterstacks MS5 Style**

GROUNDING ELECTRODE SYSTEM  
 PROVIDE A 1/8" GROUNDING  
 ELECTRODE, USER GROUND AND  
 FINAL CONNECTION TO COLD WATER  
 ENTRY.

FEEDER SCHEDULE:  
 SERVICE LATERAL METERS TO XMR  
 2 SETS PARALLEL (#250.0 @ 2 1/2")  
 THROUGH UNIT PANEL  
 3#10 @ 48" @ 1 1/2"  
 TYPICAL HOUSE PANEL  
 3#16 @ 48" @ 1"

GENERAL NOTE:  
 LABEL BREAKERS AS SERVICE  
 DISCONNECTS 1, 2, 3, 4, 5

SCHEDULE FOR PANEL HSE					
VOLTS/PHASE/WIRE	120/240/1PH-3W				
MOUNTING	MS5				
MAIN DEVICE	600A MLO				
S.C. RATING	10000 AIC				
NOTES: * Indicates Circuit may be used for Site Lighting Re: ES1.3 for Building's Used. Max. 350V					
PHASE A (kVA)	2.9				
PHASE B (kVA)	1.16				
PHASE C (kVA)	3.79				
Duty/Demand Load is Calculated Per NEC - 1.4k, Cmp. 11g, Art. & C at 125% Req. @ 10 + 50% and 0th 0100x					
CONNECTED KVA 3.28					
LOAD FACTOR 1.16					
DUTY/DEMAND KVA 3.79					
AVERAGE AMPS/LEG BASED ON DUTY/DEMAND KVA 15.8					
#	DESCRIPTION	UNIT	QUANTITY	DESCRIPTION	UNIT
1	1000 Break Panel Breaker	1000	1	1000 Break Panel Breaker	1000
2	1/2" 1/2" 20/1 B	20/1 B	2	1/2" 1/2" 20/1 B	20/1 B
3	1/2" 1/2" 20/1 B	20/1 B	2	1/2" 1/2" 20/1 B	20/1 B
4	1/2" 1/2" 20/1 B	20/1 B	2	1/2" 1/2" 20/1 B	20/1 B
5	Mech: Wt. Entry	1500	20/1 A	20/1 A	20/1 A
6	Spore	20/1 B	20/1 B	20/1 B	20/1 B
7	Spore	20/1 B	20/1 B	20/1 B	20/1 B
8	Spore	20/1 B	20/1 B	20/1 B	20/1 B
9	Spore	20/1 B	20/1 B	20/1 B	20/1 B
10	Spore	20/1 B	20/1 B	20/1 B	20/1 B
11	Spore	20/1 B	20/1 B	20/1 B	20/1 B
12	Spore	20/1 B	20/1 B	20/1 B	20/1 B
ENCLOSURE TYPE: NEMA 1		BREAKER TYPE: PLUG ON		NO. CIRCUITS: 12	
CLASS OF EQUIPMENT: LOADCENTER					



Building A : Load Summary : 400a Service

Load Type	Load Code	Load Kw	Conn. Kw	Dmd Factor	Dmd Kva
Lighting	Lgt	0.5	125%	0.6	
Gen Use Rec	Rec	0.5	10-50%	0.5	
Mechanical Equip	Mech	1.5	125%	1.9	
General Lighting	GL	56.8	3-35%	21.8	
Dryer	D	20.0	100%	20.0	
Range	RG	32.0	50%	16.0	
Other	Other	23.3	100%	23.3	
Demand Kva				Demand Kva	84.1
Demand Amps				Demand Amps	350.5

Notes:  
 1. HOUSE LOADS 'Lgt', 'Rec', 'Mech'  
 2. UNIT LOADS 'GL', 'D', 'RG', 'Oth'

TYPE	DESCRIPTION & MANUFACTURE CATALOGUE NUMBERS	NOTES	FINISH	LOCATION	LAMP(S)	
					NO.	TYPE
A	NOMINAL 15" x 4" x 4" LENS FLUORESCENT FIXTURE WITH MEDIUM OAK FINISH, FROSTED WHITE ACRYLIC LENS AND 120V ELECTRONIC BALLAST. LIGHTING #55361LE-15 OR APPROVED EQUIVALENT.	1	WHITE	KITCHEN	4	82 CRI F32T8/530 3000 Deg K
B	6" ROUND IC RATED LED CAN LIGHT WITH 30K LAMP COLOR AND WHITE TRIM RING. #100BLUM/3000 Deg K OR APPROVED EQUIVALENT.	1	WHITE	VARIOUS	-	100BLUM/3000 Deg K
C	NOMINAL 8" DIAMETER SURFACE MOUNTED (ROUND) LED STANDARD HIGH IMPACT POLYCARBONATE COLUMBA #RSEDA18L-30K-9-WH OR APPROVED EQUIVALENT.	1	WHITE	VARIOUS	-	18W/940LUM/3000 Deg K
D	SURFACE MOUNTED NOMINAL 15" DIA. x 5.5" HIGH FLUORESCENT FIXTURE WITH BRUSHED NICKEL TRIM AND SEA GULL LIGHTING #7594ABE-82 OR APPROVED EQUIVALENT.	1	NICKEL	VARIOUS	3	80 CRI 13W-G24 3000 Deg K
E	LAMP WITH MOUNTED OPEN FLUORESCENT STRIP WITH PROGRESS LIGHTING #77286-30EB OR APPROVED EQUIVALENT.	1	B.W.E.	LAUNDRY	2	82 CRI F32T8 3000 Deg K
F	SURFACE MOUNTED NOMINAL 17" DIA. x 5" HIGH FLUORESCENT FIXTURE WITH BRUSHED NICKEL TRIM AND STORED ALUMINUM STYLE GLASS. #7594ABE-82 OR APPROVED EQUIVALENT.	1	NICKEL	DINING	2	80 CRI 13W-G24 3000 Deg K
G	SURFACE MOUNTED 18" DIA. SEILING CAN (W/LS) BRUSHED NICKEL FINISH WITH SWIRL ALUMINUM STYLE GLASS. #7594ABE-82 OR APPROVED EQUIVALENT.	1	WHITE	LIVING	2	80 CRI 13W-G24 3000 Deg K
H	24" WIDE OVER MIRROR LIGHT WITH BRUSHED NICKEL FINISH AND WHITE TEXTURED POLYCARB. #8300K-11142NLED OR APPROVED EQUIV.	1	NICKEL	RESTROOMS	-	20W/141LUM 3000 Deg K
J	1 LIGHT DECORATIVE SCENCE WITH FLUOR. BULB, NICKEL FINISH AND WHITE GLASS. #8300K-11142NLED OR APPROVED EQUIV.	1	NICKEL	HALL	1	80 CRI 13W-G24 3000 Deg K
K	SMALL LED EXTERIOR WALL SCENCE OPERATED VIA ASTRONOMICAL TIME SWITCH.	1 BY ARCH	BY ARCH	EXTERIOR	-	8W/720LUM/3000 Deg K
L	DARK GRAY CONDUIT LED ADDRESS LIGHT OPERATED VIA ASTRONOMICAL TIME SWITCH. MOUNT LV TRANSFORMER IN ACCESSIBLE SPACE. #8300K-11142NLED OR APPROVED EQUIV.	1 BY ARCH	BY ARCH	EXTERIOR	-	4W/40LUM/3000 Deg K
AA	EXTERIOR LED WALL SCENCE WITH TYPE III HUBBEL #TRP-12-15-367-3-U-XX-POU OR APPROVED EQUIVALENT.	1 BY ARCH	BY ARCH	EXTERIOR	-	15W/1477LUM/3000 Deg K
BB	EXTERIOR SMALL LED WALL SCENCE OPERATED VIA ASTRONOMICAL TIME SWITCH. #8300K-11142NLED OR APPROVED EQUIV.	1 BY ARCH	BY ARCH	EXTERIOR	-	8W/492LUM/3000 Deg K

NOTES:  
 1. SUBSTITUTIONS PRIOR TO BID REQUIRED. ENGINEER MUST RECEIVE PRODUCT DATA 10 DAYS PRIOR TO BID - ONLY PRODUCT LISTED IN AN ADDENDUM WILL BE ACCEPTED.  
 FIXTURES TO BE ENERGY STAR RATED OR UTILIZE ENERGY EFFICIENT LAMPS AS LISTED IN ADDENDUM.

SYMBOL LEGEND	
20A-1P LIGHT SWITCH MOUNTED AT +45" A.F.F.	20A-1P LIGHT SWITCH MOUNTED AT +45" A.F.F.
20A, 3 WAY SWITCH MOUNTED AT +45" A.F.F.	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR MOUNTED AT +45" A.F.F.
WATSTOPPER #J5W-301 OR APPROVED EQUIVALENT.	WATSTOPPER #J5W-301 OR APPROVED EQUIVALENT.
WALL MOUNTED FAN SWITCH MOUNTED AT +45" A.F.F.	WALL MOUNTED FAN SWITCH MOUNTED AT +45" A.F.F.
WALL MOUNTED ASTRONOMICAL TIME CLOCK ON/OFF FUNCTION MOUNTED AT +45" A.F.F.	WALL MOUNTED ASTRONOMICAL TIME CLOCK ON/OFF FUNCTION MOUNTED AT +45" A.F.F.
20A TAMPER RESISTANT DUPLEX RECEPTACLE WITH ONE-HALF SWITCHED FOR DISPOSER & DISHWASHER. MOUNT BELOW COUNTER.	20A TAMPER RESISTANT DUPLEX RECEPTACLE WITH ONE-HALF SWITCHED FOR DISPOSER & DISHWASHER. MOUNT BELOW COUNTER.
15A TAMPER RESISTANT GROUND FAULT CIRCUIT INTERRUPT TYPE DUPLEX RECEPTACLE MOUNT AT +45" A.F.F. UNLESS INDICATED OTHERWISE ON DRAWINGS.	15A TAMPER RESISTANT GROUND FAULT CIRCUIT INTERRUPT TYPE DUPLEX RECEPTACLE MOUNT AT +45" A.F.F. UNLESS INDICATED OTHERWISE ON DRAWINGS.
15A TAMPER RESISTANT AFCI BREAKER PROTECTED (GENERAL USE) DUPLEX RECEPTACLE. MOUNTED AT +18"	15A TAMPER RESISTANT AFCI BREAKER PROTECTED (GENERAL USE) DUPLEX RECEPTACLE. MOUNTED AT +18"
30A-120/250V OUTLET FOR DRYER. GROUND PER NEC.	30A-120/250V OUTLET FOR DRYER. GROUND PER NEC.
50A-120/250V OUTLET FOR RANGE. GROUND PER NEC. MOUNTING HEIGHT TO BE COORDINATED WITH EQUIPMENT INSTALLED.	50A-120/250V OUTLET FOR RANGE. GROUND PER NEC. MOUNTING HEIGHT TO BE COORDINATED WITH EQUIPMENT INSTALLED.
CONNECTION FOR EXHAUST FAN. PROVIDE SNAP SWITCH NO THERMAL OVERLOAD MOUNT @ MTR.	CONNECTION FOR EXHAUST FAN. PROVIDE SNAP SWITCH NO THERMAL OVERLOAD MOUNT @ MTR.
CONNECTION FOR FAN COIL UNIT. PROVIDE SNAP SWITCH WITH THERMAL OVERLOAD MOUNT @ MTR.	CONNECTION FOR FAN COIL UNIT. PROVIDE SNAP SWITCH WITH THERMAL OVERLOAD MOUNT @ MTR.
CONNECTION FOR WATERHEATER. RE: MECHANICAL	CONNECTION FOR WATERHEATER. RE: MECHANICAL
HEAVY DUTY MOTOR DISCONNECT SWITCH FOR UNIT AIR CONDITIONING UNIT.	HEAVY DUTY MOTOR DISCONNECT SWITCH FOR UNIT AIR CONDITIONING UNIT.
TELEPHONE OUTLET MOUNTED. PROVIDE A SINGLE GANG BACKBOX, BLANK PLATE AND 3/4" INTO ACCESSIBLE CRAWLSPACE OR AS OTHERWISE DIRECTED BY ARCHITECT.	TELEPHONE OUTLET MOUNTED. PROVIDE A SINGLE GANG BACKBOX, BLANK PLATE AND 3/4" INTO ACCESSIBLE CRAWLSPACE OR AS OTHERWISE DIRECTED BY ARCHITECT.
CABLE TELEVISION OUTLET - PROVIDE SINGLE GANG BACKBOX, BLANK PLATE AND 3/4" INTO ACCESSIBLE CRAWLSPACE OR AS OTHERWISE DIRECTED BY ARCHITECT.	CABLE TELEVISION OUTLET - PROVIDE SINGLE GANG BACKBOX, BLANK PLATE AND 3/4" INTO ACCESSIBLE CRAWLSPACE OR AS OTHERWISE DIRECTED BY ARCHITECT.
120V WIREB WISED CONSUMPTION RESERVATA SOURCE DETECTOR/CARBON MONOXIDE DETECTOR WITH 9V BATTERY BACKUP AND ALARM. UNITS TO BE TAKEN WIRE WITHIN APT. UNIT TO SOUND ALARM'S SIMULTANEOUSLY.	120V WIREB WISED CONSUMPTION RESERVATA SOURCE DETECTOR/CARBON MONOXIDE DETECTOR WITH 9V BATTERY BACKUP AND ALARM. UNITS TO BE TAKEN WIRE WITHIN APT. UNIT TO SOUND ALARM'S SIMULTANEOUSLY.
120V HARD WIRED STROBE LIGHT WITH 9V BATTERY BACK UP. UNITS TO BE INTERCONNECTED WITH THE SMOKE/CARBON DETECTORS IN UNIT.	120V HARD WIRED STROBE LIGHT WITH 9V BATTERY BACK UP. UNITS TO BE INTERCONNECTED WITH THE SMOKE/CARBON DETECTORS IN UNIT.
SYSTEM EXTERIOR WEATHER PROOF HORN/STROBE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND TIED INTO FIRE SPRINKLER SYSTEM. CONDUIT AND BOXES BY ELEC CONTRACTOR.	SYSTEM EXTERIOR WEATHER PROOF HORN/STROBE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND TIED INTO FIRE SPRINKLER SYSTEM. CONDUIT AND BOXES BY ELEC CONTRACTOR.
SYSTEM SMOKE DETECTOR PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR. CONDUIT AND BOXES BY ELEC CONTRACTOR.	SYSTEM SMOKE DETECTOR PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR. CONDUIT AND BOXES BY ELEC CONTRACTOR.
WATERFLOW SWITCH/ES PROVIDED AND INSTALLED BY FIRE PROTECTION CONTRACTOR.	WATERFLOW SWITCH/ES PROVIDED AND INSTALLED BY FIRE PROTECTION CONTRACTOR.
TAMPER SWITCH/ES PROVIDED AND INSTALLED BY FIRE PROTECTION CONTRACTOR.	TAMPER SWITCH/ES PROVIDED AND INSTALLED BY FIRE PROTECTION CONTRACTOR.
SYMBOL ATTRIBUTES - 'A' = MOUNTED ABOVE COUNTER. RE: ARCHITECTURAL CASEWORK.	SYMBOL ATTRIBUTES - 'A' = MOUNTED ABOVE COUNTER. RE: ARCHITECTURAL CASEWORK.



