

CLEVELAND SINGLE FAMILY HOMES

10618-20 LEE AVE CLEVELAND, OHIO 44106

OCTOBER 11, 2019
MEP SUBMISSION

PROJECT TEAM

OWNER

THE ORLEAN COMPANY

23875 COMMERCE PARK DRIVE - SUITE 140
BEACHWOOD, OHIO 44122
PHONE: (216) 514-4990

STRUCTURAL ENGINEERING

CRAIG S. COHEN, P.E.

THREE COMMERCE PARK SQUARE, SUITE 200
23230 CHAGRIN BOULEVARD
BEACHWOOD, OH 44122
PHONE: (216) 763-2505
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ARCHITECT

CITY ARCHITECTURE, INC

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CIVIL ENGINEERING

POLARIS ENGINEERING + SURVEYING

34600 CHARDON ROAD, SUITE D
WILLOUGHBY HILLS, OHIO 44094
PHONE: (440) 944-4433



PROJECT STATISTICS

	UNIT AREA	PORCH AREA	BASEMENT AREA	GARAGE AREA	
OPTION 1	1,336 SQ. FT.	168 SQ. FT.	579 SQ. FT.	413 SQ. FT.	2,496 SQ. FT.

ARCHITECTURAL ABBREVIATIONS

ADJ.	ADJACENT	F.D.	FLOOR DRAIN	PERF.	PERFORATED
A.F.F.	ABOVE FINISH FLOOR	F.F.	FINISH FLOOR	P.LAM.	PLASTIC LAMINATE
ALLOW.	ALLOWANCE	FIN.	FINISH	PLUMB.	PLUMBING
ALT.	ALTERNATE	FLR.	FLOOR	PLYWD.	PLYWOOD
ALUM.	ALUMINUM	F.R.T.	FIRE RETARDANT	PR.	PAIR
APPROX.	APPROXIMATELY	FT.	TREATED	PSF	POUND/SQUARE FOOT
ARCH.	ARCHITECTURAL	FTG.	FEET, FOOT	P.T.	PRESSURE TREATED
B&B	BALLED & BURLAPPED	FTG.	FOOTING	PTD.	PAINTED
BD.	BOARD	G.C.	GALVANIZED	R	RISER
BLDG.	BUILDING	G.C.	GENERAL CONTRACTOR	RAD.	RADIUS
BLK.	BLOCK	GL.	GLASS	R.D.	ROOF DRAIN
BLKG.	BLOCKING	GLZ.	GLAZING	REF.	REFER TO
BM.	BEAM	GSF	GROSS SQUARE FEET	REFL.	REFLECTED
BRG.	BEARING	GSF	GROSS SQUARE FEET	REINF.	REINFORCED
BTW.	BETWEEN	GWB	GYPSUM WALL BOARD	REINQ.	REQUIRED
B/O	BOTTOM OF	GYP.	GYPSUM	R.C.P.	REFLECTED CEILING PLAN
C.B.	CATCH BASIN	H.A.	HEAVY DUTY	R.L.	ROOF LEADER
C.J.	CONTROL JOINT	HT.	HEIGHT	R.L.	ROOM
C.L.	CENTER LINE	H.M.	HOLLOW METAL	R.O.	ROUGH OPENING
CLG.	CEILING	HORIZ.	HORIZONTAL	RTU	ROOF TOP UNIT
CLOS.	CLOSET	HP	HIGH POINT	SCW	SOLID CORE WOOD
CMU	CONCRETE MASONRY UNIT	INFO.	INFORMATION	SECT.	SECTION
COL.	COLUMN	INSUL.	INSULATION, INSULATED	S.F.	SQUARE FEET
COLS.	COLUMNS	INT.	INTERIOR	SHR.	SHEET
COMP.	COMPRESSIBLE	JAN.	JANITOR'S	SIM.	SIMILAR
CONC.	CONCRETE	JT.	JOINT	SIM.	SIMILAR
CONT.	CONTINUOUS	KIT.	KITCHEN	SPECS.	SPECIFICATIONS
CONSTR.	CONSTRUCTION	L.	LENGTH	S.S.	STAINLESS STEEL
COORD.	COORDINATE	LAM.	LAMINATE	S.S.M.	SOLID SURFACE MATERIAL
CTR.	CENTER	LAV.	LAVATORY	STD.	STANDARD
DET.	DETAIL(S)	LWT.	LIGHTWEIGHT	STL.	STEEL
DIA.	DIAMETER	MFR.	MANUFACTURER	STN'D.	STAINED
DIAG.	DIAGRAM	MAS.	MASONRY	STOR.	STORAGE
DIMS.	DIMENSIONS	MATL.	MATERIAL	STRUCT.	STRUCTURAL
DN.	DOWN	MAX.	MAXIMUM	SUSP.	SUSPENDED
DS	DOWNSPOUT	MDO	MEDIUM DENSITY	THK.	THICK
DWG(S)	DRAWING(S)	MDF	MEDIUM DENSITY	TLT.	TOILET
EA	EACH	MECH.	MECHANICAL	T.O.	TOP OF
EIFS	EXTERIOR INSULATION FINISH SYSTEM	MTL.	METAL	T.	TREAD
E.J.	EXPANSION JOINT	MIN.	MINIMUM	TYP.	TYPICAL
ELEV.(S)	ELEVATION(S)	MMU.	MANUFACTURED MASONRY UNIT	U.L.	UNDERWRITERS
ELEC.	ELECTRICAL	M.O.	MASONRY OPENING	U.N.O.	UNLESS NOTED OTHERWISE
ETC.	ET CETERA	M.PT.	MIDPOINT	V.B.	VAPOR BARRIER
E.T.R.	EXISTING TO REMAIN	MTD.	MOUNTED	VERT.	VERTICAL
EQ.	EQUAL	N.I.C.	NOT IN CONTRACT	V.I.F.	VERIFY IN FIELD
EW.	ELECTRIC WATER COOLER	NOM.	NOMINAL	W.	WIDTH
EXIST.	EXISTING	NSF	NET SQUARE FOOTAGE	W/	WITH
EXP.	EXPANSION	NTS	NOT TO SCALE	W/O	WITHOUT
EXT.	EXTERIOR	O/	OVER	WD.	WOOD
FE.	FIRE EXTINGUISHER	O.C.	ON CENTER	W.P.	WORK POINT
FEC.	FIRE EXTINGUISHER CABINET	O.D.	OUTSIDE DIAMETER	/FT	PER FOOT
		O.H.	OVERHEAD	@	AT
		OSB	ORIENTED STRAND BOARD	±	PLUS OR MINUS
		PART.	PARTITION	°	DEGREE
				Ø	DIAMETER

LEGEND

	EARTH		WOOD-ROUGH
	STEEL		WOOD-FINISH
	CONCRETE		POROUS FILL
	BRICK		RIGID INSULATION
	PLYWOOD		BATT INSULATION
	DOWN SPOUT		DOOR NUMBER
	FLOOR DRAIN		ELEVATION TARGET
	VENT		REVISION
	ROOM NAME & NUMBER		
	SECTION DESIGNATION		SHEET WHERE SECTION LOCATED
	ELEVATION DESIGNATION		SHEET WHERE ELEVATION LOCATED
	DETAIL DESIGNATION		SHEET WHERE DET. LOCATED

GENERAL NOTES

- CODE: 2013 RESIDENTIAL CODE OF OHIO
- THE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AS THEY PERTAIN TO THE ACCEPTABLE COMPLETION OF THEIR WORK.
- COORDINATE ALL WORK WITH ARCHITECTURAL AND EQUIPMENT DRAWINGS.
- VERIFY ALL MECHANICAL REQUIREMENTS BEFORE FRAMING.
- DO NOT SCALE DRAWING, FOLLOW DIMENSIONS. ALL MATERIAL INSTALLATION PROCEDURES MUST FOLLOW.
- MANUFACTURERS REQUIRED / RECOMMENDED METHODS FOR INSTALLATION, INCLUDING ALL NECESSARY AND OR RECOMMENDED ACCESSORY ELEMENTS SUCH AS, BUT NOT LIMITED TO: FLASHING, SEALANT, ANCHORING AND FASTENING DEVICES, ETC. PERSONNEL INSTALLING THE MATERIALS SHALL BE PROVIDED WITH WRITTEN INSTALLATION PROCEDURES AND/OR SPECIFIC DIRECTION FROM THE MANUFACTURER PRIOR TO INSTALLATION. ITEMS REQUIRED FOR INSTALLATION, NOT SPECIFICALLY IDENTIFIED ON THESE DRAWINGS, YET NOTED ON THE INSTALLATION INSTRUCTIONS MUST BE ACCOUNTED FOR, PROVIDED, AND INSTALLED BY THE CONTRACTOR. CONTACT THE ARCHITECT IF THERE ARE ANY GENERAL OR SPECIFIC QUESTIONS REGARDING THESE REQUIREMENTS.

MATERIAL NOTES

- VERIFY ALL ROUGH OPENINGS W/MANUFACTURER PRIOR TO FRAMING. ALL EGRESS OR RESCUE WINDOWS FROM SLEEPING ROOMS MUST HAVE A NET CLEAR OPENING OF 5.7 SQ FT. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 24". THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20". THE SILL OF EGRESS WINDOWS SHALL NOT BE MORE THAN 44" AFF. (ORC 809.4)
- TEMPERED GLAZING SHALL BE PROVIDED IN THE FOLLOWING CONDITIONS (ORC 308.4):
 - IN ALL GLAZED DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS. TEMPERED GLAZING SHALL ALSO BE INSTALLED IN ANY PART OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE DRAIN INLET AND 36 INCHES HORIZONTALLY FROM THE INSIDE EDGE OF THE TUB OR COMPARTMENT.
 - IN ANY INDIVIDUALLY FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24 INCH ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR UNLESS THERE IS A WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING.
 - IN ANY INDIVIDUALLY FIXED OR OPERABLE PANEL OTHER THAN THOSE SPECIFIED ABOVE WHICH MEETS ALL THE FOLLOWING CONDITIONS:
 - EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9SQ. FT.
 - BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR.
 - TOP EDGE GREATER THAN 36 INCHES ABOVE THE FLOOR.
 - ONE OR MORE WALKING SURFACES WITHIN 36 INCHES HORIZONTALLY OF THE GLAZING.
- IN STAIRWAY, LANDINGS AND RAMPS WHICH MEET THE FOLLOWING CONDITIONS:
 - GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36 INCHES HORIZONTALLY OF A WALKING SURFACE WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.
 - GLAZING ADJACENT TO STAIRWAYS WITHIN 60 INCHES HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60 INCHES ABOVE THE NOSE OF THE TREAD.(EXCEPTION: TEMPERED GLAZING IS NOT REQUIRED IN CIRCUMSTANCES RELATED TO NOTE "D" WHEN:
 - THE SIDE OF A STAIRWAY, LANDING OR RAMP HAS A GUARDRAIL OR HANDRAIL, INCLUDING BALUSTERS OR INFILL PANELS COMPLYING WITH OBC.
 - THE PLANE OF THE GLASS IS 18 INCHES OR GREATER FROM THE RAILING.)

INDEX OF DRAWINGS

A0.0	TITLE SHEET	2019-10-11
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CIVIL / SITE

C1.1	PPN 120-06-030 SITE PLAN	2019-10-11
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ARCHITECTURAL

A1.1	OPTION 1 FLOOR PLAN	2019-10-11
A1.3	INTERIOR DETAILS	2019-10-11
A1.4	ROOF PLANS	2019-10-11
A2.1	GARAGE PLAN AND ELEVATIONS	2019-10-11
A3.1	OPTION 1 ELEVATIONS	2019-10-11
A4.1	EXTERIOR SECTIONS AND DETAILS	2019-10-11
A4.2	EXTERIOR SECTIONS AND DETAILS	2019-10-11
A5.1	STAIR SECTION AND DETAILS	2019-10-11
A5.2	INTERIOR DETAILS	2019-10-11
A6.1	SPECIFICATIONS	2019-10-11
A6.2	ENERGY STAR SPECIFICATIONS	2019-10-11

STRUCTURAL

S1.0	FOUNDATION, FIRST & SECOND FLOOR PLANS	2019-10-11
S2.0	ROOF FRAMING PLANS	2019-10-11
S3.0	SECTIONS & TYPICAL DETAILS	2019-10-11
S4.0	GENERAL NOTES	2019-10-11

PLUMBING

P1.1	PLUMBING SPECIFICATIONS	2019-10-11
P1.2	PLUMBING PLANS	2019-10-11

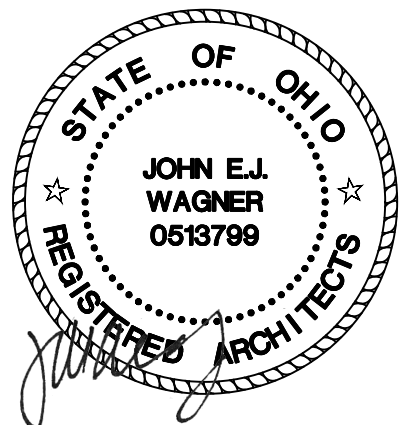
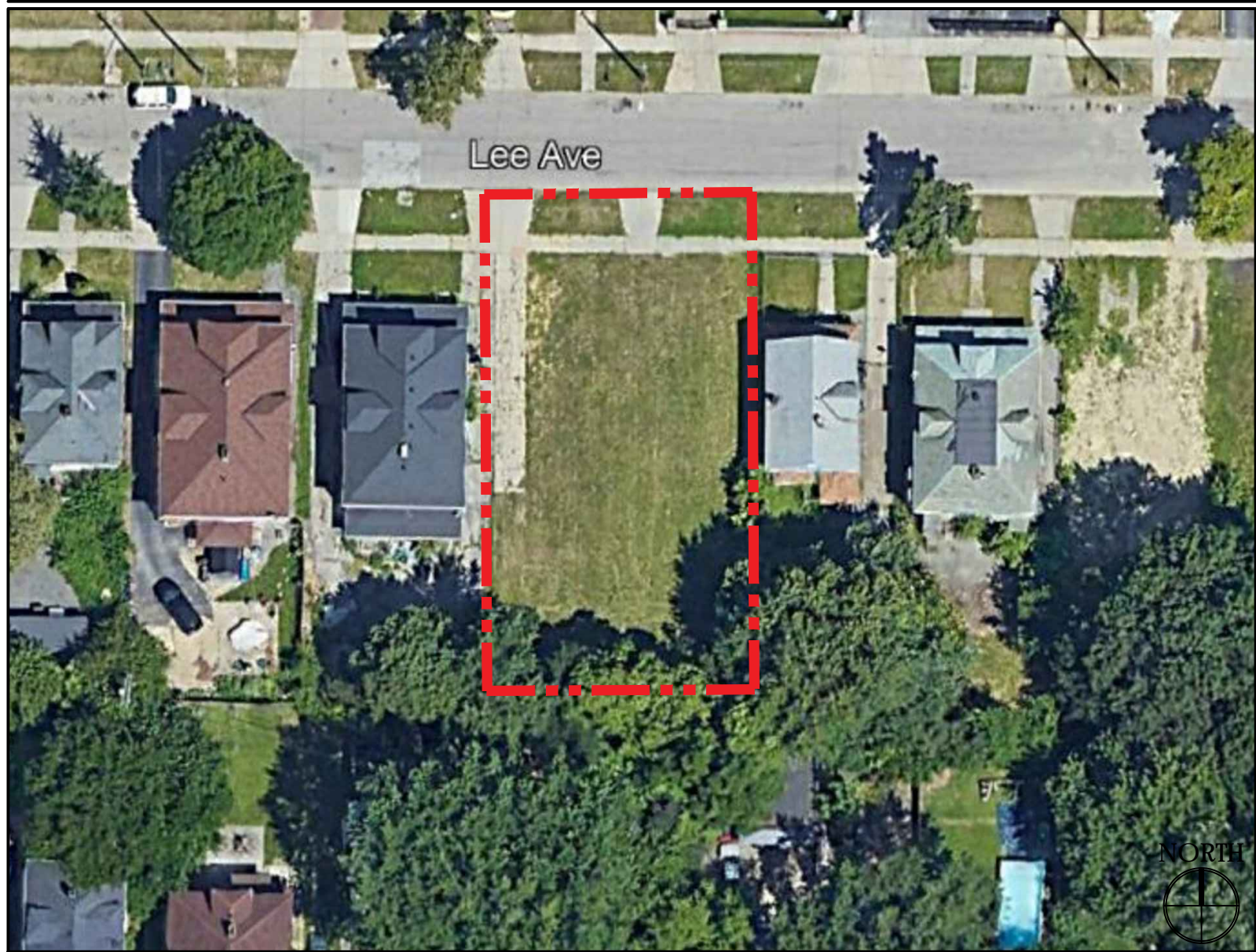
MECHANICAL

M1.1	MECHANICAL SPECIFICATIONS	2019-10-11
M1.2	MECHANICAL PLANS	2019-10-11

ELECTRICAL

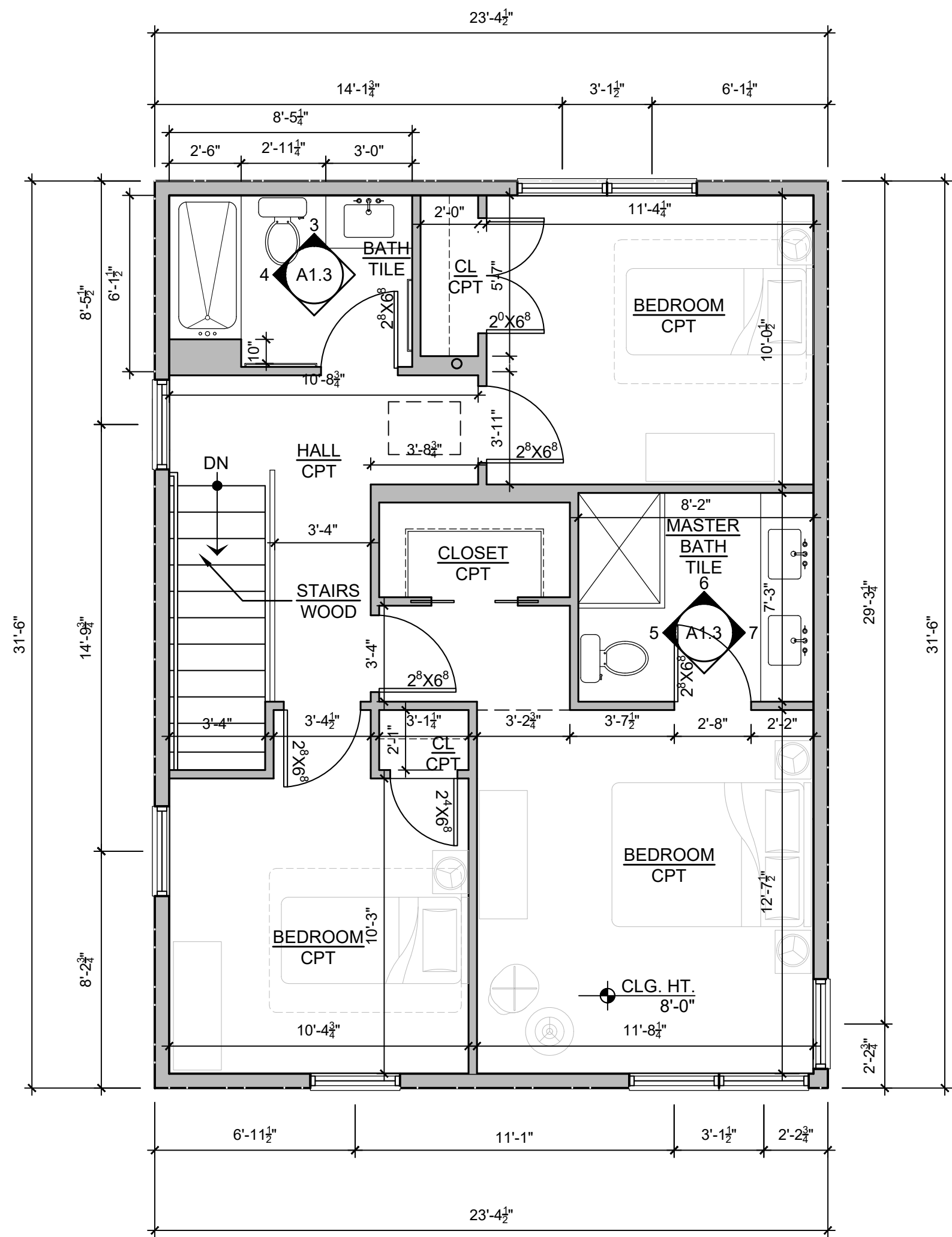
E0.1	ELECTRICAL SPECIFICATIONS	2019-10-11
E0.2	ELECTRICAL SPECIFICATIONS	2019-10-11
E0.3	ELECTRICAL SPECIFICATIONS	2019-10-11
E1.1	ELECTRICAL PLANS	2019-10-11

LOCATION PLAN



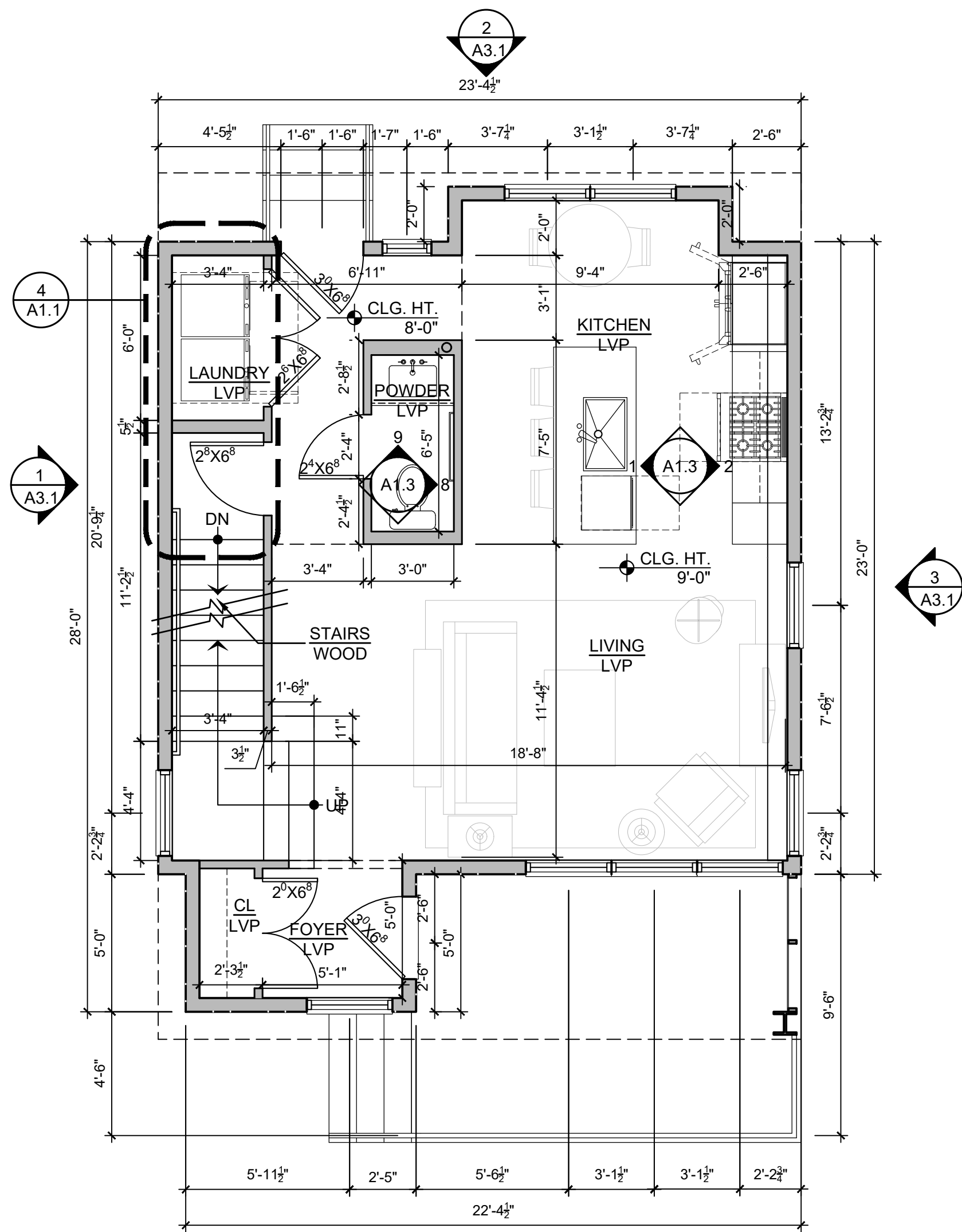
John E.J. Wagner, #0513799
Expiration Date 12/31/2019

GENERAL PLAN NOTES:	
1. ALL INTERIOR WALL DIMENSIONS ARE TO FACE OF STUDS. UNLESS OTHERWISE NOTED.	12. PROVIDE ALL LINEN CLOSETS WITH 5 WIRE SHELVES.
2. ALL INTERIOR WALLS ARE 3 1/2" STUDS UNLESS OTHERWISE NOTED.	VINYL DOUBLE HUNG WINDOW IN BEDROOMS SHALL HAVE MIN. CLEAR OPENING 20" WIDE X 24" HIGH, MIN. CLEAR AREA OF 5.7 S.F., & W/ BOTTOM CLEAR AREA NOT MORE THAN 44" A.F.F., TYP. REFER TO ELEVATIONS FOR SIZES.
3. PROVIDE HANDRAILS AT ALL INTERIOR STAIRWAYS OF STANDARD HANDRAIL PROFILE WHITE PINE MEASURING 1 1/2" DEEP BY 1 1/2" WIDE. MOUNTING BRACKETS (NATIONAL #106) MUST BE SECURELY FASTENED TO WALL AT STUD OR SOLID BLOCKING. HANDRAILS SHALL RETURN TO WALL, TYP.	13. PROVIDE VINYL MOUNTING BLOCKS AT ALL LIGHT FIXTURES, DOORBELL UNITS, AND AC UNIT DISCONNECTS @ VINYL SIDING LOCATIONS, TYP.
4. EXT. DOORS ARE WEATHER-STRIPPED.	14. ALL SECOND FLOOR HALF WALL GUARD RAILS SHALL BE NO LESS THAN 36" A.F.F., TYP.
5. ALL CLOSETS HAVE A WIRE MESH SHELF WITH INTEGRATED ROD UNLESS OTHERWISE NOTED.	15. FLUSH LEVER TO BE ON OPEN SIDE OF TOILETS.
6. PROVIDE MOISTURE RESISTANT GYPSUM BOARD AROUND SHOWERS/TUBS AND AL SINKS. (SEE 4/A5.2).	16. PROVIDE WATER RESISTANT GYPSUM BOARD TO 4'-0" A.F.F. IN LAUNDRY AREAS.
7. ALL INTERIOR WOOD TRIM TO BE PAINTED UNO.	17. PASSIVE RADON SYSTEM: PROVIDE PASSIVE RADON SYSTEM CONSISTING OF 3" PVC PIPING FROM UNDERSLAB TEE UP THROUGH ROOF. GAS PERMEABLE STONE UNDER SLAB (57 LIMESTONE), AND A DEDICATED RECEPTACLE CONNECTED TO THE 'HOUSE PANEL' IN ATTIC NEAR LOCATION OF PIPING FOR FUTURE USE IF NEEDED. SEE FLOOR PLANS FOR LOCATIONS OF PIPING. CONTRACTOR TO INSTALL FANS PER ELECTRICAL REQUIREMENTS.
8. ALL TOWEL BARS MTD. @ 42" A.F.F. UNO. ABOVE TOILET @ 60" A.F.F.	18. NO PLUMBING LINES IN EXTERIOR WALLS. PROVIDE FURRED WALLS AS NECESSARY TO RUN PLUMBING.
9. ALL WALLS TO BE SMOOTH DRYWALL. ALL CEILINGS TO BE KNOCK DOWN TEXTURE DRYWALL.	
10. ALL CEILING HEIGHTS TO BE 9'-0" HIGH ON FIRST FLOOR AND 8'-0" ON SECOND FLOOR UNO.	
11. AT ALL REMOVABLE BASE CABINETS PROVIDE BURN PROTECTION ON ALL EXPOSED PIPING, AND EXTEND FLOOR FINISHES AND BASE TO REAR WALL. PAINT REAR WALL AND PROVIDE FINISHED PANEL AT ADJ. CABINET WALLS, TYP.	



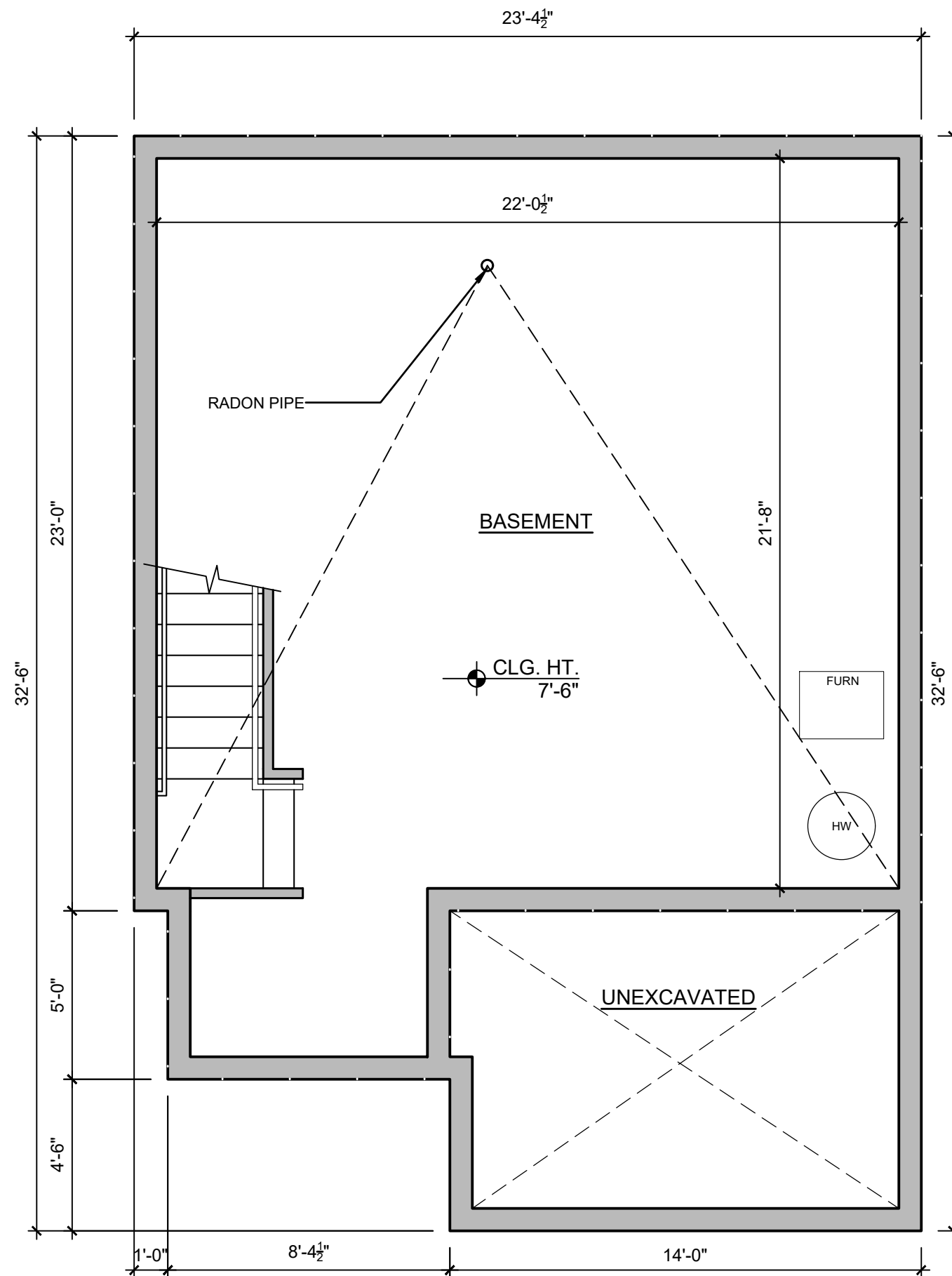
OPTION 1
SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"
AREA: 736 SQ. FT.



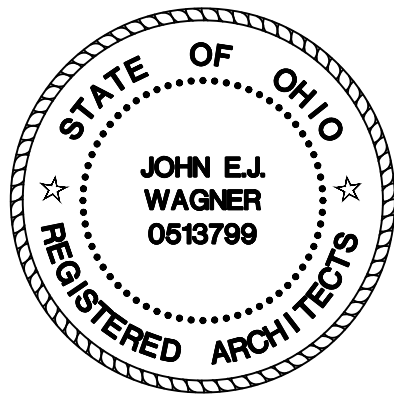
OPTION 1
FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"
AREA: 600 SQ. FT.



OPTION 1
OPTIONAL
BASEMENT PLAN

SCALE: 1/4" = 1'-0"
AREA: 580 SQ. FT.



CLEVELAND SINGLE FAMILY HOMES

THE ORLEAN COMPANY

SCATTERED SITES - GLENVILLE CLEVELAND, OHIO

Issue:
2018-12-11 - PRICING
2019-06-14 - FOR PERMIT
2019-10-11 - MEP SUBMISSION

OPTION 1 FLOOR PLANS

City Architecture

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fax: 216.881.6713

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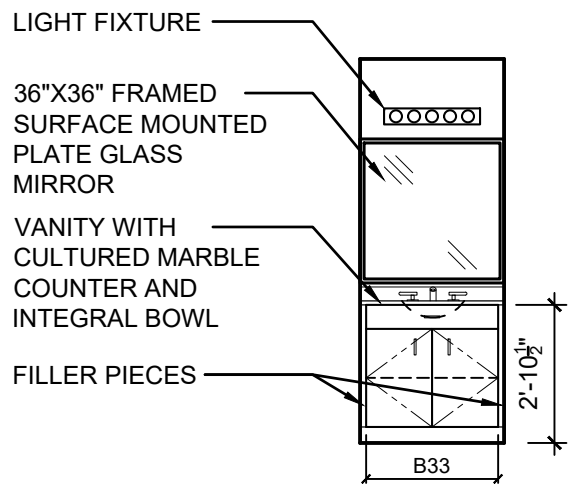
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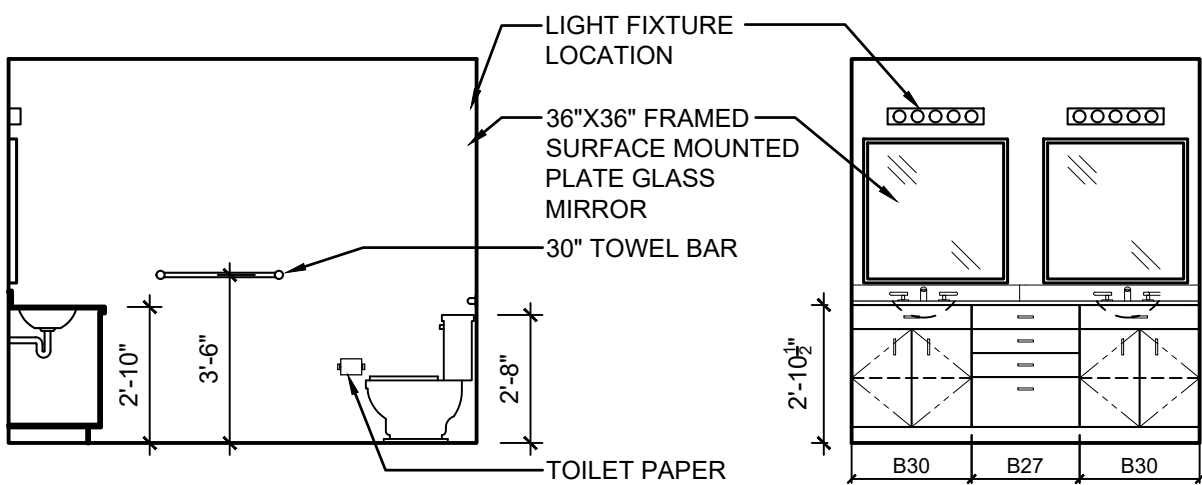
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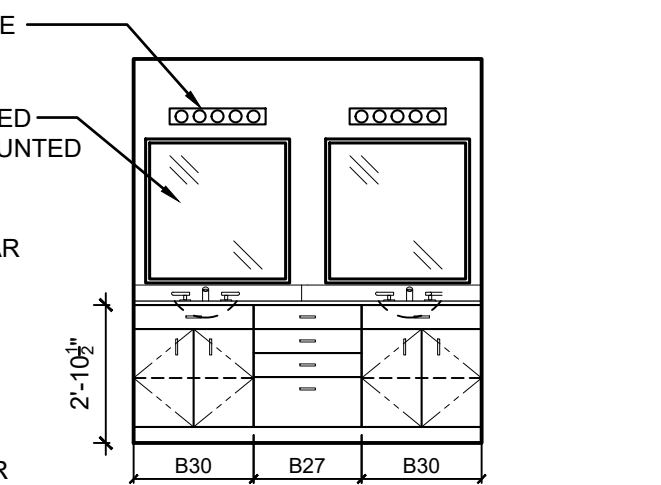
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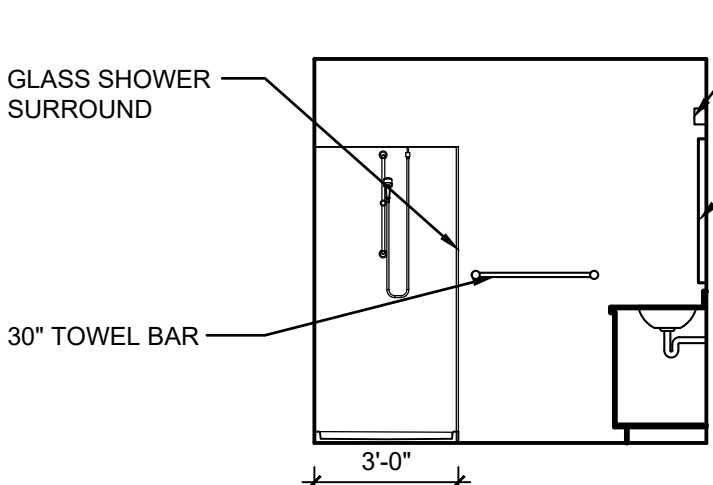
POWDER ROOM
ELEVATION
SCALE: 1/4" = 1'-0"



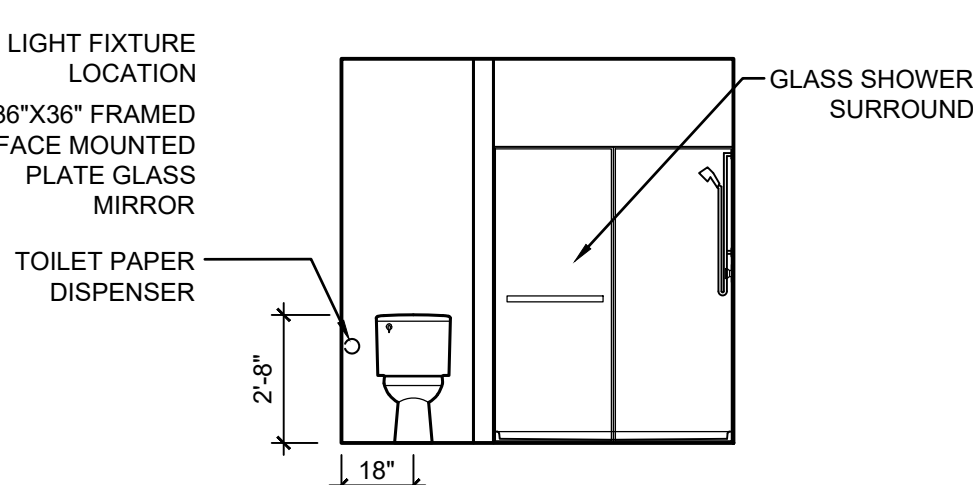
POWDER ROOM
ELEVATION
SCALE: 1/4" = 1'-0"



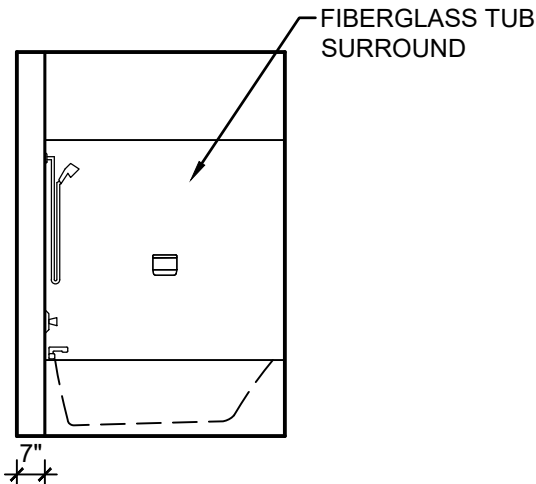
MASTER BATHROOM
ELEVATION
SCALE: 1/4" = 1'-0"



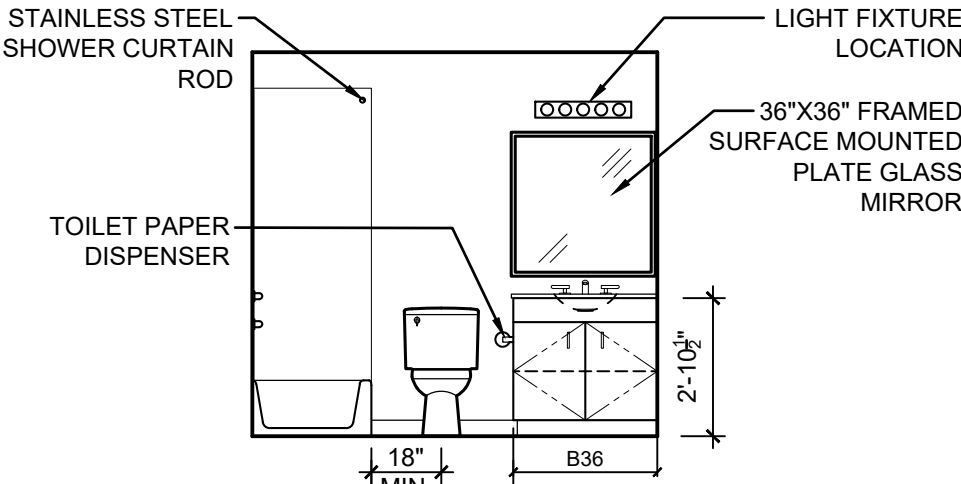
MASTER BATHROOM
ELEVATION
SCALE: 1/4" = 1'-0"



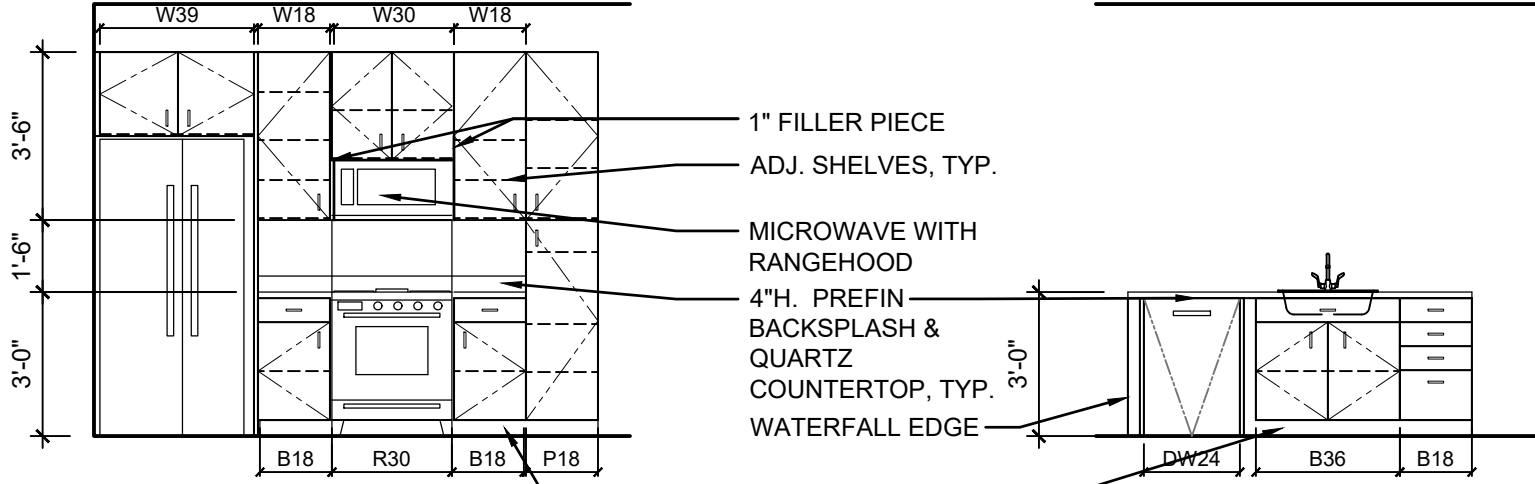
MASTER BATHROOM
ELEVATION
SCALE: 1/4" = 1'-0"



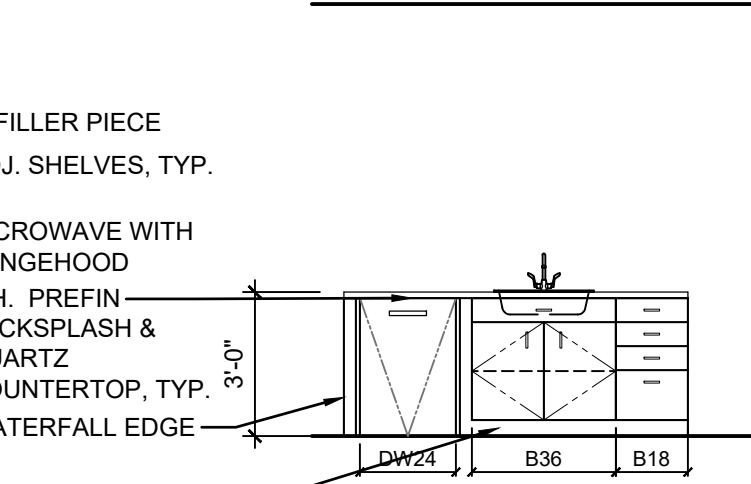
BATHROOM
ELEVATION
SCALE: 1/4" = 1'-0"



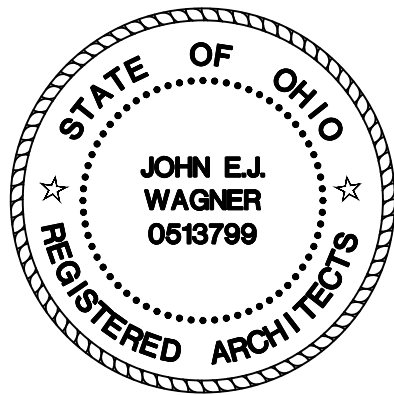
BATHROOM
ELEVATION
SCALE: 1/4" = 1'-0"



KIT. ELEVATION
SCALE: 1/4" = 1'-0"



KIT. ELEVATION
SCALE: 1/4" = 1'-0"



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INTERIOR
DETAILS

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Project Number:

18053

Sheet Number:

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TYPICAL FINISH SCHEDULE:

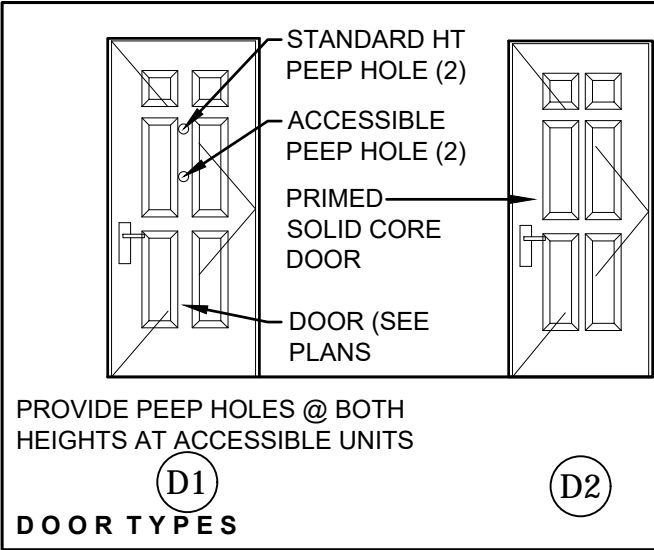
PRODUCT	MANUFACTURER	STYLE	COLOR	COMMENTS
VINYL PLANK	SHAW	TERRAIN	GROVE 00737	
CARPET	SHAW	PS700 GOLD SOLUTION	00510 WINTER BIRCH	
PORCELAIN TILE	AMERICAN OLEAN	MIRASOL	SILVER MARBLE	
CABINETS	KOUNTRY WOOD PRODUCTS	HARMONY	PAINTED WHITE	
COUNTERTOP	TBD - QUARTZ			
WALL PAINT (FIELD COLOR)	SHERWIN WILLIAMS		SW1015 - SKYLINE STEEL	
CEILING / TRIM	SHERWIN WILLIAMS		SW7006 - EXTRA WHITE	
WALL PAINT (BATHROOMS & POWDER ROOM - ALL WALLS)	SHERWIN WILLIAMS		SW6184 - AUSTERE GRAY	
ACCENT PAINT (LIVING ROOM & MASTER BEDROOM)	SHERWIN WILLIAMS		SW7081 - SENSUOUS GRAY	

TYPICAL DOOR SCHEDULE:

DOOR				FRAME		HARDWARE	REMARKS
LOCATION:	TYPE	THICKNESS	TYPE	MATERIAL	MATERIAL		
FRONT ENTRY	SEE PLANS	1 3/4"	D1	H.M.	WD	SEE SPECS	1,2,3
REAR ENTRY	SEE PLANS	1 3/4"	D1	H.M.	WD	SEE SPECS	1,2
COAT CLOSET	SEE PLANS	1 3/8"	D2	SCW	WD	SEE SPECS	-
BATHROOMS	SEE PLANS	1 3/8"	D2	SCW	WD	SEE SPECS	-
LINEN	SEE PLANS	1 3/8"	D2	SCW	WD	SEE SPECS	-
BEDROOMS	SEE PLANS	1 3/8"	D2	SCW	WD	SEE SPECS	4
CLOTHES CLOSETS (BEDROOMS)	SEE PLANS	1 3/8"	D2 (SEE PLANS)	SCW	WD	SEE SPECS	-

ABBREVIATION KEY
HM HOLLOW METAL
WD WOOD
SCW SOLID CORE WOOD
STL STEEL

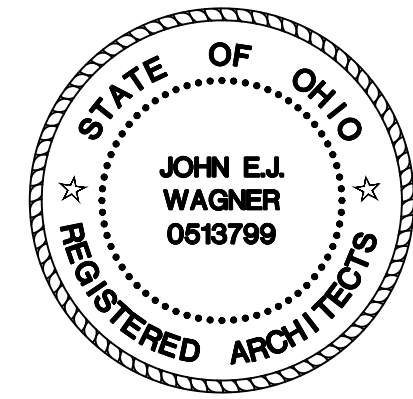
REMARKS
1. INSULATED
2. WEATHER STRIPPING
3. PEEP HOLE
4. UNDERCUT 1"
5. OWNER LOCKSET



PROVIDE PEEP HOLES @ BOTH HEIGHTS AT ACCESSIBLE UNITS

D1
DOOR TYPES

D2



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FAMILY HOMES

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ROOF
PLANS

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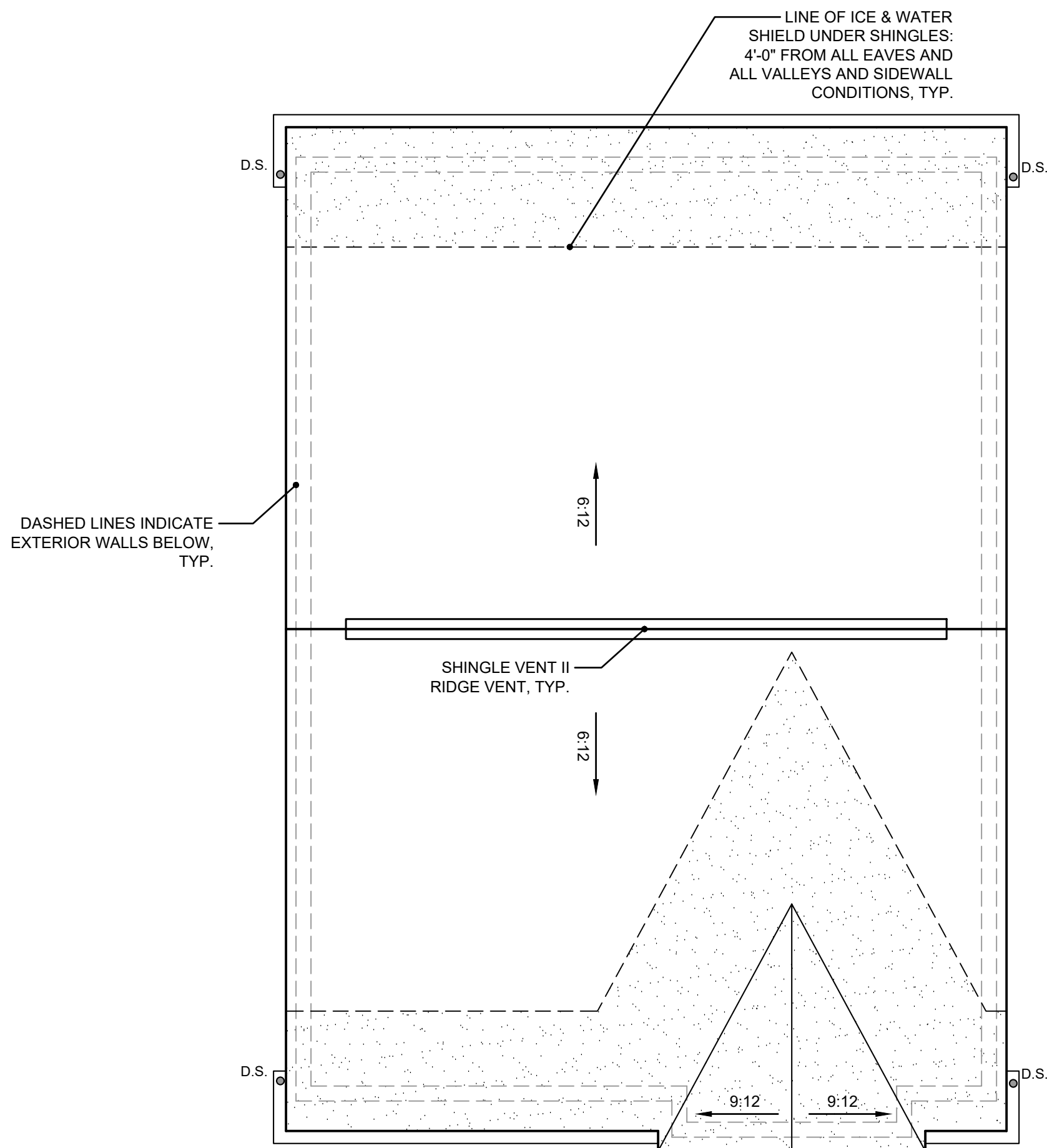
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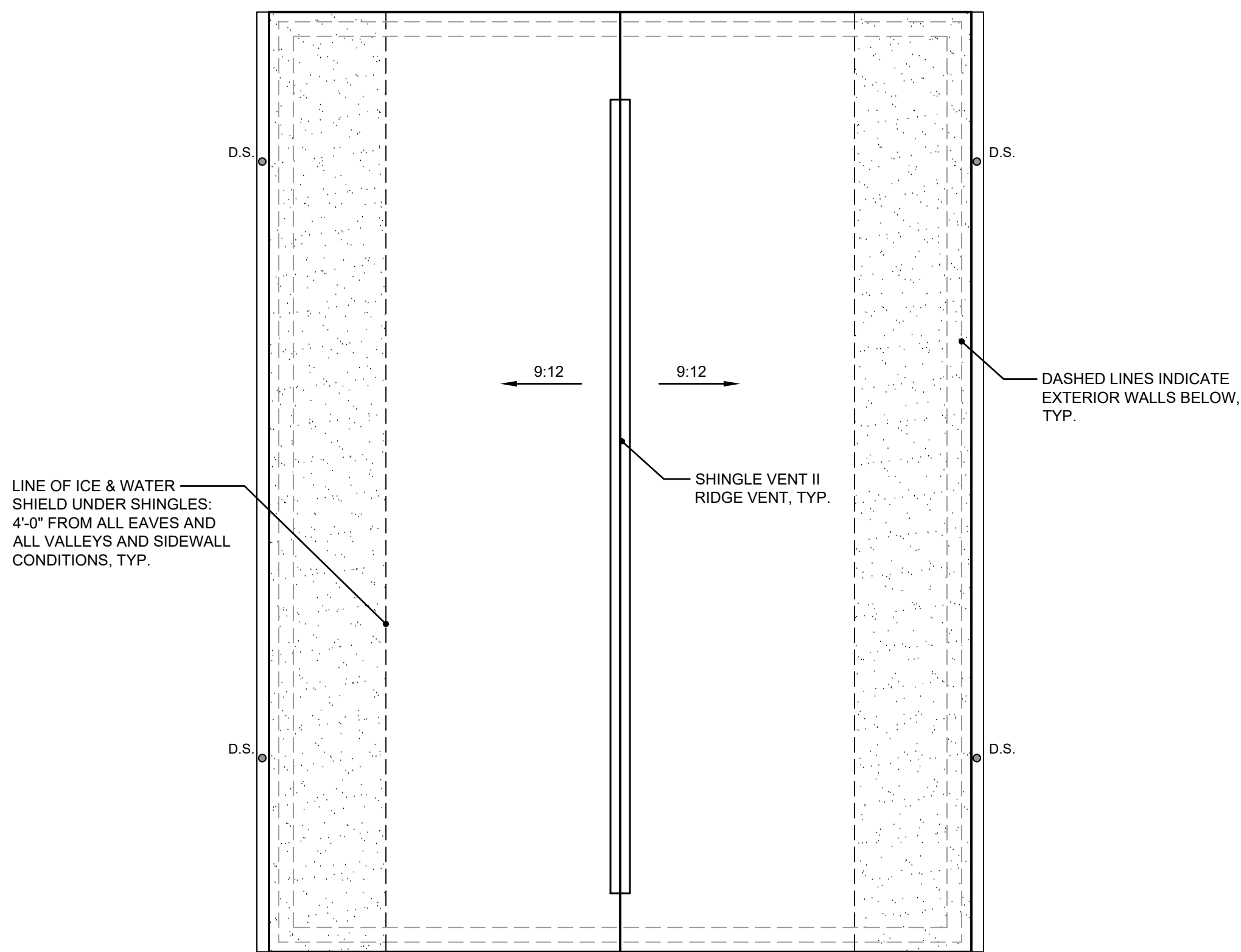
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GENERAL ROOF PLAN NOTES:

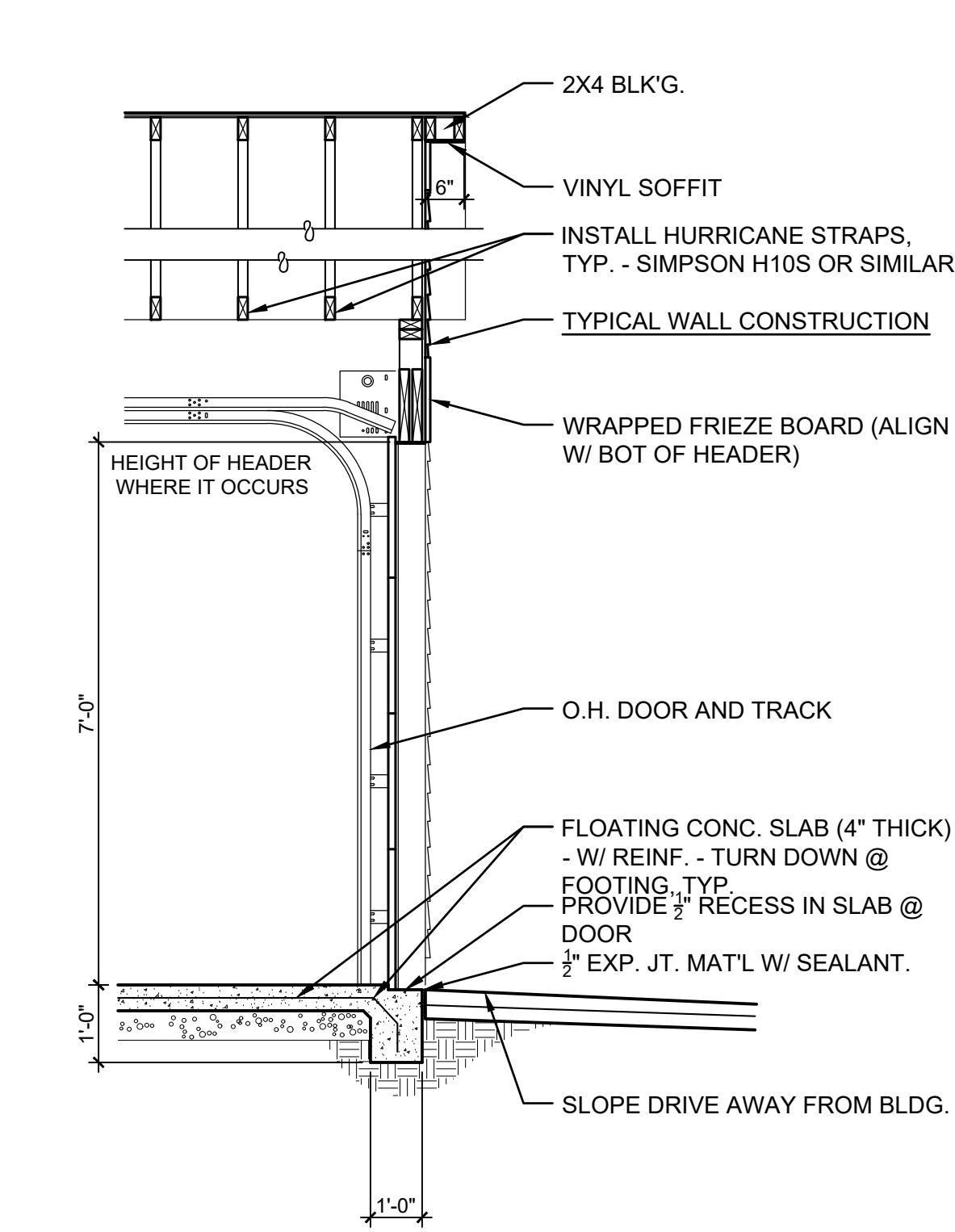
1. EXTEND ICE AND WATER SHIELD UNDER SHINGLES 4'-0" FROM ALL EAVES, VALLEYS, AND SIDEWALL CONDITIONS.
2. INSTALL ALUM. DRIP EDGE ON ALL EAVES AND GABLES.
3. ALL VALLEYS TO BE ALUM.



OPTION 2
ROOF PLAN
SCALE: 1/4" = 1'-0"



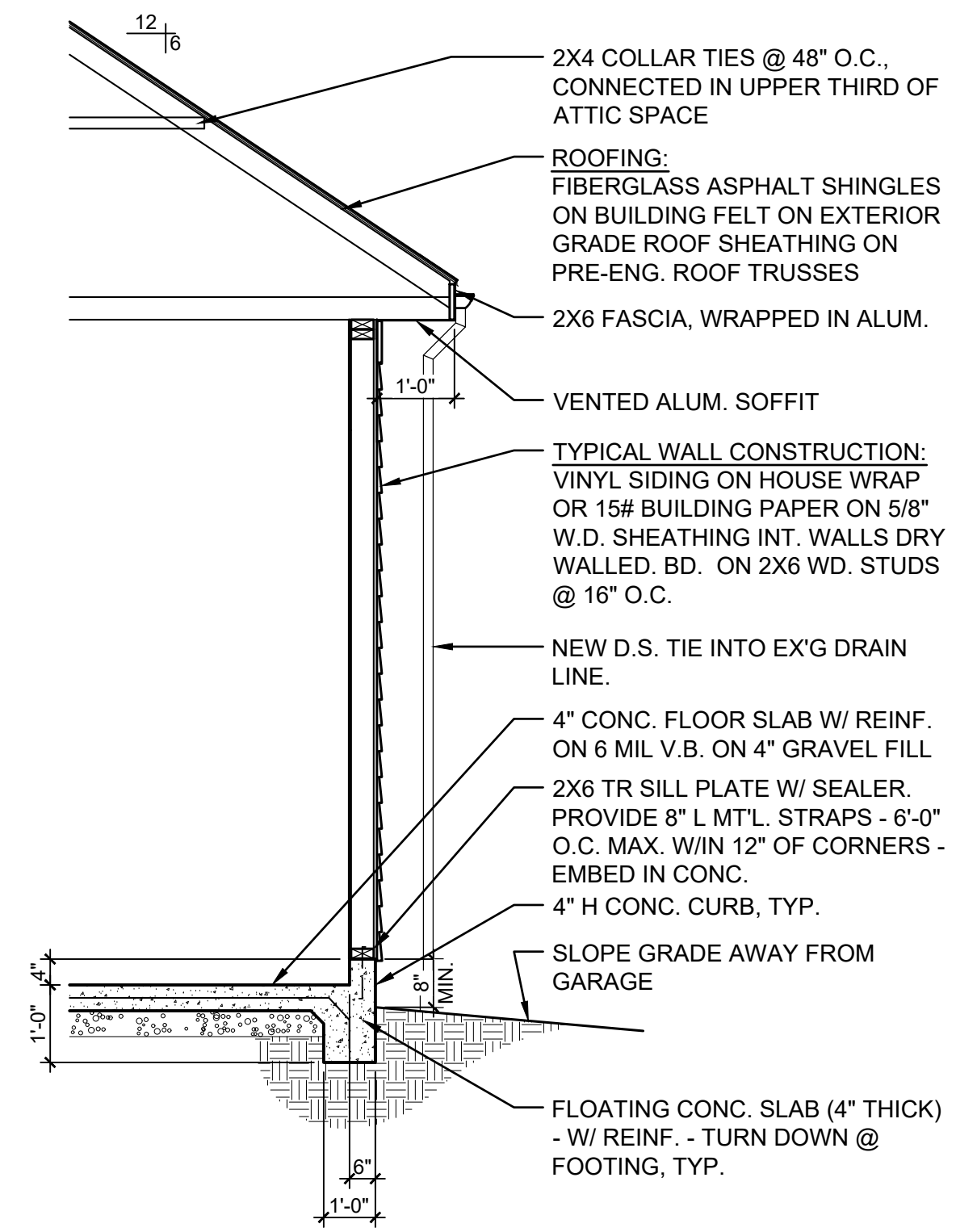
OPTION 1
ROOF PLAN
SCALE: 1/4" = 1'-0"



GARAGE WALL SECTION

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

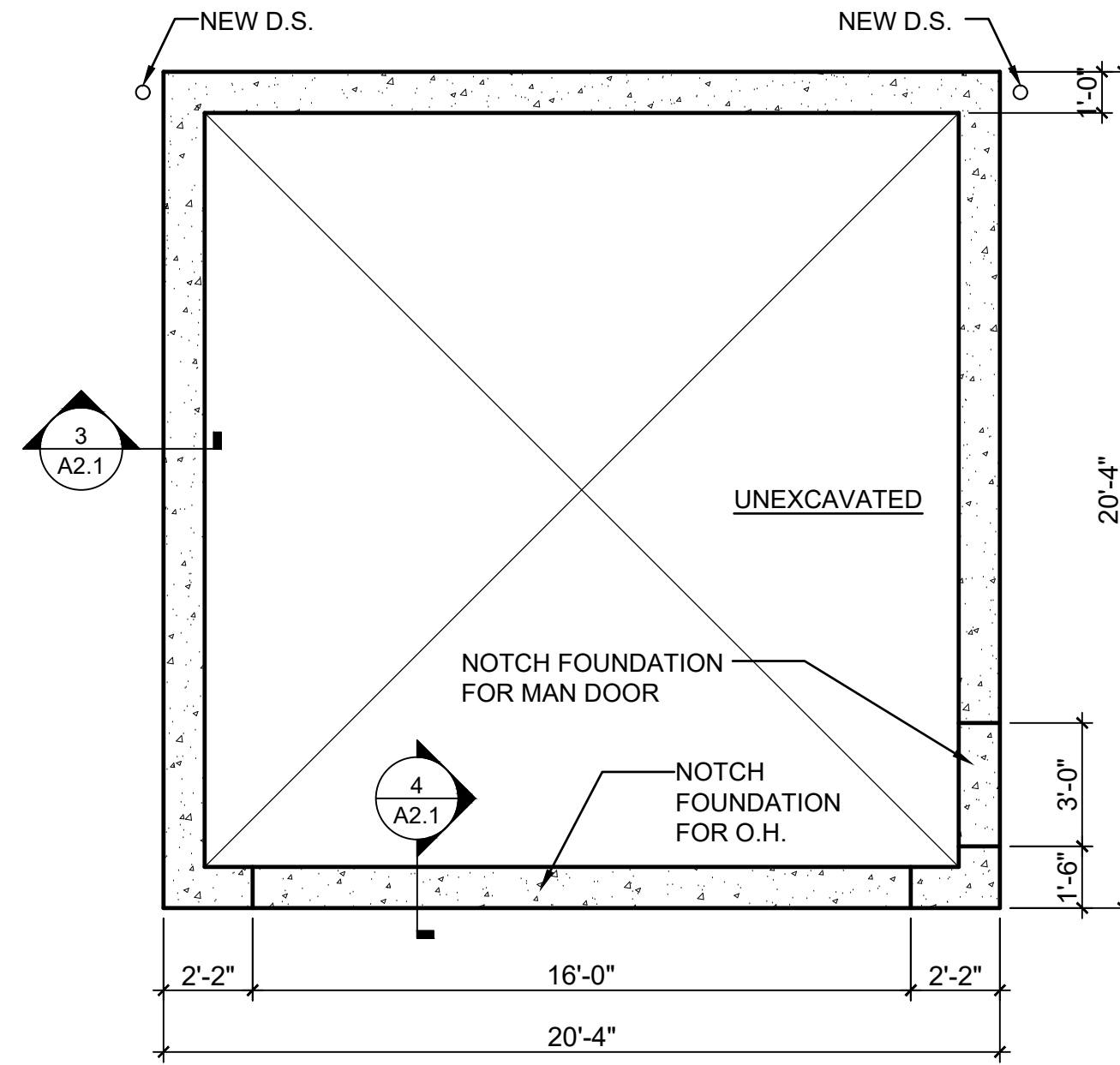
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GARAGE WALL SECTION

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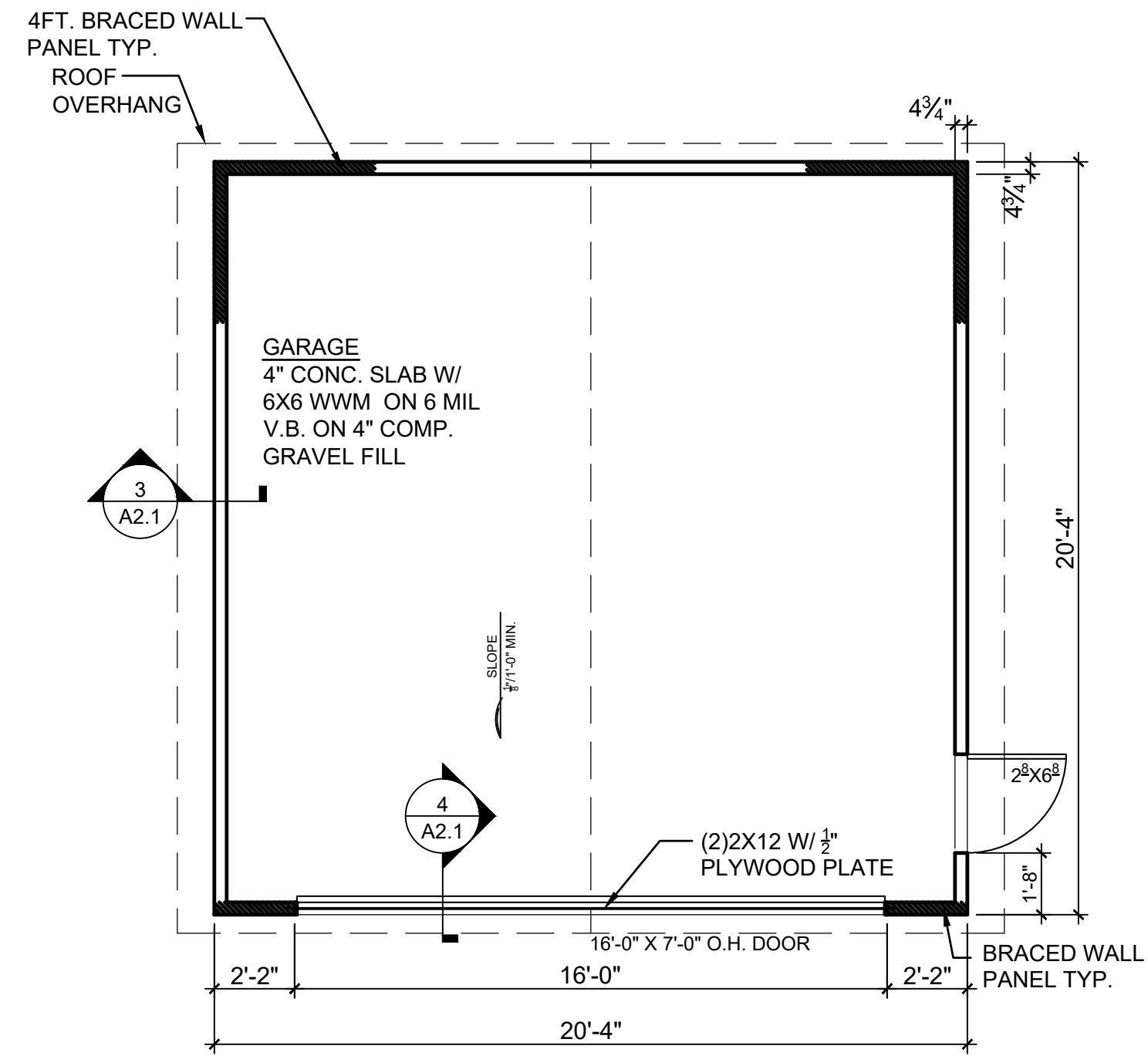
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A3.1



FOUNDATION PLAN

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

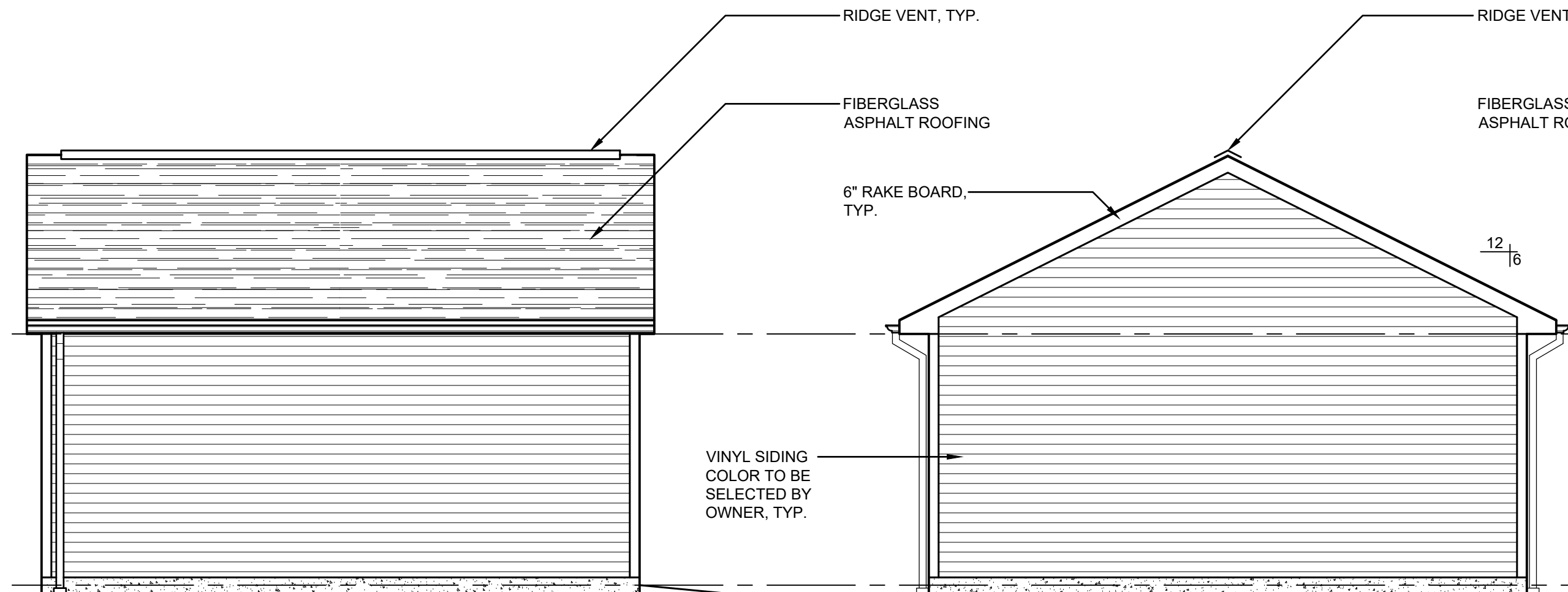
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FIRST FLOOR PLAN

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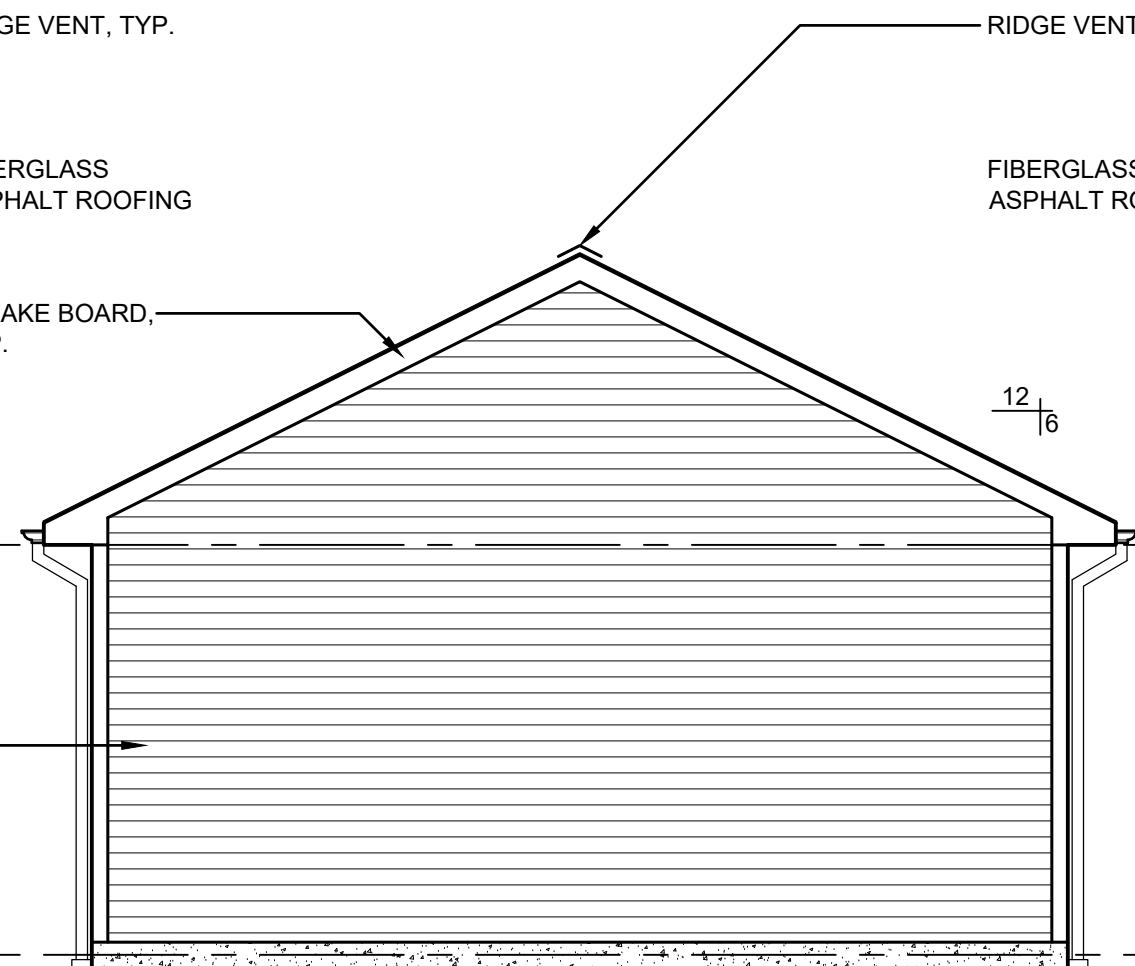
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LEFT SIDE ELEVATION

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

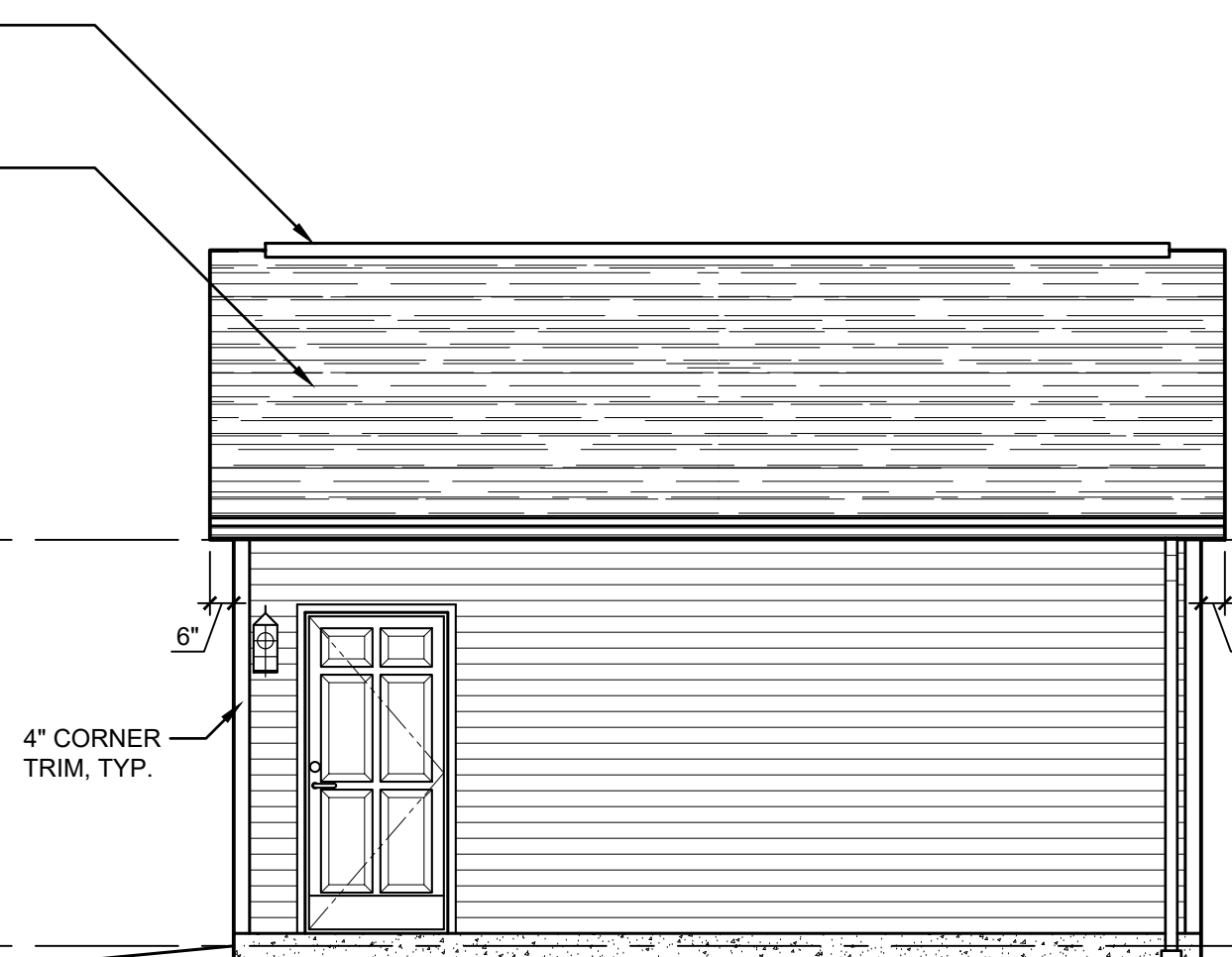
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BACK ELEVATION

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

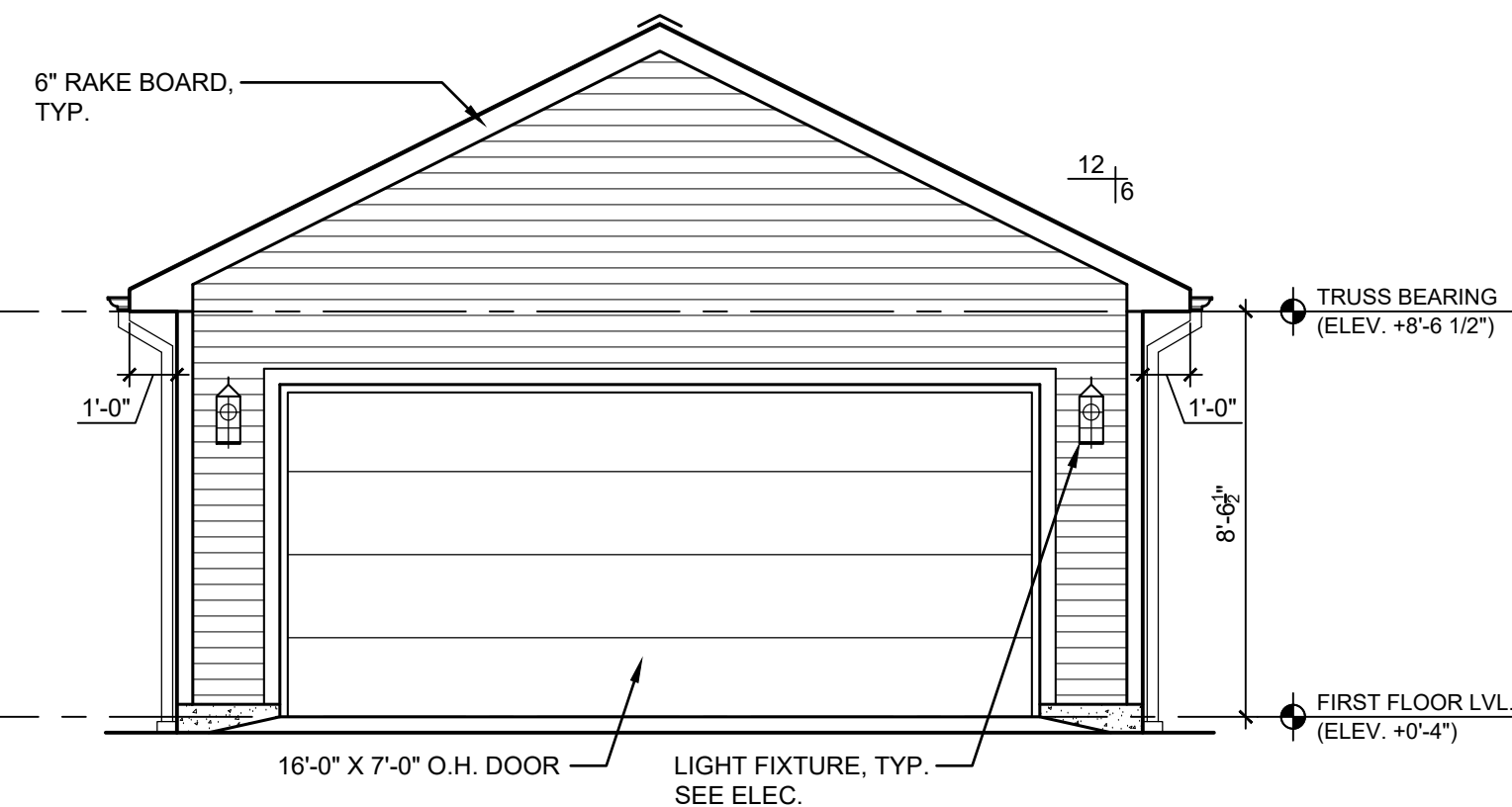
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RIGHT SIDE ELEVATION

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

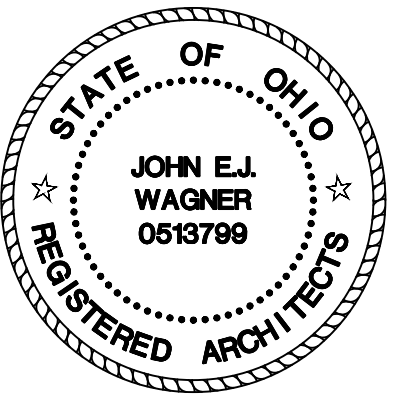
6
A3.1



FRONT ELEVATION

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

5
A3.1



**CLEVELAND SINGLE
FAMILY HOMES**

THE ORLEAN COMPANY

SCATTERED SITES - GLENVILLE CLEVELAND, OHIO

Issue:
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2019-06-14 - FOR PERMIT
2019-10-11 - MEP SUBMISSION

**GARAGE PLAN
AND ELEVATIONS**

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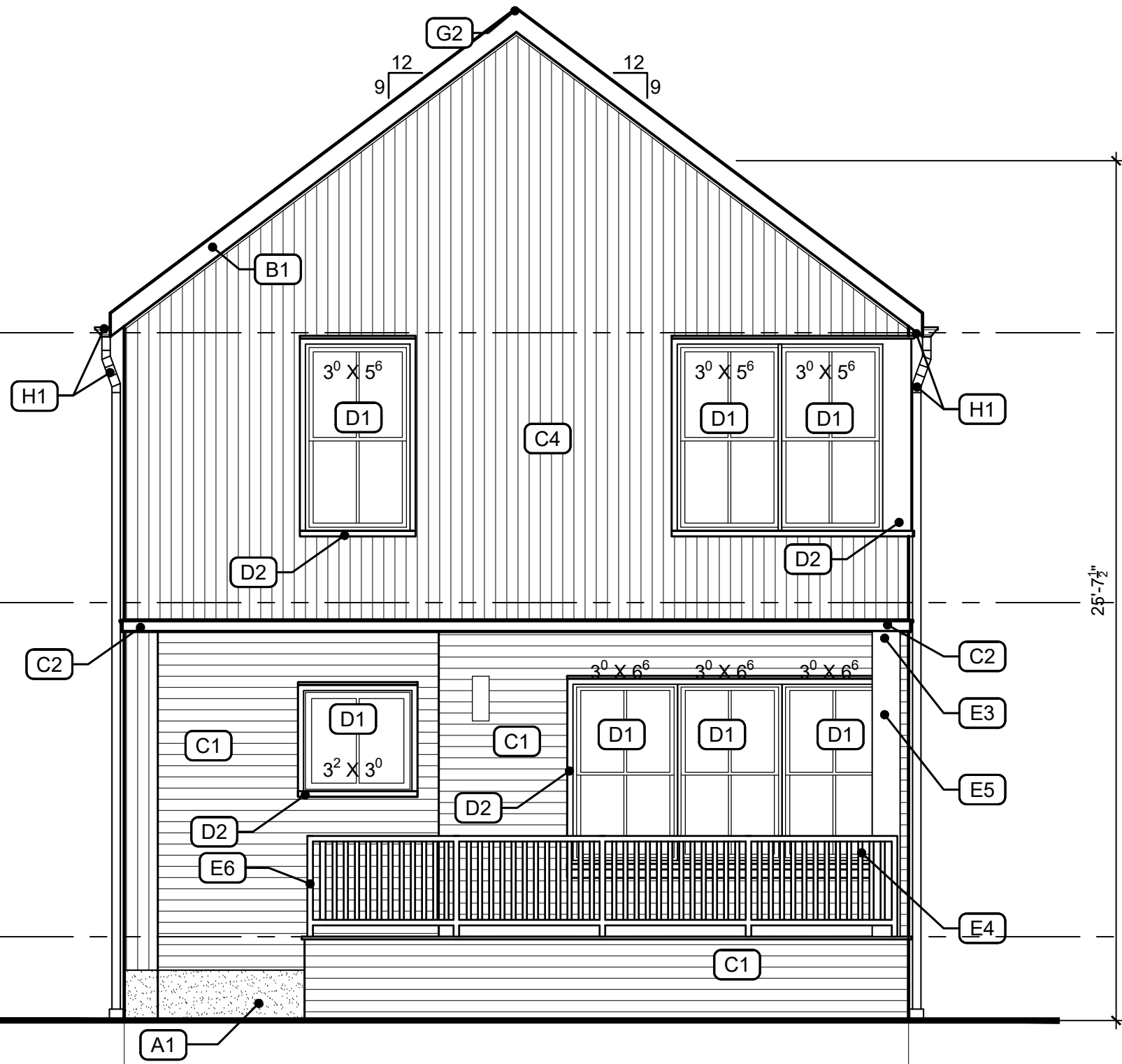
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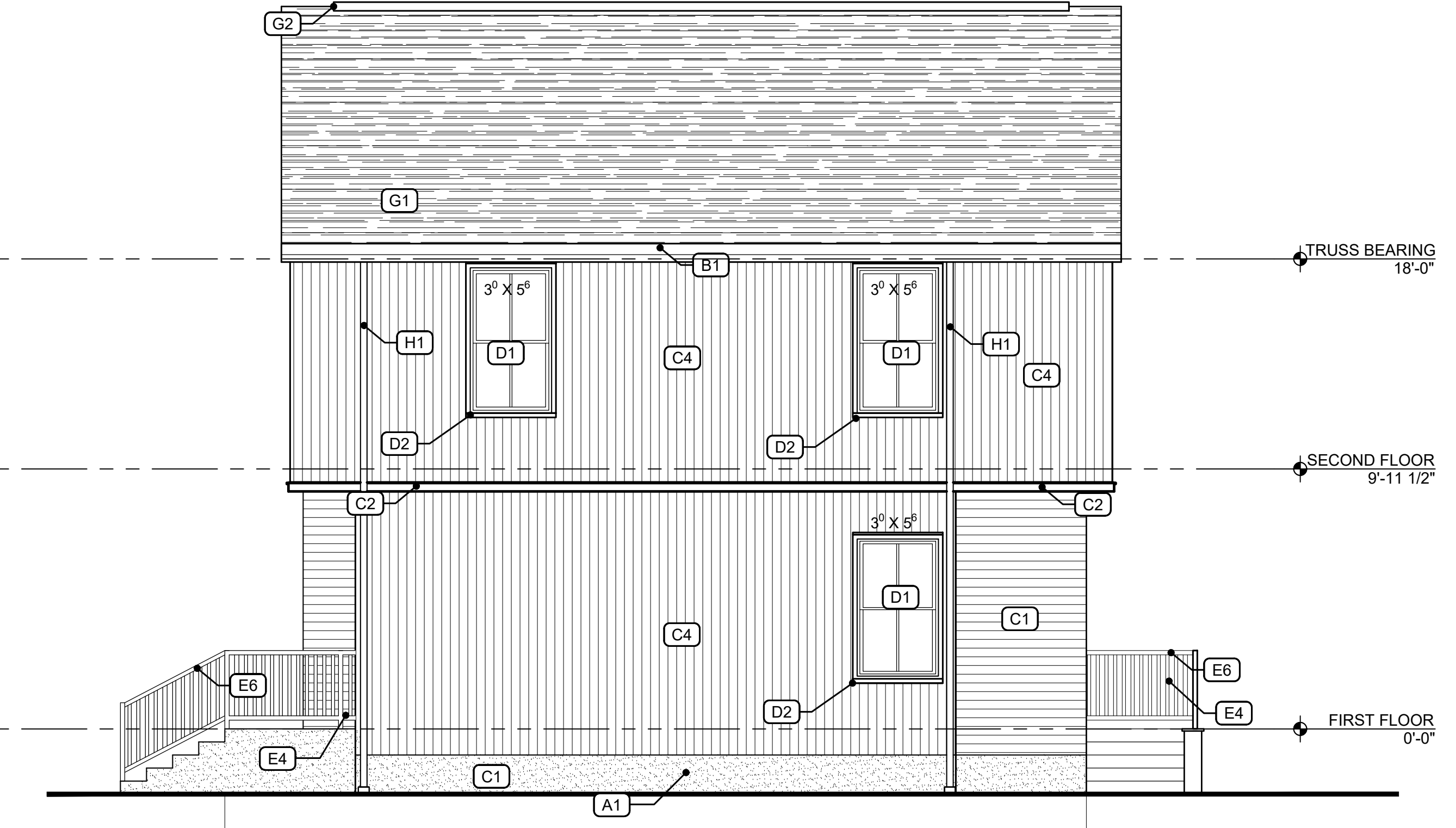
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MATERIALS LEGEND		
SYMBOL	MATERIAL	DESCRIPTION/REMARKS
A1	FOUNDATION	EXPOSED CONCRETE FOUNDATION
B1	METAL TRIM	PREFINISHED METAL TRIM - COLOR TBD BY ARCHITECT
C1	CEDAR SIDING	STAINED & SEALED CEDAR SIDING, SHIPLAP INSTALLATION
C2	VINYL TRIM	VINYL TRIM - COLORS TBD BY ARCHITECT
C3	VINYL SIDING	HORIZONTAL VINYL SIDING - COLORS TBD, CERTAINTED, MONOGRAM, 4" EXPOSURE
C4	VINYL VERTICAL SIDING	VINYL VERTICAL SIDING - COLOR: SLATE, CERTAINTED UNIVERSAL TRIPLE 4" SIDING
D1	VINYL WINDOW	VINYL DOUBLE HUNG WINDOWS AND/OR FIXED PANEL - COLOR TBD, MINI-BLINDS ON ALL DOUBLE HUNG WINDOWS
D2	VINYL WINDOW TRIM	VINYL WINDOW TRIM, COLOR TBD BY ARCHITECT
D3	VINYL TRIM	4" VINYL TRIM, COLOR TBD BY ARCHITECT
E1	PORCH RAILING - WOOD	WOODEN PORCH RAILS - COLOR: WHITE, 36" H.
E2	WOOD PORCH COLUMN	6x6 TREATED WD. POST, WRAPPED IN PVC SLEEVE, FURRED TO 8"-COLOR: WHITE.
E3	COLUMN COLLAR	1x4 AZEK COLUMN COLLAR
E4	PORCH RAILING - METAL	METAL PORCH RAILS - COLOR TBD 36" H.
E5	STEEL PORCH COLUMN	STEEL PORCH COLUMN - COLOR TBD
E6	HANDRAIL	36" HANDRAIL TO BE PROVIDED AT STEPS.
F1	LIGHT FIXTURE	EXTERIOR LIGHT FIXTURE
G1	ROOF	30 YEAR ASPHALT SHINGLE ROOFING - COLOR: TBD
G2	RIDGE VENT	COLOR TBD
H1	GUTTER/DOWNSPOUT	PREFIN. ALUM. GUTTER & VINYL DOWNSPOUT ON SPLASH BLOCKS - COLOR: TBD
I1	HOUSE NUMBERS	4" PIN MOUNTED METAL ADDRESS NUMBERS
I2	MAILBOX	PROVIDE AS INDICATED, TBD BY OWNER
J1	FIBERCEMENT PANEL & TRIM	FIBERCEMENT PANEL - COLOR TBD
K1	WOOD BRACKETS	PTD. WOOD BRACKETS. SEE DETAILS ON SHEET 5/A4.1

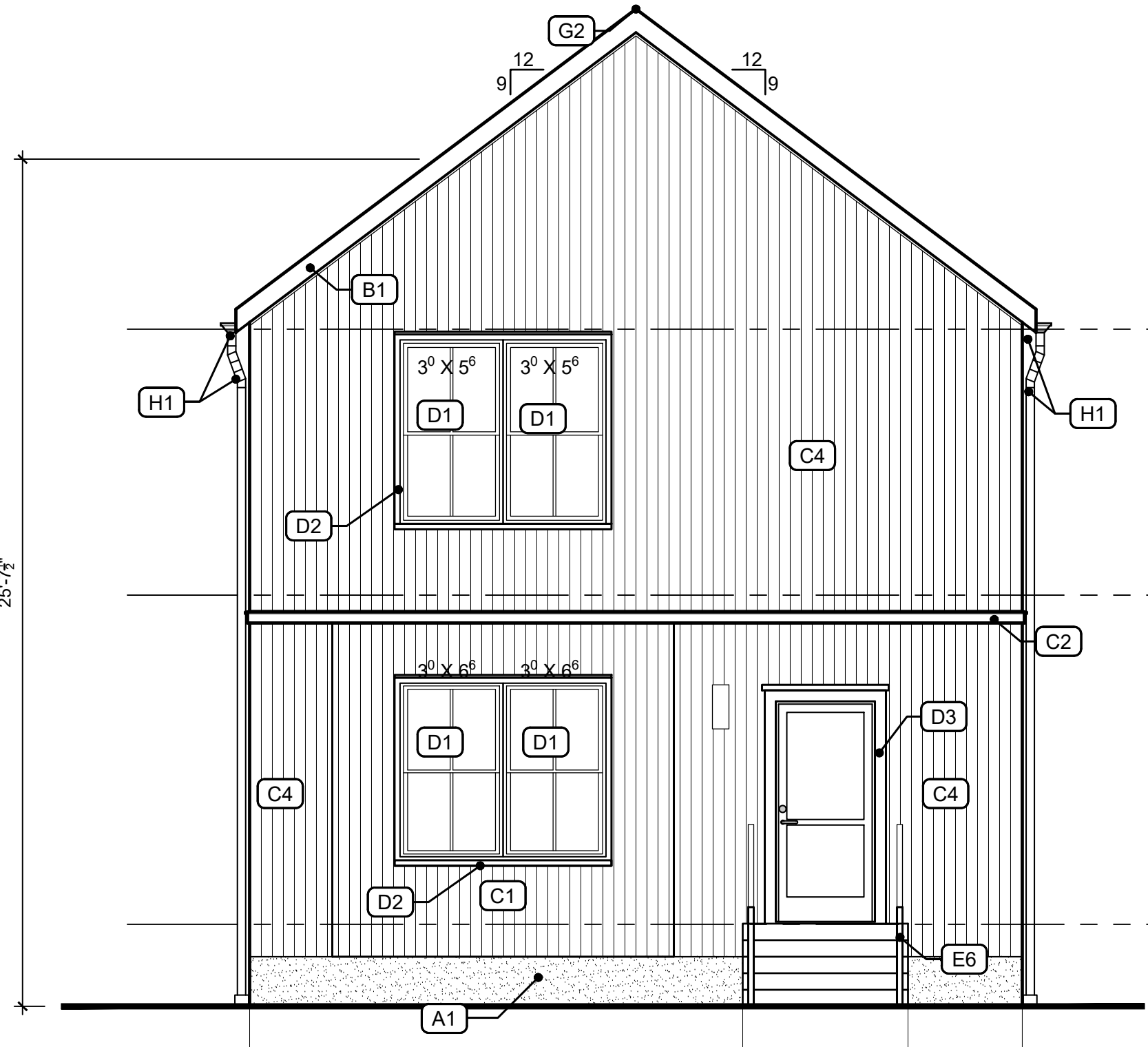
*ALL EXPOSED TREATED WOOD TO BE PAINTED OR STAINED



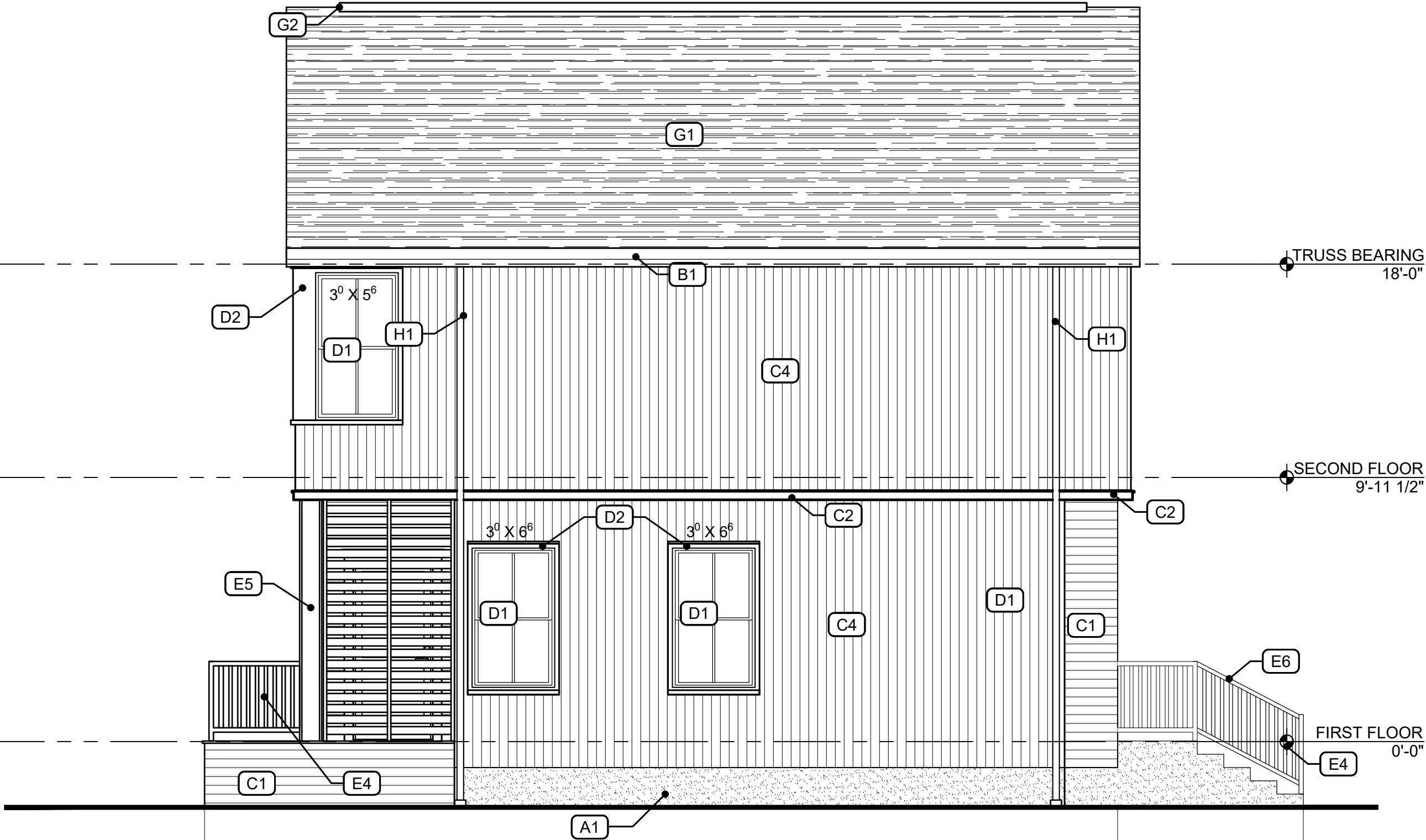
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FRONT ELEVATION
SCALE: 1/4" = 1'-0"



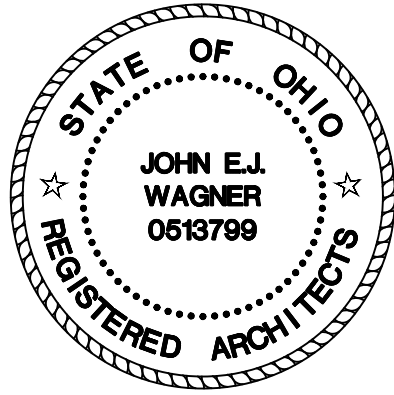
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SIDE ELEVATION
SCALE: 1/4" = 1'-0"



OPTION 1
BACK ELEVATION
SCALE: 1/4" = 1'-0"



OPTION 1
SIDE ELEVATION
SCALE: 1/4" = 1'-0"



CLEVELAND SINGLE
FAMILY HOMES

THE ORLEAN COMPANY

CLEVELAND, OHIO

SCATTERED SITES - GLENVILLE

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OPTION 1
ELEVATIONS

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



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



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



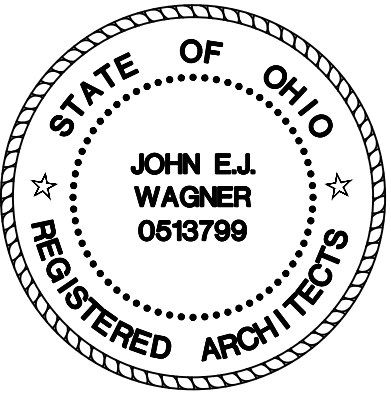
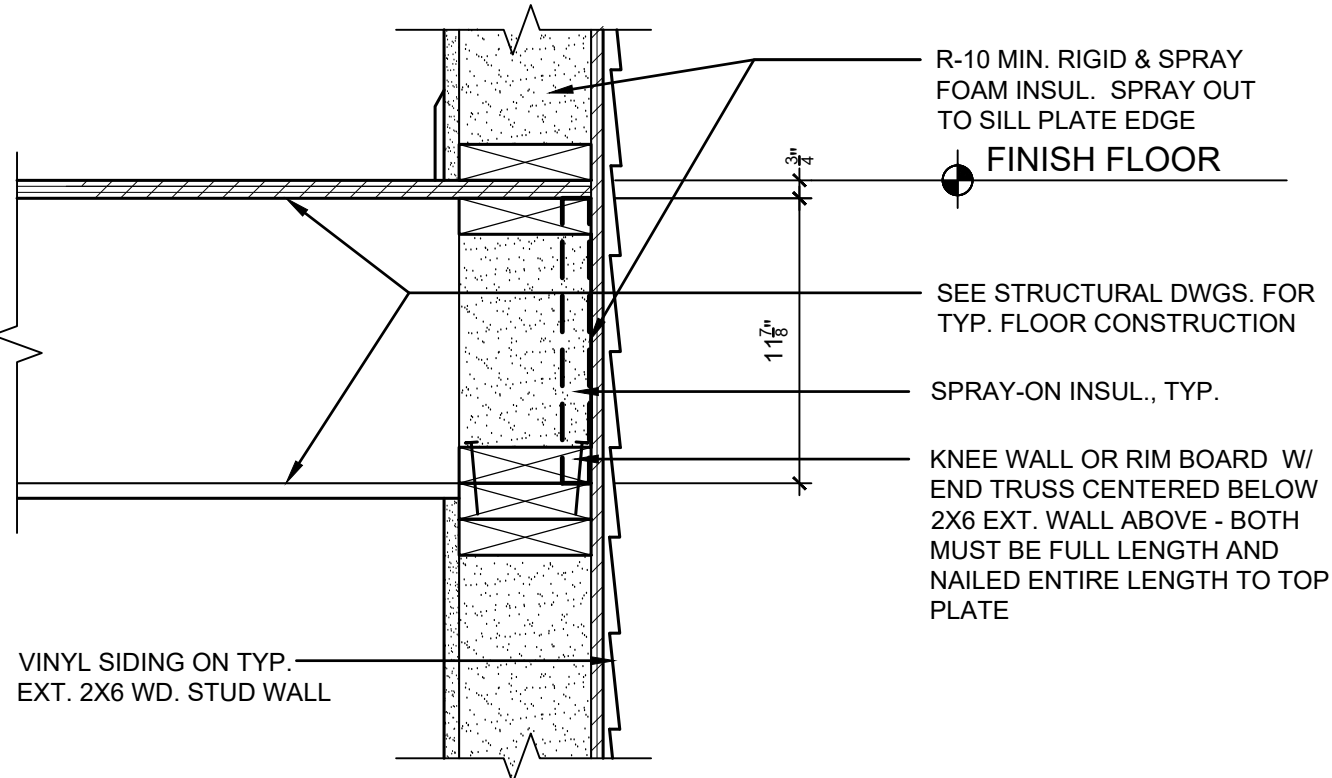
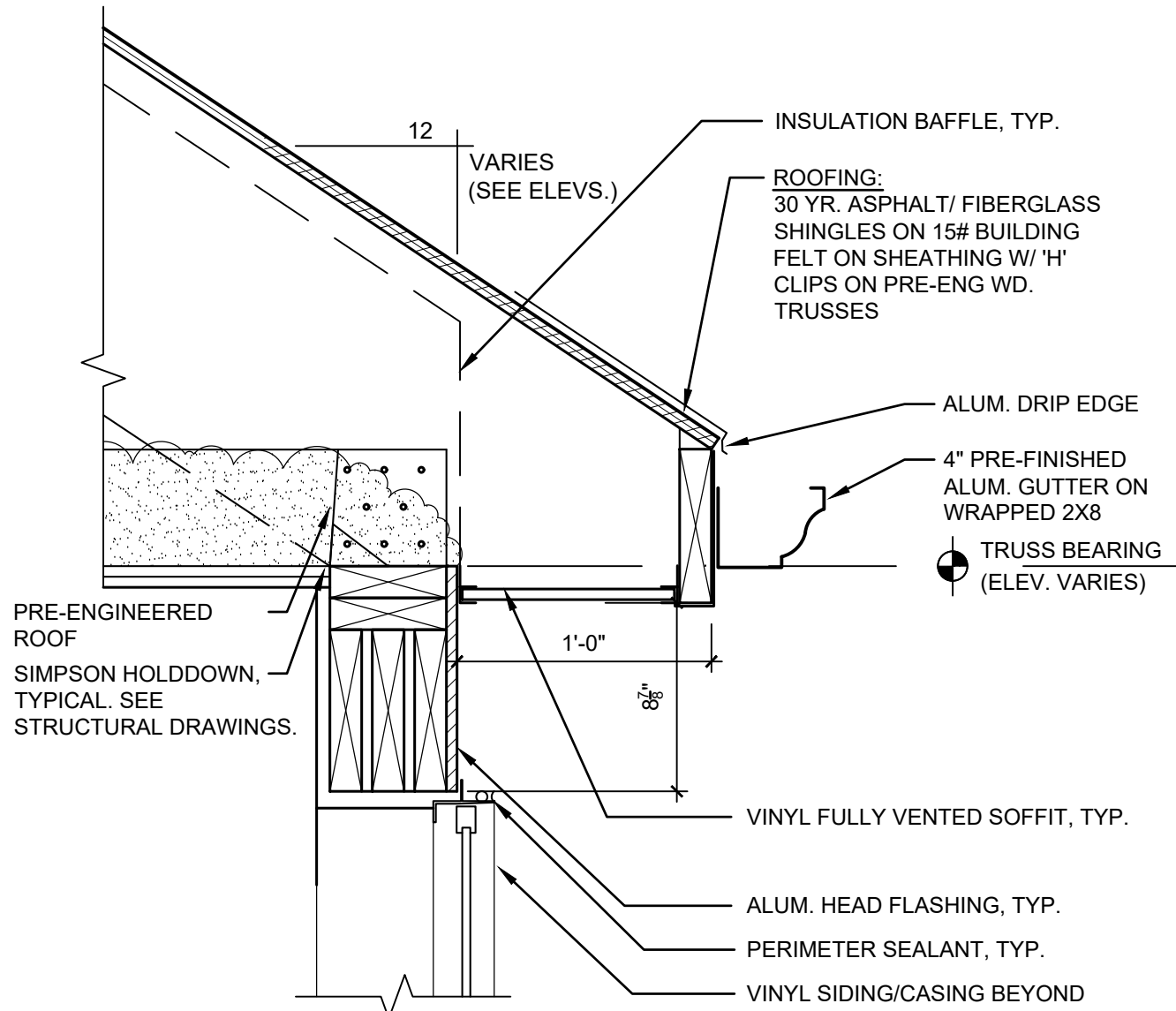
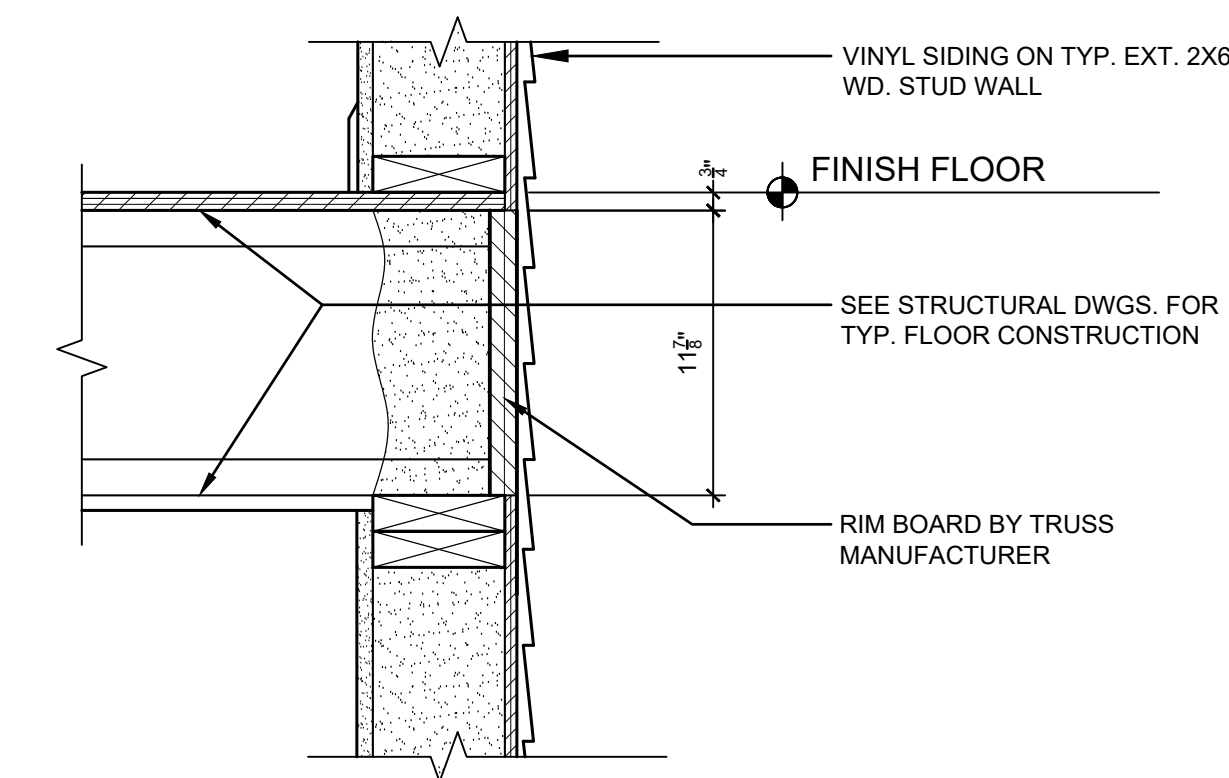
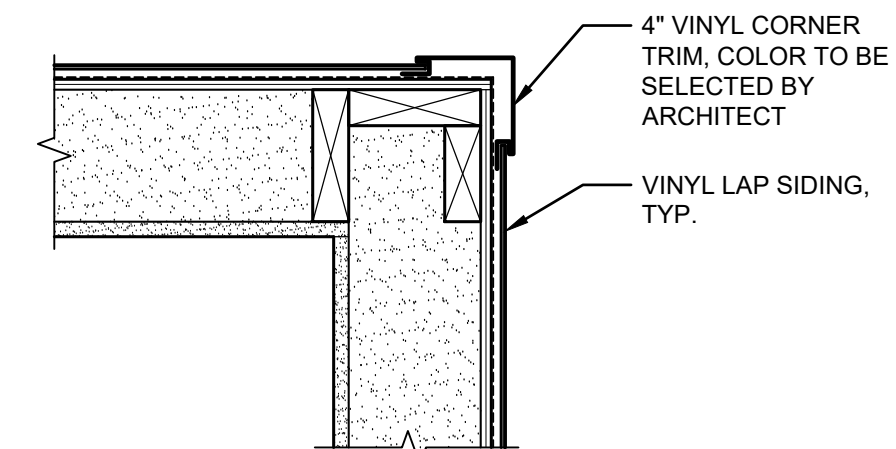
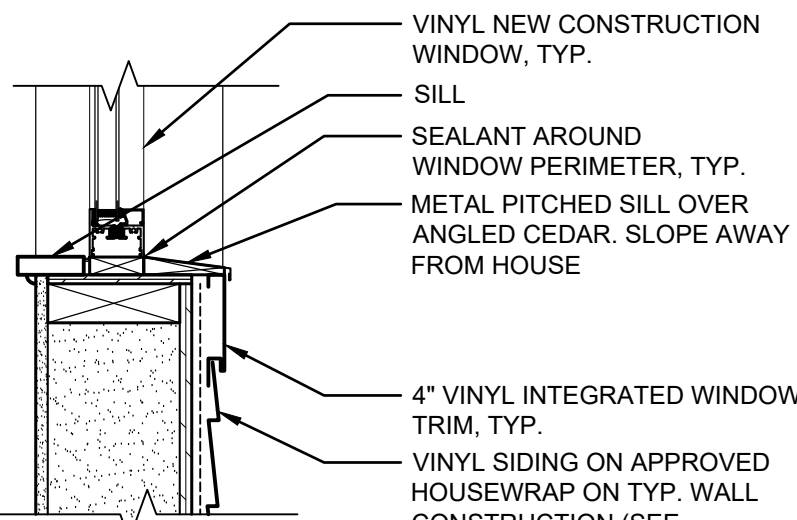
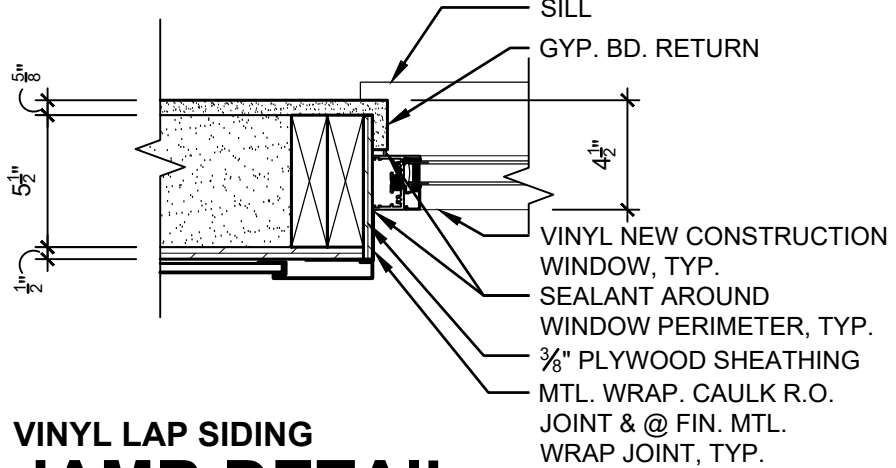
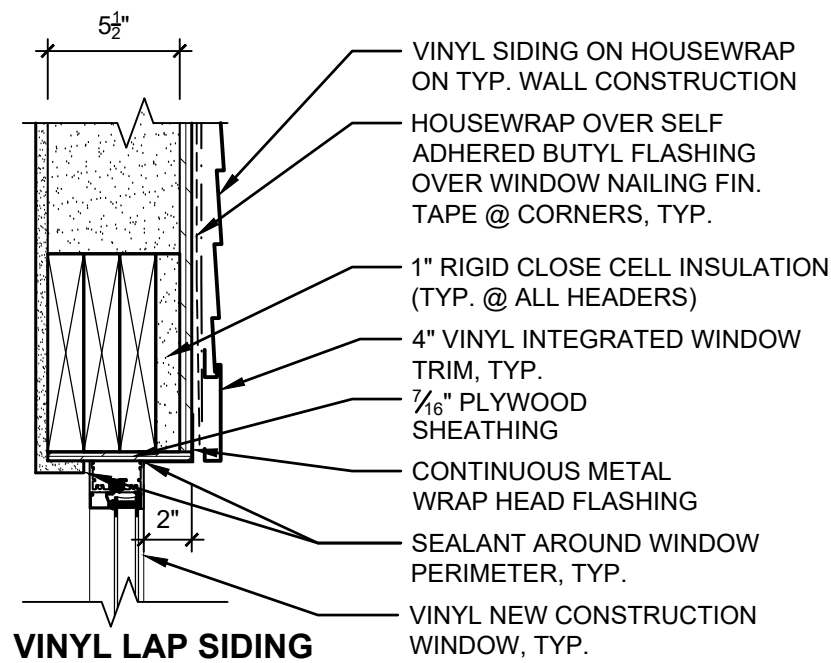
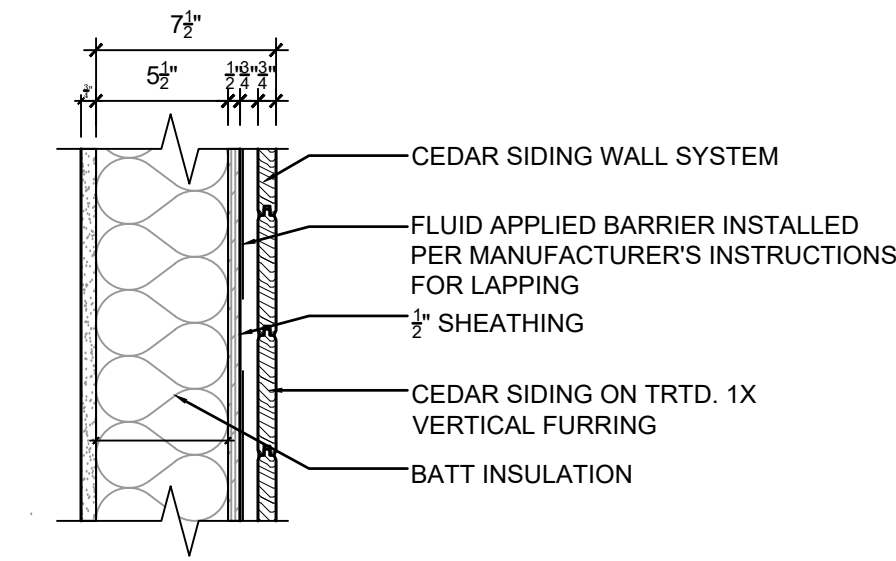
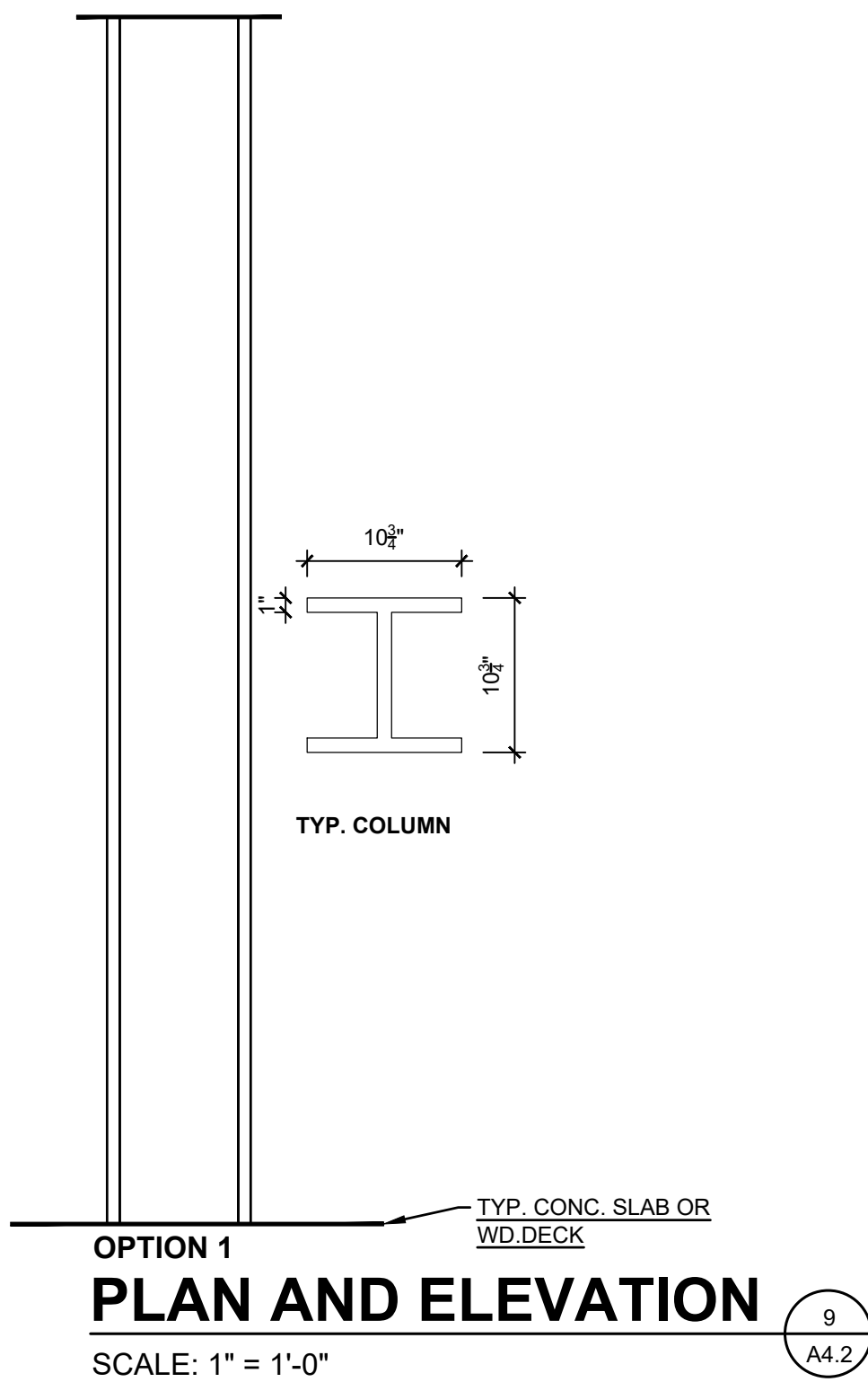
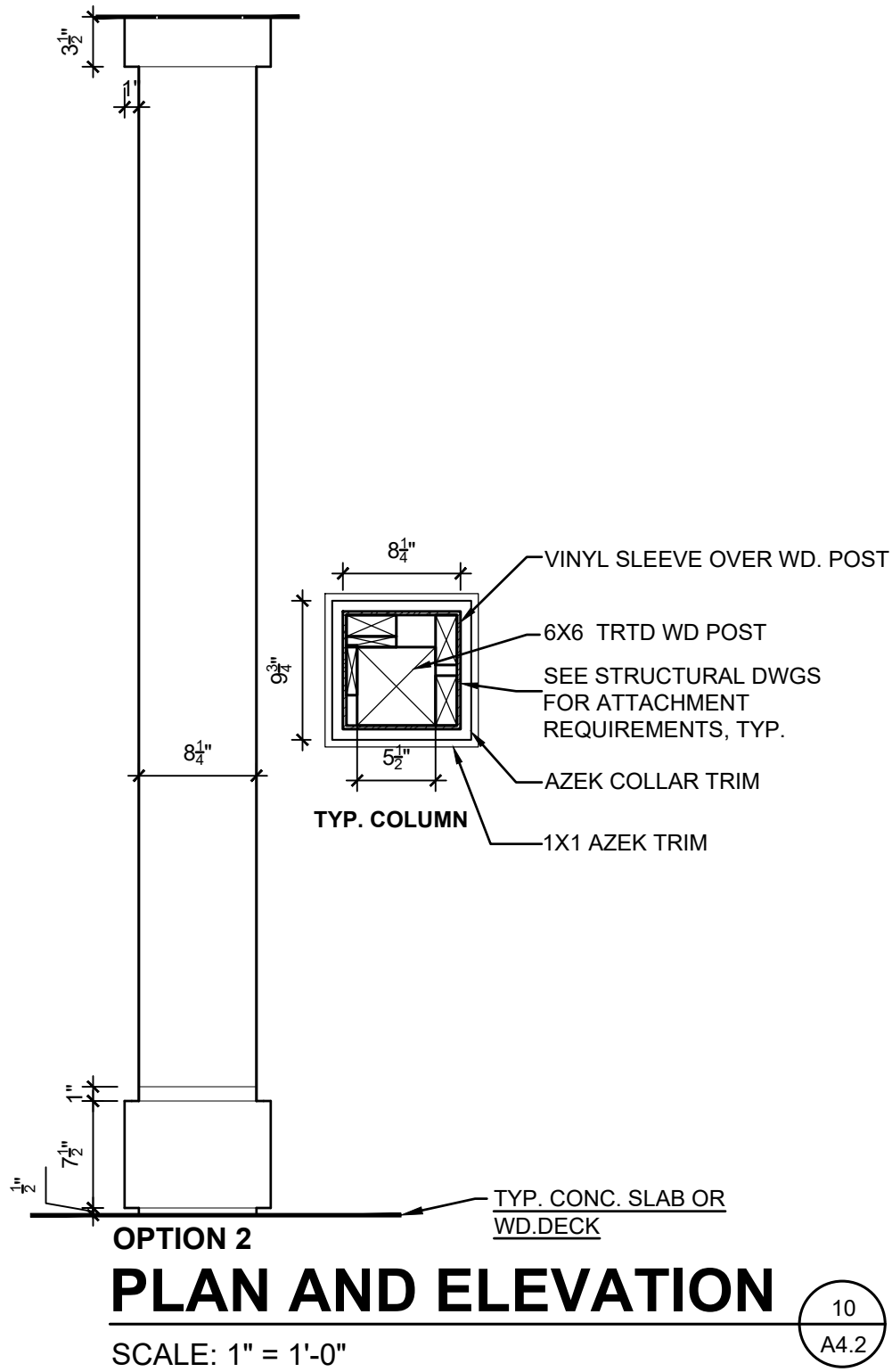
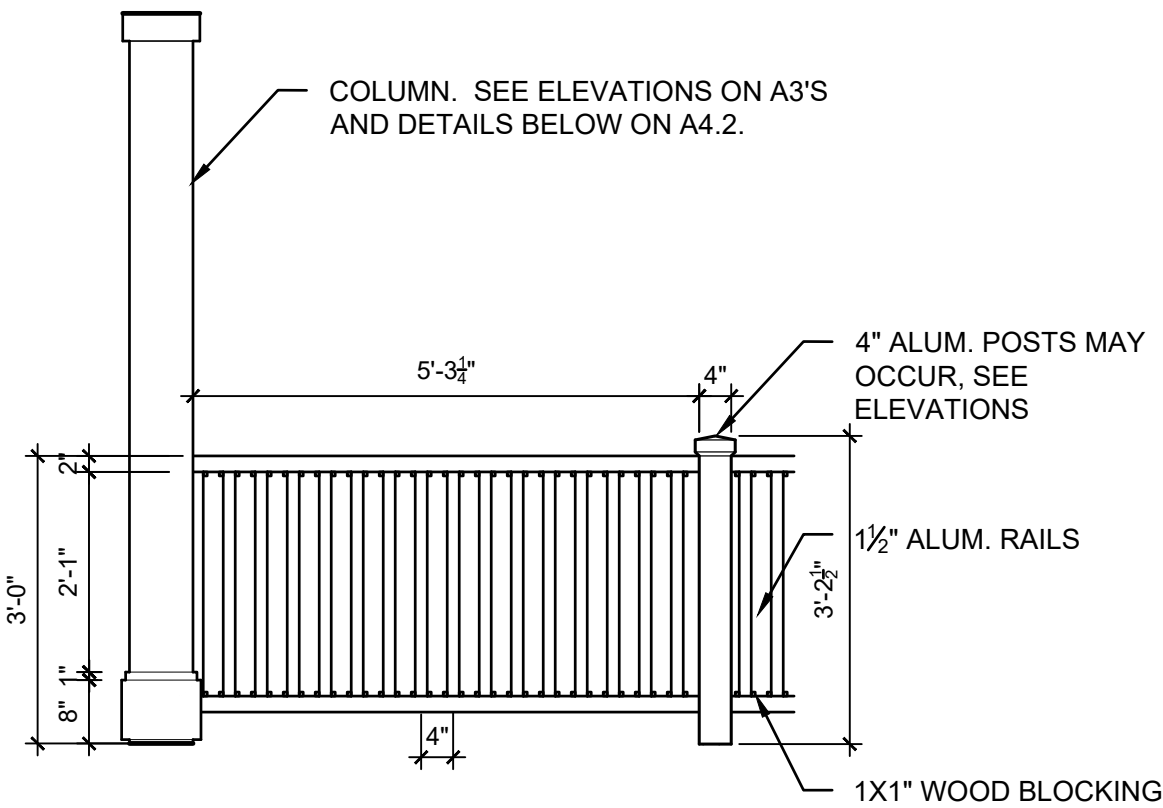
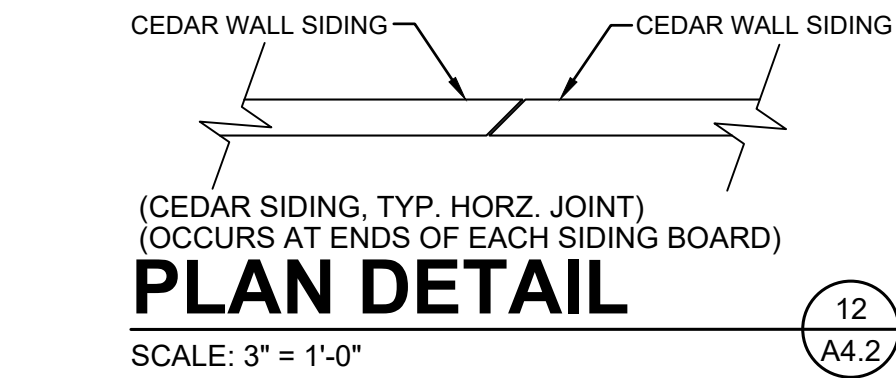
SCALE: 1/2" = 1'-0"



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



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



CLEVELAND SINGLE
FAMILY HOMES

THE ORLEAN COMPANY

SCATTERED SITES - GLENVILLE

CLEVELAND, OHIO

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EXTERIOR
SECTIONS
AND DETAILS

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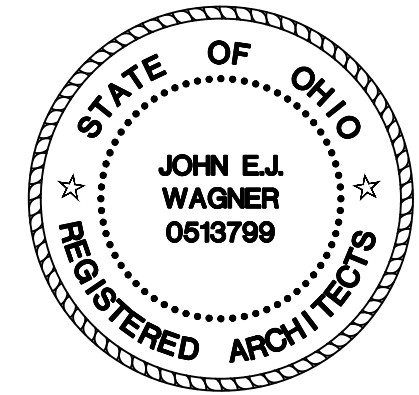
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Sheet Number:

A4.2



CLEVELAND SINGLE
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STAIR
SECTION
AND DETAILS

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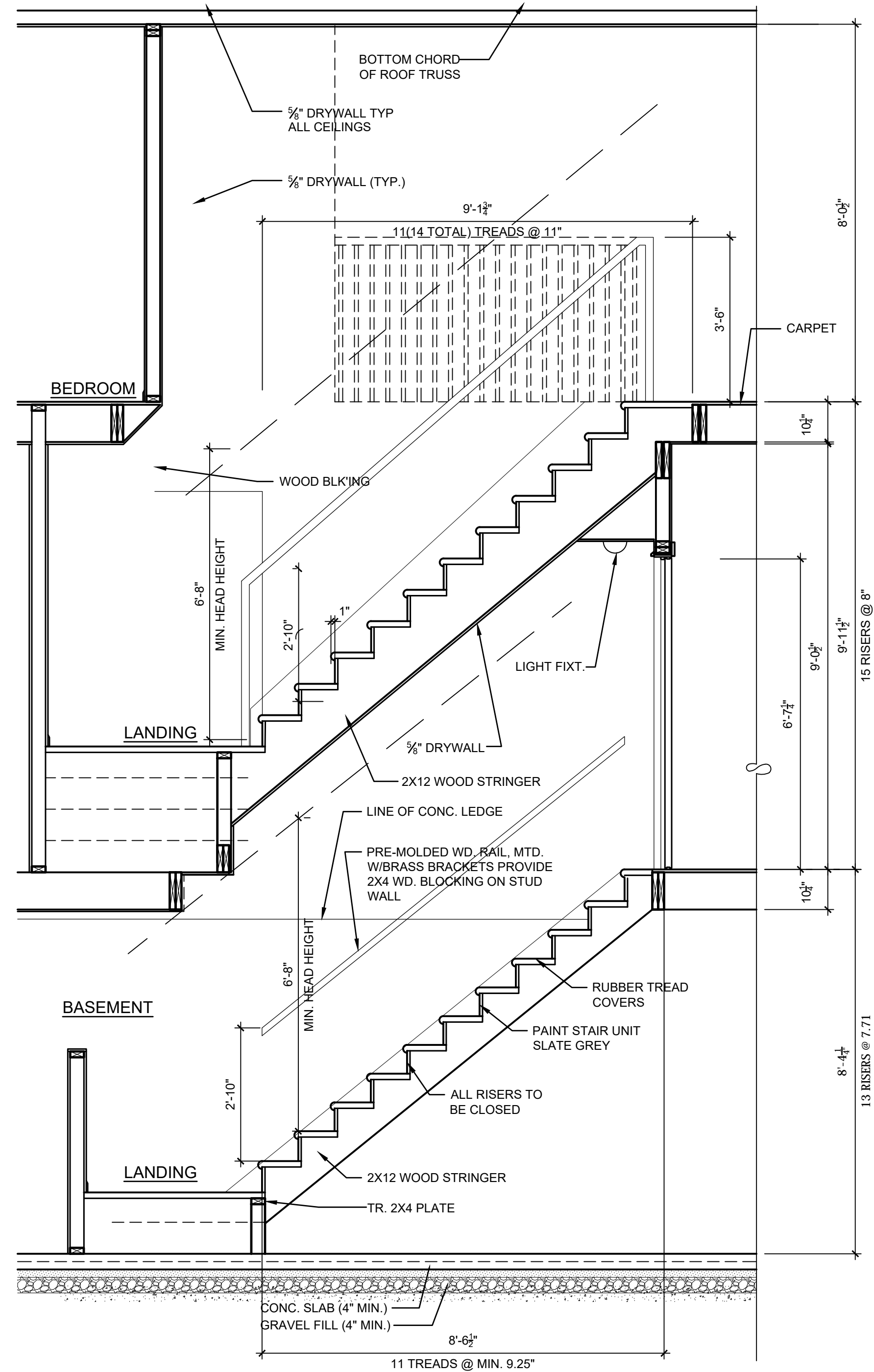
Project Number:

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Sheet Number:

A5.1

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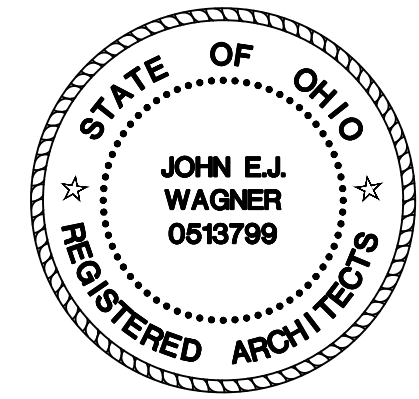


3 BEDROOM SINGLE FAMILY HOME

STAIR SECTION

1/2"=1'-0"

1
A5.1



CLEVELAND SINGLE
FAMILY HOMES

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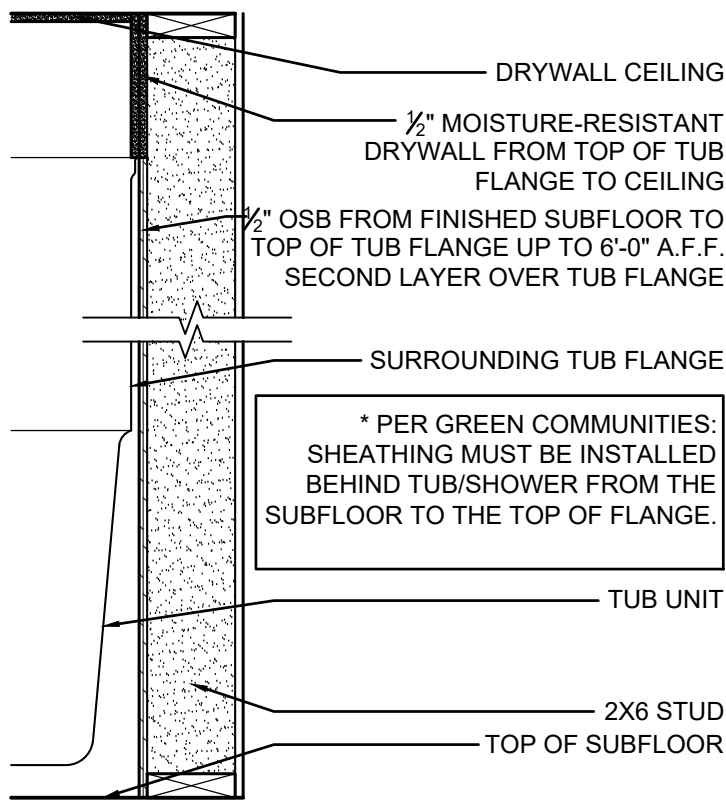
INTERIOR
DETAILS

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Project Number:
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A5.2

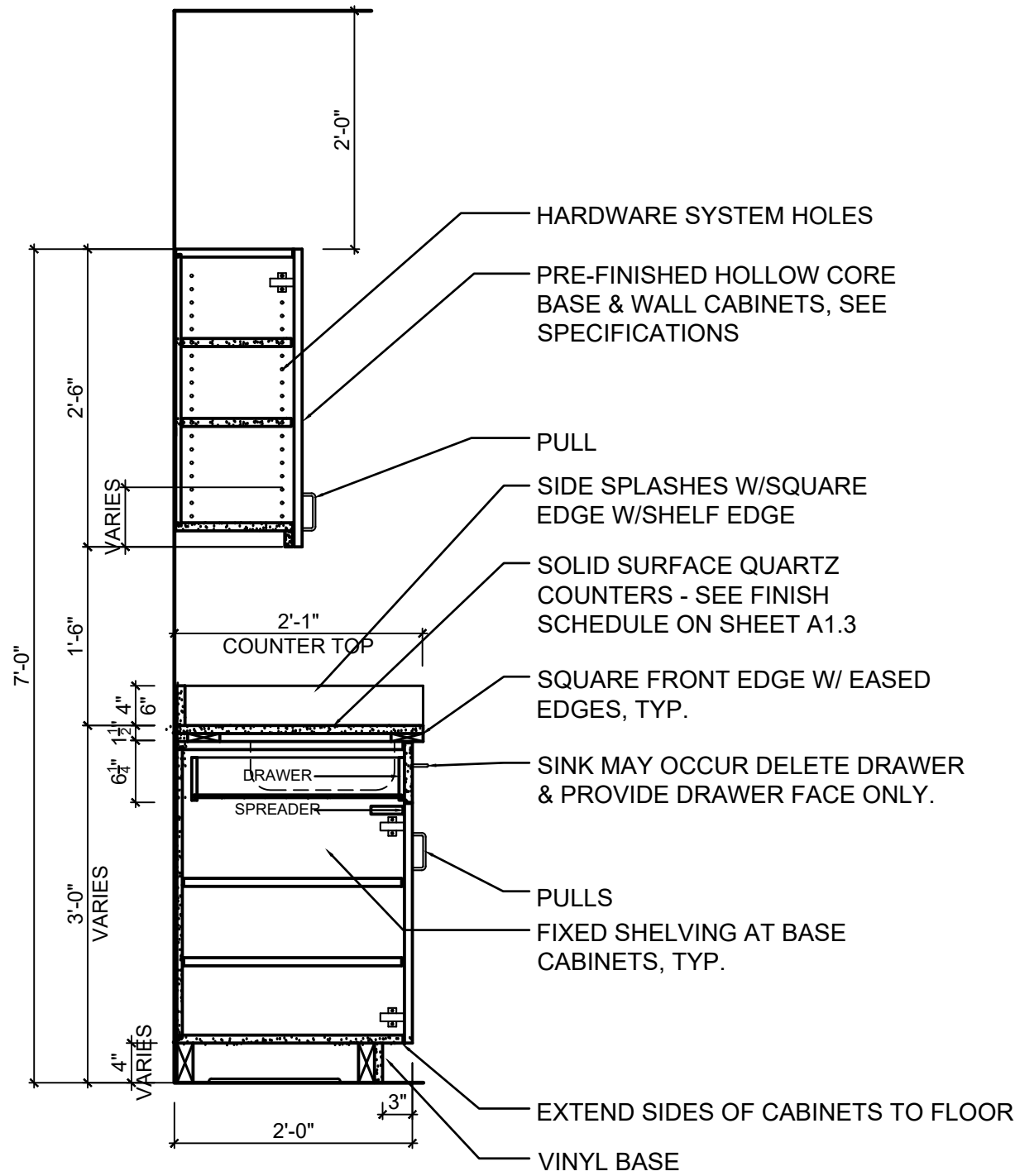
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TUB SURROUND

2
A5.2

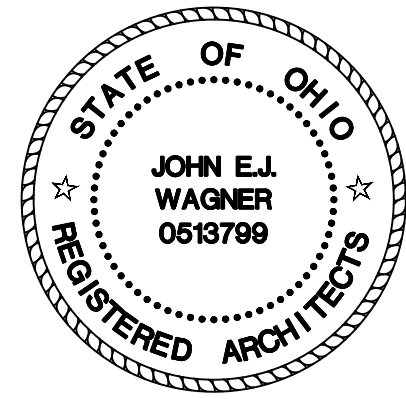
SCALE: 1" = 1'-0"



CABINET DETAIL

1
A5.2

SCALE: 3/4" = 1'-0"



CLEVELAND SINGLE
FAMILY HOMES
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SCATTERED SITES - GLENNVILLE
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SPECIFICATIONS

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Sheet Number:

A6.1

- DIVISION 9 - FINISHES
- A. GYPSUM WALLBOARD CONSTRUCTION
- Pre-drywall inspection is required. Contractor must notify Owner and coordinate with Green Rater.
 - Walls and ceilings shall be 5/8" gypsum board. Any 1/2" drywall already stocked but not installed cannot be used on walls containing blown cellulose insulation. Walls are to be smooth finish, ceilings to be knock-down textured. Closet walls and garage ceilings (attached garages only) to have knock-down texture. Metal corner bead shall be provided. All joints, inside corners and at corner bead shall be finished with joint tape and ready mixed vinyl joint compound. All gypsum board to be installed with screws and adhesive.
 - Install moisture-resistant gypsum wallboard at:
 - Plumbing walls of All Bathrooms;
 - Tub surround walls at All Bathrooms.
- B. FLOORING
- In Kitchens, Dining Areas, Living Room, Entry Foyers and Baths, resilient tile flooring shall be installed. Bathrooms: See Finish Schedule on A1.3 Kitchens and Foyer: See Finish Schedule on A1.3
 - Vinyl base shall be provided at the kicks in kitchen and bathroom cabinets (front only), 4" high as per attached standard specifications.
 - Wood base shall be provided in kitchens and bathrooms, 4" high.
 - A wet/dry adhesive shall be used.
 - All colors to be selected by Owner.
 - C. PAINTING SCHEDULE (No substitutions)
 - Painting schedule is based on products manufactured by Sherwin-Williams or approved equal. All color selections to be made by Owner, except as noted.
 - Walls:
 - Sherwin-Williams - See Finish Schedule on A1.3
 - Interior Wood Trim:
 - Sherwin-Williams -See Finish Schedule on A1.3
 - Basement Walls:
 - Sherwin-Williams - See Finish Schedule on A1.3
 - Porch (hand railing, spindles, porch deck and steps):
 - All pressure treated lumber on front and rear porches to be finished with stain with water sealer, Color T8D
 - FIRE RESISTANT CONSTRUCTION:
 - Flame Spread Index and Smoke Developed Index shall be met in accordance with R302.9, including required testing in accordance with ASTM E84 or UL 723 per R302.9.3.

- DIVISION 10 - SPECIALTIES
- A. CLOSETS
- Clothes closets to have one shelf (steel wire ventilated) and integral rod, linen closets and pantry to be provided with five (5) shelves. Closet shelving to be steel ventilated wire shelving.
- B. BATHROOM ACCESSORIES
- Bath tub to have a shower rod.
 - All mirrors to be 38" in height.
 - Bath accessories: chrome or plated metal.
 - a. two 24" towel bars in full bath, one 18" in half bath.
 - b. toilet paper holder
 - Install ceiling mounted exhaust fan by Panasonic Whisper Green or approved equal, with individual switch. Fan to be ducted to exterior.

- DIVISION 11 - KITCHEN EQUIPMENT
- Verify appliance make and manufacturer with Owner.
 - Subcontractor's to coordinate the appropriate utility hook ups with the Owner's specified appliances.
 - Microwave/Rangehood supply by Contractor, to be vented to exterior w/ a rigid vent to be #F403011
 - Dishwasher
 - Disposal

- DIVISION 12 - FURNISHING
- A. KITCHEN AND BATH CABINETS
- Cabinets shall be Kountry Wood or approved equal. See color on Finish Schedule on A1.3. Cabinet frames and doors shall be solid hardwood construction, side panels shall be vinyl-coated particle-board construction. Base sink to have retractable doors, not center style removable base. Contractor shall provide a cabinet layout for review and approval by Owner. Full bathroom vanity cabinets shall have a minimum of two operable drawers.
 - All cabinetry shall be installed in complete accordance with manufacturer's recommendations, on level surfaces and flush to floor and walls. All cabinetry shall NOT be installed until finish flooring has been completed. The Contractor shall install vinyl base at the toe-kick panel of all base cabinetry.
- B. COUNTERTOPS
- Countertops shall be Quartz - See finish schedule on A1.3.
- C. GREASE SHIELD
- Contractor to provide and install a 1/16" thick plastic laminate or FRP behind stove, min. 24" x 30".

DIVISIONS 13 AND 14 - NOT USED

DIVISION 15 - NOT USED

DIVISION 16 - NOT USED

- In addition to complying with the pertinent codes and regulations of governmental agencies having jurisdiction, comply with: N.F.P.A. National Design Specification and with TPI standards including "Quality Standard for Metal Plate Connected Wood Trusses", "Commentary and Recommendations for Handling and Erecting Wood Trusses", "Commentary and Recommendations for Bracing Wood Trusses" and "Design Specification for Metal Plate Connected Wood Trusses".
- Truss manufacturer will design trusses for the following parameters:

Top chord:	live load	= 30 psf
	dead load	= 12 psf
	wind speed	= 90 mph H2.5A
Bottom chord:	live load	= 10 psf
	dead load	= 7 psf
- Trusses shall be fastened to the top plate with hurricane clips, by Simpson # H 2.5.
- Nail or spike members in accordance with NIMAS's "Manual for House Framing". All nails exposed to weather to be hot-dipped galvanized.
- T.J.I. joists and dimensional lumber shall be single lengths between supports, per Engineer. Studs shall be 2" x 4"s spaced 16" o.c., double at openings, framed solid at corners and angles for drywall. At openings inner stud shall be cut out to receive the header over the opening and shall extend in one piece from header to bearing. Headers shall be minimum 2" x 10"s unless indicated otherwise. Brace all rafters and roof joists as required to prevent shifting, rocking or other movement. Brace roof trusses as recommended by the truss manufacturer.
- Cut framing square on bearings, closely fitted, accurately set to required lines and levels and plumb. Secure rigidly in place at bearings and connections.
- Do not use shims for leveling on wood or metal bearings. Use slate or tile shims with full bearing for leveling on masonry or concrete. Seal sealer installed at pressure-treated wood plate.
- Frame members for passage of pipes and ducts to avoid cutting structural members. Do not cut, notch, or force framing members for passage of pipes or conduits without permission from the T.J.I. Engineer.
- Hold framing and sub-floor at least 1/2" away from masonry walls.
- Interior trim shall be pre-primed fiber jointed MDF, Masonite or Legacy trim package. Color and finish to be selected by Owner. Interior trim to be 2.25" minimum, and to be installed at the floor surfaces of all living spaces, including closets, which are not receiving tile flooring. All interior stair handrails are to be solid pine, pre-formed stock, attached with mounting brackets. Handrails shall be painted as per painting specifications.
- At plumbing walls in baths, provide 2" x 6" stud wall for plumbing rough-in work.
- All framing should be in accordance to advanced framing methods.
- Provide 2 x 10 wood blocking at Bathroom wall areas to receive towel racks, grab bars and toilet paper holder. Verify locations with Owner.
- Provide 2 x 10 wood blocking at stairways to allow for proper installation of handrails, field verify locations.
- The Contractor shall take appropriate protective measures to ensure that installed OSB board does not become subject to prolonged exposure to water or moisture. Likewise, all OSB board shall be given appropriate time and conditions to properly dry out. Any moisture damaged OSB shall be repaired or replaced.

- DIVISION 7 - THERMAL AND MOISTURE PROTECTION
- A. VAPOR BARRIER AND AIR INFILTRATION BARRIER
- A vapor barrier shall be provided under all concrete interior slabs on grade. Barrier shall be a polyethylene film, 6.0 mils thick.
 - An air infiltration barrier shall provided consisting of Rufco Energy-efficient housewrap or approved equal. Housewrap shall be installed prior to installation of doors and windows and over all wall sheathing. Housewrap tape shall be used to seal all joints.
 - All adhesives, caulks, and low sealants shall comply with VOC standards.
- B. BUILDING INSULATION - Provided by Others
- Roof insulation shall be blown-in cellulose to meet R-38 minimum. Provide ventilation baffles at eaves and ridge vents to maintain venting. Mechanical venting may occur (see elevations/sections). To meet ventilation requirements as identified by rater and/or meet The Orlean Company Weatherization standards.
 - Exterior wall insulation shall be cellulose or open cell/closed cell foam insulation to meet R-23 minimum as indicated on the drawings. Insulation to be installed with vapor barrier to the warm side of spaces, and where ends of the blankets or batts meet, the vapor barrier shall be overlapped to provide continuous seal. Tears in the vapor barrier shall be repaired.
 - Sill sealer shall be provided under all wood sill plates at masonry, use 3/8" thick, width of plate.
 - Insulate all heating supply ductwork which runs in exterior walls or in ceilings above garages, to a minimum of R-8.
 - Install cellulose or open cell/closed cell foam insulation, to meet R-20 minimum, at all attic spaces above garages.
 - Insulation installation shall include caulking of all wood-to-wood connections, including around windows, window lintels and all doubled studs. Caulk to comply with specifications in Section F of these specifications.
 - Flame spread index and smoke developed index for insulation shall comply with R302.10. Testing for critical radiant flux shall be made in accordance with ASTM E 970.
- C. ASPHALT SHINGLES
- Asphalt shingle, Certainteed, Landmark Lifetime warranty roof shingles. 3 tab per shingle design, with Seal-O-matic self-sealing UL listed for wind resistance.
 - Asphalt-Saturated Roofing Felt: ASTM D-266-81, organic unperforated, 36" wide (1# 5).
 - Ice and Water Shield: Grace Ice and Water Shield HT. Self adhering rubberized asphalt/polyethylene membrane sheet - 36" wide minimum. Thickness: min. -40 minimum. Provide full width at all eaves and valleys at insulated areas, as well as first course above all gutters.
 - Fasteners: Hot-dipped galvanized steel 11 or 12 gauge barbed shank nails, 3/8" head, sharp-pointed conventional, sufficient length to penetrate roof sheathing. Stapling is not permitted.
 - Shingles colors to be approved by Owner
 - Install "Single Vent II" per manufacturer's specifications.
- D. GUTTERS, DOWNSPOUTS, AND SHEET METAL FLASHINGS
- Gutters shall be seamless aluminum gutter or approved equal, 4" ogee type gutter. All downspouts to be PVC.
 - Gutters and sheet metal flashings shall be a factory applied baked enamel. Aluminum sheet shall be in the thickness of .019 coil stock.
 - All accessories shall be provided including end caps, inside and outside mitered transitions, gutter hangers and clips. All accessories shall be finished to match gutters.
 - All gutters shall be pitched a minimum of 1/4" for every ten (10) feet of run, in the direction of the downspouts. Aluminum for gutters shall be type 5K, .027 in. thick.
- E. VINYL SIDING AND TRIM
- Acceptable Manufacturers (Royal Crest) and Type a. Double 4" lap style or approved equal as per attached standard specifications.
 - Siding and trim shall be manufactured from polyvinyl chloride (PVC) compounds meeting requirements of ASTM C 3679-88 for compound class 2 and 3 materials. Siding and trim shall be an average min. thickness of .042"
 - All accessories shall be provided, including: corner and inside posts, ventilated soffits, starter courses and buttresses where indicated on Front Elevation(s).
 - All colors to be approved by Owner.
- F. LOW V.O.C. SEALANTS AND CAULKING
- Sealant shall be Tremco, Dymonic, color to be selected by Owner from full line of standards. This sealant shall be used for all exterior joints between vinyl to vinyl, masonry to vinyl, aluminum to vinyl, wood to vinyl, etc. For hairline cracks in concrete walls, Tremco THC 900, a hybrid multi-component, chemically curing, polyurethane joint sealant shall be used, color to be approved by owner.
 - In bath rooms and kitchen, Proglaze, a clear silicone rubber-based, one-part, non-sag, elastomeric sealant, resistant to mildew shall be used.
 - For other interior joints an acrylic latex caulk that is paintable shall be used.
 - All sealant and caulking work shall be done per manufacturer's requirements. Contractor shall prepare joints; clean, prime and install back rods and bond breakers as required.
- G. BASEMENT WATERPROOFING
- Waterproofing/drainage system: install the specified elastomeric membrane, protection broad and porous fill to within 18" of finish grade as per the TuFu-N-Dri Exterior Foundation System shall consist of sprayed-on membrane minimum 60 mils wet film thickness, unfaced 2" rigid close cell polystyrene insulation protection board. System shall be installed per manufacturer's instructions and Owner shall be provided manufacturer's standard 10-year Limited Warranty.
- H. FOAM PLASTIC
- All foam plastic shall comply with Section 316 of the Residential Code of Ohio. Packages and containers of foam plastic insulation foam plastic insulation components delivered to the job site shall bear the label of an approved agency showing the manufacturer's name, the product listing, product identification, and information sufficient to determine that the end use will comply with the requirements.
 - All foam plastic surface burning characteristics shall comply with sections 316.3-7 of the Residential Code of Ohio.

- DIVISION 8 - DOORS AND WINDOWS
- A. VINYL WINDOWS
- Windows shall be Low-e (energy-efficient), and of solid vinyl construction of impact resistant exterior PVC, color to be selected by Owner. Window material thickness shall be .065. All fasteners shall be stainless steel, aluminum or other non-corrosive materials. All glazing shall be sealed insulating units. Screens shall be provided at all operating units. Windows to be double hung and fixed units. See elevations for locations.
 - Windows and doors shall meet or exceed AAMA specifications. They shall be rated, for double hung or fixed windows.
 - Acceptable manufacturers and types or approved equal:
 - a. Vinyl double hung with screen, Polaris, Value Smart,, double pane, U-Value: 0.30.
 - First floor hall and second floor windows located above porch roof to have security bars
- B. EXTERIOR DOORS
- Entrance doors and frame shall be Polaris, Steel, Pre-Hung Doors, model #CL60 or approved equal, with a U-value of 0.18. Doors shall be embossed six panel type. Front doors to be installed from a selection of doors approved by Owner. Some front doors to include fixed tempered glass panels. Front doors to be painted in accent color. Door shall be manufactured in 24 gauge and frames of 16 gauge, hot-dipped galvanized A60 steel, prefinished with a baked-on rust inhibiting primer and finish painted (DFT 1.5 mils) color to be selected by Owner from full line of standards. Doors shall be stiffened by kraft honeycomb core with polyurethane foam, thermally broken. Weather-stripping and oak or aluminum thresholds shall be provided. Thresholds shall be set in sealant. Six panel steel door between garage and home.
 - Garage doors shall be foamcore insulated construction with deep textured simulated woodgrain finish and a T-lock. All finish coatings shall be factory applied. Installation shall include one remote control automatic garage door opener to be controlled with two (2) remote controls.
 - Thresholds must extend a min. of 1/2" beyond outside face of security door, model Gibraltar.
- C. INTERIOR DOORS AND FRAMES
- Interior doors to be 1-3/8" pre-hung door unit by Masonite or approved equal, 6 panel colonist or approved equal.
- D. HARDWARE
- Hardware shall be approved by Owner. Deadbolts shall be approved by Owner as per attached standard specifications.
 - Hardware Schedule
 - a. Exterior entrance:
 - Entrance lock lockset, keyed outside and push button inside release; lever style handle;
 - Single cylinder deadbolt lock, thumbturn on inside, min. 1" throw, heavy duty strike plate;
 - 3 pair hinges;
 - Wall mounted door stop;
 - Peephole
 - b. Exterior Security Doors:
 - Single cylinder deadbolt;
 - Closer;
 - Sweep & weatherstrip;
 - c. Bedroom and Bathroom doors:
 - Privacy lockset, push button in lock, lever style handle.
 - 3 pair hinges;
 - Wall mounted door stop;
 - d. Closet, stairway doors:
 - Passage latchset; lever style handle;
 - 3 pair hinges;
 - Wall mounted door stop.
 - Keying: All exterior door locksets and dead bolts shall be keyed alike, furnish four (4) keys to Owner at Acceptance. Keys to have a Master key system with Construction Setting.
 - All strike plates shall have a minimum of 1 screw into framing. All hinges shall be fastened to framing.

- DIVISION 1 - GENERAL REQUIREMENTS
- A. GENERAL CONDITIONS
- The Contractor and all sub-contractors are to comply with AIA Document A201 General Conditions, 1987 Edition.
- B. SUMMARY OF WORK
- The scope of work is the complete construction of the house and site development. The Contractor shall provide all labor, materials, equipment, appurtenances and accessories for a complete residential unit, including but not necessarily limited to: clearing and removal of all debris from the site, removal of all trees less than 5" in diameter and other vegetation as necessary to accommodate the new non-hazardous construction, house, garage, driveway, sidewalk, finish grading, utilities, landscaping, building and utility permits and fees, etc.
- C. WORK RELATED REQUIREMENTS
- Contractor will be responsible for coordinating and laying out of the work, including that of all sub- contractors, investigating all existing conditions, checking all dimensions, verifying all sizes, checking and coordinating all elevations and details. He must tax the Owner of any discrepancies in the drawings or existing conditions.
 - The Contractor must protect construction and any other adjacent property to remain. Do not disturb any areas outside of the lot property lines. If Contractor damages adjacent properties, Contractor will be responsible for repairs at no cost to the Owner. All damaged property shall be repaired to a level at or above the original pre-construction condition.
 - No deviations from the working drawings and specifications shall be made, except through established Change Order forms to be transmitted to, and signed by the Owner. No Change Order work will commence until Change Order is fully executed.
 - Contractor is to coordinate all trades on the job. During construction, along with the Contractor, the Owner may, at various times, have other contractors working within the contract area.
 - Shop Drawings and/or submittals shall be submitted for review by the Owner in a timely and comprehensive manner to provide adequate time for review. All colors and finishes shall be submitted to the Owner for review and approval prior to fabrication or installation.
 - Existing utility service and distribution to be verified by the Contractor and all tie-ins to be in conformance with applicable codes and utility company requirements, all fees to be paid by the Contractor. Contractor is responsible to take photographs prior to construction.
 - The Contractor is responsible for keeping the site and building in which construction work is occurring free from accumulations of rubbish and building debris at all times during construction. Provide trash containers in sufficient quantity to properly collect trash as it accumulates. Use a C&D container from a recycling facility, follow guidelines for disposal, provide a generated spreadsheet by the recycling facility that demonstrates that 25% by weight of the disposed material is recycled. Submit the spreadsheet upon transferring the house to The Orlean Company. All manifest and tickets must be provided with spreadsheet. Empty such containers and clean the work area daily. Stored building materials on site shall be protected as required, and arranged in such a manner immediately accessible to the Owner for inspection. Stored materials are the responsibility of the Contractor until purchased and paid for by the Owner. No burning will be allowed on-site.
 - It is The Orlean Company policy to always have a concrete pre-pour inspection. The Orlean Company Construction Manager must complete the inspection before any concrete can be poured, regardless the time of year. Contractor should contact the Construction Manager in advance in order to avoid any scheduling conflicts.
 - The Electricity and Gas Utilities must be places as early as possible in the project, no later than the rough inspection approval from the City. This service must be maintained in the Contractor's name and the subsequent invoices paid by the Contractor throughout the project. The Orlean Company Inc. shall transfer service out of the Contractor's name and assume payments no later than 10 (ten) business days after the property transfer date. The Contractor shall not have the Utility services cut off prior to the 11th (eleventh) business day after the property transfer date.
- D. SECURITY
- The Contractor is responsible for damage from and shall provide protection against damage from vandalism, theft, weather and other causes of all in-progress and completed work, materials, and apparatus until Final Acceptance by the Owner. Install, maintain and remove upon completion of the Work all such protection devices. Repair or replace all damaged or stolen items. Protect existing work-in-place from damage during construction and repair any damage to same to match the original configuration, arrangement, and/or finish. Contractor shall provide all fences, barricades, railings and for the protection of workmen and the public necessary in and around the work area during the construction period. Contractor must follow OSHA to approve for a safe work environment. Contractor shall secure windows in a commercially reasonable manner on an ongoing basis after installation.
- E. PERMITS AND CODE REQUIREMENTS
- Contractor shall obtain all necessary permits, schedule all required inspections by local authorities, pay all fees, shipping charges and taxes.
 - All work shall be subject to the Ohio Basic Building Code and City of Cleveland Building Code Requirements. Contractor shall obtain all required licenses.
- F. WARRANTY (GUARANTEE)
- All work shall be guaranteed by the Contractor for a period of one (1) year after the date of Final Acceptance. The date of final Acceptance shall be when the Owner agrees that all Substantial Completion Items (Punch List) have been completed, AND a Certificate of Occupancy has been issued by the City of Cleveland. The Owner shall provide a Certificate of Acceptance.

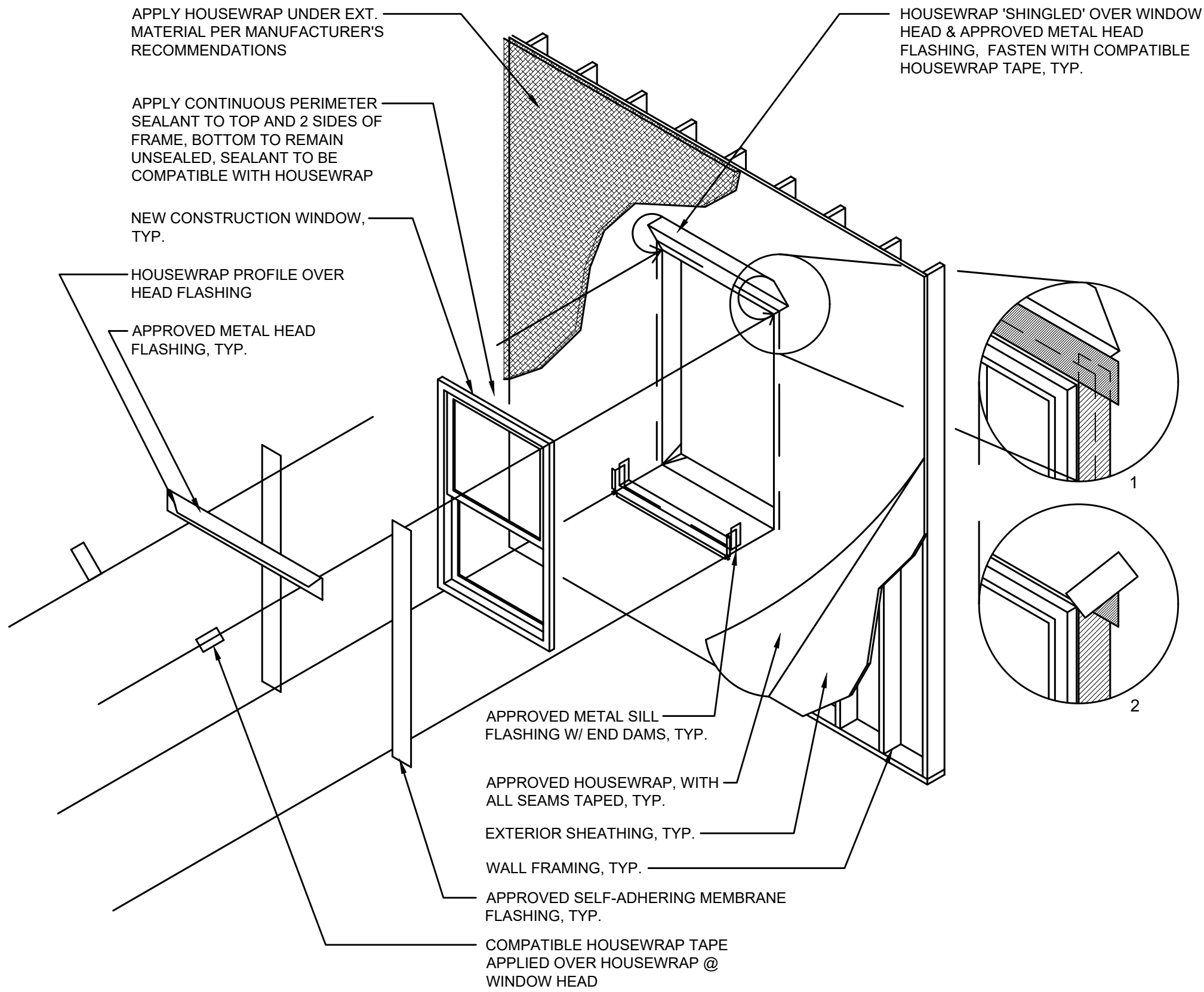
- DIVISION 2 - SITE WORK
- A. Extent of the Clearing, Excavation, Filling and Grading Work, includes but is not necessarily limited, to the following:
- Clearing of the site, removal of any existing paving materials and vegetation as required, removing and storing of topsoil and erosion control, and removal of all trees less than 5" in diameter.
 - Excavating, filling, compacting, and grading for new site grades, utility installation foundations, slabs on grade and pavement. Sub-grade debris from prior demolitions should be removed and hauled offsite to an approved landfill. Ticket and/or receipts must be provided to owner.
 - Contractor shall provide all acceptable fill material required to meet new grades. All fill used at the site shall be clean and free from rocks, bricks, construction debris and organic matter.
 - New utilities; water, sewer, and gas, to service the new houses.
 - Site shall be finish graded, including fill, to meet grade on site. The Contractor shall grade the entire site, so as to allow for proper drainage away from the house and garage, consistent with the grading requirements of the Owner's Surveyor.
- B. Landscape work shall include:
- a) Clearing the complete site, lot line to lot line, of all vegetation, rocks, stones and construction debris;
 - b) Grading the site in compliance with City codes;
 - c) Loose tilling of the site and final grading for seed. All fill to be used shall be free from building materials, bricks, stones, and gravel.
 - d) Install grass seed and straw; Seed mixture to be approved by Owner. Hydroseeding is permitted with Owner's approval.
 - e) Plant trees, minimum 1.5" in diameter, Per Landscape Plan;
 - f) Plant shrubs along the front of the house. There shall be a minimum of three (3) different shrubs in this mix. The Contractor shall provide a list of shrubbery for the Owner's approval, and the Contractor may use any three of those shrubs as available for each site.
 - g) Mulch all trees and plantings;
 - h) Remove all landscaping and construction debris from the site.
 - i) Provide written maintenance instructions for each house.
 - j) Min. 4" of top soil
 - k) All plants & vegetation must be established and is the responsibility of the Contractor.
- All basement footings shall be installed per the following requirements:
 - a) on virgin undisturbed soil, and
 - b) in the event that the soil conditions do not accommodate both conditions, the Contractor shall resolve the condition by extending the footings deeper and/or by providing engineered compacted, filling shall be done under the supervision of the Owner's Soils Engineer.
 - Trenches for footers shall be dry and free from loose stone, rocks, bricks, or other building materials and debris.
- Unsatisfactory soil materials are those defined as AASHTO M145 soil classification Groups A-2-5, A-2-7 and A-4, A-5, A-6, and A-7; also, peat, and other highly organic soils.
 - Any fill required is to consist of uncontaminated cohesionless soils including crushed natural aggregate, recycled concrete, sand, gravel, or variations thereof, and which are classified as "SC, SW, SP, SM, GW, GP, CG, and GM" within the Unified Classification System per ASTM D-2487.
 - Porous fill under floor slabs shall be #57 recycled concrete over pavement #304 recycled concrete.
- B. TESTING AND INSPECTION
- The Owner shall retain the services of a qualified independent Testing and Inspection Agency Soils Engineer, to test the execution of this work. Notify the Owner in writing.
 - Contractor must notify Owner & request a pre-pour inspection prior to installing footers, drives & walks.
- C. FOUNDATION DRAINAGE
- 4" diameter perforated Schedule 35 OR 40 pvc drain tile with filter fabric, fitted with fittings as required shall be used. Provide filter fabric of rot-proof polymeric fibers to meet O.D.O.T. requirements.
 - Filter material shall be washed, crushed stone or gravel with 85% passing #38" screen and 100% retained on #35 screen. Porous gravel shall be provided as per code or "TuFu n Dri" System.
 - Drain tube or tile shall be sloped a minimum of 1/16"/ft. to drain. Drain tile shall be tied into storm sewer system.

- DIVISION 3 - CONCRETE - SEE SHEET S0.0
- A. CONCRETE EXTERIOR FLATWORK SCOPE
- Concrete to have 4,000 PSI compressive strength.
 - Air entrained concrete to be used for exterior sidewalks and driveways.
 - a) Control joints to be placed min. every 8'-0" LF
 - b) Expansion joints to be placed at foundations, walks and aprons

DIVISION 4 - MASONRY - SEE SHEET S0.0

DIVISION 5 - METALS - SEE SHEET S0.0

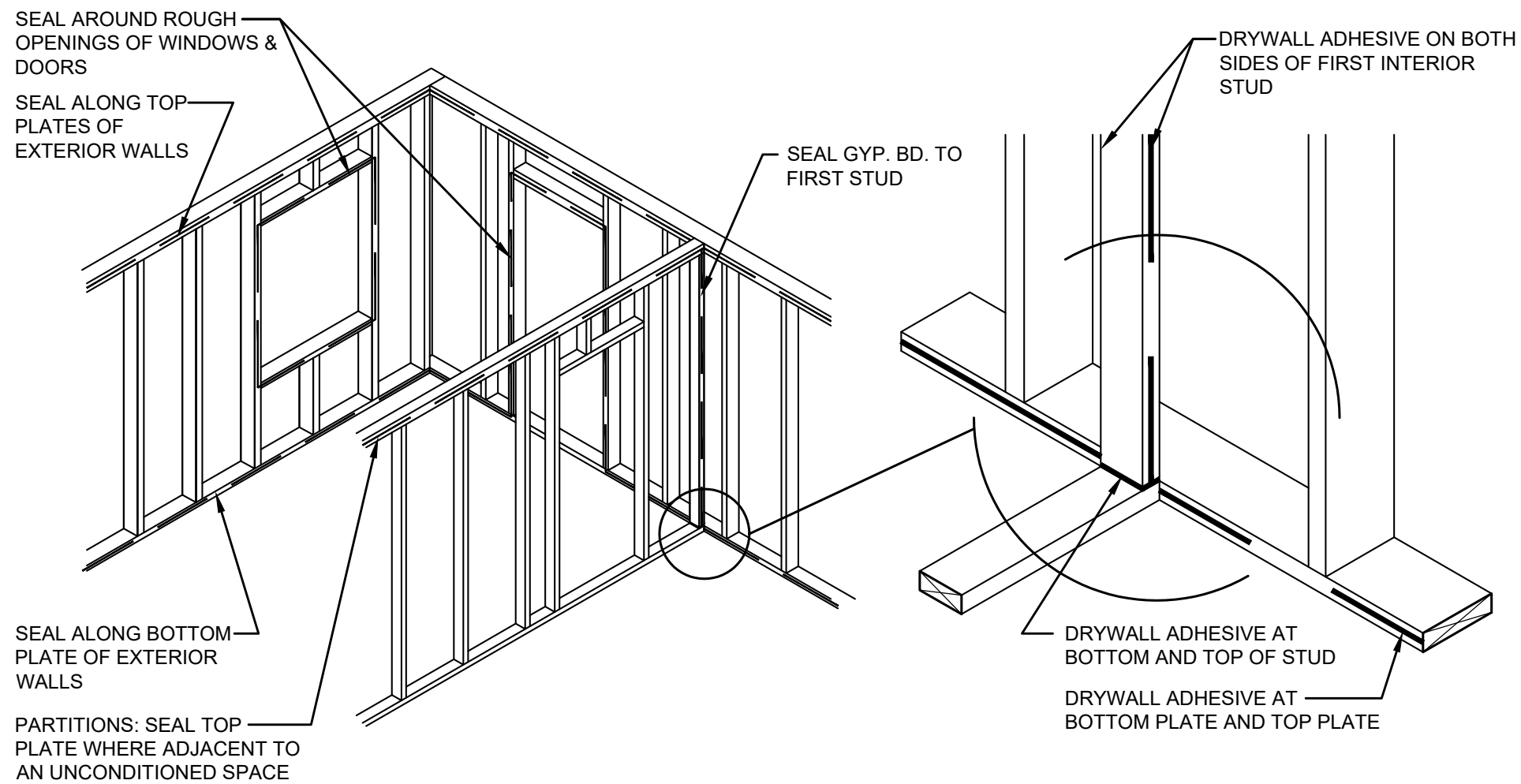
- DIVISION 6 - WOOD AND PLASTICS
- A. LUMBER
- Lumber standards: Provide lumber which complies with PS20 American Softwood Lumber Standard and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.
 - Dimensional Lumber: Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS20 for moisture content specified for each use.
 - a. Provide dressed lumber, S4S, unless otherwise indicated.
 - b. Provide seasoned lumber with 19% maximum moisture content at time of dressing and shipment for sizes 2" or less in nominal thickness, unless otherwise indicated.
 - c. For light framing (2" to 4" thick, 2" to 4" wide): Stress grade Douglas Fir, Western Pine, or Spruce Fir-Fb.
 - d. For structural framing (2" to 4" thick, 5" and wider): No. 2 grade, Douglas Fir, Western Pine, Southern Pine or Spruce Fir-Fb.
 - Wood used for the construction of the porches and in contact with masonry shall be water repellent treated wood, Ultrawood as manufactured by Chemical Specialties, Inc. or approved equal. All treated wood to receive a clear cloat exterior wood water repellent sealer.
- B. PLYWOOD
- Plywood standards: Comply with PS 1 U.S. Product Standard for Construction and Industrial Plywood for plywood panels and for products not manufactured under PS 1 provisions, with APA Performance Standard and Policies for Structural-Use Panels, Form No. E445.
 - Trademark: Factory-mark each construction panel with APA trademark evidencing compliance with grade requirements.
 - Concealed APA performance-rated panels: Where concealment panels will be used for the following concealed types of applications, provide APA performance-rated panels complying with requirements indicated for grade designation, span rating, exposure durability classification, thickness as indicated on Drawing.
 - Underlayment shall be provided at all floor areas to receive vinyl tile, sheet vinyl, or ceramic tile. Underlayment shall be 1/4" APA Plywood Underlayment with fully sanded face with exterior rated glue, or 1/4"luan is also acceptable. Fastening and gluing shall be done per APA guidelines to prevent delamination and nail popping.
- C. WALL, FLOOR AND ROOF SHEATHING
- Wall sheathing shall be 5/8" APA rated OSB board, rated for exterior use and for minimum 16" span.
 - Roof sheathing shall be 5/8" thick APA rated OSB board, rated for exterior use for a maximum 24" span.
 - Sub-floor shall be 3/4" tongue and groove O.S.B. sub-floor, A.P.A. rated for 24" o.c. span.
- D. WOOD TRUSSES
- Prefabricated metal-plate-connected wood trusses consisting of metal-plate connected members that are fabricated from dimensional lumber and that have been cut and assembled prior to delivery to the project site. Trusses shall be designed by the manufacturer to support all superimposed dead and live loads indicated, with design approved and certified by a structural engineer licensed to practice in the jurisdiction where trusses will be installed.



HOUSEWRAP AND WINDOW INSTALLATION GUIDELINES

SCALE: NOT TO SCALE

- NOTE 1:** THIS DRAWING IS INTENDED FOR REFERENCE ONLY. IT IS NOT TO REPLACE OR SUPERSEDE ANY MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION. CONTRACTOR IS RESPONSIBLE TO INSTALL ALL BUILDING COMPONENTS PURSUANT TO THE MANUFACTURER'S RECOMMENDATIONS.
- NOTE 2:** APPROVED HOUSEWRAPS INCLUDE 'TYVEK' BY DUPONT AND GREEN GUARD'S 'ULTRA-WRAP' BY PACTIV, OR EQUIVALENT AS APPROVED BY THE ARCHITECT.
- NOTE 3:** FASTEN HOUSEWRAP WITH CAP-NAILS PER MANUFACTURER'S RECOMMENDATIONS AND TAPE ALL SEAMS WITH COMPATIBLE HOUSEWRAP TAPE APPROVED BY THE HOUSEWRAP MANUFACTURER.
- NOTE 4:** APPROVED SELF-ADHERING FLASHINGS SHALL BE BUTYL BASED OR BUTYL MODIFIED ADHESIVE ON A FLEXIBLE, TEAR-RESISTANT FILM AS APPROVED BY THE HOUSEWRAP MANUFACTURER.
- NOTE 5:** COMPLETE WINDOW INSTALLATION BY FILLING ALL INTERIOR VOIDS WITH NON-EXPANDING INSULATION AND A CONTINUOUS PERIMETER SEALANT BETWEEN WINDOW FRAME AND FINISH MATERIALS.
- NOTE 6:** REFER TO 'HOME SLICKER' AND 'SURE CAVITY' MANUFACTURERS' INSTALLATION INSTRUCTIONS AND DETAILS. COORDINATE INSTALLATION WITH WINDOW, SIDING AND HOUSEWRAP MANUFACTURER'S RECOMMENDATIONS



GYP. BD. SEALANT DIAGRAMS

SCALE: NOT TO SCALE



National Rater Field Checklist ENERGY STAR Certified Homes, Version 3 / 3.1 (Rev. 09)

Home Address: _____	City: _____	State: _____	Permit Date: _____		
Thermal Enclosure System		Must Correct	Builder Verified ¹	Rater Verified ²	N/A ³
1. High-Performance Fenestration & Insulation					
1.1 Fenestration meets or exceeds specification in Item 2.1 of the National Rater Design Review Checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
1.2 Insulation meets or exceeds specification in Item 3.1 of the National Rater Design Review Checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
1.3 All insulation achieves Grade 1 install, per ANSI / RESNET / ICC Std. 301. Alternatives in Footnote 4. ^{4, 5}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
2. Fully-Aligned Air Barriers ⁶ At each insulated location below, a complete air barrier is provided that is fully aligned as follows:					
Ceilings: At interior or exterior horizontal surface of ceiling insulation in Climate Zones 1-3; at interior horizontal surface of ceiling insulation in Climate Zones 4-8. Also, at exterior vertical surface of ceiling insulation in all climate zones (e.g., using a wind baffle that extends to the full height of the insulation in every bay or a lapped baffle in each bay with a soffit vent that prevents wind washing in adjacent bays). ⁷	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1 Dropped ceilings / soffits below unconditioned attics, and all other ceilings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walls: At exterior vertical surface of wall insulation in all climate zones; also at interior vertical surface of wall insulation in Climate Zones 4-8 ⁸	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Walls behind showers, tubs, staircases, and fireplaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Attic knee walls and skylight shaft walls ⁹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4 Walls adjoining porch roofs or garages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5 Double-walls and all other exterior walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
Floors: At exterior vertical surface of floor insulation in all climate zones and, if over unconditioned space, also at interior horizontal surface including supports to ensure alignment. Alternatives in Footnotes 11 & 12. ^{10, 11, 12}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6 Floors above garages, floors above unconditioned basements or crawlspaces, and cantilevered floors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7 All other floors adjoining unconditioned space (e.g., rim / band joists at exterior wall or at porch roof)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Reduced Thermal Bridging					
3.1 For insulated ceilings with attic space above (i.e., non-cathedralized), Grade 1 insulation extends to the inside face of the exterior wall below and is ≥ R-21 in CZ 1-5; ≥ R-30 in CZ 6-8 ¹³	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 For slabs on grade in CZ 4-8, 100% of slab edge insulated to ≥ R-5 at the depth specified by the 2009 IECC and aligned with the thermal boundary of the walls ^{14, 15}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Insulation beneath attic platforms (e.g., HVAC platforms, walkways) ≥ R-21 in CZ 1-5; ≥ R-30 in CZ 6-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4 At above-grade walls separating conditioned from unconditioned space, one of the following options used (rim / band joists exempted): ¹⁶	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4.1 Continuous rigid insulation, insulated siding, or combination of the two is: ≥ R-3 in CZ 1-4; ≥ R-5 in CZ 5-8 ^{17, 18, 19} OR ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4.2 Structural Insulated Panels OR , Insulated Concrete Forms OR , Double-wall framing OR ; ^{17,20}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4.3 Advanced framing, including all of the items below: ²¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4.3a Corners insulated ≥ R-6 to edge ²² ; AND ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4.3b Headers above windows & doors insulated ≥ R-3 for 2x4 framing or equivalent cavity width, and ≥ R-5 for all other assemblies (e.g., with 2x6 framing) ²³ ; AND ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4.3c Framing limited at all windows & doors to one pair of king studs, plus one pair of jack studs per window opening to support the header and sill; AND ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4.3d Interior / exterior wall intersections insulated to same R-value as rest of exterior wall; ²⁴ AND ;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4.3e Minimum stud spacing of 16 in. o.c. for 2x4 framing in all Climate Zones and, in CZ 6-8, 24 in. o.c. for 2x6 framing ²⁵	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Air Sealing (Unless otherwise noted below, "sealed" indicates the use of caulk, foam, or equivalent material)					
4.1 Ducts, flues, shafts, plumbing, piping, wiring, exhaust fans, & other penetrations to unconditioned space sealed, with blocking / flashing as needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
4.2 Recessed lighting fixtures adjacent to unconditioned space ICAT labeled and gasketed. Also, if in insulated ceiling without attic above, exterior surface of fixture insulated to ≥ R-10 in CZ 4-8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Above-grade sill plates adjacent to conditioned space sealed to foundation or sub-floor. Gasket also placed beneath above-grade sill plate if resting atop concrete / masonry & adjacent to cond. space ^{28,27}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4 Continuous top plate or blocking is at top of walls adjoining unconditioned space, and sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.5 Drywall sealed to top plate at all unconditioned attic / wall interfaces using caulk, foam, drywall adhesive (but not other construction adhesives), or equivalent material. Either apply sealant directly between drywall and top plate or to the seam between the two from the attic above.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.6 Rough opening around windows & exterior doors sealed ²⁸	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
4.7 Walls that separate attached garages from occupiable space sealed and, also, an air barrier installed and sealed at floor cavities aligned with these walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.8 In multifamily buildings, the gap between the common wall (e.g. the drywall shaft wall) and the structural framing between units sealed at all exterior boundaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.9 Doors adjacent to unconditioned space (e.g., attics, garages, basements) or ambient conditions made substantially air-tight with weatherstripping or equivalent gasket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.10 Attic access panels, drop-down stairs, & whole-house fans equipped with durable ≥ R-10 cover that is gasketed (i.e., not caulked). Fan covers either installed on house side or mechanically operated. ²⁹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Revised 09/01/2018

Page 1 of 6

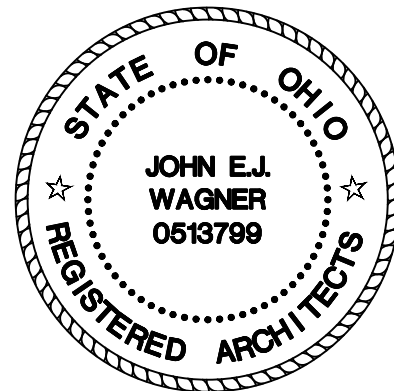


National Rater Field Checklist ENERGY STAR Certified Homes, Version 3 / 3.1 (Rev. 09)

HVAC System ³⁰ (National HVAC Design Report Item # in parenthesis)			Must Correct	Rater Verified ²	N/A ³
5. Heating & Cooling Equipment					
5.1 HVAC manufacturer & model number on installed equipment matches either of the following (check box): ³¹ <input type="checkbox"/> National HVAC Design Report (4.3, 4.4, & 4.17) <input type="checkbox"/> Written approval received from designer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
5.2 External static pressure measured by Rater at contractor-provided test locations and documented below: ³² Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure: _____ IWC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3 Permitted, but not required: National HVAC Commissioning Checklist collected, with no items left blank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Duct Quality Installation - Applies to Heating, Cooling, Ventilation, Exhaust, & Pressure Balancing Ducts, Unless Noted in Footnote					
6.1 Ductwork installed without kinks, sharp bends, compressions, or excessive coiled flexible ductwork ³³	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2 Bedrooms pressure-balanced (e.g., using transfer grilles, jump ducts, dedicated return ducts, undercut doors) to achieve a Rater-measured pressure differential ≥ -3 Pa and ≤ +3 Pa with respect to the main body of the house when all air handlers are operating. Test configuration and an alternative compliance option in Footnote 34. ³⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
6.3 All supply and return ducts in unconditioned space, including connections to trunk ducts, are insulated to ≥ R-6 ³⁵	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4 Rater-measured total duct leakage meets one of the following two options. Alternative in Footnote 37: ^{36, 37, 38}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4.1 Rough-in: The greater of ≤ 4 CFM25 per 100 sq. ft. of CFA or ≤ 40 CFM25, with air handler & all ducts, building cavities used as ducts, & duct boots installed. In addition, all duct boots sealed to finished surface, Rater-verified at final. ³⁹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4.2 Final: The greater of ≤ 8 CFM25 per 100 sq. ft. of CFA or ≤ 80 CFM25, with the air handler & all ducts, bldg. cavities used as ducts, duct boots, & register grilles atop the finished surface (e.g., drywall, floor) installed ⁴⁰	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.5 Rater-measured duct leakage to outdoors the greater of ≤ 4 CFM25 per 100 sq. ft. of CFA or ≤ 40 CFM25 ^{36, 38, 41}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Whole-House Mechanical Ventilation System					
7.1 Rater-measured ventilation rate is within either ± 15 CFM or ±15% of design value (2.3) ⁴²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
7.2 A readily-accessible ventilation override control installed and also labeled if its function is not obvious (e.g., a label is required for a standalone wall switch, but not for a switch that's on the ventilation equipment) ⁴³	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
7.3 No outdoor air intakes connected to return side of the HVAC system, unless controls are installed to operate intermittently & automatically based on a timer and to restrict intake when not in use (e.g., motorized damper)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
7.4 System fan rated ≤ 3 sones if intermittent and ≤ 1 sone if continuous, or exempted ⁴⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
7.5 If system utilizes the HVAC fan, then the specified fan type is ECM / ICM (4.7), or the controls will reduce the standalone ventilation run-time by accounting for hours when the HVAC system is heating or cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.6 Bathroom fans are ENERGY STAR certified if used as part of the whole-house system ⁴⁵	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.7 Air inlet location (Complete if ventilation air inlet location was specified (2.12, 2.13); otherwise check "N/A"); ^{46, 47}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.7.1 Inlet pulls ventilation air directly from outdoors and not from attic, crawlspace, garage, or adjacent dwelling unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
7.7.2 Inlet is ≥ 2 ft. above grade or roof deck; ≥ 10 ft. of stretched-string distance from known contamination sources (e.g., stack, vent, exhaust, vehicles) not exiting the roof, and ≥ 3 ft. distance from dryer exhausts and sources exiting the roof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
7.7.3 Inlet is provided with rodent / insect screen with ≤ 0.5 inch mesh	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Local Mechanical Exhaust - In each kitchen and bathroom, a system is installed that exhausts directly to the outdoors and meets one of the following Rater-measured airflow and manufacturer-rated sound level standards: ^{42, 48}					
Location	Airflow	Continuous Rate	Intermittent Rate ⁴⁹	<input type="checkbox"/>	<input type="checkbox"/>
8.1 Kitchen	≥ 5 ACH, based on kitchen volume ^{50, 51}	≥ 100 CFM and, if not integrated with range, also ≥ 5 ACH based on kitchen volume ^{50, 51, 52}	Recommended: ≤ 1 sone	<input type="checkbox"/>	<input type="checkbox"/>
8.2 Bathroom	≥ 20 CFM	≥ 50 CFM	Recommended: ≤ 3 sones	<input type="checkbox"/>	<input type="checkbox"/>
9. Filtration					
9.1 At least one MERV 6 or higher filter installed in each ducted mechanical system in a location that facilitates access and regular service by the occupant ⁵³	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2 Filter access panel includes gasket or comparable sealing mechanism and fits snugly against the exposed edge of filter when closed to prevent bypass ⁵⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.3 All return air and mechanically supplied outdoor air passes through filter prior to conditioning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Combustion Appliances					
10.1 Furnaces, boilers, and water heaters located within the home's pressure boundary are mechanically drafted or direct-vented. Alternatives in Footnote 57. ^{55, 56, 57}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.2 Fireplaces located within the home's pressure boundary are mechanically drafted or direct-vented. Alternatives in Footnote 59. ^{58, 59, 58}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.3 If unvented combustion appliances other than cooking ranges or ovens are located inside the home's pressure boundary, the Rater has followed Section 802 of RESNET's Standards, encompassing ANSI/ACCA 12 QH-2014, Appendix A, Section A3 (Carbon Monoxide Test), and verified the equipment meets the limits defined within ^{50, 59}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rater Name: _____ Rater Pre-Drywall Inspection Date: _____ Rater Initials: _____					
Rater Name: _____ Rater Final Inspection Date: _____ Rater Initials: _____					
Builder Employee: _____ Builder Inspection Date: _____ Builder Initials: _____					

Revised 09/01/2018

Page 2 of 6



CLEVELAND SINGLE FAMILY HOMES

THE ORLEAN COMPANY

SCATTERED SITES - GLENVILLE CLEVELAND, OHIO

Issue:

2018-12-11 - PRICING

2019-06-14 - FOR PERMIT

2019-10-11 - MEP SUBMISSION

ENERGY STAR SPECIFICATIONS

City Architecture

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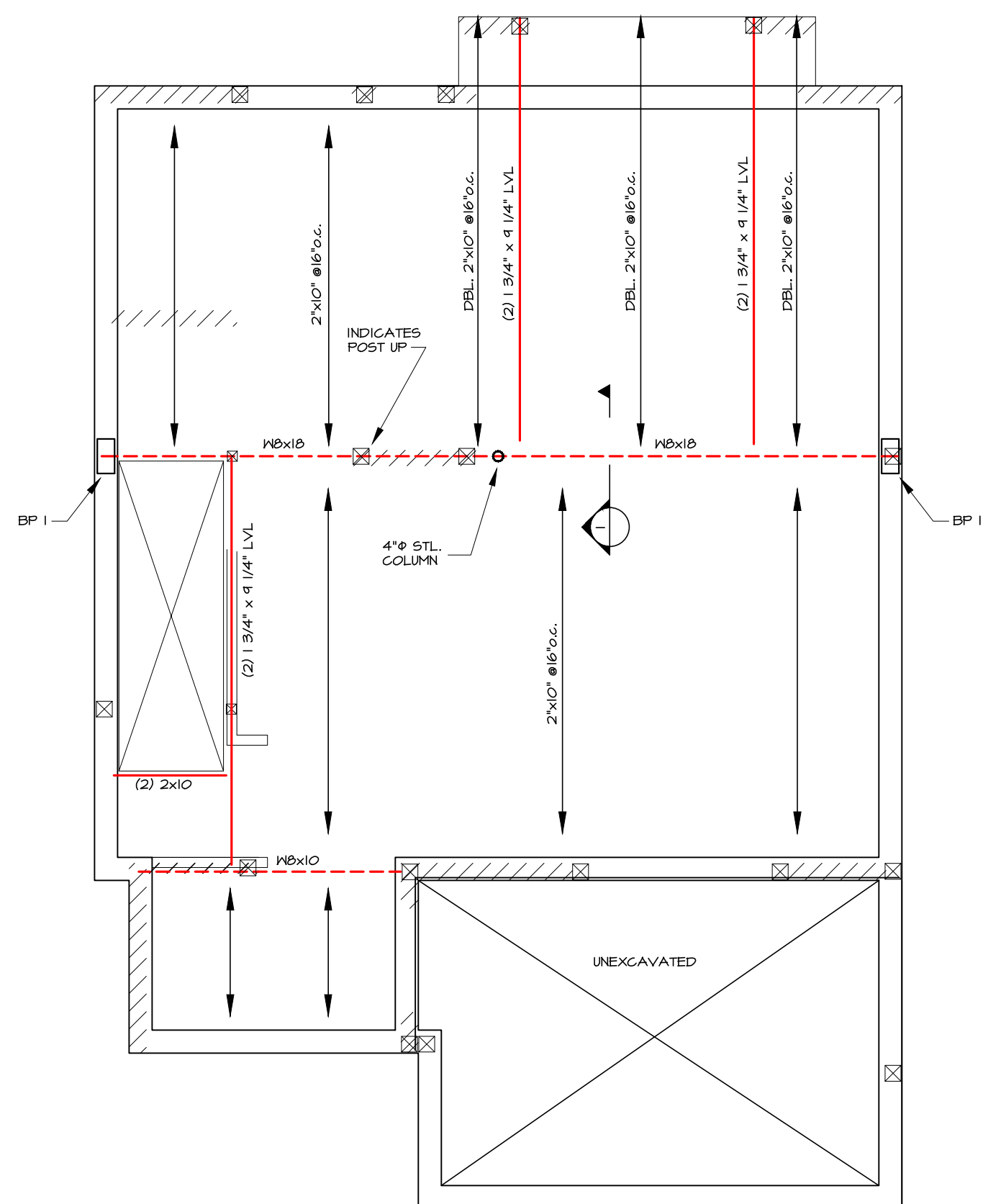
Project Number:

18053

Sheet Number:

A6.2

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[illegible]

A circular professional engineer seal for the State of Ohio. The outer ring contains the text "STATE OF OHIO" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. The center of the seal contains the name "CRAIG S. COHEN" and the registration number "E-057183". The word "REGISTERED" is written in a smaller arc below the registration number. A handwritten signature "Craig S. Cohen" is written across the seal.

CLEVELAND SINGLE
FAMILY HOMES

THE ORLEANS COMPANY

SCATTERED SITES - GLENVILLE CLEVELAND

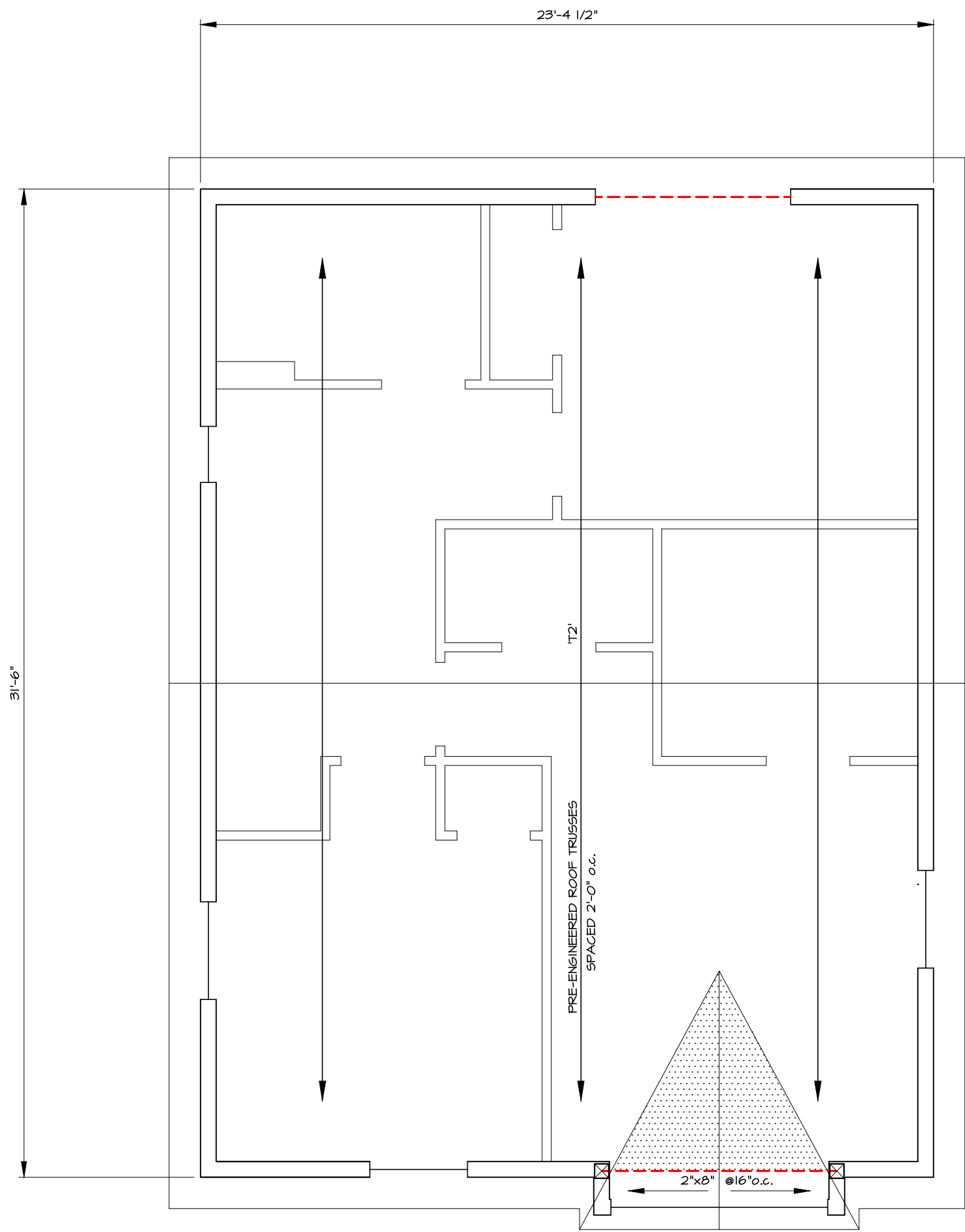
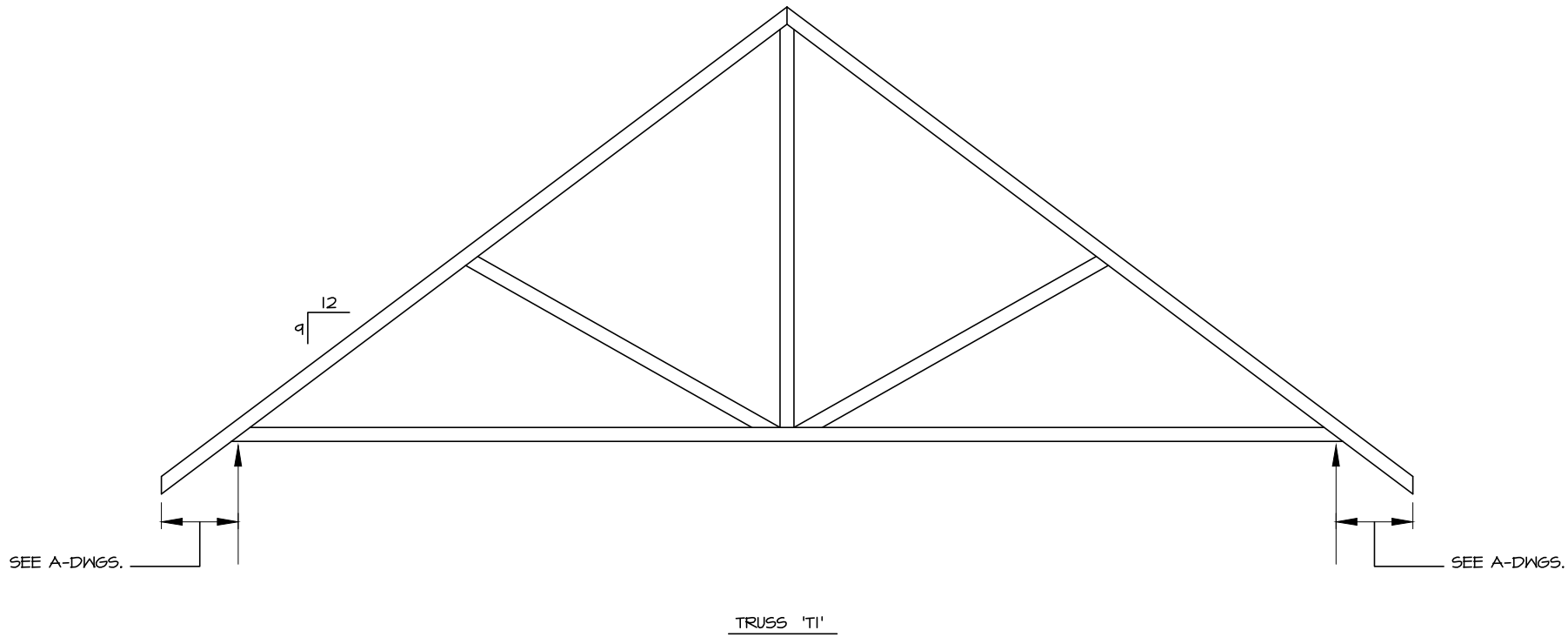
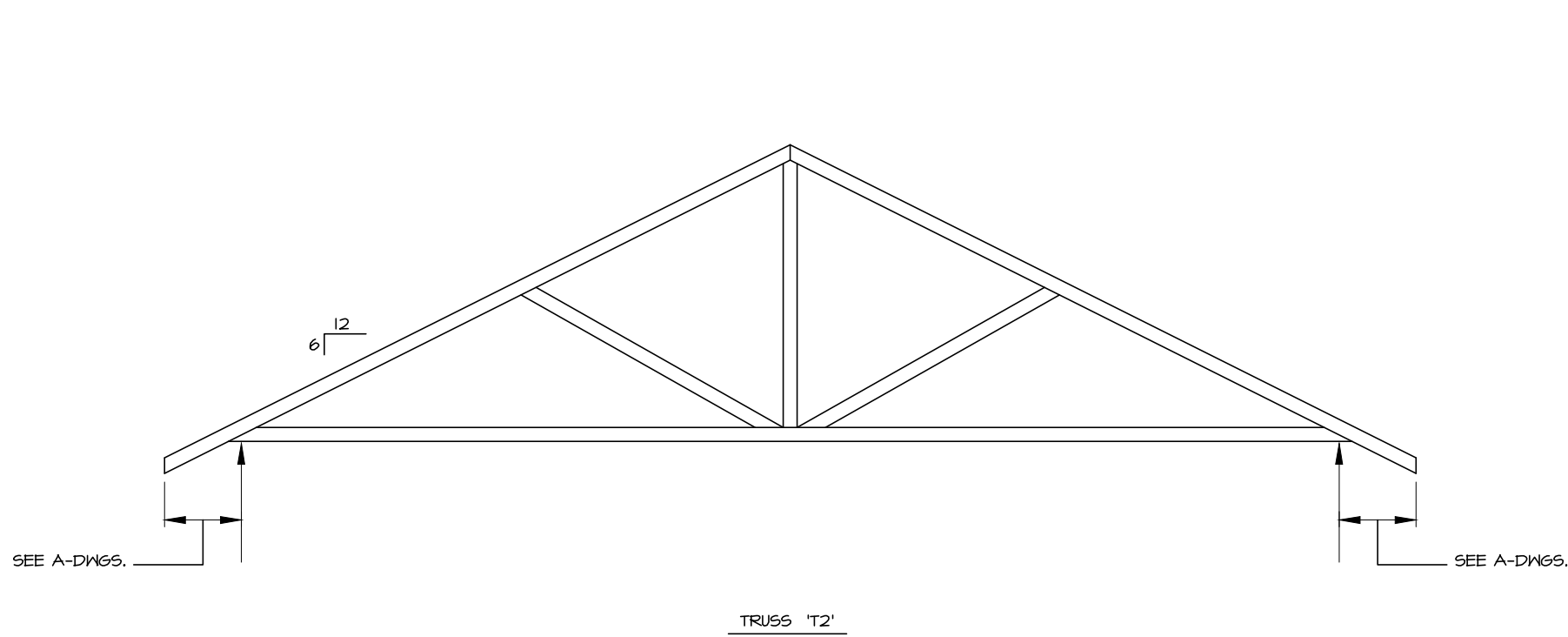
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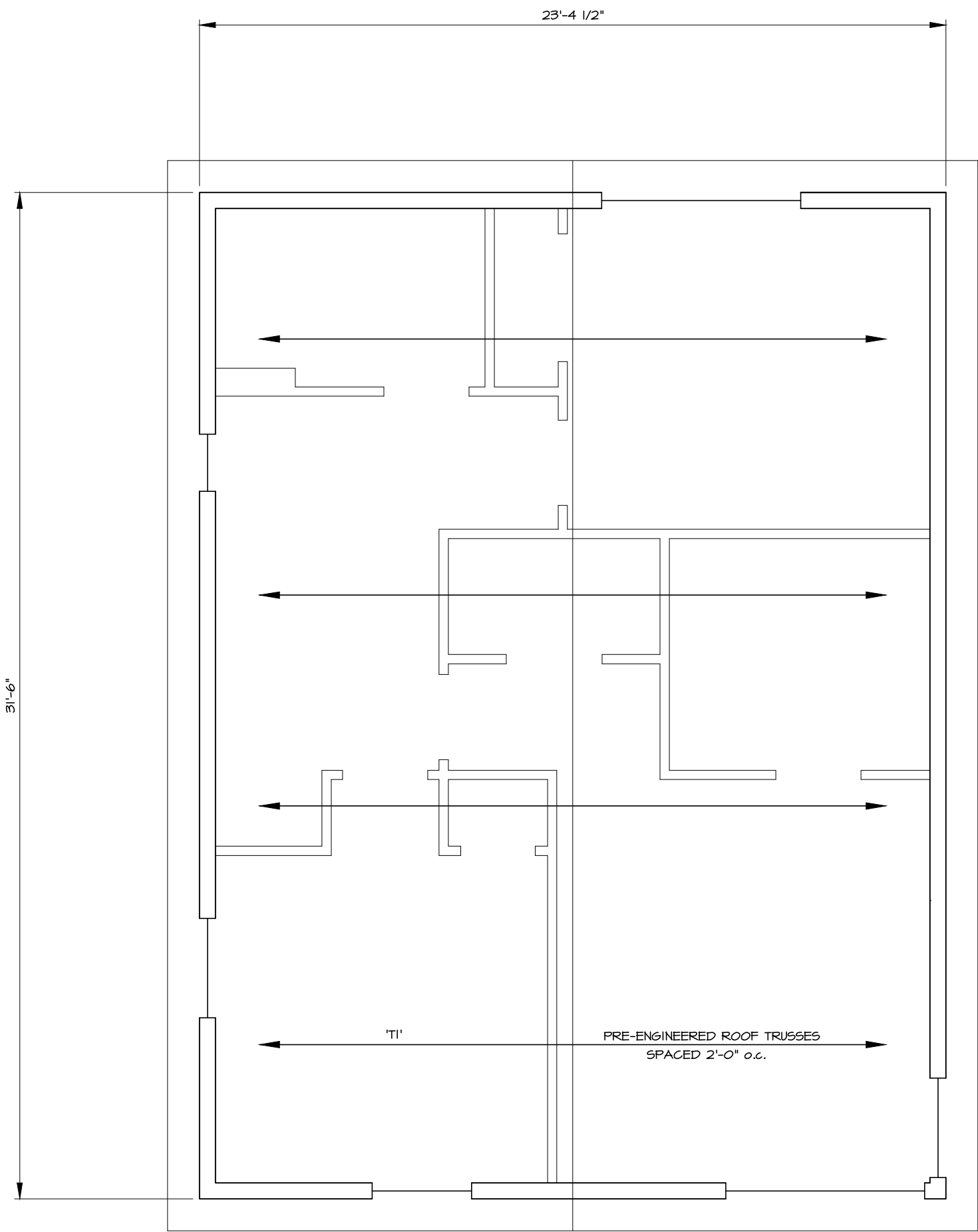
18053

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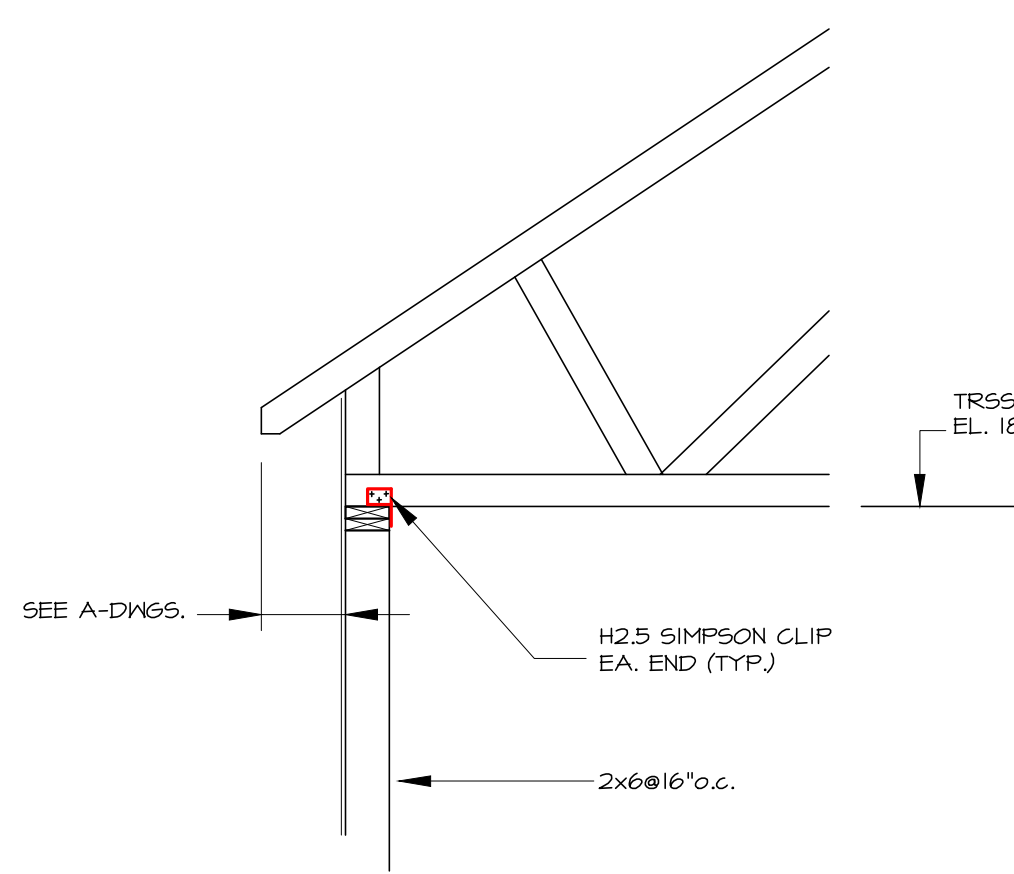
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OPTION 2
ROOF FRAMING PLAN
1/4" = 1'-0"
REFERENCE ELEVATION = FIRST FLOOR ELEVATION = (0'-0")
TRUSS BEARING ELEVATION = +10'-0")
PRE-ENGINEERED WOOD TRUSSES SPACED 24" o.c.
(TRUSSES AND HANGERS BY OTHERS)
BEARING WALLS TO BE 2"x6" @16" o.c..
ROOF WOOD SHEATHING: 5/8" T&G
BEARING WALLS TO BE 2"x6" @16" o.c..

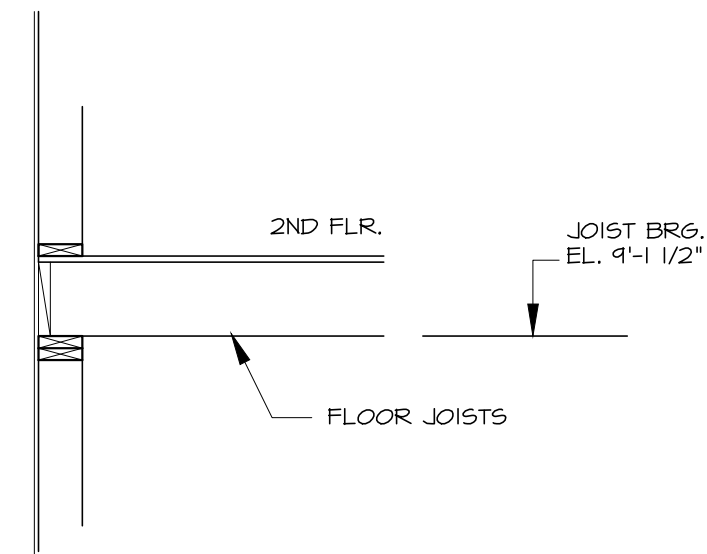


OPTION 1
ROOF FRAMING PLAN
1/4" = 1'-0"
REFERENCE ELEVATION = FIRST FLOOR ELEVATION = (0'-0")
TRUSS BEARING ELEVATION = +10'-0")
PRE-ENGINEERED WOOD TRUSSES SPACED 24" o.c.
(TRUSSES AND HANGERS BY OTHERS)
BEARING WALLS TO BE 2"x6" @16" o.c..
ROOF WOOD SHEATHING: 5/8" T&G
BEARING WALLS TO BE 2"x6" @16" o.c..



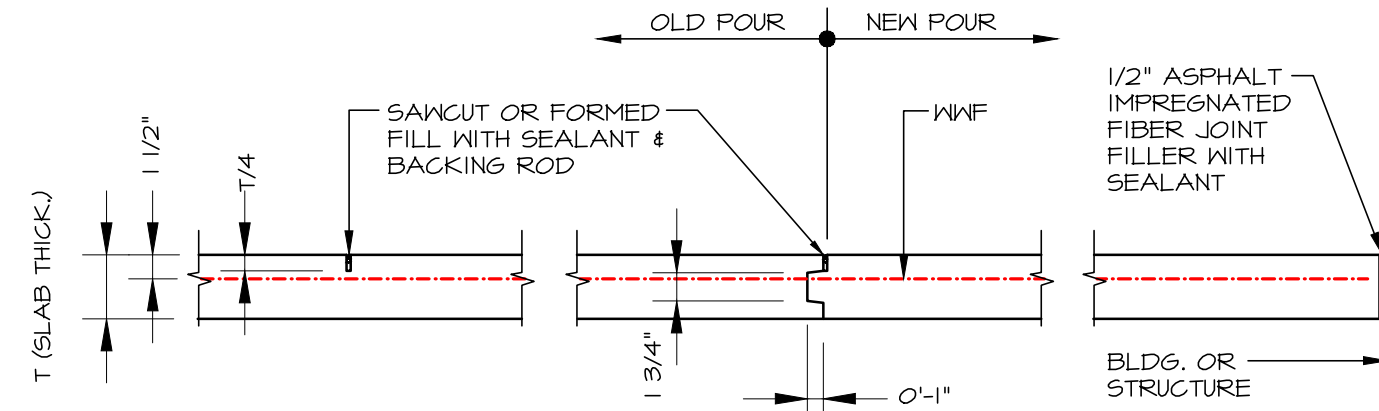
SECTION 7

1/2" = 1'-0"



SECTION

1/2" = 1'-0"



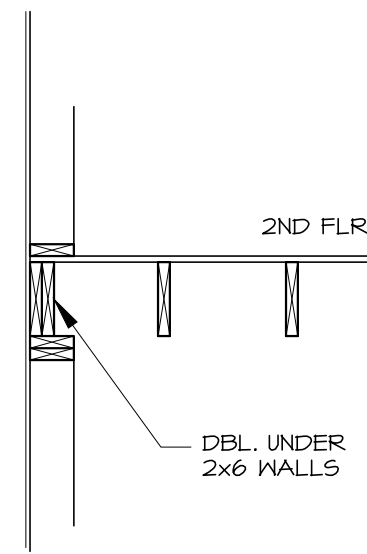
CONTROL

CONSTRUCTION

ISOLATION

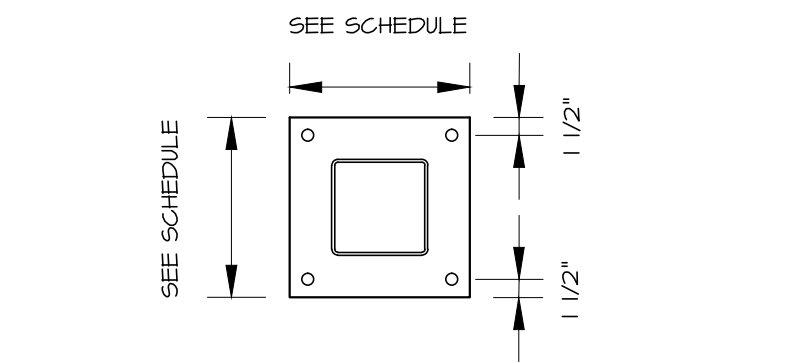
SLAB ON GRADE JOINT DETAILS

1" = 1'-0"

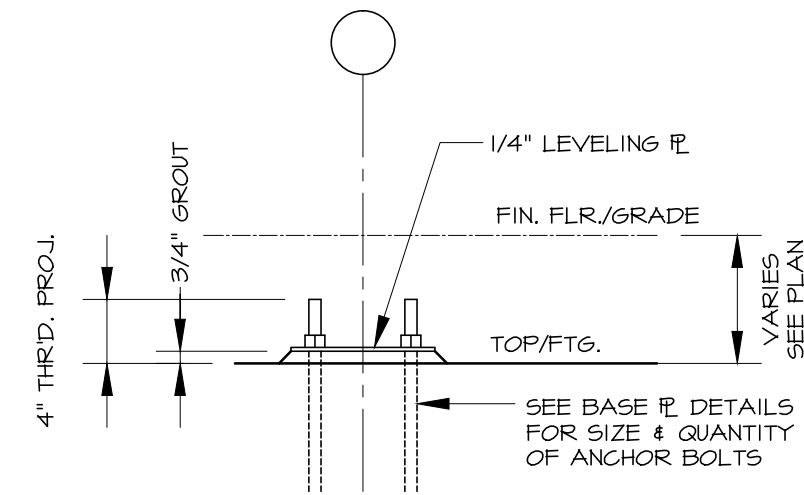


SECTION

1/2" = 1'-0"

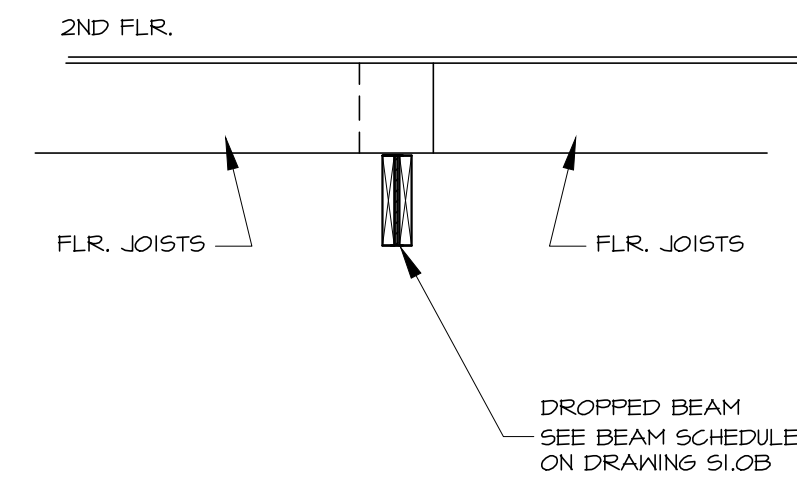


COL. BASE PL PLAN DETAIL



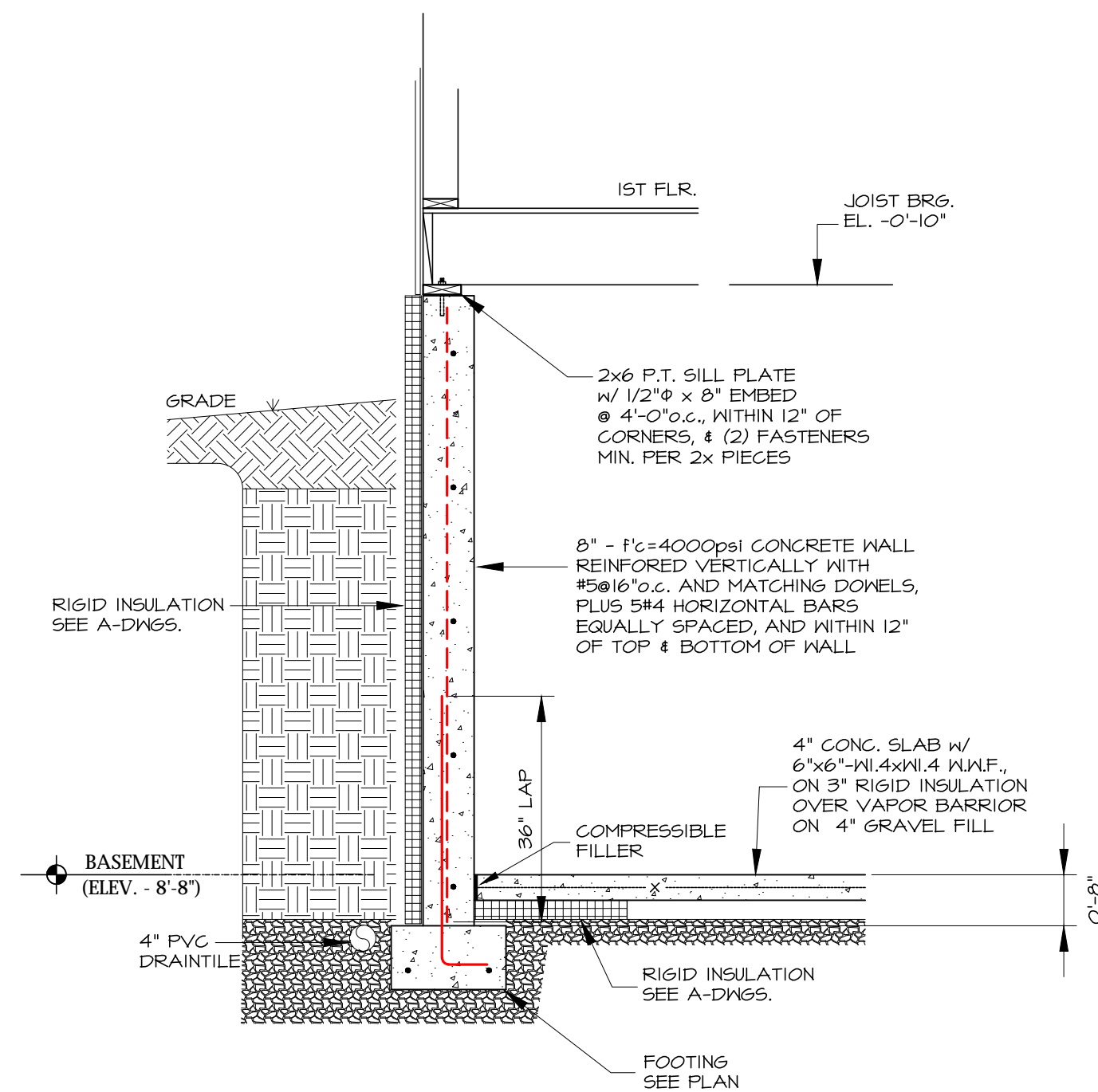
ANCHOR BOLT SETTING

ALL STEEL BELOW FIN. FLR. TO BE ENCASED IN CONCRETE



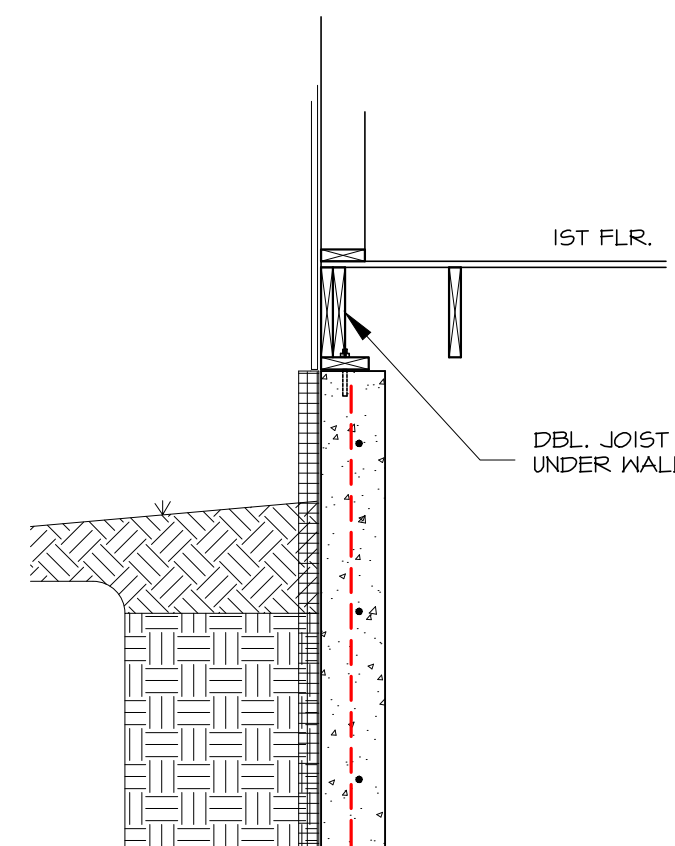
SECTION

1/2" = 1'-0"



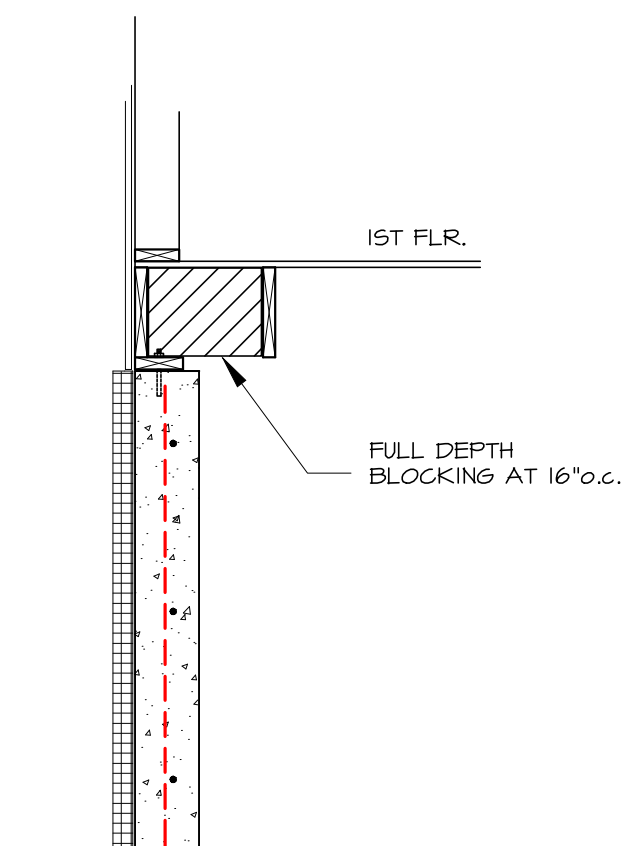
SECTION

1/2" = 1'-0"



SECTION

1/2" = 1'-0"

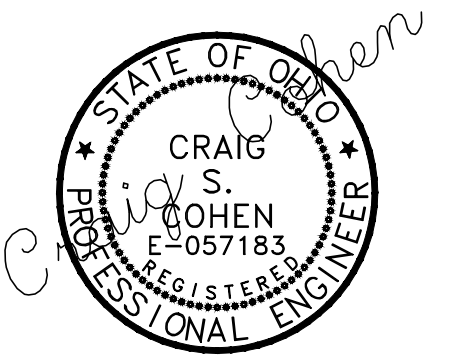


OPTION

JOISTS PARALLEL

SECTION

1/2" = 1'-0"



EXPIRATION: 12.31.2019

CLEVELAND SINGLE FAMILY HOMES

THE ORLEANS COMPANY

SCATTERED SITES - GLENVILLE

CLEVELAND, OHIO

SECTIONS & TYPICAL DETAILS

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Project Number:

18053

Sheet Number:

S3.0

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GENERAL:

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. IN CASE OF CONFLICT, MORE COSTLY REQUIREMENTS GOVERN FOR BIDDING. SUBMIT CLARIFICATION REQUEST PRIOR TO PROCEEDING WITH WORK.
- ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK, UNLESS NOTED OTHERWISE. DETAILS IN STRUCTURAL DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES, OR TILES.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES:
OBC AND LATEST REVISIONS REFERRED TO HERE AS "THE CODE," AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK.
- SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGE IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN.
FLOOR AND ROOF FINISHES.
DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
- SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, OR PLUMBING FIXTURES.
SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC.. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

- ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST REVISION.
- CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC.. IF ANY SUCH STRUCTURES ARE FOUND, ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMES SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- UNLESS NOTED OTHERWISE, EXPANSION BOLTS IN CONCRETE SHALL BE 1/2" DIAMETER X 3 1/2" EMBEDMENT HILTI Kwik BOLTS II (ICBO 4627) OR APPROVED ALTERNATE WITH ALLOWABLE VALUES EQUAL TO OR EXCEEDING THOSE FOR HILTI, PER CURRENT ICBO RESEARCH REPORT. UNLESS NOTED OTHERWISE, ALL EPOXY ANCHORS SHALL BE 1/2" DIAMETER WITH 4 1/4" EMBEDMENT HILTI HIT SYSTEM (ICBO 4016) OR APPROVED ALTERNATE WITH ALLOWABLE VALUES EQUAL TO OR EXCEEDING THOSE FOR HILTI, PER CURRENT ICBO RESEARCH REPORT. INSTALL EXPANSION AND EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
- GROUT OTHER THAN FOR MASONRY CELLS SHALL BE NON-SHRINK, NON-METALLIC, MEETING ASTM C-827, C-141, AND C-109, MIXED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS. MINIMUM COMPRESSIVE STRENGTH 5000 PSI IN TWO DAYS.

FOUNDATION:

- FOUNDATION DESIGN BASED ON ASSUMED SOIL CONDITIONS.
- FOOTINGS ARE DESIGNED BASED ON THE FOLLOWING INFORMATION:
ALLOWABLE BEARING = 1500 PSF (MINIMUM)
FOOTINGS SHALL BEAR ON COMPACTED FILL OR NATIVE SOILS, OR PER GEOTECH. ENGR'S RECOMMENDATIONS.
- CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER, OR SEEPAGE, IF REQUIRED.
- CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING, AND SHORING REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
- EXCAVATION FOR FOOTINGS SHALL BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. CONTRACTOR TO NOTIFY THE INSPECTOR WHEN INSPECTION OF EXCAVATION IS READY. INSPECTOR TO SUBMIT A LETTER OF COMPLIANCE.
- ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR GROUT HAS ATTAINED FULL DESIGN STRENGTH.
- FOUNDATIONS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER, FOUNDATION ELEVATIONS WILL BE ALTERED BY CHANGE ORDER.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS IN ACCORDANCE WITH THE SOILS REPORT AND APPROVED BY THE INSPECTOR. ALL FILLS USED TO SUPPORT FOUNDATIONS SHALL BE INSPECTED BY THE SOILS ENGINEER REPRESENTATIVE PER CODE SECTION 3301.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC. SHALL BE REMOVED (field determine). NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS.
- SLABS ON GRADE SHALL BE SUPPORTED ON NATURAL GRADE OR COMPACTED FILL AS PER THE RECOMMENDATIONS OF THE SOILS REPORT, OR OTHER.

CONCRETE:

- ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 14 OF THE CODE AND WITH THE PROVISIONS OF ACI 318, LATEST ADDITION.
- REINFORCED CONCRETE IS DESIGNED BY THE "ULTIMATE STRENGTH DESIGN METHOD".
- CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER. MIX DESIGN METHODS (TEST HISTORY OR TRAIL BATCH METHOD) PER CODE SECTION 1905.3 SHALL BE USED TO PROPORTION CONCRETE. SUBMIT MIX DESIGN METHOD DATA.
- SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTH AND TYPES:

LOCATION IN STRUCTURE	STRENGTH	DENSITY	SUMP
ALL CONCRETE FOOTINGS	3000	150 PCF	1-3
SLAB-ON-GRADE	4000	150 PCF	1-3
SLAB-ON-GRADE - EXTERIOR	4000/AE	150 PCF	1-3
- PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE I OR II.
- AGGREGATE FOR CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C-33 AND PROJECT SPECIFICATIONS.
- CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C-94.
- PLACEMENT OF CONCRETE SHALL CONFORM TO CODE SECTION 1905 AND PROJECT SPECIFICATIONS. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED.
- ALL REINFORCING BARS, ANCHOR BOLTS, AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING CONCRETE IS NOT PERMITTED. NOTIFY THE ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS. SEE THESE DRAWINGS FOR ADDITIONAL RESTRICTIONS ON THE PLACEMENT OF OPENINGS IN SLABS AND WALLS.
- PIPES LARGER THAN 1-1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY ENGINEER. PIPES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS. SPACE EMBEDDED PIPES AT A MINIMUM OF 3 DIAMETERS.
- CUT JOINTS FOR SLABS ON GRADE A MAXIMUM OF 20'-0" O.C., UNLESS NOTED OTHERWISE ON THE CONTRACT DOCUMENTS. CUT JOINTS WITHIN 8 (EIGHT) HOURS AFTER PLACING CONCRETE.
- CURE CONCRETE BY WET CURING OR LIQUID SPRAY CONFORMING TO ASTM C-309. CONTRACTOR TO VERIFY CURING AGENT IS COMPATIBLE WITH ANY FLOOR ADHESIVES SPECIFIED WITHIN THE CONTRACT DOCUMENTS.

REINFORCING STEEL:

- REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 14 OF THE CODE, ASTM A615, GRADE 60 UNO. DEFORMATIONS SHALL BE IN ACCORDANCE WITH ASTM A-305.
- BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 (MATS ONLY). PROVIDE LAPS PER THE CODE SECTION 1912.8, 9" MINIMUM. W/WF SHALL BE SUPPORTED ON APPROVED CHAIRS.
- ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
- BARS IN SLABS SHALL BE SECURELY SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, PRIOR TO PLACING CONCRETE.
- REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "A.C.I. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.
- REBAR SPACINGS GIVEN ARE MAXIMUM ON CENTER WHETHER STATED AS "O.C." OR NOT. ALL REBAR IS CONTINUOUS WHETHER STATED AS "CONT." OR NOT.
- WHERE REINFORCING IS SHOWN CONTINUOUS THROUGH CONSTRUCTION JOINTS, MECHANICAL BAR SPLICE DEVICES MAY BE USED. SIZES AND TYPES SHALL BE SELECTED TO DEVELOP THE FULL TENSION STRENGTH OF THE BAR PER ICBO RESEARCH REPORT. SUBMIT FOR APPROVAL BY STRUCTURAL ENGINEER.
- MILL TEST REPORTS FOR GRADE 60 BARS SHALL BE SUBMITTED PRIOR TO PLACEMENT OF CONCRETE.
- CONTINUOUS INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT, SLEEVES, AND EMBEDDED ITEMS MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OF REINFORCING STEEL.
- CONCRETE PROTECTION FOR REINFORCEMENT
 - CAST-IN-PLACE CONCRETE (NON-PRESTRESSED). THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT UNLESS NOTED OTHERWISE:
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - CONCRETE EXPOSED TO EARTH OR WEATHER:
 - NO. 6 THROUGH NO. 18 BAR: 2"
 - NO. 5 BAR, #31 OR #31 WIRE AND SMALLER 1-1/2"
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS, NO. 11 BAR AND SMALLER 3/4"

WOOD CONSTRUCTION:

- DETAIL, FABRICATE, AND ERECT ALL STRUCTURAL LUMBER IN ACCORDANCE WITH NATIONAL DESIGN SPECIFICATION BY NATIONAL FOREST PRODUCTS ASSOCIATION AND TIMBER CONSTRUCTION MANUAL BY AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, LATEST EDITION.
- MATERIALS:
S4S LUMBER (ASLS PS 20)
SPECIES: DOUGLAS FIR, HEM FIR OR SO. PINE
GRADE: NO. 2 OR BETTER, 14% MC, KILN DRIED
Fb = 1200 PSI
Fv = 40 PSI
E = 1,600,000 PSI
LAMINATED VENEER LUMBER:
Fb = 2800 PSI
Fv = 280 PSI
E = 2,000,000 PSI
PROVIDE PRESSURE TREATMENT FOR LUMBER - EXPOSED TO WEATHER OR EXTERIOR USE
- CONNECTIONS SHALL BE MADE WITH STANDARD DESIGNS, FABRICATED FROM GALVANIZED SHEET METAL OR PAINTED STEEL PLATE, AS MANUFACTURED BY SIMPSON UTILIZE CONNECTORS THAT DO NOT REACT OR DETERIORATE WHEN IN CONTACT WITH TREATED LUMBER FOR EXTERIOR USE. GC TO COORDINATE. DETAILS SHALL CONFORM TO AISC STANDARD NO. 104.
- BOLTS, NAILS, SPIKES, AND OTHER CONNECTORS SHALL BE APPROPRIATE FOR THE USE INTENDED. FASTENERS EXPOSED TO THE WEATHER AND/OR HIGH HUMIDITY SHALL BE HOT DIPPED GALVANIZED.
- PROVIDE WOOD HEADERS AS PER THE FOLLOWING SCHEDULE IN ALL STUD WALL OPENINGS WHEN NOT SHOWN ON DRAWINGS, OR IN OPENINGS REQUIRED BY THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.
FOR OPENINGS FROM 4'-0" TO 6'-0": 2 - 2x6's
FOR OPENINGS FROM 6'-1" TO 8'-0": 2 - 2x10's
FOR OPENINGS FROM 8'-1" TO 10'-0": 2 - 2x12's
- ALL HEADERS SHALL BEAR ON 2 STUDS AT EACH END.
- ADD ONE 2x MEMBER FOR EACH ADDITIONAL 2' NOMINAL WALL WIDTH.
- PROVIDE STUDS EQUAL TO NUMBER OF BEAM LAMINATIONS PLUS 2 UNDER ALL BEAM BEARING LOCATIONS. STUDS ARE TO EXTEND DOWN TO FOUNDATION OR OTHER SUPPORT POINTS AS NEEDED.
- WOOD USED FOR CONSTRUCTION OF EXTERIOR DECKS, STAIRS, OR IN CONTACT WITH MASONRY SHALL BE WATER REPELLANT, OR PRESURE TREATED WOOD.
- LUMBER # PLYWOOD TO BE FIRE RETARDANT SHALL BE PRESSURE-IPREGNATED IN ACCORDANCE W/ THE KOPPEKOS CO., INC, AND SHALL BEAR THE TRADEMARK DRICON
- PLYWOOD APA PERFORMANCE / PSI US PRODUCT STANDARDS FOR CONSTRUCTION
- WALL SHEATHING: 7/16" APA RATED OSB, RATED FOR EXTERIOR USE 24" MAX. SPAN
ROOF SHEATHING: 5/8" APA RATED T&G, 24" MAX. SPAN
SUB-FLOOR SHALL BE 3/4" APA RATED T&G OSB, 16" MAX. SPAN
- DESIGN, FABRICATE AND ERECT PRE-ENGINEERED WOOD TRUSSES IN ACCORDANCE WITH TRUSS PLATE INSTITUTE "DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES". SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. DRAWINGS ARE TO INCLUDE: DESIGN LOADS, REACTIONS, MEMBER SIZES, STRESSES, PLATE SIZES, DIMENSIONS, AND ERECTION DRAWINGS AS REQUIRED. TRUSSES OVER 30FT. LONG SHALL HAVE 2"x6" MIN. TOP 7 BOTTOM CHORDS. TRUSS BOTTOM CHORDS TO BE DESIGNED TO SUPPORT 15psf.

STRUCTURAL STEEL:

- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED BY AN APPROVED AND LICENSED FABRICATOR IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS LATEST EDITION (EXCLUDING SECTION A7).
- ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (UNO.):
ALL WF SHAPES UNO. A-36
BASE PLATES, CONNECTION PLATES, ANGLES, CHANNELS, WT SHAPES, AND MISC.
TUBE SECTIONS A-500, GRADE B
H.S. BOLTS A-325 S.S.
NON-STRUCTURAL BOLTS A307
- THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS TO THE ENGINEERS OF ALL STEEL FOR ARCHITECT'S AND STRUCTURAL ENGINEER'S REVIEW AND APPROVAL BEFORE FABRICATION.
- HOLES IN STEEL SHALL BE 1/16" LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED.
- ALL EXPOSED TO EXTERIOR SURFACES OF STRUCTURAL STEEL AND MISCELLANEOUS METAL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION PER ASTM A-123, WITH A MINIMUM OF 2.5OZ. OF ZINC PER SQUARE FOOT AND A MINIMUM THICKNESS OF 3.4 MILS. OR FACTORY COATED PAINT SYSTEM
PRIMER: TNEMEC SERIES 40-41 TNEMEC-ZINC A, 2.5-3.5mils DFT
INTERMEDIATE: TNEMEC SERIES 161-B162 TNEMEC FASCURE 3.5mils DFT
FINISH: ONE COAT TNEMEC SERIES 74 ENDURASHIELD @ 2-4mils DFT
COLOR TO BE SELECTED BY ARCHITECT
- BEAMS BEARING ON MASONRY OR STUD CONSTRUCTION SHALL BE PROVIDED WITH ADEQUATE SOLID BRG. W/ MIN. 3 SOLID COURSES OF CONCRETE BLOCK, OR TRIPLE STUD FRAMING. PROVIDE BRG. 12.5/8"x8"x16" MIN. UNDER STEEL BEAMS.
- REINFORCED FLITCH BEAMS (PLATES) SHALL BE CONSTRUCTED WITH 1/2"x THRU BOLTS @ 24" O.C. ALTERNATING TOP & BOTTOM WITH (2) BOLTS EA. BEAM END OVER SUPPORT, MIN 2" EDGE DIST.
- BEAMS BEARING ON CONCRETE OR STUD CONSTRUCTION SHALL BE PROVIDED WITH ADEQUATE SOLID BRG. W/ MIN. 6" BRG. INTO WALL OR POCKET OR TRIPLE STUD FRAMING. PROVIDE SOLID BRG. UNDER STEEL BEAMS WITH SOLID STEEL SHIMS AND/OR NON-SHRINK GROUT, FILL GAPS/VOIDS SOLID UNDER FULL WIDTH OF BEAMS

STEEL LINTEL SCHEDULE:

- PROVIDE STEEL LINTELS AS PER THE FOLLOWING SCHEDULE IN ALL MASONRY WALL OPENINGS WHEN NOT SHOWN ON DRAWINGS, OR IN OPENINGS REQUIRED BY THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.
FOR OPENINGS UP TO 4'-0" : L3 1/2x3 1/2x1/4
FOR OPENINGS FROM 4'-1" TO 6'-0" : L5x3 1/2x 5/16
FOR OPENINGS FROM 6'-1" TO 7'-0" : L6x3 1/2x5/16
FOR OPENINGS FROM 7'-1" TO 10'-0" : W8x18 with 5/16" plate
FOR OPENINGS GREATER THAN 10'-0" AND NOT SHOWN ON PLANS ALLOW FOR A MINIMUM BEAM WEIGHT OF 36 PLF PLUS A 5/16" x 11" BOT PLATE
- ALL LINTELS SHALL HAVE 1" OF BEARING FOR EACH FOOT OF SPAN WITH A MINIMUM OF 6" BEARING AT EACH END.
- ALL LINTELS SHALL BEAR ON 8" OF SOLID MASONRY, UNO..
- USE ONE ANGLE FOR EACH 4' RYTHE OF MASONRY. PLATES ARE TO BE 1" LESS THAN NOMINAL WALL THICKNESS.
- MINIMUM THICKNESS OF LINTELS IN EXTERIOR WALLS TO BE 5/16".

SHOP DRAWINGS:

- THE STRUCTURAL SHOP DRAWING REVIEW IS INTENDED TO HELP THE ENGINEER VERIFY HIS DESIGN CONCEPT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK HIS OWN SHOP DRAWINGS.
- THE STRUCTURAL SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF A CURSORY REVIEW SHOWS MAJOR ERRORS WHICH SHOULD HAVE BEEN FOUND BY THE CONTRACTOR'S CHECKING.
- THE FOLLOWING SHOP DRAWINGS AND CALCULATIONS, WHEN APPLICABLE, ARE REQUIRED FOR SUBMITTAL FOR STRUCTURAL REVIEW:
 - STRUCTURAL STEEL
 - CONCRETE MIX DESIGNS
 - PRE-ENG'D WOOD
 - METAL STUD FRAMING
- ANY SUBMITTAL OF A DETAIL SHEET WITH ADDED INFORMATION SHALL BE ACCOMPANIED BY LOCATION PLAN IDENTIFYING THE MEMBERS INVOLVED AND CLOUDING AROUND ADDED INFORMATION
- ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BE BY A REGISTERED STRUCTURAL ENGINEER, AND SUBMITTAL SHALL BE SEALED BY THE ENGINEER. SAID ENGINEER MUST BE REGISTERED WITH THE STATE THE PROJECT IS LOCATED WITHIN.
- THE CONTRACT DOCUMENTS MAY NOT BE USED BY THE DETAILER AS USE IN ERECTION OR DETAIL DRAWINGS WITH OUT PRIOR WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.

SPECIAL INSPECTION:

THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER OBC SECTION 1704.

NO.	DESCRIPTION OF TYPE OF INSPECTION REQUIRED	DESIGN STRENGTH
1	ALL CAST-IN-PLACE CONCRETE SHOWN ON STRUCTURAL DRAWINGS.	FOOTINGS 3000 psi SLAB ON GRADE 4000 psi
2	ALL BOLTS INSTALLED IN CONCRETE, INCLUDING EXPANSION & EPOXY ANCHORS, UNLESS SPECIFICALLY NOTED OTHERWISE IN DETAILS.	
4	PLACEMENT OF REINFORCING STEEL IN CONCRETE IDENTIFIED ABOVE.	Fy =60ksi
5	STEEL CONNECTIONS	
6	STRUCTURAL WOOD ERECTION & CONNECTIONS	
13A	SOIL ENGINEER TO VERIFY SOIL CONDITIONS ARE SUBSTANTIALLY IN CONFORMANCE WITH THE SOIL INVESTIGATION REPORT	
	TESTING AGENCY TO CONFIRM SOIL COMPACTION	
	TESTING AGENCY TO CONFIRM SOIL BEARING STRENGTH	
	TESTING AGENCY TO CONFIRM EARTHWORK CONTROLLED	

- THE CONSTRUCTION INSPECTIONS LISTED ARE IN ADDITION TO THE CALLED INSPECTIONS REQUIRED BY OBC, AS AMENDED. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A CITY INSPECTOR. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE CITY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.
- CONTINUOUS INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS OTHERWISE SPECIFIED.
- THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE CITY TO PERFORM THE TYPE OF INSPECTION SPECIFIED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.

DESIGN LIVE LOADS

GROUND SNOW LOAD: 25 PSF
ROOF SNOW: 30 PSF
SLEEPING ROOMS: 30 PSF
ROOMS OTHER: 40 PSF

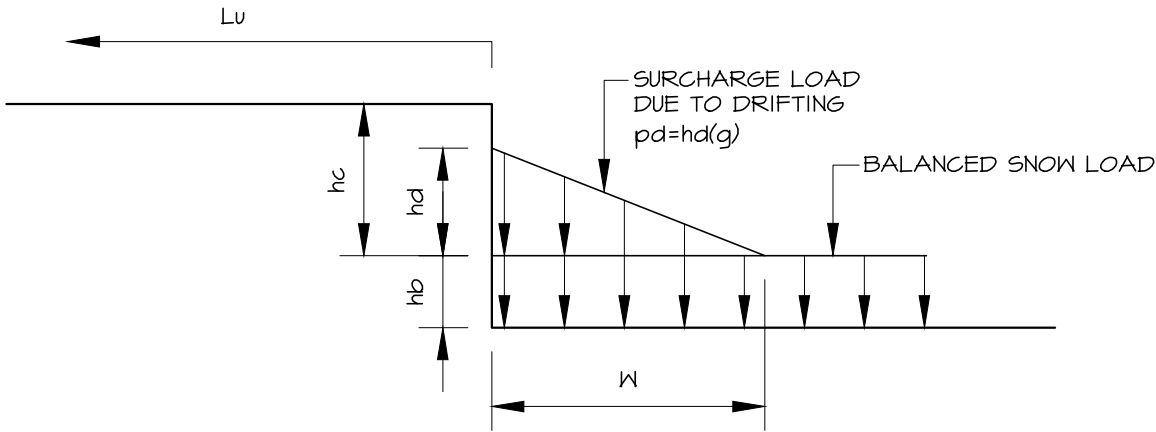
SDL - TOP CHORD TRUSSES: 3 PSF (min.) SOLAR PANEL LOADING
G.C. COORD. WITH PANEL MANUF.

GUARDRAILS/HAND: 200 LB., or 50 LB./FT.
WIND LOAD: 40 MPH, EXP. B

COMPONENTS / CLADDINGS 12.4psf, -15.1psf walls

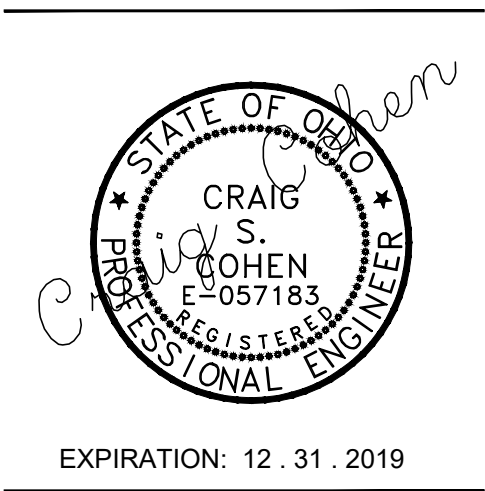
SEISMIC LOAD:
Se 0.17
SI 0.06
C C
SITE CLASS A
SEISMIC DESIGN CATEGORY A

CODES:
OBC LATEST EDITION
ASCE 7-05
RCO 2013 - LATEST EDITION



SNOW DRIFTS ON LOWER ROOFS

hc/hb <0.2 no drift reqd.
Pg = ground snow 25psf
Pd = drift snow
g = snow density = 0.13Pg(1+4 s 30pcf
If hd < hc, then W = 4hd
If hd > hc, then W = 4h^3/hc and then hd=hc(W/hc
hd = 0.43 Pd W / Pg(1+4 s 30pcf - 15



EXPIRATION: 12.31.2019

CLEVELAND SINGLE
FAMILY HOMES
THE ORLEANS COMPANY
SCATTERED SITES - GLENVILLE
CLEVELAND, OHIO

Issue:

06.14.2019 FOR PERMIT

GENERAL NOTES

City Architecture

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www.cityarch.com

Project Number:

18053

Sheet Number:

S4.0

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PLUMBING SPECIFICATIONS

A. GENERAL CONDITIONS OTHER CONTRACT DOCUMENTS

1. THE GENERAL CONDITIONS AND OTHER CONTRACT DOCUMENTS AS SET FORTH HEREBY ARE TO BE INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR THE WORK UNDER THIS DIVISION.

B. CODES AND PERMITS

1. COMPLY WITH RULES, REGULATIONS OF STATE, COUNTY, AND CITY AUTHORITIES HAVING JURISDICTION OVER THE PREMISES, INCLUDING SAFETY REQUIREMENTS OF OSHA. DO NOT CONSTRUE THIS AS RELIEVING CONTRACTOR FROM COMPLYING WITH SPECIFICATIONS WHICH EXCEED CODE REQUIREMENTS AND NOT IN CONFLICT THEREWITH.
2. SECURE AND PAY FOR ALL PERMITS AND CERTIFICATES OF INSPECTION REQUIRED. MAKE PAYMENTS TO ALL PUBLIC UTILITIES FOR WORK PERFORMED BY THEM IN PROVIDING SERVICE CONNECTIONS.

C. LOCAL CONDITIONS

1. VISIT SITE, BECOME FAMILIAR WITH CONDITIONS AFFECTING THIS WORK. NO ADDITIONAL PAYMENT WILL BE MADE ON CLAIMS THAT ARISE FROM LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
2. THIS CONTRACTOR SHALL BE HELD TO HAVE EXAMINED THE PREMISES AND SITE SO AS TO COMPARE THEM WITH THE DRAWINGS AND SPECIFICATIONS. NO ALLOWANCE SHALL BE MADE TO THE CONTRACTOR BY REASON OF HIS FAILURE TO HAVE MADE SUCH EXAMINATION OR OF ANY ERROR ON HIS PART.

D. DRAWINGS

1. DRAWINGS AND SPECIFICATIONS ARE TO BE CONSIDERED AS SUPPLEMENTING EACH OTHER. WORK SPECIFIED SHALL BE PERFORMED OR FURNISHED AS THOUGH MENTIONED IN BOTH SPECIFICATIONS AND DRAWINGS.
2. THE DRAWINGS ARE SCHEMATIC ONLY AND ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS. DO NOT SCALE.

E. SHOP DRAWINGS

1. THIS CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON THE ITEMS OF EQUIPMENT AND SYSTEMS AS NECESSARY TO CLEARLY SHOW EQUIPMENT AND CONSTRUCTION.

F. SUPERVISION

1. THIS CONTRACTOR SHALL HAVE IN CHARGE OF THE WORK, A COMPETENT SUPERINTENDENT WITH EXPERIENCE IN THE WORK TO BE INSTALLED UNDER THIS CONTRACT.

G. COORDINATION

1. THIS CONTRACTOR SHALL COORDINATE HIS WORK AND COOPERATE WITH THE OTHER CONTRACTORS. HE SHALL ARRANGE HIS WORK WITH THEIRS SO THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION.
2. EXAMINE WORK OF OTHER TRADES WHICH COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. DO NOT ATTACH TO, COVER, OR FINISH AGAINST ANY DEFECTIVE WORK, OR INSTALL WORK OF THIS DIVISION IN A MANNER WHICH WILL PREVENT OTHER TRADES FROM PROPERLY INSTALLING THEIR WORK. CONSULT ALL DRAWINGS, SPECIFICATIONS AND DETAILS OF OTHER DIVISIONS OF THE WORK.

H. CUTTING AND PATCHING

1. ALL CUTTING AND PATCHING WORK RELATED TO THIS CONTRACT WILL BE THE RESPONSIBILITY OF THIS CONTRACTOR.

I. GUARANTEE AND WARRANTIES

1. WARRANT THAT EQUIPMENT AND ALL WORK IS INSTALLED IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE AND THAT ALL EQUIPMENT WILL MEET REQUIREMENTS SPECIFIED. ANY EQUIPMENT FAILING TO PERFORM OR FUNCTION AS SPECIFIED SHALL BE REPLACED WITH COMPLYING EQUIPMENT, WITHOUT COST TO THE OWNER.
2. GUARANTEE AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS; MAKE GOOD REPAIR OR REPLACE ANY DEFECTIVE WORK, MATERIAL OR EQUIPMENT WITHIN ONE YEAR FROM DATE OF ACCEPTANCE.

J. INSTALLATION REQUIREMENTS

1. LOCATION OF PIPING, EQUIPMENT, ETC., ON THE DRAWINGS IS DIAGRAMMATIC; INDICATED POSITIONS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE; EXACT LOCATIONS SHALL BE SUBJECT TO BUILDING CONSTRUCTION AND INTERFERENCES WITH OTHER WORK. ARCHITECT RESERVES RIGHT TO MAKE MINOR CHANGES IN LOCATION OF ANY PART OF THE WORK UP TO THE TIME OF ROUGHING-IN WITHOUT ADDITIONAL COST.

K. TEST AND ADJUSTMENTS

1. OBTAIN ALL INSPECTIONS REQUIRED BY LAW, ORDINANCES, RULES, REGULATIONS OF AUTHORITIES HAVING JURISDICTION, FURNISH CERTIFICATES OF SUCH INSPECTIONS. PAY ALL FEES AND PROVIDE ALL EQUIPMENT, POWER AND LABOR NECESSARY FOR INSPECTIONS AND TEST.
2. PRESSURE TESTS
- a. ALL PIPING SHALL BE GIVEN THE FOLLOWING PRESSURE TEST WITHOUT APPRECIABLE PRESSURE DROP. EQUIPMENT WHICH WOULD BE DAMAGED BY THE REQUIRED TEST PRESSURE SHALL BE ISOLATED FROM THE SYSTEM DURING TESTING.
- | SERVICE | MEDIUM | (PSI) | HRS. |
|----------------|--------|-------|------|
| DOMESTIC WATER | WATER | 125 | 6 |
| GAS PIPING | AIR | 50 | 24 |
- b. SANITARY SEWERS PER STATE PLUMBING CODE AND LOCAL AUTHORITY.

L. MATERIALS

1. PIPE & FITTINGS
- DOMESTIC WATER – TYPE “L” HARD COPPER, COVC, OR PEX
WASTE & DRAIN PIPING (ABOVE GROUND INTERIOR) – NO-HUB CAST IRON OR PVC.
BUILDING SEWERS & DRAINS (UNDERGROUND) – PVC.

M. VALVES

1. VALVES IN WATER PIPING: BALL VALVES WITH SCREWED ENDS, MIN. 150 LBS., SWP. VALVES USED FOR SHUT-OFF AND BALANCING SHALL BE EQUIPPED WITH MEMORY STOP.

N. INSULATION

1. ALL INSULATION SHALL BE INSTALLED OVER CLEAN DRY SURFACES. INSULATION MUST BE DRY AND IN GOOD CONDITION. WET OR DAMAGED INSULATION WILL NOT BE ACCEPTABLE. NO INSULATION SHALL BE APPLIED PRIOR TO PRESSURE TEST COMPLETION OF THE RESPECTIVE PIPING SYSTEMS.

2. FIBERGLASS PIPE INSULATION SHALL BE INSTALLED WITH JOINTS BUTTED FIRMLY TOGETHER. JACKET LAPS TO BE SEALED WITH FACTORY APPLIED ADHESIVE. BUTT JOINTS TO BE SEALED WITH BUTT STRIPES, HAVING FACTORY APPLIED ADHESIVE. VALVES AND FITTINGS SHALL BE INSULATED USING MITERED SECTIONS OF INSULATION, INSULATION CEMENT, OR PREMOLDED FITTING INSULATION. THE INSULATION APPLIED TO THE VALVES AND FITTINGS SHALL BE COVERED WITH THE SAME TYPE OF COVERING AS USED ON THE PIPE INSULATION.
3. PROVIDE THE FOLLOWING INSULATION PRODUCTS AS MANUFACTURED BY OWENS-CORNING. INSULATION PRODUCTS AS MANUFACTURED BY ARMSTRONG, CERTAWEED OR KNAUF ARE ACCEPTABLE. ADHESIVE SHALL BE BENJAMIN FOSTER OR EQUAL.
4. MATERIAL

DOMESTIC HOT WATER – 1/2" THICK ASJ/SSL FIBERGLASS
DOMESTIC COLD WATER – 1/2" THICK ASJ/SSL FIBERGLASS

O. WASTE SYSTEMS

1. RUN ALL DRAINAGE PIPING AS DIRECT AS POSSIBLE. ACTUAL LOCATION OF DRAINS AND WASTE PIPING SHALL MEET THE VARIOUS BUILDING CONDITIONS. DO ANY WORK NECESSARY TO CONCEAL PIPING OR CLEAR PIPING OF OTHER TRADES.

P. WATER SUPPLY SYSTEMS

1. EXTEND WATER SERVICE FROM VALVED WATER CONNECTION PROVIDED IN BASEMENT WITH HOT AND COLD WATER BEING SUPPLIED AND CONNECTED TO ALL FIXTURES AND EQUIPMENT.

Q. GAS PIPING SYSTEMS

1. EXTEND NEW GAS PIPING FROM THE METER AND CONNECT TO ALL GAS-FIRED EQUIPMENT. INSTALL DRIP LEG AND SHUTOFF VALVE AT CONNECTION.

END OF SECTION

GENERAL PLUMBING NOTES

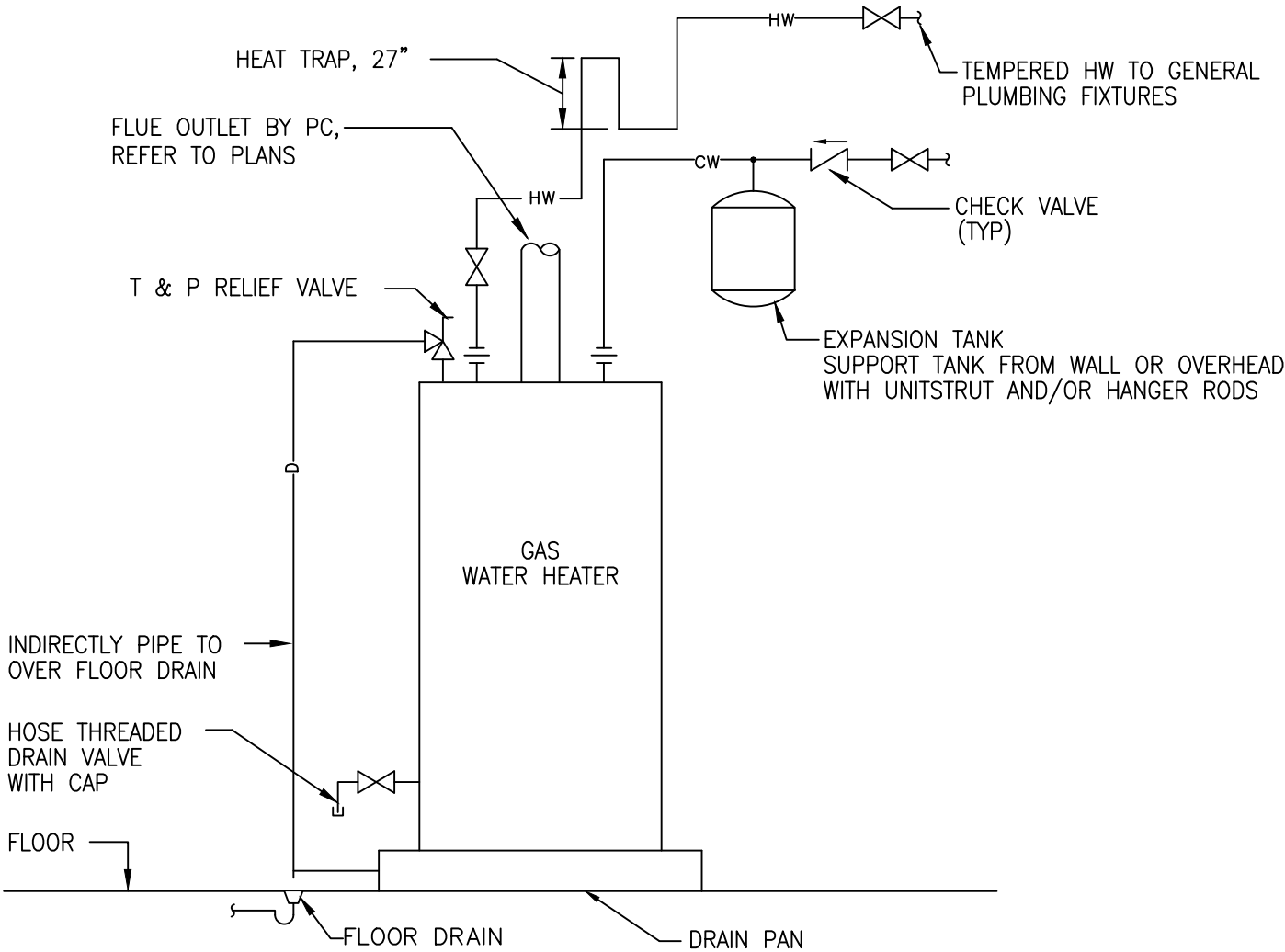
1. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL UTILITIES TO BE USED FOR POINTS OF CONNECTION PRIOR TO SUBMITTING BID AND START OF WORK, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
2. FIXTURE: EXACT LOCATIONS, MOUNTING HEIGHTS AND COLORS OF PLUMBING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL AND KITCHEN EQUIPMENT DRAWINGS.
3. DISABLED ACCESS FIXTURES: SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND MOUNTING HEIGHTS, INSTALLATION SHALL COMPLY WITH A.D.A. REQUIREMENTS.
4. INTERFERENCE: ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID STRUCTURAL FRAMING, MECHANICAL AND ELECTRICAL EQUIPMENT.
5. CLEANOUTS: ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE, WHERE INDICATED AND AS REQUIRED BY CODE. THE CONTRACTOR SHALL COORDINATE ALL CLEAN OUTS LOCATIONS WITH EQUIPMENT, CABINETS, ETC., AND THE ARCHITECT PRIOR TO ANY INSTALLATION.
6. VENT TERMINATION: ALL PLUMBING FIXTURE VENTS TO TERMINATE A MIN. OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10 FEET FROM OR TERMINATED 3'-0" ABOVE ANY OUTSIDE AIR INTAKES.
7. FULL SIZE: ALL VALVES, UNIONS. ETC. TO BE SAME SIZE AS LINE SIZE UNLESS OTHERWISE INDICATED ON DRAWINGS.
8. LATERAL SUPPORT: ALL EQUIPMENT SHALL BE Laterally SUPPORTED IN ALL DIRECTIONS TO RESIST A MIN. OF 50% OF THE EQUIPMENT'S OPERATING WEIGHT.
9. CODE COMPLIANCE: ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THIS PROJECT:

- A. OHIO BUILDING CODE.
B. OHIO MECHANICAL CODE.
C. OHIO PLUMBING CODE.
D. NATIONAL ELECTRICAL CODE.
E. NFPA
F. SMACNA GUIDELINES

10. FIELD VERIFICATION: BEFORE FABRICATION OR INSTALLATION, THIS CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND EQUIPMENT PROVIDED UNDER ANOTHER SECTION OF SPECIFICATIONS. EXACT ROUGH-IN LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED IN FIELD.
11. ISOMETRICS: THE CONTRACTOR SHALL PROVIDE ALL RISER DIAGRAMS OR ISOMETRICS THAT MAYBE REQUIRED BY GOVERNING AUTHORITIES.
12. COORDINATION: THE PLUMBING CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO BID.
13. PIPE SLOPE: ALL WASTE AND VENT PIPING SHALL SLOPE AT 2% UNLESS OTHERWISE INDICATED.
14. ACCESSIBILITY: ALL VALVES, OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN 24" OF, AND BEHIND, AN ACCESS PANEL.
15. SPECIFICATION: THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH, AND BE CONSIDERED TO BE A PART OF THE SPECIFICATIONS.
16. PATCHING: THE CONTRACT SHALL BE RESPONSIBLE FOR PATCHING AND REPAIRING ALL AREAS WHICH ARE EXCAVATED AND/OR DAMAGED BY HIS OPERATIONS.
17. EXISTING PIPING DAMAGED: ALL EXISTING PIPING DAMAGED DURING EXCAVATION SHALL BE REPAIRED WITH MATERIALS TO MATCH EXISTING BY THE CONTRACTOR.
18. SAW CUTTING/CORE DRILLING: ALL CUTTING OF EXISTING PAVING, WALKS AND/OR FLOORS SHALL BE BY MACHINE SAW CUTTING. HOLES FOR PIPING IN CONCRETE WALLS OR FLOORS SHALL BE DONE USING CORE DRILLING EQUIPMENT.
19. INCOMPATIBLE MATERIAL CONNECTION: CONNECTION BETWEEN INCOMPATIBLE MATERIALS ABOVE GRADE AND INSIDE BUILDING SHALL BE MADE WITH 2 DIELECTRIC UNIONS SEPARATED BY A 12" SECTION OF RED BRASS PIPE.
20. SUBMITTALS AND SHOP DRAWINGS: THE PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWING ON ALL WORK AND SUBMITTALS ON ALL FIXTURES, EQUIPMENT AND ACCESSORIES FOR REVIEW PRIOR TO ORDERING, FABRICATION AND INSTALLATION.

PLUMBING LEGEND

—SAN—	SANITARY WASTE
— —SAN— —	SANITARY SEWER (UNDERFLOOR)
— —V— —	VENT PIPING
—CW—	COLD WATER
—HW—	HOT WATER
—G—	GAS
—X—	SHUT-OFF VALVE
—Z—	CHECK VALVE
—X—	BALANCING VALVE
—X—	RELIEF VALVE
— —	UNION
—X—	SHUT-OFF VALVE IN RISER
—X—	THERMOMETER
—X—	FLEXIBLE PUMP CONNECTOR
—J—	CAP ON END OF PIPE
—HB—	HOSE BIBB
—FPHB—	FROSTPROOF HOSE BIBB
—FD—	FLOOR DRAIN
—CO—	CLEANOUT
—CEIL;CLG—	CEILING
—VTR—	VENT THRU ROOF
—WC—	WATER CLOSET
—LAV—	LAVATORY
—UR—	URINAL
—SS—	SERVICE SINK
—BT—	BATHTUB
—INV—	INVERT
—INL—	INLET
—EL—	ELEVATION
—GC—	GENERAL CONTRACTOR
—PC—	PLUMBING CONTRACTOR
—MC—	MECHANICAL CONTRACTOR
—EC—	ELECTRICAL CONTRACTOR
—AFF—	ABOVE FINISHED FLOOR
—X—X—X—X—	REDUCED PRESSURE BACKFLOW PREVENTER



ELECTRIC WATER HEATER PIPING DIAGRAM

SCALE: NONE

CLEVELAND SINGLE FAMILY HOMES
FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	HW	CW	SAN	VENT	GAS	MBH
WC-1	WATER CLOSET	—	1/2"	3"	2"	—	—
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	—	—
BT-1	BATHTUB	1/2"	1/2"	1-1/2"	1-1/2"	—	—
SH-1A	ADA SHOWER	1/2"	1/2"	1-1/2"	1-1/2"	—	—
KS-1	KITCHEN SINK	1/2"	1/2"	1-1/2"	1-1/2"	—	—
DW-1	DISHWASHER	HOSE	—	HOSE	—	—	—
WB-1	LAUNDRY BOX	1/2"	1/2"	1-1/2"	1-1/2"	—	—
ICE	ICE MAKER BOX	—	1/2"	—	—	—	—
WH-1	WATER HEATER	3/4"	3/4"	—	—	3/4	60
FD	FLOOR DRAIN	—	—	3"	2"	—	—

PLUMBING FIXTURES:

WC-1 (WATER CLOSET): TOTO ECO DRAKE MODEL #CST744EL, 1.28 GPF, ELONGATED BOWL, WHITE, 17" HEIGHT. INSTALL COMPLETE WITH MATCHING SEAT WITH LID MODEL #SS114.

LAV-1 (COUNTERTOP LAVATORY): VANITY & COUNTERTOP PROVIDED BY OTHERS, LAVATORY SHALL BE MANSFIELD MAVERICK MODEL #249-4, 19" ROUND, SELF-RIMMING. FAUCET: DELTA MODEL 500DST, CHROME, SINGLE HANDLE DECK MOUNT FAUCET, BRASS POP-UP ASSEMBLY. DRAIN AND SUPPLY LINES TO BE WRAPPED WITH ADA PIPE WRAP.

BT-1 (BATHTUB): STERLING PLUMBING MODELS 7112110 & 71121120, SWIRL GLOSS FINISH, VERIFY LEFT/RIGHT OUTLET IN FIELD. INSTALL WITH CLEVELAND FAUCET MODEL T42311CGR & 45322 TUB/SHOWER TRIM, CHROME FINISH, MOEN T90331 BATH WASTE, 1.75 GPM.

SH-1 (ADA SHOWER): FREEDOM SHOWERS ADA ROLL-IN SHOWER MODEL #APF6232BF5P.75, 63" x 33" x 79". INSTALL WITH CLEVELAND FAUCET MODEL T42315CGR & 45317 SHOWER TRIM, CHROME FINISH, 1.75 GPM. ALSO INSTALL WITH DELTA FAUCET HAND SPRAY, MODEL 51521-WHB, CHROME FINISH, 2.0 GPM.

KS-1 (KITCHEN SINK): ELKAY MODEL LR4DQ3122, SINGLE BOWL SINK, TOP MOUNT, 3-HOLE FAUCET, 4" CENTERS, STAINLESS STEEL, DRAIN. FAUCET: DELTA MODEL #100, SINGLE HANDLE CONTROL FAUCET, 1.5 GPM FLOW.

DW-1 (DISH WASHER): PROVIDED BY G.C. UNITS SHALL BE PROTECTED AGAINST BACKFLOW.

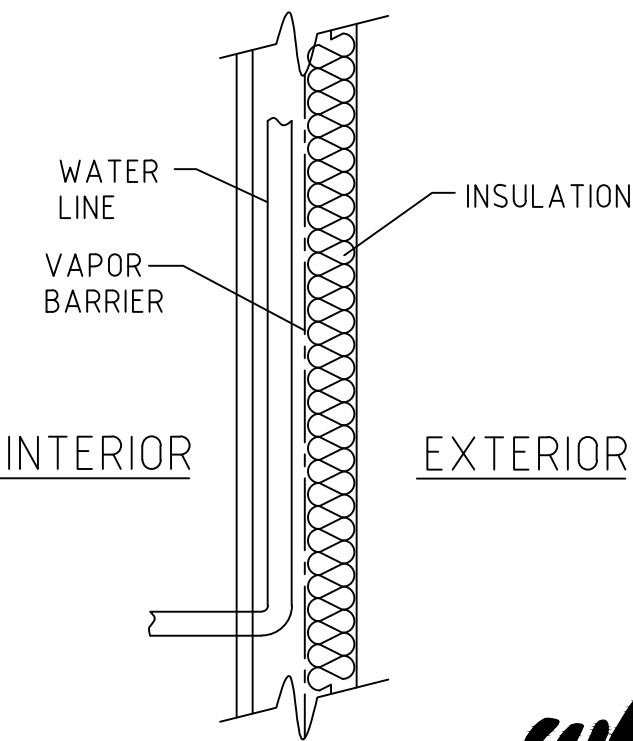
WB-1 (WASHER BOX): INSTALL OATEY MODEL 38970 WASHER BOX, 2" OFFSET DRAIN, 1/4 TURN VALVES WITH WATER HAMMER ARRESTORS. INSTALL WITH DRAIN PAN.

ICE (ICE MAKER BOX): OATEY 38823 OR EQUAL.

WH-1 (WATER HEATER): BRADFORD-WHITE MODEL RC2PDV50S6N, 50 GAL, 43 GPH RECOVERY, 40,000 BTU/H COMPLETE WITH T&P RELIEF, DRAIN, DRAIN PAN. DIMENSIONS OF 24" DIA. X 59" HIGH, & 160 LBS. ENERGY STAR RATED, .68 UEF. PROVIDE COMPLETE WITH CONCENTRIC VENT KIT.

FD (FLOOR DRAIN): ZURN 520, INSTALL WITH WATERLESS TRAP PRIMER.

NOTE: PROVIDE DRAIN PANS BELOW WASHING MACHINES, WATER HEATERS & HVAC UNITS. EXTEND DRAIN TO NEAREST SANITARY.



EXTERIOR WALL PIPING DETAIL

NO SCALE

whs
engineering

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CLEVELAND SINGLE
FAMILY HOMES

THE ORLEAN COMPANY

CLEVELAND, OHIO

SCATTERED SITES - GLENVILLE

PLUMBING
SPECIFICATIONS

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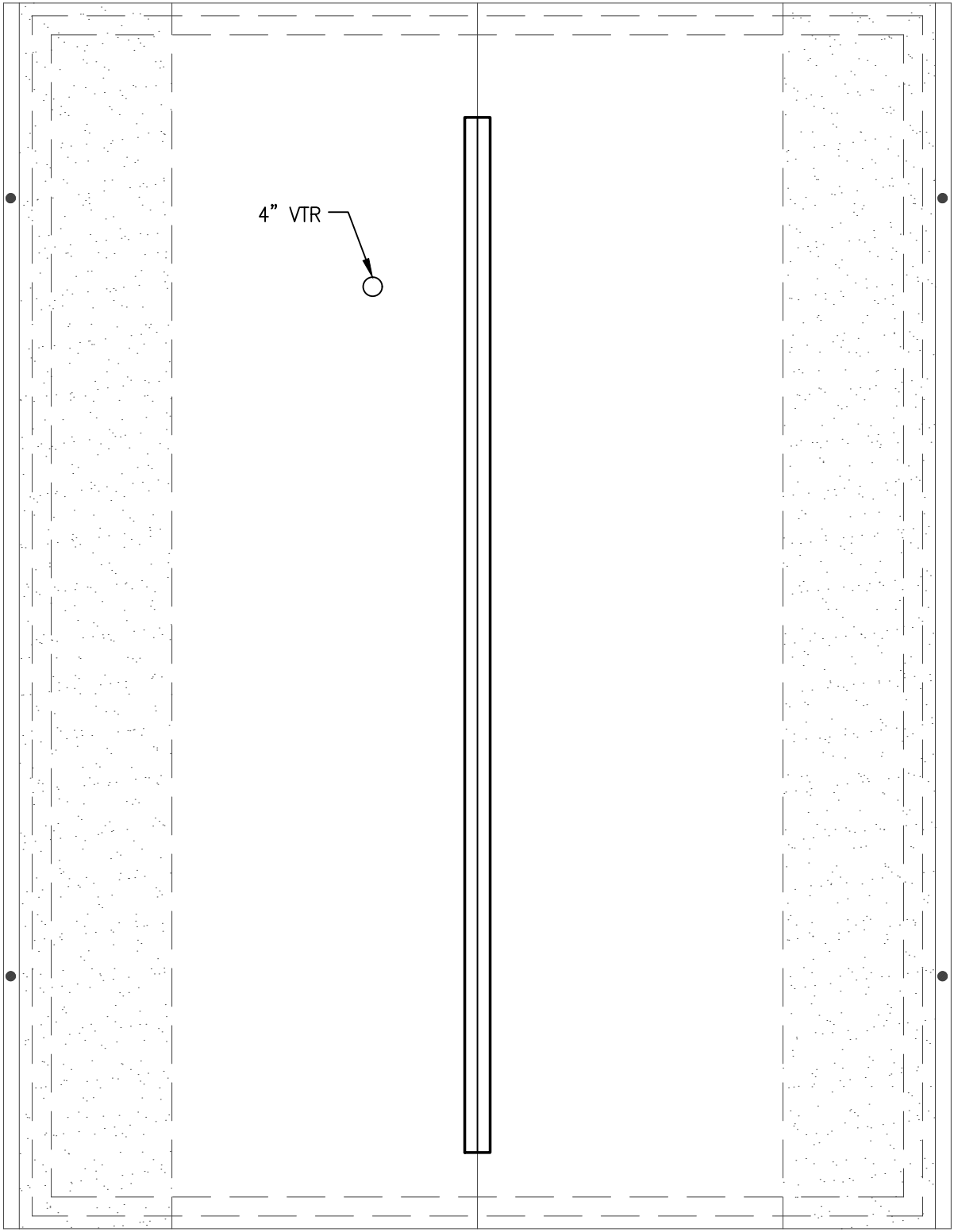
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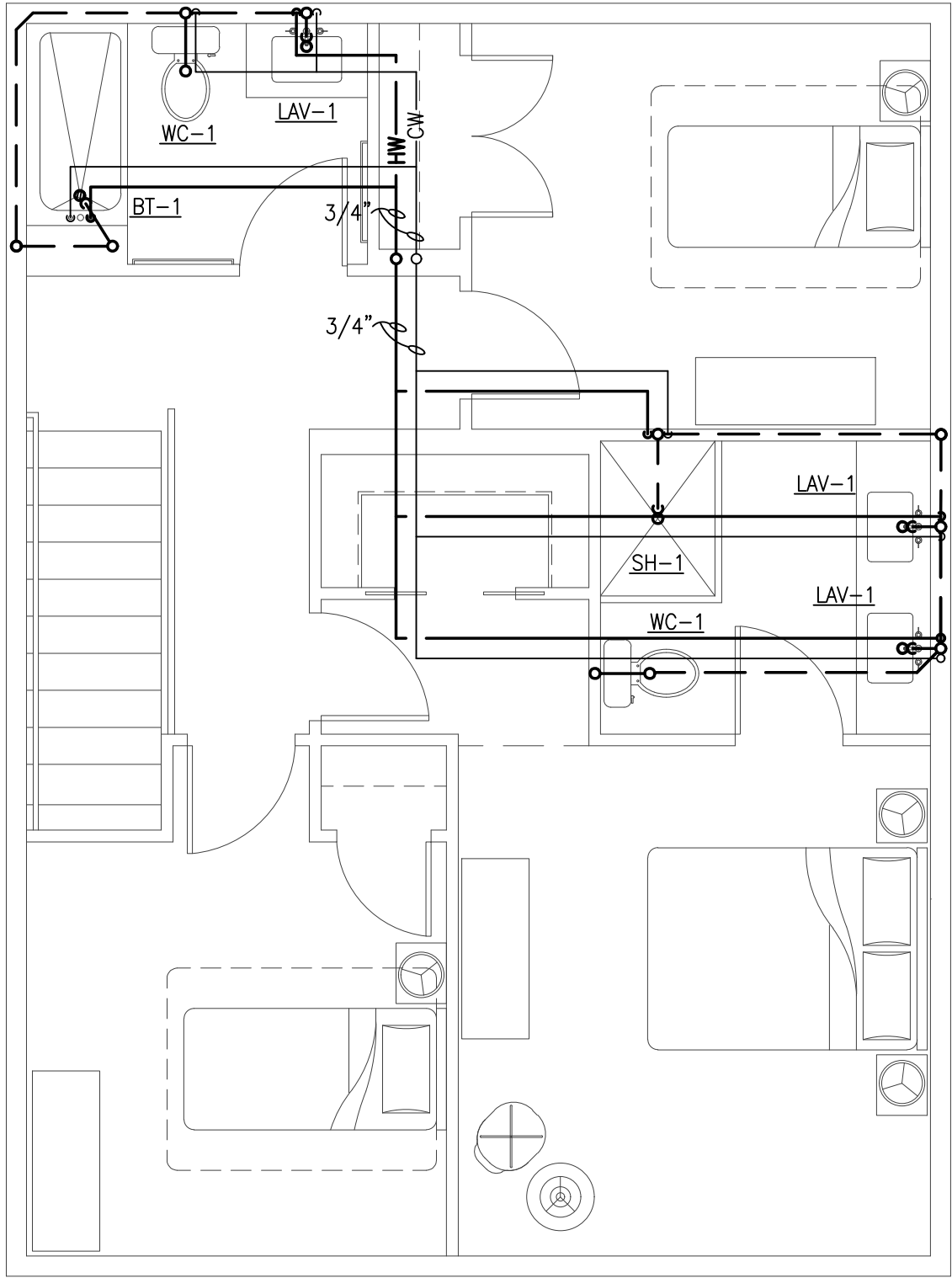
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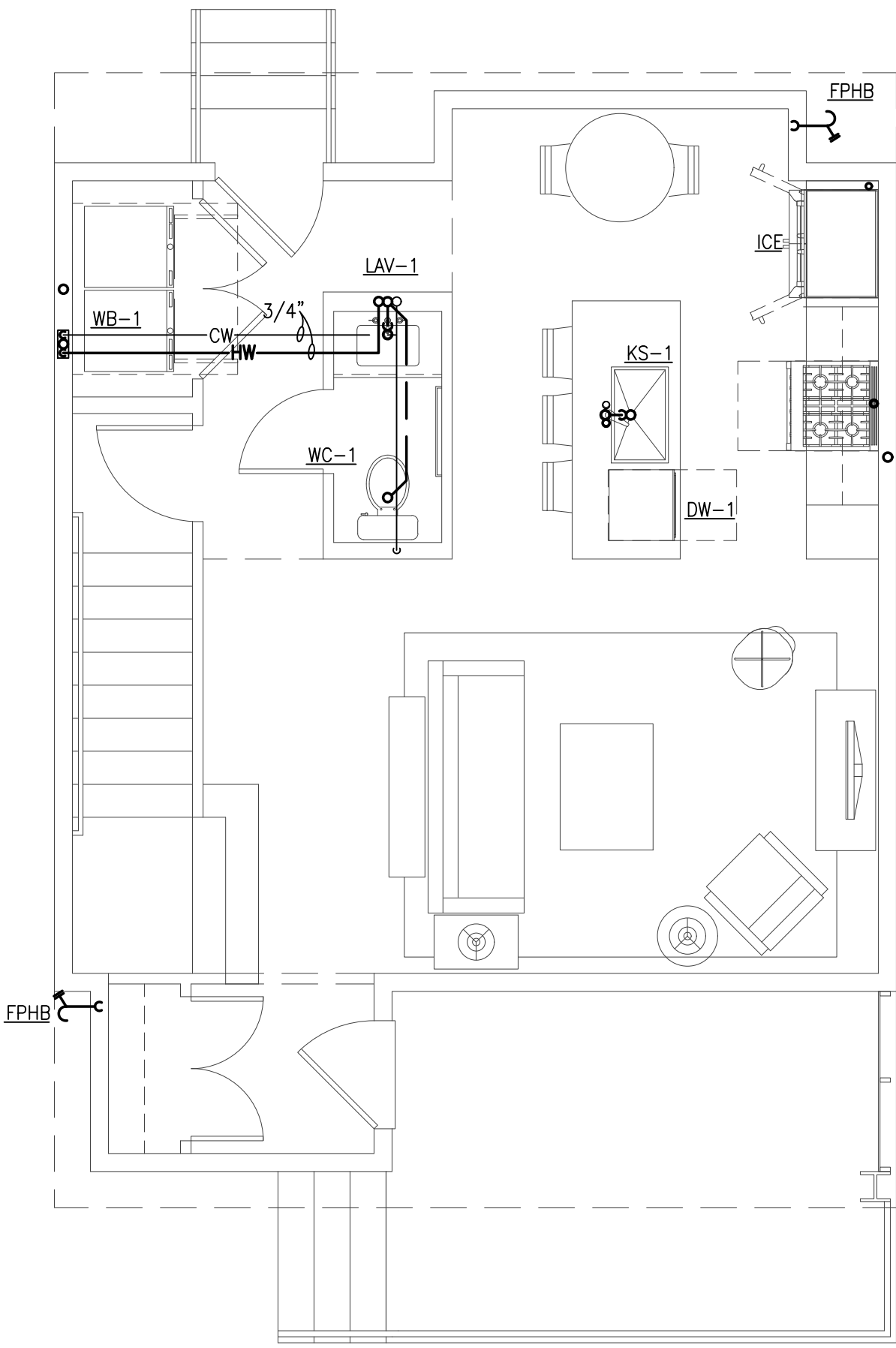
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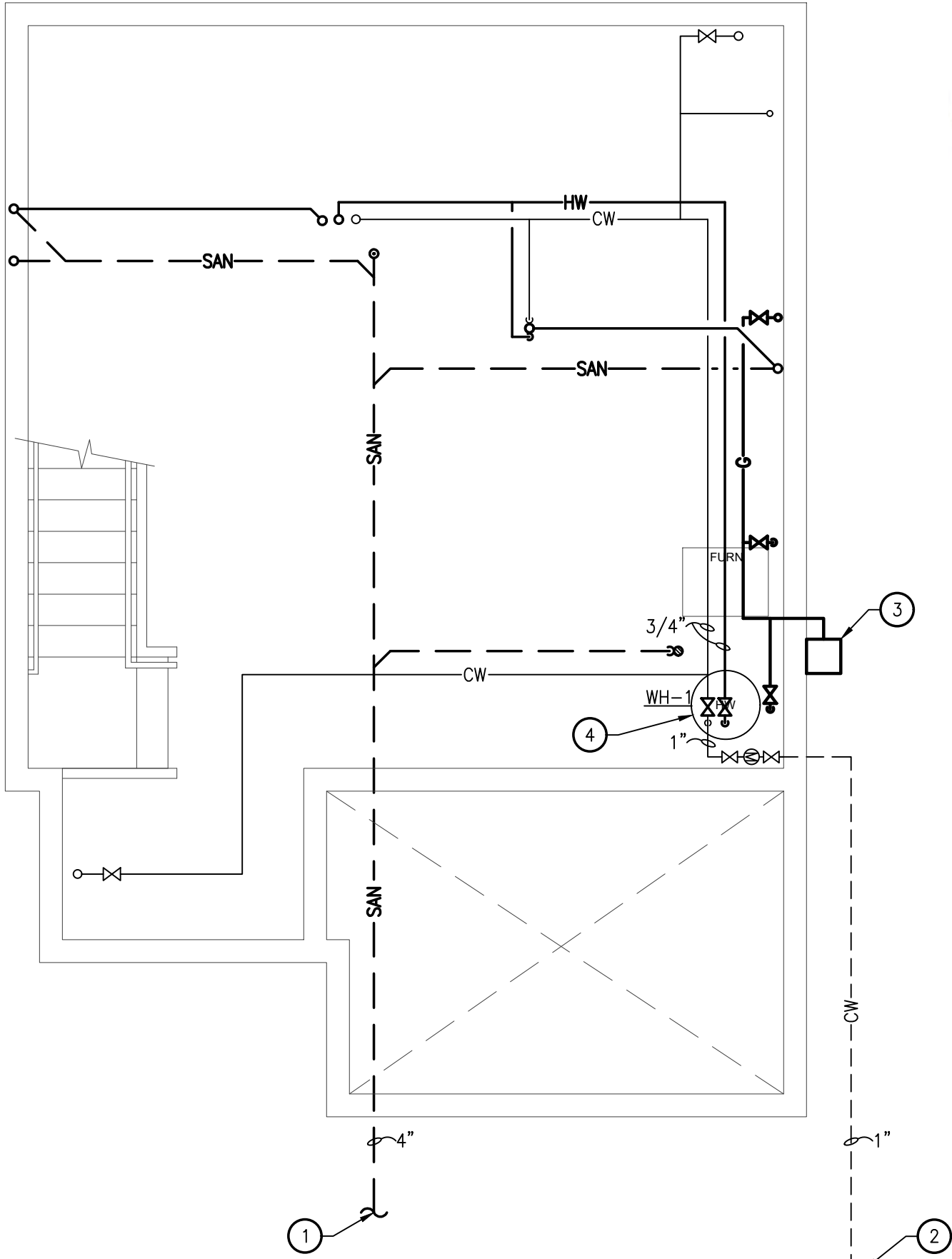
ROOF PLUMBING PLAN
SCALE: 1/4" = 1'-0"



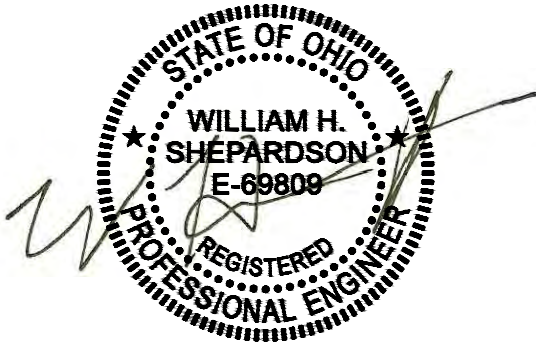
SECOND FLOOR PLUMBING PLAN
SCALE: 1/4" = 1'-0"



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



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



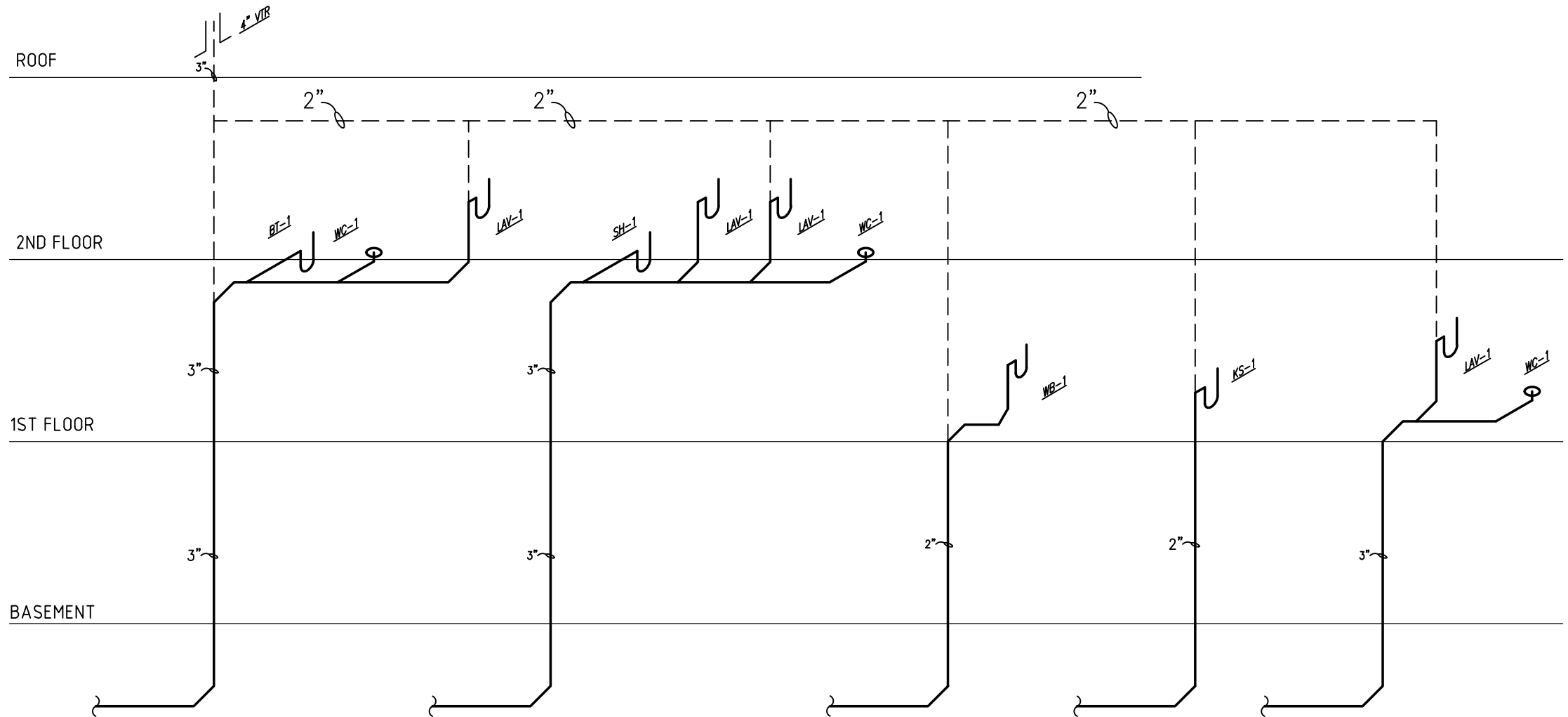
**CLEVELAND SINGLE
FAMILY HOMES**

THE ORLEAN COMPANY

SCATTERED SITES - GLENVILLE CLEVELAND, OHIO

PLUMBING PLAN CODED NOTES:

- ① 4" SANITARY. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- ② 1" CW UNDERGROUND AND INTO BASEMENT. PROVIDE WATER METER AND SHUTOFF. COORDINATE EXACT LOCATION WITH CIVIL DRAWINGS.
- ③ PROPOSED LOCATION OF GAS METER, EXTEND GAS PIPING TO FURNACE, WATER HEATER, AND GAS RANGE.
- ④ WATER HEATER. EXTEND FLUES TO EXTERIOR PER MANUFACTURER'S INSTRUCTIONS.



SANITARY STACK DIAGRAM
NO SCALE

**PLUMBING
PLANS**

City Architecture

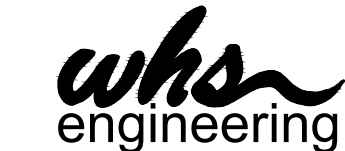
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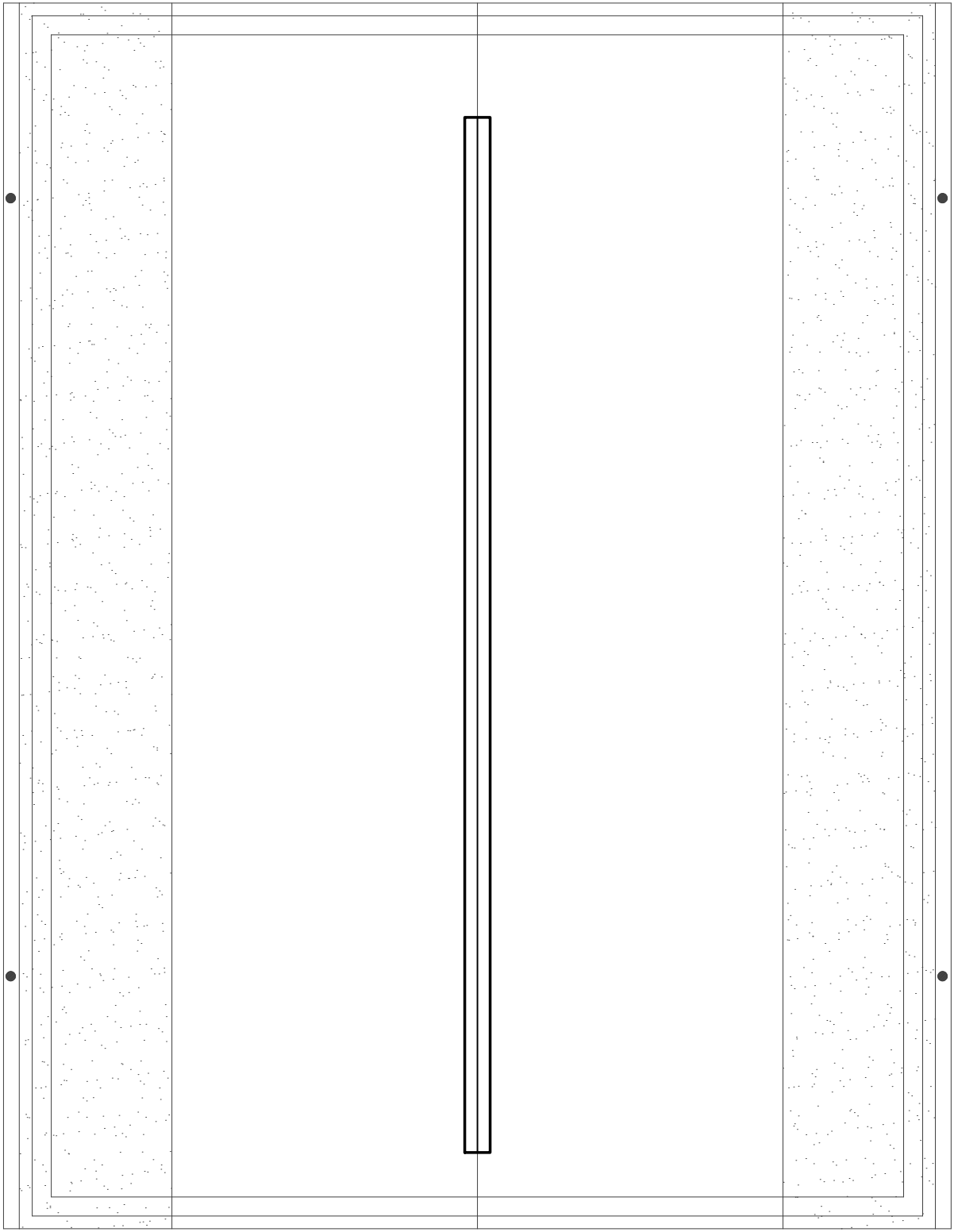
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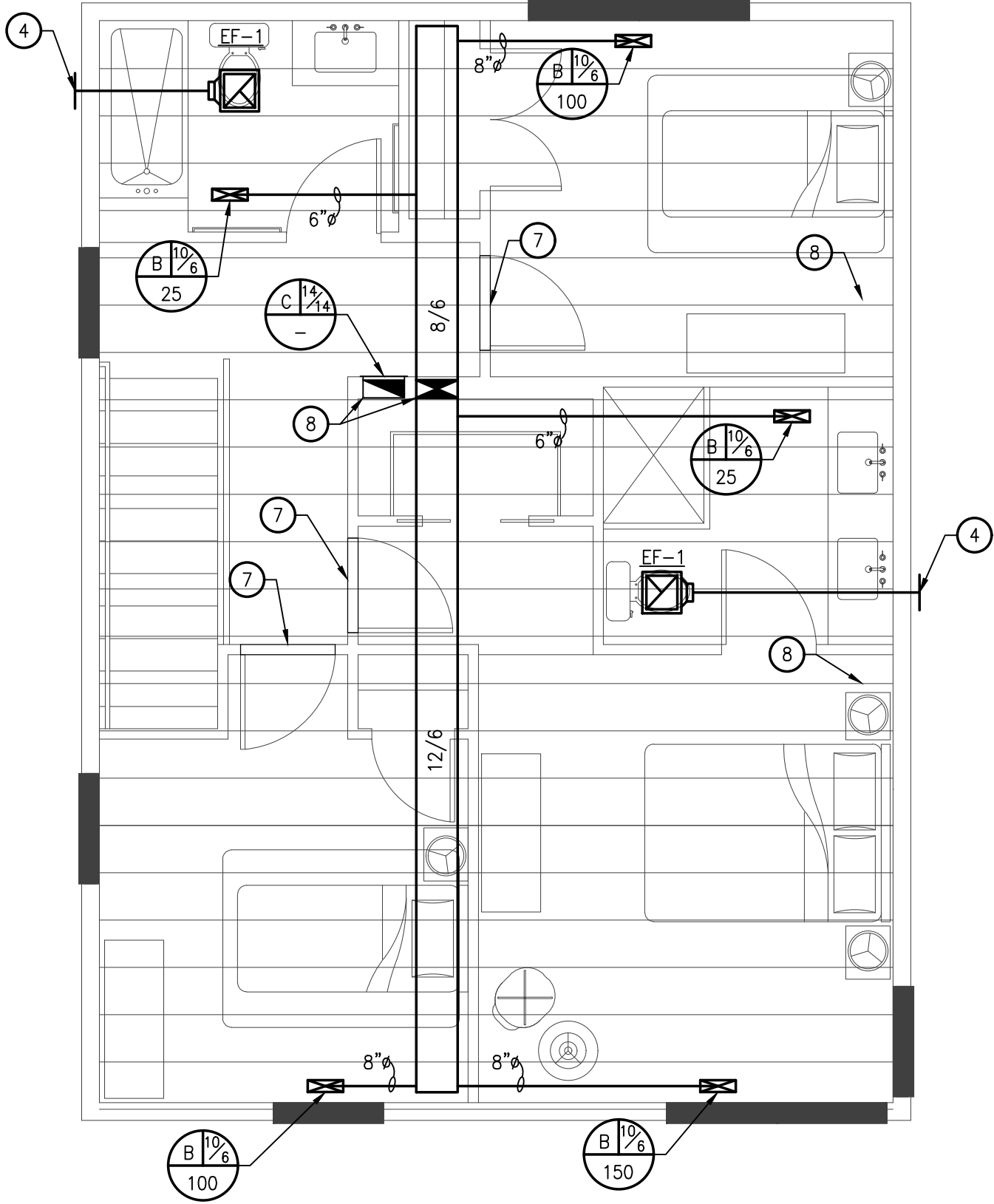
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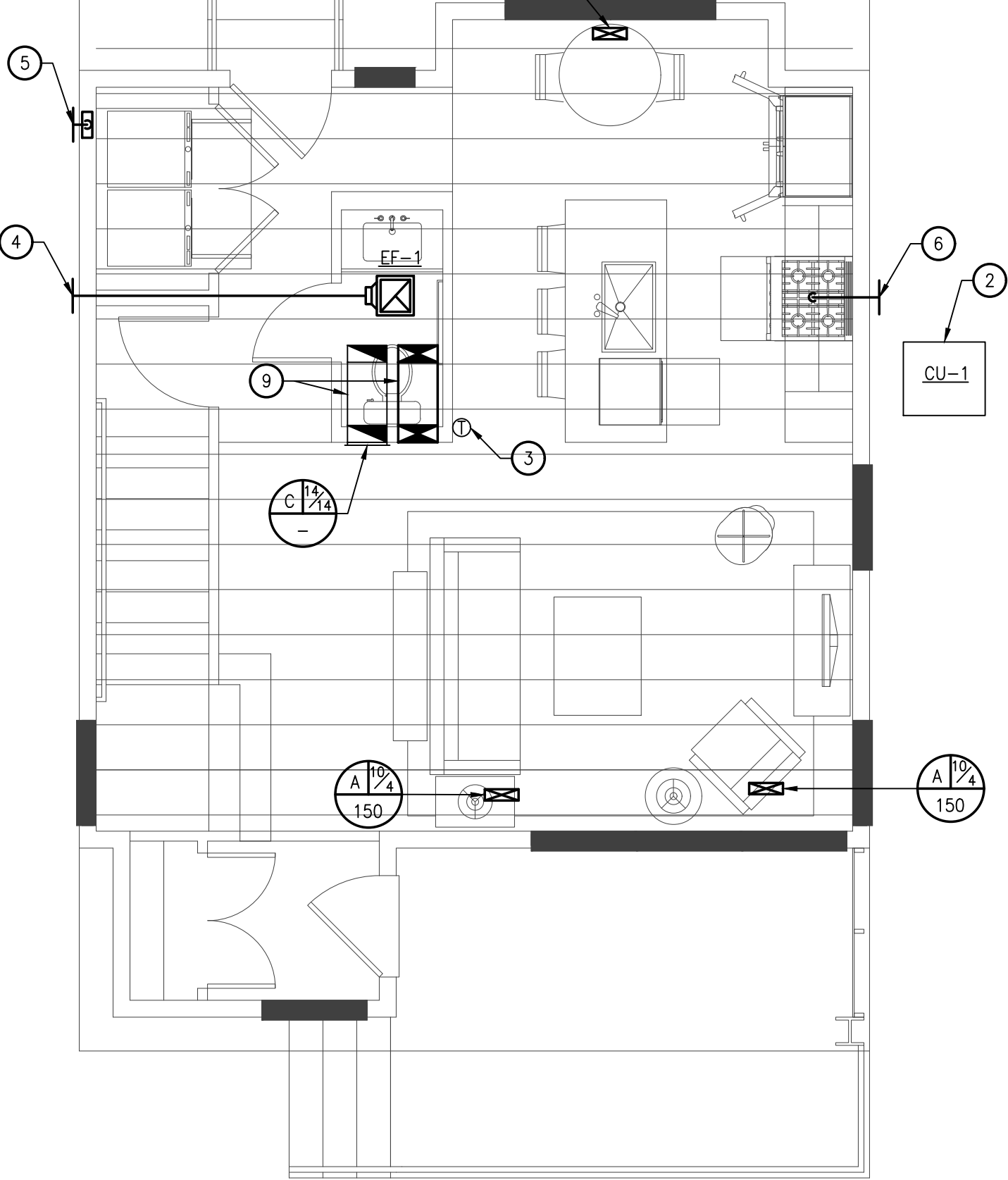
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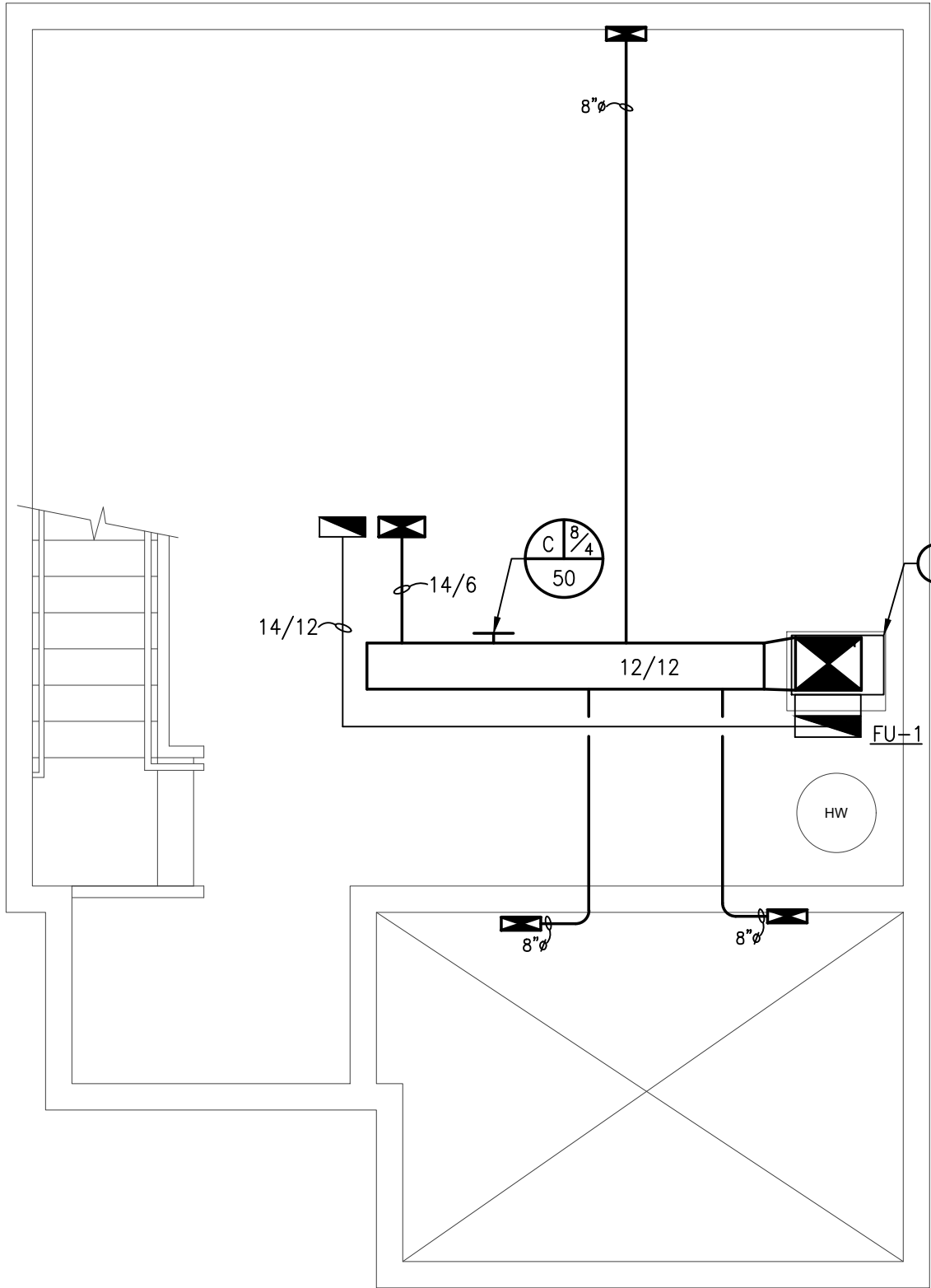
ROOF MECHANICAL PLAN
SCALE: 1/4" = 1'-0"



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



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

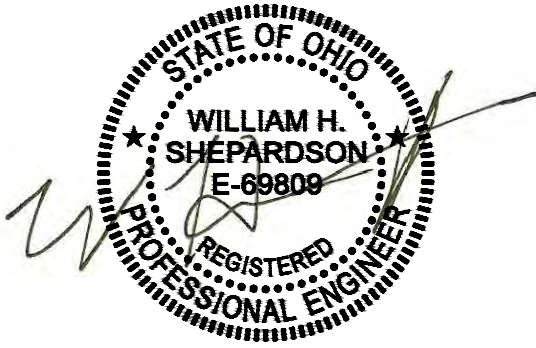


BASEMENT MECHANICAL PLAN
SCALE: 1/4" = 1'-0"



MECHANICAL PLAN NOTES:

- 1 FURNACE TO BE INSTALLED IN BASEMENT. ROUTE COMBUSTION AIR AND FLUE TO EXTERIOR WALL AND TERMINATE WITH CONCENTRIC VENT KIT PER MANUFACTURER'S REQUIREMENTS. LOCATE A MINIMUM OF 3'-0" AWAY FROM ANY OPERABLE WINDOWS. COMBUSTION AIR AND FLUE VENTS SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS.
- 2 MOUNT CONDENSING UNITS CONCRETE PAD OR WALL MOUNT AND ROUTE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. VERIFY FINAL LOCATION WITH OWNER/ARCHITECT.
- 3 INSTALL NEW THERMOSTAT AND WIRE TO FURNACE.
- 4 EXTEND 4"Ø TOILET EXHAUST THRU WALL WITH VENT CAP. LOCATE A MINIMUM OF 3'-0" AWAY FROM ANY OPERABLE WINDOWS.
- 5 EXTEND 4"Ø DRYER EXHAUST TO EXTERIOR WITH VENT CAP. LOCATE A MINIMUM OF 3'-0" AWAY FROM ANY OPERABLE WINDOWS. INSTALL A DRYER BOOSTER FAN WHEN EXHAUST DUCT LENGTH EXCEEDS 35'-0".
- 6 EXTEND RANGE EXHAUST DUCT TO EXTERIOR PER MANUFACTURER'S INSTRUCTIONS. 6"Ø DUCT MINIMUM.
- 7 UNDERCUT BEDROOM DOORS TO ALLOW FOR RETURN AIR RECIRCULATION.
- 8 14/6 SUPPLY AND RETURN DUCT UP IN WALL. ROUTE DUCTWORK IN SOFFIT.
- 9 OFFSET DUCTWORK IN BATHROOM CEILING.



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SCATTERED SITES - GLENVILLE CLEVELAND, OHIO

**MECHANICAL
PLANS**

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SECTION 16010 ELECTRICAL GENERAL PROVISIONS

1. THE PROVISIONS OF THE INSTRUCTION TO BIDDERS, GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, ALTERNATES, ADDENDA, AND DIVISION 1 ARE A PART OF THIS SPECIFICATION. A REQUIREMENT OCCURRING IN ONE IS AS BINDING AS THOUGH OCCURRING IN ALL. THEY ARE INTENDED TO BE COMPLEMENTARY AND TO DESCRIBE AND PROVIDE FOR A COMPLETE WORK. CONTRACTORS AND SUB-CONTRACTORS SHALL EXAMINE SAME AS WELL AS OTHER DIVISIONS OF THE SPECIFICATIONS WHICH AFFECT WORK UNDER THIS DIVISION.
2. MATERIAL OR LABOR WHICH IS NOT INDICATED ON THE DRAWINGS OR SPECIFICATION BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK (AND IS USUALLY INCLUDED IN SIMILAR WORK) SHALL BE PROVIDED. DRAWINGS AND SPECIFICATIONS ARE TO BE CONSIDERED AS SUPPLEMENTING EACH OTHER. WORK SPECIFIED BUT NOT INDICATED, OR INDICATED BUT NOT SPECIFIED, SHALL BE PROVIDED AS THOUGH MENTIONED IN BOTH SPECIFICATIONS AND DRAWINGS.
9. WORK SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING:
- A. BRANCH CIRCUIT WIRING.
B. SAFETY DISCONNECT SWITCHES (FUSED OR UNFUSED).
C. METERING EQUIPMENT
D. LIGHTING FIXTURES, INCLUDING LAMPS AND BALLASTS.
E. CONDUIT AND RACEWAYS.
F. WIRE AND CABLE.
G. WIRING DEVICES AND COVER PLATES.
H. FIRE SEAL (AND) FIRE-PROOF FOAM.
I. PULL BOXES AND CABLE TROUGHS.
J. FIRE ALARM SYSTEM EXTENSION (DEVICES, WIRING, ETC.)
K. ELECTRICAL CONNECTIONS TO HVAC AND OTHER EQUIPMENT PROVIDED UNDER OTHER SECTIONS OR BY THE OWNER.
L. NAMEPLATES, LABELS AND TAGS.
10. IN THE EVENT OF DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS (DRAWINGS AND SPECIFICATIONS), THE CONTRACTOR SHALL ADHERE TO THE MORE STRINGENT REQUIREMENT.
11. ELECTRICAL, ARCHITECTURAL, MECHANICAL, STRUCTURAL AND ALL OTHER DRAWINGS AS WELL AS THE SPECIFICATIONS ARE A PART OF THE CONTRACT DOCUMENTS.
12. VISIT THE SITE OF THE WORK AND BECOME FAMILIAR WITH CONDITIONS AFFECTING THE INSTALLATION. SUBMISSION OF A PROPOSAL SHALL PRESUPPOSE KNOWLEDGE OF SUCH CONDITIONS AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED WHERE EXTRA LABOR OR MATERIALS ARE REQUIRED BECAUSE OF IGNORANCE OF THESE CONDITIONS.
13. DEFINITIONS
- A. **"CONTRACTOR"** AS USED WITHIN THE ELECTRICAL SPECIFICATIONS SHALL REFER TO THE ELECTRICAL CONTRACTOR.
- B. **"EQUAL"** OR **"EQUIVALENT"** SHALL BE UNDERSTOOD TO MEAN OF THE SAME QUANTITY, SIZE, NUMBER, VALUE, DEGREE, INTENSITY AND THE ITEMS ARE SIMILAR IN ALL RESPECTS. THE ENGINEER AND/OR ARCHITECT WILL MAKE THE FINAL DECISION OF ACCEPTANCE OF THESE ITEMS.
- C. **"CONTRACT DOCUMENTS"** SHALL BE UNDERSTOOD TO ENCOMPASS DRAWINGS AND SPECIFICATIONS FOR ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL AND ALL OTHER PERTINENT DISCIPLINES.
- D. **"PROVIDE"** SHALL BE INTERPRETTED TO MEAN THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SUPPLIES INCLUDING TESTS AND INSPECTIONS NECESSARY TO INSTALL, CONNECT, APPLY, ERECT, CONSTRUCT, AND PLACE IN OPERATING CONDITION.
- E. **"FURNISH"** SHALL BE INTERPRETTED TO MEAN THE CONTRACTOR SHALL SUPPLY AND DELIVER TO THE JOB SITE SPECIFIED MATERIAL, EQUIPMENT, AND SUPPLIES.
- F. **"INSTALL"** SHALL BE INTERPRETTED TO MEAN ASSEMBLING, PLACING, ERECTING, WIRING AND TO MAKE FULLY OPERATIONAL.
6. INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, TRANSPORTATION, INSURANCE, TEMPORARY PROTECTION, SUPERVISION, SERVICES FOR THE PROPER COMPLETION OF ALL ELECTRICAL WORK. ITEMS OMITTED, BUT NECESSARY TO MAKE THE ELECTRICAL SYSTEM COMPLETE AND WORKABLE, SHALL BE UNDERSTOOD TO FORM PART OF THE WORK. SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED AND TURN OVER ALL CERTIFICATES OF APPROVAL TO THE OWNER.
7. TEMPERATURE CONTROLS ARE PROVIDED AND WIRED BY A CONTROLS CONTRACTOR UNDER DIVISION 15.
8. WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF LOCAL AND STATE CODES AS WELL AS THE NATIONAL ELECTRICAL CODE (NEC), AS INTERPRETED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
9. RESOLVE CODE VIOLATIONS OCCURING IN CONTRACT DOCUMENTS WITH THE ARCHITECT/ENGINEER PRIOR TO AWARD OF CONTRACT.
10. PROVIDE ALL EXCAVATION, CONCRETE AND BACKFILL REQUIRED FOR ELECTRICAL WORK EXCLUSIVELY. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF OHIO.
11. WIRE ITEMS NORMALLY ASSOCIATED WITH EQUIPMENT SUPPLIED BY OTHERS SUCH AS LIMIT SWITCHES FOR DOOR OPERATOR MOTORS AND MOTOR OPERATED DAMPERS.
12. PROVIDE ALL WORK ASSOCIATED WITH THE COORDINATION AND INSTALLATION OF A NEW ELECTRIC SERVICE IN ACCORDANCE WITH THE ELECTRIC UTILITY COMPANY.
- A. NOTIFY THE POWER UTILITY COMPANY REGARDING THE SERVICE SIZE, VOLTAGE, CONSTRUCTION SCHEDULE AND THE ANTICIPATED DATES WHEN THE UTILITIES SHOULD BEGIN AND COMPLETE THE WORK.
- B. PAY ANY REQUIRED UTILITY COMPANY FEES OR BACK CHARGES IN CONJUNCTION WITH THE PERMANENT SERVICE IN SUFFICIENT TIME TO ALLOW THE UTILITY TO SCHEDULE AND COMPLETE THE WORK.
- C. NOTIFY LOCAL UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION BEFORE PERFORMING ANY EXCAVATION.
- D. COORDINATE LOCATIONS OF ALL UTILITIES.
13. AFTER INSTALLATION BUT PRIOR TO ENERGIZATION, PERFORM TESTS FOR GROUNDS, SHORT CIRCUITS AND PROPER FUNCTION. FAULTS IN THE INSTALLATION SHALL BE CORRECTED.
14. PROVIDE NAMEPLATES ON NEW OR EXISTING SAFETY SWITCHES, CONTROL PANELS, CONTROL DEVICES, JUNCTION AND PULL BOXES. LETTERING SHALL INCLUDE NAME OF EQUIPMENT, HORSEPOWER, VOLTAGE RATING AND SERVICE DESIGNATION. NAMEPLATES SHALL BE LAMINATED PHENOLIC WITH A BLACK SURFACE AND WHITE CORE. NAMEPLATES MAY BE ATTACHED TO WALL ADJACENT TO EQUIPMENT IF AREA FOR ATTACHMENT IS TOO SMALL. IDENTIFICATION WITH A DYMO TYPE INSTRUMENT IS NOT PERMISSIBLE.
15. BEFORE FINAL PAYMENT, DEMONSTRATE TO THE OWNER'S SATISFACTION THE PROPER OPERATION OF EACH OF THE SYSTEMS COMPRISING THIS CONTRACT. INSTRUCT THE OWNER'S MAINTENANCE PERSONNEL IN THE OPERATION AND MAINTENANCE OF ALL ELECTRICAL EQUIPMENT AND CONTROLS.
16. AFTER ALL TESTS HAVE BEEN COMPLETED, CLEAN ALL EQUIPMENT LEAVING EVERYTHING IN WORKING ORDER AT THE COMPLETION OF THIS WORK. ALL ELECTRICAL EQUIPMENT SHALL BE COMPLETELY CLEANED INSIDE AND OUT PRIOR TO INITIAL ENERGIZING.

17. AVOID CUTTING INTO THE WORK OF OTHERS BY USING SLEEVES, INSERTS, CHASES AND SIMILAR ITEMS NECESSARY FOR THE INSTALLATION. EXCEPT WHERE OTHERWISE SPECIFIED OR NOTED ON DRAWINGS, THE ELECTRICAL CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING OF THE BUILDING AS REQUIRED TO INSTALL SLEEVES, INSERTS, CONDUITS AND ELECTRICAL EQUIPMENT. PATCHING SHALL BE DONE BY SKILLED MECHANICS. WORK SHALL MATCH THE GENERAL CONSTRUCTION WORK. ALL CUTTING SHALL BE DONE IN A MANNER TO RETAIN THE STRUCTURAL INTEGRITY OF THE UNIT BEING CUT. WHERE EXISTING EQUIPMENT IS REMOVED OR RELOCATED, PATCH TO MATCH THE EXISTING BUILDING FINISHES (WALLS, CEILINGS, FLOORS, ETC.).
18. GUARANTEE ALL WORKMANSHIP AND MATERIALS PROVIDED UNDER THE CONTRACT FOR ONE YEAR AFTER ACCEPTANCE BY THE OWNER AND COMPLETION OF ALL PUNCH LIST ITEMS. REPAIR OR REPLACE ANY DEFECT WITHOUT COST TO THE OWNER.
19. PROVIDE TEMPORARY ELECTRIC SERVICE OF SUFFICIENT CAPACITY TO SUPPLY THE ELECTRIC LIGHT AND POWER REQUIREMENTS OF CONSTRUCTION SITE.
20. **"MATERIAL SUBSTITUTIONS"** THESE SPECIFICATIONS ESTABLISH QUALITY STANDARDS OF MATERIALS AND EQUIPMENT TO BE PROVIDED. SPECIFIC ITEMS ARE IDENTIFIED BY MANUFACTURER, TRADE NAME OR CATALOG DESIGNATION. THIS CONTRACTOR SHALL SUBMIT HIS BASE BID PRICE BASED UPON STANDARD SPECIFIED EQUIPMENT DESCRIBED HEREIN AND AS DETAILED ON DRAWINGS AND ASSOCIATED CONTRACT DOCUMENTS. SUBSTITUTION EQUIPMENT ACCEPTED AS DETAILED BELOW SHALL BE SHOWN AS A SEPARATE ADD OR DEDUCT PRICE TO BE FACTORED INTO THE BASE BID PRICE BY THE ARCHITECT AND OWNER IF ACCEPTED. SUBSTITUTIONS SHALL ALSO PROVIDE FOR THE FOLLOWING:
- A. THESE SPECIFICATIONS ARE NOT TO BE CONSIDERED PROPRIETY AND THE CONTRACTOR MAY SUBMIT MATERIALS OR MANUFACTURERS (OTHER THAN THOSE LISTED) FOR REVIEW BY THE ARCHITECT AND ENGINEER NO LATER THAN SEVEN (7) WORKING DAYS BEFORE BIDS ARE SUBMITTED. MANUFACTURERS OF PRODUCTS ACCEPTED BY THE ARCHITECT AND ENGINEER WILL BE LISTED IN AN ADDENDUM TO THE SPECIFICATIONS AS AN ACCEPTABLE EQUIVALENT. SHOULD THE CONTRACTOR PROPOSE TO FURNISH MATERIALS AND EQUIPMENT OTHER THAN THOSE SPECIFIED, OR APPROVED BY ADDENDUM, SUBMIT A WRITTEN REQUEST FOR SUBSTITUTIONS TO THE ARCHITECT AT THE BID OPENING AND SUBMIT (AT HIS COST) INSPECTION SAMPLES OF BOTH THE SPECIFIED AND PROPOSED SUBSTITUTE ITEMS. THE REQUEST SHALL BE AN ALTERNATE TO THE ORIGINAL BID; BE ACCOMPANIED WITH COMPLETE DESCRIPTIVE (MANUFACTURER, BRAND NAME, CATALOG NUMBER, ETC.) AND TECHNICAL DATA FOR ALL ITEMS. FAILURE BY THIS CONTRACTOR TO SUBMIT THE REQUISITE DOCUMENTATION DETAILED ABOVE SHALL BE UNDERSTOOD BY THE ARCHITECT AND ENGINEER TO INDICATE THAT SUBSTITUTE EQUIPMENT WILL NOT BE PRESENTED BY THE CONTRACTOR FOR CONSIDERATION. SUCH SUBSTITUTIONS WILL NOT BE CONSIDERED AFTER THE BID OPENING DATE AND DELAY OF PROJECT WILL NOT BE PERMITTED FOR FURTHER INSPECTION AND EVALUATION AFTER THIS DATE.
- B. WHERE MATERIAL SUBSTITUTIONS ALTER THE DESIGN OR SPACE REQUIREMENTS INDICATED ON THE DRAWINGS, THE ELECTRICAL CONTRACTOR SHALL BEAR ALL COSTS RELATED TO THE REVISED DESIGN AND CONSTRUCTION. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE CONSTRUCTION COSTS ASSOCIATED OF OTHER TRADES, THE COST OF EVALUATING THE EQUALITY OF THE MATERIAL AND EQUIPMENT TO BE PROVIDED BY ARCHITECT/ENGINEER, ETC.
21. WIRE ITEMS NORMALLY ASSOCIATED WITH EQUIPMENT SUPPLIED BY OTHERS SUCH AS LIMIT SWITCHES FOR DOOR OPERATOR MOTORS AND MOTOR OPERATED DAMPERS.
22. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH OTHER TRADES; MECHANICAL, PLUMBING, ETC., AND SHALL VERIFY EQUIPMENT AND DEVICE VOLTAGE, PHASE AND AMPACITY SPECIFICATION. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY WIRING, RACEWAYS AND PROTECTIVE DEVICES, ETC., AS REQUIRED FOR THE CORRECT AND PROPER OPERATION OF THE INSTALLED EQUIPMENT, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
23. CONSULT THE DRAWINGS COVERING THE WORK OF ALL OTHER TRADES, AS WELL AS THE RESPECTIVE CONTRACTORS FIELD LAYOUTS, AND TICK TRACE ALL CONCRETE SLABS BEING REMOVED TO IDENTIFY THE EXACT LOCATION OF CONCEALED ELECTRICAL CONDUITS. ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO THE BEGINNING OF SLAB REMOVAL. REWORK OR REROUTE EXISTING CONDUITS AND FEEDERS AS DIRECTED BY THE ENGINEER.

SECTION 16050 BASIC MATERIALS AND METHODS

1. EQUIPMENT AND MATERIAL USED ON THIS PROJECT SHALL BE NEW AND U.L. LABELED FOR THE APPLICATION.
2. ALL FEEDERS AND BRANCH CIRCUITS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE RIGID GALVANIZED, INTERMEDIATE OR EMT. CONDUITS SHALL BE 3/4" TRADE SIZE MINIMUM, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.
3. WIRE AND CABLE FOR POWER AND LIGHTING FEEDERS LARGER THAN #6AWG SHALL BE COPPER STRANDED 600 VOLT TYPE THHN/THWN OR XHHW COPPER. WIRE AND CABLE FOR POWER AND LIGHTING BRANCH CIRCUITS SHALL BE THHN/THWN COPPER FOR #10 AND SMALLER AND THHW OR XHHW COPPER FOR #8 AND LARGER. MINIMUM WIRE SIZE FOR POWER AND LIGHTING CIRCUITS SHALL BE #12.
4. ARMORED (TYPE AC) CABLE, METAL CLAD (TYPE MC) CABLE OR NONMETALLIC (TYPE NM/NMC) CABLE (APARTMENTS AND TOWNHOMES ONLY) MAY BE USED IN LIEU OF BRANCH CIRCUIT CONDUIT. HOWEVER, THE INSTALLATION OF CABLE ASSEMBLIES SHALL COMPLY WITH ARTICLE 320, 330 AND 334 OF THE NATIONAL ELECTRICAL CODE RESPECTIVELY. THE USE OF AC, MC OR NM/NMC CABLE SHALL NOT BE USED IN EXPOSED LOCATIONS. TYPE OF WIRING SHALL BE AS SPECIFIED ELSEWHERE IN THIS SECTION. A GREEN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL MC CABLE, AC CABLE AND NM/NMC CABLES ASSEMBLIES. REFER TO RESPECTIVE POWER RISER DIAGRAMS FOR ADDITIONAL WIRING TYPE INFORMATION.
5. COLOR CODE WIRE AND CABLE FOR CIRCUITS AS CALLED FOR IN THE NATIONAL ELECTRICAL CODE.
6. ALL LOW VOLTAGE WIRING SHALL BE U.L. "PLENUM" RATED AND INSTALLED IN COMPLIANCE WITH N.E.C. SECTIONS #300.22 AND #760.30(B)(1).
7. ALL BOXES SHALL BE RIGIDLY SUPPORTED FROM BUILDING STRUCTURE INDEPENDENT OF THE CONDUIT SYSTEM. ALL BOXES SHALL BE 4" SQUARE BOXES MINIMUM WITH RAISED COVERPLATE. SUITABLE FOR WALL MATERIAL TO ALLOW BOX TO BE FLUSH. PLASTIC BOXES MAY BE UTILIZED IN NON-FIRE RATED WALLS.
8. LOCAL LIGHT SWITCHES IN ALL DWELLING UNITS SHALL BACK AND SIDE WIRED, 20 AMPERE, WITH WHITE FINISH, 120/277 VOLTS, AC, "RESIDENTIAL GRADE" TOGGLE (DECORA) STYLE WITH PER ARCHITECT/OWNER FINISH AS MANUFACTURED BY LEVITON OR PASS & SEYMOUR #12211/12231 SERIES.
9. DUPLEX RECEPTACLES IN DWELLING UNITS SHALL BE "RESIDENTIAL GRADE", 125 VOLT, 3 WIRE, GROUNDING TYPE, TAMPER RESISTANT TYPE (IN COMPLIANCE WITH N.E.C. #406.12), 20 AMP DEVICES WITH PER ARCHITECT/OWNER FINISH.
10. INDOOR AND RECEPTACLES, WHERE REQUIRED BY LOCAL CODE, SHALL HAVE INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER OR GROUND FAULT CIRCUIT INTERRUPTER CIRCUIT BREAKER PROTECTION. GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLES, WHERE REQUIRED, SHALL BE PASS & SEYMOUR #53621-G, FEED-THRU TYPE G.F.C.I. RECEPTACLES MAY NOT BE USED. ALL EXTERIOR G.F.C.I. RECEPTACLES SHALL BE INSTALLED IN A NEMA 3R SAFETY ENCLOSURE (AT OUTDOOR LOCATIONS) IN COMPLIANCE WITH NEC 406.8(B).
11. ALL COVER PLATES SHALL BE SMOOTH HIGH IMPACT COMMERCIAL GRADE THERMOPLASTIC OR SMOOTH NYLON FINISH WITH PER ARCHITECT/OWNER FINISH. IN UNFINISHED AREAS, USE CADMIUM PLATED, ROUND CORNER, STEEL COVER PLATES FOR SURFACE MOUNTED OUTLET BOXES. BOTH THE WIRING DEVICES AND THE COVER PLATES SHALL BE BY THE SAME MANUFACTURER.

12. SAFETY SWITCHES SHALL BE HEAVY-DUTY UNFUSED OR FUSED AND SHALL BE INSTALLED WHERE INDICATED ON THE DRAWINGS AND/OR WHERE REQUIRED BY CODE AND SHALL BE SUITABLE FOR VOLTAGE AND CURRENT RATING AS SHOWN ON THE DRAWINGS. ACCEPTABLE MANUFACTURERS SHALL BE: SQUARE D, GENERAL ELECTRIC, CUTLER-HAMMER, OR SIEMENS.
13. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE SET OF FUSES FOR ALL FUSIBLE EQUIPMENT ON THE JOB. UNLESS OTHERWISE INDICATED, ALL FUSES SHALL BE U.L. LISTED, CURRENT-LIMITING AND HAVE AN INTERRUPTING RATING OF 700,000 RMS AMPERES SYMMETRICAL. ALL FUSES RATED 600 AMPERES OR LESS SHALL BE DUAL ELEMENT TIME-DELAY CURRENT-LIMITING U.L. CLASS J (OR RK-1), UNLESS INDICATED OTHERWISE.
14. ALL OPENINGS IN FIRE RATED FLOORS, SHAFTS, AND WALLS ACCOMMODATING PENETRATING ITEMS SUCH AS CABLES, CONDUITS, RACEWAYS, CABLE TRAYS, OR BUSWAYS SHALL BE FIRE STOPPED. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROTECTED BY MATERIALS TESTED IN ACCORDANCE WITH UL1479/ASTM E-814. INSTALLATION SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS AND MAINTAIN THE FIRE RATING OF WALLS AND/OR FLOORS AFFECTED. PROVIDE HILTI C5240 FIRESTOP SEALANT, CSFM LISTING NO. 4060-1200:100, OR EQUIVALENT STATE FIRE MARSHAL APPROVED AND LISTED MATERIAL.
15. ALL RACEWAYS PASSING FROM INTERIOR TO THE EXTERIOR OF THE BUILDING SHALL BE FILLED WITH AN APPROVED MATERIAL TO PREVENT THE CIRCULATION OF WARM AIR TO THE COLDER SECTION OF THE RACEWAY. NEC 300.7(A).
16. ALL HARDWARE, SUPPORTS, HANGERS, ANGLE IRON, CHANNELS, RODS, CLAMPS NECESSARY TO INSTALL ELECTRICAL EQUIPMENT AND LIGHTING FIXTURES SHALL BE SUPPLIED TO SUIT CONDITIONS AND APPLICATION. CONDUIT SUPPORTING SYSTEMS SHALL BE ATTACHED TO THE DECK, SLAB, OR STRUCTURAL FRAMING ONLY AND NOT TO ANY OTHER APPURTENANCES AT THE CEILING SUCH AS MECHANICAL DUCTS, PIPES AND SUSPENDED CEILING HANGER WIRES OR FRAMING MEMBERS. PROVIDE ALL SUPPORTS, MATERIALS, ETC. IN ACCORDANCE WITH N.E.C. ARTICLE #300.11 AND #314.23.

SECTION 16060 GROUNDING AND BONDING

1. GROUND ALL CONDUITS, CABINETS, MOTORS, PANELS, FIXTURES, AND OTHER EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ALL PROVISIONS OF THE NATIONAL ELECTRIC CODE AND LOCAL CODES.
2. GROUNDING OF THE ELECTRICAL SYSTEM SHALL BE BY MEANS OF AN INSULATED GROUNDING CONDUCTOR INSTALLED WITH CIRCUIT CONDUCTORS IN ALL CONDUITS. GROUNDING CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH N.E.C. 250.122 AND SHALL RUN FROM GROUNDING BUS OF SERVING PANEL TO GROUND BUS OF SERVED PANEL. GROUNDING TERMINAL OF RECEPTABLES, LIGHTING FIXTURE HOUSINGS, GROUNDING TERMINAL OF LIGHT SWITCHES OR METAL ENCLOSURES OF SERVED EQUIPMENT.
3. INSTALL BONDING JUMPERS ACROSS ALL BUILDINGS, EXPANSION JOINTS, AND ACROSS CONDUIT EXPANSION FITTINGS.

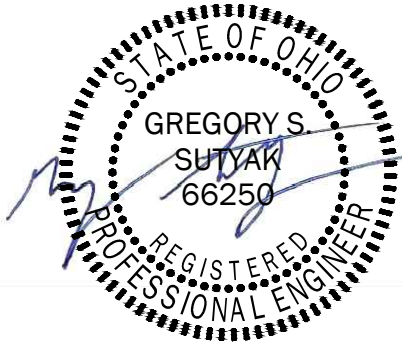
SECTION 16400 RESIDENTIAL LOAD CENTERS

1. PROVIDE BRANCH CIRCUIT RESIDENTIAL LOAD CENTERS EQUIPPED WITH CIRCUIT BREAKERS OF THE FRAME AND TRIP RATING AS SPECIFIED HEREIN AND AS SHOWN ON THE CONTRACT DRAWINGS. PANELBOARD BUS STRUCTURE AND MAIN LUG/MAIN CIRCUIT BREAKER SHALL HAVE THE CURRENT RATING AS SHOWN ON THE CONTRACT DRAWINGS. BUS BAR CONNECTIONS SHALL ACCEPT PLUS-ON CIRCUIT BREAKERS. PANELBOARDS SHALL BE DEAD FRONT SAFETY TYPE. BUS BARS SHALL HAVE ANTI-TURN SOLDERLESS LUG CONNECTIONS FOR ATTACHING FEEDERS. WHERE MULTI-POLE CIRCUIT BREAKERS ARE REQUIRED, THEY SHALL BE COMMON TRIP. PANEL BOXES SHALL BE A MAXIMUM OF 15" INCHES WIDE. CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC, MOLDED CASE PLUS-ON TYPE.
- A. PANELBOARD AS A COMPLETE UNIT SHALL HAVE A MINIMUM SHORT CIRCUIT RATING OF 208(240)/120 - 10,000 AIC, UNLESS OTHERWISE NOTED
- B. PANELBOARDS SHALL BE MANUFACTURED BY SQUARE D, SIEMENS, GENERAL ELECTRIC, OR EATON/CUTLER-HAMMER.
- C. WHEN WORK IS COMPLETE, BALANCE THE CONTINUOUS LOAD ON EACH PHASE OF ALL PANELBOARDS.

SECTION 16500 LIGHTING

1. LIGHT FIXTURES (LUMINAIRE) SHALL BE AS SPECIFIED ON THE LIGHTING FIXTURE SCHEDULE AS INDICATED ON THE DRAWINGS. WHERE FIXTURE TYPES ARE INDICATED AS A MANUFACTURER'S SERIES, THE CONTRACTOR SHALL PROVIDE THE CORRECT TRIM, MOUNTING HARDWARE, APPURTENANCES, LENGTHS, ETC., TO COMPLETE THE INSTALLATION AS INDICATED ON THE ELECTRICAL/ARCHITECTURAL DRAWINGS.
2. ALL FIXTURES SHALL BE SECURELY SUPPORTED WITH APPROVED HANGERS. FIXTURES SHALL BE SUPPORTED FROM STRUCTURAL CEILING OR STRUCTURAL SUPPORTS, NOT SUSPENDED CEILING SUPPORTS. WHERE APPLICABLE, FLUORESCENT RECESSED FIXTURES MUST BE SUPPORTED AT THE FOUR CORNERS AND SECURED TO CEILING SUPPORTS IN ACCORDANCE WITH THE N.E.C. ARTICLE # SURFACE MOUNTED FIXTURES MUST HAVE ADDITIONAL CEILING SUPPORT AS ACCEPTABLE BY THE ARCHITECT.

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	CEILING FAN/LED LIGHT COMBO UNIT
	RECESSED JUNCTION BOX FOR SURFACE MOUNTED FIXTURE
	LED VANITY WALL SCONCE FIXTURE
	LED EXTERIOR WALL SCONCE FIXTURE
	LED RECESSED FIXTURE 4" IN DIAMETER
	LED WET RATED SHOWER FIXTURE
	LED WET RATED EXTERIOR PATIO FIXTURE
	LIGHT SWITCH. SINGLE POLE, 20 AMPERE, 120/277 VOLT, 1HP.
	LIGHT SWITCH. "X" INDICATES THE FOLLOWING: "G" CONTROL OF SPECIFIED LUMINAIRES "3" 3-WAY TYPE
	HOME RUN. HASH MARKS INDICATE CONDUCTOR QUANTITY. HASH MARKS DEFINED AS SHOWN. "#" INDICATES SIZE OF CONDUCTORS OTHER THAN 12-AWG. ALL UNMARKED HOMERUNS TO CONTAIN 2-12 AWG & 1-12 AWG GND IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.
	240/120 VOLT, 1Ø, 3 WIRE BRANCH CIRCUIT PANELBOARD
	DISCONNECT SWITCH. "#" INDICATES SWITCH SIZE. "WP" INDICATES WEATHERPROOF (NEMA 3R) ENCLOSURE
	DUPLEX RECEPTACLE - 125 VOLT, 20 AMPERE, 2 POLE, 3 WIRE, GROUNDING TYPE MOUNTED AT 18" AFF UNLESS NOTED OTHERWISE
	GFCI GROUND TYPE DUPLEX RECEPTACLE - 125 VOLT, 20 AMPERE, 2 POLE, 3 WIRE, GROUNDING TYPE MOUNTED AT 18" AFF UNLESS NOTED OTHERWISE
	RECEPTACLE SYMBOL WITH ADDITIONAL SUBSCRIPT DESIGNATES TYPE OR SPECIFIC REQUIREMENTS AS FOLLOWS: "AC" INDICATES MOUNTED 8" ABOVE COUNTER UNLESS NOTED OTHERWISE ON ARCHITECTURAL ELEVATIONS "CLG" FLUSH CEILING MOUNTED OR 12" ABOVE WINDOW "+48" RECEPTACLE MOUNTED AT HEIGHT INDICATED "WP" WEATHERPROOF "WHILE-IN-USE" (HUBBELL #WP26M) COVER "CR" CONTROLLED RECEPTACLE WITH "CONTROLLED" IMPRINTED ON THE FACE OF DEVICE "U" DUPLEX RECEPTACLE WITH USB PORTS, LEVITON T5832 OR EQUAL "T" TAMPER RESISTANT "G" RECEPTACLE PROTECTED BY UPSTREAM GFCI OR GFCI BREAKER WITH "GFCI PROTECTED" LABEL ON THE FACE OF DEVICE
	SPECIAL PURPOSE RECEPTACLE.
	* COORDINATE EXACT NEMA CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
	JUNCTION BOX - SIZE PER N.E.C. ARTICLE 314 REQUIREMENTS
	COMBINATION VOICE/DATA OUTLET (4-11/16" x 2-1/8" DEEP JUNCTION BOX) COMPLETE WITH SINGLE GANG MUD RING (VERIFY DRYWALL THICKNESS) AND COVER PLATE (COLOR SELECTION BY ARCHITECT) MOUNTED AT 18" A.F.F. PROVIDE 3/4" CONDUIT WITH INSULATING BUSHING AND PULLSTRING STUBBED UP 12" INTO ACCESSIBLE CEILING SPACE.



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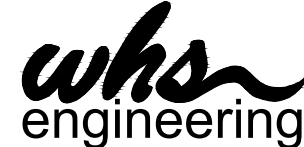
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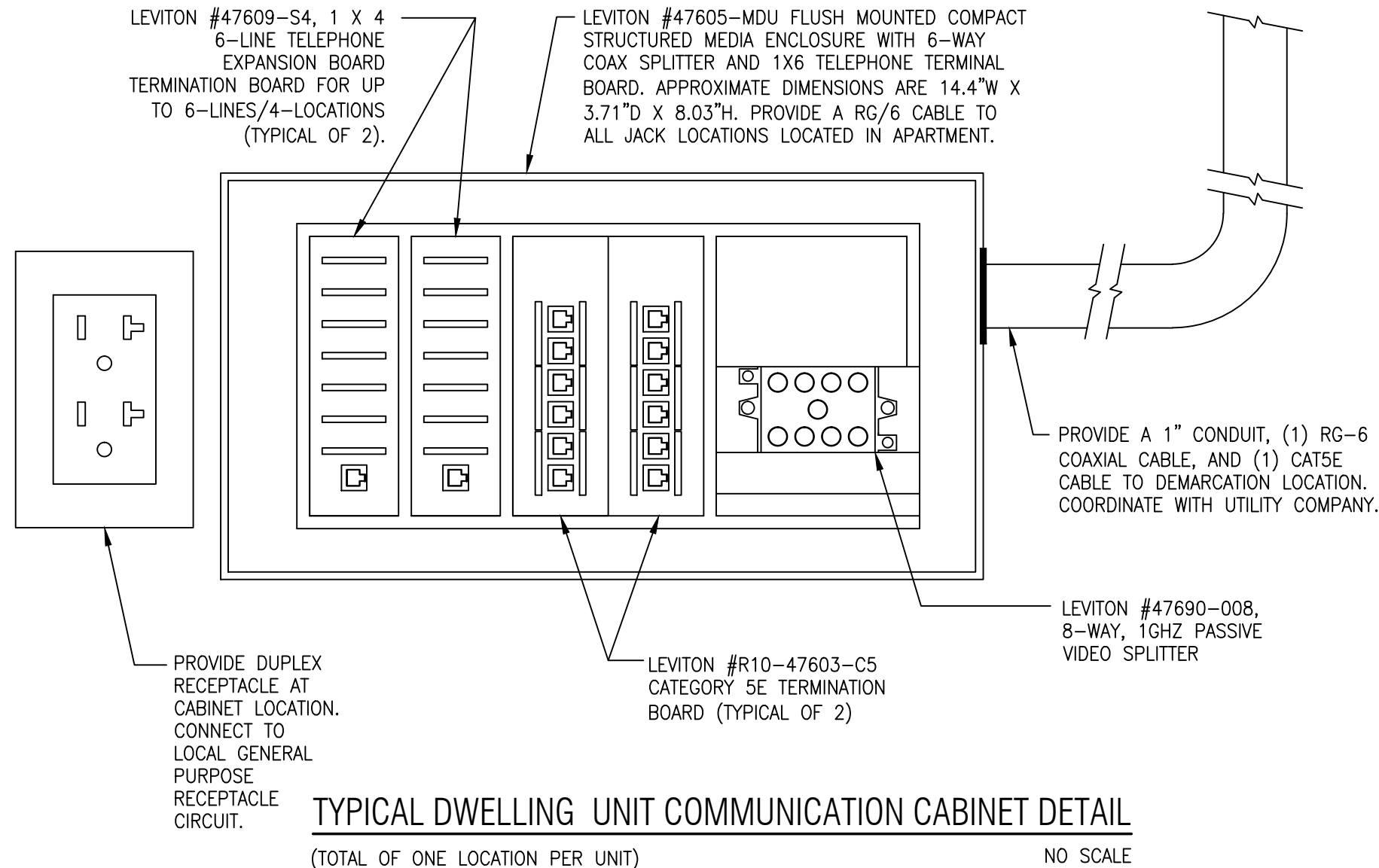
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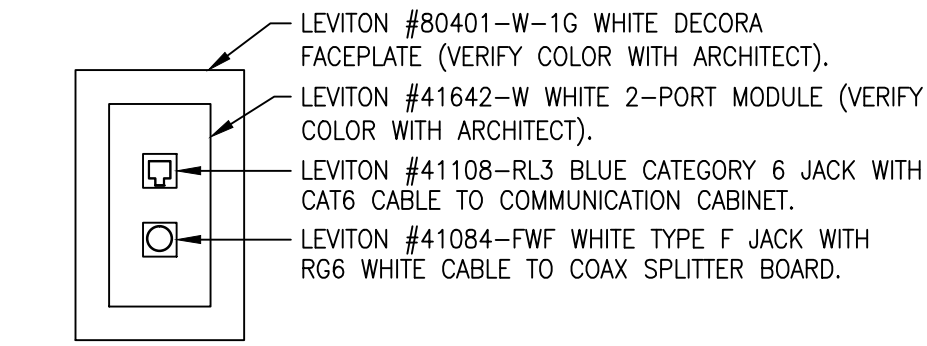
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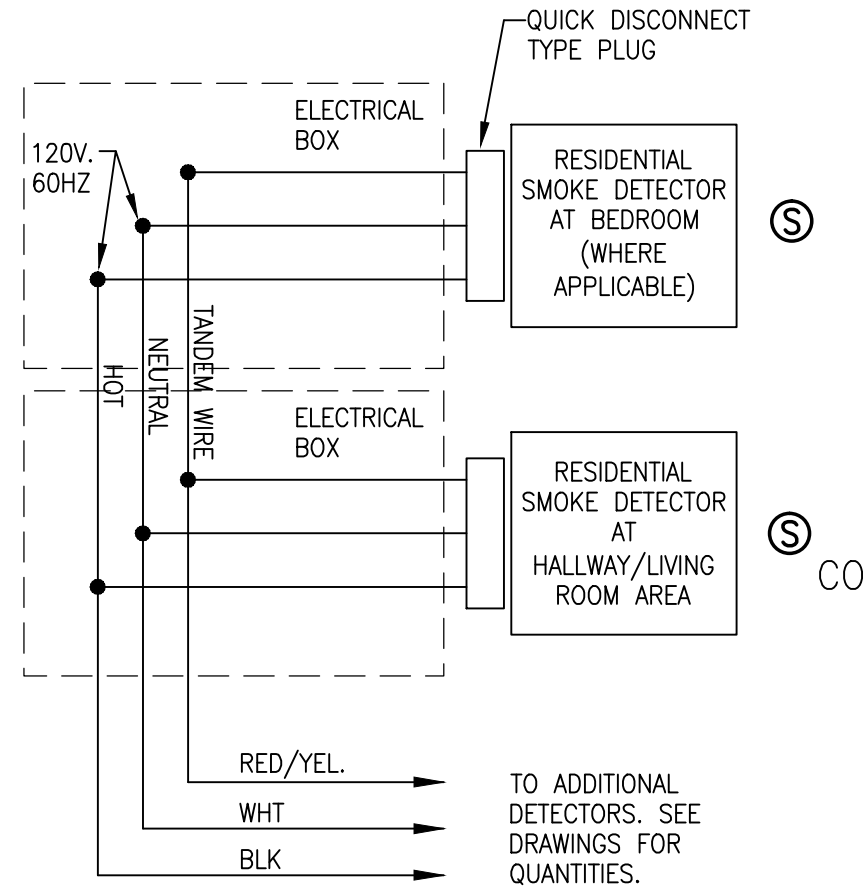
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TYPICAL DWELLING UNIT COMMUNICATION CABINET DETAIL
(TOTAL OF ONE LOCATION PER UNIT) NO SCALE



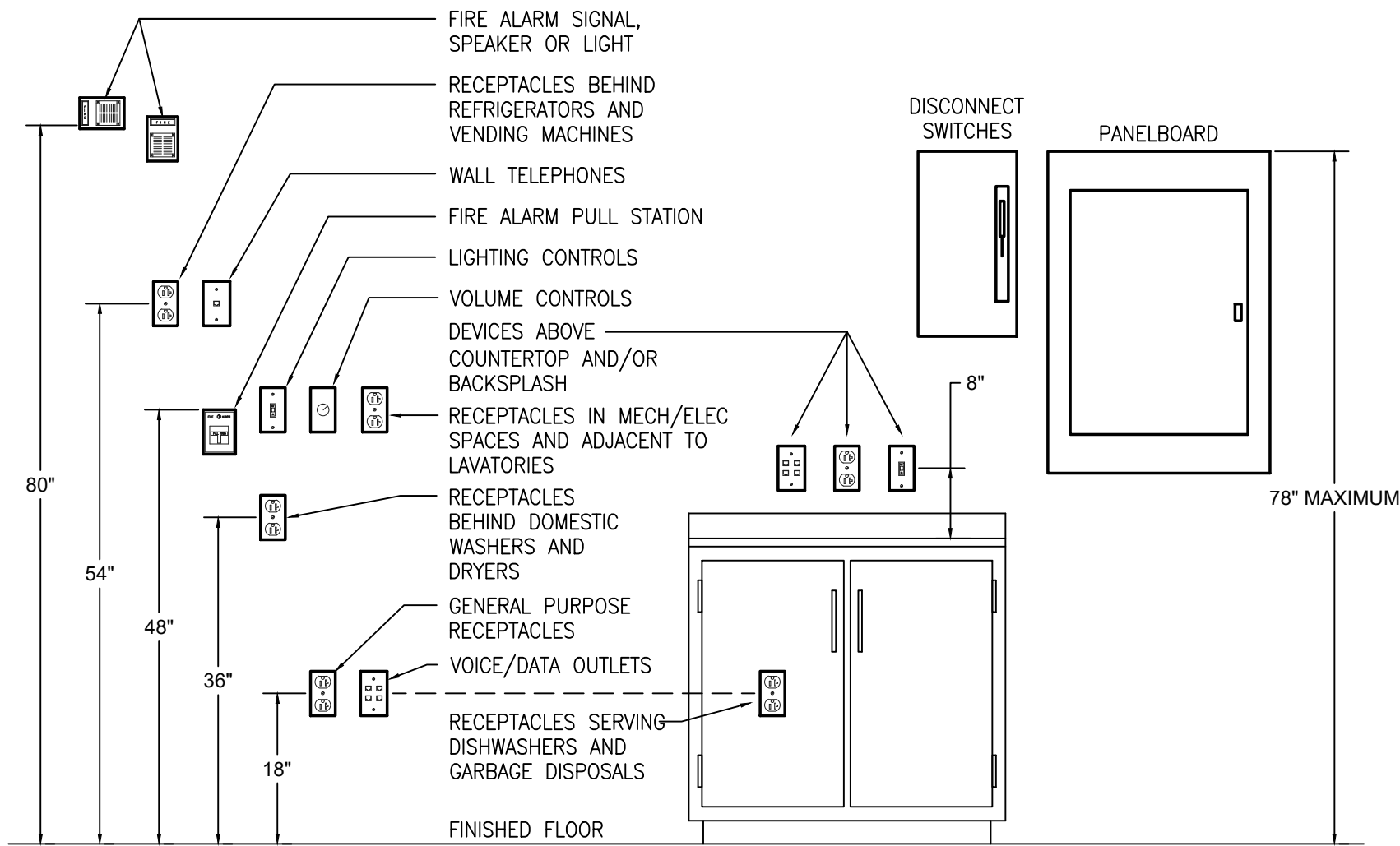
TYPICAL DWELLING UNIT COMMUNICATION JACK DETAIL
(PROVIDE AT ALL SPECIFIED LOCATIONS) NO SCALE



SINGLE UNIT SMOKE ALARM WIRING DIAGRAM
NO SCALE

TYPICAL APARTMENT SMOKE DETECTOR WIRING DIAGRAM NOTES:

1. PROVIDE ALL WIRING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, WIRING DIAGRAM AND ALL STATE AND LOCAL CODES. WIRE STROBE DEVICES SUCH THAT TANDEM DEVICES WILL INITIATE THE RELAYS OF THE "NON-ALARMING" DEVICES.
2. ALL ALARMS IN A TANDEM INSTALLATION MUST BE CONTROLLED BY THE SAME CIRCUIT BREAKER.
3. CIRCUIT BREAKER PROVIDING 120 VOLT POWER SHALL BE AFCI TYPE.
4. SMOKE DETECTOR(S) SHALL BE GENTEX #9000/9003.
5. STROBE DEVICES SHALL BE 120 VOLT, GENTEX #GXS-120177WW.
6. THIS SYSTEM BE PROVIDED WITH THE CAPABILITY TO SUPPORT VISIBLE ALARM NOTIFICATION.
7. COMBINATION SMOKE AND CARBON MONOXIDE ("CO") DETECTOR SHALL BE GENTEX #GN-503F.



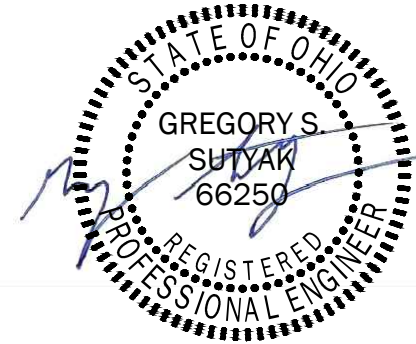
TYPICAL DEVICE MOUNTING DETAIL
SCALE: NOT TO SCALE

NOTES:

1. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO THE CENTERLINE OF DEVICE EXCEPT FIRE ALARM A/V DEVICES.
2. NO WIRING DEVICES OR OUTLET BOXES SHALL BE MOUNTED BACK TO BACK.
3. ALL MOUNTING DEVICES SHALL BE INSTALLED AT MOUNTING HEIGHTS AS INDICATED ON THIS DETAIL UNLESS OTHERWISE NOTED.
4. FOR ALL ELEVATIONS (WHERE APPLICABLE), CASEWORK DETAILS, FIRE WALLS, SMOKE WALLS, LOCATION OF COUNTERTOP RECEPTACLES, LIGHTING FIXTURE SWITCHES, TELEPHONE OUTLETS, EQUIPMENT ROUGH-INS, HEADWALLS, ETC., SEE ARCH DRAWINGS. WHERE NO ARCHITECTURAL ELEVATIONS OR DETAILS OCCUR, THE ELECTRICAL CONTRACTOR SHALL USE MEANS AND METHODS AS WELL AS THEIR FIELD KNOWLEDGE TO SPOT DEVICES IN THE BEST LOCATIONS FOR THE PROJECT.

GENERAL ELECTRICAL NOTES

1. ANY AND ALL "BUILDING STANDARDS" AND/OR "BUILDING SPECIFICATIONS" SHALL BE CONSIDERED AN INTEGRAL PART OF THESE DOCUMENTS AND THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A COPY OF THESE REQUIREMENTS/THIS DOCUMENT AND COMPLY WITH ALL REQUIREMENTS AND STANDARDS CONTAINED WITHIN.
2. THESE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE GENERAL ARRANGEMENT OF LIGHTING FIXTURES, DEVICES, CONTROLS, ELECTRICAL FIXTURES, MOTORS, PANELBOARDS, EQUIPMENT, ETC. THE LOCATIONS OF ALL ITEMS SHOWN ON THESE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE PROJECT. ALL LOCATIONS OF WORK EXPOSED TO VIEW ARE SUBJECT TO APPROVAL OF THE ARCHITECT PRIOR TO INSTALLATION.
3. THE ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO INSURE THAT ALL NEW WORK WILL FIT INTO THE EXISTING STRUCTURE IN THE MANNER INTENDED AND AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/OWNERS REPRESENTATIVE PRIOR TO ANY ROUGH-INS, FABRICATIONS, OR PERFORMING ANY WORK IN THE AREA INVOLVING DIFFERENCES. NOTIFICATION SHALL BE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS AND NOTES RELATED TO THE AREA.
4. ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DURING THE BIDDING PERIOD. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF HIS FAILURE TO HAVE BROUGHT SAID DISCREPANCIES TO THE ATTENTION OF THE ENGINEER DURING THE BIDDING PERIOD OR OF ANY ERROR ON THE CONTRACTOR'S PART.
5. ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT, PROFESSIONAL AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE.
6. ALL COMPONENTS SHOWN ON THE RISER/ONE-LINE DIAGRAMS, BUT NOT ON THE PLAN OR VICE VERSA, SHALL BE INCLUDED AS IF SHOWN ON BOTH.
7. REVIEW ALL TRADES' CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR ELECTRICAL EQUIPMENT. COORDINATE EXACT MOUNTING LOCATIONS WITH THE ARCHITECT.
8. REFER TO ARCHITECTURAL ELEVATIONS TO DERIVE EXACT LOCATIONS OF ALL RECEPTACLES, OUTLETS/JACKS, SWITCHES, ETC. LUMINAIRES AND CEILING MOUNTED EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.
9. EXACT LOCATION OF MECHANICAL EQUIPMENT THAT REQUIRE ELECTRICAL CONNECTION ARE SHOWN ON THE MECHANICAL DRAWINGS. FIELD VERIFY EXACT LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO ANY ROUGH-INS.
10. ALL CIRCUITING SHALL BE RUN CONCEALED UNLESS SPECIFIED OTHERWISE.
11. ALL RACEWAYS RUNNING THROUGH BUILDING EXPANSION JOINTS SHALL BE EQUIPPED WITH EXPANSION FITTINGS.
12. CONDUIT HOME RUNS SHOWN ON THE DRAWING WITH MORE THAN (3) CURRENT CARRYING CONDUCTORS ARE SHOWN DIAGRAMMATICALLY. THIS CONTRACTOR SHALL NOT INSTALL MORE THAN (3) CURRENT CARRYING CONDUCTORS IN A RACEWAY UNLESS NATIONAL ELECTRIC CODE (N.E.C), ARTICLE 310.15 DERATING FACTORS ARE APPLIED.
13. ALL LIGHTING AND GENERAL POWER BRANCH CIRCUITS SHALL INCLUDE A SEPARATE NEUTRAL CONDUCTOR, UNLESS SPECIFICALLY NOTED OTHERWISE.
14. MINIMUM CONDUCTOR SIZE FOR 120 VOLT BRANCH CIRCUITS SHALL BE #12 AWG. FOR 120 VOLT BRANCH CIRCUITS WITH HOMERUN OVER 100 LINEAR FEET, A MINIMUM WIRE SIZE OF #10 AWG SHALL BE PROVIDED FROM FIRST OUTLET BOX TO BRANCH CIRCUIT PANELBOARD. FOR 120 VOLT BRANCH CIRCUITS WITH HOMERUN OVER 150 LINEAR FEET, A MINIMUM WIRE SIZE OF #8 AWG SHALL BE PROVIDED FROM FIRST OUTLET BOX TO BRANCH CIRCUIT PANELBOARD.
15. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE ELECTRICAL SPECIFICATIONS FOR ACCEPTABLE CONDUIT TYPES/LOCATIONS AND ALTERNATIVE CABLE ASSEMBLIES. ALL CONDUIT SIZES ON THE DRAWINGS ARE BASED ON THE LATEST EDITION OF THE N.E.C. CONDUIT FILL TABLES FOR ELECTRICAL METALLIC TUBING (E.M.T). CONDUIT SIZES SHALL BE REVISED TO THE SIZE REQUIRED, RELATIVE TO THE ACTUAL CONDUIT TYPE TO BE INSTALLED.
16. IT IS NOT INTENDED THAT THE PLANS INDICATE ALL THE NECESSARY BENDS, OFFSETS, PULL BOXES AND OBSTRUCTIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL HIS WORK TO CONFORM TO THE STRUCTURE, MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AS REQUIRED.
17. IT IS NOT INTENDED THAT THE PLANS INDICATE ALL CONDUIT ROUTES, PULL BOXES, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL CONDUIT ROUTING, QUANTITY AND LOCATION OF PULL BOXES WITHIN ACCESSIBLE LOCATIONS.
18. WHERE MULTIPLE DEVICES ARE INDICATED IN A COMMON LOCATION, GANG INTO A SINGLE COVER PLATE.



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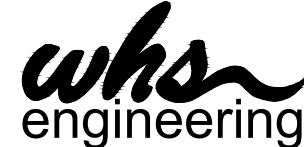
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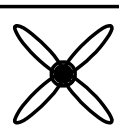


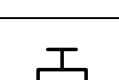
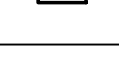
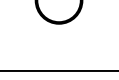

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UNIT LUMINAIRE SCHEDULE						
SYMBOL	TYPE	LAMP	WATTAGE	VOLTAGE	DESCRIPTION	CATALOG NUMBER
	CF	LED	17	120	CEILING FAN/LED LIGHT COMBO UNIT	SELECTED BY OWNER/ARCHITECT--TO BE PROVIDED AND INSTALLED BY E.C.
	A	-	-	120	RECESSED JUNCTION BOX FOR SURFACE MOUNTED FIXTURE	SELECTED BY OWNER/ARCHITECT--TO BE PROVIDED AND INSTALLED BY E.C.
	C	LED	-	120	LED VANITY WALL SCONCE FIXTURE	SELECTED BY OWNER/ARCHITECT--TO BE PROVIDED AND INSTALLED BY E.C.
	D	LED	-	120	LED EXTERIOR WALL SCONCE FIXTURE	SELECTED BY OWNER/ARCHITECT--TO BE PROVIDED AND INSTALLED BY E.C.
	E	LED	-	120	LED U.L. LISTED "WET LOCATION" RECESSED FIXTURE 4" IN DIAMETER	SELECTED BY OWNER/ARCHITECT--TO BE PROVIDED AND INSTALLED BY E.C.
	F	LED	-	120	LED U.L. LISTED "WET LOCATION" SHOWER FIXTURE	SELECTED BY OWNER/ARCHITECT--TO BE PROVIDED AND INSTALLED BY E.C.
	G	LED	-	120	LED U.L. LISTED "WET LOCATION" EXTERIOR PATIO FIXTURE	SELECTED BY OWNER/ARCHITECT--TO BE PROVIDED AND INSTALLED BY E.C.

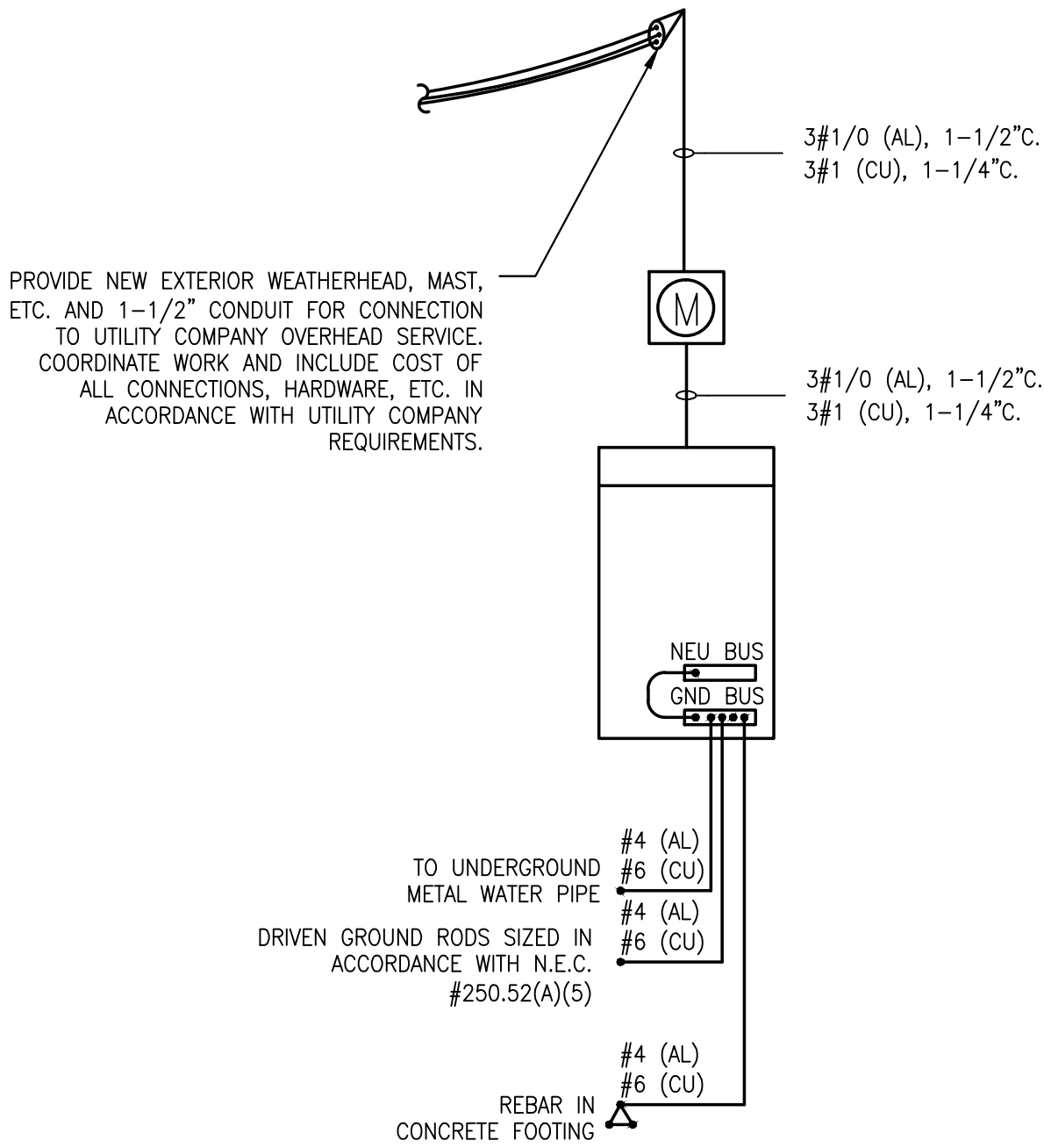
LUMINAIRE SCHEDULE GENERAL NOTES:

- VERIFY ALL LUMINAIRE COLORS, TRIMS, LENGTHS, ETC. WITH THE ARCHITECT PRIOR TO PLACING FINAL PURCHASE ORDERS. SUBMISSION OF SHOP DRAWINGS WILL BE INTERPRETED AS HAVING BEEN COORDINATED WITH THE ARCHITECTURAL DRAWINGS.
- PROVIDE ALL LENGTHS, FEEDS, ACCESSORIES, CONNECTORS, WIRING, POWER SUPPLIES, DRIVERS, ETC. FOR A COMPLETE INSTALLATION. THE E.C. SHALL VERIFY THE COMPLETE BILL OF MATERIAL WITH MANUFACTURER'S REPRESENTATIVE AND INSURE ALL EQUIPMENT IS INCLUDED IN BID PRICE. COORDINATE INSTALLATION WITH ARCHITECTURAL DETAILS.
- VERIFY FINAL LUMINAIRE LOCATIONS WITH OTHER CEILING MOUNTED EQUIPMENT SUCH AS DIFFUSERS, FIRE ALARM DEVICES, SPEAKERS, ETC., WITH ARCHITECTURAL REFLECTED CEILING PLANS.
- VERIFY EXACT MOUNTING HEIGHT AND LOCATIONS OF ALL WALL MOUNTED AND PENDANT MOUNTED LUMINAIRES WITH ARCHITECTURAL PLANS AND ELEVATIONS PRIOR TO ROUGH-IN.
- ANY PROPOSED ALTERNATE LUMINAIRES SHALL BE APPROVED BY THE ARCHITECT PRIOR TO FINAL BID PRICING.
- SHOULD THE CONTRACTOR PROPOSE TO FURNISH MATERIALS, EQUIPMENT, AND DEVICES, OTHER THAN THOSE SPECIFIED AND LISTED, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR SUBSTITUTIONS, TO THE ENGINEER AT LEAST TEN (10) BUSINESS DAYS PRIOR TO BID OPENING. THE REQUEST SHALL BE AN ALTERNATE TO THE ORIGINAL BID AND SHALL INCLUDE A COMPLETE SPECIFICATIONS CUT SHEET SUBMITTAL AS OUTLINED IN THE SPECIFICATIONS, COMPLETE WITH DESCRIPTIVE (MANUFACTURER, BRAND NAME, CATALOG NUMBER, ETC.) AND TECHNICAL DATA FOR ALL ITEMS. INDICATE ANY ADDITIONS OR DEDUCTIONS TO THE CONTRACT PRICE WITH THE SUBSTITUTION SUBMITTAL AND ON THE BID FORM.

TYPICAL UNIT EQUIPMENT CONNECTION SCHEDULE						
#	EQUIPMENT DESCRIPTION	VOLTAGE AND PHASE	KW	CONN. TYPE	HEIGHT	NOTES
1	REFRIGERATOR	120V-1Ø	1.080	#5-2ØR	48"	1,2
2	ELECTRIC RANGE	120/240V-1Ø	8.500	#14-5ØR	VERIFY	1,3,5,12
3	DISHWASHER	120V-1Ø	1.200	#5-2ØR	VERIFY	1,2,6
4	DISPOSER	120V-1Ø	.500	#5-2ØR	VERIFY	1,2,6
5	GAS WATER HEATER	120V-1Ø	0.180	#5-2ØR	48"	1,2
6	CONDENSING UNIT	208V-1Ø	2.912	U.D.S.	AT UNIT	1,4,7
7	RANGE HOOD/MICROWAVE	120V-1Ø	1.580	#5-2ØR	VERIFY	1,2
8	EXHAUST FAN	120V-1Ø	0.180	DIRECT	AT UNIT	1,2,9
9	WASHER	120V-1Ø	1.500	#5-2ØR	48"	1,2
10	DRYER	120/240V-1Ø	5.000	-	48"	1,5,11
11	FURNACE	120V-1Ø	1.116	-	48"	1,2

APPLIANCE CONNECTION SCHEDULE NOTES:

- THE E.C. SHALL VERIFY ALL EQUIPMENT SPECIFICATIONS (VOLTAGE, CONNECTION, ETC.) WITH OWNER PRIOR TO PLACING PURCHASE ORDER FOR DEVICES AND ROUGH-IN. VERIFY THE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS, MILLWORK, ETC. PRIOR TO ROUGH-IN.
- BRANCH CIRCUIT WIRING SHALL BE 2#12, 1#12(G).
- BRANCH CIRCUIT WIRING SHALL BE 3#6, 1#10(G).
- BRANCH CIRCUIT WIRING SHALL BE 2#10, 1#10(G).
- PROVIDE A TYPE "SO" CORD AND MATCHING PLUG TO APPLIANCE OR ATTACH CORD PROVIDED WITH APPLIANCE.
- PROVIDE A GFCI DUPLEX RECEPTACLE TO SERVE DISHWASHER AND DISPOSER. COORDINATE LOCATION OF DEVICE IN MILLWORK WITH ARCHITECT/G.C. ADDITIONALLY, PROVIDE A SINGLE POLE SWITCH MOUNTED ON FACE OF MILLWORK (AT ISLAND LOCATIONS) OR AT KITCHEN COUNTER BACKSPLASH TO CONTROL TOP OUTLET (DISPOSER). COORDINATE FINAL LOCATION WITH ARCHITECT/G.C. SWITCH TO BE IN ADA-COMPLIANT LOCATION WHERE REQUIRED.
- PROVIDE A NEMA 3R, 3ØA-2P (240V) UNFUSED DISCONNECT SWITCH AND INSTALL AT UNIT AS REQUIRED. BRANCH TO FINAL CONNECTION VIA FLEXIBLE METALLIC CONDUIT. THE REFERENCED DISCONNECT SWITCH MAY BE SUBSTITUTED WITH A WALL MOUNTED JUNCTION BOX WHERE THE WATER HEATER IS LOCATED WITHIN "LINE-OF-SIGHT" OF THE SERVING PANEL/CIRCUIT BREAKER IN ACCORDANCE WITH N.E.C. REQUIREMENTS.
- PROVIDE A MANUAL MOTOR STARTER MOUNTED AT/ON UNIT FOR MEANS OF DISCONNECT.
- PROVIDE DIRECT CONNECTION TO INTEGRAL DISCONNECT SWITCH ON UNIT.
- EXHAUST FAN UNIT TO BE PROVIDED BY M.C. AND INSTALLED BY E.C.
- BRANCH CIRCUIT WIRING SHALL BE 3#10, 1#10(G).
- IN ADDITION TO A NEMA #14-5ØR RECEPTACLE FOR ELECTRIC RANGE, PROVIDE A 120V-1Ø, NEMA #5-2ØR, SINGLE RECEPTACLE FOR GAS RANGE CONNECTION OPTION.



POWER RISER DIAGRAM
(120/240V-1Ø-3W) NO SCALE

PANEL SCHEDULE

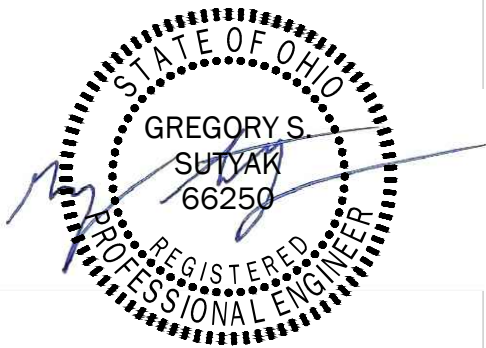
NAME: TP VOLTAGE: 120/208V-1Ø-3W
SPACES: 24 TYPE: SURFACE MOUNTED
MCB: 100 A-2P KWD: -

CKT.	DESCRIPTION	C/B	Ø	C/B	DESCRIPTION	CKT.
1	1 KITCHEN COUNTER REC.	20/1	A	20/1	REFRIGERATOR	2
1	3 KITCHEN COUNTER REC.	20/1	B	50/2	ELECTRIC RANGE	4
1	5 LIVING ROOM REC.	20/1	A			6
1	7 LIGHTING/SMOKE DET.	20/1	B	20/1	BEDROOM 1	8
	9 WATER HEATER	20/1	A	20/1	BEDROOM 2/HALL	10
1	11 WASHER	20/1	B	20/1	MASTER BEDROOM	12
	13 CONDENSING UNIT	35/2	A	20/1	MASTER BATHROOM	14
	15		B	30/2	DRYER	16
	17 RANGE HOOD/MICRO	20/1	A			18
4	19 DISHWASHER/DISPOSER	20/1	B	20/1	EXTERIOR RECEPITS	20
5	21 1ST FLOOR BATHROOM	20/1	A	20/1	FURNACE	22
5	23 2ND FLOOR BATHROOM	20/1	B	20/1	BASEMENT RECEPITS	24

TYPICAL UNIT PANEL SCHEDULE NOTES:

- PROVIDE AN ARC-FAULT TYPE CIRCUIT BREAKER TO SERVE THIS BRANCH CIRCUIT. PROVIDE ARC FAULT CIRCUIT BREAKERS TO ACCOMMODATE 2014 N.E.C.
- ALL LOAD CENTERS AND CIRCUIT BREAKERS SHALL BE RATED FOR A MINIMUM 10,000 SYMMETRICAL SHORT CIRCUIT RATING.
- PANEL ENCLOSURE DIMENSIONS ARE: 14-5/16"W X 3-7/8"D.
- PROVIDE G.F.C.I. PROTECTION IN ADDITION TO ARC-FAULT PROTECTION.
- PROVIDE G.F.C.I. PROTECTION FOR THIS BRANCH CIRCUIT.

DWELLING UNIT ELECTRIC SERVICE CALCULATION				
DESCRIPTION	AREA	LOAD	TOTAL KWC	N.E.C. ARTICLE
RECEPTACLES/LIGHTING	1336	3	4008	220.82(b)(1)
SMALL APPLIANCE CIRCUITS (2X1500)	-	3000	3000	220.82(b)(2)
REFRIGERATOR	-	700	700	220.82(b)(3)
ELECTRIC OVEN/RANGE	-	8000	8000	220.82(b)(3)
RANGE HOOD/MICROWAVE	-	1680	1680	220.82(b)(3)
DISHWASHER/DISPOSER	-	1200	1200	220.82(b)(3)
LAUNDRY CIRCUIT (WASHING MACHINE)	-	1500	1500	220.82(b)(2)
ELECTRIC DRYER	-	5000	5000	220.82(b)(3)
FURNACE	-	1116	1116	220.82(b)(3)
CONDENSING UNIT	-	2912	2912	220.82(b)(3)
GAS WATER HEATER	-	180	180	220.82(b)(3)
TOTAL CONNECTED LOAD	-	-	29296	-
100% OF FIRST 10kW + HVAC LOAD	-	-	14028	220.82(b)
40% OF REMAINING kW	-	-	6107	220.82(b)
TOTAL DEMAND LOAD	-	-	20135	-
AMPS AT 120/240V-1Ø-3W			84	



CLEVELAND SINGLE
FAMILY HOMES

THE ORLEAN COMPANY

SCATTERED SITES - GLENVILLE CLEVELAND, OHIO

Issue:
2018-12-11 - PRICING
2019-06-14 - FOR PERMIT
2019-10-11 - MEP Submission

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Project Number:

18053

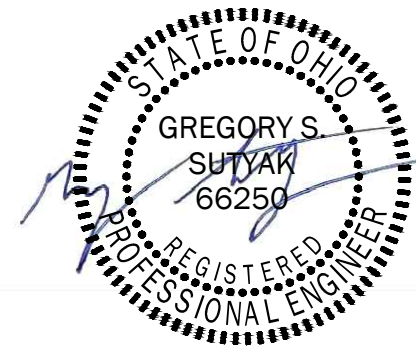
Sheet Number:

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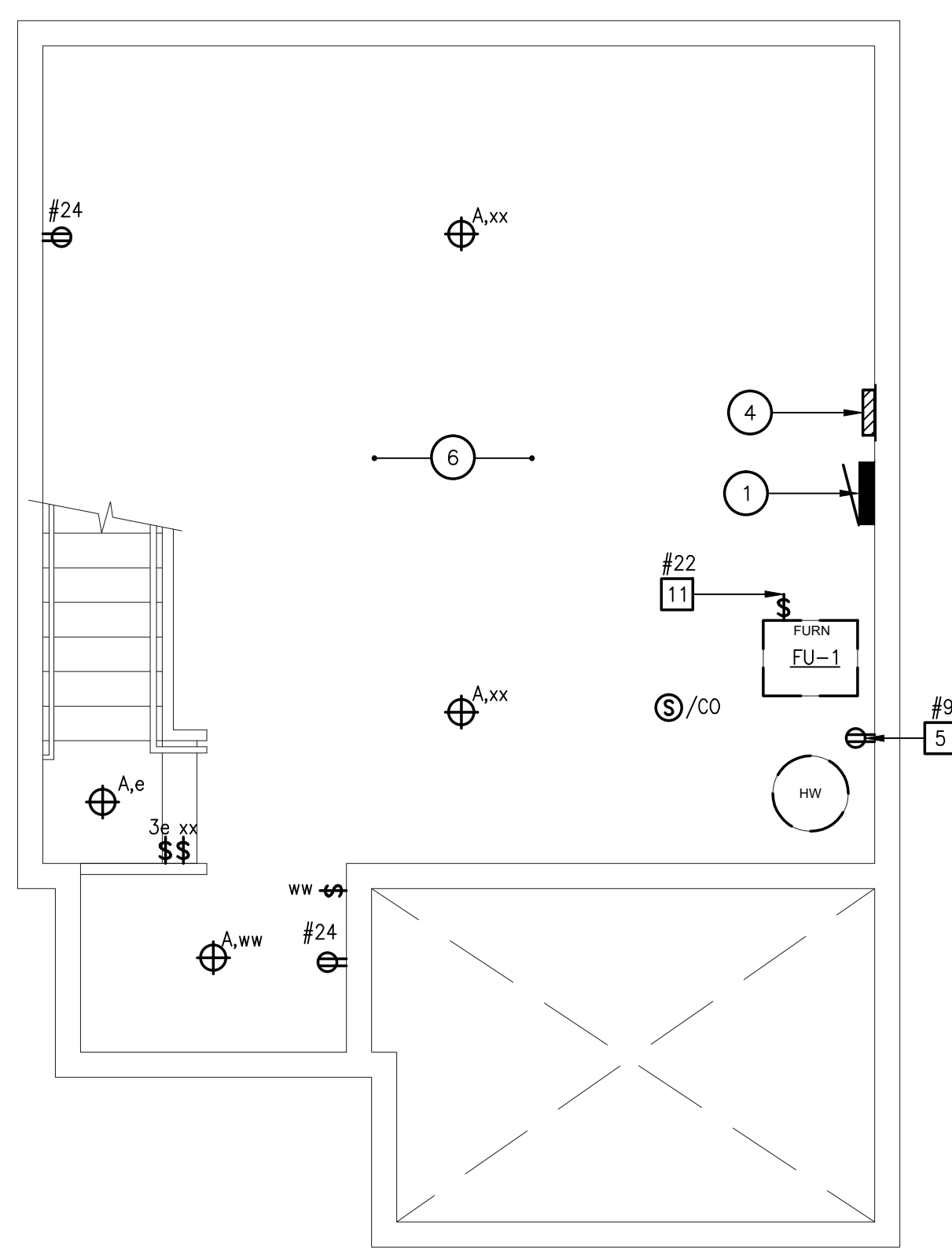
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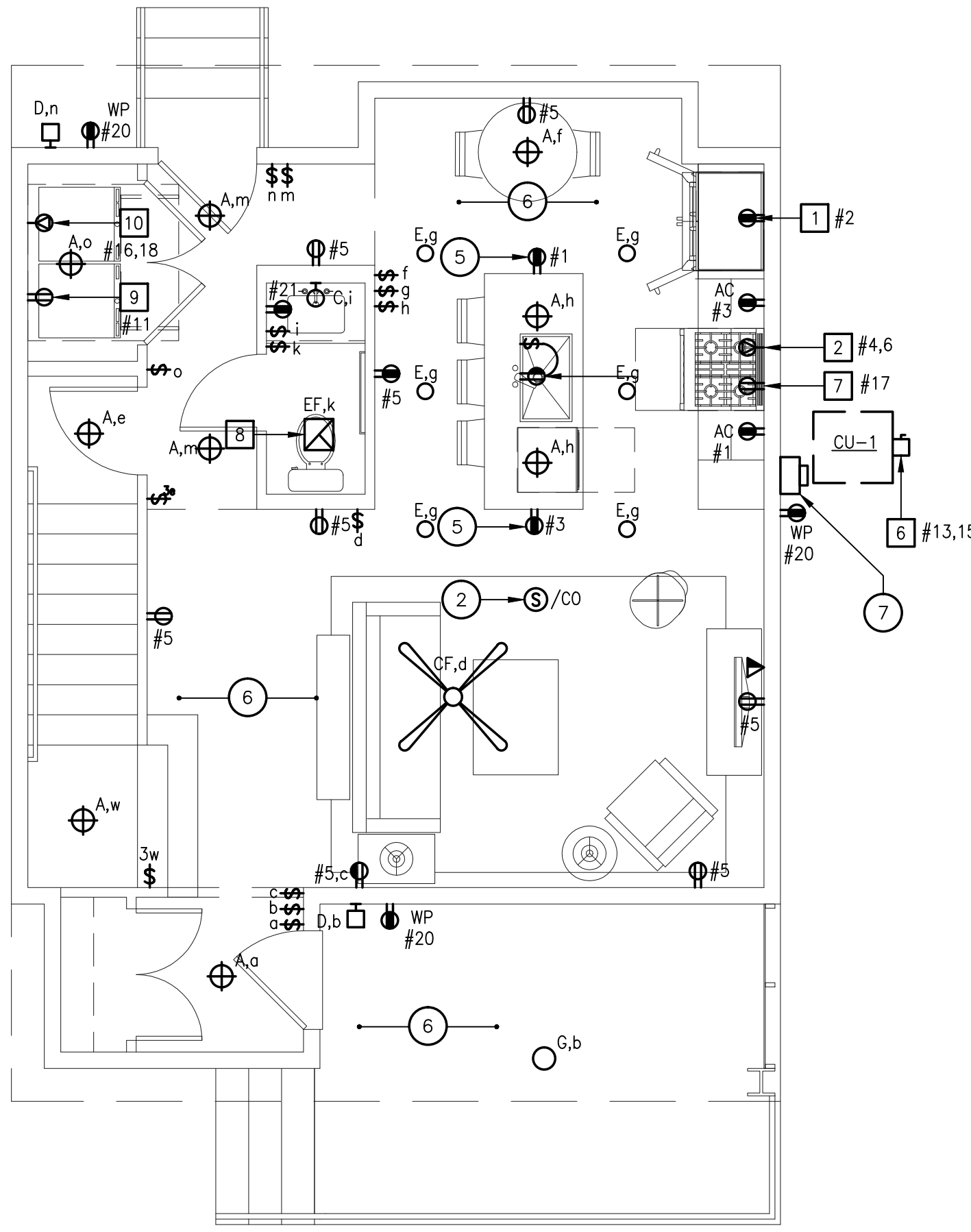
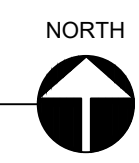


CLEVELAND SINGLE
FAMILY HOMES
THE ORLEAN COMPANY
SCATTERED SITES - GLENVILLE
CLEVELAND, OHIO

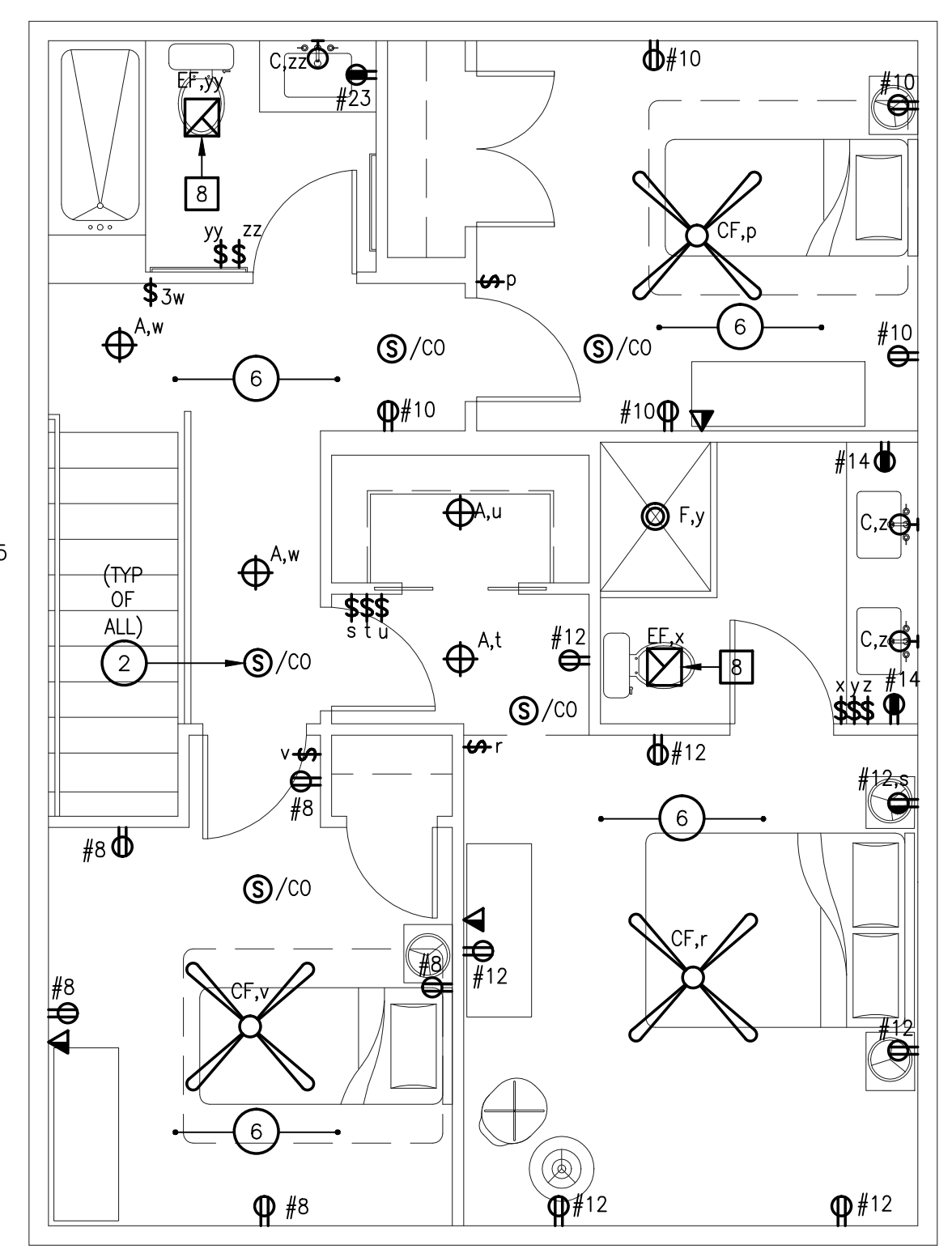
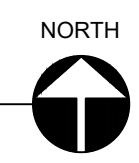
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2019-10-11 - MEP Submission



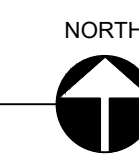
BASEMENT ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"



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



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



ELECTRICAL PLAN CONSTRUCTION NOTES:

- 1 LOCATION OF NEW CIRCUIT BREAKER LOAD CENTER. MAINTAIN WORKING CLEARANCES PER N.E.C. ARTICLE #110.26 REFER TO TYPICAL UNIT CIRCUIT BREAKER PANEL SCHEDULE FOR ELECTRICAL DETAILS. ALL LIVING AREA BRANCH CIRCUITS SHALL BE SERVED FROM AN ARC-FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER IN ACCORDANCE WITH N.E.C. ARTICLE #210.12(B).
- 2 PROVIDE MULTIPLE STATION, SELF-RESTORING TYPE SMOKE DETECTOR(S) WITH INTEGRAL BATTERY BACK-UP AND TANDEM WIRING CAPABILITY. PROVIDE CIRCUIT BREAKER "LOCK-ON" CLIP AND CONNECT TO RECEPTACLE CIRCUIT INDICATED ON PLAN. DETECTORS SHALL BE WIRED SUCH THAT UPON ACTIVATION OF (1) DETECTOR, ALL OTHER DETECTORS IN THE APARTMENT ARE INITIATED. REFER TO WIRING DIAGRAM ON DRAWING #EO-2. CONNECT TO LIGHTING CIRCUIT SERVING THIS LEVEL.
- 3 MODIFY WIRING FOR INDEPENDENT CONTROL OF LIGHT FIXTURE AND FAN. PROVIDE LIGHT SWITCH FOR LIGHT CONTROL, FAN TO OPERATE WITH INTEGRAL PULL CHAIN.
- 4 COMMUNICATION PANEL. REFER TO DETAIL ON DRAWING #EO-2 FOR ADDITIONAL INFORMATION.
- 5 INSTALL ISLAND/PENINSULA RECEPTACLE WITHIN 12" OF COUNTERTOP IN ACCORDANCE WITH N.E.C.
- 6 CONNECT ALL LIGHT FIXTURES ON THIS LEVEL TO CIRCUIT #7.
- 7 APPROXIMATE LOCATION OF UTILITY METER PROVIDED BY UTILITY COMPANY.

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