

1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING AND EXAMINING THE PROJECT SITE AND ALL EXISTING CONDITIONS PRIOR TO THE START OF WORK. THE GENERAL CONTRACTOR, SUBCONTRACTORS AND MATERIAL SUPPLIERS SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH EXISTING SITE CONDITIONS. ANY CONFLICTS SHALL BE RESOLVED BY THE DECISION OF THE OWNER PRIOR TO PROCEEDING WITH THAT PORTION OF THE WORK.
2. IT SHALL BE THE RESPONSIBILITY OF ALL WORKMEN TO PROTECT ALL EXISTING EQUIPMENT AND FACILITIES FROM UNNECESSARY DAMAGE. COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR TO MINIMIZE THE RISK OF DAMAGE TO EXISTING EQUIPMENT AND FACILITIES OF EACH INDIVIDUAL SUBCONTRACTOR FOR THEIR PORTION OF THE WORK.
3. ALL WORK SHALL BE CONDUCTED TO CONFORM WITH ALL APPLICABLE CODES AND ORDINANCES AS ADOPTED BY THE CITY OF SCOTTSDALE. WHERE CONFLICTS MAY OCCUR, THE MOST STRINGENT CODE OR ORDINANCE SHALL PREVAILENT.
4. THE INITIAL PROJECT LAYOUT SHALL BE VERIFIED WITH THE OWNER PRIOR TO THE START OF ANY WORK.

ALL CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND ADOPTED CITY OF SCOTTSDALE AMENDMENTS.

2021 INTERNATIONAL BUILDING CODE (ORD. # 4550, RESOLUTION #7348)
2021 INTERNATIONAL RESIDENTIAL CODE (ORD. # 4515, RESOLUTION #7353)
2021 INTERNATIONAL KITCHEN AND BATHING CODE (ORD. # 4550, RESOLUTION #7504)
2021 INTERNATIONAL MECHANICAL CODE (ORD. # 4550, RESOLUTION #7500)
2021 INTERNATIONAL PLUMBING CODE (ORD. # 4550, RESOLUTION #7501)
2020 NATIONAL ELECTRICAL CODE (ORD. # 4550, RESOLUTION #7506)
2020 INTERNATIONAL FIRE CODE (ORD. # 4562, RESOLUTION #7507)
2021 INTERNATIONAL GAS PIPELINE CODE (ORD. # 4550, RESOLUTION #7502)
2021 INTERNATIONAL ENERGY CONSERVATION CODE (ORD. # 4515, RESOLUTION #7503)
2021 INTERNATIONAL GREEN CONSTRUCTION CODE (ORD. # 4516, RESOLUTION #7505)
2009 ADA STANDARDS FOR ACCESSIBLE DESIGN
2005 ANSI A117

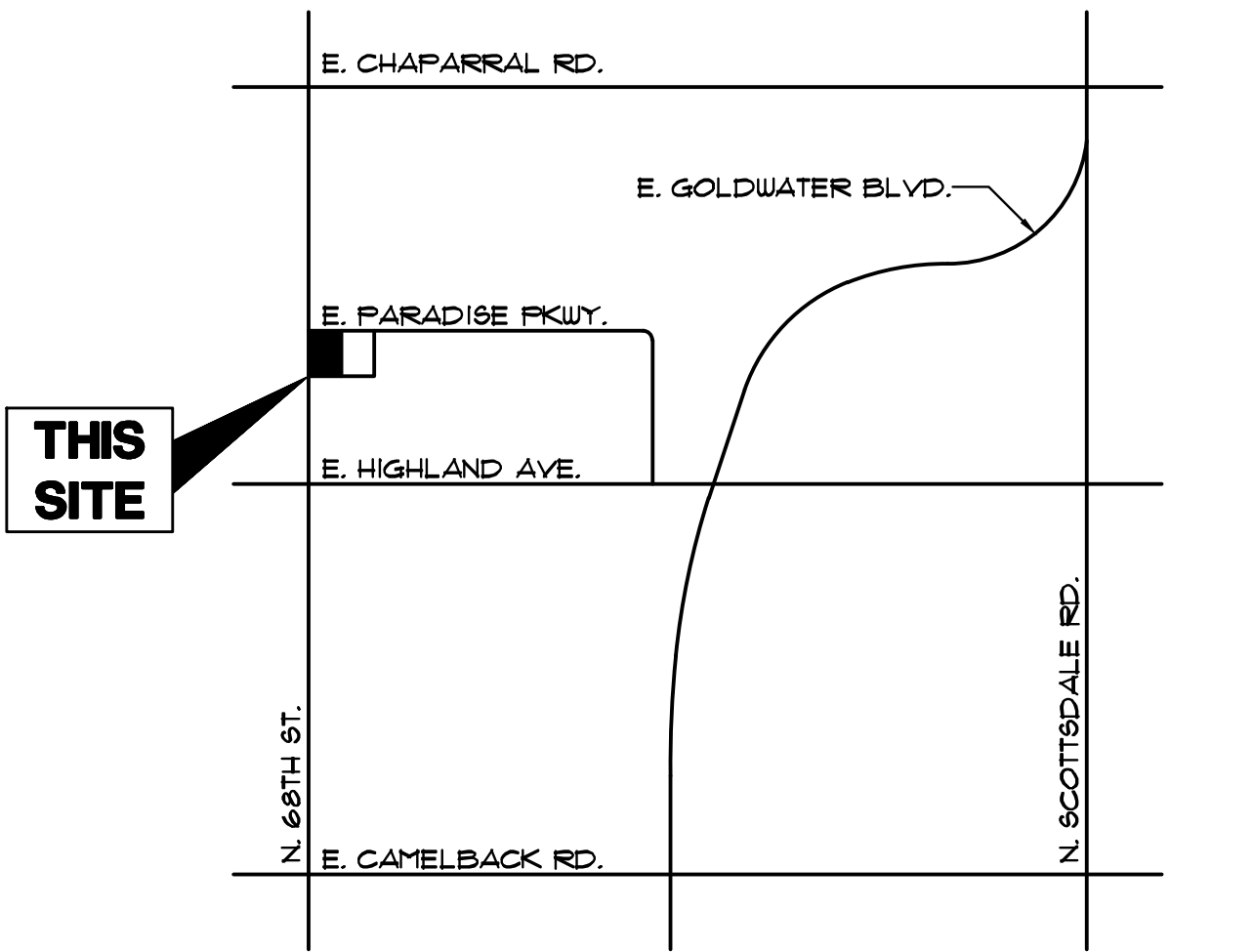
THIS PROJECT CONSISTS OF THE DEMOLITION OF AN EXISTING HOME AND THE CONSTRUCTION OF A NEW 6,306 SF. UNDER ROOF SINGLE FAMILY RESIDENCE. PROPOSED WORK WILL INCLUDE STRUCTURAL, MECHANICAL, PLUMBING & ELECTRICAL AS REQUIRED TO ACCOMPLISH SAID WORK SHOWN HEREIN.

LOT 30, PARADISE MEADOWS, ACCORDING TO THE PLAT RECORDED IN
BOOK 78 OF MAPS, PAGE 36, RECORDS OF MARICOPA COUNTY, ARIZONA
EXCEPT THE EAST 112.24 FEET OF.

- A1.0 SITE PLAN / PROJECT DATA
- A2.0 NOTED FLOOR PLAN
- A3.0 NOTED FLOOR PLAN
- A3.0 SOUTH & WEST ELEVATIONS
- A3.1 NORTH & EAST ELEVATIONS
- A4.0 ROOF PLAN
- B1.0 BUILDING SECTIONS
- G4.0 GENERAL STRUCTURAL NOTES
- S1 FOUNDATION PLAN
- S2 ROOF FRAMING PLAN & DETAILS
- S4.0 SLAB PLAN
- D1 STRUCTURAL DETAILS
- D2 STRUCTURAL DETAILS
- E1.0 ONE-LINE DIAGRAM
- E2.0 POWER SCHEDULE
- E2.0 ELECTRICAL POWER PLAN
- E3.0 ELECTRICAL LIGHTING PLAN
- M1 PANEL SCHEDULES
- M2.0 MECHANICAL PLAN
- P1.0 MECHANICAL SCHEDULE
- P2.0 WASTE ISOMETRIC

PROJECT NAME:	NEW HOME FOR WORTH DEVELOPMENT
PROJECT ADDRESS:	4133 NORTH 68th STREET SCOTTSDALE, ARIZONA 85251 APN# 173-34-078D
OWNER:	EPARCWAY, LLC 1814 AIROLE WAY AUSTIN, TEXAS 78704
LEGAL DESCRIPTION:	LOT 36, PARADISE MEADOWS MCR 18-36-22 2N 4E
ZONING:	R1-10
SETBACKS:	30' FRONT SETBACK, 15' STREET SIDE SETBACK, 25' REAR SETBACK, 4' SIDE SETBACK
NET SITE AREA:	14,849 SF. (341 ACRES)
NAOS AREA REQUIRED:	N/A
NAOS AREA DEDICATED:	N/A
ALLOWABLE BUILDING HEIGHT:	30'-0" (TWO STORIES)
TYPE OF CONSTRUCTION:	YB
<u>BUILDING AREA TABULATION:</u>	
NEW LIVABLE:	4,700 SF.
NEW 3-CAR GARAGE:	819 SF.
TOTAL BUILDING AREA:	5,580 SF.
NEW COVERED ENTRY:	42 SF.
NEW COVERED PATIO:	684 SF.
TOTAL COVERED AREA:	726 SF.
<u>UNDER ROOF CALCULATION:</u>	5,580 SF. + 726 SF. = 6,306 SF.
<u>TOTAL AREA UNDER ROOF:</u>	6,306 SF.
<u>LOT COVERAGE CALCULATION:</u>	6,306 SF. / 14,849 SF. = .4246 (42.46%)
<u>ALLOWABLE DENSITY:</u>	ONE SINGLE FAMILY DUELLING UNIT
<u>PARKING REQUIRED:</u>	2 SPACES PER 1 DUELLING UNIT
<u>PARKING PROVIDED:</u>	3 SPACES PROVIDED

- (1) DEMOLISH EXISTING RESIDENCE, SITE AMENITIES, SEPTIC SYSTEM & POOL IN THEIR ENTIRETY.
- (2) EXISTING CONCRETE CURB, GUTTER TO REMAIN.
- (3) EXISTING 6'-0" HIGH MASONRY WALL TO REMAIN.
- (4) LOCATION OF EXISTING 6" ACP WATER MAIN.
- (5) LOCATION OF EXISTING 6" CIP WATER MAIN.
- (6) LOCATION OF EXISTING WATERLINE TAP TO REMAIN.
- (7) REMOVE EXISTING WATER METER, CAP EXISTING WATER SERVICE PER C.O.S. REQUIREMENTS.
- (8) NEW 3/4" WATER METER - REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- (9) NEW 1 1/4" WATER SERVICE - REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- (10) APPROXIMATE LOCATION OF EXISTING SEWER MANHOLE.
- (11) LOCATION OF EXISTING 8" VCP SEWER MAIN TO REMAIN.
- (12) LOCATION OF NEW 4" PVC SEWER SERVICE TAP PER C.O.S. REQUIREMENTS.
- (13) 4B LINIER FEET OF NEW 6" HIGH MASONRY SCREEN WALL.
- (14) NEW SELF-CLOSING, SELF-LATCHING GATE.
- (15) 7 LINIER FEET OF NEW 6" HIGH MASONRY SCREEN WALL.
- (16) EXTERIOR GAS FIREPLACE - REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- (17) NEW METER & ELECTRICAL SERVICE PANEL - REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- (18) NEW 4" THICK CONCRETE DRIVEWAY OVER 4" A.B.C.
- (19) NEW 4" THICK CONCRETE FLATWORK OVER 4" A.B.C.
- (20) LOCATION OF NEW 400A/MF ELECTRICAL SERVICE.
- (21) LOCATION OF SCREENED POOL EQUIPMENT.
- (22) LOCATION OF GAS BAR-B-QUE.
- (23) LOCATION OF GAS FIT PIT.



SCALE: N.T.S.

[illegible]

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**A NEW HOME FOR:
WORTH DEVELOPMENT**

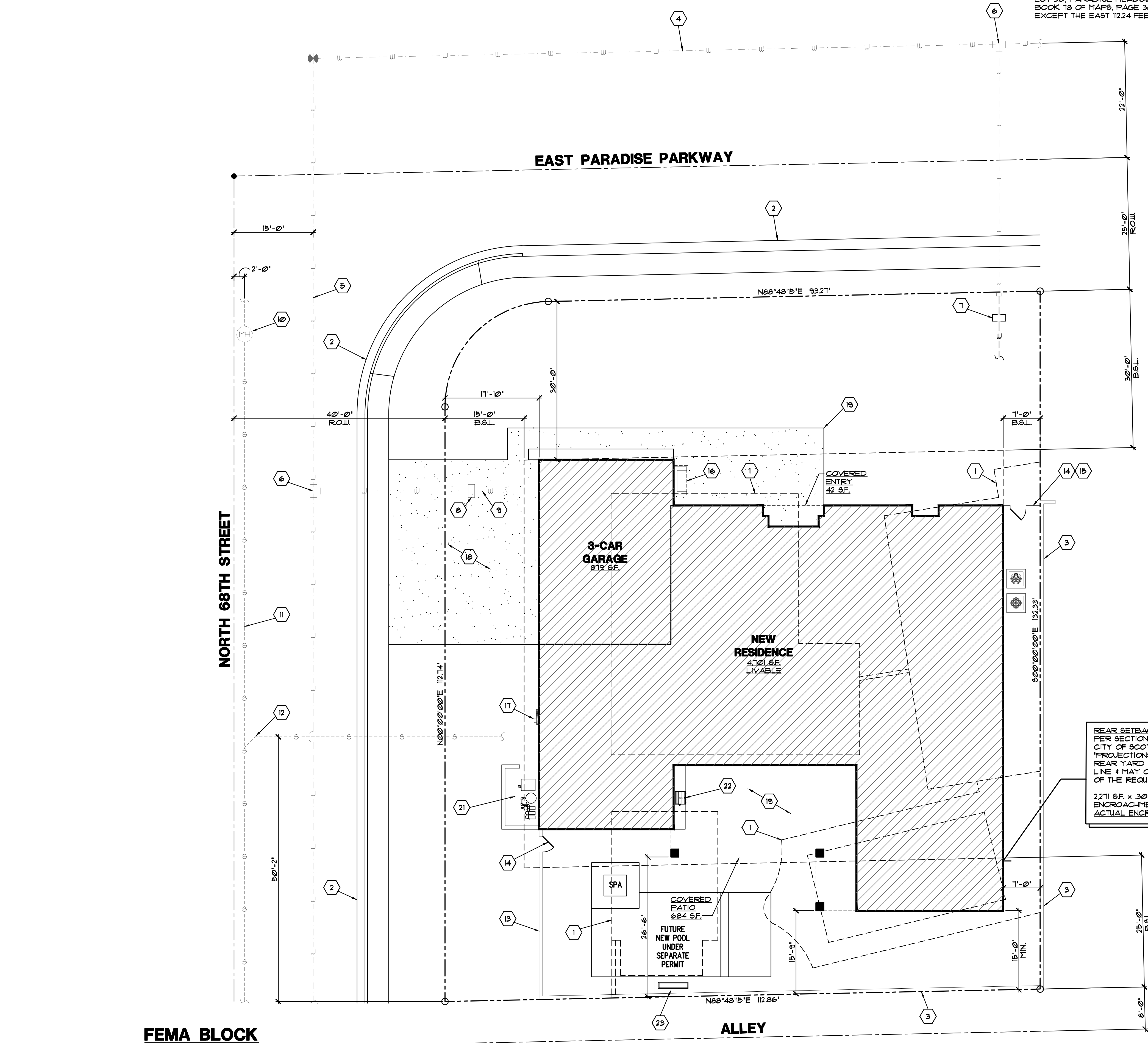
**4733 NORTH 68th STREET
SCOTTSDALE, ARIZONA 85251**

Title:	SITE PLAN & PROJECT DATA
Date:	11-12-2025
Project number:	2025-31
Drawn by:	MARK WALTH
Checked by:	MARK WALTH
CAD file:	

- ☐ Design Development
☐ Progress Const. Docs.
☒ City Submittal
☐ Bid Package
☐ Construction Issue
☐ Record Drawings

Sheet Number:

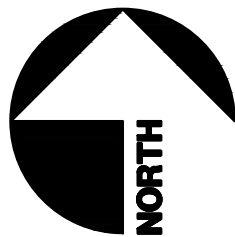
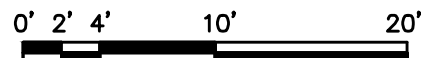
A1.0

**Flood Insurance Rate Map (FIRM) Information**

Community Number	Panel Number	Panel Date	Suffix	Firm Date	Firm Zone	Base Flood Elevation (A0 Zone, use depth)
04013C	1770	9/18/20	M	9/18/20	X	—

"STATEMENT OF CERTIFICATION"
THE LOWEST FLOOD ELEVATION AND/OR FLOOD PROOFING ELEVATIONS FOR THE REMODEL AND/OR
PROPOSED ADDITIONS ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING
CAUSED BY A 100-YEAR STORM, AND ARE IN ACCORDANCE WITH SCOTTSDALE REVISE CODE, CHAPTER
37 - FLOODPLAIN AND STORMWATER REGULATION.

SCALE: 1"=10'-0"



Call at least two full working days
before you begin excavation.

ARIZONA 811
Arizona Blue Stake, Inc.

Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100



EXTERIOR WALLS TO BE 2x6 WOOD STUDS @ 16" O.C.
 INTERIOR PLUMBING AND BEARING WALLS TO BE 2x6 WOOD STUDS @ 16" O.C.
 INTERIOR WALLS TO BE 2x4 WOOD STUDS @ 16" O.C.
 SMOKE DETECTOR
 SMOKE & CARBON MONOXIDE COMBINATION DETECTOR
 HOSE BIB

1. ALL DOORS & WINDOWS ACCESSING THE POOL AREA MUST COMPLY WITH IRC SEC. AG 109.2 POOL BARRIERS, IRC SEC. R602.3 GLAZING IN HAZARDOUS LOCATIONS & CITY OF SCOTTSDALE POOL BARRIER REQUIREMENTS.
2. NEW DOORS & WINDOWS SHALL MEET GLAZING HAZARDOUS LOCATIONS PER R602.3 (GLAZING LESS THAN 60" ABOVE WALKING SURFACE & LESS THAN 60" FROM POOL WATERS EDGE).

2021 IRC (T.N102.13)
PRESCRIPTIVE ENERGY COMPLIANCE

FINESTRATIONS/SLAZING:
SHGC: 0.25 MAX U-FACTOR: 0.40 MAX.

INSULATION:
FRAME WALLS: R-19 (2X6) R-15 (2X4)
CM/MASS WALLS: R-6

ATTN: R-44

1. COMPLY TO 5.1 S.F. MIN. PER R310.1
2. COMPLY TO MIN. CLEAR OPENING HEIGHT OF 24" PER R310.2
3. COMPLY TO MIN. CLEAR OPENING WIDTH OF 20" PER R310.3
4. COMPLY TO MAX. SILL HEIGHT OF 44" ABOVE FINISH FLOOR PER R310.1

R307.2 BATHTUB AND SHOWER SPACES. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET (1829mm) ABOVE THE FLOOR.

SHOWER AREA WALLS SHALL BE FINISHED WITH A SMOOTH, HARD NON-ABSORBENT SURFACE, SUCH AS CERAMIC TILE, TO A HEIGHT OF NOT LESS THAN 72 INCHES ABOVE THE DRAIN INLET. CEMENT, FIBER-CEMENT OR GLASS MATT GYPSUM BACKERS INSTALLED IN SHOWER AND BATH AREAS MUST MEET THE MANUFACTURER'S RECOMMENDATIONS TO BE USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN SHOWER AREAS. (R702.4.2)

EXHAUST AIR FROM BATHROOMS, KITCHEN AND TOILET ROOMS SHALL BE EXHAUSTED DIRECTLY TO THE OUTDOORS, NOT RECIRCULATED OR DISCHARGED INDOORS. (M107.2 AMENDED)

PLUMBING FIXTURES SHALL COMPLY WITH THE FOLLOWING CONSERVATION REQUIREMENTS:

- WATER CLOSETS-TANK TYPE 1.28 GAL./FLUSH.
- SINKS-2.2 GPM
- LAVATORY-1.5 GPM

(TABLE P2403.2 AMENDED)

NOTE: ISORN 408 FIREPLACE (ASR-2316) 1/4" 48" 1/2" OPENING. W/ 1/2" X 2" MIN. NON-COMBUSTIBLE HEARTH EXTENSION - PERMANENTLY INSTALL NEW 80000 BTU GAS LOG SET IN ACCORDANCE WITH RGS 41052.2 (ANSI Z21.88) PROVIDE ONE SCREENED OPENINGS WITH MINIMUM 1" SG. PER 4080 BTUS (20 SG. IN PER OPENING) RGS 42047.61 R1006.2 - VERIFY CONFIGURATION IN MANUF. SPEC'S.

NOTE: R1004.4 INVENTED GAS LOG HEATERS, AN INVENTED GAS LOG HEATER IS NOT PERMITTED IN A FACTORY-BUILT FIREPLACE. UNLESS THE FIREPLACE SYSTEM HAS BEEN SPECIFICALLY TESTED, LISTED AND LABELED FOR SUCH USE IN ACCORDANCE WITH UL 127.

PREF-AB METAL TOP VENT FLUE W/ FLUE CAP. PROVIDE APPROVED BARRIER BETWEEN INSULATION & FLUE.

SCALE: $3/16" = 1'-0"$

—

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PHOENIX, ARIZONA 85032

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WORTH DEVELOPMENT

SCOTTSDALE, ARIZONA 85251

Title: NOTED FLOOR PLAN

11 10 0005

project number: 0005 34

Drawn by: MARK WALTH

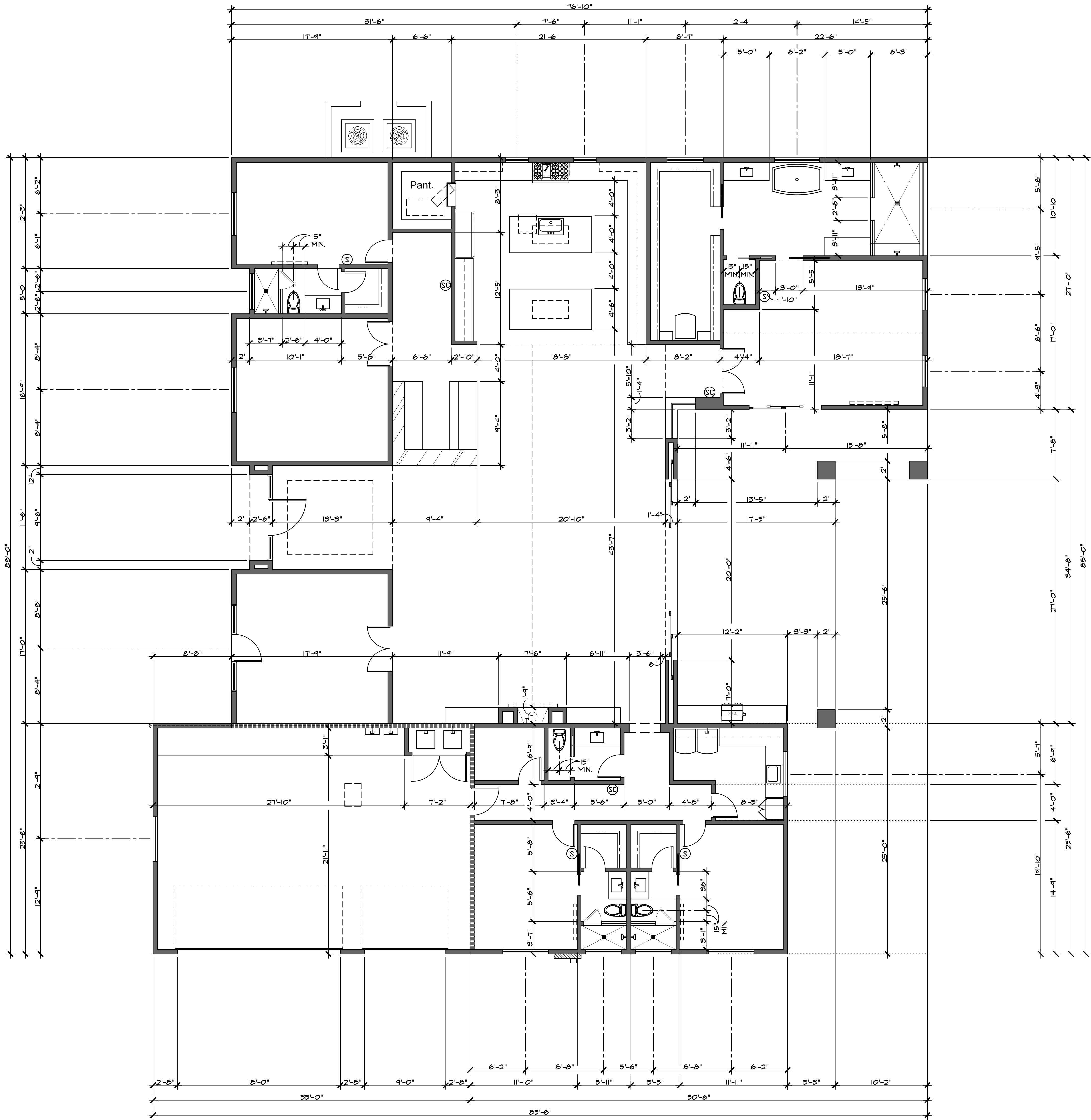
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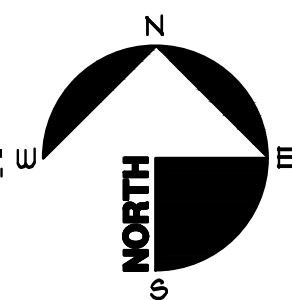
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DIMENSIONED FLOOR PLAN

SCALE: 3/16" = 1'-0"



LEGEND

- EXTERIOR WALLS TO BE 2x6 WOOD STUDS @ 16" O.C.
- INTERIOR PLUMBING AND BEARING WALLS TO BE 2x6 WOOD STUDS @ 16" O.C.
- INTERIOR WALLS TO BE 2x4 WOOD STUDS @ 16" O.C.
- SMOKE DETECTOR
- SMOKE & CARBON MONOXIDE COMBINATION DETECTOR
- HOSE BIB

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WORTH DEVELOPMENT

4733 NORTH 68th STREET
SCOTTSDALE, ARIZONA 85251

Title: DIMENSIONED FLOOR PLAN

Date: 11-12-2025

Project number: 2025-31

Drawn by: MARK WALTH

Checked by: MARK WALTH

CAD file:

☐ Design Development

☐ Progress Const. Docs.

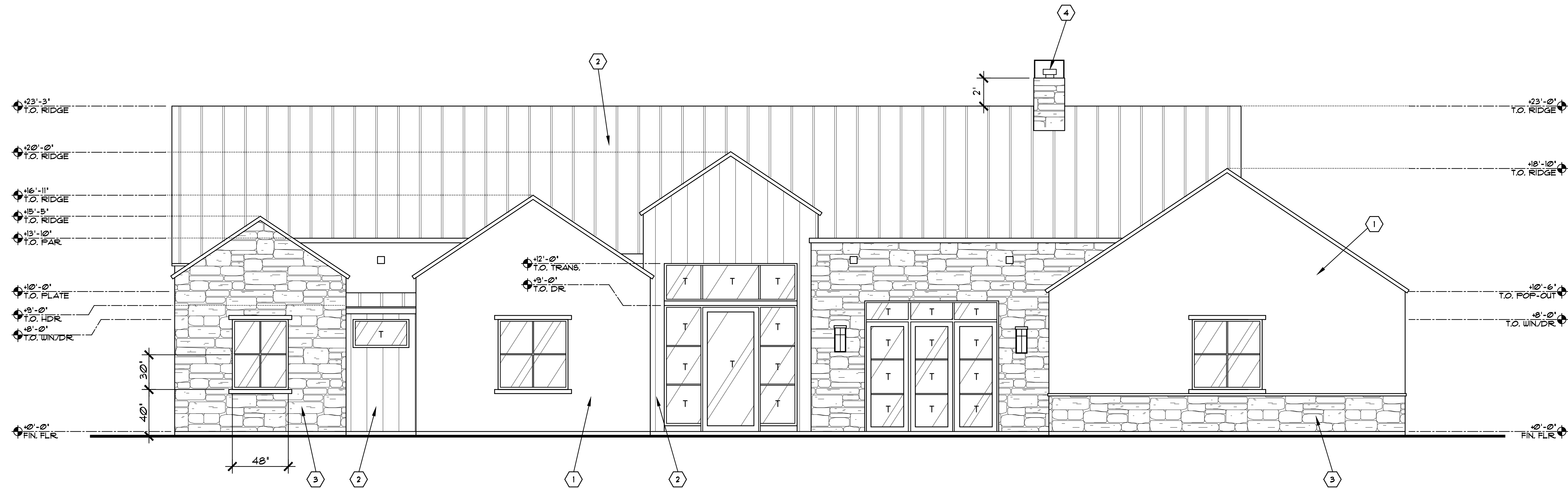
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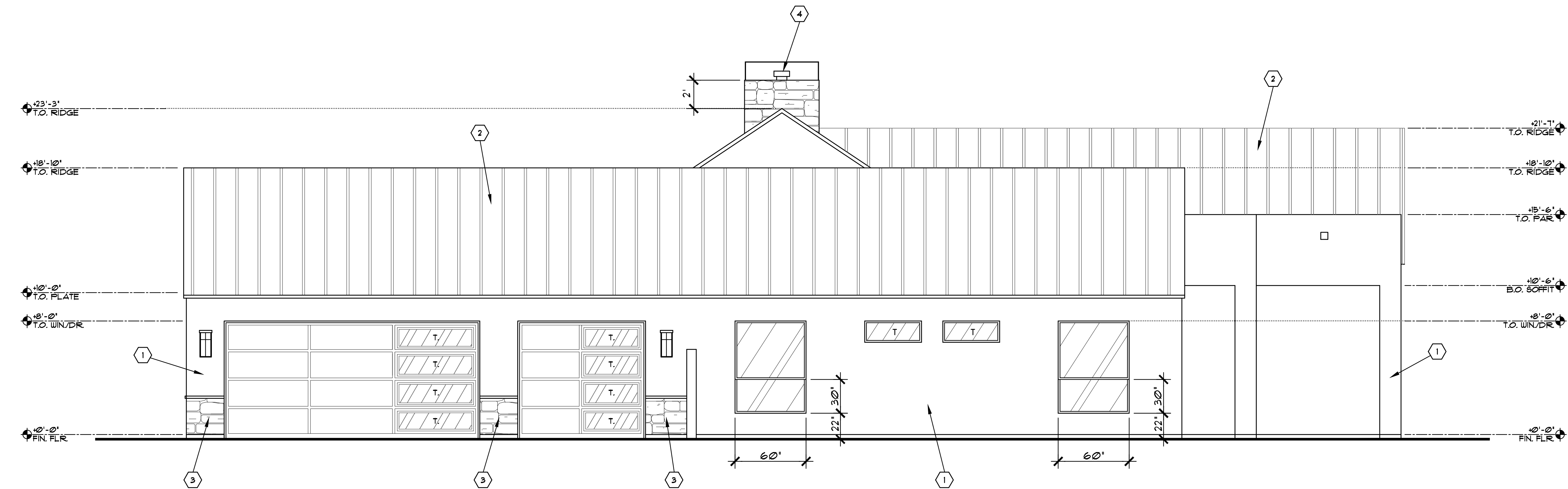
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A2.1



SOUTH ELEVATION

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



EAST ELEVATION

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

KEY NOTES

1. ULTRAKOTE ONE-COAT STUCCO SYSTEM ESR-1411
2. STANDING SEAM METAL ROOF, ESR-2048
3. CULTURED STONE VENEER ESR-3910, TYPICAL
4. ULL APPROVED SPARK ARRESTOR TYP. PROVIDE OUTSIDE COMBUSTION AIR FOR INTERIOR FIREPLACES. (R1606.2)

NOTE:
"T" INDICATES TEMPERED GLASS.

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**4733 NORTH 68th STREET
SCOTTSDALE, ARIZONA 85251**

Title: SOUTH & EAST ELEVATIONS

Date: 11-12-2025

Project number: 2025-31

Drawn by: MARK WALTH

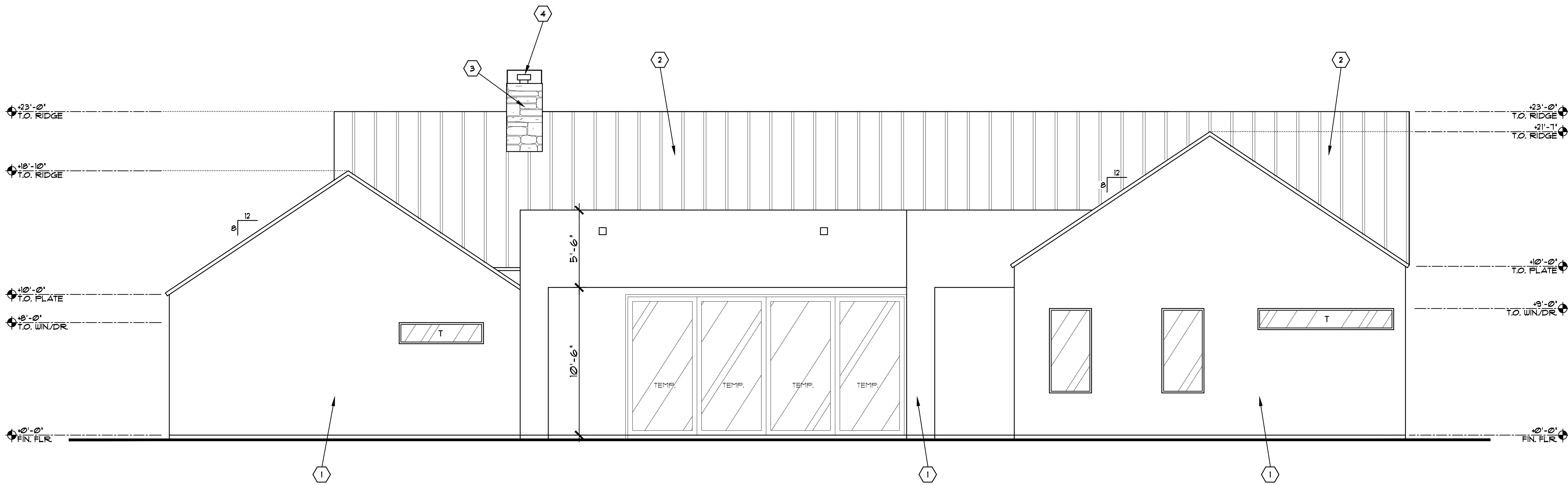
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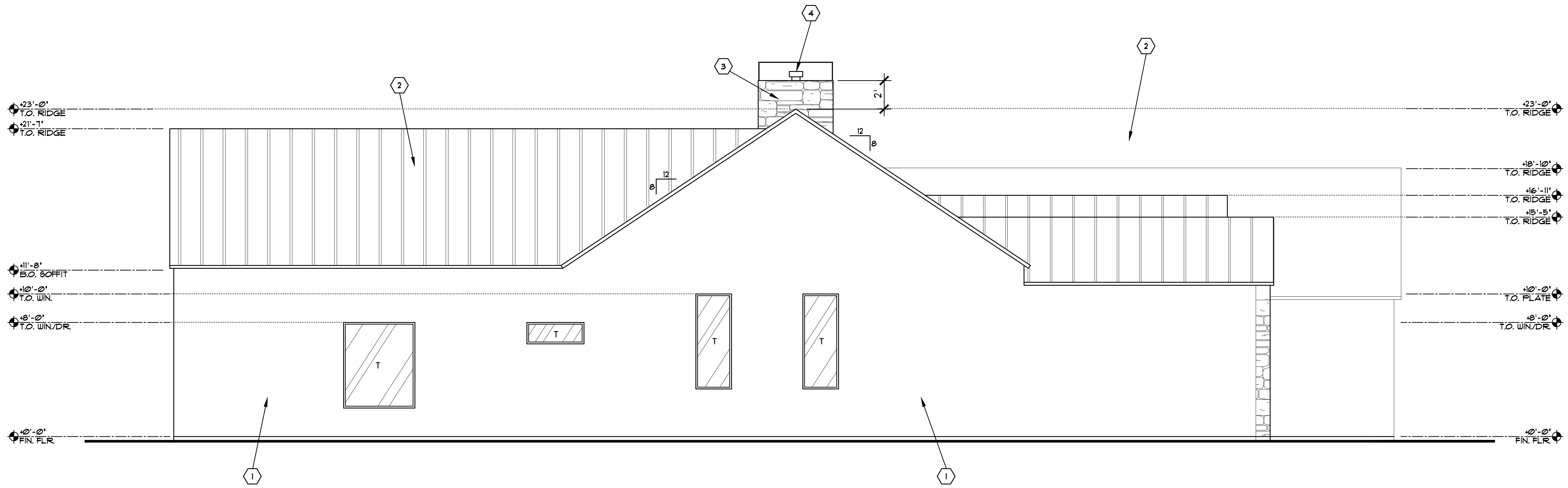
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NORTH ELEVATION

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



WEST ELEVATION

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

KEY NOTES

- 1 ULTRAKOTE ONE-COAT STUCCO SYSTEM ESR-1471
- 2 STANDING SEAM METAL ROOF, ESR-2048
- 3 CULTURED STONE VENEER ESR-3910, TYPICAL
- 4 U.L. APPROVED SPARK ARRESTOR TYP. PROVIDE OUTSIDE COMBUSTION AIR FOR INTERIOR FIREPLACES. (R1006.2)

NOTE:
"T" INDICATES TEMPERED GLASS.

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A NEW HOME FOR
WORTH DEVELOPMENT

4733 NORTH 68th STREET
SCOTTSDALE, ARIZONA 85251

Title: NORTH & EAST ELEVATIONS

Date: 11-12-2025

Project number: 2025-31

Drawn by: MARK WALTH

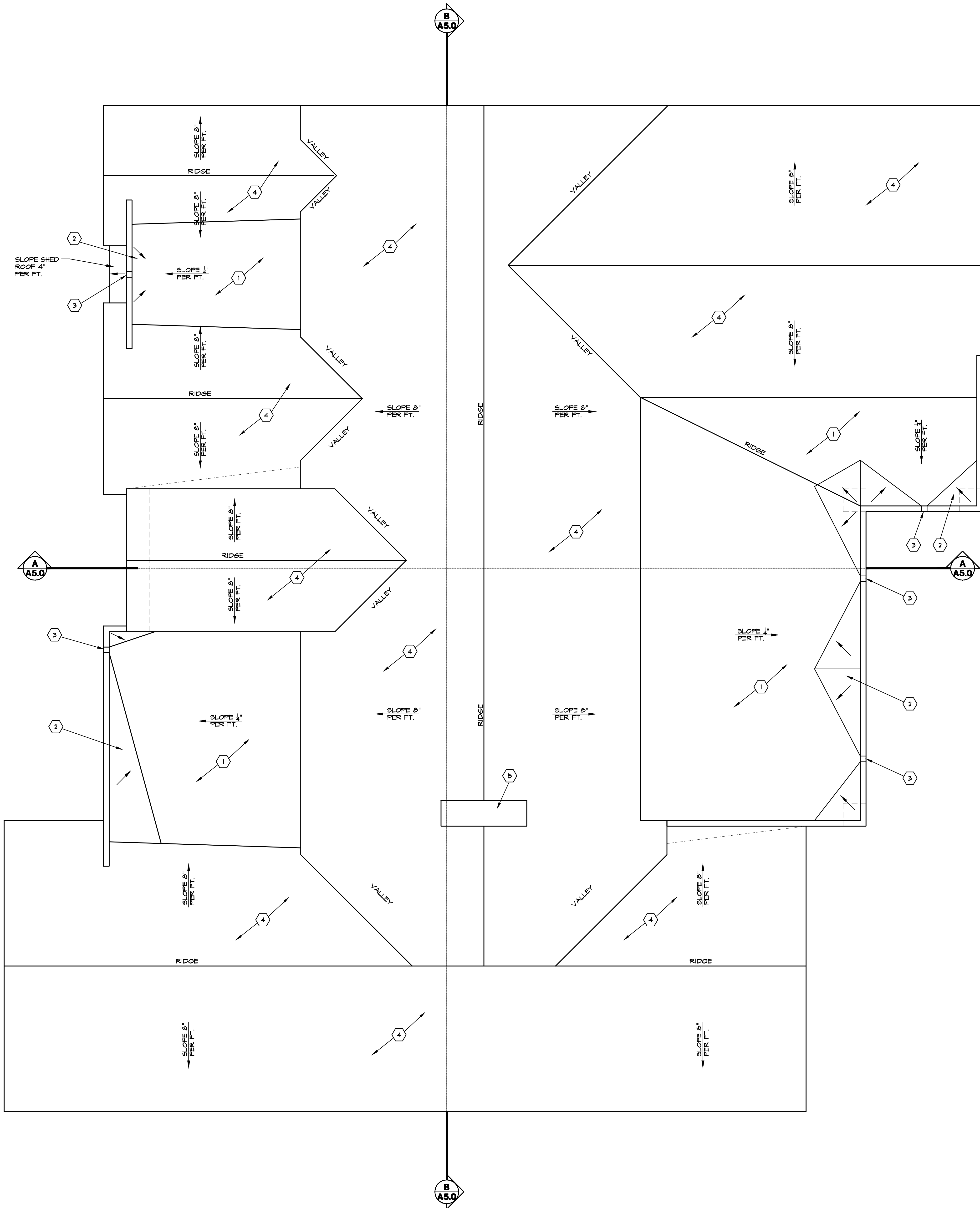
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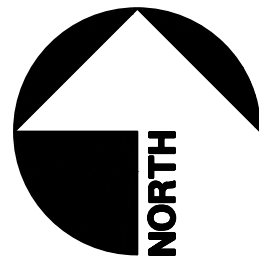
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A3.1



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

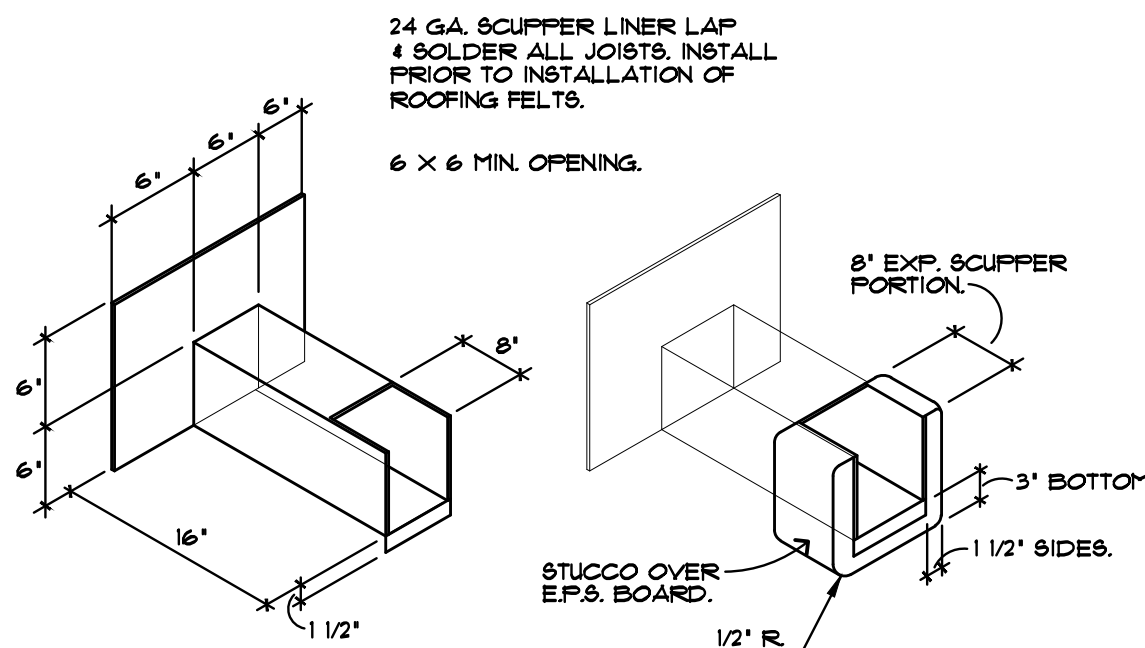


KEY FRAMING NOTES

- 1 FOAM ROOF ESR-2681 ON 5/8" OSB EXT. RATED/EXP. 1 OVER PRE-FAB TRUSSES @ 24" O.C.
- 2 ROOF CRICKET WITH POSITIVE DRAINAGE AT FLOW LINE TO ROOF DRAIN
- 3 6" SQ. SCUPPER, TYP. OF (5) - SEE PLAN FOR LOCATIONS -SEE ATTACHED DETAIL #, THIS SHEET.
- 4 STANDING SEAM METAL ROOF, ESR-2048 W/ 2 LAYERS OF 19" FELT
- 5 CHIMNEY CAP OVER MEMBRANE PARAPET FLASHING - SLOPE CAP 1/2" / FT. WHERE FACTORY-BUILT CHIMNEYS PASS THROUGH INSULATED ASSEMBLIES, AN INSULATION SHIELD CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN 0.081 INCH SHALL BE INSULATED TO PROVIDE CLEARANCE BETWEEN THE CHIMNEY AND THE INSULATION MATERIAL. (R1025.2)

COOL/LIGHT REFLECTIVE COATED ROOFS, ROOF SOLAR REFLECTANCE AND THERMAL EMITTANCE FOR ROOF SLOPES LESS THAN 2:12, THREE-YEAR-AGED SOLAR REFLECTANCE INDEX (SRI) OF 64, THREE-YEAR-AGED SOLAR REFLECTANCE OF 0.15 OVER CONDITIONED AND NON-CONDITIONED SPACES, N102.6 AMENDED.

SOLAR-READY ZONES-R1023, MINIMUM 10% OF ROOF AREA BUT NOT LESS THAN 300 SQ. FT. FREE AND CLEAR OF OBSTRUCTIONS INCLUDING MECHANICAL EQUIPMENT AND VENTS, PROVIDE ELECTRICAL PATHWAY FOR CONDUIT RUN FROM SOLAR-READY ZONE TO ELECTRICAL SERVICE PANEL WITH RESERVED SPACE FOR 2-POLE CIRCUIT BREAKER CAPRIED ROOF PENETRATION SLEEVE SHALL BE PROVIDED ON ROOFS WITH SLOPE OF 1 IN 12 OR LESS.



1 SCUPPER DETAIL

N.T.S.

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A NEW HOME FOR
WORTH DEVELOPMENT

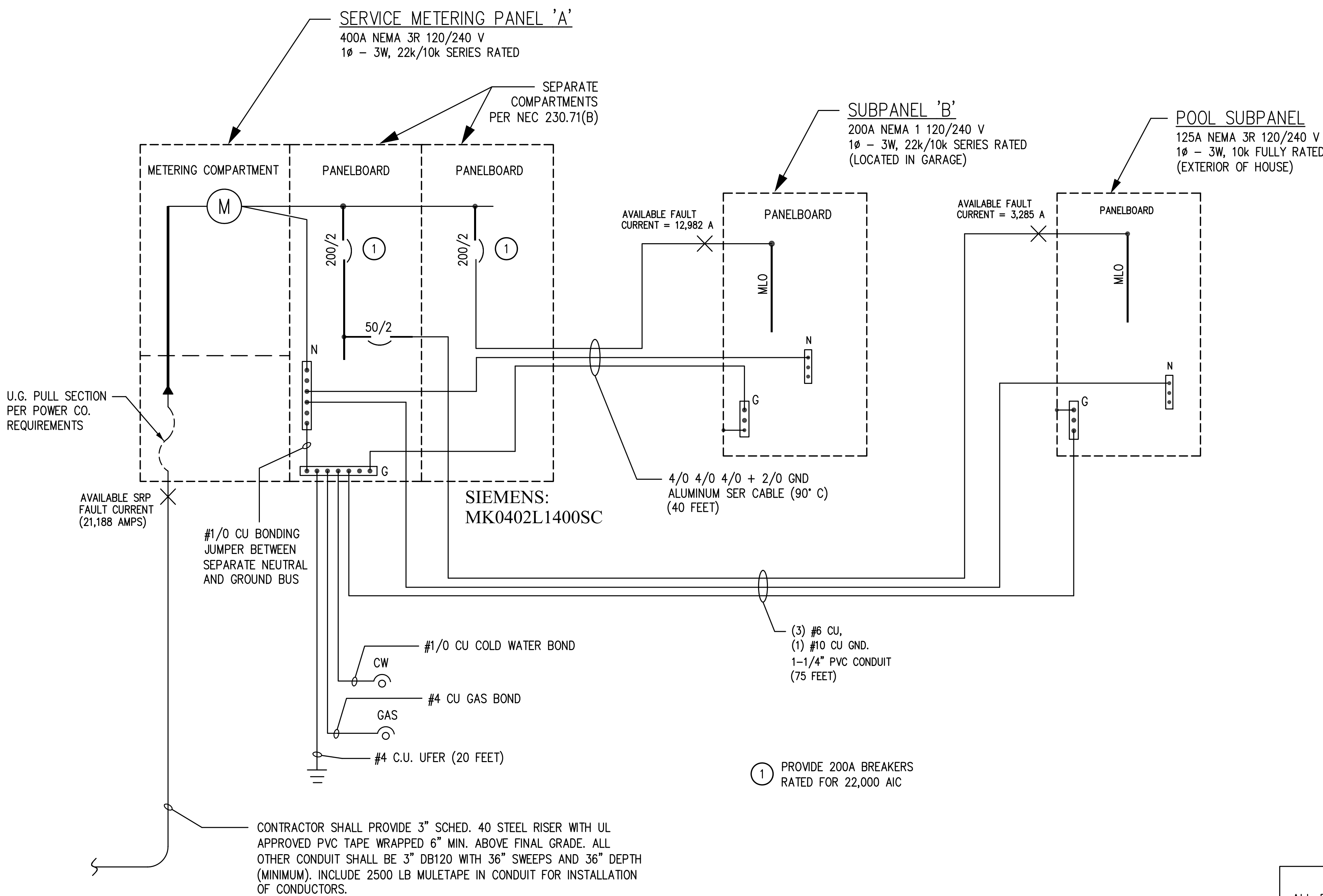
4733 NORTH 68th STREET
SCOTTSDALE, ARIZONA 85251

Title: ROOF PLAN
Date: 11-12-2025
Project number: 2025-31
Drawn by: MARK WALTH
Checked by: MARK WALTH
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Sheet Number:

A4.0



ONE LINE DIAGRAM

LOAD CALCULATIONS

PROJECT NAME: 4733 NORTH 68TH STREET

TOTAL LIVABLE - (4701) SF. X 3 WATTS 14103

APPLIANCE CIRCUITS	2 X 1500 W	3000
DISHWASHER/DISP	1 X 1500 W	1500
MICROWAVE	1 X 1500 W	1500
BATHROOM GFI	3 X 1500 W	4500
REFRIGERATOR	2 X 1500 W	3000
FIREPLACE	1 X 1500 W	1500
BAR EQUIPMENT	1 X 1500 W	1500
LAUNDRY GFI	1 X 1500 W	1500
WASHER	2 X 1500 W	3000
DRYER	2 X 5000 W	10000
RANGE		0
SUBTOTAL		45103

FIRST 10 KW @ 100% 10000
REMAINDER @ 40% 35103 X 40% 14041

SUBTOTAL		24041 VA
CONTINUOUS LOADS:		
A/C UNIT 1	1 X 7632 W	7632
A/C UNIT 2	1 X 7632 W	7632
FURNACE	2 X 2500 W	5000
BATTERY CHARGER	1 X 7500 W	7500
WINE COOLER	1 X 2500 W	2500
POOL SUBPANEL	1 X 6000 W	6000
WATER HEATER	GAS	0
TOTAL		60305 VA

TOTAL / 240 V AMPS 251

AFCI GENERAL NOTE:

ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE PHASE, 15 OR 20 AMPERE OUTLETS INSTALLED INSIDE RESIDENCE SHALL BE PROTECTED BY CONSTRUCTION TYPE ARC-FAULT CIRCUIT INTERRUPTER(S), EXCEPT AT BATHROOMS AND GARAGE. INSTALL AFCI COMBINATION-TYPE CIRCUIT BREAKERS TO PROTECT ENTIRE BRANCH CIRCUIT.

NOTE:
ALL NEW 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE RECEPTACLES SHALL BE LISTED AS TAMPER-RESISTANT (TR) RECEPTACLES.

CIRCUIT DIRECTORY

ALL CIRCUITS SHALL BE LEGIBLY IDENTIFIED AS TO PURPOSE OR USE ON A CIRCUIT DIRECTORY LOCATED AT THE FACE OR INSIDE OF THE PANEL DOOR (NEC ART. 408.4).

SUBPANEL 'B' FAULT CURRENT:

$$f = \frac{2 \times 40 \times 21,188}{11174 \times 240} = 0.632$$

$$M = 0.613$$

$$Isc = 12,982 \text{ AMPS}$$

POOL PANEL FAULT CURRENT:

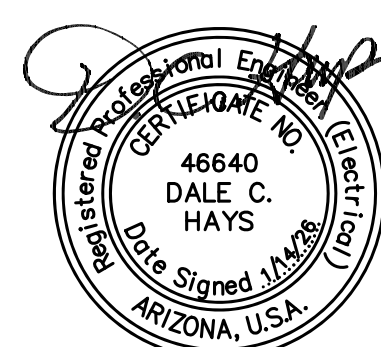
$$f = \frac{2 \times 75 \times 21,188}{2430 \times 240} = 5.450$$

$$M = 0.155$$

$$Isc = 3,285 \text{ AMPS}$$

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A NEW HOME FOR:
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4733 NORTH 68th STREET
SCOTTSDALE, ARIZONA 85251

Title: ONE LINE DIAGRAM
LOAD CALCULATIONS
Date: 11-12-2025
Project number: 2025-31
Drawn by: MARK WALTH
Checked by: MARK WALTH
CAD file:

- ☐ Design Development
☐ Progress Const. Docs.
☒ City Submittal
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☐ Record Drawings

Sheet Number:

E1.0

400A SERVICE PANEL 'A'									
VOLTAGE, PHASE & WIRE:		240/120	VAC		LOCATION:		EXTERIOR		
BUS SIZE:		400	AMPS		ENCLOSURE:		NEMA -3R		
MAIN SIZE:		(2) 200	AMPS		MOUNTING:		WALL		
MAIN TYPE:		YES	CIRCUIT BREAKER		RATING:		22 /10k SERIES RATED		
MAIN TYPE:		YES	BOLT-ON		FED FROM:		UTILITY		
CKT NO.	LOAD DESCRIPTION	CKT. BKR. AMP	AMPS		AMPS		CKT. BKR. AMP	LOAD DESCRIPTION	CKT NO.
1	AC UNIT #1 (4-TON)	40	A	B	A	B	60	BATTERY CHARGER	2
3			-	31.8	-	40.0			4
5	AC UNIT #2 (4 TON)	40	31.8	-	25.4	-	50	POOL SUBPANEL	6
7			-	31.8	-	24.9			8
9	FURNACE #1	15	8.6	-	-	-		BUSSED SPACE	10
11			-	8.6	-	-			12
13	FURNACE #2	15	8.6	-	-	-		BUSSED SPACE	14
15			-	8.6	-	-		BUSSED SPACE	16
17	BUSSED SPACE		-	-	-	-		BUSSED SPACE	18
19	BUSSED SPACE		-	-	-	-		BUSSED SPACE	20
21	BUSSED SPACE		-	-	-	-		BUSSED SPACE	22
23	BUSSED SPACE		-	-	-	-		BUSSED SPACE	24
25	BUSSED SPACE		-	-	-	-		BUSSED SPACE	26
27	BUSSED SPACE		-	-	-	-		BUSSED SPACE	28
29	BUSSED SPACE		-	-	-	-		BUSSED SPACE	30
NOTES:									
			KVA A PHASE= 17.5		AMPS A PHASE= 146.2				
			KVA B PHASE= 17.5		AMPS B PHASE= 145.7				
			TOTAL KVA 35.0		LOADS REFLECT CONNECTED AMPS ONLY		DEC. 2025		

SERVICE PANEL SCHEDULE 'A'

200A SUBPANEL 'B'									
VOLTAGE, PHASE & WIRE:		240/120	VAC		LOCATION:		INTERIOR		
BUS SIZE:		200	AMPS		ENCLOSURE:		NEMA -1		
MAIN LUG ONLY		YES	CIRCUIT BREAKER		MOUNTING:		WALL		
					RATING:		22/10k SERIES RATED		
					FED FROM:		PANEL 'A'		
CKT NO.	LOAD DESCRIPTION	CKT. BKR. AMP	AMPS		AMPS		CKT. BKR. AMP	LOAD DESCRIPTION	CKT NO.
1	KITCHEN GFI #1	20	A	B	A	B	15	MASTER LIGHTS	2
3	KITCHEN GFI #2	20	-	7.5	-	4.8	15	OFFICE / HALL / FOYER LIGHTS	4
5	DISHWASHER / DISPOSAL	20	7.5	-	7.3	-	15	DINING / KITCHEN LIGHTS	6
7	REFRIGERATOR	20	-	7.2	-	6.0	15	GREAT ROOM LIGHTS	8
9	MICROWAVE	20	10.0	-	4.9	-	15	LAUNDRY / ENTRY LIGHTS	10
11	MASTER BATH GFI	20	-	6.0	-	12.0	20	GREAT ROOM OUTLETS	12
13	BATHROOM GFI	20	4.5	-	10.5	-	20	HALL / FLEX OUTLETS	14
15	LAUNDRY GFI #1	20	-	9.0	-	9.0	20	DEN OUTLETS	16
17	LAUNDRY GFI #2	20	9.0	-	12.0	-	20	MASTER OUTLETS	18
19	WASHER #1	20	-	7.5	-	7.5	20	BAR AREA OUTLETS	20
21	WASHER #2	20	7.5	-	10.5	-	20	BEDROOM #1	22
23	PATIO GFI	20	-	7.5	-	10.5	20	BEDROOM #2	24
25	GARAGE GFI	20	4.5	-	10.5	-	20	BEDROOM #3	26
27	GARAGE DOOR OPENERS	20	-	6.4	-	9.0	20	EXTERIOR RECEPTACLES	28
29	WATER HEATER CONTROLS	15	2.0	-	7.2	-	20	WINE COOLER SYSTEM	30
31	SMOKE DETECTORS	15	-	1.0	-	7.2			32
33	BUSSED SPACE		-	-	-	-		BUSSED SPACE	34
35	BUSSED SPACE		-	-	-	-		BUSSED SPACE	36
37	BUSSED SPACE		-	-	-	-		BUSSED SPACE	38
39	BUSSED SPACE		-	-	-	-		BUSSED SPACE	40
41	BUSSED SPACE		-	-	-	-		BUSSED SPACE	42
NOTES:									
			KVA A PHASE= 14.7		AMPS A PHASE= 122.5				
			KVA B PHASE= 14.2		AMPS B PHASE= 118.1				
			TOTAL KVA 28.9		LOADS REFLECT CONNECTED AMPS ONLY		DEC. 2025		

SUBPANEL SCHEDULE 'B'

50A POOL SUBPANEL									
VOLTAGE, PHASE & WIRE:		240/120	VAC		LOCATION:		EXTERIOR		
BUS SIZE:		60	AMPS		ENCLOSURE:		NEMA -3R		
MAIN LUG ONLY		YES	CIRCUIT BREAKER		MOUNTING:		WALL		
					RATING:		10k FULLY RATED		
					FED FROM:		PANEL 'B'		
CKT NO.	LOAD DESCRIPTION	CKT. BKR. AMP	AMPS		AMPS		CKT. BKR. AMP	LOAD DESCRIPTION	CKT NO.
1	POOL PUMP	25	A	B	A	B		POOL LIGHT (GFCI)	2
3			-	13.8	-	1.5		SERVICE RECEPTACLE (GFCI)	4
5	SPA PUMP	20	9.6	-	-	-		BUSSED SPACE	6
7			-	9.6	-	-		BUSSED SPACE	8
9	BUSSED SPACE		-	-	-	-		BUSSED SPACE	10
11	BUSSED SPACE		-	-	-	-		BUSSED SPACE	12
NOTES:									
			KVA A PHASE= 3.0		AMPS A PHASE= 25.4				
			KVA B PHASE= 3.0		AMPS B PHASE= 24.9				
			TOTAL KVA 6.0		LOADS REFLECT CONNECTED AMPS ONLY		DEC. 2025		

POOL SUBPANEL SCHEDULE

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SCOTTSDALE, ARIZONA 85251

Title: PANEL SCHEDULES

Date: 11-12-2025

Project number: 2025-31

Drawn by: MARK WALTH

Checked by: MARK WALTH

CAD file:

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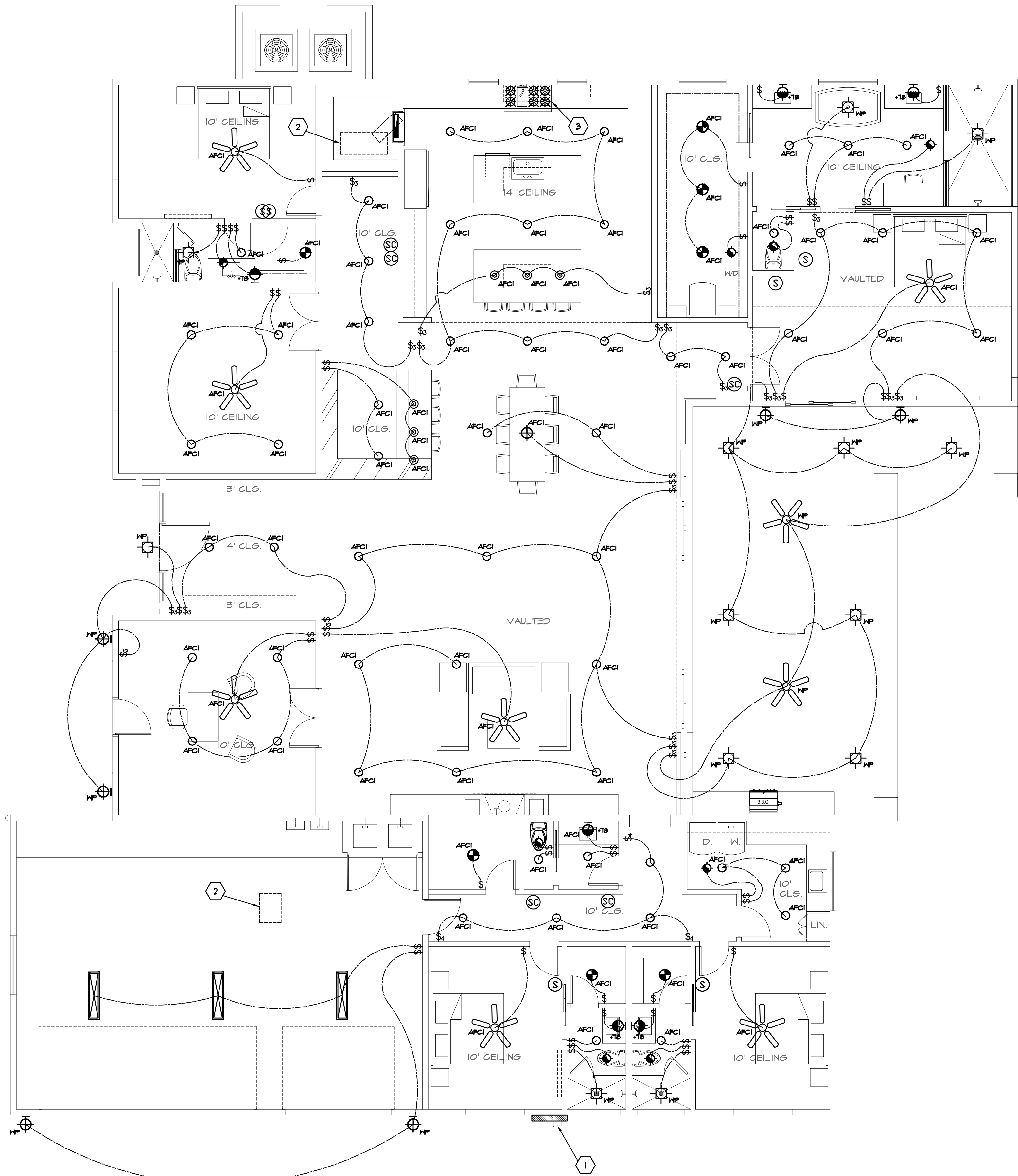
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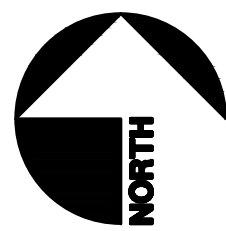
ELECTRICAL SUB-CONTRACTOR SHALL CONDUCT JOBSITE MEETINGS AS WITH OWNER AS REQUIRED TO FINALIZE POWER LAYOUT PRIOR TO INSTALLATION OF NEW ELECTRICAL FIXTURES.

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ELECTRICAL LIGHTING PLAN

SCALE: 3/16"=1'-0"



KEY NOTES

1. LOCATION OF ELECTRICAL METER & SERVICE ENTRANCE SECTION, 400 AMP, 240 VOLT, 14 3/8" SP. SPACE, 400 AMP MAIN BREAKER, NEMA 3R - COORDINATE EXACT LOCATION WITH UTILITY COMPANY
2. LOCATION OF WEIGHTED 22"x30" MINIMUM ATTIC ACCESS IN ACCORDANCE W/ IRC R801.
3. PROVIDE A 20 AMP, 120 VOLT CIRCUIT FOR RANGE HOOD VENTILATION MOTOR
4. -

LIGHTING PLAN LEGEND

- CEILING FAN
- RECESSED CAN FIXTURE W/ LED LAMP PER IECC 402.4.4
- COMPLETELY ENCLOSED, RECESSED LED FIXTURE IN ACCORDANCE W/ IRC E4003.12 & IECC 402.4.4
- SURFACE MOUNTED LED CHANDELIER - PROVIDE BLOCKING PER MANUFACTURERS SPECIFICATIONS
- SURFACE MOUNTED LED FIXTURE W/ FULL CHAIN
- PENDANT MOUNTED LED LIGHT FIXTURE
- RECESSED LED EYEBALL PER IECC 402.4.4
- WATER PROOF RECESSED LED FIXTURE
- SMALL ROUND RECESSED LED FIXTURE
- WATER PROOF WALL MOUNTED LED FIXTURE
- WALL SCONCE LED LIGHT FIXTURE
- SURFACE MOUNTED WRAP AROUND LED FIXTURE
- COMPLETELY ENCLOSED, RECESSED LED FIXTURE IN ACCORDANCE W/ IRC E4003.12 - AUTOMATICALLY ACTUATED BY DOOR
- WATER PROOF LED YARD LIGHT FIXTURE
- WATER PROOF RECESSED LED STAIR ILLUMINATION FIXTURE
- SMOKE DETECTOR - 120V INTERCONNECTED W/ BATTERY BACK UP
- SMOKE DETECTOR / CARBON MONOXIDE ALARM - 120V INTERCONNECTED W/ BATTERY BACK UP
- 400 AMP ELECTRICAL SERVICE & METER
- POOL EQUIPMENT SUB-PANEL
- ARC-FAULT CIRCUIT INTERRUPTER
- SINGLE POLE SWITCH
- WATER PROOF SINGLE POLE SWITCH
- CIRCUIT WIRING PER 2014 NEC
- EXHAUST FAN

*90% OF ALL LIGHTING SHALL HAVE EFFICACY LAMPS, 2018 IRC N104.1

ELECTRICAL NOTES:

1. RECEPTACLES SHALL BE PROVIDED FOR WALL SPACES IN EXCESS OF 24" WIDE AND NO POINT OF WALL SPACE SHALL BE FURTHER THAN 6'-0" FROM A RECEPTACLE PER NEC ARTICLE 210-52. PROVIDE ARC-FAULT CIRCUIT INTERRUPTER PROTECTION IN ALL AFFECTED SLEEPING ROOMS.
2. PROVIDE SMOKE DETECTORS FOR ALL BEDROOMS AND THE ACCESS LEADING TO THESE SLEEPING AREAS PER IRC SECTION R313
3. PROVIDE ONE 20 AMP CIRCUIT TO THE BATHROOMS WITH NO OTHER RECEPTACLES USES IN ACCORDANCE WITH NEC ARTICLE 210-52 (d).
4. PROVIDE SWITCHED CONTROLLED LIGHTING ON THE EXTERIOR OF EACH DOOR LEADING TO THE OUTSIDE.
5. CONTRACTOR IS TO ASSURE WATER AND GAS PIPING TO BE BONDED PER NEC ARTICLE 250-80.
6. BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE PHASE, 15 OR 20 AMPERE RECEPTACLE OUTLETS INSTALLED IN FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PORCHES, LIBRARIES, DEN'S, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS, SHALL BE PROTECTED BY ARC-FAULT CIRCUIT INTERRUPTER(S). C/B SHALL BE COMBINATION TYPE.
7. OUTLET BOXES IN THE GARAGE SIDE OF WALL BETWEEN DWELLING AND THE GARAGE AND IN THE GARAGE CEILING SHALL BE METAL OR OTHER MATERIAL LISTED FOR THE USE INTENDED. (IRC R302.4.2)
8. OUTLET BOXES AT CEILING FAN LOCATIONS SHALL BE APPROVED FOR SUPPORTING CEILING FANS. (IRC E3805.8)
9. LOAD CENTER BREAKERS SHALL BE SQUARE D QO BREAKERS.

NOTE:

ELECTRICAL SUB-CONTRACTOR SHALL CONDUCT JOBSITE MEETINGS AS WITH OWNER AS REQUIRED TO FINALIZE POWER LAYOUT PRIOR TO INSTALLATION OF NEW ELECTRICAL FIXTURES.

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4733 NORTH 68th STREET
SCOTTSDALE, ARIZONA 85251

Title: ELECTRICAL LIGHTING PLAN

Date: 11-12-2025

Project number: 2025-31

Drawn by: MARK WALTH

Checked by: MARK WALTH

CAD file:

☐ Design Development

☐ Progress Const. Docs.

☒ City Submittal

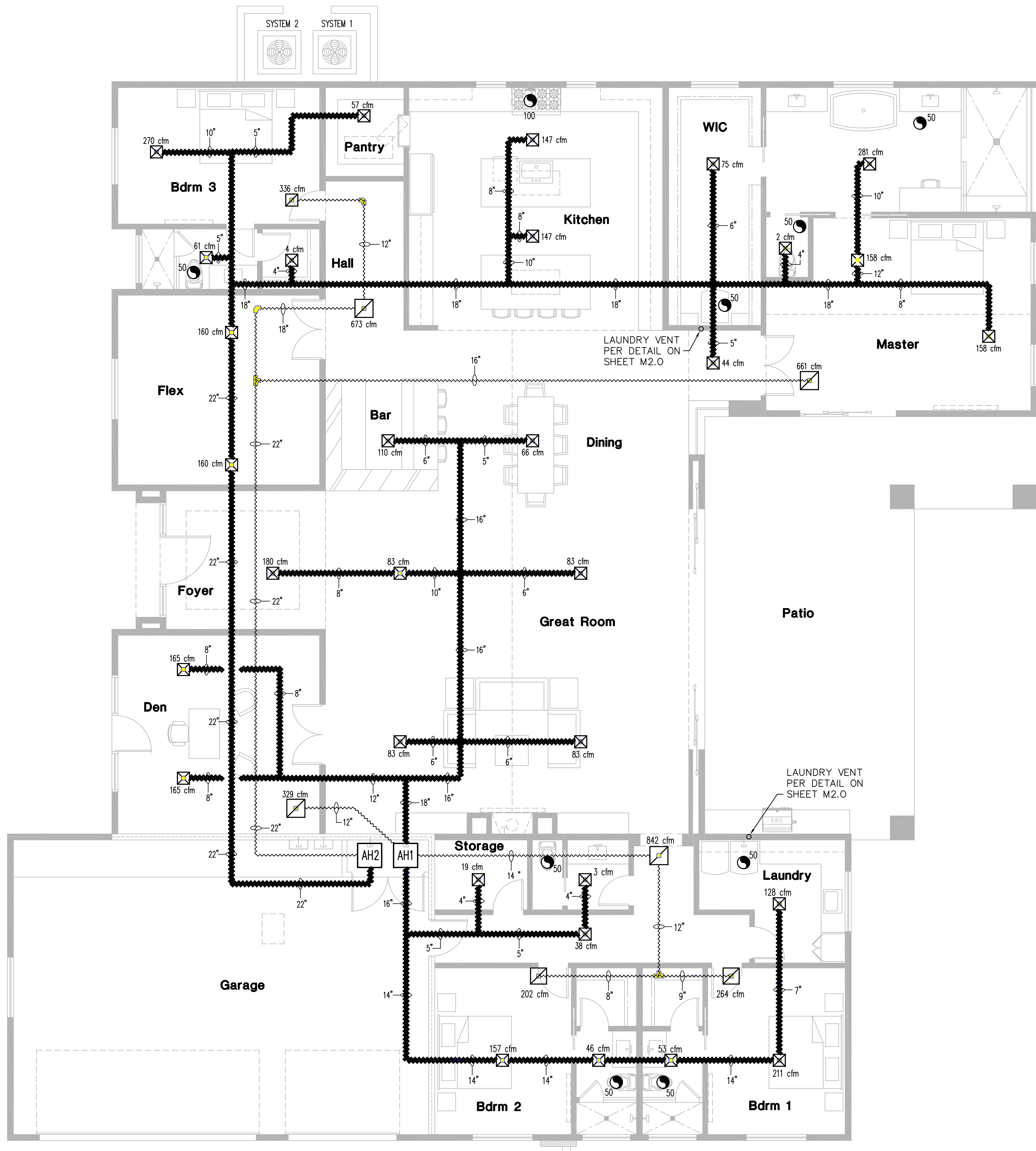
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Sheet Number:

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MECHANICAL PLAN

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



MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
	SUPPLY AIR
	RETURN AIR
	EXHAUST AIR
	THERMOSTAT
LINETYPE LEGEND	
LINETYPE	DESCRIPTION
	SUPPLY AIR DUCT
	RETURN AIR DUCT

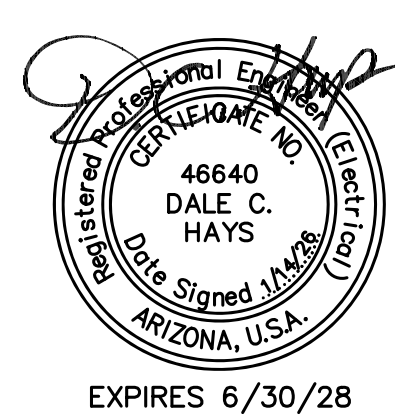
NOTE:
REFERENCE MANUAL JSD REPORT FOR
EQUIPMENT SIZES AT EACH ZONE.

GENERAL NOTES:

1. PROVIDE 60A DISCONNECT SWITCH FOR NEW 4-TON AC UNITS WITH GAS FURNACE AND 30A DISCONNECT FOR NEW 1-TON HEAT PUMP SERVING THE CASITA.
2. PROVIDE WEATHER-PROOF AND GFCI SERVICE RECEPTACLE WITHIN 25 FEET OF ALL PAD-MOUNTED HVAC COMPRESSORS.
3. ALL OUTSIDE AIR INTAKES AND EXHAUST OUTLETS SHALL INCLUDE A GRAVITY BACKDRAFT DAMPER AT THE EXHAUST FAN OR LOUVER.
4. ALL WORK TO COMPLY WITH THE 2018 INTERNATIONAL MECHANICAL CODE, 2018 IMC, AND ALL CITY OF SCOTTSDALE ADOPTED CODES AND AMENDMENTS.
5. REFERENCE SHEET M2.0 FOR MECHANICAL SPECIFICATIONS, DETAILS AND EQUIPMENT SCHEDULES FOR MECHANICAL PLAN.

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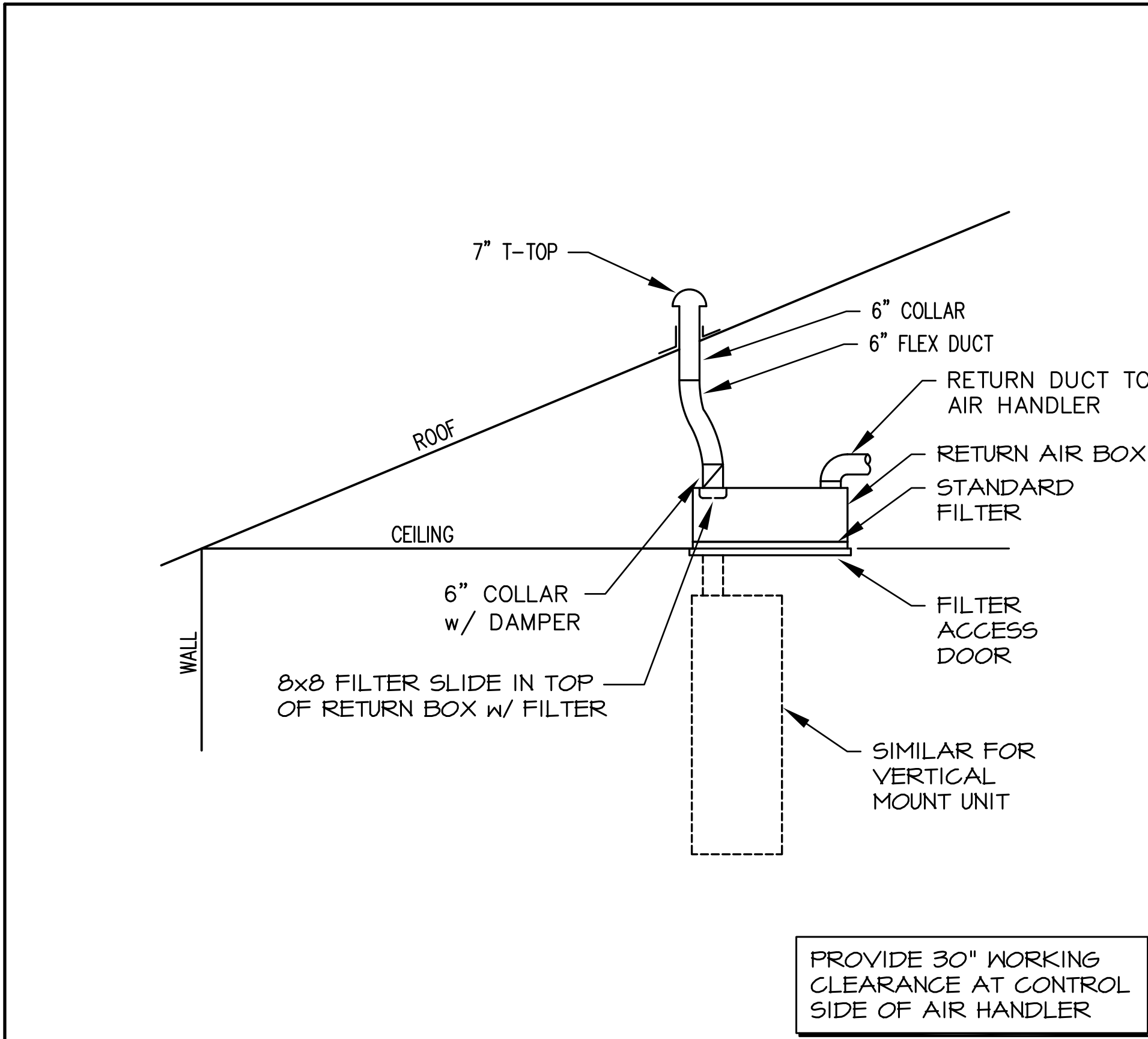
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Title: MECHANICAL PLAN
Date: 11-12-2025
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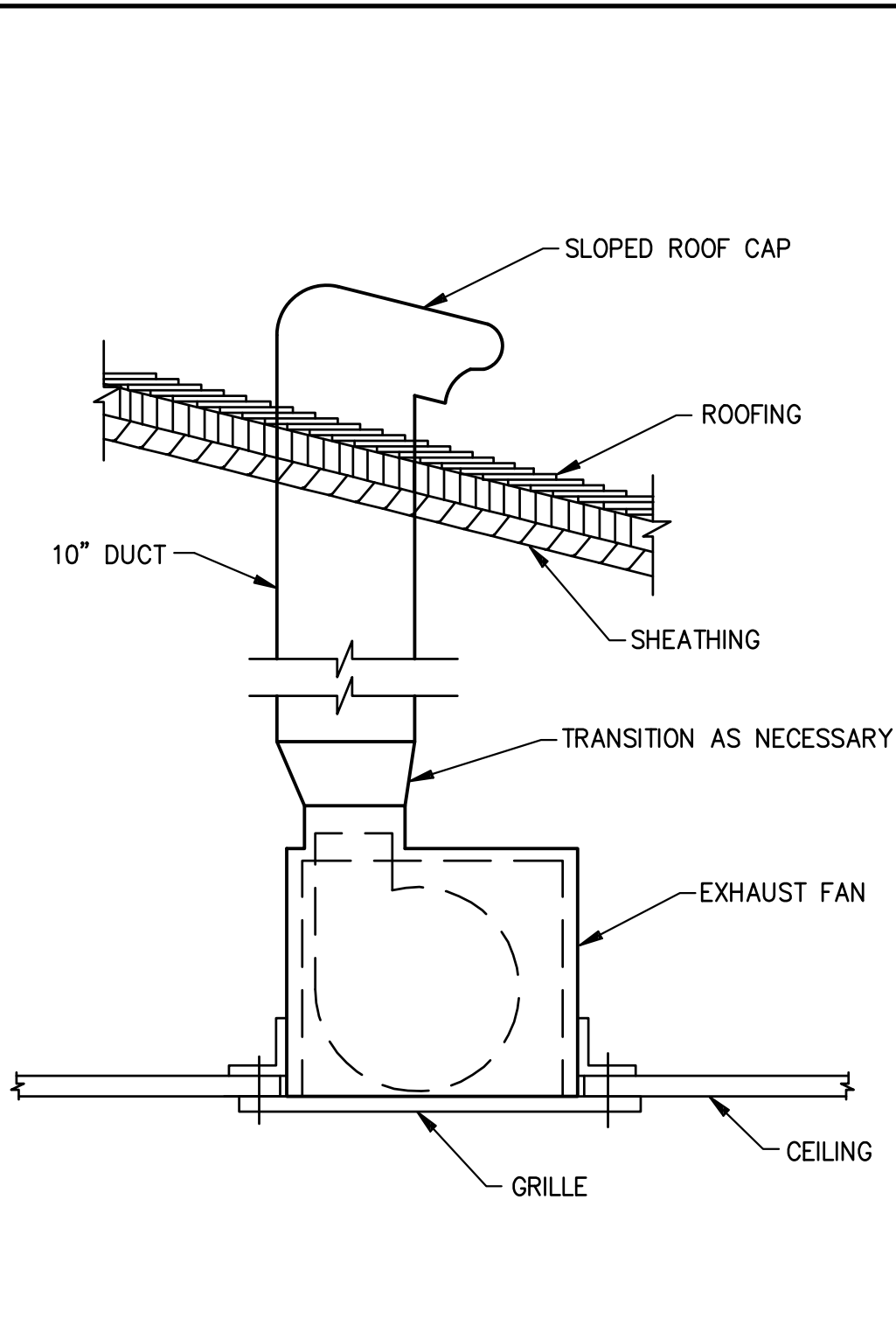
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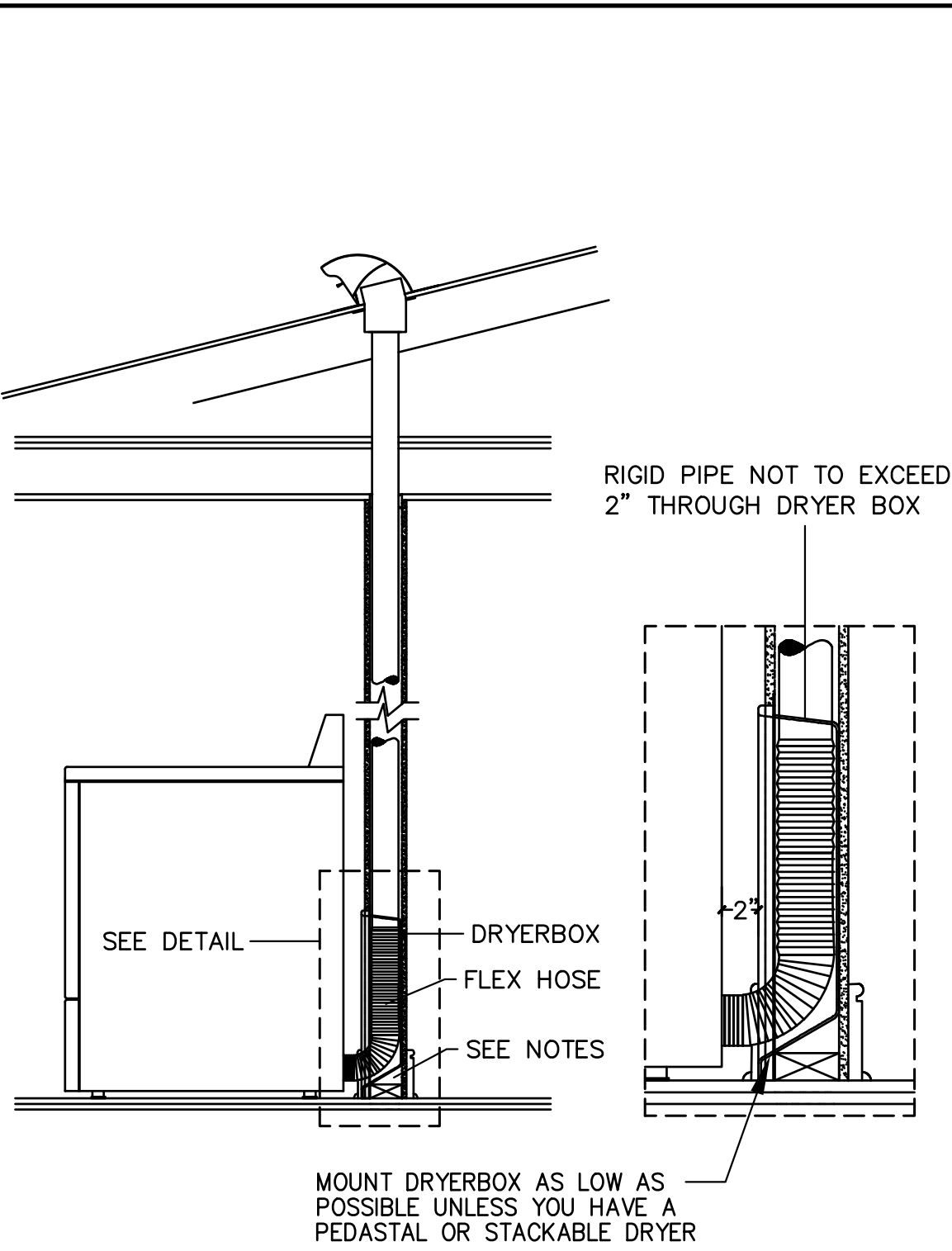
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OUTSIDE AIR INTAKE DETAIL
NOT TO SCALE



EXHAUST FAN ROOF DETAIL
NOT TO SCALE



LAUNDRY VENT DETAIL
NOT TO SCALE

GENERAL MECHANICAL NOTES:

1. PROVIDE AND INSTALL ALL DUCTED INDOOR UNITS WITH FILTER RACK PER MANUFACTURER RECOMMENDATIONS, SEAL ALL OPENINGS IN RETURN AIR PLENUM AIR TIGHT. INSTALL FLEXIBLE DUCT CONNECTIONS AT SUPPLY AND RETURN DUCT CONNECTIONS. ENSURE CLEARANCES PER MANUFACTURER'S DIRECTIONS. SEE MANUFACTURER'S WRITTEN INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS. COORDINATE VOLTAGE WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT. SEE DETAIL AND SCHEDULE ON SHEET.
2. PROVIDE AND INSTALL CEILING EXHAUST FAN WITH DECORATIVE EXHAUST GRILL AND BACKDRAFT DAMPER. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS. EXTEND EXHAUST DUCT THROUGH ROOF TO FACTORY FABRICATED ROOF CAP OR EXTERIOR WALL AT LEAST 10'-0" HORIZONTALLY FROM ANY/ALL FRESH AIR OPENINGS/WINDOWS.
3. EXTEND 4" DRYER VENT FROM APPLIANCE THROUGH SIDE WALL AND TERMINATE AT FACTORY WALL CAP. PROVIDE WITH A CLEANOUT IN THE VERTICAL DUCT AND SEAL WALL PENETRATION WEATHER TIGHT. THE MAXIMUM LENGTH OF THE EXHAUST DUCT SHALL BE 35 FEET FROM THE CONNECTION TO THE FLEXIBLE TRACTION DUCT FROM THE DRYER TO THE OUTLET TERMINAL (WALL CAP WITH BACKDRAFT DAMPER OR NON-SCREENED T-TOP). WHERE FITTINGS ARE USED, THE MAXIMUM DRYER DUCT LENGTH SHALL BE REDUCED AS FOLLOWS: 2.5 FEET FOR EVERY 45-DEGREE ELBOW, AND 5 FEET FOR EVERY 90-DEGREE ELBOW. DUCTS SHALL BE MECHANICALLY FASTENED. SCREWS OR SIMILAR FASTENERS SHALL NOT PROTRUDE MORE THAN 1/8" INTO THE INSIDE OF THE DUCT. 2" OVER-SIZED NAIL PLATES.
4. TERMINATING TO CONDENSATE DRAIN PIPING SHALL BE SCHEDULE 40 PVC. CONDENSATE LINES MUST BE INSTALLED WITH 1/8" PER FOOT MINIMUM FALL OVER ENTIRE LENGTH OF LINE. RUN DRAIN LINE FULL SIZE TO NEAREST PLANTER AREA, FLOOR DRAIN, OR P-TRAP. INSTALL LINE TRAPS AS REQUIRED BY EQUIPMENT MANUFACTURER. COORDINATE SPECIAL REQUIREMENTS FOR DRAIN AND WATER THAT MAY BE REQUIRED WITH SPECIAL EQUIPMENT WITH PLUMBING CONTRACTOR PRIOR TO COMPLETION OF ROUGH-IN. SECONDARY CONDENSATE DRAINS SHALL DISCHARGE TO A CONSPICUOUS POINT TO ALERT OCCUPANTS OF STOPPAGE.
5. PACKAGE ROOF-TOP UNIT MUST HAVE FRESH AIR VENTILATION SYSTEM INCLUDING CONTROLLER UNIT THAT OPERATES A FRESH AIR INTAKE DAMPER PER IMC TABLE M15505.4.3(1).
6. PACKAGED ROOF-TOP UNIT MUST HAVE A PROGRAMMABLE THERMOSTAT MOUNTED 54" ABOVE FLOOR. VERIFY FINAL LOCATION WITH ARCHITECT/OWNER.
7. OUTDOOR INTAKE AND EXHAUST SHALL HAVE WITHER GRAVITY OR AUTOMATIC DAMPERS THAT CLOSE WHEN THE SYSTEM IS NOT RUNNING PER IECC SECTION 403.6.
8. EXHAUST AIR FROM BATHROOMS AND TOILET ROOMS SHALL BE EXHAUSTED DIRECTLY TO THE OUTDOORS, NOT RECIRCULATED OR DISCHARGED INDOORS. EXHAUST FANS IN BATHROOMS WITH A SHOWER OR TUB SHALL BE PROVIDED WITH A DELAY TIMER OR HUMIDITY/CONDENSATION CONTROL SENSOR. EXHAUST FANS SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEMS.
9. DWELLING HAS BEEN PROVIDED WITH HEATING AND COOLING CAPABLE OF MAINTAINING A ROOM TEMPERATURE BETWEEN 70 AND 90 DEGREES AT A POINT 3 FEET ABOVE THE FLOOR AND 2 FEET FROM EXTERIOR WALLS.

MAIN HOUSE	
AREA	# of BEDROOMS
4701	4

REQUIRED CFM BASED ON VENTILATION TABLE:
105 CFM

2018 IRC M1505 WHOLE HOUSE VENTILATION CALCULATIONS					
DWELLING UNIT FLOOR AREA (SQUARE FEET)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	>7
	AIRFLOW IN CFM				
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	120	135	150

DESIGN CONDITION SCHEDULE		
OUTDOOR DRY BULB TEMPERATURE (F°)	INDOOR DRY BULB TEMPERATURE (F°)	INDOOR WET BULB TEMPERATURE (F°)
109	75	63

HEATING / COOLING LOAD CALCULATIONS:

HEATING AND COOLING CALCULATION WERE DETERMINED USING HEATING COOLING LOAD CALCULATION SOFTWARE UTILIZING ACCA MANUAL J 8th EDITION.

EQUIPMENT SIZING			
UNIT	CALC'D COOLING	COOLING PROVIDED	+/- SIZING PERCENTAGE
NEW UNIT - SYSTEM 1	32973	30100	9.5%
NEW UNIT - SYSTEM 2	27716	31500	13.7%

LOAD CALCULATION IS BASED ON:

R19 WALLS, R38 INSULATED CEILING, WINDOW U VALUE - 0.4, SHGC - 0.25

DUCT SIZING:

SUPPLY AND RETURN DUCTWORK HAS BEEN SIZED AND DESIGNED IN ACCORDANCE WITH ACCA MANUAL D

DUCT INSULATION:

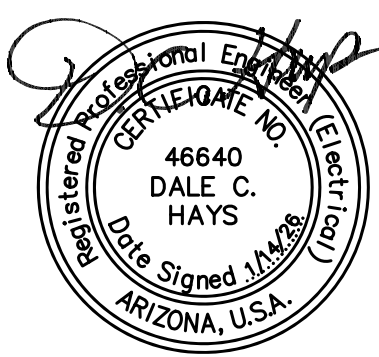
SUPPLY AND RETURN DUCTWORK IN ATTIC OR FLOORS SHALL BE INSULATED TO A MINIMUM R-6

CONTRACTOR TO VERIFY THE CONSTRUCTION AND STRUCTURE VALUE TO CORRESPOND TO ACCA MANUAL JSD REPORT BEFORE INSTALLATION. FOR ANY DIFFERENCE IN VALUES THAT MIGHT CHANGE EQUIPMENT SIZING, A NEW REPORT MUST BE GENERATED AND SIZED ACCORDINGLY.

EQUIPMENT SCHEDULE: SPLIT SYSTEM AC/FURNACE AND SPLIT HEAT PUMP										
SYSTEM / AREA	BRAND	MODEL	NOTATION	TYPE	AHRI NUMBER	TONNAGE	SEER	ELECTRICAL	MCA	MOCP
SYSTEM 1 (NEW 4.0-TON)	TRANE	4TTX5048N1 (OR EQUAL)	NEW UNIT	SPLIT - FURNACE	216061759	4.0	15.2	208/230V 1-PH 60 Hz	31.8	40
SYSTEM 2 (NEW 4.0-TON)	TRANE	4TTX5048N1 (OR EQUAL)	NEW UNIT	SPLIT - FURNACE	212573528	4.0	14.0	208/230V 1-PH 60 Hz	31.8	40

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A NEW HOME FOR
WORTH DEVELOPMENT

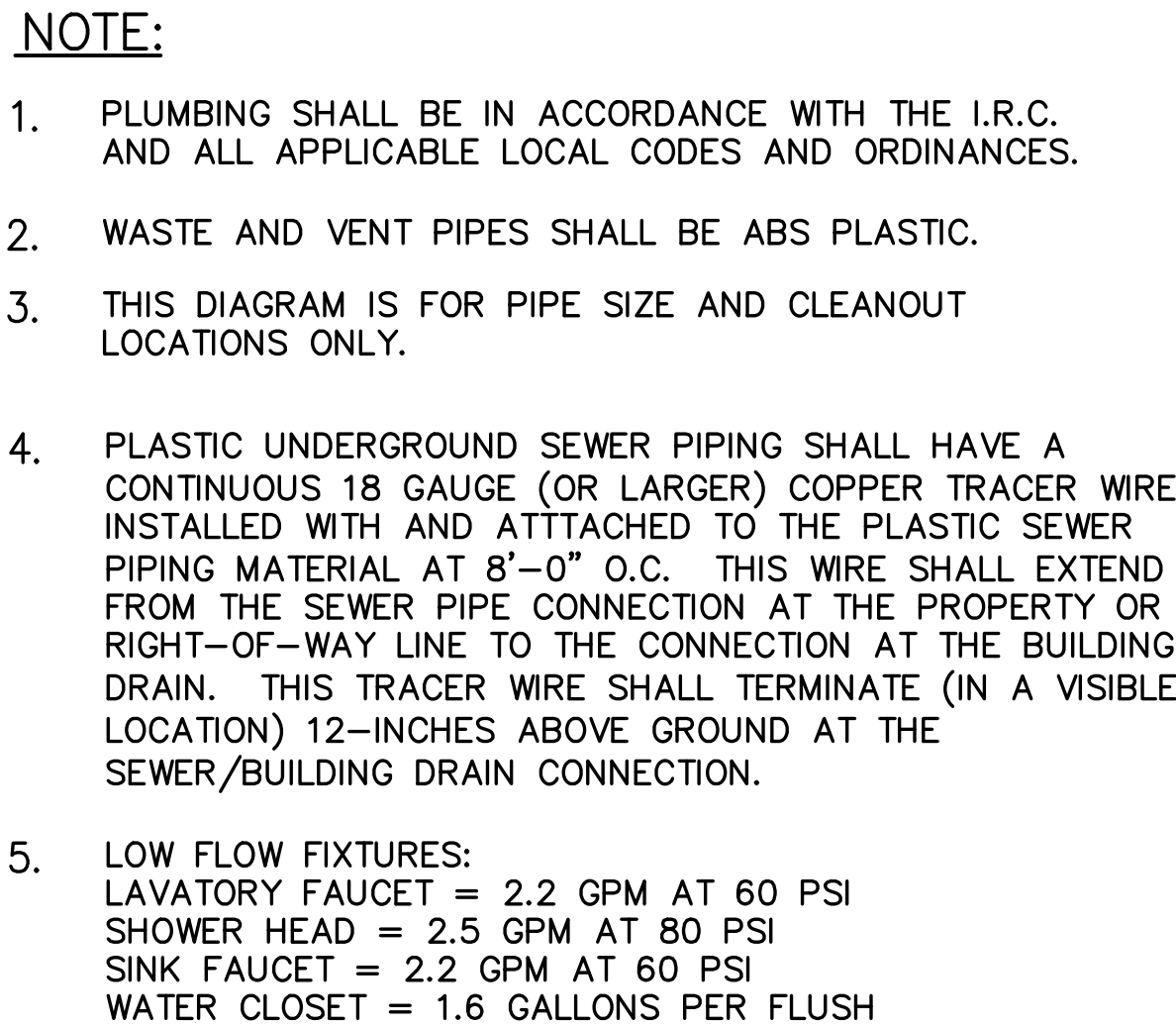
4733 NORTH 68th STREET
SCOTTSDALE, ARIZONA 85251

Title: MECHANICAL DETAILS
Date: 11-12-2025
Project number: 2025-31
Drawn by: MARK WALTH
Checked by: MARK WALTH
CAD file:

- ☐ Design Development
☐ Progress Const. Docs.
☒ City Submittal
☐ Bid Package
☐ Construction Issue
☐ Record Drawings

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SCALE: NTS



TRAPARM SCHEDULE	
TRAPARM SIZE	TRAP TO VENT DISTANCE
1-1/4"	2 FEET 6 INCHES
1-1/2"	3 FEET 6 INCHES
2"	5 FEET 0 INCHES
3"	6 FEET 0 INCHES
WATER CLOSET	6 FEET 0 INCHES
4" OR LARGER	10 FEET 0 INCHES

MATERIAL: WIRSBO PEX

9. HOSE BIBS SHALL CONSIST OF ARROW-BREAKER MODEL 261 WITH INTEGRATED VACUUM BREAKER FOR REQUIRED BACKFLOW PREVENTION. P2902.4.3

P1.0

SPECIFICATIONS

PRODUCTS:

- A. ABOVE GRADE STEEL PIPE: SCHEDULE 40 STANDARD WEIGHT SEAMLESS BLACK STEEL PIPE COMPLYING WITH ANSI B36.10 AND ASTM A53 OR ASTM A106.
- B. ABOVE GRADE STEEL PIPE FITTINGS: STANDARD WEIGHT, WELDED, MALLEABLE IRON FITTINGS COMPLYING WITH ANSI B2.L.
- C. VALVES: GAS-COCKS SHALL BE IN COMPLIANCE WITH ANSI Z21.15, ANSI Z21.21 OR ANSI B16.33. CRANE #325 OR APPROVED EQUAL.

EXECUTION:

- A. PIPING SHALL NOT BE INSTALLED IN FLOOR SLABS.
- B. PIPING INSTALLED IN SOLID WALLS SHALL NOT BE PERMITTED UNLESS INSTALLED IN A CHASE OR CASING.
- C. PIPING INSIDE ANY BUILDING SHALL NOT BE RUN IN OR THROUGH AN AIR DUCT, CLOTHES CHUTE, CHIMNEY OR VENT, VENTILATING DUCT, DUMBWAITER, OR ELEVATOR SHAFT.
- D. ALL GAS PIPING SHALL BE LAID OUT AND GRADED IN ORDER TO REDUCE THE NUMBER OF LOW POINTS. WHERE LOW POINTS OCCUR PROVIDE 6" DEEP SCALE POCKETS WITH REMOVABLE CAP FITTING ACCESSIBLE FOR CLEANING.
- E. AFTER PIPE IS ROUGHED IN, BUT BEFORE CONNECTION TO EQUIPMENT, MAIN OR TO GAS SUPPLY, AN AIR PRESSURE TEST EQUAL TO 15 PSIG FOR A MINIMUM OF 4 HOURS WITHOUT A DROP IN PRESSURE SHALL BE PERFORMED.

GAS METER DEMAND

QTY.	DESCRIPTION	GAS (BTU's)	TOTAL (BTU's)
2	WATER HEATER	180,000	360,000
2	FURNACE	46,000	92,000
1	COOKTOP	120,000	120,000
1	FIREPLACE	50,000	50,000
1	POOL HEATER	400,000	400,000
1	BBQ GRILL	75,000	75,000
1	FIRE PIT	120,000	120,000
2	DRYER	35,000	70,000

TOTAL GAS DEMAND: 1,287,000

GENERAL NOTES

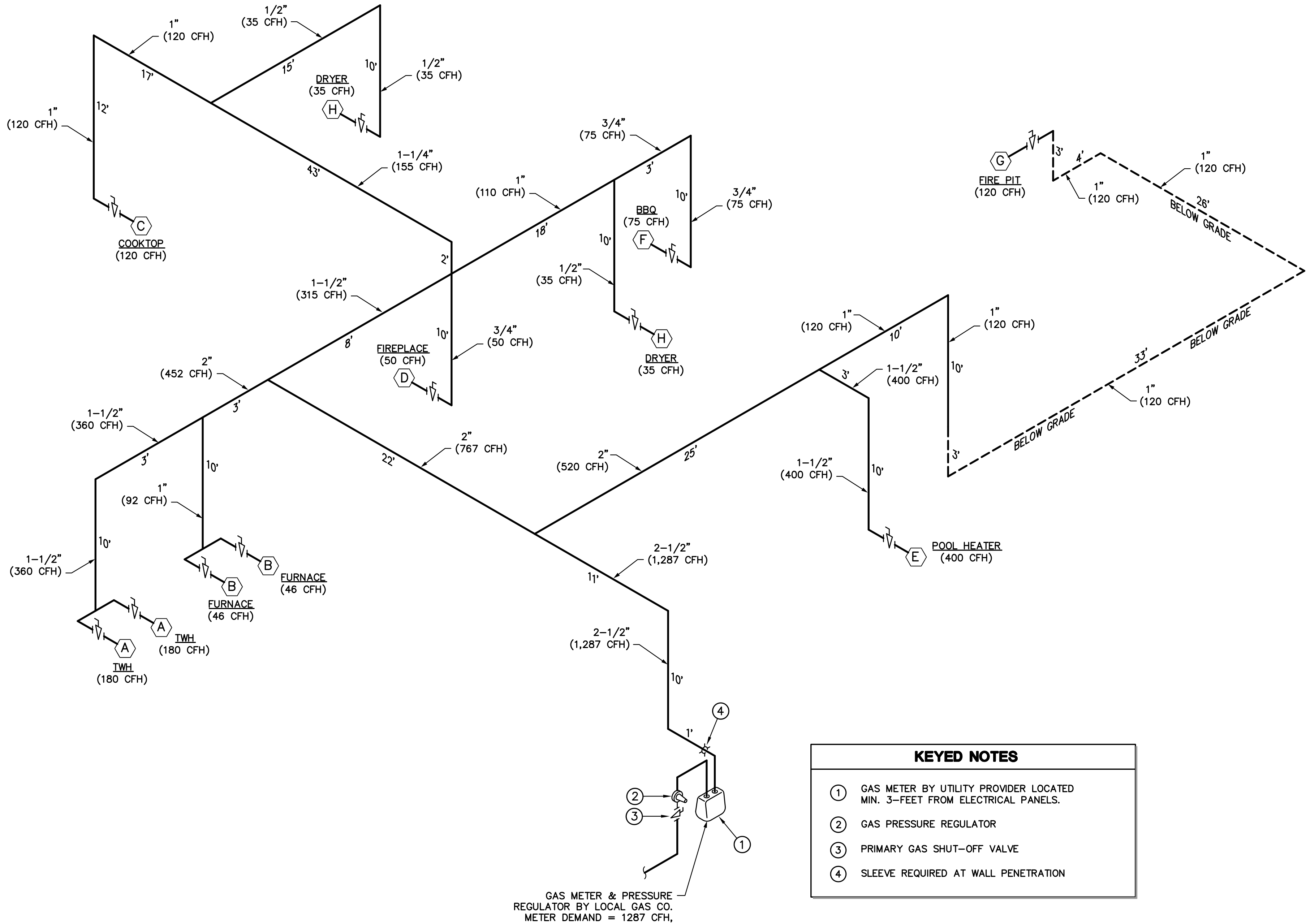
- DOWNDRAFT VENTS ROUTED THROUGH CRAWL SPACE SHALL TERMINATE AT THE EXTERIOR OF THE BUILDING. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING 10 FEET OR IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DOWNDRAFT SYSTEMS THAT EXCEED 400 CFM SHALL BE ACCOMPANIED BY MAKE-UP AIR TO AVOID NEGATIVE PRESSURE WHERE COMBUSTIBLE APPLIANCES ARE USED.
- FOR DRYER, DPROVIDE 4 IN. DIAMETER RIGID METAL VENT TO ROOF AT 25' MAXIMUM LENGTH WITH 2.5 FEET SUBTRACTED FOR EACH 45-DEGREE ELBOW AND 5 FEET' SUBTRACTED FOR EACH 90-DEGREE ELBOW.
- ALL GAS EQUIPMENT SHALL BE EQUIPPED TO BURN NATURAL GAS FUEL.
- PROVIDE SHUT-OFF VALVE AND FLEXIBLE CONNECTION AT EACH PIECE OF EQUIPMENT. CONNECTION SIZE TO BE DETERMINED BY GAS INLET SIZE OF EQUIPMENT. (TYP.)
- ALL GAS PIPING, MATERIALS, VALVES, FITTINGS, INSTALLATION AND TESTING SHALL COMPLY WITH THE 2018 IFGC.
- VERIFY ALL GAS BTU/H INPUTS WITH ACTUAL BTU/H INPUT OF APPLIANCE SUPPLIED.

GAS PIPE SIZING CHART

BASED ON 175' (IFGC TABLE 402.412)

PIPE SIZE	MAX BtuH
1/2"	37,000
3/4"	77,000
1"	144,000
1-1/4"	298,000
1-1/2"	449,000
2"	854,000
2-1/2"	1,380,000

TOTAL DEMAND = 1,287,000 BtuH
TDL = 130 x 1.25 = 163 FEET

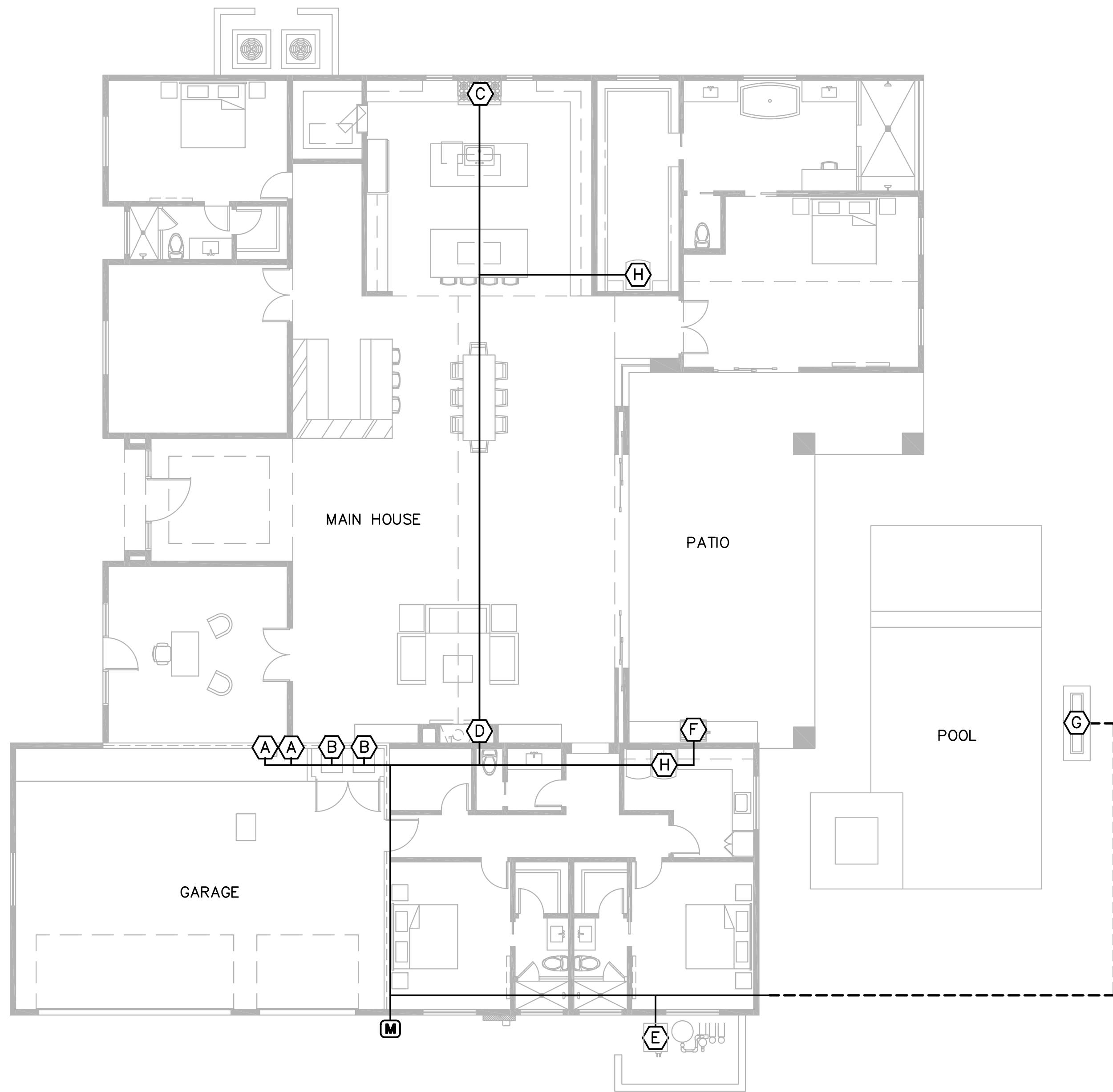


KEYED NOTES

- GAS METER BY UTILITY PROVIDER LOCATED MIN. 3- FEET FROM ELECTRICAL PANELS.
- GAS PRESSURE REGULATOR
- PRIMARY GAS SHUT-OFF VALVE
- SLEEVE REQUIRED AT WALL PENETRATION

GAS METER & PRESSURE
REGULATOR BY LOCAL GAS CO.
METER DEMAND = 1287 CFH,

SCALE: NT5

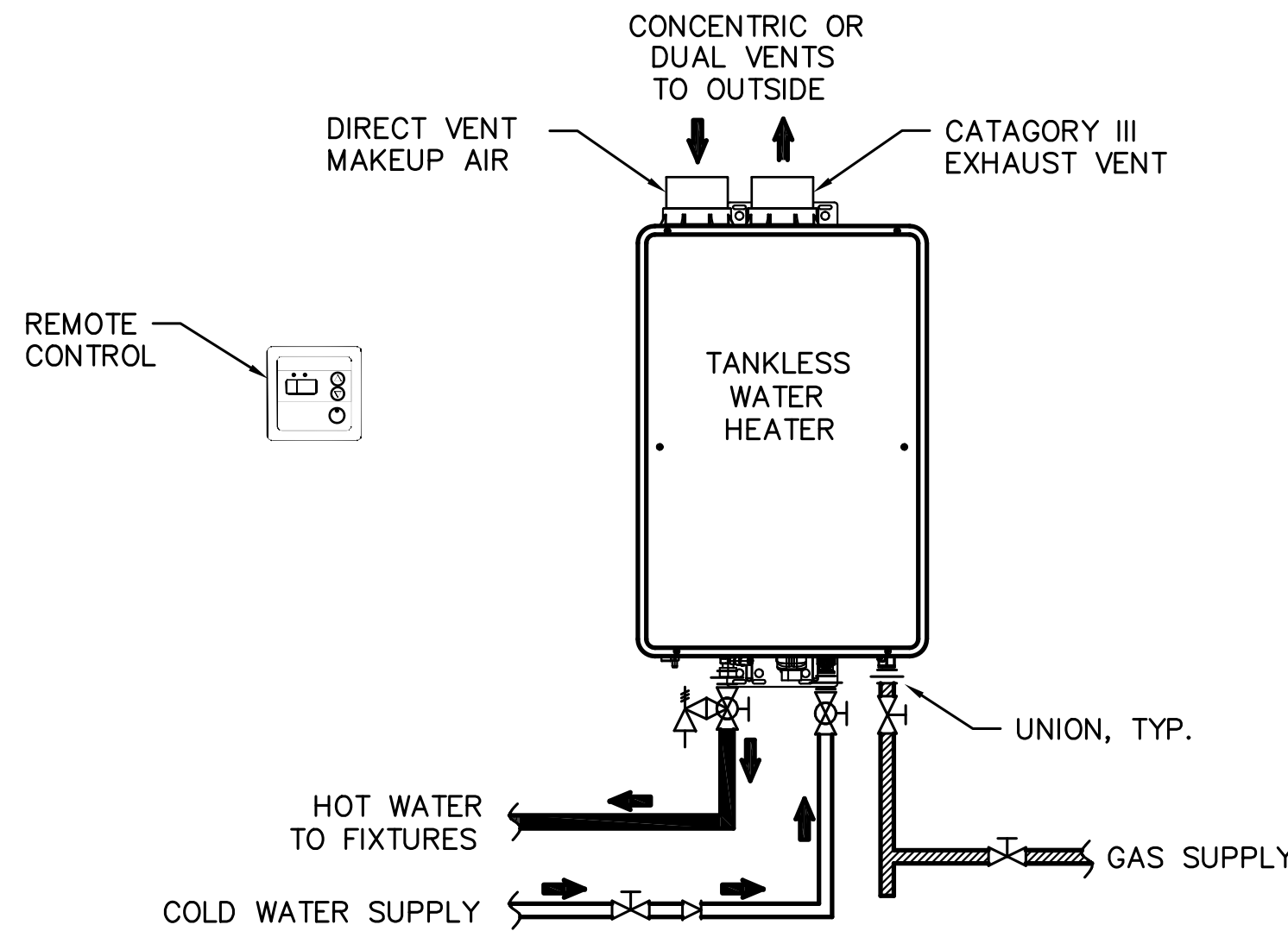


GAS LEGEND

- GAS METER
- GAS LOAD
- ABOVE GRADE
- BELOW GRADE

ROUTING OVERVIEW

SCALE: NT5

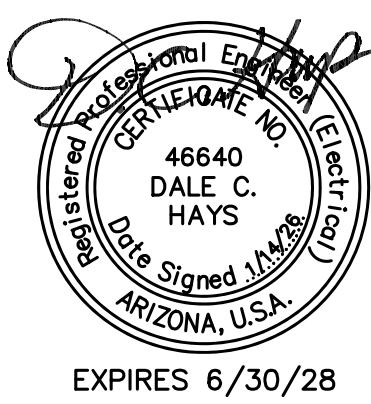


TANKLESS WATER HEATER

SCALE: NT5

REVISIONS

△ -



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STRUCTURAL NOTES

DESIGN CRITERIA: COMPLIANT WITH
CODE: 2021 IBC/IRC
ROOF LOADS:
DEAD LOAD: 20 PSF (10 PSF T.C. DL, 10 PSF B.C. D.L.) PATIO DL 15 PSF
ROOF LIVE LOAD: 20 PSF
DEFLECTION LIMITATIONS: ALL CASES
VERTICAL DEFL. UNDER DEAD AND LIVE LOAD: (ROOF-SPAN / 240, FLOOR-SPAN / 360) AND 3/4" MAX
VERTICAL DEFL. UNDER LIVE LOAD: (ROOF-SPAN / 360, FLOOR-SPAN / 480) AND 3/4" MAX
VERTICAL DEFL. BETWEEN ADJACENT TRUSSES: 1/2" MAX
HORIZONTAL DEFL. BETWEEN ADJACENT TRUSSES 3/8" MAX
CAMBER = DEAD LOAD DEFLECTION (ROOF TRUSSES ONLY)
WIND DESIGN DATA:
1. WIND SPEED (3-SECOND GUST) - 102 MPH ACTUAL, 105 MPH DESIGN, EXPOSURE C
2. RISK CATEGORY - II
3. C & C LOADING: 35 PSF
SEISMIC DESIGN
1. SEISMIC DESIGN CATEGORY - 'B'
2. RISK CATEGORY - II
3. IMPORTANCE FACTOR: 1
RAIN INTENSITY:
60 MIN. INTENSITY: 2.4 IN./HOUR, 15 MIN. INTENSITY: 5.7 IN./HOUR (ROOF LIVE LOAD GOVERNS)

SOIL :
SOILS REPORT: NON PROVIDED
PRIOR TO START OF CONSTRUCTION: SOILS ENGINEER TO VERIFY THE
UNIFORM DESIGN CRITERIA
• ALLOW BEARING 1,500 PSF @ 1'-6" BELOW FINISHED GRADE BEARING ON FIRM UNDISTURBED SOIL
• EFP: 35 PSF/FT (UNRESTRAINED), 55 PSF/FT (RESTRAINED)
• PASSIVE: 150 PSF/FT (CONTINUOUS WALLS), COEF OF FRICTION: .25
• POTENTIAL FOR CORROSION: SULFATES AND CHLORIDES BELOW LIMITS REQUIRING SPECIAL DESIGN
• EXPANSION INDEX < 20, REMODELED SWELL (% EXPANSION) < 1.5

- TREAT ALL AREAS UNDER FLOOR SLAB ON GRADE & ADJACENT TO ALL STEM WALLS FOR TERMITE PROTECTION. PROVIDE A WRITTEN 5 YEAR GUARANTEE AGAINST TERMITE INFESTATION TO BEGIN AT DATE OF SUBSTANTIAL COMPLETION, OR PER THE CURRENT ADOPTED IRC/IBC AND LOCAL BUILDING CODES.
- CONTRACTOR/OWNER ENGINEER TO VERIFY FOOTING TRENCHES ARE INTO UNDISTURBED NON EXPANSIVE/ NON COLLAPSIBLE SOIL, WITH A MINIMUM BEARING VALUE OF 1,500 PSF
- ALL FOOTINGS SHALL BE MINIMUM 1'-6" BELOW FINISH GRADE WITHIN 5'-0" OF FOUNDATION EDGE. ALL FOOTING EXCAVATIONS SHALL BE PROPERLY STEPPED IN MAXIMUM 12" INCREMENTS WITH LEVEL BOTTOMS AND SHALL BE FREE OF ALL LOOSE, SATURATED, OR OTHERWISE UNSTABLE SOIL PRIOR TO THE PLACEMENT OF REINFORCING STEEL. THE BASE OF ALL FOUNDATION EXCAVATIONS MUST BE COMPACTED WITH A "JUMPING JACK" OR PLATE TAMPER, RESULTING IN COMPACTION OF THE FOUNDATION BEARING SOILS TO A DEPTH OF 6.0 INCHES. THE FINAL COMPACTION MUST BE TO AT LEAST 95% OF THE ASTM D698 MAXIMUM DENSITY. SOME DEGREE OF MOISTURE PROCESSING MAY BE REQUIRED TO FACILITATE PROPER COMPACTION, ALTHOUGH NO MOISTURE SPECIFICATION WILL APPLY
- FINISH GRADE ON ALL SIDES OF ALL STRUCTURES SHALL SLOPE AWAY A MINIMUM 5%, (6" DROP IN 10'-0"). IF OTHER CONDITIONS EXIST, CONTACT ARCHITECT AND SOILS ENGINEER FOR APPROVAL.
- POSITIVE DRAINAGE AWAY FROM THE STRUCTURE SHALL BE MAINTAINED DURING ALL PARTS OF CONSTRUCTION AND DURING THE LIFE OF THE BUILDING. COVER ALL TRENCHES, FOOTING EXCAVATIONS AND OTHER DEPRESSIONS TO PREVENT COLLECTION OF WATER NEXT TO STRUCTURE DURING CONSTRUCTION.
- ALL UTILITY TRENCHES AND EXCAVATION SHALL BE RE-COMPACTED TO A MINIMUM 98% OPTIMUM PER ASTM D698 IN MAXIMUM 6" LIFTS.

CONCRETE :

- CONVENTIONAL FOUNDATIONS - (DESIGNED FOR 2500 PSI) MIX DESIGN: 3000 P.S.I. @ 28 DAYS, TYPE II CONC. 5 BAG MIN., MAX SLUMP = 4", MAX W/C RATIO OF .53
- FLOOR SLABS (NON STRUCTURAL) - 4" THICK W/ 3000 P.S.I. @ 28 DAYS, MAX SLUMP = 5", MAX W/C RATIO OF .56, AT CONTRACTORS OPTION USE FIBERMESH 650 OR TUF-STRAND SF MACRO FIBER REINFORCING @ 3 LBS/CY.
- A VAPOR BARRIER SHALL BE USED BENEATH CONCRETE SLABS WHICH RECEIVE MOISTURE-SENSITIVE FLOORING MATERIALS. THE VAPOR BARRIER SHALL HAVE A MAXIMUM OF .01 PERMS. SELECTION AND INSTALLATION OF THE BARRIER IS THE RESPONSIBILITY OF THE CONTRACTOR, OWNER AND ARCHITECT.
- PROVIDE CONTROL JOINTS @ 10'-0" O.C. MAX., SAW CUT SLAB WITHIN 6 HOURS OF POURING OF CONCRETE, MAX RATIO OF 1:1.5 BETWEEN JOINTS PERPENDICULAR TO EACH OTHER.
- WALKS & DRIVES (NON STRUCTURAL) - 3000 P.S.I. @ 28 DAYS, NO FLY ASH, MAX SLUMP = 5", MAX W/C RATIO OF .56, AT CONTRACTORS OPTION USE FIBERMESH 650 OR TUF-STRAND SF MACRO FIBER REINFORCING @ 3 LBS/CY.
- MAXIMUM SIZE OF AGGREGATE SHALL BE 1 1/2" INCH PER ASTM C57 OR C33.
- SEE LAP SPLICES AND EMBEDMENT SCHEDULE THIS SHEET FOR LENGTHS
- PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II.
- MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND SLEEVES, DUCTS AND WHERE REINFORCING IS REQUIRED.
- NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY TESTING AGENCY.
- COLD/HOT WEATHER CONCRETING: PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH IN COMPLIANCE WITH ACI 305 AND ACI 306.
- CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED INDEPENDENT LABORATORY AND APPROVED BY THE ENGINEER.
- RECOMMENDED CURING PROCEDURE FOR ALL CONCRETE SLABS WHERE ARCHITECTURAL OR HIGH GRADE FINISH IS REQUIRED:
CURE UNCOVERED SLABS ON GRADE AND CONCRETE OVER METAL DECK WITH POLYETHYLENE FOR 5 DAYS. TAPE JOINTS WITH 6 INCH LAPS AND COVER WITH SAND. CURING COMPOUND FOR OTHER WORK SHALL BE COMPATIBLE WITH APPLIED FINISH, CONFORM TO ASTM C-309 AND SHALL BE CLEAR ON UNCOVERED STRUCTURE AND WHITE PIGMENTED ON COVERED STRUCTURE. APPLY AT A RATE SUFFICIENT TO RETAIN MOISTURE, BUT NO LESS THAN 1 GALLON PER 200 SQUARE FEET.

REINFORCING STEEL :

- ASTM A-615, NO TWIST, FY = 40 KSI, #3 & SMALLER, FY = 60 KSI, #4 & LARGER.
- ALL VERTICAL AND HORIZONTAL STEEL IN MASONRY AND CONCRETE SHALL BE TIED WITH METAL WIRE TIES AT ITS NOTED LOCATION AS SHOWN ON THE STRUCTURAL DETAILS. TIES SHALL BE PLACED AT CLOSE ENOUGH SPACING TO PREVENT MOVEMENT OF STEEL DURING PLACEMENT OF CONCRETE OR GROUT. WHEN THE LOCATION OF THE REINFORCING STEEL IS NOT NOTED, CONTACT STRUCTURAL ENGINEER OR ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING.
- MASONRY VENEER SHALL BE ANCHORED PER ONE OF THE METHODS SPECIFIED IN THE CURRENT ADOPTED I.B.C. WITH A MINIMUM OF ONE 2# GA. GALVANIZED METAL ANCHOR FOR EACH TWO SQUARE FEET OF WALL AREA.
- THE MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS WHAT IS NOTED ON THE STRUCTURAL DETAILS BUT NO LESS THAN WHAT IS SHOWN BELOW. WHEN NO SPECIFICATION IS NOTED, THE FOLLOWING MINIMUM COVER SHALL BE USED:
4.1. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
4.2. EXPOSED TO EARTH OR WEATHER IN #5 BARS AND SMALLER: 1 1/2"
4.3. EXPOSED TO EARTH OR WEATHER IN #6 BARS AND LARGER: 2"
4.4. NOT EXPOSED TO WEATHER/EARTH IN BEAMS, GIRDERS, OR COLUMNS: 1 1/2"
4.5. NOT EXPOSED TO WEATHER/EARTH IN SLABS, WALLS OR JOINTS: 3/4"
5. WELDABLE REBAR: ASTM A706, FY = 60 KSI

NAILING SCHEDULE :

CONNECTION	FASTENING	LOCATION	CONNECTION	FASTENING	LOCATION
1. JOIST TO SILL OR GIRDER	3-8d COMMON 3'-3" x 0.131" NAILS	TOENAIL	15. CEILING JOIST TO PLATE	3-8d COMMON 3'-3" x 0.131" NAILS	TOENAIL
2. BRIDGING TO JOIST	2-8d COMMON 2'-3" x 0.131" NAILS	EACH END, TOENAIL	16. CONTINUOUS HEADER TO STUD	4-8d COMMON	TOENAIL
3. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST	2-8d COMMON	FACE NAIL	17. CEILING JOIST, LAPS OVER PARTITIONS	3-16d COMMON MIN 4'-3" x 0.131" NAILS	FACE NAIL
4. WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST	3-8d COMMON	FACE NAIL	18. RAFTER OR TRUSS TO PLATE	3-10d COMMON OR 16d BOX 4'-3" x 0.131" NAILS	(2) T.N. ON 1 SIDE, (1) ON OPPOSITE (2) TOE NAILS EACH SIDE
5. 2" SUBFLOOR TO JOIST OR GIRDER	2-16d COMMON	BLIND AND FACE NAIL	19. BUILT-UP CORNER STUDS	16d COMMON 3" x 0.131" NAILS	24" O.C. 16" O.C.
6. SOLE PLATE TO JOIST OR BLOCKING	16d AT 16" O.C. 3-16d AT 16" O.C. 4'-3" x 0.131" NAILS AT 16"	TYPICAL FACE NAIL BRACED WALL PANELS	20. BUILT-UP GIRDER AND BEAMS	20d AT 32" O.C. 3" x 0.131" NAILS AT 24" O.C.	FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES FACE NAIL AT ENDS AND AT EACH SPLICE
7. TOP OR BOTTOM PLATE TO STUD	2-16d COMMON 3'-3" x 0.131" NAILS	END NAIL	21. 2" PLANKS	16d COMMON	AT EACH BEARING
8. STUD TO SOLE PLATE	4-8d COMMON 4'-3" x 0.131" NAILS	TOENAIL	22. COLLAR TIE TO RAFTER	3-10d COMMON 4'-3" x 0.131" NAILS	FACE NAIL
9. STUD TO STUD	2-16d COMMON 3'-3" x 0.131" NAILS	END NAIL	23. JACK RAFTER TO HIP	3-10d COMMON 4'-3" x 0.131" NAILS	TOENAIL
10. DOUBLE TOP PLATES	16d COMMON AT 16" O.C. 3" x 0.131" NAILS AT 12" O.C.	FACE NAIL, STAGGER	24. ROOF RAFTER TO 2-BY RIDGE BOARD	2-16d COMMON 3'-3" x 0.131" NAILS	TOENAIL
DOUBLE TOP PLATES @ SPLICE	8-16d COMMON 12-3" x 0.131" NAILS	TYPICAL FACE NAIL FACE NAIL	25. JOIST TO BAND JOIST	3-16d COMMON 5'-3" x 0.131" NAILS	FACE NAIL
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3-16d SINKER	TOENAIL	26. LEDGER STRIP	3-16d COMMON 4'-3" x 0.148" NAILS	FACE NAIL
12. RIM JOIST TO TOP PLATE	8d AT 6" O.C. 3" x 0.131" NAIL AT 6" O.C.	TOENAIL			
13. TOP PLATES, LAPS AND INTERSECTIONS	2-16d, 148x 3"	FACE NAIL			
14. CONTINUOUS HEADER, TWO OR THREE PIECES	16d SINKER	12" O.C. ALONG ALL EDGES			

FRAMING :

- JOIST HANGERS AND OTHER MISCELLANEOUS FRAMING ANCHORS SHALL BE AS MANUF. BY SIMPSON OR APPROVED EQUAL.
- ALL HANGERS, STRAPS, HOLDDOVNS, UPJIT CONNECTORS AND ALL OTHER CONNECTORS SHALL USE MANUFACTURED SPECIFIED FASTENERS AS PUBLISHED IN THEIR LATEST CATALOG. CONTACT ENGINEER IF ALTERNATIVE FASTENERS ARE DESIRED PRIOR TO INSTALLATION.
- SEE STUD WALL SCHEDULE ON PLANS FOR EXTERIOR STUD REQUIREMENTS, USE D.F. #2 IF NONE NOTED.
- ALL BEARING PARTITIONS SHALL HAVE DOUBLE TOP PLATES
- ROOF AND FLOOR PLYWOOD SHEATHING PANEL EDGES SHALL BEAR ON FRAMING MEMBERS AND BUTT ALONG THEIR CENTER LINES WITH PANEL EDGES STAGGERED AND FACE GRAIN PERPENDICULAR TO SUPPORT.
- SEE FRAMING PLANS FOR HEADERS OVER ALL OPENINGS OVER WALLS. UNLESS NOTED OTHERWISE.
- USE DBL. STUDS UNDER BRG. POINTS OF GIRDER AND BEAMS, BUT BUILT UP STUD WITH NO LESS THAN WIDTH OF BEAM/GIRDER - U.N.O. ON PLANS.
- ALL FRAMING MEMBERS SHALL BE BLOCKED AND BRIDGED PER CURRENT CODE.
- PROVIDE DOUBLE STUDS AT ALL PLYWOOD PANEL EDGE LOCATIONS
- AT ALL GABLE WALLS OR CHORD TRUSSES, 2x STUDS TO BE CONTINUOUS "BALLOON FRAMED" FROM BOTTOM PLATE TO UNDERSIDE OF BOTTOM CHORD OF TRUSS WITH A DOUBLE TOP PLATE. GABLE TRUSS SHALL NOT HAVE A FLAT BOTTOM CHORD BUT A BOTTOM CHORD THAT FOLLOWS THE ADJACENT TRUSS.

LUMBER :

- ALL SAWN LUMBER SHALL BEAR STAMP OF WWPA OR APPRD. TESTING AGENCY, AND CONSIST OF MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF FABRICATION (2X LUMBER ONLY).
- ROOF JOISTS, FLOOR JOISTS, BEAMS, LEDGERS, AND PLATES TO BE DOUGLAS-FIR, #2 OR BETTER, U.N.O.
- AT NON-BRG. STUDS TO BE HEM FIR, S.P.F. OR DOUGLAS-FIR #2 OR BETTER AT 24" O.C. UP TO 14'-0" TALL.
- ALL BUILT UP POSTS TO BE SAME GRADE AS WALL STUDS, NAILED WITH (2) 148" x 3 1/4" NAILS @ MAX 9" O.C. FOR FULL HEIGHT AND MAX 2 1/2" FROM ENDS. NAILS TO ORIGINATE FROM EXTERIOR LAMINATED SIDE. AT 4 PLY AND GREATER POST, SCREW TOGETHER WITH (2) ROWS OF SIMPSON SDW522 SCREWS, SPACED 9" O.C. (LENGTH TO MATCH POST WIDTH)
- ALL SOLID POSTS TO BE OF #1 OR BETTER.
- TRIMMERS SHOULD BE NAILED TO KING STUDS W/ (2) 148" x 3 1/4" NAILS @ MAX 9" O.C FOR FULL HEIGHT.
- ALL POSTS ON HIGHER LEVELS TO BE EXTENDED TO THE LOWER LEVELS DOWN TO FOUNDATION WITH BLOCKING TO THE FULL DEPTH OF FLOOR CAVITY.
- 4x AND 6x SOLID SAWN BEAMS MAY BE USED IN LIEU OF (2) PLY AND (3) PLY BEAMS RESPECTIVELY AS LONG AS THE BEAM DEPTHS ARE THE SAME AND GRADE D.F. #1 IS USED
- ALL LAG BOLTS/SCREWS SHALL HAVE 33% OF THEIR HOLES FILLED WITH EPOXY PRIOR TO DRIVING LAG INTO MEMBER
- ALL WOOD IN CONTACT WITH CONC. /SILL PLATES TO BE PRESERVED TREATED
- ALL TIMBER LARGER THAN 6x6 SHALL HAVE THEIR ENDS PAINTED AND SEALED FOR PROTECTION.

GENERAL CONSTRUCTION NOTES:

THE CONTRACTOR AND STRUCTURAL SUB CONTRACTORS SHOULD REVIEW AND BE FAMILIAR WITH THE ENTIRE STRUCTURAL DRAWINGS SET, SPECIFICATIONS, DETAILS AND REQUIREMENTS FOR 3RD PARTY SPECIAL INSPECTIONS PRIOR TO THE START OF WORK. CONTACT THE ENGINEER OF RECORD (602-616-4474) PRIOR TO THE START OF WORK IF YOU DO NOT FULLY UNDERSTAND THE STRUCTURAL CONSTRUCTION DOCUMENTS' REQUIREMENTS, AND SPECIFICATIONS.
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION.

TYPICAL DETAILS

UNLESS NOTED OTHERWISE, DETAILS ON STRUCTURAL DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES, OR TITLES. ALL DETAILS SHOWN SHALL BE IMPORTED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS. WHETHER SPECIFICALLY INDICATED OR NOT, TYPICAL DETAILS MAY OR MAY NOT BE REFERENCED ON THE DOCUMENTS, BUT SHALL APPLY AT ALL LOCATIONS, UNLESS NOTED OTHERWISE. WHERE NO DETAIL CUTS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK SHOWN ELSEWHERE ON THE PROJECT. FOR BIDDING PURPOSES, WHERE ANY SHOWN MEMBER OR STRUCTURAL ELEMENT IS NOT SIZED ON THE DOCUMENTS, THE LARGEST SIMILAR MEMBER USED IN THE PROJECT SHALL BE UTILIZED.

DISCREPANCIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS AND CONDITIONS WITH ARCHITECTURAL DRAWINGS AND SITE CONDITIONS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ARCHITECT OR ENGINEER OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCIES, OMISSIONS, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WHERE EXISTING CONSTRUCTION OCCURS, CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS MATCH THE CONSTRUCTION DRAWINGS PRIOR TO THE REMOVAL OF STRUCTURAL MEMBERS INCLUDING BUT NOT LIMITED TO TRUSSES, BEAMS, WALLS, COLUMNS AND FOOTINGS

BIDDING: IN CASE OF CONFLICTS, MORE COSTLY REQUIREMENTS GOVERN FOR BIDDING. SUBMIT CLARIFICATION REQUEST PRIOR TO PROCEEDING WITH WORK.

SHORING: IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORMWORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING THE CONSTRUCTION. IMPOSED LOADS SHALL NOT EXCEED THE DESIGN LIVE LOAD FOR THE STRUCTURE.

OTHER TRADES: ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTOR PRIOR TO CONSTRUCTION.

DESIGN LOAD: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND OWNER TO VERIFY THE WEIGHTS OF BUILDING MATERIALS BEING USED INCLUDING FINISHES (IE ROOF TILE/ FLOORING) DO NOT EXCEED THE LOADS STATED ABOVE ON THIS SHEET AND THAT DEFLECTION REQUIREMENTS DO NOT EXCEED L/360 LIVE LOAD DEFLECTION AND L/240 TOTAL LOAD DEFLECTION, IF SUCH LOADING OR REQUIREMENTS IS GREATER THAN WHAT IS STATED ON THIS SHEET. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD PRIOR TO STARTING CONSTRUCTION AND SHALL NOT PROCEED UNTIL RECEIVING WRITTEN DOCUMENTATION OF NEW DESIGN AND ALLOWABLE LOADS

MISCELLANEOUS: CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE DESIGN OF MEMBERS AND CONNECTIONS FOR ANY PORTIONS OF THE STRUCTURE NOT INDICATED ON DESIGN DRAWINGS INCLUDED BUT NOT LIMITED TO SHOP DRAWINGS, SHORING, FORM WORK, STEEL AND WOOD MEMBERS

EXISTING CONDITIONS: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO: ADDRESS, DIMENSIONS, SETBACKS, FRAMING, FOOTINGS, POSTS, BEARING CONDITIONS, SPAN DIRECTIONS. WHERE DISCREPANCIES OCCUR FROM CONSTRUCTION DOCUMENTS, CONTRACTOR TO CONTACT ENGINEER FOR WRITTEN CLARIFICATION PRIOR TO STARTING WORK.

TRUSSES

- ALL TRUSSES MUST BE DESIGNED FOR THE LOADS SPECIFIED UNDER DESIGN CRITERIA, PLUS ADDITIONAL LOADS AS NOTED ON STRUCTURAL PLANS AND BELOW:
1. ALL TRUSSES TO BE FABRICATED BY AN ARIZONA APPROVED FABRICATOR. DESIGN SHALL BE SUBMITTED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE STRUCTURE IS TO BE ERCTED.
2. ALL GIRDER TRUSSES SHALL BE 2-PLY MINIMUM
3. CUTTING OF TRUSSES IS NOT PERMITTED. ALL TRUSS REPAIRS MUST BE APPROVED BY THE ENGINEER OF RECORD.
4. DRAG TRUSSES MUST BE DESIGNED FOR THE REQUIRED DRAG LOAD AS SPECIFIED ON THE FRAMING PLAN
5. ALL GABLE END WALL TRUSSES SHALL BE FULLY SHEATHED ON ONE SIDE W/ 3/8" OR 7/16" APA RATED SHEATHING NAILED WITH 8d (131" DIA. x 2 1/2" LONG) AT EDGES AND BOUNDARY AND 12" FIELD. MAXIMUM SPACING OF VERTICALS IN GABLED END WALL TRUSS SHALL BE 16" O.C.
6. TRUSSES SHALL BE DESIGNED FOR WIND EXPOSURE C WITH PARTIALLY ENCLOSED ENCLOSURE CLASSIFICATION
7. ALL TRUSSES SUPPORTING TIMBER MEMBERS SHALL BE DESIGNED FOR AN ADDITIONAL 10 PSF B.C. DEAD LOAD
8. ALL TRUSSES SHALL BE DESIGNED FOR A P.C. PERPENDICULAR GRAIN BEARING ON TOP PLATES OF 405PSI (HEM FIR)
9. ALL TRUSSES SUPPORTING OVER FRAMING ABOVE SHALL BE DESIGNED FOR AN ADDITIONAL 5 PSF DL ON TOP CHORD.

SHEATHING :

ROOF SHEATHING
ROOF SHEATHING SHALL BE 19/32" CDX STD. GRADE SHEATHING (5-PLY) W/ EXTERIOR GLUE OR OSB PER PRP108. SPAN INDEX RATIO 4020 W/ STAMP OF APPROVED TESTING AGENCY. ALL ROOF SHEATHING SHALL HAVE: 8d COMMON AT 6" O.C. AT EDGES, BOUNDARY, BLOCKING, LEDGERS, SHEAR WALLS AND PLATES. 8d AT 12" O.C. AT INTERMEDIATE FRAMING MEMBERS. USE PS2CA OR PS2CL CLIPS AT 24" O.C. AT EDGES NOT DIRECTLY OVER TRUSSES/JOISTS. CLIPS TO MATCH SHEATHING THICKNESS. AT OWNERS OPTION, AT ROOF WITH TOP CHORD DEAD LOAD LESS THAN 15 PSF, 15/32" SHEATHING MAY BE USED WITH PS2CAPSCL CLIPS IN LIEU OF 19/32" SHTG. ALL SHEATHING WITHIN 48" OF ROOF EDGES AND RIDGES SHALL BE NAILED MAXIMUM 6" O.C.

WALL/SHEAR SHEATHING

EXTERIOR WALL AND SHEAR WALL SHEATHING TO BE 3/8" OR 7/16" APA RATED SHEATHING W/ SPAN INDEX RATIO 240 W/ STAMP OF APPROVED TESTING AGENCY. BLOCK ALL PANEL EDGES ALL WALL SHEATHING SHALL HAVE: 8d COMMON NAILS AT 6" O.C. AT EDGES, BOUNDARY, BLOCKING, LEDGERS, SHEAR WALLS AND PLATES. 8d AT 12" O.C. AT INTERMEDIATE FRAMING MEMBERS.

GLUE LAMINATED BEAMS/COLUMNS (GLB)

- ALL GLUE LAM BEAMS SHALL HAVE STRESS CHARACTERISTICS OF 24F-V4 OR 26F-V5 FOR SIMPLE SPANS. WHERE BEAMS CANTILEVER OR BEAR ON MORE THAN 2 SUPPORTS USE 24F-V8 OR 26F-V5
- ALL GLUE LAMINATED COLUMNS SHALL BE 24F-V8 or 26F-V5 (BALANCED) MEMBERS, SINGLE GRADE LAYUP.
- USE ARCHITECTURAL OR ROUGH SAWN GRADE BEAMS WHEN REQUIRED BY ARCHITECTURAL PLANS OR WHEN EXPOSED
- USE WATER PROOF GLUE FOR ALL BEAMS EXPOSED TO RAIN AND AT ALL EXTERIOR APPLICATIONS WHERE THE BEAM IS NOT COVERED BY SOFFIT FRAMING OR OTHER ENCAPSULATING MEASURES
- ALL BEAMS TO BEAR AITC STAMP AND CERTIFICATION AND GRADE
- CAMBER ALL BEAMS TO THE DEAD LOAD DEFLECTION AS SHOWN IN STRUCTURAL CALCULATIONS OR PLANS BUT NOT LESS THAN R/500"
- ALL GLB SHALL HAVE A MAXIMUM MOISTURE CONTENT OF: 16% AT TIME OF FABRICATION

SPECIAL INSPECTION

- SPECIAL STRUCTURAL INSPECTION IS TO BE PROVIDED FOR THE FOLLOWING ITEMS IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING SAFETY DEPARTMENT. THE SPECIAL INSPECTOR AND THE ENGINEER RESPONSIBLE FOR IMPLEMENTING THE SPECIAL INSPECTION PROGRAM SHALL BE FAMILIAR WITH THE DESIGN OF THE PROJECT AND BE AN INDEPENDENT THIRD PARTY INDIVIDUAL/FIRM FROM THE INSTALLING CONTRACTOR. INSPECTIONS BY THE MUNICIPALITY/CITY OFFICIAL DO NOT CONSTITUTE AS SPECIAL INSPECTIONS.
- ALL SPECIAL INSPECTIONS TO BE PERFORMED AS PER THE REQUIREMENTS OF IBC
- SPECIAL INSPECTIONS SHALL PROVIDE INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE ENGINEER RESPONSIBLE FOR IMPLEMENTING THE SPECIAL INSPECTION PROGRAM. THIS ENGINEER SHALL COMPLETE AND SIGN THE SPECIAL INSPECTION CERTIFICATE CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE THE WORK HAS BEEN PERFORMED ACCORDING TO THE APPROVED PLANS, SPECIFICATIONS AND ALL THE APPLICABLE CODE REQUIREMENTS.

ITEMS REQUIRING SPECIAL INSPECTION

- SOILS, VERIFY BEARING CAPACITY, PROPER PAD CONSTRUCTION, AND FOOTING TRENCHES PRIOR TO POURING
- ALL INSPECTIONS SHALL BE PERFORMED PRIOR TO THE INSTALLATION OF FINISH MATERIAL ON WALLS, FLOORS, OR CEILINGS THAT WOULD COVER ANY STRUCTURAL CONNECTION

SHOP DRAWINGS

- SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ANY ITEMS REQUIRED BY THE ARCHITECTURAL SPECIFICATIONS. CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS
- THE GENERAL CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMITTAL. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW. THE CONTRACTOR SHALL CLOUD OR FLAG ALL ITEMS NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND LENGTHS OF MEMBERS.
- ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM THE ORIGINAL CONTRACT DRAWINGS SHALL BE CLOUDED BY THE MANUFACTURER OR FABRICATOR. ANY CHANGES, SUBSTITUTIONS OR DEVIATIONS WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED ALLOWED AFTER THE ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY BY THE STRUCTURAL ENGINEER.
- THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO ALLOW OR NOT ALLOW ANY CHANGES TO THE ORIGINAL CONTRACT DRAWINGS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW.
- THE SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DRAWINGS. ITEMS OMITTED OR SHOWN INCORRECTLY AND WHICH ARE NOT NOTED AS ALLOWED BY THE STRUCTURAL ENGINEER OR ARCHITECT ARE NOT TO BE CONSIDERED CHANGES TO THE ORIGINAL CONTRACT DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ITEMS OMITTED OR SHOWN INCORRECTLY ARE CONSTRUCTED IN ACCORDANCE WITH THE ORIGINAL CONTRACT DRAWINGS.
- ALL ENGINEERING DESIGNS AND LAYOUTS PERFORMED BY OTHERS SHALL BE SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS AND COMPLETENESS SHALL REST WITH THE CONTRACTOR.
- SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITAL IF MAJOR ERRORS ARE FOUND DURING REVIEW. NO MORE THAN (2) REVIEWS WILL OCCUR ON ANY SHOP DRAWING SET. ALL ADDITIONAL REVIEWS REQUIRED DUE TO INCOMPLETENESS OR ERRORS IN THE SHOP DRAWINGS WILL BE SUBJECT TO ADDITIONAL FEES BILLED TO THE CONTRACTOR.
- ALLOW A MINIMUM OF FIVE WORKING DAYS FOR REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER.

DEFERRED SUBMITTALS

DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW THEM AND FORWARD THEM TO THE OWNER/ARCHITECT/BUILDING OR PERSON IN CHARGE OF SUBMITTALS WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

DEFERRED STRUCTURAL ITEMS

- PREFABRICATED WOOD TRUSSES

NAIL SIZES

20d COMMON: .192" DIA. x 4" LONG
16d COMMON: .162" DIA. x 3 1/2" LONG
10d COMMON: .148" DIA. x 3" LONG
8d COMMON: .131" DIA. x 2 1/2" LONG
16d SINKER: .148" DIA. x 3 1/4" LONG
10d SINKER: .120" DIA. x 2 7/8" LONG
ALL NAIL TYPES NOT SPECIFIED SHALL BE COMMON

GR. 60 STEEL BAR SIZE	HOOK EMBEDMENT	EXTENSION	STRAIGHT BAR
3000 PSI	4000 PSI	5000 PSI	90 DEG. 3000 PSI 4000 PSI 5000 PSI
#3	6	6	6 4.5 16 14 13
#4	8	7	6 6 22 19 17
#5	10	8	7 7.5 27 24 21
#6	12	10	9 9 33 28 26
#7	13	12	10 10.5 48 42 37
#8	15	13	12 55 47 43

NOTES:

- EMBEDMENT LENGTH IS BASED ON 2 1/2" MINIMUM SIDE COVER AND 2" MINIMUM END COVER.
- CONTACT STRUCTURAL ENGINEER IF CENTER TO CENTER SPACING OF REINFORCING IS LESS THAN OR EQUAL TO 3 BAR DIAMETERS <3 Db OR 2 Db CLEAR SPACING BETWEEN BARS
- WHERE CLEAR COVER <4Db, MULTIPLY EMBEDMENT AND STRAIGHT BAR DEVELOPMENT BY 1.5
- EMBEDMENT IS THE LENGTH FROM EDGE OF CONCRETE TO THE BAR HOOK, EXTENSION IS THE LENGTH OF THE BAR FROM THE END OF THE BEND

GR. 60 STL.	CLASS B TENSIONS SPLICE LENGTHS					
CONC. PSI	fc= 2,500 & 3000 PSI		fc= 4000 PSI		fc= 5000 PSI	
BAR LOC.	REGULAR	TOP	REGULAR	TOP	REGULAR	TOP
#3	24	31	19	24	17	22
#4	32	41	25	33	23	29
#5	39	51	31	41	28	36
#6	47	61	37	49	34	43
#7	69	89	54	71	49	63
#8	78	102	62	81	56	72

NOTES:

- TOP BARS ARE ANY HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
- UNLESS NOTED OTHERWISE, LAP SPLICES IN CONCRETE BEAMS, SLABS, COLUMNS AND WALLS SHALL BE CLASS "B" TENSION SPLICES.
- CONTACT STRUCTURAL ENGINEER IF CENTER TO CENTER SPACING OF REINFORCING IS LESS THAN OR EQUAL TO 3 BAR DIAMETERS LESS THAN 3sd OR 2sd CLEAR SPACING BETWEEN BARS.
- WHERE CLEAR COVER < Db, MULTIPLY TENSION LAP SPLICE BY 1.5.
- ALL SPLICES MUST BE FULL CONTACT.

MASONRY:

- CONC. BLOCK UNITS - MEDIUM OR NORMAL WEIGHT: fm = 1900 P.S.I.
- GROUT - 3000 P.S.I. (DESIGNED FOR 2000 PSI), SLUMP MAINTAINED BETWEEN 10 AND 11 INCHES
- MORTAR - TYPE S - 2000 P.S.I.
- ALL CMU SHALL BE LAID IN RUNNING BOND WITH CLEAN TOOLED EDGES
- PROVIDE VERTICAL CONTROL JOINTS MAX 24'-0" O.C.

MASONRY HORIZONTAL REINFORCEMENT:

- MINIMUM 8" DEEP GROUTED BOND BEAMS WITH 2-#4 REBAR CONTINUOUS AT THE FOLLOWING LOCATIONS:
1.1. ROOF LINE
1.2. LEDGER LOCATIONS
1.3. 8'-0" O.C. VERTICALLY
- MINIMUM 8" DEEP GROUTED BOND BEAM WITH 1-#5 REBAR CONTINUOUS AT THE TOP OF PARAPETS.
- HORIZONTAL BARS ARE CONTINUOUS AT ALL CONTROL JOINTS. STAGGER SPLICES A MINIMUM OF 60 BAR DIAMETERS.
- PROVIDE BENT BARS AT CORNERS AND INTERSECTIONS TO MATCH AND LAP HORIZONTAL REINFORCEMENT A MINIMUM OF 2'-8".
- PROVIDE DURO-O-WIRE @ 16" O.C. VERT. IN HORIZ. JOINTS 9 GAUGE WIRE MIN. LAP REINFORCEMENT 16".
- LAP HORIZONTAL STEEL MINIMUM 40"

MASONRY VERTICAL REINFORCEMENT:

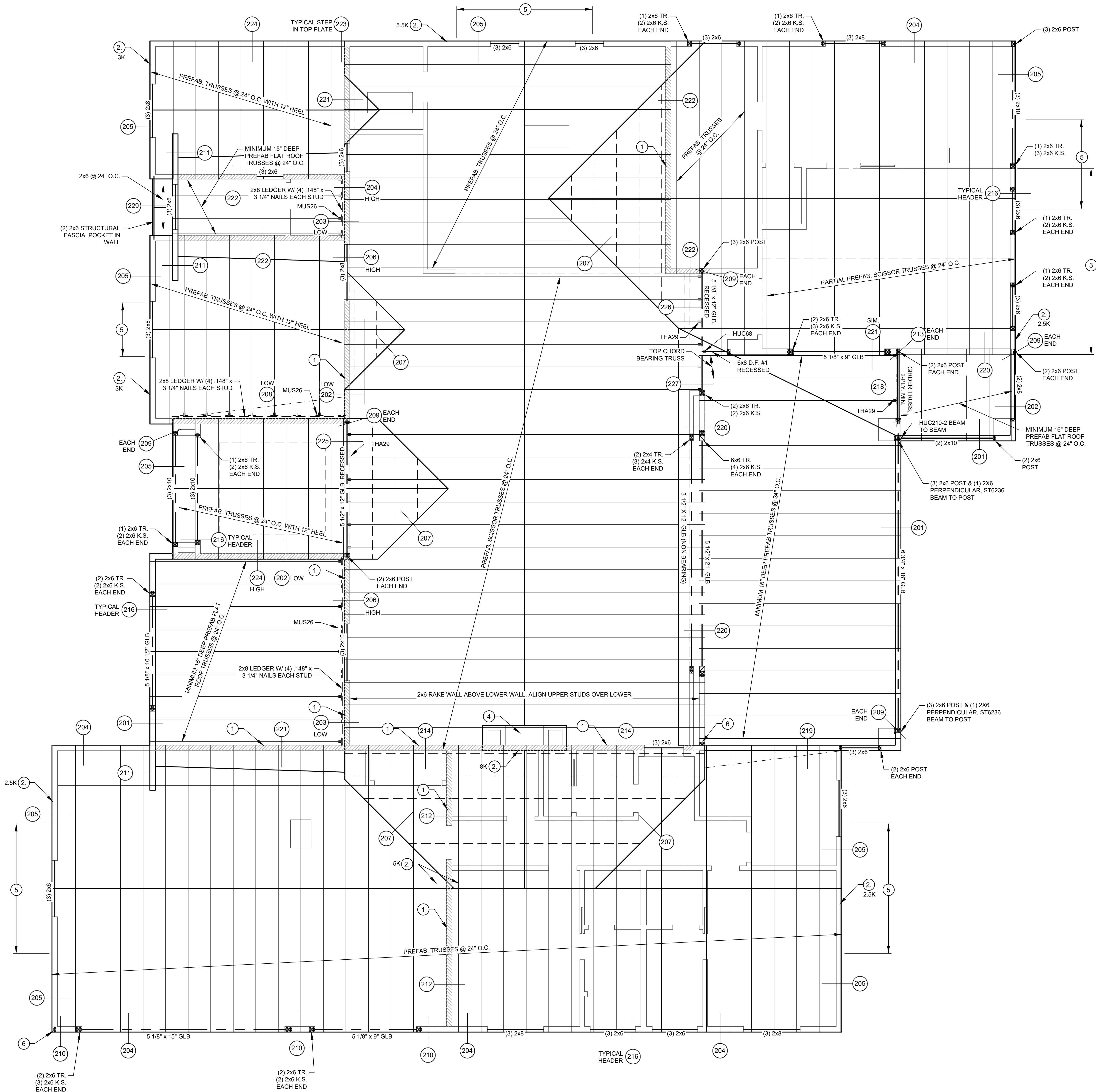
- TYPICAL VERTICAL REINFORCING SHALL BE #4 REBAR AT 48" O.C. IN THE CENTER OF THE WALL IN SOLID GROUTED CELLS (U.N.O.)
- IN ADDITION TO TYPICAL REINFORCING USE 1-#4 VERTICAL (1- BAR/CELL) AT ALL WALL INTERSECTIONS & CORNERS, EACH SIDE OF OPENINGS AND CONTROL JOINTS, AND AT ALL LOCATIONS INDICATED ON PLANS.
- USE (2) #4 VERT BAR (1 BAR/CELL) AT ALL BEAM BEARING LOCATIONS. GROUT SOLID FROM FND. TO BEAM BEARING.
- FOUNDATION SHALL HAVE DOWELS TO MATCH AND LAP VERTICAL WALL OR COLUMN REINFORCING.
- ALL EXPANSION BOLTS AND ANCHOR BOLTS SHALL BE INSTALLED IN SOLID GROUTED CELLS
- LAP VERTICAL STEEL MINIMUM 40"

MASONRY GROUTING:

- MAXIMUM GROUT LIFT:
1.1. WITHOUT CLEANOUTS: 5'-0".
1.2. WITH CLEANOUTS: 8'-0" (MIN 8" CMU REQ.)
- NO MORE THAN 1/2" OF MORTAR SHALL PROTRUDE FROM FACE OF INTERIOR SELL.
- CLEANOUTS SHALL BE A MINIMUM 3" x 5" AT THE BOTTOM OF CELLS BEING GROUTED
- NO BOND BEAMS SHALL BE PRESENT BETWEEN THE TOP AND BOTTOM OF GROUT LIFTS WHERE GROUTING OVER 5'-0"
- ALL CELLS WITH REBAR SHALL BE GROUTED SOLID
- ALL WALLS IN CONTACT WITH SOIL SHALL BE GROUTED SOLID.
- MECHANICAL VIBRATION REQUIRED IN ALL CELLS BEING GROUTED AND SHALL OCCUR IMMEDIATELY AFTER GROUTING AND AGAIN AT 5 TO 10 MINUTES AFTER INITIAL VIBRATION. USE A 3/4" TO 1" "PENCIL HEAD" VIBRATOR. VIBRATOR TO REACH TO BOTTOM OF GROUT LIFT.
- A MINIMUM 4 HOURS OF SET TIME SHALL OCCUR BETWEEN LAYING OF LAST MASONRY UNIT AND INITIAL GROUTING
- STOP EACH GROUT LIFT A MINIMUM 1" BELOW TOP OF BED JOINT EXCEPT AT FINAL LIFT TO FORM KEY.
- GROUTING SHALL OCCUR WITHIN 1 1/2 HOUR FROM INITIAL INTRODUCTION OF WATER AND PRIOR TO INITIAL SET

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SCALE 1/4" = 1'-0"



GENERAL FRAMING NOTES

- UNLESS NOTED OTHERWISE, SHEATH EXTERIOR FACE OF WALLS W/ 3/8" OR 7/16" SHEATHING FASTENED W/ 8d COMMON NAILS SPACED 6" O.C. AT PANEL & BOUNDARY EDGES & 12" O.C. A INTERIOR SUPPORTS, BLOCK ALL PANEL EDGES
- SHEATH ROOF TRUSSES W/ 19/32" CDX STD. GRADE SHEATHING (5-PLY) W/ EXTERIOR GLUE OR OSB PER PRP108 W/ 8d NAILS SPACED 6" O.C. AT PANEL AND BOUNDARY EDGES & 12" O.C. @ INTERIOR SUPPORTS. USE PSCA OR PSCL CLIPS AT 24" O.C. AT EDGES NOT DIRECTLY OVER TRUSSES/JOISTS. CLIPS TO MATCH SHEATHING THICKNESS. AT ROOF WITH TOP CHORD DEAD LOAD LESS THAN 15 PSF, 15/32" SHEATHING MAY BE USED WITH PSCA/PSCL CLIPS IN LIEU OF 19/32" SHTG. ALL SHEATHING WITHIN 48" OF ROOF EDGES AND RIDGES SHALL BE NAILED MAXIMUM 6" O.C. BOUNDARY AND FIELD.
- SHEAR WALL ANCHOR BOLT WASHERS ARE TO BE 229" x 3"x3" OR LARGER AND EXTEND WITHIN 1/2" OF SHEAR WALL SHEATHING PER IBC 2305.1/SDPWS 4.3.6.4.3
- USE CDX OR OSB SPACER PLATE AT BUILT UP HEADERS WHEN BUILT UP PLYS ARE HELD TO ONE SIDE
- ALL GIRDERS AND GLUE LAM BEAMS SHALL BE SUPPORTED BY MINIMUM 2x6 POST/TRIMMER, U.N.O.
- ALL HANGERS, STRAPS, HOLDDOWNS, UPLIFT CONNECTORS AND ALL OTHER CONNECTORS SHALL USE MANUFACTURED SPECIFIED FASTENERS AS PUBLISHED IN THEIR LATEST CATALOG. CONTACT ENGINEER IF ALTERNATIVE FASTENERS ARE DESIRED PRIOR TO INSTALLATION.
- SEE GSN FOR NAILING SCHEDULE AND ALL OTHER SPECIFICATIONS. SEE SHEET D1 FOR FOUNDATION DETAILS (100 LEVEL DETAILS), SEE SHEET D2 FOR FRAMING DETAILS (200 LEVEL DETAILS).
- VERIFY EXACT SIZE, WEIGHT, AND LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL PLANS AND ARCHITECT. VERIFY WEIGHTS DO NOT EXCEED THE LIVE LOAD FOR THE EQUIVALENT AREA OF UNIT FOOTPRINT.
- FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITIONS. DETAILS ARE TYPICAL THROUGHOUT THE PLAN AND MAY NOT BE KEYED AT EVERY LOCATION WHERE THEY OCCUR
- ALL HIPS, RIDGES, & VALLEYS SHALL BE SOLID BLOCKED WITH 2x BLOCKING. PROVIDE EDGE NAILING FROM SHEATHING TO BLOCK ON BOTH SIDES OF SPLICE
- CONTRACTOR, TRUSS MANUFACTURE AND ARCHITECT/DESIGNER TO VERIFY ROOF PITCHES AND CEILING HEIGHTS PRIOR TO TRUSS FABRICATION
- PROVIDE FIRE BLOCKING IN ALL FRAMED SPACES PER IBC SECTION 718 AND IRC R302.11
- ALL GABLE END TRUSSES OVER 5'-0" TALL REQUIRE VERTICAL BRACING. SEE TYPICAL GABLE END WALL DETAIL

KEYED FRAMING NOTES

- INTERIOR SHEAR WALL, PROVIDE STUDS 16" O.C. AND CONTINUOUS HORIZONTAL BLOCKING EVERY 48" VERTICALLY AT DRYWALL SHEAR AND 96" O.C. AT PLYWOOD/OSB SHEAR
- DRAG TRUSS, DESIGN FOR NOTED AXIAL LOAD
- BALLOON FRAME WALL TO UNDERSIDE OF VAULTED CEILING IN LINE WITH ROOF TRUSSES/ JOISTS
- TRUSS MANUFACTURE, ARCHITECT, AND BUILDER TO COORDINATE SPACING OF TRUSSES TO ALLOW FOR PROPER CLEARANCE BETWEEN FIREPLACE FLUE AND TRUSSES PRIOR TO TRUSS FABRICATION. DESIGN TRUSSES FOR AN ADDITIONAL 100 PLF LOAD TO SUPPORT STACK.
- PROVIDE 2x4 VERTICAL GABLE SUPPORT @ 16" O.C. (RAKE WALL) TOE NAIL TO GABLE VERTICAL WEBS W/ 131" x 3 1/4" NAILS @ 8" O.C. EACH SIDE
- DOUBLE FULL HEIGHT STUDS FOR HOLDDOWNS

ABBREVIATION KEY			
TYP.	TYPICAL		
TR.	TRIMMER STUD		
K.S.	KING STUD		
CR.	CRIPPLE STUD/POST		
SIM.	SIMILAR		
SIMP.	SIMPSON		
INT.	INTERIOR		
BRG.	BEARING		
BLK.	BLOCKING		
CONT.	CONTINUOUS		
PREFAB.	PREFABRICATED		
	INTERIOR 2x6		
	BEARING OR SHEAR WALL		

2x6/2x8 WALL BEARING STUD SCHEDULE			
HEIGHT	SIZE	GRADE	SPACING
0'-0" - 14'-0"	2x6	H.F. #2 OR SPF #1-#2 K.D.	16" O.C.
14'-1" - 15'-0"	2x6	H.F. #2 OR SPF #1-#2 K.D.	12" O.C.
15'-1" - 17'-6"	2x6	H.F. #2 OR SPF #1-#2 K.D.	16" O.C.
17'-7" - 19'-0"	2x6	H.F. #2 OR SPF #1-#2 K.D.	12" O.C.
19'-1" - 19'-0"	2x6	D.F. (DOUG FIR) #2	16" O.C.
19'-1" - 16'-6"	2x6	D.F. (DOUG FIR) #2	12" O.C.
16'-7" - 18'-6"	2x6	D.F. (DOUG FIR) #2	16" O.C.
18'-7" - 20'-6"	2x6	D.F. (DOUG FIR) #2	12" O.C.
20'-7" - 19'-6"	2x6	D.F. (DOUG FIR) #2	16" O.C.
19'-7" - 21'-6"	2x6	D.F. (DOUG FIR) #2	12" O.C.

2x4 WALL BEARING STUD SCHEDULE			
HEIGHT	SIZE	GRADE	SPACING
0'-0" - 9'-1"	2x4	D.F. (DOUG FIR) #2	16" O.C.
9'-1" - 10'-1"	2x4	D.F. (DOUG FIR) #2	12" O.C.

2x4 INTERIOR WALL NON BEARING STUD SCHEDULE			
HEIGHT	SIZE	GRADE	SPACING
0'-0" - 12'-1"	2x4	H.F. #2 OR SPF #1-#2 K.D.	24" O.C.
12'-1" - 14'-0"	2x4	D.F. (DOUG FIR) #2	16" O.C.

(SPF= SPRUCE PINE FIR. H.F. = HEM FIR. K.D. = KILN DRIED)
3/8" MIN PLYWOOD OSB SHEATHING APPLIED TO EXTERIOR SIDE
PROVIDE FULL WIDTH BLOCKING AT A MAXIMUM VERTICAL SPACING OF 8'-0" O.C. ON ALL WALLS OVER 10'-0" TALL

FRAMING PLAN

SCALE 1/4" = 1'-0"

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DRAWN: **MSS**

revisions:
1
2
3

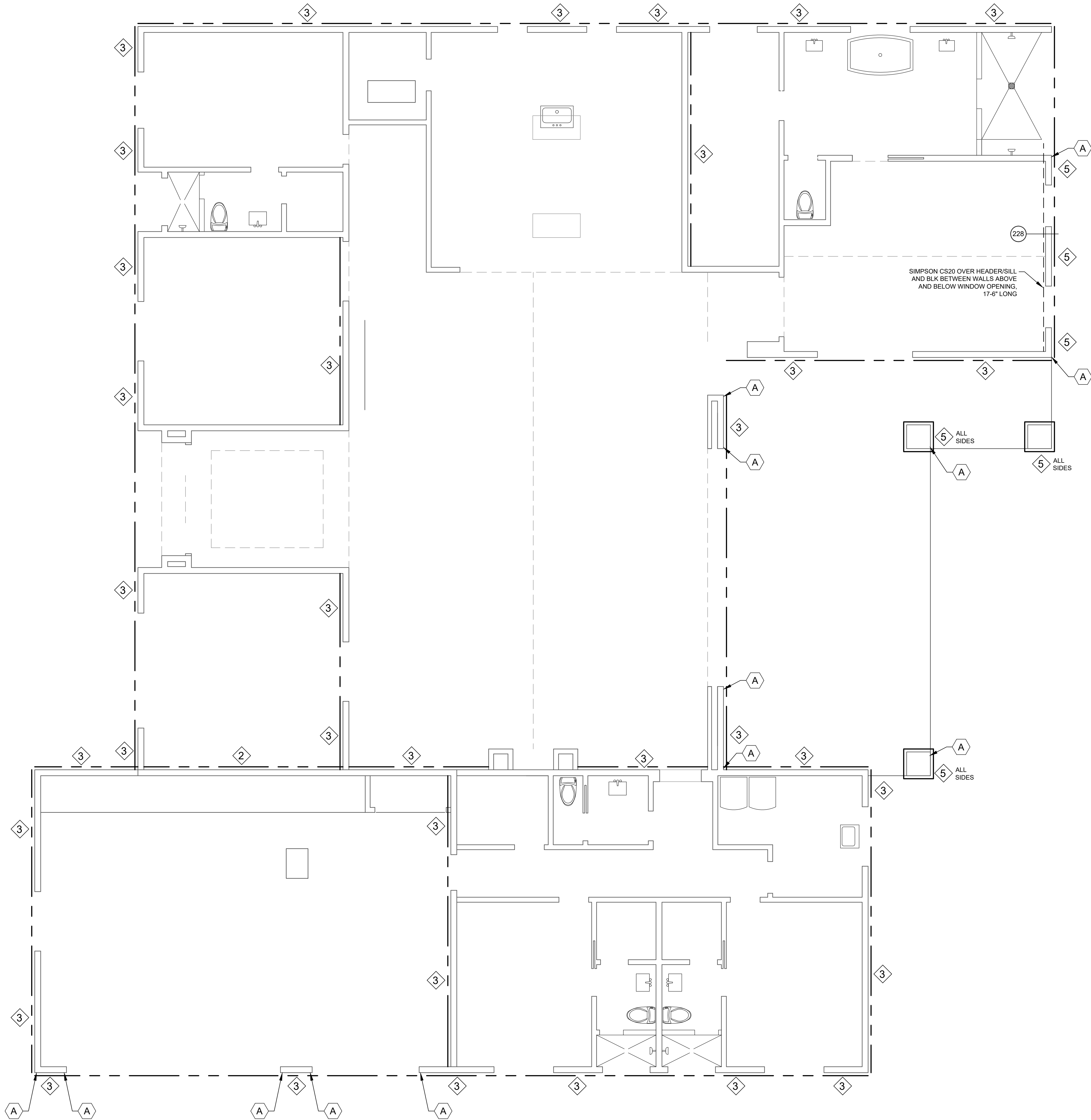
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date: **1/20/2026**

PROJECT: **25157**

S2



KEY	HOLDDOWN	ATTACHMENT	
		FOUNDATION	STUD
A	SIMPSON STD10	CAST IN PLACE, WITH REBAR IN STIRRUP PER MANUFACTURE SPECIFICATIONS	(24) 16d SINKERS
B	SIMPSON STD14	CAST IN PLACE, WITH REBAR IN STIRRUP PER MANUFACTURE SPECIFICATIONS	(30) 16d SINKERS
C	SIMPSON HDU4-SDS2.5	INTERIOR: 5/8" x 8" TITEN HD OR 5/8" x 8 1/2" STRONG BOLT 2 EXTERIOR: SSTB16 W/ 13" EMBED	(10) SDS 1/4" x 2 1/2"
D	SIMPSON HDU5-SDS2.5 (SPECIAL INSPECTION REQUIRED W/ EPOXY)	INTERIOR: 5/8" x 16" ALL THREAD ROD DRILLED AND EPOXIED 12" W/ SET-XP OR SET-3G EXTERIOR: SSTB20 W/ 17" EMBED	(14) SDS 1/4" x 2 1/2"
E	SIMPSON HDU8-SDS2.5	SSTB28 W/ 24" EMBED OR SB7/8 x 24" W/ 18" EMBED	(20) SDS 1/4" x 2 1/2"

NOTES:

- ALL HOLDDOWNS SHALL BE LOCATED AT (2) 2x FULL HEIGHT DOUG FIR #2 STUDS EXCEPT HDU8: USE (3) 2x STUDS
- APPROVED EXPANSION ANCHORS: SIMPSON: STRONG BOLT 2 (ESR 3037), HILTI KWIK BOLT-TZ (ESR 1917), HILTI KWIK BOLT-3 (ESR 2302) ALL W/ MINIMUM 6" EMBED
- ALL WET SET HOLDDOWNS SHALL BE MIN 1/2" CLEAR FROM CONCRETE EDGES
- WHEN INSTALLING TYPE 'C' OR 'D' HOLDDOWNS IN EXISTING EXTERIOR STEMS, USE 5/8" DIAMETER x 16" LONG ALL THREAD ROD DRILLED AND EPOXIED 12" INTO STEM W/ SET-XP OR SET-3G EPOXY. SPECIAL INSPECTION REQUIRED FOR EPOXY PRIOR TO INSTALL.
- TYPE 'C' HOLDDOWN MAY BE USED IN LIEU OF 'A', AND TYPE 'D' HOLDDOWN MAY BE USED IN LIEU OF TYPE 'B'. SEE NOTE 4 FOR INSTALLATION. SPECIAL INSPECTION REQUIRED.

SHEAR WALL SCHEDULE. ALL NOTES APPLY		
TYPE ALLOW	PANEL TYPE AND ATTACHMENT	FOUNDATION AND FLR. TO FLR. ATTACHMENT
1	PORTAL FRAME: 7/16" APA SHEATHING W/ 8d (.131" DIA. x 2 1/2" LONG) @ 3" O.C. ALL STUDS, BLOCKING AND PLATES AND GRID PATTERN ON BEAM	EXTERIOR: 5/8" DIA. x 12" ANCHOR BOLT OR (2) 1/2" DIA. x 12" ANCHOR BOLT W/ 2" SQ. x 3/16" PLATE WASHER ON TRIPLE 2x PLATE FLR TO FLR: SIMP SDS25412 @ 6" o.c.
2	1/2" OR 5/8" GYPSUM BOARD W/ #6 x 1 1/4" LONG SCREWS (TYPE W OR S) AT 4" O.C. EDGE, 12" O.C. FIELD, BLOCK ALL EDGES	EXTERIOR: 1/2" DIA. A.B.'S @ 48" O.C. INTERIOR: HILTI/SIMPSON PINS @ 12" O.C. / 6" O.C. AT GYP. BOARD ON 2 SIDES FLR TO FLR: SIMP SDS25412 @ 2'-8" o.c./16"
3	3/8" OR 7/16" APA SHEATHING W/ 8d (.131" DIA. x 2 1/2" LONG) @ 6" O.C. EDGE, PLATES AND BLOCKING. 12" O.C. FIELD, BLOCK ALL PANEL EDGES	EXTERIOR: 1/2" DIA. A.B.'S @ 48" O.C. INTERIOR: HILTI/SIMPSON PINS @ 8" O.C. / FLR TO FLR: SIMP SDS25412 @ 1'-8" o.c.
4	3/8" OR 7/16" APA SHEATHING W/ 8d (.131" DIA. x 2 1/2" LONG) @ 6" O.C. EDGE, PLATES AND BLOCKING. 12" O.C. FIELD, BLOCK ALL PANEL EDGES	EXTERIOR: 1/2" DIA. A.B.'S @ 32" O.C. INTERIOR: HILTI/SIMPSON PINS @ 5" O.C. / FLR TO FLR: SIMP SDS25412 @ 1'-4" o.c.
5	3/8" OR 7/16" APA SHEATHING W/ 8d (.131" DIA. x 2 1/2" LONG) @ 4" O.C. EDGE, PLATES AND BLOCKING. 12" O.C. FIELD, BLOCK ALL PANEL EDGES	EXTERIOR: 1/2" DIA. A.B.'S @ 24" O.C. INTERIOR: HILTI/SIMPSON PINS @ 4" O.C. / FLR TO FLR: SIMP SDS25412 @ 10" o.c.
6	3/8" OR 7/16" APA SHEATHING W/ 8d (.131" DIA. x 2 1/2" LONG) @ 4" O.C. EDGE, PLATES AND BLOCKING. 12" O.C. FIELD, BLOCK ALL PANEL EDGES	EXTERIOR: 1/2" DIA. A.B.'S @ 16" O.C. INTERIOR: 1/2" DIA. A.B.'S @ 16" O.C. / FLR TO FLR: SIMP SDS25412 @ 8" o.c.

NOTES:

- ALL SHEAR WALLS REQUIRE STUDS MAXIMUM 16" O.C.
- ACCEPTABLE PINS ARE HILTI XU (ESR 2289) AND SIMPSON PDP (ESR2138)
- SHEAR WALL TYPE 5 & 6 REQUIRE DBL. STUDS AT ADJOINING PANEL EDGES
- USE 1/2" DIA. SIMPSON TITEN HD x 8" AS A 1 TO 1 REPLACEMENT FOR A.B.'S (ESR2713)
- 5d COOLER NAILS MAY BE USED IN LIEU OF #6 SCREWS AT TYPE 2 SHEAR WALL
- ALL SHEAR WALLS TO USE 3" SQ. x 22g PLATE WASHERS. TYPE 5, 6, & 7 SHEAR WALLS REQUIRE THE EDGE OF THE WASHER TO BE WITHIN 1/2" OF THE PLATE WOOD PLATE EDGE
- AT PORTAL FRAMES, USE MINIMUM 7/16" PLYWOOD SHEATHING W/ .131" DIA. NAILS

GENERAL SHEAR NOTES

- UNLESS NOTED OTHERWISE, SHEATH EXTERIOR FACE OF WALLS W/ 3/8" OR 7/16" SHEATHING FASTENED W/ 8d COMMON NAILS SPACED 6" O.C., AT PANEL & BOUNDARY EDGES & 12" O.C. A INTERIOR SUPPORTS
- ALL EXTERIOR AND INTERIOR SHEAR WALLS TO HAVE ALL PANEL EDGES BLOCKED
- SHEATH ROOF TRUSSES W/ 19/32" CDX STD. GRADE SHEATHING (5-PLY) W/ EXTERIOR GLUE OR OSB PER PRP108 W/ 8d NAILS SPACED 6" O.C. AT PANEL AND BOUNDARY EDGES & 12" O.C. @ INTERIOR SUPPORTS. USE PSCA OR PSCL CLIPS AT 24" O.C. AT EDGES NOT DIRECTLY OVER TRUSSES/JOISTS. CLIPS TO MATCH SHEATHING THICKNESS. AT ROOF WITH TOP CHORD DEAD LOAD LESS THAN 15 PSF, 19/32" SHEATHING MAY BE USED WITH PSCA/PSCL CLIPS IN LIEU OF 19/32" SHTG. ALL SHEATHING WITHIN 48" OF ROOF EDGES AND RIDGES SHALL BE NAILED MAXIMUM 6" O.C. BOUNDARY AND FIELD.
- UNLESS NOTED OTHERWISE, PROVIDE 2x6 PLATE W/ 1/2" DIA. X 10" LONG ASTM F1554 L1 ANCHOR BOLTS W/ 1" LEG & 7" MIN EMBEDMENT AT 48" O.C. PROVIDE (1) BOLT WITHIN 12" OF ALL CORNERS AND SOLE PLATE ENDS. MINIMUM (2) EA. PLATE. SHEAR WALL ANCHOR BOLT WASHERS ARE TO BE 22g x 3"x3" OR LARGER AND EXTEND WITHIN 1/2" OF SHEAR WALL SHEATHING PER IBC 2305.1/SDPWS 4.3.6.4.3
- ALL HANGERS, STRAPS, HOLDDOWNS, UPLIFT CONNECTORS AND ALL OTHER CONNECTORS SHALL USE MANUFACTURED SPECIFIED FASTENERS AS PUBLISHED IN THEIR LATEST CATALOG. CONTACT ENGINEER IF ALTERNATIVE FASTENERS ARE DESIRED PRIOR TO INSTALLATION.

SHEAR WALL PLAN

SCALE 1/4" = 1'-0"

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revisions:
A
B
C

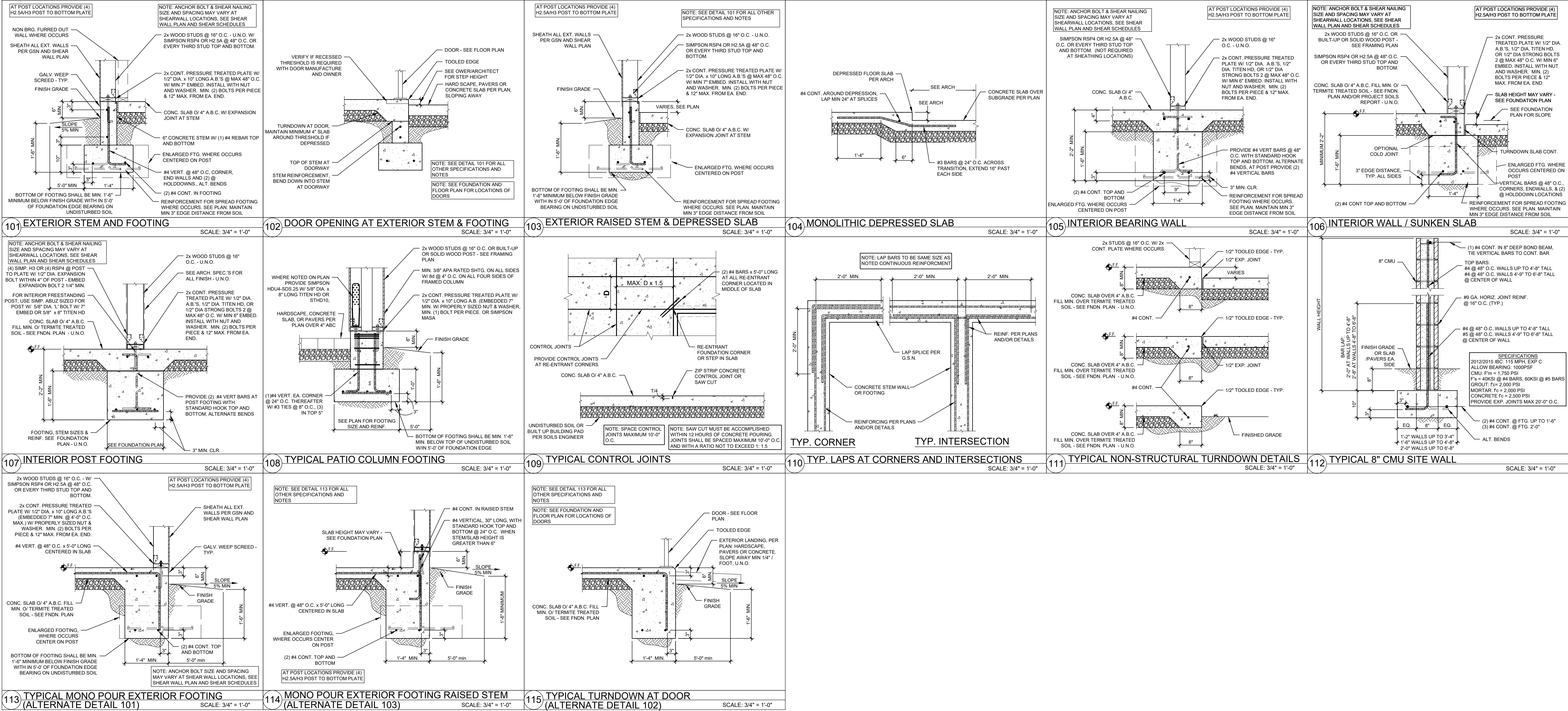
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S3



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revisions:
A
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50814
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SHEARD
REGISTERED PROFESSIONAL ENGINEER
STATE OF ARIZONA
EXPIRES 03-31-2028

date: 1/20/2026

PROJECT: 25157

D1

