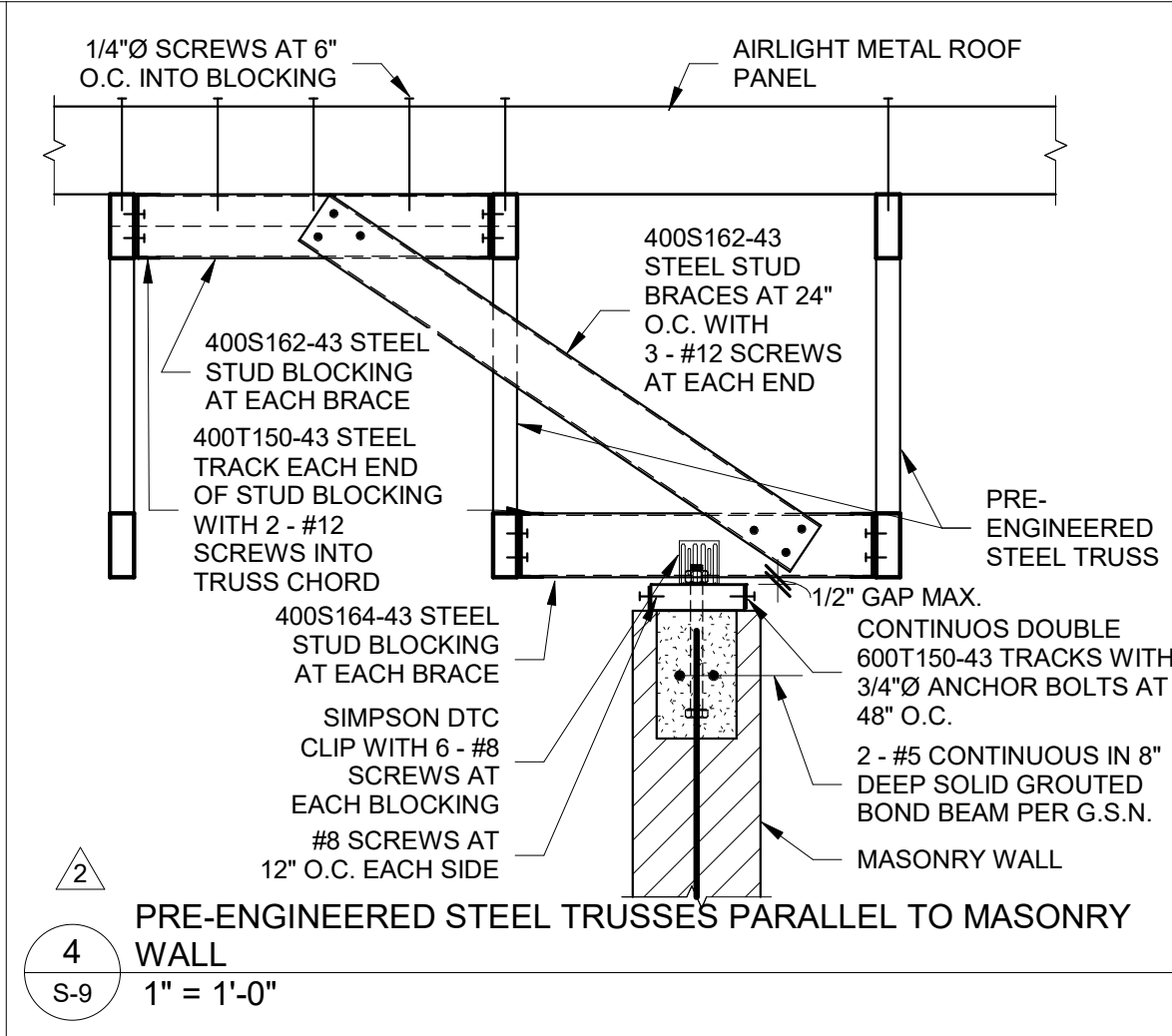
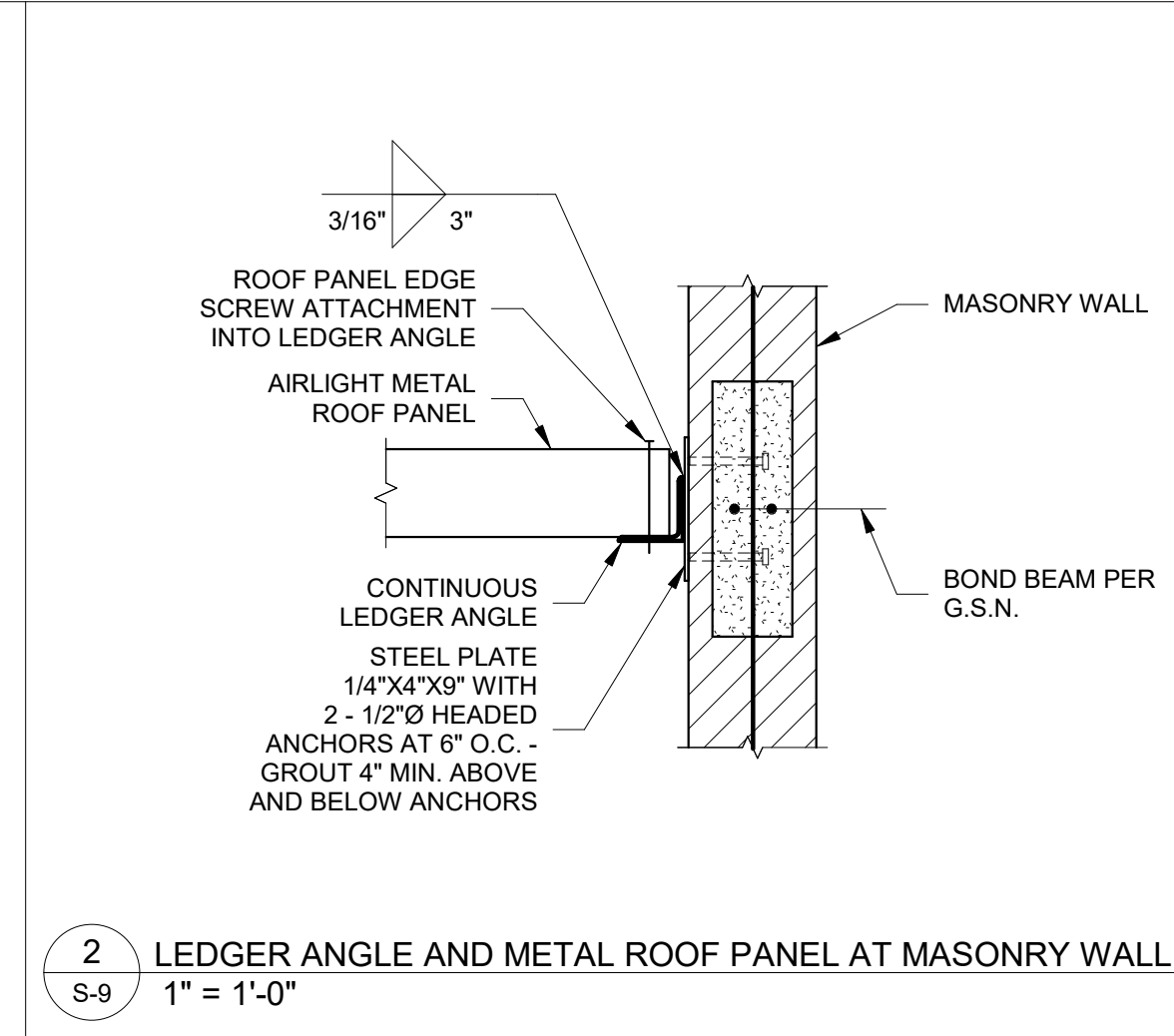


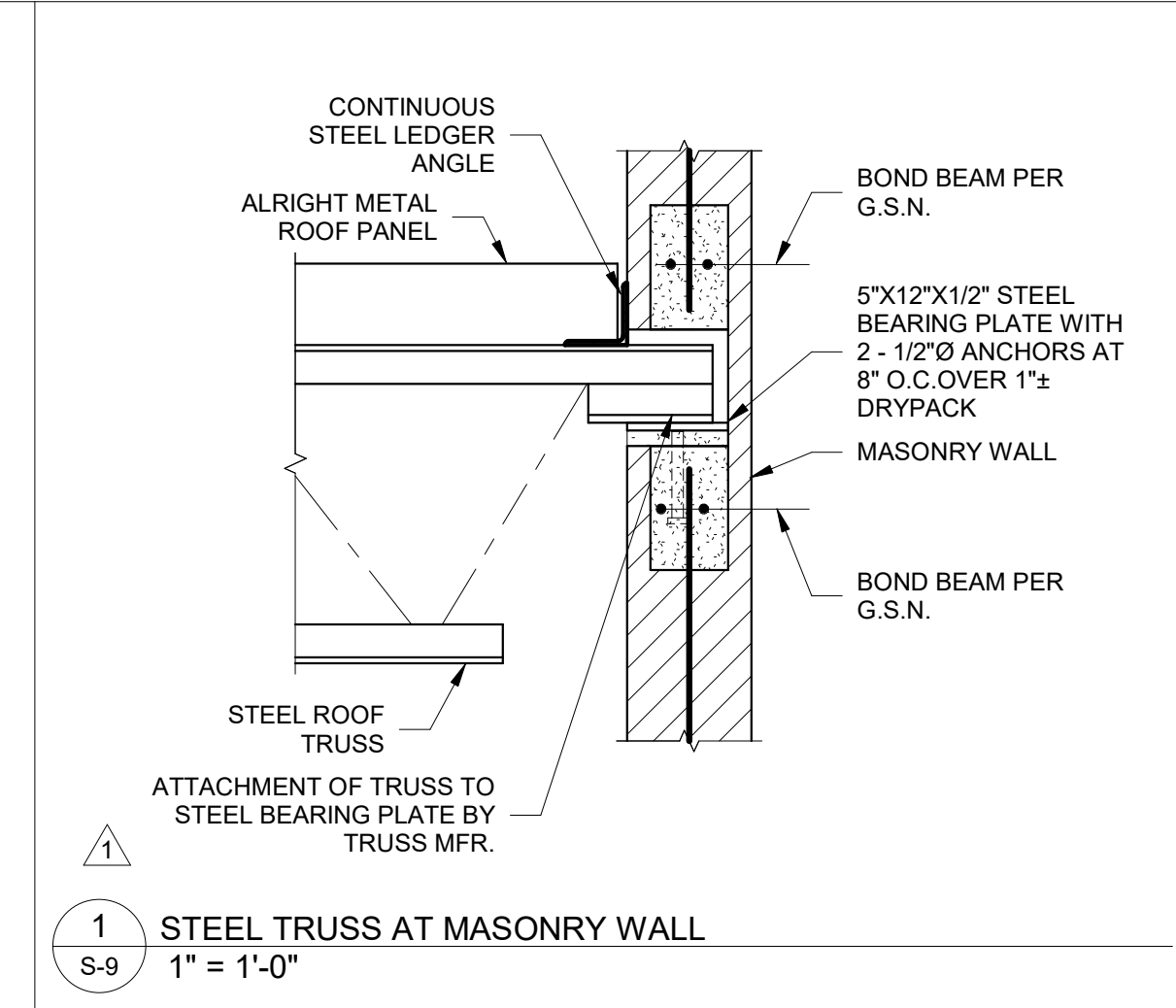
5 PRE-ENGINEERED STEEL TRUSSES AT MASONRY WALL
1" = 1'-0"



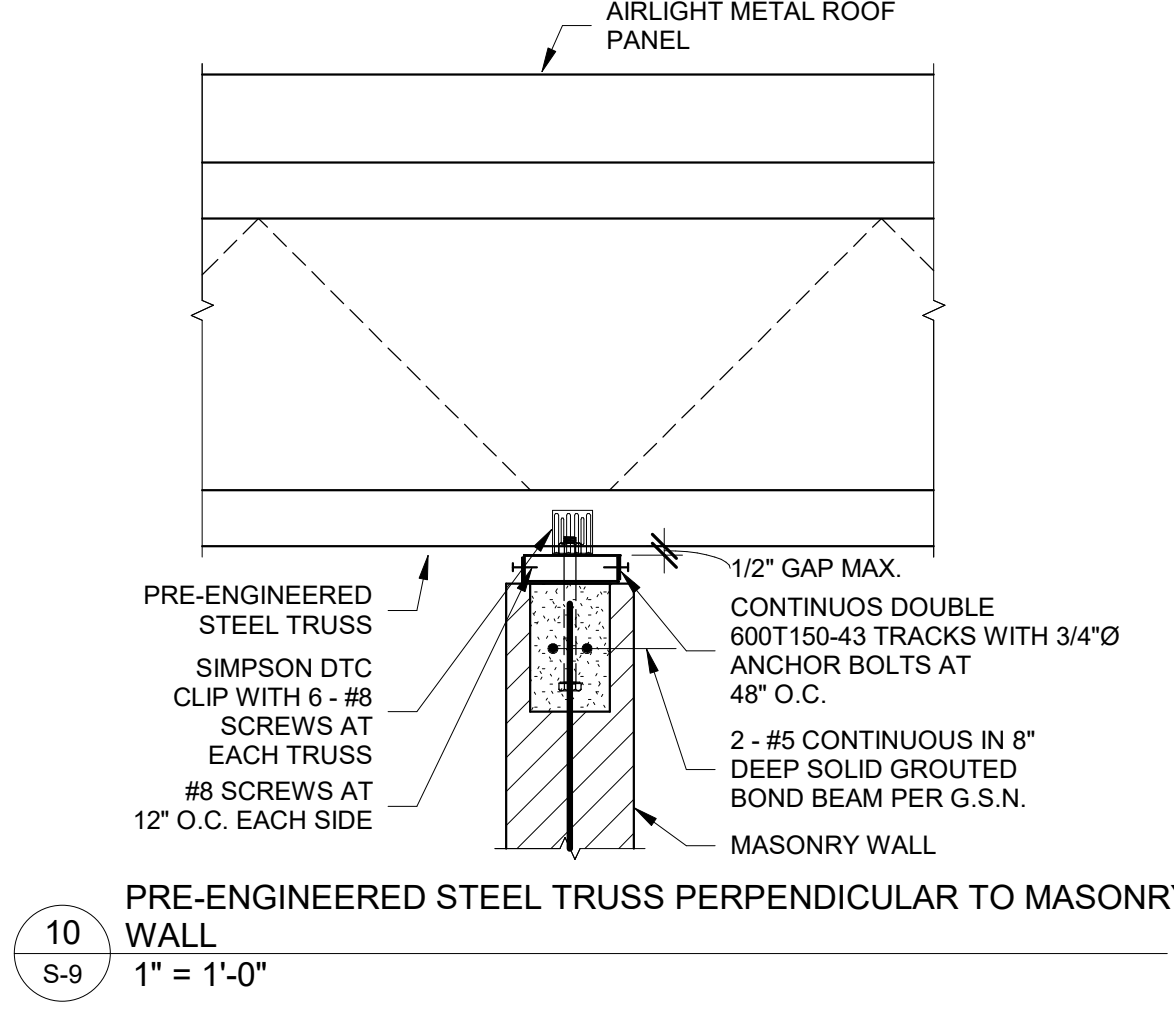
4 PRE-ENGINEERED STEEL TRUSSES PARALLEL TO MASONRY WALL
1" = 1'-0"



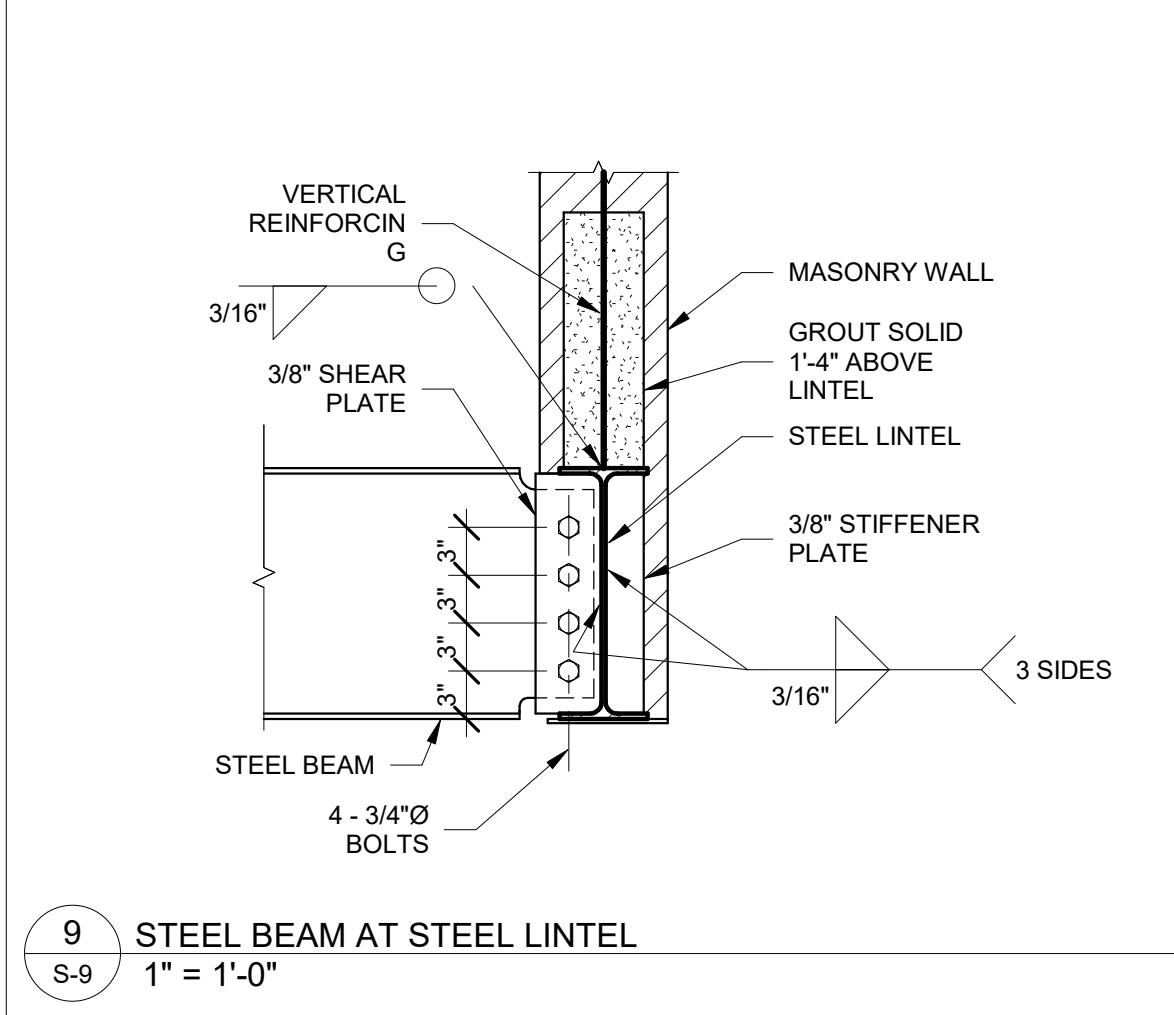
2 LEDGER ANGLE AND METAL ROOF PANEL AT MASONRY WALL
1" = 1'-0"



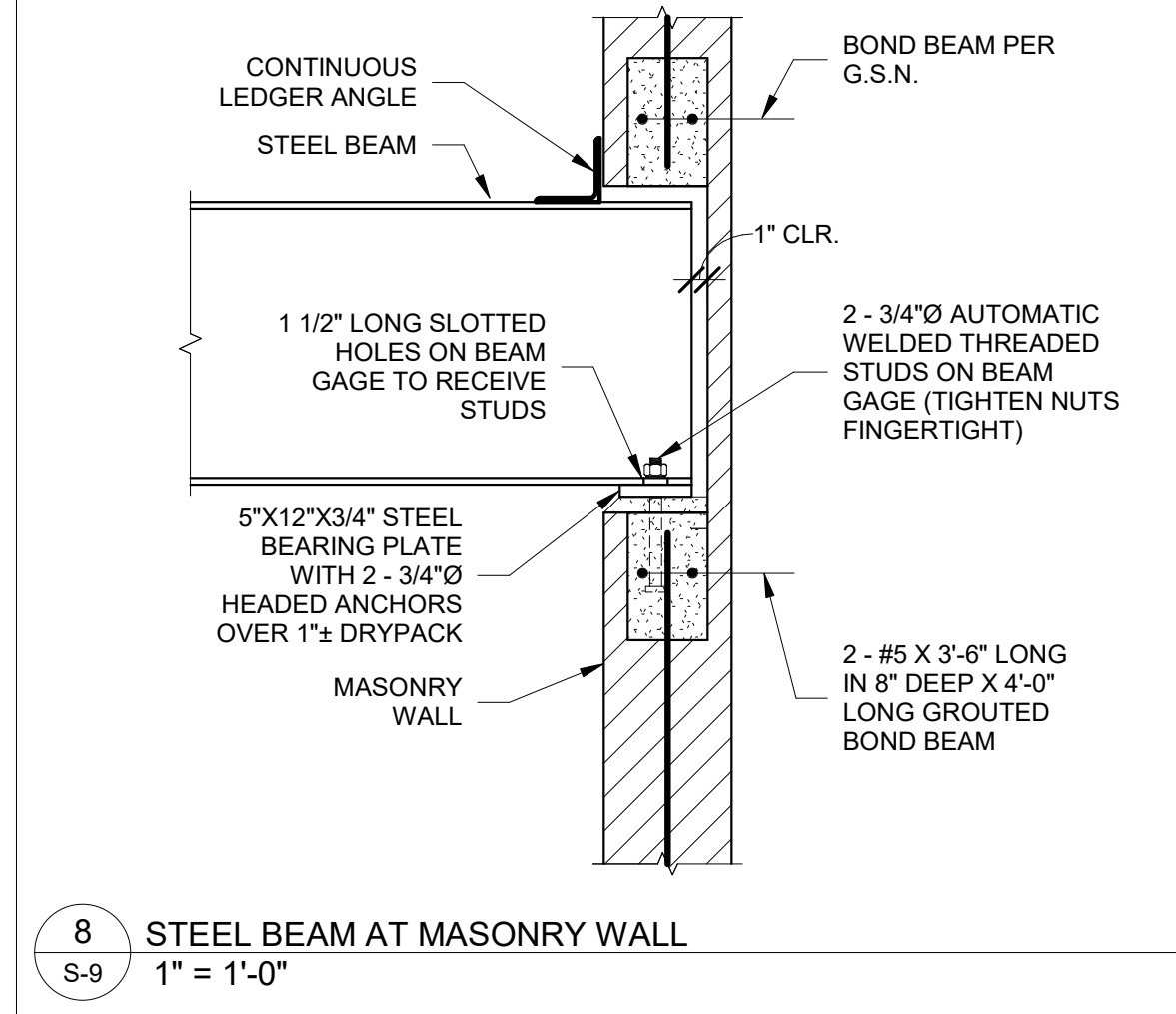
1 STEEL TRUSS AT MASONRY WALL
1" = 1'-0"



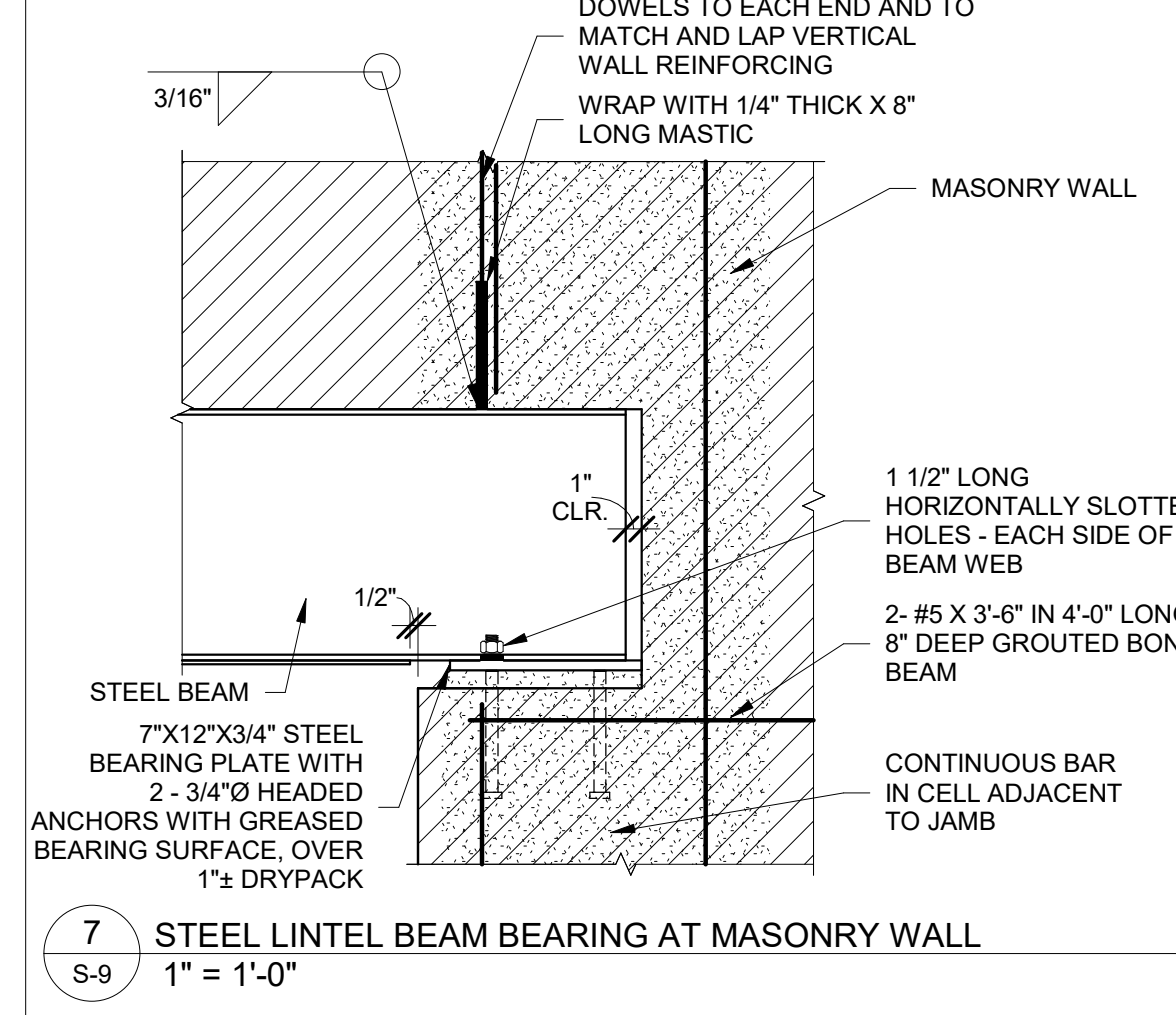
10 PRE-ENGINEERED STEEL TRUSS PERPENDICULAR TO MASONRY WALL
1" = 1'-0"



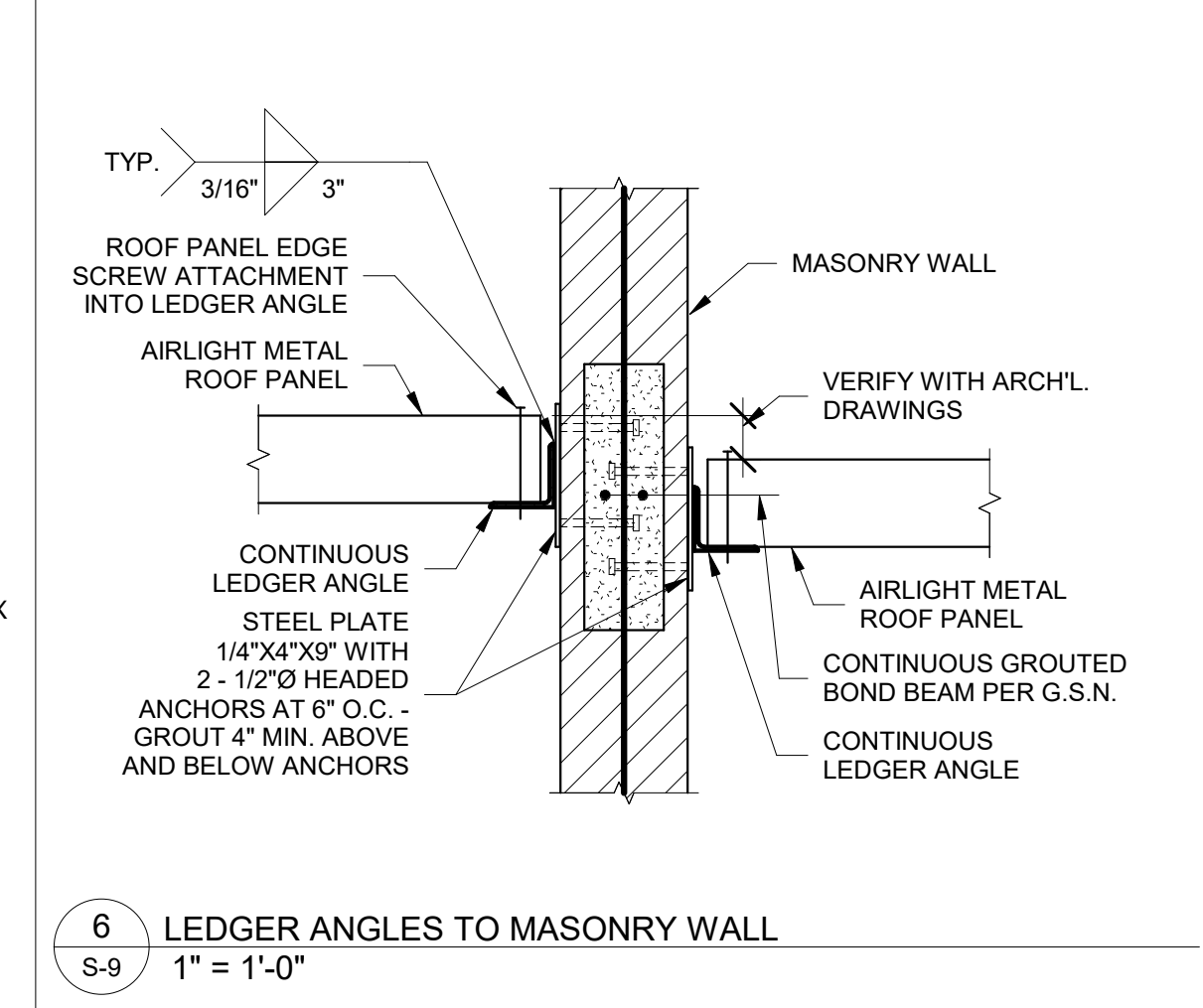
9 STEEL BEAM AT STEEL LINTEL
1" = 1'-0"



8 STEEL BEAM AT MASONRY WALL
1" = 1'-0"



7 STEEL LINTEL BEAM BEARING AT MASONRY WALL
1" = 1'-0"



6 LEDGER ANGLES TO MASONRY WALL
1" = 1'-0"



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DATE	REVISIONS
11/20/23	STEEL TRUSS BEARING REVISION
8/25/23	CITY REVIEW COMMENTS

Client:
Albert Rivera
305 CALLE LINDA, SEDONA, AZ 85336
FRAMING DETAILS

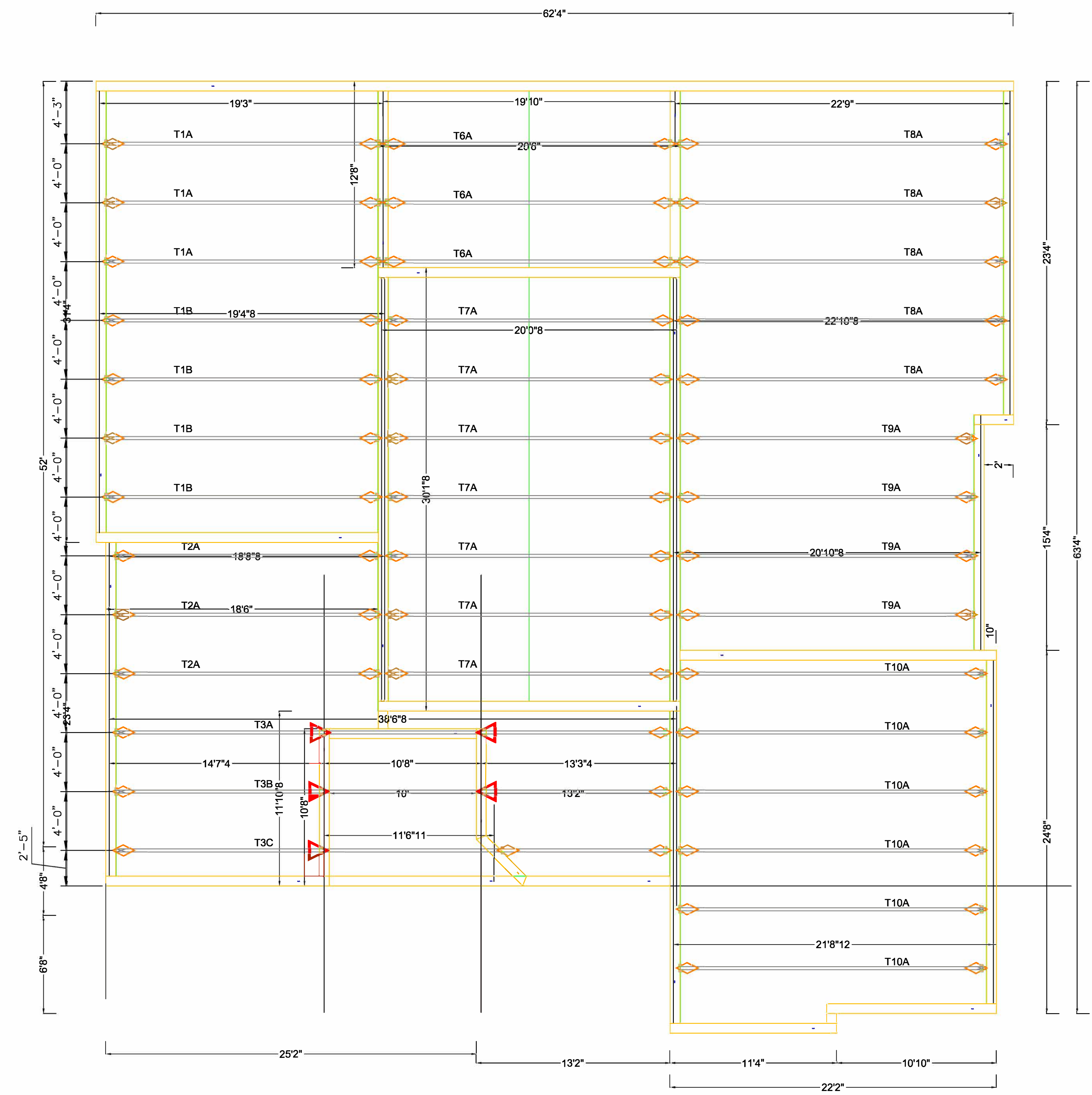
NEW SEDONA HOUSE
305 CALLE LINDA, SEDONA, AZ 85336

DATE: 7/10/2023	DRAWN: PR
JOB. NO. 2019-68	CHECKED:
SHEET NO. S-9	

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CLIP ATTACHMENT LEGEND

- ▲ DETAIL TS039-XU15 (TSUC3 CLIPS ON BOTH FACES OF TRUSS, U.N.O.)
- ◇ DETAIL CD120601-F (CLIP A)



Truss Layout Plan
SCALE: 1/4" = 1'-0"

Gecko Steel Truss L.L.C.
699 Wenden Road, Wenden, AZ 85354
Phone: (928) 726-8746
Fax: (928) 726-8846
Email: admin@geckosteeltruss.com

Alpine Licensed Fabricator

SEDONA HOUSE
305 Calle Linda
Sedona, AZ 85336
Prepared For:
Rivera Masonry
Sedona, AZ 85336

SHEET TITLE: TRUSS LAYOUT PLAN	
DATE: 09/19/24	SCALE: AS NOTED
DRAWN BY: KM	CHECKED BY: DS
JOB NUMBER: AZ-23075	SHEET NUMBER: 1 of 2

No.	DATE:
REVISION:	BY:
No.	DATE:
REVISION:	BY:
No.	DATE:
REVISION:	BY:
No.	DATE:
REVISION:	BY:

PURPOSE:
PURPOSE:
PURPOSE:
PURPOSE:

SG-1

MECHANICAL SPECIFICATIONS

PART I - GENERAL

- A. Scope
Provide labor, material, equipment and incidentals necessary or required for the completion, testing, inspection and adjusting, to provide the mechanical systems operable and complete in all respects.
- B. Drawings and Specifications
Examine and become familiar with all project drawings and specifications; and coordinate the mechanical work accordingly. Make reasonable modifications in the layout and installation as needed to prevent conflict with work of other trades and for proper execution of the work, without additional cost.
- C. Installation
The entire mechanical installation shall be made in a neat, workmanship-like, finished and sage manner. Conceal all piping in finished areas, unless otherwise noted. The entire installation shall be subject to the Architect's approval
- D. Codes, Permits, and Fees
The drawings and specifications take precedence when they are more stringent than codes, ordinances, standards and statutes. Codes, ordinances, standards and statutes take precedence where they are more stringent than the drawings and specifications. Secure and pay for permits, tests, Certificates of Inspection, and all other costs incidental to the work.
- E. Guarantees
All work shall be guaranteed to be free from defects in material and workmanship for a period of one year from date of final acceptance of the work. Replace at no additional cost any such defects or the correction of defects.

PART II - PRODUCTS

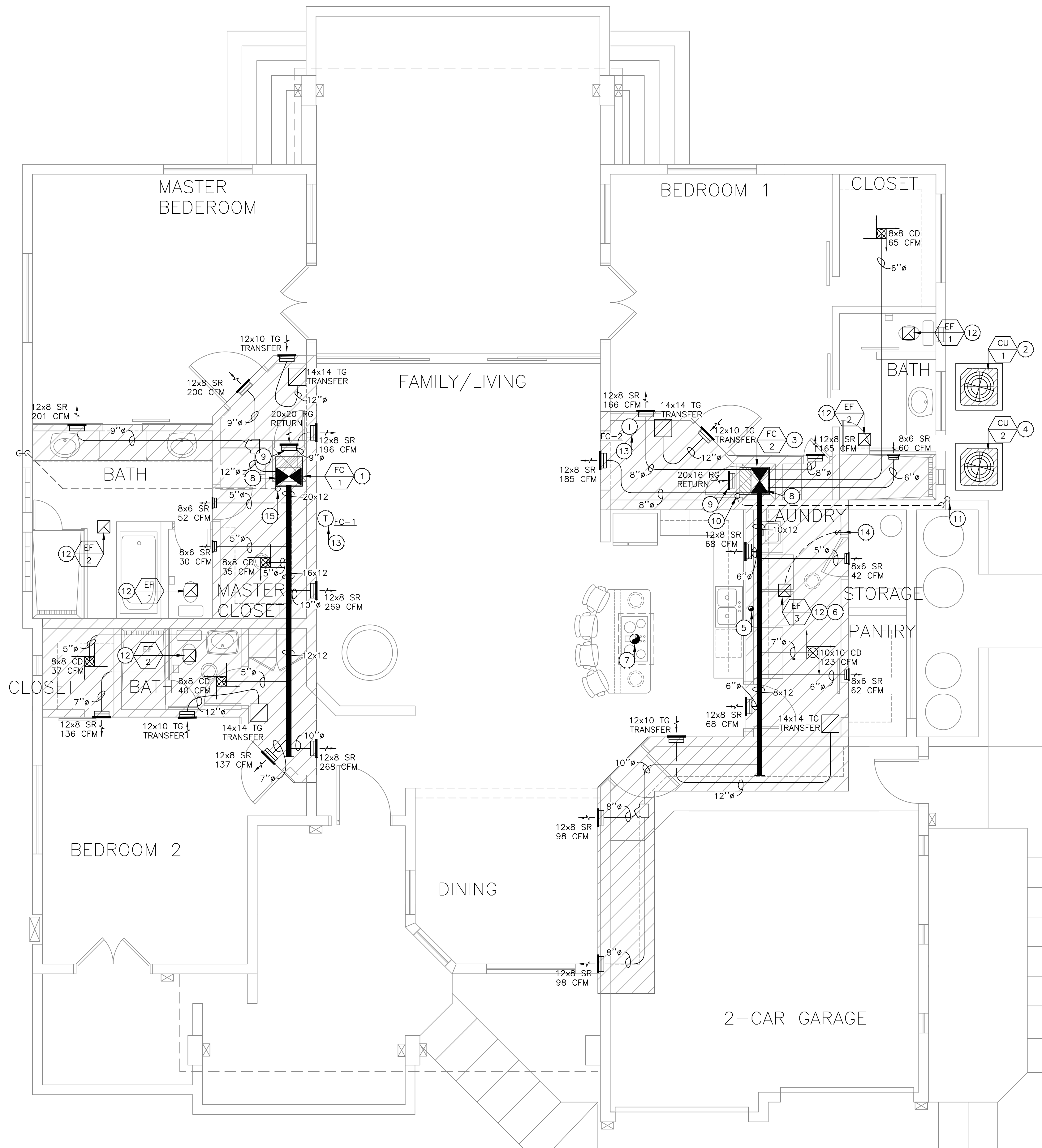
- A. Air Distribution Materials and Equipment
 - 1. Low pressure ductwork:
 - a. Low pressure ductwork: Shall be G60 coated galvanized steel. Ductwork construction and installation including sheet metal gauges, reinforcement, joint sealing, air leakage and details not specifically shown on the drawings shall be in accordance with SMACNA Low Velocity Construction standards. Take off fittings shall be spin in type with quadrant damper.
 - b. All longitudinal and transverse joints, seams on connections of supply and return ducts operating at a static pressure less than or equal to 2 inches w.g. (500 Pa) shall be securely fastened and sealed with welds, gaskets, mastics (adhesives) mastic-plus-embed- fabric systems or tapes installed in accordance with the manufacturer's installations instructions.
 - 2. Flexible Duct: Shall be Thermaflex II type MK-E or equivalent, for low pressure, factory fabricated material, with spiral wire support, mylar sheath, blanket insulation and vinyl jacket. Connectors to be U.L. listed and in compliance with NFPA 90-A. Install w/ minimum no. of bends w/ a min. radius of 1-1/2 times the duct dia. measured from the centerline, extend straight where possible.
 - 3. Duct Insulation: All supply and return ductwork shall be insulated per IECC. Ductwork installed within the Bldg. shall be R-6, ductwork installed outside of Bldg. shall be R-8. Provide fiberglass insulation blanket with foil scrimcraft vapor barrier. Installed per mfrs. instructions.
 - 4. Rooftop Package Heat pump Unit: Unit shall be factory assembled and checked. The unit shall be complete with steel insulated cabinet, compressor, indoor/outdoor coils, refig. piping, indoor/ outdoor direct drive motors, roof curb, short cycle timer and thermostat.
- B. Piping materials, Hangers and Insulation:
 - 1. Condensate drain piping: to be type 'M' copper with wrought copper fittings and 95/5 (tin/lead) solder joints.

PART III - EXECUTION

- A. Provide all labor, materials, equipment and services to install a complete, operating and approved mechanical system including but not limited to the following:
 - 1. Coordination of mechanical systems installation with all other contract trades on site for openings, clearances, space, access to equipment, etc.

MECHANICAL ENERGY NOTES

1. THE BUILDING SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE OF NOT EXCEEDING THREE AIR CHANGES PER HOUR (ACH). (SECTION N1102.4.1.2)
2. RETURN AIR SHALL BE PROVIDED BY APPROVED DUCTS, PLENUMS, TRANSFER DUCTS AND TRANSFER GRILLS. RETURN AIR SHALL NOT BE PROVIDED USING UNDER-DOOR CUTS OR OPENINGS. (SECTION M1602.2 AS AMENDED)



MECHANICAL NOTES

AND COOLING CAPABLE OF MAINTAINING A ROOM TEMPERATURE BETWEEN 68 AND 90 DEGREES AT A POINT 3 FEET ABOVE THE FLOOR, AND 2 FEET FROM EXTERIOR WALLS (2006 IRC R303.9 AS AMENDED)

DUCT LEAKAGE TEST OR ROUGH-IN DUCT LEAKAGE TEST WILL BE PERFORMED, PER SECTION N1102.2.2.

THE WHOLE HOUSE MECHANICAL VENTILATION IS REQUIRED, PER SECTION N1103.5 AND TABLE M1507.3.3.(1)

THE FAN MOTOR FOR THE MECHANICAL WHOLE HOUSE FAN TO COMPLY WITH MINIMUM EFFICACY RATINGS, PER TABLE 1102.5.1.

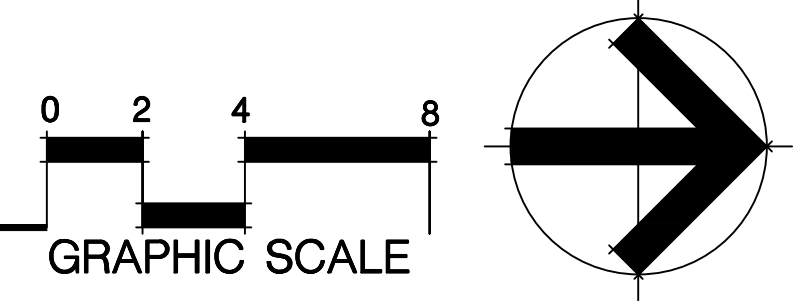
THE BLOWER DOOR TEST IS REQUIRED, PER SECTION N1102.4.1.2.

PROGRAMMABLE THERMOSTAT

PROVIDE AUTOMATIC CHANGEOVER 7-DAY PROGRAMMABLE THERMOSTATS FOR EACH ZONE WITH A 2-HOUR OCCUPANT OVERRIDE, INTELLIGENT RECOVERY, AND 10-HOUR MINIMUM BATTERY BACKUP. PROGRAM SETBACK TEMPERATURES TO 85°F(COOL) AND 55°F(HEAT). THERMOSTATS USED TO CONTROL BOTH HEATING AND COOLING, SHALL PROVIDE A SETPOINT OVERLAP RESTRICTION SUCH AS A DEADBAND OF AT LEAST 5°F. ALL TEMPERATURE CONTROLS ARE TO BE TESTED, ADJUSTED, AND CALIBRATED FOR PROPER OPERATION. MOUNT ALL THERMOSTATS AS INDICATED ON THE DRAWINGS. COORDINATE EXACT LOCATION WITH THE ARCHITECT. MOUNT BETWEEN 48"-54" AFF. (2018 IECC, SECTION R403.1.1)

- MECHANICAL KEY NOTES**
- 1 NEW 4.0 TON FAN COIL MOUNTED VERTICAL ON 24" HIGH PLATFORM INSIDE MECHANICAL CLOSET.
 - 2 NEW 4.0 TON CONDENSER UNIT MOUNTED ON 4" CONC. PAD.
 - 3 NEW 3.0 TON FAN COIL MOUNTED VERTICAL ON 24" HIGH PLATFORM INSIDE MECHANICAL CLOSET.
 - 4 NEW 3.0 TON CONDENSER UNIT MOUNTED ON 4" CONC. PAD.
 - 5 4" Ø DRYER EXHAUST DUCT UP THRU ROOF TO APPROVED ROOF CAP - KEEP 3' AWAY FROM ANY OPENINGS.
 - 6 WHOLE HOUSE VENTILATION FAN
 - 7 8" Ø EXHAUST DUCT UP FROM RANGE HOOD THRU ROOF TO APPROVED ROOF CAP - KEEP 3' AWAY FROM ANY OPENINGS.
 - 8 24x14 SUPPLY AIR DUCT CONNECTED TO TOP OF FAN COIL SUPPLY OUTLET.
 - 9 MOUNTED RETURN GRILLE 4" MIN. ABOVE FINISH FLOOR - COORDINATE WITH MILLWORK.
 - 10 3/4" PRIMARY CONDENSATE DRAIN LINE WITH TRAP AND VENT FROM UNIT TAP - ROUTE IN WALL TO EXTERIOR WALL AS SHOWN. PROVIDE RECTORSEAL MODEL SS2 SAFE-T-SWITCH CONNECTED TO SECONDARY CONDENSATE DRAIN CONNECTION AND WIRED TO SHUT UNIT DOWN UPON DETECTION OF CLOGGED PRIMARY CONDENSATE DRAIN LINE.
 - 11 3/4" PRIMARY CONDENSATE DRAIN LINE DOWN IN WALL AND OUT AT 12" ABOVE FINISH GRADE OVER PLANTER AREA. TERMINATE PIPE DOWNWARD.
 - 12 6" Ø EXHAUST DUCT UP THRU ROOF TO APPROVED ROOF CAP - KEEP 3' AWAY FROM ANY OPENINGS.
 - 13 7-DAY PROGRAMMABLE THERMOSTAT MOUNTED AT 54" A.F.F.
 - 14 HONEYWELL MODEL HVC0001, SMART SWITCH FOR WHOLE HOUSE VENTILATION
 - 15 3/4" PRIMARY CONDENSATE DRAIN LINE WITH TRAP AND VENT FROM UNIT TAP TO CONDENSATE PUMP. ROUTE CONDENSATE RAIN LINE FROM CONDENSATE PUMP UP TO ATTIC TO 3/4" GRAVITY CONDENSATE DRAIN LINE. ROUTE IN ATTIC SPACE. PROVIDE RECTORSEAL MODEL SS2 SAFE-T-SWITCH CONNECTED TO SECONDARY CONDENSATE DRAIN CONNECTION AND WIRED TO SHUT UNIT DOWN UPON DETECTION OF CLOGGED PRIMARY CONDENSATE DRAIN LINE.

Mech. Floor Plan
SCALE: 1/4" = 1'-0"



Teoca Design Solutions, LLC

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OFFICE: 602-384-1091

JOB NO: 23061
DSN: JC
CHK: RC

Reina Design Studio
602-999-4805
reinstudio@aol.com

DATE: 09.27.2023
CITY COMMENT: 06.28.2024
2ND CITY COMMENT:

Client: **Albert Rivera**
305 CALLE LINDA, SEDONA, AZ 85336
MECH. FLOOR PLAN

NEW SEDONA HOUSE
305 CALLE LINDA, SEDONA, AZ 85336

SHEET TITLE: M-1

DATE: 08/17/10
DRAWN: PR
JOB. NO. 2019-08
CHECKED:
SHEET NO. M-1

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Figure 1a

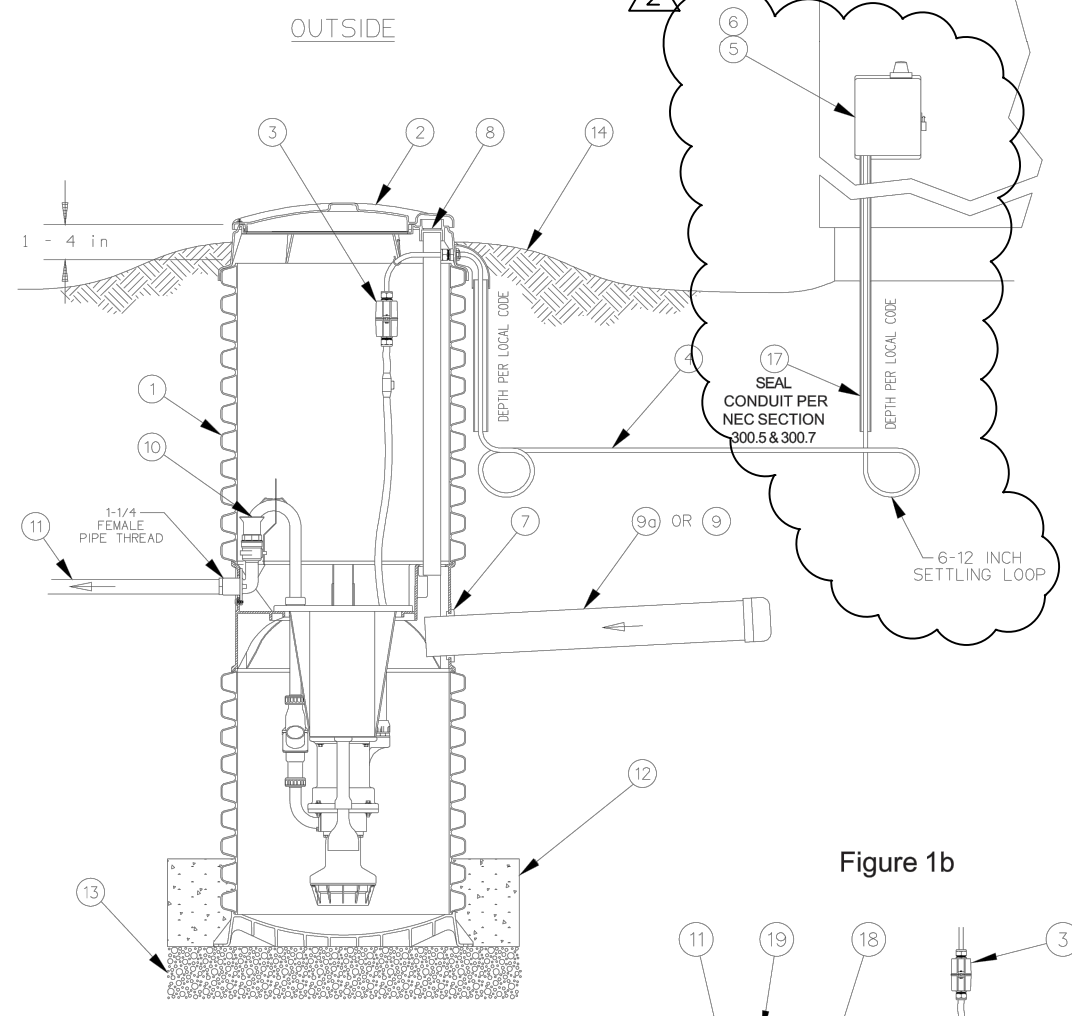
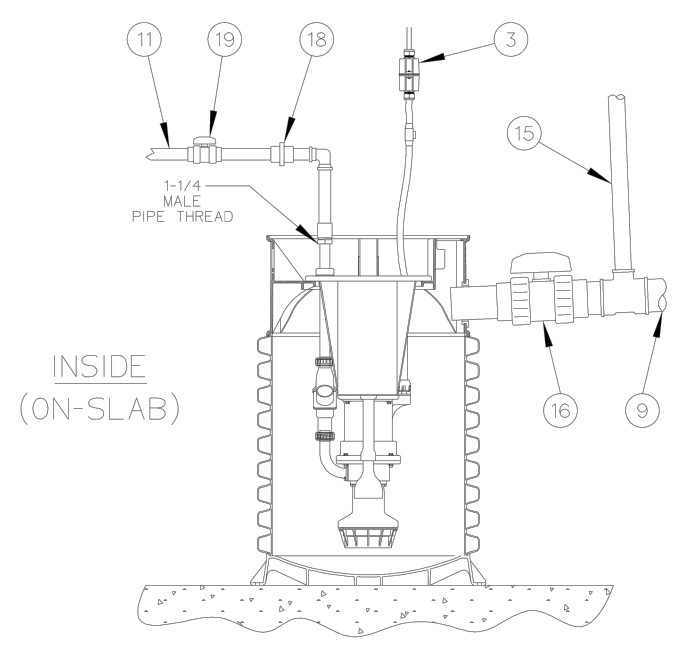


Figure 1b

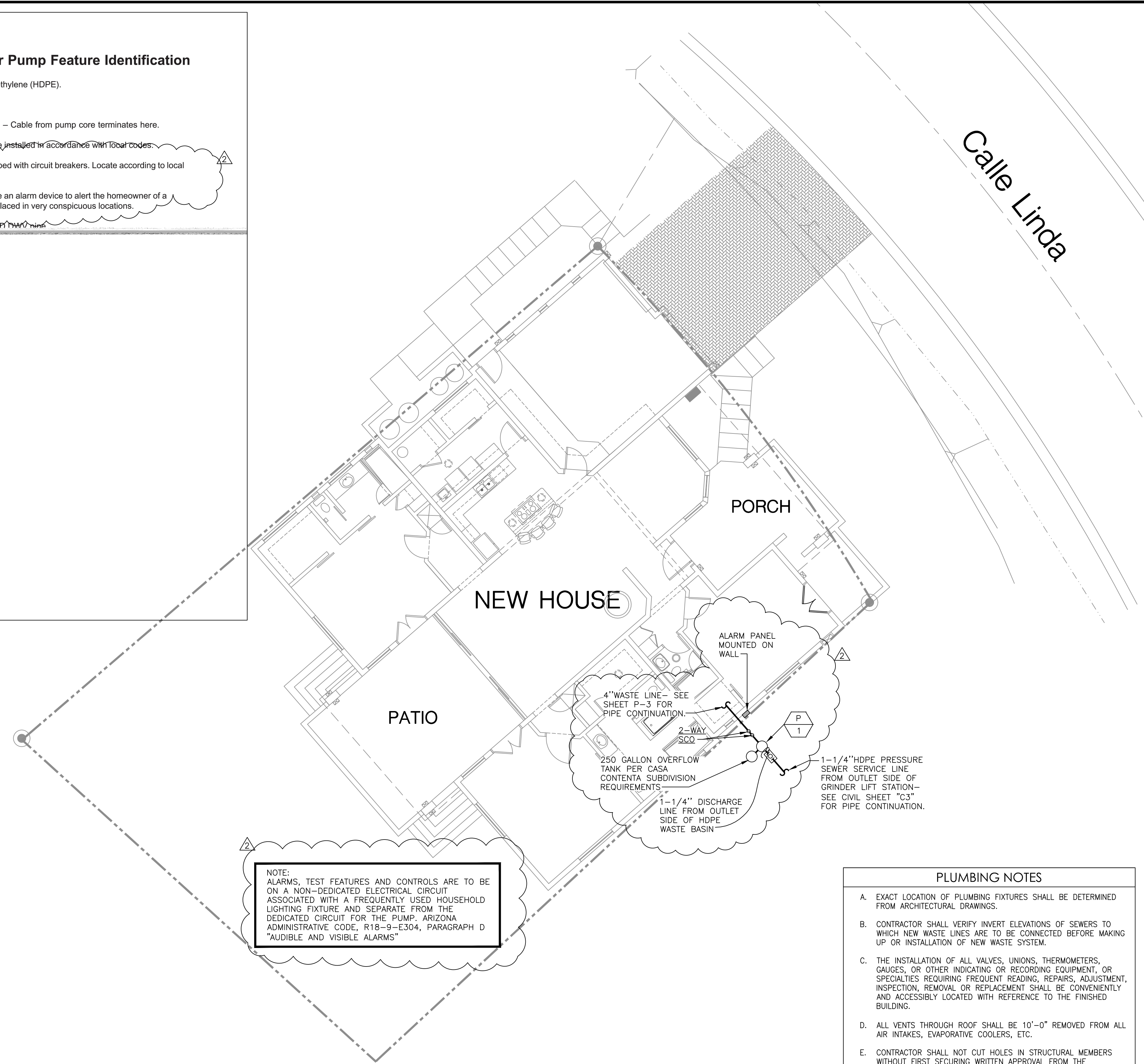


FAILURE TO COMPLY WITH INSTALLATION INSTRUCTIONS WILL VOID WARRANTY

Environment One Grinder Pump Feature Identification

1. GRINDER PUMP BASIN – High density polyethylene (HDPE).
2. ACCESSWAY COVER – FRP
3. ELECTRICAL QUICK DISCONNECT (EQD) – Cable from pump core terminates here.
4. POWER AND ALARM CABLE – Cables to be installed in accordance with local codes.
5. ALARM PANEL – NEMA 4X enclosure. Equipped with circuit breakers. Locate according to local codes.
6. ALARM DEVICE – Every installation is to have an alarm device to alert the homeowner of a potential malfunction. Visual devices should be placed in very conspicuous locations.

7. INVERTS FROM MAINLINE TO SEWER LINE AT APPOINTMENT



NOTE: ALARMS, TEST FEATURES AND CONTROLS ARE TO BE ON A NON-DEDICATED ELECTRICAL CIRCUIT ASSOCIATED WITH A FREQUENTLY USED HOUSEHOLD LIGHTING FIXTURE AND SEPARATE FROM THE DEDICATED CIRCUIT FOR THE PUMP. ARIZONA ADMINISTRATIVE CODE, R18-9-E304, PARAGRAPH D "AUDIBLE AND VISIBLE ALARMS"

- PLUMBING NOTES**
- A. EXACT LOCATION OF PLUMBING FIXTURES SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.
 - B. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF SEWERS TO WHICH NEW WASTE LINES ARE TO BE CONNECTED BEFORE MAKING UP OR INSTALLATION OF NEW WASTE SYSTEM.
 - C. THE INSTALLATION OF ALL VALVES, UNIONS, THERMOMETERS, GAUGES, OR OTHER INDICATING OR RECORDING EQUIPMENT, OR SPECIALTIES REQUIRING FREQUENT READING, REPAIRS, ADJUSTMENT, INSPECTION, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
 - D. ALL VENTS THROUGH ROOF SHALL BE 10'-0" REMOVED FROM ALL AIR INTAKES, EVAPORATIVE COOLERS, ETC.
 - E. CONTRACTOR SHALL NOT CUT HOLES IN STRUCTURAL MEMBERS WITHOUT FIRST SECURING WRITTEN APPROVAL FROM THE ARCHITECT.
 - F. CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.

250 Gal. Vertical Tank with 12.5\"/>

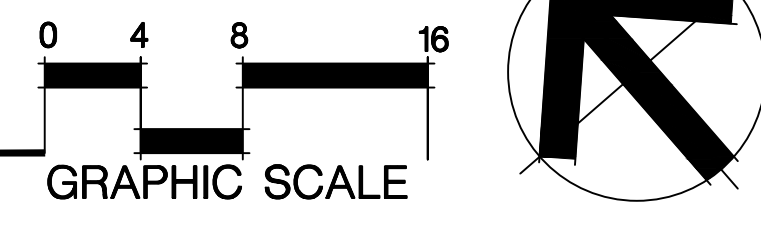
DIMENSIONS ARE IN INCHES TOLERANCE ± 1/4"		NAME	DATE
MATERIAL	LLDPE - FDA resin	DRAWN	NJV 6/16/23
CAPACITY	250 Gallon	APPROVED	
GRADUATIONS	25 Gallon	REVISIONS	
NOMINAL WALL THICKNESS	1/4"	COMMENTS	
STOCK NO. 21551, 21553, 21554		REV A	
DO NOT SCALE DRAWING		WEIGHT: 78 lbs.	

MAX. OPERATING TEMP. 140°F
INTERMITTENT SERVICE TO 160°F
SEE CHEMICAL RESISTANCE CHART FOR COMPATIBILITY

Natural, Black, Blue
UV Stabilized

Plumb. Sewer Site Plan

SCALE: 1/8" = 1'-0"



Teoca Design Solutions, LLC

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PHOENIX, AZ 85067
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DSN: RC
CHK: RC

JOB NO: 23061

Reina Design Studio
802-999-4805
reinstudio@aol.com

DATE	REVISIONS
09.27.2023	CITY COMMENT
06.28.2024	2ND CITY COMMENT

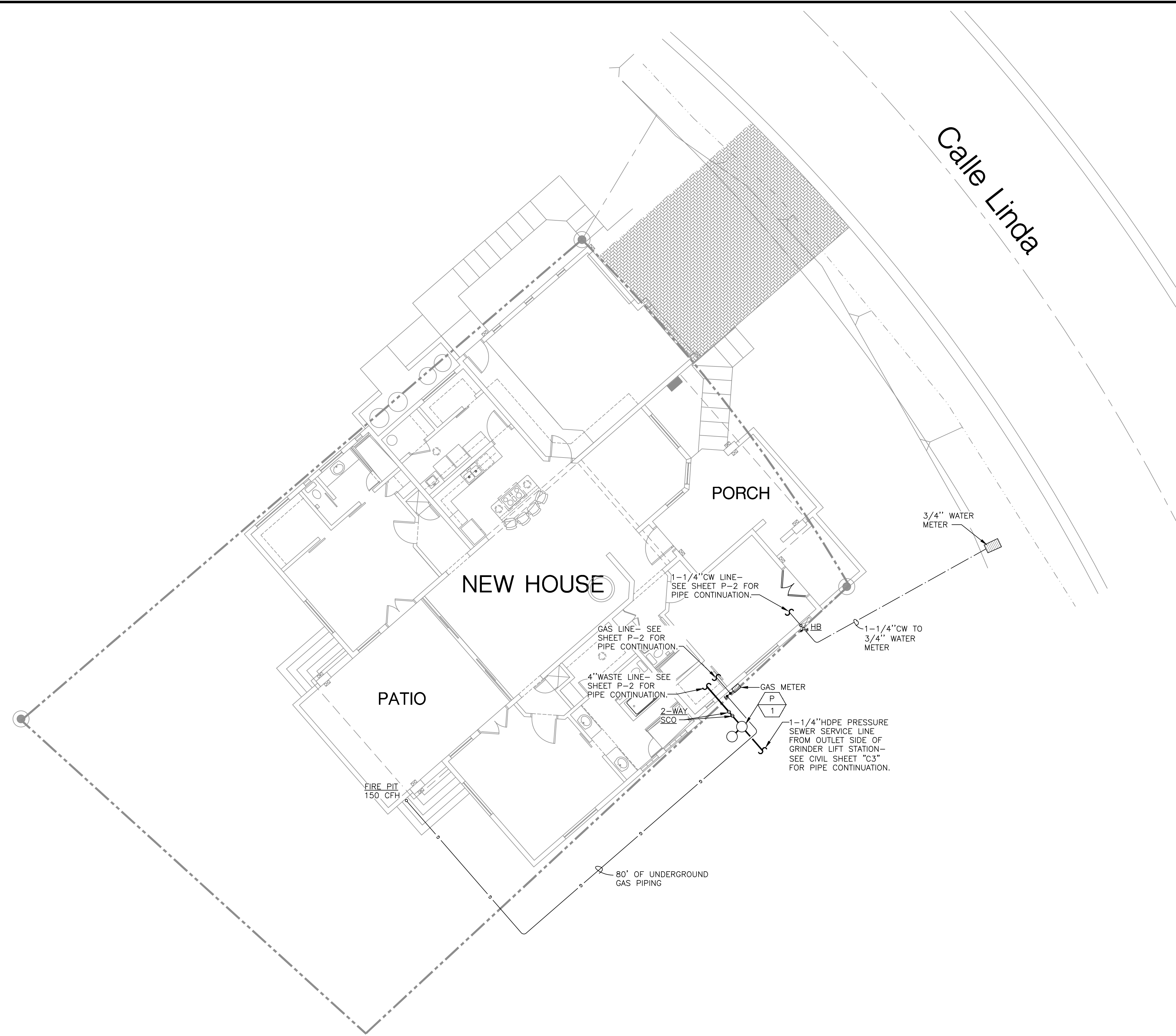
Client: **Albert Rivera**
305 CALLE LINDA, SEDONA, AZ 85336
PLUMB. SITE PLAN

NEW SEDONA HOUSE
305 CALLE LINDA, SEDONA, AZ 85336

SHEET TITLE:

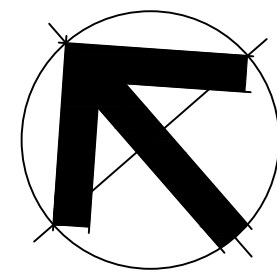
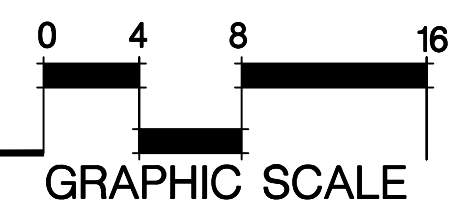
DATE: 08/17/10	DRAWN: PR
JOB. NO. 2019-08	CHECKED:
SHEET NO. P-1	

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Plumb. Site Plan

SCALE: 1/8" = 1'-0"



PLUMBING NOTES

- EXACT LOCATION OF PLUMBING FIXTURES SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.
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- THE INSTALLATION OF ALL VALVES, UNIONS, THERMOMETERS, GAUGES, OR OTHER INDICATING OR RECORDING EQUIPMENT, OR SPECIALTIES REQUIRING FREQUENT READING, REPAIRS, ADJUSTMENT, INSPECTION, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
- ALL VENTS THROUGH ROOF SHALL BE 10'-0" REMOVED FROM ALL AIR INTAKES, EVAPORATIVE COOLERS, ETC.
- CONTRACTOR SHALL NOT CUT HOLES IN STRUCTURAL MEMBERS WITHOUT FIRST SECURING WRITTEN APPROVAL FROM THE ARCHITECT.
- CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.

WASTE AND WATER PIPING MATERIAL

- WASTE AND VENT PIPING:**
- WASTE AND VENT PIPING TO BE ABS OR PVC SCHEDULE 40 WITH DIRECTIONAL FITTINGS IN ACCORDANCE WITH 2018 IPC, TABLE 702.1.
- DOMESTIC WATER PIPING:**
- WATER PIPING TO BE TYPE M MINIMUM FOR PIPING ABOVE GROUND AND COPPER TUBING TYPE L MINIMUM FOR WATER PIPING BELOW GRADE. NO FITTINGS ALLOWED BELOW GRADE IN ACCORDANCE WITH 2018 IPC, TABLE 605.3.
- UNDERGROUND PLASTIC PIPING:**
- PLASTIC UNDERGROUND WATER PIPING/TUBING SHALL HAVE A CONTINUOUS 18 GAUGE (OR LARGER) COPPER TRACER WIRE INSTALLED WITH AND ATTACHED TO THE PLASTIC PIPING/TUBING MATERIAL AT 8'-0" IN O.C. THIS WIRE SHALL EXTEND FROM THE END TO END OF THE PIPE/TUBING AND SHALL TERMINATE (IN A VISIBLE LOCATION) 12 INCHES ABOVE GROUND AT BOTH ENDS.

GAS PIPING MATERIAL

- GAS PIPING:**
- STEEL AND WROUGHT IRON PIPE SHALL BE AT LEAST OF STANDARD WEIGHT (SCHEDULE 40) AND SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:
 - ASME B36.10.10M
 - ASTM 53/A53M OR
 - ASTM A 106.
 - CORRUGATED STAINLESS STEEL TUBING SHALL BE LISTED IN ACCORDANCE WITH ANSI LC 1/CSA 6.26.
 - PLASTIC PIPE, TUBING AND FITTINGS. POLYETHYLENE PLASTIC PIPE, TUBING AND FITTINGS USE TO SUPPLY FUEL GAS SHALL CONFORM TO THE 2009 EDITION OF ASTM D 2513. SUCH PIPE SHALL BE MARKED "GAS" AND "ASTM D 2513".
- IN ACCORDANCE WITH 2018 IFGC, SECTION 403.1.
- UNDERGROUND PLASTIC PIPING:**
- PLASTIC UNDERGROUND GAS PIPING/TUBING SHALL HAVE A CONTINUOUS 18 GAUGE (OR LARGER) COPPER TRACER WIRE INSTALLED WITH AND ATTACHED TO THE PLASTIC PIPING/TUBING MATERIAL AT 8'-0" IN O.C. THIS WIRE SHALL EXTEND FROM THE END TO END OF THE PIPE/TUBING AND SHALL TERMINATE (IN A VISIBLE LOCATION) 12 INCHES ABOVE GROUND AT BOTH ENDS.



REVISIONS	
DATE	CITY COMMENT
09.27.2023	
06.28.2024	2ND CITY COMMENT

Client: **Albert Rivera**
 305 CALLE LINDA, SEDONA, AZ 85336
 PLUMB. SITE PLAN

NEW SEDONA HOUSE
 305 CALLE LINDA, SEDONA, AZ 85336

Tds Teoca Design Solutions, LLC

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 DSN: RC
 CHK: RC

JOB NO: 23061

DATE: 08/17/10	DRAWN: PR
JOB. NO. 2019-08	CHECKED:
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DATE	REVISIONS
09.27.2023 <td>CITY COMMENT</td>	CITY COMMENT
06.28.2024 <td>2ND CITY COMMENT</td>	2ND CITY COMMENT

Client: **Albert Rivera**
305 CALLE LINDA, SEDONA, AZ 85336
PLUMB. FLOOR PLAN

NEW SEDONA HOUSE
305 CALLE LINDA, SEDONA, AZ 85336

DATE: 08/17/10	DRAWN: PR
JOB NO. 2019-08	CHECKED:
SHEET NO. P-3	

- ### PLUMBING NOTES
- EXACT LOCATION OF PLUMBING FIXTURES SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.
 - CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF SEWERS TO WHICH NEW WASTE LINES ARE TO BE CONNECTED BEFORE MAKING UP OR INSTALLATION OF NEW WASTE SYSTEM.
 - THE INSTALLATION OF ALL VALVES, UNIONS, THERMOMETERS, GAUGES, OR OTHER INDICATING OR RECORDING EQUIPMENT, OR SPECIALTIES REQUIRING FREQUENT READING, REPAIRS, ADJUSTMENT, INSPECTION, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
 - ALL VENTS THROUGH ROOF SHALL BE 10'-0" REMOVED FROM ALL AIR INTAKES, EVAPORATIVE COOLERS, ETC.
 - CONTRACTOR SHALL NOT CUT HOLES IN STRUCTURAL MEMBERS WITHOUT FIRST SECURING WRITTEN APPROVAL FROM THE ARCHITECT.
 - CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
 - THE PLUMBING SYSTEM SHALL BE TESTED IN COMPLIANCE WITH SECTION P2503.5/P2503.6.

- ### PLUMBING KEY NOTES
- 1-1/4" CW LINE FROM 3/4" WATER METER.
 - 1-1/4" CW LINE UP FROM UNDERGROUND- PROVIDE 1-1/4" FULL PORT BALL VALVE IN RISER, ROUTE 3/4" CW TO H.B. WITH VACUUM BREAKER.
 - 1-1/4" CW LINE UP IN WALL TO UNDERSIDE OF ROOF STRUCTURE.
 - 1-1/4" HDPE PRESSURE SEWER SERVICE LINE FROM OUTLET SIDE OF GRINDER LIFT STATION- SEE CIVIL SHEET "C3" FOR PIPE CONTINUATION.
 - 3/4" CW LINE DOWN IN WALL TO H.B. WITH VACUUM BREAKER.
 - ELECTRIC WATER HEATER MOUNTED ON PRE-MANUFACTURE METAL STRAND WITH DRAIN PAN.
 - 1/2" H&CW LINE DOWN IN WALL TO LAV.
 - 1/2" H&CW LINE DOWN IN WALL TO TUB/SHWR.
 - 1/2" H&CW LINE DOWN IN WALL TO SHWR.
 - 3/4" CW, 1/2" HW LINES DOWN IN WALL, ROUTE 1/2" CW TO EA. WC, 1/2" H&CW TO LAV.
 - 1/2" H&CW LINES DOWN IN WALL, ROUTE 1/2" CW TO WC, 1/2" H&CW TO LAV.
 - 1/2" CW DOWN IN WALL TO REFG. ICE BOX.
 - 1/2" HW DOWN IN WALL TO LAUNDRY SINK (LS).
 - 3/4" H&CW LINE DOWN IN WALL, ROUTE 3/4" H&CW WASHER BOX (WB). 1/2" H&CW TO KS, 1/2" HW TO DW.
 - 3/4" CW LINE DOWN TO INLET SIDE OF WATER HEATER, 3/4" HW UP IN WALL FROM OUTLET SIDE OF WATER HEATER TO BOTTOM SIDE OF ROOF STRUCTURE, 3/4" HWR LINE DOWN IN WALL TO RECIRCULATING PUMP (RP).
 - ROUTE 2" VENT LINE UNDERGROUND TO EXTERIOR WALL AND UP FROM THROUGH ROOF FROM SEWER GRINDER PUMP PACKAGE SYSTEM. PROVIDE WALL CLEANOUT AT 18" A.F.G. IN VENT RISER.
 - 3/4" T&P RELIEF LINE OUT WALL AT 12" A.F.G. AND TURN DOWNWARD A MIN OF 2" FROM FACE OF WALL.
 - 250 GALLON OVERFLOW TANK PER CASA CONTENTA SUBDIVISION REQUIREMENTS
 - GRINDER PUMP CONTROL/ALARM PANEL- NOTE: TEST FEATURES AND CONTROLS ARE TO BE ON A NON-DEDICATED ELECTRICAL CIRCUIT ASSOCIATED WITH A FREQUENTLY USED HOUSEHOLD LIGHTING FIXTURE AND SEPARATE FROM THE DEDICATED CIRCUIT FOR THE PUMP. ARIZONA ADMINISTRATIVE CODE, R18-9-E304, PARAGRAPH D "AUDIBLE AND VISIBLE ALARMS"

WASTE AND WATER PIPING MATERIAL

WASTE AND VENT PIPING:

- WASTE AND VENT PIPING TO BE ABS OR PVC SCHEDULE 40 WITH DIRECTIONAL FITTINGS IN ACCORDANCE WITH 2018 IPC, TABLE 702.1.

DOMESTIC WATER PIPING:

- WATER PIPING TO BE TYPE M MINIMUM FOR PIPING ABOVE GROUND AND COPPER TUBING TYPE L MINIMUM FOR WATER PIPING BELOW GRADE. NO FITTINGS ALLOWED BELOW GRADE IN ACCORDANCE WITH 2018 IPC, TABLE 605.3.

UNDERGROUND PLASTIC PIPING:

PLASTIC UNDERGROUND WATER PIPING/TUBING SHALL HAVE A CONTINUOUS 18 GAUGE (OR LARGER) COPPER TRACER WIRE INSTALLED WITH AND ATTACHED TO THE PLASTIC PIPING/TUBING MATERIAL AT 8'-0" IN O.C. THIS WIRE SHALL EXTEND FROM THE END TO END OF THE PIPE/TUBING AND SHALL TERMINATE (IN A VISIBLE LOCATION) 12 INCHES ABOVE GROUND AT BOTH ENDS.

PIPE INSULATION

HOT WATER PIPING SHALL BE INSULATED TO A MINIMUM OF R-3 IN COMPLIANCE WITH SECTION N1103.5.3

GAS PIPING MATERIAL

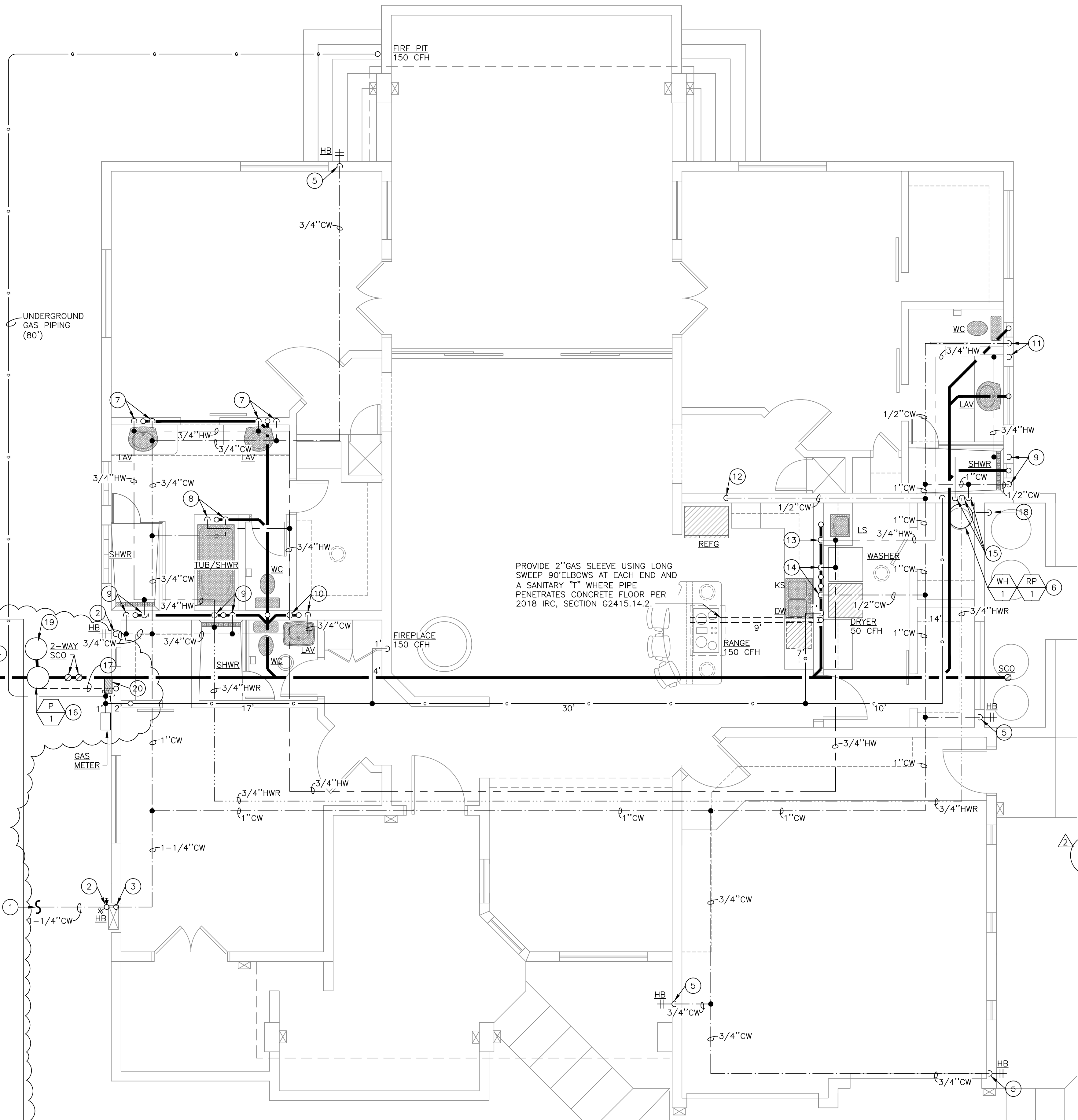
GAS PIPING:

- STEEL AND WROUGHT IRON PIPE SHALL BE AT LEAST OF STANDARD WEIGHT (SCHEDULE 40) AND SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:
 - ASME B36.10.10M
 - ASTM 53/A53M OR
 - ASTM A 106.
- CORRUGATED STAINLESS STEEL TUBING SHALL BE LISTED IN ACCORDANCE WITH ANSI LC 1/CSA 6.26.
- PLASTIC PIPE, TUBING AND FITTINGS. POLYETHYLENE PLASTIC PIPE, TUBING AND FITTINGS USE TO SUPPLY FUEL GAS SHALL CONFORM TO THE 2009 EDITION OF ASTM D 2513. SUCH PIPE SHALL BE MARKED "GAS" AND "ASTM D 2513".

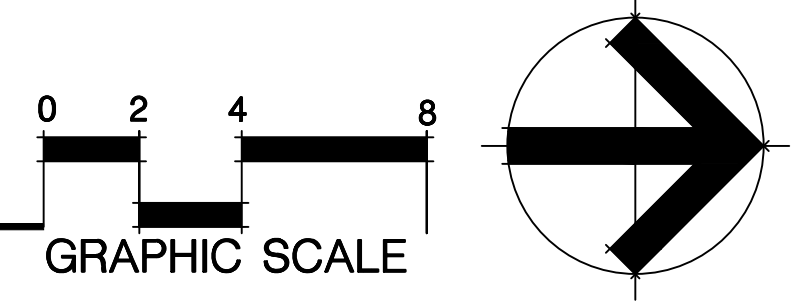
IN ACCORDANCE WITH 2018 IFGC, SECTION 403.1.

UNDERGROUND PLASTIC PIPING:

PLASTIC UNDERGROUND GAS PIPING/TUBING SHALL HAVE A CONTINUOUS 18 GAUGE (OR LARGER) COPPER TRACER WIRE INSTALLED WITH AND ATTACHED TO THE PLASTIC PIPING/TUBING MATERIAL AT 8'-0" IN O.C. THIS WIRE SHALL EXTEND FROM THE END TO END OF THE PIPE/TUBING AND SHALL TERMINATE (IN A VISIBLE LOCATION) 12 INCHES ABOVE GROUND AT BOTH ENDS.

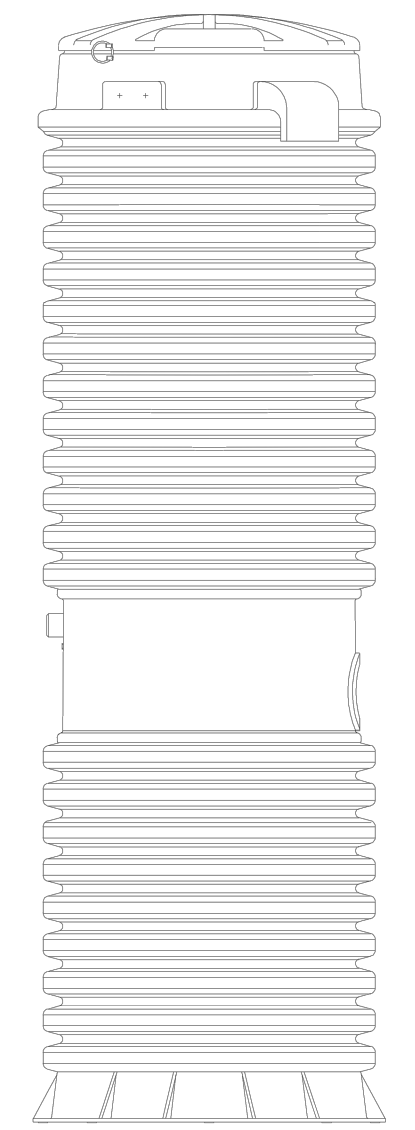


PROVIDE 2" GAS SLEEVE USING LONG SWEEP 90° ELBOWS AT EACH END AND A SANITARY "T" WHERE PIPE PENETRATES CONCRETE FLOOR PER 2018 IRC, SECTION G2415.14.2.



Plumb. Floor Plan
SCALE: 1/4" = 1'-0"

User Instructions for the Environment One Grinder Pump



Congratulations on your Environment One grinder pump investment. With proper care and by following a few guidelines, your grinder pump will give you years of dependable service.

Care and Use of your Grinder Pump

The Environment One grinder pump is capable of accepting and pumping a wide range of materials. Regulatory agencies advise that the following items should not be introduced into any sewer, either directly or through a kitchen waste disposal unit:

- | | |
|----------------|--|
| Glass | Diapers, socks, rags or cloth |
| Metal | Plastic objects (toys, utensils, etc.) |
| Seafood shells | Sanitary napkins or tampons |
| Goldfish stone | Kitty litter |

In addition, you must never introduce into any sewer:

- | | |
|-------------------------------|------------------|
| Explosives | Strong chemicals |
| Flammable material | Gasoline |
| Lubricating oil and/or grease | |

Periods of Disuse

If your home or building is left unoccupied for longer than a couple of weeks, perform the following procedure:

Purge the System. Run clean water into the unit until the pump activates. Immediately turn off the water and allow the grinder pump to run until it shuts off automatically.

Duplex Units. Special attention must be taken to ensure that both pumps turn on when clean water is added to the tank.

Caution: Do not disconnect power to the unit

Power Failure

Your grinder pump cannot dispose of wastewater without electrical power. If electrical power service is interrupted, keep water usage to a minimum.

Pump Failure Alarm

Your Environment One grinder pump has been manufactured to produce an alarm signal (120 volt) in the event of a high water level in the basin. The installer must see that the alarm signal provided is connected to an audible and/or visual alarm in such a manner as to provide adequate warning to the user that service is required. During the interim prior to the arrival of an authorized service technician, water usage must be limited to the reserve capacity of the tank.

For service, please call your local distributor:

General Information

In order to provide you with suitable wastewater disposal, your home is served by a low pressure sewer system. The key element in this system is an Environment One grinder pump. The tank collects all solid materials and effluent from the house. The solid materials are then ground to a small size suitable for pumping as a slurry with the effluent water. The grinder pump generates sufficient pressure to pump this slurry from your home to the wastewater treatment receiving line and/or disposal plant.

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DATE	REVISIONS
09.27.2023	CITY COMMENT
06.28.2024	2ND CITY COMMENT

Client: **Albert Rivera**
305 CALLE LINDA, SEDONA, AZ 85336
PLUMB. ISOMETRICS

NEW SEDONA HOUSE
305 CALLE LINDA, SEDONA, AZ 85336

DATE: 08/17/10	DRAWN: PR
JOB. NO. 2019-08	CHECKED:
SHEET NO. P-4	

VENT CALCULATION
VENT SYSTEM CONSIST OF:
(1) 3" VENT LINE AND
(2) 2" VENT LINE SERVING A 4" WASTE MAIN.

(1) x 7.07 (3" ø) = 7.07
(2) x 3.14 (2" ø) = 6.30

TOTAL 13.37 > 12.56 (4" ø)

WASTE AND WATER PIPING MATERIAL
WASTE AND VENT PIPING:
1. WASTE AND VENT PIPING TO BE ABS OR PVC SCHEDULE 40 WITH DIRECTIONAL FITTINGS IN ACCORDANCE WITH 2018 IPC, TABLE 702.1.
DOMESTIC WATER PIPING:
1. WATER PIPING TO BE TYPE M MINIMUM FOR PIPING ABOVE GROUND AND COPPER TUBING TYPE L MINIMUM FOR WATER PIPING BELOW GRADE. NO FITTINGS ALLOWED BELOW GRADE IN ACCORDANCE WITH 2018 IPC, TABLE 605.3.
UNDERGROUND PLASTIC PIPING:
PLASTIC UNDERGROUND WATER PIPING/TUBING SHALL HAVE A CONTINUOUS 18 GAUGE (OR LARGER) COPPER TRACER WIRE INSTALLED WITH AND ATTACHED TO THE PLASTIC PIPING/TUBING MATERIAL AT 8'-0" IN O.C. THIS WIRE SHALL EXTEND FROM THE END TO END OF THE PIPE/TUBING AND SHALL TERMINATE (IN A VISIBLE LOCATION) 12 INCHES ABOVE GROUND AT BOTH ENDS.

GAS PIPING MATERIAL
GAS PIPING:
1. STEEL AND WROUGHT IRON PIPE SHALL BE AT LEAST OF STANDARD WEIGHT (SCHEDULE 40) AND SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:
A. ASME B36.10.10M
B. ASTM 53/A53M OR
C. ASTM A 106.

2. CORRUGATED STAINLESS STEEL TUBING SHALL BE LISTED IN ACCORDANCE WITH ANSI LC 1/CSA 6.26.

3. PLASTIC PIPE, TUBING AND FITTINGS. POLYETHYLENE PLASTIC PIPE, TUBING AND FITTINGS USE TO SUPPLY FUEL GAS SHALL CONFORM TO THE 2009 EDITION OF ASTM D 2513. SUCH PIPE SHALL BE MARKED "GAS" AND "ASTM D 2513".
IN ACCORDANCE WITH 2018 IFGC, SECTION 403.1.
UNDERGROUND PLASTIC PIPING:
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GAS PIPING NOTES
1. MINIMUM DEPTH OF GAS PIPING TO BE 24" BELOW GRADE. COORDINATE WITH LOCAL GAS COMPANY.
2. GAS PIPING SHALL NOT BE INSTALLED IN OR ON THE GROUND UNDER ANY BUILDING.
3. GAS PIPING SHALL NOT BE RUN IN HOLLOW CORE OF BLOCK.
4. PROVIDE SHUT-OFF COCK, UNION, AND 6" LONG DIRT LEG WITH CAP AT EACH GAS LINE DROP TO APPLIANCE.
5. ALL GAS-USING EQUIPMENT TO BE NATURAL GAS FUEL.
6. DO NOT USE FLEXIBLE PIPE CONNECTIONS TO EQUIPMENT.
7. ALL GAS PIPING UNDER ASPHALT OR CONCRETE PAVING ADJOINING BUILDING MUST BE SLEEVED IN GAS TIGHT VENTED PIPE IN ACCORDANCE WITH LOCAL GAS CODE.
8. ALL GAS PIPING MATERIALS, VALVES, FITTINGS, INSTALLATION AND TESTING SHALL COMPLY WITH LOCALLY ACCEPTED PLUMBING CODE AND GAS COMPANY REGULATIONS.
9. VERIFY ALL GAS BTU/H INPUTS WITH ACTUAL BTU/H INPUT OF APPLIANCE SUPPLIED.
10. A BUILDING SHUT OFF VALVE SHALL BE INSTALLED BETWEEN MAIN GAS LINE AND NATURAL GAS METER.

GAS CALCULATION

GAS LOAD	=	150 CFH
FIREPLACE	=	150 CFH
FIRE PIT	=	50 CFH
DRYER	=	150 CFH
RANGE	=	199 CFH
TANKLESS WATER HEATER	=	199 CFH
TOTAL	=	699 CFH

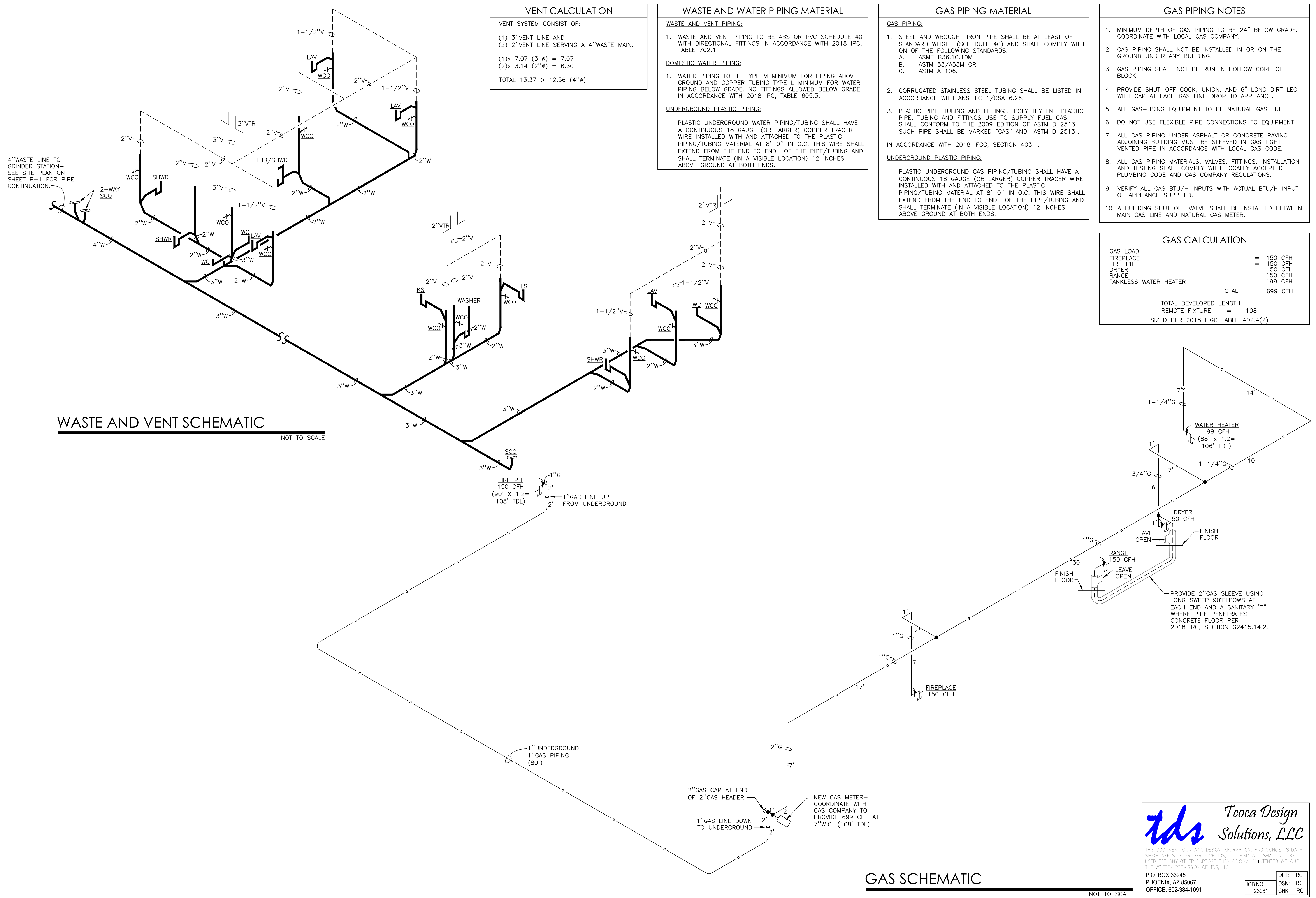
TOTAL DEVELOPED LENGTH = 108'
SIZED PER 2018 IFGC TABLE 402.4(2)

WASTE AND VENT SCHEMATIC

NOT TO SCALE

GAS SCHEMATIC

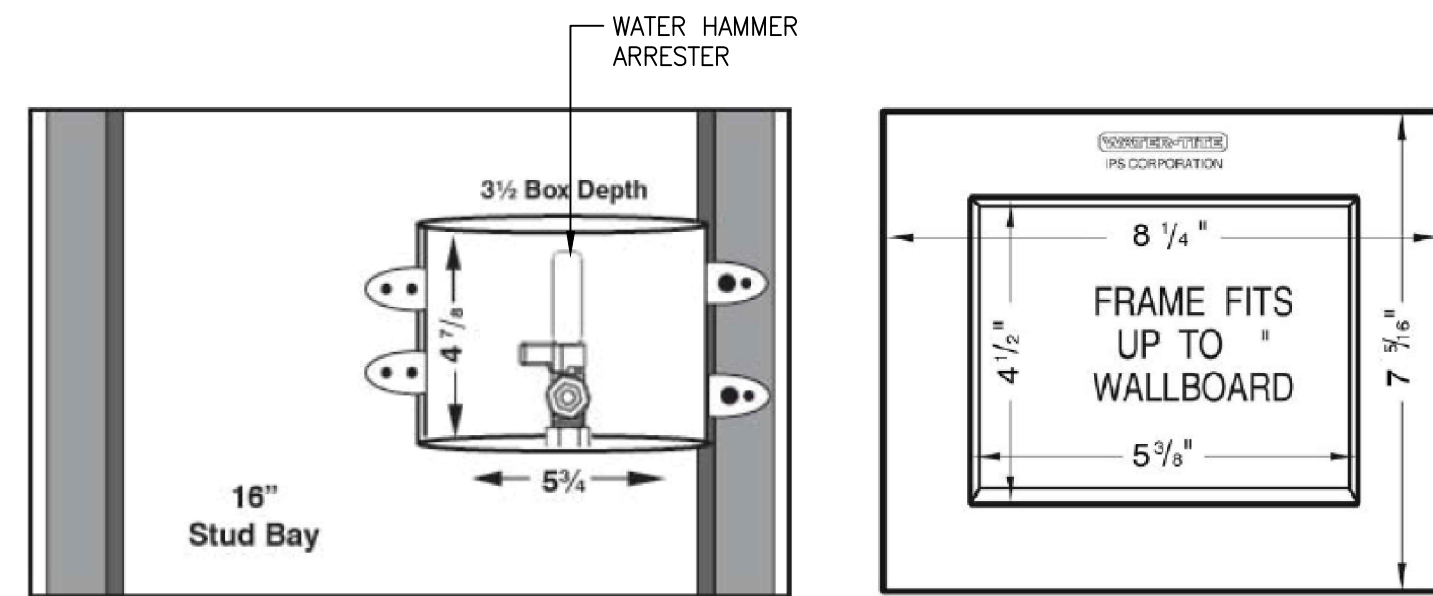
NOT TO SCALE



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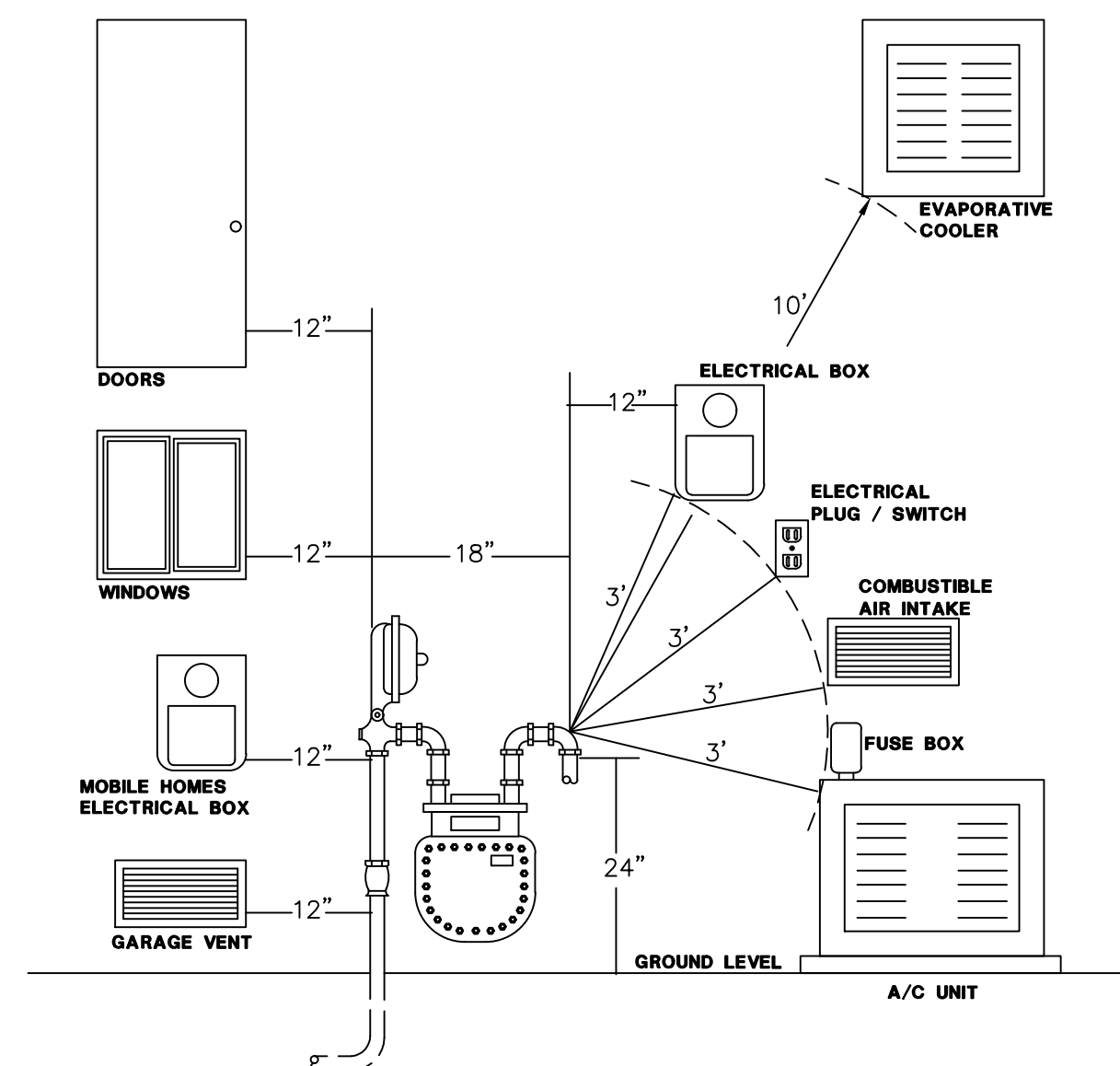
Teoca Design Solutions, LLC
P.O. BOX 33245
PHOENIX, AZ 85067
OFFICE: 602-384-1091

DFT: RC	DSN: RC
CHK: RC	JOB NO: 23061

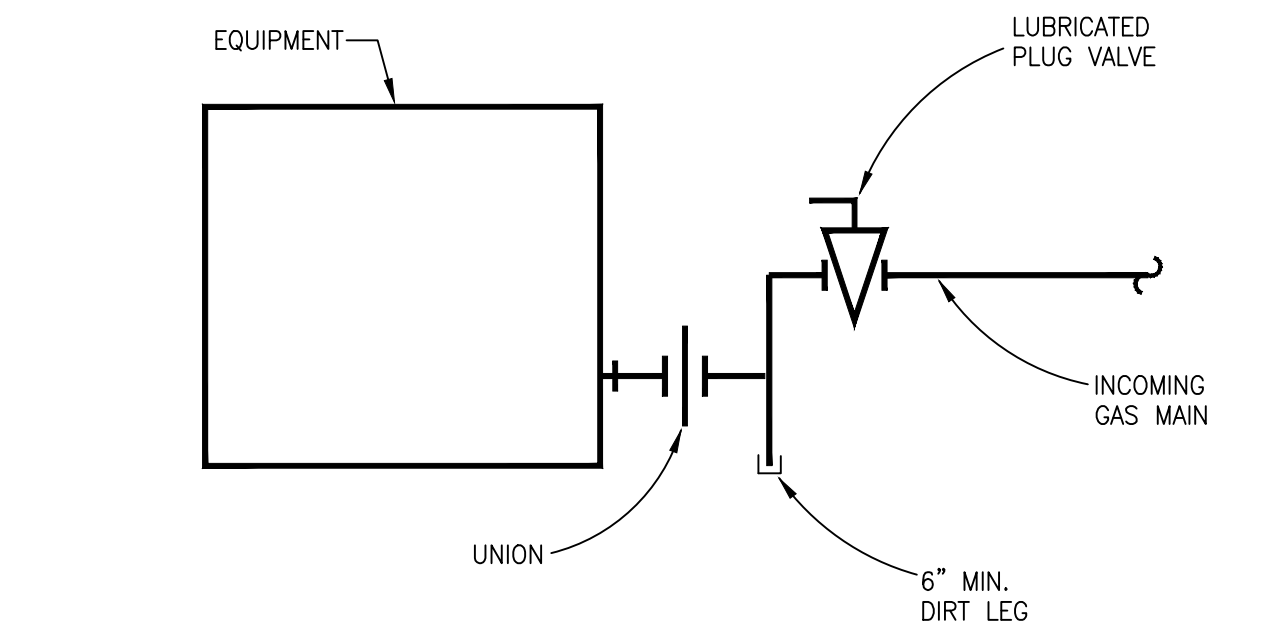


Specification:
Furnish and install ice maker outlet box with integral lead free hammer arrester quarter turn valve. Unit shall be Water-Tite product code as manufactured by IPS Corporation. Valves comply with the requirements of NSF 61-G and the "Reduction of Lead in Drinking Water Act" (Federal Public Law 111-380). Hammer arresters comply with ASSE 1010.

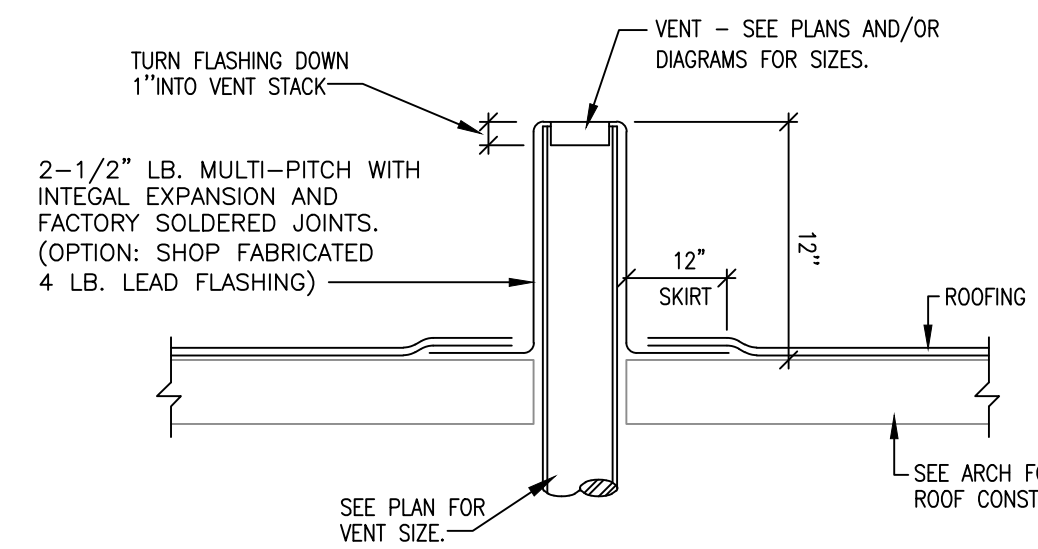
G ICE CONNECTION BOX DETAIL
NOT TO SCALE



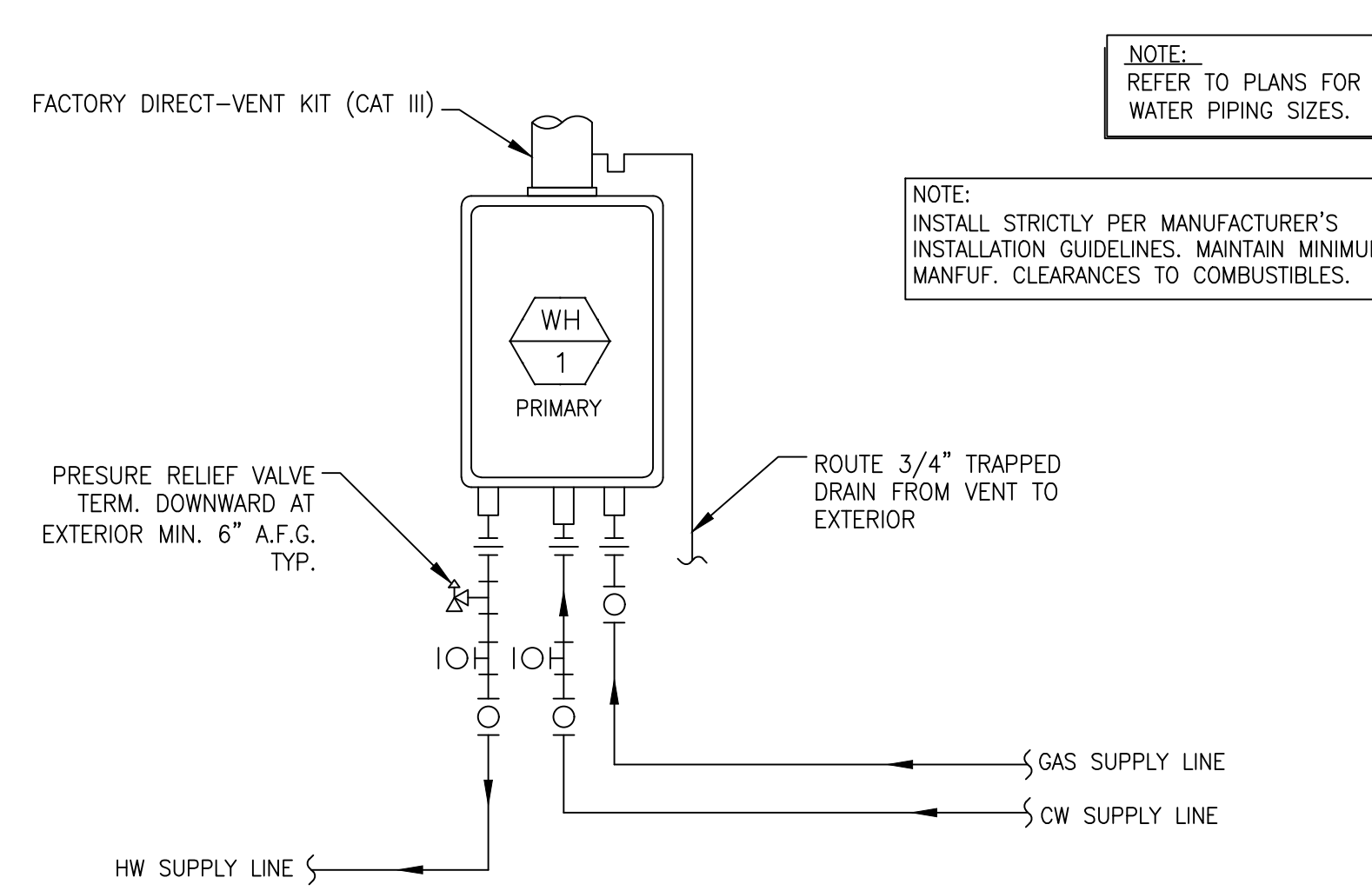
H GAS METER CLEARANCES
NOT TO SCALE



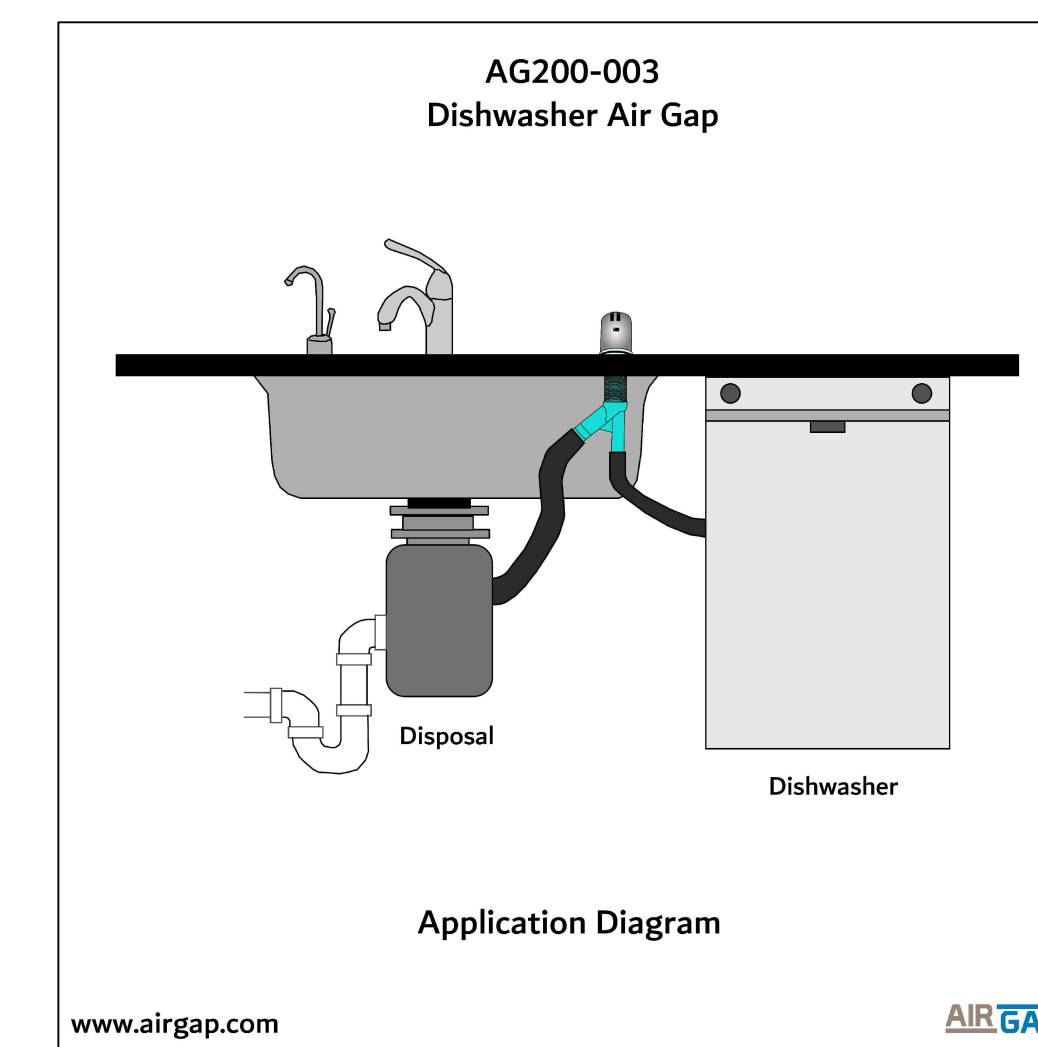
I GAS CONNECTION DETAIL
NOT TO SCALE



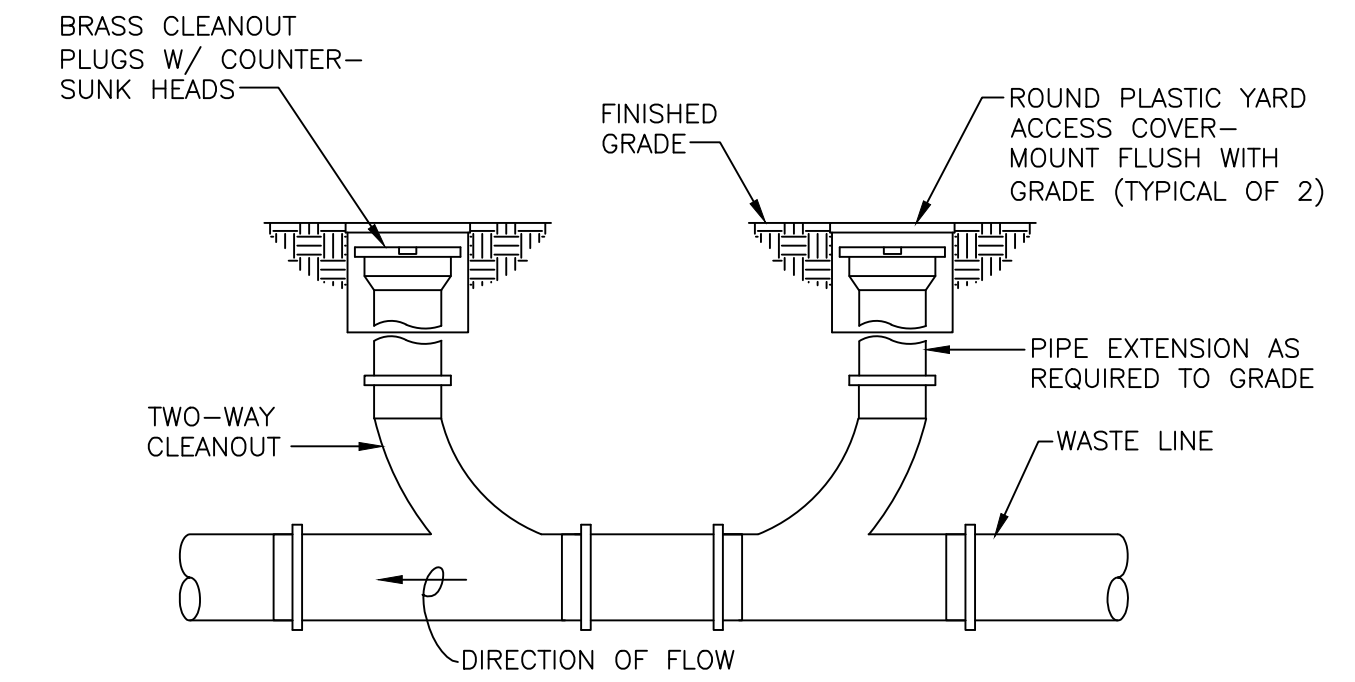
D VENT THRU ROOF
NOT TO SCALE



E WATER HEATER DETAIL
NOT TO SCALE

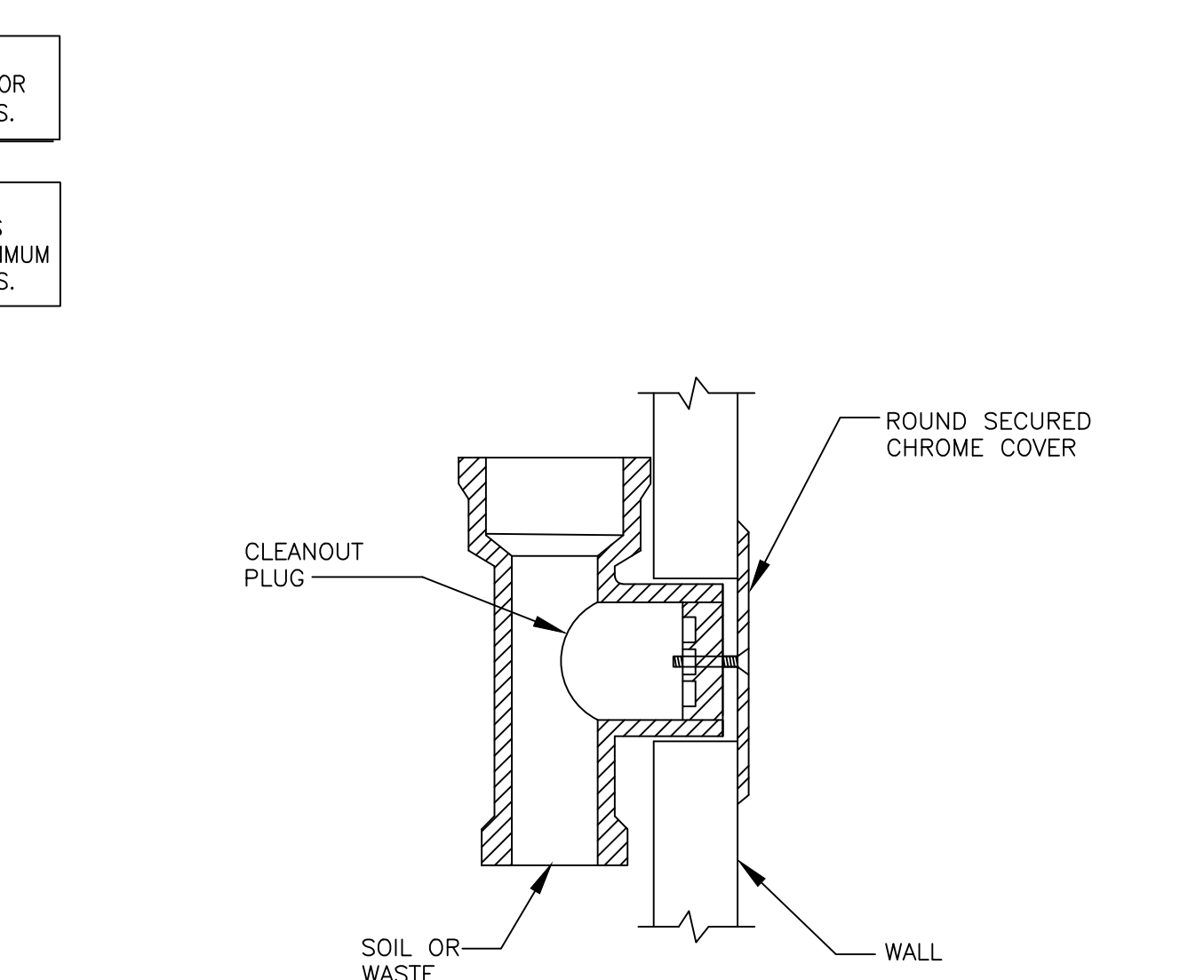


F DISHWASHER AIR GAP FITTING DETAIL
NOT TO SCALE

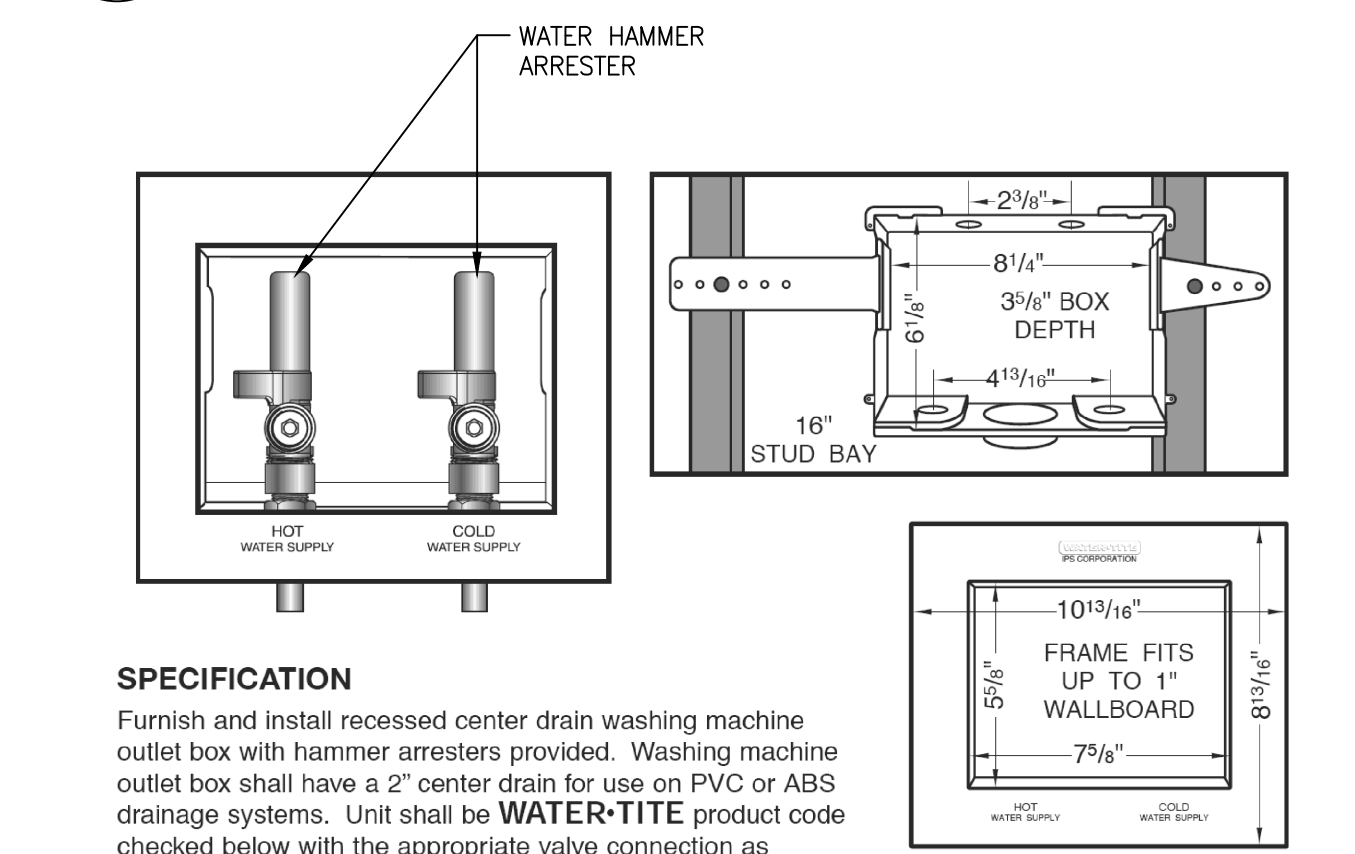


NOTE:
ALL CLEANOUT LOCATIONS SHALL BE VERIFIED WITH ARCH. PRIOR TO INSTALLATION.

A 2-WAY SURFACE CLEANOUT
NOT TO SCALE



B WALL CLEANOUT DETAIL
NOT TO SCALE



SPECIFICATION
Furnish and install recessed center drain washing machine outlet box with hammer arresters provided. Washing machine outlet box shall have a 2 inch center drain for use on PVC or ABS drainage systems. Unit shall be WATER-TITE product code checked below with the appropriate valve connection as manufactured by IPS Corporation in Collierville, TN.

C WASHER BOX (WB-1) WASHER BOX DETAIL
NOT TO SCALE

Teoca Design Solutions, LLC
P.O. BOX 33245
PHOENIX, AZ 85067
OFFICE: 602-384-1091

DFT: RC
DSN: RC
CHK: RC

JOB NO: 23061

Reina Design Studio
802-999-4805
reinaastudio@aol.com

REVISIONS		
DATE	CITY COMMENT	2ND CITY COMMENT
09.27.2023		
06.28.2024		

Client:
Albert Rivera
305 CALLE LINDA, SEDONA, AZ 85336
PLUMB. DETAILS

NEW SEDONA HOUSE
305 CALLE LINDA, SEDONA, AZ 85336

SHEET TITLE:

DATE: 08/17/10	DRAWN: PR
JOB. NO. 2019-08	CHECKED:

SHEET NO. **P-5**

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DATE	REVISIONS
09.27.2023	CITY COMMENT

DATE	REVISIONS
09.27.2023	CITY COMMENT

Client: **Albert Rivera**
 305 CALLE LINDA, SEDONA, AZ 85336
 PLUMB. SPECIFICATION, SCHEDULES AND CALCULATIONS

NEW SEDONA HOUSE
 305 CALLE LINDA, SEDONA, AZ 85336

DATE: 08/17/10	DRAWN: PR
JOB NO. 2019-08	CHECKED:
SHEET NO. P-6	

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WATER SUPPLY CALCULATION

UTILITY COMPANY: CITY OF SEDONA, AZ.
 STATIC PRESSURE: 60 P.S.I. (REDUCED IF REQUIRED, PROVIDE PRV).
 TOTAL F.U. = 19.9 F.U. = 14 GPM, USE 3/4" WATER METER

60.0 P.S.I. PRESSURE IN MAIN
 - 20.0 P.S.I. FIXTURE LOSS
 - 7.5 P.S.I. DROP FOR ELEVATION (15 FT. x 0.5)

 32.5 P.S.I. AVAILABLE

ALLOWABLE FRICTION LOSS:
 PIPE LENGTH (TAP TO METER) = 15 FT.
 PIPE LENGTH (METER TO LAST FIXTURE) = 110 FT.
 VERTICAL LENGTH = 15 FT.
 EQUIVALENT LENGTH OF FITTINGS = 28 FT.

 TOTAL DEVELOPED LENGTH = 168 FT.

P.S.I. AVAILABLE 32.5

 X 100 = 19.3 P.S.I./100 FT.
 TOTAL LENGTH 168 FT.

 MAXIMUM ALLOWABLE LOSS PER 100 FT. OF PIPE = 19.3 P.S.I.

NOTES:
 1. PLUMBING CONTRACTOR TO VERIFY AND COORDINATE EXACT STREET PRESSURE AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
 2. PLUMBING CONTRACTOR TO PROVIDE A PRESSURE REDUCING VALVE (PRV) ON CUSTOMER SIDE OF WATER METER IF THE STREET PRESSURE EXCEEDS 80 PSI. PRV TO BE SET AT 80 PSI.

FIXTURE UNIT COUNT (WATER)

FIXTURE	QTY	F.U./EA	TOTAL F.U.
BATHROOM GROUP	3	3.6	10.8
LAUNDRY GROUP	1	2.5	2.5
KITCHEN GROUP	1	2.5	2.5
ICE MAKER	1	1.0	1.0
+ SHOWER	1	1.4	1.4
+ LAVATORY	1	0.7	0.7
			19.9 F.U.

19.9 F.U. = 14 GPM

NOTE: FIXTURE COUNT SIZED IN ACCORDANCE WITH 2018 IRC, TABLE P2903.6

PIPE SIZES CALCULATION

PIPE SIZE	GPM	F.U.
1/2"	4	4
3/4"	10	13
1"	20	30
1-1/4"	35	65
1-1/2"	54	148

WATER PIPING CONSERVATIVELY SIZED AT 10.0 PSI/100'
 SIZED IN ACCORDANCE WITH I.P.C. APPENDIX E

FIXTURE UNIT COUNT (WASTE)

FIXTURE	QTY	F.U./EA	TOTAL F.U.
BATHROOM GROUP	3	5.0	15.0
LAUNDRY GROUP	1	3.0	3.0
KITCHEN GROUP	1	2.0	2.0
+ SHOWER	1	2.0	2.0
+ LAVATORY	1	1.0	1.0
			23.0 F.U.

23.0 F.U. = 17 GPM

NOTE: FIXTURE COUNT SIZED IN ACCORDANCE WITH 2018 IRC, TABLE P3004.1

PLUMBING FIXTURE SCHEDULE

* THE PIPE SIZES SHOWN IN THIS TABLE REPRESENT SERVICE PIPE SIZES AND NOT THE ACTUAL FIXTURE CONNECTION SIZE.

MARK	FIXTURE	* PIPE SIZES			
		COLD	HOT	WASTE	VENT
WC	WATER CLOSET	1/2"	-	3"	2"
LAV	COUNTER-TOP LAVATORY	1/2"	1/2"	2"	2"
SHWR	SHOWER	1/2"	1/2"	2"	2"
TUB/SHWR	TUB / SHOWER COMBO	1/2"	1/2"	2"	2"
KS	KITCHEN SINK	1/2"	1/2"	2"	2"
DW	DISHWASHER	-	1/2"	3/4" DRAIN TO KS TAILPIECE	-
IB	ICE MAKER CONNECTION BOX	1/2"	-	-	-
LS	LAUNDRY SINK	1/2"	1/2"	2"	2"
WB	WASHER BOX W/ DRAIN	3/4"	3/4"	3"	2"
HB	HOSE BIBB	3/4"	-	-	-
WCO	WALL CLEANOUT	-	-	-	-
SCD	SURFACE CLEANOUT	-	-	-	-

MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES AND FIXTURE FITTINGS

PLUMBING FIXTURE OR FIXTURE FITTINGS	MAXIMUM FLOW RATE ^b OR QUANTITY
LAVATORY FAUCETS, PRIVATE	1.5 GPM AT 60 PSI
SHOWER HEAD ^a	2.0 GPM AT 80 PSI
SINK FAUCET	1.8 GPM AT 60 PSI
WATER CLOSET	1.28 GALLON PER FLUSHING CYCLE

NOTE: SHOWER AND TUB/SHOWER VALVES SHALL HAVE PRESSURE-BALANCE, THERMOSTATIC-MIXING OR COMBINATION PRESSURE-BALANCING/ THERMOSTATIC VALVE TYPE IN ACCORDANCE WITH ASSE 1016 OR ASME A112.18.1/CSA B125.1. THE HIGH LIMIT STOP SHALL BE SET TO LIMIT THE WATER TEMPERATURE TO NOT GREATER THAN 120-FAHRENHEIT DEGREES. (2018 IRC, SECTION P2708.3)

PLUMBING SPECIFICATIONS

PART I - GENERAL

A. Scope
 Provide labor, materials, equipment and incidentals necessary or required for the completion, testing, inspection and adjusting, to provide the plumbing systems operable and complete in all your respects.

B. Drawings and Specifications
 Examine and become familiar with all project drawings and specifications, and coordinate the plumbing work accordingly. Make reasonable modifications in the layout or installation as needed to prevent conflict with work, without additional cost.

C. Materials
 Materials furnished under this contract shall be new, free from defects and shall conform with the standards of the UL, INC. where such a standard has been established, and shall be so labeled. Materials not specified here in that are required to complete the plumbing system installation shall be of first class quality for use intended, manufacturer's names and catalog numbers are used to designate the item of material or equipment as means of establishing grade and quality. Manufacturer's of a similar quality product will be considered.

D. Installation
 The entire plumbing system installation shall be made in a neat, workmanship-like finished and safe manner. Conceal all piping in finished areas, unless otherwise noted. The entire installation shall be subject to the architect's approval.

E. Codes, Permits, and Fees
 The drawings and specifications take precedence when they are more stringent than codes, ordinances, standards and statutes. Codes, ordinances, standards and statutes take precedence where they are more stringent than the drawings and specifications. Secure and pay for permits, test, certificates of inspection, and all other costs incidental to the work.

F. Guarantees
 All work shall be guaranteed to be free from defects in materials and workmanship for a period of one year from date of final acceptance of the work, replace at no additional cost any such defects or the correction of defects.

PART II - PRODUCTS

A. Piping Materials List

- Water piping: type 'L' copper (hard overhead, soft underground) with wrought copper fittings (no joints underground). Use lead free silver bearing solder for joints.
- Drain, waste and vent piping: standard weight, cast iron pipe and fittings, "no-hub" type with neoprene sleeve seal and stainless steel clamp for joints. abs approved except as install in accordance with local code, except for plumium use.
- Hot water pipe installation: Owens Corning or equal 1" thick, 3.5# cu. ft. density, premoled fiberglass insulation with all service lap sealed jacket (ASJ).

PART III - EXECUTION

A. Test

- Test water piping at building operating pressure for 4 hours.
- Test waste and vent piping by filling with water to the highest point in the new system.
- Repair all leaks until systems are water tight as required.

GAS WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	LOCATION	GAS INPUT MBH	VENT DIA INCHES	ELECTRICAL VOLTS/PHASE HZ	TEMP. RISE	FLOW RATE G.P.H.	EFF.	REMARKS
1	RHEEM	RTG-RC95DVLN-1	TANKLESS	INTERIOR MOUNT	199 MBH	3 x 5 CONCENTRIC	120 1	60 90°	21	0.82	WEIGHT W/ WATER: 80 LBS. PROVIDE WATTS PLT-05-M1 EXPANSION TANK NON-SIMULTANEOUS

NOTE: 1. MOUNT WATER HEATER ON WALL PER MANUFACTURES INSTRUCTIONS

RECIRCULATING PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	G.P.M.	FT.HD.	H.P.	VOLTS/PH.	REMARKS
1	TACO GENIE (STANDARD PIPING- TANK WATER HEATER)	008-CT	6	10'	1/25	115V/1 PH	HW RECIRCULATION - BRONZE BODY PUMP, 3/4" SIZE PROVIDE HARDWARE REMOTE TRANSMITTER BUTTON AND TRANSMITTER

GRINDER PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	G.P.M.	T.D.H.	H.P.	RPM	VOLTS/PH.	REMARKS
1	E/ONE	2010 GRINDER PACKAGE	11 GPM	138'	1 HP	1725	240V/1 PH	FOR A STANDARD 240V SINGLE-PHASE INSTALLATION, A DEDICATED 30A BREAKER IS REQUIRED, WITH #10 WIRE, TO THE E/ONE PANEL.

NOTE: PRO-SERIEE/ONE 2010 COMES COMPLETE WITH HI-LO FLOATS, VALVES, CHECK VALVE AND ALARM SYSTEM MOUNTED ON EXTERIOR WALL.

Rheem RTG is a series of ultra low NOx, Mid-Efficiency Tankless Gas Water Heaters designed for continuous hot water

Efficiency
 • .81 - .82 UEF with all-copper heat exchanger

Easy Installation and Service
 • 1/2" Gas line compatibility up to 24 ft.!

Exclusive Maintenance Notice Setting - Alerts homeowners, after 500 hours of use, to call for service (optional)

• Connects to Metal Fab, Inc., 3/5" concentric venting without an adapter
 • High-altitude capability - up to 8,400 ft. elevation above sea level!
 • Digital remote control shows temperature setting and service codes
 • Requires 120V power supply

Performance
 • **Industry Best Low Flow Activation** - Minimum flow rate of .25 GPM and activation flow rate of .40 GPM ensures hot water in low demand situations
 • **Exclusive Hot Start Programming** - Minimizes cold water bursts by staying in ready-fire state for back-to-back hot water needs

Technology
 • **EcoNet[®] Enabled** - all Tankless products from 2010 to present can connect to EcoNet mobile app via Tankless EcoNet Accessory Kit (REWR49307WH)
 • For higher demand applications, accessories available to link multiple units in a load-sharing system

Environmentally Friendly
 • **Low Emissions** - Ultra low NOx burner meets SCAQMD rule 1146.2 requirements
 • **Exclusive Water Savings Setting** - upon activation, this setting can save up to 1,100 gallons water/year¹ by reducing flow at the tap until set temperature is achieved (optional)
 • **Safety**
 • **Exclusive Guardian OFW[®] overheat film wrap** - prevents dangerous temperatures and provides industry best side-to-side clearance of 1/2 inch
 • **Industry Best! Freeze protection** to -30°F
 • Maximum water temperature is 140°F. For higher temperature applications, upgrade kits are available
 • **Warranty**
 • 12-Year heat exchanger - residential, 5-year heat exchanger - commercial, 5-year parts and 1-year labor
 See Warranty Certificate for complete information

RTG-DVL Indoor DV 11,000-199,900 BTU/h Natural and LP Gas
 RTG-XL Outdoor 11,000-199,900 BTU/h Natural and LP Gas

Rheem Mid-Efficiency Tankless Water Heater with Built-In Recirculation
 Same specifications as standard Mid-Efficiency models with added water savings and faster hot water.

RTG-RC95DVLN-1 Indoor DV Only 11,000-199,900 BTU/h Natural and LP Gas
 RTG-95DVLN-1 Indoor DV with EcoNet[®] 11,000-199,900 BTU/h Only (Outdoor model also available)

Built-In Recirculation
 • 199,900 BTU/h indoor model Only (For other variants consider on-demand recirculation pump kit)
 • Extended cabinet houses pre-plumbed recirculation pump for easy install and clean look
 • Recirculation provides faster hot water at the tap saving homeowner time
 • **Max. Pipe Lengths:**
 3/4" copper pipe - 400 ft. total
 1/2" copper pipe - 100 ft. total

Recirculation Pump
 • 008-CT Taco Genie On Demand Pump
 • Wired push button included
 • Separate power cord (2 total for unit)
 • **Accessories**
 • **Service Valves** - To isolate unit for easy flushing and maintenance (included)
 • **Cross Valve** - Uses cold water line for recirculation reducing install time (included)
 • **Remote Transmitter & Motion Sensor Activation Accessories** for On-Demand Recirculation for pump (optional)

Specifications

MODEL	GAS INPUT MBH	VENT DIA INCHES	TEMP. RISE	FLOW RATE G.P.H.	EFF.	REMARKS
Rheem RTG-95 Mid-Efficiency Series						
RTG-RC95DVLN-1	11,000-199,900	Indoor DV Only	3-4	80° to 140° F	0.25/0.40	5.0 7.4 9.5 3/4 3/4 25-5/8 13-7/8 8-7/8 3 by 5 CONCENTRIC
RTG-95DVLN-1	11,000-199,900	Indoor DV with EcoNet [®]	3-4	80° to 140° F	0.25/0.40	5.0 7.4 9.5 3/4 3/4 25-5/8 13-7/8 8-7/8 3 by 5 CONCENTRIC
RTG-95DVLN-1	11,000-199,900	Indoor DV with EcoNet [®]	3-4	80° to 140° F	0.25/0.40	5.0 7.4 9.5 3/4 3/4 25-5/8 13-7/8 8-7/8 3 by 5 CONCENTRIC
RTG-95DVLN-1	11,000-199,900	Outdoor	3-4	80° to 140° F	0.25/0.40	4.9 7.4 9.5 3/4 3/4 23-5/8 13-7/8 8-7/8 N/A 54 0.81
RTG-95DVLN-1	11,000-199,900	Outdoor	3-4	80° to 140° F	0.25/0.40	4.9 7.4 9.5 3/4 3/4 23-5/8 13-7/8 8-7/8 N/A 54 0.81
Rheem RTG-84 Mid-Efficiency Series						
RTG-84DVLN-1	11,000-199,900	Indoor	3	80° to 140° F	0.25/0.40	4.5 6.7 8.4 3/4 3/4 25-5/8 13-7/8 8-7/8 3 by 5 CONCENTRIC
RTG-84DVLN-1	11,000-199,900	Outdoor	3	80° to 140° F	0.25/0.40	4.5 6.7 8.4 3/4 3/4 23-5/8 13-7/8 8-7/8 N/A 54 0.81
Rheem RTG-70 Mid-Efficiency Series						
RTG-70DVLN-1	11,000-199,900	Indoor	2-3	80° to 140° F	0.25/0.40	4.1 6.0 7.0 3/4 3/4 25-5/8 13-7/8 8-7/8 3 by 5 CONCENTRIC
RTG-70DVLN-1	11,000-199,900	Outdoor	2-3	80° to 140° F	0.25/0.40	4.1 6.0 7.0 3/4 3/4 23-5/8 13-7/8 8-7/8 N/A 54 0.81

Temperature Rise (°F)

Model Number	35°	45°	50°	60°	70°	80°	90°	100°
RTG-RC95 Water Flow (GPM)	9.5	7.4	6.6	5.5	5.0	4.7	4.1	3.7
RTG-95 Water Flow (GPM)	9.5	7.4	6.6	5.5	5.0	4.7	4.1	3.7
RTG-84 Water Flow (GPM)	8.4	6.7	6.1	5.1	4.5	4.3	3.8	3.4
RTG-70 Water Flow (GPM)	7.9	6.0	5.4	4.5	4.1	3.9	3.4	3.0

Maximum Vent Length (intake/outlet):

Number of 90° Elbows	Maximum Length of Straight Pipe
1	39.0 ft. (12.0 m)
2	37.5 ft. (11.5 m)
3	36 ft. (11 m)
4	34.5 ft. (10.5 m)
5	33 ft. (10 m)
6	31.5 ft. (9.5 m)

Parts and Accessories
 Venting & terminations, recess boxes, pipe covers, extra remote controls, EZ-Link[®] cable, manifolds and cables, service valve kits, service parts, flush kits, recirculation pump kits and A/Clean[®] water treatment system. Motion detector and remote control accessories available for built-in on-demand recirculation models. For more information on Tankless parts and accessories, see the Parts and Accessories Catalog or call 800-720-2076.

Rheem Water Heating • 1115 Northmeadow Parkway, Suite 100 Roswell, Georgia 30078 • www.rheem.com
 Rheem Canada Ltd./Ltdé • 125 Edgeware Road, Unit 1 Brampton, Ontario L6Y 6P5 • www.rheem.com

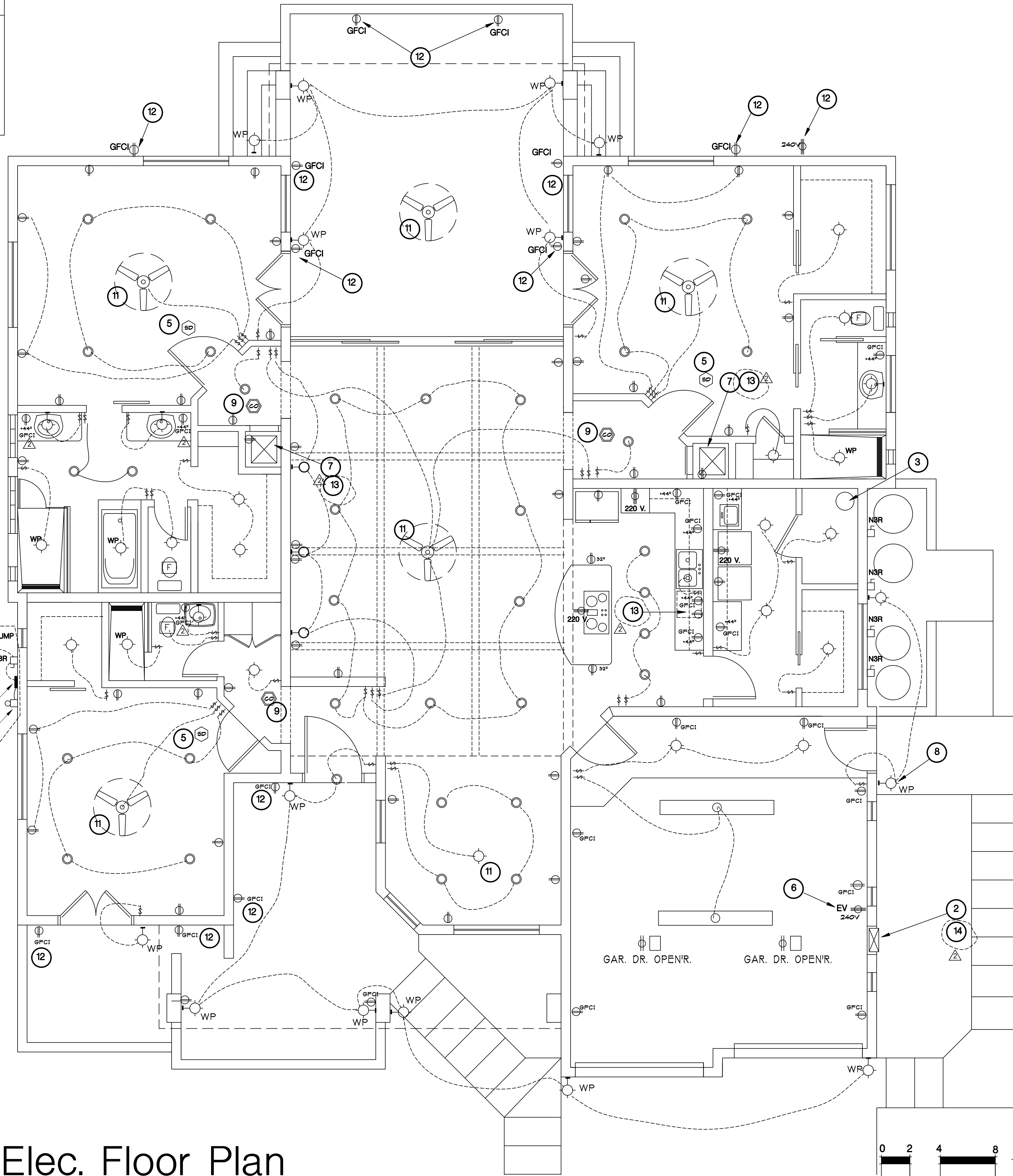
E3305.9

Boxes at fan outlets. Outlets boxes and outlet box systems used as the sole support of ceiling-suspended fans (paddle) shall be marked by their manufacturer as suitable for this purpose and shall not support ceiling-suspended fans (paddle) that weigh more than 70 pounds (31.8 kg.). For outlet boxes and outlet box systems designed to support ceiling-suspended fans (paddle) that weigh more than 35 pounds (15.9 kg.), the required marking shall include the maximum weight to be supported.

SMOKE DETECTORS

- SMOKE DETECTORS SHALL BE PROVIDED TO PROTECT EACH SEPARATE SLEEPING AREA AND 3' FROM DUCT OPENINGS.
- SMOKE DETECTORS SHALL BE PERMANENTLY WIRED AND INTERCONNECTED WITH BATTERY BACKUP POWER.
- WHERE THE HIGHEST POINT OF A CEILING IN A ROOM THAT OPENS TO THE HALLWAY SERVING THE BEDROOMS EXCEEDS THAT OF THE OPENING INTO THE HALLWAY BY 24" OR MORE, SMOKE DETECTORS SHALL BE INSTALLED IN THE HALLWAY AND IN THE ADJACENT ROOM.
- SMOKE DETECTOR TO BE CEILING MOUNTED AND IN CLOSE PROXIMITY TO THE STAIRWAY ON UPPER FLOOR LEVEL. (IF APPLICABLE)
- PROVIDE A MINIMUM OF ONE SMOKE DETECTOR IN THE BASEMENT. (IF APPLICABLE)

GRINDER PUMP NOTE:
ALARMS, TEST FEATURES AND CONTROLS ARE TO BE ON A NON-DEDICATED ELECTRICAL CIRCUIT ASSOCIATED WITH A FREQUENTLY USED HOUSEHOLD LIGHTING FIXTURE AND SEPARATE FROM THE DEDICATED CIRCUIT FOR THE PUMP. ARIZONA ADMINISTRATIVE CODE, R18-9-E304, PARAGRAPH D "AUDIBLE AND VISIBLE ALARMS"



ELECTRICAL SYMBOLS LEGEND

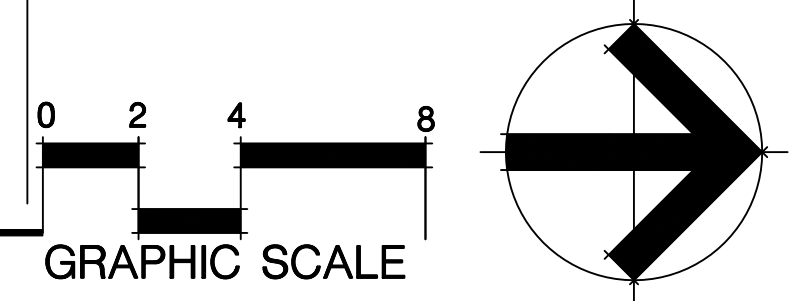
- 200A METER
- SMOKE DETECTOR
- CARBON DIOXIDE DETECTOR
- SURFACE MTD. LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- WALL MTD. LIGHT FIXTURE UP/DOWN LIGHT
- DUPLEX OUTLET
- 220 VOLT OUTLET
- 220 V.
- DUPLEX ON GROUND FAULT INTERRUPTER CIRCUIT
- WP GFI
- WATERPROOF COVER DUPLEX ON GROUND FAULT INTERRUPTER CIRCUIT
- RECESS'D. FLOOR OUTLET
- SINGLE POLE SWITCH
- DOUBLE POLE SWITCH
- THREE WAY SWITCH
- EXHAUST FAN
- DISCONNECT
- 2X4 LAMP FLORESCENT FIXTURE
- CEILING FAN

KEY NOTES - Floor Plan

- WP LIGHT FIXTURE - TYP.
- NEW 400 A ELEC. PANEL
- GAS WATER HEATER - SEE PLUMBING
- NEW GFCI OUTLET IN WP TAMPER-PROOF BOX - TYP.
- SMOKE DETECTORS - TYP. HARD-WIRED
- ELEC. AUTO EV. OUTLET
- MECH AIR-HANDLER - SEE M-1
- WATER PROOF LIGHT FIXTURE - TYP.
- PROV. HARD-WIRED NEW C.O./SMOKE DETECTORS AS SHOWN - TYP.
- PROV. ARC-FAULT INTERRUPTER PROTECTION REQD. ON ALL BRANCH CIRCUITS TYP. • KITCHEN, BEDROOM, LAUNDRY, FAMILY RM, DINING AREA, LIVING RM, PARLOR, LIBRARY, DEN, SUN ROOM, RECREATION RM, CLOSET, HALLWAY OR SIMILAR AREA.
- PROV. FAN-RATED J-BOX REQD. ON ALL BRANCH CIRCUITS - TYP.
- PROV. TAMPER-RESISTANT RECEPTACLES IN ALL APPLICABLE AREAS.
- PROV. DISCONNECT AT DISHWASHER AND FURNACES.
- PROV. AN APPROVED CONDUIT OF NO LESS THAN 3/4" DIA. SHALL BE INSTALLED FROM THE SERVICE PANEL TO AN APPROV. & COVERD. JUNC. BOX LOCATED IN AN AREA ADJ. TO OR IN AN ACCESSIBLE DIRECTLY BENEATH THE SOLAR-READY ZONE. ALL JUNC. BOXES INSTALLED AS PART OF THE PV-READY CONDUIT SYSTEM SHALL BE LABELED "PV-USE".
- PROVIDE WEATHERPROOF CONNECTION TO GRINDER PUMP AT 240V, 1PH, 1HP. GRINDER PUMP SHALL BE EQUIPPED WITH ALARM CONTROL PANEL FOR ALARM NOTIFICATION. COORDINATE WITH PLUMBING PLANS AND EQUIPMENT MANUFACTURE FOR EXACT REQUIREMENTS.

Elec. Floor Plan

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



DATE	REVISIONS
04-15-24	CITY REVIEW COMMENTS
06-04-24	CITY COMMENTS
03-12-25	CITY COMMENTS

Client:	Albert Rivera
	305 CALLE LINDA, SEDONA, AZ 85336
	ELEC. FLOOR PLAN

SHEET TITLE:	NEW SEDONA HOUSE
	305 CALLE LINDA, SEDONA, AZ 85336

DATE:	08/17/10	DRAWN:	PR
JOB. NO.	2010-08	CHECKED:	
SHEET NO.	E-1		

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RESIDENTIAL LOAD CALCULATION
(Based on NEC 220.82)

Item	Qty	Load (VA)	Total Load (VA)
Area Square Footage (House)	2664		
General Lighting & Receptacles	2664	3	7,992
Garage Door Motor	2	600	1,200
Electric Car Charger	1	8,000	8,000
Pump Alarm Panel / Beacon	1	360	360
Grinder Pump Motor	1	1,008	1,008
Sub-Total			18,560
1st 10,000VA at 100%			10,000
Remainder at 40%			3,424
Net Total Load			13,424
Heat Pump / AC Units:			
FC-2	1	1,560	1,560
CU-2	1	5,904	5,904
LARGEST MOTOR LOAD @ 25%		1,476	1,476
Sub-Total			8,940
Total Load			22,364
KVA			93.2
AMPS AT 240 VOLT, 1-PHASE			93.2

RESIDENTIAL LOAD CALCULATION
(Based on NEC 220.82)

Item	Qty	Load (VA)	Total Load (VA)
20 Amp Small Appliance Circuits	2	1,500	3,000
Oven	1	8,000	8,000
Cooktop	1	8,000	8,000
Dryer	1	5,000	5,000
Water Heater (Gas)	1	0	0
Laundry	1	1,200	1,200
Dishwasher / Disposal	1	1,200	1,200
Refrigerator	1	1,200	1,200
Cooktop Hood	1	750	750
Sub-Total			28,350
1st 10,000VA at 100%			10,000
Remainder at 40%			7,340
Net Total Load			17,340
Heat Pump / AC Units:			
FC-2	1	1,560	1,560
CU-2	1	4,848	4,848
LARGEST MOTOR LOAD @ 25%		4,848	1,212
Sub-Total			7,620
Total Load			24,960
KVA			25
AMPS AT 240 VOLT, 1-PHASE			104.0

FAULT CURRENT CALCULATIONS

$I_{sc} = I_{sc} \times M$ $M = 1/(1 + f)$ Cable: $f = 2 \times L \times I / C \times E$ $X_{fmr} = I_p \times e \times V_p \times \sqrt{2}/100000 \times KVA$
 $I_{sc} (eas) = V_p/V_s \times M \times I_{sc}$

where:
 I_{sc} = the available short-circuit current, in amperes, at the beginning of the circuit.
 L = the length of circuit to the fault, in feet.
 C = the constant from Table C for the type of conductors and circuit arrangement.
For parallel runs, multiply "C" value by the number of conductors per phase.
 I_p = primary current, in amperes.
 V_p = primary line-to-line voltage of transformer, in volts.
 V_s = secondary line-to-line voltage of transformer, in volts.
 $\sqrt{2}$ = impedance of transformer.
Use row 'ca' for feeder cables; and row 'cf' for transformers.

Fault Point	Description	Source I _{sc} (amps)	Wire / Cable Size	No. of cond. per phase	Type of conduct.	"C" value	E (volts)	L (length) in feet	X _{fmr} KVA	X _{fmr} %Z	V _p (volts)	V _s (volts)	f	M	I _{sc} (amps)
F1	ca Meter Main	20955.00											0.00	1.00	20955.00
	cf Per APS Chart												0.00	1.00	0.00
F2	ca Panel 'A'	20955.00	#3/0 CU	1	M	12844	240	22					0.30	0.77	16130.29
	cf												0.00	1.00	0.00
F3	ca Panel 'B'	20955.00	#3/0 CU	1	M	12844	240	34					0.46	0.68	14330.57
	cf												0.00	1.00	0.00

Note: The above calculations neglected motor short-circuit contributions. If significant, motor short-circuit contribution may be added to the transformer secondary short-circuit current value. A practical estimate of motor contribution is to multiply the total motor load in amperes by 4. Lengths are for calculations only. DO NOT USE for cost estimating or take-off purposes.

PANEL "A" AND PANEL "B" SHALL BE SERIES RATED WITH THEIR RESPECTIVE UPSTREAM REMOTE MAIN PROTECTIVE DEVICES.

A TWO TIER (22KA/10KA) SYSTEM IS SPECIFIED. SEE THE SERIES RATING NOTES, ON THIS SHEET.

FEEDER SCHEDULE

Feeder Tag	Wire-THHN/THWN-2 and Conduit
203	(3) #3/0 & (1) #6 GND., (1) 2" C
PRI	PRIMARY SIDE OF UTILITY COMPANY
SEC	SECONDARY SIDE OF UTILITY COMPANY. PROVIDE 4" C WITH 36IN MINIMUM RADIUS AND INSTALL PER UTILITY COMPANY REQUIREMENTS. ELECTRICAL CONTRACTOR TO PROVIDE CONDUITS, TRENCHING, AND BACKFILL.

CODE LOAD SUMMARY

PANEL 'A'	= 93.2 AMPS
PANEL 'B'	= 104.0 AMPS
TOTAL	= 197.2 AMPS

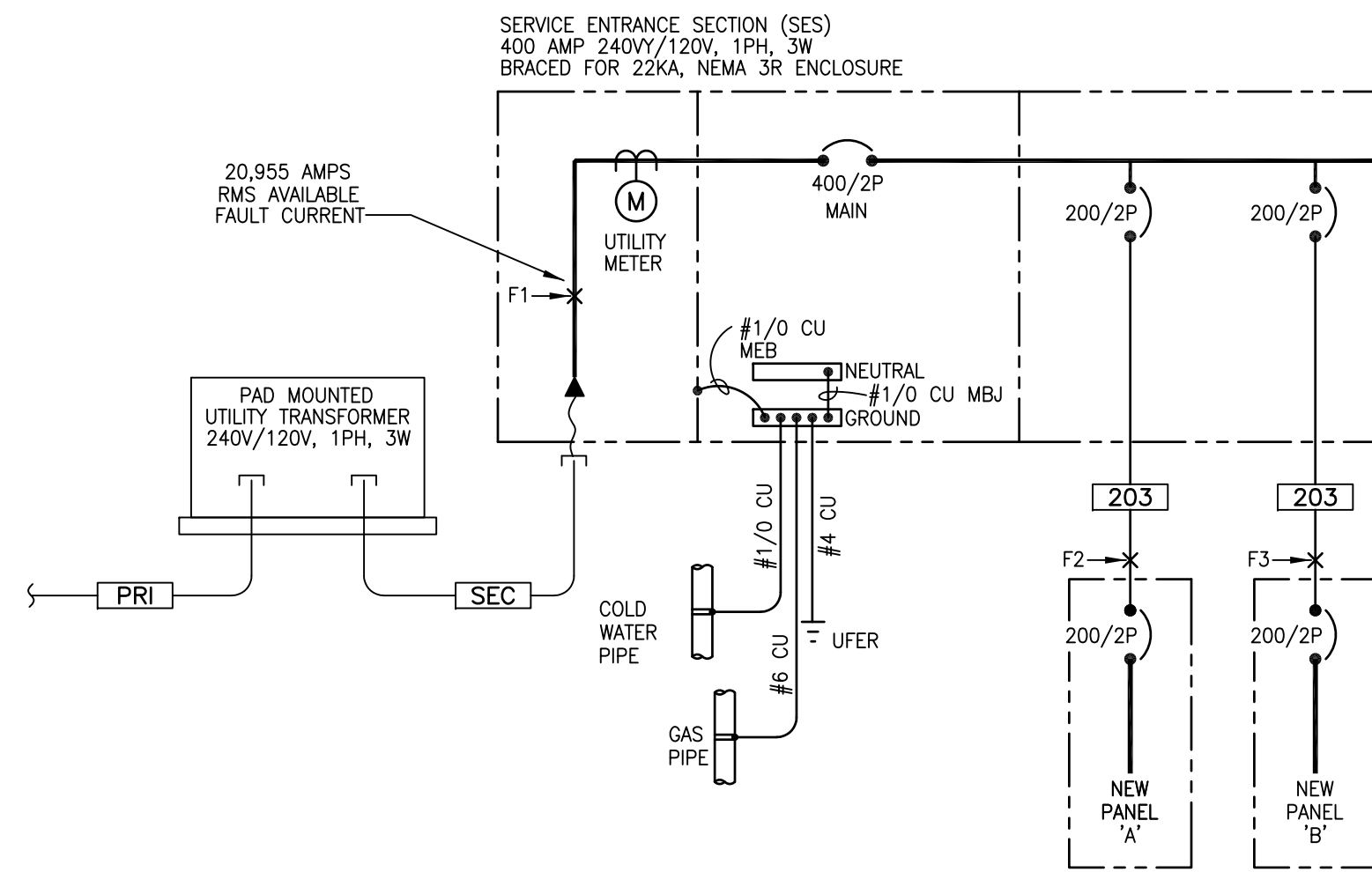
SQUARE FOOTAGE

RESIDENCE	= 2664 S.F.
TOTAL	= 2664 S.F.

ONE-LINE GENERAL NOTES

- PROVIDE A WORKING SPACE OF NOT LESS THAN 30 INCHES IN WIDTH, 36 INCHES IN DEPTH AND 78 INCHES IN HEIGHT IN FRONT OF ELECTRICAL EQUIPMENT, IF THE ELECTRICAL EQUIPMENT IS WIDER THAN 30 INCHES. THE WORKING SPACE SHALL NOT BE LESS THAN THE WIDTH OF THE EQUIPMENT. THERE SHALL BE NO STORAGE WITHIN THE DESIGNATED WORK SPACE.
- ELECTRICAL CONTRACTOR SHALL PROVIDE LABELING OF THE AVAILABLE FAULT CURRENT FOR EACH PANEL AS NOTED, PER NEC 110.24.
- ELECTRICAL CONTRACTOR SHALL PROVIDE LABELING TO INDICATE WHERE EACH PIECE OF EQUIPMENT ORIGINATES, PER 408.4(B).
- ALL METALLIC WATER PIPING WHICH MAY BECOME ENERGIZED SHALL BE BONDED TOGETHER WITH BARE #1/0 COPPER WIRE BETWEEN THE BONDED PIPING SYSTEM AND THE ELECTRODE CONDUCTOR.
- THE INTERIOR METAL COLD WATER PIPING SYSTEM IS TO BE BONDED TO THE SERVICE EQUIPMENT ENCLOSURE, THE GROUNDING CONDUCTOR AT THE SERVICE, THE GROUNDING ELECTRODE, OR TO ONE OR MORE OF THE GROUNDING ELECTRODES.
- ELECTRICAL CONTRACTOR TO PROVIDE UFER GROUNDING OF 20"-0" MIN. BARE #4 COPPER WIRE (MIN.), ENCASED BY 2" MIN. CONCRETE AT THE BOTTOM FOOTING.

- THIS SYSTEM IS A SERIES RATED SYSTEM, 2 TIER - 22/10K REMOTE MAIN SYSTEM.
- THE SES SHALL HAVE A LABEL STATING, "SERIES RATED PANELS RATED 22/10K AMPERES, REPLACE ONLY WITH BREAKER TYPE _____, AS MANUFACTURED BY _____ CO." PER THE REQUIREMENTS OF NEC 110-22 AND THE AHJ ELECTRICAL INSPECTOR.
- PANELS SHALL HAVE A LABEL STATING "SERIES RATED MAIN CIRCUIT BREAKER WITH BRANCH DEVICE. THERE IS XXXXX AMPERES AVAILABLE FAULT CURRENT AT PANEL" (PER FAULT TABLE ON THIS DRAWING) AND THE REQUIREMENTS OF NEC 110-22.
- THE SERIES RATED DEVICES SHALL BE A UL67 LISTED SYSTEM AT TIME OF INSTALLATION.
- THE MOTOR CONTRIBUTION FROM THE EQUIPMENT CONNECTED TO PANELS HAVE A FLA RATING OF LESS THAN 100A (1% OF 10,000)
- THE PANELS SHALL ALSO CONTAIN THE MANUFACTURERS LABEL STATING THAT THE MAIN CIRCUIT BREAKER AND SECONDARY DEVICE ARE A UL67 LISTED COMBINATION FOR A 22/10K SYSTEM WITH REQUIRED APPROVED REPLACEMENT PARTS PER NEC 240-86(g).
- NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT THE PRIOR APPROVAL OF THE ELECTRICAL ENGINEER OR THE ELECTRICAL INSPECTOR.



ELECTRICAL ONE-LINE DIAGRAM

N.T.S.

GENERAL NOTES

- (NOT ALL MAY APPLY)
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST JURISDICTION ADOPTED NATIONAL ELECTRICAL CODE.
 - IN EVERY KITCHEN, FAMILY ROOM, DINING ROOM, LIVING ROOM, PARLOR, LIBRARY, DEN, SUNROOM, BEDROOM, RECREATION ROOM, OR SIMILAR ROOM OR AREA OF DWELLING UNITS, RECEPTACLES SHALL BE SPACED SO THERE IS NOT A POINT ALONG THE FLOOR LINE WHICH IS MORE THAN 6'-0" FROM AN RECEPTACLE. PROVIDE (1) ONE RECEPTACLE MIN. FOR EACH COUNTER WHICH IS 12" OR WIDER, IN KITCHEN AREAS (MAX. 4'-0" O.C.), PROVIDE MINIMUM (1) RECEPTACLE FOR EVERY WALL SPACE GREATER THAN 2'-0".
 - RECEPTACLES IN BATHROOMS, GARAGES, KITCHENS, WITHIN 6'-0" OF SINKS AND ANY EXTERIOR LOCATIONS SHALL BE GROUND FAULT INTERRUPTION (GFCI) PROTECTED.
 - SMOKE DETECTORS SHALL BE PROTECTED BY A COMBINATION TYPE ARC-FAULT CIRCUIT INTERRUPTER(S) AND PLACED NO MORE THAN 12" FROM THE CEILING IF WALL MOUNTED AND 3'-0" FROM DUCT OPENINGS. S.D.'s SHALL BE PERMANENTLY WIRED AND INTERCONNECTED, AND SHALL PROTECT ALL SLEEPING AREAS. ALL S.D.'s SHALL HAVE A BATTERY BACK-UP, WHERE THE HIGHEST POINT IN A ROOM THAT OPENS TO A HALLWAY SERVING THE SLEEPING AREAS EXCEEDS THAT OF THE OPENING INTO THE HALLWAY BY 24" OR MORE, SMOKE DETECTORS SHALL BE INSTALLED IN THE HALLWAY AND THE ADJACENT ROOM. ALL SMOKE DETECTORS SHALL BE INSTALLED PER THE MFG'S. INSTRUCTIONS.
 - SWITCH PLATES AND OUTLET HEIGHTS: (UNLESS SPECIFIED BY ARCHITECT) SWITCH PLATES 46" TO CENTER LINE. OUTLETS 18" TO CENTER LINE. KITCHEN OUTLETS 44" TO TOP OF BOX. BATHROOM OUTLETS 46" TO CENTER LINE. WASHER & DRYER OUTLETS 36" TO CENTER LINE. LAUNDRY OUTLETS 46" TO CENTER LINE (EXCEPT WASHER). GARAGE OUTLETS 42" TO CENTER LINE. WATER HEATERS 60" TO CENTER LINE. DOOR BELL BOTTOM 42" TO CENTER LINE.
 - ALL BRANCH CIRCUITS THAT SUPPLY 120-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE OUTLETS INSTALLED IN FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN'S, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS AND SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A COMBINATION TYPE ARC-FAULT CIRCUIT INTERRUPTER INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
 - ALL RECEPTACLE OUTLETS FOR RANGES AND CLOTHES DRYERS SHALL BE A 3-POLE WITH GROUND TYPE. FOUR WIRE, GROUNDING TYPE FLEXIBLE CORDS WILL BE REQUIRED FOR CONNECTION OF RANGES AND CLOTHES DRYERS. THE BONDING JUMPER SHALL NOT BE CONNECTED BETWEEN THE NEUTRAL TERMINAL AND THE FRAME OF THE APPLIANCE.
 - PROVIDE (1) ONE, MIN., 20 AMP BRANCH CIRCUIT TO SERVE THE WASHER MACHINE. SUCH CIRCUIT SHALL HAVE NO OTHER OUTLETS.
 - KITCHEN COUNTER TOP RECEPTACLES SHALL BE INSTALLED PER N.E.C.
 - MIN. 50 AMP CIRCUIT REQUIRED FOR RANGE OR OVEN. PROVIDE FOUR WIRE RECEPTACLE.
 - EXTERIOR WATERPROOF GFCI RATED OUTLETS TO BE 16" TO CENTER LINE ABOVE GRADE. PHONE JACKS & T.V. JACKS SHALL MATCH RECEPTACLE HEIGHT IN ALL AREAS.
 - LIGHT FIXTURES LOCATED IN CLOTHES CLOSETS MUST MAINTAIN 12" CLEARANCE FROM SHELVES TO INCANDESCENT FIXTURE WITH GLOBE AND 6" CLEARANCE FOR RECESSED AND FLUORESCENT FIXTURES. INCANDESCENT FIXTURES WITH OPEN OR PARTIALLY ENCLOSED LAMPS, PENDANT FIXTURES, LAMP HOLDERS ARE NOT PERMITTED IN CLOSETS.
 - PROVIDE CONVENIENCE RECEPTACLE & LIGHT @ EA. AIR HANDLER IN ATTIC SPACE. LOCATE SWITCH @ ATTIC ACCESS.
 - FIXTURES LOCATED IN DAMP OR WET LOCATIONS SHALL BE LISTED TO BE SUITABLE FOR SUCH LOCATION.
 - THE TWO OR MORE 20-AMPERE SMALL APPLIANCE BRANCH CIRCUITS SHALL HAVE NO OTHER OUTLETS, EXCEPT THE RECEPTACLE INSTALLED SOLELY FOR ELECTRIC SUPPLY TO AN ELECTRICAL CLOX IN THE KITCHEN, DINING, BREAKFAST AREAS OR RECEPTACLES FOR SUPPLEMENTAL EQUIPMENT AND LIGHTING FOR GAS-FIRED RANGES, OVENS, OR COUNTER MOUNTED UNITS OR REFRIGERATOR.
 - BATHROOM RECEPTACLE OUTLETS SHALL BE SUPPLIED BY ONE 20 AMPERE GFCI BRANCH CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. EACH BATHROOM SHALL HAVE ONE DEDICATED CIRCUIT.
 - CONTRACTOR SHALL DISTINGUISH CIRCUIT IDENTIFICATION WITHIN CIRCUIT DIRECTORY, LOCATED ON THE FACE OR INSIDE THE DOOR OF THE PANEL BOARD, PER NEC 408.4
 - A ONE-LINE DIAGRAM SIGNED BY AN ENGINEER OR LICENSED CONTRACTOR MUST BE PRESENT AT THE SITE AT TIME OF INSPECTION. IF THE SIGNED ONE-LINE DIAGRAM IS NOT ON SITE, AN INSPECTION WILL NOT BE PERFORMED.
 - PROVIDE JUNCTION BOX FOR CEILING FAN. CEILING-SUSPENDED (PADBLE) FANS SHALL BE SUPPORTED INDEPENDENTLY OF AN OUTLET BOX. PROVIDE INDEPENDENT SUPPORT AND SWAY BRACING FOR MINIMUM 100 POUND UNIT, & PENDANT MOUNTED FAN (36" STEM). LOCATE J-BOX AT CEILING STRUCTURE FOR FAN.
 - ALL RECESSED CAN LIGHTING SHALL HAVE HOUSINGS THAT ARE DESIGNED FOR INSULATED CEILINGS AND CAN BE IN DIRECT CONTACT WITH CEILING INSULATION AND GASKET-SEALED.
 - ALL RECEPTACLE IN GARAGE SHALL BE GFCI TYPE.
 - NO MULTI-WIRE BRANCH CIRCUITS ALLOWED.
 - LISTED TAMPER-RESISTANT RECEPTACLES TO BE INSTALLED IN E4002.14 AREAS.
 - PROVIDE RKS FUSES PER MECHANICAL EQUIPMENT NAMEPLATE REQUIREMENTS IN LOCAL DISCONNECT.
 - DEFINITION OF ARC-FAULT CIRCUIT INTERRUPTER (AFCI): A DEVICE INTENDED TO PROVIDE PROTECTION FROM THE EFFECTS OF ARC FAULTS BY RECOGNIZING CHARACTERISTICS UNIQUE TO ARCING AND BY FUNCTIONING TO DE-ENERGIZE THE CIRCUIT WHEN AN ARC FAULT IS DETECTED.
 - ALL 120-VOLT, SINGLE PHASE, 15- AND 20- AMPERE BRANCH CIRCUIT SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN'S, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUITS INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
 - N1104.1 (R404.1) LIGHTING EQUIPMENT (MANDATORY) A MINIMUM OF 90% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICIENCY LAMPS OR A MIN. OF 90% OF PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICIENCY LAMPS. EXCEPTION: LOW VOLTAGE LIGHTING SHALL NOT BE REQUIRED TO UTILIZE HIGH-EFFICIENCY LAMPS.



REVISIONS	CITY COMMENTS	DATE
		06-04-24

Client: **Albert Rivera**
305 CALLE LINDA, SEDONA, AZ 85336
 ELEC. NOTES / CALOS / DIAGRAM

NEW SEDONA HOUSE
305 CALLE LINDA, SEDONA, AZ 85336

LIBERTY ENGINEERING, LLC.
 480.330.0892
 Ali_Lopez@msn.com

DATE: **08/17/19** DRAWN: **PR**
 JOB. NO. **2019-08** CHECKED:
 SHEET NO. **E-2**

CALL 4-7 WORKING DAYS BEFORE YOU DIG
263-1100
 INSIDE MARICOPA COUNTY
1-800-STAKE-IT
 OUTSIDE MARICOPA COUNTY

Power Company: APS
 Telephone #: 602-371-6767

Submit drawings to Utility Company representative as required in the General Notes included in the Electrical Drawings.

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NEW ELECTRICAL PANEL SCHEDULE															
PANEL: A 22KAIC/10KAIC SERIES RATED															
LOCATION: GARAGE				MOUNTING: FLUSH				VOLTAGE: 240 / 120 V 1Ø,3W				MAINS: 200 A MCB		BUS: 200 A CU	
LOAD DESCRIPTION	EMT COND	CU GRND	PHASE NEUT	CKT BRKR	CIR NO.	LOAD AMPS		CIR NO.	CKT BRKR	PHASE NEUT	CU GRND	EMT COND	LOAD DESCRIPTION		
						PHASE 1	PHASE 2								
LIGHTING		14	14	15	1			2	20	12	12		RECEPTACLES		
BEDROOM - 1				AFCI				2	GFCI				MASTER BATHROOM		
LIGHTING		14	14	15	3			4	20	12	12		RECEPTACLES		
BEDROOM - 2				AFCI				4	GFCI				SOUTH BATHROOM		
LIGHTING		14	14	15	5			6	20	12	12		RECEPTACLES		
MASTERBED RM / M. BATH				AFCI				6	GFCI				NORTH BATHROOM		
LIGHTING		14	14	15	7			8	20	12	12		RECEPTACLES		
FAMILY RM / KITCHEN				AFCI				8	GFCI				FRONT EXTERIOR		
LIGHTING		14	14	15	9			10	20	12	12		RECEPTACLES		
GARAGE / LAUNDRY ROOM				AFCI				10	GFCI				BACK EXTERIOR		
LIGHTING		14	14	15	11			12	20	12	12		RECEPTACLES		
EXTERIOR				AFCI				12	GFCI				GARAGE DOOR - 1		
MISCELLANEOUS		12	12	20	13			14	20	12	12		RECEPTACLES		
SMOKE DETECTORS				1				14	GFCI				GARAGE DOOR - 2		
MISCELLANEOUS		12	12	20	15			16	20	12	12		RECEPTACLES		
IRRIGATION SYSTEM				1				16	GFCI				GARAGE GENERAL - 1		
PANEL		12	12	20	17			18	20	12	12		RECEPTACLES		
PUMP ALARM PANEL / BEACON				1				18	GFCI				GARAGE GENERAL - 2		
SPARE				20	19			20	20	12	12		RECEPTACLES		
SPARE				1				20	AFCI				DINING ROOM		
SPARE				20	21			22	20	12	12		RECEPTACLES		
BUSSED SPACE				1				22	AFCI				FAMILY / LIVING ROOM		
BUSSED SPACE					23			24	20	12	12		RECEPTACLES		
BUSSED SPACE					25			26	20	12	12		BEDROOM - 1		
BUSSED SPACE					27			28	AFCI				BEDROOM - 2		
BUSSED SPACE					29			30	20	12	12		RECEPTACLES		
BUSSED SPACE					31			32					MASTER BEDROOM		
BUSSED SPACE					33			34					BUSSED SPACE		
BUSSED SPACE					35			36	15	12	12		MECHANICAL		
MISCELLANEOUS		12	12	20	37			38	HACR				FC-1		
GRINDER PUMP								38		12			MECHANICAL		
MISCELLANEOUS				2				40	2				CONT.		
CONT.				2				40	40	8	8	1"	MECHANICAL		
EV CHARGER		8	6	50	39			42	HACR				CU-1		
MISCELLANEOUS				6				42	2	8			MECHANICAL		
CONT.				2				42					CONT.		

REFER TO LOAD CALCULATION ON SHEET E-2

MCB = Main Circuit Breaker
 AFCI = Combination type arc/fault circuit interrupter
 GFCI = Ground fault circuit interrupter (can be accomplished with GFCI receptacle)
 HACR = Type Circuit Breaker

NEW ELECTRICAL PANEL SCHEDULE															
PANEL: B 22KAIC/10KAIC SERIES RATED															
LOCATION: LAUNDRY ROOM				MOUNTING: FLUSH				VOLTAGE: 240 / 120 V 1Ø,3W				MAINS: 200 A MCB		BUS: 200 A CU	
LOAD DESCRIPTION	EMT COND	CU GRND	PHASE NEUT	CKT BRKR	CIR NO.	LOAD AMPS		CIR NO.	CKT BRKR	PHASE NEUT	CU GRND	EMT COND	LOAD DESCRIPTION		
						PHASE 1	PHASE 2								
SPARE					20	1		2	20	12	12		RECEPTACLES		
SPARE					2			2	GFCI				SMALL APPLIANCE - 1		
SPARE					20	3		4	20	12	12		RECEPTACLES		
SPARE					1			4	GFCI				SMALL APPLIANCE - 2		
SPARE					20	5		6	20	12	12		RECEPTACLES		
BUSSED SPACE					1			6	GFCI				REFRIGERATOR		
BUSSED SPACE					7			8	20	12	12		RECEPTACLES		
BUSSED SPACE					9			8	GFCI				DISPOSAL / DISHWASHER		
BUSSED SPACE					10			10	20	12	12		RECEPTACLES		
BUSSED SPACE					11			10	GFCI				LAUNDRY		
BUSSED SPACE					12			12	20	12	12		MISCELLANEOUS		
BUSSED SPACE					13			12	GFCI				COOKTOP HOOD		
BUSSED SPACE					14			14					BUSSED SPACE		
BUSSED SPACE					15			16					BUSSED SPACE		
BUSSED SPACE					17			18					BUSSED SPACE		
BUSSED SPACE					19			20					BUSSED SPACE		
BUSSED SPACE					21			22					BUSSED SPACE		
BUSSED SPACE					23			24					BUSSED SPACE		
BUSSED SPACE					25			26					BUSSED SPACE		
BUSSED SPACE					27			28					BUSSED SPACE		
BUSSED SPACE					29			30					BUSSED SPACE		
BUSSED SPACE					31			32					BUSSED SPACE		
BUSSED SPACE					33			34					BUSSED SPACE		
MISCELLANEOUS		10	10	30	31			36	15	12	12		MECHANICAL		
DRYER								36	HACR				FC-2		
MISCELLANEOUS				10				38	2	12			MECHANICAL		
CONT.				2				38					CONT.		
MISCELLANEOUS		8	6	50	35			40	35	8	8	1"	MECHANICAL		
COOKTOP								40	HACR				CU-2		
MISCELLANEOUS				6				42	2	8			MECHANICAL		
CONT.				2				42					CONT.		
MISCELLANEOUS		8	6	50	39										
OVEN															
MISCELLANEOUS				6											
CONT.				2											

REFER TO LOAD CALCULATION ON SHEET E-2

MCB = Main Circuit Breaker
 AFCI = Combination type arc/fault circuit interrupter
 GFCI = Ground fault circuit interrupter (can be accomplished with GFCI receptacle)
 HACR = Type Circuit Breaker

GOING WITH GAS WATER HEATER IN LIEU ELECTRICAL WATER HEATER (REMOVED WATER HEATER BREAKER)

LABELS TO BE PROVIDED:

- PHENOLIC TAG INDICATING PANEL NAME, SOURCE PANEL, VOLTAGE/PHASE, AND ELECTRICAL BRANCH OF THE ELECTRICAL SYSTEM.
- PHENOLIC TAG INDICATING THE AVAILABLE FAULT CURRENT AT PANEL, EQUIPMENT BRACING RATING, AND DATE SHORT CIRCUIT CALCULATION PERFORMED.
- PHENOLIC TAG OR STICKER PROVIDING ARC FLASH HAZARD INFORMATION, INCLUDING FLASH HAZARD BOUNDARY, INCIDENT ENERGY AT INDICATED DISTANCE, PPE CATEGORY PER NFPA 70E, VOLTAGE OF PANEL TO INDICATE SHOCK HAZARD, AND LIMIT, RESTRICTED, AND PROHIBITED APPROACH DISTANCES PER NFPA 70E.

NOTES:

- ARC FLASH HAZARD INFORMATION AND FAULT CURRENT VALUES SHALL BE DETERMINED BY MANUFACTURERS ARC FLASH STUDY, SHORT CIRCUIT ANALYSIS, AND COORDINATION STUDY.
- OF ARC FLASH STUDY DETERMINES THAT THE INCIDENT ENERGY AT THE EQUIPMENT IS >40 CAL/CM², THE ARC FLASH STICKER OR PHENOLIC TAG SHALL BE PROVIDED WITH A RED BACKGROUND AND HAVE THE WORD "DANGER" INCLUDED IN THE TAG.
- REFER TO SPECIFICATIONS FOR BACKGROUND AND TEXT COLORS, FONT SIZE, AND ANY ADDITIONAL INFORMATION.
- DISTRIBUTION EQUIPMENT SHALL BE LABELED IN ACCORDANCE WITH 2011 NEC SECTIONS 110.16 AND 110.24.

PANEL " " FED FROM PANEL " "
 208V/120V, 3Ø, 4W
 NORMAL BRANCH

AVAILABLE FAULT CURRENT:
 XX,XXXA SYMMETRICAL
 EQUIPMENT BRACED AT:
 XX,XXXA SYMMETRICAL
 DATE --/--/--

WARNING
ARC FLASH AND SHOCK HAZARD
 18 INCHES FLASH HAZARD BOUNDARY
 1.2 CAL/CM² FLASH HAZARD AT 18"
 CATEGORY 0 PPE CATEGORY PER NFPA 70E
 480 VAC SHOCK HAZARD WHEN COVER IS OPEN
 42 INCHES LIMITED APPROACH PER NFPA 70E
 12 INCHES RESTRICTED APPROACH PER NFPA 70E
 1 INCH PROHIBITED APPROACH
 PANEL " " DATE --/--/--
 NOTE: CHANGES IN EQUIPMENT SETTINGS OR SYSTEM CONFIGURATION MAY INVALIDATE THE CALCULATED VALUES AND PPE REQUIREMENTS LISTED ABOVE.

PROVIDE APPROVED ARC-FLASH HAZARD WARNING ON ALL REQUIRED ELECTRICAL EQUIPMENT PER NEC 110.16

WARNING
 Electric Arc Flash Hazard
 Will cause severe injury or death
 Wear proper protective equipment before opening or performing diagnostic measurements while energized. (See NFPA 70E)

LIBERTY ENGINEERING, LLC.
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Professional Engineer (Electrical)
 CERTIFICATE NO. 51172
 DAVID G. WATSON
 1/3/2024
 ARIZONA, U.S.A.

DATE	REVISIONS	CITY COMMENTS
06-04-24		

Client:
Albert Rivera
 305 CALLE LINDA, SEDONA, AZ 85336
 ELECTRICAL PANEL SCHEDULES

NEW SEDONA HOUSE
 305 CALLE LINDA, SEDONA, AZ 85336

SHEET TITLE:
E-3

DATE: 08/17/19
 DRAWN: PR
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