

**CITY OF TEMPE  
DEVELOPMENT REVIEW COMMISSION**

**Meeting Date: 01/24/2023  
Agenda Item: 4**

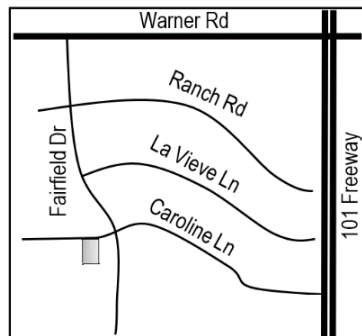
**ACTION:** Request a Use Permit Standard to Request a Use Permit Standard to allow a 20% reduction to the required rear yard setback from 35 feet to 28 feet for the **KELLER RESIDENCE**, located at 2029 East Caroline Lane. The applicant is Dahlman Construction.

**FISCAL IMPACT:** N/A

**RECOMMENDATION:** Staff – Approve, subject to conditions

**BACKGROUND INFORMATION:** KELLER RESIDENCE (PL220297) is a single-family home located within the AG zoning district, in the Circle G Ranches 4 Unit 2 Subdivision. The applicant intends to build a 1,571 s.f. detached pool house in the back yard of the property contingent upon the approval of the Use Permit Standard. The request includes the following:

ZUP220068 Use Permit Standard to allow a 20% reduction to the required rear yard setback from 35 feet to 28 feet



Property Owner	Jack and Diana Keller
Applicant	Bradley Dahlman, Dahlman Construction
Zoning District	AG (Agricultural)
Site Area	30,697 S.F.
Building Area	3,484 s.f. (existing livable)
	1,571 s.f (proposed livable)
Lot Coverage	22.71% (25% maximum allowed)
Building Setbacks	20' west side, 45'-6" east side, 28'-2" rear (20' sides, 35' rear min. required)
Vehicle Parking	3 spaces (3 min. required)

**ATTACHMENTS:** Development Project File

**STAFF CONTACT(S):** Lily Drosos, Planner I (480) 350-8245

Department Director: Jeff Tamulevich, Community Development Director

Legal review by: N/A

Prepared by: Lily Drosos, Planner I

Reviewed by: Steve Abrahamson, Principal Planner

## COMMENTS

The Keller Residence is located on Lot 43 of the Circle G Ranches 4 Unit 2 Subdivision on the south side of Warner Road, east of McClintock Drive and west of the Loop 101 Freeway. The applicant intends to build a 1,571 square-foot, detached pool house in the rear yard that would encroach into the 35-foot rear setback by 7 feet. The applicant is requesting a Use Permit Standard to allow a 20% reduction of the required rear yard setback from 35 feet to 28 feet.

## PUBLIC INPUT

Staff has not received any public input at the time of writing this report.

## USE PERMIT STANDARD

The proposed use requires a Use Permit Standard to allow a 20% reduction to the required rear yard setback from 35 feet to 28 feet within the AG zoning district.

Section 6-308(E) Approval criteria for Use Permit (*in italics*):

1. *Any significant increase in vehicular or pedestrian traffic*; the proposed use and design of the accessory building is not expected to cause a significant increase in vehicular or pedestrian traffic.
2. *Nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat or glare at a level exceeding that of ambient conditions*; the proposed accessory building is intended for the use of the single-family residence and is not expected to create any nuisances exceeding that of ambient conditions.
3. *Contribution to the deterioration of the neighborhood or to the downgrading of property values, which is in conflict with the goals, objectives or policies for rehabilitation, redevelopment or conservation as set forth in the city's adopted plans or General Plan*; the proposed use and design is permitted within the AG zoning district, contingent on the approval of the Use Permit Standard. The pool house use is expected to increase the value of the property and benefit the surrounding neighborhood.
4. *Compatibility with existing surrounding structures and uses*; the proposed accessory building is compatible with the existing surrounding structures and uses within the AG zoning district.
5. *Adequate control of disruptive behavior both inside and outside the premises which may create a nuisance to the surrounding area or general public*; the proposed pool house is intended to be used solely by the primary residence and is not expected to create disruptive behavior.

## REASONS FOR APPROVAL

Based on the information provided by the applicant, the public input received and the above analysis staff supports approval of the requested Use Permit Standard. This request meets the required criteria and will conform to the conditions.

## SHOULD AN AFFIRMATIVE ACTION BE TAKEN ON THIS REQUEST, THE FOLLOWING NUMBERED CONDITIONS OF APPROVAL SHALL APPLY, BUT MAY BE AMENDED BY THE DECISION-MAKING BODY.

### CONDITION(S) OF APPROVAL: (Non-standard conditions are identified in bold)

EACH NUMBERED ITEM IS A CONDITION OF APPROVAL. THE DECISION-MAKING BODY MAY MODIFY, DELETE OR ADD TO THESE CONDITIONS.

1. The Use Permit Standard is valid only after a Building Permit has been obtained, the required inspections have been completed and a Final Inspection has been passed. As part of the Building Permit process, on-site storm water retention may be required to be verified or accomplished on this Site.
2. The Use Permit Standard is valid for the plans as submitted within this application. Any additions or modifications may be submitted for review during the building plan check process.

### CODE/ORDINANCE REQUIREMENTS:

THE BULLETED ITEMS REFER TO EXISTING CODE OR ORDINANCES THAT PLANNING STAFF OBSERVES ARE PERTINENT TO THIS CASE. THE BULLET ITEMS ARE INCLUDED TO ALERT THE DESIGN TEAM AND ASSIST IN OBTAINING A BUILDING PERMIT AND ARE NOT AN EXHAUSTIVE LIST.

#### USE PERMIT STANDARD:

- The use permit approval shall be void if the use is not commenced or if an application for a building permit has not been submitted, whichever is applicable, within twelve (12) months after the use permit is granted or within the time stipulated by the decision-making body.
- The decision-making body, upon finding that the applicant has not taken corrective actions to resolve issues related to the permit/approval and that a continuation of the permit/approval is not in the interest of the public health, safety and general welfare, can revoke the permit/approval after providing written notice of its intentions to the holder of the permit.
- Specific requirements of the **Zoning and Development Code (ZDC)** are not listed as a condition of approval but will apply to any application. To avoid unnecessary review time and reduce the potential for multiple plan check submittals, become familiar with the ZDC. Access the ZDC through <http://www.tempe.gov/zoning> or purchase from Development Services.
- Any intensification or expansion of use shall require a new Use Permit.

#### HISTORY & FACTS:

1983                      A single-family home was constructed.

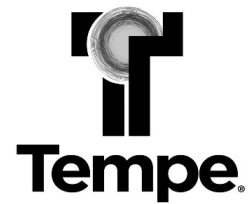
#### ZONING AND DEVELOPMENT CODE REFERENCE:

[Section 3-102, Permitted Uses in Residential Districts](#)

[Section 3-401, Accessory Buildings, Uses and Structures](#)

[Section 4-201\(A\), Use Permit Standard](#)

[Section 4-202, Development Standards for Residential Districts](#)



**DEVELOPMENT PROJECT FILE**  
for  
**KELLER RESIDENCE**  
(PL220297)

**ATTACHMENTS:**

1. Aerial Map
2. Location Map
- 3-4. Letter of Explanation
- 5-9. Context Photos
- 10-23. Site Plan, Foundation Plan, Roof Framing Plan, Bracing Plan, Floor Plan, Elevations, Electric/Mechanical Plans, Schematics



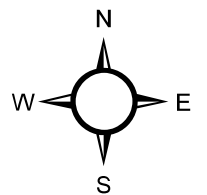
Tempe

PL220297

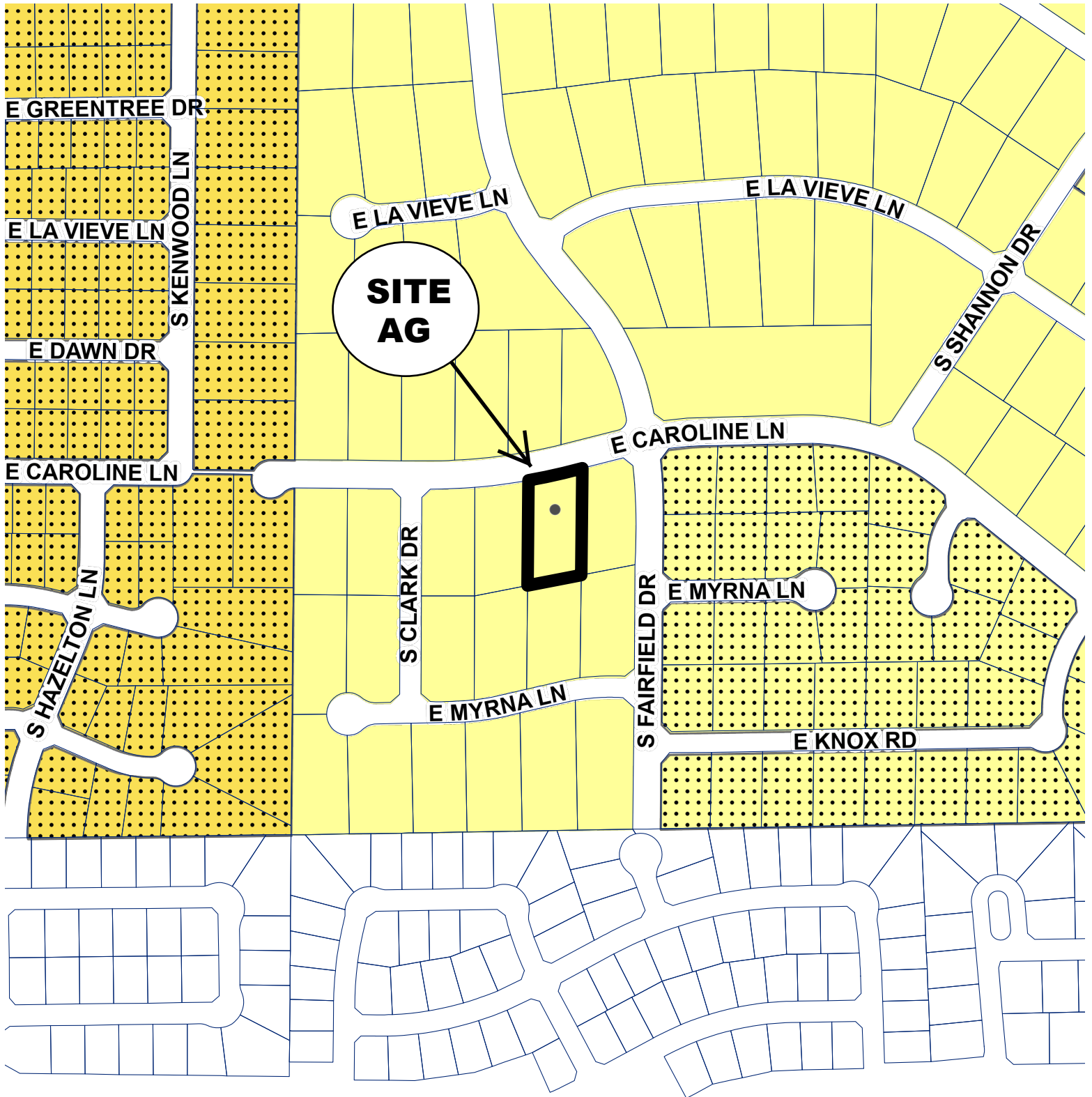
# KELLER RESIDENCE



Aerial Map



# KELLER RESIDENCE

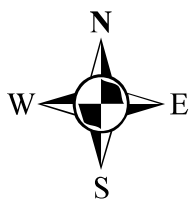


Maxar

- Agricultural (AG)
- Single-Family Residential (R1-15)
- Single-Family Residential (R1-7)
- Parcels

- Twelve Point**  
CenterlineSubType
- ADOT
  - Canal
  - Monument
  - Private

- Railroad
  - Street
  - <all other values>
- Zoning District**
- Light Industrial District (LID)
  - General Industrial District (GID)
  - Heavy Industrial District (HID)



**Dahlman Construction LLC.  
41004 N Jackrabbit Rd.  
San Tan Valley, AZ 85140  
480-882-1284  
ROC 153397  
Licensed, Bonded, Insured**

**City of Tempe  
Planning/Zoning  
12/07/22**

**Letter of Explanation**

**Dear Planning Staff,**

**We redesigned the floor plan to fit the proposed pool house within the side setback standards but are currently 7 feet over the rear setback standards. We understand we are in the rear setback, but after viewing the neighbor's property on the rear side, they have a building within 5 feet of their wall, which is in their rear setback.**

**A 7-foot encroachment into the rear setback, still leaving approximately 18 feet to the rear wall is a fair design for the proposed pool house. Therefore, we are applying for a Use Permit to allow such encroachment.**

**Per the Use Permit Standard Approval Criteria**

- a. There is no vehicular or pedestrian traffic in adjacent areas. The Proposed pool house will sit in the backyard of the existing property, which is already sectioned off to outside vehicular and pedestrian traffic via block walls on all sides of the property.**
- b. There will be no nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat, or glare at a level exceeding that of ambient conditions once construction is completed. During construction, noise will only occur after the 7:00 AM and before the 7:00 PM allotted construction time. After construction is completed, the only noise occurring will be the air conditioning, which is barely noticeable and is common in residential areas. The only gas will be sewer gas which is properly vented by city code, found in the submitted building plans.**
- c. There will be no contribution to the deterioration of the neighborhood or to the downgrading of property values, which conflict with the goals, objectives or policies of the city's adopted plans for general plan. With the appropriate footings set in the submitted building plans, the structure will rest on properly formed concrete footings reinforced by rebar which ensures no movement in the future. With such footings in place, the structure will not deteriorate the surrounding land in any fashion. The pool**

house will increase the property value, which only positively impacts the property values of surrounding neighbors.

- d. The pool house will be separate from any entity on the land, it will have its own sewer system, and new power/water lines dedicated to the pool house. Therefore it will be compatible with the existing surrounding structures and uses.
- e. There will be no disruptive behavior both inside and outside the premises that creates a nuisance to the surrounding area or general public. The pool house will be used for residential needs for the current owners. No activity outside of normal residential activity will occur inside or outside this structure. Therefore there will be no disruptive behavior as a result of this structure.

Thank you,  
Bradley Dahlman  
Dahlman Construction  
[Brdahlman@aol.com](mailto:Brdahlman@aol.com)  
480-882-1284













GENERAL SPECIFICATIONS

SUBSTITUTIONS
THE SUBCONTRACTOR SHALL BASE HIS PROPOSAL ON THE EXACT BRANDS, SYSTEMS, METHODS, AND MATERIALS SHOWN.
IF ANY ERRORS OR OMISSIONS APPEAR IN THE DRAWINGS, SPEC'S, OR OTHER DOCUMENTS, THE SUBCONTRACTOR SHALL NOTIFY OWNER IN WRITING OF SUCH OMISSIONS OR ERRORS PRIOR TO PROCEEDING WITH ANY WORK WHICH APPEARS IN QUESTION.
WINDOWS
WINDOWS SHALL COMPLY WITH THE BUILDING CODE FOR ACCESS AND EGRESS.
ATTIC VENTILATION, ACCESS, AND VENTS
ATTIC ACCESS SHALL BE NOT LESS THAN 22"x30" WITH 30" MIN. CLEAR HEADROOM ABOVE THE ACCESS OPENING.
MECHANICAL
AIR HANDLING WHEN ATTIC MOUNTED SHALL INCLUDE:
A. PLUMBING FLOOR FOR UNIT & W/ CORE CLEARANCES
B. LOGO SWITCHBOX @ UNIT & 110V OUTLET
ELECTRICAL
OUTLET BOXES IN GARAGE CLO. TO BE RATED FOR A ONE HOUR ASSEMBLY PENETRATION.
SMOKE DETECTORS TO BE INTERCONNECTED IN EVERY KITCHEN, FAMILY ROOM, DINING ROOM, LIVING ROOM, PARLOR, LIBRARY, DEN, SUN ROOM, BEDROOM, RECREATION ROOM, OR SIMILAR ROOM OR AREA OF DWELLING UNITS, RECEPTACLE OUTLETS SHALL BE INSTALLED AS REQUIRED IN EXTERIOR WALLS.
EXISTING UNDER ROOF
TOTAL LOT AREA 6,974 S.F./30,697 S.F.
LOT COVERAGE PROPOSED 22.71%
LOT COVERAGE ALLOWED 30%

PROJECT DATA

Table with columns: CITY, IRC, IPC, IMC, IFC, NEC, IECC, IFGC. Values for City of Tempe, 2018, 2018, 2018, 2018, 2017, 2018, 2018.

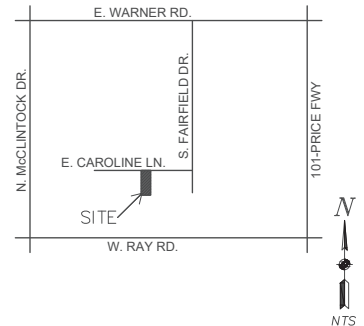
SHEET INDEX

Table with columns: No., Description, Code. Rows include: 1 C1 COVER SHEET, 2 AS1 ARCHITECTURAL SITE PLAN, 3 S1 GENERAL STRUCTURAL NOTES, 4 S2 FOUNDATION PLAN, 5 S3 ROOF FRAMING PLAN, 6 S4 ROOF FRAMING PLAN, 7 S11 DETAILS, 8 SS2 DETAILS, 9 A1 FLOOR PLAN, 10 A2 ELEVATIONS, 11 A3 SECTIONS, 12 M1 MECHANICAL PLAN, 13 E1 ELECTRICAL PLAN, 14 P1 PLUMBING PLAN.

AREA CALCULATIONS

Table with columns: ZONING (AG), SITE AREA (30,697 S.F.), SQUARE FOOTAGE (DETACHED POOL HOUSE - HABITABLE: 1,571 S.F., DETACHED POOL HOUSE - PATIO: 256 S.F.), EXISTING UNDER ROOF (5,147 S.F.), TOTAL (6,974 S.F.), LOT COVERAGE (22.71%), LOT COVERAGE ALLOWED (30%).

VICINITY MAP



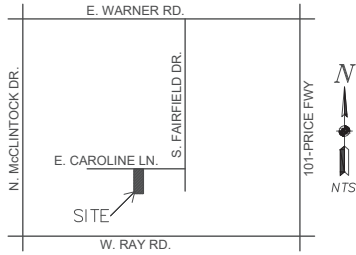
CONTACT

DESIGNER ROY CARRASCO
PHONE: 480.861.0562
EMAIL: roy.carrasco@gmail.com
CONTACT: ROY CARRASCO

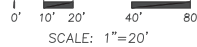
SECURITY CODE REQUIREMENTS

\* ALL DWELLING UNITS SHALL CONFORM TO THE FOLLOWING MINIMUM SECURITY REQUIREMENTS:
1. ALL MAIN OR FRONT ENTRY DOORS SHALL BE ARRANGED SO THAT THE OCCUPANT HAS A VIEW OF THE AREA IMMEDIATELY OUTSIDE THE DOOR WITHOUT OPENING THE DOOR.
2. ALL EXTERIOR SLIDING DOORS SHALL BE OF SOLID CORE OR METAL SKIN CONSTRUCTION, INCLUDING THE NON-GLAZED PORTION OF EXTERIOR GLASS INSERT DOORS.
3. OPEN SPACE BETWEEN TRIMMERS AND WOOD EXTERIOR DOOR JAMBS SHALL BE SHIMMED EXTENDING NOT LESS THAN SIX (6") INCHES ABOVE AND BELOW THE DEADBOLT STRIKE PLATE.
4. EXTERIOR DOORS WITH HINGE PINS EXPOSED ON THE OUTSIDE SHALL USE NON-REMOVABLE PIN HINGES OR STANDARD PIN HINGES WITH THE PINS MODIFIED TO PREVENT THE REMOVAL OF THE DOOR FROM THE EXTERIOR.
5. ALL EXTERIOR SLIDING DOORS SHALL BE CONSTRUCTED & INSTALLED OR EQUIPPED SO AS TO PROHIBIT THE RISING, SLIDING OR REMOVAL OF THE SLIDING SECTION FROM THE TRACK WHILE IN THE CLOSED AND LOCKED POSITION.
6. ALL EXTERIOR SLIDING DOORS SHALL BE CONSTRUCTED & INSTALLED OR EQUIPPED SO AS TO PROHIBIT THE RISING, SLIDING OR REMOVAL OF THE SLIDING SECTION FROM THE TRACK WHILE IN THE CLOSED AND LOCKED POSITION.
7. THE REQUIREMENTS OF THIS SECTION ARE NOT INTENDED TO PREVENT THE USE OF ANY OTHER HARDWARE OR METHOD OF CONSTRUCTION NOT SPECIFICALLY PRESCRIBED WHEN SUCH ALTERNATE DEVICE, HARDWARE, OR METHOD OF CONSTRUCTION PROVIDES EQUIVALENT SECURITY, SUBJECT TO THE APPROVAL OF THE BUILDING SAFETY DIRECTOR.
8. THE REQUIREMENTS OF THIS SECTION ARE NOT INTENDED TO PREVENT EGRESS, AND DEVICES SHALL NOT BE INSTALLED IN A MANNER TO PREVENT PROPER EGRESS THROUGH DOORS OR BEDROOM WINDOWS AS REQUIRED.

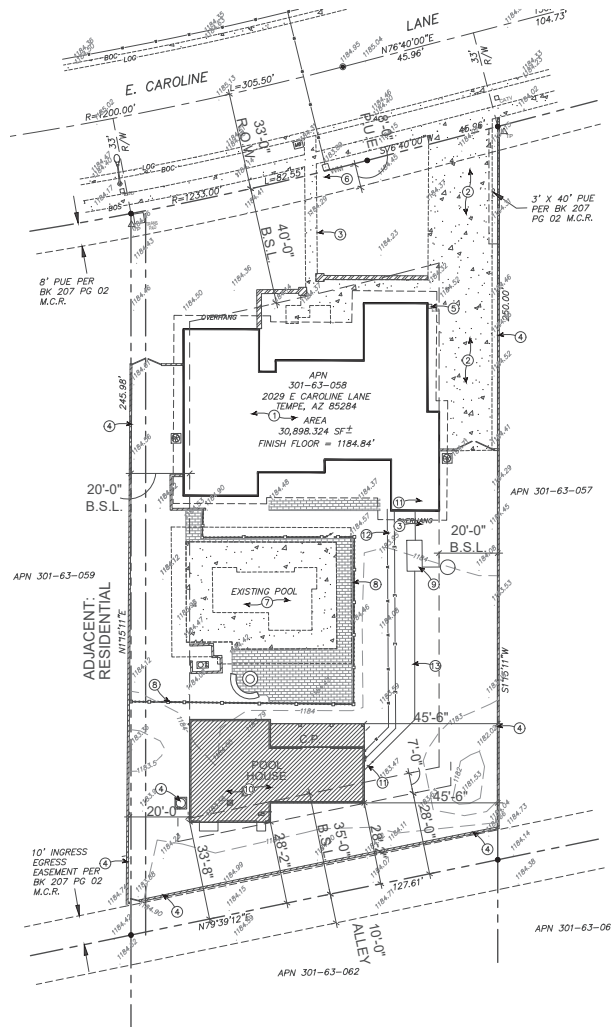
VICINITY MAP



SITE PLAN



SCALE: 1"=20'



SITE PLAN GENERAL NOTES

1. GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON DRAWINGS FOR CONFLICTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
2. NO STRUCTURE OF ANY KIND TO BE CONSTRUCTED ON, OR PLACED WITHIN PUBLIC UTILITY EASEMENTS EXCEPT WOOD, WIRE OR REMOVABLE SECTION TYPE FENCING AND/OR PAVING NOR ANY PLANTING EXCEPT GRASS. GENERAL CONTRACTOR SHALL BE REQUIRED TO REPLACE ANY OBSTRUCTIONS OR PLANTING THAT MUST BE REMOVED DURING THE COURSE OF MAINTENANCE, CONSTRUCTION OR RECONSTRUCTION OF THE PUBLIC UTILITIES.
3. ALL SIDEWALKS ARE TO BE LIGHT BROOM FINISHED UNLESS NOTED OTHERWISE
4. COORDINATE DOMESTIC WATER.
5. GENERAL CONTRACTOR SHALL VERIFY ALL ON SITE CONDITIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR OMISSIONS PRIOR TO CONSTRUCTION.
6. GENERAL CONTRACTOR TO SCHEDULE BLUE STAKE INSPECTION AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE BEGINNING ANY WORK.
7. ALL SITE IMPROVEMENTS INCLUDING LANDSCAPE AND SITE CLEANUP, MUST BE COMPLETED PRIOR TO CERTIFICATE OF OCCUPANCY FOR ANY BUILDING WITHIN A PHASE

SITE PLAN KEYED NOTES

1. EXISTING RESIDENCE
2. EXISTING CONCRETE DRIVE WAY
3. EXISTING SIDEWALK
4. EXISTING BLOCK FENCE
5. EXISTING ELECTRICAL SERVICE
6. EXISTING WATER METER
7. EXISTING POOL
8. EXISTING POOL FENCE
9. NEW SEPTIC TANK
10. POOL HOUSE
11. CLEAN OUTS
12. 3/4" WATER SUPPLY
13. 3" SEWER LINE

PROJECT INFORMATION

<b>PROJECT:</b>	2029 EAST CAROLINE LANE TEMPE, ARIZONA 85284
<b>OWNER:</b>	JOHN & DIANA KELLER
<b>SCOPE:</b>	- DETACHED POOL HOUSE
<b>APN.:</b>	301-63-058
<b>LEGAL DESC.:</b>	CIRCLE G RANCHES 4 43
<b>ZONING:</b>	AG
<b>SITE AREA:</b>	30,898 S.F.
<b>SQUARE FOOTAGE</b>	
DETACHED POOL HOUSE - HABITABLE	1,571 S.F.
DETACHED POOL HOUSE - PATIO	256 S.F.
EXISTING HABITABLE	3,484 S.F.
EXISTING UNDER ROOF	5,147 S.F.
<b>TOTAL HABITABLE</b>	<b>5,055 S.F.</b>
<b>TOTAL UNDERROOF</b>	<b>6,974 S.F.</b>
<b>LOT COVERAGE:</b>	
TOTAL LOT AREA	6,974 S.F. / 30,898 S.F.
LOT COVERAGE PROPOSED	22.57%
LOT COVERAGE ALLOWED	25%

BUILDING SETBACKS

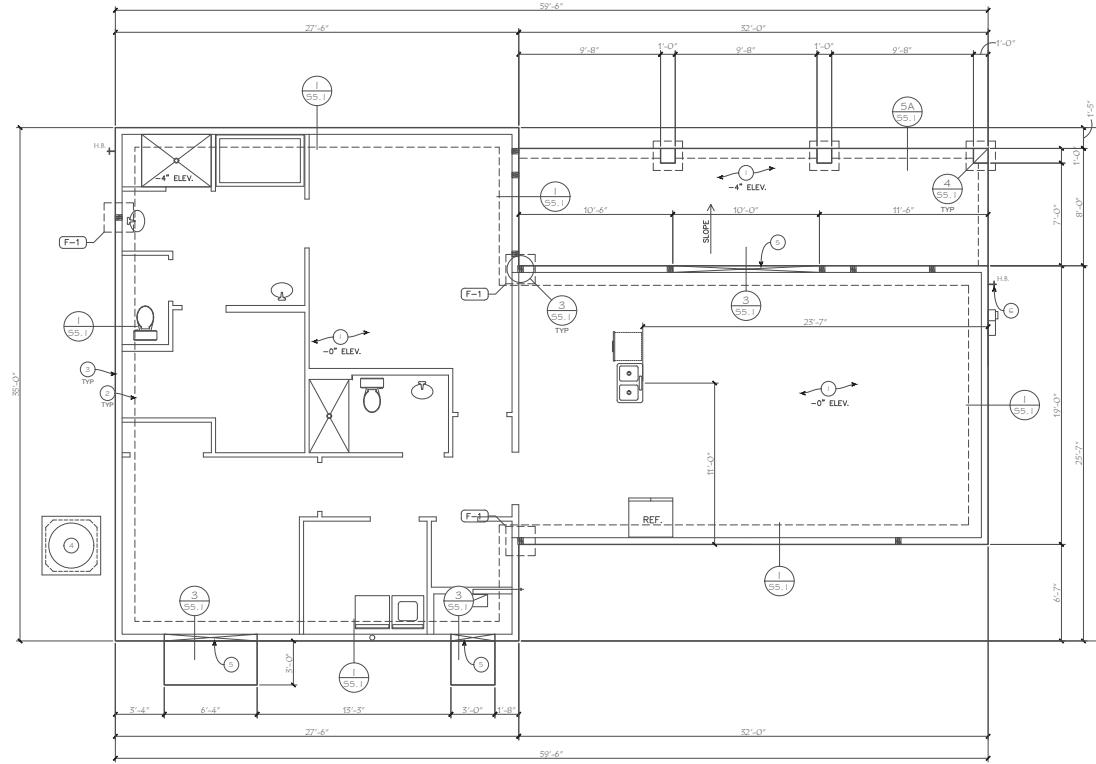
FRONT:	40 FEET
REAR:	35 FEET
LEFT:	20 FEET
RIGHT:	20 FEET

Two working days before you dip.  
CALL FOR THE BLUE STAKES  
**602-263-1100**  
1-800-STAKE-IT  
(OUTSIDE MARICOPA COUNTY)





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



NOTE:  
1. BOTTOM OF ALL FOOTINGS SHALL BE AT A MINIMUM OF 1'-0" BELOW FINISH GRADE. DEEPER AS REQUIRED BY SITE CONDITIONS.  
2. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATING FOOTING DEPTHS WITH OTHER TRADES.  
3. FOUNDATION CONCRETE SHALL BE MINIMUM 3,000 PSI FC.  
4. FOOTING SHALL BE CENTERED ON BEARING CONDITIONS ABOVE.

FOR ALL GENERAL NOTES SEE SHEET GSN.

- GENERAL NOTES**
- 1500 P.S.F. ASSUMED AT 1'-0" BELOW UNDISTURBED SOIL OR TOP OF ENGINEER CERTIFIED COMPACTED FILL.
  - ALL POST SHOWN ARE 3-(2X6), UNLESS NOTED OTHERWISE.
  - ALL EXTERIOR DIMENSIONS ARE TO EDGE OF STEM.
  - NOISE BIBBS ARE TO BE EQUIPPED WITH INTEGRAL BACKFLOW PREVENTER PER 2018 IPC SEC. 606.15-4.2
  - LANDINGS AT ALL DOOR LOCATIONS SHALL HAVE MINIMUM SLOPE OF 1/4" PER FOOT.
  - SEAL ALL VOIDS AROUND PENETRATIONS THROUGH FLOOR SLABS.
  - SEAL ALL VOIDS AROUND PIPING PASSING THRU CONCRETE FLOORS.
  - MIN. 28 DAYS COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 3000 PSI.
  - CONTINUOUS FLOOR SLAB SHALL BE SAWCUT EVERY 400 SQ. FT. FOR EXPANSION. SAWCUTS SHALL BE UNDER INTERIOR NON-BEARING WALLS OR IN AREAS NOT AFFECTING TILE FLOORS WHERE POSSIBLE.
  - ALL A/C MECHANICAL EQUIPMENT SHALL BE SCREENED A MINIMUM OF 1' ABOVE THE HIGHEST POINT OF THE EQUIPMENT.
  - GAS PIPING MAY NOT BE INSTALLED IN OR ON THE GROUND UNDER ANY BUILDING PER 2018 IPC SEC. 408.1.1
  - ALL PLATES IN CONTACT W/ CONCRETE EXTERIOR AND EXTERIOR LOAD BEARING AND NON-LOAD BEARING SHALL BE PRESSURE TREATED OR FOUNDATION GRADE REDWOOD.
  - AN APPROVED DIELECTRIC INSULATOR SHALL BE PROVIDED ON ALL DISJUNCTION METAL WATER PIPING CONNECTIONS OF WATER HEATERS AND RELATED WATER HEATING EQUIPMENT.

**KEYED NOTES**

NO.	DESCRIPTION
(1)	CONCRETE SLAB OVER MIN. 4" S.C. FILL W/ TENSILE TREATMENT
(2)	LINE OF CONCRETE FOOTING
(3)	LINE OF CONCRETE STEM
(4)	A/C COMPRESSOR W/ 4" X 4" CONCRETE PAD, PROVIDE 1/2" BETWEEN PAD & STEM
(5)	STEP DOWN
(5A)	NOISE BIBB W/ APPROVED BACKFLOW PREVENTION DEVICE - VERIFY W/ OWNER

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE AND NOTIFY THE DESIGNER OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES BEFORE BEGINNING OR FABRICATING ANY WORK.

TO THE BEST OF MY KNOWLEDGE THESE PLANS ARE DRAWN TO COMPLY WITH OWNER'S/ARCHITECT'S SPECIFICATIONS AND ANY CHANGES MADE ON THEM AFTER PRINTS ARE MADE WILL BE DONE AT THE OWNER'S AND/OR ARCHITECT'S EXPENSE AND RESPONSIBILITY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ENCLOSED DRAWING. THE DESIGNER IS NOT LIABLE FOR ERRORS ONCE CONSTRUCTION HAS BEGUN. WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THESE PLANS TO AVOID MISTAKES, THE MAKER CAN NOT GUARANTEE AGAINST HUMAN ERROR. THE CONTRACTOR OF THE JOB MUST CHECK ALL DIMENSIONS AND OTHER DETAILS PRIOR TO CONSTRUCTION AND BE SOLELY RESPONSIBLE THEREAFTER.

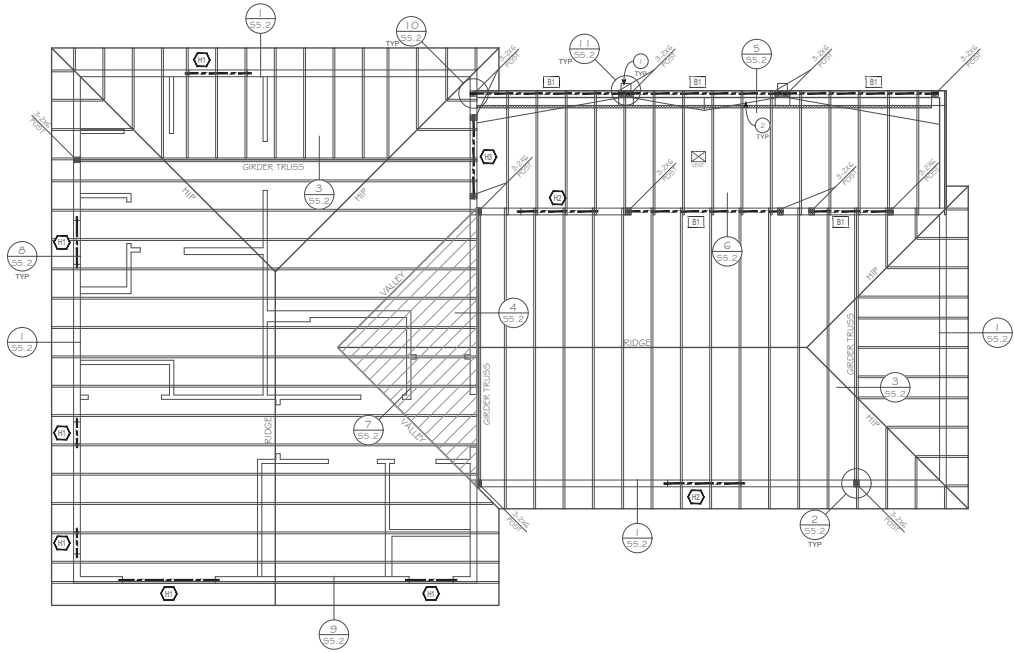
**FOOTING SCHEDULE**

KEY	WIDTH	LENGTH	THICKNESS	REBAR
F-1	2'-0"	2'-0"	1'-0"	3 #4 E.W.

**ROOF PLAN GENERAL NOTES**

- A. NOTIFY ARCHITECT, ROOFING SUPPLIERS, MANUFACTURER'S, INSTALLERS, SHEET METAL SUBCONTRACTOR AND OTHER RELATED SUBCONTRACTORS A MINIMUM OF 7 DAYS BEFORE COMMENCING ROOFING WORK. DO NOT BEGIN WORK WITHOUT HOLDING A PRE-ROOFING CONFERENCE PER THE SPECIFICATIONS.
- B. MINIMUM SLOPE AT ALL ROOFS SHALL BE 1/2" PER FOOT AND AT CRICKET VALLEYS SHALL BE A MINIMUM OF 1/4" PER FOOT. DO NOT SCALE PLAN FOR CRICKET DIMENSIONS.
- C. ALL CRICKET SLOPES SHALL BE ACHIEVED BY BUILDING UP TAPERED INSULATION OVER THE ROOF DECK UNLESS NOTED OTHERWISE. THERE SHALL BE NO MORE THAN 1/8" DIFFERENCE IN HEIGHT AT THE MEETING EDGES OF SEPARATE PIECES OF DECKING.
- D. ROOFING SUPPLIERS, MANUFACTURERS AND INSTALLERS SHALL REVIEW ALL ROOFING DETAILS AND ADVISE ARCHITECT ON ANY RECOMMENDED CHANGES. UNLESS NOTIFIED OTHERWISE, ROOFING SUPPLIERS, MANUFACTURERS AND INSTALLERS WILL BE ASSUMED TO HAVE REVIEWED AND APPROVED THE DETAILS SHOWN.
- E. GALVANIZED EDGE FLASHING FULLY OR PARTIALLY EXPOSED TO PUBLIC VIEW SHALL BE WASHED WITH "GALVA-CLEANER", PRIMED WITH "GALVA-PREP" AND METAL UNDERCOAT, AND FINISHED WITH PAINT PER THE SPECIFICATIONS.
- F. PRIME ALL METAL TO CONTACT ROOFING MATERIALS.
- G. SEE MECHANICAL FOR ROOF EQUIPMENT CURBS, ETC. ALSO SEE PLUMBING AND ELECTRICAL FOR EQUIPMENT, PIPING, CONDUITS, ROOF DRAIN LEADERS, ETC. PROVIDE CRICKETS BEHIND ALL MECHANICAL EQUIP., CURBS, ROOF HATCH CURBS ETC. TYPICAL. PROVIDE CURBS AND FLASHING AT ANY EQUIPMENT NOT PROVIDED WITH PREMANUFACTURED CURBS.
- G. SEE MECHANICAL FOR ROOF EQUIPMENT CURBS, ETC. ALSO SEE PLUMBING AND ELECTRICAL FOR EQUIPMENT, PIPING, CONDUITS, ROOF DRAIN LEADERS, ETC. PROVIDE CRICKETS BEHIND ALL MECHANICAL EQUIP., CURBS, ROOF HATCH CURBS ETC. TYPICAL. PROVIDE CURBS AND FLASHING AT ANY EQUIPMENT NOT PROVIDED WITH PREMANUFACTURED CURBS.
- H. SEPARATE DISSIMILAR METALS AS THEY OCCUR PER MANUFACTURER'S RECOMMENDATIONS. REVIEW METHODS AND MATERIALS WITH ARCHITECT.
- I. PROVIDE FLASHING PER DETAILS AT ALL CONDUIT AND HVAC LINES PENETRATING THE ROOF.
- J. CONTRACTOR AND ALL SUBTRADES SHALL BE AWARE AND EXERCISE THE NECESSARY CARE TO PREVENT DAMAGE TO OR PUNCTURE OF THE ROOF. THIS SHALL INCLUDE ALL SHARP MATERIALS, TOOLS, MATERIAL SCRAPS OR MATERIALS HAVING A DELETERIOUS AFFECT ON THE ROOFING MATERIAL.
- K. ALL FLASHING SHALL BE FACTORY FINISHED AND RADIUS. NO FIELD PAINTING OR SEGMENTS SHALL BE ALLOWED.
- L. ONCE THE ROOFING HAS BEEN COMPLETED, CONTRACTOR SHALL LIMIT TRAFFIC ON THE COMPLETED ROOF. THE ROOF ACCESS DEVICES SHALL BE SECURED AND ALL ROOF TOP ACCESS SHALL BE LIMITED.
- M. ALL SHEET METAL SCUPPERS, SLEEVES, ETC., PENETRATING ROOFING OR PARAPETS TO WHICH ROOFING MUST ATTACH SHALL BE A MINIMUM OF 20 GAUGE, ALL SOLDERED CONSTRUCTION, WITH MINIMUM 3" WIDE FLANGES. ALL SCUPPERS SHALL BE CONSTRUCTED WITH FOUR FULL SIDES, FROM FLANGES THROUGH THE THICKNESS OF THE WALL, FORMING A COMPLETE "SLEEVE" THROUGH THE WALL.
- N. PROVIDE CONCRETE SPLASH BLOCKS BELOW ALL SCUPPERS AND AT ALL DRAIN LEADERS THAT DAYLIGHT ABOVE GRADE.

**TYPICAL ROOF PITCH**  
 1/2" CDX (OR 2-3/4" OSB), UNBLOCKED, 6/4 @ 6" O.C. EN, 6/4 @ 12" O.C. IN (NO STAIRS)



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

**GENERAL NOTES**

- A. ALL HAULING SHALL BE AS PER THE LATEST CITY APPROVED EDITION OF THE INTERNATIONAL RESIDENTIAL CODE (TABLE R602.3(1) - SEE SHEET A50)
- B. PREFABRICATED WOOD TRUSSES SHALL BE APPROVED BY GOVERNING AGENCY. TRUSSES SHALL BE DESIGNED, BUILT & APPROVED FOR THIS PROJECT. TRUSSES SHALL CONFORM TO INTERNATIONAL RESIDENTIAL CODE (R502.1.1)
- C. WALL ROOF SHEETING (DIAPHRAGM) WITH 6/4 COMMON AT 4" O.C. ALL EDGES AND 1/2" O.C. AT INTERMEDIATE SUPPORTS.
- D. TRUSS TRANSFERS SHALL BE SEALED BY AN ENGINEER LICENSED IN ARIZONA. SEAL SHALL BE GATED WITHIN LATEST CITY ADOPTED I.R.C.
- E. MAINTAIN A MIN. CLEARANCE FROM WOOD TO EARTH AND FLOOR AT THE WOOD POST/COLUMNS OR USE PRESSURE TREATED WOOD PER R323.1.4
- F. PREFABRICATED WOOD TRUSSES TO BE PROVIDED BY AN APPROVED FABRICATOR. TRUSS DIAGRAMS AND KEYED LAYOUT SHALL BE AVAILABLE TO THE FIELD INSPECTOR AT THE JOB SITE AT THE TIME OF ROOF HAULING AND FRAMING INSPECTION.
- G. USE 2x6S @ 16" O.C. AT INTERIOR BEARING WALLS.
- H. 3-2x6S POST AT ALL BEAMS & GRIDERS UNLESS NOTED OTHERWISE.

NOTE:  
 MAINTAIN A MIN. CLEARANCE FROM WOOD TO EARTH AND FLOOR AT THE WOOD POST/COLUMNS OR USE PRESSURE TREATED WOOD PER R323.1.4

**ROOF PLAN KEYED NOTES**

NO.	DESCRIPTION
1	SCUPPER - METAL - PAINTED FINISH
2	CRICKET

**BEAM SCHEDULE (UNLESS OTHERWISE NOTED)**

MARK	SIZE	REMARK
B1	3-1/8" X 12" G.L.B.	

**WOOD LINTEL SCHEDULE (UNLESS OTHERWISE NOTED)**

MARK	HEADER SIZE	NO. OF JAMB STUDS BEARING
1	(2) 2x6	1
2	(2) 2x8	2
3	(2) 2x10	2

ALL HEADERS TO BE PLACED ON EDGE AND SECURELY FASTENED TOGETHER BY BLOCKING OR OTHER MEANS. BEAR HEADERS FULL ON JAMB STUDS SHOWN IN SCHEDULE. TYPICAL UNLESS NOTED OTHERWISE.

**ROOF VENTILATION CALC.'S** PITCH

ROOF AREA REQUIRED	1,570 S.F. / 300 = 5.24 SQ. FT.
INSULATION INSTALLED TO UNDER SIDE OFF DECK	= 0.00 SQ. FT.
<b>TOTAL VENTING PROVIDED</b>	<b>4.32 SQ. FT.</b>
NOTE: ROOF VENTILATION SHALL COMPLY W/ R604	

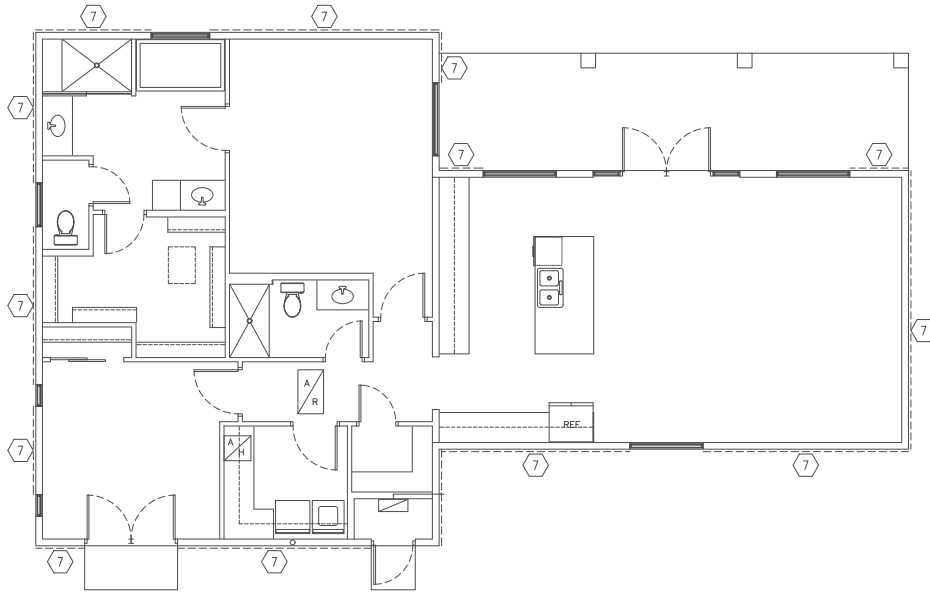
**ROOF VENTILATION CALC.'S** FLAT

ROOF AREA REQUIRED	256 S.F. / 150 = 1.71 SQ. FT.
CHIMNEY VENTS	31 - CV 5-400 SOFFIT VENT PER FOOT (OR EQUAL) = 1.72 SQ. FT.
1 - GRAVITY VENT 1 2X1 2 (OR EQUAL)	= 0.95 SQ. FT.
<b>TOTAL VENTING PROVIDED</b>	<b>2.67 SQ. FT.</b>
NOTE: ROOF VENTILATION SHALL COMPLY W/ R604	

SHEAR WALL SCHEDULE				
2018 IBC				
MARK	MATERIAL AND ATTACHMENT	ALLOW. SHEAR PLF(1)	SILL PLATE ATTACHMENT AT	
			FOUNDATIONS (4)(5)	UPPER FLOORS
①	1/2" UNBLOCKED DRYWALL WITH 5d COOLER NAILS AT 7" O.C. EDGES AND FIELD	100 HF/DF	1/2" A.B. AT 48" O.C. OR HILTI "DN" SHOT PINS AT 16" O.C.	16d 12" O.C.
②	5/8" UNBLOCKED DRYWALL WITH 6d COOLER NAILS AT 7" O.C. EDGES AND FIELD	115 HF/DF	1/2" A.B. AT 48" O.C. OR HILTI "DN" SHOT PIN AT 16" O.C.	16d 12" O.C.
③	1/2" BLOCKED DRYWALL WITH 5d COOLER NAILS AT 7" O.C. EDGES AND FIELD OR 1/2" UNBLOCKED DRYWALL W/ 5d COOLER NAILS @ 4" O.C. EDGES AND FIELD	125 HF/DF	1/2" A.B. AT 48" O.C. OR HILTI "DN" SHOT PIN AT 12" O.C.	16d 12" O.C.
④	5/8" BLOCKED DRYWALL WITH 6d COOLER NAILS AT 7" O.C. EDGES AND FIELD OR 5/8" UNBLOCKED DRYWALL WITH 6d COOLER NAILS AT 4" O.C. EDGES AND FIELD	145 HF/DF	1/2" A.B. AT 48" O.C. OR HILTI "DN" SHOT PIN AT 8" O.C.	16d 12" O.C.
⑤	1/2" BLOCKED DRYWALL WITH 5d COOLER NAILS AT 4" O.C. EDGES AND FIELD	150 HF/DF	1/2" A.B. AT 48" O.C. OR HILTI "DN" SHOT PIN AT 8" O.C.	16d 12" O.C.
⑥	5/8" BLOCKED DRYWALL WITH 5d COOLER NAILS AT 4" O.C. EDGES AND FIELD	175 HF/DF	1/2" A.B. AT 48" O.C. OR HILTI "DN" SHOT PIN AT 8" O.C.	16d 12" O.C.
⑦	3/8" BLOCKED "OSB" OR "CDX" SHEATHING W/ 8d NAILS @ 6" O.C. AT EDGES AND 12" O.C. AT FIELD.	229 HF 260 DF	1/2" A.B. AT 48" O.C.	16d 8" O.C.
⑧	3/8" BLOCKED "OSB" OR "CDX" SHEATHING W/ 8d NAILS @ 4" O.C. AT EDGES AND 12" O.C. AT FIELD.	352(3) HF 360(3) DF	1/2" A.B. AT 32" O.C.	16d 5" O.C.
⑨	3/8" BLOCKED "OSB" OR "CDX" SHEATHING W/ 8d NAILS @ 3" O.C. AT EDGES AND 12" O.C. AT FIELD.	451(3) HF 490(3) DF	1/2" A.B. AT 24" O.C.	16d 4" O.C.
⑩	3/8" BLOCKED "OSB" OR "CDX" SHEATHING W/ 8d NAILS @ 2" O.C. AT EDGES AND 12" O.C. AT FIELD.	529(2) HF 640(2) DF	1/2" A.B. AT 16" O.C.	16d 3" O.C.
⑪	1/2" BLOCKED "OSB" OR "CDX" SHEATHING W/ 8d NAILS @ 2" O.C. AT EDGES AND 12" O.C. AT FIELD.	713(2) HF 770(2) DF	1/2" A.B. AT 12" O.C.	16d 2" O.C.
⑫	7/8" 3 COAT STUCCO W/ #16 GAGE STAPLES W/ 7/8" LEGS AT 6" O.C.	180 HF/DF	1/2" A.B. AT 48" O.C. OR SHOT PINS @ 8" O.C.	16d 10" O.C.

NOTES:  
 (1) SHEATHING ON ONE SIDE: DOUBLE VALUE IF SHEATHING ON BOTH SIDES. FOR SHEAR WALLS WITH SHEATHING APPLIED TO BOTH SIDES, ANCHOR BOLT SPACING SHALL BE HALF THE SPACING SHOWN.  
 (2) FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED.  
 (3) WHERE PLYWOOD IS APPLIED ON BOTH FACES OF WALL AND NAILS SPACING IS LESS THAN 6" O.C., PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR FRAMING SHALL BE 3" NOMINAL OR THICKER AND NAILS ON EACH SIDE SHALL BE STAGGERED.  
 (4) SHOT PIN OPTION IS NOT ALLOWABLE AT EXTERIOR WALLS. SHOT PINS SHALL BE HILTI X-DNI INSTALLED WITH WASHERS AND 1" EMBEDMENT PER ICSO 2388.  
 (5) CAST-IN PLACE ANCHOR BOLTS MAY BE REPLACED WITH 1/2" DIA. EXPANSION BOLTS AT SAME SPACING AT INTERIOR WALLS ONLY. EXPANSION BOLTS SHALL BE ITW RAMSET/RED HEAD TRIBOLT WEDGE ANCHOR WITH 6" EMBED- ICSO #1372.  
 (6) STAGGER NAILS IN SILL PLATE.

SHEAR WALL NOTES:  
 1. STUD SPACING IN SHEAR WALLS SHALL NOT EXCEED 16" O.C.  
 2. ALL PANEL EDGES SHALL BE BACKED WITH MINIMUM 2 INCH NOMINAL FRAMING AS NOTED ABOVE.  
 3. FOR 3/8" PLYWOOD INSTALLED WITH FACE GRAIN PARALLEL TO STUDS SPACED AT 24" O.C., INTERMEDIATE NAILING SHALL BE 6" O.C.  
 4. FRAMING SHALL BE 3 INCH NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED AT 2" O.C. AND WHERE 10d NAILS ARE SPACED 3" O.C. AT STRAPS, AND BLOCKING.  
 5. BLOCKING SHALL BE PROVIDED NEAR MID-HEIGHT OF WALL AT SHEATHING JOINT.  
 6. SPACING APPLIES TO NAILING AT ALL STUDS, TOP AND BOTTOM PLATES, BLOCKING  
 7. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL (FINISHED SURFACE) WALL COVERINGS NOT NOTED.  
 8. TYPE X GYPSUM WALLBOARD SHALL BE PROVIDED WHERE INDICATED ON ARCH'L DWGS.  
 9. FOR EXTERIOR SHEAR WALLS USING GYPSUM WALL BOARD, USE EXTERIOR TYPE GYPSUM WALL BOARD PER ARCHITECTURAL DRAWINGS.



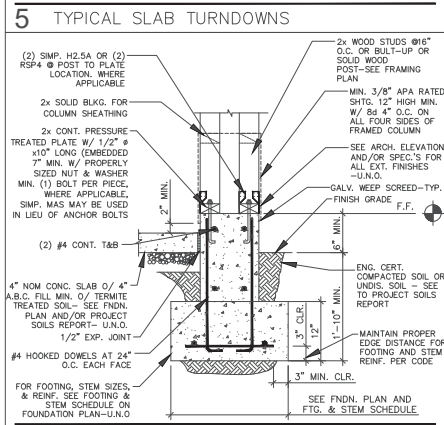
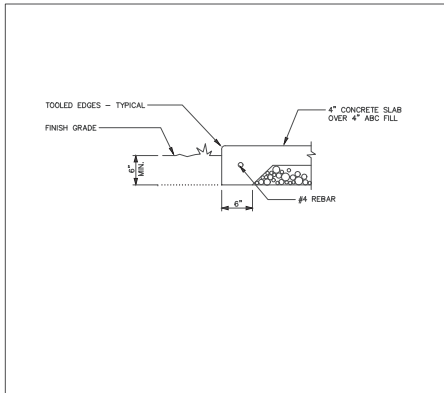
**BRACING PLAN**  
1/4" = 1'-0"

FOR ALL GENERAL NOTES SEE SHEET S.I.

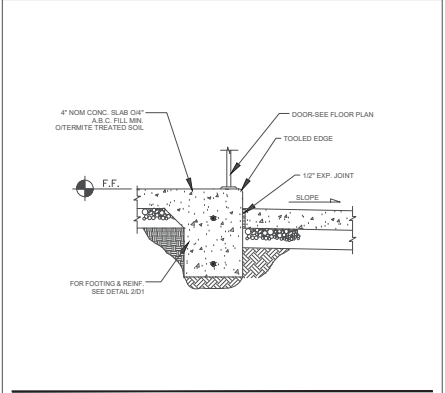
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DATE OF ISSUE	14DEC2022
DESIGNER NO.	
DRAWN BY	RL
CHECKED BY	RC
PROJECT PHASE	100%
SHEET CONTENTS	BRACING PLAN
SHEET NO.	

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE AND NOTIFY THE DRAFTMAN OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES BEFORE BEGINNING OR FABRICATING ANY WORK.

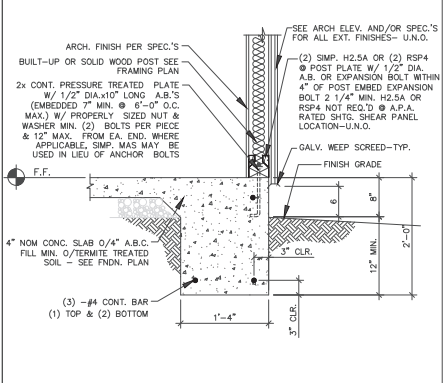
TO THE BEST OF MY KNOWLEDGE THESE PLANS ARE DRAWN TO COMPLY WITH OWNERS AND/OR BUILDER'S SPECIFICATIONS AND ANY CHANGES MADE ON THEM AFTER PRINTS ARE MADE WILL BE DONE AT THE OWNERS AND/OR BUILDER'S EXPENSE AND RESPONSIBILITY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ENCLOSED DRAWING. THE DRAFTMAN IS NOT LIABLE FOR ERRORS ONCE CONSTRUCTION HAS BEGUN. WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THESE PLANS TO AVOID MISTAKES, THE MAKER CAN NOT GUARANTEE AGAINST HUMAN ERROR. THE CONTRACTOR OF THE JOB MUST CHECK ALL DIMENSIONS AND OTHER DETAILS PRIOR TO CONSTRUCTION AND BE SOLELY RESPONSIBLE THEREAFTER.



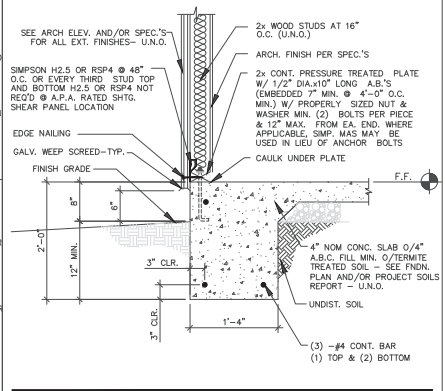
4 FRAMED COLUMN/FOOTING



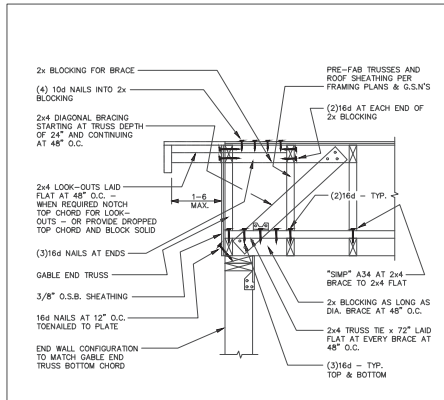
3 TURN DOWN @ EXT. DOOR



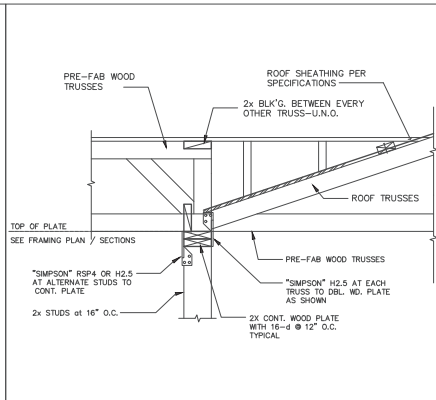
2 EXTERIOR WALL @ POST FOOTING



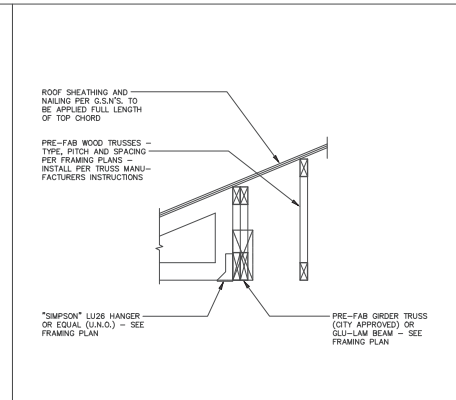
1 MONO POUR



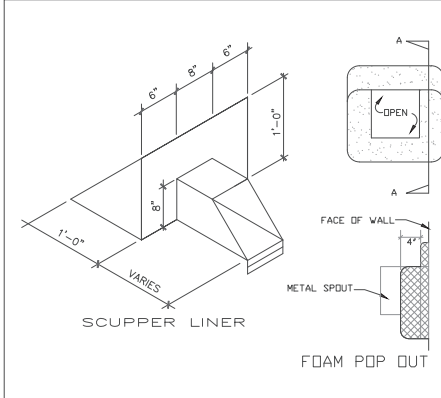
9 GABLE END TRUSS BRACING



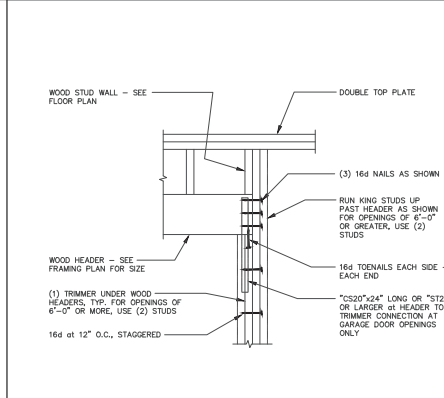
6 TRUSS TO COMMON WALL



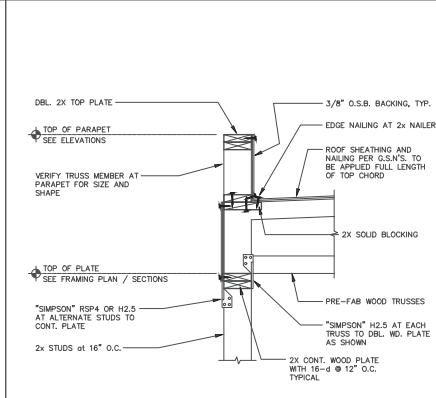
3 TRUSS TO GIRDER/BEAM



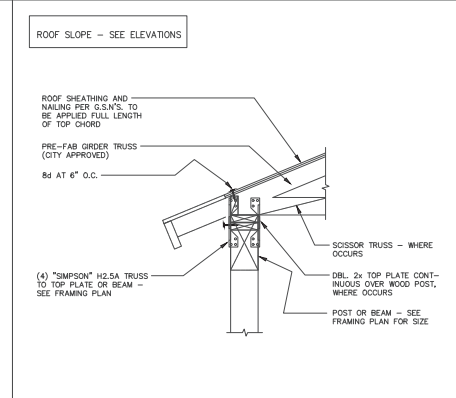
11 SCUPPER



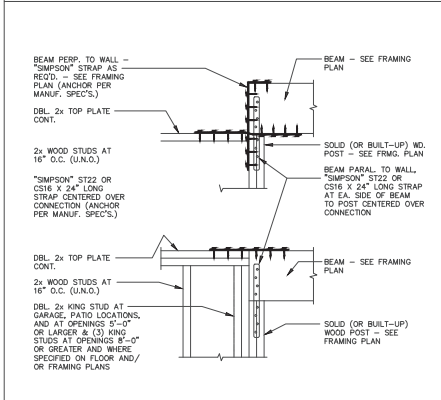
8 TYPICAL HEADER



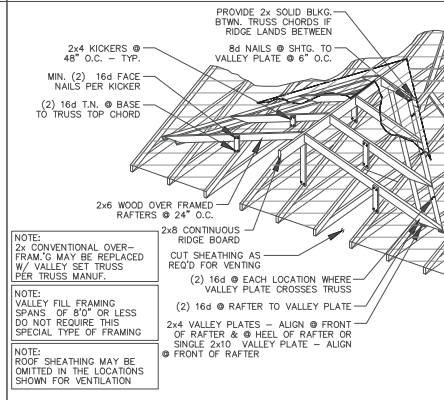
5 TRUSS AT EXTERIOR WALL



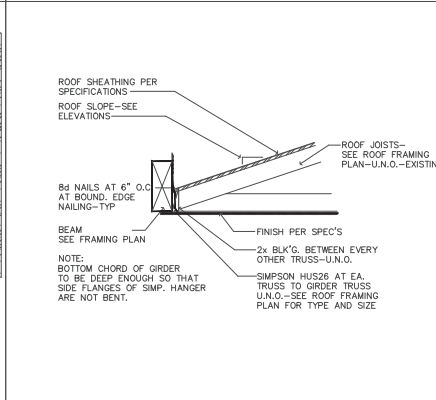
2 GIRDER TRUSS at PLATE/BEAM



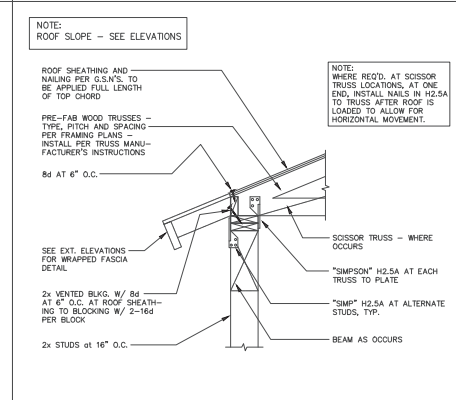
10 BEAM/WALL POST CONNECTION



7 SUPPORT OF VALLEY RAFTERS AT OVER FRAMED ROOF



4 TRUSS/GIRDER



1 TRUSS at EXTERIOR WALL

**GENERAL NOTES**

- WALL FRAMING - SEE STRUCTURAL - U.I.D. INTERIOR BEARING WALL - 2x6 @ 16" O.C. U.I.D. INTERIOR NON-BEAR - 2x4 @ 16" O.C. U.I.D. PLUMBING WALLS - 2x6 U.I.D.
- INSULATION - R-38 ROOF - U.I.D. TO UNDERSIDE OF DECK. R-13 BATT @ 16" O.C. U.I.D. R-13 BATT @ 16" O.C. U.I.D. R-13 BATT @ 16" O.C. U.I.D. R-13 BATT @ 16" O.C. U.I.D. R-13 BATT @ 16" O.C. U.I.D. R-13 BATT @ 16" O.C. U.I.D. RESISTANCE WALLS & CEILING TYP.
- REFER TO ELEVATION SHEETS FOR ALL WINDOW HEADER HEIGHTS.
- SHOWER HEADS @ 72" A.F.F. SHOWER CONTROL VALVES @ 42" A.F.F. STACK SHOWER CONTROL VALVES @ CURVED WALLS U.I.D.
- PROVIDE PRESSURE BALANCE OR THERM. MIXING VALVE TYP. CONTROL VALVES FOR ALL SHOWER AND TUB COMBS.
- ALL BATH ACCESSORIES, (TOWEL BARS, HOOKS ETC.) AND MOUNTING HEIGHTS TO BE DETERMINED BY OWNER.
- PROVIDE BLOCKING IN WALLS AS NECESSARY TO SUPPORT ALL WALL MOUNTED FIXTURES.
- ALL CEILING HEIGHTS INDICATED ARE FROM FINISHED FLOOR ELEVATION.
- REFER TO SITE PLAN FOR ALL PLAT WORK CONCRETE FINISH.
- ALL EQUIPMENT IN GARAGE SHALL HAVE ELECTRIC OR GAS CONNECTION POINTS AT LEAST THREE FEET AND SHALL BE PROTECTED FROM DAMAGE.
- ALL EQUIPMENT SHALL BE INSTALLED SO THAT AIR FLOW OVER SURFACES IS NOT PREVENTED AS PER MANUFACTURER'S INSTALLATION REQUIREMENTS. INSULATION SHALL AT A MINIMUM:
  - MAINTAIN THE MIN. CLEARANCE REQUIREMENTS OF THE VENT PIPES.
  - EXTEND A MINIMUM OF 24" ABV. THE CEILING.
  - HAVE A SLOPE TOP.
  - BE SECURED IN PLACE.
  - NOT OBSTRUCT INTERSECTION OF THE VENT PIPE JOINTS.
- 4" OR 6" DIA. DRIVER VENT WITHOUT BENDS NOT TO EXCEED A LENGTH OF 25' FROM THE DRIVE LOCATION TO THE WALL OR ROOF TERMINATION. WHEN USING L-COOKS, LENGTH NOT TO EXCEED 14' WHEN USING ALL PREVIOUS BUILDING CODES. DRIVERS AND VENT ALWAYS ON RIGHT.
- WATER HEATERS TO INCLUDE T & F RELIEF VALVE - SEE SPECS FOR SIZE OF TP LINE AND PLUMB SIZE.
- PROVIDE MIN. 1' CLEAR EACH SIDE AND MIN. 24" CLEAR IN FRONT FOR WATER CLOSET.
- PRE PLUMB REFRIGERATOR SPACE FOR ICE MAKER. PROVIDE 3" SPACE.
- INTERIOR DOOR HEIGHT 6'-0" TYP.
- PRE BLOCK STUD WALLS AT DROPPED CEILING(S), SOFFIT(S) AND 10'-0" INTERVALS (SECTION R402.8).
- PROVIDE 1" HIGH PLATFORMS UNDER ALL APPLIANCES INSTALLED ON ACCESSIBLE FROM INSIDE GARAGES SEC. M 1307.3.
- PROVIDE GLASS IN HAZARDOUS AREAS, INCLUDING WITHIN 24" EDGE OF AN ACTIVE DOOR AND ALL GLASS WITHIN 18" OF FLOOR. SHALL BE SAFETY GLASS.
- MINIMUM SILL HEIGHT AT BEDROOM SHALL BE +4" A.F.F.
- SMOKE DETECTORS SHALL BE INSTALLED AT A POINT CENTRALLY LOCATED IN THE CORRIDOR OR AREA GIVING ACCESS TO EACH SEPARATE SLEEPING AREAS AND BE A MINIMUM OF 3'-0" FROM DUCT OPENINGS.
- SMOKE DETECTORS SHALL BE PERMANENTLY WIRED, INTERCONNECTED AND HAVE BATTERY BACKUP POWER. PLACE A MINIMUM OF 3" FROM DUCT OPENINGS. WHERE THE HEIGHT OF 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.
- ALL PLUMBING SET OUT 4" RETURN AIR TO BE 7" MIN. ABOVE P.F.F. TOILETS MUST BE LOW WATER USE TYPE, DESIGNED FOR MAX. 1 G. GALLONS PER FLUSH. SINKS AND SHOWER HEADS, 3/4" OUPN PER ABOVE REVERSED STATUES SECTION 43-312.
- SHOWER DOORS SHALL HAVE SAFETY GLAZING AND SHALL SWING OUT. (R500-4)
- PROVIDE SHOWER HOT WATER CONTROL VALVE AS EITHER PRESSURE BALANCE, OR THERMOSTATIC MIXING TYPE. PER 2018 I.C.C. SEC. P2109.3(P2103.3)

**NOTE:**

- CONDIT. FIBER-CEMENT AND GLASS MAT OPSUM BACKERS SHALL BE USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN DRINKING AREAS.
  - ATTIC ACCESS WITH A MINIMUM OPENING SIZE OF 30X32" AND 5'-0" CLEAR HEAD ROOM SHALL BE PROVIDED.
  - ATTIC CONTAINING APPLIANCES WILL BE PROVIDED WITH A WORK AREA AND LIGHTING OUTLET.
- A DRAIN PAN WILL BE PROVIDED FOR TANK-TYPE WATER HEATERS. IT SHALL BE GALVANIZED STEEL HAVING A MINIMUM THICKNESS OF 24 GAUGE (OR OTHER PANS LISTED FOR SUCH USE). THE PAN SHALL BE NOT LESS THAN 1/16" THICK AND SHALL BE DRAINED BY AN INDIRECT WASTE PIPE HAVING A MINIMUM DIAMETER OF 3/4" INCH. THE DRAIN SHALL EXTEND FULL-SIZE AND TERMINATE OVER A SUITABLY LOCATED INDIRECT WASTE RECEPTOR OR SHALL EXTEND TO THE EXTERIOR OF THE BUILDING AND TERMINATE NOT LESS THAN 6" HIGHER OR MORE FROM 24" HIGHER ABOVE THE ADJACENT GROUND SURFACE. WATER HEATER RELIEF VALVE DISCHARGE PIPE SHALL NOT BE SMALLER THAN THE DIAMETER OF THE OUTLET OF THE VALVE. RELIEF VALVE SHALL BE INSTALLED TO FLOW BY GRAVITY AND SHALL SERVE A BRITTLE RELIEF DEVICE. THE DRAIN SHALL EXTEND FULL-SIZE AND TERMINATE OVER A SUITABLY LOCATED INDIRECT WASTE RECEPTOR OR SHALL EXTEND TO THE EXTERIOR OF THE BUILDING AND TERMINATE NOT LESS THAN 6" HIGHER OR MORE FROM 24" HIGHER ABOVE THE ADJACENT GROUND SURFACE.
  - PROVIDE INTERCONNECTED SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, AND ON EACH ADDITIONAL STORY OF THE DWELLING. SMOKE ALARMS SHALL BE HARD WIRED WITH BATTERY BACKUP.
  - WHEN ALTERATIONS REQUIRING A PERMIT OCCUR THE DWELLING UNIT SHALL BE EQUIPPED WITH SMOKE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS. THE SMOKE ALARMS SHALL BE INTERCONNECTED AND HARD WIRED.
  - WHEN ALTERATIONS REQUIRING A PERMIT OCCUR THE DWELLING SHALL BE EQUIPPED WITH CARBON MONOXIDE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS.
  - RECEPTACLES, SWITCHES, LIGHTSWARMS LOCATED IN DAMP OR WET LOCATIONS SHALL BE LISTED TO BE SUITABLE FOR SUCH LOCATIONS.

**NOTE:** I.C.C. 104.9.1 USED MATERIALS AND EQUIPMENT THE USE OF USED MATERIALS WHICH MEET THE REQUIREMENTS OF THIS CODE FOR NEW MATERIAL IS PERMITTED. USED EQUIPMENT AND DEVICES SHALL NOT BE REUSED UNLESS APPROVED BY BUILDING OFFICIAL.

**NOTE:** DO NOT REMOVE LABELING - LEAVE LABELING ON GLAZING GLAZING MAY BE REMOVED IF PER FRAME INSPECTION INSPECTOR. NEEDS TO SEE THIS INFORMATION TO DETERMINE ENERGY CODE COMPLIANCE.

**NOTE:** DO NOT REMOVE LABELING - LEAVE LABELING ON GLAZING LABELING MAY BE REMOVED IF PER FRAME INSPECTION INSPECTOR. NEEDS TO SEE THIS INFORMATION TO DETERMINE ENERGY CODE COMPLIANCE.

**INSULATION AND PENETRATION REQUIREMENTS**

PERMEATION RESISTANCE	30
GLAZED PENETRATION SHGC	0.35
CEILING R-VALUE	13
FOOD FRAME WALL R-VALUE	13
MASS WALL R-VALUE	4G

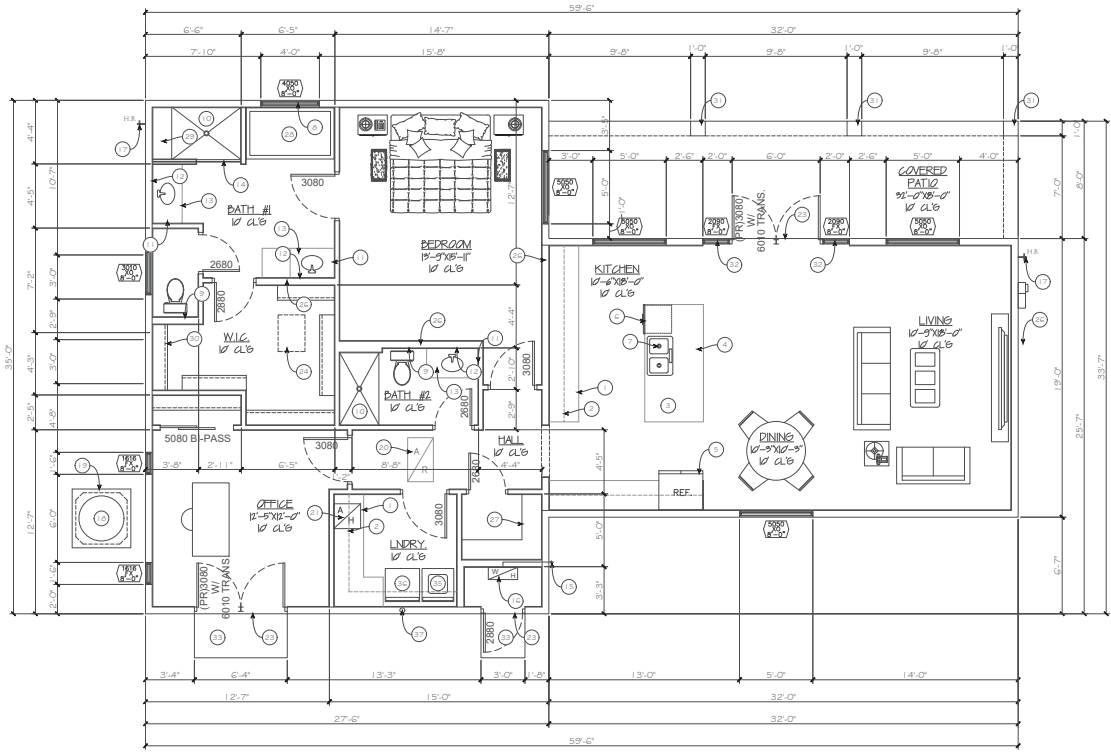
WINDOW AND DOOR REPLACEMENTS SHALL COMPLY WITH IRC CHAPTER 11.

**NOTE:** I.C.C. 104.9.1 USED MATERIALS AND EQUIPMENT THE USE OF USED MATERIALS WHICH MEET THE REQUIREMENTS OF THIS CODE FOR NEW MATERIAL IS PERMITTED. USED EQUIPMENT AND DEVICES SHALL NOT BE REUSED UNLESS APPROVED BY BUILDING OFFICIAL.

**FLOOR PLAN KEYNOTES**

NO.	DESCRIPTION
1	BASIC CABINET W/ COUNTERTOP (PER SPECS.)
2	UPPER CABINETS - (PER SPECS.)
3	KITCHEN ISLAND - SEE INTERIOR ELEVATION
4	FULL HEIGHT CABINET - VERIFY W/ OWNER
5	REFRIGERATOR - PROVIDE 1/4" C.W. LINE
6	DISHWASHER W/ HANDER ARRESTOR
7	SINK W/ SOAP DISPENSER AND 3/4" H.P. DISPOSAL
8	TEMPERED GLASS
9	CEMENT BOARD @ WALLS @ 5/8"X7/16"X 1/2"
10	CEMENT BOARD @ FLOOR @ 5/8"X7/16"X 1/2"
11	TILE SHOWER TO 4'-2" @ A.F.F. W/ CEMENT BOARD THROUGHOUT (PROVIDE RADIANT BACKING FOR FUTURE GRAB BAR TYP.) 3/4" SUPPLY TO SHOWER - SEE 1254
12	REFRIGERATOR/ICEBOX CABINET PER SPECS: 1/2"X10"X4'-2"
13	42" SINK - WITH ENTIRE LENGTH OF VANITY, SET ON BACK SPLASH
14	42" TUB VANITY CABINETS WITH CULTURED MARBLE COUNTERTOP AND 4" SPLASH
15	SHOWER GLASS ENCLOSURE - TEMPERED GLASS
16	PROVIDE TAP REEF LINE ON WATER HEATER TO EXTERIOR OF BUILDING W/ THE END OF THE PIPE NOT MORE THAN 24" HIGHER THAN 4" ABOVE GROUND AND POINTING DOWNWARD
17	HANDLESS WATER HEATER
18	ROSE BELL W/ SHUT OFF VALVE
19	RVAC CONDENSER
20	STOOP FOR CONDENSER UNIT(S), HOLD 12" AWAY FROM HOUSE
21	AIR RETURN
22	AIR HANDLER UNIT - IN ATTIC
23	2x6 WALL
24	STEP DOWN 4"
25	22x30" ATTIC ACCESS - REFER TO SECTION 4 DETAILS SHEET 04
26	1/2" OPSUM BOARD ON WOOD STUDS - TYPICAL INTERIOR WALL
27	ELECTRIC PANEL LOCATION - SEE E-1 AND GENERAL NOTES. FRAMER TO PROVIDE LATH BACKING AROUND PANEL.
28	5 EQUALLY SPACED SHELVES
29	TUB
30	BENCH
31	2 RODS, 2 SHELVES - VERIFY W/ OWNER
32	FRAMED COLUMNS
33	TEMPERED GLASS
34	CONCRETE LABELING
35	5 EQUALLY SPACED SHELVES
36	WASHER W/ HOT & COLD WATER BIBB.
37	DRYER
38	DRYER EXHAUST DUCT UP THROUGH ROOF (2018 IMC SEC. 504.4). TOTAL LENGTH NOT TO EXCEED 14'-0" MAX. COMBINED HORIZONTAL OR VERTICAL LENGTH.

\*ALL APPLIANCES TO BE "ENERGY STAR"



**FLOOR PLAN**  
1/4" = 1'-0"

**SQUARE FEET:**

HABITABLE AREA	1,571 5/8'
PATIO	256 5/8'
<b>TOTAL UNDER ROOF</b>	<b>1,827 5/8'</b>

PROJECT NUMBER  
**2021\_3021**

DATE OF ISSUE  
**14DEC2022**

REVISION NO. DATE

PROJECT PHASE  
**100%**

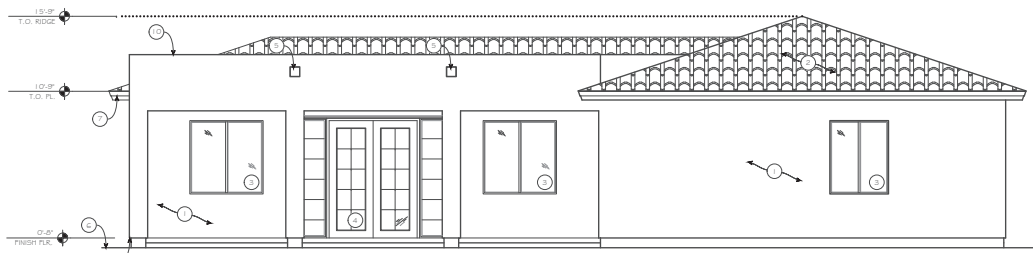
TEAM  
**RL**

DESIGNED BY  
**RC**

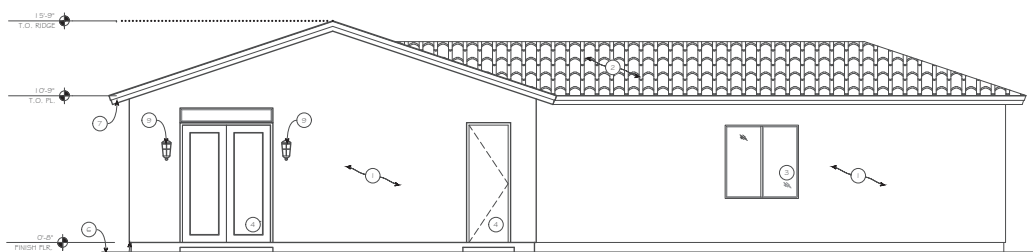
SHEET CONTENTS  
**FLOOR PLAN**

SHEET NO.

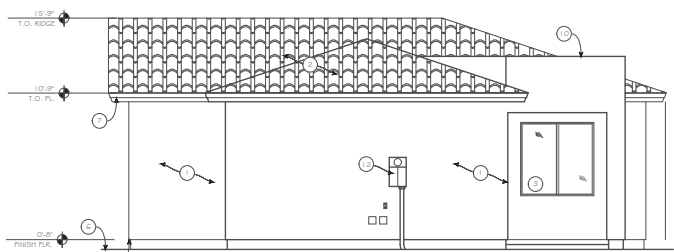
**A2**



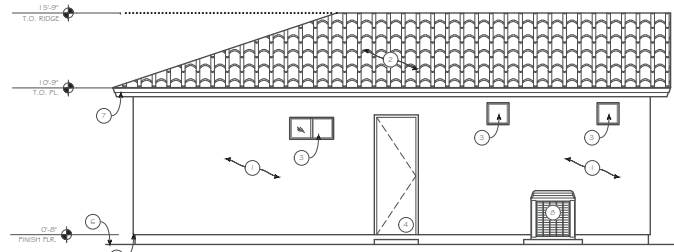
**NORTH ELEVATION**  
1/4" = 1'-0"



**REAR ELEVATION**  
1/4" = 1'-0"



**EAST ELEVATION**  
1/4" = 1'-0"



**WEST ELEVATION**  
1/4" = 1'-0"

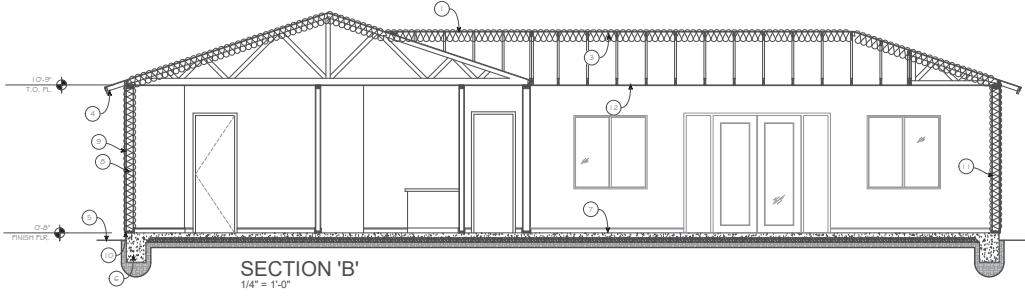
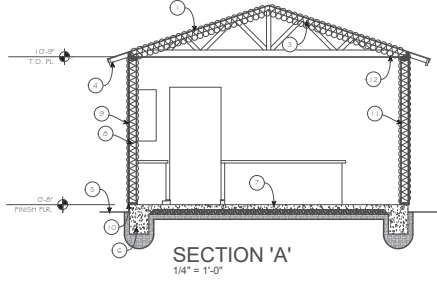
ELEVATION NOTES	
NOTE:	
A.	SEE STRUCTURAL DRAWINGS FOR LOCATIONS OF HEADERS, POISTS AND BEAMS.
B.	SEE COVER SHEET FOR PROJECT DATA AND SHEET INDEX.
C.	VERIFY ALL OPTIONS PRIOR TO PERFORMING ANY WORK.
D.	REVIEW PLANS WITH MECHANICAL, PLUMBING AND ELECTRICAL CONTRACTORS FOR ROUGH OPENING DIMENSIONS AND CLEARANCES REQUIRED.
E.	REFER TO DETAIL SHEETS FOR STANDARD STRUCTURAL NOTES AND ALL FINISHING AND ARCHITECTURAL DETAILS NOT SHOWN.

GENERAL NOTES	
1.	TYPICAL WINDOW HEADER HEIGHT IS 6'-0" AT 14" x 5/8" FLOORS U.N.O.
	EXTERIOR DOOR HEAR HEIGHTS ARE 6'-8" U.N.O.
	INTERIOR DOOR HEADER HEIGHTS ARE 8'-0" U.N.O.
2.	THE BUILDING SAFETY DEPARTMENT WILL REQUIRE THE INSTALLATION CARD FROM THE STUCCO MANUFACTURER'S APPROVED APPLICATION BE ON THE JOB SITE BEFORE THE APPLICATION OF THE WATER-RESISTIVE BARRIER. A COPY OF THE INSTALLATION CARD MUST BE PRESENTED TO THE BUILDING INSPECTOR AFTER COMPLETION OF THE WORK, AND BEFORE THE FINAL INSPECTION. A COPY OF THE INSTALLATION CARD SHALL BE LEFT AT THE JOB SITE FOR HOMEOWNER. WHEN APPLIED OVER WOOD-BASED SHEATHING, THE BARRIER SHALL BE A MINIMUM TWO LAYERS OF GRADE D, BUILDING PAPER PER THE BUILDING CODE.
3.	FLASHING OF EXTERIOR OPENINGS SHALL NOT BE LESS THAN 24 GA. CORROSION RESISTANT METAL PER THE BUILDING CODE.
4.	ARCHITECTURAL ASPHALT SHINGLES, INSTALLED PER MANUFACTURER'S WRITTEN SPECIFICATIONS, G300 NO. 3093 4 PER THE BUILDING CODE.
5.	NOT USED
6.	WEEP SCREED SHALL BE OF NO. 36 GAUGE CORROSION RESISTANT METAL WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3/16" AND PLACED A MIN. OF 3/4" BELOW TOP OF FINISHED FLOOR AND A MINIMUM OF 4" ABOVE FINISHED GRADE @ ALL EXTERIOR WALLS.
7.	ROOF SLOPES ARE 4:12 TYP. U.N.O. - VERIFY BEFORE MANUFACTURING TRUSSES.
8.	WINDOW FRAMES SHALL BE ANODIZED OR ENAMEL PAINTED TO MATCH HOUSE U.N.O.
9.	ALL VENTS, ELEC. BOXES, HVAC UNITS, ETC. SHALL BE PAINTED TO MATCH HOUSE U.N.O.
10.	PART DROPPED STEM WALLS TO MATCH U.N.O.
(1)	(SLOPES EXAMPLE: FIREPLACE / MEDIA NICHE TOPS) OF 6:12 OR LESS FROM HORIZONTAL TO HAVE UNDERLAMENT MEETING ROOFING REQUIREMENTS.

ELEVATION KEYNOTES	
NO.	DESCRIPTION
1	BOARD FINISH - WESTERN 1X4OTE STUCCO SYSTEM
2	ESP-3750 OPTIMA 800 (ON 4x8 B.O. @ ATIC AREA)
3	WEATHER RESISTIVE BARRIER
4	CONCRETE ROOF TILE ESP-1 800, GUSOM FELT
5	INSULATED WINDOW
6	DOOR
7	SCAFFLER - METAL - PAINTED FINISH
8	FINISH GRADE - SLOPE 2% AWAY FROM HOUSE
9	WOOD FASCIA - MATCH EXISTING
10	A/C CONDENSER
11	EXTERIOR LIGHT - ELECTRICAL
12	PARAPET - SLOPE TO INSIDE
13	WEEP SCREED (STUCCO FIN.) - 24 G.A. CORROSION RESISTANT IN A MIN. 3/16" VERTICAL FLANGE ATTACHMENT PROJECTING A IN. OF 3/4" BELOW TREATED SOLE PLATE AND TERMINATING A MIN. OF 4" A.T.C.
14	SUB-FASCIA

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE AND NOTIFY THE DESIGNER OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES BEFORE BEGINNING OR FABRICATING ANY WORK.

TO THE BEST OF MY KNOWLEDGE THESE PLANS ARE DRAWN TO COMPLY WITH OWNERS AND/OR BUILDERS SPECIFICATIONS AND ANY CHANGES MADE ON THEM AFTER PRINTS ARE MADE WILL BE DONE AT THE OWNERS AND/OR BUILDERS EXPENSE AND RESPONSIBILITY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CHECKS DRAWINGS. THE DESIGNER IS NOT LIABLE FOR ERRORS ONCE CONSTRUCTION HAS BEGUN. WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THESE PLANS TO AVOID MISTAKES, THE MARKS CAN NOT GUARANTEE AGAINST HUMAN ERROR. THE CONTRACTOR OF THE JOB MUST CHECK ALL DIMENSIONS AND OTHER DETAILS PRIOR TO CONSTRUCTION, AND BE SOLELY RESPONSIBLE THEREAFTER.



- NOTE**
- GYPSUM BOARD INSTALLED ON EXTERIOR OF BUILDING, WHERE IT IS DIRECTLY EXPOSED TO THE WEATHER SHALL COMPLY WITH ASTM C251 - RCT002.3.5
  - WHEN APPLYING A WATER-BASED TEXTURE MATERIAL, THE MINIMUM GYPSUM BOARD THICKNESS SHALL AN INCREASED FROM 3/8 INCH TO 1/2 INCH FOR 14- INCH ON CENTER FRAMING AND 1/2 INCH TO 5/8 INCH FOR 24 INCHES ON CENTER FRAMING OR 1/2 INCH 5/8 RESISTANT GYPSUM CEILING BOARD SHALL BE USED. IRC TABLE R702.3.5

- GENERAL NOTES**
1. TYPICAL WINDOW HEADER HEIGHT IS 6'-0" AT 14 4 S44 FLOOR U.N.O.  
EXTERIOR DOOR HEAD HEIGHTS ARE 6'-8" U.N.O.  
INTERIOR DOOR HEAD HEIGHTS ARE 8'-0" U.N.O.
  2. THE BUILDING SAFETY DEPARTMENT WILL REQUIRE THE INSTALLATION CARD FROM THE STUDIO MANUFACTURER'S APPROVED APPLICATION BE ON THE JOB SITE BEFORE THE INSPECTOR AFTER COMPLETION OF THE WORK AND BEFORE THE FINAL INSPECTION. A COPY OF THE INSTALLATION CARD SHALL BE LEFT AT THE JOB SITE FOR REMOVAL. WHEN APPLIED OVER WOOD-BASED SHEATHING, THE BARRIER SHALL BE A MINIMUM TWO LAYERS OF GRADE D, BUILDING PAPER PER THE BUILDING CODE.
  3. FLASHING OF EXTERIOR OPENINGS SHALL NOT BE LESS THAN 34 GA. CORROSION RESISTANT METAL PER THE BUILDING CODE.
  4. ARCHITECTURAL ASPHALT SHRIMPLES, INSTALLED PER MANUFACTURER'S WRITTEN SPECIFICATIONS, CS30 NO. 30934 PER THE BUILDING CODE.
  5. NOT USED
  6. WEEP SCREED SHALL BE OF NO. 36 GAUGE CORROSION RESISTANT METAL WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3 1/2" AND PLACED A MIN. OF 3/4" BELOW TOP OF FINISHED FLOOR AND A MINIMUM OF 4" ABOVE FINISHED GRADE @ ALL EXTERIOR WALLS.
  7. ROOF SLOPES ARE 4:12 TYP. U.N.O. - VERIFY BEFORE MANUFACTURING TRUSSES.
  8. WINDOW FRAMES SHALL BE ANODIZED OR ENAMEL PAINTED TO MATCH HOUSE U.N.O.
  9. ALL VENTS, ELEC. BOXES, HVAC UNITS, ETC. SHALL BE PAINTED TO MATCH HOUSE U.N.O.
  10. PAINT SPECIFICATIONS SHALL MATCH U.N.O.
  11. SLOPES (EXAMPLE: FIREPLACE / MEDIA NICHE TOPS) OF 6:12 OR LESS FROM HORIZONTAL TO HAVE UNDERLAMENT MEETING ROOFING REQUIREMENTS.

**SECTION KEYNOTES**

NO.	DESCRIPTION
1	CONCRETE ROOF TILE ESR-1775, G30F FELT
2	PRE-FABRICATED TRUSSES AT 24" O.C.
3	1" ICYNENE SPRAY FOAM INSULATION - MIN. R-36 TO THROATLINE OF DECK - CLASSIC NAVY ESR (USE 1"0 SWITCH BARRIER)
4	WOOD FASCIA - PAINTED FINISH - INSTALL RAIN Drip STOP
5	FINISH GRADE - SLOPE 5% AWAY FROM HOUSE
6	FOOTING - SEE STRUCTURAL
7	4" CONCRETE SLAB OVER MIN. 4" A.B.C. FILL W/ TERMITIC RESISTANT
8	2x4 STUDS AT 12" O.C. - 5.5" ICYNENE SPRAY FOAM INSULATION @ PARTIAL WALLS - MIN. R-19
9	INSULATION - SEE FLOOR PLAN FOR SHEAR SCHEDULE
10	GLASS FIBER REINFORCED SHEATHING SYSTEM (ESR-1607 OPT/DM BD. (ON AIS BD. @ ATTIC AREAS) OVER WATER RESISTIBLE BARRIER
11	WEEP SCREED - 36 GA. CORROSION RESISTANT W/ A MIN. 3- 1/2" VERTICAL FLANGE ATTACHMENT PROJECTING 1/8" OF 3/4" BELOW TREATED SOLE PLATE AND TERMINATING A MIN. OF 4" A.T.G.
12	GYPSUM - TYPICAL
13	1/2" S&G-RESISTANT GYPSUM - TYPICAL @ CEILING

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE AND NOTIFY THE DESIGNER OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES BEFORE BEGINNING OR FABRICATING ANY WORK.

TO THE BEST OF MY KNOWLEDGE THESE PLANS ARE DRAWN TO COMPLY WITH OWNER'S AND/OR BUILDER'S SPECIFICATIONS AND ANY CHANGES MADE ON THEM AFTER PRINTS ARE MADE WILL BE DONE AT THE OWNER'S AND/OR BUILDER'S EXPENSE AND RESPONSIBILITY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SCHEDULES DRAWINGS. THE DESIGNER IS NOT LIABLE FOR ERRORS ONCE CONSTRUCTION HAS BEGUN. WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THESE PLANS TO AVOID MISTAKES, THE ARCHITECT CAN NOT GUARANTEE AGAINST HUMAN ERROR. THE CONTRACTOR OF THE JOB MUST CHECK ALL DIMENSIONS AND OTHER DETAILS PRIOR TO CONSTRUCTION, AND BE SOLELY RESPONSIBLE THEREAFTER.

radiant lines design studio

480.861.0562  
roy.carrasco@gmail.com

Pool House  
**John & Diana Keller**  
2029 E. Caroline Lane  
Tempe, Arizona 85284

PROJECT NUMBER	2021_3021
DATE OF ISSUE	14DEC2022
REVISION NO.	DATE
1	
2	
3	
4	
PROJECT PHASE	100%
DRAWN BY	RL
CHECKED BY	RC
SHEET CONTENTS	SECTIONS
SHEET NO.	A3



**MECHANICAL NOTES:**

- DUCT LAYOUT IS APPROXIMATE ONLY. MECHANICAL CONTRACTOR SHALL SUBMIT WORKING DRAWINGS SHOWING DUCT AND REGISTER SIZES, UNIT SIZES AND HEAT GAIN/HEAT LOSS CALCULATIONS TO CONTRACTOR OR OWNER AND ECS COMPLIANCE FOR APPROVAL PRIOR TO INSTALLATION.
- MECHANICAL CONTRACTOR TO FURNISH AND INSTALL EXHAUST FANS AND SHALL SUPPLY DUCT AND TERMINATIONS FOR RANGE AND DRYER VENTS. SEE PLAN FOR LOCATIONS.
- EXHAUST FANS SHALL BE RATED 100 CFM MINIMUM. - SIZE DUCT PER MANUFACTURER'S SPECS OR IRC
- DRYER DUCT SHALL BE MIN. 4" DIAMETER WITH A SMOOTH SURFACE INSIDE.
- MECHANICAL EQUIPMENT SHALL HAVE PRIMARY CONDENSATE LINES SIZED PER 2015 I.M.C. SEC 307.2.2 (MIN. 3/4" UP TO 20 TONS) AND SHALL TERMINATE IN AN APPROVED LOCATION SUCH AS THE BUILDING EXTERIOR OR A LAVATORY TAIL PIECE. ANY CONDENSATE LINES THAT ARE PVC AND EXPOSED TO SUNLIGHT SHALL BE PAINTED TO PREVENT DEGRADATION.
- AN APPROVED DIELECTRIC INSULATOR SHALL BE PROVIDED ON ALL DISSIMILAR METAL WATER PIPING CONNECTIONS OF WATER HEATERS AND RELATED WATER HEATING EQUIPMENT.
- DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILING SEPARATING THE DWELLING FROM THE GARAGE SHALL BE OF STEEL AND HAVE NO OPENINGS INTO THE GARAGE PER R309.1.1.
- RECESSED INCANDESCENT LIGHTS SHALL MAINTAIN A 3" CLEARANCE TO INSULATION OR BE LISTED TO HAVE INSULATION IN DIRECT CONTACT WITH THE FIXTURE PER E 3904.9.
- IDENTIFY MULTIPLE HVAC UNIT DISCONNECTS WITH PERMANENT MARKINGS PER EXM4.11.
- PROVIDE A READILY ACCESSIBLE DISCONNECT THAT IS LOCATED ADJACENT TO AND "IN SIGHT" OF MECHANICAL EQUIP. PER E 4001.5.

**NOTE:** R303.8 REQUIRED HEATING AND COOLING. WHEN THE WINTER DESIGN TEMPERATURE IN TABLE R302.2(1) IS BELOW 60°F (16°C), EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING AND COOLING FACILITIES CAPABLE OF MAINTAINING A MINIMUM ROOM TEMPERATURES BETWEEN OF 68°F (20°C) AND 80°F (28°C) AT A POINT ONE FEET (314mm) ABOVE FLOOR AND 2 FEET (610mm) FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS AT THE DESIGN TEMPERATURE. THE INSTALLATION OF ONE OR MORE PORTABLE SPACE HEATERS OR COOLERS SHALL NOT BE USED TO ACHIEVE COMPLIANCE WITH THIS SECTION.

MECHANICAL PLAN KEYNOTES	
NO.	DESCRIPTION
1	4" VENT THRU ROOF
2	AIR CONDENSER
3	DUCTWORK - R-8 MINIMUM

MECHANICAL LEGEND	
CEILING REGISTER	
WALL REGISTER	
EXHAUST REGISTER	
AIR HANDLER	
THERMOSTAT	
RETURN VENT (AT EACH BEDROOM)	

**NOTE:**  
CONTRACTOR TO BE RESPONSIBLE FOR ALL DUCT / REGISTER SIZE

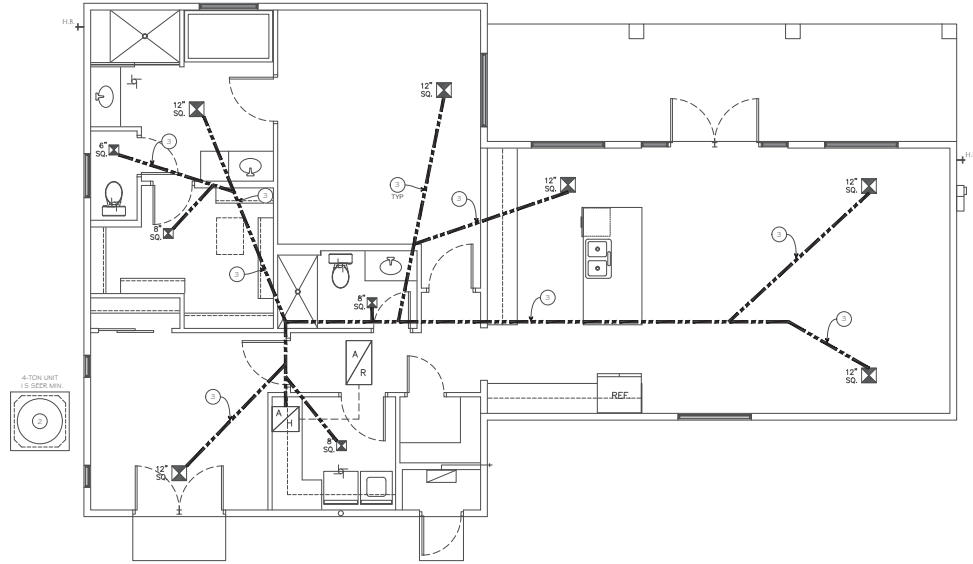
**NOTE:**  
CONTRACTOR TO PROVIDE TO ECS COMPLIANCE THE VENTILATION RATE AS APPROVED BY ENERGY STAR PRIOR TO ROUGH IN INSPECTION

**NOTE:**  
EQUIPMENT 4 APPLIANCES SHALL BE PER CHAPTER 14. AIR CONDITIONING DUCT SYSTEMS SHALL CONFORM TO SECTION M 1 601 AND M 1 602. SUPPLY AND RETURN DUCTS IN ATTICS SHALL BE INSULATED TO A MINIMUM OF R-8 WHERE 3 INCHES IN DIAMETER AND GREATER AND R-6 WHERE LESS THAN 3 INCHES PER IRC N 1 03.3.1 DIAMETER. DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE IMC OR SECTION M 1 601.4.1. BEFORE STARTING ANY WORK, THE LOCATION AND SIZE OF CEILING DIFFUSERS AND DUCT SIZES SHALL BE VERIFIED BY EITHER A REGISTERED MECHANICAL ENGINEER OR LICENSED MECHANICAL CONTRACTOR. HVAC SIZING SHALL BE PER ACCA MANUALS BASED ON LOADS FROM MANUAL J. ALL CALCULATION AND EQUIPMENT SELECTION SHALL BE SUBMITTED TO BUILDING DEPARTMENT PRIOR TO INSTALLATION.

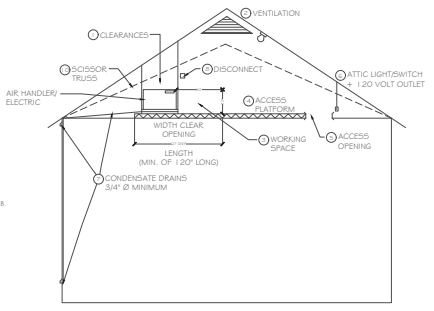
**INSPECTION NOTICE:**  
DUCT TESTING PER IRC N 1 03.3.3 IS REQUIRED AND DUCT LEAKAGE SHALL COMPLY WITH IRC N 1 03.3.4. THIRD PARTY INDEPENDENT VERIFICATION IS REQUIRED TO BE SUBMITTED TO BUILDING DEPARTMENT.

**WHOLE HOUSE VENTILATION SYSTEM**

- WHERE THE AIR INFILTRATION RATE OF A DWELLING UNIT IS 5 AIR CHANGES PER HOUR OR LESS WHERE TESTED WITH A BLOWER DOOR AT A PRESSURE OF 0.2 INCH W.G. (50 PA) IN ACCORDANCE WITH SECTION N 1 0 2.4.1.2, THE DWELLING UNIT SHALL BE PROVIDED WITH WHOLE-HOUSE MECHANICAL VENTILATION IN ACCORDANCE WITH SECTION M 1 507.3.
- WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS M 1 507.3.1 THROUGH M 1 507.3.3.
- THIRD PARTY INDEPENDENT VERIFICATION IS REQUIRED PER IRC N 1 02.4.1.2 AND SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT.



**MECHANICAL PLAN**  
1/4" = 1'-0"



- REQUIREMENTS FOR ATTIC AIR HANDLER OR GAS FURNACE**
- CLEARANCES FROM COMBUSTIBLE MATERIALS FOR GAS FIRED FURNACES MUST BE AS SPECIFIED IN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPLICABLE LOCAL BUILDING CODES. (A) MINIMUM SPACE REQUIRED: 60" WIDE x 30" HIGH x 96" LONG FOR HEAT PUMP OR 120" LONG FOR GAS FURNACE.
  - VENTILATION - THE NET FREE VENTILATION AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED. EXCEPTIONS: THE AREA MAY BE 1/200 OF THE AREA OF THE SPACE VENTILATED PROVIDED 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. \*REQUIRED ATTIC VENTILATION EXCEEDS REQUIREMENTS FOR FURNACE COMBUSTION AIR. (A)
  - WORKING SPACE - A WORKING PLATFORM MUST NOT BE LESS THAN 30 INCHES IN DEPTH FOR THE ENTIRE SERVICE SIDE OF THE FURNACE WITH A MINIMUM HEIGHT OF 30 INCHES HEAD CLEARANCE.
  - ACCESS PLATFORM - THE ACCESS PLATFORM MUST BE A MINIMUM OF 24 INCHES WIDE CONTINUOUS FLOOR NOT MORE THAN 20 FEET IN LENGTH UNLESS THE ENTIRE AIR HANDLER / FURNACE CAN BE SERVICED FROM THE ATTIC ACCESS OPENING. \*MAKE PROVISIONS FOR PROPER INSULATION TO BE INSTALLED UNDER THE PLATFORMS WHEN REQUIRED.
  - ACCESS OPENING - ATTIC OPENINGS AND PASSAGEWAYS TO THE AIR HANDLER / FURNACE MUST BE 30" x 30". EXCEPTION: THE ACCESS OPENING INTO THE SPACE MAY BE 22" BY 30" PROVIDED THE LARGEST PIECE OF EQUIPMENT CAN BE REMOVED THROUGH THIS OPENING.
  - ATTIC LIGHT - A PERMANENT 120-VOLT RECEPTICAL OUTLET AND LIGHTING FIXTURE CONTROLLED BY A SWITCH LOCATED AT THE REQUIRED PASSAGE WAY OPENING SHALL BE PROVIDED AT OR NEAR THE AIR HANDLER / FURNACE.
  - CONDENSATE DRAINS - A SECONDARY DRAIN PAN MUST BE INSTALLED UNDER THE COIL SECTION TO PREVENT DAMAGE TO THE CEILING BELOW. THE SECONDARY DRAIN MUST BE INSTALLED WITH A MINIMUM GRADE OF 1/8 INCH PER 1/2 INCHES OF HORIZONTAL RUN AND MUST EXIT TO THE OUTSIDE WHERE IT CAN BE READILY VISIBLE.
  - DISCONNECT - A POSITIVE MEANS OF ELECTRICAL DISCONNECT MUST BE LOCATED AT OR NEAR THE AIR HANDLER / FURNACE.
  - VENTS - TYPE B VENT, SIZE PER FURNACE MANUFACTURERS SPECIFICATIONS. VENTS MUST TERMINATE IN ACCORDANCE TO 2015 I.M.C. REQUIREMENTS PROVIDED THEY ARE AT LEAST 8 FEET FROM ANY VERTICAL WALL OF 45 DEGREES OR MORE AND TERMINATE NOT LESS THAN 2 FEET HIGHER THAN THE HIGHEST POINT THEY PASS THROUGH (A).
  - IF FURNACE IS LOCATED BELOW SCISSOR TRUSS THE RECOMMENDED INSULATING PROCEDURE IS ALONG CEILING LINE BELOW THE FURNACE NOT ALONG OPTIONAL SCISSOR ABOVE TO PROVIDE PROPER COMBUSTION AIR WITH OUT COMPROMISING THE INTEGRITY OF THE THERMAL ENVELOPE BY PENETRATING IT WITH COMBUSTION DUCTS. (A) THE SPECIFICATIONS ABOVE MEET THE MINIMUM REQUIREMENTS ESTABLISHED IN THE 2015 I.M.C. AND I.R.C. MANUALS. (A) - APPLIES TO GAS FURNACE ONLY.

SWITCH	DOOR BELL
3 WAY SWITCH	SMOKE DETECTOR
4 WAY SWITCH	CARBON MONOXIDE DETECTOR
DIMMER SWITCH	CEILING MOUNTED FIXTURE
GARAGE DOOR OPENER SWITCH	WALL-MOUNTED FIXTURE
120V OUTLET	ICAT RECESSED CAN
HALF-HOT OUTLET	ICAT MINI RECESSED CAN
CHIMES	DIRECTIONAL RECESSED CAN
GFCI OUTLET	MINI DIRECTIONAL RECESSED CAN
W.P. WATER-PROOF GFI	FLOODLIGHTS
AFCI OUTLET	WALL SCONCE
AFCI HALF-HOT OUTLET	CEILING FAN
220V OUTLET	2' FLOR. FIXTURE
FLOR. OUTLET (VERY LOCATION - WITH DIMMER, TYP.)	4' FLOR. FIX.
A.C. DISC. SWITCH	M MOTION DETECTOR
EXHAUST FAN	W.R. WATER RESISTANT
PHONE OUTLET	V.P. VAPOR PROOF
CATV OUTLET	D.P. DAMP PROOF
CAT 5 OUTLET	STRUCTURED WIRING PANEL
MECHANICAL- JUMP DUCT SEE MECHANICAL PLAN	

NOTE: PROVIDE PERMANENT ELECTRIC OUTLET & LIGHT FIXTURE AT ATIC AREAS WHERE HVAC EQUIPMENT IS LOCATED AND REQUIRES SERVICE LIGHT TO BE CONTROLLED BY A SWITCH NEAR OPENING.

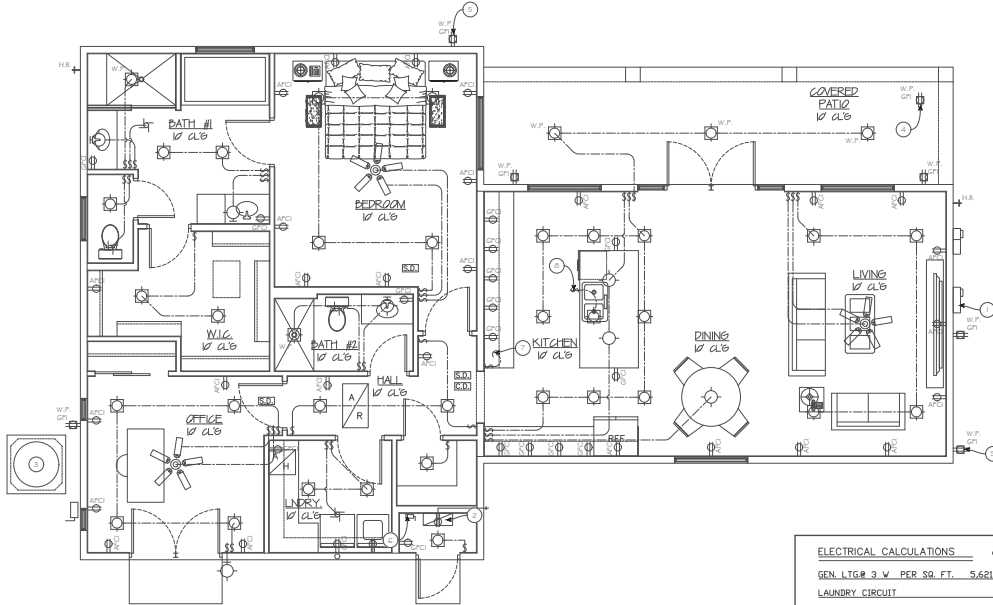
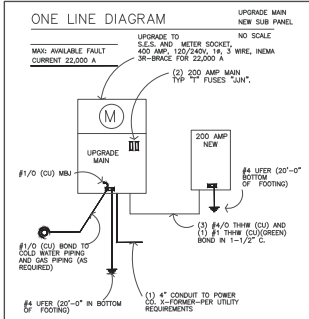
NOTES:  
ALL CIRCUITS RUN OUT OF THE 565 PANEL

NOTES:  
EVERY CIRCUIT AND CIRCUIT MODIFICATION SHALL BE LOGICALLY IDENTIFIED AS TO ITS CLEAR, EVIDENT AND SPECIFIC PURPOSE OR USE. (NEC 408.4)

NOTES:  
RECESSED CAN LIGHTS REQUIRED TO BE AIR TIGHT PER ICCI 402.4.3 - IRC N1100.4.5

NOTE:  
A MINIMUM OF 75 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICIENCY LAMPS.

NOTE:  
ALL 125-VOLT, 15- AND 20-AMPERE RECEPTABLES SHALL BE LISTED TAMPER RESISTANT RECEPTABLES.



**ELECTRICAL / MECHANICAL PLAN**  
1/4" = 1'-0"

GEN. LTG @ 3 V PER SQ. FT.	5,621 SF = 10,452
LAUNDRY CIRCUIT	1,500
APPLIANCE CIRCUITS	3,000
RANGE AT NAME PLATE RATING	10,000
DRYER (5000 WATTS DR NPR.)	5000
WATER HEATER	4500
FDL	3,600
DISHWASHER/DISPOSAL	3,000
OTHER LTG & RECEPT.	500
<b>TOTAL "OTHER LOADS"</b>	<b>75,252</b>
@2A/C UNIT @ 100%	22,000
1ST 10,000 WATTS "OTHER LOADS" @ 100%	10,000
REMAINDER "OTHER LOADS" @ 40%	26,381
<b>TOTAL CODE LOAD (WATTS)</b>	<b>58,681</b>
<b>TOTAL WATTS OF 58,681/240 VOLTS = 243 AMPS</b>	

GEN. LTG @ 3 V PER SQ. FT.	1,571 SF = 4,746
LAUNDRY CIRCUIT	1,500
APPLIANCE CIRCUITS	9,000
DRYER (5000 WATTS DR NPR.)	5000
WATER HEATER	18,000
DISHWASHER/DISPOSAL	3,000
OTHER LTG & RECEPT.	500
<b>TOTAL "OTHER LOADS"</b>	<b>25,746</b>
A/C UNIT @ 100%	11,000
1ST 10,000 WATTS "OTHER LOADS" @ 100%	10,000
REMAINDER "OTHER LOADS" @ 40%	10,299
<b>TOTAL CODE LOAD (WATTS)</b>	<b>29,063</b>
<b>TOTAL WATTS OF 10,299/240 VOLTS = 131 AMPS</b>	

NO.	DESCRIPTION
1	200 AMP 5 E.S. 565-PANEL
2	WATER HEATER - TANKLESS
3	HAC CONDENSER
4	OUTLET LOCATED AT CEILING
5	OUTLET @ BELOW FASCIA - WATER PROOF GFI W ENCLOSURE - VERIFY W DIMMER
6	WATER HEATER DISCONNECT
7	UNDER CABINET LIGHTS
8	SWITCH TO GARBAGE DISPOSAL

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- NOTE:  
ALL OUTLETS, LIGHT OUTLETS, FANS, SMOKE DETECTORS, OR CIRCUITS SERVING BEDROOMS, LAUNDRY, KITCHEN, DINING, HALLS AND CLOSETS TO BE ARC FAULT.
- NOTE:  
15- AND 20-AMPERE CIRCUIT SERVING GARAGE OUTLETS SHALL NOT SHARE ANY AREAS OUTSIDE OR INSIDE OF DWELLING.
- NOTE:  
SMOKE DETECTOR AND CARBON MONOXIDE DETECTOR TO BE 3' MIN FROM SUPPLY, RETURN AND TIPS OF FAN BLADES.
- NOTE:  
LAUNDRY, DISPOSAL, DISHWASHER TO BE GFCI/CFCI. REFRIGERATOR TO BE AFCI ONLY.

- ENERGY STAR NOTES
- ENERGY STAR LABELED PROGRAMMABLE THERMOSTAT
  - CARBON MONOXIDE DETECTOR AT HOUSE/GARAGE ENTRY
  - BATHROOM EXHAUST FAN: INTERMITTENT RATE OF 50 CFM OR CONTINUOUS RATE OR 20 CFM.
  - BATHROOM EXHAUST FAN TO BE CONTROLLED BY AN AUTOMATIC TIMER SWITCH.
  - E-RATED RECESSED LIGHTING FIXTURES WHEN PENETRATING AIR BARRIER IN CEILING.
- NOTE:  
A 125-VOLT, SINGLE-PHASE, 15- OR 20-AMPERE-RATED RECEPTABLE OUTLET SHALL BE INSTALLED AT AN ACCESSIBLE LOCATION FOR THE SERVICING OF HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT. THE RECEPTABLE SHALL BE LOCATED ON THE SAME LEVEL AND WITHIN 25 FEET (7.620 MM) OF THE HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT. THE RECEPTABLE OUTLET SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE HVAC EQUIPMENT DISCONNECTING MEANS.

REFER TO SHEET C1 FOR ADDITIONAL ELECTRICAL NOTES

- ELECTRICAL NOTES**
- PROVIDE GFI FOR ALL BATH RECEPTABLES AND WATERPROOF OUTLETS WITHIN 6' OF ALL SHWAS A LANS.
  - SMOKE DETECTORS SHALL BE PROVIDED TO PROTECT EACH SEPARATE SLEEPING AREA AND BE A MIN. OF 3' OUT FROM DUCT OPENINGS. SMOKE DETECTORS SHALL BE PERMANENTLY WIRED AND DISCONNECTED. PROVIDE SMOKE DETECTORS ON EACH FLOOR LEVEL WHERE THE HIGHEST POINT OF A CEILING IN A ROOM THAT IS ADJACENT TO THE HALLWAY SERVING THE BEDROOM EXCEEDS THAT OF THE OPENING INTO HALLWAY BY 24 INCHES OR MORE. SMOKE DETECTORS SHALL BE INSTALLED IN THE ADJACENT ROOM. PROVIDE ADDITIONAL SMOKE DETECTORS AS APPLICABLE. SMOKE DETECTORS TO HAVE BATTERY BACKUP PER 803.3 OF I.C.C.
  - OUTLETS IN GARAGE, MECHANICAL ROOMS AND UNCONDITIONED STORAGE ROOMS SHALL BE MOUNTED +1Ø A.P.F. AND SHALL BE GFI CIRCUIT.
  - ALL RECESSED LIGHTING TO BE THERMALLY PROTECTED.
  - ALL CEILING BOXES/USES FOR SUPPORT OF PANELS, SHALL BE RIGIDLY SECURED IN PLACE TO BUILDING FRAME AND LISTED FOR THE APPLICATION LOCATION AND PER 530.8 OF I.E.C.
  - ALL FUTURE LOCATIONS: WET AND DAMP LOCATIONS (OUTSIDE TO CLIMATE E.C.).
  - PROVIDE 4 WIRE CABLE TO OVEN RANGE DRYER PER E502.2 B OR I.E.C. (GROUND).
  - PROVIDE DEDICATED 20 AMP GFCI CIRCUITS TO TOILET LAV COUNTER TOP RECEPTABLES.
  - OUTLETS LOCATED AT CABINETS AND ALL SWITCHES TO BE A MIN. OF 4" TO BOTTOM OF BOV FROM CONCRETE. ALL OUTLETS AND SWITCHES LOCATED AT ISLANDS AND VANITIES TO BE INSTALLED HORIZONTALY.
  - THIS IS A SCHEMATIC PLAN, EXACT LOCATIONS ARE TO BE DETERMINED BY ELECTRICAL CONTRACTOR/INTERIOR DESIGNER/OWNER OR AS CODE REQUIRED, UNLESS SPECIFIC LOCATION IS NOTED.
  - THE GRIDDED FLOOR PLAN IS FOR REFERENCE ONLY. NOT TO BE REFERRED TO FOR ANY STRUCTURAL CHANGES.
  - MECHANICAL/ELECTRICAL CONTRACTOR TO VERIFY ELECTRICAL REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT, ELECTRICAL APPLIANCES ETC.
  - ALL OUTLETS ABOVE COUNTER HEIGHT IN KITCHEN AND BATHROOMS TO BE G.F.I. TYPE AS PER LOCAL CODES.
  - VERIFY WITH OWNER LOCATION/TYPING OF ALL FIXTURES, PANEL BOXES, OUTLET PLACEMENT ETC., BY HOLDING AN ELECTRICAL WALK THROUGH ON THE BUILDING SITE ONCE FINISHING IS COMPLETED.
  - SMOKE DETECTORS TO BE HAND-WIRED WITH BACK UP BATTERY, LOCATED PER APPLICABLE CODES.
  - LANDSCAPING LIGHTS ARE NOT INDICATED ON PLANS PROVIDE FOR LANDSCAPING LIGHTS TO BE SWITCHED AS SHOWN.
  - COORDINATE ALL WORK WITH BUILDING CONTRACTOR.
  - THRO OR MORE 20 AMP SMALL APPLIANCE CIRCUITS SHALL BE PROVIDED TO SERVE THE KITCHEN, BREAKFAST AND DINING ROOMS.
  - AT LEAST ONE 20 AMP BRANCH CIRCUIT SHALL BE INSTALLED TO SERVE THE UTILITY ROOM AND THIS CIRCUIT SHALL HAVE NO OTHER OUTLETS.
  - OUTLET BOXES IN THE WALL BETWEEN THE DWELLING AND THE GARAGE SHALL BE METAL OR U.L. APPROVED FIRE-RESISTIVE PLASTIC. OUTLET BOXES IN THE GARAGE SHALL BE METAL.
  - PROVIDE A NO. 4 BARE COPPER CONDUCTOR A MINIMUM OF 20 FEET ABOVE THE BOTTOM OF FOOTING. ISOLATE FROM REINFORCING STEEL.
  - A MINIMUM OF TWO (2) 20-AMPERE-RATED BRANCH CIRCUITS FOR RECEPTABLES LOCATED IN THE KITCHEN, PANTRY, BREAKFAST AND DINING AREAS.
  - ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE-PHASE, 15 AND 20-AMPERE OUTLETS INSTALLED INCLUDING UNIT BEDROOMS AND AREAS IDENTIFIED IN IRC E5302.2 SHALL BE PROTECTED BY AN ARC-Fault CIRCUIT INTERRUPTER (AFCI) PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.
  - A SEPARATE 20-AMPERE-RATED BRANCH CIRCUIT FOR THE BATHROOM RECEPTABLES IS REQUIRED.
  - A SEPARATE 20-AMPERE-RATED BRANCH CIRCUIT SHALL BE INSTALLED TO SERVE THE LAUNDRY ROOM AND THIS CIRCUIT SHALL HAVE NO OTHER OUTLETS.
  - PROVIDE AN ELECTRICAL DISCONNECT WITHIN SIGHT OF ALL ELECTRIC WATER HEATERS.

radiant lines design studio

480.861.0562  
roy.carrasco@gmail.com

CONSLANT

Tempe, Arizona 85284

Pool House

**John & Diana Keller**

2029 E. Caroline Lane

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### GENERAL PLUMBING NOTES

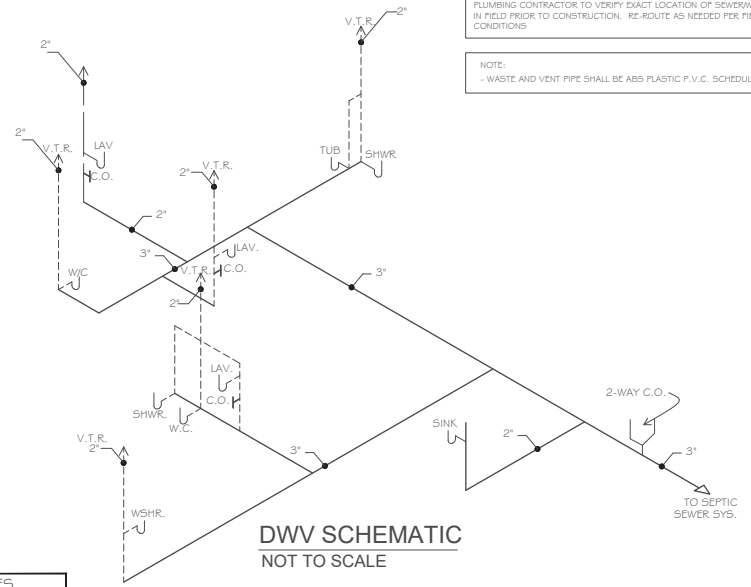
**PLUMBING FIXTURES:**

- SOLDERS AND FLUX HAVING A LEAD CONTENT IN EXCESS OF 20.0 OR ONE PERCENT SHALL NOT BE USED IN THE INSTALLATION OR REPAIR OF ANY WATER PLUMBING IN RESIDENTIAL OR NON-RESID. FACILITIES PROVIDING WATER FOR HUMAN CONSUMPTION WHICH ARE CONNECTED TO PUBLIC WATER SYSTEMS.
- PLUMBING FIXTURES SHALL BE AS FOLLOWS:  
SINKS - MAX. 2.2 GPM HOT WATER LEFT FITTING WATER CLOSERS - 1 - 4 GALLONS PER FLUSH MAX. SHOWER HEADS - 2.5 GALLONS PER MINUTE MAX.
- A.B.S. OR PVC IN DRAIN WASTE AND VENT SYSTEMS TO BE SCHEDULE 40.
- PROVIDE 1-1/4" BUILDING SUPPLY SERVICE PIPING.
- PROVIDE PRESSURE-BALANCE OR THERMOSTATIC MIXING VALVE TYPE CONTROL VALVE FOR ALL SHOWER & TUBSHOWER COMBINATIONS.

2016 IPC SEC. 424.3

**NOTE:**  
PLUMBING CONTRACTOR TO VERIFY EXACT LOCATION OF SEWER/WATER TAP IN FIELD PRIOR TO CONSTRUCTION. RE-ADJUST AS NEEDED PER FIELD CONDITIONS.

**NOTE:**  
- WASTE AND VENT PIPE SHALL BE ABS PLASTIC P.V.C., SCHEDULE 40



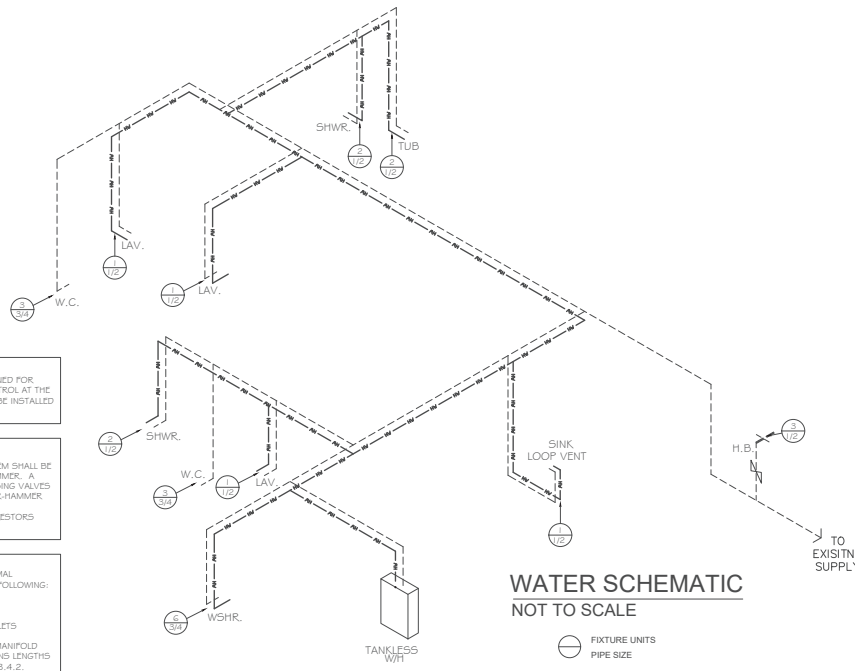
**DWV SCHEMATIC**  
NOT TO SCALE

### GENERAL NOTES

- DRAINAGE PIPING SERVING FIXTURES WHICH HAVE FLOOD LEVEL RIMS LOCATED BELOW THE ELEVATION OF THE NEXT UPSTREAM MANHOLE COVER OF THE PUBLIC OR PRIVATE SEWER SERVING SUCH DRAINAGE PIPING SHALL BE PROTECTED FROM BACKFLOW OF SEWAGE BY INSTALLING AN APPROVED TYPE BACKWATER VALVE. FIXTURES ABOVE SUCH ELEVATION SHALL NOT DISCHARGE THROUGH THE BACKWATER VALVE.
- DRAINAGE PIPING THAT ARE LOCATED BELOW THE CROWN LEVEL OF THE MAIN SEWER SHALL DISCHARGE INTO AN APPROVED WATERTIGHT SUMP OR RECEIVING TANK, SO LOCATED AS TO RECEIVE THE SEWAGE OR WASTES BY GRAVITY. FROM SUCH SUMP OR RECEIVING TANK, THE SEWAGE OR OTHER LIQUID WASTES SHALL BE LIFTED AND DISCHARGED INTO THE BUILDING DRAIN OR BUILDING SEWER BY APPROVED EJECTORS, PUMPS, OR OTHER EQUALLY EFFICIENT APPROVED MECHANICAL DEVICE.
- THE MINIMUM SIZE OF ANY PUMP OR ANY DISCHARGE PIPE FROM A SUMP HAVING A WATER CLOSET CONNECTED THERETO SHALL BE NOT LESS THAN TWO (2) INCHES (51 mm).
- THE DISCHARGE LINE FROM SUCH EJECTOR, PUMP, OR OTHER MECHANICAL DEVICE SHALL BE PROVIDED WITH AN ACCESSIBLE BACKWATER OR SWING CHECK VALVE AND GATE VALVE. IF THE GRAVITY DRAINAGE LINE TO WHICH SUCH DISCHARGE LINE CONNECTS IS HORIZONTAL, THE METHOD OF CONNECTION SHALL BE FROM THE TOP THROUGH A WYE BRANCH FITTING. THE GATE VALVE SHALL BE LOCATED ON THE DISCHARGE SIDE OF THE BACKWATER OR CHECK VALVE.
- GATE VALVES, WHEN USED ON DRAINAGE WORK, SHALL BE FULL WAY TYPE WITH WORKING PARTS OF CORROSION RESISTANT METAL, SIZES FOUR (4) INCHES (102mm) OR MORE IN DIAMETER SHALL HAVE CAST IRON BODIES, AND SIZES LESS THAN FOUR (4) INCHES (102 mm), CAST IRON OR BRASS BODIES.

REFER TO SHEET C-1 FOR ADDITIONAL PLUMBING NOTES				
WASTE FIXTURE COUNT				
FIXTURES	TRAP ARM SIZE	NUMBER OF FIXTURES	2016 IPC DRAINAGE FIXTURE UNIT VALUE	TOTAL FIXTURE UNITS
BATHTUB	1 1/2"	1	2	2
BIDETS	1 1/4"	0	1	0
C. WASHER	2"	1	2	2
FLOOR DRAIN	2"	0	3	0
SHOWER	1 1/2"	2	2	4
LAUNDRY TUB	1 1/2"	0	2	0
SINK/W.C.	1 1/2"	1	2	2
S.W.L.	1 1/2"	0	1	0
BAR/REG. SINK	1 1/2"	0	2	0
LAVATORY	1 1/4"	3	1	3
W. CLOSET	3"	2	3	6
TOTAL FIXTURE UNITS				19

SUPPLY FIXTURE COUNT				
FIXTURES	MINIMUM CONN. SIZE	NUMBER OF FIXTURES	COMBINED WATER SUPPLY FIXTURE UNITS 2016 IPC	TOTAL FIXTURE UNITS
BATHTUB (WITH/WITHOUT OVERHEAD SHWR.)	1/2" 1/2"	0	1.4	0
C. WASHER	1/2" 1/2"	1	1	1
DISHWASHER	1/2" 1/2"	0	1.4	0
FULL-BATH GROUP W/ BATHTUB (WITH OR W/O SHOWER HEAD) OR SHOWER STALL	1/2" 1/2"	2	3.6	7.2
HOSE BIBB	1/2" 1/2"	1	2.5	2.5
KITCHEN GROUP (DISHWASHER AND SINK WITH OR W/O GARBAGE DISPOSAL)	1/2" 1/2"	1	2.5	2.5
KITCHEN SINK	1/2" 1/2"	0	1.4	0
LAUNDRY GROUP (CLOTHES WASHER, STANDPIPE AND LAUNDRY TUB)	1/2" 1/2"	0	2.5	0
LAUNDRY TUB			1.4	0
SHOWER STALL		1	0.7	0.7
WATER CLOSET (TANK TYPE)		0	2.2	0
OTHER				
TOTAL FIXTURE UNITS				15.3



**WATER SCHEMATIC**  
NOT TO SCALE

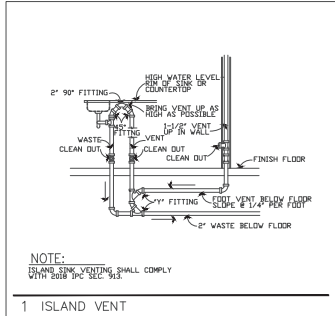
○ FIXTURE UNITS  
○ PIPE SIZE

**NOTE:**  
- PROVIDE AN EXPANSION TANK OR OTHER DEVICE DESIGNED FOR INTERMITTENT OPERATION FOR THERMAL EXPANSION CONTROL AT THE WATER HEATER IF A BACKFLOW PREVENTER IS ON OR TO BE INSTALLED ON THE WATER LINE OR AT THE METER.

**NOTE:**  
- THE FLOW VELOCITY OF THE WATER DISTRIBUTION SYSTEM SHALL BE CONTROLLED TO REDUCE THE POSSIBILITY OF WATER HAMMER. A WATER-HAMMER ARRESTOR SHALL BE INSTALLED WHERE QUICK CLOSING VALVES ARE USED. WATER-HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. WATER-HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010, IRC SECTION P3903.5

**NOTE:**  
INSULATION FOR HOT WATER PIPE WITH A MINIMUM THERMAL RESISTANCE (R-VALUE) OF R-3 SHALL BE APPLIED TO THE FOLLOWING: (PRESCRIPTIVE) 2012 IRC SEC. N1103.4.2.

- PIPING 3/4 INCH - 1 INCH NOMINAL DIAMETER
- PIPING FROM THE WATER HEATER TO THE KITCHEN OUTLETS
- PIPING LOCATED OUTSIDE THE CONDITIONED SPACE
- PIPING FROM THE WATER HEATER TO A DISTRIBUTION MANIFOLD
- PIPING RUN LENGTHS GREATER THAN THE MAXIMUM RUN LENGTHS FOR THE NOMINAL PIPE DIAMETER GIVEN IN TABLE N1103.4.2.



**NOTE:**  
DRAIN SINK VENTING SHALL COMPLY WITH 2016 IPC SEC. 901

**1 ISLAND VENT**

**Plumbing Notes:**

THE POTABLE WATER SUPPLY TO LAWN IRRIGATION SYSTEMS SHALL BE PROTECTED AGAINST BACKFLOW BY AN ATMOSPHERIC-TYPE VACUUM BREAKER, A PRESSURE-TYPE VACUUM BREAKER OR A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER. A VALVE SHALL NOT BE INSTALLED DOWNSTREAM FROM AN ATMOSPHERIC VACUUM BREAKER, WHERE CHEMICALS ARE INTRODUCED INTO THE SYSTEM. THE POTABLE WATER SUPPLY SHALL BE PROTECTED AGAINST BACKFLOW BY A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER, IRC SECTION P2902.5.3.

THE FLOW VELOCITY OF THE WATER DISTRIBUTION SYSTEM SHALL BE CONTROLLED TO REDUCE THE POSSIBILITY OF WATER HAMMER. A WATER-HAMMER ARRESTOR SHALL BE INSTALLED WHERE QUICK CLOSING VALVES ARE USED. WATER-HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. WATER-HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010, IRC SECTION P3903.5

CLEANOUTS SHALL BE THE SAME NOMINAL SIZE AS THE PIPE THEY SERVE UP TO 4 INCHES. FOR PIPES LARGER THAN 4 INCHES' NOMINAL SIZE, THE MINIMUM SIZE OF THE CLEANOUT SHALL BE 4 INCHES. IRC SECTION P3005.2.9.

T AND P RELIEF LINE FROM THE WATER HEATER TO THE EXTERIOR OF THE BUILDING SHALL BE INSTALLED. THE T AND P RELIEF LINE TO BE FULL SIZE STEEL PIPE OR HARD DRAWN COPPER TUBING EXTENDING TO THE EXTERIOR OF THE BUILDING AND TERMINATING IN A DOWNWARD NOT MORE THAN 6 INCHES ABOVE GRADE OR WASTE RECEPTOR. THE T AND P RELIEF LINE SHALL NOT TERMINATE OVER WALKWAYS, PATIOS, CARPORTS OR OTHER SIMILAR AREAS. IRC SECTION P2803.6.1.

ALL PLUMBING FIXTURES, SUPPLIES, WASTE AND GAS LINES, INCLUDING SIZES OF LINES, VENTS, CLEANOUTS, ETC. SHALL ALL COMPLY WITH IRC SECTION R106.1.1.

A DRAINAGE PIPE FOR ALL DRAIN WASTE AND VENT PIPING SHALL BE INSTALLED AND SHALL ALL COMPLY WITH IRC SECTION P3001.1.

DRAINAGE PIPING SERVING FIXTURES WHICH HAVE FLOOD LEVEL RIMS LOCATED BELOW THE ELEVATION OF THE NEXT UPSTREAM MANHOLE COVER OF THE PUBLIC SEWER SHALL BE PROTECTED FROM BACKFLOW OF SEWAGE BY A BACKFLOW VALVE. IRC AMENDED SECTION P3005.1.

IF APPLIANCE AND EQUIPMENT ARE GAS, ELECTRIC, OR PROPANE THEY SHALL ALL COMPLY WITH IRC SECTION R106.1.1.

GAS FUEL PIPING MATERIAL SHALL COMPLY WITH IRC G24.1.4.