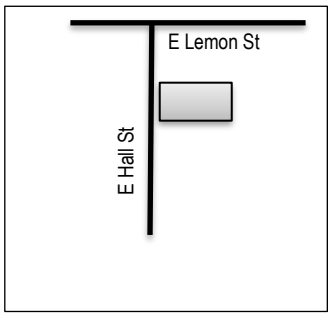
Agenda Item 3

CITY OF TEMPE
HISTORIC PRESERVATION COMMISSION

Meeting Date: 05/13/2020
Agenda Item: 3

ACTION: Request for a Certificate of Appropriateness for exterior modifications at the HENRY E. READING HOUSE, located at 1433 East Hall Street. The HENRY E. READING HOUSE is a contributing property within the TOMLINSON ESTATES HISTORIC DISTRICT (Ordinance 2006.17). The applicant is Carlos Dominguez. (PL200078 / HPO200001)

RECOMMENDATION: Approve, with conditions



Property Owner	Camillo E. Volini
Applicant	Carlos Dominguez
Tempe Hist. Prop. Reg. Status	Designated
National Register Status	Listed

ATTACHMENTS: 1) Development Project File, 2) "Tomlinson Estates Historic District Design Guidelines"

STAFF CONTACT(S): John Larsen Southard, Historic Preservation Officer (480) 350-8870

Department Director: Chad Weaver, Community Development Director
Legal review by: N/A
Prepared by: John Larsen Southard, Historic Preservation Officer

COMMENTS

The Harry E. Reading House (1433 East Hall Street) is located on the east side of East Hall Street, south of East Lemon Street. The property is a contributor to the Tomlinson Estates Historic District, which is listed in the Tempe Historic Property Register and the National Register of Historic Places.

Staff evaluation of the Certificate of Appropriateness request employed the Historic Preservation Commission-approved "Tomlinson Estates Historic District Design Guidelines" ("Design Guidelines") as guidance when analyzing the submittal.

HISTORIC OVERVIEW

The 2006 Historic Preservation Office Tomlinson Estates field survey identified three standard house models in the subdivision; Type-A, Type-B, and Type-C. The 1950 Harry E. Reading House is one of six Type-B designs constructed in 1950, the year the subdivision was platted. Type-B model examples can be viewed on pages 20, 22, 23, 24, 27, 40, and 45 of the Design Guidelines. 1433 East Hall Street is identified as a Traditional Ranch style home on page 16 of the Design Guidelines.

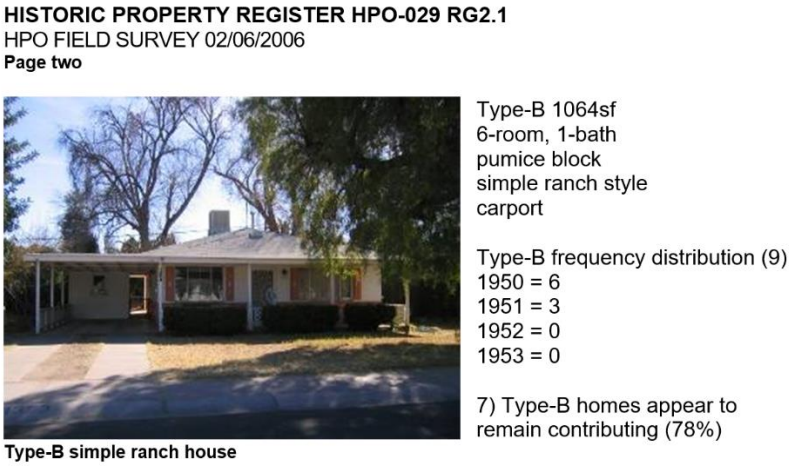


Figure 1: Excerpt of Type-B description from 2006 Tomlinson Estates field survey

Section 1.3 of the Design Guidelines describes Early/Transitional Ranch Style homes in Tomlinson Estates as follows:

> The first homes built in the Tomlinson Estates Historic District are representative of a turning point in Tempe homebuilding, largely reflecting a broad national trend in residential architecture in the years following World War II. These are small block houses with a simple design that could be built quickly and sold for between $7465 and $8265. These are outstanding examples of the Early/Transitional Ranch style, a distinct style identified throughout the Phoenix Metropolitan Area. The Early/Transitional Ranch style house has a massing and plan similar to earlier Period Revival styles, but ornamentation is largely nonexistent. Features such as concrete slab foundations, steel casement windows, and asphalt shingle roofs associated with the emerging Ranch style are already present, but these houses lack the elongated facades and horizontal

emphasis characteristic of subsequent Ranch style houses.

In Tempe, the Early/Transitional Ranch style marked the initial departure from the vernacular four- or five-room house constructed in the National Folk style. These homes are indicative of a new paradigm of residential construction in the post-WWII period that began to differentiate a unique style in the American Southwest, one that remained at variance from other regional expressions.

Houses in the Tomlinson Estates Historic District were built between 1950 and 1953, including all 14 of the Early/Transitional Ranch style examples built in the first year and a half. These homes were identical in appearance and featured hipped, nearly pyramidal shaped main roofs. A nearly flat carport roof continued across the entire front of the home creating a massive bungalow style porch. Some variety was created with various front window shutter designs and an option to have red clay brick on the bottom 3 feet of the exterior walls.

Excerpt from the Tomlinson Estates Historic District National Register nomination:

The Tomlinson Estates Historic District is a residential subdivision located a half mile east of the Arizona State University main campus. The 14.6-acre neighborhood is laid out along two streets—Lemon Street, a broad east/west residential street, and Hall Street, which runs east/west but curves north to intersect with Lemon Street. The Tomlinson Estates Historic District has 67 properties. The oldest houses were built on the south and east sides of Hall Street in 1950; houses on the north side of Hall Street and the south side of Lemon Street were built in 1951; houses were built on the remaining block on the north side of Lemon Street 1951-1953. The houses of Tomlinson Estates reflect the Ranch style of the early 1950s and several outstanding examples of an Early/Transitional Ranch style that was popular in Tempe during that time. Almost all houses are of concrete block masonry with rectilinear plan, simple side-gabled or hipped roofs, steel casement windows, and attached carports. There is consistency in size and design throughout the neighborhood, with three distinct models with only slight variations in roof type, porch, and carport. Houses in Tomlinson Estates Historic District are on large irrigated lots with grass lawns and mature trees. This landscaping and the underground irrigation system that sustains it, built in 1953, are integral parts of the district, as a lush green environment was typical for neighborhoods built in Tempe during the post-World War II period. The Tomlinson Estates Historic District and its resources are in good condition and have a high level of architectural integrity, and the streetscape reflects the character and appearance of the neighborhood as it was in the 1950s.

PROJECT ANALYSIS

The applicant seeks to 1) rebuild the front porch and 2) construct a new stuccoed wood frame wall in place of the existing west-facing interior carport wall.

Sections of the “Tomlinson Estates Historic District Design Guidelines” relevant to this proposal include:

3.1 – PRESERVE – REPAIR - REPLACE

Preserve Features - The best way to preserve historic building materials is through timely maintenance. Preserving original architectural features is critical to maintaining the integrity of any historic building.

Repair Features - When historic building materials are deteriorated, repairing rather than replacing materials is preferred. Frequently, damaged materials can be patched or consolidated using special bonding agents.

Replace Features - When materials or features are beyond repair, replacement is necessary. However, it is important to minimize the extent of replacement because the original materials contribute to the authenticity of the property as a historic resource. New material should be compatible with the original appearance, but be distinguishable from original construction. However, even when replacement materials exactly match originals, the integrity of a historic building is to some extent compromised by replacement. This is because the original material contains a record of the labor and craftsmanship of an earlier time. Integrity cannot be reproduced or recreated. The physical record of history is lost when materials are replaced; thus, conservation of original materials and features is strongly recommended.

3.3 – EXTERIOR WALLS

Concrete block masonry is a character-defining architectural detail and should be preserved. Mortar joints that have become deteriorated should be re-pointed to prevent structural damage. Some of the houses in the district exhibit the rare but signature style in their distinctive brick/block masonry walls. Beginning with a base of brick wainscot to a height of three feet in the Flemish bond rowlock masonry pattern, a raised brick belt course is surmounted by upper walls laid up in concrete block to the top. This produced walls with special visual interest and is very rare in post-war Tempe subdivisions.

Most houses built in the Tomlinson Estates Historic District, like virtually all new tract houses built in Tempe after 1947, were of concrete block construction. Painted concrete block is the primary material used on the exteriors of the houses in the Tomlinson Estates Historic District. Stucco should be discouraged in remodel projects because it is not a characteristic of the historic Ranch style house.

3.5 – CARPORTS

In keeping with the trend of providing covered parking in the 1950s, Tomlinson Estates Homes were designed to have one car carports. Front porch covers wrapped around to join the carport cover, the head of the carport was built with a storage shed/laundry room clad in lap siding known as “Rico Redwood Bungalow Style” siding. Carports were designed to also provide the option of enclosing them into additional living space for the growing needs of a family, carport enclosures should use similar but distinct materials so as not to give the impression of being original, Tomlinson Estates has several carport enclosures done with historically compatible but distinct materials.

For continued eligibility a homeowner should preserve the original form, materials, eaves, details, and other character-defining features of an historic roof. Preserve the original overhang depth of the eaves. Minimize the visual impact of new skylights and other rooftop devices by installing them behind the ridgeline of the roof and away from view from the street. If new mechanical equipment, such as air conditioning or solar devices, are installed on the roof, place them to be inconspicuous from the street and do not damage or obscure character-defining features.

3.6 – PORCHES

Early/Transitional Ranch style homes in the Tomlinson Estates Historic District were constructed with broad overhanging low pitched eaves supported by several wooden posts running the entire width of the homes façade and integrating into the covered carport.

Simple Ranch style homes in the Tomlinson Estates Historic District were constructed in a number of design variations created by using different configurations for the extended eave porch. Some overhanging eaves extended along more than half of the primary facade, providing a distinct covered entry supported by two or three posts and wrapping around to create a covered carport.

California Ranch style houses relied more on the porch to provide shade, a sheltered entry to both the main entrance and master bedroom side entry, and visual interest to the entry facade. Running the entire length of the front of the house, porches integrated into the covered carport were a prominent feature of this house type.

Original porch features may require preservation because of deterioration or inappropriate alterations. Some may have had minor changes, while others may have been altered to the point of losing their original character. Original wood posts may have been replaced with uncharacteristic materials or covered with stucco. Porches may have been in-filled to create an entry or to increase living space. These treatments may compromise the proportions and integrity of the house. Extensive replacement of historic qualities or enclosure of the porch should be avoided. Although replacement of an entire porch is discouraged, such extreme measures may, in rare occasions, become necessary. Preferably, the design of the replacement porch should be a reconstruction of the original. Short of that approach, reconstruction should be based on examples of another house of the same period and style.

Maintain the porch and its character-defining features. If an historic porch must be enlarged, the new porch posts should be in scale and proportion to those used historically. Avoid changing the character of the historic porch by adding details and features such as porch railings or trellises.

PORCH REPLACEMENT

The proposed porch is largely consistent with the Type-B example shown in the 2006 Tomlinson Estates field survey documentation. Per the submitted plans, the porch replacement will be supported by four 6” x 6” wood posts painted to match the existing color of the home (Note 7, Sheet A20). As is consistent with the Type-B exemplar shown in the 2006 field survey documentation included as Figure 1 and Type-B model examples shown on pages 20, 22, 23, 24, 27, 40, and 45 of the “Tomlinson Estates Historic District Design Guidelines,” the proposal includes simple wood posts evenly spaced along the full length of the front porch. A single wood post will support the northwest corner of the carport. This carport and porch covering is appropriate as it is true to the Early/Transitional Ranch Style “nearly flat carport roof continued across the entire front of the home creating a massive bungalow style porch” design described in Section 1.3 of the Design Guidelines.

Staff recommends approval of the proposed porch and carport cover, as depicted in the plans submitted for Historic Preservation Commission review and approval.

NEW STUCCOED WOOD-FRAME WALL

Item 1 of Sheet A10 shows the existing west-facing interior carport wall being replaced by a “NEW WOOD FRAMED WALL TO BE 2x6 STUDS SPACED AT 16” O.C. W/ ½” GYPSUM BOARD ON INTERIOR FACE OF WALL AND EXTERIOR FACE TO BE 3/8” STUCCO FINISH OVER METAL LATH OVER ½” PLYWOOD SHEATHING.” Per Section 3.5 of the Design Guidelines,

> Front porch covers wrapped around to join the carport cover, the head of the carport was built with a storage shed/laundry room clad in lap siding known as “Rico Redwood Bungalow Style” siding.

Per Section 3.3 of the Design Guidelines,

> Stucco should be discouraged in remodel projects because it is not a characteristic of the historic Ranch style house.

The proposed stucco wall can be evaluated using points 2 and 5 of Section 4.2 of the Design Guidelines (“HPC Standards for Evaluating Additions and Alterations in the Tomlinson Estates Historic District”). Point 2 reads as follows:

> New additions, exterior alterations, or related new construction should be sympathetic to the original design (i.e., stylistically appropriate, sensitively rendered, compatible in size and scale, with similar or compatible materials).

Point 5 reads as follows:

> New additions, exterior alterations, or related new construction should not mimic the historic design to the extent that it becomes indistinguishable from the original building and thereby conveys a false sense of history.

While the interior composition and interior facing material of the proposed west-facing carport wall are permissible as neither compromises the historic integrity of the house, the use of a stucco finish on a wall visible from the street is inconsistent with the Design Guidelines. Staff recommends conditional approval of the new wall described in item 1 of Sheet A10. Staff recommends a condition stipulating the exterior coating /covering material to be used or a condition requiring an exterior coating other than stucco be approved via a Certificate of No Effect.

CONCLUSION

STAFF RECOMMENDATION

Based upon the information provided and the above analysis, staff recommends conditional approval of a Certificate of Appropriateness for the exterior modifications proposed as part of case PL200078 / HP200001.

CONDITIONS OF APPROVAL

1. Staff recommends either 1) a condition stipulating the exterior coating /covering material to be used on the west-facing carport wall or 2) a condition requiring an exterior coating / covering other than stucco for use on the west-facing carport wall be approved via a Certificate of No Effect.

Attachment 1

Planning Application

Part 1 of 2

City of Tempe
Community Development Department
31 East 5th Street, Garden Level, Tempe, Arizona 85281
(480) 350-4311 Fax (480) 350-8677
Planning Fax (480) 350-8872
http//www.tempe.gov/planning

Tempe

All applications must be accompanied by the required plans, submittal materials, and correct fee(s)

PROJECT INFORMATION – REQUIRED

PROJECT NAME	VOLINI RESIDENCE	EXISTING ZONING	R1-6-H
PROJECT ADDRESS	1433 E HALL ST.	SUITE(S)	
PROJECT DESCRIPTION	REQUEST FOR CERTIFICATE OF APPROPRIATENESS-FRONT PORCH MODIF.	PARCEL No(s)	132-62-031

PROPERTY OWNER INFORMATION – REQUIRED (EXCEPT PRELIMINARY SITE PLAN REVIEW)

BUSINESS NAME	CAMILLO VOLINI	ADDRESS	7030 N. VIA DE AMOR				
CONTACT NAME	CAMILLO VOLINI	CITY	SCOTTSDALE	STATE	AZ	ZIP	85258
EMAIL	cvolini@hotmail.com	PHONE 1	4809935517	PHONE 2			

I hereby authorize the applicant below to process this application with the City of Tempe.

PROPERTY OWNER SIGNATURE or attach written statement authorizing the applicant to file the application(s): X [signature] DATE 4/22/2020

APPLICANT INFORMATION – REQUIRED

COMPANY / FIRM NAME	A&E DESIGN GROUP	ADDRESS	P.O. BOX 31151				
CONTACT NAME	CARLOS DOMINGUEZ	CITY	MESA	STATE	AZ	ZIP	85275
EMAIL	ae.designgroup@live.com	PHONE 1	480.593.3466	PHONE 2			

I hereby attest that this application is accurate and the submitted documents are complete. I acknowledge that if the application is deemed to be incomplete it will be returned to me without review, to be resubmitted with any missing information.

APPLICANT SIGNATURE X [signature] DATE 4/22/2020

BUSINESS INFORMATION – REQUIRED FOR USE PERMITS & SIGN DPRs

BUSINESS NAME		ADDRESS					
CONTACT NAME		CITY		STATE		ZIP	
TYPE OF BUSINESS		PHONE		EMAIL			

☑	APPLICATION (check all that apply)	QTY	SPECIFIC REQUEST (see planning & zoning fee schedule for types)	FOR CITY USE ONLY (planning record tracking numbers)	
☐	A. PRELIMINARY SITE PLAN REVIEW			SPR	
☐	B. ADMINISTRATIVE APPLICATIONS	X	CERTIFICATE APPROPRIATE	ADM	
☐	C. VARIANCES			VAR	
☐	D. USE PERMITS / USE PERMIT STANDARDS			ZUP	
☐	E. ZONING CODE AMENDMENTS			ZOA	ZON
☐	F. PLANNED AREA DEVELOPMENT OVERLAYS			PAD	REC
☐	G. SUBDIVISIONS / CONDOMINIUMS			SBD	REC
☐	H. DEVELOPMENT PLAN REVIEW			DPR	
☐	I. APPEALS				
☐	J. GENERAL PLAN AMENDMENTS			GPA	
☐	K. ZONING VERIFICATION LETTERS			ZVL	
☐	L. ABATEMENTS			CE	CM
	TOTAL NUMBER OF APPLICATIONS	0			

FOR CITY USE ONLY

DS TRACKING #		FILE THIS APPLICATION WITH CE / CM TRACKING #	DATE RECEIVED (STAMP)	VALIDATION OF PAYMENT (STAMP)
PL TRACKING #				
SPR TRACKING # (if 2nd or 3rd submittal, use planning resubmittal form)				TOTAL APPLICATION FEES
				RECEIVED BY INTAKE STAFF (INITIALS)

SEE REVERSE SIDE FOR REQUIRED PROJECT DATA

ARCHITECTURAL & ENGINEERING DESIGN GROUP, LLC

P.O. BOX #31151
MESA, AZ 85275-1151
PH: 480.593.3466
www.aedesignaz.com
ae.designgroup@live.com

A&E DESIGN GROUP, LLC

To: City of Tempe Planning Department – Historic Preservation
Phone: 480-350-8870

April 24th, 2020

RE: Volini Residence – Narrative support for Certificate of Appropriateness

Project Name: Volini Residence

Project Address: 1433 E Hall ST.
Tempe, AZ 85281

Our firm is respectuffy requesting the approval to obtain a certificate of appropriateness for the subject dwelling at 1433 E Hall Street. The scope of work is for a front porch addition. There are other proposed additions to the back of the property, which are not impacted by and imposed a hardship for historic preservation. The new front porch is made of wood posts and beams that will be painted to match existing color of the main dwelling. Any other elements to the front of the house will remain the same. For example, the existing CMU walls will remain the same. All casement windows and entry door will remain as well. The windows have been vandalized. Therefore, the glass will be replaced to match existing condition of property.

The subject property is located within the Tomlinson Estates Historic District and is a contributing property to Tempe's historic preservation. The new front porch will continue a contribution to the unique character of the community and the post WWII architectural elements. The main dwelling will keep the existing CMU walls, casement windows, and front door to provide protection for the significant aspects of Tempe's heritage and enhance the character of the community. The goal of adding this front porch is to provide a better frontage, but also embrace the restoration of the historic character of the property.

Should you have further questions regarding our project request please contact us at 480.593.3466 or email at 'carlosd@aedesigngroup.co'

Carlos A. Dominguez
A & E Design Group, LLC

GENERAL NOTES:

1. All products listed by ICC/N.E.R. number(s) shall be installed per the report and manufacturer's written instructions. Product substitution(s) for product(s) listed shall also have an ICC approved evaluation report(s) or be approved.
2. Provide fire protection sprinkler system. (IFC 903. Amend.).
3. Miscellaneous site structures, pools, spas, fences, site walls, retaining walls, and gas storage tanks require separate permits.
4. All exits to be operable from the inside without the use of a key or special knowledge. (310.1.4)
5. Doors leading into house from garage shall be 20 minute rated, self-closing, self-latching. (R302.5.1 Amend.).
6. Exterior wall penetrations by pipes, ducts or conduits shall be caulked. (R307.6)
7. Lumber shall bear an approved grading stamp (R502.1).
8. Bottom wood sill plates shall be pressure treated or equal. Exterior wall bottom sill plates shall bear/extend minimum 6 inches above finish grade. (R319.1).
9. When structural plans are not sealed by registered design professional, provide engineered truss designs for all prefabricated trusses for review and approval by the City of Tempe. (R802.10.1).
10. Fire blocking shall comply with (R602.8).
11. Masonry Bed and head joints…shall be 3/8 inch-thick, the thickness of the bed joint of the starting course placed over foundations shall not be less than 1/4 inch and not more than ¾ inch. Mortar joint thickness shall be within the following tolerances from the specified dimensions: 1. Bed joint: + 1/8 inch. 2. Head joint: 1/4 inch + 3/8 inch. 3. Collar joints: 1/4 inch + 3/8 inch. (R607.2.1).
12. Windows located more than 72" above finished grade shall have the lowest part of clear opening of the window to be minimum 24 inches above the floor in which it serves. (R312.2.1).
13. Gypsum board applied to a ceiling shall be 1/2" when framing members are 16" o.c. or 5/8" when framing members are 24" o.c. or use labeled 1/2" sag-resistant gypsum ceiling board. Table R702.3.5 (d).
14. Showers and tub-shower combinations shall be provided with individual control valves of the pressure balance or thermostatic mixing valve type. (P2708.3).
15. Shower area walls shall be finished with a smooth, hard non-absorbent surface, such as ceramic tile, to a height of not less than 72 inches above the drain inlet. Water-resistant gypsum board shall not be installed over a vapor retarder in a shower or tub compartment. Cement, fiber-cement or glass mat gypsum backers installed in accordance with mfgrs' recommendations shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas (R702.4.2).
16. Plumbing fixtures shall comply with the following conservation requirements: Water closets-Tank type 1.6 gal. /flush. Shower heads- 2.5 gal. /minute. Faucets- 2.2 gal. /minute, provide aerator. (Table P2903.2.).
17. Water treatment systems- shall be equipped with an automatic or readily accessible manual shutoff to prevent continuous flow when not in use. (N1103.4.1).
18. Domestic dishwashing machines connected to a disposer shall have the discharge installed as high as possible. (P2717.3).
19. Storage Tank type water heaters shall be installed with a drain pan and drain line (P2801.5 1-.2)
20. The hot water circulating system shall be equipped with an automatic or readily accessible manual on switch and a temperature sensor activated shut-off that can automatically turn off the hot-water circulating pump when the set temperature is reached. N1103.4.1 amended.
21. Provide roof attic ventilation unless insulation is applied directly to underside of roof sheathing or the dimension is 24 inches or less between the ceiling and bottom of roof sheathing. (R806.1 Amended).
22. Energy compliance shall be demonstrated by a passing REScheck energy compliance score. (N1101.2).
23. Provide Minimum R-3 insulation on hot water pipes. (N1103.4).
24. Supply and return ducts shall be insulated to a minimum R-8. Ducts in floor trusses shall be insulated to minimum R-6. (N1103.2.1).
25. Registers, diffusers and grilles shall be mechanically fastened to rigid supports or structural members on at least two opposite sides in addition to being connected to the ductwork they serve.
26. Dryer exhaust ducts shall conform to the requirements of Sections (M1502.4.5 amended), M1502.4.1 thru M1502.4.6.
27. Exhaust air from kitchens, bathrooms and toilet rooms shall not be re-circulated within a residence or to another dwelling unit, shall not discharge into an attic and/or crawl space and shall be exhausted directly to the outdoors. (M1507.2).
28. Electrical fixtures located in damp or wet locations shall be "listed" to be suitable for such location. (E4003.9).
29. Provide a wall mounted GFCI protected receptacle outlet within 36" of a bathroom or powder room lavatory. (E3901.6).
30. 15- and 20-ampere receptacles installed in bathrooms, garages and grade-level portions of unfinished accessory buildings used for storage or work areas, and installed outdoors shall have GFCI protection for personnel. (E3902.1-.3).
31. All branch circuits that supply 15- and 20-ampere outlets installed in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreations rooms, closets, kitchen, laundry, hallways and similar rooms or areas shall be protected by a combination type arc-fault circuit interrupter (AFCI) installed to provide protection of the branch circuit. (E3902.16).
32. In areas specified in Section E3901.1, 15- and 20-ampere receptacles shall be listed tamper-resistant. (E4002.14).
33. Provide Smoke Alarms (R314).
34. Approved carbon monoxide alarms shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages. (R315).
35. Provide a switch for the stairway when there are 6 or more risers. (R303.7.1).
36. Receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6 feet, measured horizontally, from an outlet in that space, including any wall space 2 feet or more in width. (E3901).
37. Provide a minimum of two 20-amp small appliance branch circuits for the kitchen/dining/breakfast. (E3703.2).
38. Provide a concrete encased grounding electrode of not less than 20 feet of #4 bare copper. (E3608.1.2).
39. Provide bonding to the water piping, gas and metal building systems. (E3606.9, E3609.7).
40. All metal piping systems, metal parts of electrical equipment, and pump motors associated with the hydro massage tub shall be bonded together using a copper bonding jumper, insulated, covered, or bare, not smaller than No. 8 solid. (E4209).
41. A minimum of 90 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or a minimum of 90 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps. (N1104.1).
42. Recessed luminaires installed in the building thermal envelope shall be IC-rated, labeled with air leakage rate not more than 2.0 cfm... sealed with a gasket or caulk between the housing and the interior wall or ceiling covering. (N1102.4.4).
43. Provide outside combustion air to all indoor fireplaces, with air intake located not higher than the firebox. (R1006.2).
44. Where a listed decorative appliance is installed, the fireplace damper open shall comply with listed decorative appliance manufacture's installation instructions. (G2434, G2435, G2453.1).
45. At least one thermostat shall be provided for each separate heating and cooling system. (N1103.1).
46. The building shall be provided with ventilation that meets the requirements of Section M1507 or with other approved means of ventilation. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating. (N1103.5).
47. The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). Testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the building official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope. (N1102.4.1.2).
48. Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with Section M1601.4.1, (N1103.2.2). Duct tightness shall be verified by either of the following:

1. Post-construction test: Total leakage shall be less than or equal to 4 cfm per 100 square feet of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.
2. Rough-in test: Total leakage shall be less than or equal to 4 cfm per 100 ft2 of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to 3 cfm per 100 square feet of conditioned floor area.
3.

PROJECT DATA

Project Name:	Volini Residence - Remodel
Project Address:	1433 E Hall St. Tempe, AZ 85281
Property Owner:	Camillo Volini 7030 N Via de Amor Scottsdale, AZ 85258
APN:	132-62-031
Lot:	22
Zoning:	R1-6 - Historic 'H' Zoning Overlay District
Lot Size:	6,948 s.f.

EXISTING

Existing Livable:	990 s.f.
Livable Remodel:	588 s.f.
Porch Addition:	160 s.f.
Patio Addition:	165 s.f.
Total Bldg sq ft:	1,903 s.f.

Setbacks:	Front: 20' / 15' Open Structures Rear: 15' Side: 5'
Lot Coverage:	Allowed 45% Provided 27.39%
Max Height:	2 story - 30'
Building Code:	2018 IRC (Ord #4060) 2018 IBC (Ord #4059) 2017 NEC 2018 IMC 2018 IFC (Ord #4045) 2018 IPC 2018 IFGC

AN AUTOMATED IRRIGATION SYSTEM SHALL BE INSTALLED WITH AN APPROVED ANTI-SYPHON SYSTEM AT MAIN WATER SOURCE

Contact Arizona 811 at least two full working days before you begin excavation

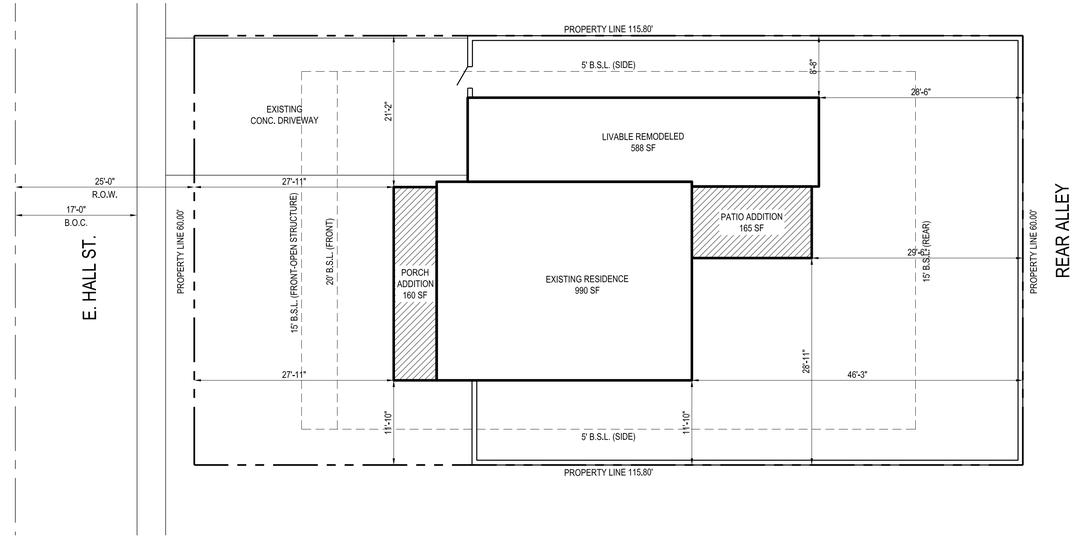
ARIZONA811 AZ BLUE STAKE, INC.

Call 811 or click: Arizona811.com

VOLINI RESIDENCE

1433 E HALL ST
TEMPE, AZ 85281

THIS PARCEL HAS A HISTORIC 'H' ZONING OVERLAY, AS IT IS LISTED IN THE TOMLINSON ESTATES HISTORIC DISTRICT. A CERTIFICATE OF APPROPRIATENESS IS REQUIRED BEFORE ISSUANCE OF ANY CITY PERMITS



SITE PLAN

SCALE: 1" = 10'-0"

A&E DESIGN GROUP, LLC

P.O. BOX 31151
MESA, AZ 85275
www.aedesigngroup.co
ae.designgroup@live.com
480.593.3466

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VOLINI RESIDENCE REMODEL

1433 E. HALL ST.
TEMPE, AZ

- ☐ Conceptual / Preliminary Set
- ☐ Bid Set
- ■ Submittal Set
- ☐ Construction Set

REVISIONS	DATE:

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

PROJECT NUMBER 2013

SHEET NUMBER

COVER SHEET SITE PLAN

CS

PLOT DATE: 4.14.2020

GENERAL PLAN NOTES

1 CONTRACTOR SHALL FIELD VERIFY ALL NEW AND EXISTING DIMENSIONS.

2 GYPSUM BACKER BOARD FOR ADHESIVE APPLICATIONS OF CERAMIC TILE OR OTHER NON-ABSORBANT FINISH MATERIAL SHALL CONFORM WITH ASTM C630 OR C1178 1/2" MR GYPSUM BD SHALL BE PERMITTED AT CEILINGS WITH FRAMING MEMBERS SPACED AT 12" CTS, AND 5/8" WHERE FRAMING MEMBERS ARE SPACED AT 16" CTS MR GYPSUM BD SHALL NOT BE INSTALLED OVER A VAPOR RETARDER IN A SHOWER OR TUB COMPARTMENT ALL CUT OR EXPOSED EDGES, INCLUDING THOSE AT WALL INTERSECTIONS SHALL BE SEALED AS RECOMMENDED BY THE MFR MR GYPSUM BD TO BE INSTALLED IN BATHROOMS, KITCHEN, LAUNDRY ROOM AND GARAGE, TYP

3 CONTRACTOR SHALL USE FIBER-CEMENT BACKERS PER ASTM C 1288 OR EQUAL FOR CERAMIC TILE ON WALLS IN TUB AND SHOWER AREAS AND WALL PANELS IN SHOWER AREAS

4 PROVIDE SOLID WOOD BLOCKING IN WALLS FOR PROPER INSTALLATION OF ALL CABINETS, TOWEL BAR SHELF STANDARDS, MIRRORS, WALL MOUNTED ITEMS, ETC

5 SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NON-ABSORBANT SURFACE TO A HEIGHT OR NOT LESS THAN 6' ABOVE FLOOR PER IRC R307 2

6A SHOWER ENCLOSURES SHALL HAVE MINIMUM FINISHED INTERIOR DIMENSION OF 30" EACH WAY PER IRC R 307 1

6B ALL SHOWER GLASS ENCLOSURES SHALL BE TEMPERED PER IRC R308 4 5

7 TOILETS, BATHTUBS, SINKS, AND SHOWER SPACES SHALL BE SPACED IN ACCORDANCE WITH R307.1 AND WITH ACCORDANCE WITH SECTION P2705.1

8 PROVIDE GROUND FAULT PROTECTED ELEC. OUTLETS AT BATH ROOMS AND PATIO AREA AND GARAGE & KITCHEN OUTLETS WITHIN 6' OF SINK

9 LIGHTING -40 LUMANS /WATT OR GREATER FOR GENERAL LIGHTING IN KITCHEN AND BATH ROOMS.

10 PROVIDE RECEPTACLES WITHIN 25' OF ALL MECHANICAL EQUIPMENT.

11 ALL OUTDOOR, KITCHEN. BATHROOM AND GARAGE OUTLETS ARE TO BE G.F.C.I OUTLETS

12 BATHROOM RECEPTACLES SHALL BE SERVED BY DEDICATED 20 AMP CIRCUITS.

13 ALL BRANCH CIRCUITS THAT SUPPLY 15- AND 20-AMP OUTLETS INSTALLED IN FAMILY RM, DINING RM, LIVING RM, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, KITCHENS, LAUNDRY, AND SIMILAR ROOMS, OR AREAS SHALL BE PROTECTED BY A COMBINATION TYPE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT (E3902.12).

14 APPROVED BOXES ONLY FOR ALL CEILING FANS.

15 SMOKE DETECTORS - ALL SLEEPING ROOMS AND AREAS LEADING TO EXISTING SLEEPING ROOMS SHALL BE PROVIDED WITH SMOKE DETECTORS COMPLYING WITH SEC. 310.9.1.3 AND 313. OF THE 2018 IRC.

16 VENTILATION - PROVIDE MECHANICAL VENTILATION CONNECTED DIRECTLY TO THE OUTSIDE CAPABLE OF PROVIDING FIVE AIR CHANGES PER HOUR IN BATHROOMS, WATER CLOSET COMPARTMENTS, LAUNDRY ROOMS AND SIMILAR ROOMS.

17 LIGHTING - THE MINIMUM NET GLAZED AREA SHALL BE NOT LESS THAN 8% OF THE FLOOR AREA OF THE ROOM SERVED

18 WHEN ALTERATIONS, REPAIRS, OR ADDITIONS REQUIRING A PERMIT OCCUR, OR WHEN ONE OR MORE SLEEPING ROOMS ARE ADDED OR CREATED IN EXISTING DWELLINGS, THE INDIVIDUAL DWELLING UNIT SHALL BE EQUIPPED WITH SMOKE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS; THE SMOKE ALARMS SHALL BE INTERCONNECTED AND HARD WIRED AS PER R313.2.1

19 A PERMANENT CERTIFICATE SHALL BE COMPLETED AND POSTED ON OR IN THE ELECTRICAL DISTRIBUTION PANEL, NEAR FURNACE OR IN UTILITY BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL THE CERTIFICATE SHALL LIST THE PRE-DOMINANT R-VALUES OF INSULATION INSTALLED IN OR ON CEILING/ROOF, WALLS, FOUNDATION AND DUCTS OUTSIDE THE CONDITIONED SPACES, U FACTORS FOR FENESTRATION AND THE SOLAR HEAT GAIN COEFFICIENT OF FENESTRATION, AND THE RESULTS FROM ANY REQUIRED DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING DONE ON THE BUILDING PER IRC N1101 16

20 ACCESS DOORS FROM CONDITIONED SPACES TO UN-CONDITIONED SPACES SHALL BE WEATHER-STRIPPED AND INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES PER IRC N1102 24

21 DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE OF NOT TO EXCEED 5 AIR CHANGES PER HOUR IN ZONES 1 AND 2 TESTING SHALL BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF 0 2 INCHES WG (50 PASCAL'S) PER IRC N1102 412

22 APPLIANCES HAVING AN IGNITION SOURCE SHALL BE ELEVATED SUCH THAT THE SOURCE OF IGNITION IS NOT LESS THAN 18 INCHES ABOVE THE FLOOR IN GARAGES. IN THE CONTEXT OF THIS SECTION, A SOURCE OF IGNITION COULD BE A ELECTRICAL COMPONENT CAPABLE OF PILOT FLAME, BURNER, BURNER IGNITER OR ELECTRICAL COMPENT CAPABLE OF PRODUCING A SPARK, IRC SECTION M1307.3

23 WHERE A STORAGE TANK TYPE WATER HEATER IS INSTALLED IN A LOCATION WHERE WATER LEAKAGE FROM THE TANK WILL CAUSE DAMAGE, THE TANK SHALL BE INSTALLED IN A GALVANIZED STEEL PAN HAVING A MATERIAL THICKNESS OF NOT LESS THAN 24 GAGE OR OTHER APPROVED PAN FOR SUCH USE. LISTED PANS SHALL COMPLY WITH CSA LC3, THE PAN SHALL NOT BE LESS THAN 1.5 INCHES DEEP AND SHALL BE DRAINED BY AN INDIRECT WASTE PIPE OF NOT LESS THAN .75 INCH DIAMETER, THE PAN 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 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE ADJACENT GROUND SURFACE, IRC SECTION P2801.5

24 WHERE THE PRIMARY HEATING SYSTEM IS FORCED AIR FURNACE, AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURES THROUGHOUT THE DAY THE THERMOSTAT SHALL INITIALLY BE PROGRAMMED WITH A HEATING TEMPERATURE SET POINT NO HIGHER THAN 70 DEGREES AND A COOLING TEMPERATURE SET POINT NO LOWER THAN 78 DEGREES PER IRC N1103 11

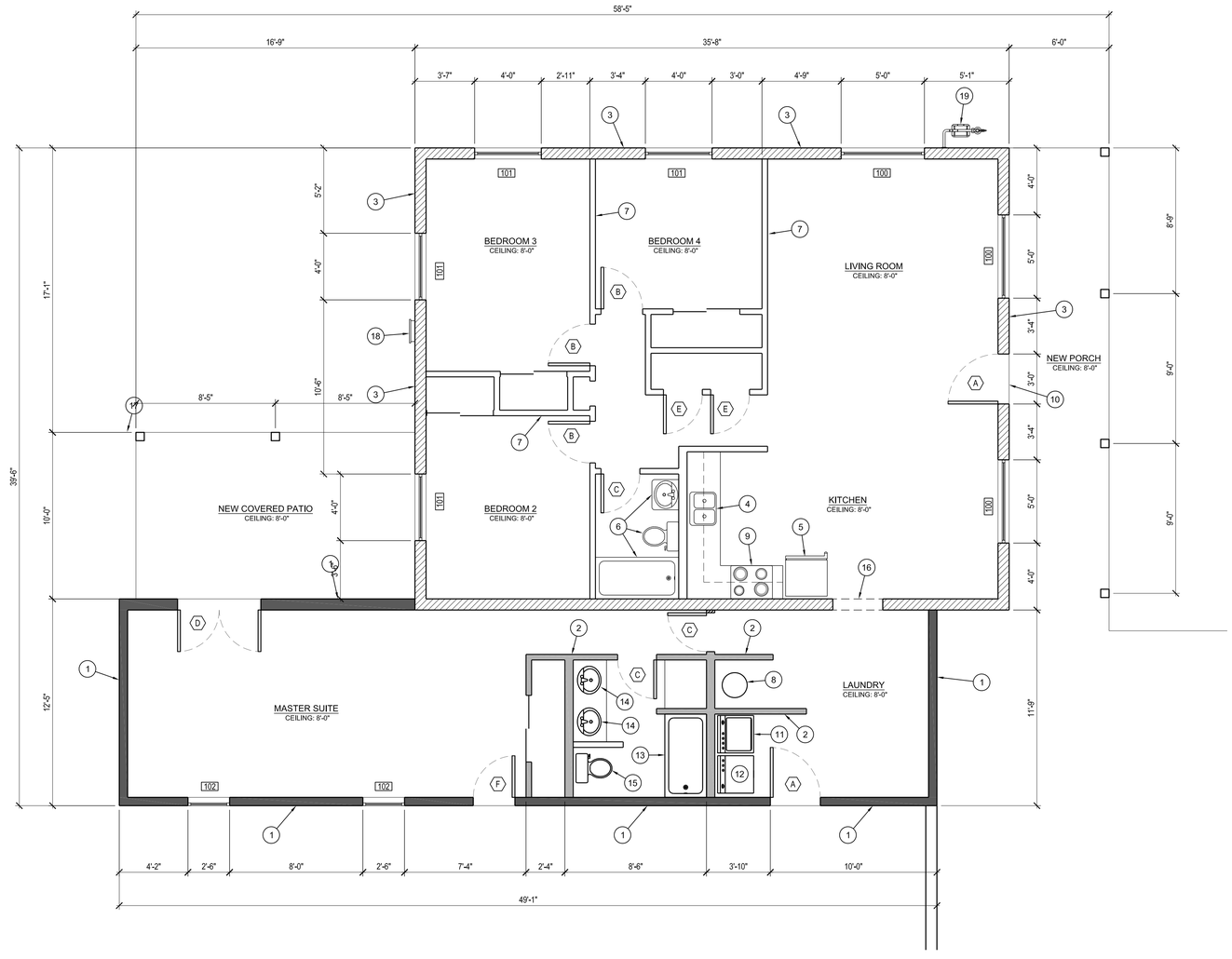
25 AIR DUCT TIGHTNESS SHALL BE VERIFIED BY EITHER OF THE FOLLOWING, POST CONSTRUCTION TEST OR ROUGH-1N TEST

26 A MINIMUM OF 90% OF THE LAMPS IN THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH EFFICACY LAMPS PER IRC N1104 4

27 THE MAX HEIGHT AT BOTTOM OF THE OPERABLE SASH FOR ALL BEDROOM EGRESS WINDOWS SHALL NOT BE MORE THAN 44" MEASURED FROM FINISH FLOOR TO THE CLEAR OPENING PER IRC R3101

28 PROVIDE A 4 INCH DIAMETER MOISTURE EXHAUST VENT FOR CLOTHES DRYER, OR AS REQUIRED BY THE CLOTHES DRYER'S LISTING AND THE MANUFACTURERS INSTALLATION INSTRUCTIONS PROVIDED THAT IS TO BE PRESENTED PRIOR TO CONSTRUCTION. IRC SECTION M1502.4 & G2439.5

29 THE CLOTHES DRYER EXHAUST DUCT SHALL BE AT LEAST THE DIAMETER OF THE APPLIANCE OUTLET AND SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING . IT SHALL NOT EXCEED 35'-0" FROM THE CONNECTION TO THE TRANSITION DUCT FROM THE DRYER TO THE OUTLET TERMINAL WITH REDUCTIONS FOR BENDS. THE DUCT SHALL TERMINATE NOT LESS THAN 3'-0" FROM PROPERTY LINE IN ANY DIRECTION FROM OPENINGS INTO BUILDINGS, IRC M1502.3, M1502.4.4 & G2439.5.5.



FLOOR PLAN

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

PLAN KEY NOTES

1 NEW WOOD FRAMED WALL TO BE 2X6 STUDS SPACED AT 16" O.C. W/ 1/2" GYPSUM BOARD ON INTERIOR FACE OF WALL AND EXTERIOR FACE TO BE 3/8" STUCCO FINISH OVER METAL LATH OVER 1/2" PLYWOOD SHEATHING.

2 NEW WOOD FRAMED WALL TO BE 2X4 STUDS SPACED AT 16' O.C. W/ 1/2" GYPSUM BOARD ON BOTH SIDES OF WALL

3 EXISTING EXTERIOR CMU WALL TO REMAIN

4 EXISTING KITCHEN SINK

5 REFRIGERATOR

6 EXISTING PLUMBING FIXTURE TO REMAIN

7 EXISTING INTERIOR NON-BEARING WALL TO REMAIN

8 EXISTING 40 GAL WATER HEATER

9 RANGE - GAS

10 LANDING TO BE 4" BELOW FINISH FLOOR ELEVATION WITH A MINIMUM WIDTH OF 36" OF PATH OF TRAVEL

11 CLOTHE WASHER

12 CLOTHE DRYER - REFER TO GENERAL NOTE #28 & #29

13 NEW BATHTUB

14 NEW LAVATORY

15 NEW WATER CLOSET

16 EXISTING NON-BEARING WALL TO BE REMOVED

17 WOOD POST

18 200A SERVICE PANEL

19 GAS METER

I.E.C.C. NOTES

ALL MODIFICATIONS TO THE BUILDING ENVELOPE MUST COMPLY WITH THE FOLLOWING:
FENESTRATION
U-FACTOR – .40
SHGC – .25 OR BETTER

MIN. R-13 @ FRAME WALL & FLOORS
R-4 @ MASS WALLS OR R-13 LOCATED ON INTERIOR SIDE
R-38 @ CEILING
MIN. R-8 @ DUCT INSULATION LOCATED OUTSIDE THE BLDG ENVELOPE
MIN. R-6 @ DUCT INSULATION LOCATED IN FLOOR JOIST.
MINIMIZE AIR LEAKAGE PER IECC 402.

WINDOW SCHEDULE

-	SIZE (INCHES)		TEMPERED		EXISTING	NEW	
WINDOW	WIDTH	HEIGHT	YES	NO			STYLE
100	60	48		●	●		CASEMENT
101	48	48		●	●		SLIDER
102	30	48		●		●	HUNG

DOOR SCHEDULE

-		
A	DOOR	EXISTING 3'-0" x 6'-8" SOLID CORE WOOD ENTRY DOOR
	FRAME	SOLID WOOD FRAME
	HARDWARE	LEVER HANDLE HARDWARE WITH KEYED LOCK SET
B	DOOR	2'-6" x 6'-6" HOLLOW CORE WOOD DOOR
	FRAME	SOLID WOOD FRAME
	HARDWARE	LEVER HANDLE HARDWARE WITH PRIVACY LOCK SET
C	DOOR	2'-4" x 6'-6" HOLLOW CORE WOOD DOOR
	FRAME	SOLID WOOD FRAME
	HARDWARE	LEVER HANDLE HARDWARE WITH PRIVACY LOCK SET
D	DOOR	(2) - 2'-6" x 6'-8" SOLID CORE FRENCH DOOR W/ TEMPERED GLAZING
	FRAME	SOLID WOOD FRAME
	HARDWARE	LEVER HANDLE HARDWARE WITH KEYED LOCK SET
E	DOOR	2'-4" x 6'-6" SOLID CORE WOOD DOOR
	FRAME	SOLID WOOD FRAME
	HARDWARE	LEVER HANDLE HARDWARE WITH NO LOCK SET
F	DOOR	2'-6" x 6'-6" SOLID CORE WOOD DOOR
	FRAME	SOLID WOOD FRAME
	HARDWARE	LEVER HANDLE HARDWARE WITH KEYED LOCK SET

WALL LEGEND

- EXISTING EXTERIOR C.M.U. WALL TO REMAIN
- EXISTING INTERIOR / EXTERIOR WOOD STUD WALL TO REMAIN
- NEW EXTERIOR CMU WALL
- TYPICAL WALL TO BE DEMOLISHED
- NEW EXTERIOR FRAMED WALL
- NEW INTERIOR FRAMED WALL

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REVISIONS	DATE:

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

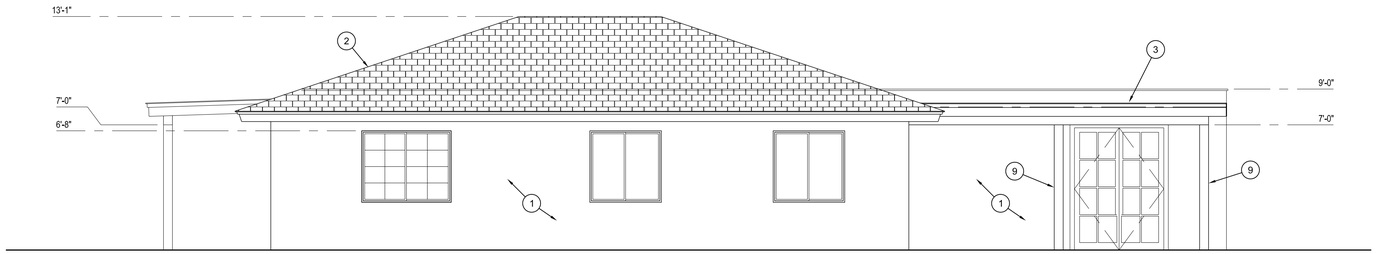
PROJECT NUMBER 2013

SHEET NUMBER

FLOOR PLAN

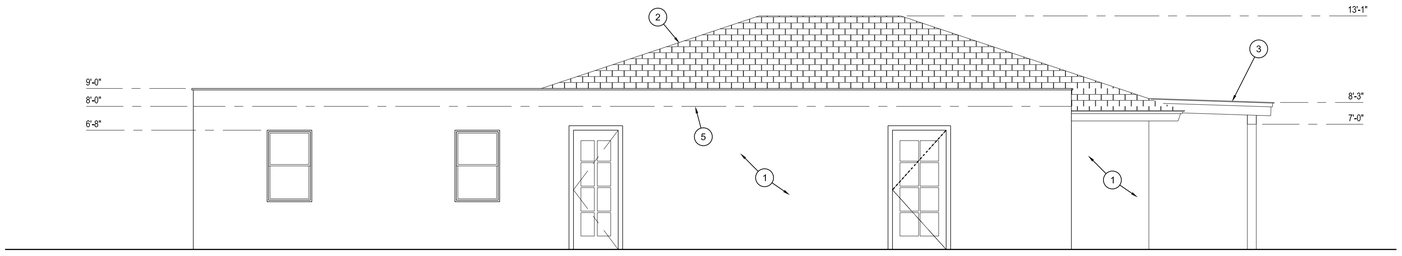
A10

PLOT DATE: 4.26.2020



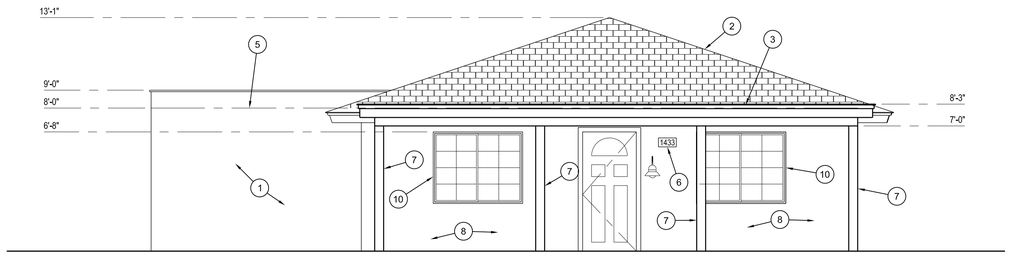
SOUTH ELEVATION

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



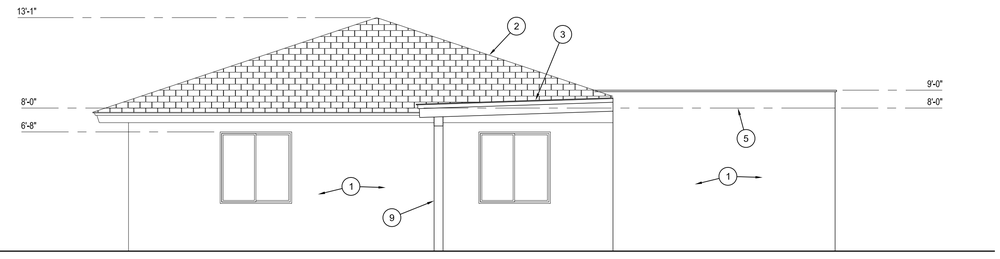
NORTH ELEVATION

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



WEST ELEVATION

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



EAST ELEVATION

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

PLAN KEY NOTES

1. EXTERIOR FINISH TO BE 3/8" WESTERN 1-KOTE STUCCO FINISH, ICC # ESR-2729 - PAINT TO MATCH EXISTING MAIN RESIDENCE
2. EXISTING ROOF ASPHALT SHINGLES, ICC # ESR-1475
3. ROLLED ASPHALT SELF ADHESIVE ROOFING, ICC #ESR-1274
4. NOT USED
5. LINE OF TOP OF PLATE / CEILING HEIGHT
6. SITE ADDRESS WITH NUMBERS "1433" - PROVIDE AT MINIMUM 4" HEIGHT AND MINIMUM 1/2" STROKE
7. NEW POST FOR FRONT PORCH - PAINT TO MATCH EXISTING RESIDENCE
8. EXISTING CMU PAINTED WALL TO REMAIN
9. NEW POST FOR COVERED PATIO - PAINT TO MATCH EXISTING RESIDENCE
10. EXISTING CASEMENT WINDOW SWINGING OUT - REPLACE ANY BROKEN GLASS. ALL FRAME TO REMAIN

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CHCKD BY: C. Dominguez
DATE: 3.02.2020

PROJECT NUMBER 2013

SHEET NUMBER

ELEVATIONS

A20

PLOT DATE: 4.26.2020

GENERAL

1 THE STRUCTURES DEPICTED HEREIN HAVE BEEN DESIGNED PRIMARLILY TO SAFEGUARD AGAINST MAJOR STRUCTURAL DAMAGE AND LOSS OF LIFE, NOT TO LIMIT DAMAGE OR MAINTAIN FUNCTION (2018 INTERNATIONAL RESIDENTIAL CODE).

2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEERS IN THIS OR SIMILAR LOCALITIES. THESE DRAWINGS ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND OR WORKMEN WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OR INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, IT IS UNDERSTOOD THAT THE CONTRACTOR WILL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR ALL MISCELLANEOUS WORK NOT EXPLICITYLY SHOWN ON THE DRAWINGS.

3. CALCULATIONS AND DESIGN OF MISCELLANEOUS NON-STRUCTURAL ITEMS, SUCH AS STAIRS, RAILING, NON-STRUCTURAL WALLS AND PREFABRICATED STRUCTURAL ITEMS, FOR EXAMPLE, FLOOR AND ROOF TRUSSES, ARE NOT INCLUDED AND ARE TO BE PROVIDED BY OTHERS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS.

4. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBLITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORMWORK, ETC... AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. CONSTRCUTION MATERIALS STACKED ON FLOOR OR ROOF FRAMING SHALL BE UNIFORMLY SPREAD OUT SUCH THAT DESIGN LIVE LOAD PER SUARE FOOT AS STATED HEREIN IS NOT EXCEEDED. VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT BE CONSIDERED AN INSPECTION, BUT AS A RESOURCE FOR THE CONTRACTOR.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING CODES, REGULATIONS AND SAFETY REQUIREMENTS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED BEFORE START OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHERE DISCREPANCIES OCCUR IN THESE DRAWINGS, NOTES, AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.

7. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 2018 INTERNATIONAL RESIDENTIAL CODE AND ANY OTHER REGULATORY AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.

8. OPENINGS, POCKETS, ETC... LARGER THAN 6 INCHES SHALL NOT BE PLACED IN SLABS, DECKS, BEAMS, JOISTS, COLUMNS WALLS, ETC. ULESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS, NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC, NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED ON STRUCTURAL MEMBERS SPECIFIED ON THE APPROVED STRUCTURAL DRAWINGS.

9. ASTM SPECIFICATIONS NOTED ON THESE CONSTRUCTION DOCUMENTS SHALL BE THE LATEST ACCEPTED VERSION.

10. STANDARD ABBREVIATIONS.

A.C.I	AMERICAN CONCRETE INSTITUTE	MFR	MANUFACTURER
A.F.F.	ABOVE FINISH FLOOR	MAX	MAXIMUM
A.IS.C.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MIN	MINIMUM
A.I.S.I.	AMERICAN IRON AND STEEL INSITITUTE	MISC	MISCELLANEOUS
A.N.S.I.	AMERICAN NATIONAL STANDARD INSTITUTE	N.T.S.	NOT TO SCALE
ARCH'L	ARCHITECTURAL PLANS AND SPECIFICATION	O.C.	ON CENTER
ALT	ALTERNATE	OPP	OPPOSITE
A.S.T.M	AMERICAN SOCIETY FOR TESTING AND MATERIALS	plf	POUNDS PER LINEAR FOOT
B.F.F.	BELOW FINISH FLOOR	psf	POUNDS PER SQUARE FOOT
B.O.B.	BOTTOM OF BEAM	psi	POUNDS PER SQUARE INCH
B.O.D.	BOTTOM OF DECK	SIM	SIMILAR
C.J.	CONTROL JOINT	SPEC	SPECIFICATION
CONT.	CONTINUOUS	STD	STANDARD
DIA	DIAMETER	T&G	TONGUE AND GROOVE
E.F.	EACH FACE	T.O.	TOP OF
EQ.	EQUAL	T.O.B.	TOP OF BEAM
E.W.	EACH WAY	T.O.D.	TOP OF DECK
F.F.	FINISH FLOOR	T.O.F.	TOP OF FOOTING
ft	FOOT	T.O.J.	TOP OF JOIST
GA	GAUGE	T.O.L.	TOP OF LEDGER
GLB	GLULAM BEAM	T.O.M.	TOP OF MASONRY
G.S.N.	GENERAL STRUCTURAL NOTES	T.O.S.	TOP OF STEEL
HSS	HOLLOW STRUCTURAL SECTION	T.O.W.	TOP OF WALL
I.B.C.	INTERNATIONAL BUILDING CODE	T.W.I.	TOP OF WROUGHT IRON
k	KIP (1,000 LBS)	TYP	TYPICAL
K.O.	KNOCKOUT	U.B.C.	UNIFORM BUILDING CODE
ksi	KIPS PER SUARE INCH	U.N.O.	UNLESS NOTED OTHERWISE
L.L.H.	LONG LEG HORIZONTAL	VERT	VERTICAL
L.L.V.	LONG LEG VERTICAL		

BASIS FOR DESIGN

BASIS OF DESIGN

1. 2018 INTERNATIONAL RESIDENTIAL CODE / WITH CITY OF PHOENIX AMENDMENTS.

2. ROOF LIVE LOADS = 20 PSF MAX
   (VARIES DUE TO SLOPE)
   ROOF DEAD LOADS (CLAY TILE) = 20 PSF

3. WIND DESIGN
   BASIC WIND SPEED (3-SEC. GUST) = 115 MPH
   IMPORTANCE FACTOR = 1.0
   WIND EXPOSURE = C

4. SEISMIC DESIGN
   IMPORTANCE FACTOR = 1.0

   SDS = 0.213
   SDI = 0.096
   SITE CLASS = D
   SEISMIC DESIGN CATEGORY = B
   LATERAL FORCE RESISTING SYSTEM = WOOD SHEAR WALL
   BASE SHEAR = 0.033 W
   ANALYSIS PROCEDURE = EQUIVALENT METHOD

FOUNDATION

1. FOUNDATIONS WERE DESIGNED PER THE 2018 INTERNATIONAL RESIDENTIAL CODE MINIMUM REQUIREMENTS. IT IS RECOMMENDED BUT NOT REQUIRED THAT A SOILS REPORT BE ACQUIRED PRIOR TO OUR COMPLETING THE STRUCTURAL DESIGN FOR THIS PROJECT. IN THE EVENT THAT A GEOTECHNICAL REPORT IS NOT PROVIDED BY A REPUTABLE GEOTECHNICAL ENGINEER THE DESIGNER ON THIS PROJECT WILL NOT ASSUME THE LIABILITY FOR THE ENGINEERING EXPERTISE NORMALLY PROVIDED BY THE GEOTECHNICAL ENGINEER.

2. ALL FOOTINGS SHALL EXTEND 18" INCHES MINIMUM BELOW GRADE. GRADE IS DEFINED AS TO OF SLAB FOR INTERIOR FOOTINGS, LOWEST ADJACENT COMPACTED SUBGRADE (BUILDING PAD PRIOR TO PLACEMENT OF LANDSCAPE) OR NATURAL GRADE WITHIN 10 FEET OF BUILDING PERIMETER FOOTINGS. WHERE PERMANENT CONRETE OR PAVING EXTEND AT LEAST 1 FT FROM THE BUILDING AND IS LOCATED DIRECTLY ADJACENT TO THE BUILDING THE TOP OF FINISHED SURFACE MAY BE CONSIDERED GRADE. FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE FROM LOOSE DEBRIS, STANDING WATER OR UNCOMPACTED MATERIAL AT THE TIME OF CONCRET PLACEMENT.

3. ALLOWABLE DEAD PLUS LIVE LOAD SOIL PRESSURE = 1,000 PSF.

CONCRETE

1. 28-DAY CONCRETE COMPRESSIVE STRENGTH, f'c, SHALL BE 2500 PSI FOR ALL CONCRETE IN CONTACT WITH SOIL.

2. CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE ENGINEER. MIX DESIGNS SHOULD INCLUDE THE AMOUNT OF CEMENT, AGGREGATE (FINE & COARSE), WATER AND ADMIXTURES, MIX DESIGNS SHALL BE PROVDED A MINIMUM 2 WEEKS PRIOR TO PLACEMENT TO ALLOW FOR REVIEW. MIX DESIGNS FOR CONCRETE SLABS SHALL BE PROPORTIONED SO AS TO MINIMIZE SHRINKAGE.

3. ADMIXTURES THAT CONTAIN CHLORIDE WILL NOT BE PERMITTED TO BE USED.

4. CONCRETE TEST CYLINDERS MUST BE TAKEN & TESTED IN ACCORDANCE WITH ACI STANDARDS FOR ALL POURS OF 50 YARDS OR MORE.

5. DO NOT ADD WATER TO CONCRETE AFTER PLACEMENT.

6. ALL CONCRETE THAT MAY CONTACT WATER ARE TO BE AIR-ENTRAINED PER ASTM C260, C494 & C618.

7. ALL CONCRETE SHALL BE NORMAL WEIGHT OF 145 POUNDS PER CUBIC FOOT USING HARDROCK AGGREGATES.

8. MAXIMUM SLUMP SHALL BE 5" ± 1" INCHES AND THE WATER SHALL BE CLEAN AND POTABLE.

9. PORTLAND CEMENT SHALL CONFORM TO ASTM C150. TYPE V CEMENT SHALL BE USED FOR CONCRETE IN CONTACT WITH THE SOIL. TYPE II CEMENT MAY BE USED ELSEWHERE. CEMENT SHALL BE TYPE V WITH POZZOLAN WHERE CONCRETE IS IN CONTACT WITH SOIL CONTAINING VERY SEVERE SULFATE EXPOSURE.

10. FLY ASH SHALL COMPLY WITH ASTM C-618, AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEING USED ON A PROJECT.

10.1 CEMENT CONTENT MAY BE REDUCED A MINIMUM OF 15 PERCENT UP TO A MAXIMUM OF 25 PERCENT WHEN COMPARED TO AN EQUIVALENT CONCRETE MIX DESIGN WITHOUT FLY ASH. FLY ASH CONTENT SHALL NOT COMPRISE MORE THAN 35 PERCENT OF THE TOTAL CEMENTIOUS CONTENT, THE WATER-CEMENT RATIO SHALL BE CALCULATED BASED ON THE TOTAL CEMENTOUS MATERIAL IN THE MIX.

10.2 CLASS 'F' FLY ASH SHALL BE USED IN SULFATE RESISTANT CONCRETE WITH f'c EQUAL OR GREATER THAN 4000 PSI. CLASS 'C' FLY ASHMAY BE USED IN LIEU OF CLASS 'F' FLY ASH WHERE CONCRETE IS NOT IN CONTACT WITH SOIL.

10.3 SHOULD THE CONTRACTOR ELECT TO USE EARLY STRENGTH CONRETE TO ACHIEVE THE SPECIFIED COMPRESSIVE STRENGTH, f', AT LESS THAN 28-DAYS, THE CONCRETE MIX DESIGN SHALL BE PROPORTIONED TO DEVELOP THE 28-DAY COMPRESSIVE STRENGTH AT THE REQURIED AGE. THE CONTRACTOR SHALL SUBMIT TEST DATA FOR REVIEW BY THE STRUCTURAL ENGINEER TO SUBSTRANTIATE THE CONCRETE STRENGTH AT THE REQUIRED AGE.

11. NO MORE THAN 90 MINUMTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT, AND CAN NOT EXCEED A TEMPERATURE OF 90°F UNLESS APPROVED BY THE ENGINEER IN WRITING.

12. CONCRETE MIXING, PLACEMENT AND QUALITY SHALL BE PER LATEST EDITION OF ACI 318. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. SLABS ON GRADE NEED BE VIBRATED ONLY AROUND AND UNDER FLOOR DUCTS, EMBEDDED ITEMS OR SIMILAR ELEMENTS. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONRETE. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL SO AS TO NOT CAUSE SEGREGATION OF AGGREGATES. UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED FIVE FEET.

13. ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. SHALL BE SECURELY POSITIONED IN THE FORMS PRIOR TO PLACEMENT OF THE CONCRETE.

14. CONCRETE SLAB ON GRADE CONTROL JOINTS SHALL BE PER THE TABLE BELOW OR AS NOTED ON THE FOUNDATION PLAN OR STANDARD DETAIL. KEYED OR DOWELED CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT OF THE CONCRETE. ALL OTHER JOINTS MAY BE SAW CUT. POST-TENSIONED CONCRETE SLABS ON GRADE SHALL NOT HAVE CONTROL JOINTS UNLESS SPECIFICALLY NOTED ON THE PLANS. SAW CUT JOINTS ARE TO BE MADE IN SLAB PRIOR TO THE DEVELOPMENT OF VISIBLE SHRINKAGE CRACKS, WITHOUT CAUSING SPALLING OR CHIPPING OF THE CONCRETE SURFACE.

SLAB THICKNESS	MAXIMUM JOINT SPACING (EACH DIRECTION)
4"	10'
5"	12.5'
6"	15'

15. PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH DUE TO COLD OR HOT WEATHER IN ACCORDANCE WITH ACI 305 AND 306. CONTRACTOR SHALL TAKE SPECIAL CURING PRECAUTIONS TO MINIMIZE SHRINKAGE CRACKING OF CONCRETE SLABS.

16. CONSTRUCTION JOINTS OR POUR JOINTS IN STRUCTURAL ELEMENTS (BEAMS, COLUMNS, ELEVATED SLABS, ETC) NOT SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS REQUIRED PRIOR APPROVAL OF THE ENGINEER. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING PROPOSED JOINTS TO ENGINEER FOR APPROVAL.

17. PIPES, SLEEVES, CONDUITS, ETC. OF ANY MATERIAL SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY THE ENGINEER. EMBEDDED ITEMS SHALLNOT IMPAIR THE STRENGTH OF THE MEMBER.

REINFORCING STEEL

1. REINFORCING STEEL SHALL CONFORM TO REQUIREMENTS OF ASTM A615 AND CRSI SPECIFICATIONS AND HANDBOOK. REINFORCING SHALL BE GRADE 60 (Fy = 60 ksi) DEFORMED BARS FOR ALL BARS #4 AND LARGER AND ALL BARS USED FOR CONCRETE WALLS, BEAMS ELEVATED SLABS AND COLUMN PRIMARY REINFORCING. REINFORCING MAY BE GRADE 40 (Fy = 40 KSI) DEFORMED BARS FOR ALL BARS #3 AND SMALLER U.N.O. ON PLANS OR DETAILS. ALL REINFORCING TO BE WELDED SHALL BE ASTM A706, GRADE 60 LOW ALLOY WELDABLE STEEL.

2. ALL REINFORCING SHALL BE BENT COLD, ONE TIME ONLY, FIELD BENDING OF REBAR SHALL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED ON THE PLANS.

3. WELDING OF REINFORCING BARS, METAL INSERTS, AND CONNECTIONS SHALL CONFORM WITH AWS D1.4 AND SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS. REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706.

4. REINFORCING BAR SPACING SHOWN ON PLANS REPRESENT THE MAXIMUM ON CENTER SPACING. ALL BARS SHALL BE DETAILED AND PLACED PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION, AS SPECIFIED ON PLANS OR DETAILS. MINIMUM CLEAR SPACING BETWEEN PARALLEL REINFORCEMENT SHALL BE THE LARGER OF 1 1/2 TIMES NOMINAL BAR DIAMETER, 1 1/3 TIMES MAXIMUM AGGREGATE SIZE.

5. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AT LEAST 3" FOR CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH AND 1 1/2" MINIMUM COVER FOR CONCRETE CAST AGAINST FORMED EDGES OR TOP OF SLABS.

6. MINIMUM SPLICE LENGTHS SHALL BE EQUAL TO 48 BAR DIAMENTERS UNLESS NOTED OTHERWISE.

WOOD

1. STRUCTURAL SAWN LUMBER DESIGN VALUES SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) OR THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB). ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MATCH OF AN APPROVED LUMBER GRADING AGENCY. STRUCTURAL SAWN LUMBER COMPONENTS SHALL HAVE THE FOLLOWING MIN. GRADE U.N.O.

USE	MATERIAL
2X4 TOP PLATES	SPRUCE-PINE-FIR STUD GRADE
2X4 STUDS (UP TO 10'-0"), BLOCKING	SPRUCE-PINE-FIR STUD GRADE
2X6 STUDS (UP TO 10'-0") BLOCKING, TOP PLATES	SPRUCE-PINE-FIR STUD GRADE
2X6 STUDS (OVER 10'-0")	DOUGLAS FIR No 2
JOISTS AND OTHER	DOUGLAS FIR No 2
SAWN LUMBER 6X AND LARGER BEAMS AND POST	DOUGLAS FIR No 1

2. ALL SILL PLATES RESTING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR.

3. ALL BOLTS SHALL BE INSTALLED IN HOLES BORED WITH A BIT 1/16 INCH LARGER THAN THE DIA. OF THE BOLT. BOLTS AND NUTS SEATING ON WOOD SHALL HAVE CUT STEEL WASHERS UNDER HEADS AND NUTS, DING THREADS TO PREVENT LOOSENING. LAG BOLTS SHALL BE INSTALLED IN PRE-DRILLED HOLES BY TURNING WITH A WRENCH.

4. ALL NAILS EXCEPT 16d NAILS SHALL BE COMMON NAILS U.N.O. 16d NAILS MAY BE 16d SINKER, PNEUMATIC (P-NAIL), OR COMMON U.N.O. NAILS SHALL BE DRIVEN SO THAT HEADS ARE FLUSH WITH WOOD SURFACE. OVER- OR UNDER-DRIVEN NAILS WILL NOT BE ACCEPTABLE. MISC. NAILING SHALL BE PER IBC TABLE 2304.9.1 NAILING SCHEDULE.

NAIL SIZE	SHANK DIAMETER	LENGTH
16d COMMON	.162"	3 1/2"
16d SINKER	.148"	3 1/4"
16d BOX	.135"	3 1/2"
PNEUMATIC (P-NAIL)	.131"	3 1/4"
12d COMMON	.148"	3 1/4"
10d	.148"	3"
8d	.131"	2 1/2"

5. ALL PYWOOD LAYED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS SHALL BE C-D OR C-C SHEATHING STRUCTURAL II OR BETTER, EXPOSURE I CONFORMING TO IBC STANDARD SECTION 2304 AND SHALL CONFORM TO THE FOLLOWING NOMINAL THICKNESS SPAN RATING AND NAILING PATTERN U.N.O. AT UNBLOCKED EDGES, PROVIDE PLY CLIPS.

THICKNESS	SPAN RATING	EDGE NAILING	FIELD NAILING
3/8"	24/0	8d AT 6" O.C.	8d AT 12" O.C.
7/16"	24/16	8d AT 6" O.C.	8d AT 12" O.C.
15/32"	32/16	8d AT 6" O.C.	8d AT 12" O.C.
3/4"	48/24	10d AT 6" O.C.	10d AT 12" O.C.
1"	60/48	10d AT 6" O.C.	10d AT 12" O.C.
1 1/8"	48" O.C.	10d AT 6" O.C.	10d AT 12" O.C.

6. A.P.A PERFORMANCE RATED SHEATHING (OSB) MAY BE USED AS AN ALTERNATE TO PLYWOOD WITH PRIOR APPROVAL OF OWNER AND ARCHTIECT. RATED SHEATHING SHALL COMPLY WITH I.C.B.O. REPORT NO. NER-108, EXPOSURE 1, AND SHALL HAVE A SPAN RATING EQUIVALENT TO OR BETTER THAN THE PLYWOOD IT REPLACES. ATTACHMENT AND THICKNESS (WITHIN 1/32") SHALL BE THE SAME AS THE PLYWOOD IT REPLACES, INSTALL PER MFR'S RECOMMENDATIONS.

7. AT TRUSSED FLOOR AND/OR HIGH HEEL ROOF SYSTEMS, PROVIDE FULL HEIGHT PANEL BLOCKING PER G.S.N.

8. TYPICAL NAILING SCHEDULE.

TYPE OF CONNECTION	MINIMUM NAILING
JOIST OR TRUSS TO TOP PLATE, SILL, ETC	(3) 16d, TOENAIL
BRIDGING TO JOIST	(2) 8d, TOENAIL EACH END
SOLE PLATE TO JOIST OR BLOCKING	16d AT 16" O.C.
TOP PLATE TO STUD	(2) 16d, END NAIL
STUD TO SOLE PLATE (2X OR 3X)	(2) 16d AT 16" O.C. STAGGERED, EACH PIECE
DOUBLE OR MULTIPLE BUILT-UP STUDS	16d AT 16" O.C. STAGGERED, EACH PIECE
DOUBLE OR MILTIPLE TOP PLATES	16d AT 16" O.C. STAGGERED, EACH PIECE
BLCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE	(3) 16d, TOENAIL
RIM JOIST TO TOP PLATE	16d AT 8" O.C. TOENAIL
TOP PLATE, LAPS AND INTERSECTIONS	(2) 16d
CONT. HEADER, TWO OR MORE LAMINATIONS	16d AT 16" O.C. ALONG EACH EDGE, EA. PIECE
CEILING JOIST TO PLATE	(3) 16d, TOENAIL
CONTINOUS HEADER TO STUD	(3) 16d, TOENAIL
CEILING JOIST, LAP OVER PARTITION	(3) 16d
CEILING JOIST TO PARALLEL RAFTERS	(3) 16d
RAFTER OR TRUSS TO PLATE	(3) 16d, TOENAIL
BUILT-UP CORNER STUDS	16d AT 16" O.C. STAGGERED, EACH PIECE
BUILT-UP CHANNEL BLOCKING AT WALL INTERSTECTING SHEARWALL	16d AT 3" O.C., EACH PIECE
KING STUD TO BEAM (END)	(2) 16d AT 3" O.C. (4 MIN.)

NOTES

A. MINIMUM NAILING PER THIS SCHEDULE U.N.O. ON PLANS OR DETAILS
B. ALL NAILING IS FACE NAILING U.N.O. ON PLANS ORDETAILS
C. SEE FRAMING PLAN NOTES FOR TOP PLATE SPLICE CONNECTION
D. SEE IBC TABLE 2304.9.1 FOR CONDITIONS NOT LISTED

9. THE FOLLOWING STAPLE EQUIVALENTS MAY BE SUBSTITUTED FOR THE NAILS SPECIFIED ON THE PLANS.

NAIL SIZE	COMMON NAIL SPACING	STAPLES AND NAILS 14 GAUGE	15 GAUGE	16 GAUGE
6d	4"	5"	4"	3 1/2"
	6"	7"	6"	5"
	8"	9 1/2"	8"	6 1/2"
	10"	12"	10"	8 1/2"
	12"	14 1/2"	12"	10"
8d	4"	4"	3 1/2"	2 1/2"
	6"	6"	5"	4"
	8"	8"	6 1/2"	5 1/2"
	10"	10"	8"	6 1/2"
	12"	12"	10"	8"
10d	4"	3"	2 1/2"	2"
	6"	5"	4"	3 1/2"
	8"	6 1/2"	5 1/2"	4 1/2"
	10"	8"	7"	5 1/2"
	12"	9 1/2"	8"	6 1/2"

NOTE: PENETRATION IS THE DEPTH OF EMBEDMENT OF THE STAPLE OR NAIL INTO THEMAIN MEMBER REQUIRED TO ATTAIN ITS FULL CAPACITY (SHEAR VALVE) FOR LATERAL CAPACITY. (1" MIN. PENETRATION INTO MAIN FRAMING MEMBER)

10. GLU-LAM BEAMS AND COLUMNS SHALL BE DOUGLAS FIR COMBINATION 24F WITH EXTERIOR GLUE AND SHALL BEAR THE STAMP OF AN APPROVED INSPECTION AGENCY. GLULAM BEAMS SHALL BE 24F-V4 DF/DF FOR SIMPLE SUPPORTED BEAMS AND 24F-V8 FOR CONTINUOUS AND CANTILEVERED BEAMS. Fb = 2,400 PSI, Fv = 265 PSI, E= 1,800 KSI MINIMUM

WOOD TRUSSES

1. ALL PRE-FAB ROOF TRUSSES TO BE BY A CITY APPROVED MANUFACTURER. IT IS THE RESPONSIBILITY OF THE SUB-CONTRACTOR SUPPLYING ROOF TRUSSES TO PROVIDE ADEQUATE SPECIFICATIONS AND /OR OTHER INFORMATION TO SATISFY APPROVING AUTHORITIES. (UNLESS WAIVER IS USED).

2. PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED TO SUPPORT THEIR SELF WEIGHT, PLUS LIVE LOAD AND SUPERIMPOSED DEAD LEAD LOADS INCLUDING, BUT NOT LIMITED TO, ALL MECHANICAL AND OTHER EQUIPMENT, AND SHALL BE DESIGNED TO RESIST ALL DRAG FORCES, SHEARWALL UPLIFT AND DOWNWARD LOADS, AND OTHER SPECIAL LOADS NOTED ON THE DRAWINGS OR CALCULATIONS.

3. TRUSS MFR SHALL DESIGN FOR SPAN / 240 TOTAL LOAD DEFLECTION AND SPAN / 360 LIVE LOAD DEFLECTION

4. BRIDGING SIZE AND SPACING SHALL BE AS DESIGNED BY TRUSS MFR U.N.O.

5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, ERECTION DRAWINGS, AND DESIGN CALCULATIONS SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ARIZONA. SHOP DRAWINGS SHALL SHOW ANY SPECIAL DETAILS REQUIRED AT BEARING POINTS. ALL CONNECTORS SHALL HAVE CURRENT I.C.B.O. APPROVAL.

6. TRUSSES MAY BE OVERSPANNED TO ACCOMMODATE 30"x30" ATTIC ACCESS PROVIDED ROOF SHEATHING PANEL EDGES ARE BLOCKED AND EDGE NAILED AT OVERSPAN.

CONNECTION HARDWARE

1. U.N.O. ALL HANGERS, CLIPS, STRAPS, HOLDOWNS, MISC STRUCTURAL CONNECTORS, ETC. SHOWN ON PLANS OR DETAILS SHALL BE SIMPSON STRONG-TIE OR EQUAL. ALL HARDWARE SHALL BE INSTALLED WITH FASTENERS PER MFR'S SPECIFICATIONS.

2. MANUFACTURED HARDWARE SHALL BE AS NOTED ON THE DRAWINGS. ADDITIONAL ALTERNATIVES NOT LISTED BELOW MAY BE USED PROVIDED THEY HAVE EQUIVALENT CAPACITY FOR THE INTENDED APPLCIATION AND A CURRENT ICBO APPROVAL. ONE MANUFACTURER SHALL BE USED EXCLUSIVELY FOR EACH PROJECT. THE CONNECTOR FABRICATORS LISTED BELOW MAY BE USED AT THE CONTRACTOR'S DISCRETION:

   A) SIMPSON STRONG-TIE COMPANY INC., BREA, CALIFORNIA, SEE CURRENT CATALOGS FOR ALL CURRENT ICC REPORTS.

   B) USP LUMBER CONNECTORS, 2150 KITTY HAWK ROAD, LIVERMORE, CALIFORNIA 94550. SEE CURRENT CATALOGS FOR ALL CURRENT ICC REPORTS.

3. WHERE TRUSS MFR REQUIRES ADDITIONAL BEARING, AN APPROPRIATELY SIZED SIMPSON TIE CONNECTION SHALL BE PROVIDED. THE HARDWARE SHALL BE INSTALLED PER MFR SPECIFICATIONS.

DEFERRED SUBMITTAL

1. PREFABRICATED COMPONENTS, SPECIALTY ITEMS, OR DESIGN-BUILD ELEMENTS NOTED ON THE STRUCTURAL DRAWINGS, BUT WHICH REQUIRE THE MFR OR SUPPLIER TO PROVIDE THE DESIGN, MAY BE SUBMITTED TO THE ARCHITECT AND/OR ENGINEER FOR REVIEW AS A DEFERRED SUBMITTAL. DEFERRED SUBMITTALS REQUIRED BY THE STRUCTURAL ENGINEER OF RECORD SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

   - WOOD TRUSSES

2. DEFERRED SUBMITTALS SHALL INCLUDE CALCULATIONS AND DRAWINGS PREPARED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ARIZONA (SPECIALTY ENGINEER) SHOWING LOCATION AND MAGNITUDE OF LOADS, CONFIGURATION AND SIZE OF MEMBERS, AND COMPATIBILITY OF SUBMITTAL ITEM WITH THE PRIMARY STRUCTURAL SYSTEM.

3. IF A TRUSS WAIVER IS SUBMITTED AT THE TIME OF PLAN REVIEW THE ENGINEER REVIEWED AND APPROVED TRUSS DESIGNS SHALL BE ATTACHED TO THE FIELD SET OF CITY APPROVED PLANS BEFORE ANY ROOF, SHEATHING, OR FRAMING INSPECTION.

4. THE PURPOSE OF THE STRUCTURAL ENGINEER'S REVIEW SHALL BE LIMITED TO DETERMINING THAT THE DRAWINGS AND CALCULATIONS HAVE BEEN PROPERTY SEALED, THAT THE LOAD CRITERIA IS IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE IBC, THAT CONNECTIONS TO THE PRIMARY STRUCTURE ARE COMPATIBLE WITH THE PRIMARY DESIGN,AND THAT THE PRIMARY STRUCTURE IS CAPABLE OF SUPPORTING THE IMPOSED LOADS.

5. THE STRUCTURAL ENGINEER WILL RELY UPON THE SPECIALTY ENGINEER'S SEAL AS CERTIFICATION THAT THE DEFERRED SUBMITTAL ITEMS DESIGNED BY THE SPECIALTY ENGINEER COMPLY WITH THE CRITERIA SET FORTH IN THE CONTRACT DOCUMENTS AND APPLICABLE CODES AND STANDARDS. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSBILE FOR THE ADEQUACY OF DESIGNS PROVIDED BY OTHERS.

6. ALLOW SEVEN (7) WORKING DAYS FOR THE ENGINEER'S REVIEW ONE COPY OF EACH SUBMITTAL WILL BE RETAINED FOR THE EGINEER'S RECORDS.

SPECIAL INSPECTION NOTES:

1. ALL SPECIAL INSPECTIONS REQUIRED SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 1704 AND 1707 OF THE 2018 INTERNATIONAL BUILDING CODE.

2. IN ADDITION TO STANDARD INSPECTION BY THE BUILDING OFFICIAL REQUIRED PER IBC SECTION 109, THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE INSPECTION DURING CONSTRUCTION FOR THE TYPES OF WORK LISTED BELOW.

3. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

4. THE SPECIAL INSPECTOR SHALL INSPECT THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED CONTRACT DRAWINGS AND SPECIFICATIONS. SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BULDING OFFICIAL. THE ENGINEER OF RECORD AND OTHER DESIGNATED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED IN A REASONABLE PERIOD OF TIME, THE ENGINEER AND THE BUILDING OFFICIAL SHALL BE NOTIFIED. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE CODE PROVISIONS.

5. INSPECTORS SHALL INSPECT FROM AN APPROVED SET OF CONTRACT DRAWINGS, SHOP DRAWINGS SHALL NOT BE USED IN LIEU OF THE APPROVED CONTRACT DRAWINGS FOR INSPECTION PURPOSES.

6. CERTIFICATE OF APPROVAL REGARDING MATERIALS AND INSPECTION OF PREFABRICATED ITEMS SHALL BE PROVIDE IN ACCORDANCE WITH IBC SECTION 1703.

7. TYPES OF WORK TO BE INSPECTED BY THE SPECIAL INSPECTOR ARE AS FOLLOWS:

7.1 DURING ALL EPOXY ANCHORING INSTALLATIONS FOR BOLTS, REBAR, THREADED ROD, ETC. INCLUDING VERIFICATION OF BOLT OR BAR MATERIALS, HOLE DEPTH AND DIAMETER, HOLE CLEANOUT, EPOXY MIXING AND PLACEMENT PROCEDURES, AND EMBEDMENT DEPTH IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND THE MFR'S SPECIFICATIONS AND RECOMMENDATIONS.

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☐ Bid Set
■ Submittal Set
☐ Construction Set

REVISIONS	DATE:
1	
2	
3	
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DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

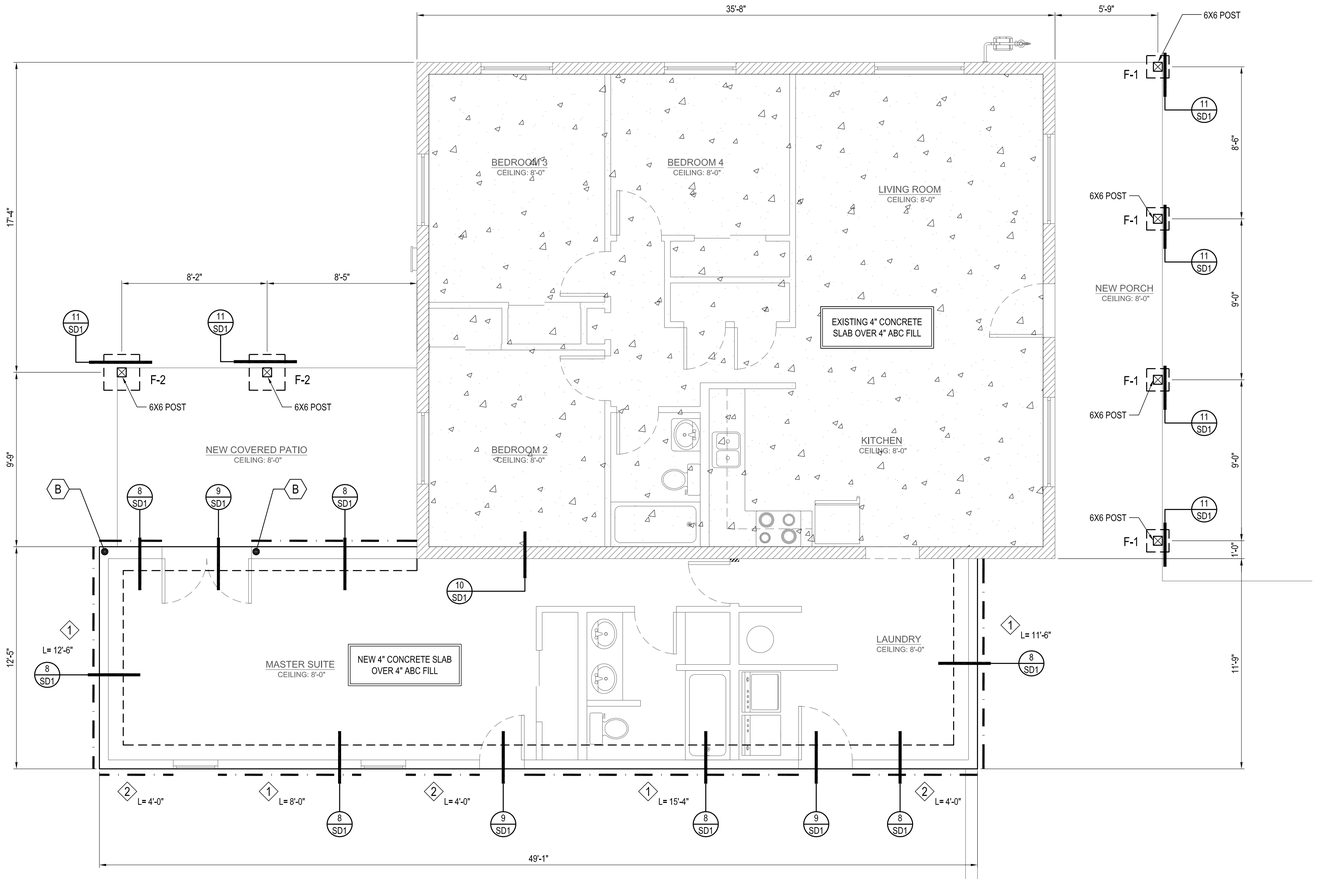
PROJECT NUMBER 2013

SHEET NUMBER

GENERAL STRUCT NOTES

GSN

PLOT DATE: 4.14.2020



FOOTING SCHEDULE	
MARK	DESCRIPTION
F1	15" SQ X 12" THICK W/ (3) #4 EA. WAY
F2	2'-0" SQ X 12" THICK W/ (3) #4 EA. WAY

NOTE:
FOOTINGS LOCATED UNDER INTERIOR POSTS SHALL BE 18" THICK INSTEAD OF DEPTH GIVEN ABOVE AND INSTALLED SIMILAR TO DETAIL 5/SD1

FOUNDATION PLAN NOTES:

1. FINISH FLOOR SHALL BE 6" MINIMUM ABOVE ADJACENT FINISHED GRADE AND 14" MINUMUM ABOVE ELEVATION OF THE STREET GUTTER OR INLET OF AN APPROVED DRAINAGE DEVICE.
2. VERIFY LOCATION OF ALL INSERTS IN SLAB WITH ARCHITECTURAL PLANS PRIOR TO PLACEMENT OF CONCRETE SLAB ON GRADE.
3. CONCRETE SLAB ON GRADE SHALL BE 4" THICK OVER A MINIMUM 4" A.B.C. FILL OVER TERMITE TREATED SOIL U.N.O. REINFORCED WITH WIRE MESH REINFORCING (6X6 WI.4 X WI.4) OR #3 AT 16" O.C. EA. WAY CENTERED IN SLAB.
4. ALL EXTERIOR WALLS SHALL BE 2X6 STUDS @ 16" O.C. U.N.O.
5. PERIMETER FOOTINGS SHALL BE 12" WIDE X 24" THICK WITH (2) #4 BAR CONTINUOUS WTH 1/2" DIA. A.B. AT 48" O.C. U.N.O. IN SHEAR WALL SCHEDULE. MIN. SILL PLATE THICKNESS SHALL BE 2X U.N.O. FOOTING SHALL BE STEPPED IF REQUIRED TO MAINTAIN THE MIN. DEPTH OF EMBEDMENT SPECIFIED IN THE G.S.N.
6. THESE WALLS SHALL BE 2X8 STUDS @ 12" O.C. (DFL #2). ALL STUDS AND POSTS NOT INTERRUPTED BY WINDOWS SHALL EXTEND FULL HEIGHT (FOOTING TO UPPER ROOF WITH NO LAPS.
7. ▬ - ▬ - ▬ INDICATES INTERIOR OR EXTERIOR SHEAR WALL AND HOLD DOWN SCHEDULES.
8. INTERIOR WALL FOOTINGS SHALL BE 1'-4" WIDE AND EXTEND 6" PAST END OF WALL OR POST U.N.O. SEE DETAIL 5 ON SD1.
9. CORNERS AND END WALLS SHALL HAVE DOUBLE STUDS. ☒ INDICATES OTHER POST LOCATION UNDER BEAMS OR END OF SHEAR WALLS WITH DBL STUDS MIN. U.N.O.
10. BOTTOM OF ALL FOOTINGS TO BE 18" MINIMUM BELOW FINISH GRADE OR UNDISTURBED NATIVE SOIL OR ENGINEERED FILL UNLESS NOTED OTHERWISE IN A SOILS REPORT.
11. SLAB CONTROL JOINTS TO BE PLACED PER CONTRACTOR AT 15'-0" O.C. MAX
12. ALL FOOTINGS / STEM WALLS TO HAVE CORNER BARS AT CORNERS / INTERSECTIONS WITH 2'-0" LAP EACH WAY.
13. SHEATHING FOR ALL EXTERIOR WALLS SHALL BE 3/8" PLYWOOD OR OSB WITH 8d @ 6" EDGES AND 8d @ 12" FIELD U.N.O. IN SHEAR WALL SCHEDULE.

	SHEAR WALL SCHEDULE		SILL PLATE CONNECTION SCHEDULE	
MARK	MATERIAL	NAILING	2nd FLOOR BOT. PLATE NAILING	1st FLOOR SILL PLATE A.B.
1	3/8" CDX PLYWOOD - 1 SIDE BLOCKED	EDGES: 8d @ 6" O.C. FIELD: 8d @ 12" O.C.	16d @ 8" O.C.	1/2" Ø A.B. X 10" @ 32" O.C.
2	3/8" CDX PLYWOOD - 1 SIDE BLOCKED	EDGES: 8d @ 4" O.C. FIELD: 8d @ 12" O.C.	16d @ 4" O.C.	1/2" Ø A.B. X 10" @ 24" O.C.
3	3/8" CDX PLYWOOD - 1 SIDE BLOCKED	EDGES: 8d @ 3" O.C. FIELD: 8d @ 12" O.C.	NONE	1/2" Ø A.B. X 10" @ 16" O.C.
4	3/8" CDX PLYWOOD - 1 SIDE BLOCKED	EDGES: 8d @ 2" O.C. FIELD: 8d @ 12" O.C.	NONE	1/2" Ø A.B. X 10" @ 8" O.C.
5	SIMPSON SWD22X8X6 - SINGLE WALL GARAGE PORTAL	-	NONE	5/8" Ø PER SIMPSON REQUIREMENTS
6	SIMPSON SSW18X10 - STEEL STRONG WALL	-	NONE	NONE PER SIMPSON

NOTES:
1. PROVIDE DOUBLE FULL HEIGHT STUDS AT SHEAR WALL ENDS EXCEPT FOR SIMPSON SW AND / OR AS OTHERWISE NOTED, STUD SPACING SHALL NOT EXCEED 16" ON CENTER.
2. PROVIDE A MINIMUM OF TWO ANCHORS IN SHORTER WALLS. ANCHOR BOLTS AT END OF WALL SHALL NOT BE OVER 12" FROM THE END.

HOLD DOWN SCHEDULE		
MARK	DESCRIPTION	
A	SIMP. LTT20B W/ 10-d NAILS INTO MIN. (2) 2X STUDS	1/2" Ø WITH MIN. 7" EMBEDDED
B	SIMP. STHD10 W/ 24-16d SINKERS INTO MIN. (2) 2X STUDS	-
C	SIMP. HTT5 W/ 26-10d NAILS INTO MIN (2) 2X STUDS	5/8" Ø WITH MIN. 8" EMBEDDED
D	SIMP. HDU8-SDS2.5 INTO MIN. (2) 2X STUDS	7/8" Ø SIMP. PAB W/ 10" EMBED MIN.
E	SIMP. HDC 10/22-SDS2.5 INTO MIN. (2) 2X STUDS	7/8" Ø SIMP. PAB W/ 10" EMBED MIN.

FOUNDATION PLAN

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

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All services provided by A&E Design Group, LLC. are performed in compliance with the Arizona Revised Statutes governing the Board of Technical Registration and the provisions in Statute 32-144 allowing for a non-registrant to provide architectural services for single family residences of any size and commercial projects of two stories or less, less than 3,000 square feet of enclosed space, and intended for use by no more than 20 occupants.

VOLINI RESIDENCE REMODEL

1433 E. HALL ST.
TEMPE, AZ

☐ Conceptual / Preliminary Set
☐ Bid Set
■ Submittal Set
☐ Construction Set

REVISIONS	DATE:

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

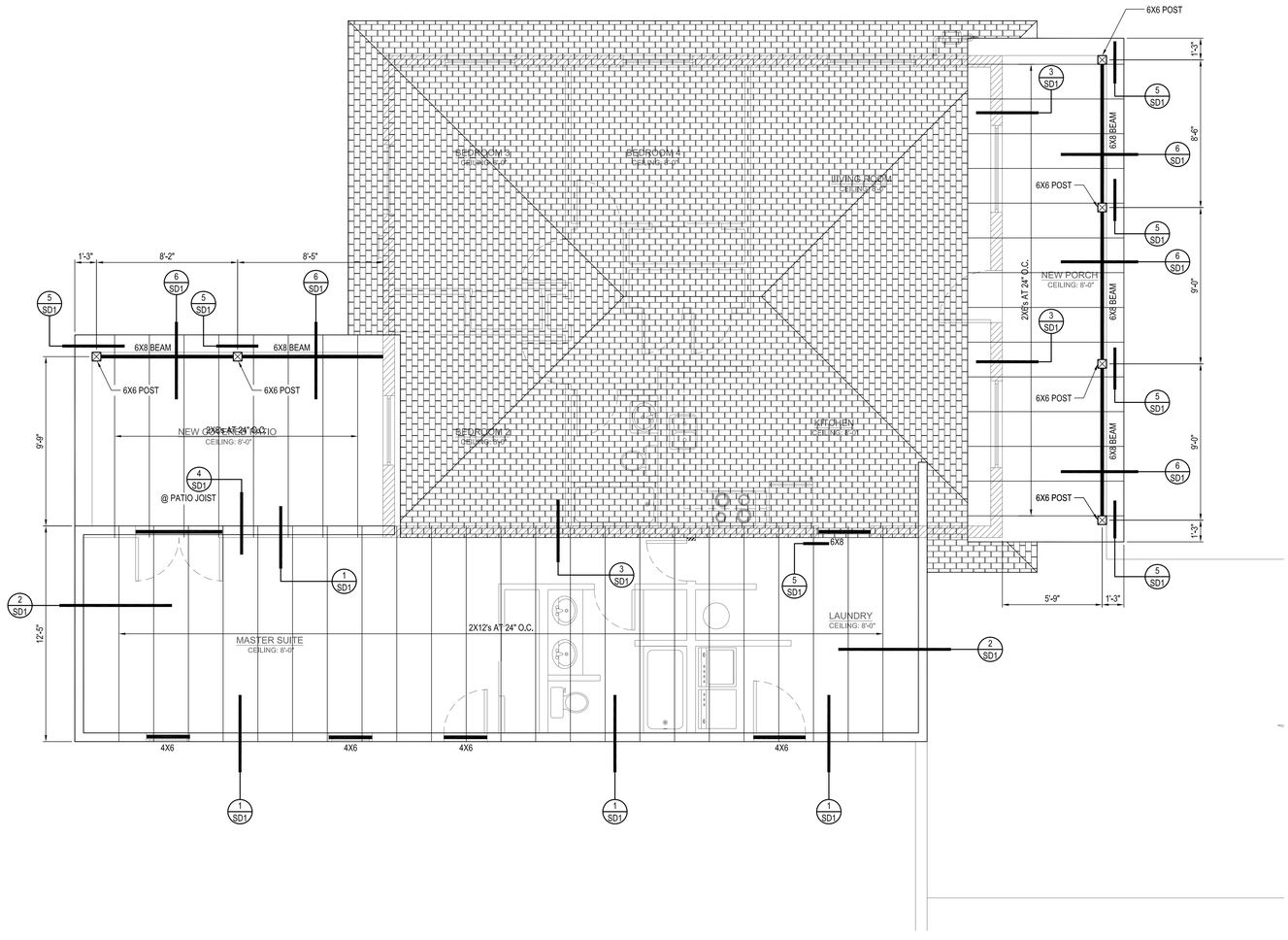
PROJECT NUMBER 2013

SHEET NUMBER

FOUNDATION PLAN

S1

PLOT DATE: 4.14.2020



PLAN KEY NOTES

1. 2X4 OVERFRAME PER DETAIL 208/SD3
2. UNVENTED, CONDITIONED ATTIC (NO VENTING REQUIRED) R806.4
3. 15/32" PLYWOOD ROOF SHEATHING - ATTACH PER GSN, TYP.
4. 6X6 WOOD POST, CENTER UNDER GIRDER TRUSS, TYP.

FRAMING PLAN NOTES

1. ALL T.O.B. AND B.O.B. CALLOUTS SHALL BE TAKEN FROM 0'-0" F.F. (TYP.)
2. ROOF DIAPHRAGM SHEATHING SHALL BE 15/32" APA RATED SHEATHING ATTACHED PER G.S.N.
3. FRAMING MEMBERS INDICATE TYPICAL MANUFATURED TRUSSES DESIGNED IN ACCORDANCE WITH THE BASIS FOR DESIGN OF THE G.S.N. AND SPACED AT 24" O.C. U.N.O.
4. TYPICAL EXTERIOR WALL AND INTERIOR BEARING WALL FRAMING SHALL BE 2X6 WOOD STUDS SPACED AT 16" O.C. U.N.O., (2) TRIMMER STUD SHALL BE PROVIDED TO ALL WOOD STUD WALL OPENINGS U.NO. AND (2) 2X POSTS AT ALL BEAMS AND GIRDER TRUSS SUPPORTS U.N.O. (2) KING STUDS SHALL BE PROVIDED AT ALL STUD WALL OPENINGS U.N.O.
5. TYP. DOUBLE TOP PLATE JOINT SPLICE SHALL HAVE A MMIMUM 6'-0" OVERLAP WITH (20) 16d NAILS EACH SIDE OF THE JOINT STAGGERED AND EVENLY SPACED WHERE REQUIRED OVERLAP AND/OR NAILING CANNOT BE ACHIEVED A SIMPSON MST148 STRAP MAY BE INSTALLED AND FULLY NAILED AT THE TOP PLATE SPLICE.
6. NOT USE
7. FOR TRUSS WAIVERS SEE DEFERRED SUBMITTALS SECTIONS OF THE G.S.N.
8. DESIGN DBL TRUSS FOR 2000 LB HORIZONTAL WIND APPLIED AT TOP CHORD, NAIL PLYWOOD TO TRUSS WITH 8d @ 6" NAILS, INSTALL SIMPSON 6215 STRAP TIE FROM WALL TOP PLATE TO TRUSS BOTTOM CHORD EA. END.
9. BOTTOM CHORDS OF ALL TRUSSES TO HAVE RIGID CEILING APPLIED OR SHALL BE BRACED AS PER TRUSS CALCS. "BOTTOM CHORD" NOTES
10. WHEN APPLICABLE - '☒' DENOTES (2) 2X6 POST OR EQUAL U.N.O. ON PLANS
11. INSTALL SIMPSON MSTC40 STRAP POST TO POST PER DETAIL 22/SD3
12. INSTALL SIMPSON MSTC52 STRAP POST TO POST PER DETAIL 23/SD3
13. FLOOR SHEATHING SHALL BE 3/4" APA RATED SHEATHING PER G.S.N.

CONNECTION SCHEDULE

KEY	SIMPSON	DESCRIPTION
①	HTU210	TRUSS TO BEAM
②	U24	CEILING JOIST TO BEAM
③	U210	JOIST / TRUSS TO BEAM
④	SUR/L 214	JOIST / TRUSS TO BEAM
⑤	LS 50	BEAM TO BEAM
⑥	HU48	BEAM TO CMU
⑦	HU48	22 1/2° SKEW BEAM TO CMU
⑧	HU48	45° SKEW BEAM TO CMU
⑨	HU210-2	BEAM TO BEAM
⑩	GLBA	BEAM TO CMU
⑪	HUSC48	BEAM TO POST
⑫	HU 5.125	45° SKEW BEAM TO BEAM
⑬	HUC410	BEAM TO CMU

SEE DETAILS AND PLAN NOTES FOR MORE CONNECTIONS

INTERIOR NON-BEARING HEADER SCHEDULE

SPAN	SIZE	SUPPORT
0' TO 6'-0"	2-2X6	1-TRIMMER
6'-1" TO 10'-0"	2-2X8	1-TRIMMER
10'-1" TO 13'-0"	2-2X10	2-TRIMMER
13'-1" TO 16'-0"	2-2X12	2-TRIMMER

CEILING FUR-DOWN SCHEDULE (WHEN APPLICABLE)

SIZE	SPACING	MAX SPAN
2X4	12" O.C.	11'-7"
	16" O.C.	10'-6"
	24" O.C.	9'-2"
2X6	12" O.C.	18'-2"
	16" O.C.	16'-6"
	24" O.C.	14'-5"
2X8	12" O.C.	24'-0"
	16" O.C.	21'-9"
	24" O.C.	18'-6"
2X10	12" O.C.	26'-0"
	16" O.C.	26'-0"
	24" O.C.	22'-7"

FRAMING PLAN

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

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REVISIONS	DATE:

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

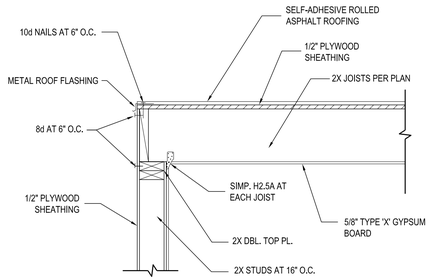
PROJECT NUMBER 2013

SHEET NUMBER

FRAMING PLAN

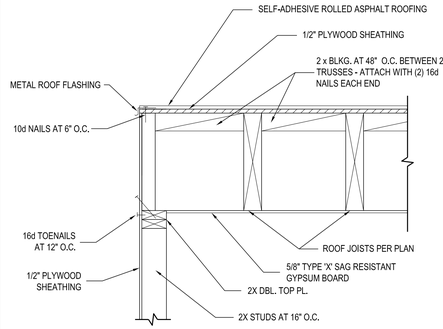
S2

PLOT DATE: 4.14.2020



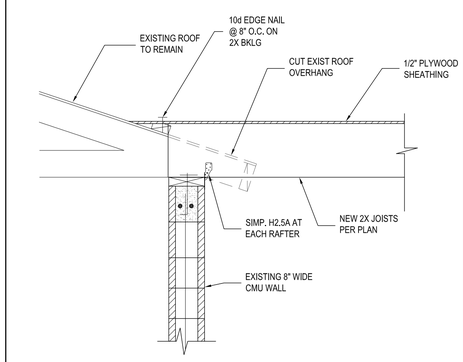
1 TYP. JOIST TO BEARING WALL DETAIL

3/4" = 1'-0" DETAIL: IRR-01



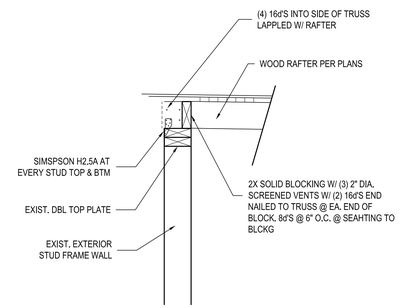
2 TYP. TRUSS DETAIL AT PARALLEL WALL

3/4" = 1'-0" DETAIL: IRR-01



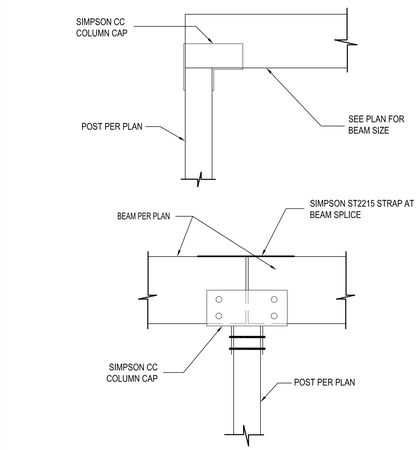
3 JOIST CONNECTION AT EXIST. CMU WALL

3/4" = 1'-0" DETAIL: IRR-01



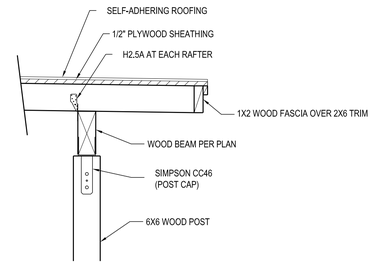
4 PATIO JOIST TO WALL CONNECTION DETAI

3/4" = 1'-0" DETAIL: IRR-01



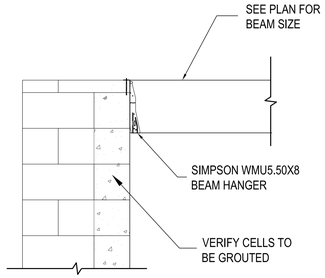
5 BEAM TO POST CONNECTION DETAIL

3/4" = 1'-0" DETAIL: IRR-01



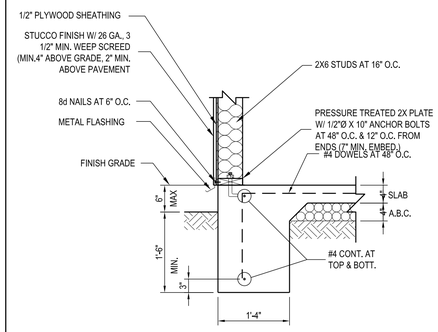
6 JOIST TO BEAM DETAIL

3/4" = 1'-0" DETAIL: IRR-01



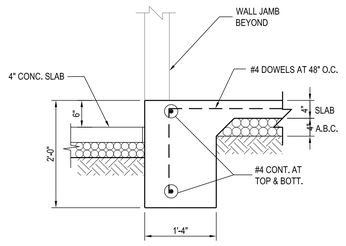
7 WOOD BEAM TO CMU WALL CONNECTION

3/4" = 1'-0" DETAIL: IRR-01



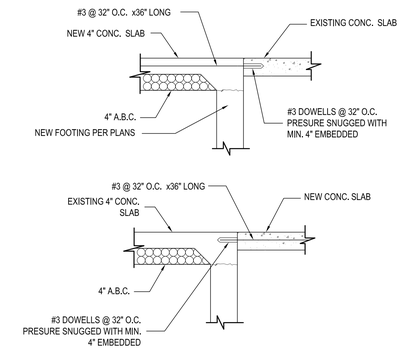
8 16" WIDE EXTERIOR TURN DOWN FOOTING

3/4" = 1'-0" DETAIL: IRR-01



9 16" WIDE EXTERIOR FOOTING AT OPENING

3/4" = 1'-0" DETAIL: IRR-01



10 NEW SLAB TO EXISTING SLAB

3/4" = 1'-0" DETAIL: IRR-01

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REVISIONS	DATE:

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

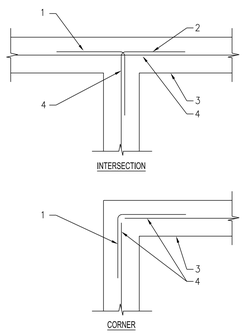
PROJECT NUMBER 2013

SHEET NUMBER

STRUCTURAL DETAILS

SD1

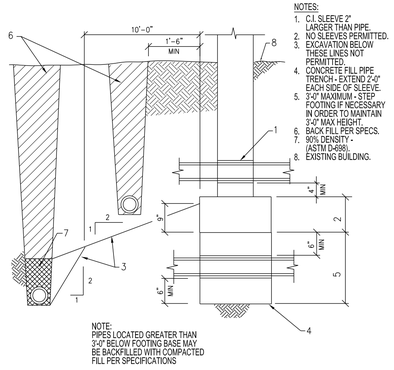
PLOT DATE: 4.14.2020



NOTES:
1. CORNER BARS SAME SIZE AND SPACING AS HORIZ. REINF. LAP PER G.S.N. (24" MINIMUM).
2. ALTERNATE BEND.
3. CONCRETE STEM WALL OR FOOTING.
4. REINF. PER PLANS AND/OR G.S.N.

151 PLAN VIEW - CORNER REINFORCING IN CONC.

3/4" = 1'-0" DETAIL: IRR-01

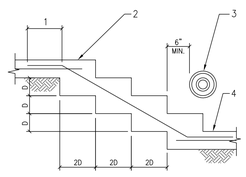


NOTES:
1. C.I. SLEEVE 2" LARGER THAN PIPE.
2. NO SLEEVES PERMITTED.
3. EXCAVATION BELOW THESE LINES NOT PERMITTED.
4. CONCRETE FILL PIPE TRENCH - EXTEND 2'-0" EACH SIDE OF SLEEVE.
5. 3'-0" MAXIMUM - STEP FOOTING IF NECESSARY IN ORDER TO MAINTAIN 3'-0" MAX HEIGHT.
6. BACK FILL PER SPECS.
7. 90% DENSITY - (ASTM D-698).
8. EXISTING BUILDING.

NOTE:
PIPES LOCATED GREATER THAN 3'-0" BELOW FOOTING BASE MAY BE BACKFILLED WITH COMPACTED FILL PER SPECIFICATIONS

152 TYPICAL PIPE THROUGH FOOTING AND TRENCH

3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. LAP PER G.S.N. (24" MIN.) - TYPICAL.
2. TOP OF WALL FOOTING.
3. PIPE THRU STEM WALL AS OCCURS - SEE TYPICAL DETAIL.
4. RETURN TO FOOTING THICKNESS AS SHOWN ON PLAN.

NOTE:
D = 2'-0" MAXIMUM.

153 TYPICAL STEP IN CONCRETE FOOTING

3/4" = 1'-0" DETAIL: IRR-01

CONC. PSI	CLASS B TENSION SPLICE LENGTHS							COMP. BARS
	f'c = 2,500 PSI f'c = 3,000 PSI		f'c = 4,000 PSI		f'c = 5,000 PSI AND HIGHER			f'c = ALL
BAR LOCATION	REGULAR CLASS	TOP CLASS	REGULAR CLASS	TOP CLASS	REGULAR CLASS	TOP CLASS	STD LAP	ENCLOSED W/ SPIRAL TIES
SIZE								
#3	24"	31"	19"	24"	17"	22"	12"	12"
#4	32"	41"	25"	33"	23"	29"	15"	12"
#5	39"	51"	31"	41"	28"	36"	19"	14"
#6	47"	61"	37"	49"	34"	43"	23"	17"
#7	69"	89"	54"	71"	49"	63"	26"	20"
#8	78"	102"	62"	81"	56"	72"	30"	23"
#9	88"	115"	70"	91"	63"	81"	34"	25"
#10	100"	129"	79"	102"	70"	92"	38"	29"
#11	110"	143"	87"	113"	78"	102"	42"	32"

NOTES:
1. TOP BARS ARE ANY HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
2. UNLESS NOTED OTHERWISE, LAP SPLICES IN CONCRETE BEAMS, SLABS AND WALLS SHALL BE CLASS "B" TENSION SPLICES. CONCRETE COLUMNS SHALL USE COMPRESSION LAP SPLICES.
3. CONTACT STRUCTURAL ENGINEER IF CENTER TO CENTER SPACING OF REINFORCING IS LESS THAN OR EQUAL TO 3 BAR DIAMETERS <3db OR 2db CLEAR SPACING BETWEEN BARS.
4. WHERE CLEAR COVER <db, MULTIPLY TENSION LAP SPLICE BY 1.5.
5. ALL SPLICES MUST BE FULL CONTACT.
6. WHERE REINFORCEMENT IS COATED WITH EPOXY, ZINC, ETC., INCREASE SPLICE LENGTHS PER ACI 12.2.4(8).

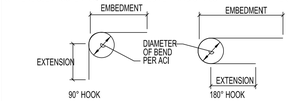
NOTE:
WHERE f'c FALLS BETWEEN THOSE NOTED IN TABLE USE LAP SPLICE LENGTHS FOR NEXT LOWEST f'c (i.e. IF f'c = 3,500 PSI USE LAPS FOR f'c = 3,000- PSI U.N.O.)

154 LAP SCHEDULE FOR REINFORCING STEEL

3/4" = 1'-0" DETAIL: IRR-01

BAR SIZE	HOOKED EMBEDMENT			EXTENSION		STRAIGHT BAR EMBEDMENT		
	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	90° HOOK	180° HOOK	5000 PSI	4000 PSI	3000 PSI
#3	6	6	6	4.5	2.5	13	14	16
#4	8	7	6	6.0	2.5	17	19	22
#5	10	8	7	7.5	2.5	21	24	27
#6	12	10	9	9.0	3.0	26	28	33
#7	13	12	10	10.5	3.5	37	42	48
#8	15	13	12	12.0	4.0	43	47	55
#9	17	15	13	13.5	4.5	48	54	62
#10	19	17	15	15.2	5.1	54	60	70
#11	22	19	17	16.9	5.6	60	67	77

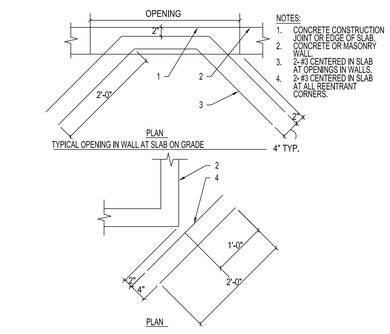
NOTES:
1.EMBEDMENT LENGTH IS BASED ON 2 1/2" MINIMUM SIDE COVER AND 2" MINIMUM END COVER.
2.CONTACT STRUCTURAL ENGINEER IF CENTER TO CENTER SPACING OF REINFORCING IS LESS THAN OR EQUAL TO 3 BAR DIAMETERS <3db OR 2db CLEAR SPACING BETWEEN BARS.
3.WHERE CLEAR COVER <db, MULTIPLY EMBEDMENT AND STRAIGHT BAR DEVELOPMENT BY 1.5.



NO SCALE

155 DOWEL DEVELOPMENT LENGTH IN TENSION (IN)

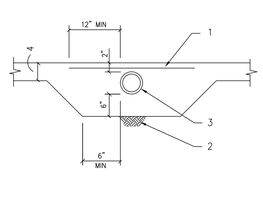
3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. CONCRETE CONSTRUCTION JOINT OR EDGE OF SLAB.
2. CONCRETE OR MASONRY WALL.
3. 2-#3 CENTERED IN SLAB AT OPENINGS IN WALLS.
4. 2-#3 CENTERED IN SLAB AT ALL REENTRANT CORNERS.

156 TYP. @ REENTRANT CORNERS IN SLAB ON GRADE

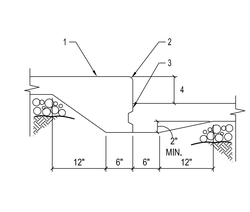
3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. 4 X 4 - W1.4 X W1.4 W.W.F. OR #4 AT 12" O.C.
2. FIRM UNDISTURBED SOIL OR COMPACTED BASE.
3. PIPE OR CONDUIT.
4. TYPICAL SLAB THICKNESS.

157 SLEEVE FOR PIPE AT SLAB

3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. CONCRETE SLAB ON GRADE.
2. TOOLED EDGE.
3. CONTINUOUS KEY - SEE TYPICAL KEY IN CONCRETE DETAIL.
4. 8" MAX. - VERIFY WITH ARCHITECTURAL DRAWINGS.

158 CONCRETE SLAB AT ELEVATION CHANGE

3/4" = 1'-0" DETAIL: IRR-01

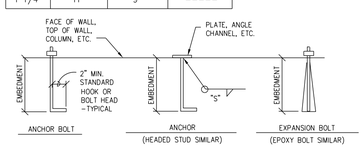
BOLT DIAMETER	VERT BOLT EMBEDMENT LENGTH	HORIZ BOLT EMBEDMENT LENGTH	HEADED STUD FILLET WELD SIZE, "S".
1/2"	7"	4"	1/4"
5/8"	7"	4"	5/16"
3/4"	7"	5"	5/16"
7/8"	8"	6"	5/16"
1"	9"	7"	3/8"
1 1/8"	10"	8"	-----
1 1/4"	11"	9"	-----

NOTES:
PROVIDE ANCHORS, ANCHOR BOLTS AND EXPANSION BOLTS PER THIS SCHEDULE UNLESS NOTED ON PLANS OR DETAILS.

EXPANSION OR ADHESIVE BOLTS USED IN MASONRY SHALL HAVE I.C.B.O. APPROVAL IN MASONRY.

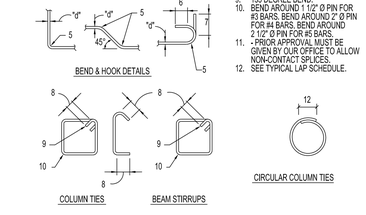
AT "ANCHORS" USE 3/16" FILLET WELD("S").

THICKNESS OF DRYPACK DOES NOT APPLY TOWARDS EMBEDMENT.



159 TYP. ANCHOR, A.B., AND EXPANSION BOLT SCHED

3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. LAP - SEE G.S.N.
2. MAXIMUM 1S LAP LENGTH BUT NOT MORE THAN 6".
3. WIRE TIES.
4. 1d (1" MINIMUM).
5. RADIUS=3d FOR BARS NOT OVER #8; 4d FOR #9, #10 AND #11 BARS; 5d FOR #14 AND #18 BARS.
6. 4d (12" MINIMUM).
7. 12d (90 DEGREE HOOK).
8. 6d (3" MINIMUM).
9. 135 DEGREE BEND.
10. BEND AROUND 1 1/2" Ø PIN FOR #3 BARS, BEND AROUND 2" Ø PIN FOR #4 BARS, BEND AROUND 2 1/2" Ø PIN FOR #5 BARS.
11. - PRIOR APPROVAL MUST BE GIVEN BY OUR OFFICE TO ALLOW NON-CONTACT SPLICES.
12. SEE TYPICAL LAP SCHEDULE.

160 TYP. CONCRETE REINFORCING BAR DETAILS

3/4" = 1'-0" DETAIL: IRR-01

161 TRENCH PARALLEL TO FOUNDATION

3/4" = 1'-0" DETAIL: IRR-01

162 TYP. THICKENED SLAB AT CONC. CLOSURE POUR

3/4" = 1'-0" DETAIL: IRR-01

NOTES:
1. MULTIPLE KING STUDS OR POST PER SHEARWALL HOLDOWN SCHEDULE - (SOLID POST REPLACES NUMBER OF KING STUDS OF EQUAL SIZE).
2. PROVIDE 1 ADDITIONAL KING STUD AT JAMBS TO COVER HEADS OF HOLDOWN BOLTS - BORE HOLES AS REQUIRED AT BOLTS - PROVIDE MIN. 3 KING STUDS AT DOUBLE HOLDOWN.
3. 2x CONTINUOUS SILL PLATE - 3 X OR DOUBLE 2x AS REQUIRED PER SHEARWALL NOTES AND SCHEDULES.
4. CONCRETE STEM WALL WITH REINF. PER PLANS AND DETAILS.
5. SIMPSON "HD" HOLDOWN PER PLAN.
6. ANCHOR BOLT PER SHEARWALL SCHEDULE.
7. CONCRETE FOOTING.
8. ALL-THREAD PER HOLDOWN SCHEDULE.
9. 8" AT HDU5, 10" AT HDU8, 12" AT HD9, AND 15" AT HD12 AND HD19.
10. 1/2"x4"x4" PLATE WASHER WITH DOUBLE NUTS.
11. 3" CLR AT ALL STEEL BELOW GRADE - THICKEN FOOTING AS REQD.
12. TRIM STUDS AS REQUIRED BY JAMB SCHEDULE.

NOTE:
* ALL-THREAD FOR SIMPSON HOLDOWN NOT TO BE CONSIDERED AS ANCHOR BOLT FOR SILL PLATE.
* AT CONTRACTOR'S OPTION WHERE EDGE DISTANCE AT ANCHOR EXCEEDS 2x EMBEDMENT DEPTH AND FOOTING DEPTH IS 1.5 TIMES EMBEDMENT, HILTI HY-150 MAX EPOXY ANCHOR MAY BE USED

163 SIMPSON 'HD' OR 'HDU' HOLDOWN

3/4" = 1'-0" DETAIL: IRR-01

NOTES:
1. MAXIMUM SLOPE BETWEEN BOTTOM OF FOOTINGS SHALL BE 45 DEGREES. STEP FOOTINGS AS REQUIRED - SEE TYPICAL DETAIL.
2. BOTTOM OF CONCRETE FOOTING.

NOTE:
FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS.

164 MAXIMUM SLOPE BETWEEN ADJACENT FOOTING

3/4" = 1'-0" DETAIL: IRR-01

- -

3/4" = 1'-0" DETAIL: IRR-01

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VOLINI RESIDENCE REMODEL

1433 E. HALL ST.
TEMPE, AZ

☐ Conceptual / Preliminary Set
☐ Bid Set
■ Submittal Set
☐ Construction Set

REVISIONS	DATE:

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

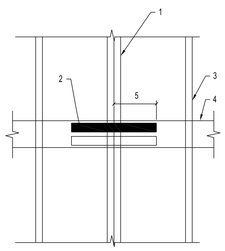
PROJECT NUMBER 2013

SHEET NUMBER

STD FOUNDATION DETAILS

SD2

PLOT DATE: 4.14.2020

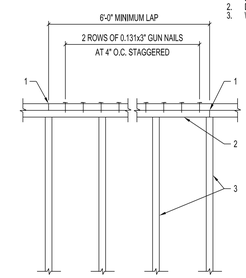


NOTES:
1. DOUBLE STUD AT SPLICE.
2. SIMPSON STRAP PER PLANS & DETAILS (DOUBLE STRAP WHERE NOTED ON PLANS).
3. WOOD STUD WALL..
4. WOOD LEDGER..
5. END LENGTH PER MANUFACTURER'S RECOMMENDATION FOR 100% CAPACITY - TYPICAL.

NOTE:
USE SIMPSON CMST12 STRAP U.N.O.

151 TYPICAL LEDGER SPLICE DETAIL

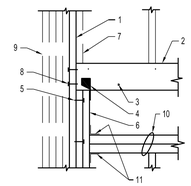
3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. TOP PLATE SPLICE OVER STUD ONLY.
2. DOUBLE TOP PLATE.
3. WOOD STUDS.

152 TYPICAL SPLICE OF TOP PLATES

3/4" = 1'-0" DETAIL: IRR-01



STRUCTURAL STUD WALL

OPENING WIDTH	HEADER AT BEARING WALL OR SHEAR WALL AS SHOWN ON STRUCTURAL DRAWINGS 2 X 6	2 X 4	HEADER AT OTHER INTERIOR WALLS
0'-0" TO 4'-0"	6 X 6	4 X 6	2 - 2 X 4
4'-1" TO 6'-0"	6 X 6	4 X 8	2 - 2 X 6
6'-1" TO 8'-0"	6 X 10	4 X 12	2 - 2 X 8
8'-1" TO 10'-0"	6 X 12	2 - 2 X 14	2 - 2 X 10

NOTES:
1. 2x JAMB CONTINUOUS TO TOP PLATE.
2. WOOD HEADER PER PLAN WHERE SPECIFIED, OTHERWISE PROVIDE HEADER AS SHOWN BELOW.
3. 16d AT 12" O.C. STAGGER AT BUILT UP HEADERS.
4. SIMPSON H3 EACH SIDE (2 TOTAL).
5. 16d AT 12" O.C. STAGGERED.
6. 2- 2x TRIMMER STUDS.
7. ADDITIONAL STUD AT OPENING 6'-0" OR WIDER.
8. 4- 16d EACH END.
9. MUTIPLE STUD PER OPENING SIZE:
   1 STUD WHEN OPENING < 2'-0"
   2 STUDS WHEN OPENING < 4'-0"
   3 STUDS WHEN OPENING < 6'-0"
   4 STUDS WHEN OPENING < 8'-0"
   5 STUDS WHEN OPENING < 10'-0"
10. 2x2x PLATE AT BOTTOM OF OPENING.
11. SIMPSON A35.

NOTE:
- HEADER SCHEDULE APPLIES UNLESS NOTED OTHERWISE ON FRAMING PLANS.
- AT OTHER INTERIOR (NON STRUCTURAL WALLS USE ONLY 1 JAMB AND 1 TRIMMER STUD (2 TOTAL).

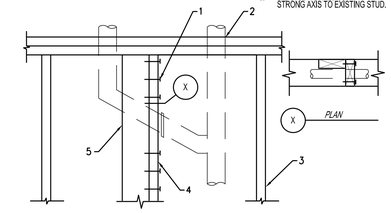
153 TYP. WOOD STUD HEADER DETAIL

3/4" = 1'-0" DETAIL: IRR-01

CONNECTION	NAILING
JOIST TO ALL SILL OR GIRDER, TIE NAIL	3 - 8d
BRIDGING TO JOIST, TOE NAIL EACH END	2 - 8d
PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16" O.C.
TOP PLATE TO STUD, END NAIL	2 - 16d
STUD TO PLATE	4 - 8d, TOE NAIL OR 2 - 16d, END NAIL
DOUBLED STUDS, FACE NAIL	16d AT 24" O.C.
DOUBLED TOP PLATES, FACE NAIL	16d AT 16" O.C.
TOP PLATE, LAPS AND INTERSECTIONS, FACE NAIL	2 - 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOE NAIL	3 - 8d
CONTINUOUS HEADER TO STUDS, TOE NAIL	4 - 8d
CEILING JOISTS, LAPS OVER PARITIONS, FACE NAIL	3 - 16d
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3 - 16d
RAFTER TO PLATE, TOE NAIL	3 - 8d
BUILT-UP CORNER STUDS	16d AT 24" O.C.

154 NAILING SCHEDULE - U.N.O. ON I.B.C.

3/4" = 1'-0" DETAIL: IRR-01

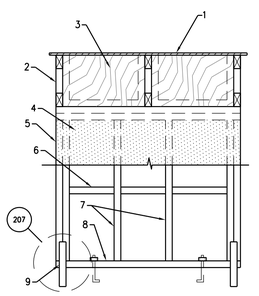


NOTES:
1. 16d NAILS AT 12" O.C.
2. PLUMBING PIPE AT TOP PLATE PER TYPICAL DETAIL.
3. 2x6 STUDS, TYP.
4. 2x6 STUDS WITH NOTCH/HOLE.
5. 2x6 STUD TURNED 90° - STRONG AXIS TO EXISTING STUD.

NOTE:
JOIST/RIMBOARD/BLOCKING NOT SHOWN FOR CLARITY.

155 ELEVATION - AT WOOD STUD WALL

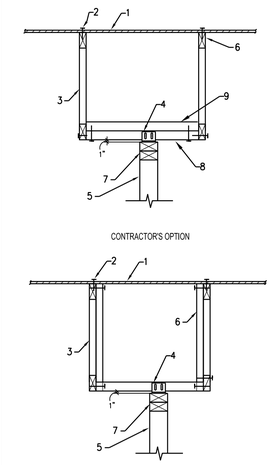
3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. ROOF SHEATHING.
2. ROOF TRUSSES.
3. PLYWOOD PANEL EACH BAY SEE DETAIL 203.
4. SHEARWALL SHEATHING SEE PLAN FOR TYPE AND LOCATION.
5. DOUBLE 2x STUDS AT END OF EACH SHEAR PANEL.
6. 2x SOLID BLOCKING AT SHEATHING JOINTS.
7. 2x STUDS AT 16" O.C.
8. 2x BASE PLATE - SEE SHEARWALL SCHEDULE FOR ANCHOR BOLT SPACING AND SIZE.
9. HOLDOWN SEE PLAN FOR TYPE AND LOCATION.

156 TYPICALONE STORY SHEAR PANEL

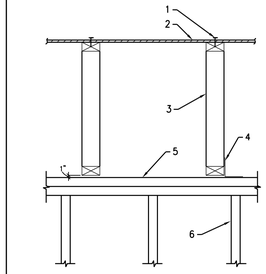
3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. PLYWOOD SHEATHING.
2. EDGE NAILING.
3. PREFABRICATED WOOD TRUSSES.
4. SIMPSON DTC CLIP.
5. 2x STUDS.
6. 2x4 FRAMING WITH 3- 16d NAILS AT TOP AND BOTTOM TRUSS CHORD.
7. DOUBLE TOP PLATE WITH 16d AT 12" O.C.
8. 2x4 (FLAT) AT 16" O.C. WITH 3-16d.
9. 2x4 (FLAT) AT 16" O.C. WITH 2- 16d END NAILS.

157 NON-BRG WALL BRACING AT TRUSSES OR TJI'S

3/4" = 1'-0" DETAIL: IRR-01

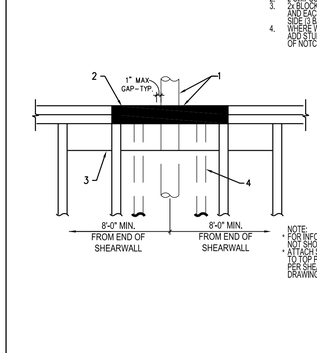


NOTES:
1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. PREFAB WOOD TRUSSES.
4. SIMPSON DTC CLIP AT 4'-0" O.C.
5. DOUBLE TOP PLATE WITH 16d AT 12" O.C.
6. 2x6 AT 24" O.C.

NOTE:
FOR EXACT LOCATION OF WALL, SEE ARCHITECTURAL DRAWINGS.

158 NON-BRG WALL BRACING AT TRUSSES OR TJI'S

3/4" = 1'-0" DETAIL: IRR-01

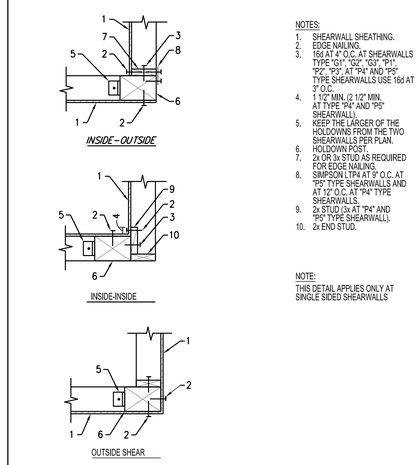


NOTES:
1. OVERBORED (NOTCHED OR GAP) PLATED PIPE.
2. 2 SIMPSON DTS2415 EACH SIDE.
3. 2x BLOCKING ADD AT PIPE (MIN EACH STUD BAY EACH SIDE IS 8WS MIN.
4. WHERE WALL IS A BEARING WALL, ADD STUD SUPPORT WITHIN 6" OF NOTCHED TOP PLATES.

NOTE:
- FOR INFORMATION AND NOTES NOT SHOWN SEE PLANS.
- ATTACH SHEATHING MATERIAL TO TOP PLATES AND BLOCKING PER SHEARWALL NOTES AND DRAWINGS.

159 PIPE IN SHEARWALL

3/4" = 1'-0" DETAIL: IRR-01



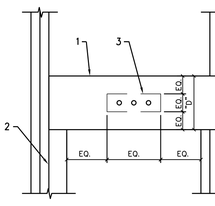
INSIDE - OUTSIDE

NOTES:
1. SHEARWALL SHEATHING.
2. EDGE NAILING.
3. 16d AT 4" O.C. AT SHEARWALLS TYPE "G1", "G2", "G3", "P1", "P2", "P3", AT "P4" AND "P5" TYPE SHEARWALLS USE 16d AT 3" O.C.
4. 1 1/2" MIN. (2 1/2" MIN. AT TYPE "P4" AND "P5" SHEARWALL).
5. KEEP THE LARGER OF THE HOLDOWNS FROM THE TWO SHEARWALLS PER PLAN.
6. HOLDOWN POST.
7. 2x OR 3x STUD AS REQUIRED FOR EDGE NAILING.
8. SIMPSON LTP4 AT 9' O.C. AT "P2" TYPE SHEARWALLS AND AT 12" O.C. AT "P4" TYPE SHEARWALLS.
9. 2x STUD (3x AT "P4" AND "P5" TYPE SHEARWALL).
10. 2x END STUD.

NOTE:
THIS DETAIL APPLIES ONLY AT SINGLE SIDED SHEARWALLS

160 PLAN VIEW - SHEARWALLS SHORING AT CONER

3/4" = 1'-0" DETAIL: IRR-01

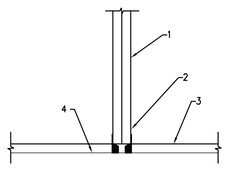


NOTES:
1. WOOD BEAM.
2. VERTICAL AND LATERAL SUPPORT MEMBERS PER NOTES, PLAND AND DETAILS.
3. ALLOWABLE ZONE FOR DRILLED HOLES - MAXIMUM "D"/12" WITHOUT SPECIAL PERMISSION FROM THE STRUCTURAL ENGINEER. DRILLED HOES UP TO "D"/4" MAX ALLOWED WHEN SPECIAL PERMISSION IS OBTAINED FROM THE STRUCTURAL ENGINEER PRIOR TO DRILLING HOLES TO BE DRILLED AND NOT SQUARE CUT.

NOTES:
- OBTAIN PERMISSION FROM THE STRUCTURAL ENGINEER AND MANUFACTURER PRIOR TO DRILLING OR NOTCHING
- ENGINEERED LUMBER PRODUCTS. ALL HOLES SHALL BE LOCATED COMPLETELY WITHIN THE
- ALLOWABLE ZONE AND SPACED A MINIMUM OF "D" INCHES ON CENTER.
- HOLES ARE NOT ALLOWED IN BEAMS SUPPORTING LOADS FROM POSTS OR OTHER BEAMS. DO NOT NOTCH WOOD BEAMS WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.

161 DRILLED HOLES IN WOOD BEAM

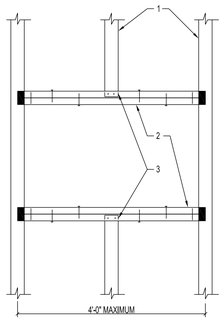
3/4" = 1'-0" DETAIL: IRR-01



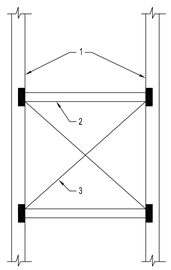
NOTES:
1. 2- 2x POST.
2. SIMPSON H2.5 AT EACH SIDE OF POST.
3. PRESSURE TREATED BASE PLATE.
4. TOP OF STEM WALL OR SLAB.

162 TYPICAL (2) 2X POST TO SILL PLATE DETAIL

3/4" = 1'-0" DETAIL: IRR-01



NOTES:
1. PREFABRICATED WOOD TRUSS NOTE: MANUFACTURER TO VERIFY TRUSS CAPACITY FOR MECHANICAL LOADS - MODIFY TOP AND BOTTOM CHORDS AS REQUIRED (MAINTAIN DEPTH).
2. DOUBLE 2x6 WITH SIMPSON HUS28-2TF HANGERS EACH END AND 16d AT 12" O.C.
3. SIMPSON HUTF TYPE HANGERS.

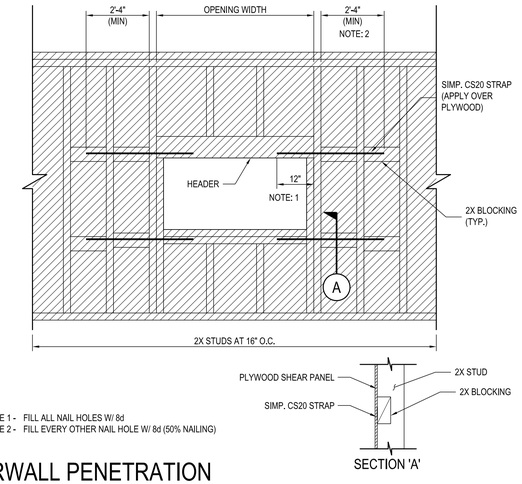


NOTES:
1. PREFABRICATED WOOD TRUSS.
2. 2x6 WITH SIMPSON FN TYPE HANGERS - TYPICAL.
3. OPEN.

NOTE:
PLYWOOD SHEATHING NOT SHOWN FOR CLARITY.

163 TYPICAL ROOF OPENING

SCALE DETAIL: DETTYPE



NOTE 1 - FILL ALL NAIL HOLES W/ 8d
NOTE 2 - FILL EVERY OTHER NAIL HOLE W/ 8d (50% NAILING)

164 SHEARWALL PENETRATION

SCALE DETAIL: DETTYPE

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VOLINI RESIDENCE REMODEL

1433 E. HALL ST.
TEMPE, AZ

- ☐ Conceptual / Preliminary Set
- ☐ Bid Set
- ■ Submittal Set
- ☐ Construction Set

REVISIONS	DATE:

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

PROJECT NUMBER 2013

SHEET NUMBER

STD FRAMING DETAILS

SD3

PLOT DATE: 4.14.2020

PIPING MATERIALS SHALL BE AS FOLLOWS:

DESCRIPTION	MATERIALS
SEWER DRAIN	ABS - SCHEDULE 40
SEWER VENT	ABS - SCHEDULE 40
WATERLINE COLD	BLUE PEX (CROSS-LINKED POLYETHYLENE)
WATERLINE HOT	RED PEX (CROSS-LINKED POLYETHYLENE)
GAS	YELLOW P.E. (POLYETHYLENE)

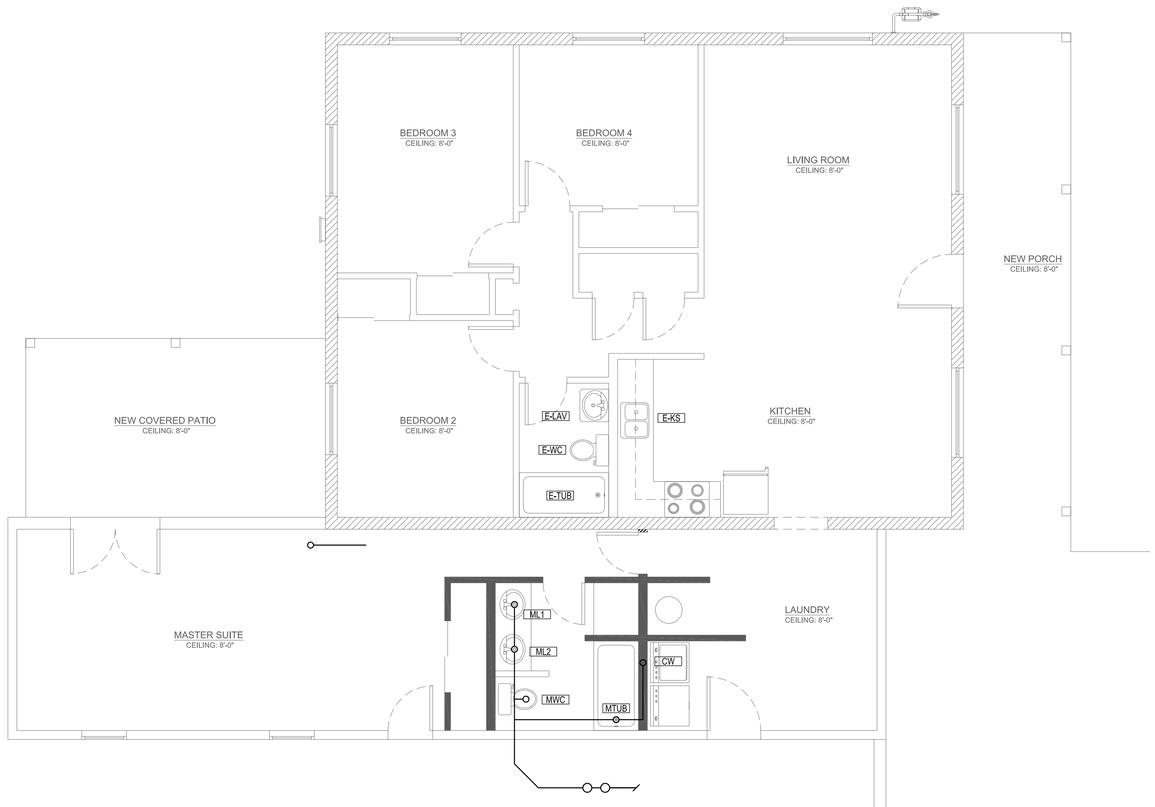
PLASTIC		METALLIC	
NOMINAL SIZE (IN)	MAXIMUM (GPM)	NOMINAL SIZE (IN)	MAXIMUM (GPM)
3/4	17	3/4	11
1	29	1	20
1 1/4	46	1 1/4	31
1 1/2	66	1 1/2	44

PLUMBING NOTES

1. GAS FUEL PIPING MATERIAL SHALL COMPLY WITH IRC G2414 OR AS NOTED ON PLUMBING ISOMETRICS.
2. GAS PIPING NON-METALLIC SHALL HAVE A TRACER WIRE AS SPECIFIED ON 2012 IFGC 404.17.3
3. INSTALL WATER CLOSETS AT 1.6 GALLONS PER FLUSH.
4. INSTALL SINKS AND SHOWERHEADS AT 2.5 GALLONS PER MINUTE
5. THE SIZE OF THE WATER SERVICE PIPE SHALL BE NOT LESS THAN 3/4 INCH (19 MM) DIAMETER. THE SIZE OF WATER SERVICE MAINS, BRANCH MAINS AND RISERS SHALL BE DETERMINED FROM THE WATER SUPPLY DEMAND [GPM (L/M)], AVAILABLE WATER PRESSURE [PSI (KPA)] AND FRICTION LOSS CAUSED BY THE WATER METER AND DEVELOPED LENGTH OF PIPE [FEET (M)], INCLUDING EQUIVALENT LENGTH OF FITTINGS. THE SIZE OF EACH WATER DISTRIBUTION SYSTEM SHALL BE DETERMINED ACCORDING TO DESIGN METHODS CONFORMING TO ACCEPTABLE ENGINEERING PRACTICE, SUCH AS THOSE METHODS IN APPENDIX P AND SHALL BE APPROVED BY THE CODE OFFICIAL PER P2903.7.
6. HOT WATER AND COLD WATER MANIFOLDS INSTALLED WITH PARALLEL-CONNECTED INDIVIDUAL DISTRIBUTION LINES AND COLD WATER MANIFOLDS INSTALLED WITH GRIDDED DISTRIBUTION LINES TO EACH FIXTURE OR FIXTURE FITTING SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS P2903.8.1 THROUGH P2903.8.5. GRIDDED SYSTEMS FOR HOT WATER DISTRIBUTION SYSTEMS SHALL BE PROHIBITED.

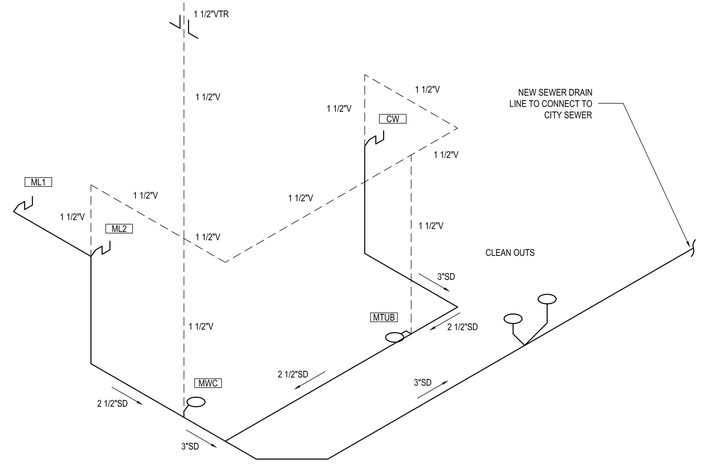
LEGEND

E-KS	EXISTING KITCHEN SINK
E-WC	EXISTING WATER CLOSET
E-LAV	EXISTING LAVATORY
E-TUB	EXISTING BATHTUB
ML1	LAVATORY AT MASTER SUITE
ML2	LAVATORY AT MASTER SUITE
MWC	WATER CLOSET AT MASTER SUITE
MTUB	BATHTUB AT MASTER SUITE
CW	CLOTHE WASHER



PLUMBING WASTE PLAN

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



SANITARY WASTE ISOMETRIC

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

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DATE: 3.02.2020

PROJECT NUMBER 2013

SHEET NUMBER

PLUMBING PLAN

P1

PLOT DATE: 4.14.2020

ELEC. GROUNDING NOTES:

1. ALL INTERIOR METALLIC WATER PIPING WHICH MAY BECOME ENERGIZED SHALL BE BONDED TOGETHER AND MADE ELECTRICALLY CONTINUOUS. A BOND OF BARE #4 COPPER WIRE SHALL BE MADE BETWEE THE BONDED PIPING SYSTEM AND THE ELECTRODE CONDUCTOR.

2. 20'-0" MIN. BARE COPPER WIRE CONDUCTOR (#4 MIN.) ENCASED BY 2" MIN. OF CONCRETE AT THE BOTTOM OF A FOOTING WHICH IS IN DIRECT CONTACT WITH THE ADJACENT EARTH.

3. 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 GROUNDING ELECTRODES USED.

4. ELECTRICAL RANGES AND CLOTHE DRYERS SHALL BE SUPPLIED BY 4-WIRE (GRND) CIRCUIT CONDUCTORS. NEC 250-140.

5. BATHROOM RECEPTACLE OUTLETS SHALL BE GFCI PROTECTED AND SUPPLIED BY AT LEAST ONE DEDICATED 20A BRANCH CIRCUIT THAT SUPPLIES NO OTHER LOADS. NEC 210-8, 210-52(D).

6. SUBSERVICE PANEL BOARDS SUPPLYING OR INTENDED TO SUPPLY POOL EQUIPMENT SHALL BE GROUNDED BY AN INSULATED EQUIPMENT GROUNDING CONDUCTOR INSTALLED WITH FEEDERS. NEC 680-25(D).

7. ALL OUTLETS IN AREAS SPECIFIED IN SECTION E3901.1, 125-VOLT, 15A AND 20A SHALL BE TAMPER RESISTANT PER E4002.14.

8. ALL CIRCUITS SHALL BE ON ARC-FAULT CIRCUIT INTERRUPTER (AFCI) CIRCUITS PER E3902.12.

9. ALL METAL PIPING SYSTEMS, METAL PARTS OF ELECTRICAL EQUIPMENT, AND PUMP MOTORS ASSOCIATED WITH HYDROMASSAGE TUB SHALL BE BONDED TOGETHER USING A COPPER BONDING JUMPER, INSULATED, COVERED, OR BARE, NOT SMALLER THAN NO. 8 SOLID.

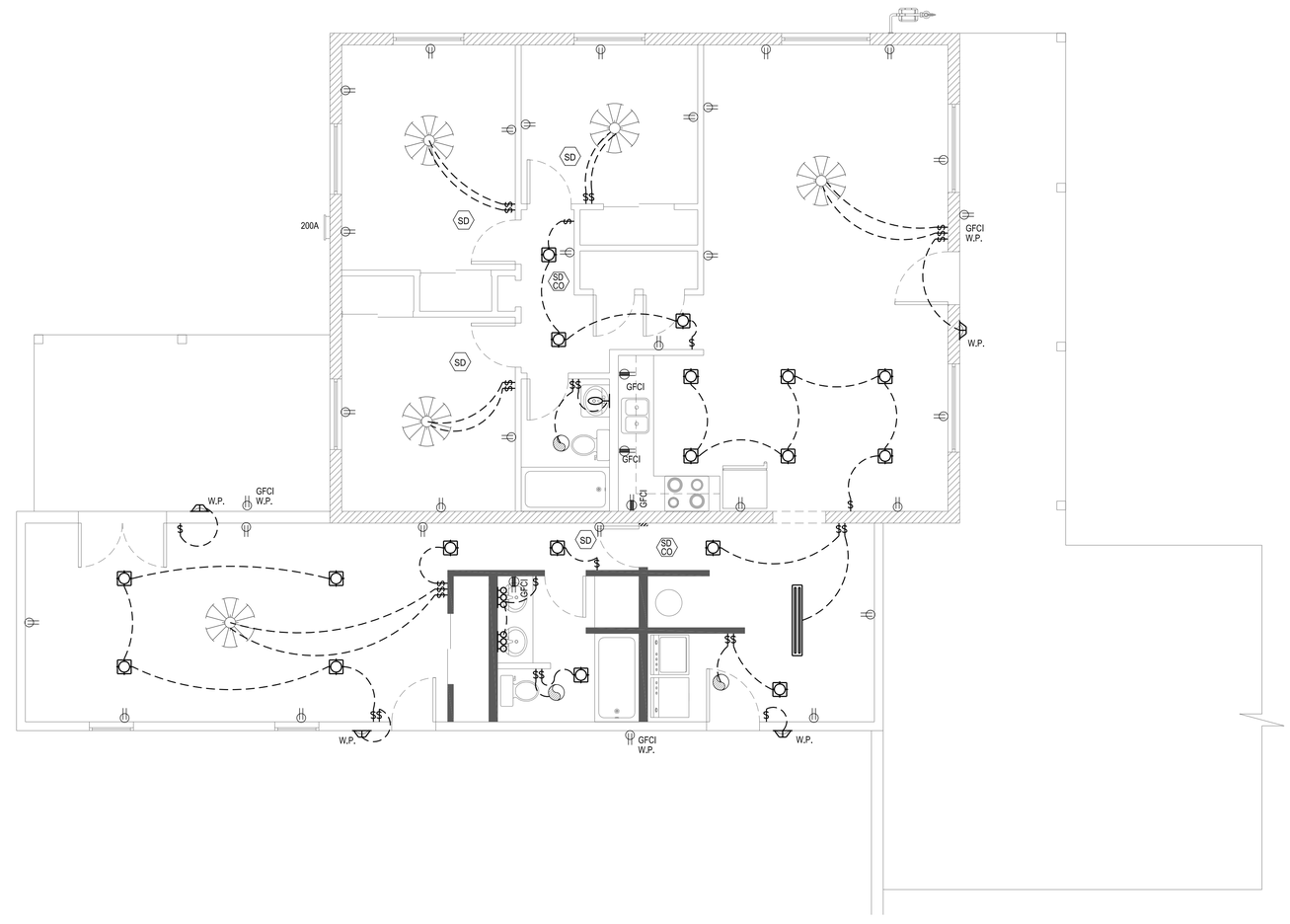
10. METAL PARTS OF LISTED EQUIPMENT INCORPORATING AN APPROVED SYSTEM OF DOUBLE INSULATION AND PROVIDING A MEAN FOR GROUNDING INTERNAL NONACCESSIBLE, NONCURRENT-CARRYING METAL PARTS SHALL NOT BE BONDED. PROVIDE GFCI PROTECTION FOR RECEPTACLE OUTLETS AT THE FOLLOWING LOCATIONS:

A) BATHROOMS
B) GARAGES
C) WORK AREAS
D) STORAGE
E) OUTDOORS
F) CRAWL SPACES
G) UNFINISHED BASEMENTS
H) KITCHEN COUNTERTOPS
I) WITHIN 6 FT OF ANY SINK, LAV. OR SIMILAR WATER RECEPTOR
J) HYDROMASSAGE OR JETTED BATHTUBS
K) POOLS
L) SPAS

LEGEND

- SINGLE OUTLET
- DUPLEX OUTLET
- DUPLEX OUTLET ABOVE COUNTERTOP SEE ELEC. NOTES
- DUPLEX 1/2 SWITCHED
- DOUBLE DUPLEX OUTLET
- TRIPLE DUPLEX OUTLET
- TRIPLEX OUTLET
- WP WATER PROOF
- 220V OUTLET
- FLOOR OUTLET
- CLG. / ATTIC OUTLET
- EQUIP. SERVICE DISCONNECT
- EXHAUST FAN TO OUTSIDE - 5 AIR CHANGES/HOUR MIN.
- EXHAUST FAN W/ LIGHT COMBO
- ATTIC FAN OULET
- CEILING FAN OUTLET W/ DUAL CONTROL SWITCH AND BACKING. SOLID=STD. DASHED=OPT'L CNTR, IN ROOM
- CEILING MOUNTED CHANDELIER
- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- DIMMER SWITCH
- DB DOOR BELL BUTTON
- GD GARAGE DOOR OPENER BUTTON
- CH CHIME
- TV T.V. CABLE
- PH PHONE JACK
- PB PULL-BOX
- PC PHOTOCELL
- TS THERMOSTAT
- TC TIME CLOCK
- CO 'CO' DETECTOR
- SD SMOKE DETECTOR
- ELECTRIC PANEL
- SECURITY SYS. CONTROL PANEL
- INTERCOM STATION
- CEILING MOUNTED PENDANT FIXTURE
- SURFACE MTD. LIGHT FIXTURE
- WALL MTD. FLSCT. LIGHT FIXTURE
- WALL MTD. TRACK LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- EXTERIOR WALL MOUNT LIGHT FIXTURE
- FLOOD LIGHTS- TRIANGLES INDICATE # OF LAMPS
- FLUORESCENT LIGHT FIXT. UNDER OVERHEAD CAB'S
- CEILING MOUNTED TRACK LIGHT FIXTURE
- SURFACE MTD. 2 LAMP 32W FIXTURE
- GARAGE DOOR OPENER WITH LIGHT AND OUTLET

A MINIMUM OF 90% OF THE LAMPS IN THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH EFFICACY LAMPS PER IRC N1104 4



ELECTRICAL PLAN

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

PLAN KEY NOTES

1 PROVIDE 30A/250V/2P NEMA3R DISCONNECT W/ RK5-40/2 FUSES

2 INSTALL 125V/15A RECEPTACLE OUTLET IN ATTIC SPACE FOR HVAC EQUIPMENT SERVICING. RECEPTACLE SHALL BE LOCATED ON SAME LEVEL AND WITHIN 25 FT OF HVAC EQUIPMENT. OUTLET IN ATTIC SPACE SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE HVAC EQUIPMENT

3 INSTALL RECEPTACLE OUTLETS BELOW COUNTER

4 NEW 200A SERVICE PANEL - SEE SHEET E2 FOR 1-LINE DIAGRAM

5 INSTALL SWITCH-CONTROLLED LIGHT IN ATTIC. LIGHT SHALL BE CONTROLLED BY A WALL SWITCH OR INTEGRAL SWITCH AND MUST BE LOCATED AT USUAL POINT OF ENTRY OF ATTIC ACCESS PER E3903.4

6 RECEPTACLES AT FIRE RATED WALLS MUST BE SEPARATED BY PROTECTING BOTH BOXES WITH LISTED PUTTY PAD OR BY OTHER LISTED MATERIALS AND METHODS TO COMPLY WITH E302.4.2 EXCEPTION #2.

ELECTRICAL NOTES

1. ELECTRICAL SERVICE TO BE 200 AMPS - U.N.O.

2. RECEPTACLES SHALL BE SPACED SO THAT THERE IS NO POINT ALONG THE FLOOR LINE WHICH IS MORE THAN 6'-0" FROM AN OUTLET. PROVIDE ONE OUTLET MIN. FOR EACH COUNTER SPACE IN KITCHEN WHICH IS 12" OR WIDER. (MAX. 4'-0" O.C.)

3. RECEPTACLES IN BATHROOMS, GARAGES, WITHIN 6'-0" OF KITCHEN, ALL SINKS, AND ANY EXTERIOR LOCATION SHALL BE GROUND FAULT INTERRUPTION SYSTEM (G.F.I.)

4A. SMOKE DETECTORS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND 3'-0" MIN. FROM DUCT OPENINGS, S.D.'S SHALL BE PERMANENTLY WIRED AND INTERCONNECTED AND SHALL PROTECT ALL SLEEPING AREAS., ALL S.D.'S SHALL HAVE BATTERY BACK-UP. 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. PROVIDE ADDITIONAL S.D.'S AS APPLICABLE.

4B. CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS WITHIN WHICH FUEL-FIRED APPLIANCES ARE INSTALLED AND IN DWELLINGS THAT HAVE ATTACHED GARAGES. SINGLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2034 AND SHALL BE INSTALLED IN ACCORDANCE WITH THIS CODE AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5. SWITCH PLATES AND OUTLET HEIGHTS: SWITCH PLATES - +46" TO C.L. OUTLETS - +12" TO C.L. KITCHEN OUTLETS - +44" TO C.L. BATHROOM OUTLETS - +44" TO C.L. WASHER & DRYER OUTLETS - +36" TO C.L. LAUNDRY OUTLETS - +46" TO C.L. GARAGE OUTLETS - +46" TO C.L. WATER HEATERS - +60" TO C.L.

6. ALL LIGHTING FIXTURES IN CLOSETS SHALL BE LOCATED 18" MIN. FROM ALL SHELVING.

7. PROVIDE ONE (MIN.) 20 AMP BRANCH CIRCUIT TO SERVE THE LAUNDRY ROOM. SUCH CIRCUIT SHALL HAVE NO OTHER OUTLETS

8. PROVIDE ONE (MIN.) 20 AMP BRANCH CIRCUIT TO SERVE THE NEW HVAC UNIT. SUCH CIRCUIT SHALL HAVE NO OTHER OUTLETS

9. BREAKERS THAT ARE TO BE APPROVED TO SUPPLY LIGHTING LOADS SHALL BE RATED FOR SWITCHING DUTY. PROVIDE HOT WIRE (NON-SWITCHED) FOR THE NIGHT LIGHT CIRCUIT ALL NIGHT LIGHT SHALL ALSO HAVE AN EMERGENCY BALLAST FOR EMERGENCY LIGHTING.

10. SMOKE DETECTORS SHALL BE INCLUDED IN ALARM SYSTEM WHEN APPLICABLE.

11. DRAWINGS ARE DIAGRAMATIC ONLY FOR THE PURPOSE OF SHOWING OUTLET LOCATIONS. OUTLETS TO BE INSTALLED WITH #12 COPPER WIRE ON 15-A BREAKER UNLESS NOTED OTHERWISE ON ELECTRICAL PANEL SCHEUDLE. ELECTRICAL CONTRACTOR TO COMPLY WITH ALL APPLICABLE CODES AND MFR'S WRITTEN INSTRUCTIONS FOR THE INSTALLATION AND WIRING.

12. ELECTRICAL CONTRACTOR TO VERIFY SERVICE SIZE BY CALCULATION BASED UPON ACTUAL NAME PLATE RATINGS OF SELECTED EQUIPMENT.

13. PROVIDE WATERPROOF FIXTURES IN ALL HIGH MOISTURE AREAS (EXTERIOR, SHOWER AND TUB CEILINGS, ETC.)

14. PROVIDE TWO SEPARATE 20 AMP CIRCUITS FOR KITCHEN / DINING AREA WHEN APPLICABLE.

15. CONTRACTOR TO PROVIDE AND INSTALL ELECTRICAL WORK, INCLUDING BUT NOT LIMITED TO INTERIOR LIGHTING AS SHOWN, JUNCTION BOXES FOR CEILING LIGHT/FAN, RECEPTACLES AS INDICATED AND TELEPHONE/DATA LINES. VERIFY FINAL LOCATIONS WITH OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE ELECTRICAL REQUIREMENTS FOR MECHANICAL AND PLUMBING WORK, PER 2017 N.E.C. AND APPLICABLE RULES, REGULATIONS, AND ORDINANCES.

16. PROVIDE AND COORDINATE DISCONNECTS, FUSES, OVERLOAD PROTECTION AND PROPER CONTROL & POWER WIRING FOR OTHER EQUIPMENT SUCH AS HVAC, MECHANICAL AND OTHER DETAILS, ACTUAL LOCATIONS, AND WIRE SIZES WITH THE RESPONSIBLE TRADES AND FOLLOW INSTALLATION WRITTEN INSTRUCTIONS FOR THE EQUIPMENT BEING INSTALLED.

17. PROVIDE COPPER WIRE THIN / THIN #12 MINIMUM. CONDUITS SHALL BE EITHER RIGID OR EMT AS ALLOWED BY CODE. CONDUIT EXPOSED TO THE ELEMENTS OR BURIED UNDERGROUND SHALL BE WRAPPED WITH SCOTCH 51 TAPE OR EQUAL.

18. ALUMINUM CONDUCTORS ARE NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT IN WRITING BEFORE BIDDING THE JOB.

19. FOR RECEPTACLE HOMERUNS OVER 65 LINEAL FEET, USE #10 AWG WIRE. FOR RECEPTACLE HOMERUNS OVER 115 FEET IN LINEAL FEET USE #8 AWG WIRE.

20. EQUIPMENT, RACEWAYS, ETC, SHALL HAVE PROPER GROUNDING PER NATIONAL ELECTRICAL CODE.

A&E DESIGN GROUP, LLC

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480.593.3466

All services provided by A&E Design Group, LLC. are performed in compliance with the Arizona Revised Statutes governing the Board of Technical Registration and the provisions In Statute 32-144 allowing for a non-registrant to provide architectural services for single family residences of any size and commercial projects of two stories or less, less than 3,000 square feet of enclosed space, and intended for use by no more than 20 occupants.

VOLINI RESIDENCE REMODEL

1433 E. HALL ST.
TEMPE, AZ

- ☐ Conceptual / Preliminary Set
- ☐ Bid Set
- ■ Submittal Set
- ☐ Construction Set

REVISIONS	DATE:
1	
2	
3	
4	
5	

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

PROJECT NUMBER 2013

SHEET NUMBER

ELECTRICAL PLAN

E1

PLOT DATE: 4.14.2020

PANEL SCHEDULE "A"					
110/240v, 1 PHASE 3 WIRE	TYPE: NEMA 3R		MOUNTING: SURFACE		MAIN: 200 AMP M.C.B.
USE	C.B.	#	#	C.B.	USE
A/C	40 / 2	1	2	20	GFCI / KITCHEN
		3	4	15	MICROWAVE - AFCI
DRYER	30 / 2	5	6	15	KITCHEN / DINING - AFCI
		7	8	15	DISPOSAL - AFCI
WATER HEATER	30 / 2	9	10	15	LIVING ROOM /HALLWAY - AFCI
		11	12	20	BATHROOM - GFCI
AIR HANDLER	20 / 2	13	14	15	BEDROOM 2 / 3 - AFCI
		15	16	15	BEDROOM 4 - AFCI
SPARE	15	17	18	15	GENERAL LIGHTS - AFCI
SPARE	15	19	20	15	MASTER SUITE - AFCI
SPARE	15	21	22	20	MASTER BATH - GFCI
SPARE	15	23	24	20	LAUNDRY - GFCI
SPARE	15	25	26	20	OUTDOOR - GFCI
SPARE	15	27	28	15	SPARE
SPARE	15	29	30	15	SPARE

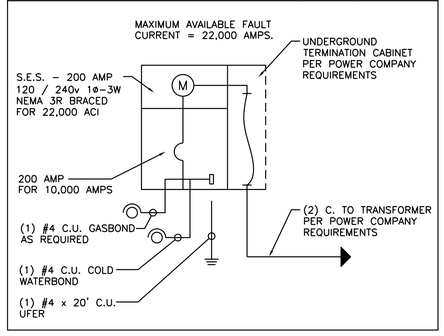
*UNUSED CIRCUITS WILL BECOME SPARES

NOTES:

1) ALL CIRCUITS AND CIRCUIT MODIFICATIONS SHALL BE LEGIBLY IDENTIFIED AS TO THEIR CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE, THE IDENTIFICATION SHALL INCLUDE AN APPROVED DEGREE OF DETAIL THAT ALLOWS EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS. THE IDENTIFICATION SHALL BE INCLUDED IN A CIRCUIT DIRECTORY LOCATED ON THE FACE OF THE PANEL BOARD ENCLOSURE OR INSIDE THE PANEL DOOR. 2018 IRC, SECTION E3706.2

2) BRANCH CIRCUITS THAT SUPPLY 120-VOLT, SINGLE PHASE, 15-AND 20-AMPERE OUTLETS INSTALLED IN KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUN-ROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS AND SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY ARCH-FAULT CIRCUIT INTERRUPTER PROTECTION PER 2018 IRC, E3902.16

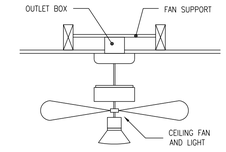
ONE LINE DIAGRAM (200A)



LOAD CALCULATION SCHEDULE		WATTS
LIVABLE AREA	1,580 SQ. FT.	
LIGHTING AND RECEPTACLE LOADS @ 3W / SQFT	3 X 1580 =	4740
LAUNDRY (MINIMUM OF 1 CIRCUIT @ 1,500 WATTS EACH)	1500	1500
APPLIANCE LOADS (MINIMUM OF 2 CIRCUIT @ 1,500 WATTS EACH)	-	3000
DRYER	5000	5000
DISHWASHER / GARBAGE DISPOSAL	2200	2200
BATHROOM CIRCUIT	2 X 1500	3000
MICROWAVE	1200	1200
WATER HEATER		4500
SUBTOTAL GENERAL LOAD		13440
NET LOAD CALCULATION		
FIRST 10 KW OF OTHER LOAD @ 100%	10000	10000
REMAINDER OF OTHER LOAD @ 40%	13440 - 10K =	3440 X .4 = 1376
TOTAL GENERAL LOAD CALCULATION (10K + 40% LOAD) =		(10K + 1376) = 11376
HVAC LOADS	FLA	VOLTS WATTS
A/C#1 (LARGEST UNIT @ 125%)	37.88	240 9091.2 11364.0
TOTAL HVAC LOADS		11364
TOTAL GENERAL LOAD DEMAND		11376
TOTAL HVAC LOAD		11364
TOTAL NET LOAD IN WATTS		22740
SERVICE AMPS = NET DEMAND LOAD / 240 VOLTS	(22740W / 240V) =	94.75

SERVICE METER = 200A

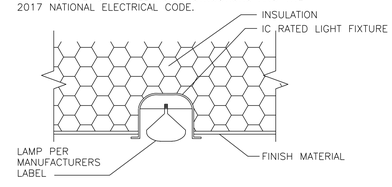
IRC E4001.6
CEILING-SUSPENDED PADDLE FANS THAT DO NOT EXCEED 35 POUNDS (15.88 kg) IN WEIGHT, WITH OR WITHOUT ACCESSORIES, SHALL BE PERMITTED SUPORTED BY OUTLET BOXES IDENTIFIED FOR SUCH USE AND SUPORTED IN ACCORDANCE WITH SECTIONS E3805 AND E3806. CEILING-SUSPENDED PADDLE FANS EXCEEDING 35 POUNDS (15.88kg) IN WEIGHT, WITH OR WITHOUT ACCESSORIES, SHALL BE SUPPORTED INDEPENDENTLY OF THE OUTLET.



1 **FAN DETAIL**
N.T.S.

BUILDINGS SHALL BE INSULATED IN ACCORDANCE WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE CHAPTER 11 AND AS AMENDED BY CITY ORDINANCE. THE INSULATION INTEGRITY SHALL NOT BE COMPROMISED BY LIGHT FIXTURE PENETRATIONS.

LIGHT FIXTURES COVERED WITH INSULATION SHALL BE IC RATED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE 2017 NATIONAL ELECTRICAL CODE.



2 **RECESSED LIGHT**
N.T.S.

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REVISIONS	DATE:

DRAWN BY: C. Dominguez
CHCKD BY: C. Dominguez
DATE: 3.02.2020

PROJECT NUMBER 2013

SHEET NUMBER

ELECTRICAL SPECS

E2

PLOT DATE: 4.14.2020

Attachment 2

Tomlinson Estates Historic District

Design Guidelines

CITY OF TEMPE ARIZONA®

TEMPE PRESERVATION

ACKNOWLEDGEMENTS

Tempe Mayor and City Council

Mark Mitchell, Mayor
Corey Woods, Vice Mayor
Robin Arredondo-Savage, Councilmember
Kolby Granville, Councilmember
Lauren Kuby, Councilmember
Joel Navarro, Councilmember
David Schapira, Councilmember

Tempe Historic Preservation Commission

Andrea Gregory, Chair
Scott Solliday, Vice Chair
Jim Garrison, Commissioner
Matthew Bilsbarrow, Commissioner
Chuck Buss, Commissioner
Sara Ferland, Commissioner
Joe Nucci, Commissioner
Lauren Proper Potter, Commissioner
Korri Turner, Commissioner

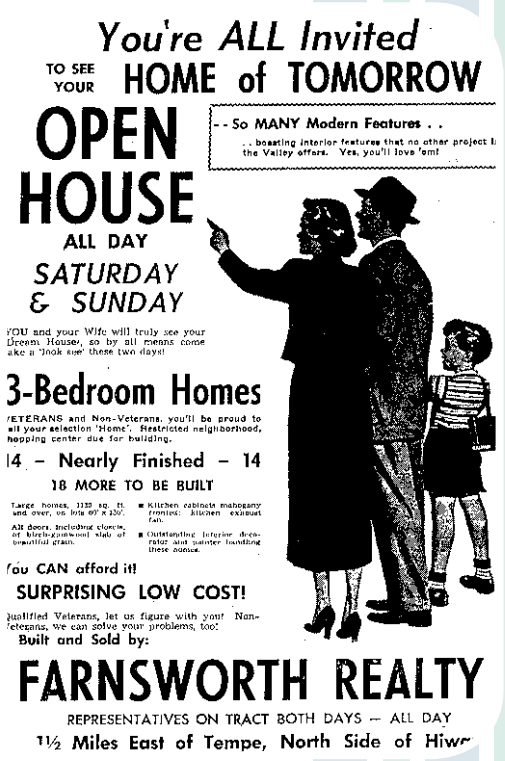
Community Development Department

Chad Weaver, Director
John Southard, Historic Preservation Officer/ Senior Planner
Hunter Hansen, Project Management Coordinator, Design and Preservation
Ryan Levesque, Deputy Director-Planning
Billy Kiser, PhD. Historic Preservation Office Graduate Student Intern
Cerelia Torres, Historic Preservation Office Undergraduate Student Intern
Mark Vinson, FAIA, AICP City Architect / Design and Preservation Manager
Robbie Aaron, Planner, Design and Preservation

With Special Thanks

To all the historic district property owners, tenants, and interested persons who participated in the workshops and public meetings during the preparation of these historic preservation guidelines and who generously contributed first-hand knowledge and insight to the information contained herein.

LETTER TO THE NEIGHBORS



Dear Neighbors:

Good News! Tomlinson Estates is now listed as a National Register of Historic Places Historic District and a committee composed of neighbors and city volunteers, with the help of Tempe Preservation volunteers and staff has drawn-up this set of guidelines to establish the criteria for determining which homes are "contributing properties" (i.e. what makes your house eligible for the status "Historic Home"). The process used and the factors considered are all discussed in detail in the attached document, the Tomlinson Estates Historic District Design Guidelines. If you have any interest in Tempe history, please read it; it will give you a sense of the importance of your home in the development of the Phoenix area post-WWII. Many of us think Southwestern History consists of Native American and early Spanish History in the Valley, and do not realize that our homes also make a contribution to the story. In reading these guidelines, please understand that we worked on setting reasonable requirements; basically, could the original owner of the property recognize it today? Also, note that there is no "stick" but only "carrot" to encourage homeowners to bring their homes into the category of "contributing property." If your home contributes you can apply for a substantial reduction in property taxes for fifteen to thirty years along with the enhancement of the home value that accompanies the historic classification. No one will make you do or not do anything to your property outside of existing City Zoning, Development, and Building Safety Codes. With that in mind, please relax and read!

For the Committee,

Charles Buss,
Tomlinson Estates Homeowner

TABLE OF CONTENTS

INTRODUCTION

With the end of World War II, Arizona in general, and Tempe in particular, experienced unprecedented population growth and economic expansion. From 1945 to 1960, Tempe opened more than one hundred new subdivisions for development and frequent annexations saw the city's boundaries expand eight-fold. Residential development trends that began in the post-war period are reflected in thousands of Tempe houses and structures that were built during this time. Many of these post-war Tempe neighborhoods continue to contribute to the unique character of our community today.

Tomlinson Estates Historic District is one of the earliest post-war neighborhoods in Tempe. The district is historically significant as a well-preserved post-World War II neighborhood that is representative of new approaches to subdivision development and residential design and construction in Tempe in the early 1950s. Feeding off the success of Borden Homes, the first subdivision of tract homes established east of Tempe after the war, Tomlinson Estates began construction adjacent to Borden three years later. Built in anticipation of the emerging population boom; successful development of Borden Homes and then Tomlinson Estates soon caused the city to expand and incorporate the subdivisions within the city limits through annexation.

Tomlinson Estates Historic District has been designated historic and listed in the Tempe Historic Property Register as well as the National Register of Historic Places. The Tempe Register is the official list of historically, culturally, and visually significant buildings, structures, landmarks, districts, and archaeological sites in Tempe that have undergone the process of historic designation provided by city code and ordinances.

The intent of historic designation is to provide protection for significant properties and archaeological sites which represent important aspects of Tempe's heritage, to enhance the character of the community by taking such properties and sites into account during development, and to assist owners in the preservation and restoration of their properties.

DESIGN GUIDELINES

Tomlinson Estates Historic District Design Guidelines assist in managing change in the district. The guidelines seek to identify a range of solutions that allows a property to be adapted to a modern use maintaining its historic integrity and its status as a contributing property to the historic district. The guidelines provide an understanding of the historic significance of the neighborhood and by calling attention to the character-defining features of buildings and properties. This understanding can inform decision-making with regard to maintenance, repair, rehabilitation, and new construction, by identifying alternatives that conserve and enhance the historic character of the district.

A concrete irrigation box enhanced with 1950s-themed mosaic tile artwork speaks to the neighborhood's period of construction.

Property owners can use the guidelines for planning exterior alterations or additions to properties in the district and for design of new or relocated buildings in the district.

Tempe Historic Preservation Commission (HPC) and City Staff will use the guidelines to approve requests for alterations to properties in the district and to evaluate the appropriateness of the City's own projects in and adjacent to the district.

1 TOMLINSON ESTATES HISTORIC CHARACTER

Tomlinson Estates Historic District demonstrates the evolution of rapidly changing homebuilding methods in the post-WWII era in Tempe. Houses in the Tomlinson Estates Historic District were constructed in three discrete phases within a three-year period beginning in 1950. During this time, construction materials and methods developed by wartime industries found new applications in raising the productivity and controlling costs amidst a post-war residential construction boom. Attendant upon the rapid expansion of residential construction was the advent of new building safety regulations in the form of standardized building codes being implemented across the country. Tempe was following a national trend when, on June 12, 1952, Council adopted the 1949 Edition of the Uniform Building Code, as the first Tempe building regulation to provide minimum standards for safeguarding life, health, property, and public welfare.

This home and others preserve the neighborhood charm because they embody the characteristic of a Transitional Ranch Style Home.

The homes in the Tomlinson Estates Historic District are small masonry houses that are similar in size and design yet with enough variation in plan, roof types, and porch types, as to make each house appear to be unique. Homes exhibit a change in construction with the introduction of concrete block as the primary building material and the more elongated plan characteristic of the true Ranch style. The continuing evolution of the Ranch style in the post-war era included standard features such as, slab foundations, steel casement windows, and asphalt shingle roofs. Further evolution continued to happen by providing carports under the main roof as part of the designed expandability of these homes, which allowed them to keep pace with growing families. It is hard to capture the significance of the Tomlinson Estates subdivision simply by physical description. Instead, it is in the larger community setting that the district develops significance as a representation of fulfillment of deeply held values about home in American society. Protection of the collection of properties as a whole is essential to maintaining district character. These humble houses develop significance through the integrity of their setting.

This home has multiple qualities that make it historic. The steel casement windows, shutters, front porch/carport and ribbon driveway are all defining characteristics of the neighborhood.

Information is based on the nomination that listed the district in the National Register of Historic Places as prepared by historian Scott Solliday (2014), and on data used to designate and list the district in the Tempe Historic Property Register.

This home displays many characteristics that need to be preserved: the porch, windows, shutters, and masonry construction.

1.1 NEIGHBORHOOD DESCRIPTION

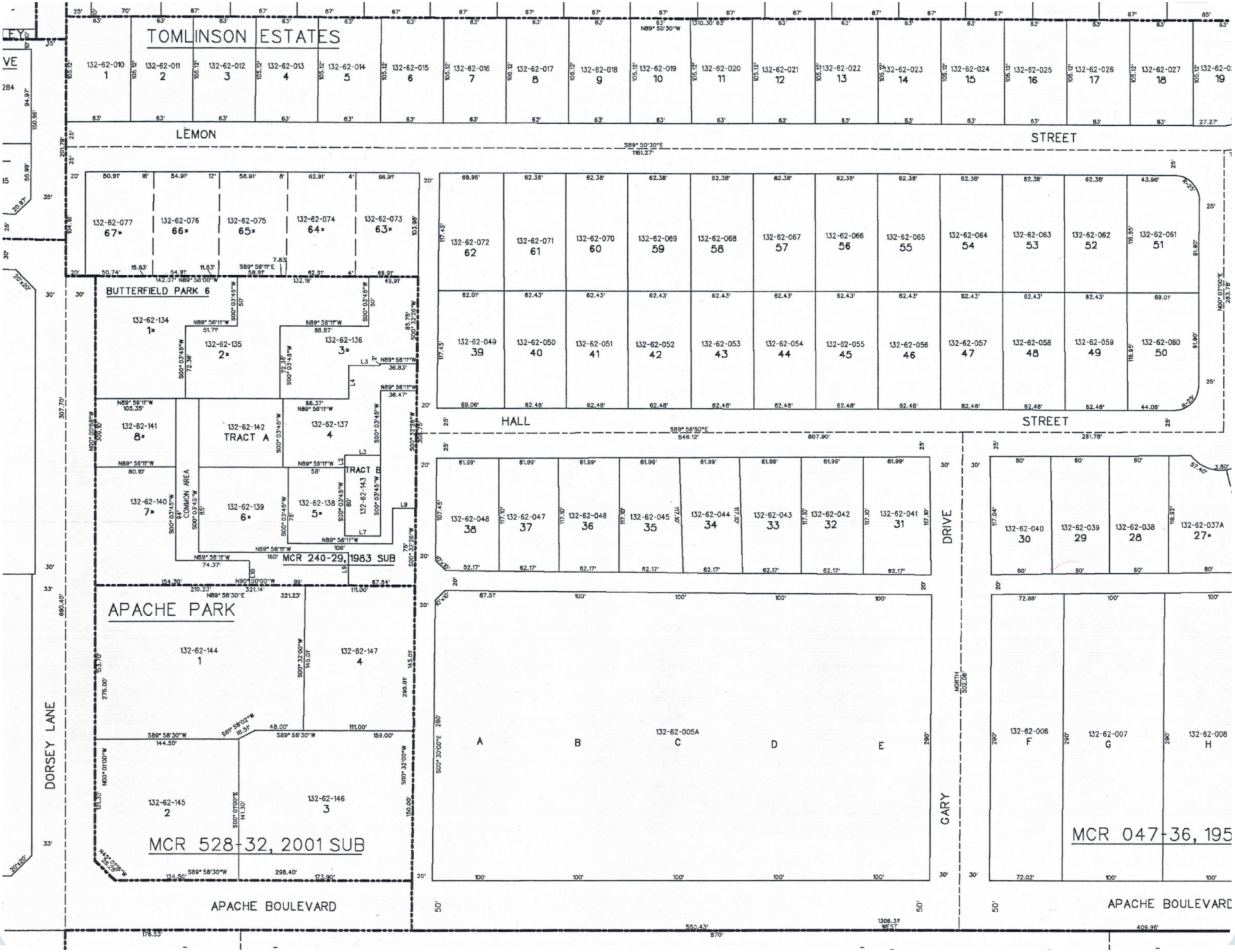
Tomlinson Estates Historic District is a 14-acre residential subdivision located one mile east of Arizona State University and downtown Tempe. The 66 single-family zoned lots in the rectangular district are arranged along two streets. Comprising the 1300 to 1400 blocks of East Lemon and Hall streets, the district is zoned R1-6 and is identified as a Cultural Resource Area in Tempe General Plan 2040.

The chronological development of the subdivision from south to north occurred in the decade after World War II, a time when building materials, methods, and regulations were changing rapidly. Today the streetscape of the Tomlinson Estates Historic District retains a secluded, quiet atmosphere and a strong sense of place. Many properties have uninterrupted, open front yards. Original sidewalks, curbs, and gutters from 1959 remain intact. The Tempe City Council designated the neighborhood as a historic district on June 2, 2005 and it was listed on the National Register of Historic Places on December 15, 2015.

Flood irrigation is a characteristic of the historic landscape of this community.

Overall the neighborhood presents a generally uniform streetscape of small, one-story houses on large lots with flood-irrigated landscapes. Mature shade trees, large shrubs, and lush lawns resulting from years of flood irrigation, along with the visible elements of irrigation, are significant character-defining features of the historic district.

Roughly two-thirds of the houses in the district were built within the first year of development, including the 14 houses built in the Early Transitional Ranch style. Within the first 3 years of the period of significance (1950-1959) all of the houses had been built, with the majority having been constructed in the Simple Ranch style. The initial and brief period of Early Transitional Ranch style building exemplifies the rapid evolution of residential design and construction methods in Tempe during the post-war period.



Historic Map of the Tomlinson Estates Neighborhood

The Borden Homes Historic District exemplifies amazing historic beauty thanks to all of the contributing properties.

1.2 CHARACTER-DEFINING FEATURES OF TOMLINSON ESTATES HISTORIC DISTRICT

The design guidelines process begins with identification of the form and detailing of those materials and features that are important to maintaining the historic character or integrity of a district's property. A character-defining feature is critical to conveying the historical significance of a property. These are the features of the property that should be retained in order to preserve that character and convey historic significance.

The Tomlinson Estates Historic District Design Guidelines provides guidance on identifying character-defining features, and guidance on retaining and preserving the character of an historic property. The ability to recognize what is important to retain can provide an architectural theme or indicate a thematic context for rehabilitation and reuse. This informed decision-making may lead to sensitive or conspicuously appropriate design solutions. The following will assist in identifying the form and detailing of character-defining features for both the District overall, as well as each of the three primary house types within the Tomlinson Estates Historic District.

Neighborhood artwork adds to the uniqueness of the community and does not detract from the historic character.

- Small, one-story houses on large lots
- Consistent spacing between houses
- Flood-irrigated yards and lush, mature landscaping
- Lush irrigated front lawns continuous from lot to lot
- 35-foot front yard dramatically punctuated by mature shade tree(s)
- Asphalt-paved streets
- Continuous concrete sidewalks with rolled curbs along both sides of the street
- Ribbon driveways to the carports of each house
- Consistent lot width, depth and shapes (rectangular or square corner lots)
- Water cured stained concrete floor slabs
- Steel casement windows
- Masonry block construction
- Asphalt single roofs
- 20" roof overhangs
- Low pitched or gable roofs
- Attached carports
- Low pitch or flat carport and porch roofs

ARCHITECTURAL STYLES IN TOMLINSON ESTATES HISTORIC DISTRICT

1.3 EARLY/TRANSITIONAL RANCH STYLE

The first homes built in the Tomlinson Estates Historic District are representative of a turning point in Tempe homebuilding, largely reflecting a broad national trend in residential architecture in the years following World War II. These are small block houses with a simple design that could be built quickly and sold for between $7465 and $8265. These are outstanding examples of the Early/ Transitional Ranch style, a distinct style identified throughout the Phoenix Metropolitan Area.

The Early/Transitional Ranch style house has a massing and plan similar to earlier Period Revival styles, but ornamentation is largely nonexistent. Features such as concrete slab foundations, steel casement windows, and asphalt shingle roofs associated with the emerging Ranch style are already present, but these houses lack the elongated facades and horizontal emphasis characteristic of subsequent Ranch style houses.

Horizontal roof lines are an important characteristic of the Ranch home because they create uniform elevations and visual patterns.

In Tempe, the Early/Transitional Ranch style marked the initial departure from the vernacular four- or five-room house constructed in the National Folk style. These homes are indicative of a new paradigm of residential construction in the post-WWII period that began to differentiate a unique style in the American Southwest, one that remained at variance from other regional expressions.

This entry porch is an example of the type of porch built for the Early Transitional Ranch style home.

Houses in the Tomlinson Estates Historic District were built between 1950 and 1953, including all 14 of the Early/Transitional Ranch style examples built in the first year and a half. These homes were identical in appearance and featured hipped, nearly pyramidal shaped main roofs. A nearly flat carport roof continued across the entire front of the home creating a massive bungalow style porch. Some variety was created with various front window shutter designs and an option to have red clay brick on the bottom 3 feet of the exterior walls.

This origional porch and carport are important to preserve because they provide an aesthetic quality to the facade of the Ranch Home.

1.4 SIMPLE RANCH STYLE

Concurrent with its 3 bedroom/ 1 bath Early Ranch floor plan, Tomlinson Estates offered both a 2 bedroom/ 1 bath and 3 bedroom/ 1 bath plan in the Simple Ranch style. Exterior variety was achieved with the choice of a simple gable roof or hipped roof. The 3 bedroom plan also offered the option of a flat carport roof that wrapped around to the homes entry, giving a hint of the emerging low horizontal midcentury modern look. During year two of construction, sale of the Early Ranch plan ended and all remaining sales would be the two Simple Ranch plans or a variant California Ranch to be explained in the next section.

Houses built in the Simple Ranch style exhibit a significant change in construction with the introduction of more elongated floor plans and horizontal emphasis. Taken together, these houses represent an important incremental shift in the evolution of the Ranch form—which, for sake of differentiation from earlier and later motifs, will be referred to as the Simple Ranch style. Concurrent with changes in design and materials, sweeping changes in building codes for residential masonry construction were taking place throughout the Valley.

The historic roof lines, entry, porch, windows, shutters and masonary block are all great examples of the ranch house style.

The engineering implications of masonry reinforcement impacted many aspects of residential development and caused both the gradual transition to, and the overwhelming success of, what would ultimately become recognized as the Ranch style house. All houses were of concrete block construction and long, low facades with strong horizontal emphasis indicating that the Ranch style was emerging. Homes were of common bond concrete block with a narrow plan and a broad facade spanning more of the lot's width. These houses clearly reflect the Ranch style that was emerging across mid-century America.

1.5 CALIFORNIA CLASSIC RANCH STYLE

The Ranch style home proudly displays its entry porch, steel casement windows and projecting front gable.

5 Houses built in Tomlinson Estates show the further evolution of the Ranch style and are distinguished most quickly by the projecting front gable from the main roof of the house. The houses are still small, typically less than 1,200-sf as originally built. This type typically has an L-shaped plan and intersecting gable roof with an extended eave porch over the junction of the two wings. It simply is a variation of the 3 bedroom/ 1 bath Simple Ranch plan to which the builder added a 2nd bathroom to the front corner bedroom resulting in a six foot deep bump out of the front façade. The inner side of the new L-shaped plan has an exterior door connecting the master bedroom to the expanded covered front porch.

The integral carport feature is typical of the ultimate form of the Ranch style house of the American Southwest.

Several of these houses have enclosed the carport to add additional living space. This Classic Ranch style provided built-in expandability to the post-war Ranch style and introduced the concept of the starter-house, one that could be economically adapted to keep pace with the needs of growing families during the baby-boom era. This inherent expandability has been taken advantage of by property owners frequently. The State Historic Preservation Office provides special guidance on how the carport, an integral component of the Ranch style house type, has successfully been modified over time.

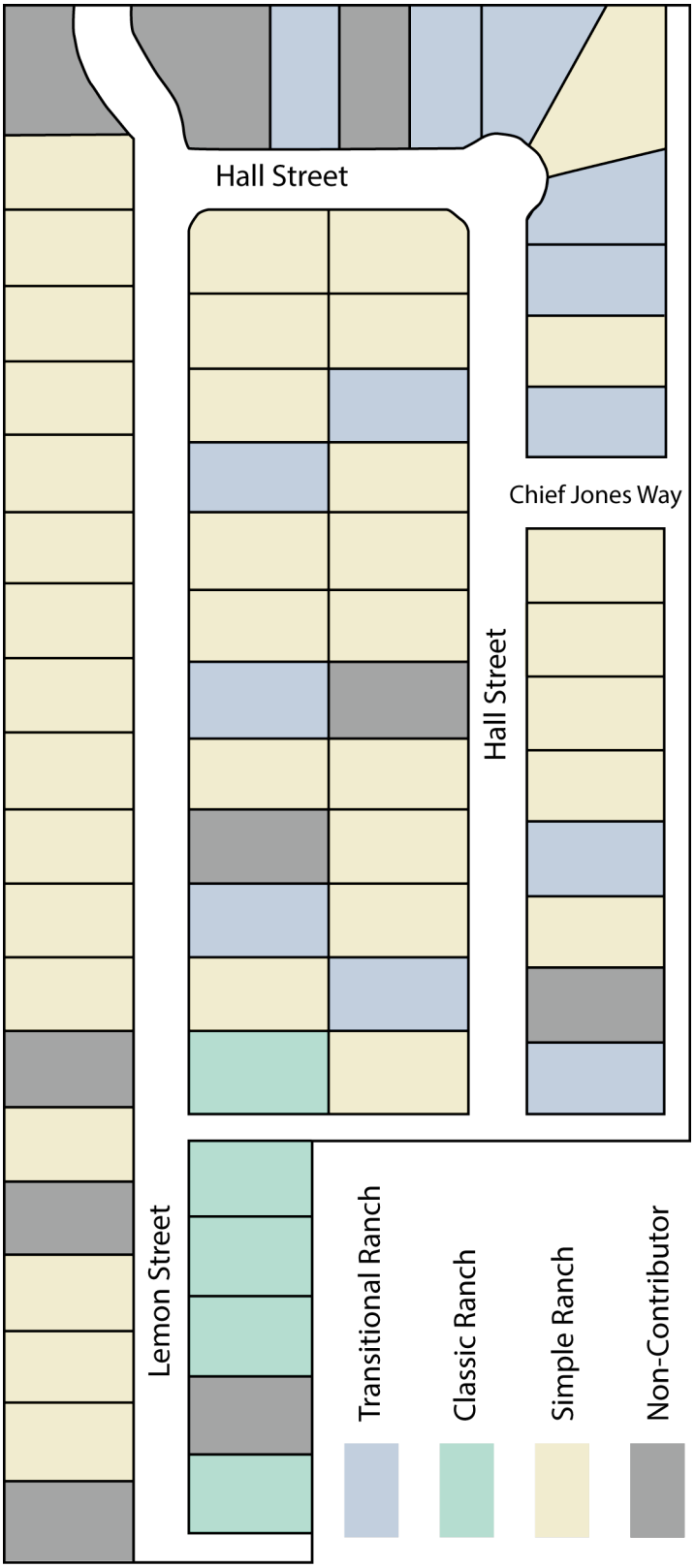


Diagram - Early/Transitional Ranch Homes in the Neighborhood

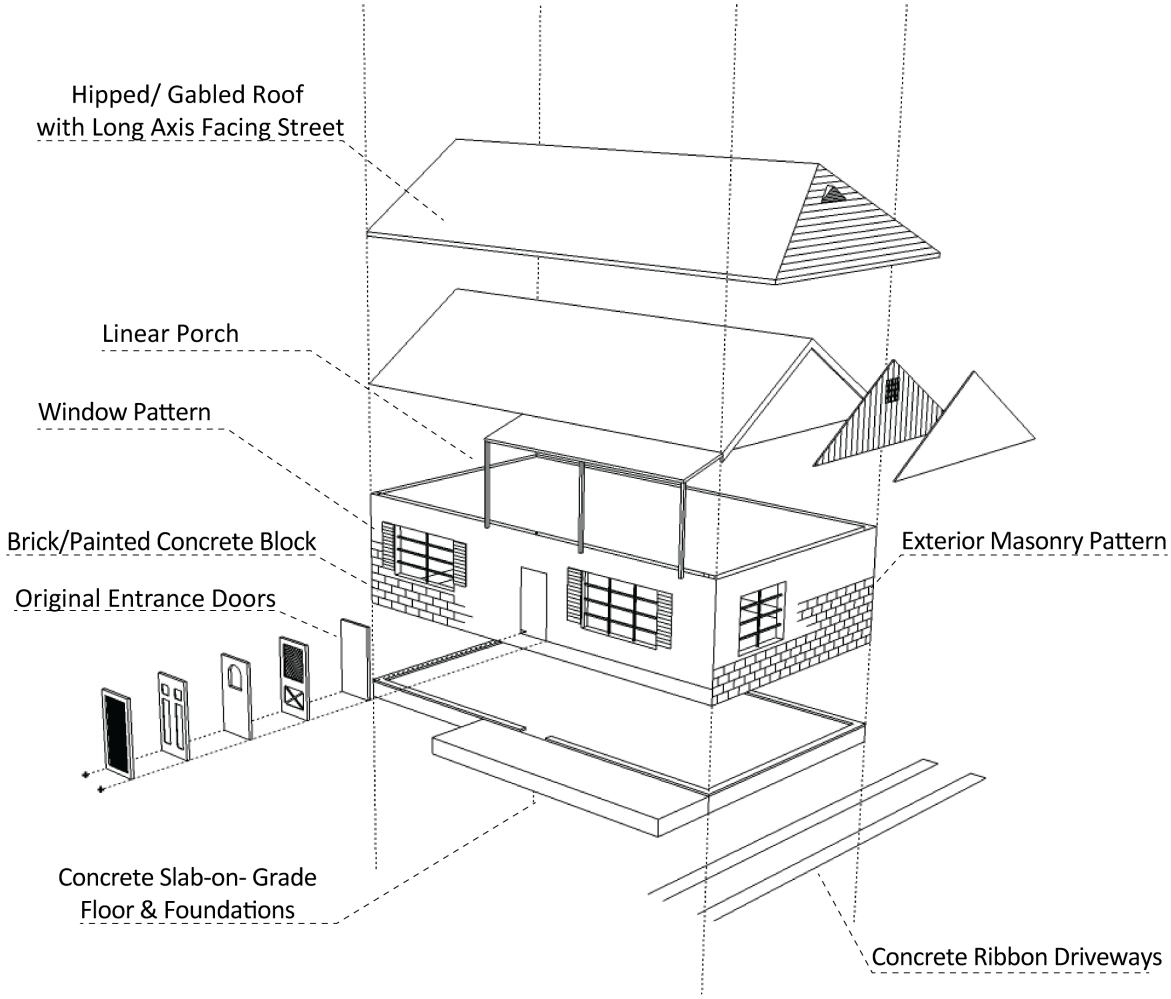


Diagram - Ranch Style House Kit Of Parts (Aaron 2016)

2 PRESERVATION REVIEW PROCESS

Guidelines provide a basis for managing change that affects the appearance of individual buildings or the general character of the district. Guidelines do not dictate design solutions; instead, they identify a range of responses to specific design issues affecting historic resources.

This document provides guidance for sensitively changing single-family historic residential properties by complying with the Secretary of the Interior's Standards for Rehabilitation. By so doing, a homeowner will have a better chance of qualifying for the historic property tax reclassification program and for other historic preservation grants and incentives.

Guidelines in this document provide direction for specific changes and follow basic principles specified by the Secretary of the Interior's Standards for Rehabilitation. Design and construction proposals that can be demonstrated to comply with the Secretary's Standards will be accepted as meeting the intent of these guidelines (see Appendix B). Standards and Guidelines emphasize retention and repair of historic materials and provide latitude for replacement. Guidelines focus on preservation of the character-defining features of a property; those materials, features, finishes, spaces, and spatial relationships that, together, give a property its historic character. A property may exhibit less than three minor changes to the character defining features and still be considered a contributing property.

2.1 HISTORIC PRESERVATION REVIEW PROCESS

Tomlinson Estates Historic District Design Guidelines are authorized by Tempe City Code Chapter 14A - Historic Preservation in keeping with community policies regarding review of alterations and additions to properties, new buildings, and site work, located in the Tomlinson Estates Historic District.

City of Tempe General Plan 2040 lists as a major community objective the preservation of historic resources. It also notes that it is desirable to maintain the existing residential density of locally designated neighborhoods.

When a building permit or approval is required to alter, remodel, build or otherwise develop or landscape property located in the Tomlinson Estates Historic District, City Code stipulates that permits or approvals shall be deferred until approval has been obtained from the Tempe Historic Preservation Commission. When the work is obviously minor in nature, the Tempe Historic Preservation Office can provide administrative-level approval. Commission or administrative-level approval or denial will be based on how well proposed changes meet the intent or objectives stated in these guidelines. Issuance of historic preservation approval indicates conformity with the provisions and intent of these guidelines only and does not imply approval by other City or regulatory agencies.

3 EXTERIOR BUILDING FEATURES

Exterior building features help define the character of historic properties. A building's architectural details add visual interest, distinguish building styles and types, and often reflect craftsmanship characteristic of a particular period in time. Features such as windows, doors, porch posts, and roof eaves display materials, finishes, and designs that are associated with specific architectural styles and historic periods.

This building is a great example of an integrated porch and carport.

According to the national Park Service, a character-defining feature is a prominent or distinctive aspect, quality or characteristic of a historic property that contributes significantly to its physical character. Character-defining features are property features such as materials, spaces, and finishes that help convey the property's historic significance. The ongoing ability of a property to convey its historic significance is called historic integrity. The historic integrity of a property survives only when critical character-defining features remain intact. When making changes to historic properties it is often necessary to determine which features are most important to preserve in order to avoid or minimize harm, or to determine whether proposed rehabilitation, preservation, maintenance and other activities are consistent with the preservation objective.

Character-defining features are different for each architectural style. Identification and evaluation of these features does not address intangible qualities, such as feeling or association with significant persons or events, but works from the understanding that historic significance is often embodied in the tangible aspects of a property that include its setting, form and essential physical features.

Asphalt shingles are a prominent feature of historic homes in the neighborhood. These must be maintained in order to have a contributing property.

In the three developmental stages of the Ranch style home on display in the Tomlinson Estates Historic District, simplicity of design and construction is arguably the most consistent stylistic theme. Simplicity was perhaps the greatest advantage of the Ranch style in the early post-war period as it enabled fast and efficient housing production to meet the growing demand for affordable housing.

Here one can see the specific details of the entry porch and window shutters. Identifying the defining characteristics is the first step in preserving a historically significant home.

Early/Transitional Ranch, Simple Ranch, and California Ranch style houses in the Tomlinson Estates Historic District are devoid of elaborate detailing. Their most significant character-defining features are the porch, windows, doors, and the rooflines. Based on their historical importance and stylistic prominence, preservation of these basic features is important for appropriately managing change in the district. These character-defining features provide a sense of authenticity, scale, and aesthetic quality to the facade of the Ranch style house and should receive sensitive treatment during exterior rehabilitation and restoration work.

3.1 PRESERVE - REPAIR - REPLACE

Preserve Features - The best way to preserve historic building materials is through timely maintenance. Preserving original architectural features is critical to maintaining the integrity of any historic building.

Repair Features - When historic building materials are deteriorated, repairing rather than replacing materials is preferred. Frequently, damaged materials can be patched or consolidated using special bonding agents.

A character-defining feature of the Early/Transitional Ranch home was an exterior masonry wall that is rare to find still standing in the neighborhood.

Replace Features - When materials or features are beyond repair, replacement is necessary. However, it is important to minimize the extent of replacement because the original materials contribute to the authenticity of the property as a historic resource. New material should be compatible with the original appearance, but be distinguishable from original construction. However, even when replacement materials exactly match originals, the integrity of a historic building is to some extent compromised by replacement. This is because the original material contains a record of the labor and craftsmanship of an earlier time. Integrity cannot be reproduced or recreated. The physical record of history is lost when materials are replaced; thus, conservation of original materials and features is strongly recommended.

3.2 FOUNDATIONS

Early/Transitional Ranch, Simple Ranch, and California Ranch style houses in the Tomlinson Estates Historic District all utilize the more cost-effective concrete slab-on-grade technique rather than the raised wooden floors and crawl spaces characteristic of pre-war times.

All the homes in the neighborhood were constructed with a slab-on-grade foundation. In order to preserve the foundation, address any drainage issues that arise.

For continued eligibility slab foundations should be maintained in good condition by keeping moisture away. Make sure the soil or pavement next to the slab-on-grade foundation slopes away to keep water from soaking down along the slab and surrounding soil. Provide rain gutters, downspouts, and concrete splash blocks to direct water away from the foundation.

For continued eligibility cracks in the foundation should be repaired with compatible patching material. If cracking is caused by differential settlement, which may, in turn, cause cracking of interior and exterior walls, professional consultation by a historical architect or structural engineer is recommended. Stabilize settling foundations using low-impact techniques. It is sometimes advisable to stop further settlement of a foundation rather than to raise it back into place. Replace or rebuild a new foundation only as a last resort.

3.3 EXTERIOR WALLS

Concrete block masonry is a character-defining architectural detail and should be preserved. Mortar joints that have become deteriorated should be re-pointed to prevent structural damage. Some of the houses in the district exhibit the rare but signature style in their distinctive brick/block masonry walls. Beginning with a base of brick wainscot to a height of three feet in the Flemish bond rowlock masonry pattern, a raised brick belt course is surmounted by upper walls laid up in concrete block to the top. This produced walls with special visual interest and is very rare in post-war Tempe subdivisions.

Shown above is an example of the Simple Ranch construction style using a 3'high base of red brick topped by concrete block.

The Ranch Style home is known for its concrete block patterns.

Most houses built in the Tomlinson Estates Historic District, like virtually all new tract houses built in Tempe after 1947, were of concrete block construction. Painted concrete block is the primary material used on the exteriors of the houses in the Tomlinson Estates Historic District. Stucco should be discouraged in remodel projects because it is not a characteristic of the historic Ranch style house.

3.4 ROOFS

The Ranch style drew its inspiration from various sources, including early Prairie style houses designed by Frank Lloyd Wright. The simple and sparsely adorned house form reflected romantic imagery of the past and new social trends toward informality and casual home life embodied in post-war suburbia. The cohesive visual character of the Tomlinson Estates Historic District results, in part, from consistent use of low-pitched simple-gable and hip roofs, typically with asphalt shingles. These low roof forms are a character-defining feature of the Ranch style house.

Gable-end lap siding on the sides of the home gives the property a unique character.

Early/Transitional Ranch style houses in the Tomlinson Estates Historic District employ the low-pitched asphalt shingle roof in the form a full hip.

Simple Ranch style houses in the Tomlinson Estates Historic District employ the low-pitched asphalt shingle roof over a rectilinear plan, with a hip or simple-gable roof emblematic of the developing style.

California Ranch style houses in the Tomlinson Estates Historic District employ the low-pitched asphalt shingle roof to illustrate the further evolution of the form, with predominantly L-shaped plans and intersecting gable roofs extending at their intersecting junction to form an eave porch at the front entry. Many of the California Ranch style houses have a carport under the main roof of the house.

3.5 CARPORTS

In keeping with the trend of providing covered parking in the 1950s, Tomlinson Estates Homes were designed to have one car carports. Front porch covers wrapped around to join the carport cover, the head of the carport was built with a storage shed/laundry room clad in lap siding known as "Rico Redwood Bungalow Style" siding. Carports were designed to also provide the option of enclosing them into additional living space for the growing needs of a family, carport enclosures should use similar but distinct materials so as not to give the impression of being original, Tomlinson Estates has several carport enclosures done with historically compatible but distinct materials.

An entry porch is a defining feature because of its ability to promote social interaction within the neighborhood and adds a welcoming charm to the front of the home.

For continued eligibility a homeowner should preserve the original form, materials, eaves, details, and other character-defining features of an historic roof. Preserve the original overhang depth of the eaves. Minimize the visual impact of new skylights and other rooftop devices by installing them behind the ridgeline of the roof and away from view from the street. If new mechanical equipment, such as air conditioning or solar devices, are installed on the roof, place them to be inconspicuous from the street and do not damage or obscure character-defining features.

3.6 PORCHES

Early/Transitional Ranch style homes in the Tomlinson Estates Historic District were constructed with broad overhanging low pitched eaves supported by several wooden posts running the entire width of the homes façade and integrating into the covered carport.

Simple Ranch style homes in the Tomlinson Estates Historic District were constructed in a number of design variations created by using different configurations for the extended eave porch. Some overhanging eaves extended along more than half of the primary facade, providing a distinct covered entry supported by two or three posts and wrapping around to create a covered carport.

California Ranch style houses relied more on the porch to provide shade, a sheltered entry to both the main entrance and master bedroom side entry, and visual interest to the entry facade. Running the entire length of the front of the house, porches integrated into the covered carport were a prominent feature of this house type.

Original porch features may require preservation because of deterioration or inappropriate alterations. Some may have had minor changes, while others may have been altered to the point of losing their

original character. Original wood posts may have been replaced with uncharacteristic materials or covered with stucco. Porches may have been in-filled to create an entry or to increase living space. These treatments may compromise the proportions and integrity of the house. Extensive replacement of historic qualities or enclosure of the porch should be avoided. Although replacement of an entire porch is discouraged, such extreme measures may, in rare occasions, become necessary. Preferably, the design of the replacement porch should be a reconstruction of the original. Short of that approach, reconstruction should be based on examples of another house of the same period and style.

The historic steel casement window is a uniform window pane grid that is used throughout the entire neighborhood.

Maintain the porch and its character-defining features. If an historic porch must be enlarged, the new porch posts should be in scale and proportion to those used historically. Avoid changing the character of the historic porch by adding details and features such as porch railings or trellises.

3.7 WINDOWS

Windows are an important character-defining feature of the historic Ranch style house. Along with the front door, windows give scale to the building and provide visual interest to the composition of the facades. Distinct window designs help define the historic Ranch style. The depth of their position set into the thickness of the wall casts shadows that also contribute to the character of the facade. Proportions, orientation, divisions, and materials of a historic window are among its essential elements of design. Arrangement and number of panes, or "lights," is also an important compositional element of windows.

Virtually all-original windows in the Tomlinson Estates Historic District were the steel casement type. Casement windows have an operable sash that swings open, typically to the outside. Nearly square or rectangular, these windows were usually divided into horizontal rectangular lights. The original steel casement windows have provided excellent service for decades and with proper maintenance can continue to function well into the future.

Some historic windows have been replaced with new windows that do not reflect the historic character of the house. In many instances, historic character can be emulated by adding muntins to reflect the proportions of the historic windows.

Replacing windows for greater energy efficiency may have unintended consequences. The window area is a relatively small portion of the total exterior surface of a house. Repairing and resetting historic

windows, combined with adding insulation in the attic, can provide more effective energy performance without compromising the historic integrity of the house. In addition, removing and discarding serviceable building components such as windows and doors wastes their embodied energy and adds to landfills unnecessarily while also causing additional energy to be expended in the manufacturing of new windows. Where historic windows still exist, they should be repaired rather than replaced. The original windows significantly contribute to the historic character of the Ranch style house. Even when replaced with an exact duplicate window, a portion of the historic character is lost. Distinctive stylistic features and examples of skilled craftsmanship should be treated with sensitivity.

A vital detail of the historic ranch home are the awnings that shade the historic steel casement windows.

3.8 AWNINGS, SHADES, AND SHUTTERS

Energy studies show that significant cost savings can be achieved by shading window openings. In addition to strategically placed landscaping, a number of architectural elements were commonly used to shade window openings on houses during the post-war period and can effectively block sunlight from striking the window without obscuring historic glazing patterns or details.

Awnings appear to have been installed on several houses in the Tomlinson Estates Historic District, demonstrating the popularity of these devices during the historic period. Awnings continue to provide important and effective energy conservation and should be preserved. Maintain existing awnings in good repair. Modern materials such as acrylic fibers have significantly extended life expectancies compared to traditional canvas fabrics and can reduce long-term maintenance needs. Select fabric consistent in appearance with period colors and textures. If it is necessary to reduce sun exposure on windows, awnings can be an effective means of reducing heat gain. New installations should follow recommendations for reversibility and minimize damage to existing historic fabric.

One type of shutter pattern utilizes the two vertical wood slats connected by two horizontal pieces.

Shade screen products were historically available in wide varieties to protect windows. Typically, these screens were designed as removable panels that were mounted at the onset of warm weather and taken down seasonally. The number of shade screen panels used to cover any given window was typically less than the number of panes in the sash, resulting in these exterior mounted screens completely changing observable window proportions and obscuring historic glazing patterns. Modern screens should not change the observable glazing patterns.

One of very few embellishments found on Ranch style houses in the district are the nonfunctional wood shutters on the windows in primary facades. These original shutters remain important character-defining features of an architectural style that used only minimal ornamentation.

3.9 ENTRANCE DOORS AND SCREEN DOORS

An entry that is appropriate to the style and period of significance helps to maintain the historic character of the district. Entry doors provide scale and visual interest to the primary facade. Entry doors on Ranch style houses have traditionally encompassed a wide range of design variations indicative of their historic antecedents. From the familiar frame-and-panel type, through the nine-lights-over cross-bucks, to the modern flush or slab construction, the Ranch house has drawn on a variety of door styles.

This is an appropriate entry that maintains the significance and historic character of the district. The Tomlinson Estates neighborhood displays a wide variety of front doors that are historically significant. The most common, luan mahogany, is shown above.

Historically, front entrance doors would almost always have a screen door for ventilation. This was typically a single-panel, insect-screened opening reinforced at hardware height by some unobtrusive decorative grille installed on the inside of the door.

Many houses in the district have had historic front entrance doors replaced for acoustic concerns. For the most part, new doors of compatible character have been installed in the original masonry openings. Other houses have had security doors installed that are not characteristic of the Ranch style and that visually obscure the historic front doors; these should be avoided.

Preserve decorative features of historic entrances and doors. Repair is a better approach than replacement if a door possesses significance through visual prominence on the facade or due to its stylistic characteristics.

The front door on this home is covered by a screen door. These doors must be unobtrusive enough that one can still see the front door detail from the street through the closed screen door.

4 BUILDING ADDITIONS AND ALTERATIONS

On Thursday, January 14, 2010, the Tempe Historic Preservation Commission adopted standards for evaluating additions proposed for historic properties or for determining the effect of existing additions on historic integrity. These standards are based on the work of Linda McClelland in 2008, and are included on the following page of these guidelines.

When enclosing a carport, it is important that the new construction does not encroach into the historic setbacks. This is an example of sensitive construction respecting the original plan.

4.1 TOMLINSON ESTATES DESIGN GUIDELINES EVALUATION PROCESS

On Wednesday, September 23, 2015, members of the Tomlinson Estates Historic District Design Guidelines Work Group met to assess the existing conditions within the district and determine what the criteria should be to balance the diversity of the housing stock with the desire to maintain eligibility for listing in the National Register of Historic Places and the Tempe Historic Property Register. The consensus of this grass-roots policy making is recorded in the minutes of that meeting and specific guidance is codified as items 1 through 7 herein.

1) A property will not be a contributing property if a detached two-story addition is built that can be seen from the street.

2) A room addition is acceptable if it is located in the backyard and is a single story-structure.

3) A carport addition, or front-of-house addition, cannot encroach into the historic front yard setback.

4) A property may exhibit two minor changes to the character-defining features and still be considered a contributing property.

5) If a property owner encloses their carport, they will be encouraged to use compatible materials that are distinct enough to preserve historic integrity to still be considered a contributing property.

6) A front porch enclosure is not allowed; property owners are to be discouraged from screening in the front porch.

7) The front facade of a property needs to be kept uniform through the use of the same steel casement windows and compatible materials that are unique to this community

4.2 HPC STANDARDS FOR EVALUATING ADDITIONS AND ALTERATIONS IN THE TOMLINSON ESTATES HISTORIC DISTRICT

1. An addition should fall within the period of significance, and, in some cases, its date of construction may be used as the closing date of an extended period of significance.

2. New additions, exterior alterations, or related new construction should be sympathetic to the original design (i.e., stylistically appropriate, sensitively rendered, compatible in size and scale, with similar or compatible materials).

3. New additions, exterior alterations, or related new construction should consider the cumulative effect of the change along with other changes that have been made or proposed (window replacement, siding, etc.).

4. New additions, exterior alterations, or related new construction that is not sympathetic in design must not substantially damage the historic property.

5. New additions, exterior alterations, or related new construction should not mimic the historic design to the extent that it becomes indistinguishable from the original building and thereby conveys a false sense of history.

6. New additions, exterior alterations, or related new construction should not overwhelm or dominate the historic character of the property as a whole or alter the property's character-defining features, including significant open space.

7. New additions, exterior alterations, or related new construction should not be out-of-scale; rooftop additions and additions that obscure principal elevations are particularly problematic unless they are stepped back and appear small in scale.

8. New additions, exterior alterations, or related new construction should not hide a building's principal facade from the public right-of-way and other significant viewpoints, or change the perceived orientation or number of entrances.

9. New additions, exterior alterations, or related new construction should not impair significant or character-defining features of the historic resource.

10. New additions, exterior alterations, or related new construction should not impact the front-yard setback to protect the historic integrity of the property and its environment.

These standards for evaluating additions proposed for historic properties or for determining the effect of existing additions on historic integrity are adopted by the Tempe Historic Preservation Commission. These standards are based on the work of Linda McClelland, 2008 "Evaluating the Significance of Additions and Accretions: A National Register White Paper".

4.3 ARIZONA STATE HISTORIC PRESERVATION OFFICE STANDARDS FOR EVALUATION

SHPO has recently published guidance for evaluating building additions and alterations (AZ SHPO 2011). The SHPO protocol has been included for reference as Appendix A of these guidelines. SHPO evaluation protocol requires the significance of the addition to be assessed regardless of compliance with the Secretary's Standards. Under SHPO evaluation protocol, the typical carport enclosure in Tomlinson Estates Historic District could be determined not to be historically significant. However, the typical carport enclosure would still meet the Secretary's Standards and, therefore the property could still be considered to contribute generally to the historic character of the district. Again under the SHPO evaluation protocol, in instances where a carport enclosure is determined to be significant and does not meet the Standards, most would be considered minor alterations and the property could still be considered contributing.

For purposes of evaluating a property as contributing to a Tempe Historic Property Register Historic District, it must be a property within a designated historic district that contributes generally to the distinctive character of the district. SHPO policy cited above is based on interpretation of National Park Service guidance and does not define the limits of local eligibility.

These carports were enclosed to form additional living space.
Each home is an example of an acceptable alteration.

Porch screens that do not allow visibility of the doors and windows is not in compliance with the HPC standards of a historic contributing property.

4.4 COMPATIBLE DESIGN OF ADDITIONS AND ALTERATIONS

Appropriate additions and alterations will relate to the scale of nearby historic buildings and to the general size, shape, and proportions of nearby historic buildings, and will not utilize primary building materials dissimilar, at least in appearance, to historic materials.

Appropriate additions and alterations will be in proportion to the overall size of the lot and will not appear to be too big for the lot when compared with nearby historic buildings. Maintain the established scale of the neighborhood's houses and lots.

Appropriate additions and alterations will maintain setbacks and alignments of the buildings with the surrounding context and will not maximize front yard development standards. Setback from the street at a distance similar to that of nearby historic buildings and provide landscaped areas compatible with the historic setting. Maintain alignments of horizontal features on new roof ridges, eaves, porches, windows, and doors, with those of adjacent buildings to help ensure compatibility with the overall patterns of streetscape facades.

This is a good example of a compatible carport enlargement and conversion to a garage.

Appropriate additions and alterations will respect the design character of nearby historic properties and will not destroy historic materials, features, and spatial relationships that characterize these properties. Balance appropriate differentiation and compatibility with the character of the nearby historic properties. Do not make new work look older than it is. Differentiate style, design, and details subtly from the historic buildings through contemporary interpretation of the historic architecture.

This is an example of a carport enclosure that ws done during the period of significance and is now historic in its own right.

4.5 SIGNIFICANT HISTORIC-ERA ADDITIONS AND ALTERATIONS

Many of the additions and alterations visible from the street in the Tomlinson Estates Historic District occurred during the period of significance, 1950-1959, the most common change being the enclosure of a carport on the side of the house. The typical carport enclosure was a simple, walling in of the roof structure that did not adversely affect the architectural or historic integrity of the houses. Many of the additions and alterations constructed within the period of significance have acquired historic significance in their own right and should be retained and preserved. A property may exhibit less than three minor changes to the character-defining features and still be considered a contributing property.

Shown above is a property that replaced its original asphalt shingles with tile ones. This alteration is not compliant with the design guidelines set forth by the community.

4.6 NON-CONTRIBUTING BUILDING ADDITIONS AND ALTERATIONS

Design of alterations and additions to noncontributing buildings should address the characteristics of both the non-contributing building and the contributing neighboring buildings. For historic-era buildings that have lost integrity, a rehabilitation project may be the ideal way to reverse incompatible alterations, allowing them to regain their original character and perhaps become eligible for listing on the National Register of Historic Places. Some of the additions and alterations visible from the street in the Tomlinson Estates Historic District occurred outside of the period of significance or are substantially incompatible with the general historic character of the district. In a few cases, where an addition or alteration can be determined not to be significant, not to meet the Secretary of the Interior's Standards for Rehabilitation, and having a major effect on the integrity of the building, the property should be considered ineligible. This is an infrequent occurrence in the Tomlinson Estates Historic District.

A noncontributing site feature is a drive way that is paved over fifty percent of the front yard.

The use of solar panels is encouraged in the community as long as they are installed on the roof slope facing away from the street. the panel placement shown above does not meet this guideline and interferes with the home's historic character.

4.7 ENERGY CONSERVATION

Historic preservation maximizes the use of existing materials and infrastructure, reduces waste, and preserves the character of neighborhoods and the community. The energy embodied in an historic building can exceed 40 percent of the embedded maintenance and operations energy over the useful life of the building. Historic preservation is the ultimate sustainability strategy.

Because these houses were constructed prior to the introduction of affordable air conditioning systems, they tend to have been designed with greater consideration for passive energy efficiency techniques. Even the latest evaporative coolers available in post-World War II Arizona were far more energy efficient (although less comfortable in humid seasons) than later air conditioners. The flood-irrigated environment of the Tomlinson Estates Historic District also contributes to energy efficiency.

Historic masonry concrete block should not be covered with any insulating treatment. This wall has been preserved and exemplifies a historic block pattern.

The irrigation system of the neighborhood and of each house should be maintained for the sake of energy conservation as well as historic character.

1) The community would like to encourage the use of solar panels as long as they are installed on the roof slope that is facing away from the street.

2) It is important to discourage the replacement of the original steel casement windows and doors on the front facade of the house, and instead to repair the windows or doors back to their original state.

3) Preserve the historic masonry wall. Do not cover with foam insulation, stucco, or other treatment to increase energy performance.

One can see how installation of sunscreens can alter the appearance of original casement windows by aggregating multiple panes of glass together and disrupting the horizontal rhythm of the horizontal glazing pattern.

4.8 HEALTH, SAFETY AND ACCESSIBILITY

The Early/Transitional Ranch and Simple Ranch style houses in Tomlinson Estates Historic District have very little ornamentation and few character-defining features. Thus, the loss of original steel casement windows, while marginally successful in improving the residents' comfort, would have a significant adverse effect on the architectural integrity of the house. Patterns created by the vertical casement sashes and the horizontal mutins were important, not only to each house, but also to the continuity of horizontal lines that carried through the facades collectively as an element of streetscape design. The horizontal line is one of the important characteristics of the Ranch style created by uniform elevations of roof ridges, eaves, window openings, windowpanes, and masonry bonding patterns. The key visual pattern to be retained is the twelve-inch vertical dimension of the original windowpanes. Even casual observation of this historic window type will reveal several windowpane widths but the heights are all twelve inches. Homeowners may restore the original horizontal character of twelve-inch-high panes by modifying existing replacement windows or by installing new window assemblies with the appropriate mullion patterns and glass proportions.

It is often necessary to make modifications to an historic property so that it can comply with current accessibility code requirements or, in the case of a private home, simply to make use of the building more convenient. Although federal, state or local laws do not require the accessibility of existing private residences, standards exist that can be used as a guide for homeowners who desire to improve accessibility to their own dwelling and property. The work must be carefully planned and undertaken so that it does not result in a loss of character-defining spaces, features, and finishes. The goal is to provide the highest level of access with the lowest level of impact. Provide barrier-free access in such a manner that character-defining spaces, features, and finishes are preserved.

If a bedroom is located in the front of the house, a window on the side of that bedroom may be installed for fire egress, which would then preserve the original steel casement window that is located on the front facade of the property.

5 IN-FILL BUILDINGS

No houses in the Tomlinson Estates Historic District have been constructed after the neighborhood's period of significance as in-fill structures. All platted lots were built on during the period of significance. Infill building could occur in the future if a house is lost to fire or demolition, following are design guidelines should that ever occur.

The community encourages that in-fill construction abide by the historic character of the neighborhood in order to preserve the unique charm. This building shown above does not match the character of the neighborhood and therefore takes away from the historic charm. The home was built entirely of red brick rather than concrete block and was also built with a fireplace which no other homes were constructed with.

5.1 NEW IN-FILL BUILDINGS

The Secretary of the Interior's Standards for Rehabilitation and these Guidelines acknowledge that in-fill buildings should be reflections of their own time, but they must also defer to the character of their host historic district. New in-fill buildings constructed in the Tomlinson Estates Historic District must be visually compatible with contributing buildings and should be differentiated from the historic buildings. A new building should not be mistaken for a historic building. Its design must take into consideration the scale, size, massing, silhouette, and materials, patterns of openings and structure, color, and texture of the earlier buildings. New construction must also be placed appropriately on its property to maintain setbacks, spacing and setting of historic structures. New landscaping should blend with the general character of the streetscape. For example, a gravel yard with desert landscaping would not be appropriate in the context of the character-defining lush, mature vegetation and lawns of this irrigated subdivision.

All homes in the community are set back from the street. In-fill buildings should maintain the same historic setback in order to conform to the rest of the neighborhood.

5.2 STREETSCAPE PATTERN

Should an historic house be lost to disaster or demolition, an existing building may be moved into the district if it maintains a sense of architectural unity with existing buildings in the district. Likewise, a new building of contemporary design may be constructed in compliance with these same standards of appropriateness, especially in terms of massing, size, scale and placement. New buildings and additions should be placed within the historic-era setbacks. A building should fit within the range of yard dimensions seen in the block and maintain the existing spacing of side yards. The front of the house should be oriented to the street and the front door should be clearly identifiable. A side yard driveway in keeping with the traditional layout of the streetscape should be provided.

5.3 BUILDING HEIGHT

The height of a building should be similar to that of houses found traditionally on the block and in the neighborhood. New buildings should be the same one-story height as found traditionally in the subdivision or provide wall heights of one story (8 or 9 feet) at facades visible from the street.

5.4 BUILDING FORM

Simple building plans in the form of a rectangle or L-shape should complement the traditional layouts of the Early/Transitional Ranch and Simple Ranch style houses. Low-pitched gable and hipped roofs are appropriate for primary roof forms. Dormers and cupolas are not appropriate for complementing the simple roof massing of the Early/Transitional Ranch and Simple Ranch style houses.

5.5 BUILDING MATERIALS

Building materials that contribute to the traditional sense of scale and that reinforce the sense of visual continuity in the neighborhood are appropriate. The most appropriate wall material in the Ranch style is painted masonry. Use block or brick that is similar in texture, size and proportions to those used historically. Natural-finished used bricks and false bricks or stone should be avoided. Wood siding, as found in the gables of the historic houses, may also be used. Stucco was not characteristically used in this neighborhood, and thus should be avoided. New materials that are similar to traditional materials may be used as accent materials. Roof materials should be composite shingles and should convey a scale and texture similar to those used traditionally on Early/Transitional Ranch and Simple Ranch style houses. Wood shakes appropriate for the later up-scaled California Ranch style houses are not appropriate here.

Historic building materials for the Tomlinson Estates neighborhood include masonry brick and painted concrete block.

5.6 BUILDING FEATURES

Building features for in-fill houses and accessory buildings should complement the historic character of the contributing houses of the district. The porches should be compatible with the size, scale, materials and colors of the neighborhood's prevalent historic architectural style. Eaves of the roof overhangs should be modeled after the visual characteristics of the molding trim type and exposed rafter tail type found in the neighborhood. Decorative profiles at the ends of bargeboards or rafter tails should differ in design from the historic examples in order to differentiate old from new.

This neighborhood home demonstrates multiple features in a successful way. The concrete block, steel casement windows and unique shutters are all character defining features.

6 SITE FEATURES AND SETTING

In recent years, community awareness of water conservation issues has dramatically affected the character of many historic districts. Well-watered lawns, shrubs, and shade trees characterized traditional older Tempe neighborhoods. Today, many homeowners are converting to low-water (xeriscape) landscaping and abandoning lawns for gravel. The loss of traditional green lawns in Ranch house neighborhoods adversely affects the character of the streetscape as well as the setting of the individual house. Lush lawns and mature trees are character-defining features of the district and contribute to energy conservation in their own ways. These guidelines focus on preserving this aspect of neighborhood character through continuation of Tempe's Residential Flood Irrigation Program and the traditional landscapes that program supports. Updating this traditional landscape form considers non-invasive species and allergy or air-quality concerns as factors limiting the recommendations from the historically correct plant lists provided (Appendix C). The best of both, or an enlightened blending of the new with the old, make these guidelines unique to Tomlinson Estates Historic District.

A maintained lush landscape is important in preserving the neighborhood character.

6.1 ENTRANCE COURTYARDS

Homes in the Tomlinson Estates Historic District use the front porch and front entrance as an area for social interaction. Early/ Transitional and Simple Ranch style homes here have a true front porch, Broad overhanging eaves may extend along half or more of the entry facade supported by porch posts. California ranch style houses typically have an L-shaped plan and intersecting gable roofs with an extended eave porch over the junction of the two wings. In keeping with a broad post-WWII trend, the backyard became a retreat for the family and guests, but in Tomlinson Estates the traditional broad, raised, front porch verandahs overlooking the street remained, as did the focus on neighborly interaction with passers-by.

This entry porch maintains the original features of the Ranch Home. The 4x4 support column is a distinct feature unique to this house type.

The carport on this property is set back behind the main line of the house in order to not breach the historic setback.

Today, homeowners may try to create a friendly front porch setting for their Ranch style house. By creating entrance courtyards with paving surrounded by a low fence or planter, the historic facades of Ranch style houses may be respected while creating a neighbor-friendly, semi-public space for the family. Create a small-scaled expansion of the existing porch floor or stoop in a manner that retains the materials, features and character of the original porch. Define the semi-public zone of the entrance courtyard with a low fence, hedge, or raised planter at a height no greater than the sill of the front windows or belt course of the brick wall. Avoid overemphasizing the entrance to the courtyard by using large piers or light fixtures. Instead, provide shade for the new courtyard by introducing an appropriate tree rather than constructing a new or larger porch roof. Avoid extension of an existing porch forward toward the street or adding a trellis or pergola to the primary facade of the Ranch style house.

6.2 SIDEWALKS AND WALKWAYS

Typical 4' sidewalk and rolled curb/ gutter in Tomlinson Estates.

Streets in the Tomlinson Estates Historic District were not paved until 1959, at which point sidewalks and continuous rolled curbs were installed. These elements are considered to be character-defining features of the historic district because the technology is representative of the period of significance and they are elements that work generally to unify the various phases of development within the neighborhood into one comprehensible district. The original concrete sidewalks and rolled concrete curbs in Tomlinson Estates Historic District reflect the post-World War II development of the subdivision. This design allows placement of driveways anywhere along the frontage of each lot. Parkways buffering the street from the sidewalk do not exist as they had in earlier pedestrian-oriented neighborhoods. Instead, the front entrance door and porch of the district's house was reached directly by straight and narrow, concrete ribbon driveway strips.

Because these features of the right of way possess historic significance, it is recommended to preserve significant sidewalk and walkway features retaining their original materials, finishes and colors. Encourage the City to repair damaged portions of the concrete curbs and public sidewalk by replacing them with the matching color, texture and scoring patterns.

Preserve historic contractors' marks stamped into the concrete of sidewalks. Do not remove them. Where concrete sidewalks are too damaged to repair, encourage the City to replace damaged portions of the concrete curbs and public sidewalk using a matching color, texture and scoring patterns. Design for new walkways should take into consideration the materials, design, patterns, scale, size and color of historic examples. New walkways should complement historic features without copying them directly and should not be more ornate than the original sidewalks in finish or detailing.

All driveways in Tomlinson Estates had two concrete paths for the car tires seperated by grass. It also served as a walkway to the entry porch.

6.3 DRIVEWAYS, STREETS AND PARKING

Driveways in the Tomlinson Estates Historic District are two narrow strips of concrete separated by grass leading to the carport. The most common alteration visible from the street during and after the period of significance, was the addition of concrete between the original strips. Preserve significant driveway and parking features retaining their original materials, finishes, colors, and extents.

6.4 FENCES

It is likely that perimeter fences and hedges were seldom seen in the Tomlinson Estates Historic District during the period of significance, 1950-1959. Wooden picket fences and chain link fences seen today were probably introduced later. Backyards, when enclosed at all, were probably secured by chain link or cedar stake fences popular in the early post-war period. These fences were primarily intended to prevent pets and children from wandering.

Many properties have enclosed the backyard with fences; chain link, concrete block or cedar rails are acceptable materials.

In recent decades, when security and privacy became a concern, stronger and higher fences of concrete block enclosed the backyards. Today, fences in the Tomlinson Estates Historic District are generally five or six-feet high, built of wood or block, and remain limited to enclosing the backyard. Most properties do not have a fence in the front yard; however, landscape often defines front yard boundaries. Lot-line plantings often add a sense of boundaries.

In recent decades block fencing has replaced older chain link and wood.

Where no perimeter fence or hedge exists, keeping the front yard open is encouraged. Where a new decorative fence is desired, it should be similar in design, material, and color with those seen in Ranch style neighborhoods. Front yard fences of low scale, open railings, and rustic materials (e.g., cedar rails) are appropriate. New fences must not obscure the primary facade of a building. The railing addition to the front porch is not typical of the Early/ Traditional Ranch style houses of the Tomlinson Estates Historic District, but is in keeping with the broader Ranch style vocabulary of design. Decorative railings, like non-operable window shutters, are symbolic features often used in later Ranch style designs.

When installing a six-foot-high fence or wall at a side yard, keep the front corners of the house visible from the street. If possible, connect the side yard fence to the house behind the side window of the front room.

To meet the Arizona State Historic Preservation Office solid wall or fence policy any solid wall or fence should to the greatest extent possible (see Appendix A):

a. Have a maximum height of four feet (48 inches) and be placed at the front property line in order to maintain the historic relationship of the building to the front yard and the relationship of the building to the public street.

b. Have openings or breaks that allow the building and the character defining features to be viewed from the street. If the openings and breaks exceed 25% of the width of the lot then the wall may exceed the four-foot height restriction.

c. Be designed to meet the Secretary of the Interior's Standards for Rehabilitation and defer to the historic building.

6.5 LANDSCAPE AND IRRIGATION

The residential flood irrigation system that serves the Tomlinson Estates Historic District and the landscaped environment that it supports are important components of the neighborhood design, and were features so desirable in 1950s Tempe that the irrigation works were constructed before street paving or any other improvements. Many properties have grass lawns and a variety of non-native trees and foliage. A lush green landscape was a very desirable feature of post-war subdivisions throughout central Arizona, and flood irrigation provided consistent watering to support it. In the Tomlinson Estates Historic District the setting is green and open, with expanses of turf lawns that were generally not broken by fences, except for an occasional low decorative wall or picket fence. In some cases, vegetation today is so dense that it partially obscures the view of the house. Large, mature, deciduous and semi-tropical trees shade houses and streets, and the vegetation and irrigation water noticeably lower the ambient temperature in the neighborhood during the hot summer months. Tree and shrub varieties present include eucalyptus, Aleppo pine, mulberry, African sumac, orange, bougainvillea, oleander, Italian cypress, boxwood, juniper, Mexican fan palm, mesquite, fig, olive, cottonwood, and pecan.

Many neighbors have installed a xeriscaped landscape because of convenience or cost. Xeriscaping can be used if it provides shade trees and lush vegetation.

A character-defining feature of the neighborhood is the front yard landscaping - which should have mature trees and a lush atmosphere.

This property utilizes the city-provided flood irrigation service to maintain its lush front yard.

The first impression of the historic character of the district landscape is a continuous plane of lush grass punctuated by mature shade trees. This impressive landscape has been made possible by the historic flood irrigation system. Deep watering provided by flood irrigation promotes species and growth rates that modern sprinklers and drippers simply cannot sustain. Irrigation standpipes should be maintained as character defining features of the streetscape. The components of this infrastructure (e.g., standpipes, alfalfa valves, culverts, berms) are the tangible elements that convey the significant technical design aspects of the irrigation system. The mature landscape materials are the direct result of the system. Berms, basins, and raised building pads were designed to protect the foundations and slab floors of the houses from water damage. Maintaining flood irrigation is imperative to preserving the character of the landscape in the Tomlinson Estates Historic District.

Numerous pecan trees were planted in the neighborhood.

Maintaining the clearances between irrigation water and foundations is crucial to preserving each house. Property owners should preserve the component features of the flood irrigation system on their residential lots and preserve historic landscape features whenever possible. Front yard lawns and mature landscaping should be retained to preserve the character of the flood-irrigated historic subdivision. New landscape designs should use materials that are compatible with the historic property and neighborhood. Retain as much of the original design as possible, including landscape materials and irrigation infrastructure. A typical landscape plan for this subdivision would consist of a Bermuda grass lawn and a large shade tree in the front yard. Smaller plantings would have been placed to screen objectionable views or to frame the house.

The African Sumac is an appropriate historic characteristic of the neighborhood.

Today many historic neighborhoods are in a transition from traditional well-watered lawns to low-water desert landscapes. These changes are dramatically affecting the character of the streetscapes. When considering redesign, special attention should be paid to the choice and location of a shade tree. The tree should be placed so that it shades the house as much as possible. A complete list of historically appropriate trees, shrubs and annuals is available in Appendix C.

Varieties that are most significant in the Tomlinson Estates Historic District include:
Morus alba – Mulberry
Pinus Halepensis – Aleppo Pine
Pinus Halepensis – African Sumac
Pinus Halepensis – Pecan

Several varieties are recommended more than others including:
Morus alba 'Kingan' – Fruitless Mulberry
Fraxinus velutina – Arizona Ash
Pinus Halepensis – Aleppo Pine
Platanus wrightii - Cottonwood

Many residents maintain their mature Aleppo Pine trees so large amounts of shade are accessible throughout the neighborhood.

Several historic varieties are strongly discouraged because they are considered highly allergenic or invasive species. See Appendix C for a full list.

6.6 LIGHTING

Streetlights in the Tomlinson Estates Historic District are spaced about 400 feet apart, with three on Hall Street and four on Lemon Street. Original lighting fixtures of the house or site should be preserved, when feasible. New exterior lights should be simple in character and low in intensity. Light sources should be shielded to prevent excessive glare. Minimize the visual impacts of site and architectural lighting. Prevent shining light into adjacent properties by using shielded and focused light sources that direct light onto the ground. Select lighting fixtures that maintain the "dark sky" by avoiding directing light upward.

The residents of Tomlinson Estates enjoy eating fruit from the Mulberry tree which is a common characteristic of the neighborhood.

6.7 ACCESSORY STRUCTURES AND FEATURES

Accessory structures and features in the Tomlinson Estates Historic District almost entirely exist out of view from the right-of-way. Locate a new permanent accessory structure toward the rear of a lot whenever possible, respecting the building setback requirements of the zoning ordinance. Construct a permanent accessory structure that is not only subordinate in size and design to the primary structure, but also similar in character.

This home is another example of the painted concrete masonry block construction prevalent throughout the neighborhood.

Some properties in Tomlinson Estates have managed to remove their Heating, Ventilation, and Air Conditioning (HVAC) units from the roof and relocate them to the rear side of the home. This alteration is encouraged.

The HVAC units on some properties were installed on the roof and can be visible from the street. This detracts from the historic characteristics of the home.

Maintain the traditional range of building materials on accessory structures and the simple detailing historically found on accessory structures. Keep accessory buildings low in scale, small, and hidden from view from the street.

6.8 EQUIPMENT AND UTILITIES PLACEMENT

The residential flood irrigation system in the Tomlinson Estates Historic District was built in 1953, and is an important character-defining feature of the district. It is a complex network of underground concrete pipes and manifolds with concrete risers that bring water to the surface of each lot. There are three large above-ground features of this structure that are visible in the neighborhood: a concrete outlet box, which regulates the flow of water in to the system, and two vertical standpipes that fill with water to pressurize the system and force water to rise to the surface.

These features have been recently altered by a neighborhood public art project that installed ceramic mosaic tiles depicting neighborhood images on much of the visible surfaces above ground. The form and function of these system components is still apparent and they remain character-defining features of the historic district. Irrigation features on individual properties include alfalfa valves to regulate water flow on the property and perimeter earthen berms to contain residential flood irrigation water on the lot without flooding, runoff or erosion. These features should be maintained.

APPENDIX A THE ARIZONA STATE HISTORIC PRESERVATION OFFICE REVISED POLICY STATEMENT FOR RECOMMENDATIONS OF ELIGIBILITY OF BUILDINGS TO THE ARIZONA REGISTER OF HISTORIC PLACES (ADOPTED MARCH 25, 2011)

New placement of equipment and utilities in the Tomlinson Estates Historic District should minimize the visual impacts of utilities and service equipment. Avoid placing mechanical equipment (e.g., air conditioner, attic turbine ventilators) on a roof where it is visible from the public right-of-way. Solar devices should not block views or be placed where they are visible from the public right-of-way. Place a satellite dish out of view from the public right-of-way.

As a guide to consultants, the SHPO staff and the Historic Sites Review Committee the following standards for integrity and eligibility will be applied to buildings being nominated to the Arizona or National Registers of Historic Places under criterion C: Design/Construction. These policies are primarily designed to address the eligibility of buildings as contributors to historic or architectural districts. The eligibility of an individual building will often require the presence of a higher level of integrity. To be eligible a building must convey its significance by maintaining its integrity. Changes that respect the integrity of a historic building do not alter its significance.

THE ORIGINAL BUILDING

1. Evaluation of exterior integrity will continue to be the primary focus of survey work with most attention given to the primary facade.

2. In general, the primary facade must have a majority (51%) of its features intact, and at least 75% of all exterior walls must be present.

3. In general, either the historic wall materials and details must be intact and visible, or the historic massing and openings (doors and windows) must be intact and visible. If both are missing or are hidden behind non-historic materials the building will not be eligible for lack of integrity. In the future, if the non-historic materials are sufficiently removed to prove the existence of intact historic materials, details or openings, the property can then be reevaluated for eligibility.

4. Only the uncovering and exposure of historic materials, not the restoration of missing features, can affect the evaluation of historic integrity. Although the accurate replacement of missing features shall be encouraged, their replacement will play no role in the evaluation of historic integrity.
5. At the request of an owner, the SHPO, or a member of the HSRC, the SHPO staff or qualified consultant can undertake a comprehensive evaluation of a potential historic property. This expanded evaluation may include the exterior, interior and setting of the property utilizing the federal tax act application "Part 1" evaluation format.

6. Interior features including the building's structural system which are found to be rare or of high artistic merit will indicate that the building is potentially eligible even if the exterior integrity is marginal, but in any evaluation at least 75% of the original exterior walls must be intact. In only very rare cases can a building be eligible for its significant interior features if its primary facade has been extensively altered or completely replaced. In general, the complete removal of the primary facade indicates an irreparable loss of integrity no matter how much documentation exists for reconstruction.

7. As part of a comprehensive evaluation the age and rarity of the resource will be addressed within an historical context and a comparison with other similar properties. In general, the older or rarer the property the less integrity will be required for eligibility. Indigenous buildings over 100 years old, vernacular or designed buildings constructed by hand utilizing square nails, or unique one of a kind buildings will be given the greatest leniency in relationship to level of integrity.

8. Although the National Register program allows buildings to be nominated under criterion D, it will be applied to buildings only in cases when there is an indication that the building is likely to yield important information on construction technology, stylistic evolution, or artistic design. If these factors are clearly visible then the building must be nominated under criterion C. If significant below ground archaeological resources are present on the building site then the property should be nominated under both criteria.

BUILDING ADDITIONS

1. For building additions within the property's period of significance:

a. The significance of the addition must be assessed regardless of compliance with the Secretary's Standards.

b. If determined significant the property should be considered eligible.

c. If determined not to be significant but still meets the Secretary's Standards the building should be considered eligible.

d. If determined not to be significant and not to meet the Standards but considered minor the property should be considered eligible.

e. If determined not to be significant, not to meet the Standards and having a major effect on the integrity of the building, the property should be considered ineligible.

2. For building additions outside the property's period of significance:

a. If the addition meets the Secretary's Standards the property should be considered eligible.

b. If the addition does not meet the Standards but is considered minor the property should be considered eligible.

c. If the addition does not to meet the Standards and has a major effect on the integrity of the building, the property should be considered ineligible.

3. To meet the Secretary's Standards an addition should to the greatest extent possible:

a. Be located at the rear or on an inconspicuous side of the historic building. Front facade additions are limited to simply designed carports, porches or balconies.

b. Be limited in its size and scale in relationship to the historic building or district.

c. Be designed to be clearly differentiated or distinctive from the historic building but be compatible with it in terms of mass, materials, relationship of solid to voids, and color thus making clear what is historic and what is new.

d. Be designed not to obscure the character defining features of the historic building.

e. Be designed with setbacks or offsets from the roof and/or wall planes or have a neutral spacer such as glass between original fabric and the new addition and be as inconspicuous as possible when viewed from the street.

f. Be placed behind the front roof slope if designed taller than the original building.

g. Defer all new work to the original building.

h. Leave original exterior walls in place even if enclosed within the addition. And,

i. Match original roof slopes and eave widths.

PORCH AND/OR CARPORT INFILL ADDITIONS

1. For porch or carport infill additions within the property's period of significance:

a. The significance of the infill must be assessed regardless of compliance with the Secretary's Standards.

b. If determined significant the property should be considered eligible.

c. If determined not to be significant but still meets the Secretary's Standards the property should be considered eligible.

d. If determined not to be significant and not to meet the Standards the property should be considered ineligible.

2. For porch or carport infill additions outside the property's period of significance:

a. If the infill meets the Secretary's Standards the property should be considered eligible.

b. If the infill does not to meet the Standards the property should be considered ineligible.

3. To meet the Secretary's Standards a porch or carport infill addition should to the greatest extent possible:

a. Not destroy character-defining features of the original building including any porch or carport features.

b. Not destroy the original bay expression of the original porch or carport.

c. Be in filled with panels of glass, glass block, stucco or horizontal wood siding that are distinctive but compatible with the original building and reinforce the bay expression of the original feature.
d. Not incorporate discrete openings but utilize grouped or ribbon openings that blend with the infill panels. New doors should not be on primary facades.
e. If in filled as a garage, incorporates a plane and simple garage door that matches the full width of the original carport.
f. Have any new walls offset inward from the original bay structure or have new walls that express the underlying structural bays as a surface treatment.
g. Defers to the original building, porch and/or carport.
h. Retains the original driveway location.

FRONT YARD SOLID WALLS OR FENCES

1. For front yard solid walls or fences within the property's period of significance:
   a. The significance of the wall must be assessed.
   b. If the wall or fence is determined significant the property should be considered eligible.
   c. If the wall or fence is determined not to be significant and blocks the view of the historic building the property should be considered ineligible.
   d. If the wall or fence is determined not to be significant but meets these policies then the property should be considered eligible.
2. For front yard solid walls or fences outside the property's period of significance:
   a. If the wall or fence meets these policies then the property should be considered eligible.
   b. If the wall or fence does not to meet these policies then the property should be considered ineligible.
3. To meet this solid wall or fence policy any solid wall or fence should to the greatest extent possible:
   a. Have a maximum height of 4 feet (48 inches) and be placed at the front property line in order to maintain the historic relationship of the building to the front yard and the relationship of the building to the public street.
   b. Have openings or breaks that allow the building and the character defining features to be viewed from the street. If the openings and breaks exceed 25% of the width of the lot then the wall may exceed the 4-foot height restriction.

c. Be designed to meet the Secretary of the Interior's Standards for Rehabilitation and defer to the historic building.

LANDSCAPING

1. Historic property landscaping must be consistent with one of the following treatments for historic properties: preservation, restoration or rehabilitation.

a. Landscaping preservation retains the character of the landscape per the date of the survey. Historic changes and alterations are respected but additional changes are discouraged.

b. Landscaping restoration returns the landscaping to an earlier specific time period. Restoration must be based on research from physical evidence, historic photographs and/or written documentation.

c. Landscaping rehabilitation retains significant features from the past while allowing non-historic replacement materials and added features that are distinctive but compatible with the historic landscaping.

2. For landscaping features over 50 years old at the time of survey:

a. The significance of the landscaping must be assessed.

b. If the landscaping is determined significant the property should be considered eligible.

c. If the landscaping is determined not to be significant and blocks the view of the historic building the property should be considered ineligible.

d. If the landscaping meets these policies then the property should be considered eligible.

3. For landscaping features less that 50 years old at the time of survey work:

a. If the landscaping meets these policies then the property should be considered eligible.

b. If the landscaping does not meet these policies then the property should be considered ineligible.

4. To meet this landscaping policy the landscaping should to the greatest extent possible:

a. Meet the Secretary of the Interior's Standards for the selected treatment.

b. Retain the historic relationship between the building, landscape features and open space.
c. Not introduce new landscape features that are out of scale or otherwise inappropriate to the historic setting.
d. Not introduce new landscape features or plant materials that are visually incompatible with the site or destroys site patterns or vistas including the view of the primary building.
e. Have any new hardscape features defer to the historic building.

RECOMMENDATIONS OF ELIGIBILITY

1. In cases of clear eligibility (consensus by the SHPO staff) the SHPO can determine eligibility without HSRC consultation. An eligibility statement signed by the appropriate staff and the SHPO must be on file with a State Inventory Form. Files containing properties that have been determined eligible will be clearly marked for identification.

2. Properties of marginal or questionable integrity by staff in need of a recommendation of eligibility will be brought to the HSRC for comment. The HSRC will receive a completed State Inventory Form and a staff report addressing the eligibility of the property. If the HSRC considers the property eligible, such statement, if agreed to by the SHPO, will be signed and filed with the State Inventory Form.

Adopted by the Historic Sites Review Committee (HSRC) March 25, 2011
Prepared by James Garrison, State Historic Preservation Officer
State Historic Preservation Office, Arizona State Parks

APPENDIX B THE SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction, will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

APPENDIX C TEMPE HISTORIC ERA PLANT MATERIALS LIST

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

* Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values.

Trees available from Valley garden centers ca. 1950s

Acacia farnesiana	Sweet Acacia
Callistemon viminalis	Weeping Bottlebrush
Carya illinoinensis	Pecan
Citrus species	Citrus (all but sour)
Eriobotrya japonica	Loquat - Japanese
Fraxinus velutina	Arizona Ash -NATIVE
Morus alba 'Kingan'	Mulberry - Kingan, Fruitless
Pinus halepensis	Aleppo Pine
Punica granatum	Pomegranate
Ulmus parvifolia	Chinese Elm
Vitex agnus	Chaste Tree

Shrubs available from Valley garden centers ca. 1950s

Bougainvillea spp.	Bougainvillea
Buxux japonica	Boxwood
Jasminium mesnyi	Primrose Jasmine
Juniperus deppeana	'Chinese' Juniper
Lagerstromia indica	Crape myrtle
Leucophyllum fruitescens	Texas Sage
Liguistrum japonicum	Japanese Privet
Liguistrum lucidum	Wax Leaf Privet
Myrtus communis compacta	Dwarf Myrtle
Nandina domestica	Heavenly Bamboo
Nerium oleander	Oleander

APPENDIX C

Pyracantha spp.	Pyracantha
Rosa spp.	Roses
Rosemarinus officinalis prostrate	Rosemary
Thuja orientalis	Arborvitae

Annuals available from Valley garden centers ca. 1950s

Antirrhinum spp.	Snapdragons
Bellis perennis	Daisies
Calendula	Pot Marigold
Camellia spp.	Camellia
Chrysanthemum spp.	Chrysanthemum
Delphinium spp.	Larkspur
Dianthus caryophyllus	Carnations
Gardenia spp.	Gardenia
Geranium spp.	Geranium
Hemerocallis spp.	Daylily
Iris spp.	Iris
Lobularia maritima	Sweet Assylum
Petunia spp.	Petunias
Tagetes spp.	Marigolds
Verbena spp.	Verbena
Viola spp.	Pansies
Viola spp.	Violets
Zinnias spp.	Zinnia

Vines available from Valley garden centers ca. 1950s

Antigonon leptopus	Queen's Wreath
Campsis radicans	Trumpet Vine
Dipogon lignosus	Australian Pea Vine
Hedera helix	English Ivy
Lablab purpureus	Hyacinth Bean
Lagenaria spp.	Gourds
Lathyrus odoratus	Sweet Pea
Marah gilensis	Wild Cucumber
Tropaeolum spp.	Nasturtiums
Wisteria frutescens	Wisteria

APPENDIX D GLOSSARY OF TERMS

Alteration:
Any aesthetic, architectural, mechanical or structural change to the exterior surface of any significant part of a designated property.

Archeologically sensitive:
A property that includes known or suspected archeological sites.

Archeological site:
A site that has yielded, or exhibits the promise of yielding, information important in the understanding of human prehistory or history. Such information may consist of evidence of past human life, habitation or activity, as well as material remains.

Arizona register of historic places:

The list of Arizona's historic properties worthy of preservation which serves as an official record of Arizona's historic districts, archeological sites, buildings, structures and objects significant in this state's history, architecture, archeology, engineering and culture. Pursuant to A.R.S. § 41-511.04(9), the Arizona state parks board, state historic preservation office is authorized to keep and administer an Arizona register of historic places composed of properties that meet the criteria established by the board, see below, or which are listed on the national register of historic places. Entry on the register requires nomination by the state historic preservation officer (SHPO) and owner notification in accordance with rules that the board adopts. The criteria for evaluation of potential Arizona register properties generally encompass the quality of significance in Arizona history, architecture, archeology, engineering and culture. Such qualities may be present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association; and also:

(1) Are associated with events that have made a significant contribution to the broad patterns of history;

(2) Are associated with the lives of historically significant persons;

(3) Are the embodiment of a distinctive characteristic(s) of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(4) Have yielded, or may be likely to yield, information important in prehistory or history.

Building:

Any structure created to shelter any form of human activity, such as a house, church or hotel; may also refer to a related complex such as a courthouse and jail, or a house and barn.

Certified Local Government (CLG):

A federal program, the aim of which is to decentralize the national historic preservation program by assigning decision-making to the states and, ultimately, to local governments. Applications for certification are reviewed by the state historic preservation officer and must document, at a minimum, establishment of an historic preservation commission with specific membership and duties, adoption of an historic preservation ordinance and development of an historic preservation plan.

Commission:
The historic preservation commission of Tempe.

Compatibility:
A pleasing visual relationship between elements of a property, building, or structure, or among properties, buildings and structures, or with their surroundings. Aspects of compatibility may include, but are not limited to, proportion, rhythm, detail, texture, material, reflectance and architectural style.

Contributing property:
A classification applied to an individual property within a designated historic district, signifying that the property contributes generally to the distinctive character of the district; or an archeological site.

Demolition:
The act or process that destroys a designated property.

Designated property:
Any property that has been classified as a landmark, historic property or contributing property within an historic district.

Distinctive character:
The distinguishing architectural and aesthetic characteristics of a landmark or historic property, or those generally found throughout an historic district, which fulfill the criteria for designation.

Historic district:

A designation, in the form of overlay zoning, applied to all properties within an area with defined boundaries, as a result of formal adoption by the city council, which express a distinctive character worthy of preservation. An historic district may also include or be composed of one or more archeological sites.

Historic eligible:
A property that appears to meet the criteria for designation.

Historic preservation officer (HPO):
A city staff member appointed by the community development manager to serve as secretary to the historic preservation commission, maintain the Tempe historic property register and otherwise perform such tasks and duties as assigned by this chapter.

Historic preservation plan:
A document, formally adopted by the city council, containing goals and policies regarding historic preservation within the city.

Historic property:
A designation, in the form of overlay zoning, applied to an individual property, as a result of formal adoption by the city council, which expresses a distinctive character worthy of preservation, or an archaeological site.

Landmark:
A designation, in the form of overlay zoning, applied to an individual property, as a result of formal adoption by the city council, which has achieved significance within the past fifty (50) years and which expresses a distinctive character worthy of

preservation and which otherwise fulfills or exceeds the criteria for designation as an historic property.
National register of historic places:

The national register of historic places as established by the Historic Sites Act of 1935 (16 U.S.C. § 461 et seq.) and expanded by the National Historic Preservation Act of 1966, (16 U.S.C. § 470 et seq.) as amended. It is the nation's official listing of prehistoric and historic properties worthy of preservation. It affords protection and recognition for districts, sites, buildings and structures significant in American history, architecture, archeology, engineering and culture. This significance can be at the local, state or national level. The national register serves both as a planning tool and as a means of identifying buildings, sites and districts that are of special significance to a community and worthy of preservation. The criteria for evaluation of potential national register properties generally encompass the quality of significance in American history, architecture, archaeology, engineering and culture. Such qualities may be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association; and

(1) That are associated with events that have made a significant contribution to the broad patterns of our history;

(2) That are associated with the lives of persons significant in our past;

(3) That embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(4) That have yielded, or may be likely to yield, information important in prehistory or history.

Noncontributing property:

A classification applied to an individual property located within a designated historic district, signifying that the property does not contribute to the distinctive character of the district. Such properties are subject only to the provisions of this chapter regarding new construction, including general landscape character, and only when the amount of new construction equals or exceeds twenty-five percent (25%) of the land area or building ground floor area of the property at the time of its identification as noncontributing.

Ordinary maintenance and repair:

Regular or usual care, upkeep or replacement of any part, or putting back together that which is deteriorated or broken, of an existing property, building or structure to effect the maintenance of a safe, sanitary and stable condition.

Owner:

The legal ownership entity of an individual parcel or property, as recorded with Maricopa County. For purposes of this chapter, each such parcel or property shall be considered to have one owner.

Parcel:

Land identified as a separate lot for purposes of the subdivision and zoning regulations of the city and so recorded with Maricopa County.

Preservation covenant:

A deed restriction, filed with Maricopa County, which limits the owner's use of a designated property in order to effect the preservation of the distinctive character of the property.

Preservation easement:

The non-possessory interest of a holder in real property, said property being a designated property, imposing limitations or obligations to preserve the distinctive character of that property, or a specified portion thereof.

Property:

Building(s), structures(s) or other improvements, or an archeological site, associated with a particular parcel or location.

APPENDIX E REFERENCES CITED

Secretary of the interior's standards for the treatment of historic properties:

Standards developed and adopted, as amended, by the secretary of the interior of the United States to guide work funded by, or otherwise conducted under the auspices of, the federal government on historic properties and archeological sites. Guidelines are given for preservation, rehabilitation, restoration and reconstruction.

Significant:

Having aesthetic, architectural or historical qualities of critical importance to the consideration of a property, building or structure for classification as a designated property.

Structure:

Anything built, constructed or erected, or any piece of work artificially built-up or composed of parts joined together in some definite manner, the existence of which requires a permanent or semi-permanent location on or in the ground, including, but not limited to: bridges, dams, walls, fences, gazebos, garages, advertising signs, communications towers, sculpture, monuments, recreational facilities and water distribution systems.

Tempe historic property register:

A document listing all designated properties and districts in the city.

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