CITY OF TEMPE
HISTORIC PRESERVATION COMMISSION

Meeting Date: 09/14/2022
Agenda Item: 6

Memorandum

To: Historic Preservation Commission

From: Zachary J. Lechner, Historic Preservation Officer

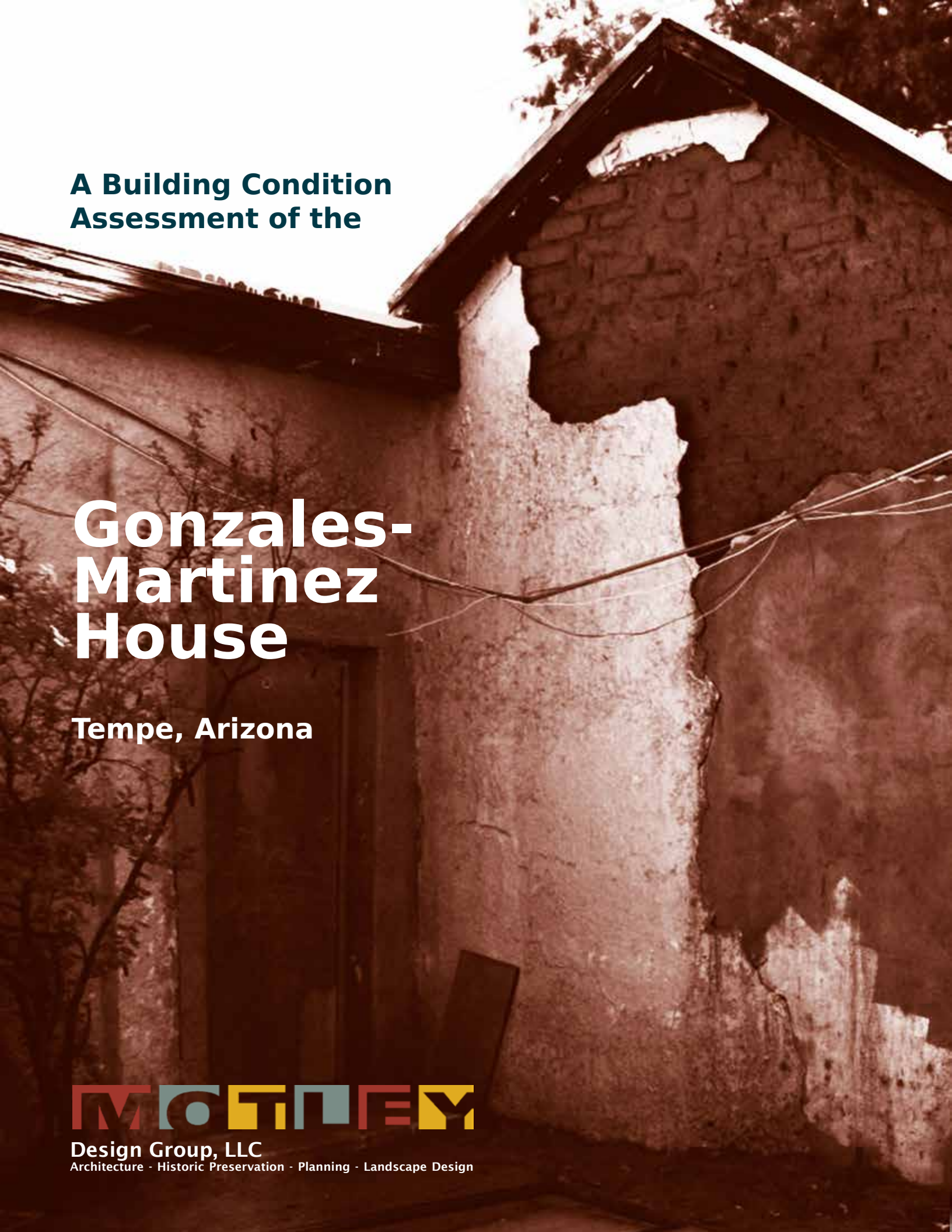
Date: September 7, 2022

Subject: Agenda Item #6: Update on the Gonzales-Martinez House

Historic Preservation Officer Zachary Lechner will present an update on ongoing efforts to maintain and plans to stabilize and rehabilitate the Gonzales-Martinez House, a City-owned property located at 321 West First Street, that is Historic Eligible and listed in the National Register of Historic Places.

ATTACHMENTS:

1. 2017 Building Condition Assessment Report for the Gonzales-Martinez House



A Building Condition Assessment of the

Gonzales-Martinez House

Tempe, Arizona

Design Group, LLC
Architecture - Historic Preservation - Planning - Landscape Design

A Building Condition Assessment of the

Gonzales-Martinez House

Tempe, Arizona

Prepared for:

The City of Tempe
Historic Preservation Office
P. O. Box 5002
Tempe, Arizona 85280

By:

Motley Design Group, LLC
1114 NW Grand Ave.
Phoenix, Arizona 85007
(602) 254-5599

Robert G. Graham, AIA - Historical Architect

Expires 12/31/2017

Projecct No. 17-019
December, 2017

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Executive Summary

Introduction

The Gonzales-Martinez House was constructed beginning in 1880 and evolved through the 1980s to its present form. It is significant as one of the earliest three remaining buildings from the founding years of the city of Tempe. The house's ownership has been in dispute for many years, but the city plans to take full control of the property in the near future.

This assessment was conducted at the behest of the Tempe Historic Preservation Office as a tool for planning for the preservation of the building. The assessment was conducted by Motley Design Group, historical architects, and Slaysman Engineering Co., structural engineers, in September and October of 2017.

Historical Background

The house was initially constructed in 1880 by Ramon Gonzales on informally occupied federal land. The property was conveyed to Jesus Martinez in 1892. The property has been occupied by his descendents to the present day. The initial adobe house was expanded with an addition using railroad ties as walls in about 1918. A second addition was made to the back in modern times, about 1982-85, for additional living space and a garage.

General Description

The house is located on a parcel at the northeast corner of First Street and Farmer Avenue, just on the west side of the Union Pacific railroad tracks. The historic part of the house is comprised of four rooms. The first two rooms, of adobe with a wood framed side gable roof, are on the south side of the house and face toward First Street. The third and fourth rooms are constructed on the back side of the first two, and are built of railroad ties with a wood frame roof structure. Later additions are of conventional wood framing and abut the north side of the historic portions.

Two additional small wood frame structures exist on site that are of historic age, a Shack moved to the site from Phoenix in the 1940s and a rail workers Cabin of unknown age.

Assessment Summary

The building was found to be in stable condition although with deterioration that could put it in structural danger fairly soon. Much of the building could not be directly assessed due to being covered win modern stucco and, on the interior, with furring and drywall.

The most critical work items relate to protection of the adobe walls and repair of rotted railroad ties at the base of the wooden walls. The modern additions that cover historic materials need to be removed in order to get a more complete assessment of the building structure and preservation needs. The overall weather resistance of the building needs to be improved by repairs to the roofing and replacement of doors and windows.

Other required work is not of an immediate nature and includes additional adobe stabilization, repair and finishing to the roof eaves, and interior repair and finish work.

The repair work noted above would result in a relatively stable building but would not restore it to its earlier appearance. If the building is to be rehabilitated for a new use in keeping with its historic character, certain building code upgrades will be needed as well as removal of the modern additions, replacement of the roof, reconstruction of certain critical elements such as the front porch, reconstruction of interior finishes, and complete replacement of mechanical, plumbing, and electrical systems.

Cost Estimates

General and Critical Work:	$109,971
Serious/Minor Work:	$23,615
Restoration Work:	$134,242
Project Total:	**$267,828**

Introduction/Methodology

Purpose and Scope

The Gonzales-Martinez House was constructed beginning in 1880 and evolved to its present form by 1985. The site has been occupied by the same family since 1892. Government ownership of the property has been disputed by the occupants for many years. Recent court judgments have confirmed that the site overall is split in ownership between the city of Tempe and the State of Arizona Land Trust. The City's parcel contains the historic house.

Because the house is known to be one of only three buildings left from the first decade of Tempe's development, it has been identified as a high priority for preservation. The city of Tempe commissioned this assessment in anticipation of taking full possession of the property, in order to document the existing conditions and identify any emergency stabilization measures that may be necessary. The report also is to provide information useful for the long term management of the property as an historic resource.

This Building Condition Assessment Report examines the existing conditions of building, locates deteriorated conditions or other deficiencies, and recommends remedial actions to cure those deficiencies. The report integrates known historical data with inspection of existing building conditions to obtain recommendations that will be in conformance with the Secretary of the Interior's Standards for Rehabilitation.

Project Team

Project Manager: Catherine Hollow, P.E., City of Tempe, Engineering Department

Client Agency: John Southard, City of Tempe Historic Preservation Officer

Principal Investigator / Historical Architect: Robert Graham, AIA, Motley Design Group

Architectural Assistants: Roberta L. Graham, Sophia Urbaez, Motley Design Group

Structural Engineer: Melvin Slaysman, P.E., Slaysman Engineering Co.

Historical Research

No historical research in primary sources was undertaken for this study. Existing data, including that found in prior studies and readily available secondary sources, was used. The primary documentation used was taken from the city's own published information available on its website.

Condition Assessment

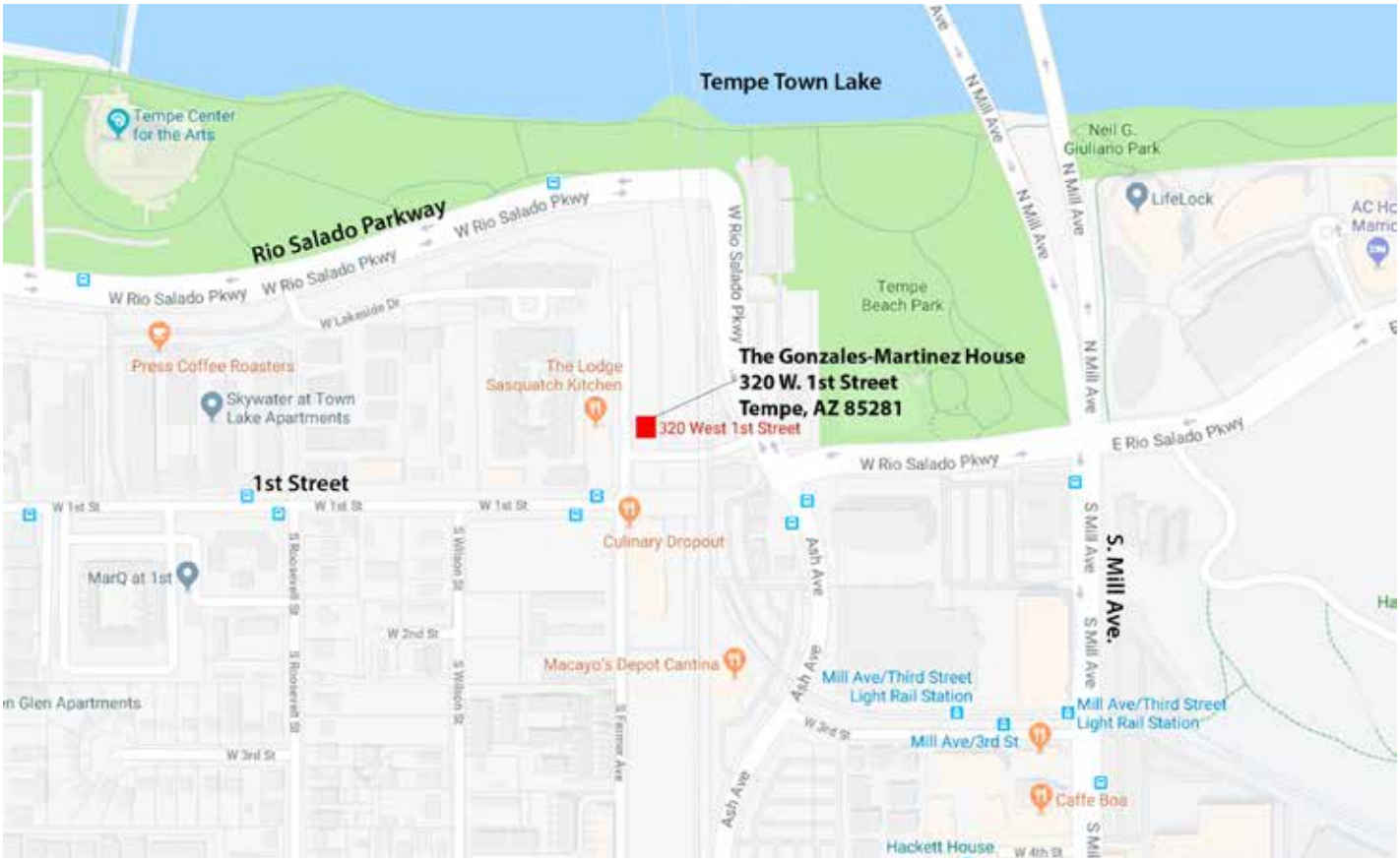
The architectural and engineering team visited the site on September 6, 19 and 27, 2017, and the historical architect made an additional visit on October 4, 2017. The floor plan, as well as critical vertical dimensions, were measured and documented. Building features were investigated on an individual basis, following the Architect's standard break-down of building and site features and systems. Digital photographic documentation of each feature or condition was conducted at the same time.

All parts of the building were accessed, although this was severely limited by the need to arrange special access to particular rooms or spaces. In addition, much of the historic construction was found to be concealed behind modern finishes. Some limited demolition was undertaken to expose the historic construction. This was limited to small access holes made through non-historic drywall. The foundations were excavated in two representative locations.

The structural engineering consultant prepared his recommendations in letter format, which is appended to this document. The recommendations contained therein have been restated and supplemented in the architectural assessment (sections A-1 through A-4).

The feature assessment rates the integrity of each feature as good, fair, or poor, in relation to the relative magnitude of work required to repair or restore the feature.

The significance of each feature is noted as



Vicinity Map

original, early, or late to denote the feature's role in conveying the period of significance of the building. Architectural significance of a feature is noted as CDE, or character-defining element.

The priority of importance of the recommended work on the feature is noted as critical, serious, or minor. Features in the critical category are those that have failed; that are causing accelerated deterioration of other building elements; or that are not in conformance with a code or law. Serious priority features are those that can be expected to fail within five to seven years. Features categorized as a minor priority are those that have long-term consequences or that are not expected to fail for seven or more years.

The analysis of each feature is then broken down into three parts: description, deficiencies, and recommendations.

Historical Overview

Summary

This building is significant for its association with the initial settlement of the Hayden's Ferry townsite along the south bank of the Salt River. Built in 1880 by Ramon Gonzales, the house is one of only three remaining structures associated with the first ten years of Tempe's history. The building is a rare local example of a house type illustrative of the lifestyle and settlement pattern of the predominantly Mexican population of early Tempe.

Historic Events

Originally an employee of Charles Trumbull Hayden at his adjacent Salt River ferry, Ramon Gonzales likely built the house at its location due simply to its proximity to his place of work; many others did the same, Hayden being the largest employer in the area at that time. The fact that Gonzales and other Hispanic employees essentially "squatted" on the land without clear title has led to lawsuits with the State of Arizona in recent years, one of which has directly impacted the subject property and has resulted in a shift in ownership from the Sussex family to both state and local government entities.

Persons

Ramon Gonzales was a freighter in Southern Arizona until he relocated to Tempe in about 1877 and was employed by Charles T. Hayden. Jesus Martinez acquired the property in 1892. Martinez was the great-grandfather of Steven Sussex, whose family lived on the property for over 100 years. Carl Hayden, the State's first Congressional Representative and one of the longest-serving U.S. Congressmen in history, raised hogs on the property

with Sussex's uncle, who arrived in Tempe in 1912 and worked in the construction of the 1912 bridge that spanned the banks of the Salt River. During the Great Depression, the Sussex family allowed homeless travelers on the adjacent railroad to stay in shacks on the property (one of which still remains).

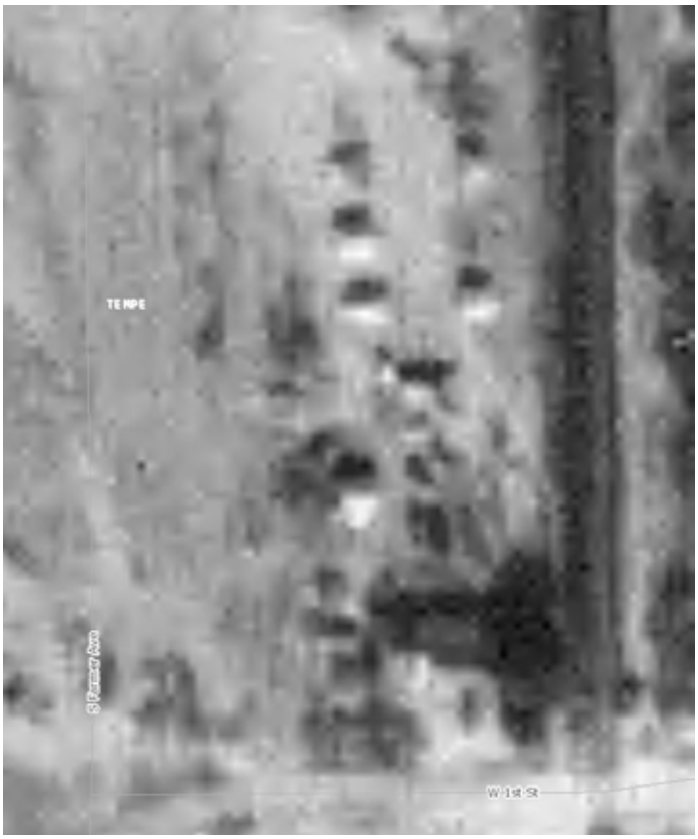
Architecture

Constructed of adobe, the house represents the earliest form of traditional Southwestern architecture, harkening back to the days of Spanish colonization of Arizona and New Mexico. The Gonzales-Martinez House is one of only two such adobe structures (the other being the Charles T. Hayden House/Monti's La Casa Vieja) that remain in the City of Tempe. Furthermore, this is the only Hispanic-built and Hispanic-owned adobe home remaining in a town that at one time—in the late 1800s—had entire neighborhoods (or "barrios") built of similar small adobe homes. Thus, this property might be seen as the last remaining architectural vestige of Tempe's working-class Mexican roots.

Aerial Photographs

1949

1959



1969

1976

1979

1982

1991

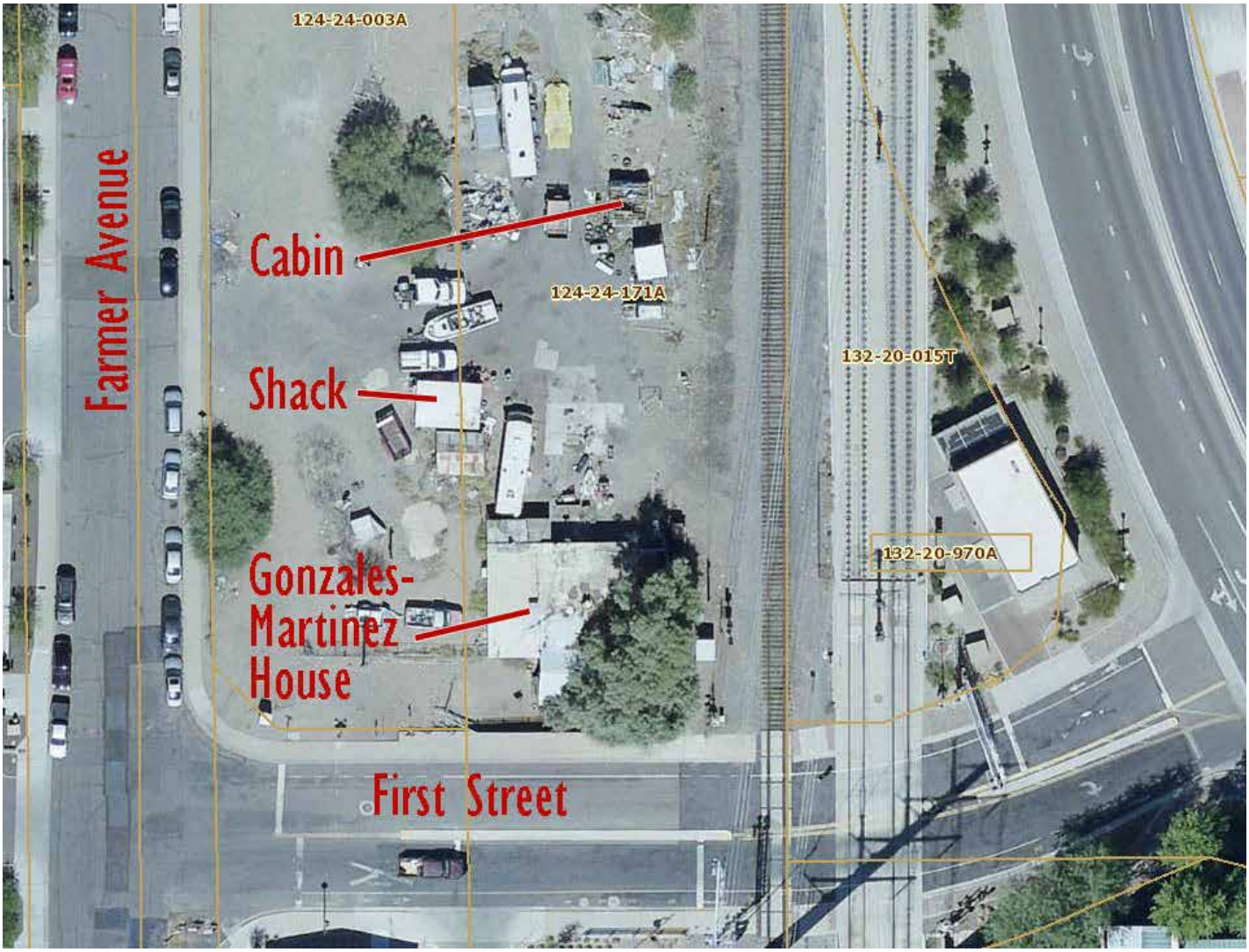
2016

Building Description

The Gonzales-Martinez House lies within a piece of land near the Tempe downtown core bounded by First Street on the south, Rio Salado Parkway on the north, Farmer Avenue on the west, and the Union Pacific railroad tracks on the east. The house is located at the southeast corner of this land. While ownership of the property has been disputed over the years, today's records indicate that the eastern half of the property, which includes the house, is owned by the city of Tempe while the western half, extending to Farmer Avenue, is State of Arizona Trust land. The boundary between these two halves is not obvious to a visitor.

The site is barren for the most part. A few volunteer mesquite trees and desert shrubs and one large salt cedar tree (just on the east side of the house) are all that exists of plants on the site. The site itself is nearly flat, but due to the railroad tracks being raised 5 to 6 feet above grade as an approach to the Salt River bridge, and the intersecting First Street sloping up to intersect the tracks, the house appears to reside in a hole or niche in the southeast corner of the site.

The area to the north of the house is used as a storage yard for vehicles, equipment, and general salvage. Two potentially historic features were noted in this area: a wood framed Shack moved to the site in the 1940s and a rail workers' Cabin apparently left from railroad construction some time before World War II.



Site Aerial Photo 2017

General View to North East

The 1880 adobe house was probably a one-room cabin when first built. The front elevation had one central entry door flanked by double hung wood windows. It appears there was just one door out the back side, more or less in line with the entry door, and no other windows. The walls were 18 inches of earthen bricks on the north and south but only 10 inches on the east and west sides, not including plaster finishes. It is not known if the building was originally plastered, but at some early point it was covered in lime plaster. The side-gable roof of 8:12 pitch is framed of conventional 2x4 rafters and ceiling joists. The roof was covered in wood shingles. The side adobe walls continued up into the gables to enclose the attics. There is also evidence of a veranda porch on the entry side of the house, no longer extant. The exact appearance of the porch is not known, but in context with the rest of the house, was likely a very simple wooden structure.

The interiors of the original house were simple and unadorned. Floors were wood boards over a shallow crawlspace (although the wood floors may have come later). Walls were plastered. The ceiling was light weight fiber board nailed to the ceiling joists, with joints covered with wood battens. The single room was partitioned into two in the late teens or in the 1920s with a plastered woof frame partition wall, creating a private bedroom.

In about 1918, two rooms were added to the back of the house using 8-inch thick railroad ties as the wall materials. The ties were stacked up to the height required to support the shed roof extending off the back slope of the earlier house. The two rooms may in fact have been built in phases. The first room (designated Room 3 in this report) was directly behind (north of) the west half of the original house and was entered through the former back door. This addition had door openings (or perhaps, originally window openings) on all three sides and was probably used as a kitchen. Today it is used for storage. The second room (possibly built a little later, and designated Room 4 in this report) was built to the west side of Room 3, breaking the rectangular regularity of the floor plan. It originally had a near-flat roof that was discontinuous from the others. The original use of Room 4 is not known, but it may have contained a bathroom and storage space, since these features were not present elsewhere. Today it serves as a kitchen.

The remaining space behind the adobe house east of the wooden addition became a covered porch. It was open or screened above a short concrete or masonry wall. If Room 3 was a kitchen, then the porch was likely for utility purposes such as for

Overall view to southwest. Shack (with metal roof) at right

laundry. This space was typical of pre-Depression homes in the region.

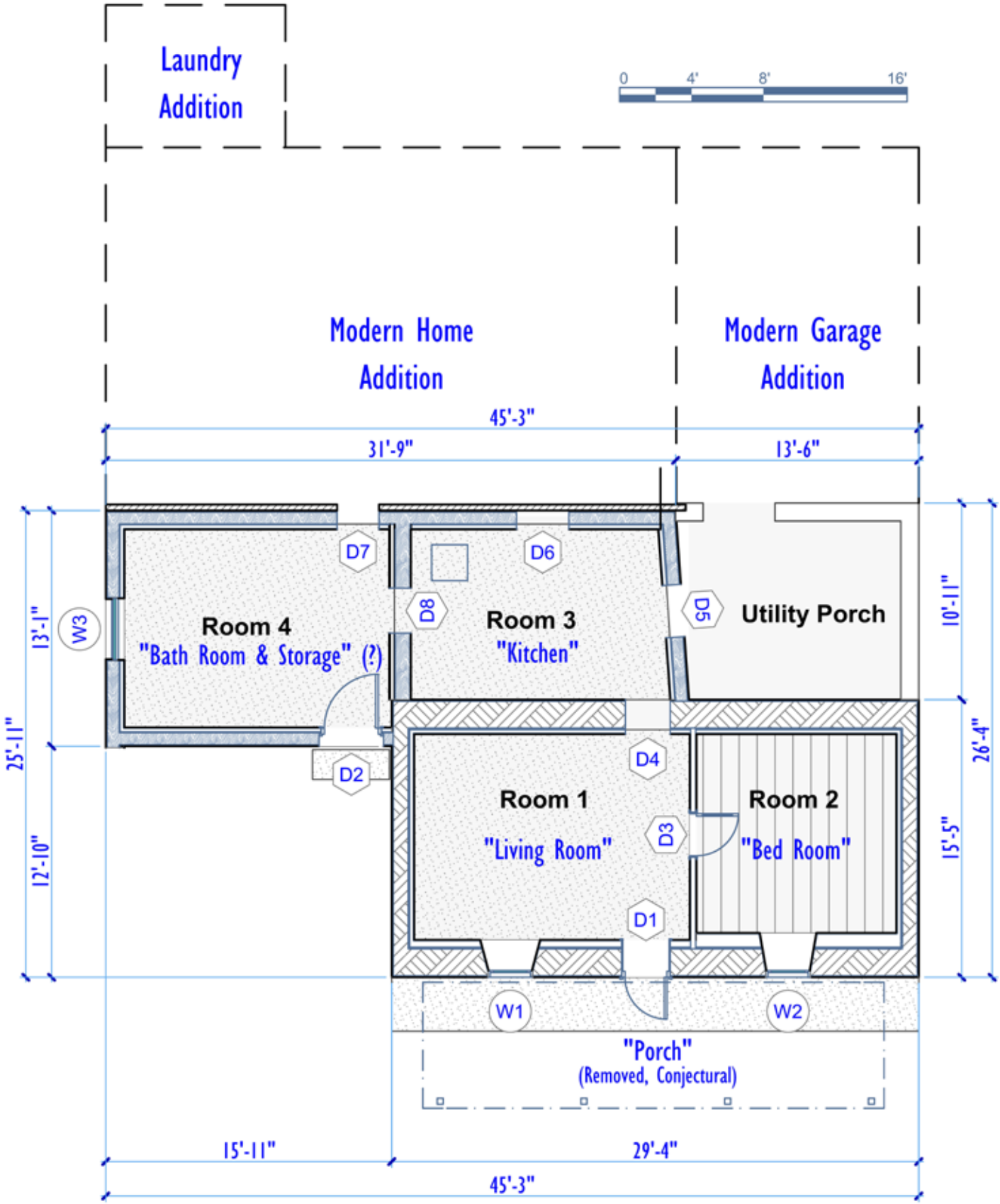
The home remained more or less in this form until the 1980s. Between 1982 and 1985 (from aerial photographs), additional living space and a garage were added to the north side of the house, extending its depth by 20 feet. It was probably about this time also that the floors in Rooms 1, 3, and 4 were replaced with concrete slabs and the roof of Room 4 was removed and replaced to appear more as a continuation of the roof of Room 3. The interior of Room 4 was fitted out with modern kitchen cabinetry and appliances.

Today the house exists more or less in this form, although in poor condition. The historic parts of the house have been largely abandoned except for the Kitchen in Room 4. The modern additions continue to be occupied as a home.

East side of house, looking southwest

Interior, Room 1, looking southwest

Interior, Room 3, looking northeast


Laundry
Addition
0
4'
8'
16'
Modern Home
Addition
Modern Garage
Addition
45'-3"
31'-9"
13'-6"
D7
D6
D8
D5
Utility Porch
Room 4
"Bath Room & Storage" (?)
Room 3
"Kitchen"
W3
13'-1"
10'-11"
25'-11"
26'-4"
D2
D4
Room 1
"Living Room"
Room 2
"Bed Room"
D3
15'-5"
12'-10"
D1
W1
W2
"Porch"
(Removed, Conjectural)
15'-11"
29'-4"
45'-3"

Floor Plan

Building Feature Analysis

Foundations

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
● Good	● Original	● Critical
☐ Fair	☐ Early	☐ Serious
● Poor	☐ Late	☐ Minor
	☐ CDE	

1 - Description

The foundation of the west adobe wall was excavated to a depth of about 12 inches below existing grade. The adobe wall was found to bear directly on earth, although a curb composed of lime mortar or plaster 8 inches high and up to 6 inches wide was found placed within the wall with the top of the curb just below grade.

The railroad tie walls were also found to bear directly on earth. A test hole was excavated on the south side of Room 4 near the west end of the wall.

2 - Deficiencies

While the earth at the base of the adobe at grade was found to be damp, it still appeared to be coherent and stable.

The bottom railroad tie acting as the foundation of the wooden walls was found to be significantly deteriorated by insect damage and rot at the location excavated. The next tie above did not exhibit the same degree of damage. It appears likely that the bottom tie will be found to be similarly deteriorated throughout the structure, although currently concealed by plaster.

3 - Recommendations

Expose and evaluate the bottom wood ties where they are in contact with the earth. Replace all damaged ties using new pressure-treated wood material. Alternatively, if it is found that the original interior and exterior wall finish was plaster, and the wall material will not be exposed, the bottom tie can be replaced with concrete or masonry on a spread footing excavated beneath the wall.

Adobe foundation excavation

Wood Foundation Test

Structure: A 02

Vertical Load Systems (Walls/Columns)

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	● Critical
● Fair	☐ Early	☐ Serious
☐ Poor	☐ Late	☐ Minor
	☐ CDE	

1 - Description

Walls of the original house, encompassing Rooms 1 and 2, are of unreinforced plain adobe brick 12 inches in length in 4 inch high courses. The north and south walls (front and back) appear to be 18 inches in thickness plus plaster coats on both sides, for a total wall thickness of 20 inches. The north and south walls support the roof framing, which bears on the top of the wall at 9 '-0" above the floor elevation. The east and west walls (sides) are thinner adobe brick, measuring 10 inches of adobe plus plaster on each side to create a 12 inch thick wall.

Walls of Rooms 3 and 4 (except where common with the original adobe house) are of 8 to 9 inches of solid wood railroad ties covered in plaster. The ties, which typically were treated with creosote, are simply stacked one on the other. The attachment between courses is not known. The south wall of Room 4 has an irregular surface with some areas inset and others projecting outward, indicating likely differences in underlying wall thickness. The railroad tie walls are extended by a stuccoed wood frame cripple wall to support the sloped shed roof. A rail spike was noted driven into a tie where the plaster was removed for inspection.

2 - Deficiencies

The adobe structure appears to be generally sound, however it is eroding where it is exposed due to failure of the exterior plaster. Deteriorated conditions or structural damage may also be hidden by wall finishes.

The original wall finish on the railroad ties could not be determined. They may have been plastered, or may have been left exposed. If they were exposed, this finish would be considered a significant character defining element.

3 - Recommendations

Remove wall finishes over the adobe (interior and exterior) in order to allow further evaluation. Determine remaining wall thickness at the top of the west wall, and reconstruct if more than 1/3 of the original material has been lost. Minor thickness losses can be built back up with mud plaster keyed into joints in the wall. Where repairs are needed, use mud plaster and/or adobe bricks matching the original construction and composition.

Remove exterior plaster from wood tie walls in order to enable additional evaluation. Determine condition of foundation tie and any other deterioration encountered; determine whether or not the exterior wall finish was left as exposed wood by the level of surface weathering (that would indicate it being exposed). Restore to original condition thus established.

West Stucco Peel

West Stucco Peel

East Wall Damage

East Wall Damage

South Wall Buckling

East Wall Crack

Floor Systems

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	☐ Critical
☐ Fair	☐ Early	● Serious
● Poor	● Late	☐ Minor
	☐ CDE	

1 - Description

The floor system in Room 2 is an original/early floor of wood frame over a shallow crawl space. The size of the joists and their support system could not be established; however the joist spacing is about 16 inches on centers.

The remainder of the historic house, Rooms 2, 3, and 4, while previously wood framed or dirt floors, are today concrete slabs on grade. This alteration occurred prior to 1982.

2 - Deficiencies

Floor decking in the wood floor areas was partly obscured by stored materials and sheet vinyl. Exposed areas appear sound except for damage in the southwest corner of the room, which has been patched with sheet metal. Removal of some of the decking in this area revealed that the earth in this location has risen through the years, through insect action and fallout through the floor boards, to be in contact with the back of the decking and completely encasing the joists. Probing through the decking at the northern extreme of the room did not encounter soil close to the surface.

Concrete slabs are in good condition. The slab in Room 4 is out of level, sloping down to the northwest. There is a potential for concrete slabs to drive rising moisture to the exterior walls, where it could cause damage.

3 - Recommendations

Floor decking in the wood floor areas was partly obscured by stored materials and sheet vinyl. Exposed areas appear sound except for damage in the southwest corner of the room, which has been patched with sheet metal. Removal of some of the decking in this area revealed that the earth in this location has risen through the years, through insect action and fallout through the floor boards, to be in contact with the back of the decking and completely encasing the joists. Probing through the decking at the northern extreme of the room did not encounter soil close to the surface.

Concrete slabs are in good condition. The slab in Room 4 is out of level, sloping down to the northwest. There is a potential for concrete slabs to drive rising moisture to the exterior walls, where it could cause damage.

Floor Damage

Wood Flooring

Roof Systems

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
● Good	● Original	○ Critical
○ Fair	○ Early	○ Serious
○ Poor	○ Late	● Minor
	○ CDE	

1 - Description

The roof over the adobe section of the house is conventionally framed with full sized 2”x4” rafters at about three feet on centers, with 2x4 ties at the bottom that double as ceiling joists. Angled 1x4 boards provide additional rafter supports down to the ties. The rafters are covered in 1x4 skip sheathing, which was originally covered by wood shingles and later by corrugated metal.

The roof of Rooms 3 and 4 is framed with 2x joists. Access to the attic space above Room 3 was very limited and the details of construction could not be ascertained. Room 4 has no attic, as the interior finishes are installed on the bottom of the joists. The roof of Room 4 appears to be entirely modern, evidenced by the additional framing and 2-foot high stucco patch on the south elevation.

2 - Deficiencies

The roof structure appears to be in good condition.

3 - Recommendations

Expose and re-evaluate the portions of roof structure that were not accessible. Repair or reinforce any broken or deteriorated structural members, including the sheathing.

Roof to South East

Roof Ridge

East Vent

Roof Ridge Closeup

Roof to West

Roof to East

Structure: A 05

Lateral Systems (Wind/Seismic)

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
● Good	● Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
☐ Poor	☐ Late	● Minor
	☐ CDE	

1 - Description

The building has no formal lateral force resisting system. The lateral stability of walls is dependent on the height to thickness ratio of the walls themselves, their intersection with other walls, and the incidental bracing provided to them by other construction such as roofs.

2 - Deficiencies

The building has withstood all forces placed on it since its construction. If the occupancy is changed, additional requirements could come into play. The weak points of the existing construction are the rigidity of the roof as a diaphragm, the roof-wall connection, and the shear value of any connection between courses of the railroad ties.

3 - Recommendations

If the building is to be occupied as other than a residence, evaluate with respect to applicable codes. If found necessary, upgrades would likely include placing a solid sheathing deck beneath roofing; creation of bond beams and anchorage of the roof perimeter to the tops of the walls; and pinning each course of railroad tie to the adjacent courses, if no connection currently exists.

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	● Critical
☐ Fair	☐ Early	☐ Serious
● Poor	● Late	☐ Minor
	● CDE	

1 - Description

The adobe walls appear to have two coats of plaster on them, the first coat being lime plaster (where it had not failed and fallen off) and the second being portland cement stucco. The outer stucco coat was applied flush to the surface of door and window casings. The stucco has a dashed finish and carries many coats of paint. There is evidence in several places that the stucco is mechanically attached to the underlying adobe with nails.

Wood railroad tie walls have one coat of portland cement stucco on the south side and two coats on the west. It is not known whether the original finish was plaster or simply exposed wood.

2 - Deficiencies

An area of the stucco about 10 feet wide and 6 feet high on the exterior of the western adobe wall has broken off, exposing the gable end. The outer stucco coat below this area, which includes a substantial patch reinforced with metal lath, is peeling away from the wall, forming a pocket that traps water and adobe debris sloughing off of the wall above. This condition is progressively worsening as a result.

A second area of wall finish is missing at the east adobe wall. The damage is low on the wall and about 4 feet by 4 feet in area. The adobe joints are deeply eroded where they are exposed.

On the south side adobe wall, the stucco finish is buckling out along the west end. Most stucco surfaces on this façade sound hollow.

The hard exterior stucco coat appears to be moving independently of the wall behind it. This could be concealing structural cracking in the underlying adobe, which is also covered on the interior.

The stucco surface over railroad ties has numerous small cracks and patches. It is concealing potentially significant structural problems within the walls.

3 - Recommendations

All portland cement stucco should be removed to expose underlying construction for additional evaluation and repair. Most likely, lime plaster remnants will also need to be removed. Repair eroded or damaged adobe brick and re-coat with lime plaster finished in whitewash. After determining the original finish of railroad tie walls, repair and restore to the original appearance.

South Elevation

View to North West

West Side of House with Additions

House Addition to South East

House Addition to North West

Exterior Doors

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	● Critical
☐ Fair	☐ Early	☐ Serious
● Poor	● Late	☐ Minor
	● CDE	

1 - Description

Door D1, the front entry door, was originally a wood door and frame with a 2'-8" x 6'-8" opening. The opening has been framed down for a modern 2'-4" x 6'-8" solid core wood door.

Door D2, into the railroad-tie Room 4 kitchen, is a modern solid core wood flush door and frame, with a 3'-0" x 6'-8" opening.

Doors D5, D6, and D7 were exterior openings prior to the modern additions made to the north side of the house. D5 and D6 have been removed and the openings infilled. D7 has a modern pre-hung type wood door frame, but the door has been removed to make a passage to the addition.

2 - Deficiencies

Door D1 has been removed/replaced and the original frame has been altered. The frame cannot be fully evaluated because it is obscured by added trim and boarding of the opening.

Door D2 is modern. The exterior stucco has been patched in around the door.

3 - Recommendations

Most exterior doors, while representing original openings, do not appear to have much, if any, historical integrity. The frame and inner casing of Door D1 appears to be an exception, and due to the age and importance of the building, should be preserved and restored if feasible.

Door D1: Restore remains of frame and casings, supplement with new wood to reconstruct original appearance. Provide new door leaf, which would be a wood panel door to fit the period.

Door D2: Replace door and frame entirely.

D5, D6, and D7: Remove furring and modern construction elements if the 1980s addition is removed. Provide new wood frame, casings, door leaf and hardware based on physical evidence revealed following removal of concealing finishes.

Door 1 Exterior

Door 1 Interior

Door 2 Exterior

Door 2 Interior

Door 6 Interior View

Door 7 Interior View

Exterior Windows

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	● Critical
☐ Fair	☐ Early	☐ Serious
● Poor	● Late	● Minor
	● CDE	

1 - Description

Windows W1 and W2 occur in the south facing wall of the adobe part of the house. They appear to have been of identical construction although the W1 is mounted 2 inches higher in the wall than W2. Both were (originally) wood double hung windows with a sash opening of 2'-10" wide and 5'-0" high. The windows have 1x6 nominal size wood casings on the exterior jambs and heads. (These members had little paint on them, possibly indicating later replacement material.) Window sills are of 2x nominal lumber with a later casing applied to the face.

W3 is a modern single-light fixed aluminum window unit with clear double glazing.

2 - Deficiencies

The wood windows W1 and W2 are original openings and are the original frames, but the sashes have been removed and the openings infilled with framing. The casings also may have been replaced. Overall even the remaining parts of the windows are in poor condition.

W2, being modern, is without significance.

3 - Recommendations

Following removal of infill framing and other late finishes that conceal parts of windows W1 and W2, it may be found that some portions of the original windows can be salvaged, repaired, and reused. As a minimum, the frames must be rehabilitated and the sashes replaced. Complete replacement may be necessary.

W3 is a modern window with no historical significance. It may be replaced with a more appropriate wood window.

Window 1 Exterior

Window 1 Interior

Window 2 Exterior

Window 2 Interior

Window 3 Exterior

Window 3 Interior

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
☐ Poor	● Late	● Minor
	☐ CDE	

1 - Description

A narrow strip of concrete, 3 feet wide, abuts the south wall of the adobe.

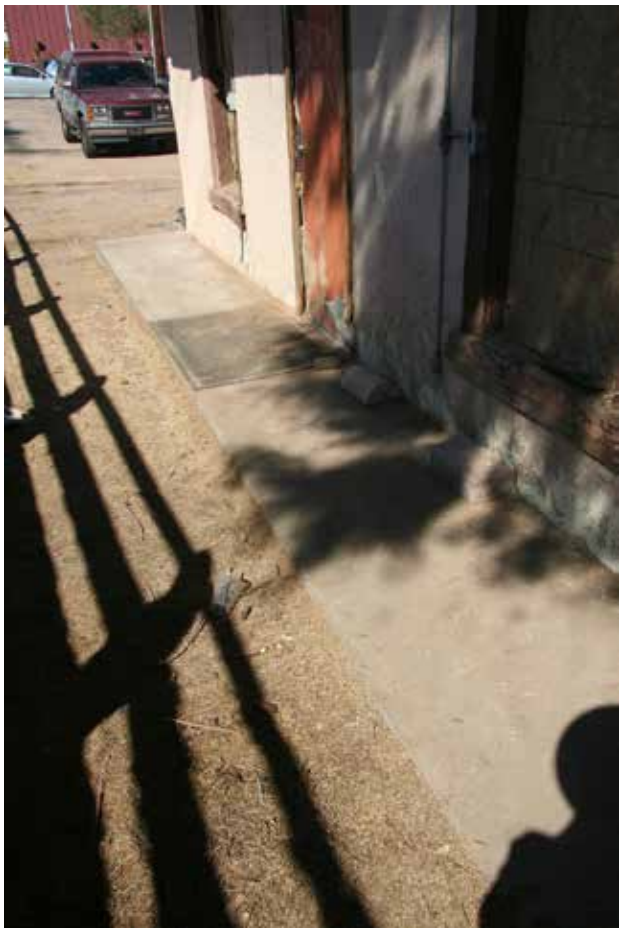
2 - Deficiencies

The exterior floor surface is cracked but serviceable. While its age is uncertain, it is not an original feature. It could be causing moisture damage to the base of the wall by holding in and directing rising damp, because it directly abuts the foundation.

3 - Recommendations

The exterior walls should be evaluated in the area of this floor following plaster removal, in order to gauge whether the floor may be causing wall damage due to rising damp. If so, the slab should be remove and an alternative, pervious paving or wood porch surface should be provide in its place.

South Slab



South Slab

Exterior Ceilings/Soffits

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	☐ Critical
● Fair	☐ Early	● Serious
☐ Poor	● Late	☐ Minor
	☐ CDE	

1 - Description

At the south adobe wall the roof eaves extend about 18 inches from the wall face, supported on 2x4 sistered extensions of the rafters. The rafter extensions have a rounded bottom cut on the ends. The roof sheathing is exposed on the underside and is 1x12 boards. The joists are bird blocked at the wall and carry a modern 1x4 fascia.

At the gable ends, the roof extends about 1 foot beyond the wall and is finished in a boxed soffit.

The eaves at the railroad tie walls are shallow extensions (about 6 inches) of the exposed roof joists, finished with a 2x10 fascia.

2 - Deficiencies

The exposed roof sheathing is severely rotted along the south eave except where is has been replaced. About half of the south rafter extensions are rotted at the ends. About half of the added fascia is also missing.

The 2x10 fascias are a modern feature. They are severely weathered and have little, if any, paint left on them.

3 - Recommendations

Rotted sheathing boards should be replaced. Weathered rafter tails may be repaired using epoxy consolidants and fillers, then painted. The weathered 2x10 fascias will require replacement.

East Fascia at Joint

South Eave

East Fascia

South Eave Close up

Eave at South West Corner

West Gable

Roof and Drainage

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	● Critical
● Fair	☐ Early	☐ Serious
☐ Poor	● Late	☐ Minor
	● CDE	

1 - Description

The roof over the adobe Rooms 1 and 2 is a side gable configuration with a medium slope of about 8 in 12. It is covered in corrugated galvanized steel panels, which cover an earlier wood shingle roof on spaced sheathing. The back (north) slope of the roof has been coated in sprayed polyurethane foam. The roof above the wooden Rooms 3 and 4 is lower slope, about 1 in 12, and is coated in sprayed polyurethane foam. This roof continues seamlessly to the north to cover the modern additions.

The overall drainage pattern of the roof is to the north and south off of the roof eaves. The majority of the drainage slopes to the north.

2 - Deficiencies

The existing roofs probably represent the building's appearance c. 1985 and after. A photo of the building showing conditions prior to the 1980s additions shows the entire roof covered in wood shingles, except for Room 4, which may have had a flatter roof than it does now and covered in composition roofing. This is borne out on (blurry) aerial photographs. The existing roof material does not convey this historic appearance although it appears to be more or less water tight. The coating on the foam roofing has begun to fail, however, and the roof ridge above the adobe house section does not appear to be flashed water tight.

3 - Recommendations

While the 1980s additions remain, it is probably best to maintain the existing roofs. The foam roofing will require patching and re-coating very soon. The ridge also requires a cap flashing to be installed to prevent rain from running in beneath the metal panels.

If the additions are removed, the roofs should be restored to their earlier configuration and appearance.

Roof to South East

Roof Ridge

East Vent

Roof Ridge Closeup

Roof to West

Roof to East

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
● Poor	☐ Late	● Minor
	☐ CDE	

1 - Description

Small, triangular vent openings were provided at the top of each gable end of the adobe house attic. These openings are now boarded with plywood.

The attic of Room 3 appears to be un-ventilated.

2 - Deficiencies

Attics are required to be ventilated by modern code. While the size of these small vents is not to modern standards, they would improve the cooling load imposed by the roof.

3 - Recommendations

Reopen the attic vents and provide them with rodent & insect screening.

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
● Poor	☐ Late	● Minor
	☐ CDE	

1 - Description

The building currently has no chimneys or flues that could be found. Typically a building of this vintage would have been heated with wood stoves, which also would have been used for cooking. A short brick chimney is visible in a pre-1985 photograph in the northwest corner of Room 3.

2 - Deficiencies

While there is no problem with any extant feature, the building's historical appearance is changed by the lack of original chimneys.

3 - Recommendations

If a decision is made to restore the building to represent its original appearance, consideration should be made to reconstructing the known chimney, and to examine the building after the demolition phase to see if others would be appropriate.

Miscellaneous Exterior Features

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
● Poor	☐ Late	● Minor
	☐ CDE	

1 - Description

There is evidence that house once had a full width porch along the south sides of Rooms 1 and 2. Currently, there is only a 3-foot wide concrete slab adjacent to the foundation. However there are four anchor bolts built into the wall at about 8'-8" above the floor elevation, which probably supported a porch roof.

2 - Deficiencies

The early porch has been removed. Unfortunately, the appearance and provenance of the porch is not known. The porch would soften the appearance of the house and potentially provide a more accurate idea of its historical appearance, if a restoration is undertaken.

3 - Recommendations

Additional research is required if the porch is to be reconstructed. Adequate documentary evidence might include maps, plans, or photographs. Archaeological investigation of the space between the house and First Street may also yield important clues. If enough data can be amassed, consider reconstruction. If the appearance is lost to history, then construction of a clearly modern placeholder would be another alternative.

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	● Critical
● Fair	● Early	☐ Serious
☐ Poor	● Late	☐ Minor
	☐ CDE	

1 - Description

The interior side of the walls in Rooms 1 and 2 are completely furred with ½" gypsum board on light gauge steel studs. The furring depth is 3 to 5 inches, except for the south wall of Room 2, which is furred about 9 inches. The thicker furring at this wall clears a concrete curb 5 to 7 feet in length along the base of the wall beneath the window.

The partition wall between Rooms 1 and 2 is wood framed with plaster on one side, gypsum board on the other. Overall thickness is 4 inches. The plaster has a heavy hand texture that likely dates to the 1920s.

The part of the adobe wall facing into Room 3 is plastered using lime plaster, which was therefore the likely exterior wall finish on adobe c. 1918, before Rooms 3 and 4 were added to the house.

North and east walls of Room 3 have 3" depth furring over the railroad ties. The west wall has plaster applied directly to ties.

All four walls of Room 4 are furred with gypsum boards on steel studs. The earlier plaster wall finish is believed to remain beneath the furring.

2 - Deficiencies

The gypsum board furring is in poor condition, and it completely obscures original interior wall surfaces. Structural damage to walls may be concealed. One known area of deterioration is at the concrete curbing beneath window W1.

The partition wall between Rooms 1 and 2 does not appear to be an original feature, but it is an historic alteration. It is in fair to good condition.

3 - Recommendations

Remove all interior furring and gypsum board, taking care not to cause additional damage to underlying wall surfaces and door/window trim. Re-evaluate interior face of exterior walls following removal and treat accordingly.

Retain the partition wall between Rooms 1 and 2.

Adobe Wall base at South

Adobe Wall base at South

Interior Doors

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	☐ Critical
☐ Fair	● Early	● Serious
● Poor	☐ Late	☐ Minor
	☐ CDE	

1 - Description

Door D3 is a one-panel wood door of mahogany, size 2'-4" x 6'-8", stained on one side and painted on the other, in a wood frame. The style of the door suggests that it dates to the 1920s-40s period. Hardware includes a mortise latch and ball-tipped hinges.

Door D4 was originally an exterior door but was made interior in the 1910s. The opening measures 2'-6" x 6'-6". There is no door leaf. It is cased on the Room 3 side but covered on the Room 1 side.

D8 was probably an exterior door for a short time, but now connects Rooms 3 and 4. The opening is cased with wood trim on the Room 3 side but covered by furring on the Room 4 side and within the opening.

2 - Deficiencies

Door D3 is an early door and frame, but in poor condition. It has been altered for the addition of two cylinder locks. Joints in the construction of the panel door are loose and wobbly.

Door D4 was made into a passageway by 1918. Casings are likely original or early, but covered in layers of texture and paint.

D8's status is similar to D4.

3 - Recommendations

D3: Retain and restore. Fill in inappropriate hardware modifications and provide appropriate period latching hardware.

D4 and D8: Remove furring (See section C-01). Remove texturing and paint build-up from wood casings and trim and re-paint.

Door 3

Door 3

Door 3 Detail

Door 2

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	☐ Critical
☐ Fair	☐ Early	● Serious
● Poor	● Late	● Minor
	☐ CDE	

1 - Description

The floor in Room 1 is a concrete slab on grade covered in carpeting.

The floor of Room 2 is an original or early wood board floor on joists or sleepers. The wood framing is 2x joists of unknown depth, which are in contact with, or very close to, earth. These are sheathed with 1x12 floor boards, which were generally spaced 1/8" to 1/4" apart and chinked. The wood floors have been covered with a carpet pad and sheet vinyl. Vinyl base has been applied around the perimeter.

In Rooms 3 and 4, the floors are concrete slabs on grade. Room 4 has a paint finish while Room 3 is unfinished.

2 - Deficiencies

The wood floor has severe termite damage at the southwest corner. The floor is rotted clear through in this location, and the dirt has accumulated to be in contact with the bottoms of the boards.

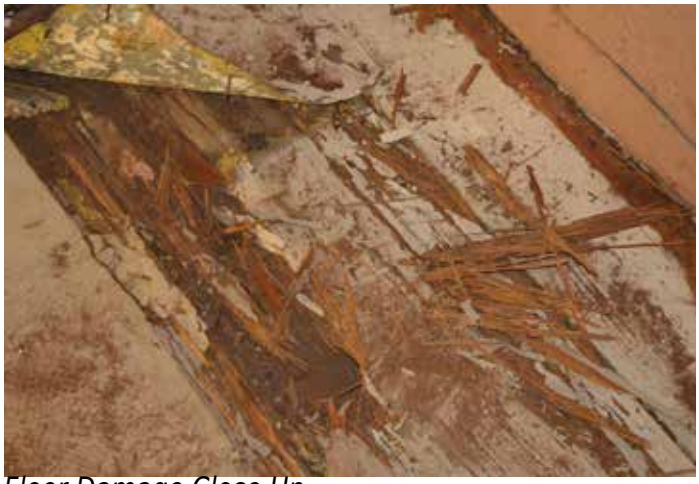
Concrete floors are in good condition although Room 4 floor is out of level. The concrete slabs may lead to damage to adobe walls by channeling rising damp to them. They are out of character with the early appearance of the house.

3 - Recommendations

See also Section A-03. Carefully remove wood board flooring and salvage for re-use to the extent feasible. Following repair of the structure below, reinstall flooring in a manner similar to the original, with spaces chinked with non-synthetic rope and then painted. Supplement missing or damage material with new wood milled to match the size and species of the original floor boards.

Concrete floors may be retained if wall damage is not noted. If a restoration to an earlier appearance is desired, they may be removed and either a new wood floor system over a crawlspace could be constructed, or alternatively a new slab could be constructed recessed 3 to 4 inches and then covered with wood boards on sleepers, which would duplicate the appearance and much of the "feel" of a suspended wood floor.

Floor Damage



Floor Damage Close Up

Wood Flooring

Wood Flooring

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
● Poor	☐ Late	● Minor
	☐ CDE	

1 - Description

Original ceilings in Rooms 1 and 2 were originally approximately 9’-6” above the finished floors. The ceilings were finished with fiberboard with wood battens at the seams. Today, a gypsum board ceiling has been suspended at about 8’-0” above floor elevation, completely concealing the original ceilings in these rooms.

The ceiling of Room 3 is plaster on metal lath applied to horizontal ceiling joists. A “popcorn” sprayed acoustical treatment has been applied to the plaster.

Room 4 has plaster or gypsum board applied to the bottom of the sloped roof joists.

2 - Deficiencies

Suspended gypsum board ceilings are in fair to poor condition, with some water damage. They are concealing the historic construction and change the character of the rooms by significantly lowering the ceiling height. The original ceilings above (in Rooms 1 and 2) are in very poor condition, but could not be completely evaluated for lack of access.

“Popcorn” texture ceilings in Room 3 are known to be a potential asbestos-containing material.

The ceiling in Room 4 is in good condition, It is part of a non-original roof structure constructed over this room.

3 - Recommendations

Remove suspended ceiling in Rooms 1 and 2. Re-evaluate earlier ceiling materials. Most likely they will require replacement. If allowable by the building official, use similar light weight fiber board material such as Homasote with battens over the seams, painted.

Test “popcorn” ceiling material (as should be done with all suspect ACM) for asbestos content. Remove the material from the surface, using approved techniques. Patch and repair remaining ceiling material in Room 3.

If the Room 4 roof structure is restored, the ceilings will be reconstructed as a part of that restoration. Otherwise the existing ceiling may be maintained.

Old and New Ceilings

Old Ceilings

Old Ceilings

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	● Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
● Poor	☐ Late	● Minor
	● CDE	

1 - Description

The entry door D1 appears to have an original wood casing and opening closure on the interior that has been covered with gypsum board furring. Window openings with splayed jambs also may possess original material under the gypsum board, which was mounted to solid backing.

The doorway between Rooms 1 and 3 is cased with wood, which was later textured with joint compound. The age of the wooden elements is not known, but they look early or original.

Original running trim such as baseboard is concealed by modern construction, if any exists.

2 - Deficiencies

Interior finish carpentry work is generally in poor condition where it occurs. It has been either damaged or covered with modern coatings. Much of the carpentry work has been lost.

3 - Recommendations

Some of the finish carpentry likely dates to 1880 and/or 1918. The 19th century work is particularly rare and where encountered, should be retained and repaired/restored if possible. Reevaluate what trim is remaining (particularly at original door and window openings) following demolition of modern interior materials.

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
● Poor	● Late	● Minor
	☐ CDE	

1 - Description

The building was originally naturally ventilated for cooling and likely had wood stoves for heating. Later, evaporative cooling was added to window openings. Today, the older parts of the house (Rooms 1-4) are served by a rooftop mounted evaporative cooler (and possibly an indoor furnace) on the roof of the 1980s addition. Metal ductwork was added within the attic of Rooms 1 and 2 with flexible ducts down to registers in the ceiling.

2 - Deficiencies

Mechanical systems are no known to be active in the historic part of the house. If they are, they appear to be minimally adequate. If the additions are removed, no active mechanical systems would remain.

3 - Recommendations

As Rooms 1-3 are used for storage, the lack of climate control is not a current problem and does not affect building stability. If the additions are removed and the historic building is put to a new use, mechanical systems should be planned as part of the rehabilitation work.

Plumbing Systems

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
● Good	☐ Original	☐ Critical
☐ Fair	☐ Early	☐ Serious
☐ Poor	● Late	● Minor
	☐ CDE	

1 - Description

The only plumbing in the historic part of the building is the kitchen sink in Room 4. The bathroom is in the 1980s addition. Historically, it appears likely that the current kitchen wing (Room 4) contained a bathroom.

2 - Deficiencies

There are no significant plumbing features in the building. All is modern. The kitchen sink is functional.

3 - Recommendations

If the later house additions are removed, re-evaluate plumbing needs and provide new.

Electrical Systems

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	☐ Critical
● Fair	☐ Early	☐ Serious
☐ Poor	● Late	● Minor
	☐ CDE	

1 - Description

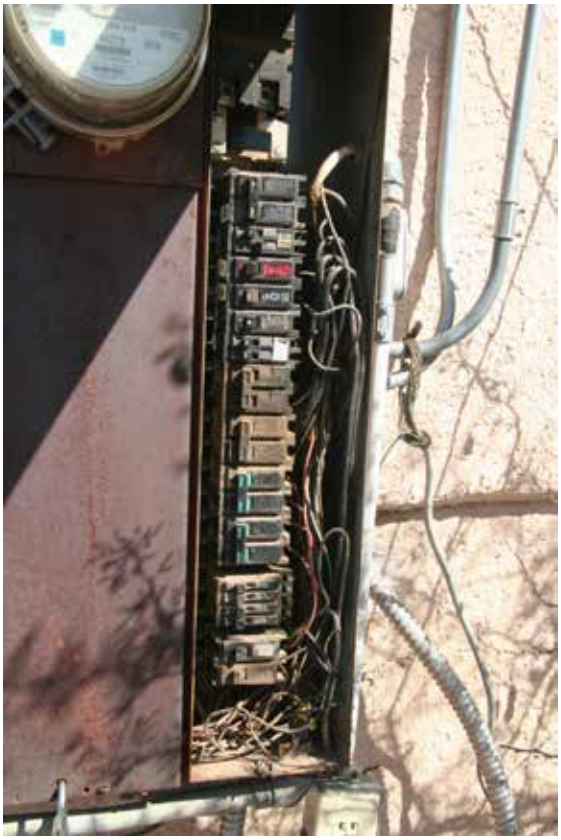
An older residential type overhead electrical service entrance is located on the south wall of Room 4, near the west end of the building. The building appears to have been substantially re-wired, with the circuits being run in the ceilings and behind wall furring. Circuiting is run in conduit on the exterior of the walls from the service to the building interior. No historic electrical features were found. Lighting in Rooms 1 and 2 is provided by surface mounted fluorescent fixtures on the dropped ceiling. The light in Room 3 is a strip fluorescent fixture surface mounted on exposed conduit. Strip fluorescents are also found surface mounted to the ceiling of Room 4.

2 - Deficiencies

The electrical service is old and weathered, and is missing the internal face plate in the breaker panel, leaving live conductors exposed. It is obtrusively located on the front of the building and detracts from historic character. Conduits mounted on the exterior walls likewise detract. None of the interior electrical features contribute to the building's significance, and some are in conflict with a potential restoration.

3 - Recommendations

Replace the electrical system in its entirety if a rehabilitation is undertaken.



Circuit Breaker Panel

Electrical Service

Grading and Drainage

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	● Critical
● Fair	☐ Early	☐ Serious
☐ Poor	● Late	☐ Minor
	☐ CDE	

1 - Description

No topographic information was available. The following observations are based on our experience and the general appearance of the site.

The site overall is near the Salt River bed and likely drains north, toward the river. The grading around the building is nearly flat. The east side of the site is bordered by raised railroad tracks and light rail line. The south side of the site is bordered by First Street, which is raised above grade in order to cross the tracks. These features limit offsite flows from the east and south but also create a possible pond in this corner of the site, depending on how the site itself is graded. The house is nearest this corner of the site.

2 - Deficiencies

Areas of potential water retention close to adobe and wood foundation walls exist along the east and south sides of the house.

3 - Recommendations

Conduct a detailed topographic survey for the site in order to verify drainage patterns. If found to be necessary, re-grade the site to eliminate any standing water within 10 feet of the exterior foundation walls.

South East Lot Corner

South Yard to West

South Yard to East

INTEGRITY:	SIGNIFICANCE:	PRIORITY:
☐ Good	☐ Original	● Critical
☐ Fair	● Early	☐ Serious
● Poor	☐ Late	☐ Minor
	☐ CDE	

1 - Descripton

Two outbuildings of historic age were found on the site with the Gonzales-Martinez House.

A wood framed shack is located approximately 35 feet north of the northwest corner of the house. The current site occupant reports that this structure was moved to the site in the 1940s, salvaged from a central Phoenix location. The shack measures 14'-0" wide and 12'-4" deep and is constructed of 7'-0" tall wood stud walls sheathed in vertical 1x12 board and batten, supporting an 8:12 pitch side gable roof. The roof material us currently corrugated metal panels. Original roofing is not known. Fenestration includes a 2'6" wide entry door slightly off center in the front facade, and one small window in each of the other elevations. Only one window was accessible: a 2'-10" x 2'-4" sash of unknown operation. The interior wall finish was boards covered in gypsum sheathing.

The second outbuilding, located about 80 feet north of the house's northeast corner, was reportedly one of several cabins once constructed on the site for railroad workers. The wood frame building measures 11 feet wide and 12 feet deep and supported a 3:12 pitch front gable roof. The 7' high, 2x4 stud frame walls were covered in horizontal 1x board siding. The roof has largely collapsed and therefore the material is not known. Fenestration included a 2'-6" x 6'-0 entry door at one side of the façade with a 1'-10" x 2'-0" window beside it, and small windows on each of the other three elevations. A port through the back wall for a wood stove was noted. The interior had a framed wood floor structure but was otherwise largely unfinished.

The Shack is in very poor condition. Access to the interior was limited by stored objects and materials. There appears to be no foundation. The door is missing. All exterior wood surfaces are weathered, with only a few remnants of paint on them. The interior is also heavily damaged. Storage shelving has been added around the perimeter of the room. Despite its poor condition, the Shack does retain historical integrity, reflecting the diverse use of the site during the 20th century.

The Cabin is essentially a ruin. A few exposed joists and sheathing boards are all that remain of the roof. Wall finishes are weathered inside and out. The door is a piece of plywood. Remnants of plaster are found on one side, probably indicating that an additional room had been added on that side and later removed. While this may be considered a significant building, it has lost a great deal of historical integrity.

3 - Recommendations

It may be feasible to stabilize the Shack as an interpretive feature of the site. Given its condition, it would be difficult to restore to occupied space. If a place can be found in future site plans, it should be preserved. Since the building was previously moved, its precise location is less important than its general proximity to the main house.

The Cabin appears to be beyond repair and has lost integrity. Additional research specific to the Cabin should be undertaken, and if found significant, it should be documented prior to removal or demolition.

2 - Deficiencies

Cabin Overview to South East

Cabin Overview to South West

Cabin Rear Elevation

Shack Overview to North East

Shack Overview to North West

Shack Interior

Rehabilitation Recommendations

Building Code Issues

The Gonzales-Martinez House has been used as a single family residence for over a century. In later years, while part of the house was lived in, it has also been used informally as storage space. Today, the single family use continues. The potential future use is not known. Given the explosion of development in downtown Tempe, the house could become part of a larger redevelopment, where it could be used simply as commercial space (retail, coffee shop), a public space (community room) or just as a museum piece.

Building code issues are minimal as long as the residential use continues. If the house were to be rehabilitated without a change in use, it should be made to comply with applicable provisions of the International Residential Code (IRC) with Tempe amendments. However, in light of the historical significance of the house, ownership by the city, and surrounding development trends, a commercial or museum-like use is more likely. If this is the case, the operative building codes become the International Building Code (IBC) and International Existing Building Code (IEBC), and more specifically their provisions with regard to a change of occupancy or use.

Using the IEBC, existing and historic buildings are provided a little more leeway to maintain existing conditions rather than being required to bring them "up to code." One could not build a new commercial building today out of un-stabilized, un-reinforced adobe and of stacked railroad ties on no foundation without extensive engineering justification and appeals. However under IBC/IEBC existing conditions may remain as long as the building is not an imminent hazard and it not being made "less safe" that it was before. The detailed provisions of IEBC more clearly define "less safe."

Without a defined use or rehabilitation plan, it is difficult to identify the most critical code issues and how the codes would be applied in this specific instance. The following highlight the general areas of typical concern.

- With few exceptions, any feature that is reconstructed or built new must comply with the current codes.
- Structurally, existing conditions are grandfathered (other than deterioration) as long as new loads are not being applied and the new use is no more hazardous than a typical "B" occupancy.
- Mechanical, plumbing, and electrical systems are recommended to be replaced, and so must meet current code for the new occupancy.
- At least one accessible entry (which is not required to be the main entry, for historic buildings). and access to primary use areas must be provided.

Summary of Rehabilitation Work by Priority

The foregoing treatment recommendations are presented here in order of priority. Rehabilitation work should generally be undertaken in this order if only partial funding is available.

Some work is of a general nature and applies to multiple sections of the report, as the need to generally clean out and re-evaluate much of the building due to lack of access. Also, it may be wise to conduct archaeological surveys around the building prior to conducting any earthwork in order to avoid loss of important historical information.

The priority of importance of the recommended work on the feature is noted as critical, serious, or minor. Features in the critical category are those that have failed; that are causing accelerated deterioration of other building elements; or that are not in conformance with a code or law. Serious priority features are those that can be expected to fail within five to seven years. Features categorized as a minor priority are those that have long-term consequences or that are not expected to fail for seven or more years.

Future work related to restoration to an earlier period and/or rehabilitation of the building for a new use is summarized in the final section.

GENERAL PREPARATORY WORK

Demolish exterior plaster

Demolish interior furring and false ceilings

Re-evaluate hidden conditions

Archaeological testing around house, porch area

CRITICAL – Failed or failing

A-01 Replace rotted RR ties with new or concrete

A-02 Repair top of west adobe wall

B-02 General repair of adobe walls, re-plaster using lime plaster, whitewashed

B-03 Repair/replace exterior doors D1, D2

B-04 Repair/replace exterior windows W1, W2

B-08 Make roofs weathertight, re-coat foam

C-05 Document and remove damaged historic ceilings to access framing

G-01 Topographic survey, re-grade around building if necessary

G-07 Document and demolish Cabin; stabilize Shack

SERIOUS – 5-7 years

A-03 Expose & repair floor joists, remove soil

B-06 Repair weathered eaves

C-01 Interior adobe curb remove & repair

C-04 Remove, repair, reinstall wood flooring

MINOR – 8+ years

C-03 Restore door D3, repairs to frames D4, D8

C-05 Replace historic ceilings to match original; remove texture from plaster and patch.

RESTORATION WORK

Demolish non-historic additions

A-05 nstall solid roof deck and anchor to walls

B-03 Install doors and frames D5, D6, D7

B-04 Replace window W3 with appropriate wood window

B-05 Remove concrete strip at entry side

B-08 Remove roof over Room 4 and restore original configuration

B-08 Remove all roofing and install wood shingles

B-12 Restore attic vents

B-13 Reconstruct chimney

B-14 Reconstruct front porch

C-04 Remove concrete floors, install wood

C-05 Reconstruct ceiling Room 4

C-07 Remove kitchen improvements Room 4

D-01 Replace mechanical systems

D-02 Replace plumbing systems

D-03 Replace electrical systems

Cost Estimates

The following cost estimates are given as a guide for future project phasing, budgeting, and fund raising.

Each item is related to a specific recommendation of the Building Feature Analysis. Some of the recommendations given in the different sections of the analysis overlap or repeat, so not all recommendations may have a one-to-one correspondence with a work item in the cost estimate.

Features were added to the list of work that are not specifically applicable to a single section. These items are given a “Gen-” prefix, to denote a general work item.

The unit costs for each item were taken from a combination of industry estimating manuals, records of past projects, and personal experience. Some items are very difficult to estimate, because the project is not yet designed. For these difficult-to-estimate items, lump sum costs or square foot costs were used to arrive at an educated guess as to the value of the work. All of these items should be reevaluated as more information is gathered and as designs proceed to refine the scope of construction work.

The costs given cover only the basic repair, restoration, and rehabilitation work and do not address site development costs.

An allowance of 15% of the construction costs was included for architectural and engineering design fees. This percentage may vary in relation to the magnitude of any given project. That is, if all work were executed in one deign/construction phase, fees will be lower than if the project is executed in multiple phases.

Summary

General and Critical Work:	$109,971
Serious/Minor Work:	$23,615
Restoration Work:	$134,242
Project Total:	**$267,828**

General and Critical Work

Item #	Description	Quantity	Units	Unit Cost	Extension
Gen-01	Demolish Exterior Plaster	1100	sf	$1.00	$1,100
Gen-02	Demolish Interior Furring	1600	sf	$2.50	$4,000
Gen-03	Demolish Interior Ceilings	322	sf	$1.20	$386
Gen-04	Archaeological surveying	1	ls	$7,500.00	$7,500
A-01.01	Remove interior slabs Rms 3 and 4	315	sf	$30.00	$9,450
A-01.02	Shore & lift wooden rooms	1	ls	$5,000.00	$5,000
A-01.03	Conc footer	80	lf	$27.50	$2,200
A-01.04	Remove/Replace Rotted ties	80	lf	$10.00	$800
A-02.01	General adobe repairs	1	ls	$10,000.00	$10,000
B-02.01	Replaster adobe with lime based materials	720	sf	$5.00	$3,600
B-02.02	Wood tie wall treatment TBD	380	sf	$5.00	$1,900
B-03.01	Repair/Replace doors D1 & D2	2	ea	$1,500.00	$3,000
B-04.01	Repair/replace windows W1, W2	2	ea	$1,500.00	$3,000
B-08.01	Ridge flashing	32	lf	$4.50	$144
B-08.02	Repair & coat roof	1690	sf	$1.00	$1,690
C-05.01	Document/remove historic ceiling	325	sf	$1.00	$325
G-01.01	Survey & grading	1	ls	$5,000.00	$5,000
G-07.01	Cabin documentation	1	ls	$2,000.00	$2,000
G-07.02	Cabin demolition & disposal	1	ls	$500.00	$500
	Subcontract Subtotal				$61,595
	Contingency	15%			$9,239
	Subtotal				$70,835
	General Conditions, Overhead & Profit	35%			$24,792
	Construction Total				$95,627
	A/E Fees	15%			$14,344
	Project Total Costs				$109,971

Serious/Minor Work

Item #	Description	Quantity	Units	Unit Cost	Extension
A-03.01	Disassemble wood floor	138	sf	$1.00	$138
A-03.02	Excavate	138	cf	$5.00	$690
A-03.03	New Joists	138	sf	$2.50	$345
B-06.01	Repair eaves	100	lf	$10.00	$1,000
C-01.01	Interior adobe curb remove/repair	1	ls	$2,500.00	$2,500
C-01.02	Replaster or patch interior walls	760	sf	$5.00	$3,800
C-01.03	Paint interior walls	760	sf	$1.50	$1,140
C-03.01	Restore door D3	1	ls	$1,000.00	$1,000
C-03.02	Rehabilitate frames D4, D8	2	ea	$500.00	$1,000
C.04.01	Reinstall/replace floor boards	138	sf	$3.25	$449
C-05.01	Replace ceiling boards, paint	333	sf	$3.50	$1,166
	Subcontract Subtotal				$13,227
	Contingency	15%			$1,984
	Subtotal				$15,211
	General Conditions, Overhead & Profit	35%			$5,324
	Construction Total				$20,535
	A/E Fees	15%			$3,080
	Project Total Costs				$23,615

Restoration Work

Item #	Description	Quantity	Units	Unit Cost	Extension
Gen-05	Demolish house addition	1	LS	$5,000.00	$5,000
A-05.01	Install solid decking	880	sf	$1.50	$1,320
A-05.02	Roof-wall connections	190	lf	$25.00	$4,750
B-03.01	Doors and frames D5, D6, D7	3	ea	$1,200.00	$3,600
B-04.01	Replace window W3	1	ea	$750.00	$750
B-05.01	Remove concrete porch	88	sf	$20.00	$1,760
B-08.01	Remove Room 4 roof	240	sf	$10.00	$2,400
B-08.02	Replace Room 8 roof, ceiling, roofing	240	sf	$15.00	$3,600
B-08.03	Demo existing roofing	880	sf	$2.50	$2,200
B-08.04	Wood shingle roofing	880	sf	$5.00	$4,400
B-12.01	Restore roof vents	2	ea	$100.00	$200
B-13.01	Reconstruct chimney	1	ls	$500.00	$500
B-14.01	Reconstruct front porch	180	sf	$25.00	$4,500
C-04.01	Remove remaining conc floor	200	sf	$30.00	$6,000
C-04.02	Install wood floor system complete	520	sf	$10.00	$5,200
C-07.01	Demo existing kitchen	1	ls	$250.00	$250
D.01.01	New HVAC system	670	SF	$18.00	$12,060
D.02.01	New plumbing ; assume 2 restrooms	5	fixt	$2,000.00	$10,000
D.03.01	New electrical system	670	sf	$10.00	$6,700
					$-
	Subcontract Subtotal				$75,190
	Contingency	15%			$11,279
	Subtotal				$86,469
	General Conditions, Overhead & Profit	35%			$30,264
	Construction Total				$116,732
	A/E Fees	15%			$17,510
	Project Total Costs				$134,242

Appendices

Appendix A:

The Secretary of the Interior's Standards for Rehabilitation

The following Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

(1) A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site or environment.

(2) The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

(3) Each property shall 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 architectural elements from other buildings, shall not be undertaken.

(4) Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

(5) Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

(6) Deteriorated historic features shall be repaired rather than replaced. Where the severity of the deterioration required replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

(7) Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

(8) Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

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

(10) New additions and adjacent or related new construction shall 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.

Appendix B:

Structural Engineering Assessment

Slaysman Engineering, PLLC
Structural • Civil • Historic Preservation

Melvin J Slaysman, Jr, P.E.

November 26, 2017

Mr. Robert Graham, A.I.A.
Motley Design Group
1114 NW Grand Avenue
Phoenix, Arizona 85007

Re: Gonzales - Martinez House
Tempe, Arizona

Dear Mr. Graham:

I have reviewed the available documentation and made several visits to the site to perform a field investigation of the above property. This report presents my findings and conclusions regarding these investigative visits and evaluation of the structure.

SCOPE:

The purpose of these field visits and investigation was to evaluate the overall structural integrity of the building. The report will also present general recommendations for the structural stabilization.

BACKGROUND AND GENERAL DESCRIPTION:

The building was constructed in 1880 by Mr. Ramon Gonzales. The property was later occupied by Mr. Jesus Martinez in 1892 and remained occupied by that family until recently. The house originally was a two-room residence. A two-room addition was added circa 1918. The date of the last official residence was not determined. Currently the building is occupied by a caretaker and also is being used for storage. The attached sketch shows the areas referenced in this report. Areas' 1 and 2 refer to the original 1880 structure. Areas' 3 and 4 reference the 1918 addition.

The original house consisted or two (2) rooms, Areas 1 and 2 on the sketch and was constructed of adobe bearing walls with a wood frame roof. The gable end walls are also of adobe and are full height. The 1918 addition was constructed of railroad ties for the walls and a conventionally framed shed type roof sloping south to north.

INVESTIGATION METHODOLOGY:

My investigation consisted of a visual inspection of the existing building structure. This observation included the viewing of the structural systems in accessible areas and by minor selective demolition in certain areas to expose the structure. Much of the structure is concealed by ceilings and wall coverings including furring of the walls with wood framework and drywall. Some access was attained by previous damage to ceilings and walls.

ITEM: ROOF STRUCTURE

Description:

The roof structure of the original building consists of 2x roof joists spaced at approximately 36" on center. The joists are full size material, i.e., a full two inches by four inches in size. The original roof is sheathed with 1x4 spaced board sheathing with wood shingles. Currently the roofing is corrugated metal sheathing over the original roof. The roof configuration is a simple gable conventionally framed roof. The ceiling joists act as collar ties for the roof system. The joists bear on the north and south exterior adobe walls. The roof slope was not measured but is estimated at approximately 6:12.

The roof joist of the 1918 addition consists of 2x joists at approximately 24 inches on center. The roof is a shed type roof of approximately 2:12 slope.

Condition:

The roof structure is in generally fair shape and free of major distress. There were no areas noted of extensive roof leaking in either area of the house. Access to the roof structure was severely limited as stated previously.

Recommendation:

Minor reinforcements of any roof joist that may found to be broken or severely deteriorated will be required. This can be accomplished either by sistering the joists, i.e., pair up existing joists with new joist or installation of new joists. Roof sheathing will generally require some replacement or repair in damaged areas for roofs of this age and condition.

ITEM: WALLS:

Description:

The main bearing walls and end walls of the 1880 structure are constructed

of unreinforced, un-stabilized adobe. The walls are approximately 12 - 16 inches thick and rest on what appears to be a combination of a lime-stabilized curb and the adobe resting directly on the earth. The width of the curb was determined not to be full wall width. The bases of the walls are approximately at the surrounding grade. The south and north exterior walls are approximately eight (8) feet high and are bearing. The east and west walls are full height gable walls to the ridge. The adobe walls are (were) covered with Portland cement plaster. The interior is also plaster.

The exterior walls at the 1918 addition are constructed of railroad ties. The ties appear to be treated timbers possibly treated by creosote. The ties are stacked. Method of attachment between the ties was not determined. The ties are laid directly on the earth without any type of formal foundation.

Condition:

The walls are in generally fair shape, however, the full extent of the walls' condition was hidden by the delaminating Portland cement stucco. This cannot be fully ascertained until removal of the stucco exposing the walls' surfaces are done.

Adobe Walls (1880 Walls):

The exterior adobe bearing walls, in general, are in fair shape and have benefitted somewhat from the protection of the framing at the interior and the stucco exterior covering. Some basal coving was noted at the base of the walls. There is evidence that the moisture has entered the wall at the door and window jambs resulting in deterioration of the adobe.

The west wall was checked and appears to be degraded somewhat and has pulled away from the adobe wall allowing water running down the wall to enter between the stucco and the adobe further degrading the adobe in these areas.

Wood Walls (1918 Walls)

The wood railroad tie walls above grade appear to be in fair to good condition. These walls, like the adobe walls, are stuccoed. A pot hole was dug at the south wall. The ties at the base of the wall below grade were found to be severely damaged by either rot or insect damage. The damage appears to be restricted to the base of the wall under the stucco.

The height to thickness ratios of all walls appears to be within Building Code requirements.

Recommendation:

Some repair will be required for all walls with the possible exception of the interior adobe bearing walls. The recommended repairs are as follows:

Adobe Walls:

The stucco and plaster as well as the interior furring down to the base adobe should be removed to expose the walls and investigate the total damage to the walls. Rebuilding or repair of the exterior walls will be required. Depending on findings, the west gable wall may require extensive repairs. This is the wall where the rainfall is apparently entering between the stucco and the adobe wall.

The adobe bricks used for repair and replacement of brick in this structure should be from native materials. The repair bricks mix design should be as closely formulated to the existing brick as possible. Repair using clay bricks or concrete masonry bricks or blocks should not be performed under any circumstances. All repairs are to conform to the Secretary of Interior Standards and the Adobe Repair Manual by Arizona State Parks.

Wood Walls:

Excavate the base of the wood (railroad ties) walls to determine the full extent of the damage. Repair areas of damaged wood by replacement of the rotted ties. If the observed damage is extensive complete replacement of the base ties to provide complete foundation will be required. This will be required depending on the overall condition of the base ties found after the excavation.

ITEM: FLOOR SYSTEMS:

Description:

The floor structures of Areas 1 and 2 in the 1880 house (see attached sketch) were originally wood frames. The floor system consists of board/plank flooring over wood floor joists resting on the earth. Remnants of the floor system are present in Area 1 of the house. Area 2 of the 1880 house the house was modified to a concrete slab on grade at some time in the life of the house. Areas' 3 and 4, circa 1918 addition are currently slabs on grade of unknown thickness. The original floor configuration and construction are not known.

Condition:

The floor of Area 1 is in fair to poor condition. The wood planks and joist framing are in contact with the earth and have been subjected to insect

damage. The floor of the remaining three (3) areas are concrete and are in fair to good condition. It was noted that the slab of Area 4 appears to be sloping toward the northwest.

Recommendation:

Rehabilitation of the wood floor, Area 1, would require taking up the floor and excavate out the earth encasing the existing framing and rebuilding the floor after treatment of the floor and soil for termites. The interface of the concrete slabs with the adobe walls should be carefully examined for adobe damage. This interface commonly results in adobe damage due to trapped moisture. If this is found to be causing damage, a vapor break such as cutting back the floor slab and installing a vent system. The three (3) concrete areas would only require minor crack repair and patchwork other than the vapor break.

ITEM: FOUNDATIONS

Description:

The exterior foundations at the west wall of the1880's portion of the house were excavated in a limited area. The foundation appeared to consist of a curb of a lime-based mortar mixture. The "curb," however, did not continue completely thorough the wall.

The foundations of the 1918 addition appeared to be recessed one course of depth of the railroad ties that comprises the wall, i.e., the first tie is the foundation (approximately 8 inches).

Condition:

Apparently the foundation for the 1880 house has been functioning adequately throughout its life. There has been no apparent major settlement of the structure.

The railroad tie footing on the 1918 addition was found to be deteriorated by either rot, insect damage or both. The damage extends from the base of the "footing" up at least one course of ties, approximately eight (8) inches.

Recommendations:

No recommendations for the 1880 portion of the house are made at this time.

Depending on the extent of the damage discovered by the investigation of the walls' base as described in the "Wood Walls" section of this report. The 1918 portion of the house, consisting of railroad ties will require the lifting and

removal of the decomposed wood tie foundation and replace with a new foundation of either concrete or wood.

Maintain adequate site drainage and low water demand landscaping around the entire building.

TEM: LATERAL CONSIDERATIONS

Description:

The Tempe area is in an area of very minor seismic activity. The building was constructed at a time when there was little technology to address seismic responses in even major structures. This building was constructed with little regard to any building codes or engineering technology and there was no attempt to formally address earthquake loading in its construction. Such technology would not be available for another 50 plus years. All construction, except for major bridges and other strictures followed historic "rules of thumb" measure.

Condition:

The building has survived all local seismic events during its life of 137 years. The building has not sustained any major damage, which is currently visible, from any previous event and is not currently under distress from any damage due to earthquake loading.

Recommendations:

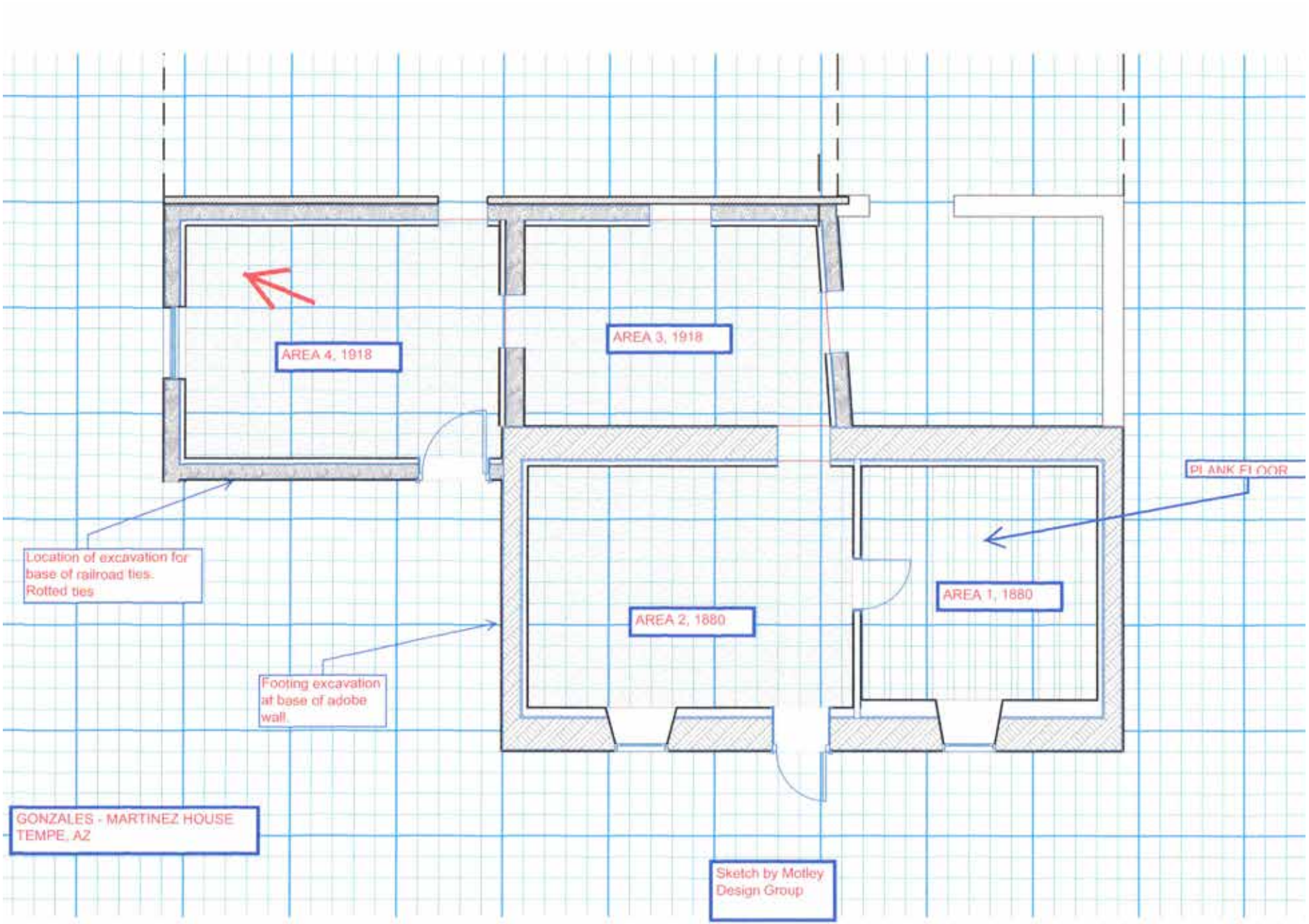
Only very minor strengthening for lateral loads are recommended even if the structure is to undergo a complete rehabilitation. This reinforcement would be in the form of anchorage of the walls to the roof and the checking of the railroad ties to tie connections of 1918 addition.

If there are any questions or we can be of further assistance with this building assessment please feel free to call.

Sincerely,

Melvin J. Slaysman Jr., P.E., S.E.
SLAYSMAN ENGINEERING PLLC

Expires 6/30/19


AREA 4, 1918
AREA 3, 1918
PLANK FLOOR
Location of excavation for base of railroad ties. Rotted ties
AREA 1, 1880
AREA 2, 1880
Footing excavation at base of adobe wall
GONZALES - MARTINEZ HOUSE
TEMPE, AZ
Sketch by Motley Design Group