EL VADO MOTEL

Structural Evaluation

Final Report August 2006

Prepared by:
Druc Engineering
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Druc Engineering Biographical Information

William M. Druc

William M. Druc, Principal of Druc Engineering, LLC. Has a Master of Engineering Degree from Cornell University, a Master of Architecture Degree from the State University of New York and a Bachelor of Arts from Brandeis University.
Druc is currently licensed as a Structural Engineer in New Mexico and Colorado and is a registered architect in the State of New York.

Mr. Druc has extensive experience as a Professional Engineer in commercial and residential projects. He has also taught structural engineering courses at the University of New Mexico School of Architecture and Planning and the Santa Fe Community College.

Some of the projects William has worked on include: the San Esteban del Rey Church at Acoma Pueblo, the Oldest House in the United States in Santa Fe, NM, and the Santuario de Guadalupe in Santa Fe, NM. William has extensive experience with historical adobe and other building materials and has worked on numerous projects with Cornerstones Community Partnership, leaders in historical preservation.

Arnold Valdez

Arnold Valdez, Associate, Architectural Harmonics, San Luis, Colorado, obtained an MArch at the University of New Mexico in 1992, receiving the John Gaw Meem Award for his thesis on Hispano vernacular architecture. In 1999-2000 Valdez was the recipient of Loeb Fellowship of Advanced Environmental Studies at Harvard University Graduate School of Design. Currently, Valdez is an Adjunct Research Professor at the University of New Mexico School of Architecture and Planning.

As co-founder of Peoples Alternative Energy Services (PAES), Mr. Valdez has promoted alternative energy for low-income sectors, sustainable planning, and environmental reform since 1976. PAES's grassroots organizing workshops and hands-on initiatives were featured in a variety of publications and highlighted in a PBS documentary. Currently, the principal of Valdez & Associates, a consulting firm specializing in earthen designs, Valdez served as trainer for Peace Corps and other government sponsored solar projects since the 1980s. After studying advanced adobe dome construction techniques in India, he collaborated on a design for a high altitude adobe village and spearheaded several construction projects for the Sangre de Cristo Parish, including a design of an environmental center and restoration of the oldest non-Amerindian adobe religious structure in Colorado. His greatest achievement was to co-design and supervise construction of a domed adobe chapel in 1996. Since 1990, his firm has undertaken landscape research, architectural surveys and historic preservation of buildings and cultural landscapes in southern Colorado and New Mexcio.

Suzy Bedford

Suzy has received a Bachelor of Architecture from Portland State University. She has a technical report writing background with a local architecture firm collaborating to do existing facility assessment reports with her major contribution being determining American with Disability Act requirements and providing a separate report for each facility. She has worked at City of Albuquerque's Planning Department doing residential drawing plan checks and signing off for permit applications. She has special interest in historic preservation with an emphasis in regional adobe architecture.

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1. Executive Summary

The El Vado Motel is a classic adobe revival structure. This report focuses on the overall complex of structures. The following report is a detailed description of our observations including descriptions of the buildings, deficiencies and general recommendations for remediation.

The recommendations for a renovation plan are supported by our field observations, evaluations, research and experience with historic buildings. There are items that require further investigation and areas that the project team did not or could not investigate. This report does not purport to be inclusive of all facility features and their deficiencies. In the course of executing repairs, there may come to light additional defects and features in the building not apparent during our investigation or discussed in the report.

The entire complex is showing some significant problems, some portions can be repaired. In general, the condition of the El Vado is marginal. Some portions of the structures are so far-gone and must be demolished. ***Our investigation shows that the building has serious structural deficiencies in many areas.*** At many locations, there is obvious distress to the building components. One severe problem, seen over and over, is moisture infiltration. Moisture infiltration has been documented to have ruined many adobe buildings. It is also the cause of health problems resulting from mold. Poor detailing of the El Vado's elements including parapets, poor drainage, plasters, foundations and site drainage exacerbate the problem of moisture infiltration.

This report is an overall structural assessment, of The El Vado Motel. Its intent is to be used in conjunction with a team of experienced design professionals to create detailed construction documents and material specifications if the owner chooses to renovate the facility. A preservation plan and detailed phases of development program is recommended for a more exact estimate of the repair/renovation costs. A preliminary assessment of the estimated cost for remediation could range as high as $ probably not less than $
(See Detailed Preliminary Cost Estimates)

2. Introduction

2.1 Research

The following report is an engineering assessment of the El Vado Motel Buildings. After many decades of existence, ***the buildings have seriously deteriorated*** in many areas. In order to accommodate changing uses and new programs, reconfiguration of the building and site is necessary. This report is supported by a ***Structural Engineering assessment*** conducted over several site visits by Druc Engineering, LLC. Assessments of the mechanical and electrical systems may be provided by associated professional engineering consulting firms. ***In this report the existing conditions are explored and recommendations and strategies for initiating repairs are provided.***

2.2 Participants

Druc Engineering, LLC.-
William Druc, P.E., Structural Engineer, Principal Investigator;
Arnold Valdez, M.Arch., Architectural Historian
Suzy Bedford, B.Arch

2.3 Building Location

Latitude: 35° 05.650'
Longitude: 106° 40.700'
2500 Central Avenue SW
Albuquerque, New Mexico

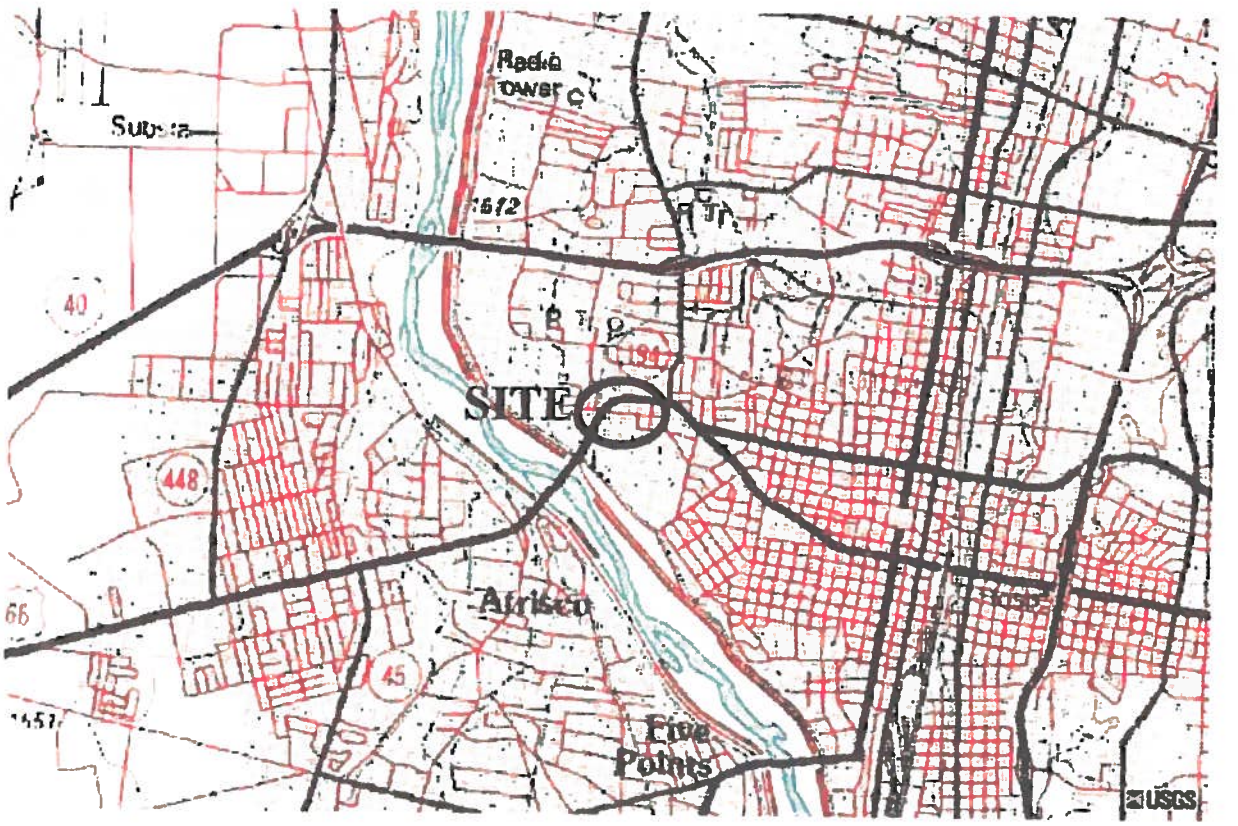


Figure 1: Vicinity Map

EL VADO MOTEL 2500 CENTRAL AVE SW

Figure 2: El Vado Motel Aerial Photo

3. History and Use

3.1 Architectural and Construction History

Description

The El Vado Motel site, located in Albuquerque, Bernalillo County, New Mexico encompasses a lobby building, 3 motel room buildings, swimming pool, a parking lot and a small open space at the east property boundary.

Figure 3 Lobby Building

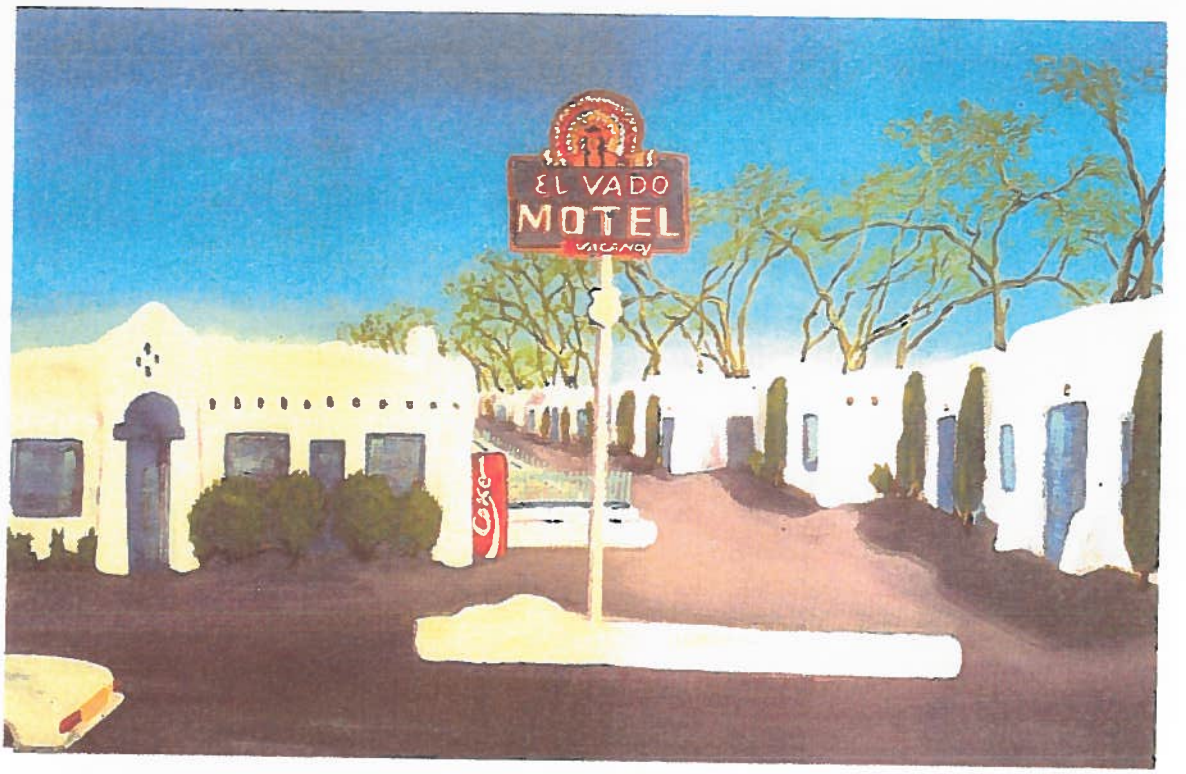


Figure 4 Historic El Vado Post Card Artwork

Construction History

The El Vado Motel is an example of a pre-World War II tourist court located on Route 66. Built in 1937 by Dan Murphy, formerly manager of the Franciscan Hotel, and N.C. Cross of Tulsa, Oklahoma. The first 10 rooms located at the southwest portion of the site are constructed from 8 inch thick hollow clay tile (Building 3, Figure 9) (Figure 5). Designed in a Pueblo Revival Style, the architectural features include buttressed walls, curvilinear parapets, irregular massing and exposed vigas. The office/lobby (Building 1, Figure 9) has ornamental buttressing framing the entries and is constructed of adobe brick.

The additional block of rooms located at the east portion of the site (Building 4, Figure 9) and north block (Building 2, Figure 9) were constructed of 10 inch thick adobe walls covered with cement stucco. Garage spaces are interspersed between the lodging units and are articulated by stucco covered support posts (Figures 6,7). There are a total of thirty-five units organized in a parallel linear plan with the wider office/residence at the front of the west wing extending to the south courtyard. A swimming pool southeast of the office fills in part of the courtyard adjacent to the north block of rooms (Figure 10).

Figure 5 El Vado Building 3

Figure 6 El Vado Building 4

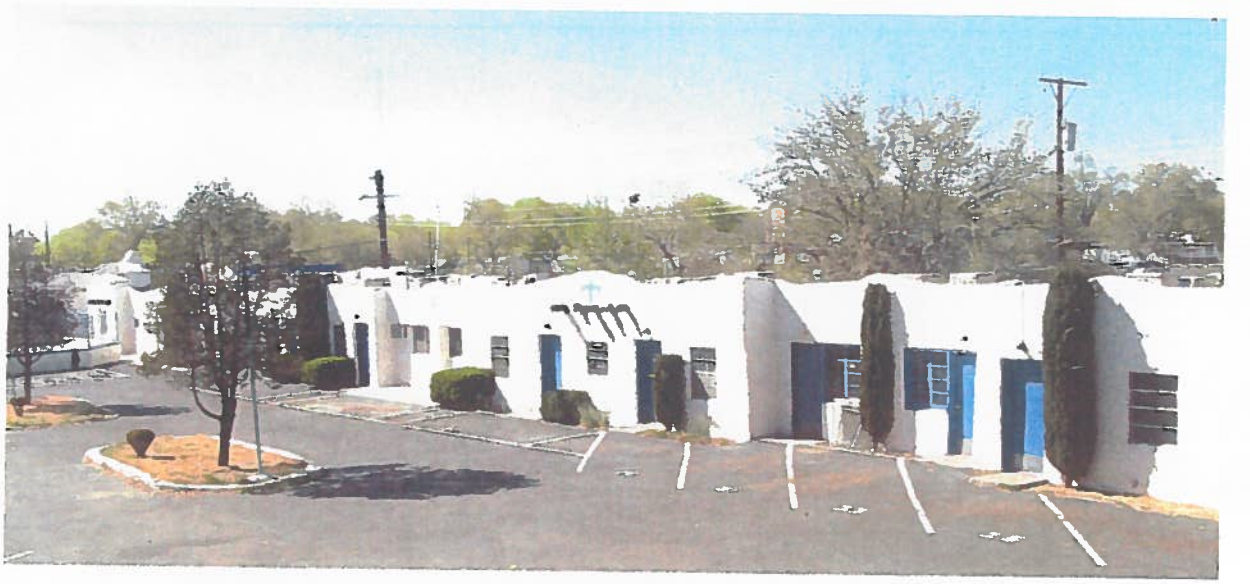


Figure 7 Building 2

Figure 8 Building 1

3.2 Existing Site Plan

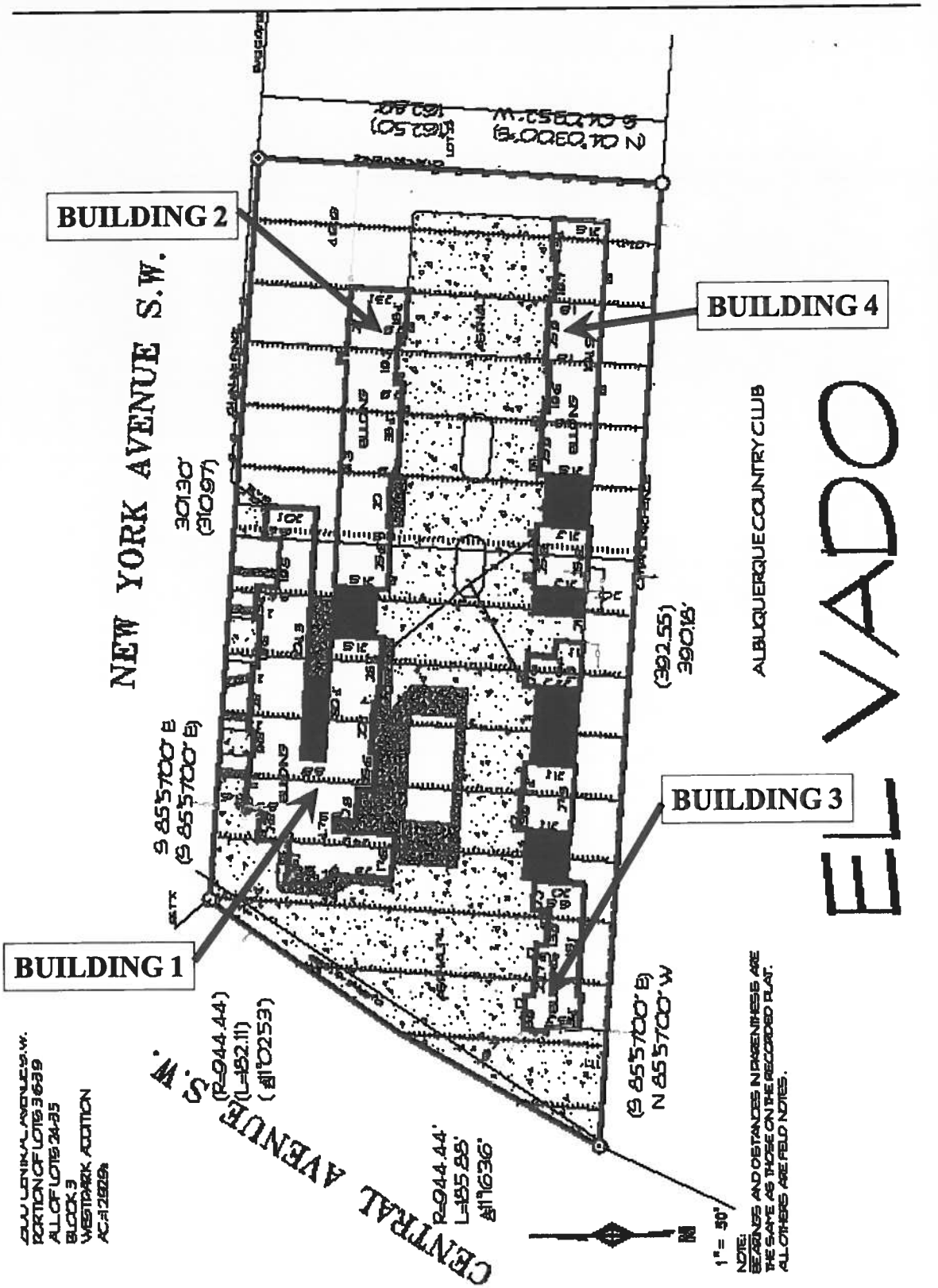
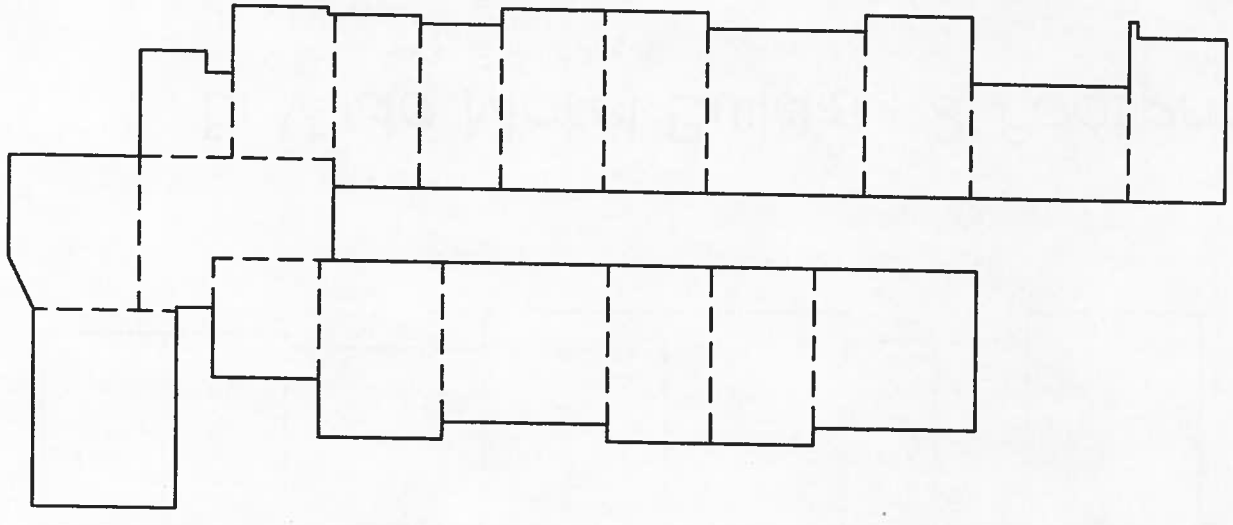
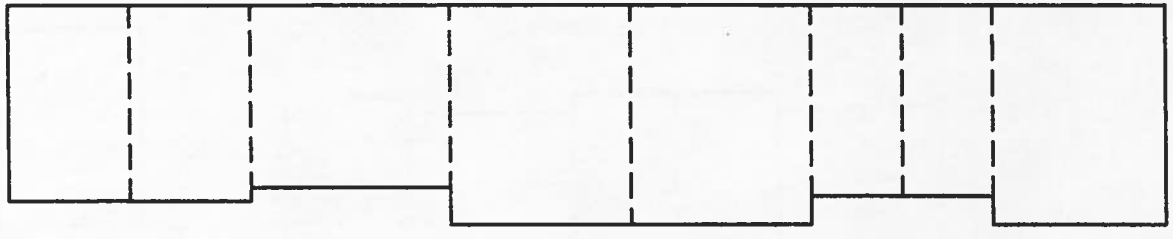


Figure 9 Existing Site Plan



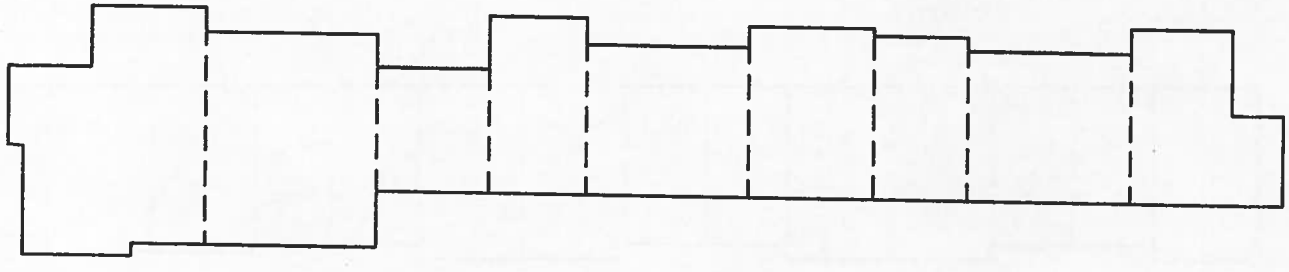
El Vado Motel Building 1 Footprint

- Total Area: 5,467 sq.ft.
- Perimeter: 646 LF
- Interior Partition Walls (both sides): 680 LF



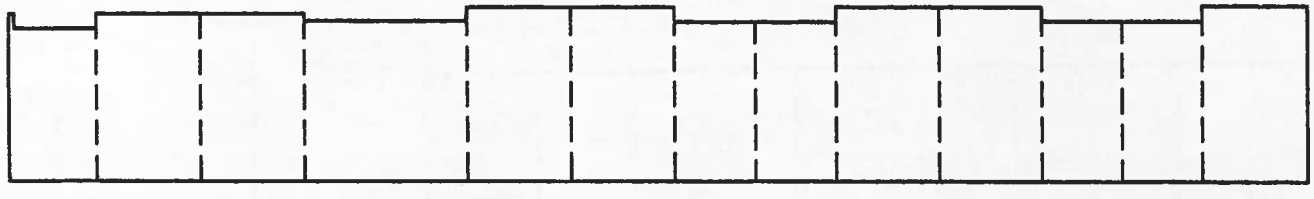
El Vado Motel Building 2 Footprint

- Total Area: 2,613 sq.ft.
- Perimeter: 295LF
- Interior Partition Walls (both sides) 295LF



El Vado Motel Building 3 Footprint

- Total Area: 3,284 sq.ft.
- Perimeter: 397 LF
- Interior Partition Walls (both sides): 325 LF



El Vado Motel Building 4 Footprint

- Total Area: 3,238 sq.ft.
- Perimeter: 379 ft.
- Interior Partition Walls: (Both Walls)485 lin ft)

4. Architectural/Structural Assessment and Preservation Recommendations

4.1 Landscape Features

The site of the El Vado Motel (Figure 9) is a mostly rectangular lot with a diagonal west boundary. In addition to the four buildings, there is paved circulation and on-site parking for the motel rooms (Figure 10), signage (Figure 11), two landscaped planter islands at the middle of the lot, a swimming pool (Figure 12) and a small open space area at the northeast corner wrapping around to the east. The existing asphalt paving is cracked with vegetation growth emerging throughout. The grading of the pavement is nearly at the level of the room doorways. The Albuquerque Country Club landscape to the south of the El Vado site is at a higher elevation resulting in flooding and pooling of water at the El Vado site during seasonal heavy rains.

Figure 10 Asphalt Paving and Landscape Island

Figure 11 El Vado Sign and West Entry Gate

Figure 12 El Vado Swimming Pool

The swimming pool of the El Vado has been closed for a few years due to structural cracks in the concrete walls and decking (Figure 13). Currently the perimeter is enclosed with a chain link fence. The pool surface is covered with plywood panels and asphalt roofing. The mechanical room for the pool is also dilapidated and is out of compliance with plumbing and electrical codes.

Figure 13 Cracked Concrete at Swimming Pool deck

Figure 14 Soil Level Adjacent to Wall

Poor drainage adjacent to all the El Vado buildings, results in moisture problems such as wet walls and mold. This is a severe problem. The problem is most acute at the south walls of the south and north cluster of rooms. ***All along the walls of the buildings the level of the exterior grade is above the top of the existing concrete stem wall,*** creating conditions for moisture infiltration especially into the adobe walls (Figure 14). This is a severe deficiency. The adobe blocks situated below grade absorb moisture. Wet adobes at the base of the wall have eroded and have begun to deteriorate. ***Eroded, deteriorated base adobes have been the cause of numerous adobe wall failures (Figure 15).***

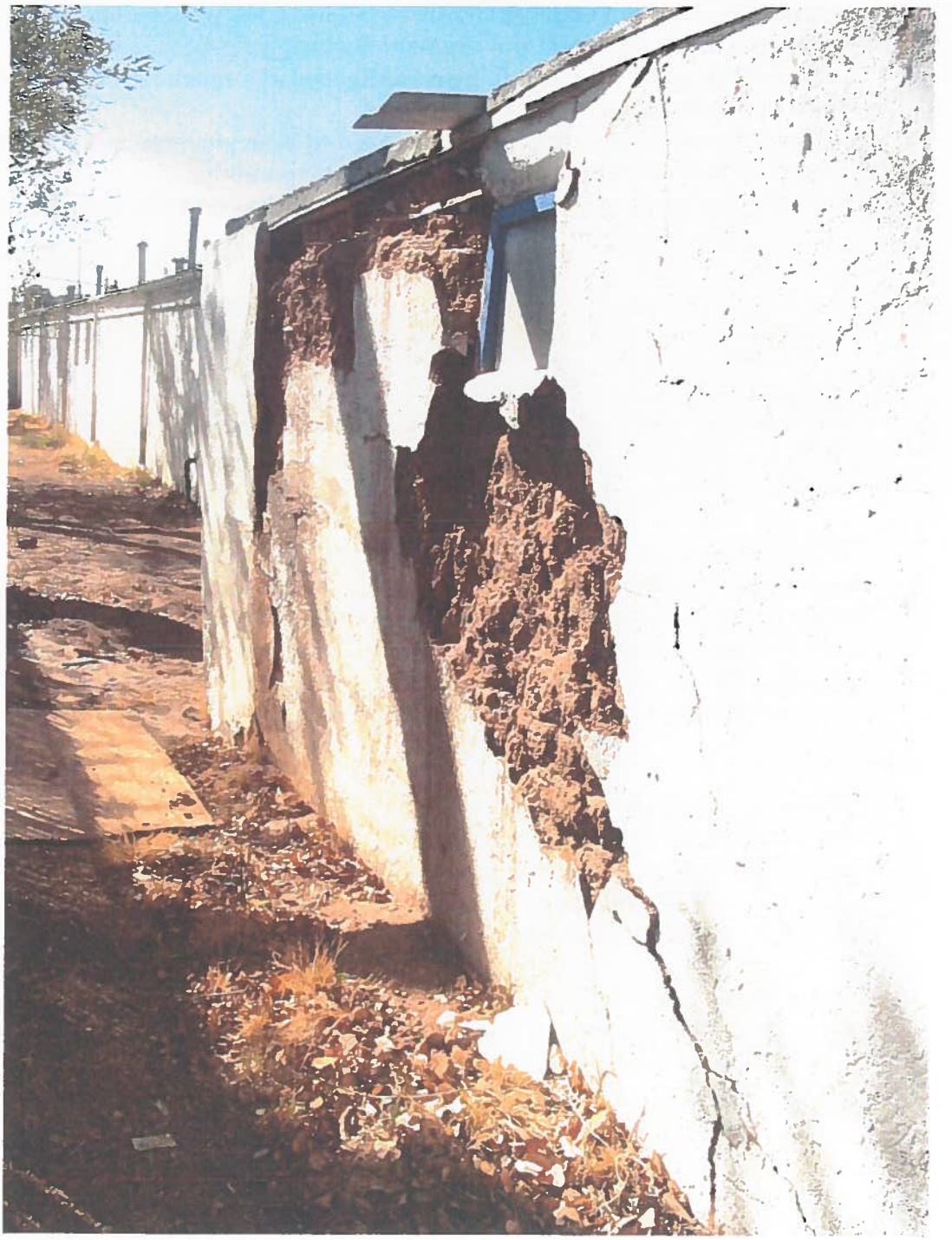


Figure 15 Wall Failure at Southeast Building Cluster

Recommendations

1. **The site needs to be accurately surveyed for existing elevation grades and topography to facilitate site drainage design.**
2. **The drainage levels need to be reconfigured at a much lower elevation relative to the building foundations.**
3. **The location of the drainage swales need to be engineered as necessary to appropriate discharge areas to avoid onsite ponding.**
4. **Onsite drainage, needs to be redirected such that these flows do not detriment the buildings.**

4.2 Foundations

Foundation System

The foundation system consists of cast in place concrete monolithic slab/footings approximately 14-inches depth by 12-inches wide. The concrete slab is 4 to 6 inches thick.

The onsite investigation hand dug a trench to expose the existing foundation. We discovered a foundation system consisting of a monolithic turn down slab ***(See Figure 16). Our investigation found that the footing width is adequate but the depth of the footing to the frost line is inadequate.*** The footings are in fair condition, however, there are signs of building settlement at various footing sections. The stem walls are not waterproofed. The investigation did not discover any foundation drains.

Perimeter Foundation Drainage

Rainwater from all the roofs drain onto the site with a system of gutters and downspouts. There are no roof overhangs in any of the roofs. The existing gutters are integrated onto the to roof edge and are contributing to water leaks that seep between the walls an cement stucco ***(Figure 17). This is a serious deficiency.***

The combination of water pooling at the base of the walls and poor site drainage have caused the infiltration of moisture to the adobe walls at all buildings elevations. ***This is a serious deficiency.***

Figure 16 Foundation Wall

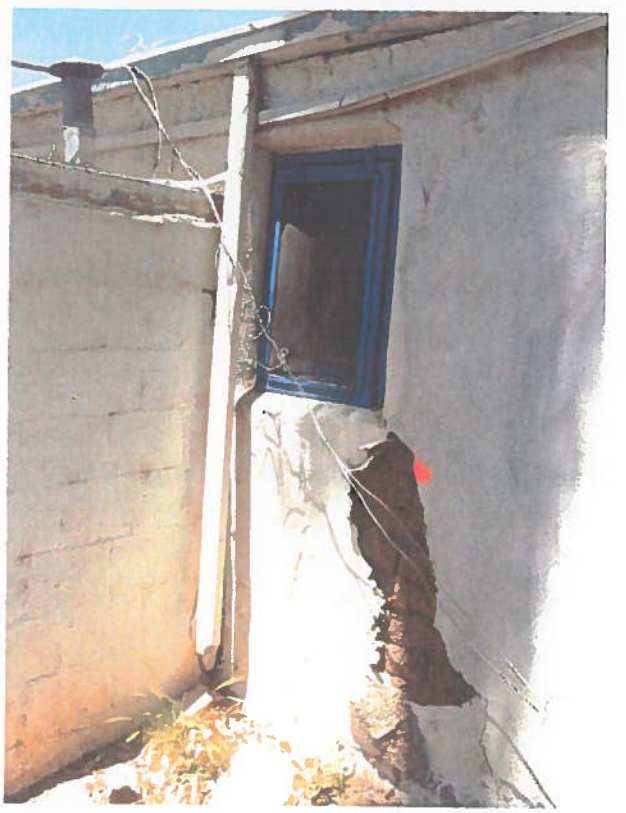


Figure 17 Roof Gutters/Downspout

Figure 18 - Field Verified Foundation Detail - Building

The southwest building (Building 3, Figure 9) has several low spots where storm water has been pooling near the foundation perimeter. This is especially critical at the adobe storage shed addition where there has been intensive moisture damage from the leaking gutters and damp ground leading upwards to the base of the adobe walls. As a result of the moisture saturation, the adobe walls at the storage sheds have collapsed.

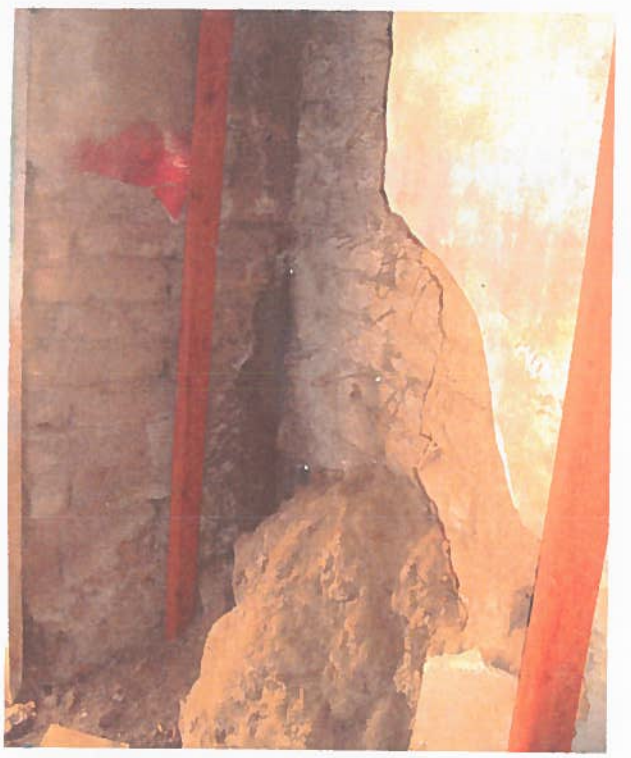


Figure 19 Collapsed Storage Shed Adobe Walls

Recommendations

1. **The soils adjacent to the footing need to be lowered so that all adobes are above finish grade. Offsite drainage to the south needs to be mitigated.**
2. **The footing wall needs to be waterproofed and insulated by an approved method. A foundation drain should be installed adjacent to the footing. An approved design should include a drain pipe, with an appropriate geotextile to prevent clogging, and appropriate placed gravel to direct moisture into the drain. The drain should run down at an appropriate slope out to daylight.**
3. **Downspouts and gutters need to be cleaned, prepared and sealed.**
4. **Leaders should be installed to divert water away from the building foundation.**
5. **The roof needs to be reconstructed to provide appropriate overhangs, parapets and flashing.**

4.3 Building Structural System

Ground Floor Structural System

The investigation revealed concrete slab floors throughout the El Vado facility. The floor slabs appear to be poured in conjunction with a foundation wall forming a typical monolithic slab turn down footing.

Figure 20 Cast in Place Concrete Floor Slab

Roof Framing System

The main structural framing members for all the roofs of the El Vado are the structural wood vigas. The vigas have diameters ranging from 6-inches to 8-inches at their ends. ***Some vigas have serious problems with dry rot at the exposed ends where they are supported on load bearing walls.*** The structure of the motel's roofs is composed of a roof ceiling assembly (vigas spanned by 3/4 of an inch thick tongue and groove wood decked ceiling with no insulation above) then layers of roofing material.

The roofing surface is in poor condition with several patched spots throughout causing water pooling and subsequent damaged. Due to the large number of roof penetrations from the utility lines there are numerous leaks throughout all roof surfaces. It seems that repairs were made to the roofing at numerous times. We noticed soft spots on the roof indicating possible failure of the roof sheathing. Some minor deflection was observed throughout portions of the roof.

Figure 21 Typical Viga Layout

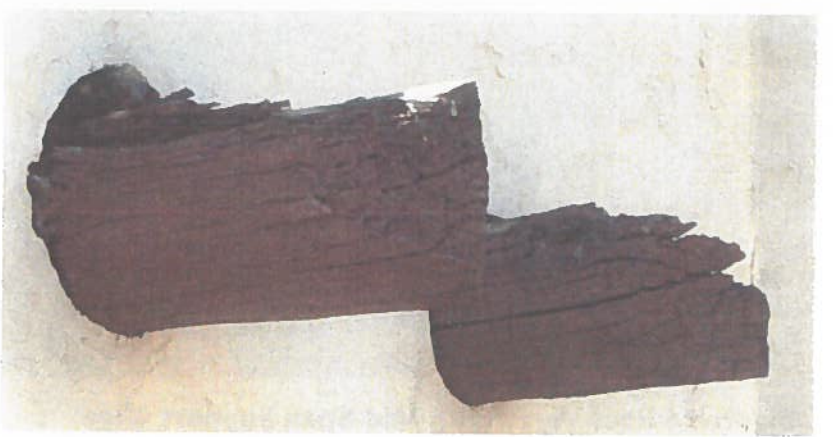


Figure 22 Dry Rot Viga Ends

Figure 23 Roof Sheathing and Layered Roofing Sheets

Figure 24 Roof Vigas With Mid-Span Support Viga

The lobby/office building of the El Vado's roof structure is composed of wood beams spaced at approximately 24 inches from centers. The low pitched roof is covered with lapped asphalt membrane roofing. This roof appears to be in poor condition. This roof contains numerous vent stacks, swamp cooler and ventilating equipment. The exposed viga ends that extend beyond the walls are in a deteriorating condition due to dry rot.

Generally, such penetrations to roofing membranes at the El Vado facility have created roof and ceiling leaks.

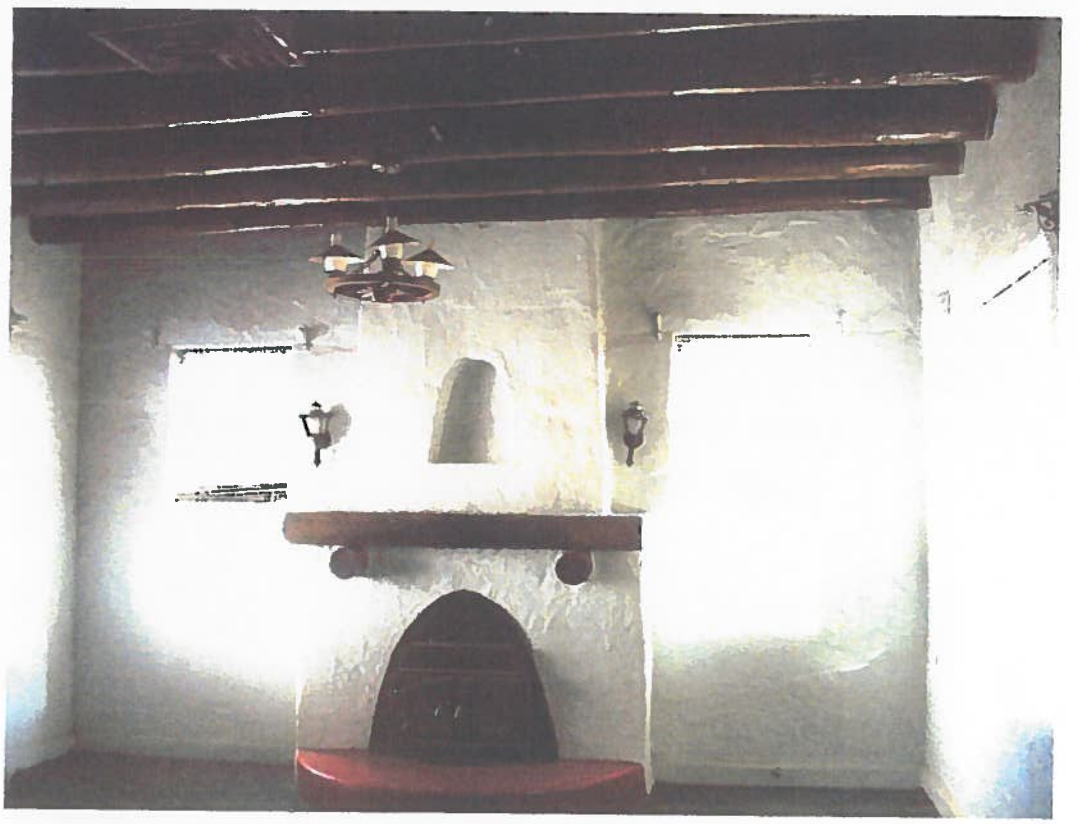


Figure 25 Roof Vigas at Office/Lobby

Recommendations

1. **Inspect and evaluate each viga end throughout the buildings to check for rot and repair as necessary.**
2. **Inspect and evaluate each viga for stress cracks, excessive deflection and repair as necessary.**
3. **Inspect and evaluate roof sheathing. Replace with 3/4 inch sheathing as necessary.**
4. **Insulate roofs to code standards and replace entire roof surfaces.**
5. **Overhangs, gutters etc.**

Figure 26 Office/Lobby Roof Pipes & Electrical Lines

Figure 27 Low Spot in Lobby Roof

Figure 28 Roof Penetrations at North Room Block

Figure 29 Roof Penetrations at South Room Block

4.4 Exterior Walls

Exterior Wall Construction

The southwest building (Building 3, Figure 9) has 8-inch thick walls consisting of hollow clay tile 4-inches thick by 8-inches long. The interior load bearing walls are also constructed of hollow clay tile.

The south east, north, and Lobby building's walls are 10-inches thick adobe. ***There is no continuous bond beam at the top of the walls, instead there is a 1-1/2 inch wood plate. This is a serious structural deficiency.*** Several cracks and settlement conditions are evident through out the adobe buildings.

how fix?

Both the hollow clay tile and adobe walls have no insulation allowing for extreme thermal temperature swings in the summer and winter seasons.

Figure 30 Hollow Clay Tile Unit

Figure 31 South West Rooms Built of Hollow Clay Tile

Exterior Finishes

Cement stucco is the exterior finish material for both the adobe and hollow clay tile block walls of all buildings. The stucco on the adobe building is in poor condition. The adobe walls are being impacted by moisture infiltration. Cement stucco traps moisture in the walls. As a result there are numerous cracks in the stucco that exacerbate the moisture related problems. Asbestos examination has revealed trace elements of asbestos in the plaster samples of the Delphi, Inc. report.

Exterior Appendages

The main entrance to the office/lobby building (Building 1, Figure 9) is covered with an overhead roof forming a protective alcove for the doorway. There are concrete slab stoops at all doorways, some above the interior room's floor grade.

Figure 32 Typical Cement Stucco Walls

Figure 33 Entry Canopy Over Lobby Door

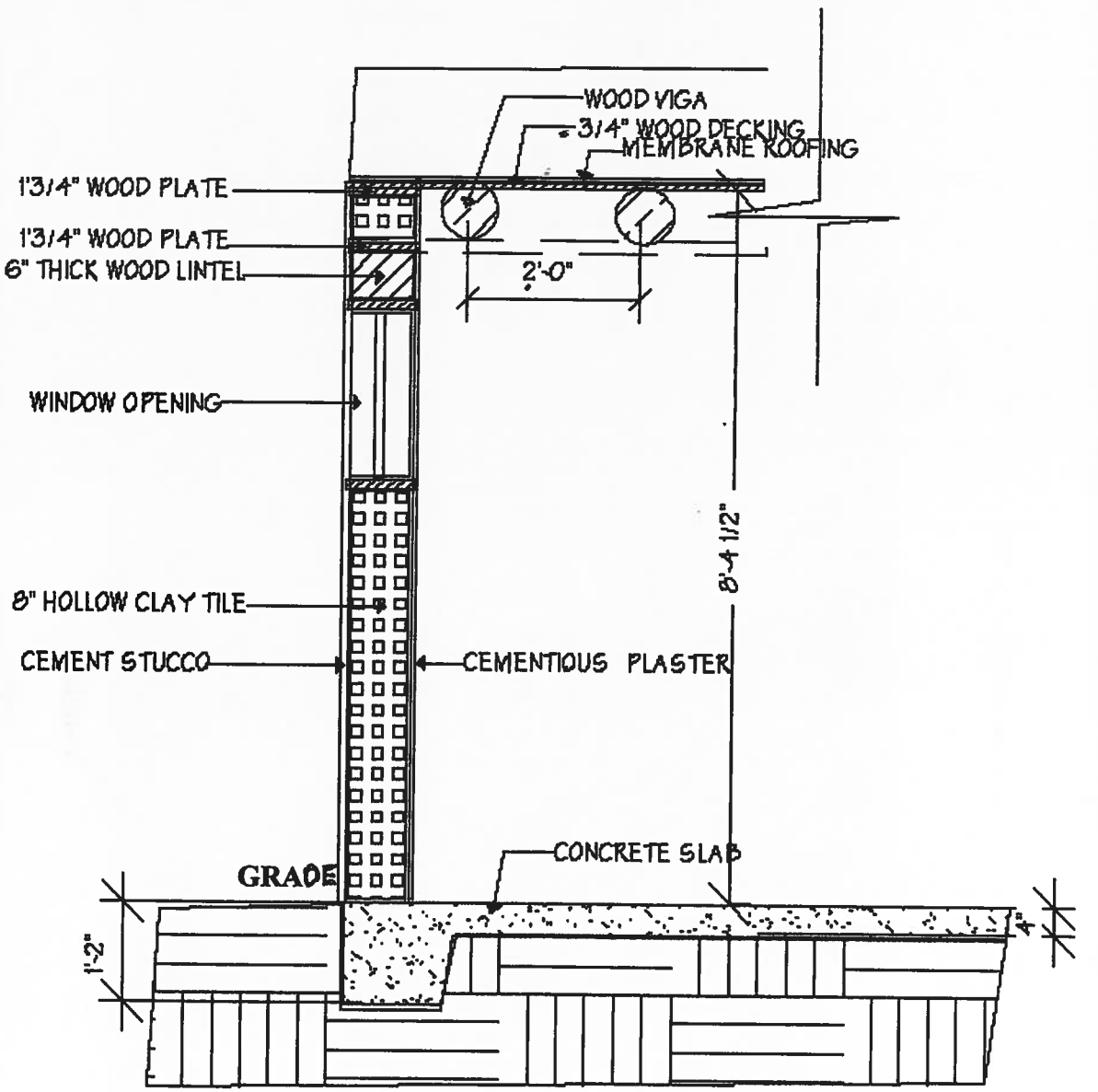


Figure 34 Typical Hollow Clay Tile Wall Section

Figure 35 Typical Adobe Wall Construction

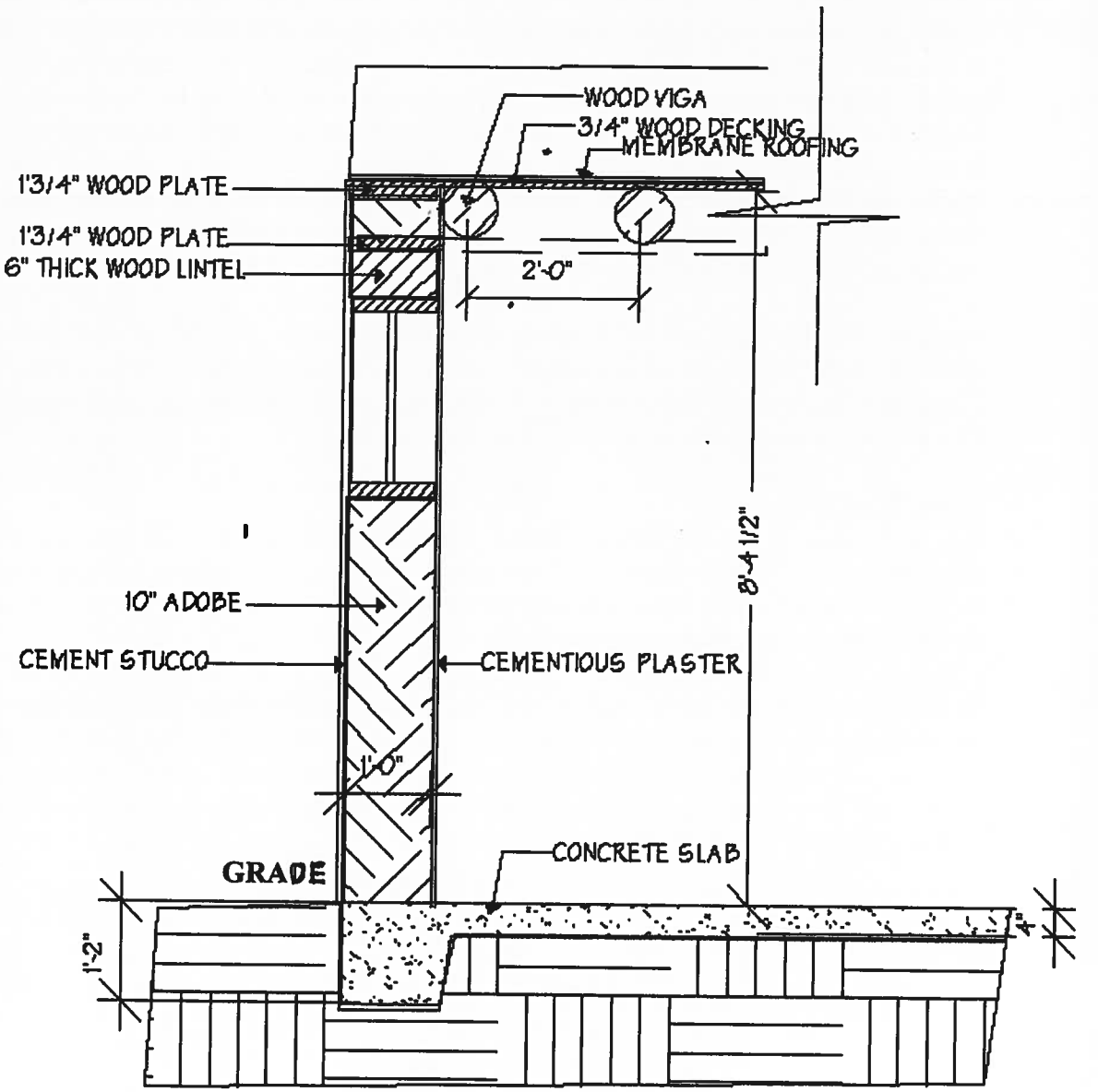


Figure 36 Typical Adobe Wall Construction

Exterior Wall Construction and Plaster

The exterior walls of the southeast and north buildings are constructed with adobe block. ***The adobe walls have been damaged extensively*** (Building 2,4, Figure 9) ***due to moisture infiltration from the gutters. In many locations the cement stucco has failed.*** In some locations, the adobes are prevented from drying by the presence of concrete stucco. All of the exterior wall finishes of the buildings consist of a cement based stucco applied over the adobe walls. Apparently there are 2 layers of cement stucco applied at different time periods. The attachment substrate for the original stucco layer is composed of randomly spaced galvanized nails. The thickness of the stucco varies from one half inch to over an inch and a half in many places.

Because of the lack of a uniform attachment base for the stucco and its incompatibility with adobe the condition of the stucco is poor and deteriorating. ***This is a serious deficiency.*** None ***of the walls are insulated as per energy code*** standards. ***The rooms are hot in the summer and cold in the winter.***

North East Walls

The north wall of the northeast building (Building 2, Figure 9) has been seriously compromised and needs attention. Two layers of cement stucco have been applied to the adobe blocks. One layer was probably applied when the building was built, and the other layer was added sometime later.

At some locations the adobe is powdery, indicating that the walls have been through numerous cycles of becoming wet and drying out. When adobes are powdery they lose their strength are in danger of failing. There was an appearance of slumping due to the fact that there are air spaces between the layers of cement stucco (which is bulging out) and the adobe block ***(Figure 37).***

Figure 37 Cement Stucco at North East Adobe Wall

South And West Wall

Overall the condition of the south wall and west wall (Building 1,4, Figure 9) ***are unsatisfactory.*** There are numerous stucco cracks in both walls and at the parapet. However, we did notice severe deterioration. Portions of the upper walls under the eave have missing or broken sections of stucco.

Recommendations

1. **A detailed inspection and evaluation of the stucco condition should be conducted**
2. **Perform site and grading recommendations as listed in the above sections.**
3. **Remove all cement stucco at areas where stucco appears to be slumped.**
4. **Remove all cement stucco at any areas where the stucco is loose or where there are major cracks.**
4. **If possible, remove all the cement stucco from the exterior of the adobe buildings throughout. Since the cement stucco is actually a problem, it would be a good idea to remove it everywhere. The cement stucco is very hard and is adhered to the adobes. Removing the stucco might cause the adobes to crack and fall apart.**
5. **Replace cement stucco with an approved material, such as a lime-based stucco which will allow the wall to "breathe".**

Note: Apply extreme caution when removing stucco. Since all building adobes have not been inspected, it is imperative that stucco be removed slowly and under the supervision of an experienced professional. The removal of cement stucco is risky.

Adequate precautions must be taken:

1. **Shore roof structure at wall sections to be removed.**
2. **Remove small non-contiguous sections of stucco to preclude wall collapse.**
3. **Access wall condition with experienced professional engineer.**

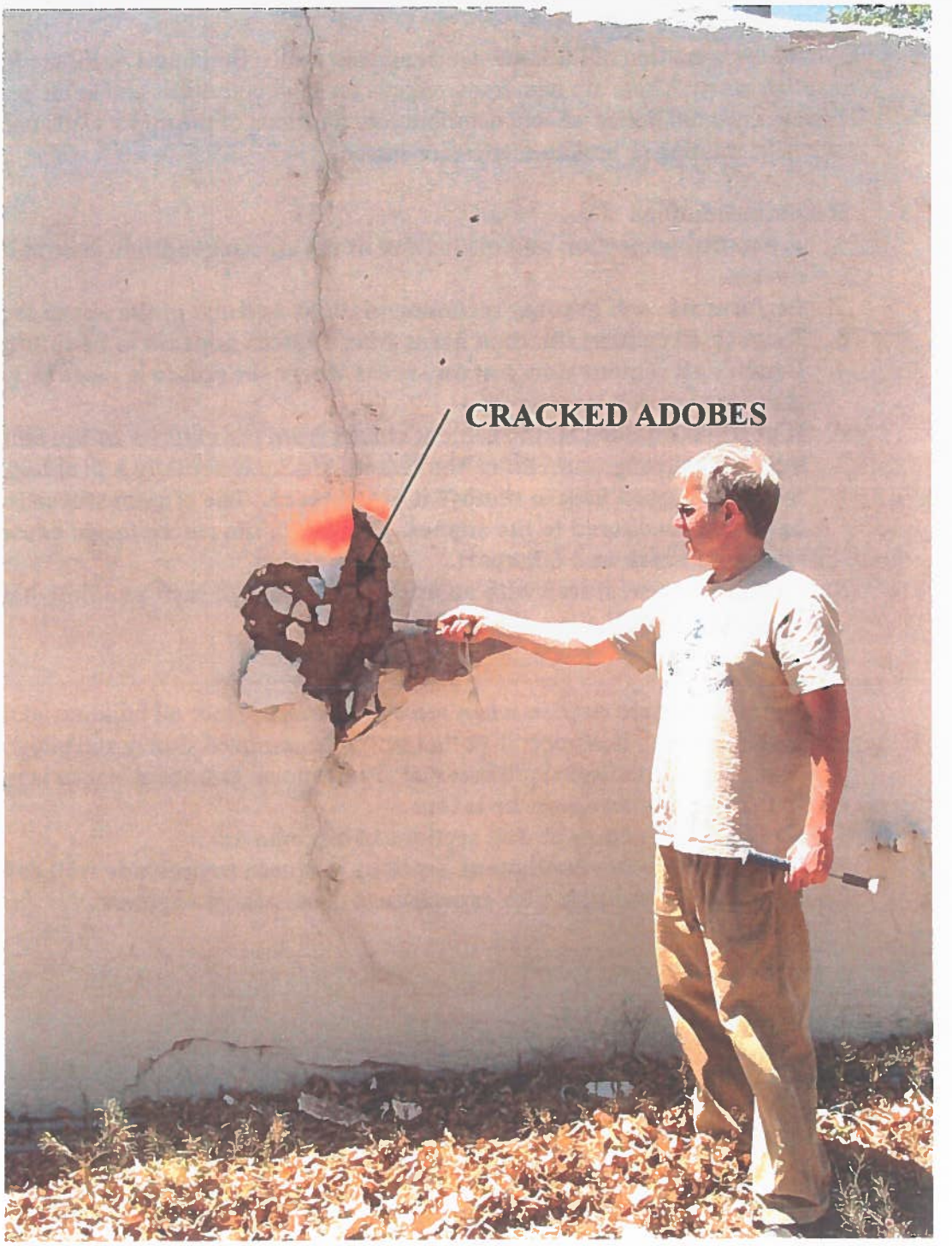


Figure 38 Structural Adobe Wall Separation and Stucco Crack East Adobe Wall

North Wall (Building 2)

A severe condition that requires immediate attention occurs adjacent to the parapet wall on the north side of the building. The damage occurring is due to moisture infiltration because of cracked stucco which allows moisture in between the adobe walls and cement plaster. The moisture becomes trapped and cannot get out. The adobe blocks become saturated with the moisture and begin to deteriorate. As the blocks deteriorate, chunks of adobe mud and mortar separate from the rest of the block. This creates a larger void between the cement stucco and the adobe, giving access for snow melt and rain to enter the cavity. The adobe chunks become wedged between the intact wall and the cement plaster causing a further cycle of deterioration. As trapped moisture freezes and expands it creates even more damage as the cement stucco is forced away from the building dragging pieces of adhered adobe with it.

The north wall is now at the point where large sections of cement plaster are falling off the building. **This constitutes a dangerous, severe existing condition.** Exposed adobe walls, cracked stucco and wall damage at the northeast as evident by the bulging stucco and separated concrete apron.

Figure 39 - Cement Stucco Separation from Adobe Wall

Recommendations

1. **Remove all the loose cement stucco from the wall area. (Risk of wall failure in remediation effort to removing stucco is extremely probable).**
2. **Remove all the loose adobe block from the area.**
3. **Repair all compromised adobes with new adobes interwoven with the stable existing ones.**
4. **Retouch the adobe blocks with mud mortar to fill in all the gaps.**
5. **Re-stucco with an approved material such as lime-plaster.**

Figure 40- Parapet at the Office/Lobby Building Showing cracks in the cement stucco where moisture enters the walls of the building, causing severe deterioration.

4.5 Roofing/Drainage

Roofing & Weatherproofing

The El Vado buildings have asphalt based roofing. ***The roof surfaces are in fair to poor condition.*** Maintenance is required periodically to inspect fasteners, joints and the ridge/parapet connections. The parapet flashing has separated from the walls creating gaps and cracks in the walls. ***Areas of particular concern exist at the parapets and perimeter of all building walls. The roof vigas which protruding from the walls are in poor shape due to dry rot conditions***

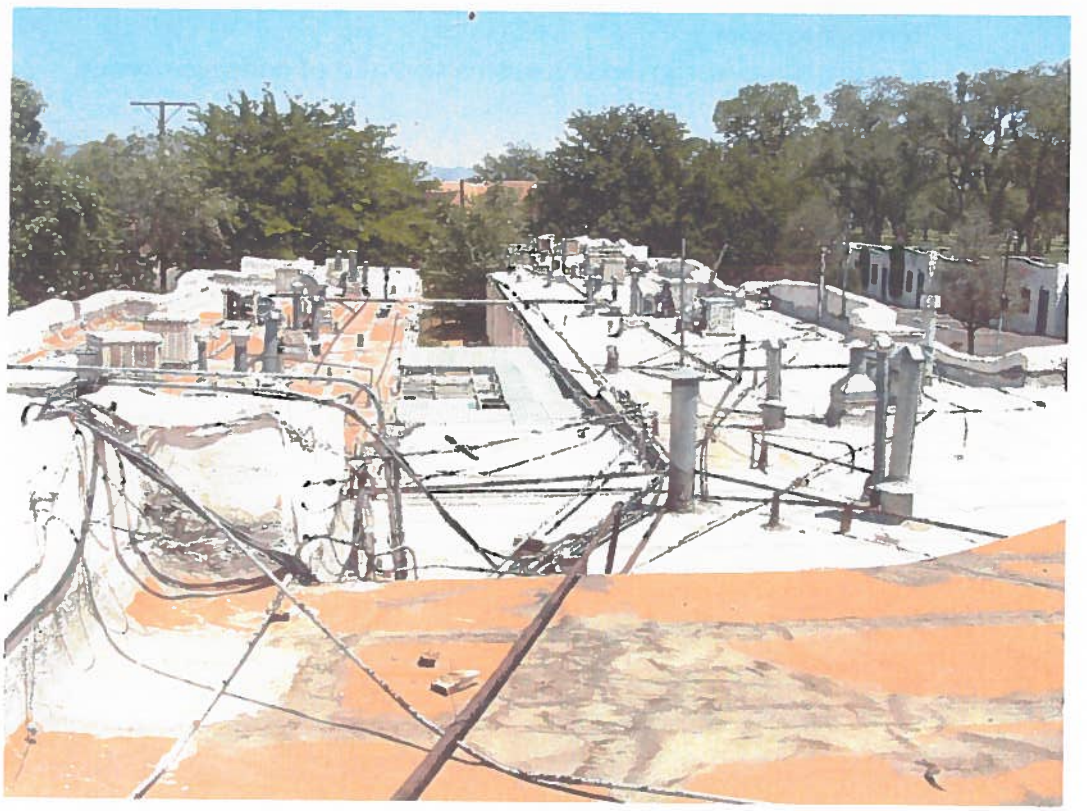


Figure 41– Roofing Materials at Building 1.

Drainage System, Gutters, and Downspouts

The roof surfaces of all buildings consist of low slope roofs. Rainwater flows toward the roof edges where it is collected in galvanized metal gutters then drains to the ground via the square metal downspouts. The connections from the gutter to the roof are loose and have been leaking creating damage to walls.

- ***Each roof surface of the buildings is dotted with roof penetrations from vent stacks and heater flues.***

Flashing Boots around the penetrations are in need of repair and or sealants.

Recommendations

1. Complete re-design and reconstruction of roof drainage system

Figure 42 Gutter and Downspout Assembly

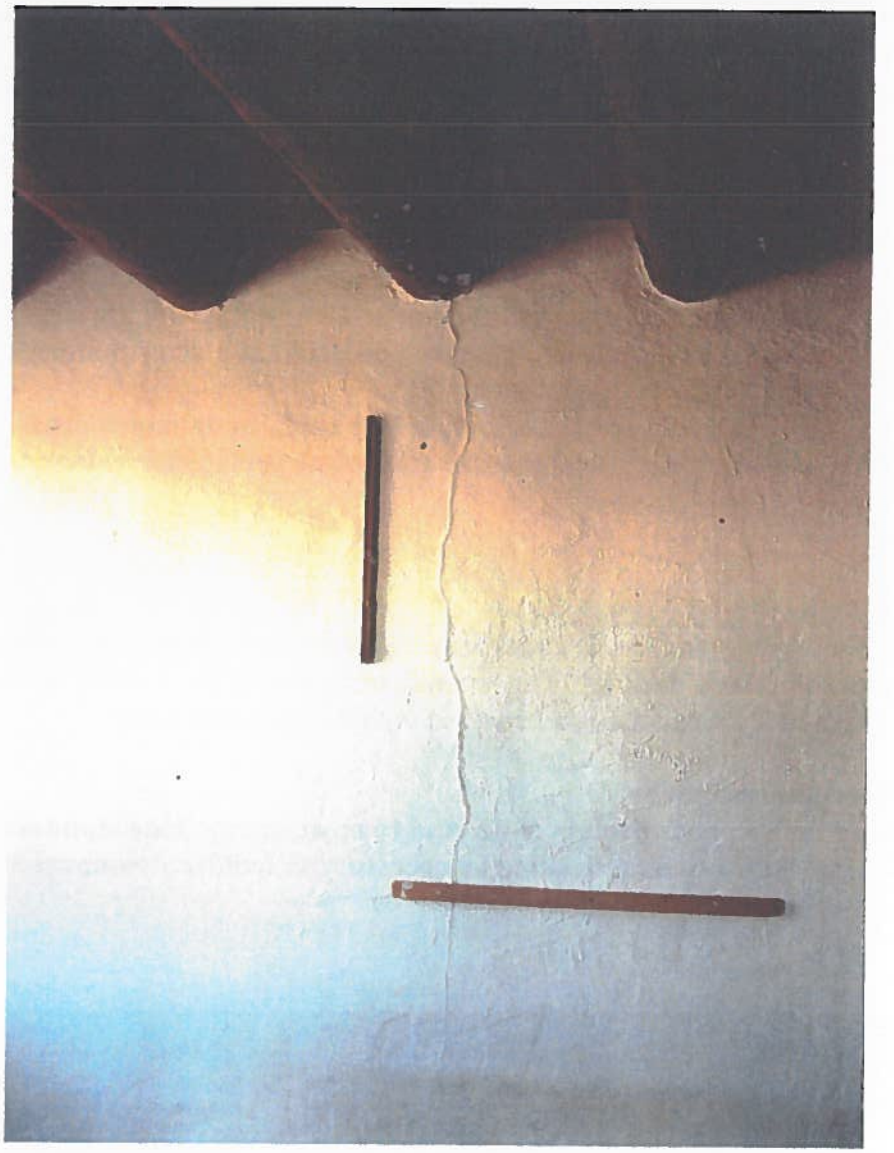


Figure 43 Typical Interior Wall Plaster

4.6 Interior - Wall, Ceiling and Floor Finishes

Wall Finish Materials

In all buildings, the interior wall surfaces are coated with cementious plaster. The thickness of the plastered surface varies from 1/4 inch to 1/2 inches. Several layers of paint in different colors have been applied over the original whitewash. At several locations, the interior plaster is flaking, cracking and crumbling. ***The main cause of this problem is moisture infiltration and wear and tear due to use.***

Recommendations

1. **Inspect all interior wall surfaces with special attention to the base and other areas that might be susceptible to moisture infiltration.**
2. **A paint analysis should be conduced to evaluate the presence of lead-based paints.**
3. **Repair any wall areas that exhibit cracking, crumbling, or flaking off of plaster.**
4. **Eliminate moisture infiltration and allow any wet surfaces to dry.**
5. **Conduct analysis and research on original plaster materials, mix ratio and application methods.**
6. **Replicate original plaster mix and apply to damaged areas.**
7. **Match existing wall texture and prime surface for color coat.**

Ceiling Finish Materials

The ceiling at the El Vado consists of exposed wood vigas with tongue and groove plank decking. The overall condition of the ceiling materials is fair. Vigas are stained dark and covered with a shiny preservative.

Recommendations

1. **Inspect and insulate main roof to meet energy code standards.**
2. **Remove ceiling decking as necessary to facilitate removal of existing roofing.**

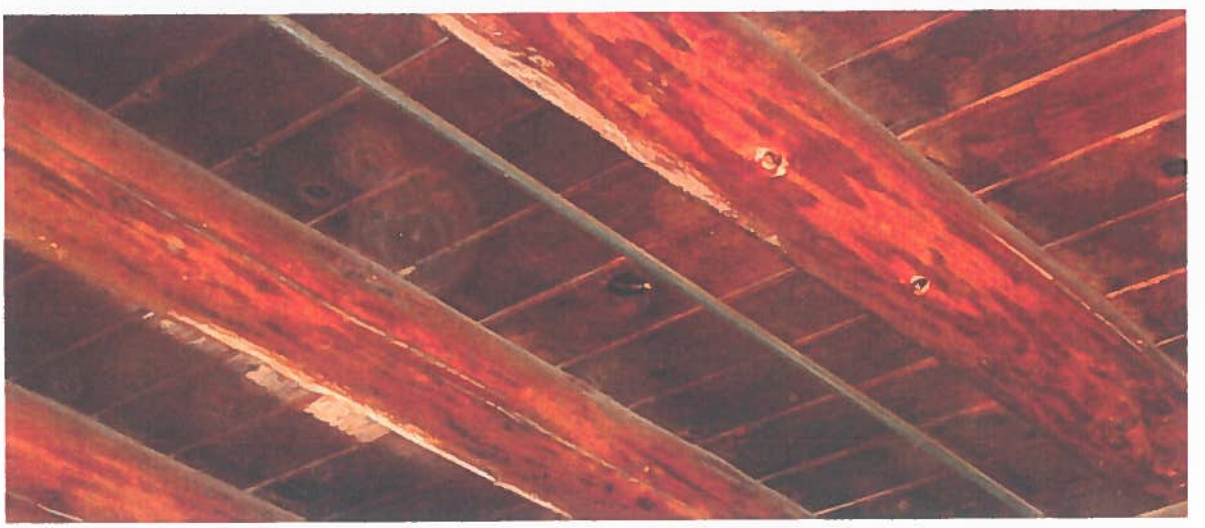


Figure 44 - Vigas & Tongue & Groove Decking

4.7 Interior - Doors, Windows

The original windows of the buildings are single glass, wood framed single hung units. Some original units have been replaced with single hung metal clad units. Steel security bars have been added to some windows blocking egress.

Figure 45 - Single Hung Window With Security Bars

The overall condition of the windows are poor. Numerous repairs and replacement is required. The paint is peeling and is in poor condition. Entry doors and interior doors need refinishing.

Figure 46 - Multi-pane Window and Typical Wood Exterior Door

Recommendations

1. **Inspect, repair and or replace exterior doors.**
2. **Inspect, repair and or replace windows.**
3. **Door hardware should comply with accessibility standards.**
4. **Door trim needs to be refinished or replaced to original finish.**
5. **New energy efficient windows and doors are recommended.**
6. **Inspect, repair or replace single hung windows to original integrity. Frames and trim are included in this procedure.**
7. **Replace bathroom window with new window comparable to original opening and style to include energy efficient glass.**
8. **Repair or replace concrete sills and paint.**
9. **Restore original window openings, install new frames windows comparable to existing windows.**
10. **Patch and repair around all window frames.**
11. **Incorporate new door hardware, include security locks.**
12. **Handicap requirements.**

Interior Windows

With the exception of the windows on the north and east walls, all other perimeter windows are of the original configuration and have remained unchanged. The north and east windows were replaced with aluminum windows.

Recommendations

1. **Inspect, repair or replace windows and trim as necessary.**
2. **Paint color may be changed as per overall interior restoration to original colors.**
3. **Window hardware for sliding mechanisms should be inspected and repaired or replaced as necessary.**
4. **Remove retrofitted windows and replace with window comparable to original configuration and size if desired.**
5. **Conduct paint analysis to determine the presence of lead-based paints.**

Interior Doors

For the most part, the interior doors have remained as originally installed and are composed of painted, solid core wood-paneled construction with simple door knobs, and removable pin butt hinges.

Recommendations

1. **Inspect, repair and re-paint doors and trim as necessary.**
2. **Paint color may be changed as per overall interior restoration to original colors.**
3. **Door hardware should be inspected and repaired and or replaced as necessary.**
4. **Handicap requirements.**

5. Prioritized Work

5.1 Emergency Stabilization

Removal of the cement plaster at all adobe walls with a priority at the north walls. As noted above, this area of the building constitutes unsafe conditions that should be corrected immediately. Pieces of adobe and plaster are separating from the building and possibly detaching and falling. ***This constitutes a dangerous situation which threatens personal safety and requires immediate repair. Other high priority repairs are the site drainage, roof leaks and mold and asbestos abatement measures.***

5.2 Renovation Plan

5.2.1 Lobby/Motel Buildings

1. Provide appropriate site grading and drainage.
2. Lower the existing grade at adobe walls.
3. Provide perimeter foundation waterproofing
4. Provide perimeter foundation drain.
5. Inspect and repair vigas.
6. Inspect and repair roofing and decking.
7. Insulate roof to code standards.
8. Repair the parapets.
9. Replace gutters, leaders and downspouts.
10. Refinish floors, doors, lintels trim.
11. Install appropriate door hardware.
12. Analyze paints.
13. Additional investigation for ground water, radon and molds.
14. Provide adequate building installation per applicable energy code.
15. Update mechanical systems.
16. Update electrical systems.
17. Remove pool
18. Handicap Accessibility Requirements

6. Mechanical Assessment

6.1 Introduction

This study did not investigate existing mechanical heating, ventilating and plumbing systems associated with El Vado Motel.

Druc Engineering recommends field investigations and references to the following code related handbooks and guidelines pertinent to the project:

ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers)
NFPA 90A (Installation of Air Conditioning and Ventilating Systems)

- Uniform Mechanical Code
- Uniform Plumbing Code
- Uniform Fire Code

Electrical Assessment

7.1. Introduction

Druc Engineering did not investigate the main electrical service, exterior lighting, interior lighting.

Druc Engineering recommends field investigations and references to the following code related handbooks and guidelines pertinent to the project:

- National Electrical Code

Mold Assessment

8. Introduction

CERL Environmental Consultants investigated El Vado Buildings for mold contamination. Site evaluation was conducted on May 27, 2006. The findings of are contained in a report submitted by the consultants

9. Summary

- ***The El Vado buildings are seriously compromised due to structural deficiency and mold.***
- ***The foundation, walls, interior finishes are marginal at best.***
- ***The drainage around the perimeter of the buildings and roof drains are deficient.***
- ***Portions of the adobe buildings must be demolished.***
- ***The rest of the buildings need to be gutted down to the core in order to be of any future usefulness and in compliance with health and safety standards and requirements.***

10. References

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