Appendix FEIR-2

Relocation Study

PAGE&TURNBULL

1360 VINE RELOCATION AND REHABILITATION STUDY

LOS ANGELES, CA
[17220A]

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EXECUTIVE SUMMARY

The development of a new construction and historic rehabilitation mixed-use project at 1360 Vine Street in Los Angeles, California, entails the temporary off-site relocation of six bungalows (Bungalows) and their relocation back to the project site for incorporation into the project. This is necessary to allow construction of the subterranean parking structure required for the project.

The six Bungalows, located at 6245, 6249, 6255 Afton Place and 6254, 6256, 6262 De Longpre Avenue, are located within the Afton Square Historic District, which is listed in the California Register of Historical Resources.

The purpose of this report is to analyze whether the relocation of the Bungalows to a temporary storage site and then back to the project site is feasible and that the Bungalows can be appropriately protected and rehabilitated.

Page & Turnbull (P&T) visited the project site to document current conditions, identify and assess the character defining features of the Bungalows and consider issues in connection with the temporary relocation and rehabilitation. After consulting with expert building movers and Krakower & Associates, a structural engineering firm with experience with historic buildings, P&T was able to provide a plan for the relocation of the buildings based on relocation route restrictions and structural requirements. Additionally, the report recommends measures to stabilize and protect the Bungalows at the temporary storage site and lists key components of rehabilitation work that may be required when the Bungalows are returned for use at the project site.

The Bungalows can be relocated to a temporary storage site, and then back to the project site, if structural measures are followed. While stored, the Bungalows would be protected against weather and vandalism with measures such as shrink-wrapping, fencing, and regular monitoring. A structural engineer would be needed to provide a detailed structural retrofit plan for when the Bungalows are returned to the project site.

The temporary relocation would not result in a significant adverse impact on the historic character of the Bungalows. The buildings will be thoroughly documented before their relocation and will be rehabilitated according to the Standards upon return to the project site.

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INTRODUCTION

Background

This report is prepared for the ONNI GROUP and associated with the proposed new construction mixed- use project at 1360 Vine Street in Los Angeles, California, which entails the temporary off-site relocation of six bungalows (Bungalows) and their relocation back to the project site for incorporation into the project.

Purpose

The purpose of this report is to:

- Analyze whether the relocation of the Bungalows to a temporary storage site and then back to the project site is feasible.
- Provide a strategy for the relocation of the buildings based on relocation route restrictions and structural requirements.
- Identify and assess the character defining features of the Bungalows.
- Identify measures to stabilize and protect the Bungalows at the temporary storage site.
- Identify key components of rehabilitation work that may be required for permanent location and use at the project site.

Project Team

Page & Turnbull: Historic Architect (line spaces are wrong)

Krakower & Associates: Structural Engineer Consultant

Summary of Historic Status

The Bungalows are contributing buildings to the Afton Square Historic District, which is listed in the California Register of Historical Resources.

Methodology

To compile this report Page & Turnbull performed the following tasks: (line spaces are wrong)

- Reviewed the Historical Resources Technical Report prepared by GPA Consulting (Historic Report) in connection with the City's CEQA review of the project.Visited the project site on 10/11/2022 to take measurements of the buildings and document current conditions.
- Met with expert building movers (American Heavy Moving) to identify relocation issues. Drove the possible relocation route to the potential storage site to identify restrictions.
- Consulted with the structural engineer to identify key concepts of the relocation plan and reinstallation requirements upon return of buildings to the project site.

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CHARACTER DEFINING FEATURES

This section provides an analysis of the elements of the Bungalows that have extant character defining features as identified in the Historic Report and reviewed and confirmed by Page & Turnbull. This report documents the character-defining features with a series of diagrams. For the purposes of this analysis, Page & Turnbull surveyed the Bungalows and evaluated the significance of the character defining features by categorizing them as "Significant," "Contributing," or "Non-Contributing." These categories are defined as follows:

SIGNIFICANCE DEFINITIONS

Significant

Definition: Significant elements, materials, and spaces characterized by a high degree of architectural significance and a high degree of historic integrity and dating to the period of significance for the historic district (1916-1939).

Description: Significant features of each Bungalow are primarily comprised of the building's footprint, massing, original exterior walls, original doors and windows, and applied features, and architectural details.

Preliminary Guideline: Significant exterior elements and materials should be retained and preserved, or where alterations have occurred, be restored. Deteriorated materials should be repaired where feasible rather than replaced. Where replacement is necessary due to extensive material deterioration or failure, replacement materials should match the original materials and forms.

Contributing

Definition: Contributing elements, materials, and spaces characterized by a lesser degree of architectural significance, yet retaining a high degree of historic integrity, or are historically important, yet altered elements. These elements, materials, and spaces also date to the period of significance (1916-1939).

Description: Contributing elements and materials of each Bungalow include secondary porches and entrances, original elements constructed from common materials, and applied details that have not been substantially altered.

Preliminary Guideline: Contributing elements and materials should be retained wherever possible but are not essential to the building's ability to convey its overall significance. Where required, alterations and additions should be designed to be compatible with the existing elements and materials.

Non-Contributing

Definition: Non-Contributing elements, materials, and spaces are generally non-historic elements (built or added after 1939) or elements that have been altered to the extent that their original character is absent.

Description: Non-Contributing elements, materials, and spaces of each Bungalow generally include window and door openings that have been removed and filled or heavily modified, windows and doors that have been replaced, porches that have been filled, and interior spaces that have been reconfigured or extensively modified. These elements, materials, and spaces represent additions and/or alterations that detract from the building's historic character.

Preliminary Guideline: Non-Contributing elements, materials, and spaces are not specifically limited by preservation recommendations, except to note that the overall character of alterations to an historic building must meet the general requirements set forth in the Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards). While there are no specific recommendations for the treatment of Non-Contributing interior spaces, the building's general spatial organization should be preserved where possible. Furthermore, Non-Contributing additions could be removed to improve the building's overall integrity. If Non-Contributing features are removed and need to be replaced (such as windows), the replacement features should be compatible with the original features.

BUNGALOW 1 – 6255 AFTON PL

Significant Features

1. Intersecting roof with clipped gables
2. Centered front porch with gable roof supported by Doric columns
3. Boxed eaves with cornice returns and facia board
4. Plain frieze at roofline around the building
5. Clapboard siding
6. Original wood windows, double-hung and casements
7. Original multi-lite glazed, wood front door

Contributing Features

8. Raised foundation
9. Rectangular attic vents with louvers
10. Exterior steps and landings at rear and side yards

Non-Contributing Features

11. Non-original handrails at front porch
12. Non-original exterior doors and windows

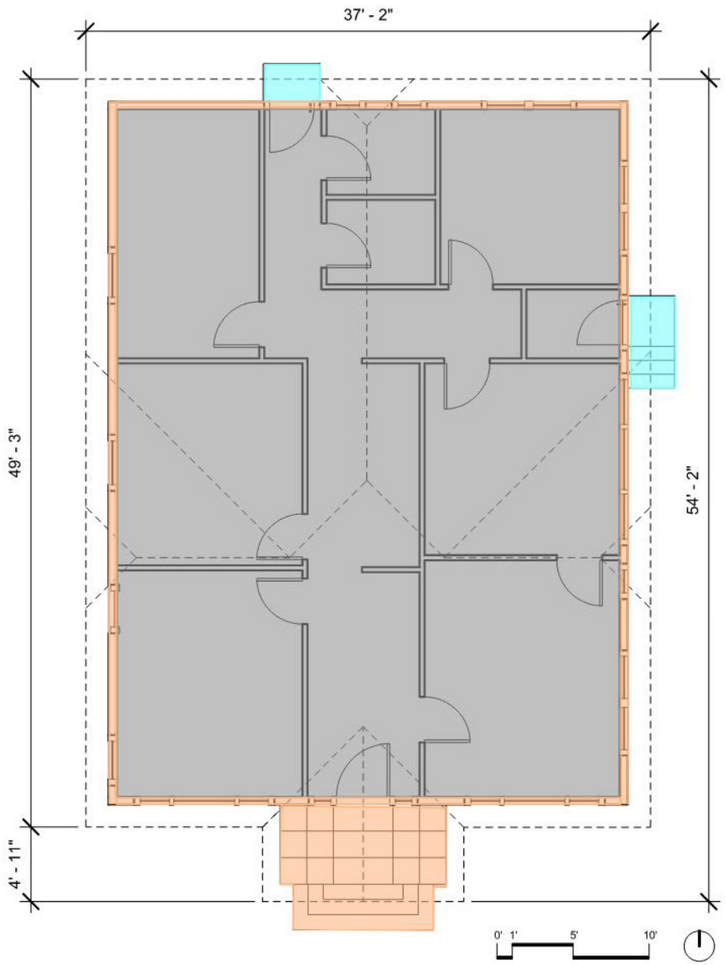


Figure 1: Bungalow 1, South Elevation

Figure 2: Bungalow 1, North-East corner

Significant Features Contributing Features Non-Contributing Features

BUNGALOW 2 – 6251 AFTON PL

Significant Features

1. Multi-gable roof.
2. Full width front porch with centered gable roof supported by Doric columns
3. Boxed eaves with cornice returns and facia board
4. Plain frieze at roofline around the building
5. Clapboard siding
6. Original wood windows, double-hung and casements

Contributing Features

7. Original multi-lite glazed, wood back door
8. Triangular attic vents with louvers
9. Raised foundation
10. Exterior landings at rear yard

Non-Contributing Features

11. Non-original handrails at front porch
12. Non-original exterior doors and windows

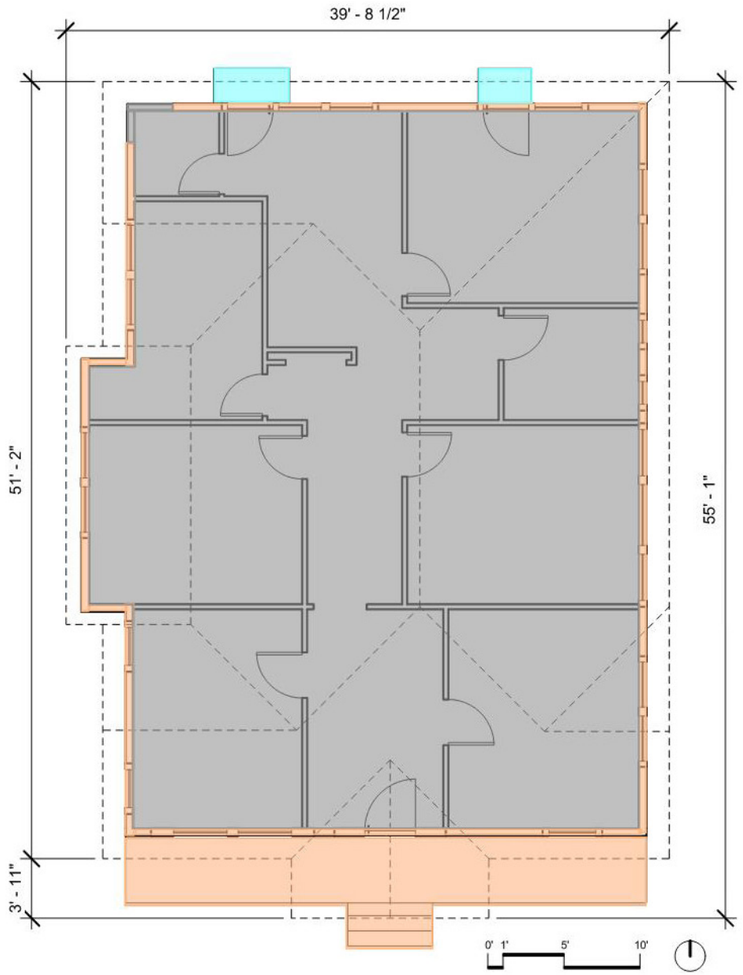


Figure 3: Bungalow 2, South Elevation.

Figure 4: Bungalow 2, North-West Elevation.

Significant Features Contributing Features Non-Contributing Features

BUNGALOW 3 – 6245 AFTON PL

Significant Features

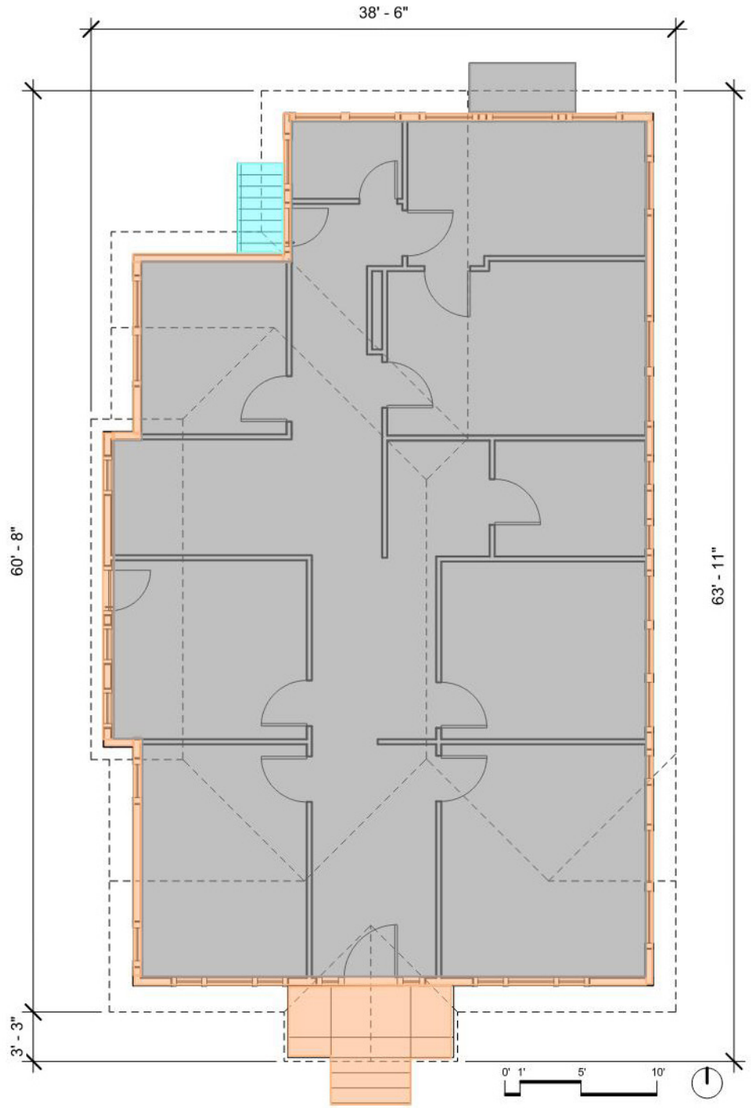
1. Multi-gable roof
2. Centered front porch with gable roof supported by Doric columns
3. Boxed eaves with cornice returns and facia board
4. Plain frieze wraps the building.
5. Clapboard siding
6. Original wood windows, double-hung and casements
7. Original multi-lite glazed, wood front door

Contributing Features

8. Raised foundation
9. Triangular and rectangular attic vents with louvers
10. Exterior landings at side yard

Non-Contributing Features

11. Non-original handrails at front porch
12. Non-original exterior doors and windows
13. Brick structure at rear yard



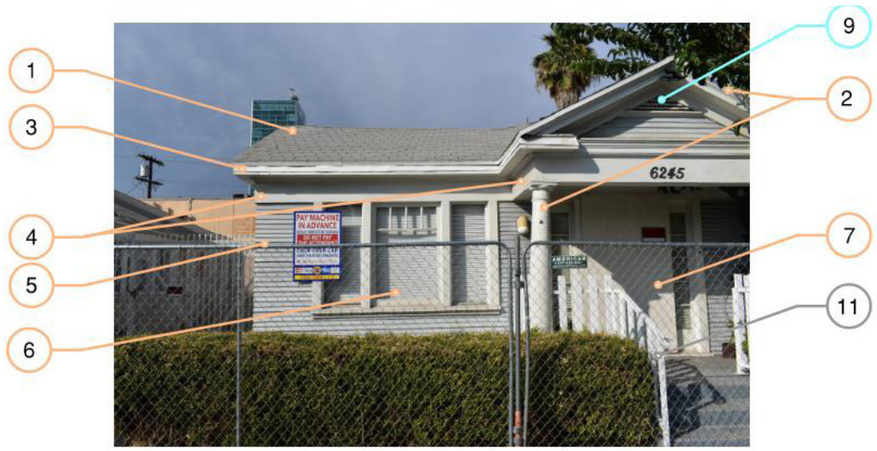


Figure 5: Bungalow 3, South Elevation

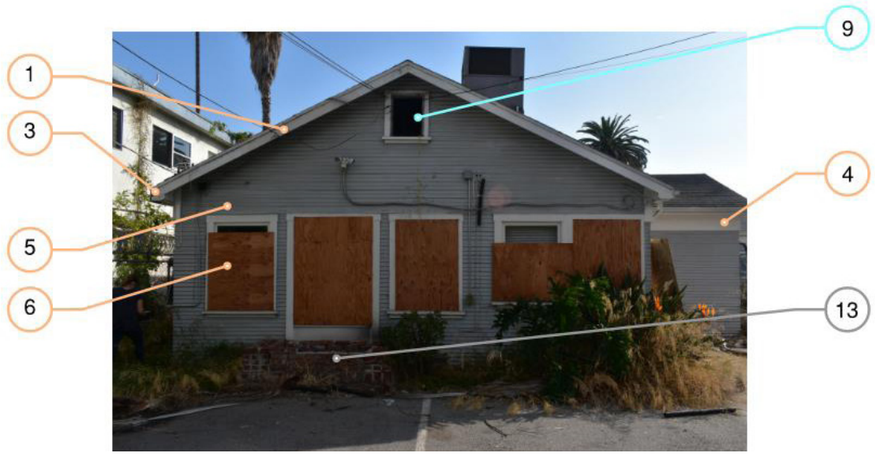


Figure 6: Bungalow 3, Norh Elevation

Significant Features Contributing Features Non-Contributing Features

BUNGALOW 4 – 6254 DE LONGPRE AVE

Significant Features

1. Multi-gable roof
2. Partial width front porch with centered gable roof supported by doric columns
3. Boxed eaves with cornice returns and facia board
4. Clapboard siding
5. Brick chimney
6. Original wood windows, double-hung and casements

Contributing Features

7. Raised foundation
8. Elliptical fanlight attic vents with louvers
9. Side porch
10. Rear stairs and landing

Non-Contributing Features

11. Non-original exterior doors and windows
12. Non-original handrails at front porch

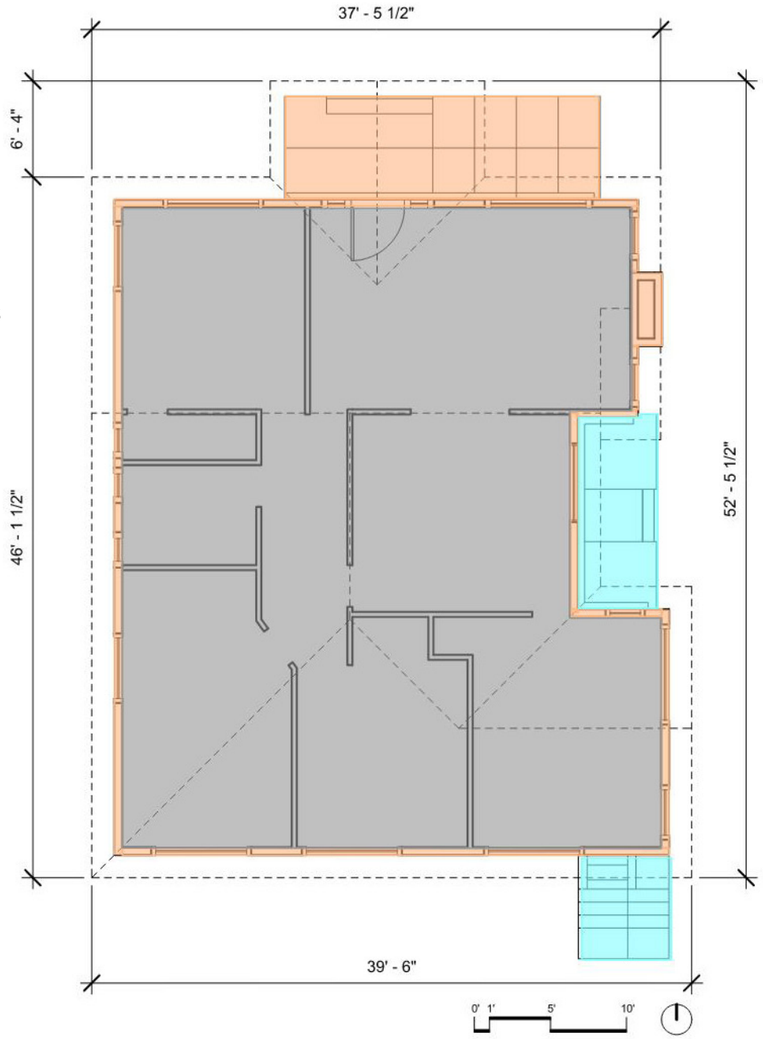


Figure 7: Bungalow 4, North Elevation

Figure 8: Bungalow 4, South Elevation

Significant Features Contributing Features Non-Contributing Features

BUNGALOW 5 – 6258 DE LONGPRE AVE

Significant Features

1. Multi-gable roof
2. Partial width front porch with centered gable roof supported by Doric columns
3. Boxed eaves with cornice returns and facia board
4. Stucco exterior finish
5. Stucco chimney
6. Original wood windows, double-hung and casements

Contributing Features

7. Elliptical fanlight attic vents with louvers
8. Side porch
9. Rear stairs and landing
10. Raised foundation

Non-Contributing Features

11. Non-original exterior doors and windows

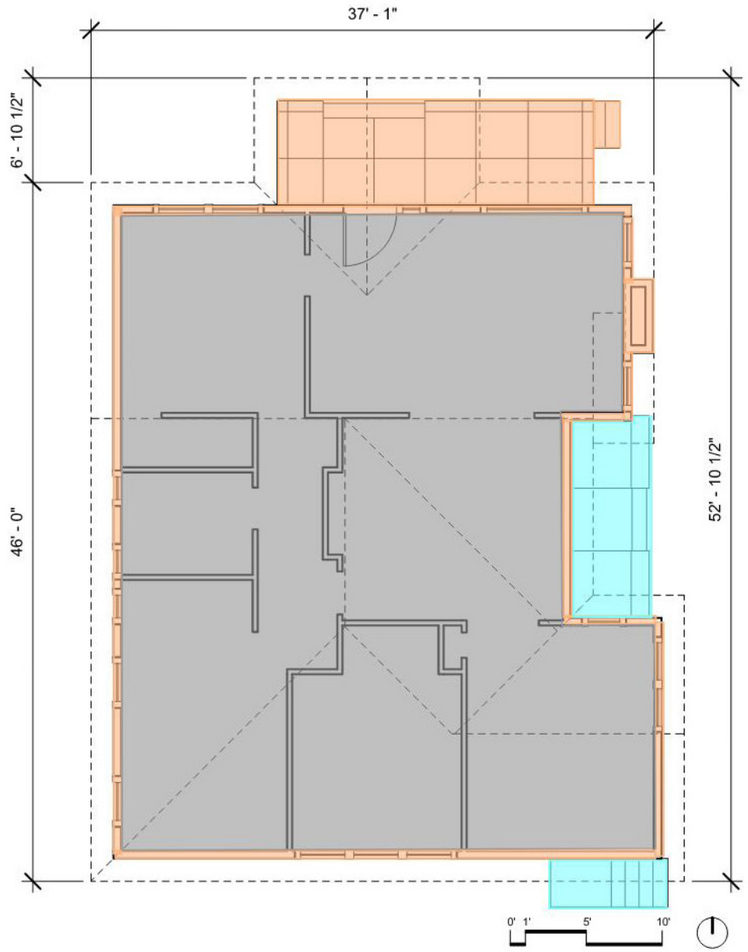


Figure 9: Bungalow 5, North ELevation

Figure 10: Bungalow 5, South Elevation

Significant Features Contributing Features Non-Contributing Features

BUNGALOW 6 – 6262 DE LONGPRE AVE

Significant Features

1. Flat roof with parapet walls
2. Partial width front porch with centered shed roof portico
3. Stucco exterior finish
4. Stucco chimney

Contributing Features

5. Rectangular attic vents with louvers
6. Side porch
7. Rear stairs and landing
8. Rear porch
9. Raised foundation

Non-Contributing Features

10. Non-original exterior doors and windows

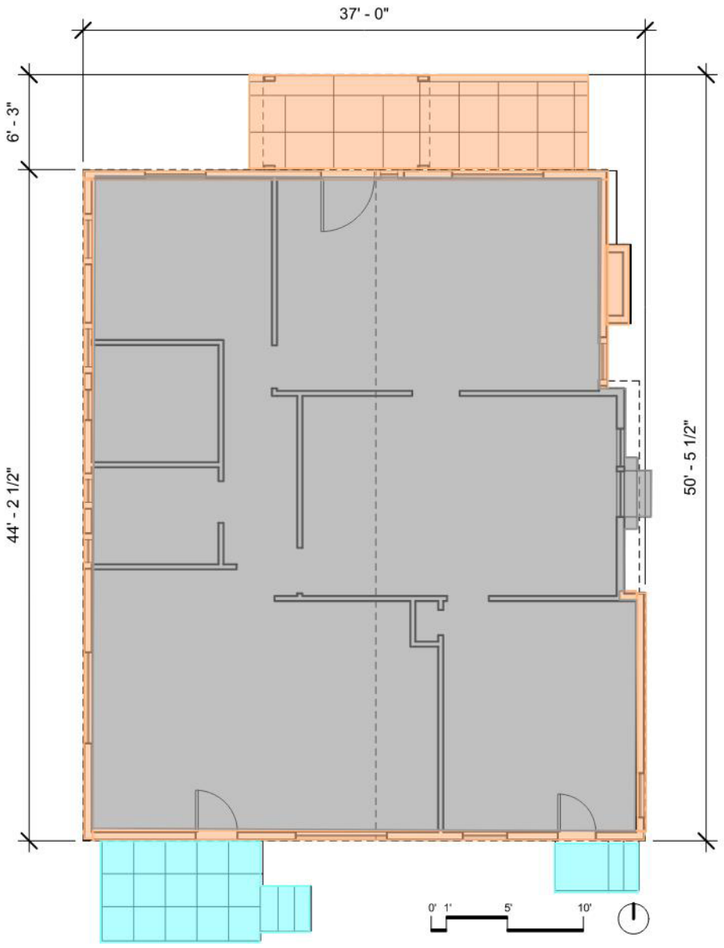


Figure 11: Bungalow 6, North-East corner and Front Porch

Figure 12: Bungalow 6, South Elevation

Significant Features Contributing Features Non-Contributing Features

EXISTING CONDITIONS

The Bungalows are one-story single-family residences built around 1919/1920 with varying styles. All six Bungalows are wood frame structures and are contributors to the Afton Square Historic District. Since the buildings are no longer in use they have been boarded up for protection against vandalism. While on site Page & Turnbull documented the existing conditions of the buildings' Character Defining Features.

CONDITION DEFINITIONS

The building elements / feature conditions are described on a good, fair, poor rating system, defined as:

Good (G)

The building element / feature is intact, structurally sound, and performing its intended purpose. The component needs no repair or rehabilitation but may need routine or preventative maintenance.

Fair (F)

The building element / feature shows signs of aging and one or more of the following conditions is present:

a) There are early signs of wear, failure, or deterioration, though the component and its features are generally structurally sound and performing their intended purpose; and/or

b) There is damage to a feature or component.

c) Needs repair or rehabilitation beyond routine or preventive maintenance.

Poor (P)

The building element / feature shows signs of deterioration and one or more the following conditions are present:

a) The feature is no longer performing its intended purpose.

b) Features are missing.

c) Deterioration or damage affects more than 25% of the element; and/or

d) The component or features show signs of imminent failure or breakdown.

Unknown (U)

The assembly or feature was not accessible for assessment or not enough information is available to make an evaluation.

BUNGALOW 1 – 6255 AFTON PL

This 1920 Colonial Revival Bungalows' Character Defining Features include the intersecting roofs with clipped gables, front porch gable roof with supporting Doric columns, boxed eaves with cornice returns, plain frieze, clapboard exterior, and original wood windows and front door. Contributing features include the attic vents, steps and landings at side yard entrances and the raised foundation. Below are the current conditions of these features as seen during Page & Turnbull's site visit.

Significant Features

1. FAIR/UNKNOWN: The roof appears to be in fair condition from the exterior; however, structural members are concealed and not accessible for evaluation. The roof covering seems to be in fair condition; however, some of the asphalt shingles are warping and lifting along the roof edges.
2. FAIR: The wood members of the front porch including the roof gable and supporting columns are in fair condition, columns are missing paint. The concrete steps and base are overall in fair condition, but the concrete base has a few cracks.
3. FAIR: Wood boxed eaves and the fascia board are in fair condition overall. However, some portions cannot be determined until the gutters are removed.
4. FAIR: Paint is cracking and peeling from the wood frieze, but the condition is fair overall.
5. FAIR: The wood clapboard siding is patched in multiple locations where windows were infilled. The seams are in poor condition, and in some locations the siding is pulling away from the building. However, the siding is in fair condition overall.

Figure 13: Visile clapboard siding seam.

Figure 14: Concrete footing w/ visible aggregate

6. FAIR: Overall, the wood window frames, casements, and sashes are in fair condition. The windows have been boarded up, and some of the glass has been broken, however the windows appear to be serviceable.

7. FAIR: The wood front door with a multi-lite panel is in fair condition.

Contributing Features

8. FAIR/UNKNOWN: The raised foundation is presumably made of wood joists and beams sitting on concrete perimeter walls and internal wood posts on concrete piers. The floor structural members are concealed and not accessible for inspection. The visible portions of the concrete foundation walls are in fair condition. The first floor elevation is set at 23" above grade at the main entrance.

9. GOOD: The attic vents appear to be in good condition from the exterior.

10. FAIR: The steps and landing at the side yard were rebuilt in wood at what appears to be the location of the original landing. The concrete landing at rear door is in fair condition.

Figure 15: Cracked concrete front porch.

BUNGALOW 2 – 6251 AFTON PL

This 1919 Colonial Revival Bungalows' Character Defining Features include the multi-gabled roof, front porch gable roof with supporting Doric columns, boxed eaves with cornice returns, plain frieze, clapboard exterior, and original wood windows. Contributing features include the attic vents, the original wood back door, exterior landings at rear entrances and the raised foundation. Below are the current conditions of these features as seen during Page & Turnbull's site visit.

Significant Features

1. FAIR/UNKNOWN: The roof appears to be in fair condition from the exterior; however, structural members are concealed and not accessible for evaluation. The roof covering is in fair condition; however, some of the asphalt shingles are warping and lifting along the roof edges.
2. FAIR: The wood members of the front porch including the roof gable, the pergola and supporting Doric columns are in fair condition. The concrete steps and base are overall in fair condition, but the concrete base has a few cracks.
3. FAIR: Damage to the fascia boards beyond the gutters is visible, but the full extent of the damage cannot be determined until the gutters are removed. Wood boxed eaves are in fair condition overall. However, some portions cannot be assessed until the gutters are removed.
4. FAIR: Paint is bubbling and starting to peel in some locations on the wood frieze. Where the top of the frieze is exposed to the weather (at the gable ends) there is more damage.

Figure 16: Damaged cornice return and plain frieze.

Figure 17: Damaged clapboard siding.

5. FAIR: The wood clapboard siding is patched in multiple locations where windows were infilled, the seams are in poor condition, and in some locations the siding is pulling away from the building. However, the siding is in fair condition overall.
6. FAIR: Overall, the wood window frames, trim, and sash are in fair condition. The windows have been boarded up, and some of the glass has been broken, however the windows are serviceable. Some exterior? wood shutters have been added to the windows and doors. On the northwest corner of the house, glass block was added to create a window in the bathroom. This block is non-original.

Contributing Features

7. FAIR: The wood back door with a multi-lite panel is in fair condition.
8. FAIR: The attic vents appear to be in fair condition. However, further investigation will be needed to determine the condition of the louvers behind the screens.
9. FAIR/UNKNOWN: The raised foundation is presumably constructed of wood joists and beams sitting on concrete perimeter walls and internal wood posts on concrete piers. The floor structural members are concealed and not accessible for evaluation. The visible portions of the concrete foundation walls seem in fair condition. The first floor elevation is set at about 20” above grade at the main entrance.
10. FAIR: The concrete landings at rear doors are in fair condition.

Figure 18: Original wood windows.

BUNGALOW 3 – 6245 AFTON PL

This 1919/1921 Colonial Revival Bungalows' Character Defining Features include the multi-gabled roof, front porch gable roof with supporting Doric columns, boxed eaves with cornice returns, plain frieze, clapboard exterior, and original wood windows and front door. Contributing features include the attic vents, the exterior landing at side entrance and the raised foundation. Below are the current conditions of these features as seen during Page & Turnbull's site visit.

Significant Features

1. FAIR/UNKNOWN: The roof appears to be in fair condition from the exterior; however, structural members are concealed and not accessible for evaluation. The roof covering is in fair condition; however, some of the asphalt shingles are warping and lifting along the roof edges. There is a portion of flat roof on the west elevation with exposed rafter tails below the roof along with more decorative rafter tails farther down. Note the flat roof does not have a plain frieze.
2. FAIR: The wood members of the front porch including the roof gable and supporting Doric columns are in fair condition, both columns have peeling paint. The concrete steps and base are overall in fair condition, but the concrete base has a few cracks probably caused by settlement.
3. FAIR: The wood boxed eaves and the fascia board are in fair condition overall, except for the east elevation where there is damage to the facia board. The north elevation does not have cornice returns.
4. FAIR: Paint is bubbling and starting to peel in some locations of the wood frieze, but the condition is fair overall. Where the top of the frieze is exposed to the weather (at the gable ends) there is more damage. The frieze does not occur on the rear gable.

Figure 19: Original wood window, missing trim.

Figure 20: Remains of original brick chimney.

5. FAIR: The wood clapboard siding is patched in multiple locations where windows were infilled, the seams are in poor condition, and in some locations the siding is pulling away from the building. However, the siding is in fair condition overall.

6. FAIR: Overall, the wood window frames, casements, and sashes are in fair condition. The windows have been boarded up, and some of the glass has been broken, however the windows appear to be serviceable. The casement windows which are part of the tripartite windows on the south façade to the west of the door have been replaced with fixed aluminum windows, aluminum sliders have been added to the west façade in existing openings, and a fixed window was placed on the north facade where there are remnants from a chimney.

7. FAIR: The wood front door with a multi-lite panel is in fair condition.

Contributing Features

8. FAIR/UNKNOWN: The raised foundation is presumably made of wood joists and beams sitting on concrete perimeter walls and internal wood posts on concrete piers. The floor structural members are concealed and not accessible for evaluation. The visible portions of the concrete foundation walls are in fair condition. The first floor elevation is set at 18” above grade at the main entrance.

9. FAIR: There are two types of attic vents – triangular and rectangular. The attic vents appear to be in fair condition overall. However, one of the triangular vents is infilled and the louvers from the rectangular vent are missing.

10. FAIR: The concrete landings at side doors are in fair condition.

Figure 21: Vegetation attaching to building.

BUNGALOW 4 – 6254 DE LONGPRE AVE

This 1919 Colonial Revival Bungalows' Character Defining Features include the multi-gabled roof, front porch gable roof with supporting Doric columns, boxed eaves with cornice returns, clapboard exterior, brick chimney, and original wood windows. Contributing features include attic vents, additional porches, and the raised foundation. The interior walls have been stripped down to the studs. Below are the current conditions of these features as seen during Page & Turnbull's site visit.

Significant Features

1. POOR: Some of the roof wood members appear to be in poor condition. The roof covering is in poor condition: some of the asphalt shingles are lifting or missing.
2. POOR: The wood members of the front porch are in poor condition. The bases of the Doric columns are damaged, and the seams of the columns are beginning to show where the paint is cracking, the plain frieze along the base of the gable roof has cracking and peeling paint and portions of the cornice are rotten. The brick base and the concrete cap on top are also in poor condition. Chunks of concrete are missing, the bricks on the northeast corner have gone missing and/or are no longer attached, the base needs repointing and the concrete cap is bowing which indicates issues occurring at the base.
3. POOR: Wood boxed eaves and cornice returns are in poor condition and are falling off, missing, or beginning to rot. The poor condition of the boxed eaves has caused damage to the rafter tails that are now exposed to the elements.
4. POOR: The wood clapboard siding has been patched where window and door openings have been infilled. The siding is in poor condition with missing boards, boards splitting, and holes in the wall.

Figure 22: Damaged front porch.

Figure 23: Damaged boxed eaves.

5. FAIR: The brick chimney is overall in fair condition. Where the chimney narrows there is a brick detail that would need to be replicated. The top of the chimney has been truncated and does not have sufficient height above the roof to meet current code. The repointing towards the top of the chimney was not well executed.

6. POOR: The majority of the wood windows have been damaged or replaced with aluminum sliders. Overall, the original wood window frames, casements, and sashes are in poor condition with several pieces broken or showing sign of deterioration. A wood windowsill on the west elevation is detaching from the window. None of the windows have glass, and all have been boarded up.

Contributing Features

7. POOR/FAIR: The raised foundation is made of wood joists and beams sitting on concrete perimeter walls and internal wood posts on concrete piers. Some of the structural members appear to be in poor condition. The visible portions of the concrete foundation walls seem in fair condition; however, some cracks are visible. The first floor elevation is set at 14” above grade at main entrance.

8. FAIR: Wood elliptical attic vents are overall in fair condition. One vent is missing the louvers.

9. POOR: Overall, the side porch is in poor condition. The concrete on the south side of the porch is cracked and chipped, the brick base is chipped and needs repointing, the siding is different from the siding around the house, roof is falling in.

10. POOR: The rear concrete landing and stairs are in poor condition with a piece of concrete missing from the top riser. The top landing has score lines creating a pattern on the side of the concrete. The stairs and landing were painted gray at one point, but now the paint is peeling off.

Figure 24: Roof collapsing over side porch.

BUNGALOW 5 – 6258 DE LONGPRE AVE

This 1919 Colonial Revival Bungalows' Character Defining Features include the multi-gabled roof, front porch gable roof with supporting Doric columns, boxed eaves with cornice returns, exterior stucco, stucco chimney, and original wood windows. Contributing features include the attic vents, additional porches, and the raised foundation. The interior of the house has been stripped down to the studs. Below are the current conditions of these features as seen during Page & Turnbull's site visit.

Significant Features

1. POOR: Some of the roof wood members are in poor condition. The roof covering is in poor condition: some of the asphalt shingles are lifting or missing.
2. POOR: The wood members of the front porch are in poor condition. The bases of the Doric columns are cracked and missing sections, the seams of the columns are beginning to show where the paint is cracking; the paint at the frieze, eaves and cornices is cracking and peeling, and in general exposed portions of wood are showing sign of deterioration. The porch base appears overall in poor condition. The concrete top (What is this? Landing? Use an architectural term) is bowing which may indicate issues occurring at the base, and some portions are chipped and cracked. Stairs were added along the east elevation but differ in color from the porch.
3. POOR: Wood boxed eaves with cornice returns are in poor condition and are falling off, missing, or beginning to rot. The poor condition of the boxed eaves has caused damage to the rafter tails that are now exposed to the elements.
4. POOR: There are holes in the stucco walls. Window and door openings have been infilled, which is visible in the cracking and patchwork of the stucco.

Figure 25: Damaged column base.

Figure 26: Missing fascia board on boxed eaves.

5. FAIR: The stucco chimney appears overall in fair condition. Where the chimney narrows there is a stucco detail mimicking Bungalows 4's brick chimney that would need to be replicated. The top of the chimney has been truncated and does not pass the roof enough to meet current code. There is cracking in the stucco at the top of the chimney and on the face of the chimney.
6. POOR: Overall, the original wood window frames, casements, and sashes are in poor condition with several pieces broken or showing sign of deterioration. Some of the wood windows have been removed and infilled.

Contributing Features

7. FAIR: Wood elliptical attic vents are overall in fair condition. The paint is cracking, and some louvers are crooked.
8. POOR: The side porch is in poor condition. The concrete top is heavily cracked and bowed. The bottom stair is completely missing. There is no roof covering the side porch. The doors leading out to the porch have been infilled.
9. FAIR: The rear concrete landing and stairs are in fair condition. The sides of the stairs are covered in stucco to match the house, while the top remains unpainted concrete. The landing has a concrete cap to match the front porch.
10. POOR/FAIR: The raised foundation is made of wood joists and beams sitting on concrete perimeter walls and internal wood posts on concrete piers. Some of the structural members appear to be in poor condition. The visible portions of the concrete foundation walls are in fair condition; however, some cracks are visible. The first floor elevation is 14" above grade at the main entrance.

Figure 27: Holes in exterior stucco.

BUNGALOW 6 – 6262 DE LONGPRE AVE

This 1920 Spanish Colonial Revival Bungalows' Character Defining Features include a flat roof with a parapet, front porch with a shed roof enclosure and arched openings, exterior stucco, stucco chimney, and original wood windows. Contributing features include attic vents, additional porches, and the raised foundation. The interior walls of the house have been stripped down to the studs. Below are the current conditions of these features as seen during Page & Turnbull's site visit.

Significant Features

1. POOR: Some of the roof wood members appear to be in poor condition. The top of the parapet appears to be in poor condition with terracotta tiles missing or broken.
2. POOR/UNKNOWN: Plants around the porch are overgrown and prevented full inspection of the exterior. However, some visible portions of the stucco are cracking and some portions have spalled off, leaving the wood members exposed.
3. POOR: The building has plants attached and growing on the stucco. The visible portion of the stucco is overall in poor condition. Infilled window and door openings are visible in the cracking and patchwork of the stucco. The vegetation will need to be removed from the stucco for further investigation of existing conditions.
4. UNKNOWN: Plants around the chimney are overgrown, which prevented inspection of the chimney area.

Figure 28: Vegetation over stucco.

Figure 29: Altered opening.

Contributing Features

5. POOR: Wood attic vents are in poor condition; they are located along the south elevation and are rectangular with wood louvers. The wood trim and the louvers are heavily weathered and deteriorating.
6. POOR/UNKNOWN: The original side porch was enclosed by an addition. The stucco base with concrete cap from the original porch is still visible. The addition would need to be removed to determine its condition.
7. POOR: The rear concrete landing and stairs are in poor condition. The concrete base is severely cracked on the southwest corner, resulting in the stucco cracking and detaching.
8. FAIR/UNKNOWN: Visible portions of rear porch are in fair condition.
9. POOR: The raised foundation is made of wood joists and beams sitting on concrete perimeter walls and internal wood posts on concrete piers. Some of the structural members appear to be in poor condition. The concrete foundation wall is not visible from the exterior. The first floor elevation above grade at the main entrance cannot be determined because of vegetation overgrowth.

Figure 30: Infilled side porch.

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RELOCATION CRITERIA

This chapter defines a moving plan and analyzes the different factors influencing the relocation process including route restrictions, a building relocation plan, structural considerations, and protective measures during the storage phase.

ROUTE ANALYSIS

Site Locations

The Bungalows will be relocated from their original sites to a temporary storage site, which may be located at 947 N. Orange Dr. This route is approximately 1.5 miles long without significant slopes. The storage site on Orange Dr. was used to demonstrate the issues and requirements for this report. It is possible at the time of the temporary relocation another storage site with similar characteristics would be used.

The original sites are accessed from De Longpre Ave. and Afton Pl., while the storage site is accessed via Sycamore Ave. These three streets are approximately 30’-0” wide. Roads along the route include Vine St. and Santa Monica Blvd., both of which are wider and allow for the required 90 degree turning radius.

Route Restrictions

After a preliminary analysis of the relocation route, the main restrictions seem to be:

- 30’ road width at De Longpre Ave., Afton Pl., and Sycamore Ave.

This restriction will cause the Bungalows to be divided into pieces with a width not exceeding the width of the road.

- Presence of cross wires, especially along Santa Monica Blvd. and Sycamore Ave. that would interfere with the overall height of the Bungalows while being relocated.

This restriction will require the roofs of the Bungalows to be disconnected.

BUILDING RELOCATION PLAN

Strategy for Meeting Route Restrictions:

1. Disconnect Front Porches
    - Document original porch with drawings and photos.
    - Detach porch portico.

- Salvage and safely store porch components.
- Reinstall porch portico upon return of Bungalows to the project site.
- Repair all parts as necessary.

2. Roof / Sheath Ceilings
    - Remove tiles and planks; salvage and store any material that could be re-used
    - Document roof beam locations with drawings and pictures
    - Detach roof beams.Provide sheathing at ceiling joists to provide bracing of walls during relocation.
    - Replace in kind any deteriorated ceiling joists prior to sheathing; sheathing will also serve as protective covering from weather and vandalism at storage site.
    - Rebuild roof per original layout and per structural engineer's drawings upon return of Bungalows to the project site.
    - Install roof planks and tiles consistent with their original appearance.

Figure 31: House relocation showing stabilization wall for moving

3. Cut Bungalows in 2 pieces lengthwise. (See following diagrams for the proposed work for relocation to the temporary storage site.)
    - Avoid cutting character defining features to the extent feasible.
    - Document, remove, and safely store character defining feature when encroaching with cut lines.
    - Construct structural support made of wood framed walls and sheathing along division cuts.
    - Install plywood sheathing at large openings and at walls for lateral support, as determined by a structural engineer.
    - Steel beams will be used to support Bungalow floors during the moving and storage phases.
    - Reconnect walls and structural elements per the original layout and per the structural engineer's drawings upon return of Bungalows to the project site.
    - Reinstall character defining features that were removed.
    - Repair as necessary all elements that were affected by the relocation procedure.

STRUCTURAL CONSIDERATIONS

Structural requirements for stabilizing the Bungalow structures during the disassembly and storage phase

To facilitate relocation to the storage site, the pitched roofs of five Bungalows will be temporarily removed and all six Bungalow structures will be divided lengthwise in two pieces. In order to implement the relocation procedure, it will be necessary to apply a few measures to stabilize the structures so that they can withstand the relocation process.

Stabilization measures include:

1. Ceiling joist sheathing.

    Since the roof framing members will be removed and temporarily stored, the ceiling joists will need to be sheathed before the move to provide bracing during the move. Deteriorated ceiling joists will need to be replaced in kind prior to sheathing.

2. Cut lines support.

    The lengthwise division of the structures will create large openings that will need to be supported and braced by constructing wood framed and sheathed walls along the cut lines. For this purpose, existing interior sheathed walls may be used where approved by a

structural engineer.

3. Existing wall sheathing.

   All interior and exterior walls will need to be braced and sheathed prior to the lift and for the whole duration of the relocation process.

4. Building element protection.

   All interior and exterior elements of the building will need to be secured and protected prior to the lift and for the whole duration of the relocation process.

5. Floor framing support.

   A system of steel beams will need to be planned to support and lift the structures.

6. Temporary foundation.

   The steel beams will be placed on wood cribbing at the storage site to create a temporary foundation.

7. Retrofit plan

   Upon return to the project site, Bungalows will be retrofitted per structural engineer's recommendations.

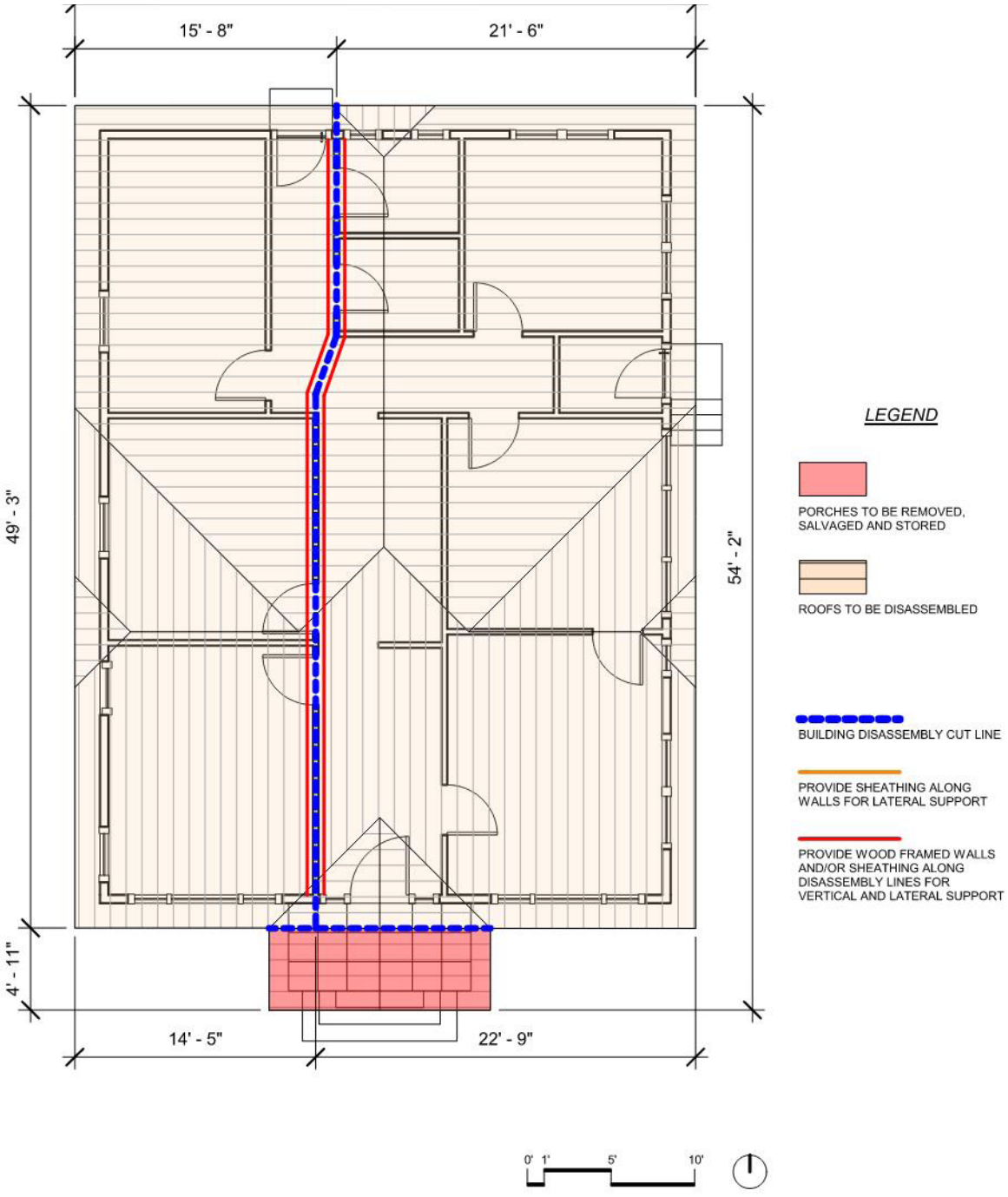
PROTECTIVE MEASURES

Stabilization

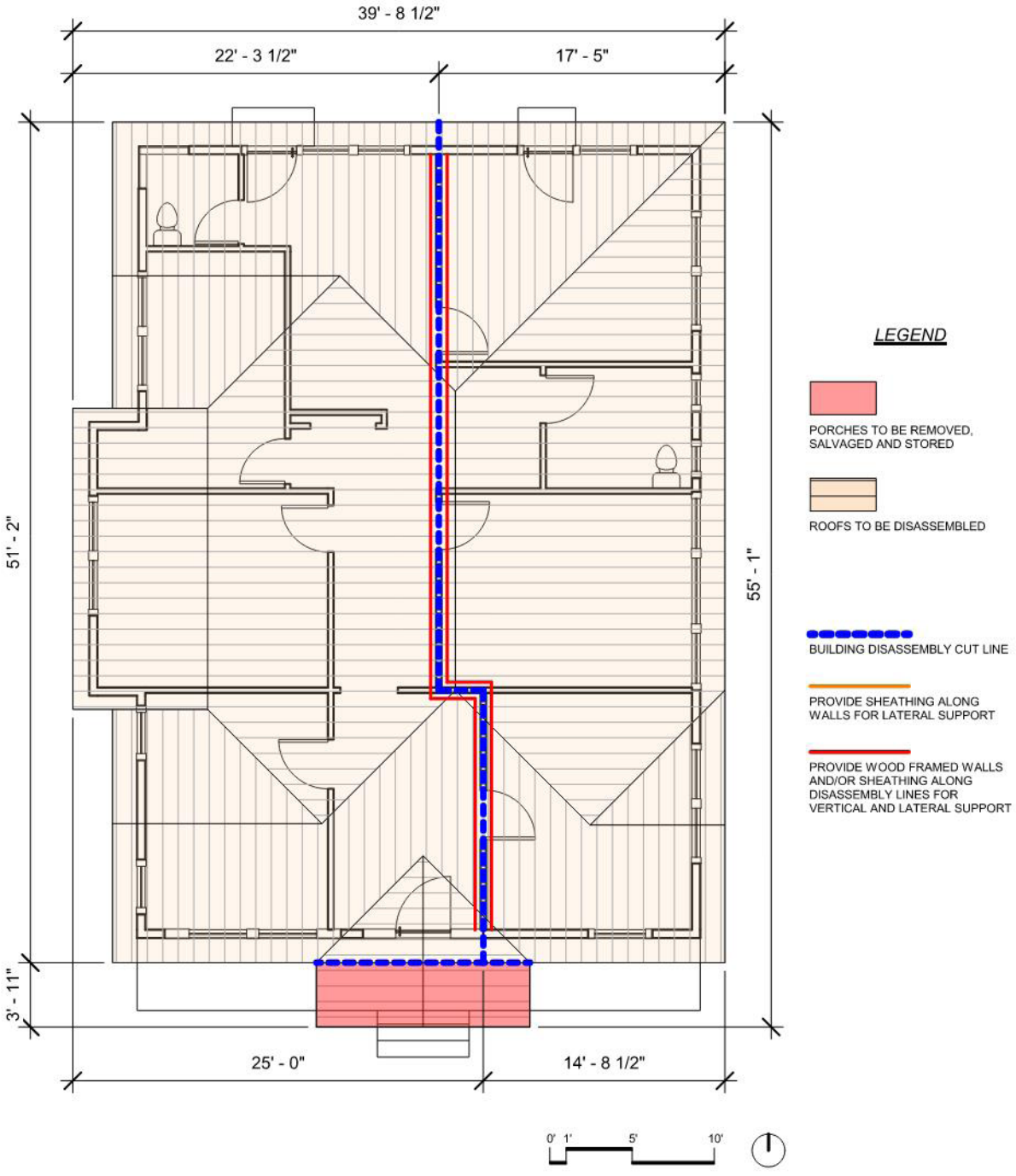
Along with structural stabilization, the Bungalows must be protected against weather and vandalism on the storage site. Protection measures include:

- Securing access to Bungalows.
- Installing security fence around the storage lot.
- Installing plywood panels over doors and windows (screw in place avoiding direct contact on existing structure).
- Shrink-wrapping bungalows during storage phase.
- Inspect for pests and exterminate/control if necessary.
- Inspect and regularly monitor the structures.

BUNGALOW 1 – 6255 AFTON PL



BUNGALOW 2 – 6251 AFTON PL



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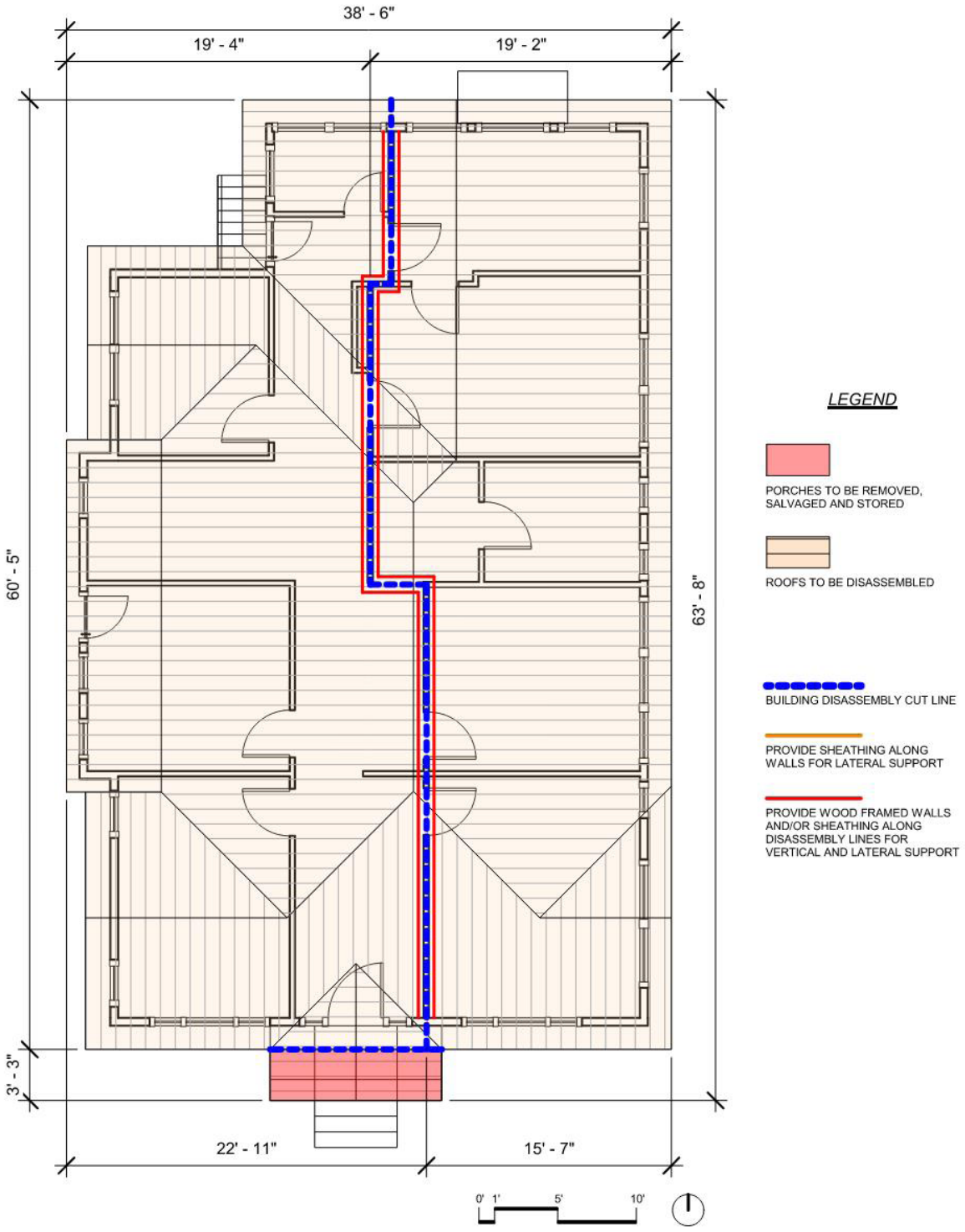
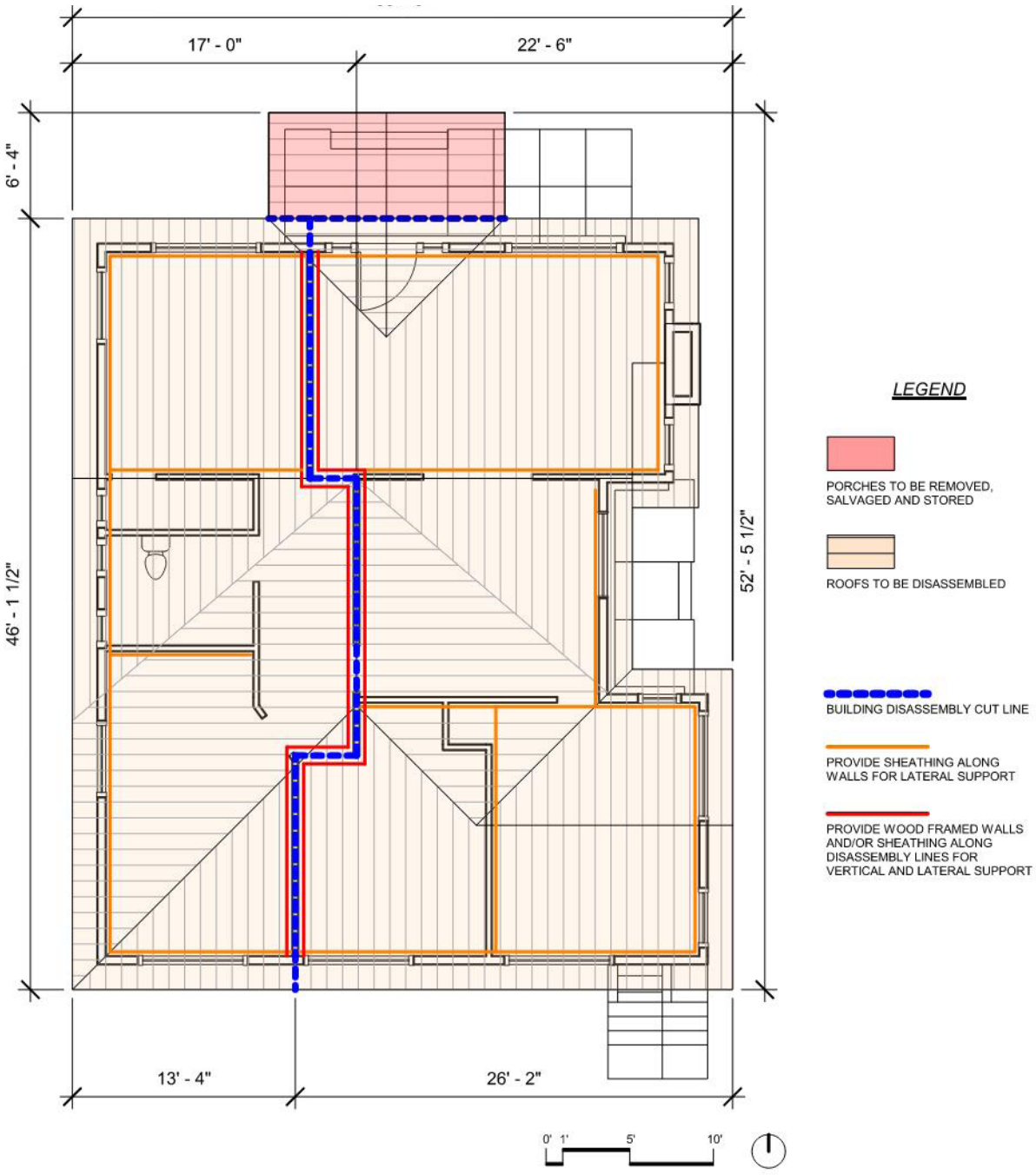


BUNGALOW 4 – 6254 DE LONGPRE AVE



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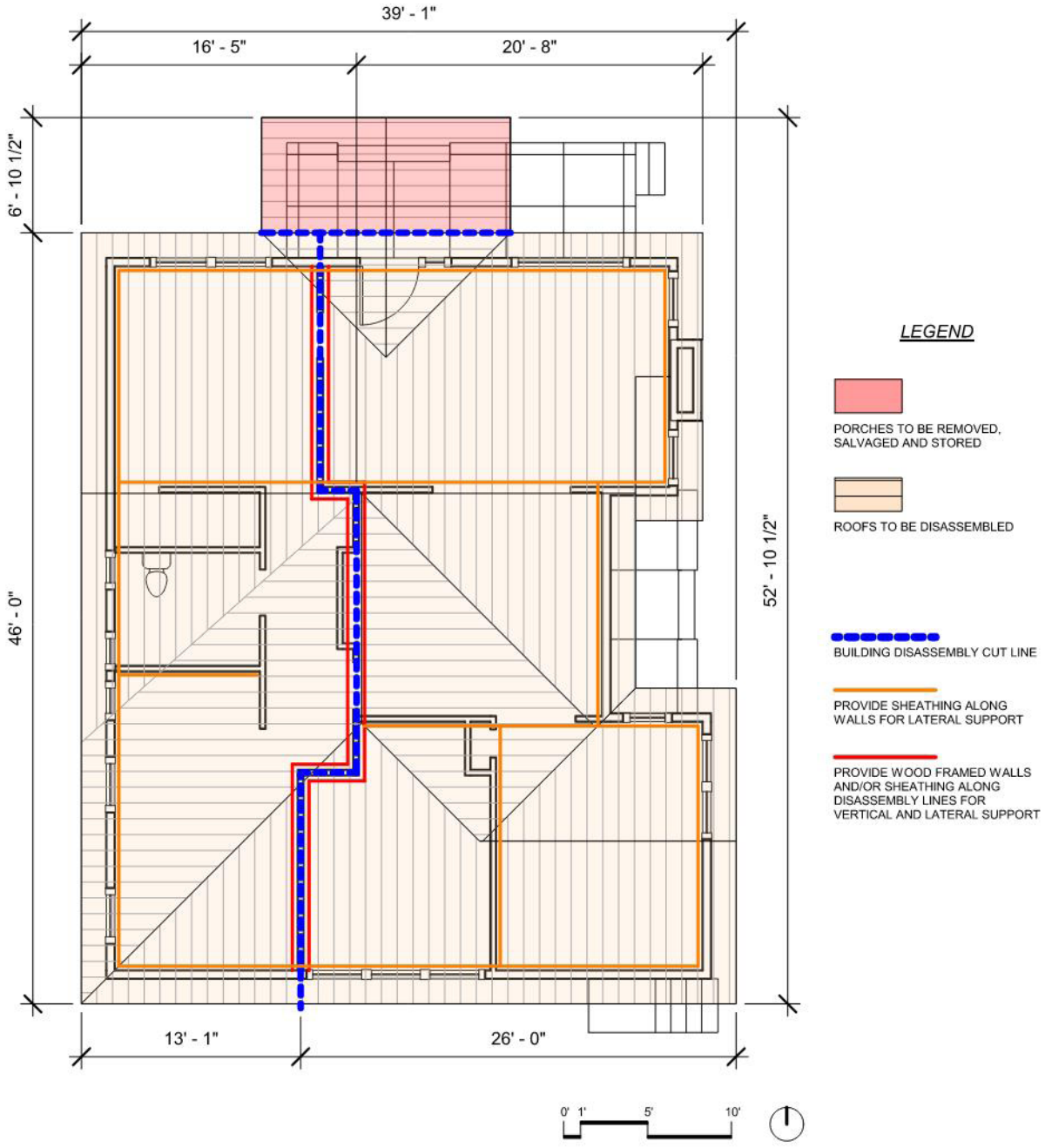

BUNGALOW 6 – 6262 DE LONGPRE AVE

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REHABILITATION MEASURES

This chapter lists key aspects of rehabilitation work that would likely be required for permanent location and use at the project site

Structural Retrofit

Upon return to the project site, the Bungalows will be retrofitted per a structural engineer's recommendations, including:

- New foundations and cripple walls. Structures will be reinstalled above ground to match the original appearance.
- Reconnection of walls Sistering of original floor and ceiling joists as necessary
- Roof framing per original layout
- Sheathing of interior and exterior wall as necessary
- Reassembly of porch structures wood members

Structural elements will be replaced in kind if deemed structurally unsound.

Elements to be reconstructed:

The following elements would not be relocated. Rather, they will be thoroughly documented with drawings and pictures, and will be replaced in kind pursuant to the Standards:

- Chimneys and fireplace hearths
- Concrete porch bases and steps
- Concrete steps and landings at rear and side doors
- Concrete foundation walls
- Roof framing per original layout
- Character Defining Features where repair is not feasible

Elements to be reassembled:

To facilitate the move, the following elements will be temporarily removed prior to the relocation to the temporary storage site, safely stored, repaired, and reinstalled upon return of the Bungalows to the project site.

- Wood members of porch structures
- Character Defining Features along building cut lines

These elements will be thoroughly documented with drawings and pictures to assure that they will match the original appearance once reassembled. These elements will be replaced in kind when too deteriorated or structurally unsound to be salvageable.

Other work required for Reuse:

The following other key rehabilitation work will be undertaken with the Bungalows to allow reuse as part of the project.

- A new disabled access ramp will be added where required and constructed out of materials that are compatible to the Bungalows. The proposed location for a new accessible ramp would be in the side yard, connected to the front walkway and accessing the side or rear existing entrance of the Bungalow.
- Interior walls will be removed, and spaces will be reconfigured to update interior residential layouts.
- New bathrooms
- New kitchens
- New electrical system
- New plumbing system
- New HVAC
- New landscaping compatible with the character of the Bungalows and historic district
- Improvements to meet current code requirements including applicable ADA and Energy Efficiency standards while using the State Historical Building Code as feasible.

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CONCLUSION

Structural Integrity and Stabilization

The relocation of the Bungalows to a temporary storage site, and then back to the project site is feasible. Structural measures, such as the ones listed in the Relocation Criteria Chapter and in Appendix A, will need to be followed to ensure the stability of the buildings during the relocation process. A structural engineer will need to be retained to further detail a structural retrofit plan for when the Bungalows are returned to the project site.

While stored, the Bungalows will be protected against weather and vandalism with measures such as shrink-wrapping, fencing, and regular monitoring.

Historic Character

The temporary relocation would not result in a significant adverse impact on the historic character of the Bungalows. The Bungalows will be thoroughly documented before their relocation and will be rehabilitated according to the Standards upon return to the project site. Chimneys, porch bases, and steps would not be relocated and will be reconstructed to match the original features. All other character defining features will be protected, removed, and stored, and repaired as needed. Features deteriorated beyond repair will be replaced in kind.

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APPENDIX

A. REPORT OF STRUCTURAL SURVEY

REPORT OF STRUCTURAL SURVEY

1360 VINE STREET BUNGALOWS

TEMPORARY RELOCATION AND RECONSTRUCTION

Prepared for

PAGE AND TURNBULL ARCHITECTS

Prepared by

KRAKOWER & ASSOCIATES STRUCTURAL ENGINEERS

NOVEMBER 2022

Introduction

On November 9, 2022, Michael Krakower SE of Krakower & Associates reviewed architectural sheets B1 thru B6 prepared in October of 2022 by Page and Turnbull for six one story bungalows for the project noted above. Three of the bungalows are located on Delongpre Avenue and three are located on Afton Place, all in Los Angeles, CA. The purpose of the review was to provide structural input for the temporary relocation of the structures to a nearby site while a new underground parking structure is being constructed at the existing site. Nicola Gries and Lauren Postlmayr of Page and Turnbull convened a Teams meeting to review the drawings for the temporary relocation and to define the overall project objectives. A site visit to view the current as found conditions including the temporary relocation path of travel and temporary receiver site has not been performed. Computations and working drawings suitable for plan checking and permitting are not part of this phase.

Structural System

Vertical Load Carrying System

All six buildings have similar structural systems. Five of the six bungalows have pitched wood joists overlaid with sheathing boards. One bungalow has a flat roof. Ceilings are wood framed with plaster. Walls are wood framed with conventional finishes such as siding and lath and plaster. Floors are wood framed with sheathing board overlay.

Lateral Load Resisting System

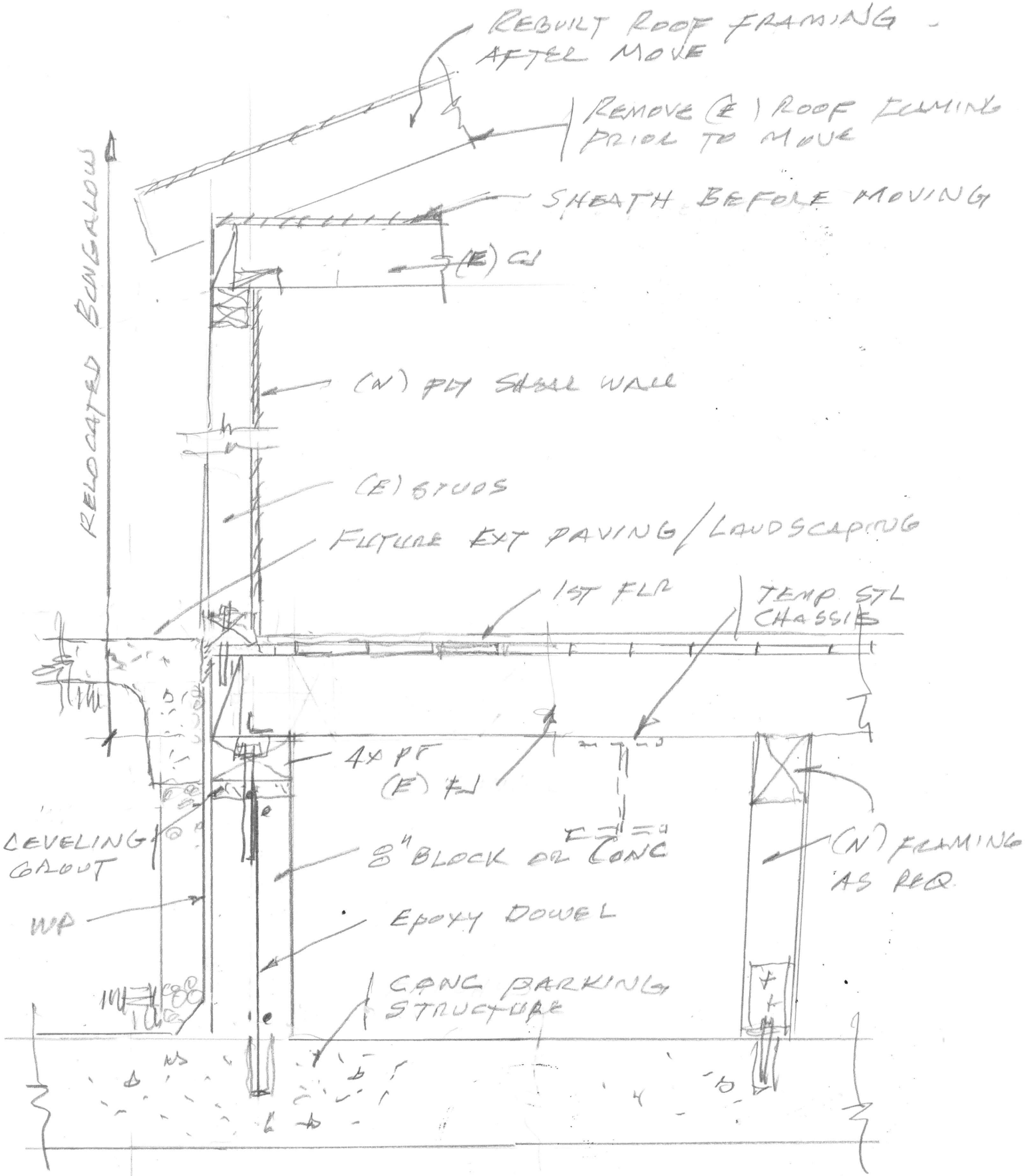
Equivalent lateral forces from earthquakes are represented as a percentage of the weight of the building. Demands from the ground motion are delivered into the building through the foundations and walls and distributed to the structural elements based upon their position and inter-connection. The capacities of the sheathing of the walls, floors and roof allow comparison to the demands and lead to evaluation of the adequacy of the existing lateral load resisting system. Buildings of this vintage typically require plywood sheathing and/or oriented strand board added over the existing roof for a diaphragm and some sheathed wall framing to create shear walls. Shear walls are anchored to foundations.

Staging, Moving and Temporary Relocation of the Existing Buildings

Relocation of the existing buildings to a temporary site is feasible. The following outline specification describes key aspects of the process.

1. Completely document the as found layout of the existing bungalows before doing any staging for the temporary relocation.
2. Determine to the fullest extent possible the location of all existing utilities including service connections within the area of the present sites, along the route of travel and at the temporary receiving site. Protect the utilities.
3. Remove the pitched roof framing of 5 bungalows as recommended by the moving contractor to clear utilities and other obstructions along the proposed route. Salvage and store any finish material that could be re-used.
4. Sheath the ceiling joists before the move to provide bracing of the walls during the move. Replace in kind any deteriorated ceiling joists prior to sheathing. The sheathing will also serve as a protective covering from weather and vandalism at the temporary site.
5. The moving contractor has identified the need to cut each bungalow into 2 narrower sections to fit the width of the path of travel. The moving contractor shall submit a shoring and staging and transport plan for each bungalow prior to the moving operation including, but not limited to, steel framed support chassis and dolly layout under the floor framing, bracing of the walls and bracing of the open fronts created by the cutting of the buildings
6. Brace and protect all interior and exterior elements of the building as required prior to the lift, during the lift, during transport and during final positioning at the temporary site. Record the weight of each lifted bungalow section.
7. Appendages such as porches, fire places, chimneys and access stairs are commonly documented for record, but not transported. They are re-built at the final site.
8. Place the steel chassis on wood cribbing at the temporary site. Provide protective fencing and security around the bungalows at the temporary site. Consider installing protective tarp or similar weather protection over the bungalows.

9. After the parking structure is completed reverse the above steps to transport the bungalows back to the original site.
10. Move the bungalow sections on their steel chassis onto the finished parking garage slab above their final location and place on temporary wood cribbing. Construct new reinforced concrete block or cast in place concrete stem walls up to the underside of the bungalow framing. Do not construct the stem walls before the bungalows are moved into final position. Provide sufficient space between the bottom of the bungalow framing and top of concrete slab for access during re-connection of the bungalows to the stem walls and for future service requirements. The stem walls should be started by doweling into the top of the parking structure slab with epoxy anchors. Use post drilled anchors to attach the bungalow wall sill plates and framing to the top of the stem walls. See attached schematic detail.
11. Complete re-attachment of the cut sections back together along with the rest of the framing and appendages
12. Refer to LADBS Document P/BC 2014-099, “Relocation of Buildings” for other requirements.



SCHEMATIC SECTION

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