

HOME, SAFE HOME.

SEISMIC SAFETY & REHABILITATING HISTORIC HOMES

Six webinars. A team of preservation professionals. One goal.

Welcome.

Julianne Polanco

State Historic Preservation Officer
California Office of Historic Preservation



Office of Historic
Preservation



HOME, SAFE HOME.

SEISMIC SAFETY & REHABILITATING HISTORIC HOMES

Six webinars. A team of preservation professionals. One goal.

The Nuts and Bolts of Retrofits

Workshop #6 | December 15, 2022

Presented by

John Lesak, AIA, FAPT, Principal, Page & Turnbull

Mel Green SE, Structural Engineer/Historic Preservation, Melvyn Green & Associates, Inc.

Sarah Brummett, Assoc. AIA, Senior Associate, Page & Turnbull



HOME, SAFE HOME.

SEISMIC SAFETY & REHABILITATING HISTORIC HOMES

Workshop #1: What Makes My Home 'Historic'? | Thursday, June 23, 2022

Workshop #2: Is 'Compatible' 'Matchy-Matchy'? | Tuesday, July 26, 2022

Workshop #3: Seismic Retrofit Basics | Tuesday, August 30, 2022

Workshop #4: Retrofit Projects | Thursday, October 6, 2022

Workshop #5: Keep it Lookin' Great | Tuesday, November 8, 2022

Workshop #6: The Nuts and Bolts of Retrofits | Thursday, December 15, 2022

Program offered by:



Office of Historic
Preservation

Grant funding from:



FEMA

Presented by:



PAGE & TURNBULL



WORKSHOP #6 OBJECTIVES

Empowered by knowledge of what makes your home historic and the basics of retrofits and maintenance, you are ready to begin your retrofit project. In this session you will learn:

- How to apply the 'lessons learned' from case studies to your retrofit project
- How to select, budget for, and work with qualified architects, engineers, consultants, and contractors
- How to navigate local permitting and approval processes, as not all municipalities are the same



Agenda

1. Workshop #5 Recap
2. Case Studies
 - A. Wood-Framed
 - B. Adobe/Masonry
 - C. Mid-Century
3. Selecting & Working with Qualified Professionals
4. Local Permitting & Approval Processes
5. Summary & Questions
6. Series Summary



In what region do you live?

Did you attend Workshop #5 or any of the prior workshops?



In what capacity are you interested in this topic?
As a(n)...?



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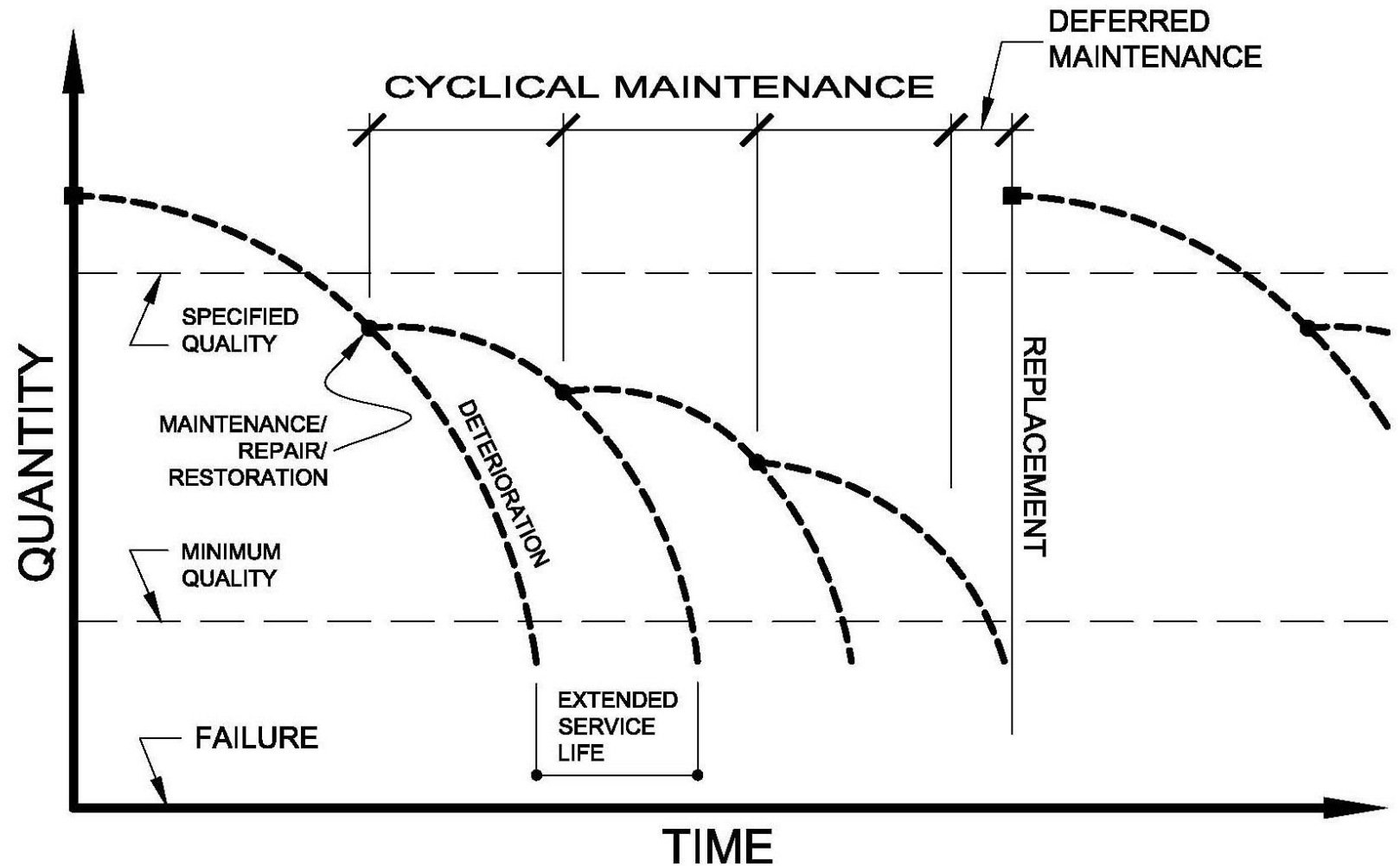
Workshop #5 Recap

1. Maintenance helps preserve the integrity of your home
2. Maintenance reduces the need for more costly repairs and replacement
3. The climate, aspect, and features of a property impact the cyclical maintenance concerns
4. Prioritize work for greatest impact, and plan long-term if possible
5. Financing & Funding Tools and Resources are available to assist



Why Maintain?

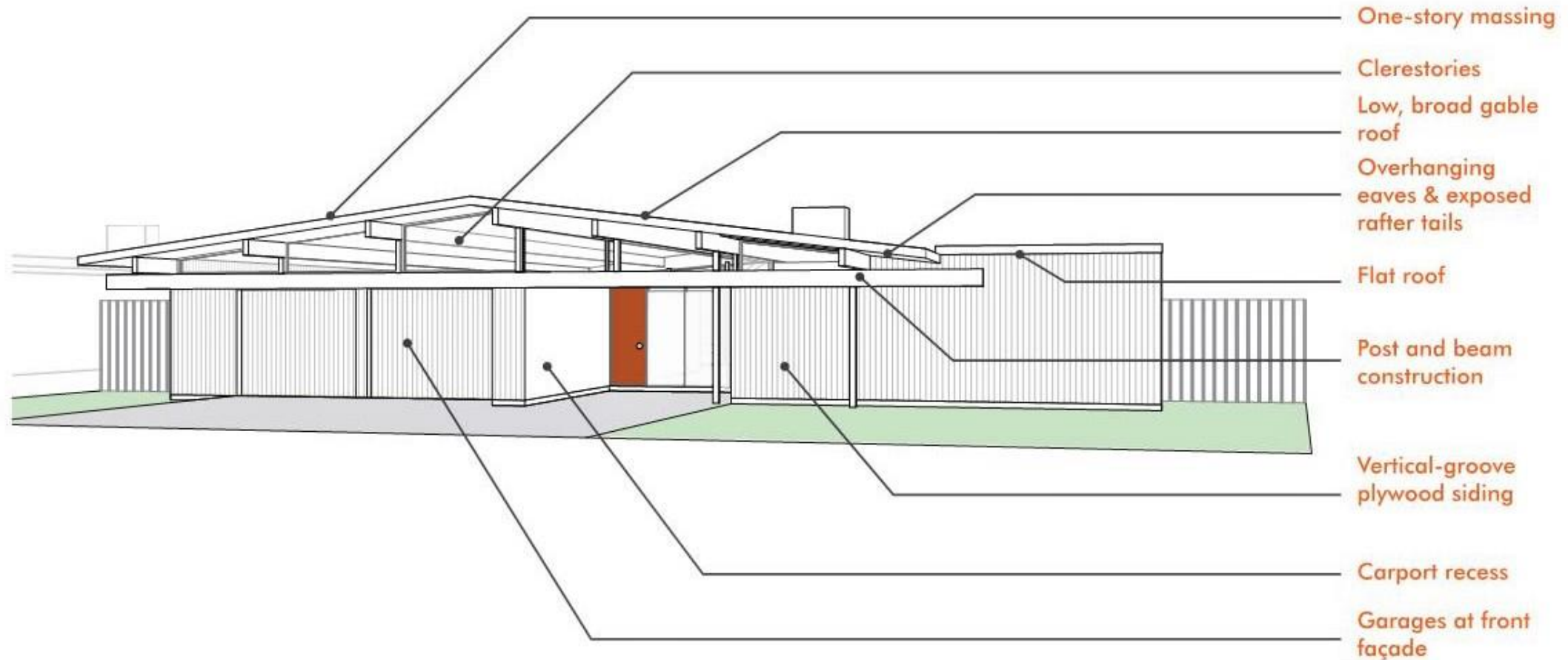
- Safety
- Higher Re-Sale Value
- Spend less on repairs
- Curb Appeal



Adapted from *Enclosure Durability* by Ted Kesik Architectural Science Forum September 2002
http://www.cdnarchitect.com/asf/enclosure_durability/index.htm

What to Preserve | Character-Defining Features

The elements or architectural components which establish the visual character of your home. They are the physical parts of both the exterior and interior that should be [retained and preserved](#).



Integrity & Maintenance

Integrity is judged by whether the significant features of the property are present, and whether the property retains the identity for which it is significant. Historic integrity is composed of seven qualities.

- 1. Materials**
- 2. Design**
- 3. Feeling**
4. Location
5. Association
- 6. Workmanship**
7. Setting

Important Note About Integrity



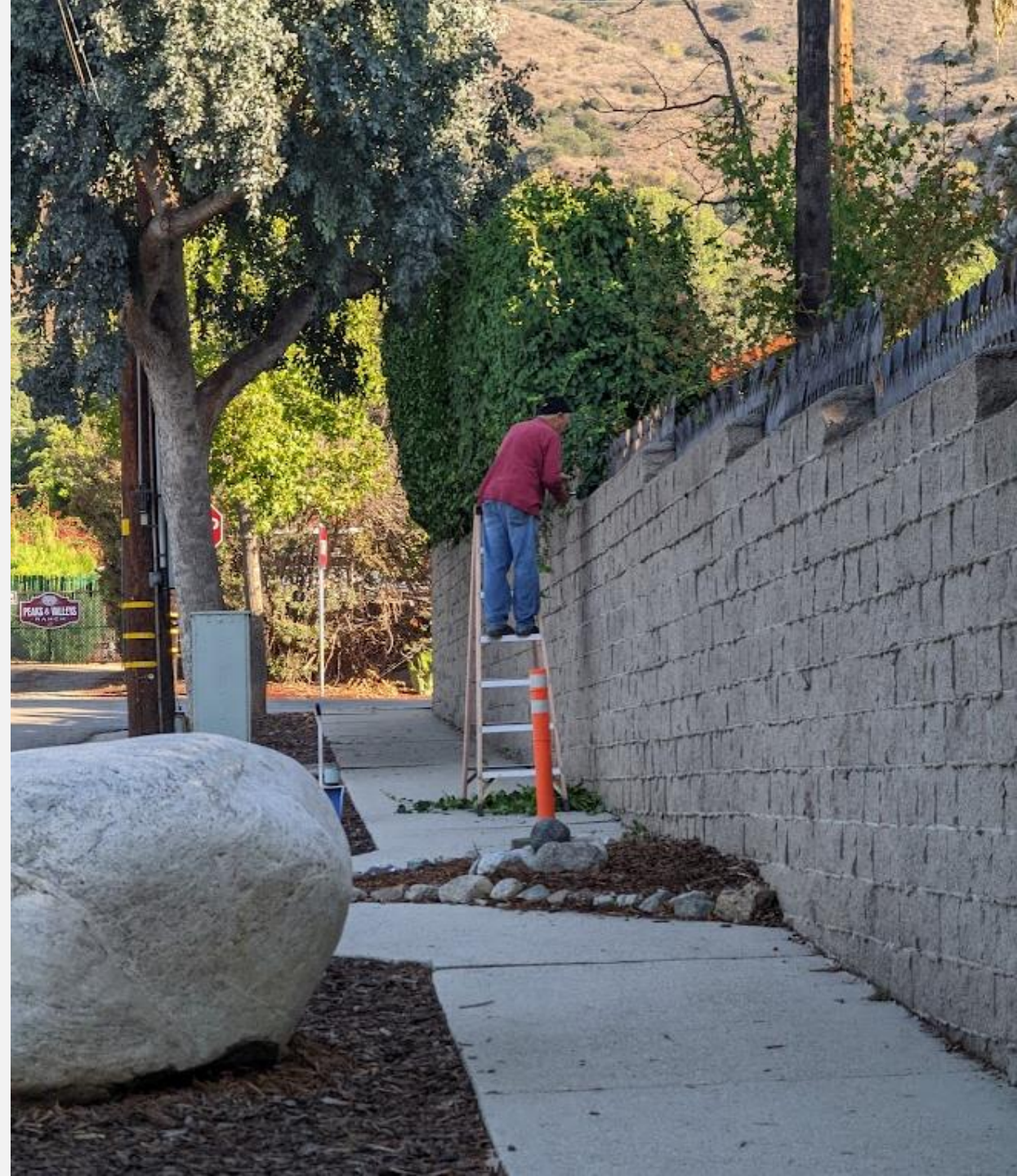
Condition is NOT the same as historic integrity. Buildings with evident signs of deterioration can still retain eligibility for historic listing as long as it can be demonstrated that they retain enough character-defining features to convey their significance.

Service Environment



Cyclical Maintenance

- Keep a schedule of building features requiring inspection and maintenance, and plan and budget accordingly.
- Prioritize scope in order of life-safety, conditions accelerating decay, cyclical maintenance, and cosmetic concerns.
- Financing and funding resources are available specifically for historic homes through state and local programs.



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Wood-Framed Residence: Joseph D. Grant Ranch House

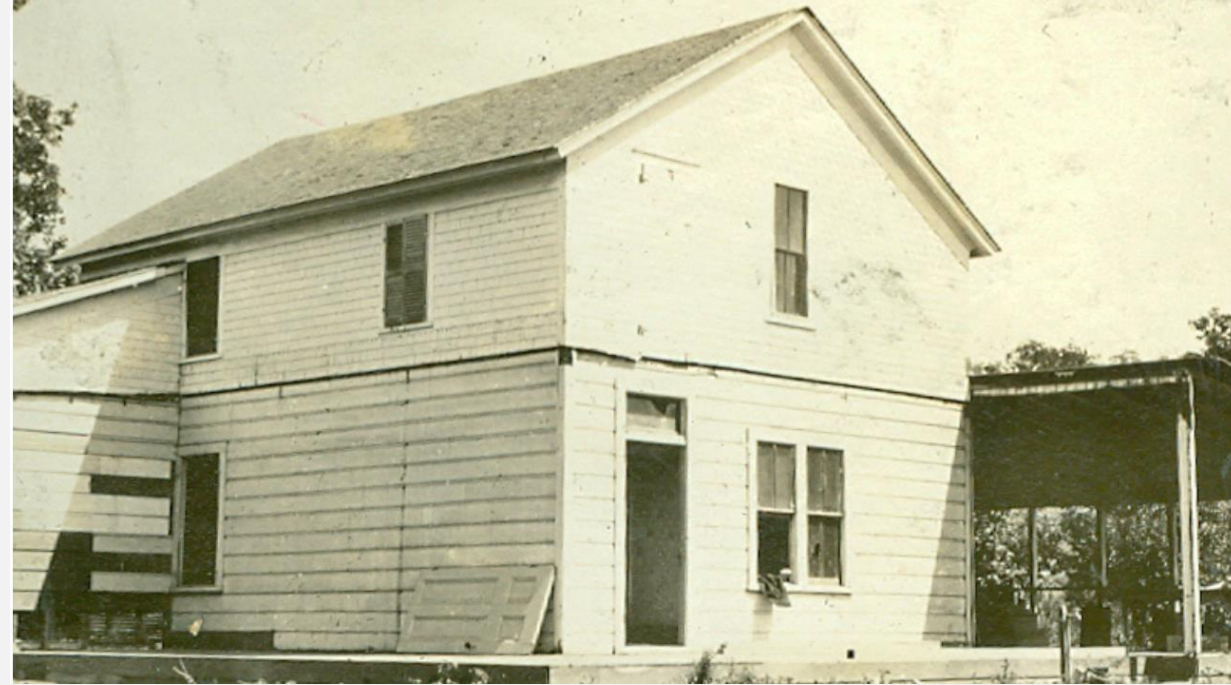
Scope of Retrofit

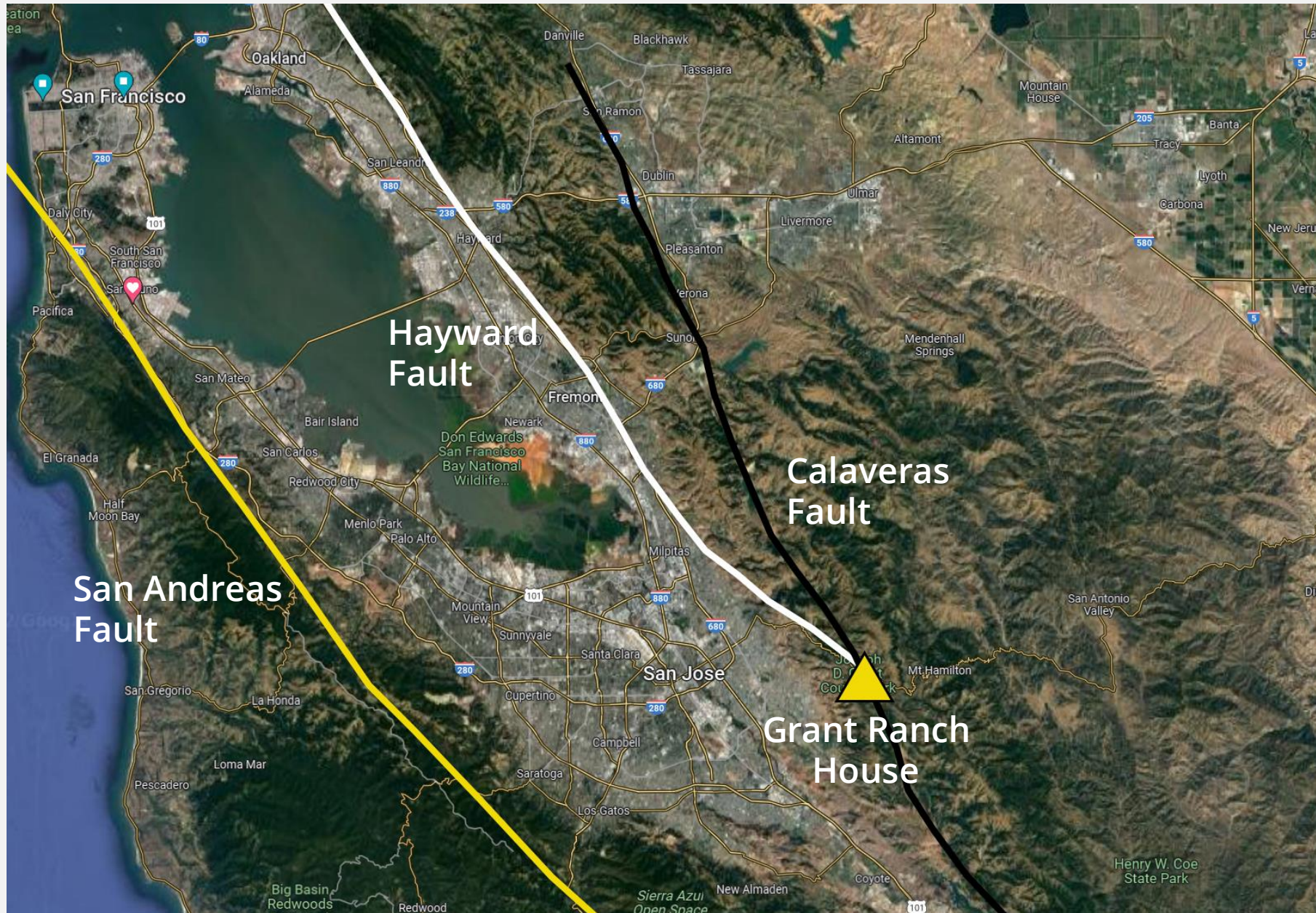
- Envelope repairs, including siding, shutters, windows, and roofing
- Voluntary seismic retrofit, including foundation strengthening, shear walls, and moment frames
- Voluntary structural upgrades to second story porch railing and column connections



Background

- Multiple eras of construction and modification between ca. 1882 and the 1930s.
- Combination of framing and foundation types
- Areas of vernacular construction with insufficient support or connections
- Converted to an historic house museum owned and managed by Santa Clara County in 1978.





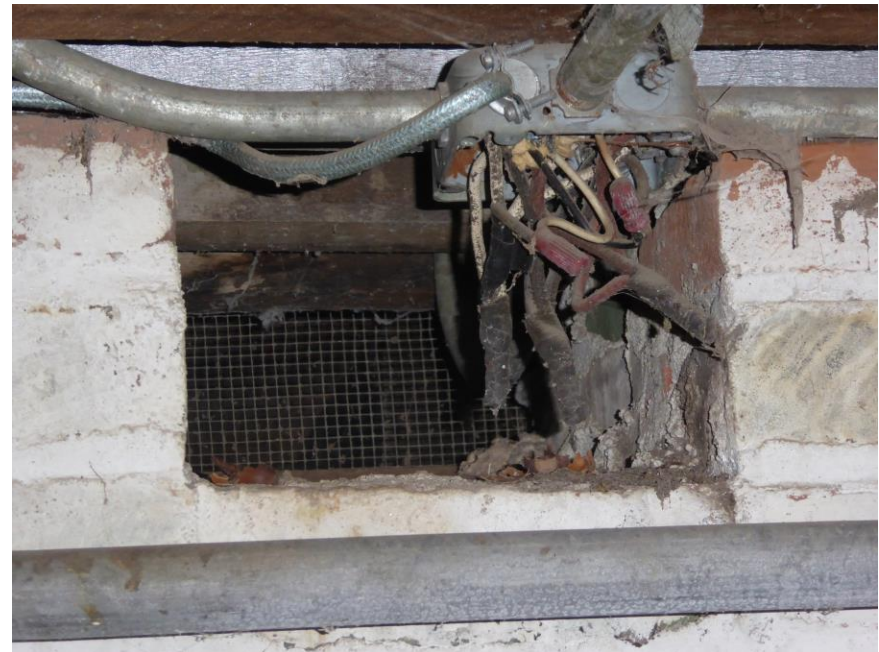
Foundation Investigation

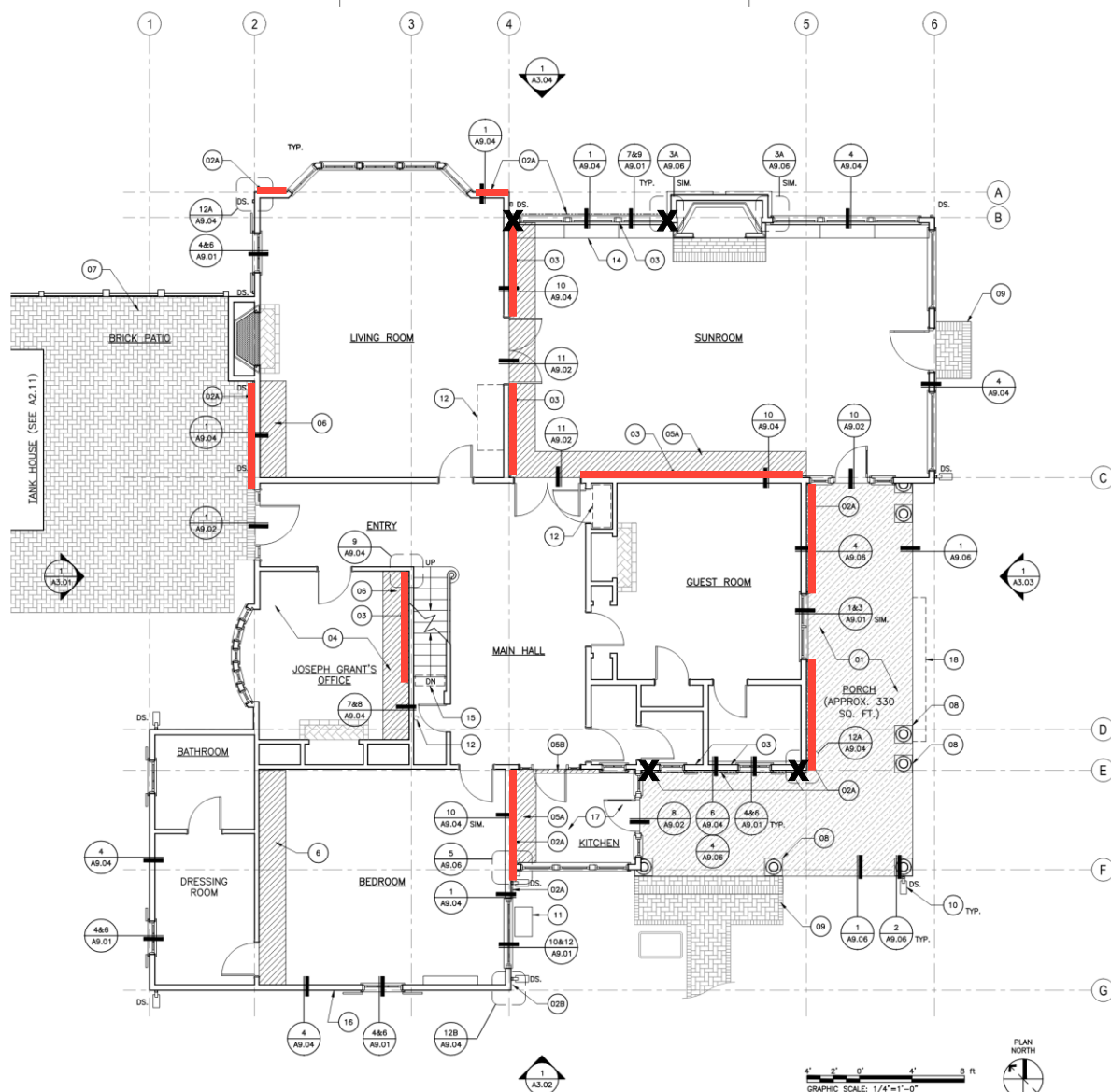


Page & Turnbull

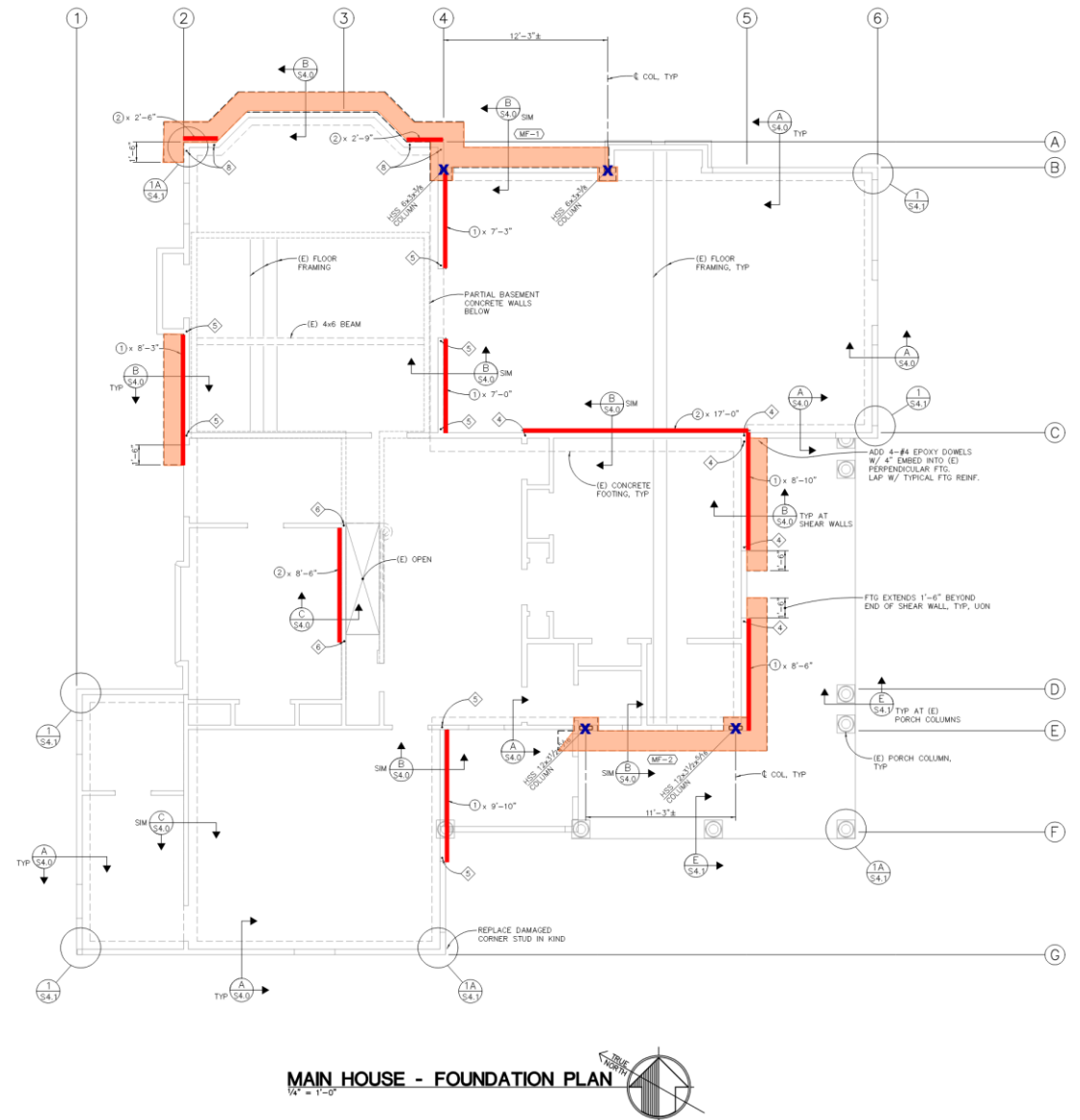


Courtesy Cornerstone





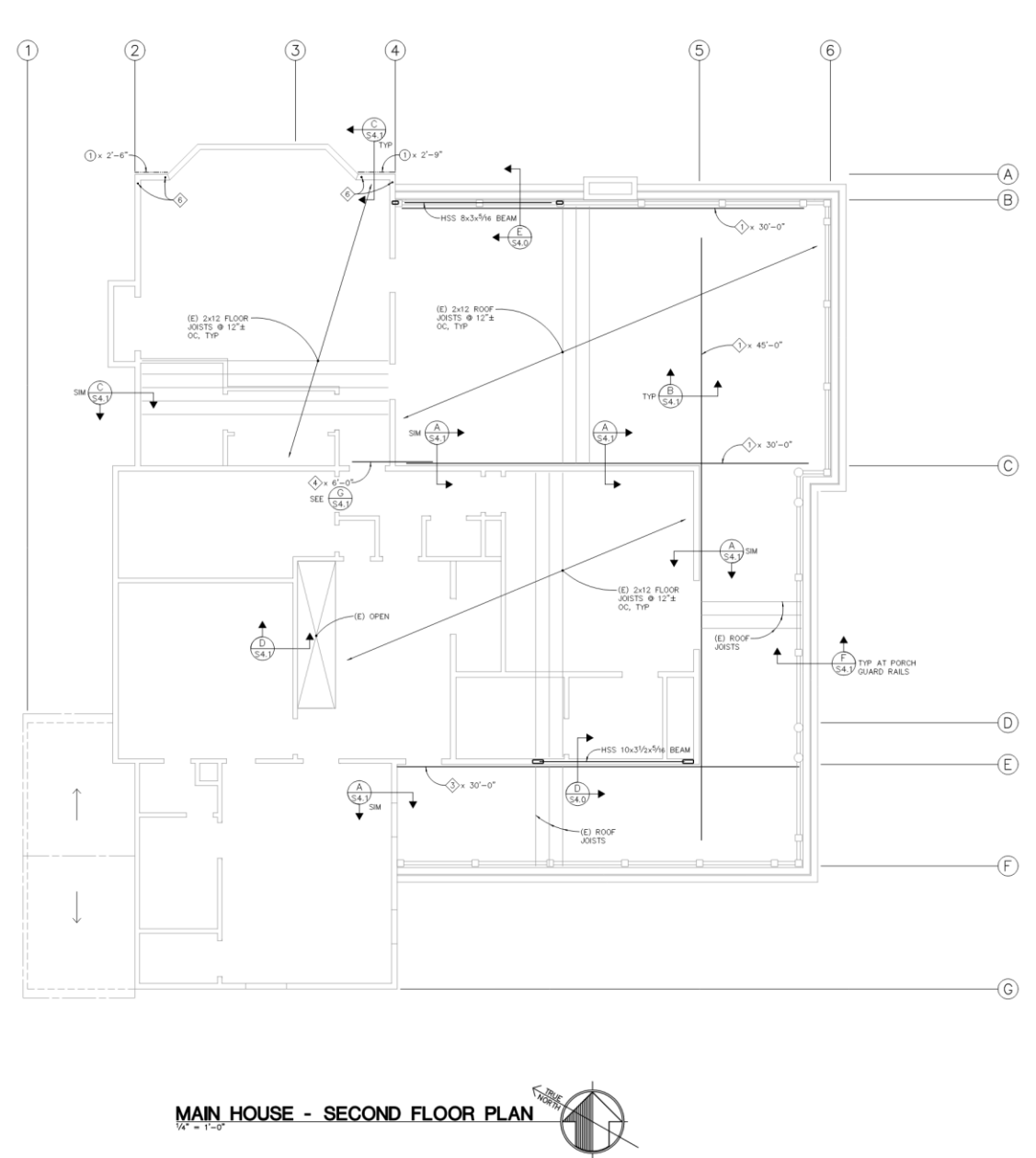
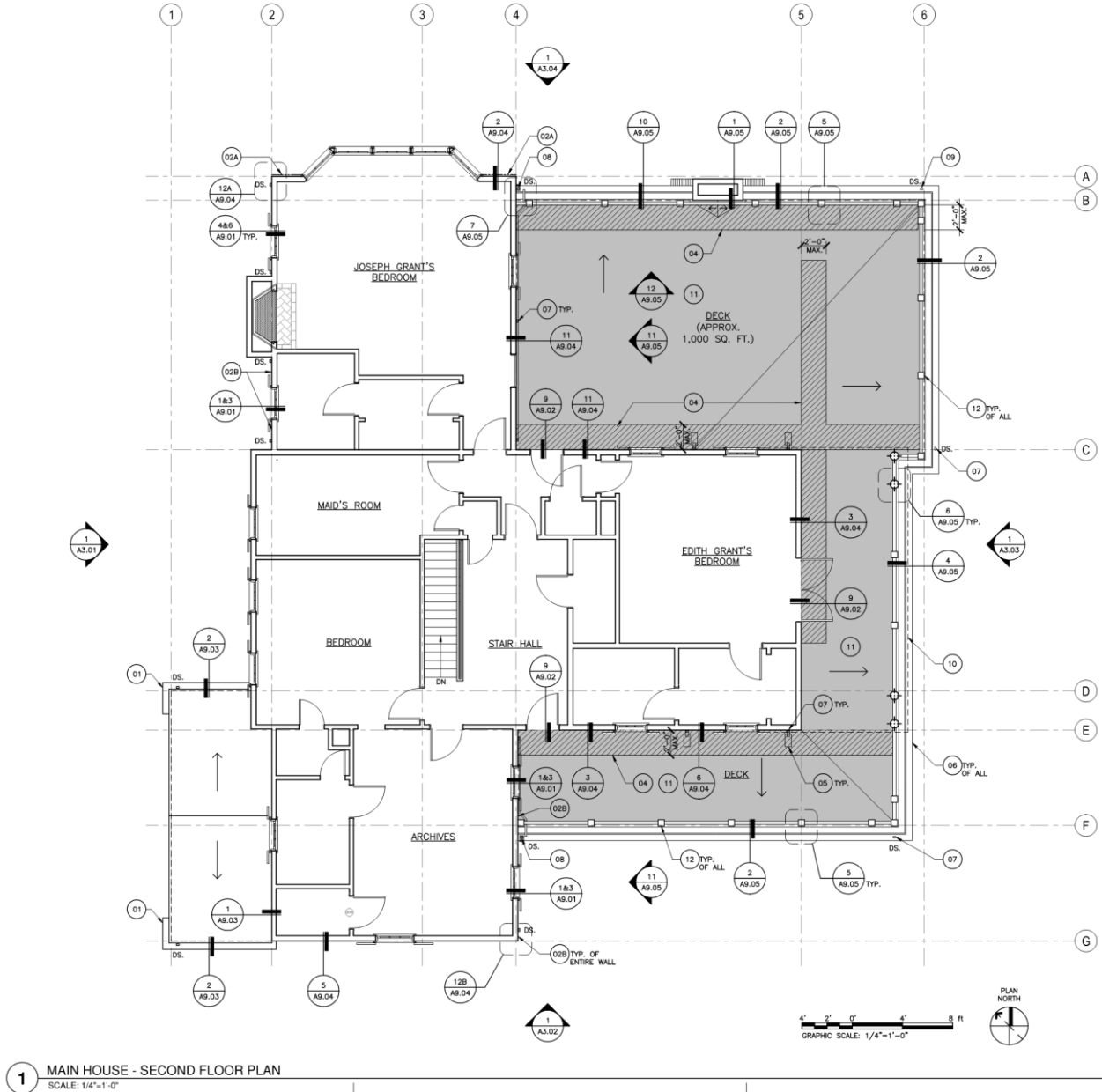
1 MAIN HOUSE - FIRST FLOOR PLAN
SCALE: 1/4"=1'-0"



MAIN HOUSE - FOUNDATION PLAN
1/4" = 1'-0"

Page & Turnbull

Courtesy Biggs Cardosa Associates, Inc.

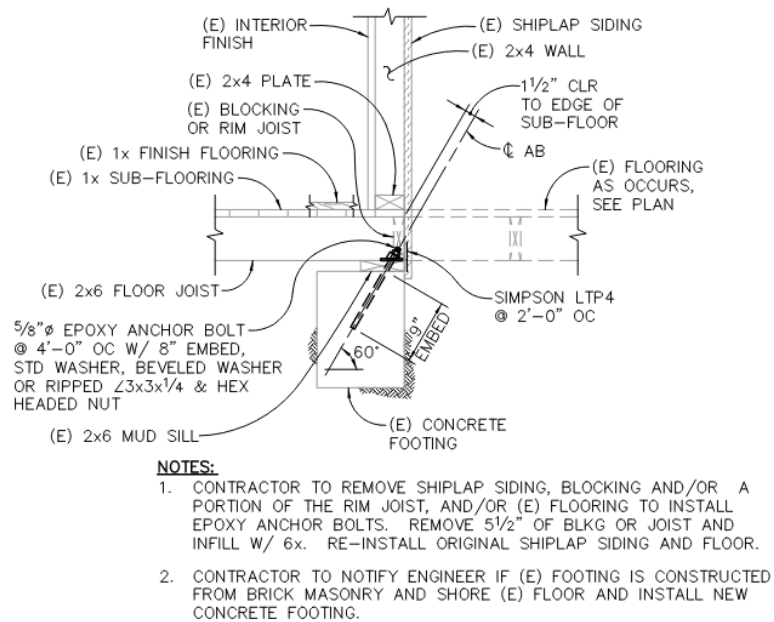


Page & Turnbull

Courtesy Biggs Cardosa Associates, Inc.

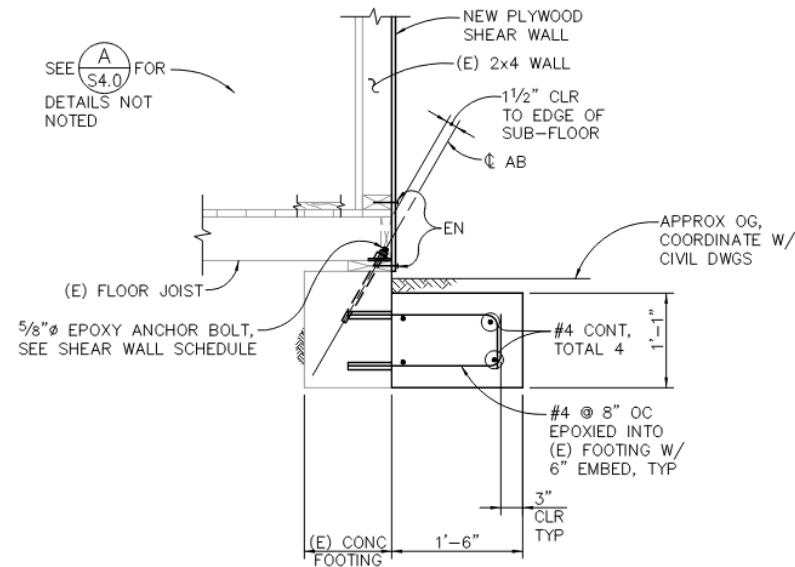
Foundation Retrofits

Existing foundation, bolted from exterior



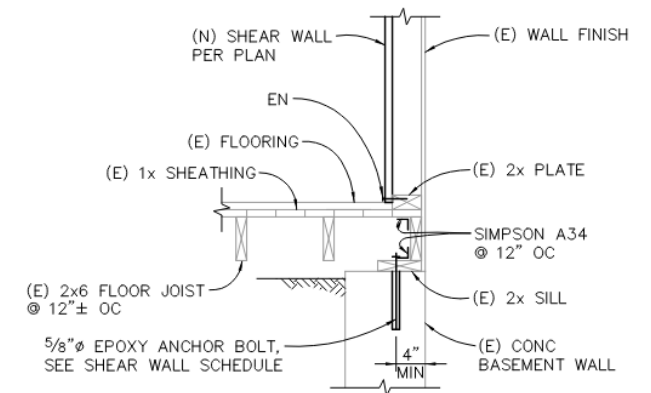
SECTION A
3/4" = 1'-0" S4.0

Existing foundation, new exterior shear wall, additional concrete footing, bolted from exterior



SECTION B
3/4" = 1'-0" S4.0

Existing foundation, new interior shear wall, brace and bolt from interior



SECTION C
3/4" = 1'-0" S4.0

Foundation Retrofit



Shear Walls



Shear Walls

- First story had insufficient shear strength
- Locations chosen where wall cladding could be most easily removed
- Blocking and clips installed to attach second story to first story framing and new shear walls



Moment Frame





Home, Safe Home: Seismic Safety & Rehabilitating Historic Homes
Workshop #6: The Nuts and Bolts of Retrofits | December 15, 2022

Architectural Modifications



Replacement In-Kind





Home, Safe Home: Seismic Safety & Rehabilitating Historic Homes
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Retrofits – Adobe & Unreinforced Masonry

- Single family dwelling
- Alterations over the building's lifetime.



Source: FEMA

Retrofits – Adobe

Second floor roof added over an open patio.



Retrofits – Adobe

Living room at the start of the project. Note water intrusion.



Retrofits – Adobe

Living room during installation of a steel angle bond beam.

Angle is bolted into the wall and to the floor system.



Source: FEMA

Retrofits – Adobe

Bond beam installation complete.



Source: MGA

Retrofits – Integration

The new retrofit elements should be incorporated with the existing features of the house as much as possible.



Source: MGA

Retrofits – Adobe

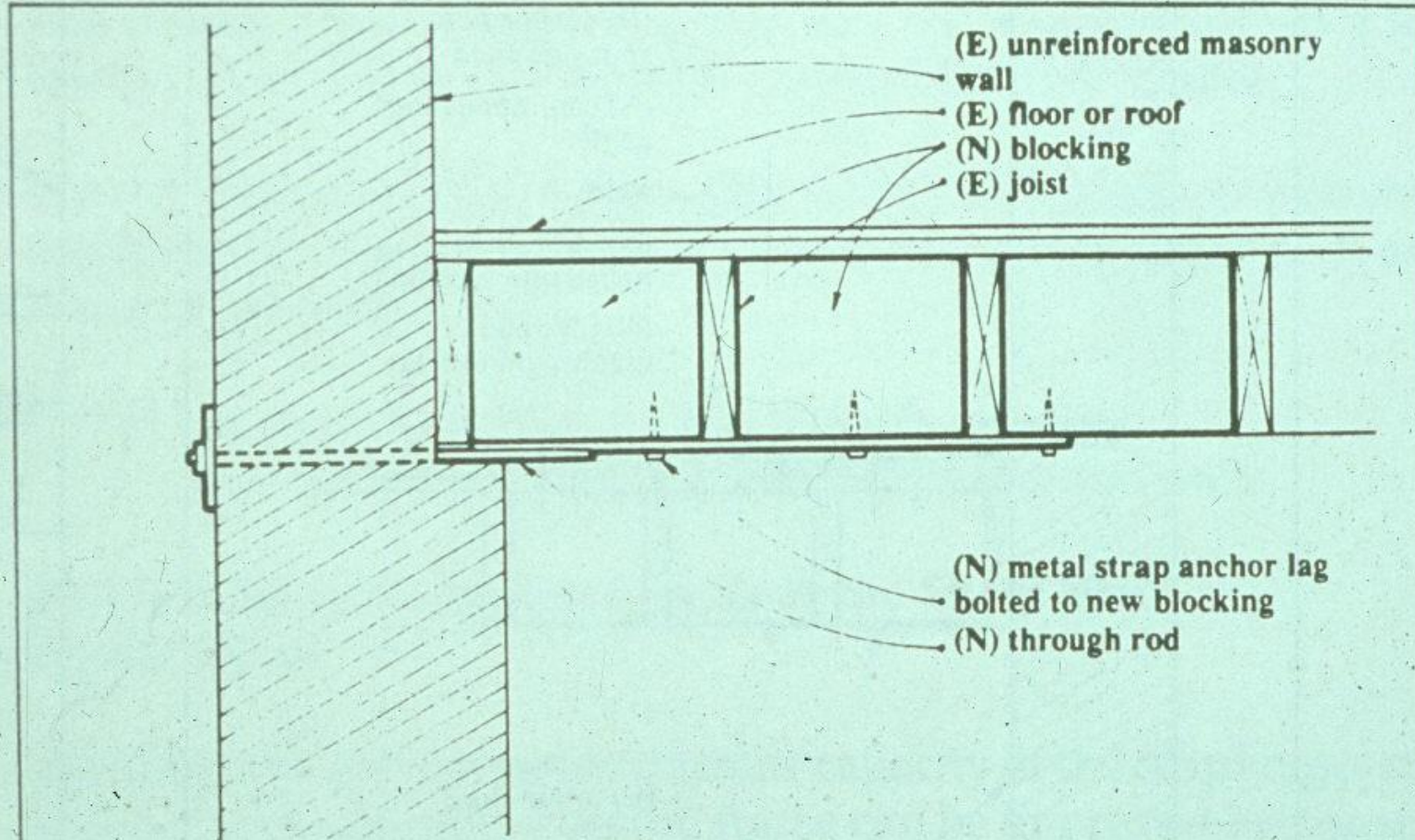
Upstairs, now enclosed, patio.
Vertical posts brace the adobe wall
from falling outward.





Home, Safe Home: Seismic Safety & Rehabilitating Historic Homes
Workshop #6: The Nuts and Bolts of Retrofits | December 15, 2022

Diaphragm Connections



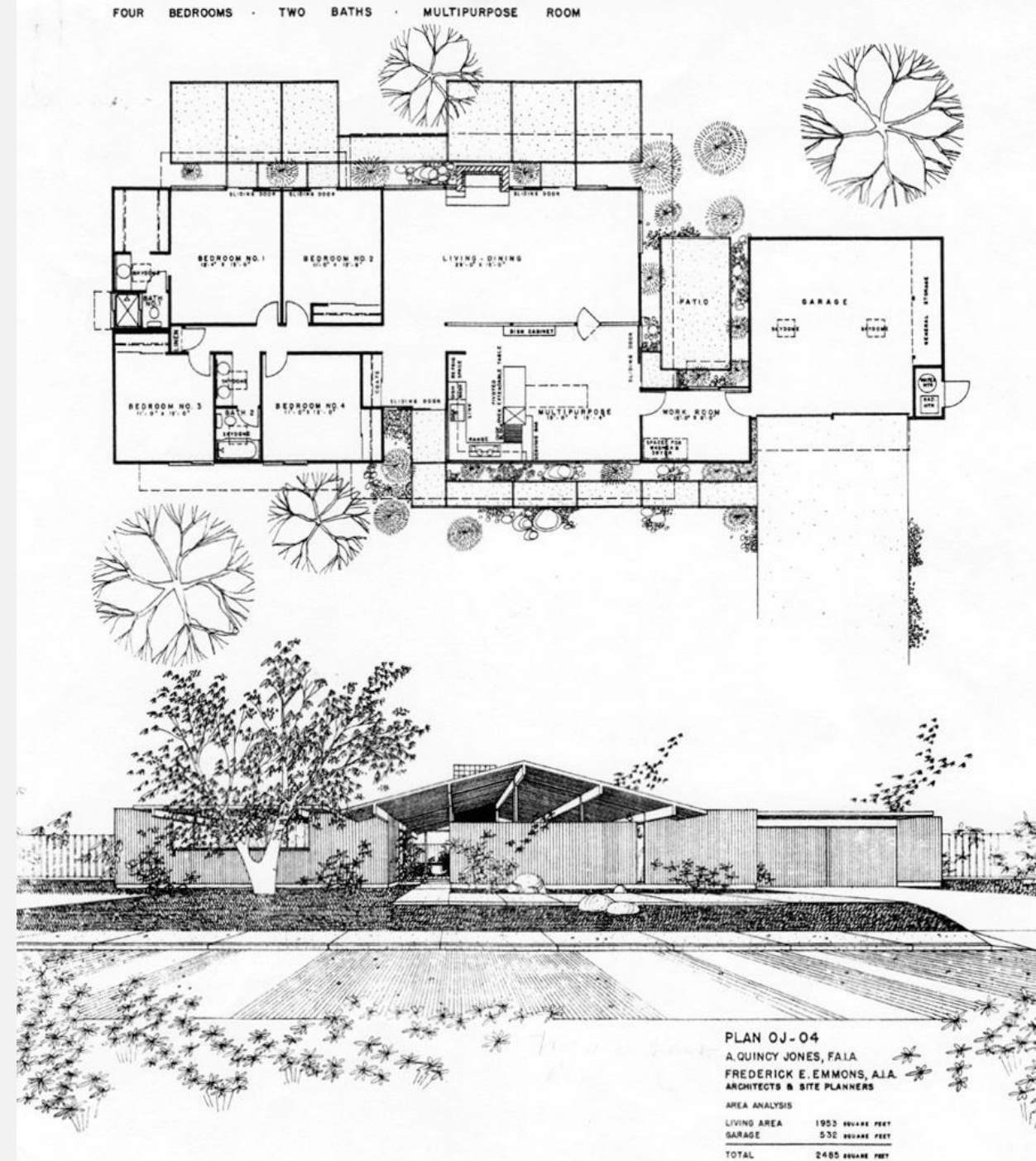


Eichler-Type Homes

- Post and Beam Construction

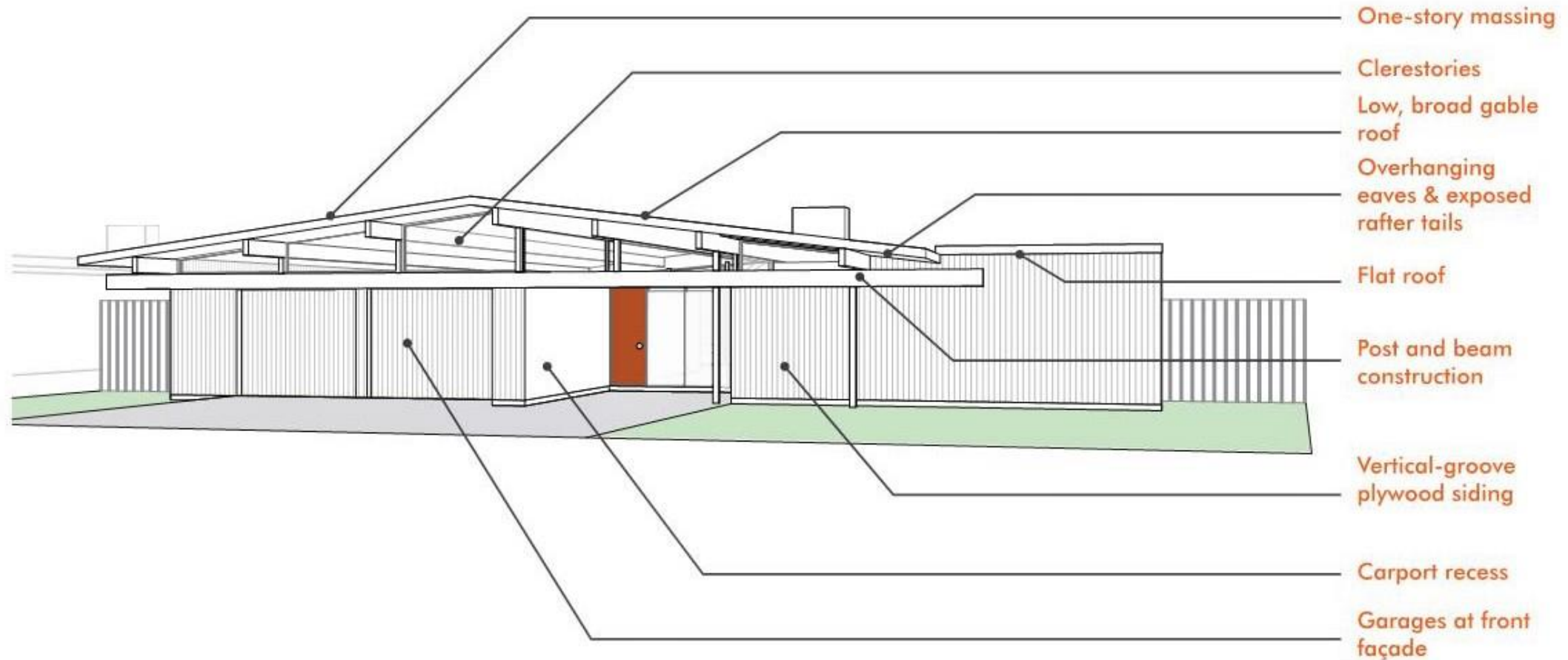


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Eichler-Type Homes

Many of the character-defining features noted here create weaknesses for lateral loading during an earthquake.



Eichler-Type Homes



Questions?



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What Type of Project

REPAIR



The reconstruction or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.

ALTERATION



Any construction or renovation to an existing structure other than repair or addition. A change or modification in construction, change in occupancy or use, or structural repair to an existing building or facility.

ADDITION



An extension or increase in floor area, number of stories or height of a building or structure.

Project Execution

REPAIR



- Do it Yourself
- Hire a Qualified Contractor
- Hire a Qualified Designer/Engineer

ALTERATION



- Hire a Qualified Contractor
- Hire a Qualified Architect/Designer/Engineer
- Hire a Qualified Design-Builder

ADDITION



- Hire a Qualified Contractor
- Hire a Qualified Architect/Designer/Engineer
- Hire a Qualified Design-Builder

Considerations for Hiring a Professional

Cost

Price

Time

Changes

Quality

Reputation

Experience

References

People

Staff

Consultants/
Subcontractors

Connections

Experience Recommendation – 5 years minimum working on historic residences plus 3 to 5 examples of similar projects with locations and contacts.



Defining The Scope of Work – Repairs & Alterations

- Narrative
- Annotated Photographs
- Product Information
- Standard (Pre-Approved) Details



CB399 Agoura Hills Blend (Tops: 2F19, 30%, B330-R 30%, 2F45 20%, F40 20%, Pans: 2F45 60%, F40 40%) Agoura Hills, CA

Roman Pan Tile

Roman Pan Tile is truly an architectural legacy of Ancient Roman and Greek artistic design. Re-creating this traditional flat Roman Pan and pairing it with high-crown Classic Tapered Mission Tops, MCA captures this timeless architecture for both commercial and custom residential projects.

Available in a variety of textures, including popular Sand Cast and Vintage, MCA Roman Pan Tile adds an inviting Tuscan look to any building. Choose from our Designer's Blends, or create your own custom blend.

MCA Roman Pan Tile is made in the USA and is ASTM C1167 Grade 1, the highest quality clay product available.

Competitively priced, this product is also backed by a 50-year limited warranty.

For more information, please contact MCA sales office at 1-800-736-6221 or sales@mca-tile.com.

CC/CODES, CERTIFICATIONS

- IAPMO UES E1-3567
- Class A, E108 (UL790)
- TDI Approval RC-21
- ASTM C1167 Grade 1
- Florida Building Code, FL22539.9
- Made in USA
- Miami-Dade County, FL NOA No. 17-0329.14 (Exp. 02/16/22)



*IAPMO UES Evaluation Report covers City of Los Angeles and is in lieu of ICC-ES

30

800.736.6221



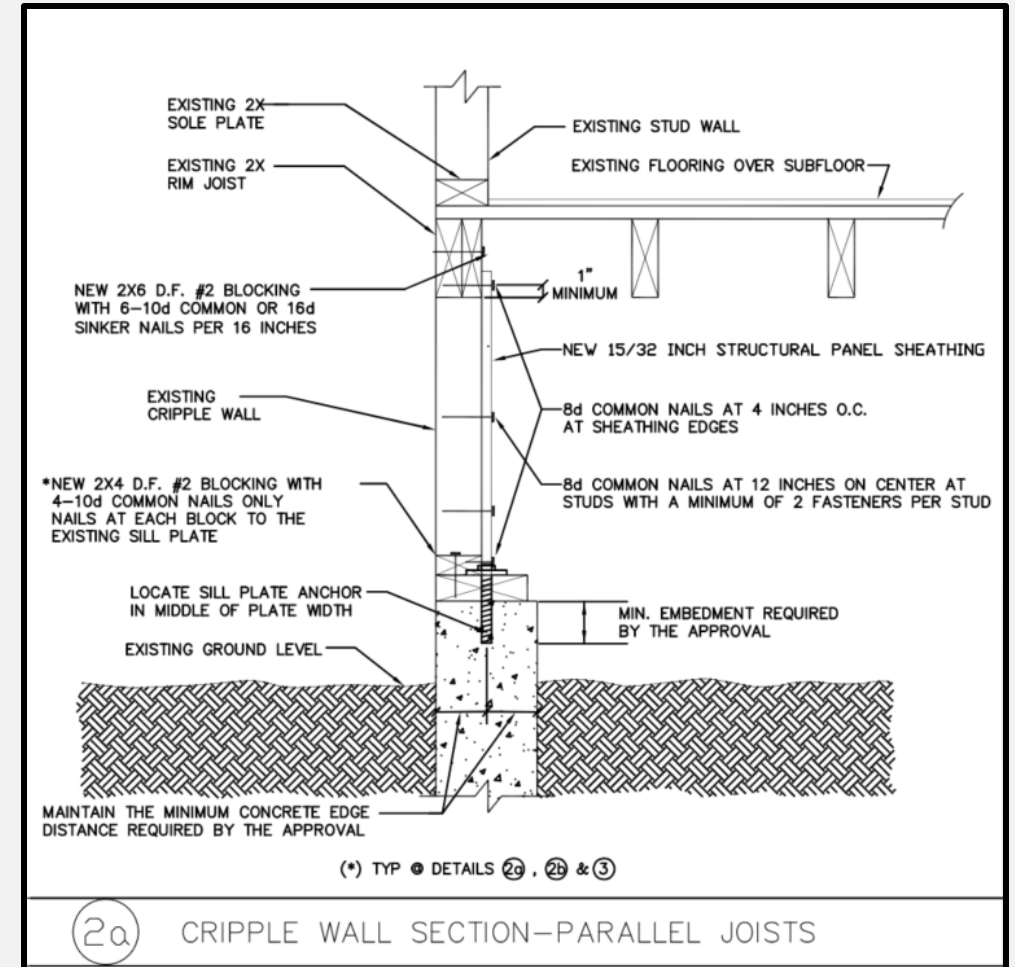
TILE SPECIFICATIONS:

Actual Size:	19" x 10"
Exposed Size:	16" x 12" O.C.
Weight per Square:	1050 lbs.
Weight per Piece Pan:	8 lbs.
Weight per Piece Top:	6 lbs.
No. of Pieces per Square:	150

METRIC TILE SPECIFICATIONS:

Actual Size:	483mm x 254mm
Exposed Size:	406mm x 305mm
Weight per M ² :	51.27 kg
Weight per Piece Pan:	3.63 kg
Weight per Piece Top:	2.72 kg
No. of Pieces per M ² :	16.15 pcs

Metric conversion of lumber is actual dimensions of lumber; use lumber of the closest dimensions available.
*Dimension of the head of the tile.

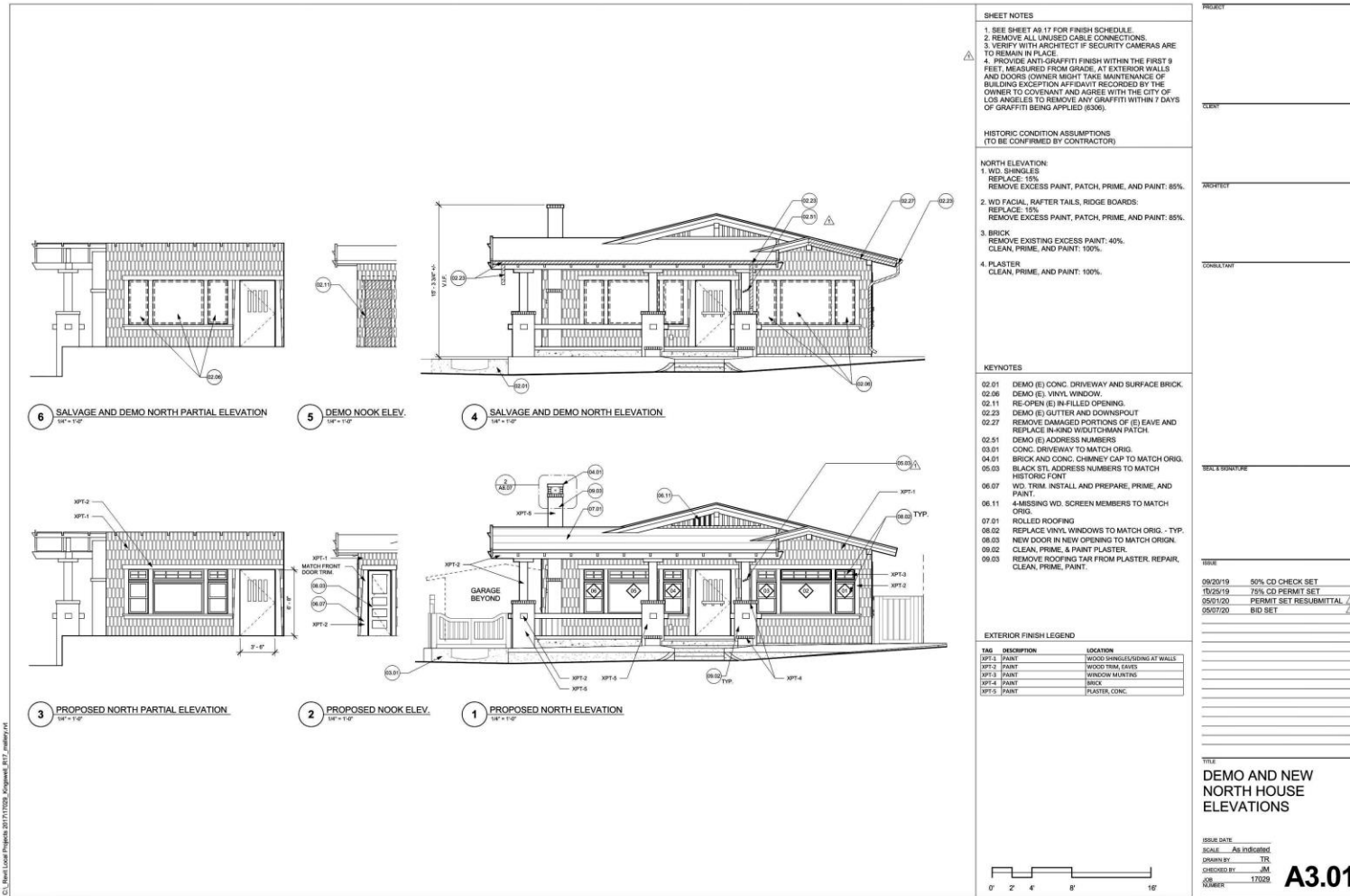


MCA Tile

City of Los Angeles Department of Building & Safety

Defining The Scope of Work – Repairs, Alterations, & Additions

Drawings



Specifications

SECTION 060312 - HISTORIC WOOD REPAIR AND INTERIOR CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes historic treatment of wood in the form of repairing wood features as follows:
- Repairing decorative exterior and interior wood features including but not limited to the following:
 - Repairing wood paneling dining room hutch railings and trim
 - Replacing wood paneling dining room hutch railings and trim
 - Repairing, refinishing, and replacing hardware.
 - Repairing wood rafters, rafter tails, outriggers, decking. See RCP.
 - Closet Shelving
 - Replacing wood features where repair is not possible.
 - Also see notes about interior and exterior wood repair on Sheet G0.04, Protection and Repair Procedures.

B. Related Requirements:

- Section 013591 "Historic Treatment Procedures" for general historic treatment requirements.
- Section 080314 "Historic Treatment of Wood Doors" for historic wood door repairs, including related trim.
- Section 080352 "Historic Treatment of Wood Windows" for historic wood window repairs, including related trim.
- Section 090391 "Historic Treatment of Plain Painting."

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

- Review minutes of Preliminary Historic Treatment Conference that pertain to historic wood repair and fire protection.
- Review methods and procedures related to historic wood repair.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

Bid Set
7 May 2020

060312 - 1

HISTORIC WOOD REPAIR

Budgeting

- Hard (construction)/soft costs
- Soft costs 20-30%
- Discovery (unknowns)
- Minimum 15% contingency
- Escalation minimum 8-10% annually right now – depends on the market.

Item #	Description of Work	Scheduled Value
1	Mobilization/Commencement	\$ 75,000.00
2	General Conditions	\$ 70,000.00
3	Temp Facilities	\$ 15,000.00
4	Contractors Fee	\$ 125,000.00
5	Rough Carpentry	\$ 108,000.00
6	Concrete Footings and Slab on Grade	\$ 37,994.00
7	Finish Carpentry Interior	\$ 32,650.00
8	Finish Carpentry Exterior	\$ 67,880.00
9	Doors	\$ 44,000.00
10	Windows	\$ 55,000.00
11	Floor Restoration	\$ 22,105.00
12	Painting and Staining	\$ 58,700.00
13	Tile	\$ 19,000.00
14	Demolition	\$ 28,000.00
15	Lead Abatement	\$ 16,200.00
16	Selective Removals	\$ 24,880.00
17	Insulation, Drywall and Plaster	\$ 23,000.00
18	Roofing	\$ 26,650.00
19	MEP Design Fee's	\$ 12,000.00
20	Mechanical	\$ 28,750.00
21	Electrical	\$ 105,500.00
22	Plumbing	\$ 44,750.00
23	Fire Suppression	\$ 9,500.00
24	Cabinets and Countertops	\$ 24,750.00
25	Grading	\$ 20,000.00
26	Concrete Flatwork, DG, Masonry and Site Drainage	\$ 69,365.00
27	Landscape, Irrigation on LV Lighting	\$ 114,360.00
28	Gates and Fencing	\$ 51,000.00
29	Appliance Install	\$ 750.00
30	Contingency	\$ 50,000.00
31	Bonding	\$ 25,796.00
	Contract Total	\$ 1,405,580.00

Considerations for Bidding / Getting a Price

Process

- Negotiate with One Firm
- Competitive Bids from Multiple Firms
 - Negotiation/Clarification

Comparing “Apples to Apples”

- Provide a Bid Form

DOCUMENT 004113 - BID FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: _____
- C. Project Location: _____
- D. Owner: _____
- E. Architect: _____
- F. Architect Project Number: 17029.

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Page & Turnbull and Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of.

1. _____ Dollars
(\$ _____).

2. The above amount may be modified by amounts indicated by the Bidder on the attached Document 004322 "Unit Prices Form" and Document 004323 "Alternates Form."

B. Price breakdown by following project components and categories:

1. **House (Subtotal):** \$ _____

Trade	Subcontractor	Amount
a. Abatement		\$
b. Concrete		\$
c. Rough Carpentry		\$

Bid Set
7 May 2020

004113 - 1

BID FORM

Considerations for Terms of Agreement

Price

- Fixed vs. "Cost Plus"
- How are changes made?
- How / when is payment made?
- Advance Payments?

Schedule

- How are changes made?
- Bonus for early completion?
- Penalty for late completion?

Contacts

How to Terminate

Use of Premises

Insurance

Contract Documents (Drawings and/or Specifications)

 **AIA** Document A105™ – 2017
Standard Short Form of Agreement Between Owner and Contractor

AGREEMENT made as of the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

The Architect:
(Name, legal status, address and other information)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The Owner and Contractor agree as follows:

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Questions?



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Considerations - Navigating Approvals & Permitting Process

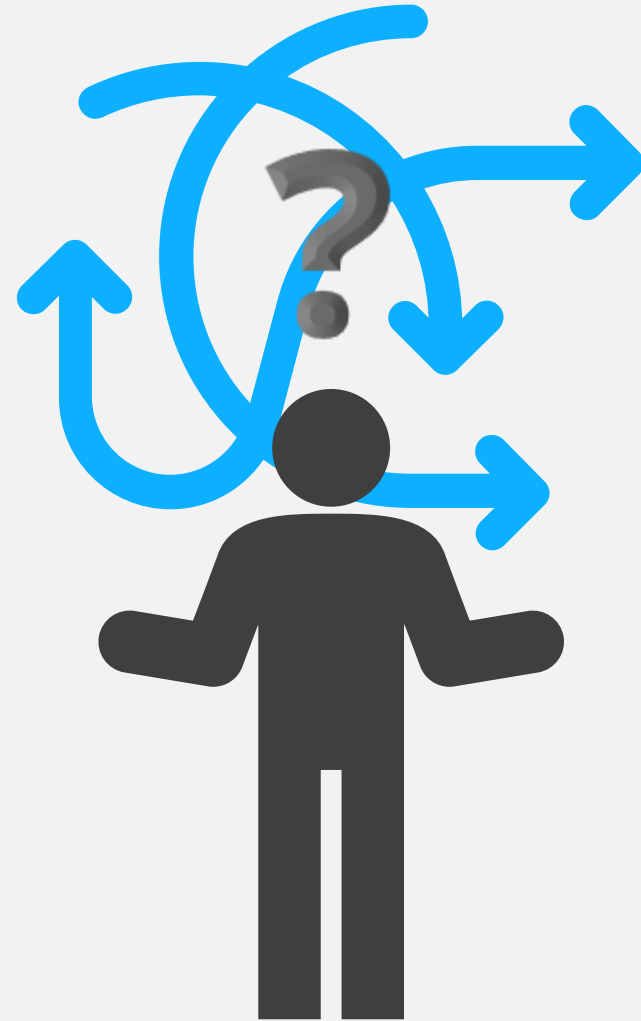
Determine:

- Jurisdiction(s)
- Historic Designation
 - Listed locally, state, or nationally?
 - Existing Mills Act contract or easement?
- Scope of the Project

Meet with Staff People

- Have them explain process
- Understand who makes decisions

Be Patient



**PROCESSES VERY WIDELY
FROM MUNICIPALITY TO
MUNICIPALITY**



PLANNING APPROVAL

- Over the Counter (Staff)
- Staff Review
- Commission Review & Approval
 - Architect/Designer

OTHER REVIEWS

- Tree Removal
- Hillside



BUILDING PERMIT

- Over the Counter
- On-Line Permit
- Plan Check
 - Architect/Engineer

CLEARANCES

- Fire Department
- Public Works



INSPECTIONS

SIGN-OFF / FINALS

Common Historic Project Planning Approvals by Project Type

REPAIR



- Minor Design Review / Project – Over the Counter
- Minor Project Review - Staff Level Review

ALTERATION



- Minor Design Review / Project – Over the Counter
- Minor Project Review - Staff Level Review
- Major Project Review – Staff Level Review
- Major Project Review / Certificate of Appropriateness – Commission Review

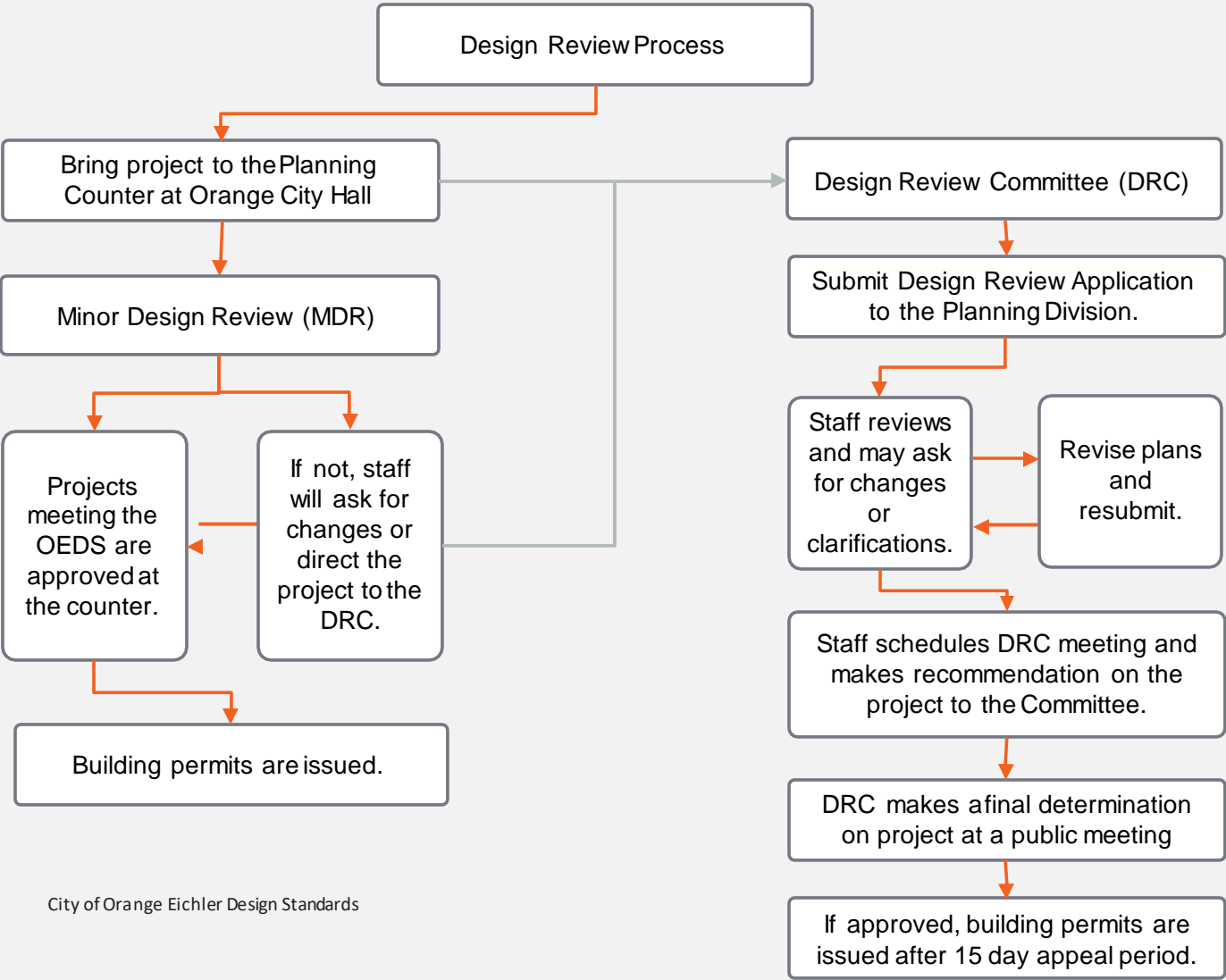
ADDITION



- Major Project Review – Staff Level Review
- Major Project Review / Certificate of Appropriateness – Commission Review

Approvals & Permitting Process

Example: City of Orange – Eichler Neighborhoods



City of Orange Eichler Design Standards

Project Type	Contributor	Non-Contributor	Reviewed By
EXTERIOR			
Maintenance with no change to design or materials of building and not including abrasive or destructive cleaning methods	Exempt	Exempt	N/A
Repainting previously painted exterior surfaces	Exempt	Exempt	N/A
Paint on previously unpainted exterior surfaces	MDR	MDR	Staff
Repair or re-roofing with in-kind or compatible materials and no significant aesthetic change	MDR	MDR	Staff
Insulating roof with no significant visible change in appearance	MDR	MDR	Staff
Atrium covers (flush with the roof line)	MDR	MDR	Staff
Exterior cladding – in-kind replacement	MDR	MDR	Staff
Windows/doors – in-kind replacement	MDR	MDR	Staff
Foundation/concrete slab repairs visible from the street	MDR	MDR	Staff
In-kind replacement of an original exterior (primary or secondary) feature	MDR	MDR	Staff
Restoration of missing or altered exterior feature to original	MDR	MDR	Staff
Replacement of missing or altered exterior feature with compatible feature	MDR	MDR	Staff
Replacement of secondary original features (including entry and garage doors) with compatible replacements, even if original is not deteriorated	MDR	MDR	Staff

Common Historic Project Building Permits by Project Type

REPAIR



- Over the Counter
- On-Line Permit

ALTERATION



- Over the Counter
- On-Line Permit
- Plan Check

ADDITION



- Plan Check

Building Permitting Process

Building Department:

- All depends on the size and scope of the project
- Calculations and stamps not needed if using standard details from Building Department
- Big/non-standard projects: plan-check package with drawings and calculations
- Clearance sheets for grading, public works (provide example sheet)

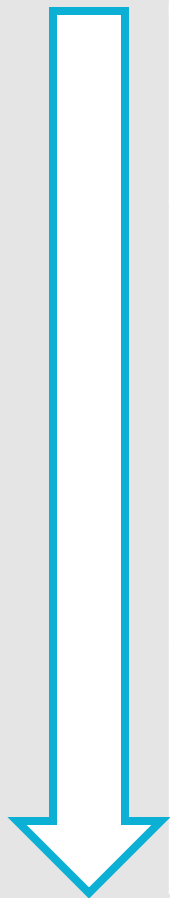


Permit #:
Plan Check #: B15LA13332
Event Code:

15016 - 10000 - 20417
Printed: 12/21/16 01:20 PM

Bldg-Alter/Repair Commercial Regular Plan Check Plan Check		City of Los Angeles - Department of Building and Safety APPLICATION FOR BUILDING PERMIT AND CERTIFICATE OF OCCUPANCY				Issued on: 12/21/2016 Last Status: Issued Status Date: 12/21/2016	
1. TRACT LANKERSHIM	BLOCK BLK 3	LOT 8	ARR	COUNTY MAP REF # M B 16-114/115	PARCEL ID # (PIN #) 171B173 258	2. ASSESSOR PARCEL # 2350 - 014 - 007	
3. PARCEL INFORMATION							
Area Planning Commission - South Valley LADBS Branch Office - VN Bldg. Line - 5 Council District - 2 Certified Neighborhood Council - Mid-Town North Hollywood			Community Plan Area - North Hollywood - Valley Village Census Tract - 1253.20 District Map - 171B173 Energy Zone - 9 Fire District - 2		Earthquake-Induced Liquefaction Area - Yes Near Source Zone Distance - 3.7 School Within 500 Foot Radius - YES Thomas Brothers Map Grid - 563-A2		
ZONES(S): C4-2D-CA							
4. DOCUMENTS							
Z1 - Z1-1048 North Hollywood Redevelopment TNY - North Hollywood Z1 - Z1-2374 LOS ANGELES STATE ENTER ORD - ORD-109940 ZA - ZA-2014-4603-ZAA-SPR YC - YD-8583-YV				HCM - LA-883 CRA - Z1 1048 N HOLLYWOOD CPC - CPC-1994-42-SUD CDBG - BID-NORTH HOLLYWOOD TRAN		CDBG - LARZ-Valley CDBG - SEZ-LOS ANGELES STATE ENTER	
5. CHECKLIST ITEMS							
Special Inspect - Anchor Bolts Special Inspect - Epoxy Bolts				Permit Flag - Not a Fire Life Safety Project Std. Work Descr - Seismic Gas Shut Off Valve			

Regular Plan Check		CLEARANCE SUMMARY WORKSHEET		Printed On: 02/18/20 16:10:46	
IMPORTANT: This summary documents the clearance(s) required prior to permit issuance. Most clearance(s) are granted electronically, however this form will also be completed so that in the event of a computer outage, there is evidence of the clearance action(s). Keep this form with all other documents necessary to obtain the permit.					
INSTRUCTIONS APPLICANT/REPRESENTATIVE: You are advised to initiate the approval process for the following permit application clearance(s) marked as "Not Cleared" as soon as possible, in order to allow adequate time to obtain the approvals. Certain departments (such as the Department of City Planning) may require additional plan review and approval process, which may include mandatory appeal periods. The address and phone number of the specific agency corresponding to the "Address Code:" shown for each clearance is indicated at the end of this form and it is recommended that you call before appearing in person. Remember to bring a copy of the permit application to the clearance agency for their reference. A "Cleared" condition requires no further action on your part.					
CLEARANCE AGENCIES: For city agencies, perform electronic clearance action(s) using PCIS and complete this form. For non-city agencies or PCIS outages, complete this form.					
Description of Work: NEW 1 CAR GARAGE 1 OF 5				Building & Safety Contact Plan Check Office: METRO PC Engineer: Zaw Han	
Status	Clearance Description and New Status				
Not Cleared	Agency: Bureau of Engineering Address Code: 1 Electronic Clearance <input type="checkbox"/> By: ZHAN Comments: _____ Date: _____ Phone: _____ <input type="checkbox"/> Outage - Print Name/Initial: _____				
Not Cleared	Agency: Bureau of Engineering Address Code: 1 Electronic Clearance <input type="checkbox"/> By: ZHAN Comments: _____ Date: _____ Phone: _____ <input type="checkbox"/> Outage - Print Name/Initial: _____				
Not Cleared	Agency: Bureau of Engineering Address Code: 1 Electronic Clearance <input type="checkbox"/> By: ZHAN Comments: _____ Date: _____ Phone: _____ <input type="checkbox"/> Outage - Print Name/Initial: _____				



NEED	CITY OR COUNTY AGENCY	POSSIBLE ASSISTANCE NEEDED	TME REQUIRED
1. Understand System	Preliminary, Pre-Application Meeting	Neighbors, Department Staff	
2. Historical Approval	Local District (if applicable)	Preservation Architect	Varies depending on commission schedule
	City/County Historic Preservation Office (Planning/Zoning)	Planning Department or Historic Preservation Staff	
3. Building Permit	Building Department		Could be over-the-county if Planning approves, but may require additional Planning review



Inspection



Los Angeles Regional
Code Program



STRUCTURAL OBSERVATION REPORT FORM

STRUCTURAL OBSERVATION means the visual observation of the structural system, for general conformance to the approved plans and specifications, at significant construction stages and at completion of the structural system. Structural observation does not include or waive the responsibility for the inspections required by Section 108, 1701 or other sections of the code.

Report No. 1

This report includes all construction work through 27th day of MARCH, 2017 Page No. 1 of 1

Project Address: <u>11025 W. WEDDINGTON ST</u>	Structural Observer of Record (SOR): <u>604 355 6088</u>
Building Permit No.: <u>19016-10000-20417</u>	Professional Lic./Reg. No. of Observer: <u>S 2443 Exp 3-31-17</u>
Structural Observation performed by: <u>MICHAEL KRAKOWSKI</u>	Phone No. of Observer: <u>604 355-6088</u>

OBSERVED STRUCTURAL ELEMENTS AND THEIR CONNECTIONS

FOUNDATION	WALL	FRAMES	FLOOR	ELEMENTS/ CONNECTION OBSERVATION LOCATION
<input checked="" type="checkbox"/> Footing, Stem Walls,	<input type="checkbox"/> Concrete	<input type="checkbox"/> Steel Moment Frame	<input type="checkbox"/> Concrete	BUILDING AND ADA ACCESS RAMP EXCAVATIONS AND REINF. STEEL.
<input type="checkbox"/> Mat Foundation	<input type="checkbox"/> Masonry	<input type="checkbox"/> Steel Braced Frame	<input type="checkbox"/> Steel Deck	
<input type="checkbox"/> Caisson, Piles, Grade Beams	<input type="checkbox"/> Wood	<input type="checkbox"/> Concrete Moment Frame	<input type="checkbox"/> Wood	
<input type="checkbox"/> Retaining Foundation Hillside Special Anchors	<input type="checkbox"/> Others:	<input type="checkbox"/> Masonry Wall Frame	<input type="checkbox"/> Others:	
<input type="checkbox"/> Others:		<input type="checkbox"/> Others:		

NOTED DEFICIENCIES with the proposed corresponding corrective actions with respect to general conformance with the approved plans or in the load path: (A final report by the structural observer which states that all observed deficiencies have been resolved is required before acceptance of the work by the building officials.)

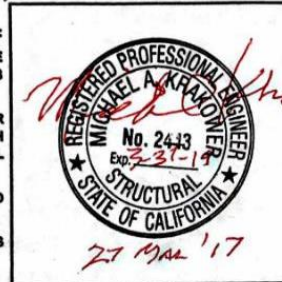
- ADD TEE AND CORNER "L" BARS PER 3/SI-D. (CORRECTION UNDERWAY DURING SITE VISIT)
- VERIFY LAP SPLICE OF CONTINUOUS HORIZONTAL BARS PER 1/SI-D. (CORRECTION UNDERWAY DURING SITE VISIT)
- OK TO CAST IN PLACE CONCRETE AFTER CORRECTIONS MADE

I DECLARE THAT THE FOLLOWING STATEMENTS ARE TRUE TO THE BEST OF MY KNOWLEDGE:

- I AM THE ENGINEER OR ARCHITECT RETAINED BY THE OWNER TO BE IN RESPONSIBLE CHARGE FOR THE STRUCTURAL OBSERVATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF LOS ANGELES.
- I, OR ANOTHER ENGINEER OR ARCHITECT WHO I HAVE DESIGNATED ABOVE AND IS UNDER MY RESPONSIBLE CHARGE, HAS PERFORMED THE REQUIRED SITE VISITS AT EACH SIGNIFICANT CONSTRUCTION STAGE TO VERIFY IF THE STRUCTURE IS IN GENERAL CONFORMANCE WITH APPROVED PLANS AND SPECIFICATIONS;
- ALL NOTED DEFICIENCIES WHICH REMAIN TO BE CORRECTED HAVE BEEN INDICATED ABOVE;
- I RECOMMEND THAT ACCEPTANCE OF THE STRUCTURAL SYSTEMS BY THE CITY OF LOS ANGELES BE WITHHELD UNTIL ALL OBSERVED DEFICIENCIES ARE CORRECTED.

Michael Krakowski
SIGNATURE OF STRUCTURAL OBSERVER

27 MAR '17
DATE



STAMP OF STRUCTURAL OBSERVER)



Questions?



Agenda

1. Workshop #5 Recap
2. Case Studies
 - A. Wood-Framed
 - B. Adobe/Masonry
 - C. Mid-Century
3. Selecting & Working with Qualified Professionals
4. Local Permitting & Approval Processes
5. Summary & Questions
6. Series Summary



Summary

- Evaluate and understand the scope of work
 - Consider how to integrate structural and architectural work
- Prioritize tasks and consider phasing
- Work with qualified, experienced contractors, engineers, architects, and consultants
- Review local permitting requirements for the planned project, and always get a permit for retrofit work!



Questions?



Agenda

1. Workshop #5 Recap
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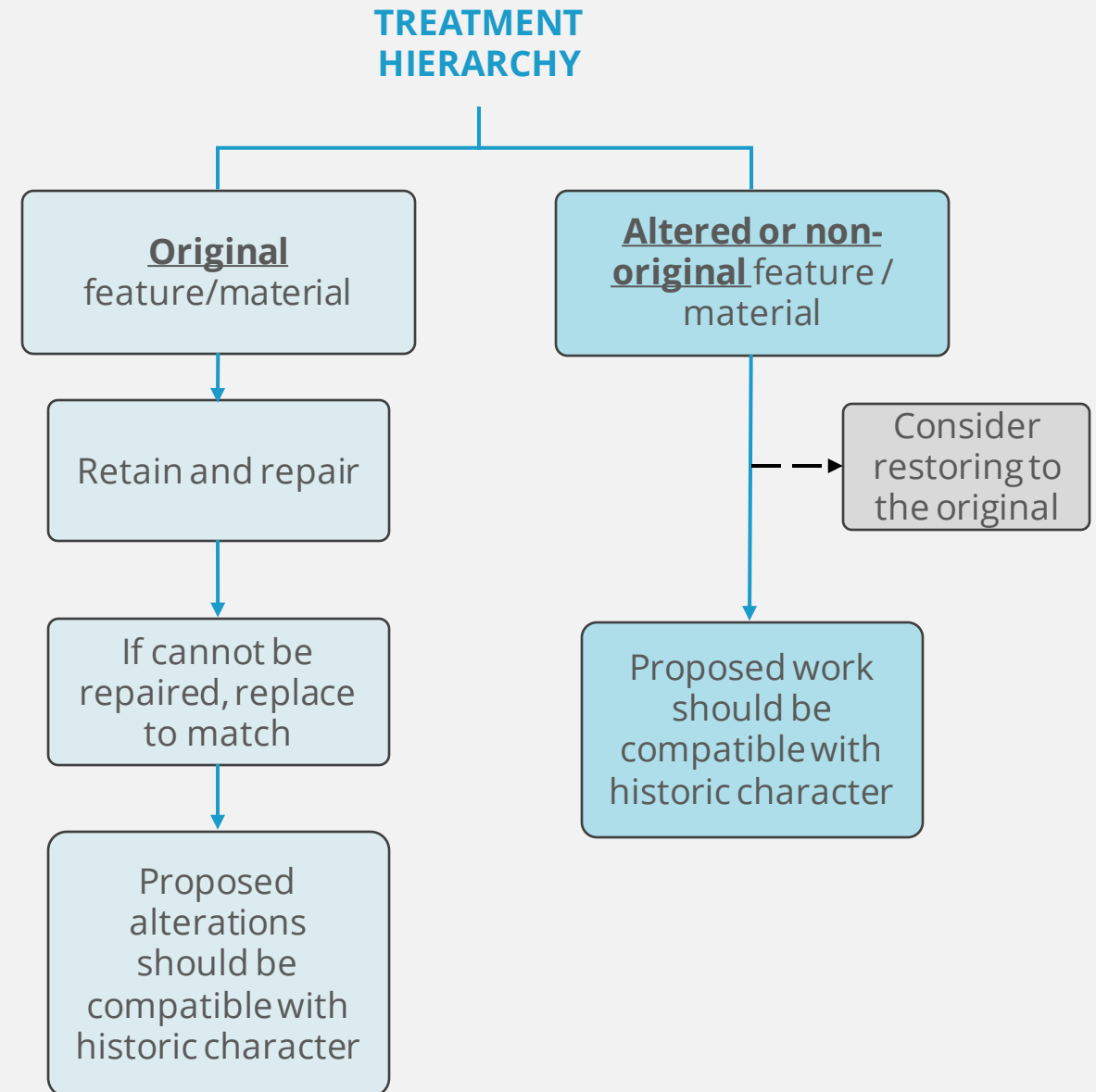
Workshop 1: What Makes a Home Historic?

- **Historic Context** – Theme, Place, Time
- **Historic Significance** – Events, Person, Design, Informational Potential
- **Historic Integrity** – Materials, Design, Feeling, Location, Association, Workmanship, Setting



Workshop 2: Is 'Compatible' 'Matchy-Matchy?'

- *Secretary of the Interior's Standards for the Treatment of Historic Properties*
- Rehabilitation Standards
- Rehabilitation Guidelines for Structural Systems
 - Identify, retain, and preserve
 - Protect and maintain (and stabilize)
 - Repair
 - Replacement, if beyond repair
 - Alterations and Additions for New Use (Rehabilitation)



Workshop 3: Seismic Retrofit Basics

- Seismic Vulnerability in California – not many regions that are not vulnerable
- How to identify commonly found construction types for single-family houses
- Seismic vulnerabilities
- California Historic Building Code provisions
- Potential phasing of retrofit



Workshop 4: Retrofit Projects

- Every Improvement Helps!
- Evaluate Your House
- Retrofit Strategies
- Retrofit Techniques & Examples
- Priorities & Phasing



Workshop 5: Keep it Lookin' Great

- Maintenance helps preserve the integrity of your home
- Maintenance reduces the need for more costly repairs and replacement
- The climate, aspect, and features of a property impact the cyclical maintenance concerns
- Prioritize work for greatest impact, and plan long-term if possible
- Financing & Funding Tools and Resources are available to assist



Who We Reached

British Columbia

Alberta

Alaska

Montana

Massachusetts

Oregon

Nevada

Illinois

New York

New Jersey

Hong Kong

California

Washington, DC

Florida

Who We Reached

Planner Architect

Homeowner

Contractor Engineer

Workshop #1: What Makes My Home 'Historic'? | Thursday, June 23, 2022

Workshop #2: Is 'Compatible' 'Matchy-Matchy'? | Tuesday, July 26, 2022

Workshop #3: Retrofitting Basic Training | Tuesday, August 30, 2022

Workshop #4: Seismic Retrofits | Thursday, October 6, 2022

Workshop #5: Keep it Lookin' Great | Tuesday, November 8, 2022

Workshop #6: The Nuts and Bolts of Retrofits | Thursday, December 15, 2022

Questions?



Additional Resources & Further Reading

- California Office of Historic Preservation - <https://ohp.parks.ca.gov/>
- Built Environment Resource Directory (BERD) https://ohp.parks.ca.gov/?page_id=30338
- National Register of Historic Places <https://www.nps.gov/subjects/nationalregister/index.htm>
- Eichler Design Standards (City of Orange) <https://www.cityoforange.org/home/showpublisheddocument/78/637698087815930000>
- Secretary of the Interior's Standards for the Treatment of Historic Properties - <https://www.nps.gov/orgs/1739/secretary-standards-treatment-historic-properties.htm>
- [NPS Preservation Brief #17 - Architectural Character – Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character](#)
- [NPS Preservation Brief #18 – Rehabilitating Interiors in Historic Buildings: Identifying and Preserving Character-Defining Elements](#)
- [NPS Preservation Brief #41 – The Seismic Rehabilitation of Historic Buildings](#)
- [NPS Preservation Brief #47 – Maintaining the Exteriors of Small and Medium-Sized Historic Buildings](#)
- Virginia Savage McAlester, *A Field Guide to American Houses* (Second Edition), Knopf (2015) - https://www.google.com/books/edition/A_Field_Guide_to_American_Houses/fjbaCwAAQBAJ?hl=en&gbpv=0
- California Earthquake Authority Brace & Bolt Program - <https://www.californiaresidentialmitigationprogram.com/How-to-Pay-for-a-Seismic-Retrofit/Our-Seismic-Retrofit-Grant-Programs>
- CalCAP/Seismic Safety Financing Program (<https://www.treasurer.ca.gov/cpcf/cap/calcap/seismic/summary.asp>)