

Rancho Los Alamitos
Ranch House Seismic Strengthening

The existing adobe walls, which comprise the core of the existing Ranch House, are formed of adobe blocks 44" thick mortared together with clay. They are essentially free standing columns of adobe, some wider than others. The intent of this seismic strengthening is to install full height steel dowels down through the center of the adobe columns. A 2-1/4" core drill will be placed at 6' 0" on center throughout the adobe structure. A 3/4" steel rod will be inserted into these core holes and the hole will be filled with an epoxy grout. Intermediate steel rods will be placed to a depth of 36" in between the full height rods. All rods will be attached to the adjacent ceiling joists with wood blocking and steel fasteners. The blocking and ceiling joists will all be tied together using 1/2" structural plywood to create a diaphragm over the entire adobe structure. All work will be performed from the attic space above the adobe walls. The existing roof shingles and sheathing must be removed in order to access the top of the adobe walls. Once the plywood diaphragm is in place, the roof will be reinstalled using structural 1/2" plywood and fire treated cedar shingles.

RANCHO LOS ALAMITOS

PHASE III

RANCH HOUSE SEISMIC UPGRADING

SEISMIC STRENGTHENING OF THE ADOBE, CHIMNEYS, ROOF AND RELATED ITEMS

SCOPE OF WORK

PREPARED FOR:

RANCHO LOS ALAMITOS FOUNDATION

April 27, 2015

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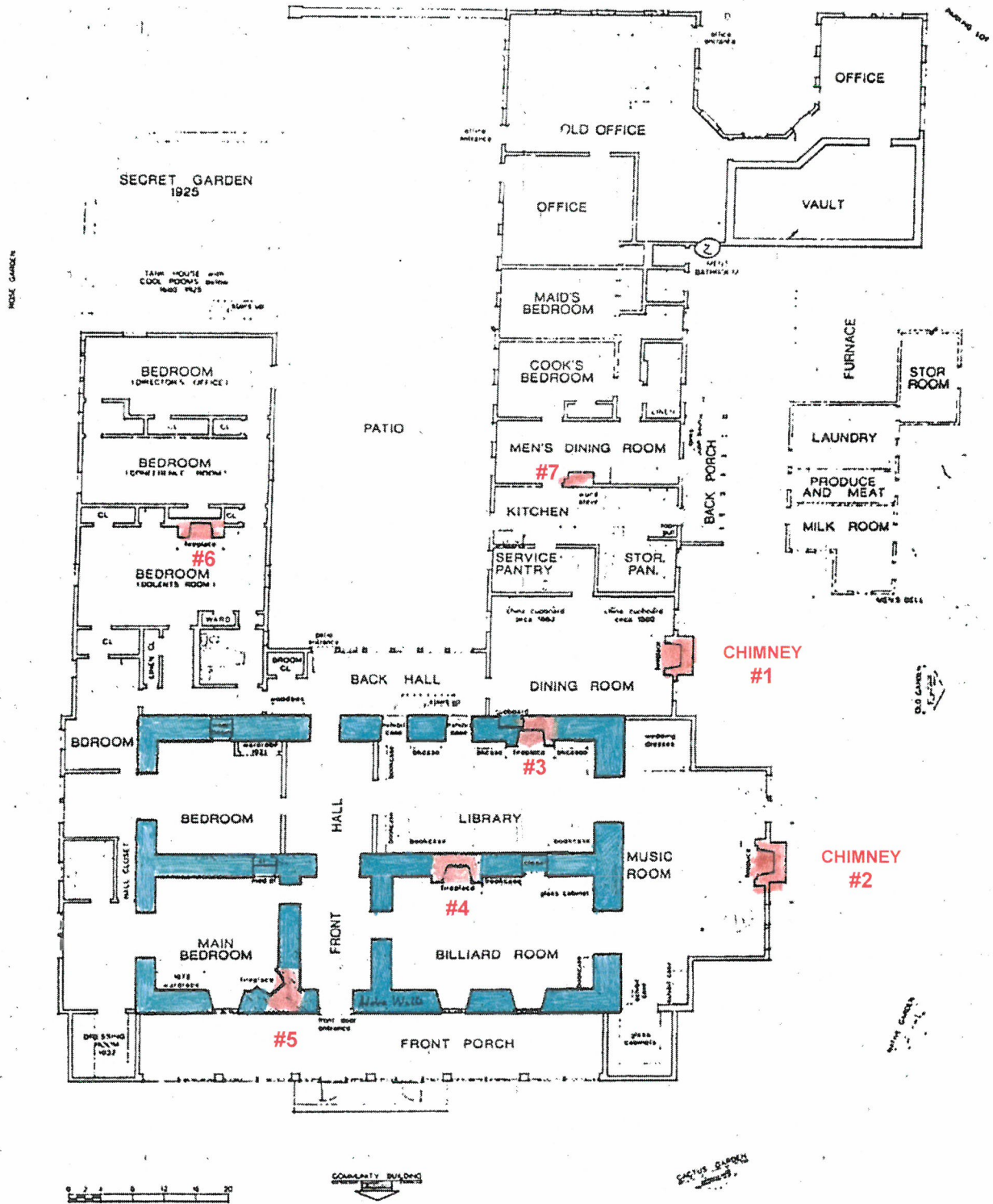
ADOBE SEISMIC UPGRADING

TABLE OF CONTENTS

TASK/ITEM	PAGE
Chimney # Key Plan	1
Chimney Stabilization	2
Kitchen Chimney #7 and Flue Stack	4
Chimney Details	5
Chimney Survey	11
2 nd Floor Porch	12
Skylights	13
Dormers	15
Windows	17
Restoration Carpentry	19
Plumbing	21
Hardwood Flooring	22
Electrical	23
HVAC	24
Termite/Pest Control	25
Survey of Rodent/Pest Entry Points	27
Roofing	30
Raingutters/Downspouts	33
Fire Alarm/Security	34
Telephones/Computers	35
Preparation of Attic	36

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CHIMNEY # KEY PLAN

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CHIMNEY STABILIZATION

- All stabilization work that was not performed in Phase One (1996) is to be completed per the Structural Drawings dated January 19, 2015 by Structural Focus.
- Refine interior scope, verify structural work on Chimney #6. See Phase One Structural Drawings by GFDS Engineers dated April 17, 1996, Pages S5 and S6. Include cost of verification/inspection in Base Bid Pricing. Any missing structural elements will be installed by contractor. An additive cost change order will be issued.
- Verify interior attic work and roofline work on Chimneys #3, #4 and #5 was completed in Phase One. Verify the Chimney Lining was completed on Chimney #3, see Detail #6 in this section
- Clean existing exterior mortar joints, remove all loose mortar and repaint.
- Reseal all existing copper chimney flashings at caps and roofline.
- Chimney #3 – V-Groove existing cracks in plaster, seal with polyurethane caulking and elastomeric patching compound, feather skim with stucco to match existing texture. If the brick chimney structure is cracked as well, report conditions to Project Manager and provide additive cost to inject with Sikadur High Modulus Injection Gel Epoxy Resin. Break out existing stucco at 1st floor roofline and install new copper flashing and counterflashing around base of chimney. Coordinate with custom copper cricket on adjacent roof. See Detail #3 in this section. Seal and waterproof, replace stucco to match existing. Paint to match existing. See Paint Specifications.
- Temporary metal bracing - L-Metal angles on Chimney #5 to be removed upon completion of Bond Beam diaphragm and chimney tie-in.

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- Perform Epoxy injection for structural cracks in Chimney #6. Use Sikadur High Modulus Injection Gel Epoxy Resin – Red Color.
- Remove and replace flashings at Chimney #6 with new copper per Flashing Details #1 and #2 in this section.

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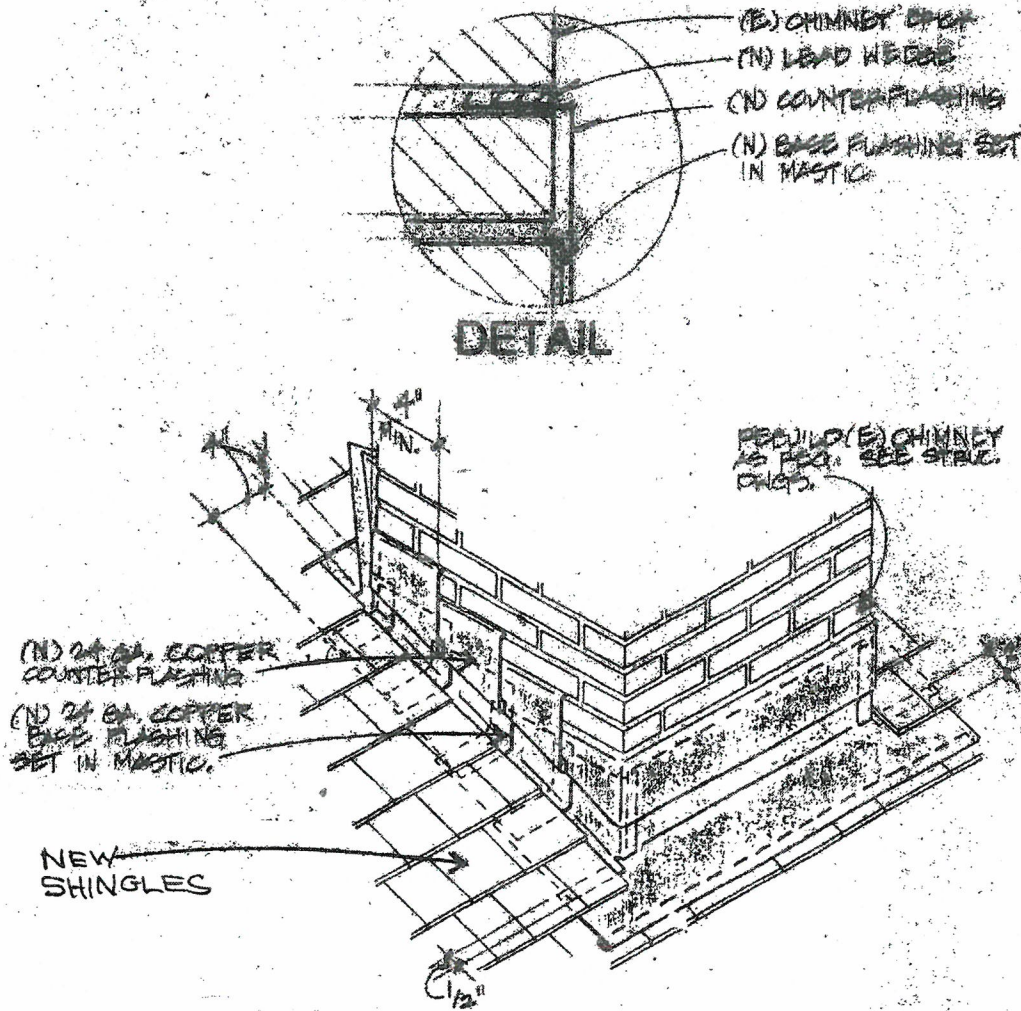
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KITCHEN CHIMNEY #7 AND FLUE STACK

- Carefully remove existing twin stack metal chimney assembly. Straighten sheet metal and repair any failing solder joints.
- Clean, wire brush all rust, treat with rust reformer. Prime and paint two coats with flat silver color enamel. See Paint Specifications.
- Reattach metal twin stack assembly after brick chimney repairs are complete. Install new screws, or rivets at existing slip joints and chimney caps. Attach new guy wires per Detail #4 in this Section.
- Remove and replace all existing roof to wall flashings and counterflashings around brick chimney with new copper flashings. See Flashing Details #1, #2, and #5 in this section.
- Clean existing brick and rout out loose mortar. Repoint all mortar joints.
- After removal of twin stack metal assembly, inspect Chimney flue(s) and determine if they can be made operational. Refer to Chimney Lining Detail #6 in this section. Coordinate options with RLAF.
- Retrofit brick chimney in attic and at roofline per Detail #11 on Page S7.2 of the Structural Drawings by Structural Focus dated January 19, 2015.

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1

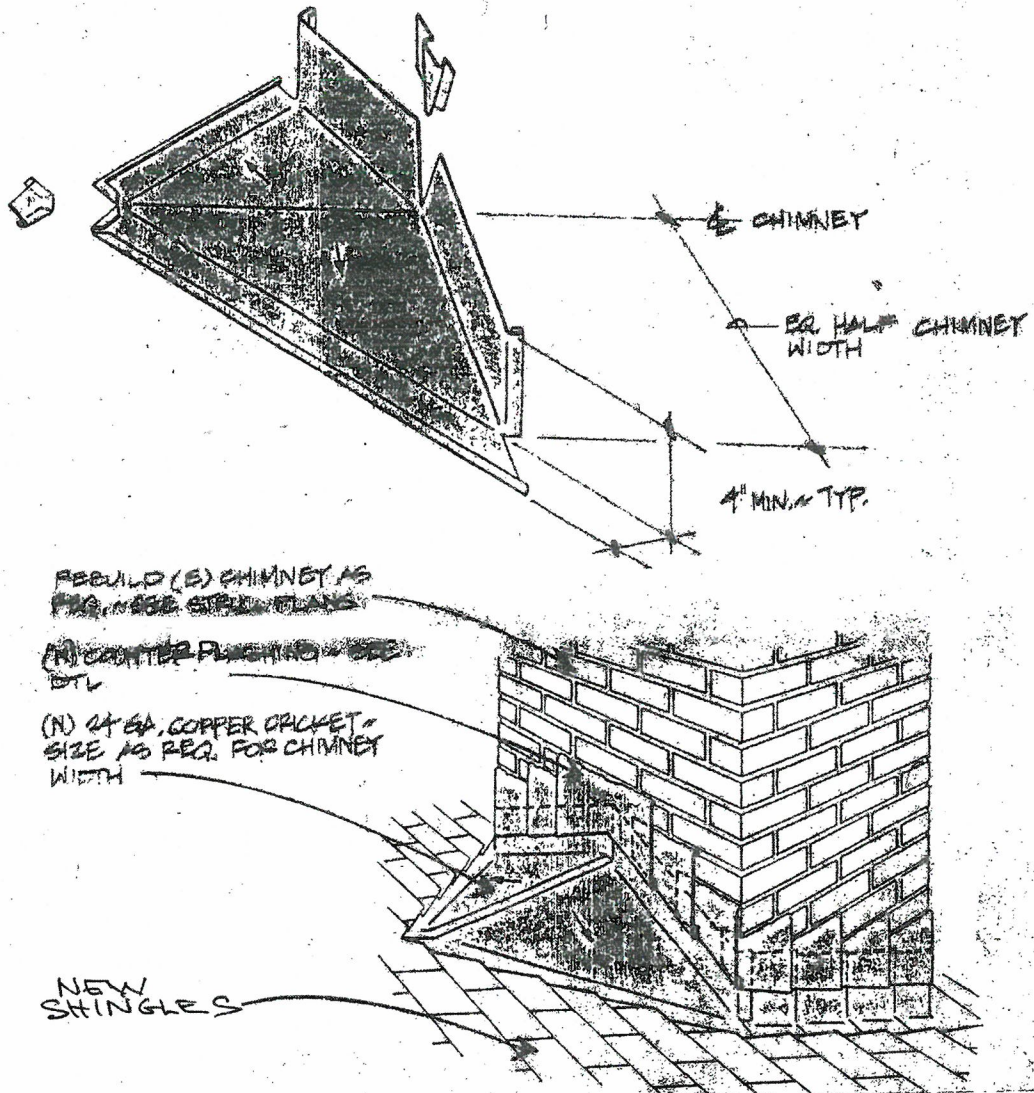
CHIMNEY FLASHING DETAIL

NTS

Chimneys #6 and #7

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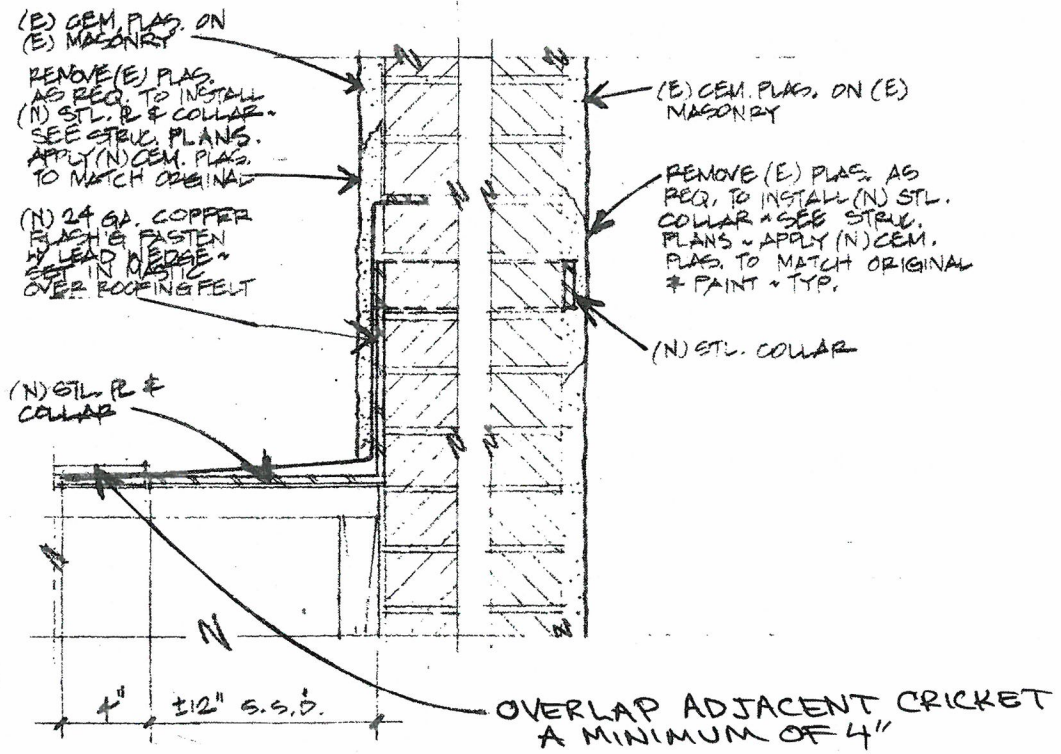
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2 CHIMNEY FLASHING DETAIL NTS
Chimneys #6 and #7

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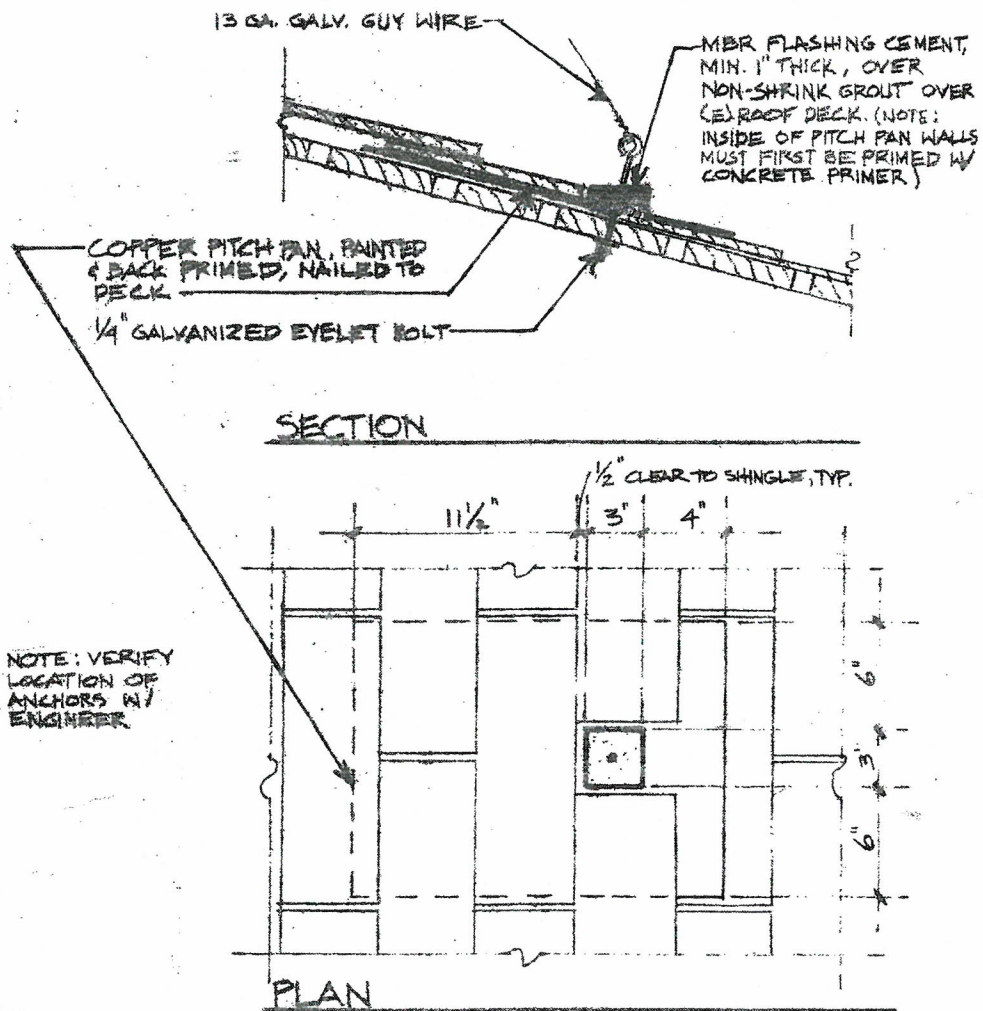


3 CHIMNEY #3 FLASHING

1 1/2" = 1'-0"

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4

GUY WIRE ANCHOR

Chimney #7

1 1/2" = 1'-0"

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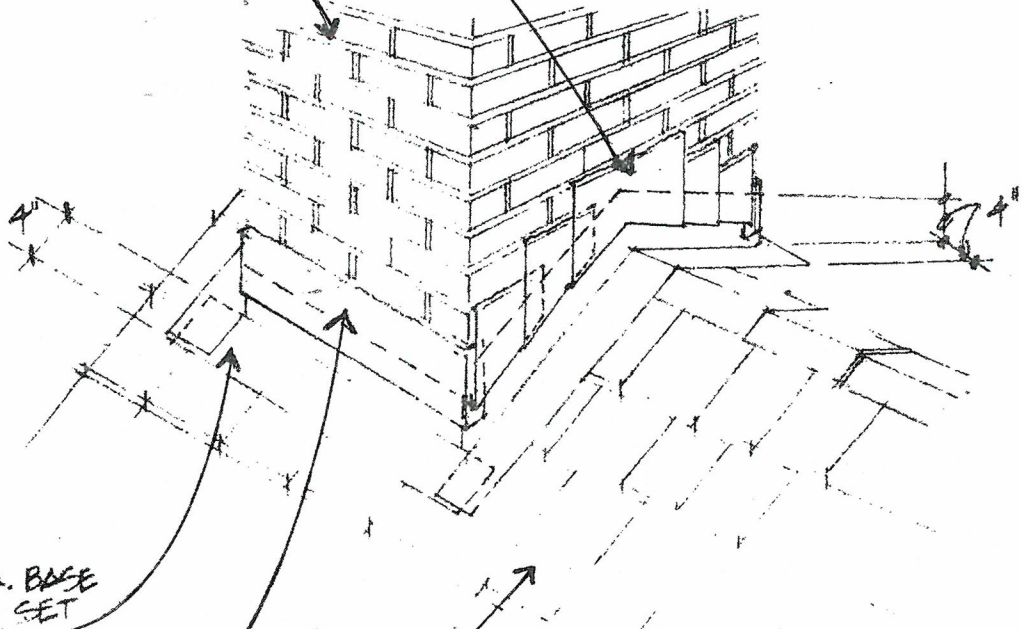
(N) COUNTER FLASHING
4" WIDE ~ MIN.

REBUILD (E) CHIMNEY
AS REQ. ~ SEE
STRUC. PLANS

(N) 24 GA. BASE
FLASHING SET
IN MASTIC

(N) 24 GA. COUNTER
FLASHING SET W/
LEAD WEDGE

INSTALL (N) WD.
SHINGLES AS REQ.



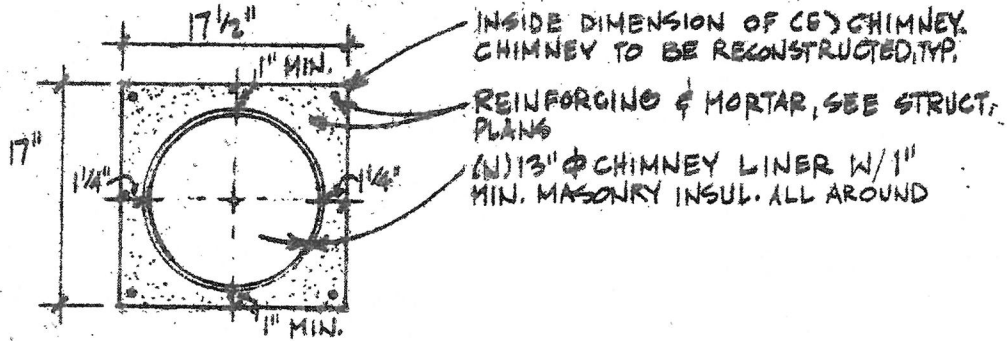
5 CHIMNEY FLASHING AT RIDGE

INTS

Chimney #7

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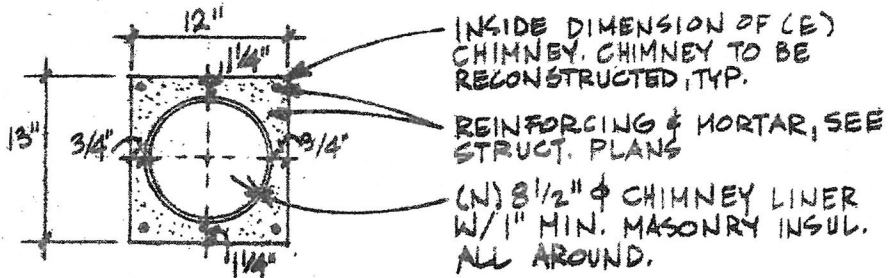


INSIDE DIMENSION OF (C) CHIMNEY. CHIMNEY TO BE RECONSTRUCTED, TYP.

REINFORCING & MORTAR, SEE STRUCT. PLANS

(N) 13" ϕ CHIMNEY LINER W/ 1" MIN. MASONRY INSUL. ALL AROUND

CHIMNEY NO. 1

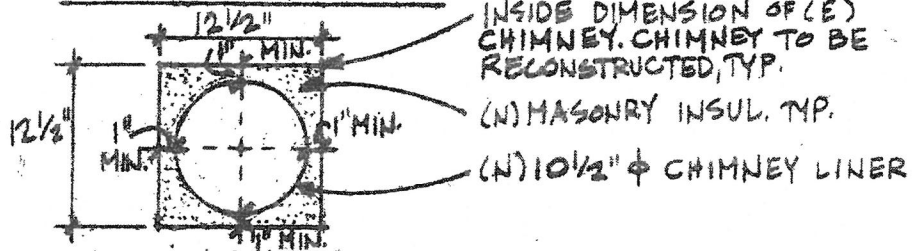


INSIDE DIMENSION OF (C) CHIMNEY. CHIMNEY TO BE RECONSTRUCTED, TYP.

REINFORCING & MORTAR, SEE STRUCT. PLANS

(N) 8 1/2" ϕ CHIMNEY LINER W/ 1" MIN. MASONRY INSUL. ALL AROUND.

CHIMNEY NO. 2



INSIDE DIMENSION OF (C) CHIMNEY. CHIMNEY TO BE RECONSTRUCTED, TYP.

(N) MASONRY INSUL. TYP.

(N) 10 1/2" ϕ CHIMNEY LINER

CHIMNEY NO. 3

6

CHIMNEY LINING DETAIL 1" = 1'-0"

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ADOBE SEISMIC UPGRADING

CHIMNEY SURVEY

Phase One of the seismic retrofit program performed seismic strengthening and flashing upgrades TO THE Ranch House Chimneys. The retrofit work was based on sheets A1.2, A2.1, S5, S6 of Ranch House Strengthening Drawing by GFDS/ARG dated April 17, 1996. The current conditions of the Chimneys are as follows:

Chimney # 1 – Dining Room

The refitted chimney had not been done per plan, but from the physical examination of the chimney it would appear that the alternate execution was most likely an engineered solution. It has a metal cage around the exterior which probably has to stay in lieu of tie back. Additional work was done inside the attic. The chimney was completely rebuilt from the ground up.

Chimney # 2 – Music Room This was executed per plan.

Chimney # 3 – Library

From the roof upward it was refitted, however it does not look as though the collar tie in from the rafters was executed. Per the plan, the collar was plastered over to match existing. While some work was done, during Phase III once the roof is removed, it will be possible to see inside and determine what else may need to be done.

Chimney # 4 – Billiard Room

It appears that no seismic work was done on this chimney and there is no disturbance to the existing ceiling which would have had to be partially removed. The floor boards around the chimney (Storage Room) were not visible due to storage of artifacts. Re-inspect when contents are relocated. The roof flashing and chimney cap are complete per plan.

Chimney # 5 – Master Bedroom

This was executed per plan. Need to see if we should install a better connection to the new bond beam and need to be sure that Structural Focus looks at this. According to the plan, the existing “temporary” bracing can be removed once the chimney is tied into the Bond Beam.

Chimney # 6 – South Wing, east bedroom

There is no evidence that anything was done inside. It is not on the plans but it appears that it was rebuilt from the roofline up, but not tied into the rafters. Verify once the roof is removed. Chimney # 6 is not shown on the plans.

Chimney # 7 – Kitchen

No work executed. Double chimney back-to-back through the Attic. Structural Focus has provided a design detail. See Detail #11 on Page S7.2 of the Structural Drawings dated January 19, 2015

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ADOBE SEISMIC UPGRADING

2ND FLOOR PORCH

- Perform structural retrofit to the posts, corbels and headers as indicated on Page S7.1 of the Structural Drawings by Structural Focus dated January 19, 2015..
- All “Dutchman” and epoxy fillers are to be textured to match existing finishes.
- Remove the temporary plywood covering the failing plaster ceiling and original plaster wood lath? Leave lath? Inspect for any structural framing damage and repair as necessary. Report any damage to structural engineer and RLAF. Reinstall new lath and plaster with “Dash” type finish to match existing.
- Document existing floor covering material. Provide matching mock-up finish sample to be used over new waterproofing system. Remove all existing materials down to sound substrate and install new waterproofing system over entire porch surface. Waterproofing system to be Pacific Polymers Elasto-Deck 5000 x 2 with Elasto-Glaze 6001 AL-HT Clear Top Coat Membrane applied over historical “Canvas” covering. After approval of mock-up sample by RLAF, apply “Historical” finish over new system.
- Paint all walls and woodwork – see painting specifications.

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ADOBE SEISMIC UPGRADING

SKYLIGHTS

LIBRARY

- Remove and replace broken glass pane. Provide new glass to match existing as close as possible. Submit sample for approval by RLAF prior to installation.
- Remove all existing paint from metal frame. Prime and paint with two finish coats of "Rancho Red" enamel. See Paint Specifications.
- Treat all rust at glazing stops and frame with wire brush and Rust Reformer prior to painting.
- Provide and install new copper counter flashings around perimeter of frame.
- Remove all existing glass panes. Number in sequence. Clean thoroughly and reinstall with new polyurethane sealant.
- Clean and seal any cracks or holes in existing metal frame.

FRONT RANCH OFFICE

- Same treatment as Library, except no broken glass.

KITCHEN

- Provide and install new copper roof to wall flashing and counterflashings to replace temporary flashings.

FRONT RANCH OFFICE

- Remove and replace existing metal facing around skylight curbing.
- Remove all existing paint from metal frame. Prime and paint with two finish coats of "Rancho Red" enamel. See Paint Specifications.

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ADOBE SEISMIC UPGRADING

- Treat all rust at glazing stops and frame with wire brush and Rust Reformer prior to painting.
- Provide and install new copper counter flashings around perimeter of frame.
- Remove all existing glass panes. Number in sequence. Clean thoroughly and reinstall with new polyurethane sealant.
- Clean and seal any cracks or holes in existing metal frame.

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ADOBE SEISMIC UPGRADING

DORMERS

Save as much of the original materials as possible. The scope of work calls for remove and replace for some elements. Epoxy-fill and/or Dutchman patches are preferred in lieu of remove and replace.

DORMER #1 – SOUTH WING – NORTH SIDE

- Remove and replace 1 x 8 two-step fascia at all three sides.
- Epoxy-fill window frame and sill.
- Install new copper roof to wall flashings at two sides and sill flashing at window sill
- Install self-stick Bituthene sheeting on Dormer side walls prior to reinstallation of shingles.

DORMER #2 – SOUTH WING – SOUTH SIDE

- Epoxy-fill window frame and sill.
- Install new copper roof to wall flashings at two sides and sill flashing at window sill
- Install self-stick Bituthene sheeting on Dormer side walls prior to reinstallation of shingles.

DORMER #3 – EAST SIDE – SOUTH

- Epoxy-fill corners of 2-step fascia.
- Minor frame deterioration to be filled and sanded.
- Install new copper roof to wall flashings at two sides and reseal existing copper sill flashing at window sill.
- Install self-stick Bituthene sheeting on Dormer sidewalls prior to reinstallation of shingles.

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ADOBE SEISMIC UPGRADING

- Clean glass and muntins inside and out.

DORMER #4 – EAST SIDE – NORTH

- Epoxy-fill corners of 2-step fascia.
- Reattach and seal wood window stops. Minor frame deterioration to be filled and sanded.
- Install new copper roof to wall flashings at two sides and reseal existing copper sill flashing at window sill.
- Install self-stick Bituthene sheeting on Dormer sidewalls prior to reinstallation of shingles.
- Miscellaneous carpentry repairs at south side of Dormer.

GENERAL NOTE - ALL DORMERS

- Prepare, prime and paint all windows, frames, trim, fascia and sidewall shingles "Rancho Red". Verify paint product will adhere to fire treated shingles. See Paint Specifications.

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ADOBE SEISMIC UPGRADING

WINDOWS

NORTH 2ND FLOOR

- Remove sash slider track on frame.
- Reglaze as necessary.
- Make window operable on both sashes.

EAST DORMER WINDOWS

- Clean glass inside and out.
- Seal around interior sash perimeter at frame to weatherproof. Use polyurethane caulking.

BUSINESS OFFICE – BACK PATIO

- Reglaze three windows, upper and lower sash. Protect historical glass during removal of old glazing.
- Epoxy-fill left lower frame at center window. Remove and replace cracked glass pane at upper left sash. Match historical glass as close as possible.

COOK'S BEDROOM – BACK PATIO

- Reglaze lower sash at east window and upper sash of west window.

MAID'S BEDROOM – BACK PATIO

- Reglaze lower sash of east window.
- Reglaze lower sash of west window and epoxy-fill the window sill.

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ADOBE SEISMIC UPGRADING

FRONT OFFICE – WEST WALL

- Reglaze linear multi-pane window above the awning.
- Epoxy-fill the window sill full length.
- Coordinate removal and replacement of awning or alternate access to this window.

GENERAL NOTE – ALL WINDOWS

- Prepare, prime and paint sash, muntins and frame/sill with “Rancho Red”. See Paint Specifications.
- Protect historical glass during removal of old glazing and preparation of muntins for painting.

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ADOBE SEISMIC UPGRADING

RESTORATION CARPENTRY

BUSINESS OFFICE

- Prepare and epoxy-fill termite damage to 1 x siding at upper west wall. Coordinate removal and replacement of awning, or alternate access to this area to perform repairs.
- Prepare and epoxy-fill termite damage and deterioration to fascia at north end.

BACK PATIO

- Prepare and epoxy-fill water damage and deterioration to lower ends of 1 x siding along north wall. Area to be repaired = approximately 10 linear feet x 8 inches high, including 2 lineal feet of 1 x 4 Batten.
- Rebuild and rescreen the wood panel screen door at "Fred's Office". Restore and reuse hinges and hardware.

NORTH WING – NORTH SIDE

- Repair/restore wood panel door to "Men's Bathroom". Repair delaminating panel veneer. Prepare and epoxy-fill 1 x trim at bottom of frame and miscellaneous damage to frame and sill. Restore and reuse hinges and hardware.
- Restore metal sign over door to old Bathroom = "Men's Bathroom".

FASCIA

- Remove and replace, or epoxy-fill two-step fascia west of roof peak at south side of Master Bedroom.

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ADOBE SEISMIC UPGRADING

- Repair fascia connection of two-step fascia at roof peak of 2nd floor on the north side.

SCREENED PORCH-EAST LAWN

- Repair mitered corner of fascia at the southeast corner of Porch Roof.
- Repair/epoxy patch mitered corner of fascia at the northeast corner of Porch Roof.
- Epoxy patch 1" hole in Porch fascia at north end.
- Above Porch at northeast corner, repair/Epoxy patch large gap in mitered corner of fascia at Main House Roof.

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ADOBE SEISMIC UPGRADING

PLUMBING ITEMS

- Disconnect gas line to existing furnace unit and reconnect new unit in approximately same location after seismic work is completed.
- Provide pressure test on all existing gas lines to remain in place.
- Disconnect and dispose of abandoned non-historic gas, steam heat, or water lines that are in the path of construction over all Adobe walls and plywood diaphragm. Any historic piping to remain shall be labeled.
- Disconnect and temporarily cap, or reroute all existing active gas and water lines that are in the path of construction over all Adobe walls. Reconnect all lines that were not rerouted for the seismic work, after construction is complete.
- Disconnect gas line to existing abandoned furnace at south end of attic. Remove and dispose of furnace and all related piping. Provide and install new piping to same location.
- Disconnect gas lines and water lines to existing abandoned water heaters at south end of attic. Remove and dispose of all related piping. Cap off piping at wall penetrations. Remove and dispose of both water heaters.
- Provide and install new Insta-Hot point of use water heater at existing historical bathroom at southwest bedroom, ground floor of South Wing.
- Remove and dispose of existing non-historic electric 30 gallon water heater located in Back Porch Closet. Provide and install new energy efficient 30 gallon electric water heater with new valves, drip pan, T.P.R. valve and piping, and seismic strapping.
- Install a "tee" in the attic to the main gas line for potential future connection. Install threaded plug in Tee. Coordinate location of tee with Project Manager.

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ADOBE SEISMIC UPGRADING

HARDWOOD FLOORING

- At the second floor living space, remove and store all Hardwood and Douglas Fir flooring to allow access to the top of the Adobe walls.
- Carefully remove the finish flooring in three bedrooms, three closets and the Hallway. Clean materials of all nails, bundle, and label and store onsite until seismic work on the floor joists is completed.
- When the seismic work in these areas is completed, reinstall flooring materials, sand and finish. Installation to be glue down method.
- Apply any filler required prior to sanding. Finish with a color aged patina using three coats of polyurethane.
- Carefully remove and reinstall any baseboard, mouldings or trim necessary to allow removal of the flooring material.
- Submit specifications on the filler and glue-down products for approval to RLAF.
- Submit mock-up finish samples of color and polyurethane finish along with product data to RLAF for approval.

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ADOBE SEISMIC UPGRADING

ELECTRICAL ITEMS

- Prior to any work commencing, review all existing wiring and conduit installations with RLAF to map and document any installations done in the "Family" period.
- Survey all electrical conduit and junction boxes throughout the attic area for abandoned and/or obsolete service and wiring.
- Remove all abandoned and/or obsolete conduit, boxes and wiring.
- Reroute all conduits, wiring and J-Boxes in the areas of seismic framing/blocking and the new plywood diaphragm in all obstructed areas. Provide new conduit, wiring and J-Boxes as required.
- Properly label all identifiable conduit runs and J-Boxes. Provide an As-Built Drawing to indicate what supplies the various devices in the Ranch House.
- Provide and install new electrical service and disconnects to the three new HVAC units to be installed.
- Provide and install temporary lighting throughout the Attic in the areas of seismic retrofit work. Coordinate with existing light fixtures already in place.
- Provide separate optional bid pricing to install an electrical contactor system to shut down all outlets and lighting in the Ranch House using a single switch.

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ADOBE SEISMIC UPGRADING

HVAC

- Provide and install three zoned systems in the Ranch House attic. The systems are to be high-velocity type, capable of dehumidification, humidification, heating and cooling.
- Areas to be served are as follows:
 - System#1 = North Adobe area, Dining Room, Kitchen areas, Men's Dining Room and Cook's Bedroom.
 - System #2 = South Adobe area, Master Bedroom, Girl's Bedroom and Granny Green's Bedroom.
 - System #3 = Offices/Former Bedrooms in the south wing.
- Zone sensors are to be placed at locations coordinated with RLAF.
- All supply and return air registers are to be placed at locations coordinated with RLAF.
- Coordinate size, type and color of all registers with RLAF.
- New HVAC systems are to be provided on a Design/Build basis. Capacity and locations of all equipment and ductwork to be reviewed and approved by RLAF. Include design review by certified Mechanical Engineer in bid pricing.

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ADOBE SEISMIC UPGRADING

TERMITE/PEST CONTROL

- Fumigate the entire Ranch House structure for the control of drywood termites. The fumigant to be used is "Vikane", the active ingredients are Sulfuryl Flouride and Chloropicrin.
- RLAF will prepare the structure and affected plant materials for fumigation upon formal written notice from Fumigator. The structure will be vacated until released for re-entry by the fumigator.
- Fumigator will be a fully licensed contractor and registered with the Structural Pest Control Board of the State of California. Only pesticides that are registered and approved by the California Department of Pesticide Regulation and the EPA may be used on the structure.
- Fumigation procedure to take place once the new plywood roof sheathing has been installed, prior to installation of any roofing materials.
- Provide lump sum pricing for the fumigation of the entire first and second floors of the Ranch House structure.
- Provide an additive per building cost for the Foreman's Cottage, the Blacksmith's Shop, the Cow Barn, the Sheepherder's Wagon, the Feed Shed, the Stallion Barn and Event Prep/Laundry Room/Milk Room Building.
- Provide an additive cost for local treatments at the Rancho Center, the Bookstore and the Feed Storage Shed.

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- Fumigation Contractor is fully responsible for protection of all plant materials and historical finishes during the course of fumigation. Coordinate with RLAF and General Contractor.

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ADOBE SEISMIC UPGRADING

SURVEY OF THE RANCH HOUSE EXTERIOR FOR RODENT/PEST ENTRY POINTS

The locations are listed below and the recommended repairs for each location are in italics.

- Electrical conduit penetration through the eaves above the Pantry window on the north wall is oversize. There is a 1¼" open hole adjacent to the pipe penetration.
 - *Caulk and seal around conduit penetration with Sika Polyurethane or equal. Provide and install a "Dutchman" plug in the abandoned open pipe hole. Use similar wood material to match. Prep, prime and paint to match existing.*
- Square hole in siding, approximately 1½", between windows at north side (Cook's Bathroom) west of Screen Porch.
 - *Provide and install a "Dutchman" plug in the open hole. Use similar wood material to match. Prep, prime and paint to match existing.*
- The louver Attic Vents at all areas are missing all screening. The vents are located above Vault at north wall, above Accounting Office at west wall, above Front Office at west wall and the north and south ends of the second floor.
 - *Provide and install copper, or bronze insect screen on Attic side of louvers. Attach screening to obtain a tight perimeter seal.*
- Miscellaneous open spaces in wood siding at Front Office Pepper Tree Patio. There are large gaps between the bottom of the siding and the top of the brick foundation, above the old abandoned pipes (cut off), and at the Hose Bibb. The wire mesh on the Foundation Vent is stretched and open.

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ADOBE SEISMIC UPGRADING

- *Provide and install "Dutchman" pieces and epoxy filler to seal all open areas. Use similar wood material to match. Prep, prime and paint to match existing. Remove and replace wire mesh screen on Foundation Vent. Use galvanized wire mesh to match existing.*
- Miscellaneous open spaces at west wall of Front Office. There is a hole in the wood siding to the left of window, oversize hole around conduit penetration into siding at Attic level, a hole in the eaves above the conduit and three holes above the Louver Vent.
 - *Provide and install "Dutchman" plugs in open holes and spaces. Use similar material to match. Caulk and seal around conduit penetration with Sika Polyurethane, or equal. Prep, prime and paint to match.*
 - * *NOTE: The holes above the Louver Vent are above the window awning. Special ladder access may be required, or the Awning may have to be removed and reinstalled. Contractor to inspect window sill, on upper window system and report condition to Rancho Representative. Action on window sill T.B.D.*
- Entire corner of roof eave fascia at southeast corner is deteriorated and open full height.
 - *Rebuild corner fascia using similar wood material and epoxy filler. Prep, prime and paint to match existing.*
- The south ends of the floorboards for the Front Screened Porch are deteriorated and open to the foundation space.
 - *Rebuild all floorboards using similar wood material to match and epoxy filler. Prep, prime and paint to match existing.*
- Front Roof Dormers where they tie into main roof require miscellaneous repairs.

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ADOBE SEISMIC UPGRADING

- *See the Section on "Dormers".*
- The electrical and telephone "Dog Houses" along the east wall of the Vault Building have miscellaneous open areas into the attic space and the wall space.
 - *Provide and install wood, sheet metal and wire mesh as required to close up all openings. Maximum gap, or opening to be no greater than 1/4".*
- There is a large opening up into the rafter eaves at the east side of Chimney #1.
 - Provide and install plywood, or 1 x to fully close and box out opening.

GENERAL NOTE:

- All areas requiring prep, prime and paint are to be treated per the Paint Specifications.

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ADOBE SEISMIC UPGRADING

ROOFING

Roofing will include the first and second floors of the entire Ranch House, including Dormers, Skylight ties-ins, flat hot mop areas and the Back Porch. Two areas have been re-roofed previously and are not to be replaced as part of this contract. These two areas are: The Girl's Bedroom (south side) and the Business/Accounting Offices (east side). The skylight over the Business Office is to be included in this contract/Scope. The roofing installation is to include all related flashings, counterflashings and roof metal.

- Remove all existing layers of roofing materials, including Dormer side walls. Haul away from site and dispose of properly.
- Provide and install ½" OSB roof sheathing over the existing 1 x spaced sheathing. See Pages S0.4 and S2.3 of the drawings by Structural Focus dated, January 19, 2015.
- Provide and install one layer of 30# ASTM underlayment on entire roof surface with cap sheet bleeder in all valleys. Use stainless steel, or hot dipped galvanized steel wire nails with low profile capped heads or disc caps, 1 inch minimum diameter.
- Provide and install all roof related metals, including all custom steep pitch pipe flashings, valley flashings, drip metal, chimney flashings, dormer flashings, custom cricket at north side. All metals to be fabricated with 16oz. copper. See Details #1, #2, #3, #4, #5 in Chimney Section.
- Provide and install one layer of 72# cap sheet to obtain a Class A Fire Rating.
- Provide and install fire treated Grade No. 1 - 18 inch long, 0.45 inches thick Class B Perfection Wood Cedar Shingles on entire roof and Dormer sidewalls.

RANCHO LOS ALAMITOS

ADOBE SEISMIC UPGRADING

- Shingle = "Cedar Plus" by Chemco, or approved equal, ICBO#ES ER 5404 installation to be a maximum 5" exposure. All hip and ridge shingles are to be included. Manufactured units of same species, thickness and fire treatment as roof shingle, 7" wide, alternately overlapped. Grade No.1, Class B, 18 inches.

Roofing Nails: ASTM F1667, stainless steel, ring shank, wire nails, sharp-pointed, and of sufficient length to penetrate full depth into OSB sheathing. Use shingle type nails for wood shingles. Where nails are in contact with copper flashings, use copper nails with same specifications.

- Provide and install Fall Arrest Anchors per current CalOSHA requirements. Coordinate options available with RLAF. Low profile options are preferred, or reuse existing anchor rings.
- Contractor to protect all historical plant materials adjacent to the Ranch House during the course of demolition/tear-off and new installation. Coordinate with RLAF and General Contractor.
- Contractor to provide manufacturer's Data Sheets on all products proposed for use.
- Contractor to provide 100 square feet of bundled fire treated shingles to Owner, for future repairs.
- Review options on roofing materials with Owner for the Back Porch (north side). Final product to be historically correct, composition type sheet product. No nailing is to penetrate through sheathing at underside.
- All grounds to be cleaned up daily.
- Roofing contractor to coordinate schedule with General Contractor and Owner. The east end of the Roof, over the Adobe will need to remain open and unroofed for access to the

RANCHO LOS ALAMITOS

ADOBE SEISMIC UPGRADING

Attic. The proposed "access hole" will be in the center of the east roof between the two Dormers. Final size of access to be determined with General Contractor. Final roofing of this area will be a second move-in. Base sheet and cap sheet can be installed up to the perimeter of the access hole.

- Weather Limitations – Proceed with roof tear-off and installation only when existing and forecasted weather conditions permit roofing to be performed according to manufacturer's instructions. The interior furnishings and finishes must be protected from weather damage.
- Roofing Installer shall provide a full warranty on all installed roofing products and materials. Installer agrees to repair, or replace any components of roofing system that fail in materials or workmanship within five (5) years from Substantial Completion.

RANCHO LOS ALAMITOS

ADOBE SEISMIC UPGRADING

RAINGUTTERS/DOWNSPOUTS

- Provide and install custom steep pitch copper drip metal on entire roof perimeter edge.
- Review options of 5 inch OG, or 6 inch Half-round copper gutter system on entire Ranch House. Install as directed by Owner.
- Review options of 2" x 3" rectangular, or 3 inch round copper downspouts on entire Ranch House. Install as directed by Owner.
- All miters and joints to be soldered.
- Provide and install all special copper counterflashings required at Chimneys and other protrusions which affect adjacent rain gutters.
- Provide optional pricing to Owner to provide and install all of the above items in prefinished aluminum. All miters and joints to be caulked with Polyurethane.

RANCHO LOS ALAMITOS

ADOBE SEISMIC UPGRADING

FIRE ALARM/SECURITY

- Provide and install Smoke Detectors in both upstairs Bedrooms.
- Provide and install Smoke Detector in the "Inner Attic" Storage Closet.
- Provide and install Smoke Detector at the 2nd Floor stairway landing/hallway. The Detector should not be visible from the downstairs Back Hallway.
- Provide and install Smoke Detector in "Granny Green's" Bedroom.
- Provide and install all components required to link the Ranch House System Control Panel in the Attic with the Master Panel in the Rancho Center Basement. Arming and disarming of all systems and zones to be accessible at all keypad locations.

RANCHO LOS ALAMITOS

ADOBE SEISMIC UPGRADING

TELEPHONES/COMPUTERS

- Reroute existing low voltage wiring to accommodate seismic retrofit work. Maintain continuity of systems during construction.
- Electronic Switch location to be determined. It is currently located in the closet in Pam Lee's new office. Coordinate with RLAF for any relocation.
- Identify, verify and label a continuous dual-pair low voltage wire connection between Security/Fire Control Panel in the Ranch House and the Master Control Panel in the Basement of Rancho Center. Maintain connectivity with the Foreman's Cottage keypad.

RANCHO LOS ALAMITOS

ADOBE SEISMIC UPGRADING

PREPARATION OF ATTIC

- Cut access hole into east facing roof for construction access. Coordinate location and size with Project Manager. Save and number existing 1x sheathing for reinstallation.
- Remove all existing Catwalks, plywood and storage cages to allow for structural improvements. Material may be used for temporary access to the ceiling joists and Adobe walls. All material to be reviewed by RLAF and then disposed of upon completion of plywood diaphragm.
- Remove Gunitite where it stacks above the ceiling joists and wherever it is in conflict with new retrofit work. Remove debris from the site.
- Provide and install temporary lighting throughout the area in the Attic where the seismic retrofit work will take place. Coordinate with existing light fixtures already in place.
- Provide plastic sheeting and/or plywood and/or wire mesh screening to prevent animals/rodents from entering the Attic through the construction access hole. See Specifications Section 01500-10