PRESERVATION
ARCHITECTURE

July 31, 2015

PHOENIX CABIN
HISTORIC STRUCTURE REPORT

PHOENIX CABIN – Front yard – 1991 (MMWD)

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446 17th Street #302 Oakland 94612
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Introduction

This Historic Structure Report (HSR) has been prepared at the request of the Marin Municipal Water District (District), and for their use in planning for the future of the Phoenix Lake Log Cabin (Cabin), which is located on District lands adjacent to Phoenix Lake in southern Marin County.

What to do with this structure is a key question for this evaluation. To address this question, its history and significance are first summarized, the property and structure and their extant conditions are then described — including planning information about specific aspects of significance — then concluding in an evaluation in the form of specific use and treatment recommendations.

To begin with, regarding potential historic significance, while it has not previously been identified as an historic resource, the Cabin has clear historic importance given its age, its location, its early associations, and its unique type of construction.

Regarding its extant conditions, what is most in evidence about the Cabin is its lack of purpose and use, thus the lack of care, compounded by a semi-remote location. Consequently, the Cabin is a deteriorating and highly vulnerable structure that does not have time on its side and if left to decay in a natural way would be a continued liability. This HSR thus especially focuses on the Cabin's condition and potential remedial treatments.

Fig.1 – PHOENIX CABIN - Front from fire road, looking north (MH-2014)

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Fig.2 – **PHOENIX CABIN - Aerial view showing location** (Google Maps, 2015 - north at left)

Summary History

PORTEUS RANCH

(the following summary is from ***Historical Resources Inventory and Evaluation Report, Porteous Ranch House, Phoenix Lake***)

The Porteus Mansion was built by James Stoddard Porteous. In 1886 the Porteous Ranch homesite consisted of the mansion, a log cabin for the ranch foreman, a smaller log cabin or bunkhouse, and a barn on 5-acres with a garden, vineyard and orchard, all surrounded by an eight-foot wire fence to keep out the deer. The main house consisted of 12 rooms and 3 bathrooms in two stories, facing south toward the mountain.

Mr. Porteous died February 6, 1887, at the age of 58 a few weeks after having moved to the ranch from San Francisco. The property went to his widow, Janet, who continued to live at the ranch until just before her death in San Francisco on March 14, 1904, at the age of 84. There being no children the estate passed to the executors who sold the ranch at public auction to the Marin County Water Company, which later became the Marin Water and Power Company. The Water District acquired the property in November 1916 and until it was destroyed by fire September 14, 1925, the mansion was used as a residence for lake keepers and patrolmen.

James Stoddard Porteous was one of the many San Franciscans who moved to Marin County in the late nineteenth century. Porteous, who had emigrated from Scotland and arrived in California in 1872, purchased the Hippolyte Ranch, a 1,128 acre section of the former Rancho Punta de Quentin, from Alexander and Mary A. Forbes in 1883. Mary Forbes had acquired the property from Mary Ross in 1880. The ranch was located west of Ross and Fairfax. It extended from Phoenix Creek near the location of the Phoenix Dam, up the Fish Grade northwest to the site of the Meadow Club west of Fairfax, easterly through Deer Park to the backside of Bald Hill. Porteous obtained an additional thirty-two- acre parcel adjoining the Hippolyte Ranch from the Marin County Water Company, on the northern side on Phoenix Gulch where Porteous and his wife Janet constructed a five-acre country estate in 1886. This property, referred to as the Porteous Place, overlooked Phoenix Creek. It included a two-story, twelve-room house, several outbuildings, a barn, a garden, vineyard and orchard all surrounded by fencing. Although Porteous died within months of moving to the new residence, Mrs. Porteous continued to reside on the homesite while maintaining an active participation in San Francisco's social and charitable organizations. For example, Mrs. Porteous was a charter member of the California Club and created a self-improvement club for young, single working women she named the Porteous Club, an offshoot of the California Club. After her husband died, Mrs. Porteous leased portions of the Porteous Hippolyte Ranch property to the Marshall family of Ross who used the property for cattle and a dairy ranch. Several buildings were constructed on the grounds during Mrs. Porteous' occupancy, including the Phoenix Log Cabin built in 1893, which sits south of the present Porteous Ranch House.

After Janet Porteous' death in 1904, the estate heirs and the Marin County Water Company clashed over the proposed abandonment of the county road that ran through Phoenix Gulch and provided access from the Porteous estate into Ross. The road abandonment was a necessary step for the construction of the proposed Phoenix Lake. The water company purchased the Phoenix Dam site from David Porter and built Phoenix Dam in 1908. After several years of negotiation, the Marin County Water Company purchased the Porteous land in February 1909 that included portions of where Phoenix Lake is now and land surrounding Phoenix Lake. After taking possession of the land, the water company terminated the Marshall lease and ran its own cattle on the old Hippolyte Ranch.

PHOENIX CABIN

(The following brief historical summary is from MMWD files dated 1974 and revised 1982)

Located on what was known as a part of the Porteous Ranch, the Phoenix Log Cabin was built in 1893 or 1894. It was built by Mrs. Porteous, Mr. Porteous having died in 1887, for Martin Grant, her coachman and more or less foreman of the ranch.

The redwood logs were cut on the Deer Park section of the ranch as Mrs. Porteous did not want any trees removed from near the main house, which was uphill of the cabin on the same site as today's ranger's house. The curly redwood trim around the windows and doors came from a fallen tree on the southwesterly side of the Shaver Grade.

In 1898 Henry Hanson, landscape gardener from the Hotel Rafael, went to work for Mrs. Porteous, replacing Martin Grant as foreman, and lived in the cabin until late 1909. Mrs. Porteous died in early 1909 and the Marin County Water Company acquired the ranch at a public auction that fall. From late 1909 until the Water District acquired the property in November of 1916 the cabin was used as a hunting lodge by A. W. Foster, President of the Water Company.

Early pictures of the cabin show it with a cupola over the front porch. It is not known when this was removed. Speculation is that it may have been removed when the cabin was reroofed or it may have caught fire at one time.

In 1940 considerable renovation was done. The concrete floor was poured in the kitchen, some interior paneling was done, the brick fireplace was built and the flagstone patio was added to the front of the cabin.

Summary of Historic Significance

Dating to 1893-94, thus an aged building in its Marin County context, and a structure directly associated with the Porteous family, early settlers and ranchers on this property, the Phoenix Log Cabin has each of these clear and simple bases for the identification of historic significance. Moreover, it is a log cabin, which is easily identified as unique rustic design and construction.

Additionally, what may constitute the core historic structure is also largely intact even if, currently, in a deteriorating state.

While a formal determination of significance requires more detailed analyses and findings based on applicable criteria, at this juncture, a finding of historical importance appears possible. Consequently, it also appears that the Cabin would be considered a historic resource for planning purposes, which would include addressing proposed work with respect to the California Environmental Quality Act (CEQA), and which generally requires the identification of historic resources and an analysis of potential impacts thereon.

Additional and detailed information that can be used in a determination of significance is located in the descriptions section of this report.

Descriptions

SITE/SETTING

The Phoenix Log Cabin is set in a semi-rural setting – an open oak woodland along the northwestern shoreline of Phoenix Lake (figs.1-4), which was created in 1908 when Phoenix Creek was dammed by the Marin Water Co. and the Marin Water & Power Co. in the period of their acquisition of the former Porteous Ranch. Today, an unpaved watershed protection road, used recreationally and as a restricted road for water system and watershed maintenance, approaches and passes directly around the front of the Cabin – the road actually comes to within 10 feet, yet which it is separated from by a tall wooden fence, though an unused front gate remains to suggest a former frontal approach. The Cabin is now approached from a driveway at the rear, where there is parking and which also accesses a house to the north. The Cabin sits on land sloping down to the southeast towards the lake. Thus, from the rear, it is approached from above. Plus, the structure hunkers low from that perspective as it is partially dug into the ground at the rear and west side, along which there are low retaining walls set back from the perimeter to create narrow area ways.

From a small water district pump house structure at the driveway, an asphalt paved and curbed entry walk and ramp meander down the slope to the rear porch and entry at the Cabin's northeast corner. There are, essentially, no other site improvements (walks, patios, etc.) associated with the Cabin.

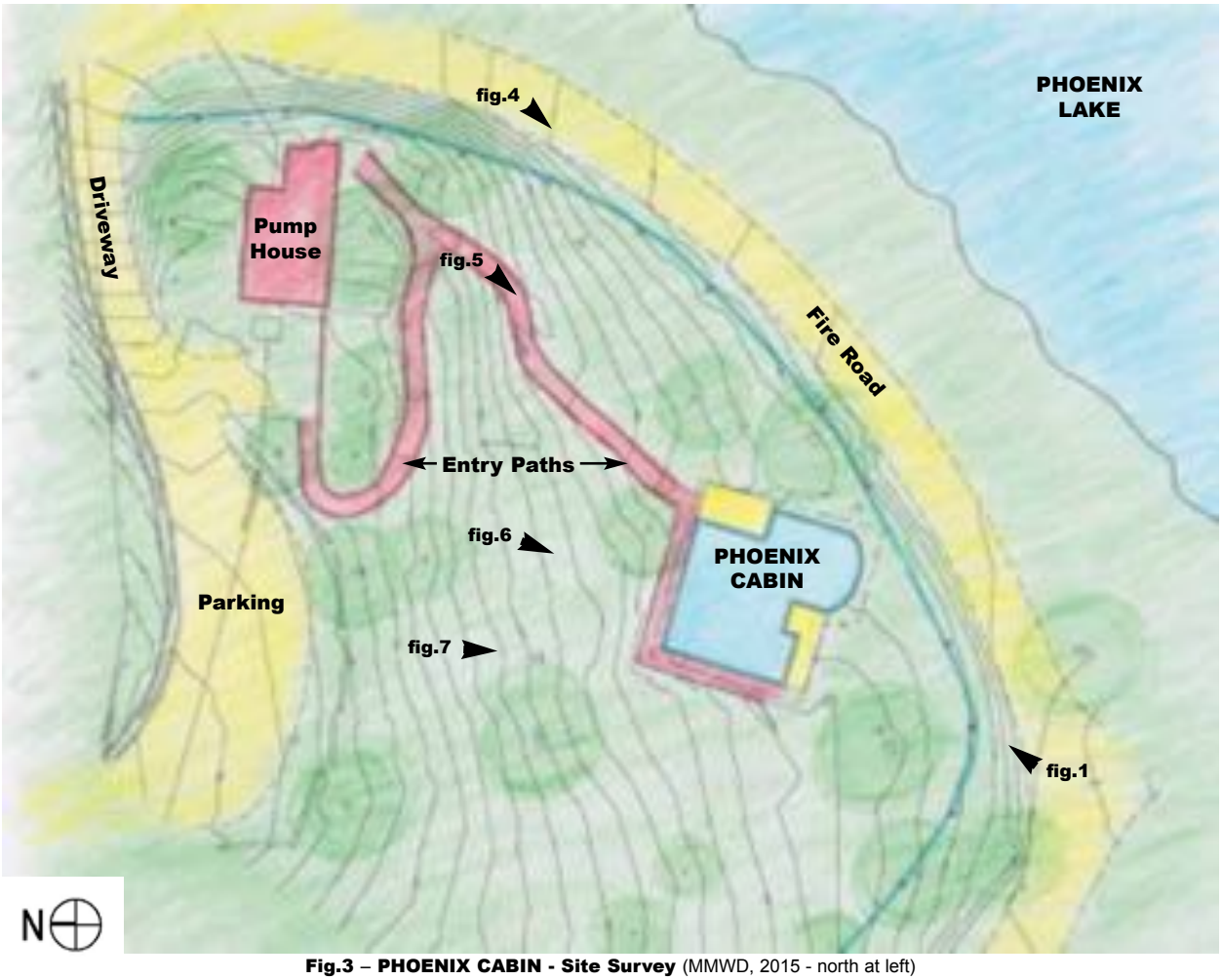


Fig.3 – **PHOENIX CABIN - Site Survey** (MMWD, 2015 - north at left)

Fig.4 – PHOENIX CABIN - Northeast corner from fire road, looking southwest

Fig.5 – PHOENIX CABIN - East side (left) and north/rear (right) from entry path, looking southwest

CABIN EXTERIOR

The Cabin's exterior is exposed, unpeeled redwood log walls and steeply sloped cedar shingled roofs. There are covered porches at the front (southwest) and rear (northeast) corners. In plan, the main body of the Cabin is almost square under a double-gabled roof oriented east-west. The living room, located in the southeast corner, projects forward under a perpendicular, north-south gable and with a three-sided bay window facing frontward (south). Thus, the Cabin's roof is multi-gabled – with two minor and side-by-side gables facing east-west and a third and higher gable oriented north-south across the eastern half of the structure – resolving itself in a clipped-gable and hip at the northeast corner. The front porch is separately roofed with two steep and small gables and an octagonal cupola under a rounded cone-shaped roof.

Raked roof eaves are log framed, and straight eaves are supported by exposed log rafter tails. There are no roof gutters. Windows are wood sash, painted, including a mix of operating types – most double hung though several are casement and awning. The rear door is wood panel, painted, with a glass lite, and the front a very fine door with curly redwood stiles and rails and decorative sticking arrayed in the upper and lower panels. Window and doors are also framed (cased) with unfinished curly redwood boards. Except for the front door and the casing boards, the doors, window sashes and sills are painted.

The log structure sits atop a concrete foundation faced with thin brick where exposed above grade. The rear porch has a concrete floor slab on grade, and the front porch a wood floor and structure. The roofs of both covered porches are supported by log posts.

Front (south):
In addition to the multi-gable roofed porch and its ornamental cupola, the front elevation is distinguished by the projecting living room bay, its three windows hooded with small log roof assemblies, and its gable ridge and ends further ornamented with log assemblies. And an independent log post supports the front gable's overhanging southwest corner.

East (side):
This elevation is the Cabin's longest, with the relatively long log wall of the living room – including the angled wall of the bay – and porch extension all under one roof plane. There's a large double hung window in the angled wall of the front bay and a large, single awning window in the living room wall. The open and covered rear porch has a pair of log supports and low log railings. Inside the rear porch, a pair of casement windows flank the east-facing rear door. Above, a brick masonry living room chimney stands tall above the roof. Uniquely, netting is used in the overhanging roof eave of this elevation alone to discourage bird nesting and feeding activities.

Rear (north):
As noted, this exterior wall is partly depressed into an area way with a low retaining wall outboard. This elevation, with the open rear porch at its east end, is also under a single, steep roof pitch. There are a pair of double hung windows at the kitchen and a single awning window at the bath. A brick masonry chimney, housing a kitchen flue, stands along this wall. Within the porch, there's also a built-in, stick-built cabinet along the recessed north facing wall.

West (side):
Here, the exterior log wall has double gables to correspond to the roofs. Two double-hung windows are randomly situated within each gable wall, and the south end of this elevation gives way to the open front porch and its roof structures. Like the rear, this exterior wall is partly depressed in a shallow area way.

Fig.6 – PHOENIX CABIN - Rear/north, looking south

Fig.7 – PHOENIX CABIN - Rear/north (left) and west side (right), looking southeast

Fig.8 – PHOENIX CABIN - Rear/north

Fig.9 – PHOENIX CABIN - Front

Fig.10 – PHOENIX CABIN - East side

Fig.11 – PHOENIX CABIN - West side

Exterior character-defining spaces, elements, materials and finishes:

- Unpeeled redwood log walls
- Exposed log roof framing
- Gabled and clipped-gable roof forms
- Front and rear porch spaces
- Ornamental wood entry door
- Wood windows and doors
- Curly wood door and window casings
- Brick masonry chimney (at living room roof)
- Brick masonry flue (at rear wall)

Reconstructed exterior elements are not identifiably historic as they are recent interventions (c1989) and as their conditions are generally poor:

- Front porch roof and cupola
- Rear porch railings
- Ornamental log window hoods
- Log ornamentation at front gable including supporting post

While in generally good condition, other exterior elements added c1989 that are also not potentially character-defining include:

- Brick faced foundations
- Exposed copperwork (at foundations and roofs)
- Utility cabinet at rear porch
- Asphalt paved path
- Exterior lighting

Fig.12 – Log work at front gable

Fig.13 – Log tip detail

Fig.14 – Log work detail

Fig.15 – Double-gabled roof

Fig.16 – Hipped & clipped-hip roof

Fig.17 – Front porch

Fig.18 – Rear porch

Fig.19 – Front Door

Fig.20 – Rear Door

Fig.21 – Window

CABIN INTERIOR

At the interior, the Cabin has three principal rooms – essentially kitchen, dining and living room spaces – plus an entry vestibule, bathroom and closet. However, those labels are assigned on the basis of their former use, the spatial character of which partially remains, and yet the principal uses are in fact absent.

Interior materials and finishes include a mix of exposed unpeeled redwood log walls, partitions and ceilings; wood paneled walls, partitions, wall bases and ceilings; wood flooring; wood panel doors; log, curly wood and molded wood window and door casings; and ceiling hung or ceiling mounted light fixtures in each space. As the living room floor is lower than the rest, there is a pair of wood steps from both kitchen and vestibule doorways.

As the structure is unused, there are no furnishings and minimal equipment, excepting:

- The kitchen has a built-in wood cupboard, a range with a vent flue, a sink, a corner shelf, a freestanding water heater, and a baseboard heater;
- The living room has a brick masonry fireplace, chimney and hearth, a fireplace plaque and a set of fireplace tools;
- The bath has a lavatory, toilet and bathtub;
- The closet has a built-in wood shelf and clothes hanging rail and a floor hatch for crawl space access.

The vestibule, dining and living spaces are all clear wood finishes, including the faces of doors therein. The kitchen is predominately clear wood yet with a painted wood wainscoting and base, the wood cupboard and wood shelf are painted, and the door faces therein are painted. The bath and closet spaces are painted throughout except for the floors, which are clear wood.

Attic spaces also exist above each of the spaces excepting the kitchen, which has a log-built cathedral ceiling.

Interior character-defining elements, material and finishes:

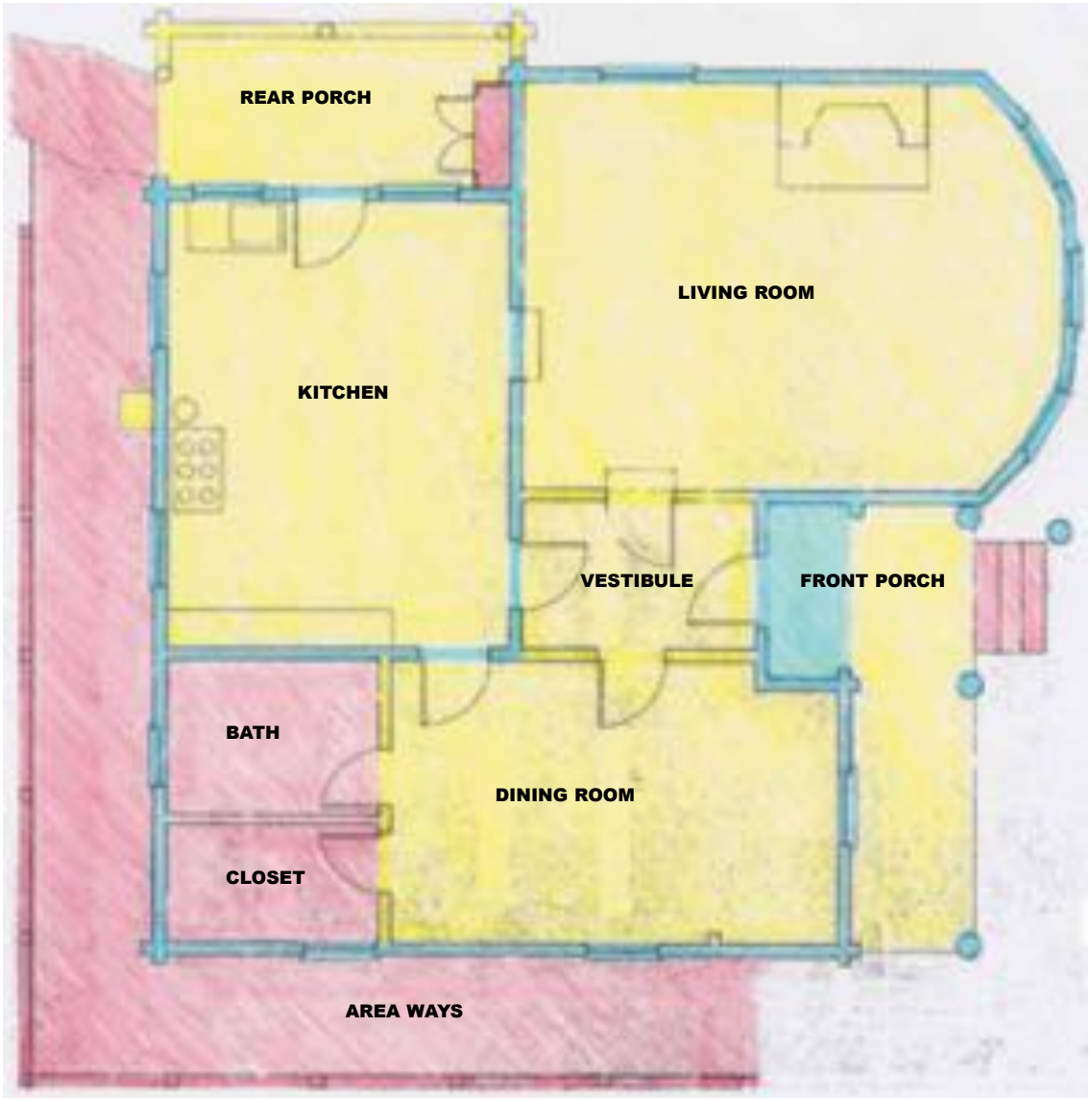
- Spatial qualities of each primary space, especially as defined by log walls and ceilings
- Log walls and ceilings
- Log-built cathedral ceiling in kitchen
- Fireplace, chimney and hearth
- Built-in kitchen cupboard
- Kitchen sink

Alterations at the interior include:

- Kitchen and bath appliances and fixtures (except as noted)
- Wood flooring and steps
- Lighting, power, etc.

Fig.22 – **Living room** (MMWD-1991)

Fig.23 – **Dining room** (MMWD-1991)



KEY TO SIGNIFICANCE DIAGRAMS

HIGHEST IMPORTANCE

SECONDARY IMPORTANCE

NO HISTORICAL IMPORTANCE

See "Summary of Character Defining Spaces and Features" for detailed identification

Significance Diagram based on 1989 Building Plans

Fig.24 – PHOENIX CABIN - SIGNIFICANCE DIAGRAMS - PLAN

Fig.25 – PHOENIX CABIN - SIGNIFICANCE DIAGRAMS - SOUTH ELEVATION

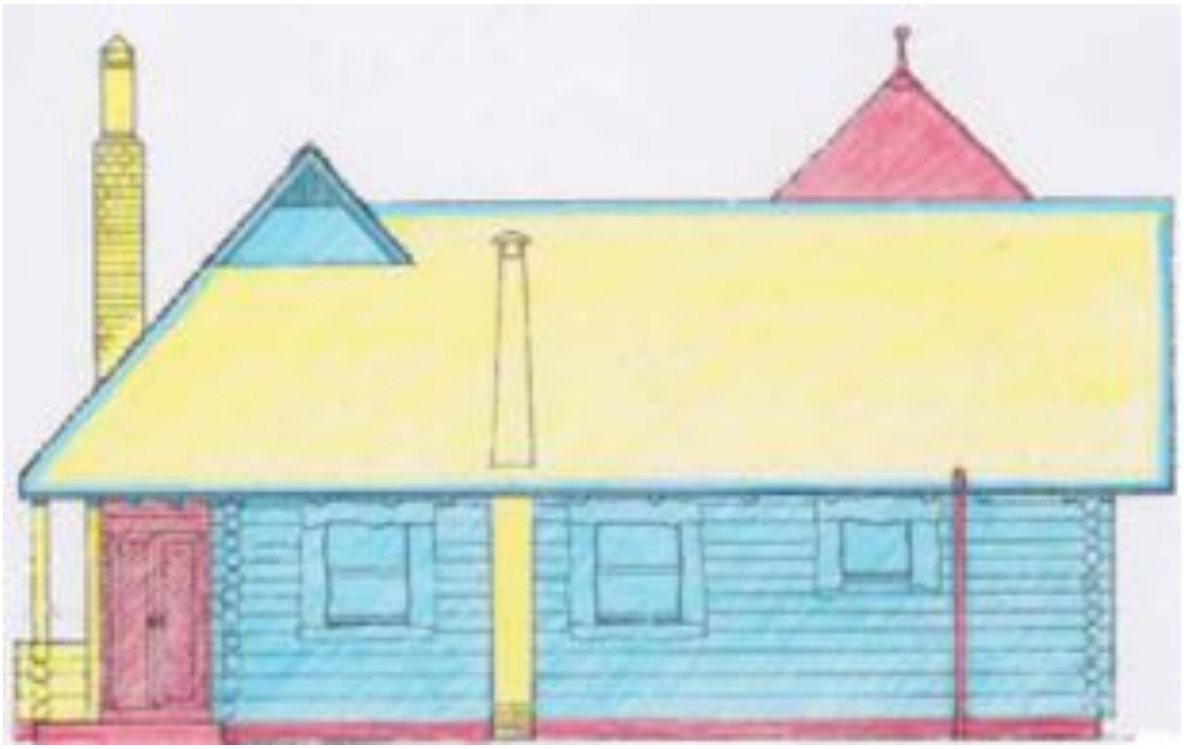


Fig.26 – PHOENIX CABIN - SIGNIFICANCE DIAGRAMS - NORTH ELEVATION

Fig.27 – PHOENIX CABIN - SIGNIFICANCE DIAGRAMS - EAST ELEVATION

Fig.28 – PHOENIX CABIN - SIGNIFICANCE DIAGRAMS - WEST ELEVATION

Existing Conditions Summary

The Cabin is a single-story, 3-plus room, log-built structure dating to the late-19th century. Its original residential use is no longer, its last use as such possibly dating to the mid-20th century. Per District records, the Cabin was altered in 1940 with interior finish work and a new front patio (replacing a previous porch and cupola). In 1989, the Cabin was restored, including the reconstruction of the original/early front porch and cupola, while upgrading the Cabin and its immediate site for use as a meeting and group use facility (1989 plans attached). Subsequently, and due to limitations – specifically being located semi-remotely and with challenging access to potential users – the use of the Cabin was ended some 10 years ago and it has largely stood vacant since.

The fact of its lack of use is pivotal to its current status and conditions. It is an aged residential building of unique and vulnerable redwood log construction. Its vulnerabilities are several: environmental, being in a semi-remote, hillside location exposed to wooded outdoor conditions and the concomitant invasions of nature (trees, birds, insects, etc.); and human, being accessible to people yet with only limited custodianship. Interestingly, it is the former of these two factors that dominate its present conditions, as the site and structure have not experienced much in the way of vandalism (ex: loose copper work has not been pilfered, no graffiti, and the interior has not been invaded).

SITE (figs.29–33)

Specific site conditions are limited since the Cabin is essentially freestanding and has no specifically related outdoor areas with the exception of parking and an entry path. The parking is located along the driveway above and to the north. The asphalt-paved entry path descends the slope in a meander, arriving at the rear porch. Both parking and entry pathway are improved to no more than a basic extent – the parking is unpaved and circumstantial, and the path while paved is makeshift.
At the front of the Cabin, there is a gate in the fence at the fire road, but which is unused, and there is no associated front entry path.

Fig.29 – Entry path (with pumphouse/toilet room above)

Fig.30 – Site - Parking area above Cabin

Other site issues basically include the wooded setting. While a rural structure without any cultivated landscape, tree related conditions are evident. An additional and important site condition is that of birds and pests, the range of which have caused extensive material and structural damage.

Fig.31 – Site - Accessible parking space above Cabin (pump house at left)

Fig.32 – Front gate & fence

Fig.33 – Site - Fence along road at east side of Cabin

Fig.34 – **Front porch - 1991** (MMWD)

Fig.35 – **Front Porch - 2014**

Fig.36 – Cupola at front porch roof

Fig.37 – Log conditions at front gable ornamentation

Fig.38 – Log and roof drainage conditions at west side

Fig.39 – Structural conditions at front porch and entry door

Fig.40 – Rear porch

Fig.41 – Front window

Fig.42 – Log conditions at east side wall

Fig.43 – Log conditions at west side wall

Fig.44 – Log conditions at front wall

Fig.45 – Log conditions at rear porch

EXTERIOR (figs.34–45)

In general, the Cabin's exterior conditions can be summarized as deteriorating, with decay largely unarrested and with localized structural failure. The only areas and features that appear to be in good condition are the Cabin's overall form, its front door and curly redwood trim boards, some of the logwork, and its non-historic concrete foundations. The 1989 cedar shingle roofing is in good-to-fair condition, yet its ridge and hip shingles having just been replaced.

Though the unpeeled redwood logs are the most salient aspect of this structure, the use of unpeeled logs in this setting is unfortunate. Peeled logs, which are typically surfaced to remove sapwood, would be far more durable and treatable. As it is, there are no treatments that can be applied to unpeeled logs. And the logs are essentially unpeeling themselves, with aggressive help from acorn woodpeckers and bark beetles.

As it is an unused structure in a semi-remote natural area, its material conditions could be irrelevant. However, the Cabin's deteriorating conditions could also be a liability, as the structure is not off-limits. In fact, it stands along a publicly accessible, well-used unpaved road. Allowing its continued deterioration to a state of eventual ruin is not a prudent alternative from any planning perspective (short of making the decaying structure strictly off limits to the public).

The following material observations summarize the potential extent of material repairs that would be needed for reuse or preservation:

- Logs consist of unpeeled redwood structural wall and roof timbers — vertical, horizontal and sloped — and smaller diameter unpeeled logs and split logs used for infill and ornamentation. Logs are both whole and split, with split logs evident where there are interior finishes. Many of the unpeeled logs have lost their face bark. Birds and insects visibly infest, in some areas heavily, suggesting deeper infestation than meets the eye. Previously reconstructed logwork is failing structurally and materially — a direct representation of the material limitations of unpeeled log construction, yet also evidence that the south and west exposures are particularly vulnerable. Literally, the existing log exterior is falling apart. To the extent that, overall, approximately 50% or greater of the logs appear to require replacement, with increasing deterioration expected over a fairly short period of time.
- Wood windows — Marginal wood and glazing materials and extensive paint deterioration, requiring repair, including approximately 50% replacement.
- Wood doors — Front, good; rear, fair and requiring repair and repainting.
- Roofing — Cedar shingle. Areas of loss, especially at ridges, recently repaired. Leaks at west side valley between gables evident at interior — repair or replace waterproofing/flashing assemblies.
- Copper flashings, roof drainage assemblies — Fair, again with areas of loss, requiring extensive repairs and selective replacement.

With other types of wooden structures, decay can be arrested, often via basic wood repairs, selective replacement, patching and refinishing or repainting. Unpeeled logs cannot be repaired and refinished. The bark cannot be reapplied. Without the bark, the soft wood is exposed to elements. While the exposed wood could be treated, it cannot reasonably be painted or coated. The character of this cabin is dependent on its unpeeled log construction. Even if physically possible, stripping its bark and treating the logs would forfeit its unique and principal design and material characteristics. Realistically, the repair of deteriorated log assemblies requires removal of decayed logs and their replacement with undecayed logs.

Tellingly, the 1989 restoration drawings could serve as documentation for the approximate extent of replacement log work presently required. As such, the work undertaken some 25 years ago requires redoing and once done, absent daily use and care, would likely require another restoration some 25 years hence. This log structure is of highly vulnerable construction. It is evidently not well-adapted to its circumstances — both natural and institutional. If regular use and care are not available or provided, then the sustenance of this cabin is unimaginable.

INTERIOR (figs.46–52)

In general, the Cabin's interior is in fair and relatively stable condition. Interior walls, floors, and ceiling/roofs are variously of wood frame and log construction. The walls and ceiling/roofs appear to be in good condition, whereas the wood floors have been affected by wetness and debris. Some bird/rodent infestation is also in evidence, both in the lower walls and in the attics. Interior doors are in good condition, as is a large brick masonry fireplace/chimney in the former living room.

While the interior retains remnants of its domestic origins, and specifically the arrangement and types of rooms, the interior spatial divisions may be a limitation to reuse. The entry vestibule is situated in the very center, would serve little purpose in some reuse situations, and has four doors serving this little space. The bath and closet are equally small and would serve little purpose in some reuse situations.

While the various wood panelings at the exterior log walls also convey original domestic use, these wall finishes provide concealed cavities that invite and harbor debris and infestation via the many openings at the exterior log walls. By contrast, the interior face of logs are exposed at the kitchen walls, where the voids between logs have been effectively caulked.

Fig.46 – Entry vestibule and door

Fig.47 – Kitchen

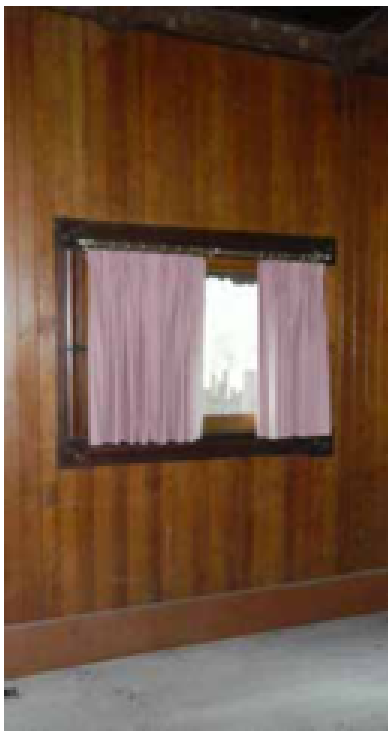


Fig.48 – Living room wall-window

Fig.49 – Kitchen-Living Rm. door

Fig.50 – Dining-vestibule door

Fig.51 – Fireplace at living room

Fig.52 – Living room

Recommendations

In general, sustaining this log structure is largely dependent on regular use and maintenance. Its current damaged and deteriorated conditions are largely the result of the lack thereof.

The range of possible treatments include:

1. Simple stabilization via protection (such as covering and/or enclosing the structure);
2. Stabilization and repair excluding reuse;
3. Rehabilitation for reuse including accessible restrooms, parking, site and landscape improvements;
4. Retention and rehabilitation of portions of the existing structure – the kitchen and/or living room spaces, for example – in order to retain salient parts of the historic structure and to plan and allow for a more manageable use and building;
5. Dismantle and salvage for reconstruction – in part or in whole – by the District or by an outside interest;
6. Demolition.

Under the latter two options (5-6), the possibility exists for a replacement outdoor use structure that replicates the footprint and/or form of the cabin, possibly reusing salvaged log materials and elements (ex: fireplace).

The following recommendations address the reuse of the structure.

REUSE RECOMMENDATIONS

With regard to the possibility of reuse, ideally, a given historic structure would be used for its original purpose. In this case, that purpose was a residence, thus, the ideal scenario advocates the re-restoration of the Cabin and its residential use. However, many difficult questions would need to be addressed before deciding whether such a scenario is feasible. Who would reside here and why? District employees? Some form of tenant or tenant group? What benefit would a residence of this type in this location have to the District and its customers? What would it cost to maintain a residence of this type? And for how long?

If not a residence, what other potential mission might this structure fulfill for the District and its customers, for the community, or for an outside group?

Without a readily foreseeable and available use and user, establishing a program for the reuse of this structure will require time. Without intervention, this structure does not appear to have the benefit of time. Consequently, any deferred reuse scenario would require the substantive and secure protection of the Cabin in the meantime.

In the judgment of the district, it is desirable to rehabilitate the Cabin for reuse consistent with district policies. At this juncture, no use has been identified, so use related recommendations remain general. While restoration of a residential use would fulfill a preservation ideal, a form of public or semi-public use is far more realistic and practicable. Under that presumption, certain specific use related recommendations are identifiable, specifically those concerning feasibility and accessibility.

Reuse of the cabin for any form of public use warrants changes, both interior and exterior, that will accommodate public activities.

Entries:
At the exterior, porches require alteration and adaptation to create functional entry ways. While the Cabin is generally accessed from the rear and not from the front, consideration should be given to reorienting the building frontward. Doing so could include providing parking and/or drop off at or near the front, and reconstructing the front porch as an entry way.

Parking and Access:
In any event, access consistent with the Americans with Disabilities Act will be required to the Cabin. One scenario would provide a drive and parking near the front of the structure, possibly along the western side, and which could allow for direct entry to the front door via a reconstructed front porch (see below). Another scenario is to provide a drive and parking space at the rear. In this scenario, the drive could double as an entry path from the parking area above. Using a shuttle for access from the trailhead parking area is another scenario.

Restrooms:
Rather than provide restrooms within the Cabin, the extent of required new accessible restroom facilities should be separately added at the exterior, in the form of a detached structure located at the rear (north) of the Cabin and along a convenient and accessible path.

Interiors:
At present, the Cabin interior is segregated into spaces that pose limitations to reuse (other than in some domestic form). In general, in order to make a new use feasible and functional, the interior of the Cabin may preferably be opened up by the elimination of wood frame walls and partitions. This reuse related recommendation dovetails with specific material recommendations, as interior construction that creates concealed areas is a hindrance to the care and maintenance of the structure.

MATERIAL TREATMENT RECOMMENDATIONS

General:
- The log structure and exterior are in fair-to-poor condition due to exposure, lack of use and of resultant lack of structural and material care. Regular use of the Cabin is necessary in order to undertake a rehabilitation and repair project and to set up a regimen of physical site and building care.
- The Cabin is a rustic, semi-isolated structure. If pared down to its essential form and materials, its care would be as straightforward as possible. Doing so would mean the removal of extraneous construction at the exterior, specifically the front porch structures and ornamental features added in 1989.
- This same issue is equally applicable at the interior. The care of this building would be made more feasible were the interior largely open and the log construction largely exposed. At the interior, this direction would prescribe the removal of wood frame partitions and the removal of interior finishes applied to the exterior log walls, understanding however that, where finished, some of the log walls are split rather than full logs. Thus, this potential direction will require exploratory work to discover the concealed log conditions and the viability of exposing those split logs.

Recommended Exterior Alterations:
- Previous exterior alterations and additions should be removed and the essential structure and materials repaired and selectively rebuilt. While the current cupola is a romantic element, it was reconstructed in 1989 based on a historic photo and, from a more practical preservation

Fig.53 – **Front, with previous porch - c1980s** (MMWD)

interpretation, inappropriately so, as the cupola is in fact structurally failing as well as purposeless. Thus, at the front porch, the porch roof and cupola should be removed and replaced with a new, simple front porch. Pre-1989 images of the Cabin show the front porch with a simple post-supported shed roof (fig.48). The front porch could also be redesigned to make the front entry accessible, if possible, from the fire road and/or from an adjoining parking space. A front patio-like area is an additional possibility, along with the possibility that such a space could be opened to the fire road or, if not fully open, with front gates that allow visibility and access at the front.

- Likewise, the ornamental logwork at the front gabled roof eaves should be removed and the original logwork repaired, including structural fixes to enable the removal of the wood post added to support the ornamental eave.
- At the rear porch, the previously added log railing that has also failed should be removed and either replaced with a more permanent wood railing assembly or, preferably, by extending the porch level into the landscape thus eliminating the railing requirement. The rear porch posts also require replacement.
- The ornamental window hoods at the living room bay windows are distinctive but are also far too fragile for their setting. They should be sturdily rebuilt or they may preferably be removed.

Exterior Repairs:

- Inspect, identify and periodically treat pest damage.
- Selectively remove and replace structurally damaged logs.
- In lieu of replacement, periodically treat partially damaged/exposed (i.e., unbarked) wood logs with wood sealer.
- Temporarily and periodically (seasonally) protect exterior log structure from birds with nets and other physical (or sonic) barriers.

- Restore and repaint wood window sashes and sills, or selectively replace to match; replace split log sills where damaged or missing.
- Clean and repair wood shingle roofing and roof drainage (flashing) assemblies. Replace where missing or irreparably damaged (also acknowledging that some roof repairs have recently happened, specifically the replacement of ridge and hip shingles).
- At the roof, damage is evident in the form of leaking via the valley between the two gables. This area of roofing and flashing should be carefully inspected and repaired. It is also evident that debris builds up in this location – which may be part of the problem – so that roof area requires more regular maintenance. A couple of other factors are evident in this location: first, that the cricket is insufficiently sloped; and, second, that the copper scupper does not sufficiently reject water as it drains from the roof, instead allowing water to hit the lower wall, which is suffering as a consequence. A longer term reroofing solution would rebuild this roof area for more effective drainage.

Interior Repairs:

- Consider removing wood wall finishes to expose interior side of exterior logs. In some areas, where the logs are split rather than full, potentially exposed logs require investigation. Even yet, exposed logs at interior will eliminate wall cavities and allow clearer and more accessible care of log work, including sealing of the gaps between logs. Alternatively, the log work could remain open, depending on the eventually intended interior environment.
- Retain interior log walls and ceilings.
- Repair damaged log and wood ceilings.
- Address rodent/pest damage and control. Provide easier access to attic spaces to enable maintenance.
- Remove interior wood frame partitions to open the spaces up, specifically: the wood frame walls between the vestibule, dining and living room spaces; plus the toilet room and closet walls. The intent being to open the interior up as much as possible for future reuse.
- Retain kitchen cupboard and sink.
- Otherwise, remove kitchen and bathroom fixtures, appliances and equipment.
- Repair wood floors.
- Remove lighting. Replace with new lighting throughout.

Fig.54 – **Wide side of Cabin - c1980s** (MMWD)

PHOENIX LOG CABIN

Located on what was known as a part of the Porteous Ranch, the Phoenix Log Cabin was built in 1893 or 1894. It was built by Mrs. Porteous, Mr. Porteous having died in 1887, for Martin Grant, her coachman and more or less foreman of the ranch.

The redwood logs were cut on the Deer Park section of the ranch as Mrs. Porteous did not want any trees removed from near the main house, which was uphill of the cabin on the same site as today's ranger's house. The curly redwood trim around the windows and doors came from a fallen tree on the southwesterly side of the Shaver Grade.

In 1898 Henry Hanson, landscape gardener from the Hotel Rafael, went to work for Mrs. Porteous, replacing Martin Grant as foreman, and lived in the cabin until late 1909.

Mrs. Porteous died in early 1909 and the Marin County Water Company acquired the ranch at a public auction that fall.

From late 1909 until the Water District acquired the property in November of 1916 the cabin was used as a hunting lodge by A. W. Foster, President of the Water Company.

A picture of the cabin titled, "A Home in Ross Valley" appears on page 74 of the book, "In Tamal Land" by Helen Bingham. The book was copyrighted in 1906.

Early pictures of the cabin show it with a cupola over the front porch. It is not known when this was removed. Speculation is that it may have been removed when the cabin was reroofed or it may have caught fire at one time.

In 1940 considerable renovation was done. The concrete floor was poured in the kitchen, some interior paneling was done, the brick fireplace was built and the flagstone patio was added to the front of the cabin.

MMWD Files
Janet Langford - daughter of Henry Hanson, lived in cabin as a young girl
Henry I. Marshall - father leased land from Mrs. Porteous
Edward "Bud" Walsh - MMWD - lived in old Porteous house and cabin

1974 - Revised 2/82

My dear Tommy,

This is in answer to your note left at our home asking me information about the Porteous log cabin.

To the best of my memory about 1900, two and perhaps three English nephews of Mrs. Porteous came to visit them for quite a stay. They evidently found time hanging on their hands so they built the cabin and I think with some help from the Marshall boys.

The Marshall family (Portuguese), of which the postmaster of Ross and a woman by the name of Laura Duff of Lagunitas Road, Ross are survivors, ran a small dairy (Hyppolite Dairy).

The dairy was located (Hidden Meadow) where a fire road now turns off to the right a little beyond the intersection of the Old Fish Grade and the original road (Shaver Grade) that ran from Ross to Bolinas. I am sure the logs must have been cut on the Porteous property, but as to any other material, I do not know.

It may interest you to know that a road that turns off to the right of the old Bolinas road at (Fire Corners), about where the present pipeline from Alpine crosses it and where there are some comfort stations, was also built by the same nephews and, I think, with the Marshall boys help. The road (Deer Park Road) ran down to a flat just above Fairfax, at one time a small barn was on the flat (Deer Park). I think for hay storage which may have been raised on the flat.

All the Marshalls did not live at the dairy, most of them, and there were many, lived in a house in Ross where the Belmore Brown house now stands on Lagunitas Road.

As a kid, 10 to 15 years old, many a time on the way to and from Lake Lagunitas we would stop at the Bon Tempe dairy for a drink of milk. Also we used to swim at a pool below the Lagunitas spillway, until people heard of it and thought we were swimming in the lake, then John O'Malley put an end to it. I used to fish in Lagunitas with a permit and poached on Water Company lands for deer, in spite of old LeCornec.

Yours,

(E.A.) Schmiedell

NOTE: This is a copy of a letter written to Board President Thomas T. Kent, October 23, 1952 by a member of one of the old Ross families - the Schmiedells. The items in parenthesis are, with the exception of "Portugese" mine. RML 5/80

Symbols

- CONCRETE
- EARTH
- EXISTING WALL TO REMAIN
- DEMOLISHED WALLS OR MATERIALS
- PLYWOOD
- AREA OF NEW CONSTRUCTION
- LINE OF CONSTRUCTION ABOVE AREA SHOWN
- REVISION NO.
- DETAIL IDENTIFICATION / SHEET WHERE DETAIL SHOWN
- SECTION IDENTIFICATION / SHEET WHERE SECTION IS SHOWN

Abbreviations

[illegible]

General Notes

1. VERIFY ALL DIMENSIONS & CONDITIONS IN THE FIELD PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL, BY THE ACT OF SUBMITTING A BID, BE DEEMED TO HAVE CAREFULLY EXAMINED THE SITE AS WELL AS ALL DRAWINGS & SPECIFICATIONS.
3. ALL CARRIAGE BOLTS, PLATES, WASHERS, AND OTHER METAL FASTENERS @ EXTERIOR SHALL BE HOT-DIPPED GALVANIZED.

Project Data

1. USE: NO CHANGE TO EXISTING: A-3
2. TYPE OF CONSTRUCTION: NO CHANGE: TYPE V
3. DATE OF CONSTRUCTION: [illegible]
4. GROSS FLOOR AREA: [illegible] S.F.

Index

Alternates

BID ALTERNATE NO. 1: ADD FOR PROVIDING RAISED WOOD FLOOR STRUCTURE WITH CRAWLSPACE IN LIEU OF NEW & EXISTING CONCRETE FLOOR SLABS & WOOD SLEEPERS, AT AREAS AS SHOWN ON DRAWINGS. INCLUDE FIBERGLAS BATT INSULATION BETWEEN NEW FLOOR JOISTS. SEE DRAWING NO. S2.1.

Location Map

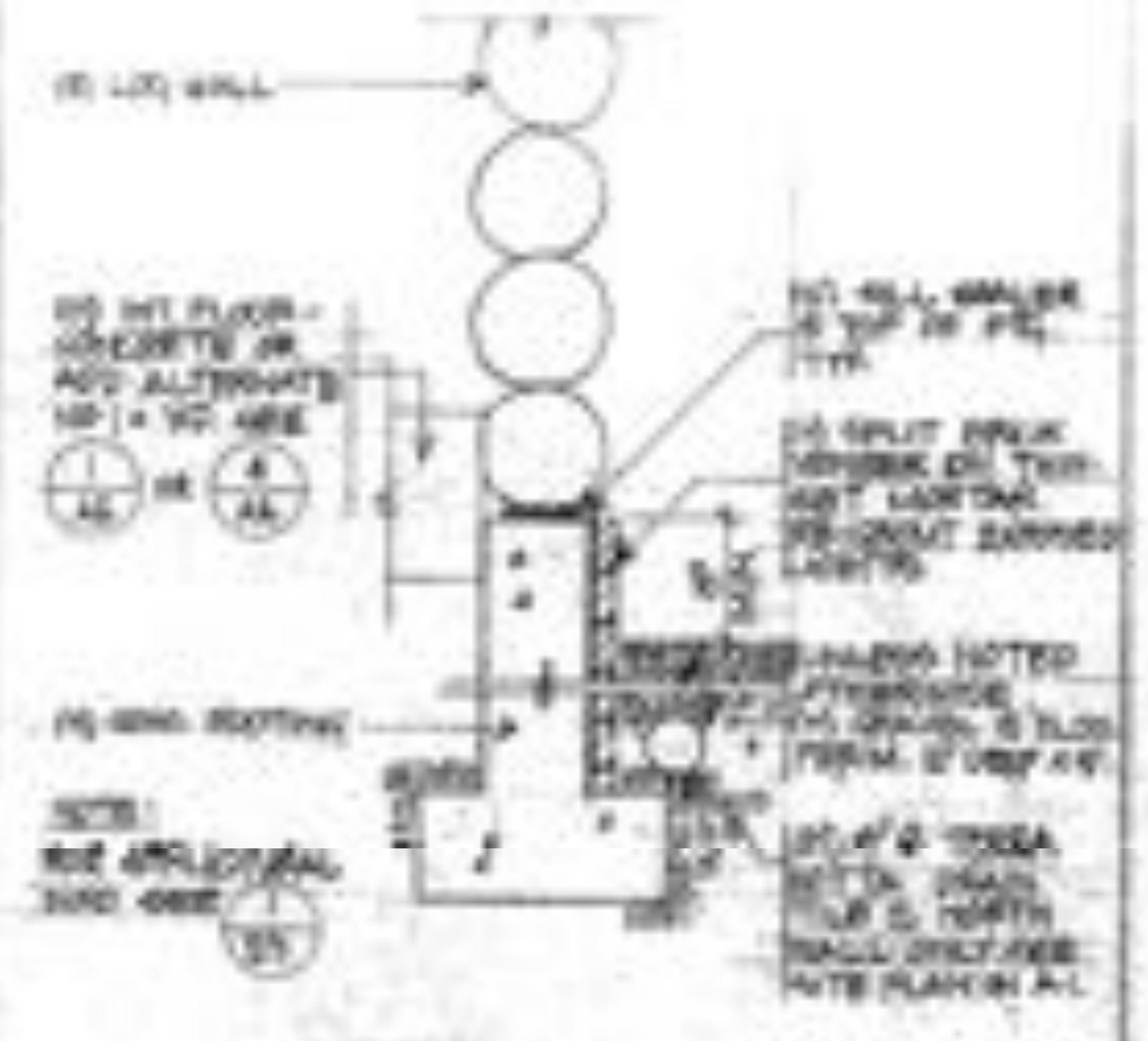
Site Plan

Project: Phoenix Lake Log House Restoration

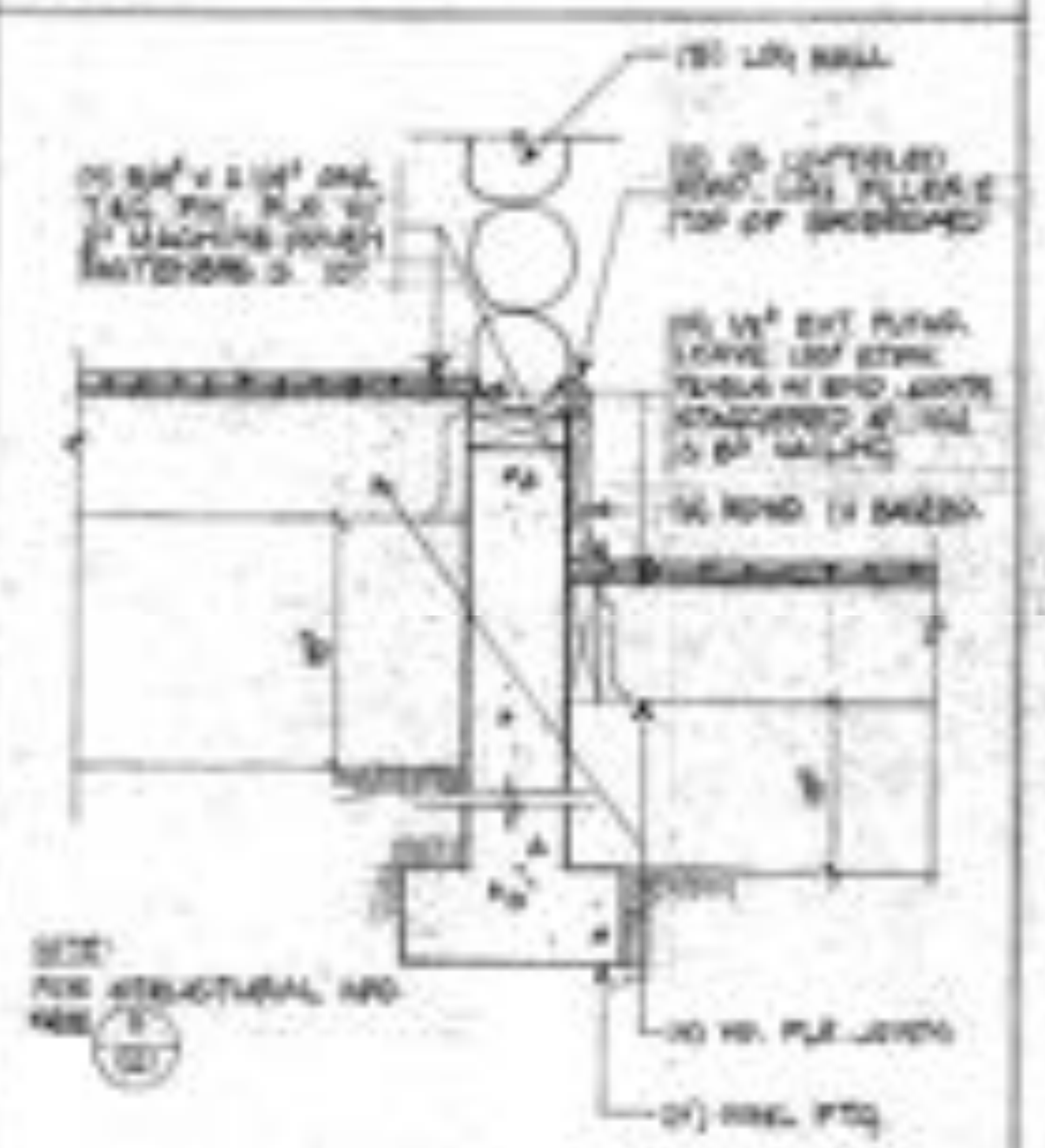
Page, Anderson & Turnbull, Inc.
San Francisco, California

Sheet Title: SITE PLAN, TITLE SHEET

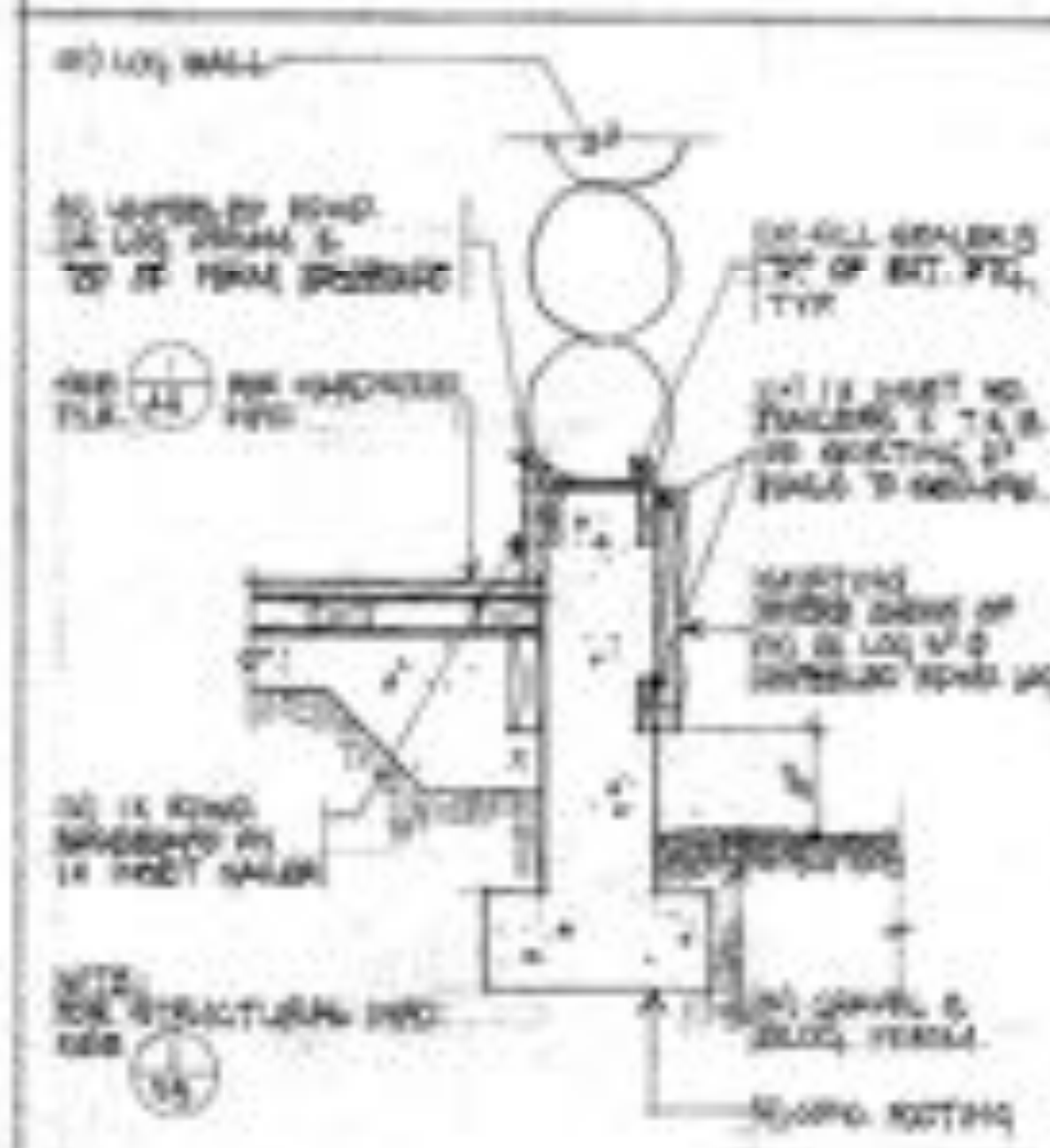
Sheet No.: A-1



2/A2 BRICK VENEER @ EXT. WALL

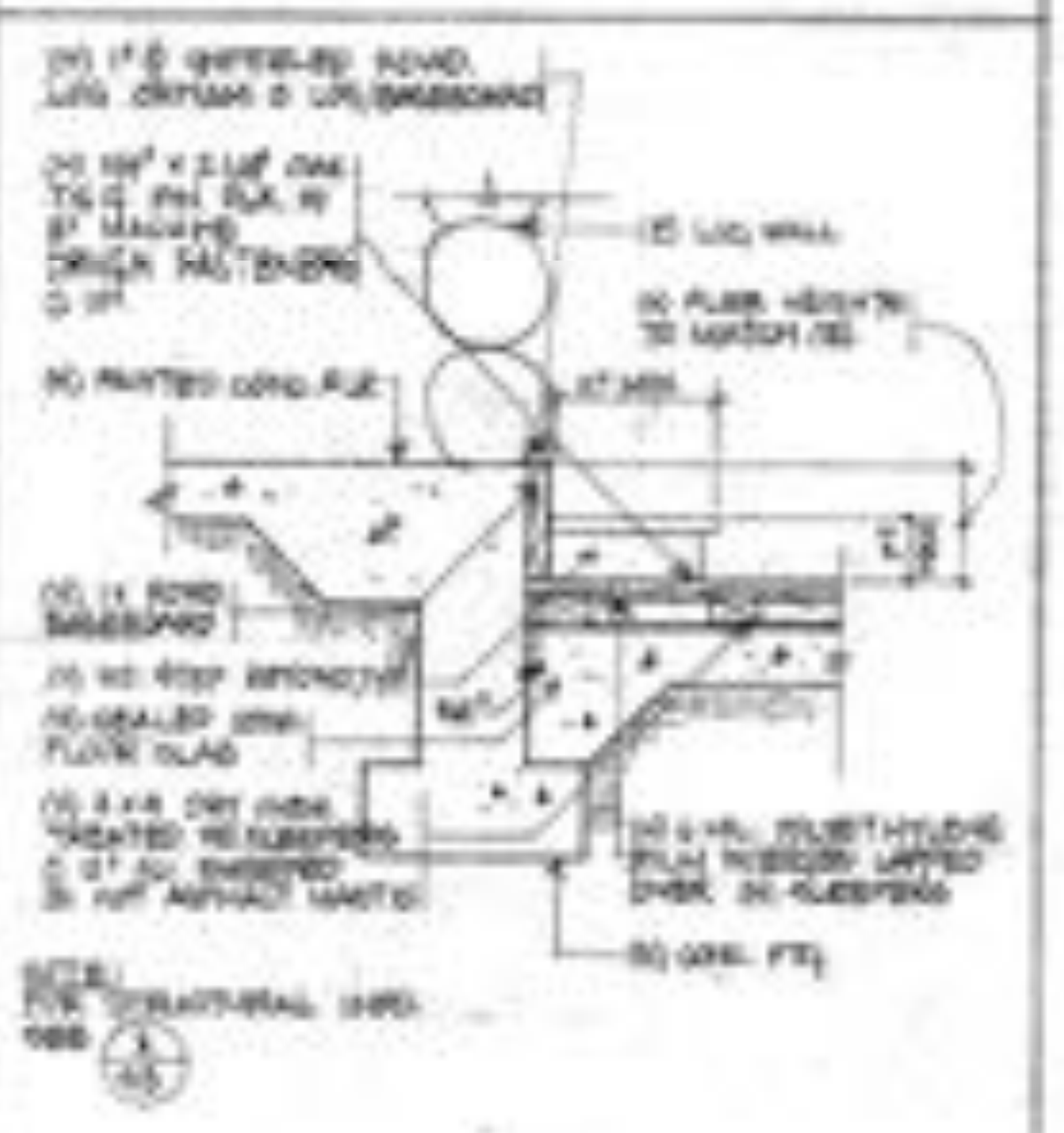


1A/A2 FLOOR & STEP @ INT.: ADD-ALTERN. HF



3/A2 FLOOR & SKIRTING @ EXT. WALL

SCALE: 1" = 1'-0"



1/A2 FLOOR & STEP @ INTERIOR

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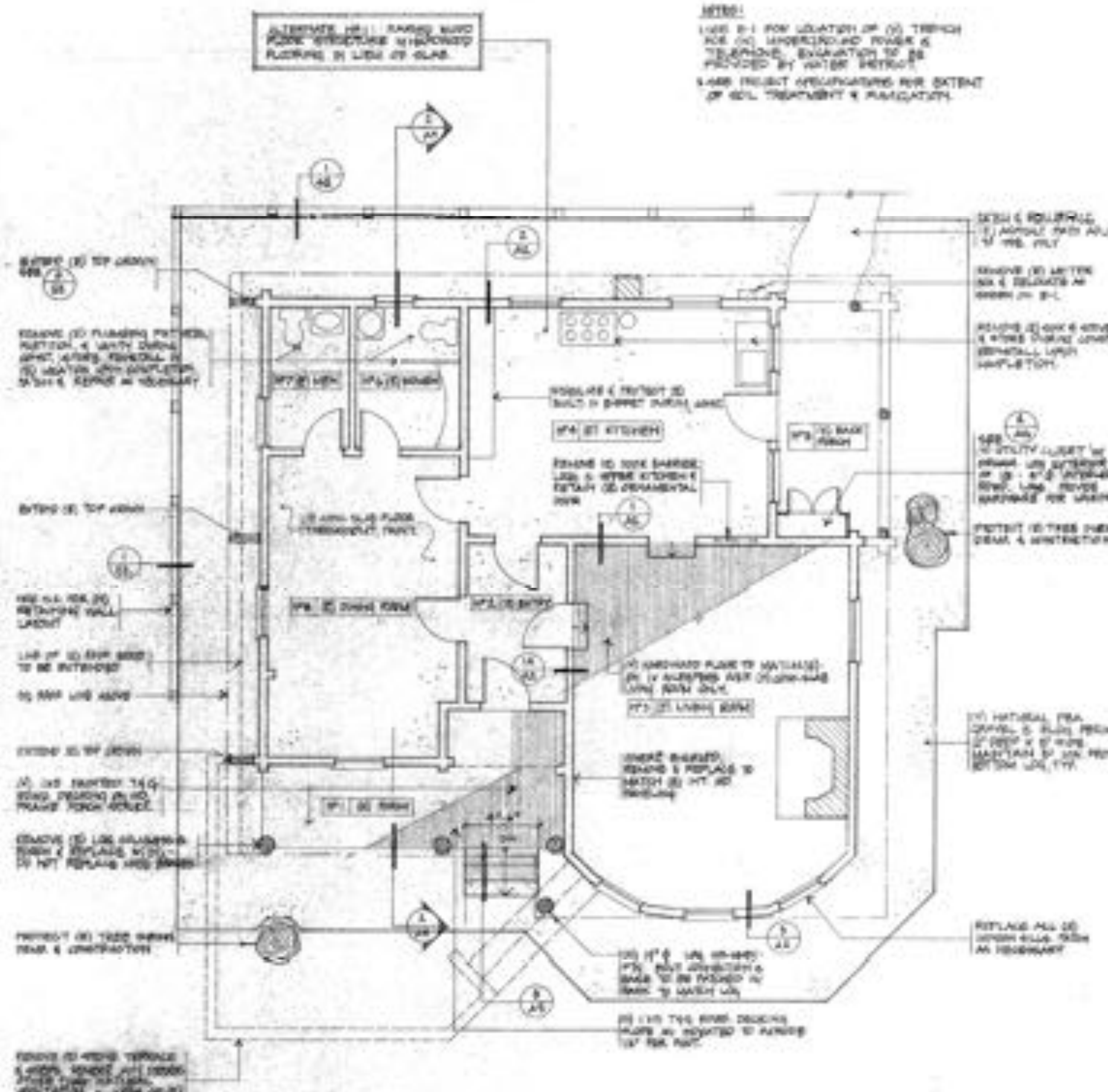
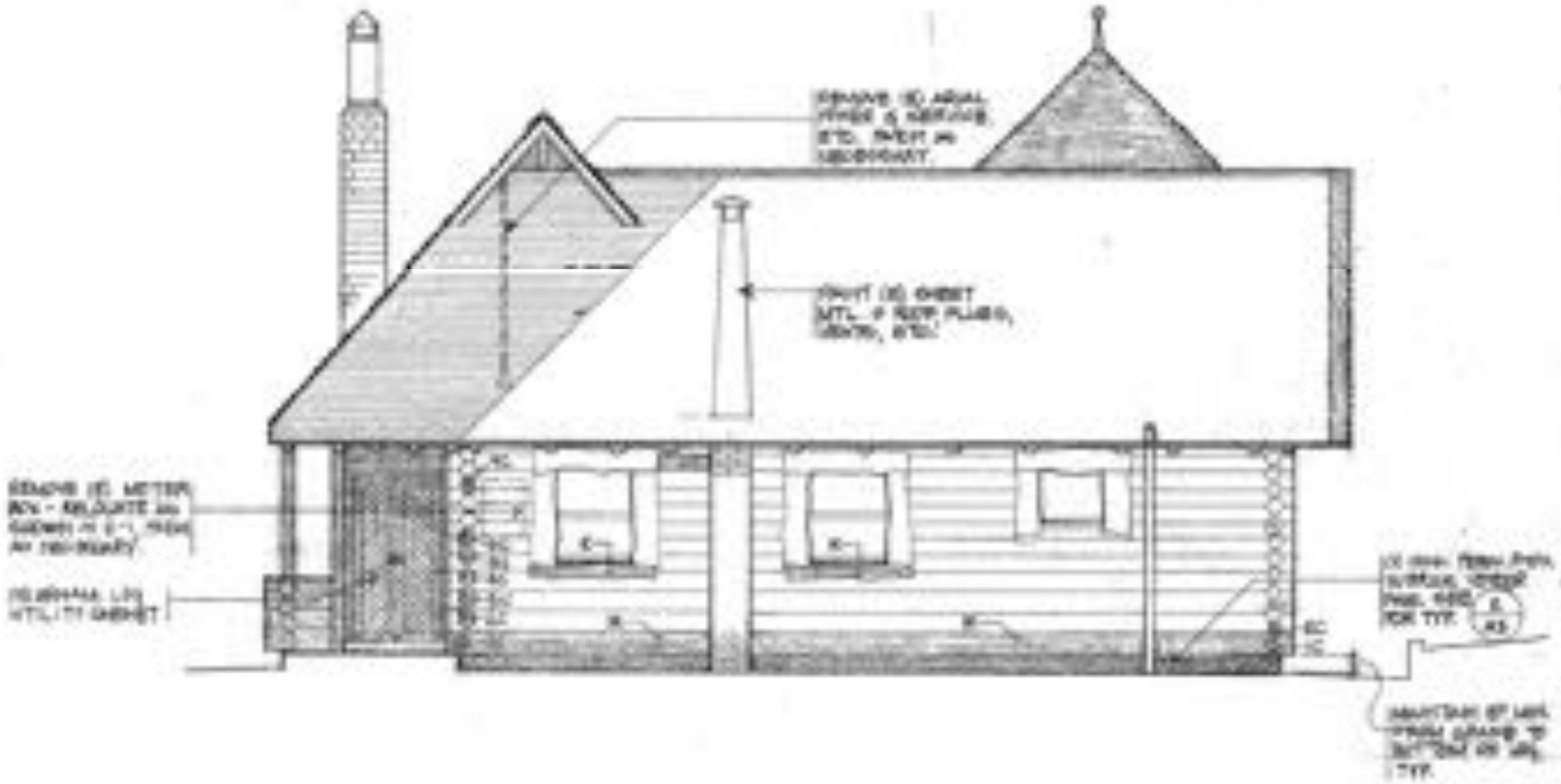


Floor Plan

Phoenix Lake Log House Restoration

Sheet Title: FLOOR PLAN & FLOOR DETAILS

A - 2



East Elevation

North Elevation

South Elevation

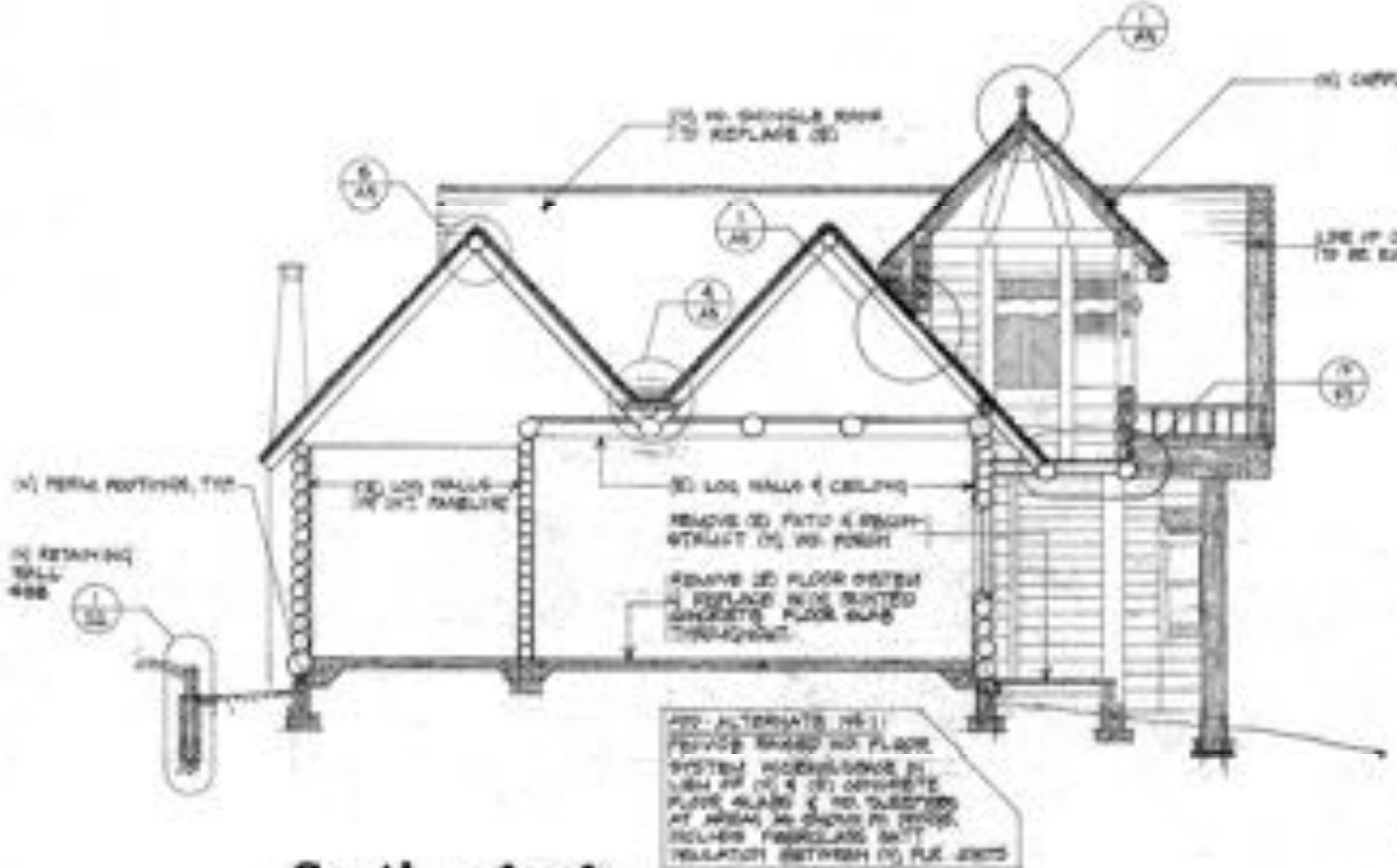
West Elevation

Project:
Phoenix Lake Log House Restoration

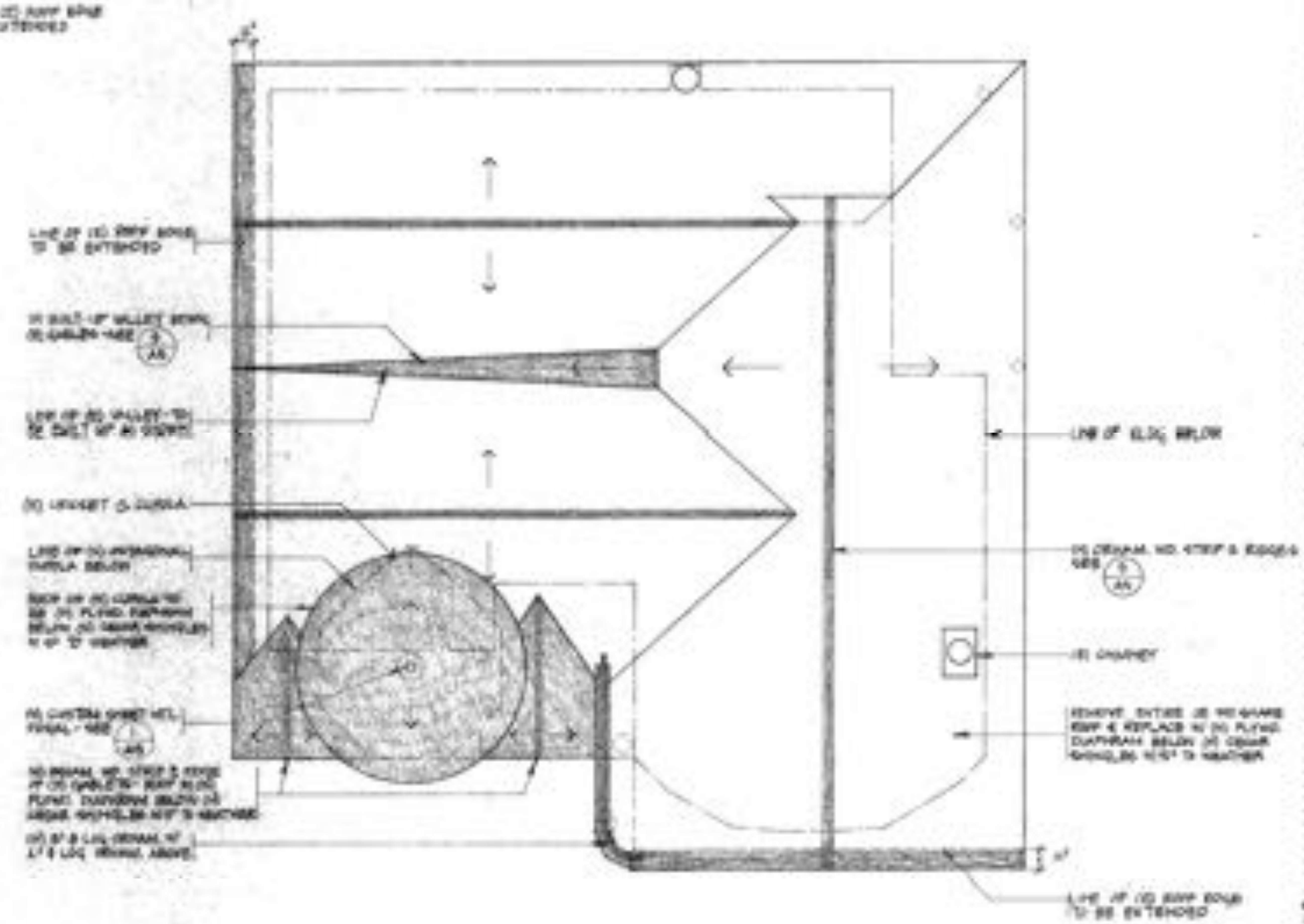
Page, Anderson & Turnbull, Inc.

EXTERIOR ELEVATIONS

A - 3



Section A - A



Roof Plan

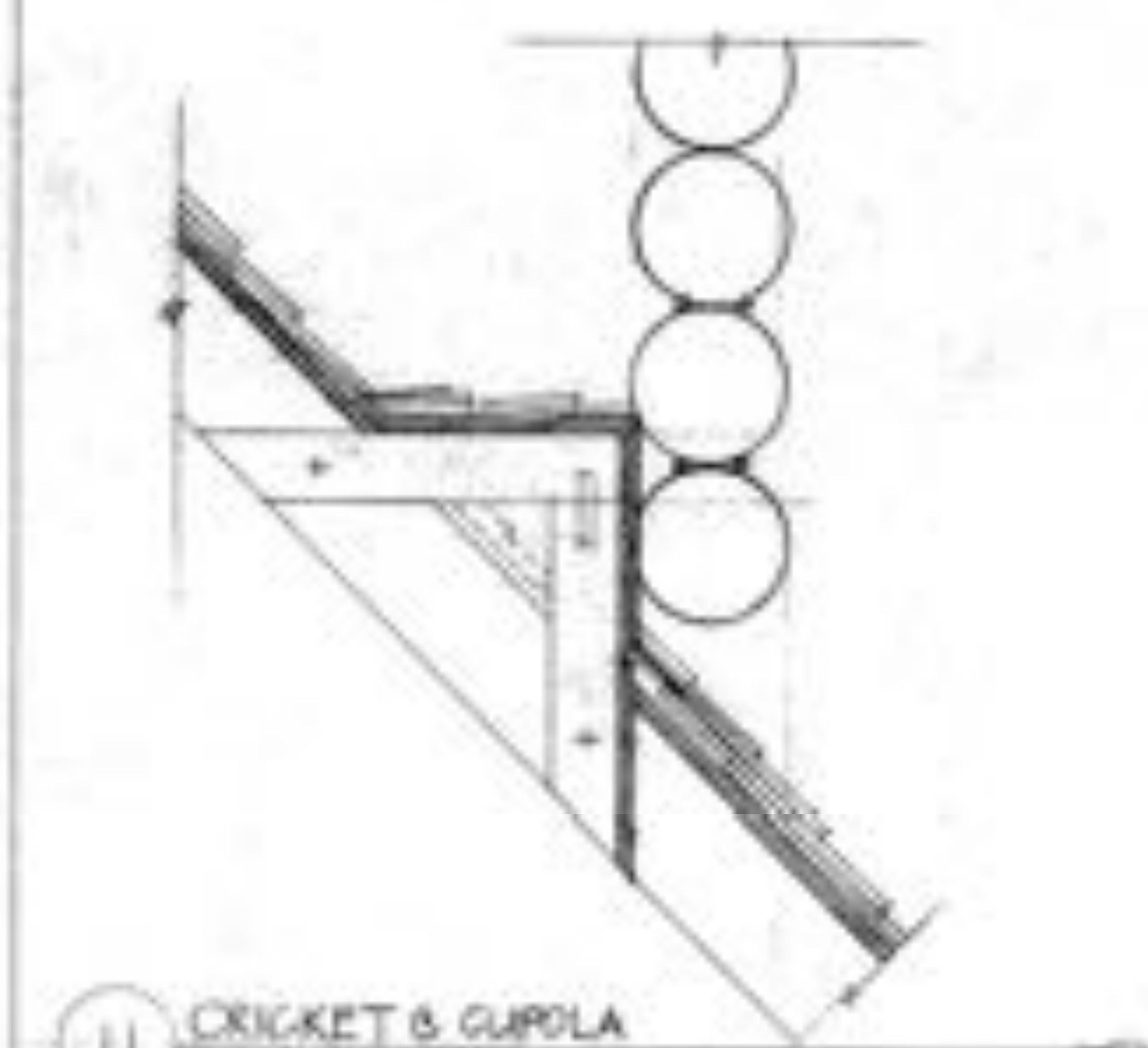
Project:

Phoenix Lake Log House Restoration

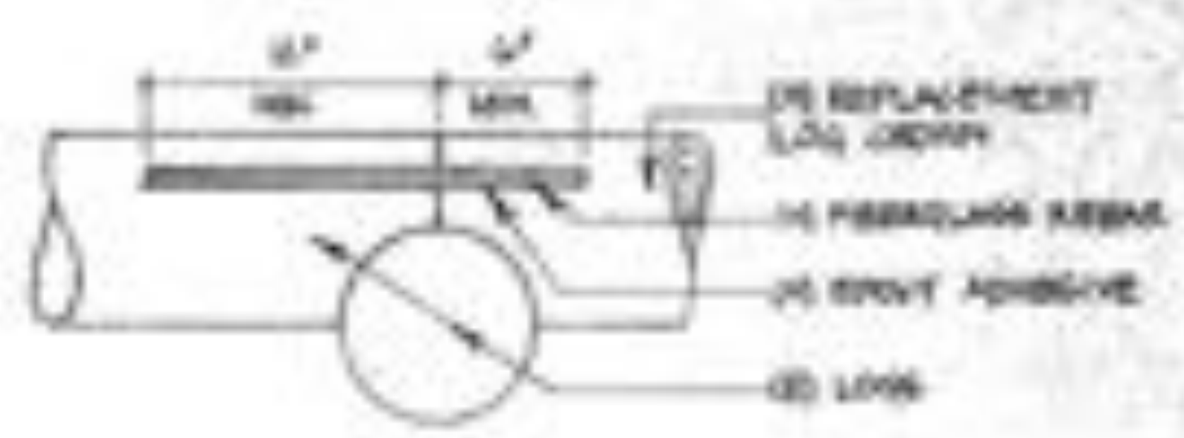
Page, Anderson & Turnbull, Inc.

Sheet No.:

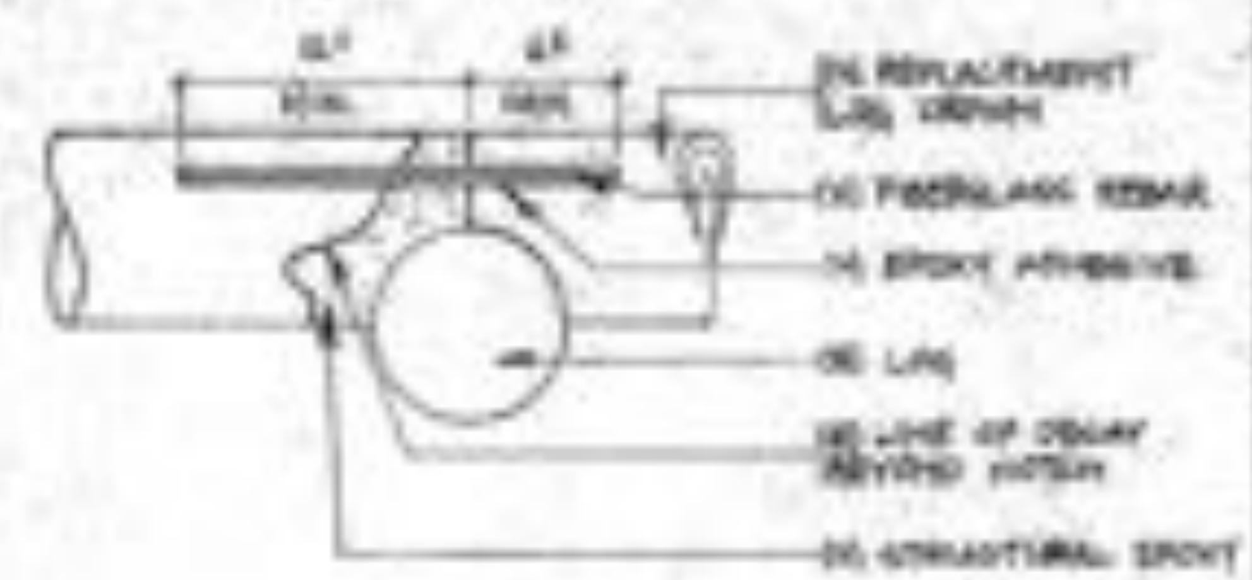
A - 4



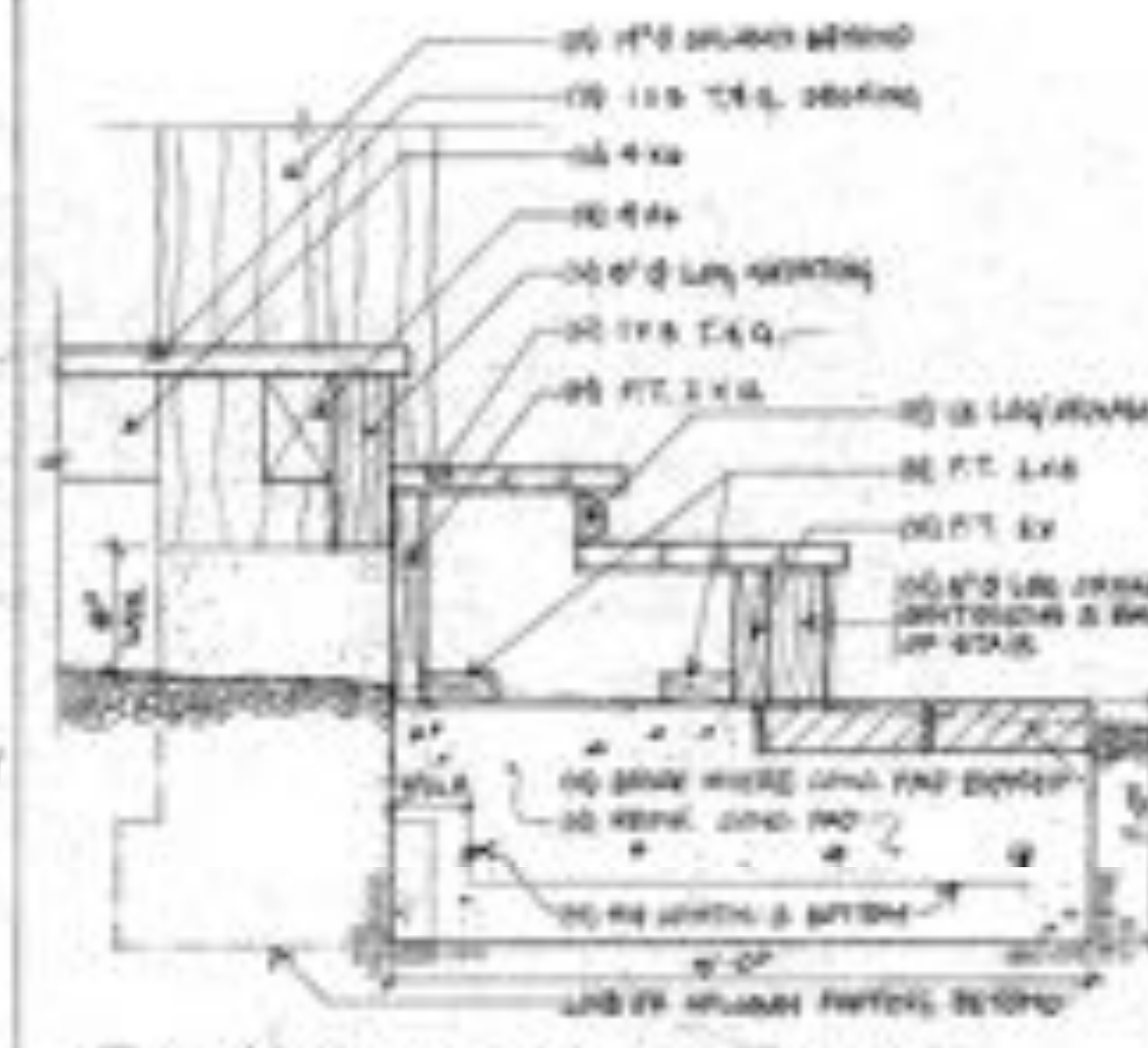
11 CRICKET & CUPOLA



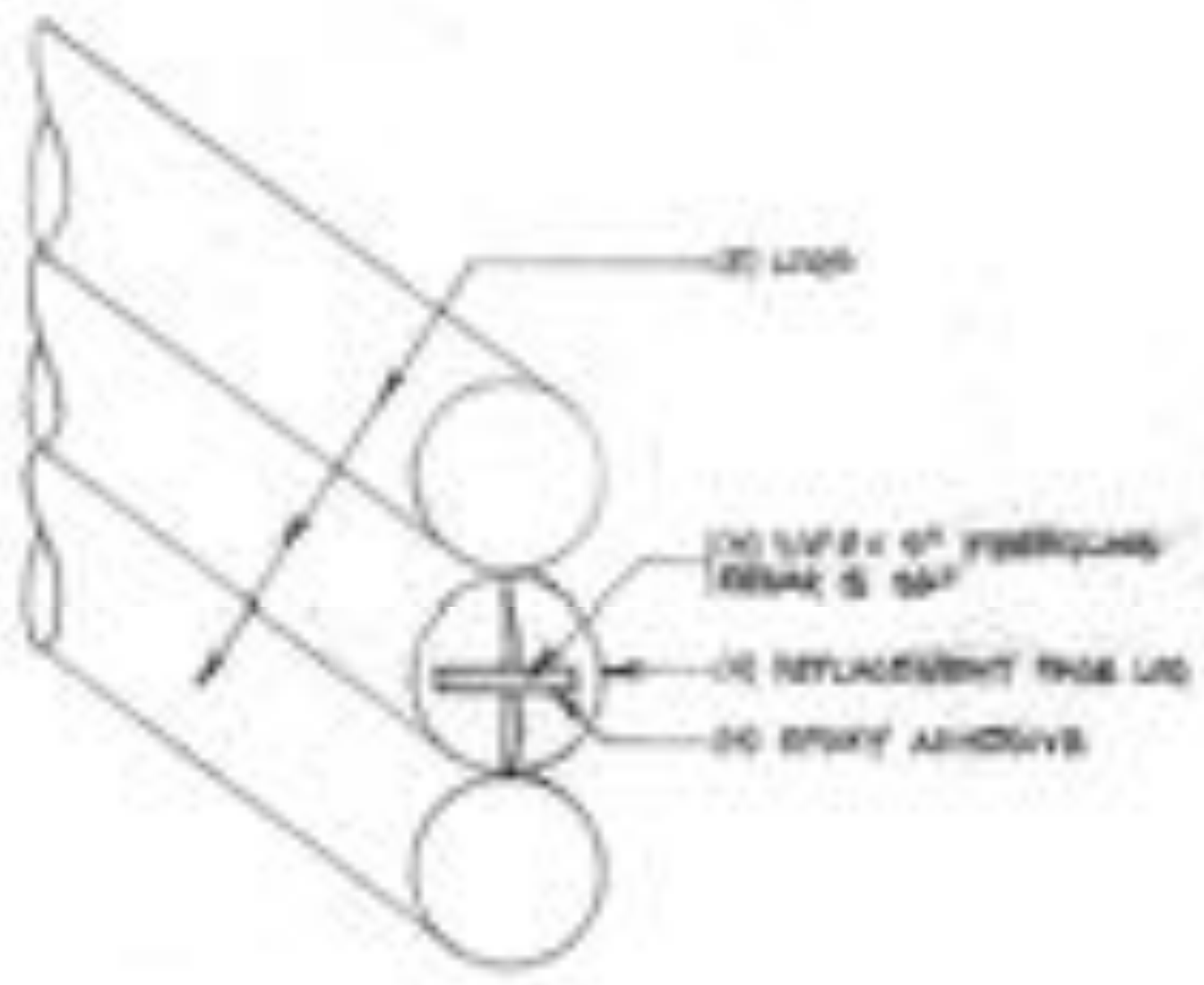
9 LOG CROWN SPLICE



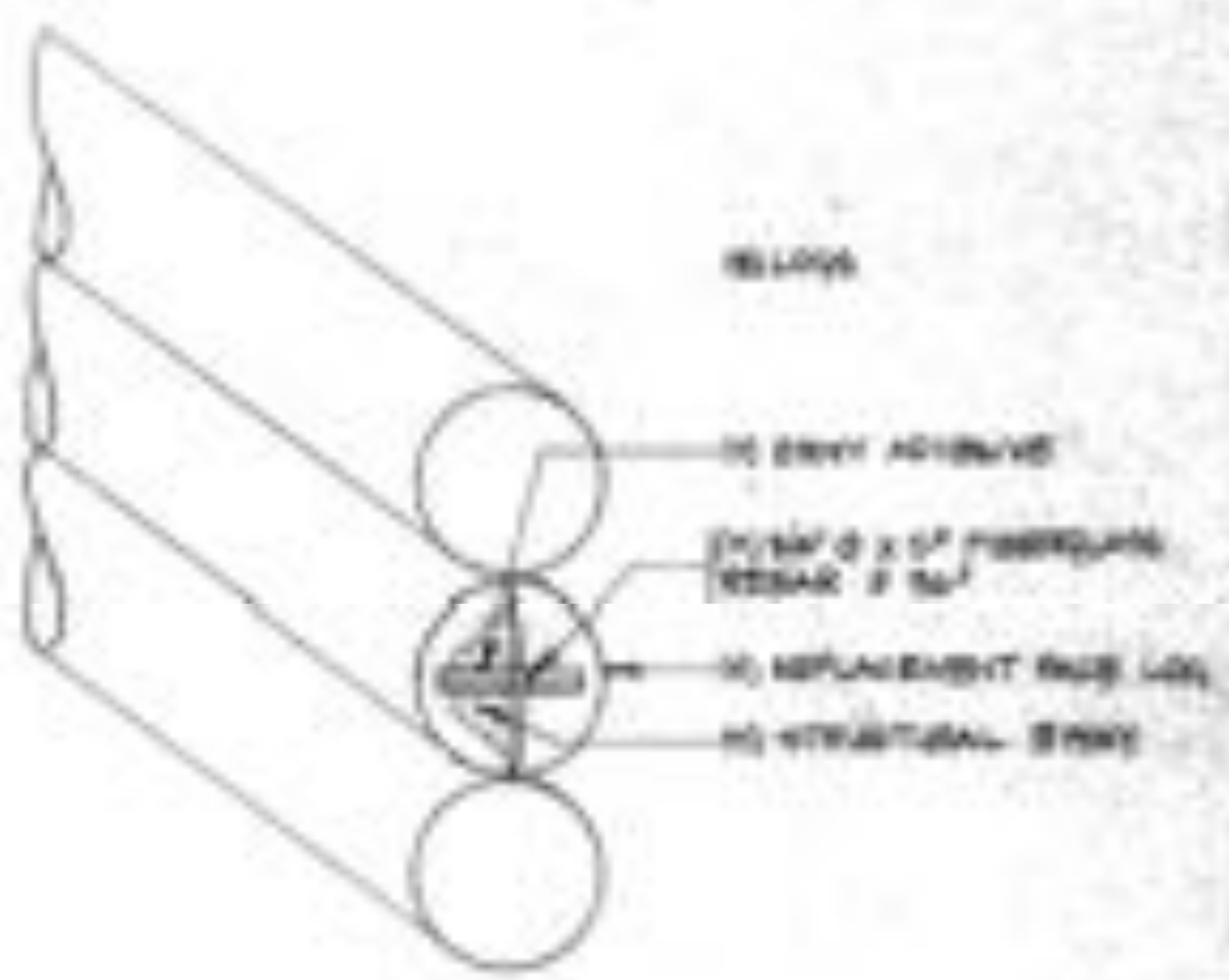
6 LOG CROWN SPLICE W/STRUCTURAL REPAIR



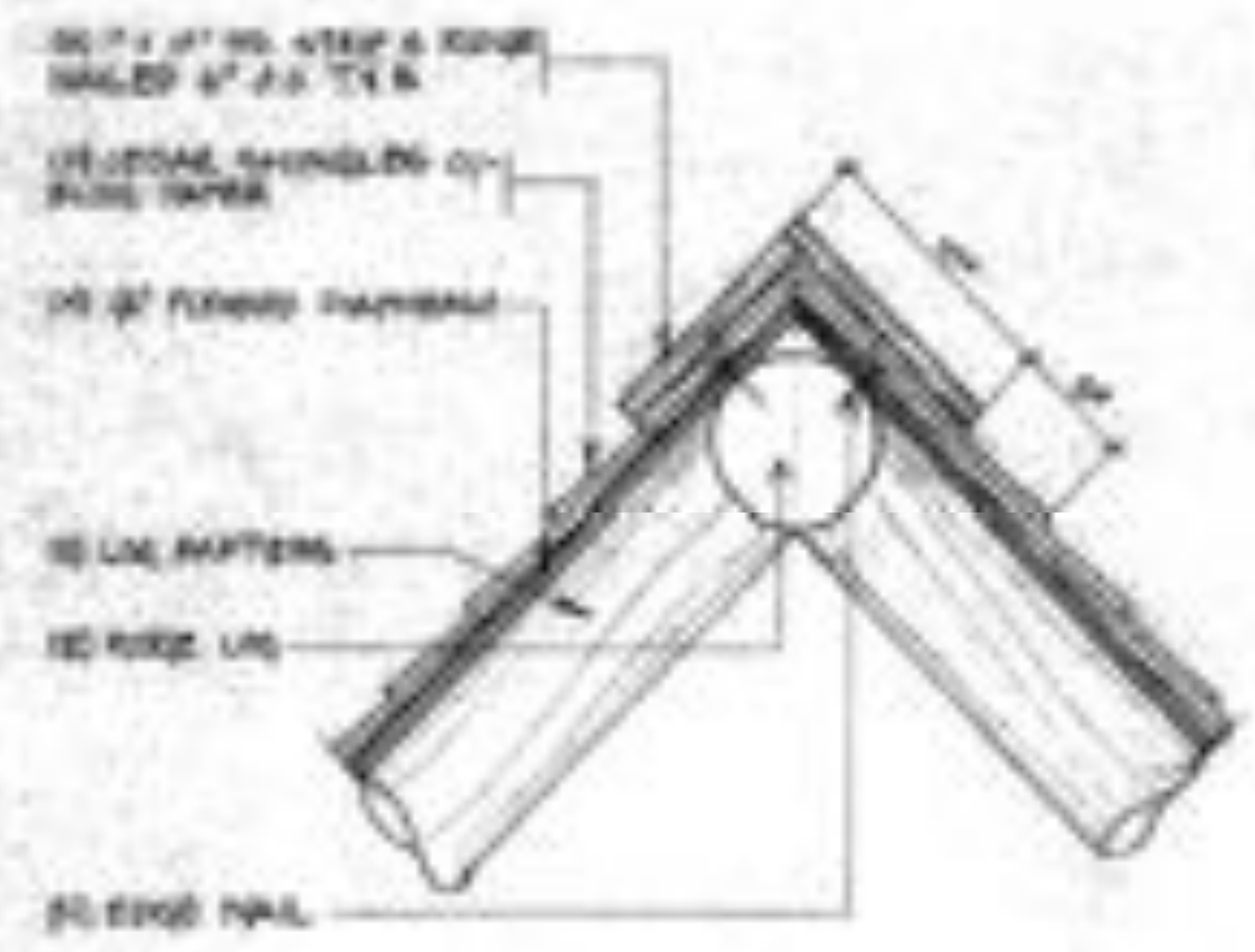
3 FRONT PORCH SKIRTING & STEPS



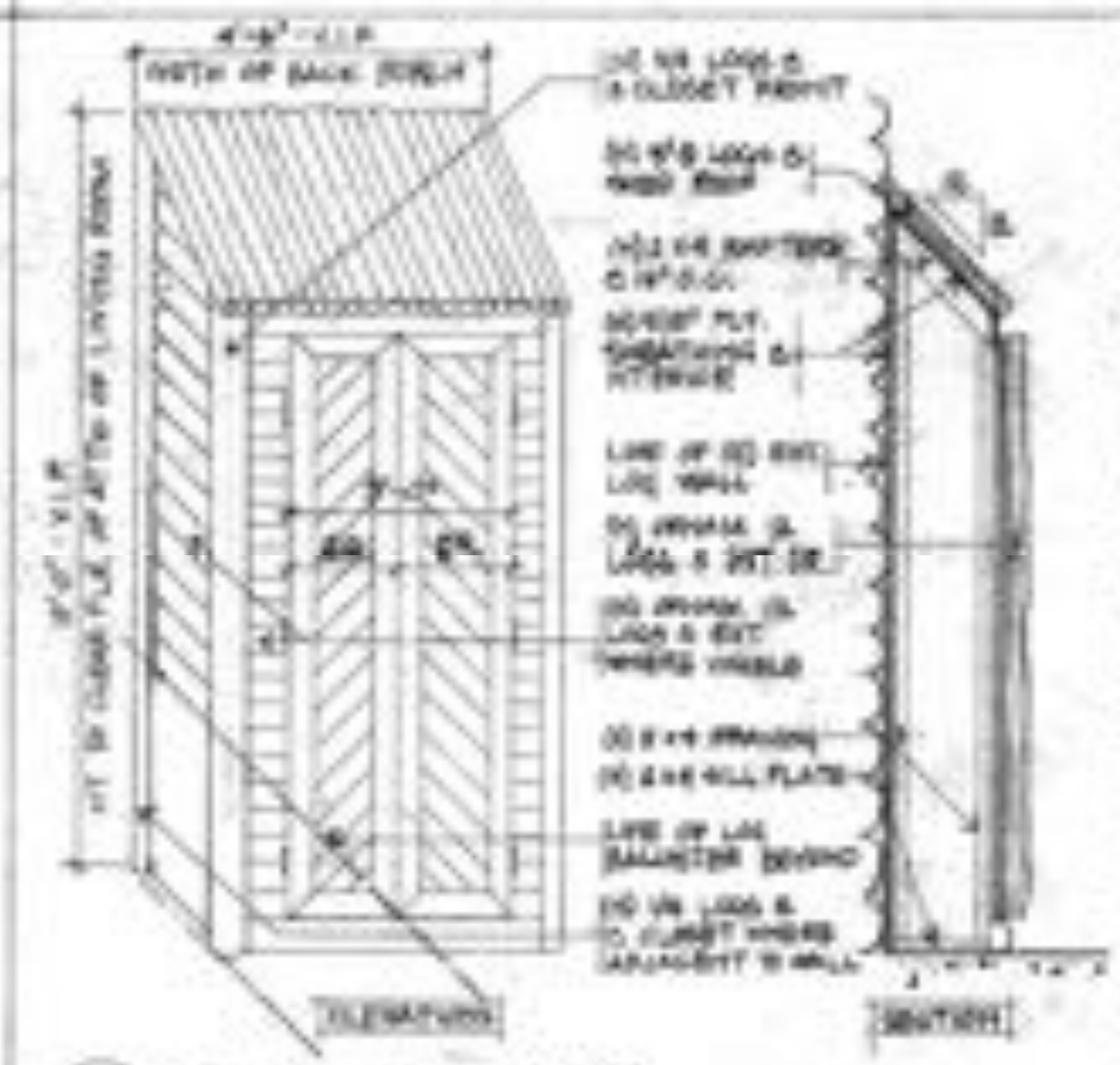
10 LOG FACING



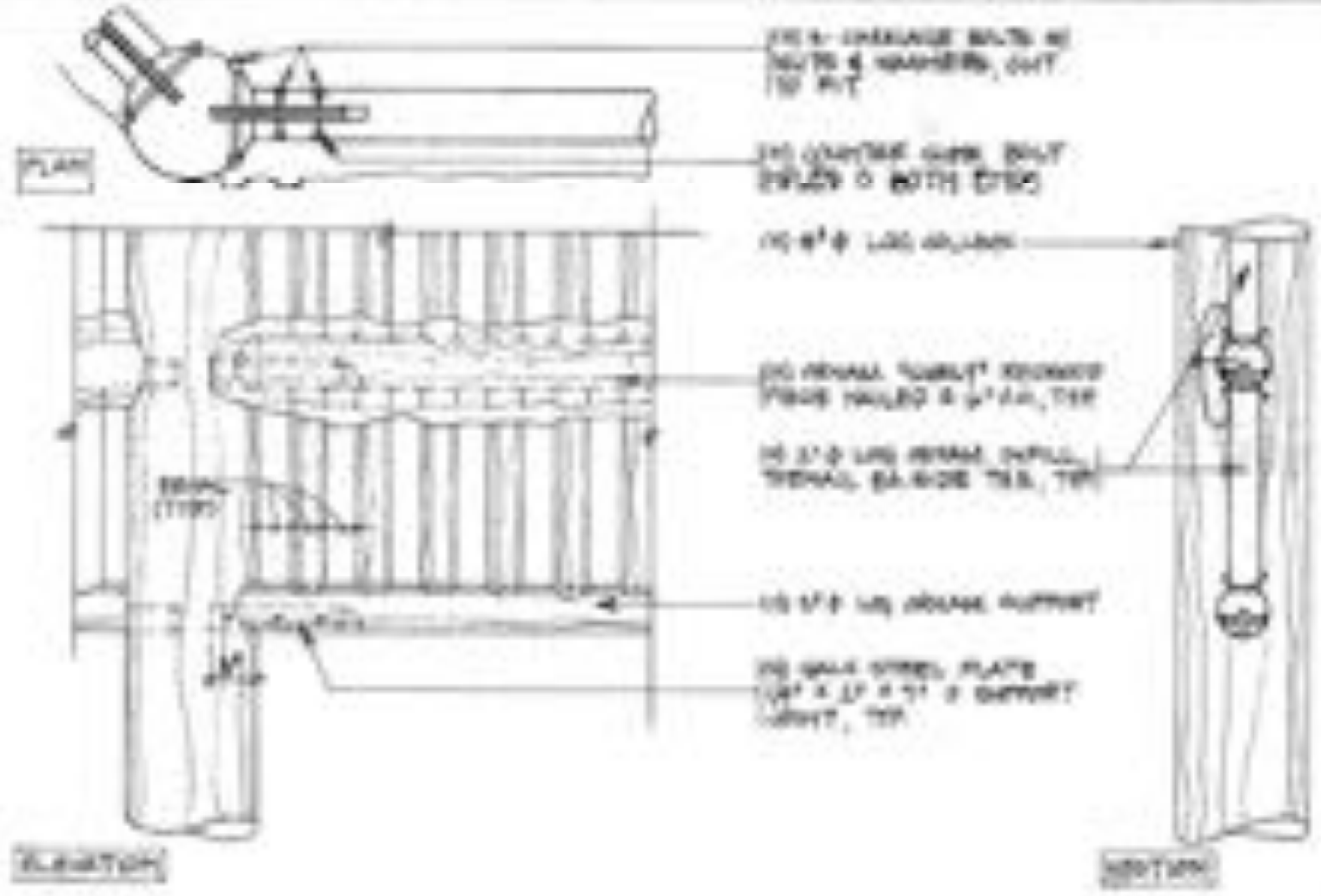
8 LOG FACING W/STRUCTURAL REPAIR



5 ROOF RIDGE BOARDS

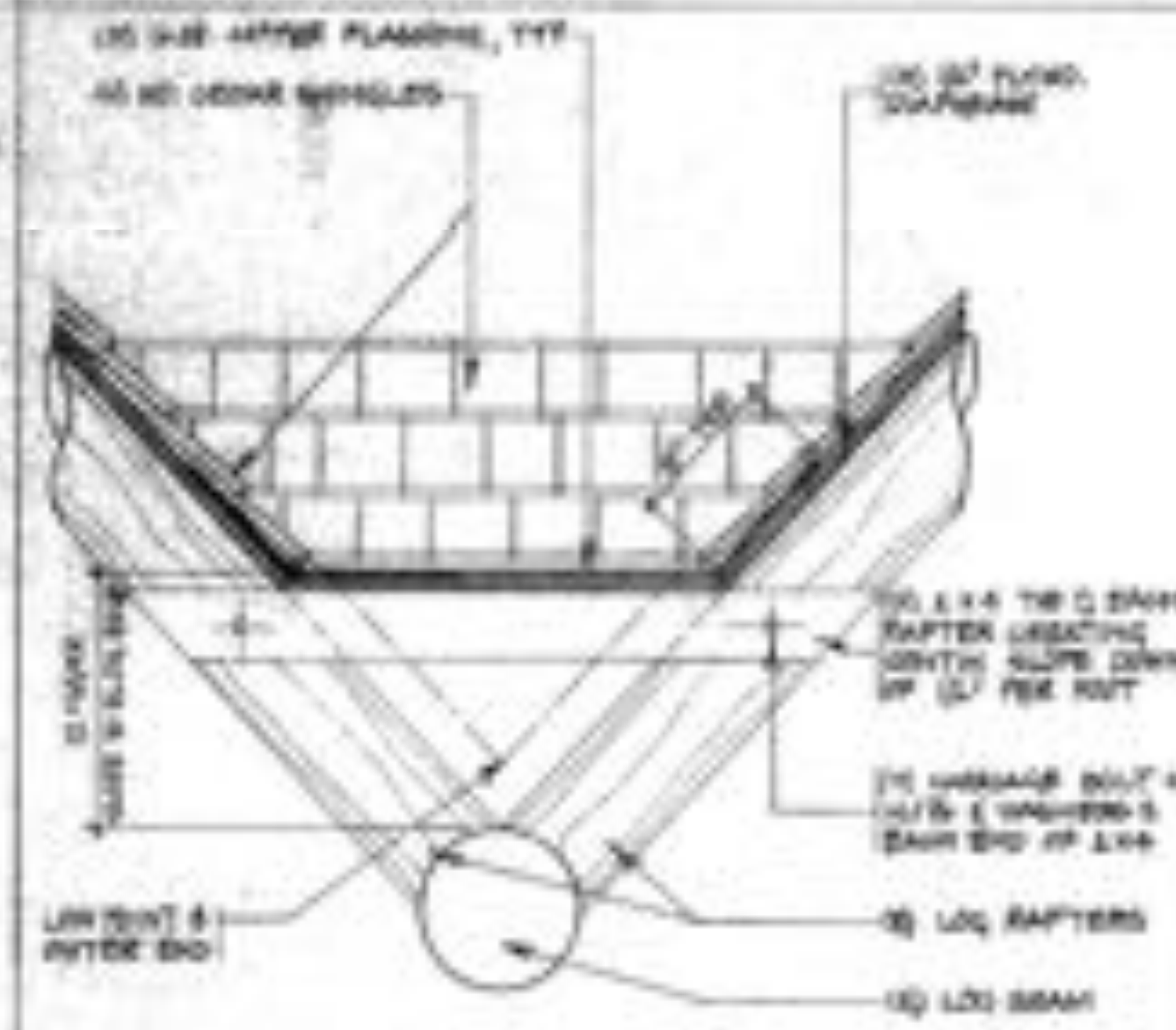


2 (N) UTILITY CLOSET



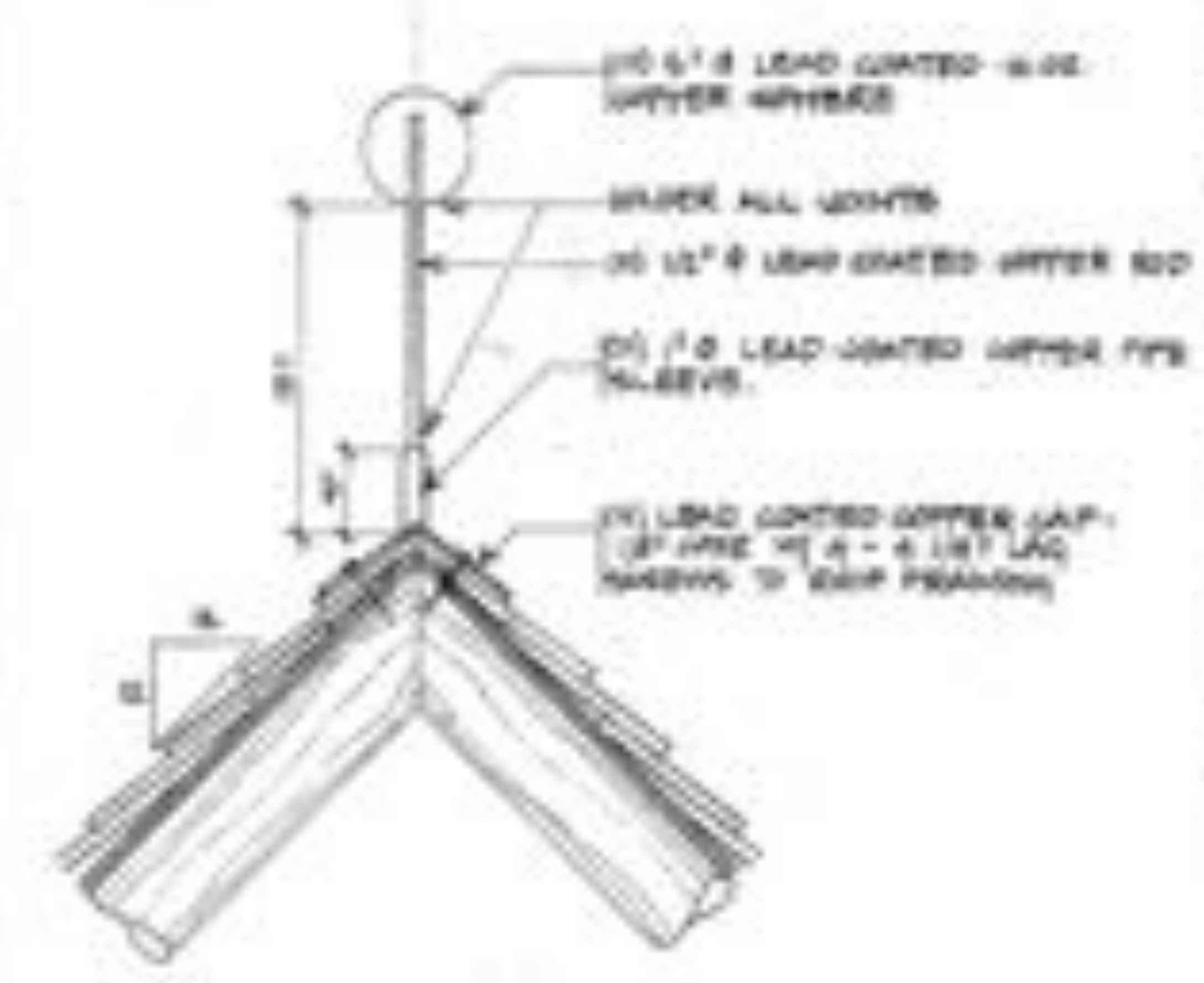
7 TYPICAL LOG ORNAMENT DETAILS

SCALE: 1-1/2" = 1'-0"



4 CRICKET & GABLE VALLEY

SCALE: 1 1/2" = 1'-0"



1 FINIAL & CUPOLA

SCALE: 1-1/2" = 1'-0"

Project:
Phoenix Lake Log House
Restoration

Page, Anderson & Turnbull, Inc.

Sheet Title:
DETAILS

A - 5

STRUCTURAL NOTES

1. GENERAL

A. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE UNIFORM BUILDING CODE, 1988 EDITION.

B. THESE NOTES APPLY TO ALL STRUCTURAL WORK UNLESS NOTED OTHERWISE.

C. COMPARE STRUCTURAL DRAWINGS WITH THE VARIOUS OTHER DRAWINGS AND SPECIFICATIONS BEFORE COMMENCING THE WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES AND DO NOT PROCEED WITH AFFECTED WORK UNTIL THEY ARE RESOLVED.

D. FOR ITEMS NOT SHOWN HEREIN SEE OTHER DRAWINGS.

E. ALL DETAILS ARE TYPICAL. FOR CONDITIONS NOT SPECIFICALLY SHOWN PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY WITH THE ARCHITECT IF NEEDED.

F. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION.

G. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ARCHITECT'S (OR ENGINEER'S) PRESENCE OR REVIEW OF THE WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S METHODS OR MEASURES.

H. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND MINIMIZE MOVEMENT/SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR ALL SHORING, BRACING, AND SOIL RETENTION SYSTEMS NEEDED TO BRING THE PROJECT TO ITS PERMANENT (AS DESIGNED) CONDITION.

I. THE CONTRACTOR'S TEMPORARY MEASURES SHALL BE ARRANGED OR DESIGNED SO AS TO NOT ALTER OR AFFECT THE PERMANENT STRUCTURE.

2. DESIGN CRITERIA

A. LIVE LOAD:
- ROOFS [illegible]
- DECKS [illegible]

3. MATERIALS

A. GRAVEL: [illegible]

B. CONCRETE: [illegible]

C. REINFORCING: [illegible]

D. STEEL: [illegible]

E. WOOD: [illegible]

F. PLYWOOD: [illegible]

G. GROUT: [illegible]

4. EXCAVATION

A.–E. [illegible]

5. CONCRETE

A. ALL CONCRETE TO BE REINFORCED UNLESS NOTED AS LEAN CONCRETE.

B. CONCRETE PROTECTION FOR REINFORCEMENT (COVER) SHALL BE AS FOLLOWS:
- CAST AGAINST EARTH 3"
- FORMED AND EXPOSED TO EARTH 2"
- EXPOSED TO WEATHER 2"
- OTHER 1"

C. CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED BY SAND BLASTING, WATER JETTING AND/OR MECHANICAL MEANS TO EXPOSE COARSE AGGREGATE (1/4" ROUGHNESS) AND REMOVE ALL UNSOUND MATERIAL.

D. ALL REINFORCING, EMBEDMENTS, INSERTS, ETC., SHALL BE POSITIVELY SECURED IN PROPER LOCATION BEFORE CONCRETE IS PLACED. PROVIDE SUFFICIENT SUPPORTS TO PREVENT DISPLACEMENT DURING PLACING AND FINISHING OPERATIONS.

E. REINFORCING SHALL BE CONTINUOUS WITH SPLICES ONLY WHERE SHOWN. STAGGER SPLICES 24" (END TO END AND CLEAR) AT EVERY OTHER BAR) WHEREVER POSSIBLE.

F. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR FORMWORK DRAWINGS AND DESIGN.

G. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR MIX DESIGNS ACCORDING TO ACI AND BASED UPON FIELD EXPERIENCE OR TRIAL BATCHES.

6. STEEL

A. ALL BUTT WELDS TO BE COMPLETE PENETRATION UNLESS NOTED OTHERWISE.

B. ALL WELDING TO BE PER AWS AND PERFORMED BY CERTIFIED WELDERS.

7. CARPENTRY

A. INSTALL JOISTS AND BEAMS WITH CAMBER UP.

B.–I. [illegible]

8. EXISTING CONSTRUCTION

A.–F. [illegible]

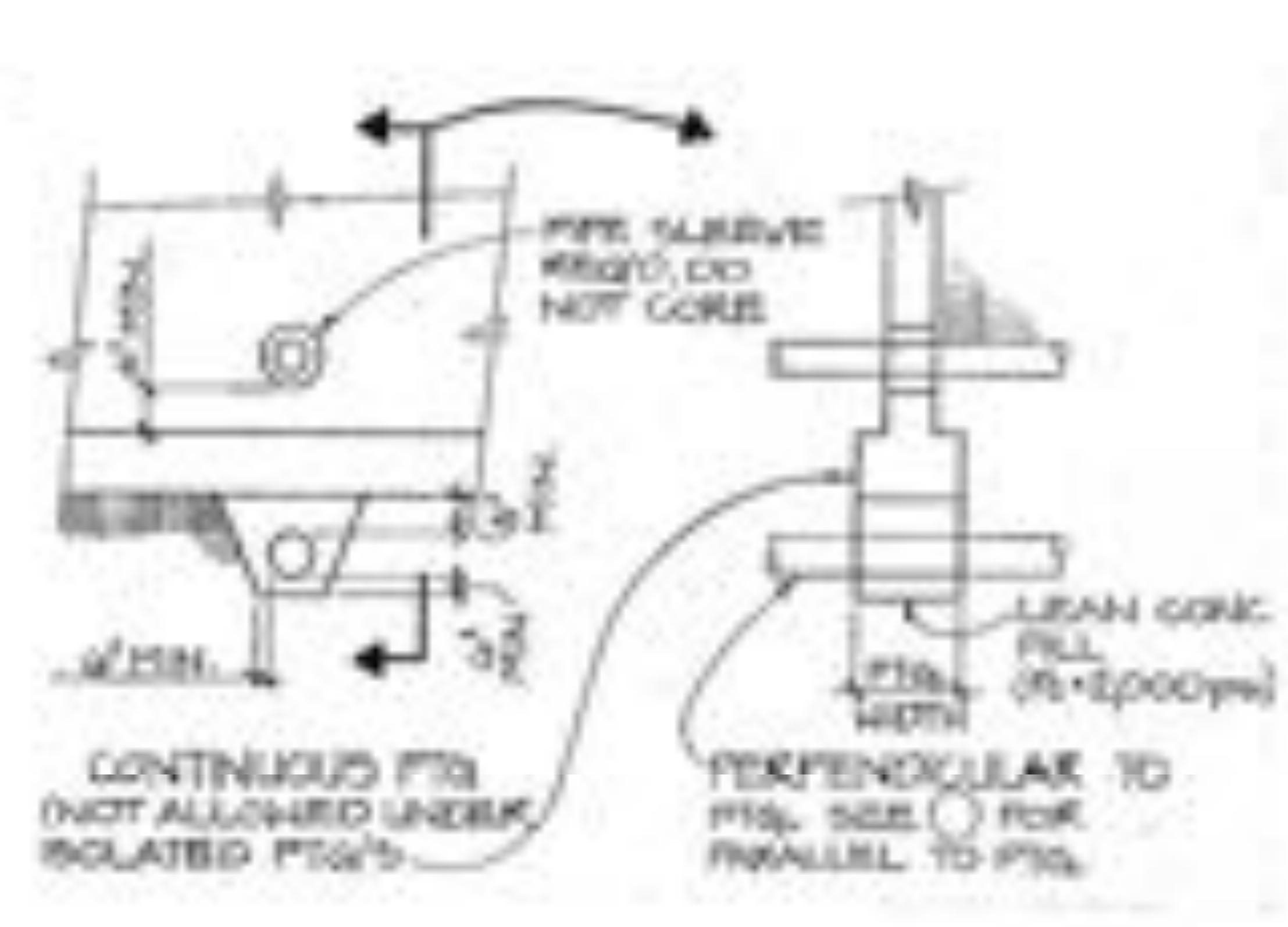
9. TESTING AND INSPECTION

A. STRUCTURAL ENGINEER TO INSPECT: [illegible]

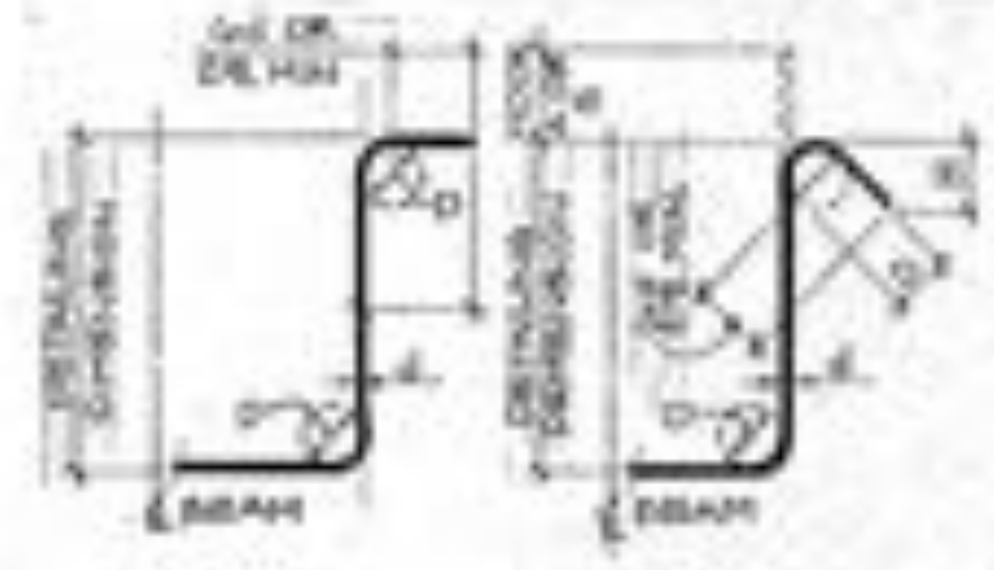
B. [illegible]

10. MISCELLANEOUS

A. [illegible]

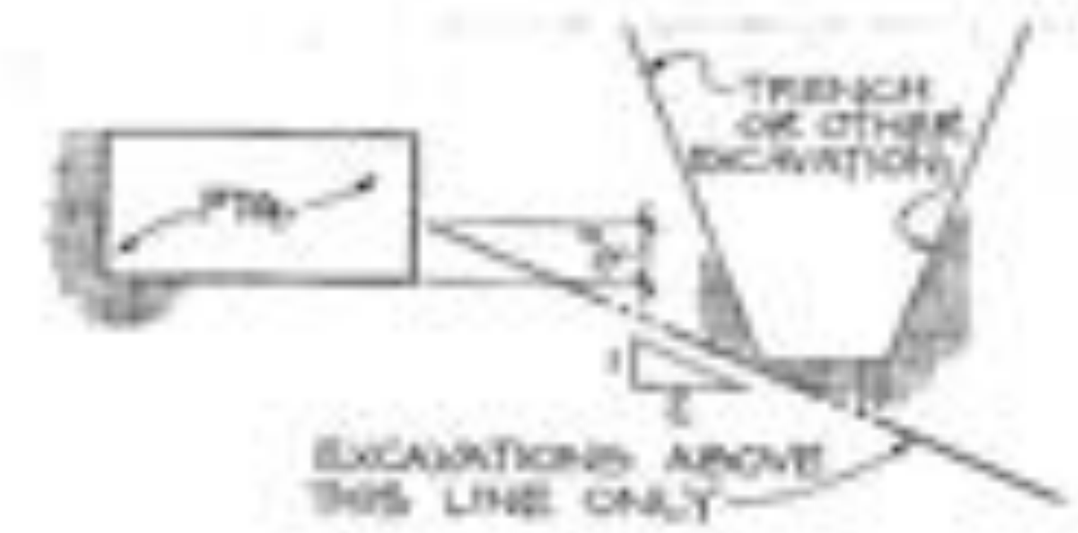


PIPES AND CONDUIT AT FOOTING

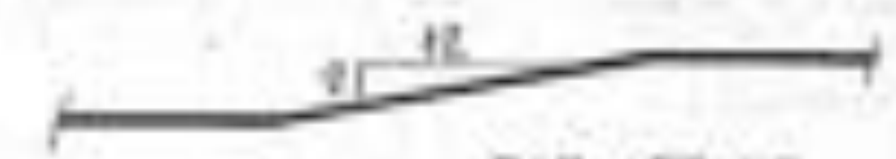


STIRRUP & TIE HOOK DIMENSIONS GRADES 40-50-60KSI				
BAR SIZE	D (IN)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	APPROX H
#3	1½	4	4	2½
#4	2	4½	4½	3

STIRRUPS AND TIE HOOKS



EXCAVATIONS AT FOOTINGS

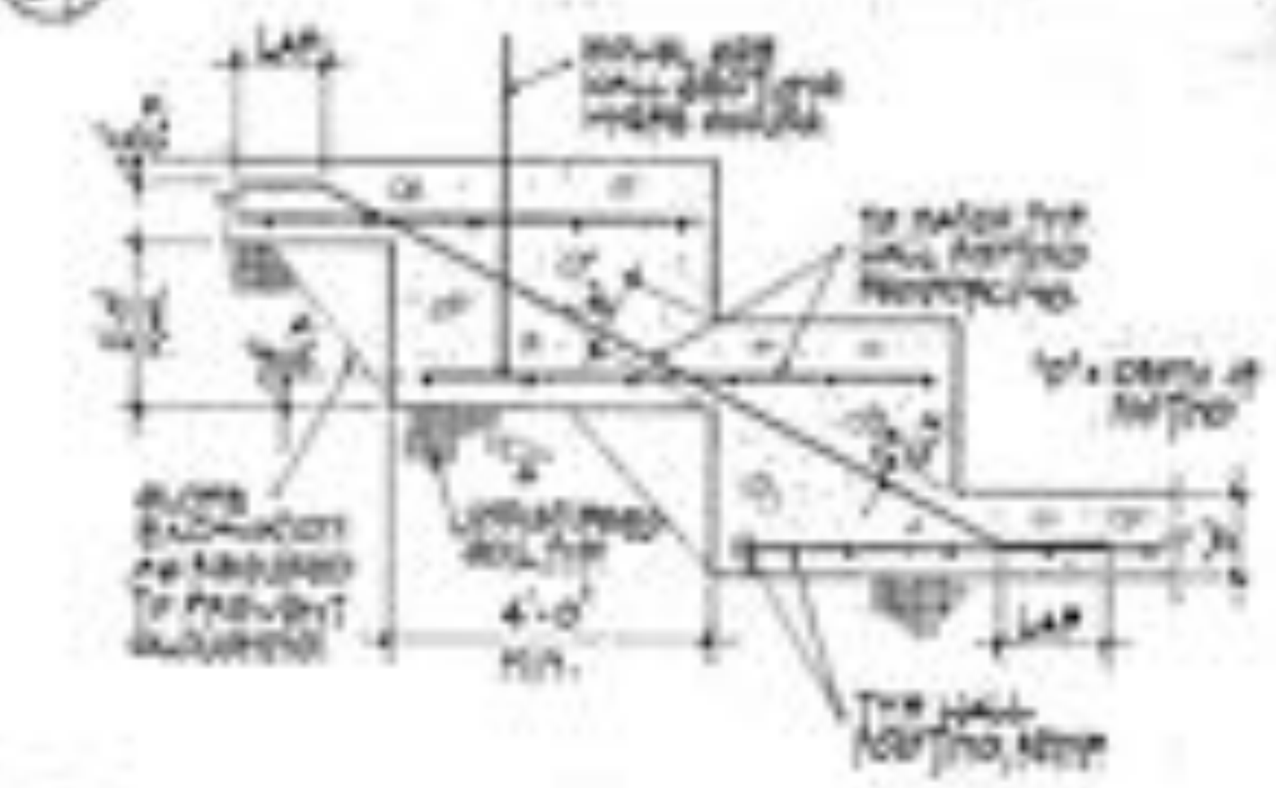


BAR OFFSET

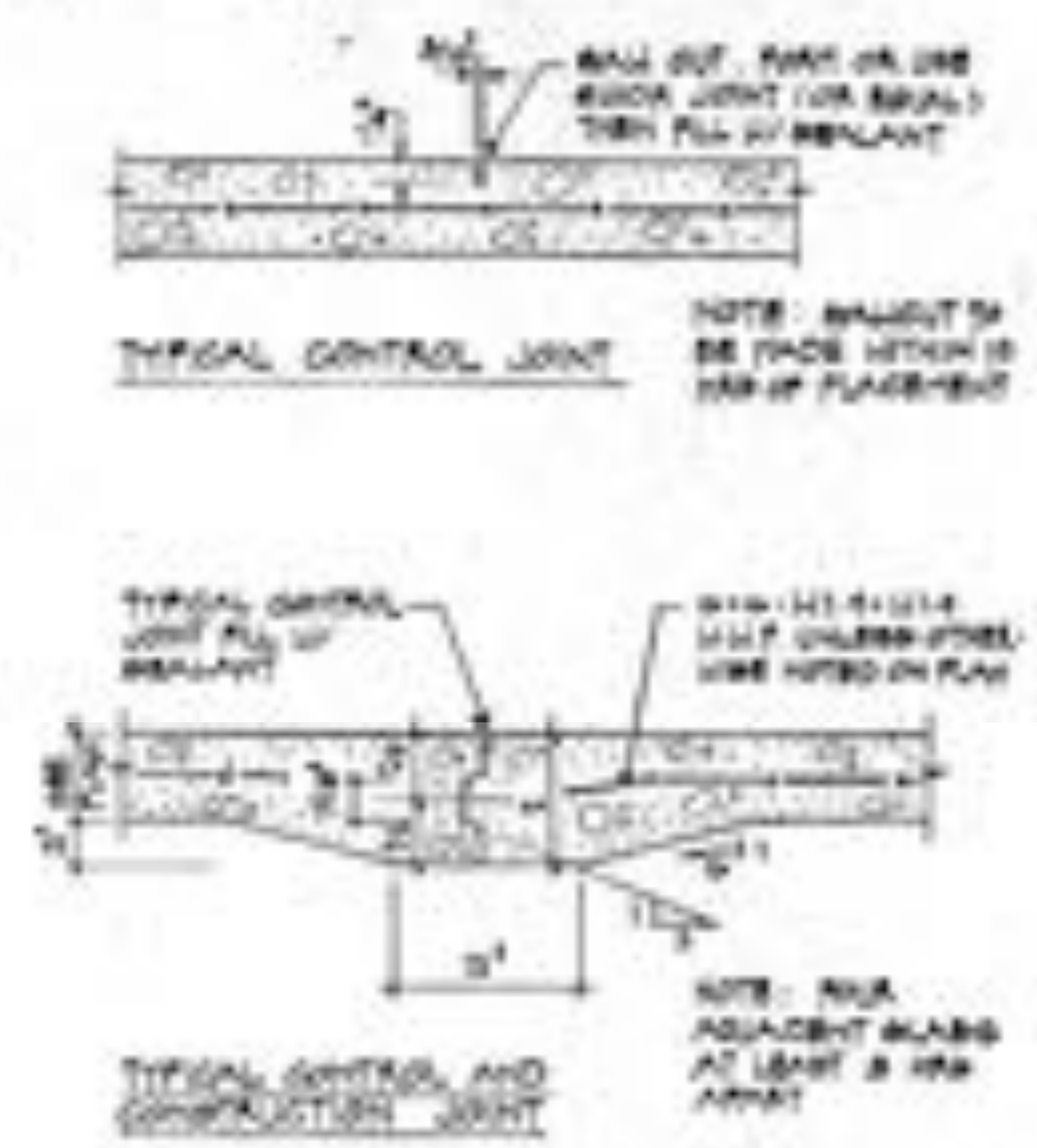
BAR SIZE	TOP (1) BARS	BOTT BARS	WALL (3) BARS
#3	[illegible]	[illegible]	[illegible]
#4	24"	[illegible]	[illegible]

(1) USE FOR BEAM BARS.
(2) USE FOR SLAB & FOOTING BARS.
(3) USE FOR CONCRETE MASONRY UNITS.

MINIMUM LAP AND EMBEDMT LENGTHS NOTED 'LAP' ON DRAWINGS



STEPPED FOOTING DETAIL



TYPICAL JOINTS IN CONC SLAB ON GRADE

NOTE:
WHERE SINGLE LAYER OF REINF. OCCURS BEND STEEL AS SHOWN FOR OUTSIDE BARS

TYPICAL BENDS FOR HORIZ REINF. IN CONCRETE WALLS AND FOOTINGS

Project: Phoenix Lake Log House Restoration

Structural Design Engineers

Page, Anderson & Turnbull, Inc.
364 Bush Street
San Francisco, California 94104

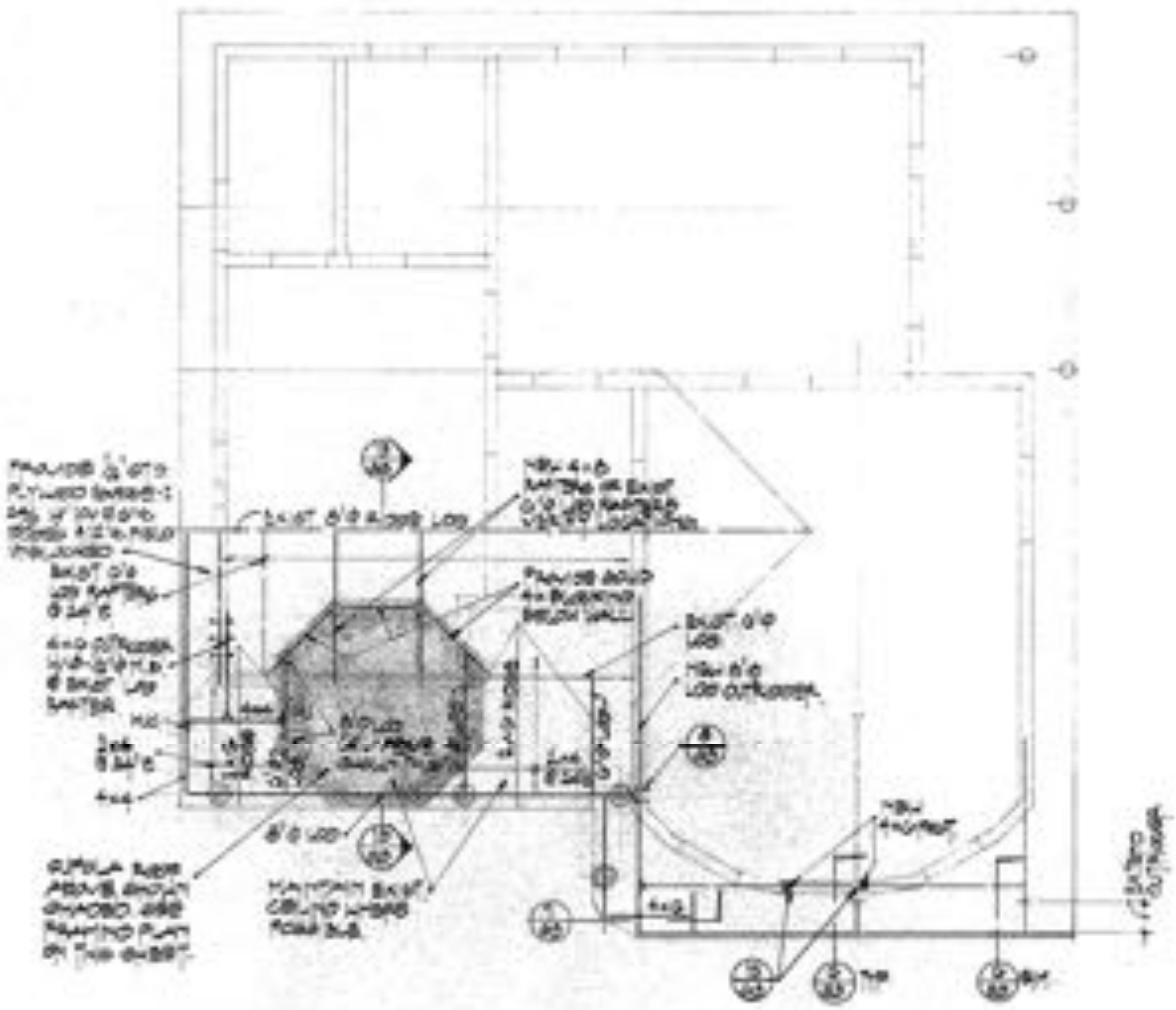
Drawn: [illegible]
Checked:
Approved:
Issue Date: NOV 27 1988

SCALE: NO SCALE

Sheet Title: STRUCTURAL NOTES AND GENERAL DETAILS

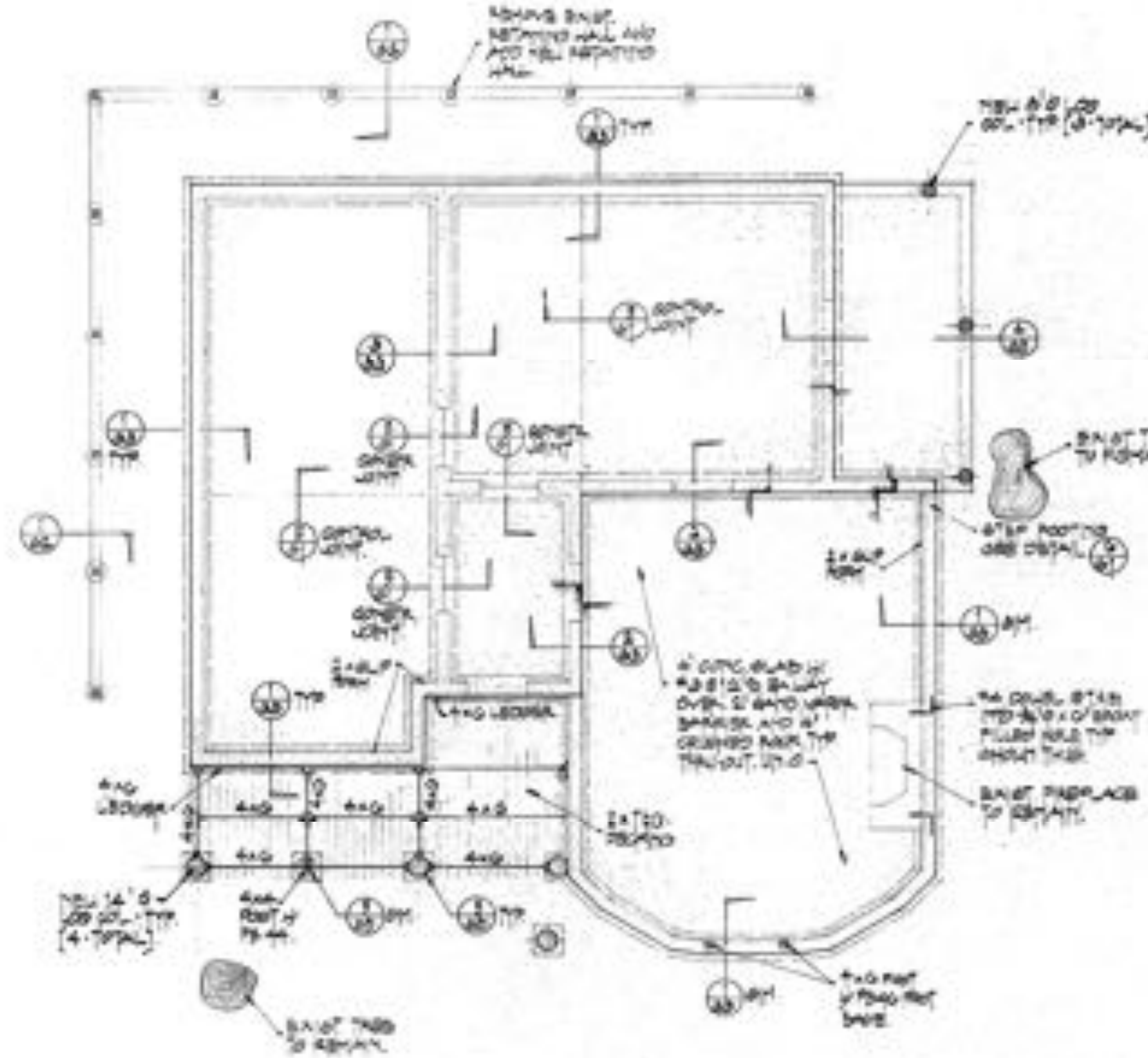
Project No. 88071

Sheet No. S1



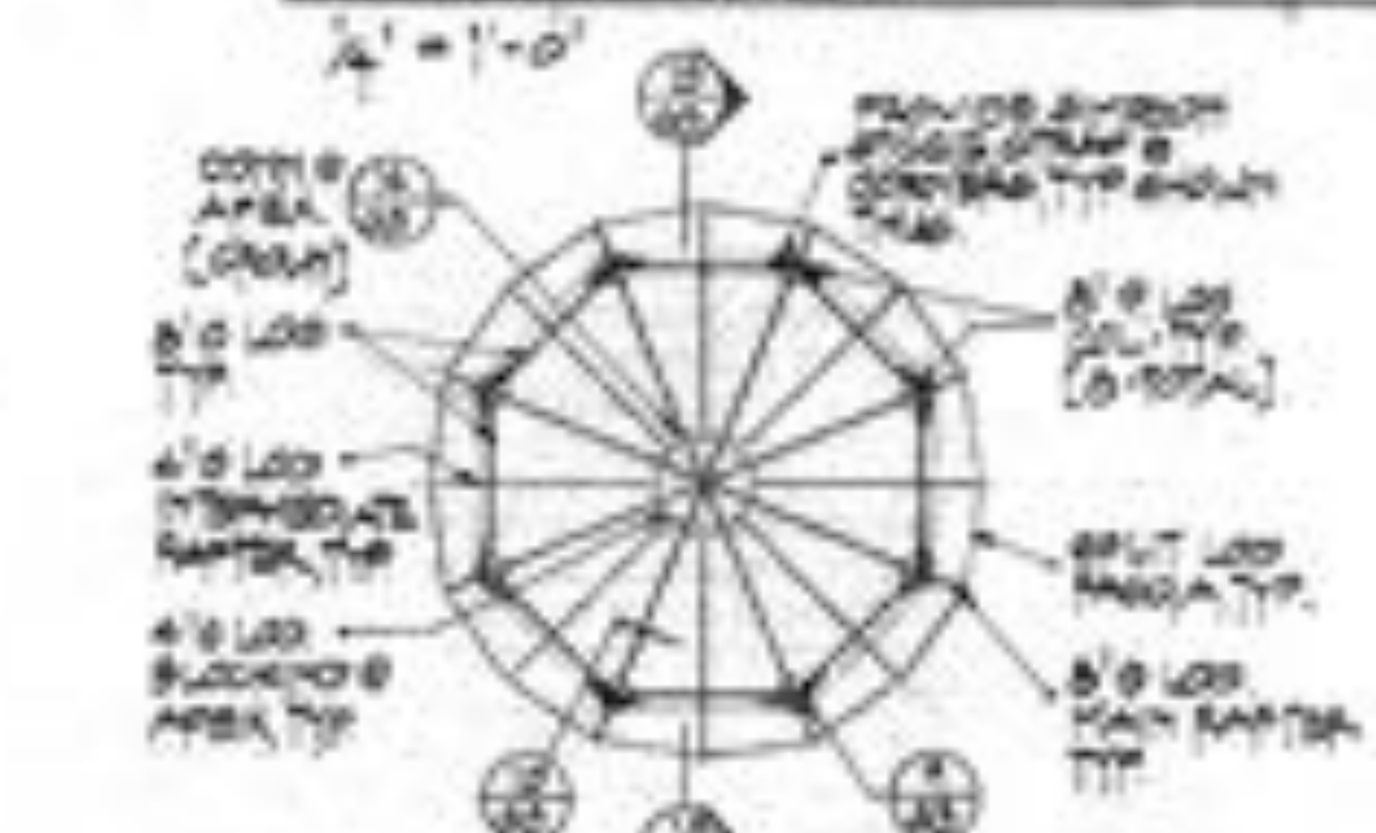
EXISTING / NEW ROOF FRAMING PLAN

1/4" = 1'-0"



NEW FOUNDATION LAYOUT PLAN

1/4" = 1'-0"

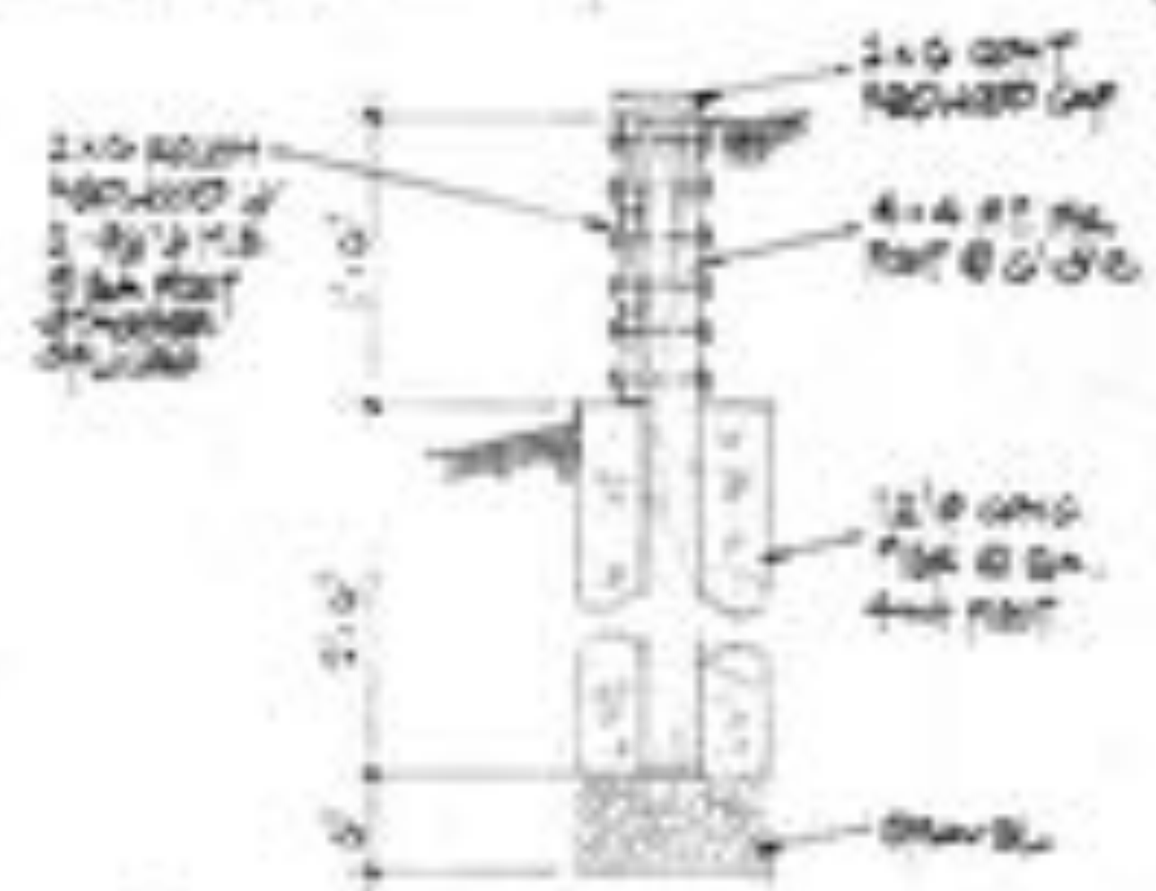


CUPOLA ROOF FRAMING PLAN

1/4" = 1'-0"

GENERAL FRAMING NOTES

- FOR STRUCTURAL NOTES AND GENERAL DETAILS SEE SHEET S1
- ALL EXISTING FOUNDATIONS AND SLAB ON GRADE SHALL BE REMOVED AND SUBGRADES SHALL BE CHEMICALLY TREATED AS PER TERMITE REPORT.
- ALL NOMINALLY DIMENSIONED LUMBER SHALL BE NO. 1 DOUGLAS FIR. PRESSURE TREATED OR NO. 1 - CALIF. REDWOOD.
- PROVIDE MINIMUM 5/8" Ø x 10" LONG LAG SCREWS @ 48" o.c. FROM EXIST. BOTTOM WALL LOG TO NEW FOUNDATION. EMBED 4" INTO LOG AND 6" INTO FOUNDATION.
- VERIFY AND COORDINATE ALL DIMENSIONS, FRAMING AND EXIST. CONDITIONS NOT SHOWN ON THESE [STRUCTURAL] DRAWINGS WITH ARCH. DRAWINGS.



RETAINING WALL DETAIL

Project: Phoenix Lake Log House Restoration

Structural Design Engineers

Page, Anderson & Turnbull, Inc.

Drawn: TONY

Checked:

Approved:

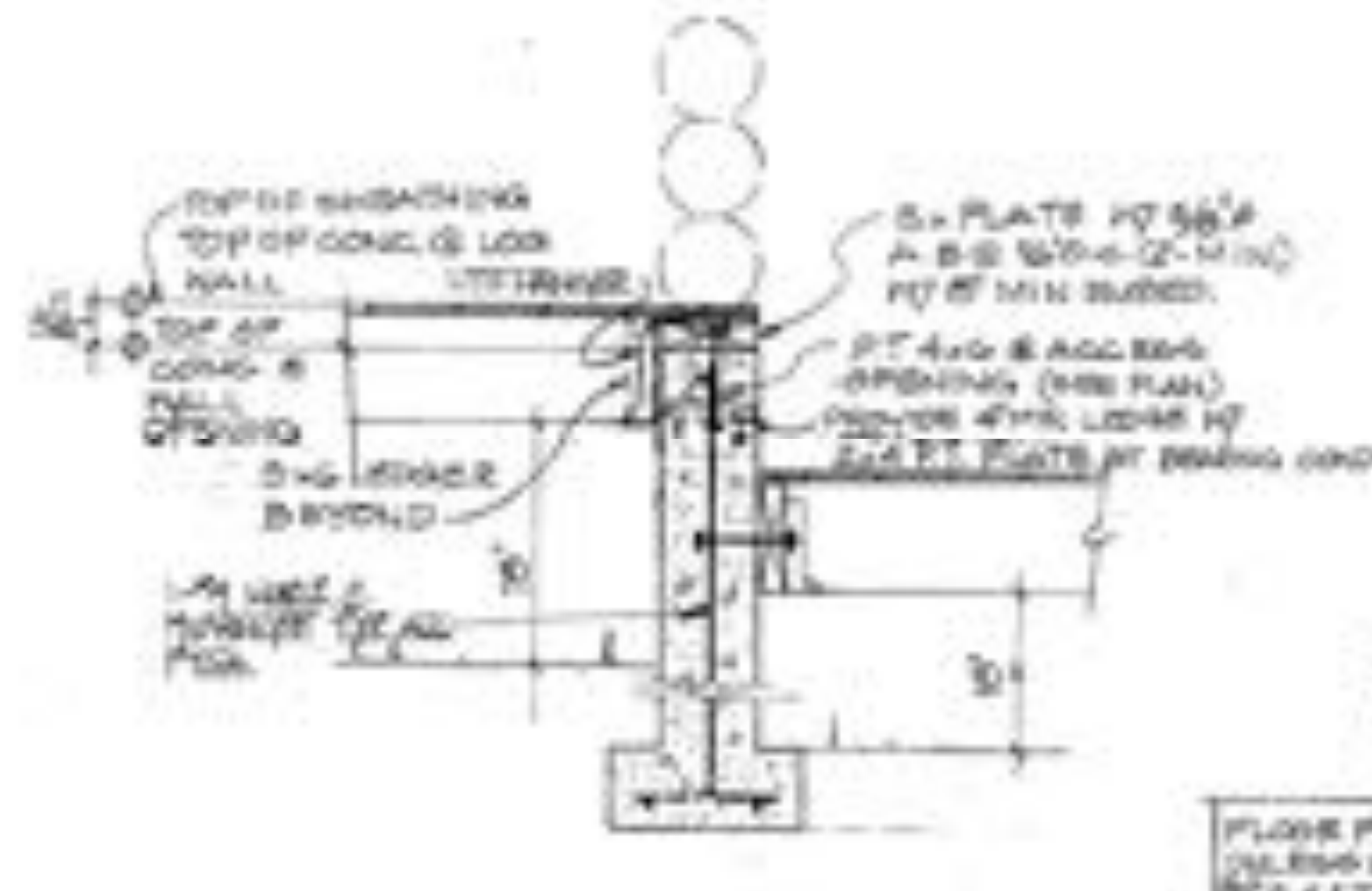
Issue Date: NOV 2, 2000

SCALE: AS NOTED

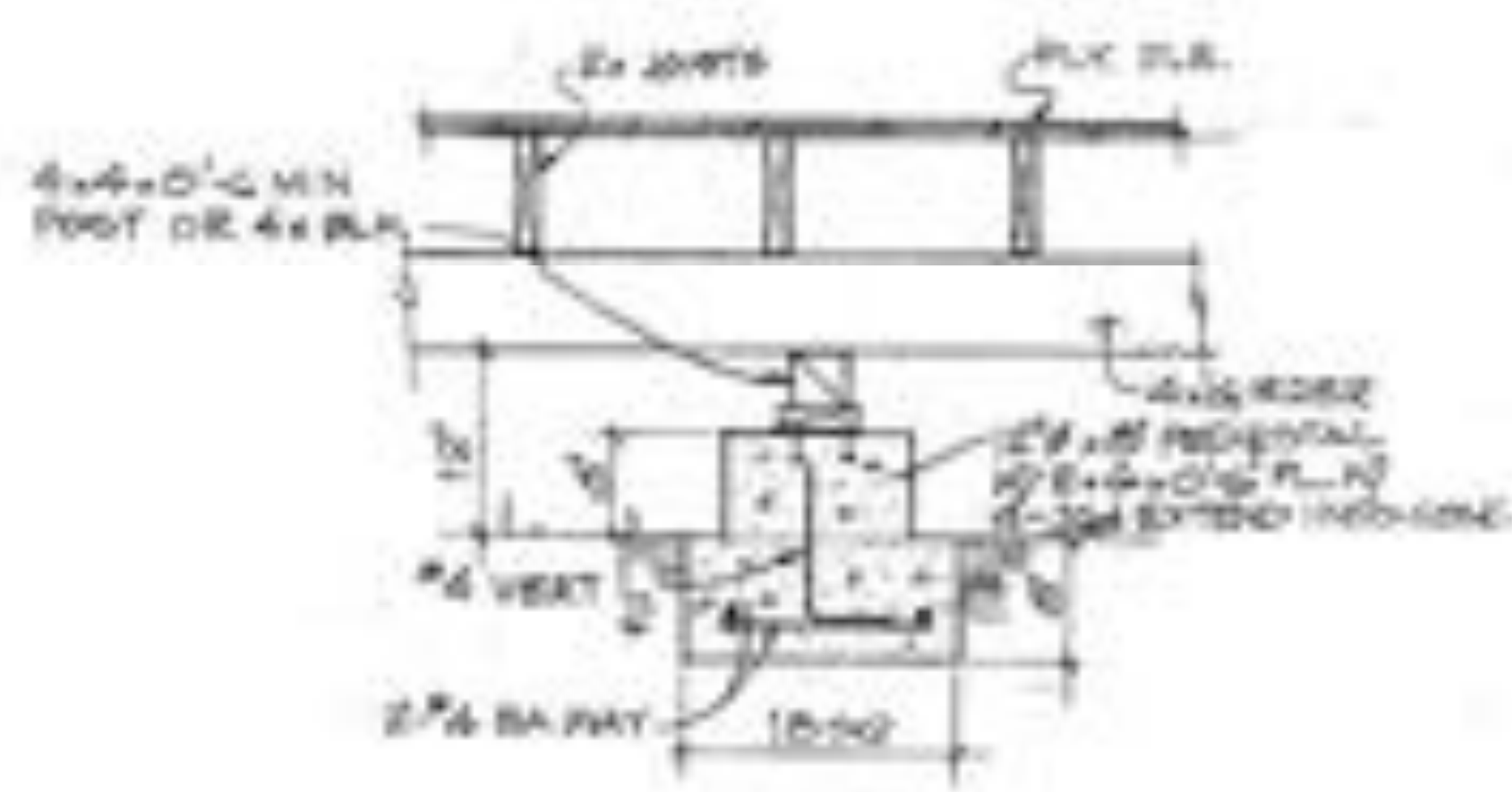
Sheet Title: FOUNDATION AND ROOF FRAMING PLAN

Project No.: 8807

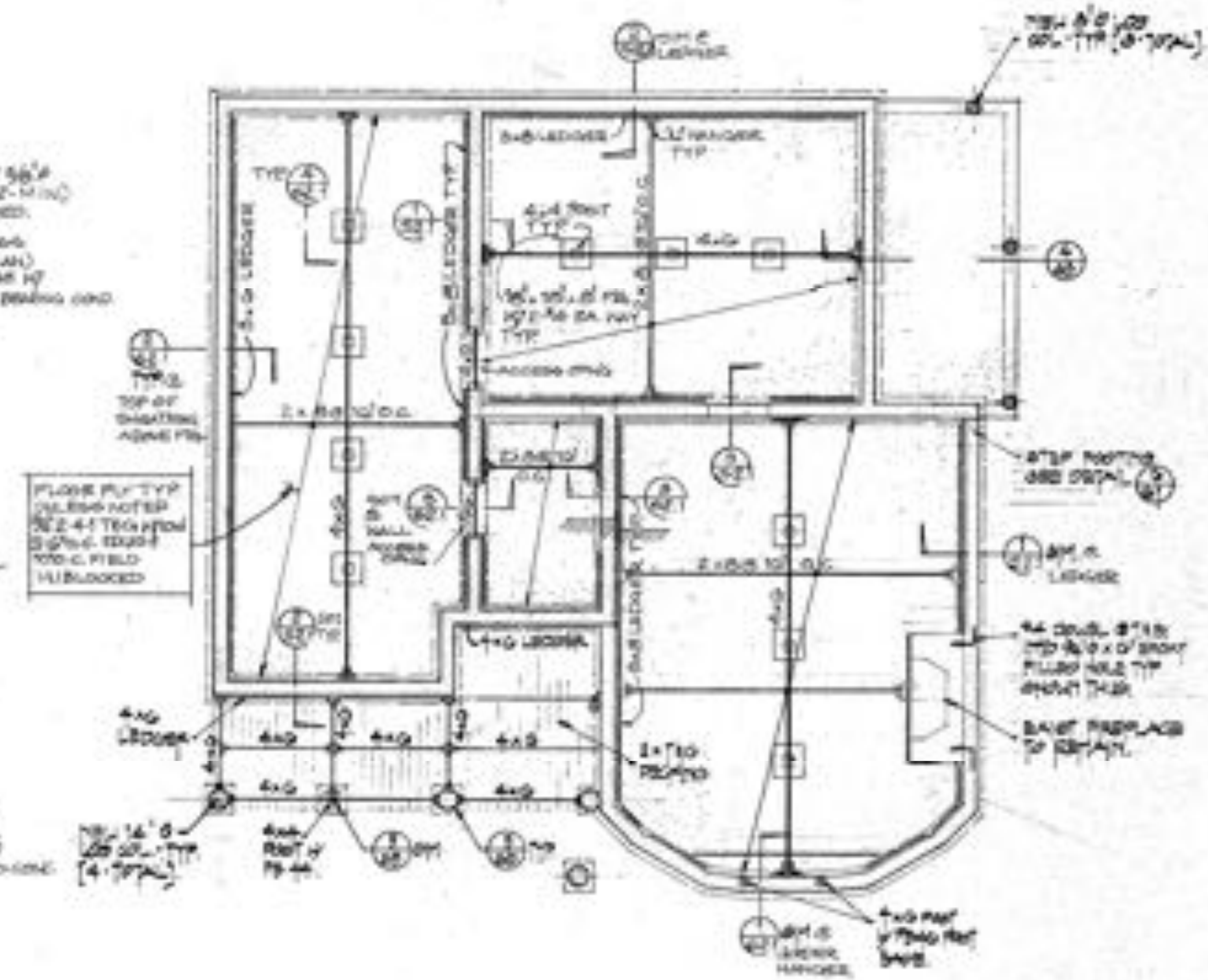
Sheet No.: S2



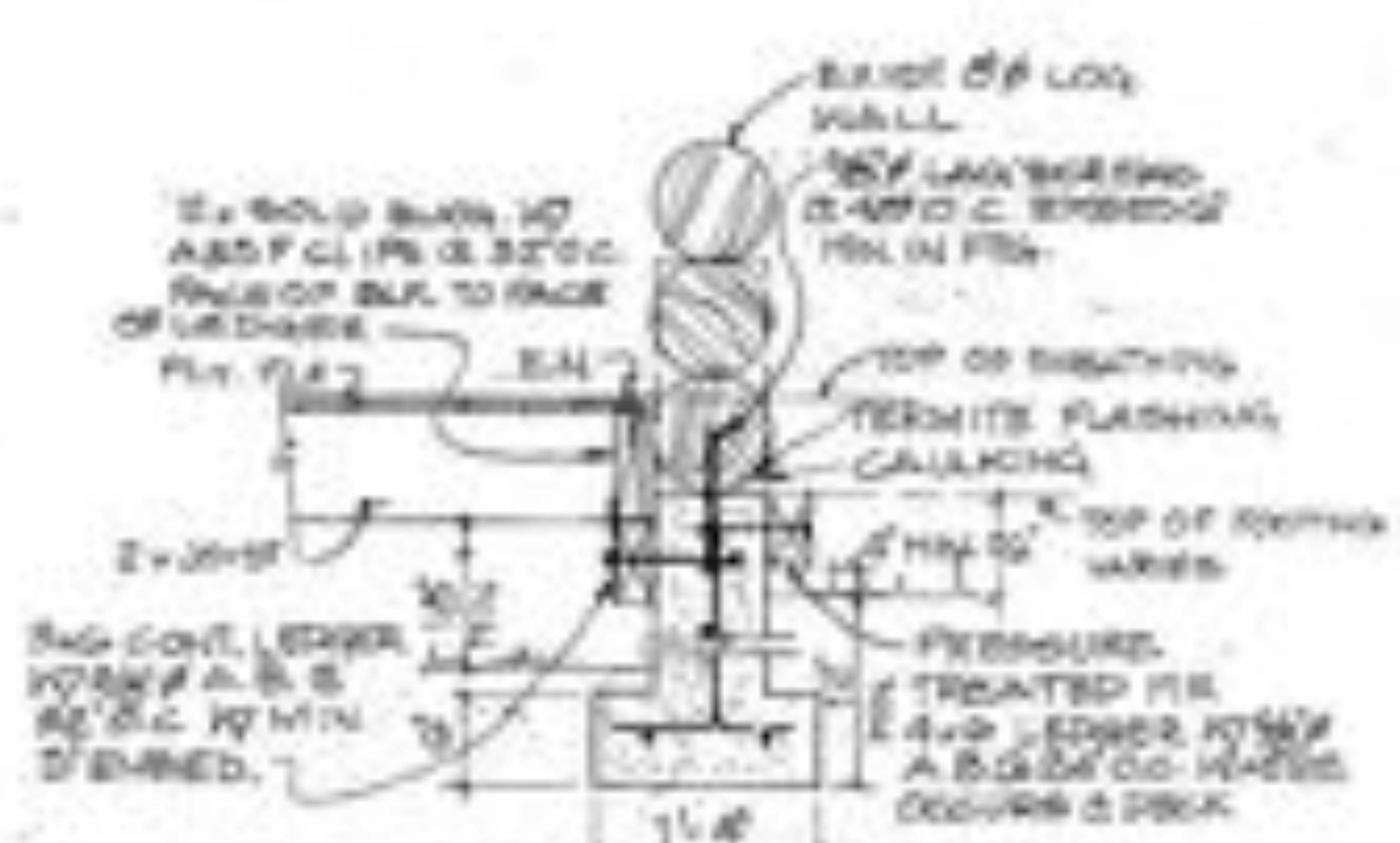
5/S2.1 FOOTING @ STEP AND WALL OPENING



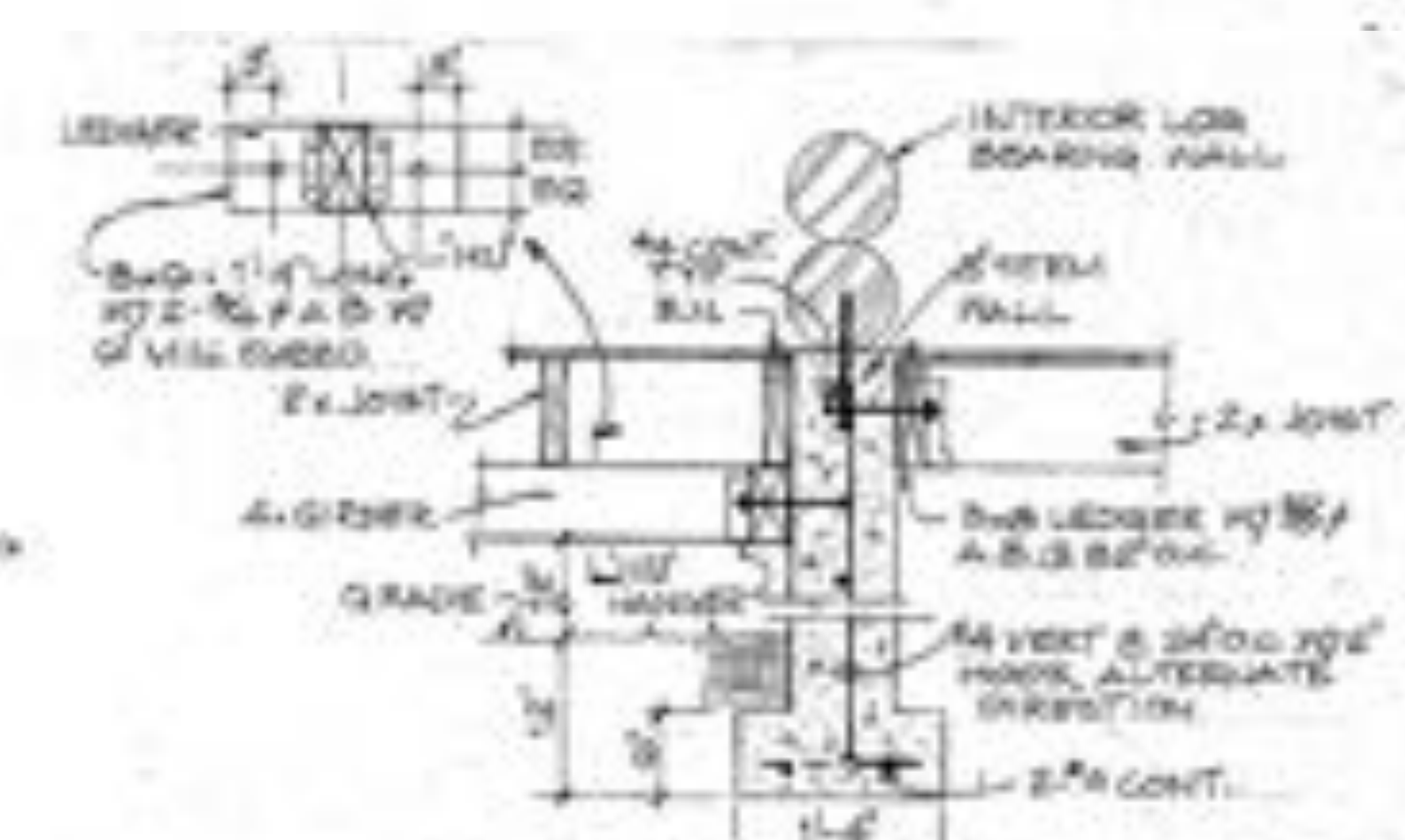
4/S2.1 ISOLATED SPREAD FOOTING



ALTERNATE RAISED FLOOR FRAMING PLAN



2/S2.1 EXTERIOR WALL FOOTING



1/S2.1 BEARING WALL FOOTING

Project:

Phoenix Lake Log House Restoration

Structural Design Engineers

Page, Anderson & Turnbull, Inc.

364 Bush Street
San Francisco, California 94108

Drawn:

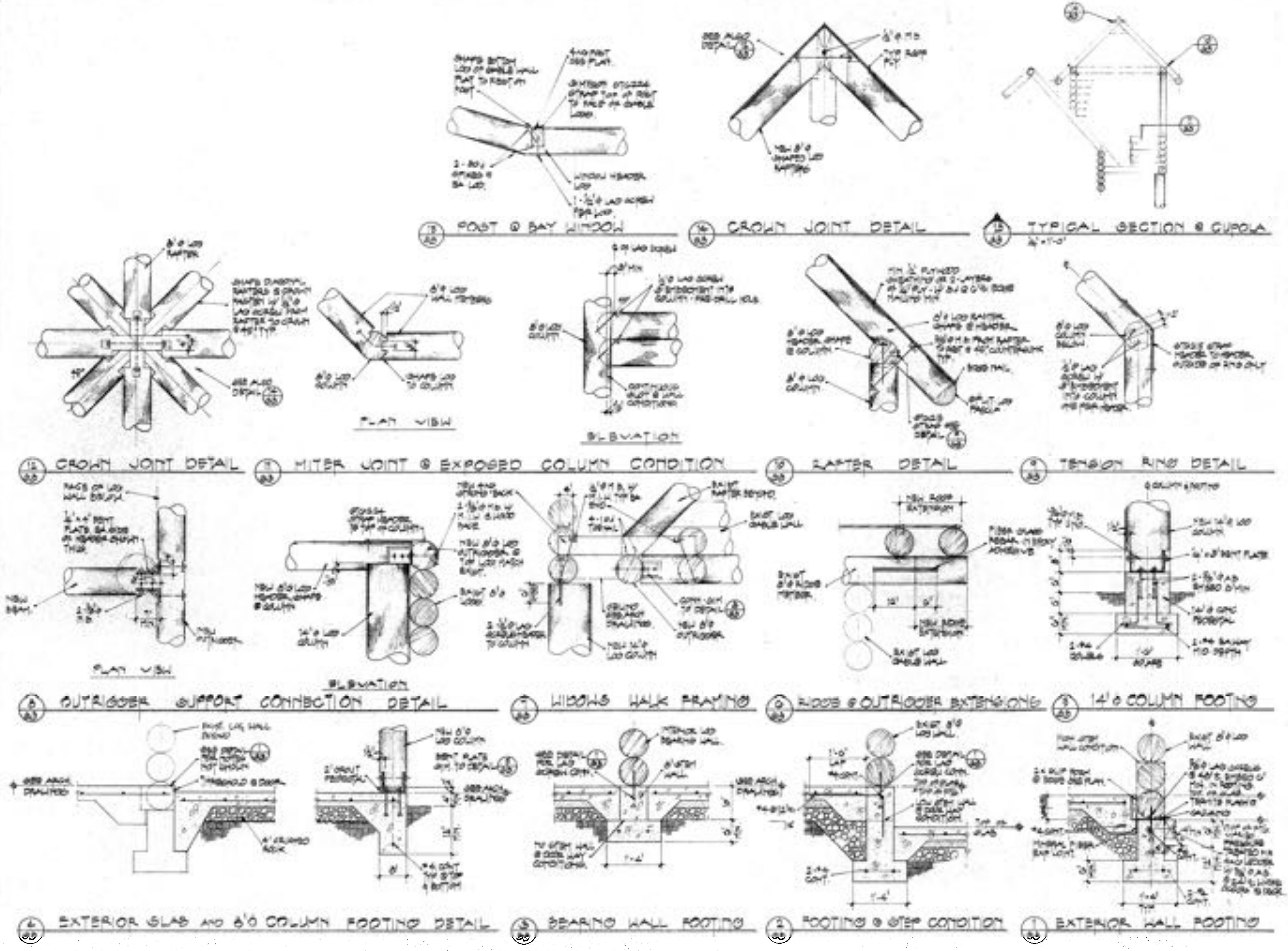
Checked:

Approved:

SCALE: AS NOTED

ALT. FOUNDATION PLAN & DETAILS

S2.1


POST @ BAY WINDOW
CROWN JOINT DETAIL
TYPICAL SECTION @ CUPOLA
CROWN JOINT DETAIL
MITER JOINT @ EXPOSED COLUMN CONDITION
PLAN VIEW
ELEVATION
RAFTER DETAIL
TENSION RING DETAIL
OUTRIGGER SUPPORT CONNECTION DETAIL
PLAN VIEW
ELEVATION
WIDOWS WALK FRAMING
RIDGE & OUTRIGGER EXTENSIONS
14'⌀ COLUMN FOOTING
EXTERIOR SLAB AND 8'⌀ COLUMN FOOTING DETAIL
BEARING WALL FOOTING
FOOTING @ STEP CONDITION
EXTERIOR WALL FOOTING

Project:
Phoenix Lake Log House Restoration

Structural Design Engineers

Page, Anderson & Turnbull, Inc.
Bush Street
San Francisco, California

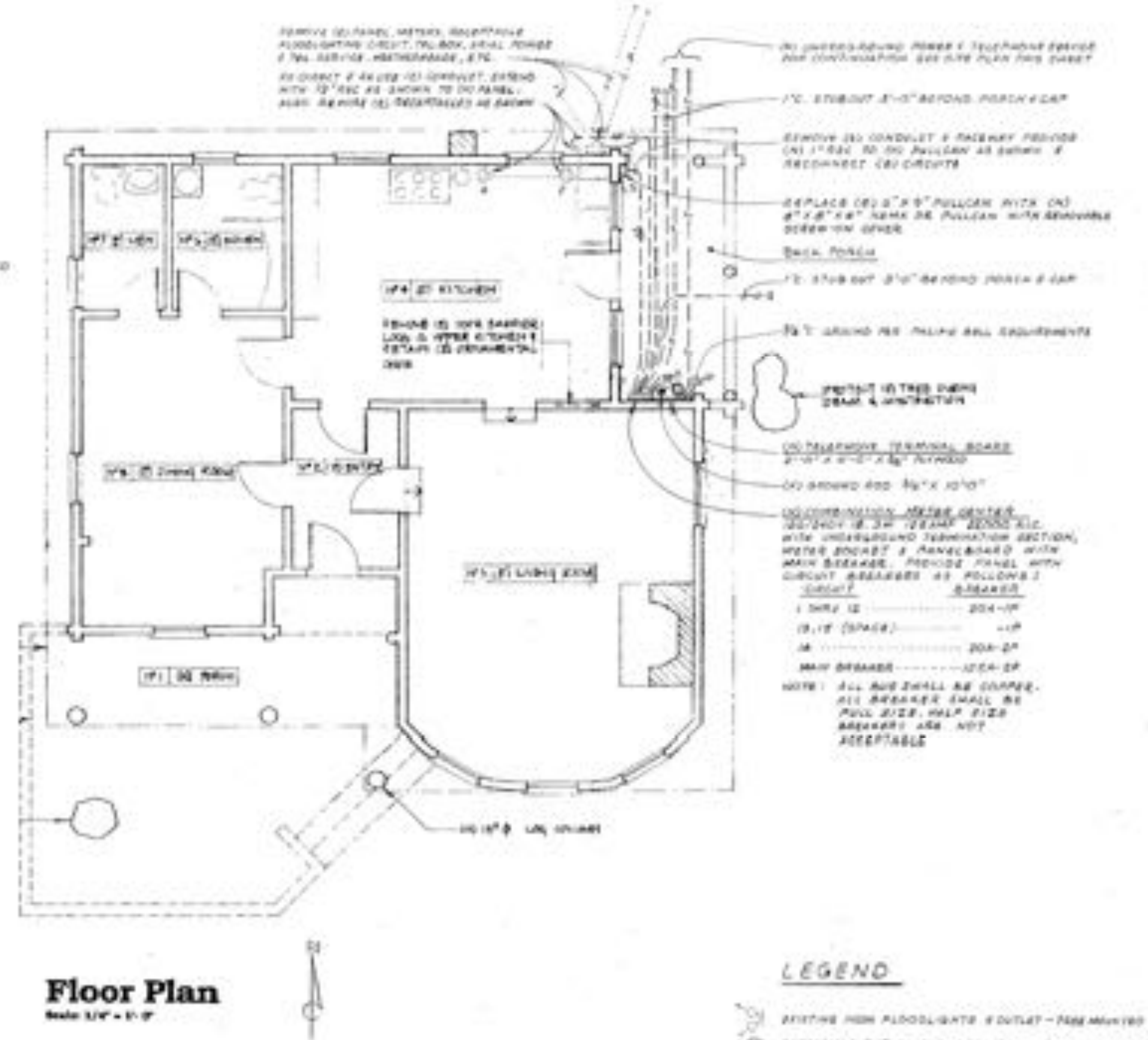
Drawn: TODD
Checked:
Approved:
Issue Date: NOV 21, 1988

SCALE: 1"=1'-0" U.N.O.

Sheet Title: TYPICAL FRAMING DETAILS
Project No.: 8804
Sheet No.:
S3

PARTIAL SITE PLAN

SCALE: 1" = 20'-0"



Floor Plan

Scale: 1/4" = 1'-0"

LEGEND

EXISTING HIGH FLOODLIGHTS & OUTLET – TREE MOUNTED

RECEPTACLE, DUPLEX 20A 3 PR, 120V SURFACE MOUNT +24"

EXISTING RECEPTACLE

NEW CONDUIT RUN IN OR BELOW FLOOR OR GRADE

HASH MARKS INDICATE QUANTITY OF WIRE OTHER THAN 2#12

NEW CONDUIT RUN EXPOSED ON WALL

EXISTING RACEWAY

(E) (N) INDICATES EXISTING OR NEW

UON UNLESS OTHERWISE NOTED

WP INDICATES DEVICE IS WEATHERPROOF

RSC RIGID STEEL CONDUIT, GALVANIZED

Project: Phoenix Lake Log House Restoration

Page, Anderson & Turnbull, Inc.

Drawn: L.E.R.

Checked: L.E.R.

Approved:

Issue Date:

Sheet Title: ELECTRICAL PARTIAL SITE PLAN & FLOOR PLAN

Project No.:

Sheet No.: E-1

059

656

13-6

Preliminary/Schematic Report

Phoenix Lake Log House

Prepared for
Marin Municipal Water District

Prepared by
Page, Anderson & Turnbull, Inc.
Architects & Planners
364 Bush Street
San Francisco, California 94104

1 October 1986

Table of Contents

I. Introduction

This preliminary/schematic report is a written and graphic summary of on-site findings of deterioration, and the subsequent analysis of and recommendation for repair or restoration of the Phoenix Lake Log House.

In addition to the architectural evaluation done by Page, Anderson & Turnbull, Inc., a preliminary structural survey was done by Jack Laws, of Structural Design Engineers.

II. Building History

The Hippolyte Ranch Log House is significant as a example of the development of southern Marin County during the late nineteenth century, for its association with prominent Bay Area residents, and for its representative role in national and regional architectural movements of the period.

Predominantly a rural area during the nineteenth century, lower Marin County experienced suburban settlement when San Francisco's growth spurred development of ferry service in 1855 and a railroad line in 1872. Wealthy city dwellers favored the climate and picturesque scenery, patronizing resort hotels and building summer villas or year-round residences.

Similiar to other prosperous San Franciscians, James and Janet Stoddart Porteous purchased Hippolyte Ranch in Ross Valley in 1883, retiring there in 1887. Natives of Scotland, they had arrived on the West coast in 1872 via the overland railroad, and settled in San Francisco by 1876. Deeds and probate records show that James Porteous, a graduate of the University of Edinburgh and a member of the Middle Temple, London, was a successful real estate investor in San Francisco and Marin County.

After the 1887 death of her husband, Janet Porteous resided at Hippolyte Ranch with her coachman and two Chinese servants. The ranch property contained a fifteen-room, two-story house, a stable, a winery, and a chicken house in addition to other farm structures. Mrs. Porteus, according to local reminiscences, is said to have had the Log House erected in 1893 or 1894 for her coachman and ranch manager, Martin Grant. Henry Hansen, a naturalized U.S. citizen from Sweden, took Grant's place by 1900, and remained at the ranch until 1905. Janet Porteous continued her active involvement in charitable and progressive San Francisco societies until her death in 1904. These included the California Club, of which she was a charter member in1897, and its offshoot, the Porteous Club, a self-improvement club for young, single working women.

In 1906, Marin County Water Company constructed Phoenix Lake, a reservoir, at the site of Phoenix Gulch, and formally purchased Hippolyte Ranch from the Porteous estate in 1909. The Log House is a fairly typical Queen Anne composition, although exceptionally constructed of redwood logs to evoke a

picturesque and nostalgic image. No architect, builder or pattern book source has come to light during research. The Adirondack Style, originating in the rustic summer lodges erected in the Adirondack Mountains for the Eastern Elite, was popularized in architectrual journals of the day and was recommended as especially appropriate for the cottages of gatekeepers or gardeners at the entrances to rural estates. Regional popualar magazines and architectural journals indicate that several Marin County dwellings were constructed of logs or had log decorative details, part of the West coast wood building tradition which culminated in the Stick and Shingle styles. The Hippolyte Ranch Log House appears to be the only remaining log structure from this phase of building in Marin County.

III. Architectural Description

Set on a sloping, wooded hillside, the Hippolyte Ranch Log House is a one-story caretaker's residence of log construction. Onginally at the entrance to Hippolyte Ranch, the L-plan is formed by a three-sided bay which projects forward from a double-gabled bay. A rear porch is located at the northeast corner of the house under the slope of the shingled roof. Unpeeled redwood logs set in saddle-notched corners form the primary walls while the front bay, almost semicircular in plan, is constructed of shorter lengths of logs presumably nailed to an underlying framework.

A number of decorative elements ornament the exterior. Double-hung, one-over-one windows feature elaborate frames of curly redwood; the bay windows in addition sport small visor roofs of rustic stickwork. An ornate front door and eave soffits repeat this stickwork. Alterations include removal of the original overscaled turret with a conical roof which projected from the front porch, flanked by small gablets. Similar to the spindlework of Queen Anne dwellings, ornamental "rustic work" of small sticks once embellished the gable end and eaves of the front bay. The foundation initially was enclosed with a rustic skirting of small vertical logs; a brick and concrete foundation replaced the original in 1940.

The cabin interior consists of a central hall flanked by the parlor with the three-sided bay, and a rectangular bedroom with closet and bathroom behind. Both front rooms are paneled in varnished, dark honey-colored matchstick boarding; windows and interior paneled doors with bull's-eye moldings have a similar finish. The ceilings of both front rooms produce a coffered effect formed by a matchstick boarding surface framed by a grid of logs. A fireplace of brick was constructed in the front bay room on the southeast wall in 1940.

At the rear of the house, the kitchen features the most elaborate interior treatment, with an open gable ceiling of logs set in a herringbone pattern Original wood floors were replaced with a poured concrete floor in 1940, and a board floor was installed in the front bay room. A flagstone patio was constructed in front of the cabin at the same time by the Mann Municipal Water District. The Hippolyte Ranch Log Cottage at present suffers from termite infestation and dampness.

IV. Review and Preservation Recommendations

A. Applicable Codes

The goal of the Marin Municipal Water District is to stabilize the Phoenix Lake Log House and restore it to its original state. Its present use as a caretaker's lodge would be retained, although the future possibility of rehabilitating the structure to a more intensive or public use should be considered.

The building falls under the jurisdiction of the County of Mann, Bureau of Building Inspection which enforces the Uniform Building Code. This code will,

therefore, be the primary source for this study. In order to comply with grant requirements, the California Administrative Code, Title 24 dealing with handicapped accessibility requirements, must also be considered.

The State Historic Building Code could also be invoked in order to make the rehabilitation work easier or at least more flexible. This code allows (when dealing with certified historic structures), the evaluation of alternate means of reaching the same code objectives that are set for new buildings.

As a restored caretaker's residence, the Phoenix Lake Log House would not be required to have its systems upgraded to meet present codes. A number of structural and safety issues should be addressed regardless of what is mandated by code and these items will be discussed further.

If the building were to be rehabilitated and the use changed to one with increased occupancy requirements (such as a community center or museum), then most present code requirements would have to be met. Conformance would be required for structural, handicapped, and fire and life/safety issues.

Compliance with the present structural code requirements would entail more structural work than that proposed for simple stabilization. Such work might include the addition of interior shear walls and bracing of the exterior log walls

Handicapped accessiblity would have to be provided to and through the building. This includes the use of toilet facilities which must be enlarged and modified. A ramp must be built to provide level access into the building and a place for parking must be identified.

Depending on the final use of the structure, a fire suppression system might be necessary as well as fire detection and alarm systems. Emergency and exit lighting might also be required.

It is recognized that there are several significant code ammendments which provide alternate methods of compliance for qualified historic structures so that the historic resource is not compromised.

Since the requirements differ, dependent on the type of occupancy, a more detailed code review should be performed if a change in use is proposed.

B. Evaluation of Condition

Walls of the house are constructed of redwood logs of decreasing thickness rising through the structure. The logs have aged successfully or not depending on their position in the building. By and large, those logs which have been constantly wet or have been in close or nearly close contact with the ground have deteriorated. Other logs, higher up in the structure and kept dry, appear to be in relatively good condition. The logs were placed in the building with their bark, so they do not exhibit the resistance to decay or deterioration that milled redwood, which is notably consistent in physical properties, would have.

It appears that a part of the structure (the Dining Room, bathrooms, and Kitchen area) may have been constructed on the ground. In 1940, a concrete slab was poured under this portion of the structure in an effort to separate the wood from the earth. But, as the accompanying termite report states, the introduction of this slab did not really accomplish what was needed. The Living Room portion of the building is on a perimeter foundation of brick, which has substantial cracks and breaks in its construction. Beneath the living room floor, modern framing was introduced in 1940 and has been repaired in the past year.

Moving up through the structure, interior walls exhibit beaded redwood panelling and many inventive designs formed with small, half-round logs. Log construction is used throughout, and with excellent control of the material, since the photograph of the structure at the time of its construction shows a remarkably smooth shingle roof, which would have to have been laid on a row of four-inch logs.

For additional and more detailed information regarding the condition of the building, copies of the structural and termite reports can be found in Section VIII, *Appendix*.

C. Work Program

The following work program items are presented according to their order of priority. The program, if necessary, could be divided into two phases: a Stabilization Phase, where proper drainage would be established, damaged foundation and lower damaged log courses would be replaced, and an inspection/fumigation program established; followed by a Restoration Phase, where the missing original roof elements, building ornamentation, and original porch and Living Room floor would be replaced.

1. Foundations

Due to extensive settling, the entire perimeter foundation must be replaced. The new foundation wall must accommodate the replacement of the porch by extending around its perimeter also. The new foundation should be a continuous poured in place concrete footing. Where visible and where bricks

were used previously, the new foundation should be lined with a brick facing. Some interior footings would also need replacement.

2. Drainage

The addition of collectors at the roof edges and especially at the large roof trough at the west wall is necessary. Surface drainage should also be improved by sloping adjacent site soil away from the building,with special control at the northern and western edges where the building meets the hillside.

3. Walls

The bottom two or three courses of redwood logs must be replaced due to extensive decay on all sides of the building. Other upper courses that have also been damaged must be replaced. Due to the necessary removal of bark for pressure-treating, we recommend that new, but untreated redwood logs be used to correctly preserve the appearance of the building. A program for treatment of insect infestation should be set up for inspection/treatments on a regular basis, probably yearly. Bug bore holes are visible in many of the exterior wall logs that appear to be otherwise undamaged. It may be possible to avoid replacement by injecting these logs with epoxy and then treating them to arrest any further decay.

4. Floors

The floor joists beneath the raised floor surface in the living room must be replaced due to insect and fungus damage. The form boards around the fireplace and portions of the interior 1 x 4 wall sheathing at the floor connection must also be replaced. The wooden porch, seen in the c.1900 photograph should also be replaced.

5. Roof System

Restoration activity would involve replacing the existing wood shake roof with fire-retardant wood shingles; re-building the cupola, additional roof gables, and other ornamental features that may have been lost over the years, and removing various mis-guided roof-framing improvement activity on the interior. No roof inspection has been done for this preliminary study due to inaccesibility, but it is possible that structural members could need repair or replacement.

6. Electrical

The existing electrical system should be evaluated by an electrical engineer and recommendations made for any possible upgrade of the existing system. The conduits and electrical switchboxes should be relocated in a less visually obtrusive location, with the conduits more sensitively aligned with the lines of the building. An outdoor lighting system might also be considered.

In the event that the building were to undergo a change-of-use making it a more intensively used or public building, code requirements would require the following:

1. Handicapped Ramp/Parking/Toilet Facility

Appropriate places must be studied and designated for the handicapped. Due to its close proximity to existing parking and the area in between for a connecting ramp, the existing rear porch could be re-designed as a handicaped entrance. The toilet rooms may be designated as "Unisex" with one being upgraded as a handicapped toilet.

2. Seismic Up-Grade:

Careful study by an engineer would be necessary to provide appropriate lateral stability. Two options that might be studied would be a steel cage built independently within the structure, or shear walls provided behind the existing wall paneling.

V. Photographs

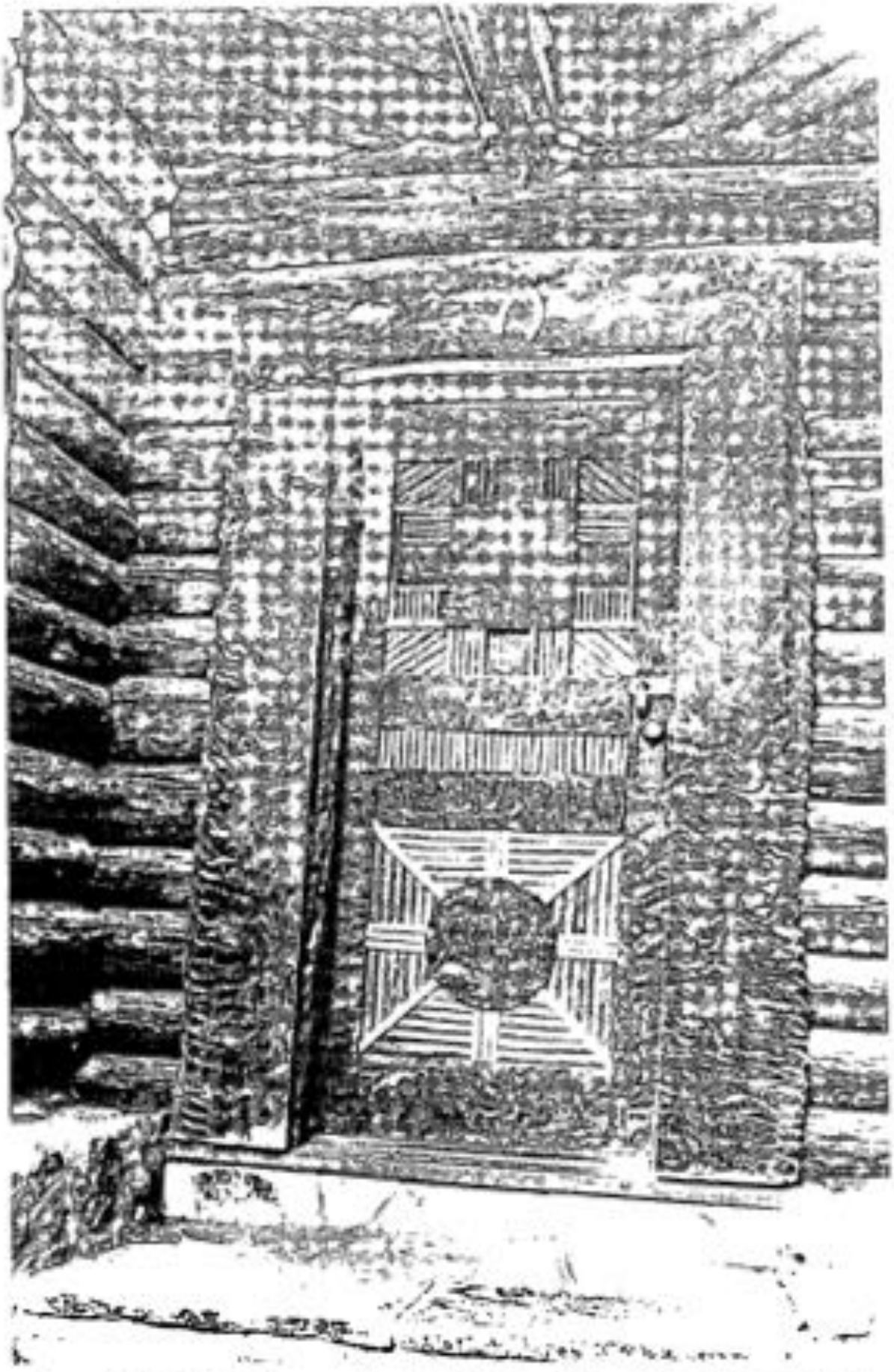
This section includes some photographs taken during the site visit of 12 September, 1986, and some from the historical studies of Elizabeth Krase.

Photo taken around 1900 by Lorillard & Bratt of San Raphael. Shows original porch, cupola, and roof gables. Also note gable end ornamentation above bay window.

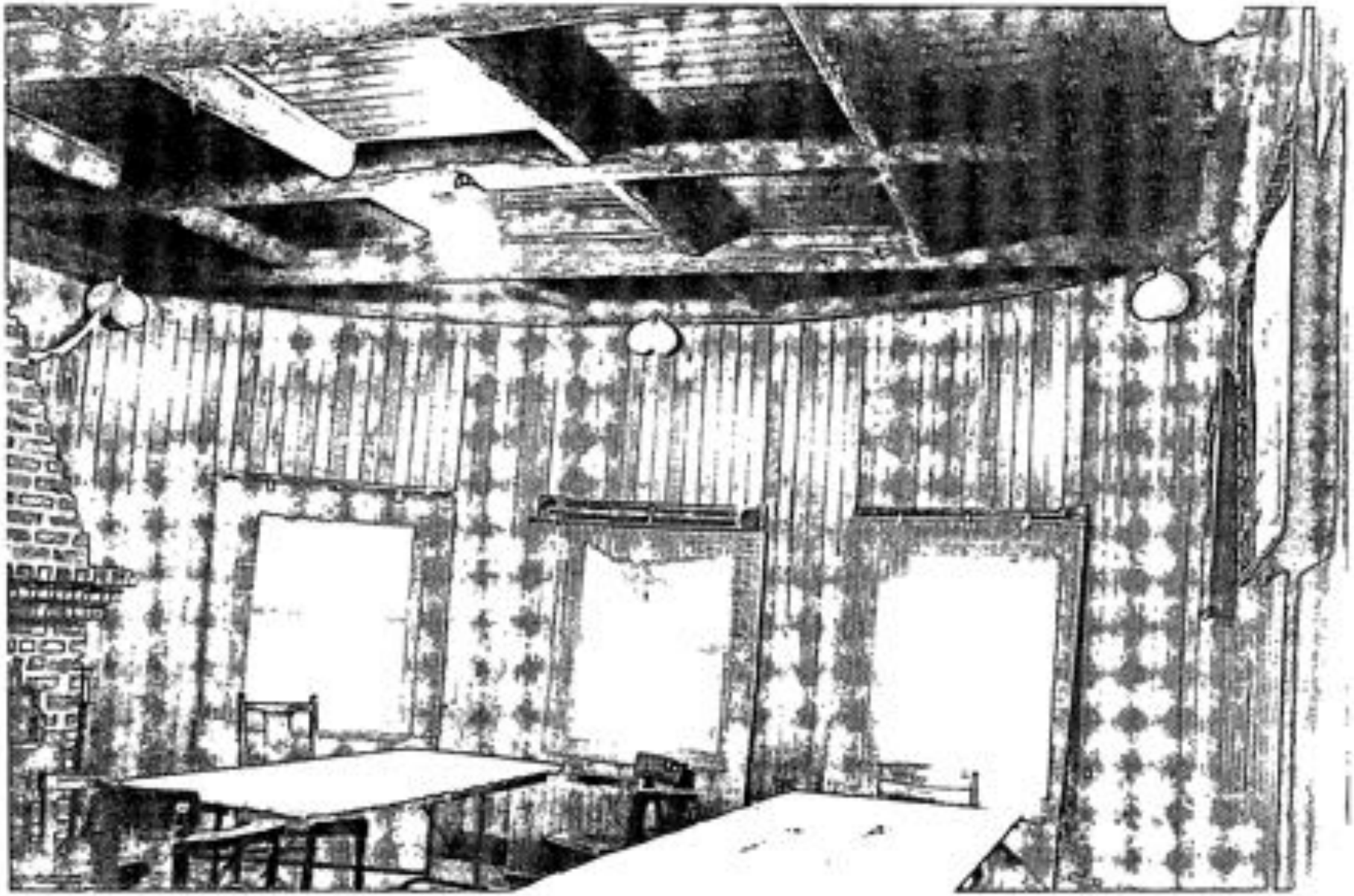
Southwest (front) elevation looking northeast.

Southwest and northwest elevations looking east. Terrace is not original and the original wood porch (as seen in the c.1900 photograph) should be replaced.

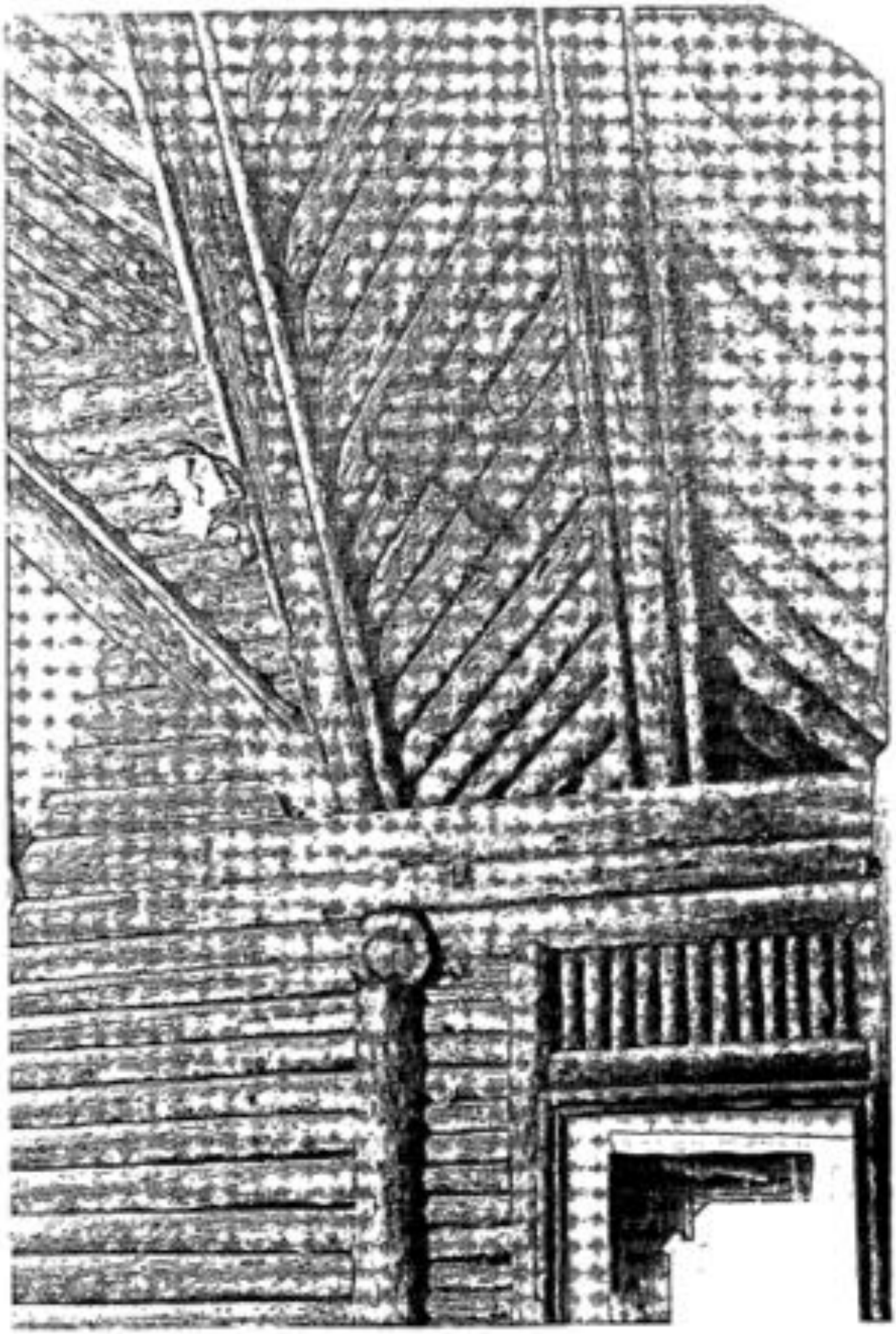
Northeast (rear) and southeast elevations looking west. Note unsightly electrical equipment and conduits--these should be relocated in a less conspicuous location.



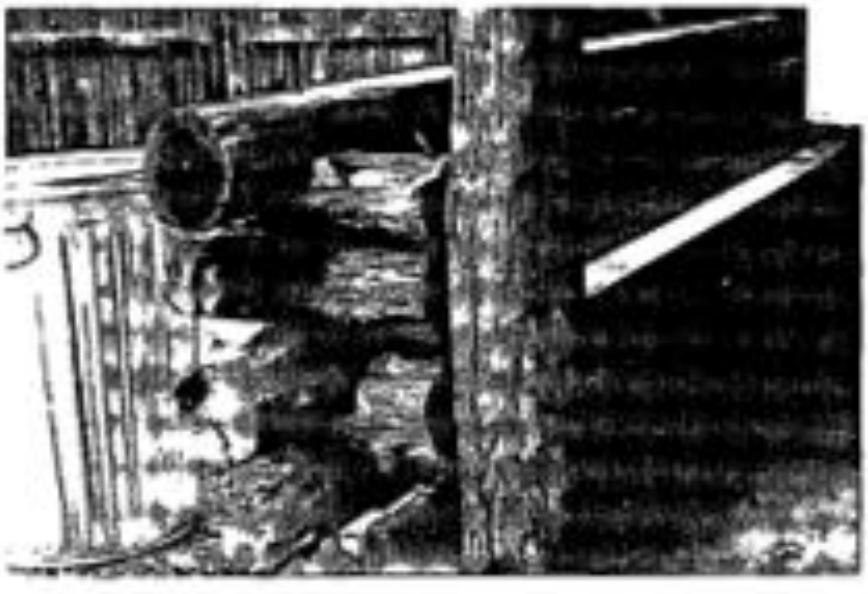
View of original front door, southwest elevation. Curly redwood trim is typical at openings throughout. The use of patterned stickwork is also typical, for both structural and ornamental use.



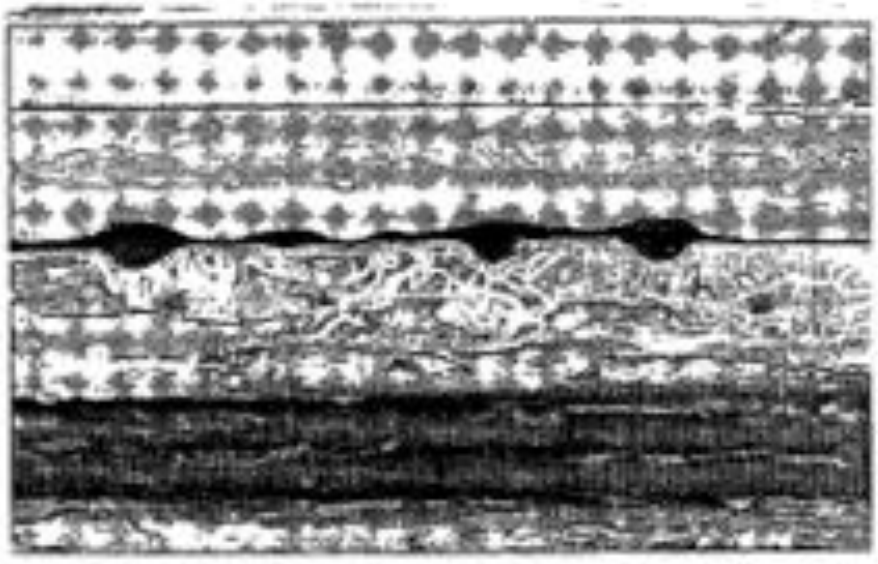
Living Room looking south. Fireplace is not original, and was added in 1940.



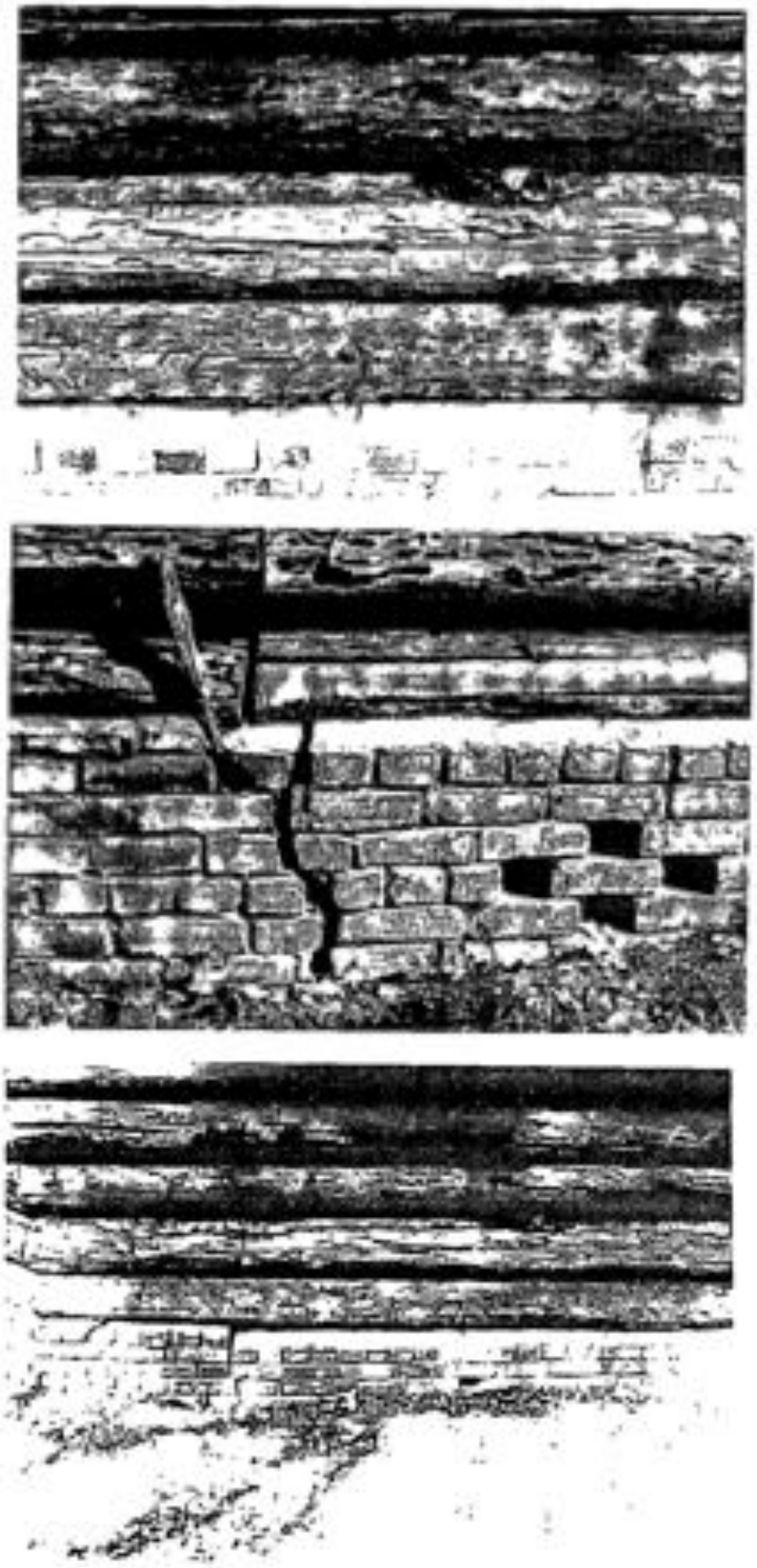
Detail: wall and ceiling of kitchen looking southwest.



Log bases and ends show severe water, fungus, and termite damage.



Views of typical exterior window sill damage.



Various views of deteriorating logs with severe fungus and insect damage, resting upon cracked foundation walls.

VI. Measured Drawings

The measured drawings included in this report were drawn by Page, Anderson & Turnbull, Inc. from data compiled at the site in September, 1986.

Section A-A

South Elevation

Floor Plan

Scale: 1/4" = 1'-0"

VII. Cost Estimate

Prepared By: trh

Date: 26 September 1986

Page no. 1 of 2

Project: **Phoenix Lake Log House**

Phase: Pre-design

Project No.: 86417

BASIC COSTS ASSUMING RETENTION OF EXISTING USE

No.	Description	quantity	unit	cost	total
	DEMOLITION	LS			10,000
	STRUCTURAL				
	Jacking/shoring	LS			5,000
	New foundation	150	LF	55	8,250
	New concrete floor slab	1,050	SF	3.50	3,675
	Roof diaphragm	18	SQ	150	2,700
	Replace 3 lower log courses	450	LF	30	13,500
	Plumb/stabilize exist. logs	LS			5,000
	TERMITE/PEST CONTROL				
	Soil treatment	LS			1,200
	Fumigation	LS			3,100
	IMPROVE SITE DRAINAGE	LS			5,000
	ROOFING				
	New fire-treated wood shingles	18	SQ	250	4,500
	Roof drainage	100	LF	20	2,000
	SHEET METAL & FLASHING	LS			2,500
	RECONSTRUCT TURRET AND PORCH	LS			20,000
	CAULK BETWEEN LOGS	2,400	LF	1.50	3,600
	REPAIRS TO EXTERIOR TRIM	LS			15,000
	INTERIOR FINISHES	LS			10,000
	NEW HARDWOOD FLOOR	375	SF	10	3,750
	PAINTING	LS			4,000
	ELECTRICAL	1,050	SF	4	4,200
	Subtotal				126,975
	Contingency	10%			12,697
	Subtotal				139,672
	Contractor's General Cond. and Overhead & Profit	15%			20,950
	TOTAL				**$ 160,622**

Notes:

1. The above costs are basic budget costs for the outlined repair work in this report and assume that the present use is retained. Costs which follow are in addition to these basic costs and reflect work necessary to comply with more stringent code requirements which would be triggered by a change in occupancy to a more intensive use.

2 Accurate costs cannot be assembled without more developed construction documents showing explicit locations and amounts of materials and details.

3 Building area is roughly 1,050 square feet.

SUPPLEMENTAL COST ESTIMATE

ADDITIONAL COSTS, ASSUMING CHANGE TO MORE INTENSIVE USE

No.	Description	quantity	unit	cost	total
	DEMOLITION	LS			4,000
	STRUCTURAL				
	Jacking/shoring	LS			5,000
	Lateral resistance systems (shear walls)	1,050	SF	10	10,500
	HANDICAPPED COMPLIANCE				
	Ramp (wood frame)	LS			5,000
	Toilet facilities	LS			7,500
	FIRE AND LIFE/SAFETY				
	Fire suppression system	1,050	SF	7	7,350
	Emergency lighting	2	EA	250	500
	Exit lighting	2	EA	250	500
	Fire detection/alarm system	1,050	SF	1	1,050
	SECURITY SYSTEM (audio sensors)	1,050	SF	75	787
	ELECTRICAL	1,050	SF	4	4,200
	Subtotal				46,387
	Contingency	10%			4,638
	Subtotal				51,025
	Contractor's General Cond. and Overhead & Profit	15%			7,653
	TOTAL				**$ 58,678**

Note These costs are based on the assumption that the present use of the building will change to a more intensive or public use such as a community center or museum. The final use will have an effect on the code requirements which vary according to the type of occupancy.

VIII. Appendix

A. Reference List

Publications:

Log Structures: Preservation and Problem Solving. Harrison Goodall and Renee Friedman. Nashville: American Association for State and Local History, 1980. 120 pp., illus., append., biblio., index.

Epoxies for Wood Repairs in Historic Buildings. Morgan Phillips and Dr. Judith E. Selwin. U.S. Department of the Interior, 1978.

American Log Buildings: An Old World Heritage. Terry G. Jordan. Chapel Hill: University of North Carolina Press, 1985. 240 pp., illus.

The Log Cabin Myth: A Study of the Early Dwellings of the English Colonists in North America. Harold R. Shurtleff. Introduction by Samuel Eliot Morison, ed. 1939. Reprint. Magnolia, Mass.: Peter Smith, 1967. 243 pp., illus.

The Log Cabin: Homes of the North American Wilderness. Alex W.Bealer and John O. Ellis. Barre, Mass.: Barre Publishing, 1978. 193 pp., illus., biblio., index.

The Log Cabin in America: From Pioneer Days to the Present. Clinton A. Weslager. New Brunswick, N.J.; Rutgers University Press, 1969. 362 pp., illus., biblio.

Pattern in the Material Folk Culture of the Eastern United States. Henry Glassie. Philadelphia: University of Pennsylvania Press, 1968. 316 pp , illus.

The Architecture of Migration: Log Construction in the Ohio Country, 1750-1850. Donald Hutslar. Athens: Ohio University Press, 1985.

Texas Log Buildings: A Folk Architecture. Terry G. Jordan. Austin: University of Texas Press, 1982.

The Foxfire Book, No. 1. Eliot Wigginton, ed. Garden City, N.Y.: Doubleday, 1972. 320 pp. illus.

The Complete Log House Book. Dale Mann and Richard Skinulis. New York: McGraw-Hill, 1979. 175 pp., illus., biblio., gloss., index.

"The Role of Fumigants in Log Preservation" by Robert D. Graham. ART XV-1-83, p.21.

"The Preservation of Logs and Heavy Timbers in Historic Buildings by Using Volatile Chemicals: A Preliminary Report" by Alfred M. Staehli. ARTXV-1-83, p22.

B. Consultants' Reports

The following appended information includes a termite report prepared by Herold & Associates Termite Service and a preliminary evaluation of existing structural conditions written by John Laws of Structural Design Engineers of San Francisco.

HEROLD & ASSOCIATES TERMITE SERVICE
580 Irwin Street
San Rafael, CA 94901

PROPERTY INSPECTED			CO CODE 21	
	Log Cabin	Phoenix Lake		

HEROLD & ASSOCIATES
580 Irwin Street
San Rafael, CA 94901
(415) 459-9002

Affix stamp here on Board copy only
A LICENSED PEST CONTROL OPERATOR IS AN EXPERT IN HIS FIELD. ANY QUESTIONS RELATIVE TO THIS REPORT SHOULD BE REFERRED TO HIM

FIRM LICENSE NO	CO REPORT NO (if any)	STAMP NO
6076	134386	313781

Inspection Ordered by (Name and Address): Eric McGuire 125 Heller Ave Corte Madera, CA 94925
Report Sent to (Name and Address): Marin Municipal Water District and Same
Owner's Name and Address: Marin Municipal Water District
Name and Address of a Party in Interest:
Original Report ☐ Supplemental Report ☐ Limited Report ☐ Reinspection Report ☐ No. of Pages

YES	CODE	SEE DIAGRAM BELOW	YES	CODE	SEE DIAGRAM BELOW	YES	CODE	SEE DIAGRAM BELOW	YES	CODE	SEE DIAGRAM BELOW
X	3 Subterranean Termites		X	8 Beetles (Other Wood Pests)			2 Dampness Conducive to Termites		X	EV Excessive Moisture Conducive	
X	4 Dry-Wood Termites		X	FG Fungus Grade Lumber			5L Shower Leaks		X	H Inaccessible Areas	
X	F Fungus or Dry Rot		X	EC Earth-Wood Contacts		X	CC Cellulose Debris		X	FI Further Inspection Recom	

1. SUBSTRUCTURE AREA (soil conditions, accessibility, etc.): See Below
2. Was Stall Shower water tested? NONE — Did floor coverings indicate leaks? See Below
3. FOUNDATIONS (Type, Relation to Grade, etc.): See Below
4. PORCHES STEPS PATIOS: See Below
5. VENTILATION (Adequate, Relation to Grade, etc.): See below
6. ABUTMENTS Stucco walls, concrete arches, etc.: None
7. ATTIC SPACES (accessibility, insulation, etc.): Inaccessable Access Nailed Shut
8. GARAGES (Type, accessibility, etc.): None
9. OTHER: See Below

DIAGRAM AND EXPLANATION OF FINDINGS (Use report & refer to structure or structures shown on diagram)

General Description: This is a one story Log Cabin with a wood shake roof.

Inspection Tag Posted (location): In kitchen Cabinet
Other Inspection Tags: none noted

A diligent inspection was made but, in accordance with Standard Practice of the industry, certain areas of the structure are considered Inaccessible Areas and impracticable for the inspection without physically removing the building contents, furniture, appliances and floor coverings to expose all accessible woodwork, including floors; also tearing open or defacing hollow walls, lumber, masonry, plaster, buttresses, bay windows, ceilings, porte cocheres, built-in cabinet work or other finished elements of the structure and such was not done. Refer to scope of inspection on jacket and attached contract work which is part of this report. All work is subject to the approval of the local building department. If additional repairs and/or changes are required by the local building department, compliance will be performed upon written authorization and at costs in addition to the contract. No representation is made to the roof covering except as noted below. If the parties of interest are concerned with the roof surface, we suggest a qualified roofing contractor be consulted.

LIVING ROOM AREA - Item #1

At the time of this inspection the wood floor had been removed, exposing the joist network and the interior of the perimeter foundation. Extensive strucutral damage was noted to the joist network from subterranean termites and a heavy wood boring beetle infestation. ① The area previous to opening was constructed on grade or in very close proximity to grade. A large percentage of the intermediate supports with the joist network were noted to extend into the unimproved soil. At the fireplace the form boards of the pedestal were noted intact, and fungus and subterranean termite infested. At the left forward portion of the living room, extensive decay fungus activity and damage was noted to the 1x4 wall sheathing from apparent moisture entry through the log stack at the exterior. Heavy dry wood termite excrement pellets were noted on the unimproved soil, sifting from the log configuration at the right front. Examination of the foundation at the right side of the structure and the forward most portion of the structure, heavy settlement cracks ④ were noted in the brick mortar lines. On the left forward most portion of the structure, Cont pg. 2

Inspected by: Ralph Herold License No: 6076 Signature:

Bldg. No.	Street	Lot
9133761	March	134986
Stamp No.	Date of Inspection	Report No. (if any)

Continued from pg. 1

there's evidence of either prior repair and/or extensive settling in the foundation as prominent voids were noted to the log configuration of the exterior. In the area indicated #2 of our diagram, between the entry wall and kitchen area The main supporting log timbers were noted to extend into the concrete slab, constituting a faulty grade condition. Heavy decay fungus damage and subterranean termite damage was noted to the main supports. It appears to this inspector that the structure was constructed on grade, or in very close proximity to grade. Subsequent removal of the wood floor and pouring of the concrete slab has entrapped all of the intermediate bearing supports. Subterranean termite galleries were noted in the common wall between the kitchen and left forward room area. At the perimeter of the structure indicated #3 on our diagram, extensive decay fungus damage was noted to the bottom two or three courses of log material, resulting from entrapped moisture, moisture penetrating the exterior into the wall cavity treated by the installation of the 1x4 rustic on the interior. Numerous areas of prior repair were noted of which are inadequate and have created conditions contrary to good building practices. Several areas were noted to be filled with concrete or mortar of which has entrapped a large percentage of the bottom course of logs. On the left side of the structure the roof valley empties directly on the soil and damage was noted to extend from grade to the bottom of the valley of the roof. At the majority of the perimeter, heavy drywood termite excrement pellets were noted in prominent voids and cavities in the log configuration. Active wood boring beetles were noted throughout. Conversations at the time of this inspection with Eric McGuire, environmental service coordinator of the Marin Municipal Water District, revealed the area of the foundations and slabs are to be removed and new foundations installed. The areas of structural damage are to be repaired.

We recommend, prior to the installationof the concrete slabs and perimeter foundation that all cellulose debris, form boards, form stakes,and points of direct earth contact be removed and the soil chemically treated with a residual termiticide (Gold Crest C-100 Chlordane) to control the subterranean termite infestation and deter reinfestation to the areas of reconstruction. We further recommend after the structure has been repaired, the building be vacated and the building be fumigated with Methyl Bromide fumigant to completely irradicate the drywood termite infestation and the Wood Boaring Beetle infestation. Theprocess of fumigation will require vacating the premises, for a period of approximately 72 hours, removing all food stuffs, and items which contain foam rubber. A specific list of items whichmust be removed will be supplied upon request.The process of installation of the tarp over the structure which contains the fumigant will require workman traffic on the roof surface. All precautions will be taken to safe guard the condition of the roof. Power Company and/or Sub-Contract fumigation company assumes no responsibility for damage done. Please contact our office in this regard.

Note: Due to the extent of the damage and requirements for moisture control and structural repair to the foundation and log configuration of the exterior. Our contract is for the chemical soil treatment and fumigation of the structure only. Herold and Associates Termite Servicewould quote approximate dollar figures for structural repair, after engineering and moisture control measures are determined please contact our office in this regard.

No other conditions of infestations noted this date. A reinspection of the above property will be performed if requested by the person ordering the original inspection within four (4) months from the date of original inspection. Cost of reinspection will be the same as the cost of original inspection.

Contract

Harold & Associates Termite Service, hereinafter called "Contractor" is hereby authorized and directed by the undersigned, hereinafter called "Owner" to do the work and furnish the materials as recommended in its Standard Inspection Report

Number 134986 Address Log Cabin Phoenix Lake, Ross, California

Includes work outlined in items Structural Repairs, Labor and materials quote after Engineering. Chemical Soil Treatment for Subterainian Termite Control $1,180.00. Fumigation $3,095.00.

for which the undersigned agrees to pay Contractor the sum of $ 4,275.00 + Said sum due and payable upon completion.

All treated lumber and structural repairs done under the terms of this contract are warranted for (1) one year from date of completion, against reinfestation. Soil treatment for Subterranean Termite control is warranted for (2) two years from date original treatment against reinfestation. Caulking and sealing of stall showers, shower enclosures, resetting of water closets, and plumbing repair is warranted for (90) ninety days from completion. Any additional repair or treating found necessary in such areas during this warranty is to be done at no cost to the owner.

It is mutually understood and agreed that the above warranty shall remain effective only if payment is made as agreed in this contract, that if payment becomes delinquent, interest shall be charged and paid by owner at the rate of 1.5% per month on the balance due until paid in full, that any attorney fees, costs or other expenses which may be incurred in the collection of monies due under this contract and/or in connection with any action involving this contract, will be paid by the owner. No extra work will be done during the course of construction or repair work provided in this contract unless ordered by the owner. Any written orders for extra work shall become part of this contract and subject to all provisions thereof. Payment for extras shall be in accordance with the payment provision herein provided.

Contractor agrees to exercise all possible care in applying chemical treatment in order to avoid damage to shrubs or vegetation, but under no circumstances or conditions will contractor be responsible for damage to shrubs or vegetation involved in the job, or for stains or discoloration to any part of the structure or premises involved, except those caused by acts of gross negligence on the part of the contractor.

If contractor raises the building, or any part thereof, or increases the foundation height, he shall not be liable for any damage to said building, or parts thereof, including cracks in plaster, walls, wiring, pipes, windows or any other damage occasioned by said raising.

Contractor shall not be liable for any excess costs due to failure to perform the work herein provided arising out of causes beyond the control and without the fault or negligence of contractor. Such causes include, but are not restricted to, acts of God or public enemy, acts of the government, fires, flood, epidemics quarantine restrictions, strikes, freight embargoes, unusually severe weather, and default of sub-contractors due to any of such causes.

Contractor shall carry Workmen's Compensation and Public Liability Insurance.

The undersigned has read the Scope of Inspection and Report and agrees that they are provisions of this contract.

Accepted _____

Address _____

Date _____

Approved
Harold & Associates

by Ralph Harold

NOTICE TO OWNER

Under the California Mechanics Lien Law any structural pest control operator who contracts to do work for you, any contractor, subcontractor, laborer, supplier or other person who helps to improve your property, but is not paid for his work or supplies, has a right to enforce a claim against your property. This means that after a court hearing, your property could be sold by a court officer and the proceeds of the sale used to satisfy the indebtedness. This can happen even if you have paid your structural pest control operator in full if the subcontractor, laborers or suppliers remain unpaid.

To preserve their right to file a claim or lien against your property, certain claimants such as subcontractors or material suppliers are required to provide you with a document entitled "Preliminary Notice". Prime contractors and laborers for wages do not have to provide this notice. A Preliminary Notice is not a lien against your property. Its purpose is to notify you of persons who may have a right to file a lien against your property if they are not paid.

SCOPE OF INSPECTION AND REPORT

The Standard Inspection Report covers conditions relative to wood destroying organisms such as termites, fungus (dry rot), beetles and other wood destroying pests found in exposed accessible sub-structure timbers in the basement and or below the first sub-floor level in accessible areas only unless otherwise indicated, and is intended to be reasonably detailed and accurate.

In the course of an inspection, if defects is found by us to suspect hidden infestation or damage in concealed areas recommendations for further inspection will be made. The inspection of concealed or inaccessible areas, attics, detached garages and other outbuildings, water tests of showers and/or other parts of the building made only by special arrangement and at additional cost.

Recommendations will be made for correction and/or control of actual infestation and damage found. Conditions found by the inspector that are likely to cause infestation will also be reported.

This report is limited to what was found and what we deem necessary to correct at the time of the inspection. We assume no responsibility for concealed or inaccessible damage or infestation that was not observed by us without excavating or opening timbers, walls, floors, ceilings, moving furnishings, stores, etc. We shall not be liable for any damages resulting from probing, cutting, opening, removal or otherwise of timbers, walls, floors, ceilings or other parts of the building inspected. Our liability for damages arising by reason of errors or delinquency in the inspection report shall be limited to the costs of the inspection and report.

If the foregoing and the information given herein is in variance with the desires and instructions of any person or persons concerned with this report or fails to conform with known data, inform **HEROLD & ASSOCIATES** immediately, refraining from use of this report until a full understanding is reached.

Structural Design Engineers

42 Notaling Place
San Francisco, CA 94108
(415) 543-8300

September 25, 1986

Mr. Jay Turnbull
Page, Anderson & Turnbull
364 Bush Street
San Francisco, CA 94104

Re: Preliminary Investigation Report
Phoenix Lake Log House

Dear Jay,

At your request, we have reviewed the plans prepared by your office, visited the site for a visual inspection, and reviewed the termite inspection report by Herold and Associates for the above-captioned building.

No materials testing report or geotechnical report has been made available for our review at the present time. The recommendations included herein assume that no change in use of the building is currently planned.

SUMMARY OF FINDINGS

1. GENERAL

The general condition of the exposed structural materials is poor due to extensive weathering. Some of the items noted by us are also referenced in the termite report.

2. DAMAGED STRUCTURAL MEMBERS

A large number of the wood joists supporting the plywood floor under the living room area are exposed to soil and are damaged. The damaged joists should be replaced with treated joists and the remaining floor members treated, or the entire floor could be replaced with concrete slab-on-grade. If wood replacement is preferred, the proper clearance under the joists to soil should be provided.

In the exterior walls, extensive decay damage was noted in the bottom two or three courses of log material on all sides of the building. These damaged courses as well as other damaged areas in the upper courses will have to be replaced.

The exact extent of log material to be replaced can only be determined after a more detailed survey. Bug bore holes were visible in many of the exterior wall logs that appear to be otherwise undamaged. It may be possible to avoid replacement by injecting these logs with epoxy or similar material and then treating them to arrest any further decay. However, a more detailed inspection of the log material will be required to assess the extent of interior damage to these logs.

The worst decay damage noted occurs on the west exterior wall from grade to the bottom of the roof valley, where the large roof valley empties directly onto the soil. A large portion of this area to the west wall will require replacement.

No roof inspection was done at the time of this survey because it was inaccessible.

3. FOUNDATIONS

The entire perimeter of the building is supported on brick foundations approximately 8" wide by 18" deep. There has been extensive settling of the foundations in some areas, causing voids and out-of-plumbness between the logs in the exterior walls. We also noted 4 or 5 vertical cracks in the foundations, some as wide as about 1". A new continuous poured in place concrete footing at the perimeter of the building will be required to replace the brick foundation. No interior footings were noted during our inspection, however, this requires further verification.

4. SURFACE DRAINAGE

There are areas of decay in the exterior walls which appear to be related to poor drainage. This was especially noted in areas where roof water drains directly onto the walls or splashes onto the lower courses of the wall after running off the roof. Addition of collectors at the roof edges and especially at the large roof trough at the west wall would improve these conditions. Surface drainage should also be improved by sloping adjacent site soil away from the build-

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Engineers

ing. This would greatly decrease future building settlements and splash. Lower log courses in the north wall, for example, have suffered extensive decay damage likely due to accumulation of water near the building in heavy rains.

5. CONCLUSIONS AND RECOMMENDATIONS

Due to the historic nature of the building, it is assumed that any logs replaced will be redwood similar to the existing structure. Where possible, continuous logs should be used for replacement to minimize the amount of exposed end grain in the exterior walls. Although redwood is resistant, it is generally recommended that the replacement logs be soaked in a penetrant or industrial insecticide prior to replacement. The bottom course log should be bolted to the new concrete foundation prior to replacement of any courses above. The restructuring program for the exterior wall should include replumbing of walls which are out of plumb due to foundation settlement or lower course damage. Also, methods should be established (such as caulking) for preventing the penetration of moisture into the interior of the wall through voids and cavities between log courses on the exterior wall.

After foundation replacement and restructuring, and replacement of damaged logs, fumigation of the entire structure, as well as application of a surface pesticide/water repellant preservative to the exposed structure should follow. Methods and materials for these procedures can be determined following engineering of the repairs.

If you have any questions concerning this report, please contact me.

Sincerely,
STRUCTURAL DESIGN ENGINEERS

John W. Laws

John W. Laws
Principal

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