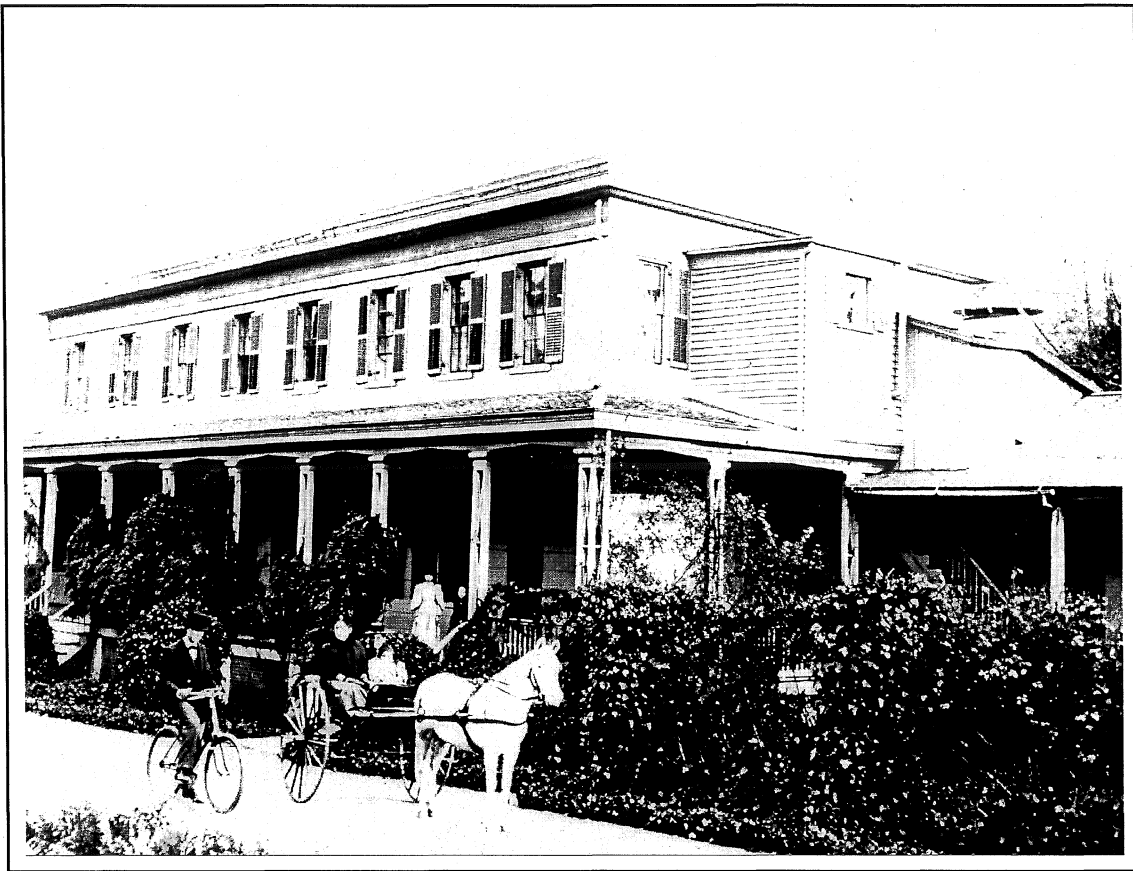


HISTORIC STRUCTURE REPORT
VOLUME II

FOR

CASA GRANDE
New Almaden, California



Prepared for

**COUNTY OF SANTA CLARA
ENVIRONMENTAL RESOURCES AGENCY
PARKS AND RECREATION DEPARTMENT**

March, 2000

TENNEBAUM-MANHEIM ENGINEERS | PATRI . MERKER . ARCHITECTS

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COST ESTIMATE

COST ESTIMATE for

County of Santa Clara
Environmental Resources Agency
Parks and Recreation Department

Almaden Quicksilver County Park
Casa Grande Historical Renovation
21350 Almaden Road
San Jose, California

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ESTIMATE CRITERIA:

Schematic drawings for Casa Grande historical renovation, prepared by Tennebaum-Manheim Engineers and Patri-Merker Architects, dated December 22, 1999.

SPECIFIC INCLUSIONS:

The project consists of additions and improvements to an existing three story historical building located in Almaden Quicksilver County Park, San Jose, California. The existing enclosed area is approximately 16,000 square feet.

The schematic plans explore removing the existing ancillary buildings, constructing a new veranda and restoring the building to its original footprint with an added exterior elevator. The new enclosed area is approximately 10,743 square feet.

Estimate Pricing:

The opinion of probable construction cost reflected in this cost study is based on fair and reasonable construction costs during the first quarter of the year 2000; a minimum of three bids from general contractors; and prevailing wages for the Santa Clara County area. Please note that the estimate does not include any provisions or allowances for unusual market conditions, material and labor shortages; union labor (add 7 to 10 percent); inflation escalation to midpoint of construction (3 to 5 percent/year compounded); and, latent conditions. Please review carefully the list of exclusions on page 5 and, also, the exclusions referenced in the body of the trade detail.

General Requirements:

The estimate includes a construction schedule of approximately five months; superintendent with additional field labor; progressive and final cleanup. Temporary facilities and utilities are to be provided by the Owner.

Demolition:

Site preparation includes building demolition and regrading only. The restoration of landscaping, walks or decks is excluded. Selective demolition, lead mitigation and disposal measures, are also included.

Sitework:

The sitework includes new paving to allow access to the rear of the property. Site utility work include a new french drain along the front of the building and new fire water service. Since the building that encloses the existing water and gas service is demolished, the estimate allows for the relocation of these utilities. All other sitework is excluded.

Foundations:

The existing foundation remains. The foundation work excludes upgrades, piles, caissons, and dewatering.

Structure:

The building includes patching the existing slab-on-grade. The walls are masonry brick walls supporting a wood frame horizontal structure. The existing museum high roof is reinforced with sister joists and new plywood sheathing with edge blocking. The veranda and low roof structure remains and only the roofing is replaced. The existing chimney stacks are reinforced using a structural steel web system.

Exterior Cladding:

The existing brick walls, on the upper two floors, are refaced with painted scored plaster restoring the façade to its original design. The lower floor features smooth textured plaster. New windows replace the existing that were installed during more current remodels. Original wood windows and doors designated to remain are restored. The roofing is replaced with composition shingles.

Interior Finishes:

The existing lower floor will be converted to a new museum display area. The lower floor display area features new carpet (\$10,188) and miscellaneous millwork allowance (\$5,461). The main floor museum exhibit space finishes are maintained. The new main floor museum display areas include refinished wood plank flooring, coffered ceilings, and new wall coverings. The new lower floor bathrooms feature ceramic tile floors and wainscot. Sheet vinyl flooring is used in the upper floor bathrooms. The office area in the upper floor includes new carpeting.

Equipment and Specialties:

Exterior and interior signage; toilet partitions and accessories; fire extinguisher cabinets; liquid board/tackboards.

Upgrade and re-use of existing kitchen equipment. New detached elevator tower is included in the sitework section of the cost study.

Plumbing:

The buildings provides for two restaurant bathrooms; two bathrooms in the main floor; and one unisex in upper floor; kitchen area rough-ins; one utility drain; two drinking fountains; gas distribution system.

HVAC:

The building includes a complete replacement and upgrade of the HVAC system; exhaust to bathrooms and kitchen areas. All ductwork will be low pressure and distributed in the ceiling space or new soffits. All AC units (5 each – total of 21.5 tons) will be controlled with local programmable thermostats and an electronic time clock with a minimum of 3 channels. The system excludes special filtration and sensitive temperature requirement criteria.

Fire Sprinklers:

New fire sprinkler system throughout and dual acting heads in museum display areas.

Electrical:

Re-use existing main power and distribution. Allow for one new subpanel; machine and equipment power; upgrade user convenience power and lighting; 10 new telephone and data outlets; and, a new fire alarm and signal system.

EXCLUSIONS:

Architectural and Engineering Fees.
Pre-construction services fee
Santa Clara County fees.
Plan checking, building permit and utility fees.
Testing and inspections.
Contingency for inflation
Builder's risk insurance.
Performance and payment bonds.
Asbestos abatement, disposal, removal.
Dewatering.
Pile or caisson foundations.
Emergency generator
New kitchen equipment.
Movable furniture or exhibits.
Data and telephone equipment.
Window coverings.

Areas	Total	Unit	Ratio to Enclosed Area
1. Existing Building			
Enclosed Area	16,000	SF	1.00
Veranda	1,720	SF	0.11
Roof Area (measured flat)	7,960	SF	0.50
2. Schematic Design			
Enclosed Area - Existing	10,250	SF	0.95
Enclosed Area - New	493	SF	0.05
Total Enclosed Area	10,743	SF	1.00
Veranda - Existing	1,120	SF	0.10
Veranda - New	1,512	SF	0.14
Covered Outdoor Seating - New	1,020	SF	0.09
Roof Area (measured flat)	6,370	SF	0.59

Schematic Estimate	Quantity	Unit	Unit Price	Total \$
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CSI SUMMARY

ENCLOSED AREA	10,743	SF		
3.000 CONCRETE			1.38	14,810
4.000 MASONRY			6.57	70,575
5.000 METALS			4.73	50,770
6.100 ROUGH CARPENTRY			19.79	212,618
6.200 FINISH CARPENTRY			3.86	41,479
7.200 INSULATION			0.11	1,145
7.300 ROOFING & WATERPROOFING			3.07	33,012
7.600 ARCHITECTURAL SHEETMETAL			0.91	9,790
7.900 CAULKING & SEALANTS			0.20	2,149
8.100 DOORS & FRAMES			3.04	32,660
8.500 WINDOWS, MIRRORS			6.02	64,625
8.700 FINISH HARDWARE			1.56	16,800
9.100 LATH & PLASTER			7.15	76,854
9.250 GYPSUM BOARD			3.66	39,317
9.300 CERAMIC TILE			1.50	16,080
9.700 FLOORING			2.37	25,502
9.800 PAINTING & WALL COVERINGS			9.19	98,772
10.000 MISCELLANEOUS SPECIALTIES			1.23	13,200
11.450 EQUIPMENT			2.79	30,000
12.300 CABINETS & WINDOW COVERINGS			3.02	32,450
15.000 PLUMBING			11.17	119,975
15.300 HEATING & VENTILATING			13.67	146,855
15.500 FIRE SPRINKLERS			3.91	41,983
16.000 ELECTRICAL			8.02	86,108
SUBTOTAL			118.92	1,277,528
SITework, DEMOLITION, EXT. STRUCTURES			49.19	528,497
GENERAL CONDITIONS			12.91	138,664
SUBTOTAL			181.02	1,944,689
CONTRACTOR'S FEE	6%		10.86	116,681
CONTINGENCY	15%		27.15	291,703
RECOMMENDED BUDGET FOR CONSTRUCTION				
Commencing - First Quarter 2000			219.03	2,353,074

Schematic Estimate	Quantity	Unit	Unit Price	Total \$
1.000 GENERAL CONDITIONS				
Project manager, 40% Scheduling	22	WKS	960	21,120
Initial schedule	1	LS	1,200	1,200
Updates	4	EA	500	2,000
Life Safety				
Safety kit, equipment, signs	1	LS	800	800
Temporary lighting	10,743	SF	0.10	1,074
Miscellaneous safety	5	MO	600	3,000
Temporary utilities				
Electricity		By Owner		
Phone and FAX	5	MO	400	2,000
Water		By Owner		
Temp Toilets (2 average)		By Owner		
Field laborers	22	WKS	960	21,120
Construction Clean Up				
Debris boxes	10	EA	450	4,500
Field Offices				
Set-up, transportation	1	LS	2,200	2,200
Field Office (On site)		By Owner		
Office consumables	5	MO	250	1,250
Printing and messenger service	5	MO	750	3,750
Office Equipment	1	LS	3,000	3,000
Miscellaneous Equipment				
Small tools	5	MO	400	2,000
Hoisting	1	LS	3,500	3,500
Pick-up trucks, gas, maint.	5	MO	1,080	5,400
Finish Protection / Damage	10,743	SF	0.54	5,801
Final clean-up	10,743	SF	0.20	2,149
Supervision				
Superintendent	22	WKS	2,400	52,800
TOTAL GENERAL CONDITIONS	5	MO	27,733	138,664

Schematic Estimate	Quantity	Unit	Unit Price	Total \$
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2.000 SITEWORK, DEMOLITION, EXT. STRUCTURES

Site Demolition

Layout and protection	1	LS	3,530	3,530
MEP safing off for demolition	1	LS	3,000	3,000
Demo and remove structures	5,760	SF	10.00	57,600
Remove site hardscape, allow	2,000	SF	3.00	6,000
Remove off-site hardscape		NIC		
Curb and gutter removal		NIC		
Tree removal		NIC		
Subtotal			70,130	

Selective Demolition

Saw cut, break, remove concrete for new bathrooms and outdoor seating	2,211	SF	5.00	11,055
Cut opening for chimney work and salvage bricks	3	EA	4,260	12,780
New opening in brick walls with steel lintel at bathrooms/bridge	3	EA	2,360	7,080
Remove and dispose:				
Partitions	164	LF	22.00	3,608
Doors	14	EA	55.00	770
Windows	42	EA	82.50	3,465
Roofing	6,800	SF	0.75	5,100
Roof sheath'g (main roof only)	2,900	SF	1.00	2,900
Remove and salvage:				
Doors	7	EA	137.50	963
Fireplace mantle/surround	5	EA	220.00	1,100
Windows (restore in place)	8	EA	192.50	1,540
Asbestos removal/abatement		NIC		
Lead Abatement (Allowances):				
Monitoring and testing	1	LS	5,000	5,000
Encapsulation, suits and misc.	1	LS	4,640	4,640
Disposal	1	LS	3,000	3,000
Subtotal			63,001	

Site staking and engineering

Building, earthwork, sitework	1	LS	5,600	5,600
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Grading and Paving

Mobilization	1	LS	1,500	1,500
AC paving patching, allow	1,200	SF	4.00	4,800
Erosion control	1	LS	2,060	2,060
Subtotal			8,360	

<i>Schematic Estimate</i>	Quantity	Unit	Unit Price	Total \$
Site Utilities (All meter and utility fees are NIC)				
Domestic water & valves, relocate	1	LS	5,000	5,000
Fire water (stub inside building)	250	LF	60.00	15,000
PIV and fire deptmt connection	2	EA	4,500	9,000
Fire hydrants		NIC		
Sanitary sewer & clean out	200	LF	40.00	8,000
French drain - Excavate/backfill	150	CY	38.00	5,700
French drain - Pipe and conn.	200	LF	15.00	3,000
Gas line and shut off valve, relocate	1	LS	3,500	3,500
Electrical, underground	100	LF	250.00	25,000
Electrical, comm conduit, allow	100	LF	80.00	8,000
Site lighting		NIC		
		Subtotal	82,200	
Site concrete				
Allow for regrading/retaining wall for handicap access to the rear of building	1	LS	8,100	8,100
Paving for handicap access	300	SF	6.00	1,800
		Subtotal	9,900	
Fences				
No work anticipated				
Site Masonry				
No work anticipated				
Irrigation & landscaping				
Excluded NIC				
Striping				
Allow for re-striping in front	1	LS	750	750
Street striping		NIC		
		Subtotal	750	
Exterior Elevator and Bridges				
Demolition and Grading				
Layout and surveying	1	LS	1,140	1,140
Land clearing and grading	800	SF	3.00	2,400
Mat Slab and Elevator Pit				
Including rebar and embedded metal	625	SF	37.00	23,125

<i>Schematic Estimate</i>	Quantity	Unit	Unit Price	Total \$
Metals				
Structural Steel	25	TON	3,500	87,500
Bridge connections to house	4	LS	1,640	6,560
Penthouse roof beam ring	1	LS	800	800
Penthouse grating	493	SF	45.00	22,185
Add for penthouse hatch	1	EA	810	810
Stairs, landings and rails	1	LS	24,000	24,000
Elevator supports/angle/ladder	1	LS	5,000	5,000
Rough Carpentry				
Penthouse:				
Wall framing	720	BF	2.61	1,879
Vertical sheathing/siding	512	SF	15.00	7,680
Install roof beam ring	1	LS	735	735
Beams	320	BF	1.35	432
Rafters and blocking	436	SF	3.05	1,330
Roof sheathing	384	SF	2.80	1,075
Decorative windows, 2' x 2'	4	EA	220	880
Structure:				
Steel nailers, 3 x 6	270	BF	5.15	1,391
Decking at bridge and elevator front landing, 3 x 6	1,320	BF	3.17	4,184
Bridge and elevator front guard rails	128	LF	80.00	10,240
Roofing				
Composition shingle	5	SQ	300	1,500
Sheet metal				
Gutters and down spouts	140	LF	15.00	2,100
Doors, frames, hardware				
No work anticipated				
Plaster and Gypboard				
Core walls and framing	1,100	SF	5.50	6,050
Lath and plaster, smooth	120	SY	63.00	7,560
Painting				
Paint/stain walls and rails	1	LS	10,000	10,000
Equipment				
Elevators - hydraulic	3	STOP	17,000	51,000
Fire Sprinklers				
Under stairs, landings, pent house, bridges	1,400	SF	3.00	4,200
Electrical				
Exterior lighting	1	LS	2,000	2,000
Elevator	1	EA	800	800
Subtotal			288,556	
TOTAL SITEWORK, DEMOLITION, EXT. STRUCTURES				528,497

<i>Schematic Estimate</i>	Quantity	Unit	Unit Price	Total \$
3.000 CONCRETE				
Foundation				
Layout	1	LS	1,760	1,760
Reinforce pilasters at front: No work anticipated				
Slab-On-Grade				
Patch slab on grade at bath	375	SF	6.00	2,250
New slab at bath/kitchen	490	SF	6.00	2,940
Attach slab to (E) structure	58	LF	30.00	1,740
Outdoor seating slab extension	1,020	SF	6.00	6,120
		Subtotal	13,050	
Concrete Walls / Curbs				
No work anticipated				
TOTAL CONCRETE				14,810
4.000 MASONRY				
Brick walls				
Rework at new openings	3	EA	1,000	3,000
Curved lintel including: shoring, install steel, catalog and reset bricks, drill and epoxy bolts	1	LS	6,700	6,700
Infill at new Museum Display	112	SF	50.00	5,600
Infill at (E) Museum Display	207	SF	45.00	9,315
Infill at lower floor west wall	4	EA	650	2,600
Dowels to (E) structure	142	LF	35.00	4,970
Reinforcing at infill walls (4#/SF)	1,500	LB	1.00	1,500
Chimney, remove and replace three sides - to third floor	5	EA	6,750	33,750
Masonry bucks/Miscellaneous	1	LS	3,140	3,140
TOTAL MASONRY				70,575
5.000 METALS				
Furnish and Install:				
Pilaster cap at new Veranda	16	EA	220	3,520
Curved lintel, material only	1	LS	1,200	1,200
Steel lacing at chimney braces	5	EA	9,210	46,050
TOTAL METALS				50,770

Schematic Estimate	Quantity	Unit	Unit Price	Total \$
6.100 ROUGH CARPENTRY				
Vertical framing				
Misc. interior walls	1,500	BF	2.45	3,675
Lower floor enclosure walls	1,300	BF	2.45	3,185
Lower floor wall sheathing	768	SF	1.58	1,213
Floor structure				
Veranda dry rot allowance	1,120	SF	1.68	1,882
Existing pilaster, 4x framing, bolts and clip angles	13	EA	353	4,583
Floor framing	2,738	BF	3.15	8,625
Ledger bolts, epoxy anchor	140	EA	30.00	4,200
Floor sheath'g - 5/8" ply	1,600	SF	1.73	2,768
Roof structure				
Veranda, roof/clg joist framing	1,520	BF	2.66	4,043
Veranda sheathing - 1/2" ply	1,600	SF	1.48	2,368
Main struct, ply edge blocking	600	BF	3.54	2,124
High roof sheathing - 1/2" ply	2,816	SF	1.48	4,168
Add'l joists between (E), 2x4	1,100	BF	2.22	2,442
Sheathing above (E) Museum	1,536	SF	1.48	2,273
Exterior				
Front entry stairs	7	RIS	270	1,890
Rear stair and rail	16	RIS	110	1,760
Veranda rail	320	LF	80.00	25,600
Veranda fascia	206	LF	20.00	4,120
Veranda columns	27	EA	785	21,195
Veranda T&G wood flooring	1,500	SF	9.00	13,500
Veranda T&G wood soffit	1,500	SF	10.50	15,750
Veranda floor & soffit patching	1,120	SF	3.00	3,360
Kitchen enclosure siding	750	SF	10.35	7,763
Shutters, main floor	30	EA	560	16,800
Shutters, upper floor	40	EA	485	19,400
Miscellaneous				
Lower floor ceiling joists	840	SF	0.76	638
Mechanical and Electrical shaft, equipment support, access framing (per SF enclosed area)	10,743	SF	2.27	24,387
Misc. backing and blocking	1,000	BF	3.44	3,440
Small tools/material hoisting	36,450	BF	0.10	3,645
Rough hardware	36,450	LS	0.05	1,823
TOTAL ROUGH CARPENTRY				212,618

<i>Schematic Estimate</i>	Quantity	Unit	Unit Price	Total \$
6.200 FINISH CARPENTRY				
Finish carpentry				
Lower floor misc. millwork, allow	2,540	SF	2.15	5,461
Wood base	290	LF	5.40	1,566
Picture rail at museum display	244	LF	6.65	1,623
Coffered clg at museum display	1,216	SF	25.60	31,130
Reinstall fireplace mantles	5	EA	340	1,700
TOTAL FINISH CARPENTRY				41,479
7.200 INSULATION				
R-30 roof insulation, Lower floor	450	SF	1.10	495
R-19 wall insulation, Lower floor	750	SF	0.60	450
Sound insulation at baths	400	SF	0.50	200
TOTAL INSULATION				1,145
7.300 ROOFING & WATERPROOFING				
Waterproof front retaining wall	700	SF	4.20	2,940
Waterproof new veranda floor	1,512	SF	6.00	9,072
Comp shingle roofing	70	SQ	300	21,000
TOTAL ROOFING & WATERPROOFING				33,012
7.600 ARCHITECTURAL SHEETMETAL				
Metal wall louvers	20	SF	45.00	900
Misc. sheet metal				
Gutters	350	LF	12.00	4,200
Downspouts/conductor heads	10	EA	175	1,750
Misc. flashing at main roof and window heads	420	LF	7.00	2,940
TOTAL ARCHITECTURAL SHEETMETAL				9,790
7.900 CAULKING & SEALANTS				
Caulk and seal building	10,743	SF	0.20	2,149
TOTAL CAULKING & SEALANTS				2,149

Schematic Estimate	Quantity	Unit	Unit Price	Total \$
8.100 DOORS & FRAMES				
Exterior doors				
Single, refurbish	5	EA	450	2,250
Single	6	EA	750	4,500
Double	2	PAIR	1,500	3,000
Install new doors/frames/hdwr	15	EA	440	6,600
Interior doors and frames				
Single, refurbish	13	EA	350	4,550
Single	2	EA	350	700
Double	1	PAIR	1,300	1,300
Pocket panel doors	1	PAIR	1,400	1,400
Install new doors/frames/hdwr	19	EA	440	8,360
TOTAL DOORS & FRAMES				32,660
8.500 WINDOWS, MIRRORS				
Windows and casings:				
Windows, lower floor	8	EA	750	6,000
Windows, new museum display	16	EA	1,260	20,160
Refurbish existing windows	8	EA	600	4,800
Windows, (E) museum display	3	EA	750	2,250
Windows, upper floor	20	EA	700	14,000
Install windows	47	EA	345	16,215
Mirrors				
Bathrooms	120	SF	10.00	1,200
TOTAL WINDOWS, MIRRORS				64,625
8.700 FINISH HARDWARE				
Exterior doors				
Exterior doors (per leaf)	15	SET	550	8,250
Interior doors				
Average cost (per leaf)	19	SET	450	8,550
TOTAL FINISH HARDWARE				16,800

Schematic Estimate	Quantity	Unit	Unit Price	Total \$
9.100 LATH & PLASTER				
Lath and plaster, scored, over existing brick walls	617	SY	84.00	51,828
Lath and plaster, smooth at lower floor	227	SY	63.00	14,301
Existing column wrap	143	SY	75.00	10,725
TOTAL LATH & PLASTER				76,854
9.250 GYPSUM BOARD				
Gypsum Board Taped and Textured Interior walls and ceiling	3,392	SF	1.50	5,088
Patch for mechanical and electrical access (per SF encl.)	10,743	SF	3.00	32,229
Patch demolition scars	400	SF	5.00	2,000
TOTAL GYPSUM BOARD				39,317
9.300 CERAMIC TILE				
Wall and floor tiles Kitchen addition	240	SF	12.00	2,880
Lower floor bathrooms	1,100	SF	12.00	13,200
TOTAL CERAMIC TILE				16,080
9.700 FLOORING				
Lower floor Utility/Storage, exp. Concrete		NIC		
Museum display, sheet vinyl	283	SY	36.00	10,188
Kitchen, existing floor		NIC		
Main floor Existing museum display floor to remain		NIC		
Refinish wood flooring in new museum display areas	1,522	SF	5.00	7,610
Bathrooms, sheet vinyl	20	SY	36.00	720
Upper floor Unisex toilet, sheet vinyl	14	SY	36.00	504
Office area, allow carpet	270	SY	24.00	6,480
TOTAL FLOORING				25,502

<i>Schematic Estimate</i>	Quantity	Unit	Unit Price	Total \$
9.800 PAINTING & WALL COVERINGS				
Exterior:				
Misc. metal, allow	970	LF	1.50	1,455
Veranda ceiling, columns and rails (per square foot of Veranda floor area)	2,630	SF	2.50	6,575
Exterior doors (both sides)	15	EA	90.00	1,350
Windows (both sides)	43	EA	130	5,590
Windows, museum (both sides)	16	EA	250	4,000
Paint stucco	8,900	SF	0.60	5,340
Interior:				
Interior doors	19	EA	90.00	1,710
Gypsum board, walls & ceiling (per square foot of enclosed area)	10,743	SF	2.25	24,172
Wall Covering:				
New museum display accent at lower floor, allow (per SF floor)	2,540	SF	2.00	5,080
New museum display wall covering, main floor, allow	2,900	SF	15.00	43,500
TOTAL PAINTING & WALL COVERINGS				98,772
10.000 MISCELLANEOUS SPECIALTIES				
Exterior				
Flagpole		NIC		
Exterior signage	1	LS	1,000	1,000
Interior				
Interior signage	1	LS	500	500
Toilet partitions, floor mounted	6	EA	600	3,600
Urinal screens	1	EA	400	400
Toilet accessories (per fixture)	22	EA	200	4,400
Fire extinguisher cabinets	6	EA	300	1,800
Liquid and tack boards	1	LS	1,500	1,500
TOTAL MISCELLANEOUS SPECIALTIES				13,200
11.450 EQUIPMENT				
Kitchen				
Equipment allowance	1	LS	30,000	30,000
TOTAL EQUIPMENT				30,000

Schematic Estimate **Quantity Unit Unit Price Total \$**

12.300 CABINETS & WINDOW COVERINGS

Kitchen				
See kitchen equipment allowance		NIC		
Bathroom				
Countertop	24	LF	175	4,200
Storage Room				
Allow for open shelves (5/LF)	100	LF	125	12,500
Offices				
Work counters w/ open shelves	45	LF	350	15,750
Window coverings				
No work anticipated		NIC		
TOTAL CABINETS & WINDOW COVERINGS				32,450

15.000 PLUMBING

Sanitary fixtures with rough-in (Water meter NIC)				
Restaurant bathrooms	14	FIXT	3,500	49,000
Museum women's toilet	4	FIXT	3,500	14,000
Museum men's toilet	2	FIXT	3,500	7,000
Office unisex toilet	2	FIXT	3,500	7,000
Drinking fountains, allow	2	EA	3,500	7,000
Warming kitchen, allow	255	SF	45.00	11,475
Janitor sink, floor, allow	1	EA	2,500	2,500
Sanitary waste, vent and water piping				
Utility floor drain, allow	1	EA	1,200	1,200
Hose bibbs with water pipe	3	EA	250	750
Kitchen grease interceptor	1	EA	2,000	2,000
Sump pump at bottom of stair with PVC discharge line	1	EA	1,500	1,500
Equipment				
Water heater	1	EA	3,000	3,000
Electric water heaters	3	EA	350	1,050
Condensate drains (5 units)	1	LS	2,000	2,000
Natural Gas (to gas meter by Utility Co. - NIC)				
Gas line, allow	350	LF	30.00	10,500
TOTAL PLUMBING				119,975

<i>Schematic Estimate</i>	Quantity	Unit	Unit Price	Total \$
15.300 HEATING & VENTILATING				
HVAC				
New units, including supports (5 units)	21.5	TON	950	20,425
Kitchen exhaust duct and make- up air unit	1	LS	15,000	15,000
Ductwork, insulation, registers, grilles & controls (per SF floor)	10,743	SF	10.00	107,430
Bathrooms				
Exhaust only	4	LOC	1,000	4,000
TOTAL HEATING & VENTILATING				146,855
15.500 FIRE SPRINKLERS				
Fire sprinkler system per NFPA 13 with flow switch and bell provided, using steel pipe - Enclosed area				
	10,743	SF	2.50	26,858
Add for double actuated heads	6,000	SF	1.00	6,000
Veranda and outdoor seating	3,650	SF	2.50	9,125
TOTAL FIRE SPRINKLERS				41,983

Schematic Estimate	Quantity	Unit	Unit Price	Total \$
16.000 ELECTRICAL				
Main service and distribution				
Main power and distribution		Existing		
Subpanels, allow	1	EA	2,000	2,000
Machine and equipment power				
HVAC equipment	5	EA	350	1,750
Sprinkler flow switch	2	EA	200	400
Exhaust fans	5	EA	140	700
Power to electric water heaters	3	EA	200	600
User convenience power				
Addition	500	SF	5.00	2,500
Receptacles and wire (upgrade)	10,743	SF	1.00	10,743
Lighting, switches and wiring				
Veranda and outdoor seating	3,650	SF	3.00	10,950
Interior addition	500	SF	4.00	2,000
Upgrade contingency, allow	10,743	SF	3.00	32,229
Telephone and communications				
Telephone/data outlets	10	EA	75.00	750
Intercom system		NIC		
Miscellaneous				
Security		NIC		
Door bell and chimes		NIC		
Fire alarm and signal sytem				
Allowance	10,743	SF	2.00	21,486
TOTAL ELECTRICAL				86,108
				#REF!

STRUCTURAL ENGINEER'S SEISMIC
OBSERVATIONS

February 1, 2000

Mark Frederick
County of Santa Clara
Parks and Recreation Department
298 Garden Hill Drive
Los Gatos, CA 95302

Re: Casa Grande

Dear Mark:

As stated in our Existing Conditions Report, the 1998 seismic upgrade of Casa Grande may not be effective and warrants further examination. We have not reviewed or analyzed the upgrade in detail and our comments are based solely on a cursory review of the drawings prepared by Robert Croyle, P.E. and our field observations as part of our existing condition report. None of the following comments are intended to be definitive statements as to the effectiveness of the upgrade. It is not possible reach any firm conclusions without a certain amount of analysis and study. The following comments are therefore only of possible deficiencies.

1. There are two steel beam and column frames placed in the third floor of Casa Grande, which were built during the 1998 seismic upgrade. These frames are called moment frames and are usually in a building to pick up and transfer earthquake loads to the level below. These loads are normally transferred into the frames with a positive connection to the horizontal roof (or floor) sheathing (called the diaphragm). A positive connection is one that ties two or more elements together with nails, bolts or other types of connectors. The steel beams of the existing moment frames go up to the ceiling and do not appear to be adequately tied or connected to the roof level (sheathing) diaphragm. Therefore, since no load or minimal load is being transferred into each frame from a diaphragm, the effectiveness of each moment frame is in question. In addition, the existing horizontal boards or sheathing is not adequate in itself to transfer earthquake loads to the steel frames. Thus, it appears that the steel moment frames are not working. They may only be locally effective, meaning that they are only picking up a very small area of lateral load.

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AND ENGINEERING

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2. The steel moment frames are very flexible elements, whereas the heavy masonry walls are very stiff elements. The stiffness of these two elements may not be compatible. Earthquake loads tend to go toward the stiffer elements first. The steel moment frames may not even attempt to pick up load until the masonry starts to crack and fail. In other words, the wall may displace enough to cause substantial damage prior to being restrained by the moment frames.
3. The connection of the moment frame at the base of the column to the existing masonry wall is questionable. The connection at the column base consists of a two bolted connection into the wall. The two bolted connection to the brick is over a very small area of brick and if the moment frame was actually picking up its full earthquake load potential the connection would most likely loosen and fail.

Although the frame may not pick up much load as stated, it may displace or move side to side a great deal because of its flexibility. This may cause great strains in the two bolts at the base connection of the column causing some local damage.

4. The earthquake loads as well as wind loads must transfer from the roof down to the foundation. This is accomplished by providing a complete load path. The path consists of providing positive connections from one element to another until it gets to the base and into the soil. For example, the roof sheathing or diaphragms must be connected to the wall framing by nails or clips and the wall framing connected to the sheathing and wall top plates below. Transfer of loads from roof or floors to interior wall is not apparent from the as-built drawings. There is nailing indicated from floor sheathing into blocking, however there is no connection shown from the blocking into the wall top plates below. Thus, the load path may not continue at that point where a positive connection does not occur.

In addition, we have the following comments regarding the chimneys:

1. The chimney bracing appears to be so flexible that it may twist and move so much that the chimney may fail. The connection to the roof framing is also questionable.
2. The museum chimney bracing is placed in such a manner that it may actually induce twisting of the chimney and cause a failure.

We have provided a new means of supporting the masonry chimneys in our conceptual drawings. It has been found that unreinforced masonry chimneys are usually the first element to fail in an earthquake and we strongly recommend that the chimneys be supported properly.

We do think it would be best to have a more complete evaluation analysis of the seismic system of Casa Grande. It is important that we inform a client of potential problems in a building. We also feel it is important that you understand the level of safety you have in your building.

We have made an estimate for structural engineering services and cost of construction for a new upgrade evaluation and design as you requested. We are assuming that the costs would be incorporated within the total rehabilitation as presented in the schematic design of Casa Grande. The fees and construction costs may increase for the work if not included in the total rehabilitation project. The fees and estimated costs of construction are broken down as follows:

Estimated Fees for Structural Engineering Services:

Evaluation of existing seismic system, Analysis and Schematic Design -	\$4,000
Construction Documents (pertaining to seismic design) -	\$5,000
Construction Administration (pertaining to seismic design) -	\$2,000

We do not know at this time the extent of work that may or may not be required to bring the building up to minimum life safety standards. We estimate that the cost of construction could be as high as \$200,000 ±.

We hope that this letter clarifies your questions regarding our concerns of the existing seismic system at Casa Grande. We will be happy to discuss this with you further and in more detail at your request.

Sincerely,



Nancy Tennebaum

EXISTING CONDITIONS REPORT

EXISTING CONDITIONS SYSTEMS - ARCHITECTURAL

General Architectural Description

The central section of Casa Grande is a long red brick masonry rectangle, eight bays wide with two stories on the west (front) side and three stories on the east (rear) side and is covered by a low hip roof. On the south side of the central section is a one-story red brick masonry section (two stories on the East Side) with a gable roof. On the north side of the building, a one story wood addition (two story on the East Side) with a hip roof has been added. A shed roof, supported by lacy wood pillars and wood railing, shades the veranda of the raised first floor across the central and southern sections. This veranda is the remnant of the original veranda that once encircled the entire structure. The door and window openings are simple wood lintels and sills constructed to imitate stone. A simple wood cornice decorates the second floor. Two pairs of red brick chimneys on the north and south sides pierce the hipped roof of the two-story section.

Exterior

Roofs

The roof that covers the main two-story section of the building is covered with asphalt shingles. Please refer to the Materials Conservation Section of this report for a more detailed description of the roof and its condition. The gable roof of the one story section is a hodge-podge of roofing materials. The West Side gable is covered with various layers and colors of rolled asphalt roofing sheets. It is possible that these layers of roofing material also cover a layer of wood shingles. The rolled roofing sheets are worn and have many patches. The East Side gable is covered with wood shingles. The wood shingles are in fair condition but are at the end of their serviceable life. The roof over the Opry section on the north side of

the building is covered with asphalt shingles that look relatively new and in good condition. The roof of the veranda is covered with asphalt shingles that are in poor condition.

Exterior Walls - Brick

The exterior walls of the central two-story section and one story section to the south are constructed of red brick. These walls were once covered by a coat of plaster scored in an ashlar pattern to look like stone. Please refer to the materials conservation section of this report for a detailed review of the masonry walls. In the materials conservation section of this report, the conservator states that the brick is in fair to good condition. That is true for most of the brick. However, the brick piers that support the verandas show considerable deterioration (of the brick and mortar) due to water intrusion. This is seen mostly at the base of the piers where water has “wicked” up the pier from ground moisture or standing water at concrete decks, etc. A great deal of deterioration may be seen under the front veranda where the grade level has been raised. Here, the piers form part of a retaining wall and underground moisture has penetrated the wall and caused considerable damage to the historic material.

Exterior Walls – Wood

The exterior walls of the “Opry House” north addition and the south and east walls of the museum are constructed of wood studs covered with rough-sawn vertical T-111 plywood siding. This siding continues across the rear of the building at the first (basement) level where it clads various recent additions to the building as well as the restaurant restrooms and the rear exit stair. The siding is relatively new and in good condition in most places.

Foundation/Basement Walls

The first floor of Casa Grande was once the basement of the building. The original exterior walls and many of the interior walls are original red brick and are approximately 18" thick. All of the interior brick walls have had arched openings punched through to create circulation for the restaurant. The walls look to be in good condition. Most of the original basement window openings have been closed and converted into display niches for the restaurant. One original wood window frame can be found in the electrical room under the front veranda.

Original Windows

Historic photographs indicate that the original windows of the Casa Grande were wood with double-hung sashes in a six-over-six pattern with delicate window muttons. Eight of these windows exist today, the two sets on either side of the main entry front door and two sets on either side of the main entry rear door. All the other windows of the building are replacement windows. The two windows on each side of the front door have had their sills raised. The south window was altered to accommodate the New Almaden Post Office that once inhabited the building. The north window was altered to accommodate a ticket window for the "Opry" theater. In both cases, the original window material is intact and can be restored to its original configuration. The southern most original window on the front is located in a historical display area of the museum and has had a Plexiglas panel applied to the outside to seal the opening. The original windows on the rear are all intact with the exception of the window to the north (right) side of the door. Here, the upper sash has been removed and replaced with a window air conditioning unit. All of the original windows look to be in good to fair condition but are in need of restoration and repair work in order to be operable.

Museum Replacement Windows

The windows of the museum are new wood double glazed window units. They were installed by the previous owner when this area of the building was remodeled in the mid 1980s. According to a historic floor plan from the 1880's, the openings where these windows are located were once door openings. The openings were closed up to the level of the current windowsill with matching new brick. Other windows in the museum wood exterior walls match the replacement windows.

Third Floor Replacement Windows

The third floor original windows have been removed and replaced with modern double-glazed wood windows with a mixture of fixed and casement operation. The fixed windows are divided into 15 panes with snap-on mutton. The casement windows have the operating sash divided into 12 panes with a fixed section of three panes at the top separated from the operating sash by a horizontal mullion. The windows of the Club Almaden Restaurant on the lower floor are also modern wood casement replacement windows.

All of the new replacement windows are in good condition with the exception of a few on the third floor where the operating hardware is in need of repair or adjustment.

Original Doors

During our review of the building we found that only the rear and front hallway doors appear to be original or old enough to be considered historically significant. Both of these doors are "style and rail" type panel doors constructed with mortise and tendon joints. The hardware on these doors has been altered many times as evidenced by many patches on the jamb rails. The doors are in working order but in poor to bad condition and should be completely restored.

Replacement Doors

Three doors on the front (west) façade in the museum area have been changed to modern clear finished raised panel oak doors. The doors are in good condition and in working order. The double doors to the “Opry House” and the single doors to Club Almaden are relatively new non-historic solid core flush face doors. They are all in good operating conditions but their style is not in character with the building. The double entry doors of Club Almaden are dark stained clear coated wood panel doors and are in good condition.

Front Veranda

The veranda that wraps around the front of the Casa Grande is what a remnant of the veranda that originally circled the building. The veranda on the north side was removed to add the “Opry” addition in the 1920’s. The rear veranda was intact until fairly recently. Photos from the National Register nomination show the rear veranda intact in 1964. The front veranda is supported by columns consisting of two vertical 2” x 4” posts spaced approximately 12” and connected by 2” x 4” diagonals that zigzag the length of the column creating a light lacy element on the façade. Historic photos show us that originally, these diagonals went in both directions creating an “X” pattern instead of today’s zigzag pattern. The individual column elements are unified at the base and head trim. Most of the column elements look as if they have been replaced over the years with few, if any, original columns remaining. The columns are in good condition.

A wood railing with vertical wood balustrades spans between each column. The flooring is constructed tongue and groove wood flooring spanning the width of the veranda and is painted. The flooring is not original, but is quite old. There is a gap in the veranda flooring at the juncture of the wall where the original wall plaster was removed in the 1980s. Through this gap another tongue and groove flooring material can be seen. The area of flooring at the main entry stair

is badly deteriorated and could fail causing an injury. This area of flooring should be repaired immediately with new tongue and groove material that matches the existing.

The ceiling of the veranda is constructed of tongue and groove “bead board”. Most ceiling material looks to be in good condition with the exception of the area at the front door of the “Opry” where the ceiling sags. The source of this sag should be investigated and the material removed. Once this is done, the ceiling boards can be restored to their proper condition.

Rear Porch

The rear porch is what is left of the original veranda. It exists only between the “Opry” rear exit doors and the rear entry door on the rear (east) side of the building. Here the original roof has been removed and replaced with a canvas awning supported by new wood 4x 4’s. The wood picket railing has been replaced with a solid wood railing constructed of 2x4’s covered in T-111 rough-sawn plywood. In the area between the rear entry door and the rear museum addition, the veranda was removed and a corrugated metal roof installed 12” above the floor level to shield the new restaurant restrooms below. The flooring of the rear porch is plywood coated with a waterproofing deck material. The entire rear porch construction is in bad condition and suffers from the lack of maintenance. The stairs are in bad condition and should be removed and rebuilt. The corrugated metal roof over the restrooms is not in good condition. It should be removed and a better solution found for roofing the restrooms.

Interior

Interior Walls

The only original interior walls of the building remaining are red brick walls that form the structure. These are the walls that form the Main Hall, the wall

that divides the office area from the museum display space and the wall that divides the one story museum space. All other interior walls are new wood frame gyp. board walls. All of the interior brick walls were once covered with the same plaster material that was on the outside of the building. Like the outside walls, all of the plaster material was removed from the interior brick walls leaving the brick exposed. The gyp. board walls are texture coated and painted. All of the walls are in good condition with the exception of the brick wall that divides the one story museum space. Here, where an arched opening was added in the wall, the bricks of the new arch are loose with cracks forming above the arch. The Structural Engineer will discuss this problem in the Structural section of this report.

Floors

The floor material of the Main Hall and possibly the Opry Dressing Room are original wood plank flooring. The museum remodel and the seismic upgrading performed a few years ago required the removal of the original flooring on both the main and upper floors. In the main museum area, a new soft wood floor was installed to match as closely as possible, the original flooring material. The new floor is unstained oiled finish and is in good condition. The original flooring in the Main Hall shows a lot of wear, but is in good to fair condition. Other areas of the second and third floors have either carpet or vinyl flooring that was recently installed in the museum remodel or seismic upgrade and are in good condition.

EXISTING CONDITIONS SYSTEMS – MATERIALS CONSERVATION

Introduction

The exterior of the subject property was surveyed on July 28, 1999. The purpose of this preliminary survey was to establish the condition of the building exterior and to identify any evidence of original decorative treatments.

Materials Survey

Roof Condition and Assessment

The roof appears to be serviceable at this time. Leaders located at the building corners drain the shallow swales at the eaves. The swales, and specifically the areas around the drains that are connected to the leader, are locations where leaks are likely to develop due to the shallow slope. These areas should be checked frequently and the drains kept clear. The flashing at the intersection of the porch roof and the second story wall on the north elevation is detached from the wall and will allow water to penetrate between the roof and wall. This condition should be repaired or replaced.

Exterior Masonry Condition

Historic photos of the building indicate that the exterior walls were originally finished with plaster scored to imitate unit masonry. The chimneys are currently finished with plaster that has been scored and are painted white. Evidence suggests, however, that this cement finish on the chimneys is not original. Small samples of the plaster gathered during the survey were examined and found to be a very hard Portland cement plaster. Portland cement was not widely available until the 1890s, many years after the original construction of the building. Further, the

score lines in the plaster do not match those seen in historic photos of the building in which the chimneys are clearly visible.

The condition of the exterior brickwork is fair to good despite its age and the removal of the protective plaster coating. There was no evidence of significant deterioration associated with water intrusion or moisture rising from the ground.

It appears that the building was sandblasted. Wall areas that would have been shielded from blasting such as behind drain leaders and at the base of walls have brick with noticeably smoother texture than is seen on the rest of the building. Sand blasting was likely used after the plaster was stripped from the walls to remove small pieces of plaster and to produce a uniform appearance.

Samples of cement plaster were removed from either side of the opera house stage. This stage wall was originally an exposed, exterior wall prior to the construction of the opera house addition. The samples were examined under a binocular microscope in the laboratory. The plaster is in good condition. It was firm and did not crumble. Lime particles were observed in the cement binder. The sample was a brownish color suggesting the presence of a natural cement. Natural cements, produced in Benicia, were available in California during the period that the house was constructed. The presence of natural cement helps to account for the good condition of the plaster.

It was observed that the plaster had been coated with paint many times. The first coatings on the sample were white and off-white in color, and subsequent coatings included blues and pinks. These latter color appear to be more appropriate for interiors and probably date to the opera house period. Interestingly,

the first paint coating on the plaster was mixed with very fine sand. This was not an uncommon decorative finishing technique in America. At Mount Vernon, George Washington sprayed sand onto wet paint that was applied on wood exterior walls for the purpose of imitating masonry.

In the museum wing, a clear coating has been applied to the exterior side of the north elevation brick wall. Coatings that inhibit or prevent moisture vapor transmission through masonry may contribute to deterioration of the material. In this case, however, there was no visual evidence that the coating is causing problems at this time. A sample of the coating was taken for identification in the laboratory. Further assessment will follow once the coating has been identified.

Exterior Wood Elements Condition

Sand paint also occurs as the first or second layer on samples from the wood trim surrounding the windows on the north elevation as well as on samples from the eave soffit at the second floor. Samples from the window sash have two to three layers of off-white paint next to the wood substrate followed by one or two layers of a barn red colored paint.

Assessment

The evidence from both wood and masonry samples indicates the following. The building was originally plastered with a durable mortar that may have had a natural cement component. The entire building was then painted an off-white color to imitate natural stone. The window sash was painted the same color, but because they are moving elements, the paint did not have a sand component. Later, the building color was maintained as a cream or off-white. Somewhat early in the building's history, probably around 1900, the window sashes were painted barn red.

EXISTING CONDITIONS SYSTEMS – STRUCTURAL OVERVIEW

Introduction

Casa Grande can be described as three separate but attached structures. The main building, Casa Grande, is a three-story (or two-story plus basement) unreinforced brick masonry structure with wood joist floors. The adjacent attached structure is designated as the museum is a two-story wood frame infill supported on unreinforced brick walls. The Opry House is an addition on the East Side of Casa Grande and is wood frame on wood stud walls.

For purposes of clarification, the project will be broken into the three separate building areas as follows: 1) Casa Grande, 2) Casa Grande Museum, and 3) Opry House.

Description of Casa Grande- 3 Story Area

Walls

The existing perimeter walls of Casa Grande are 18" unreinforced brick from the first floor to below the top floor. The brick is 14" thick from the top floor to the roof. The interior brick walls on the 1st and 2nd floors range from 9" to 14" thick. There are no interior brick walls on the 3rd floor to roof. In some locations, the original wall openings have been modified or enlarged.

Foundation

The depth of foundation is unknown at this time and it may be necessary in the near future to dig a pit to determine the actual depth and thickness. The floors appear to be quite level, which indicates that the foundations are adequate for the building for bearing pressures. It may be prudent for the owner to hire a geotechnical engineer for alterations or modifications required in the future.

Floors

The first floor (or basement) is a slab on grade of unknown thickness. The third floor consists of 2-7/8 x 11-7/8 @ 16" o.c. Redwood joists @ 16" o.c. with 2x6 @ 16" o.c. ceiling framing spanning to the transverse brick walls. The original wood appears to be in excellent condition. We were unable to see the second floor framing, however, we assume that the floor joists are 2-7/8 x 11-7/8 @ 16" o.c. as they are on the 3rd floor. According to the as built documents by Robert Croyle, P.E., dated 13 Jan 1998, existing 1x6 diagonal floor sheathing were replaced with 3/4" tongue and groove plywood. Sheet 1 and 2 of the as-built drawings indicate that new plywood was added on the entire third floor of Casa Grande. We were able to verify this visually through an upper floor ceiling hatch. Plywood is also shown on the entire second floor of the museum and Casa Grande with the exception of the floor at the stage and dressing room, in which case plywood was added at the ceiling below. The existing diagonal sheathing remains on the stage and dressing room floor.

Two steel moment frames were added in the 1998 seismic upgrade designed by Robert W. Croyle. The moment frames are located on the 3rd floor seated on the interior masonry walls to the ceiling framing. There are also the angle brackets at the top of the 3rd floor perimeter brick walls spaced at approximately 32' to 48" o.c. The as-built drawings indicate that the second and third floors were bolted to the masonry walls. The bolting was not visible on these floors and we were not able to confirm this detail.

Roof

The roof above the three stories has 1x6 spaced sheathing over 3-1/4" x 4" redwood joists @ 32" o.c. The joists bear on the longitudinal brick masonry walls (34' span) and frame into a 1x6 ridge members.

2-5/8" x 5" ceiling joists at 16" o.c. span the 34' to the exterior masonry walls. 4x4 beams run perpendicular and rest on the ceiling joists supporting intermediate 2x4 posts @ 32" o.c. which pick up load from the roof joists shortening the roof joists span.

Description of Casa Grande Museum

Walls

The existing perimeter walls are 14" unreinforced brick from the first floor to the roof. Interior brick walls are 14" and 9" thick on the 1st floor and 14" on the 2nd floor.

Originally there was a porch on the south side of the museum, which was more recently enclosed with wood stud walls.

Foundation

The depth, size and material of foundation are unknown at this time. However, there are no apparent signs of settlement.

Floors

The first floor (or basement) is a slab-on-grade of unknown thickness. We were unable to see the 2nd floor framing during our visit, however, existing documents dated January 13, 1998 by Robert Croyle indicate that the 2nd floor joists consist of 3x12's @ 16" o.c. spanning 16' onto the existing brick walls. Most of the diagonal floor sheathing was removed during the seismic upgrade and replaced with 3/4" tongue and groove plywood, as discussed previously.

Roof

The roof framing over the museum has 1x6 spaced sheathing over 2x4 redwood joists @ 36" o.c. The joists bear onto the longitudinal brick walls (16' span) and frame into a ridge member. 2-1/2 x 5" ceiling joists @ 18-1/2" o.c. span the 16' to the masonry walls with 2x4 @ 36" o.c. collar ties. The wood appears to be in excellent condition. The enclosed porch area has a shed wood frame roof. We were unable to see the joists in that area.

The Veranda of Casa Grande

There is an intact wood frame porch and veranda roof on the north side of Casa Grande. The framing is supported between the brick walls and beams to 13-1/2" x 18" brick pilasters.

The south side veranda porch and roof have been removed, except for a portion, which was rebuilt between the back door and Opry house rear exit. The original double stairs were removed.

Description of the Opry House

Walls

The original veranda porch and roof were removed on the East Side of Casa Grande for the addition of the Opry House structure, however that the pilasters supporting the veranda remain in tact. It has wood frame stud walls from the first floor to the roof. An enlarged opening was made in the brick walls to provide for the stage opening (proscenium). The opening supports the brick wall above with two 10x6 (flat) members.

Foundation

The depth and size of foundation is unknown at this time.

Floors

The first floor is a slab on grade of unknown thickness and slopes in various locations.

We were unable to see the second floor framing, however, it is important to evaluate for future loading.

Roof

The roof has four trusses equally spaced with 3x4 joists @ 2'-0" o.c. parallel to the trusses.

Areas for Future Investigation

Seismic Improvements

Robert W. Croyle, P.E, prepared seismic upgrade documents, dated January 13, 1998. The work has been carried out and documented by County Building Inspectors. It may be prudent in the future to examine the effectiveness of the upgrade. There are several questions, which need to be further studied. Reviewing the seismic upgrade is not part of this scope of work.

Chimneys

The chimneys (five total) were reinforced as part of the seismic upgrade. The chimney restraint at the museum is questionable. Chimneys have tendency to rotate as well as rock and the restraint as shown cannot resist rotation.

Openings in Masonry Walls

There are several arches and openings which were made into existing brick walls and should be studied. For example, the opening in the proscenium at the stage of the Opry House was originally a solid brick wall with two window openings. The large opening supports the brick wall above with two 10x6 (flat) wood members. Also, one arch opening in the museum is cracked in the center and should be reviewed.

Foundations

In addition, the foundations previously mentioned should be evaluated. Any program change should be investigated for loading.

CASA GRANDE

EXISTING CONDITIONS SYSTEMS - HEATING, VENTILATION, AND AIR CONDITIONING

Equipment History

Most of the existing HVAC equipment has been installed in the early 1980's. They have been in operation for the last 15 - 20 years. The operating life expectancy incorporating current technology and energy efficiency features to save energy costs and minimize maintenance costs.

Existing Systems Analysis

Kitchen

Two roof mounted up blast exhaust fans and a wall mounted evaporative make up air cooler unit currently serve the kitchen, and meet ventilation requirements for the two grease kitchen hoods. A third roof mounted utility exhaust fan serves a baking oven, and vents the flue gas from the oven to outside.

The grease ducts from the kitchen hoods pass through the second floor museum before they are connected to roof mounted exhaust fans. It was not possible to observe whether the exhaust ducts are routed separately or combined together in a duct enclosure from kitchen floor to the roof. There is no visual or physical identification of any vents above roof for venting the duct enclosure. The enclosure may not comply with current Code.

The up blast exhaust fans and ductwork appear to be in good condition. The exhaust fan support curbs require vents for venting the duct enclosure.

The utility fan serving the baking oven is currently positioned to discharge the flue gas horizontally just above the roof. The current position shall be changed to vertical discharge with a small length of stack duct and a terminal vent hood for rain protection. The new stack shall be supported from the roof with wire

strings and turn buckles for wire tension.

The fan and exposed exhaust duct require prime coating and painting to prevent corrosion and rusting.

Evaporative make up air cooler unit's metal casing appears to be corroding and rusting. Otherwise the unit seems to be in good operating condition. The unit casing shall be prime coated and painted to prevent further rusting and corrosion.

Code Required Improvements:

If the grease ducts from two kitchen range hoods are found to be one duct in the duct enclosure, then they shall be separated and routed to their respective exhaust fans in fire rated enclosures.

The existing green exhaust duct enclosure fire rating is to be determined by the architect. The duct enclosure shall be upgraded to meet the appropriate building codes if required (Architectural item).

Museum Area Air Conditioning

The main museum area is currently served by a roof mounted packaged gas/electric air conditioning unit with supply and return air duct systems. The system does not have any provision to provide outside air ventilation to the people in the conditioned space. The unit is also located less than 10 feet away from one of the kitchen hood exhaust fans.

Our estimated cooling load calculations show that the existing air conditioning unit's 5.0Ton cooling capacity is not adequate to meet the current space cooling load requirements.

Code Required Improvements

Although the air conditioning unit appears to be in good condition, the equipment cooling capacity is not adequate to meet current ventilation code requirements. It is recommended that this unit shall be replaced with a large capacity unit, (7.5 - 10.0 Ton) unit with high heating capacity. The new unit shall have economizer controls for energy savings. The outside air intake should be installed at least 10 ft away from grease hood exhaust fan discharge.

First Floor Exterior Men's Restroom

The existing room is currently not served by any exhaust or air conditioning systems.

Code Required Improvements

The rest room has to be provided with either natural ventilation or a mechanically operated ventilation system per UBC Chapter 12, Section 1202. We recommend that a new dedicated mechanical system consist of an exhaust fan either wall or roof mounted and a door louver for air intake from outside shall be installed to provide mechanical ventilation to restroom.

First Floor Exterior Women's Restroom

The existing room is currently not served by any exhaust or air conditioning systems.

Code Required Improvements

The rest room has to be provided with either natural ventilation or a mechanically operated ventilation system per UBC Chapter 12, Section 1202. We recommend that a new dedicated mechanical system consist of an exhaust fan either wall or roof mounted and a door louver for air intake from outside shall be installed to provide mechanical ventilation to restroom.

Banquet Hall

Two gas fired radiant heaters provide heating to the space. The space is not air-conditioned.

The heaters appear to be aged. We recommend that these units be replaced with new heaters.

Elective Improvement:

If it is the owner elects to have air conditioning added to this space, then a new air conditioning system consisting of an indoor air handling unit and an outdoor condensing unit shall be installed to provide cooling to the space.

Bar Air Conditioning and Heating

The bar ceiling is provided with ceiling air outlets to supply conditioned air and to return the air to the unit. We were unable to locate either the air conditioning unit or the thermostat. We do not know whether this space is air conditioned at this time.

A floor mounted standalone fireplace with exposed gas flue vent duct outside the north exterior wall currently provides heating to the space on demand.

This space is a part of banquet and theater activities.

Elective Improvement:

If the owner elects to have air conditioning added to this space, then we recommend a new dedicated stand alone air conditioning system.

The existing exposed gas flue vent duct is rusting and corroding. It shall be prime coated and painted to prevent further corrosion and rusting.

Closet Ventilation

A wall mounted propeller exhaust fan serves the existing closet adjacent to the banquet corridor for the control of south wall water condensation and water

drip on the floor. The air is exhausted to the crawl space underneath of the banquet hall. There is neither an air intake to the closet nor an air exhaust to outside the building.

The closet room door shall be provided with a door louver to bring in air from the bar to the closet. We also recommend ducted exhaust from the exhaust fan to outside the building.

Stage and Theater Air Conditioning

A roof mounted air conditioning unit with associated duct system serves this space. The system is not in operation most of the time, since most plays are performed in the late evening or nighttime. The air conditioning unit appears to be old and broken. We were unable to determine the unit's manufacturer or the capacity of the unit. The system does not have any provision to provide outside air to the space.

We noticed a water sprinkler on the top the roof above this area. It looks like the museum personnel operate the sprinkler manually to spray water on the roof whenever the space is getting hot in the summer time. The air conditioning unit serving this area is either not providing enough cooling or is broken.

We recommend that the unit be replaced with a new larger cooling capacity air conditioning unit with economizer controls to meet current cooling load.

Code Required Improvements

The occupants in the conditioned space require outside air ventilation air per codes. The current unit may not have cooling capacity to provide the necessary ventilation air-cooling load. The new replacement unit can be sized to handle additional cooling load.

Stars Dressing Room

A through the wall window air conditioning unit is serving this area.

The unit appears to be quite old but appears to be functioning well. Since the window units are inexpensive, the replacement of existing unit with a new unit will provide additional cost saving benefits in conserving electrical energy and decreasing maintenance.

Second Floor Office Area

A ceiling mounted air conditioning unit of 3.0 Ton cooling capacity serves approximately 1,100 sq.ft. of office area.

Our estimated cooling load calculations show that the current unit has capacity to meet the space-cooling load. The unit seems to be in good condition.

Code Required Improvements:

There is no current ventilation air supply provision in the air handling system to bring in outside air to the unit and blend with the return air from the space. A wall louver shall be installed with a volume damper above the ceiling to bring in a fixed quantity of outside air. The outside air intake shall be ducted to the return side of air conditioning unit to provide ventilation air to the conditioned space

Elective Improvement:

If the owner elects to replace the air conditioning unit for more operational reliability, then the unit shall be replaced with a new unit of same capacity.

Third floor Air Conditioning

Two ceiling mounted gas/electric packaged air conditioning units currently serve 2300 sq.ft. area. Each unit has 5.0 Ton cooling capacity to provide air conditioning to the space.

Our cooling load calculation indicate that these two units' combined cooling capacity is adequate to serve the entire third floor

These units appear to be in good condition and functioning well. They are aged and are approaching the end of their economic life. We do not recommend any major modifications to these units but they may have to be replaced in the future.

Code Required Improvements:

The ceiling is well ventilated by roof mounted gravity ventilators. There is enough outside air available for gas heater combustion. But there is no provision to provide outside air to the air conditioning systems for outside air to the space. The code requires that the outside air shall be supplied directly to the air conditioning units. A dedicated duct shall be installed to bring in outside air from above the roof to the air conditioning systems

The existing 5.0 Ton air conditioning units supply 2000 CFM nominal airflow each. UMC, Section 608 requires that each air conditioning equipment supplying 2000CFM or more shall be provided with a smoke detector in the main supply duct for smoke detection and automatic shut off equipment.

Elective Improvement:

If the owner elects to replace the two air conditioning units for more operational reliability, then these units shall be replaced with new units of same capacity.

Roof Condenser Units

Three Roof mounted condensers, serving two air conditioning units located in the third floor ceiling and one air conditioning unit located in the second floor office area ceiling were not accessible during this visit. We believe that these units were installed along with the air conditioning units in early 1980.

Elective Improvement:

If the owner elects to replace these three units along with air condensing units for more operational reliability, then these units shall be replaced with new units of same capacity.

Existing Equipment Data

Museum:

Unitary gas/electric DX unit
Manufacturer: BDP Carrier
Prod# 585 CBW 060 100ABAC
Model# 585 CB 060 100
Heating Input: 100000Btuh

Theater:

Unitary electric DX unit
Manufacturer: HQCO, Lewisburg, TN
Model# 867822461
Style # 41RPS-704897C

Second Floor Office Area:

Split electric DX Air Conditioning Unit
Manufacturer: BDP Carrier
Model# 517 EN 036

Third Floor:

Units - 1
Split electric DX Air Conditioning Unit with gas heating
Manufacturer: BDP Carrier
Prod# 506B00060000MBAA
Model# 506B060
Serial# 3885C34442

Units - 2:

Split electric DX Air Conditioning Unit with gas heating
Manufacturer: BDP Carrier
Prod# 506B00060000MBAA
Model# 506B060
Serial# 3885C34441

Existing Conditions Systems - Plumbing System Description

Existing Systems Analysis

Domestic Cold Water System

The building is supplied by a 2" water service from Almaden Road. The service enters the building mechanical room located at first floor next to the kitchen. The water meter is located in this room.

There is a small water line connected to the main line upstream the meter. It appears to serve a hose bibb. It could not be determined if it serves other fixtures. This small line is not metered. Also, a 2" water line continues to the back of the site, from the mechanical room. Presumably it is used for irrigation. This line is not metered either.

The domestic cold water system supplies the plumbing fixtures located in the kitchen (sinks), toilets at first and second floors (lavatories, water closets), first floor bar area (sinks) and second floor theater bar area (sinks).

There is a water softening system installed in the mechanical room. This system includes water softener tank, brine tank, controller and related piping and it is supplying the gas fired water heater. The piping is all copper and appears to be in good condition. Some valves need to be replaced. The water softener is in good condition.

The domestic water system is not equipped with a backflow prevention device. A reduced pressure backflow preventer will have to be installed in the water service line.

There are exposed water lines on the back wall that used to supply fixtures at the third floor. The fixtures have been removed or there are no longer operational (i.e. countertop stainless steel sink). The abandoned water lines need to be removed.

Domestic Hot Water System

The building is equipped with two water heaters. The 100 gallon gas fired water heater located in the first floor mechanical room supplies with hot water the kitchen fixtures, the lavatories in the second floor museum offices and the lavatories in the first floor restrooms.

The 20 gallons electric water heater located in the first floor bar service area serves the bar fixtures. It is unknown how the second floor theater bar area is supplied with hot water - possibly from the first floor electric water heater. Both water heaters are very close to the time when they will need to be replaced. The hot water piping is copper and it is insulated for the most part. Some valves will have to be replaced and insulation repaired in several places.

Sanitary Waste and Vent System

The sanitary waste and vent system serves the toilet fixtures, kitchen and bar fixtures and equipment. It includes piping, floor drains, floor sinks and cleanouts.

The system has three lateral sanitary building sewers:

1. One lateral serves the kitchen fixtures. The grease waste produced by the kitchen fixtures is discharged into a grease interceptor located outside the kitchen.
2. The second lateral serves the second floor museum office toilets and the ground floor public restrooms. The fixtures on the third floor are either removed or non-operational. The only operational element is the connection for the

condensate drainage from the air conditioning units in the third floor attic. The condensate drainage pipe is directly connected to a vent line that used to serve the former third floor bathroom. This is a code violation; the condensate drainage has to discharge indirectly into an approved receptor. The first floor bar fixtures also are served by this lateral.

3. The third lateral serves the second floor theater bar fixtures.

Each lateral discharges into a dedicated septic tank. The septic tank effluent is discharged into leaching fields. Two septic tanks are located on the southeast side of the building and one septic tank is located on the northeast side.

The systems appear to be in good condition. With the exception of some PVC vent piping (through the third floor meeting room), all piping is cast iron and galvanized steel pipe.

Storm Drainage System

All roof drainage is achieved through gutters that discharge through downspouts onto the ground or (as on the northeast side) connected to underground storm drainage.

There is a sump pump in a sump pit located at the bottom of the outside stair going down below the museum level. The discharge line is a 2" PVC pipe that discharges into a small area drain.

Natural Gas System

The building is supplied by one gas meter and regulator assembly located on the northwest side, in front of the museum. The meter and regulator are enclosed in a wood box-like enclosure with a cutout for meter reading. The PG&E gas service is connected to the main line on Almaden Road.

There are several gas lines originating from the gas meter, more than likely installed every time a new piece of gas fired equipment was installed.

All piping is galvanized steel and appears to be in good condition. The gas lines supplying the cooking equipment are provided with solenoid shut-off valves controlled by the hood fire suppression systems.

Plumbing Fixtures

The museum office toilet fixtures are in very good condition and were installed to comply with accessibility requirements at the time.

The first floor public restroom fixtures are old but still functional. They do not comply with any accessibility requirements. None of the fixtures meet the current water conservation flow requirements.

General Comments and Recommendations

The building plumbing systems are in working condition. The extent of the plumbing system renovation will be dictated by the extent of the building rehabilitation. At a minimum, the plumbing fixtures in the first floor public restrooms have to be upgraded and the exposed, abandoned piping on the southeast outside wall should be removed.

Fire Protection System

The building does not have a fire protection system.

The two kitchen hoods are equipped with dry chemical fire suppression systems interlocked with the gas solenoid valves on the supply piping to the cooking equipment.

We recommend that a fire sprinkler system be considered to be installed throughout the building.

EXISTING CONDITIONS SYSTEMS - ELECTRICAL REVIEW AND EVALUATION

Introduction

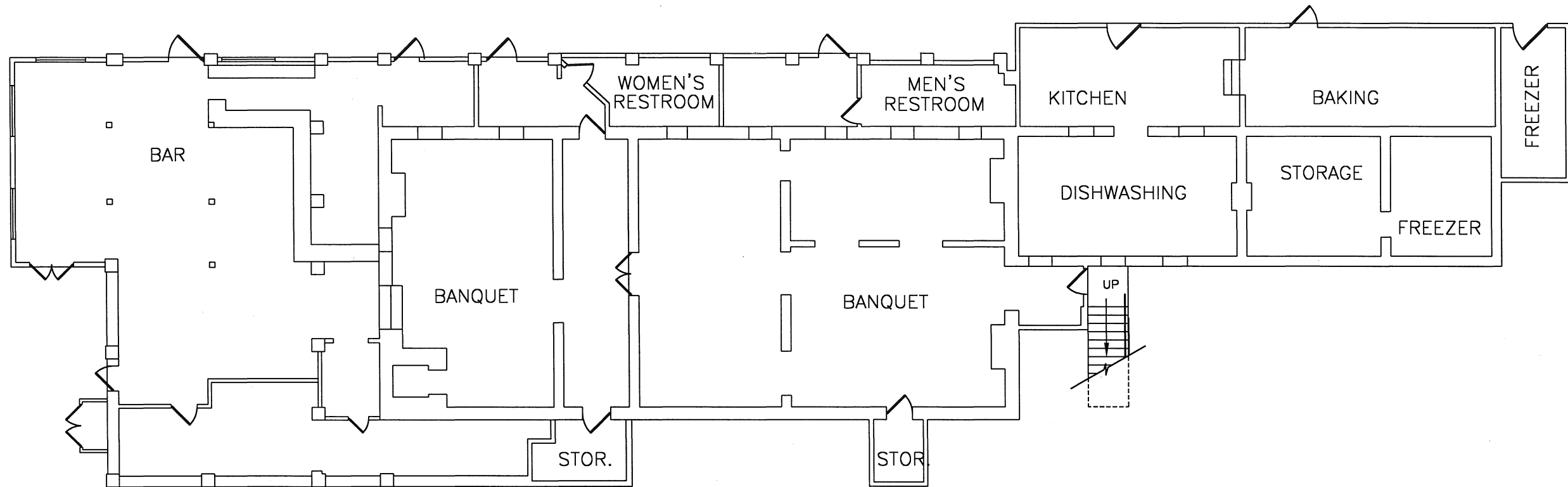
We have completed a review of the existing available record drawings for the Casa Grande Historical facilities and also have completed a site walk-through of the facilities observe the electrical systems. The following summarizes our findings and comments related to this review and evaluation.

Summary of Electrical Review and Evaluation

1. The main incoming electrical service is fed overhead from the service pole to service heads located at the roof. The service then drops down through two service raceways to an incoming pull box located in the basement. The incoming service is 120/240 Volt, single phase and is rated at 800 Amps. It is recommended that this service be changed to an underground service as part of the restoration project.
2. The main incoming telephone service is also fed overhead from the service pole (shared with the electric service). It is also recommended that this service be changed to an underground service as part of the restoration project.
3. The electrical service extends from the 800 Amp incoming pull section to a 12"x12" gutter with cables then extending into four separate Utility Company meters.
 - a. Meter No. 1 serves Loadcenter No. 1 (30 Poles) with 200 Amp, 2 Pole main circuit breaker and serves the following.
 - 1) 100 Amp, 2 Pole circuit breaker feeding theater Panel 1-3.
 - 2) 30 A, 2 Pole circuit breaker feeding Dressing Room and Ticket Office.
 - b. Meter No. 2 (Labeled "Upstairs Only") serves Loadcenter No. 2 (30 Poles) with 100 Amp, 2 Pole main circuit breaker and subfeeds second floor Panel 2-1 (serving the second floor power and lighting).
 - c. Meter No. 3 (Labeled "Bar, Waiting Sta., Pizza") serves Loadcenter No. 3 (30 Poles) with 200 Amp, 2 Pole main circuit breaker and serves the following:
 - 1) 100 Amp, 2 Pole circuit breaker feeding Panel 'B3'.
 - 2) 100 Amp, 2 Pole circuit breaker feeding Panel 'B4'.
 - 3) Numerous 20 Amp, 1 Pole circuit breakers serving lights, plugs, and miscellaneous loads.
 - d. Meter No. 4 (Labeled "Tieco Kitchen, Park") serves Loadcenter No. 4 (30 Pole) with 200 Amp, 2 Pole main circuit breaker and serves the following:
 - 1) 100 Amp, 2 Pole circuit breaker feeding Panel 1-1 (Tieco).
 - 2) 125 Amp, 2 Pole circuit breaker feeding Deck Panel.
 - 3) 70 Amp, 2 Pole circuit breaker feeding sub panel in back of Opry Dressing Room.

4. The meter and loadcenter line-up as referenced above appears to be adequate to serve the existing loads. It is possible that a new three-phase service may be required to serve future possible air conditioning and/or new kitchen loads.
5. The main electrical grounding system is extended to a ground rod and to the building cold water piping system. The grounding system should be tested.
6. The area panelboards and/or loadcenters were observed. Select panelboard locations will require access modifications to maintain adequate code working clearances.
7. Individual branch circuit receptacles, devices, and lighting fixtures were observed. Numerous changes will be required once the extent of the building reconfiguration and/or restoration is determined. All new raceways should be installed concealed.

EXISTING CONDITIONS DRAWINGS



EXISTING LOWER FLOOR PLAN

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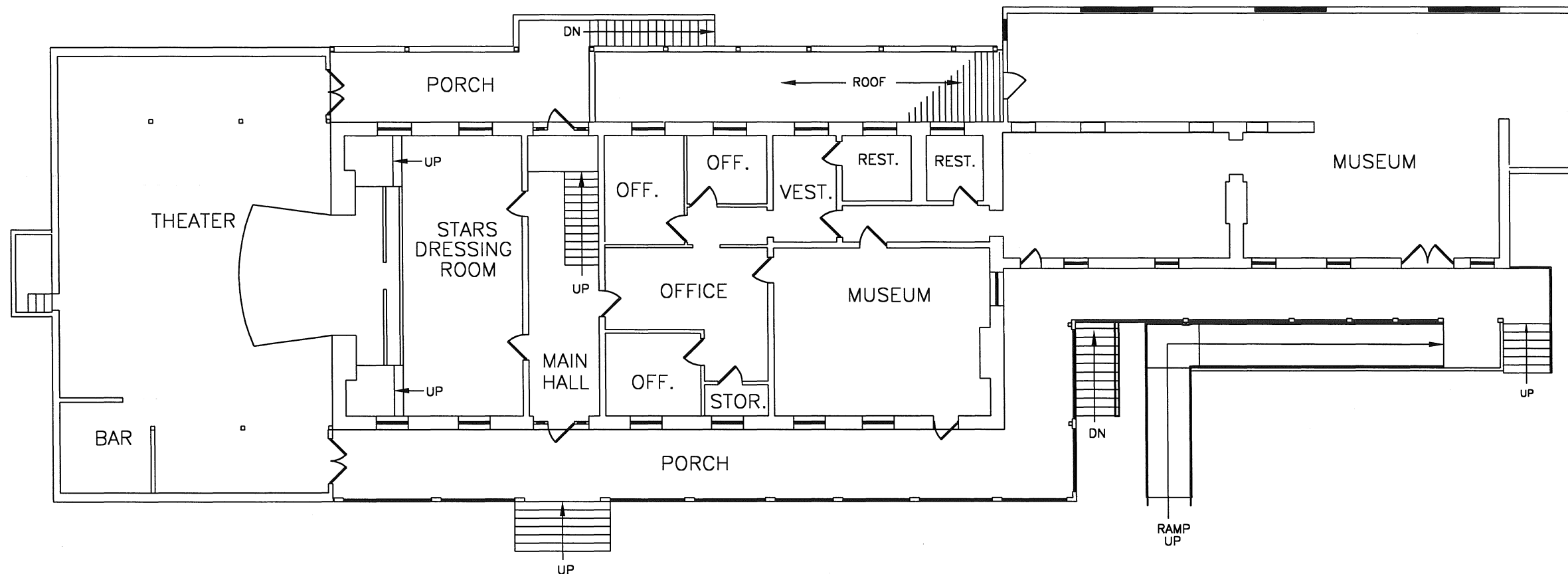
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A-1



EXISTING MIDDLE FLOOR PLAN

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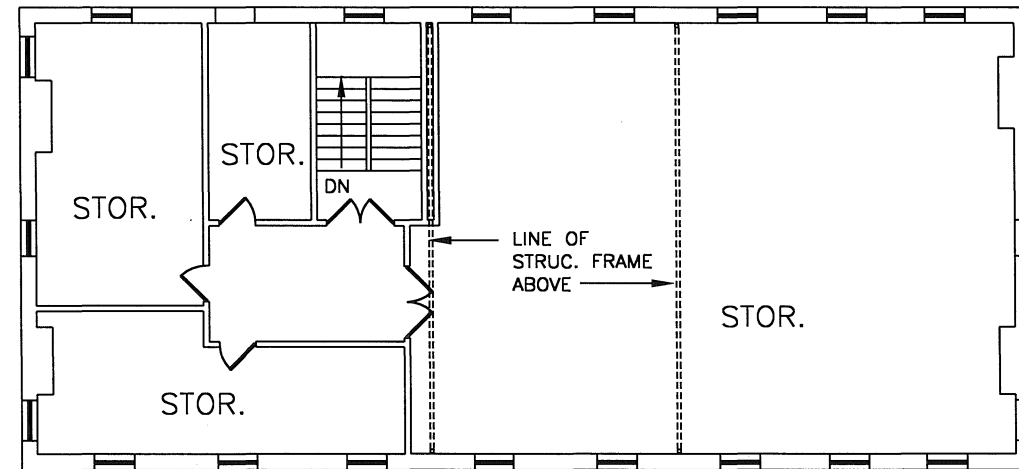
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EXISTING UPPER FLOOR PLAN

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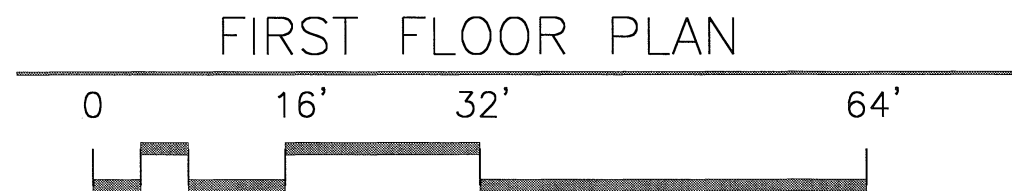
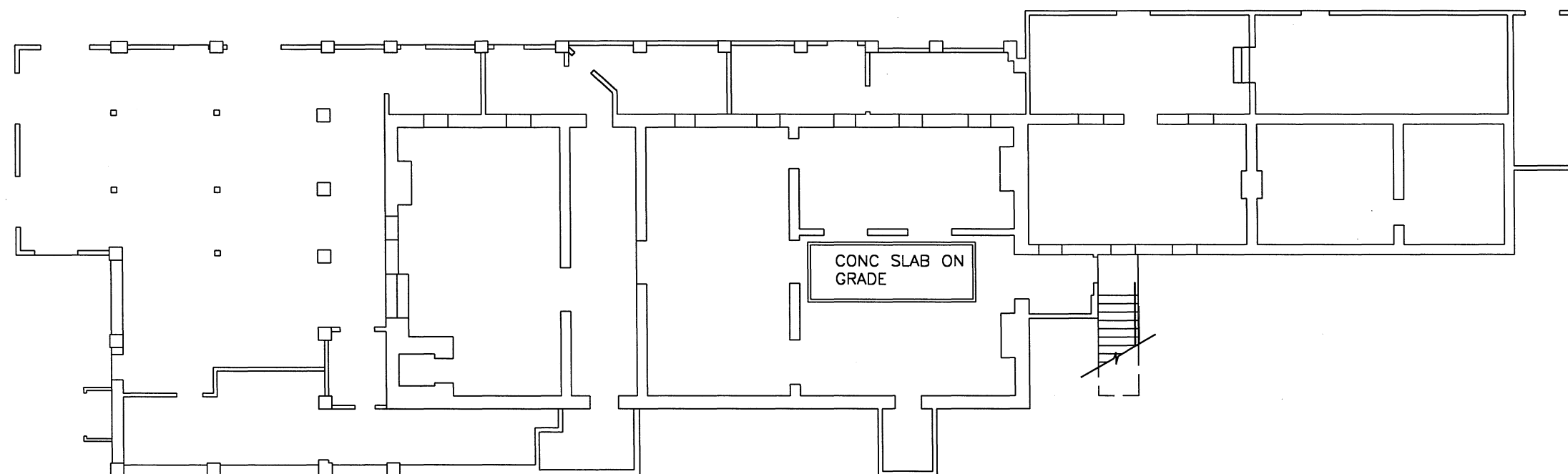
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**FIRST FLOOR PLAN
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CONDITIONS)**

Sheet Number:

S2.1



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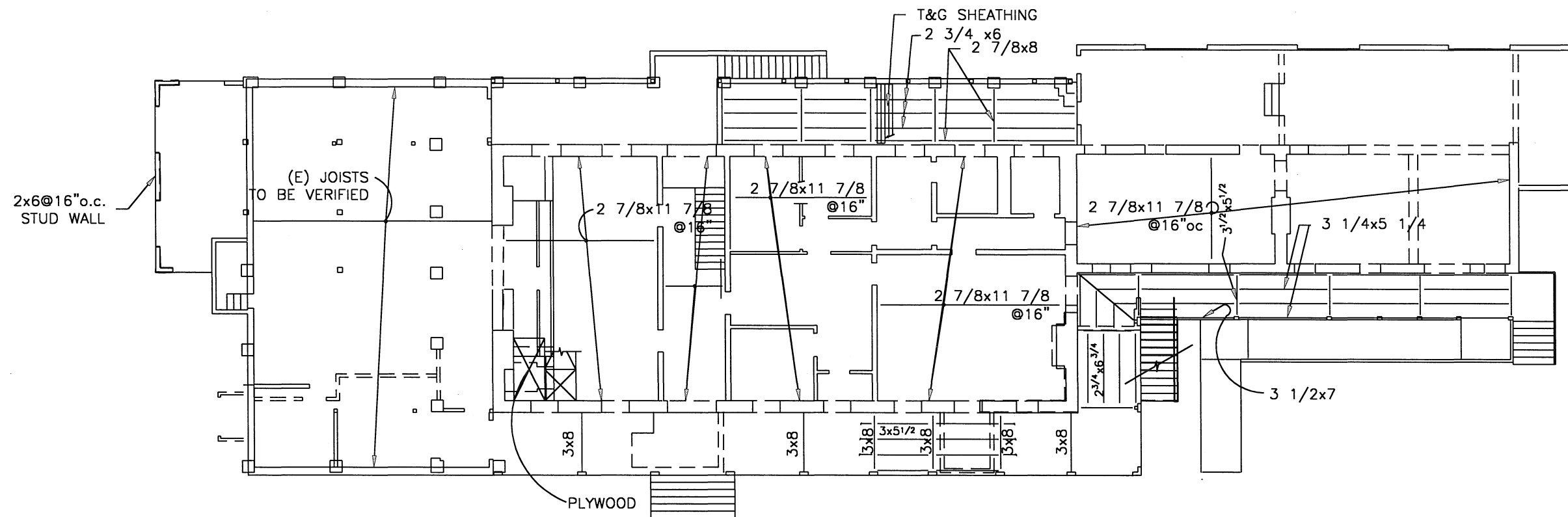
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**SECOND FLOOR
FRAMING PLAN
(EXISTING
CONDITIONS)**

Sheet Number:

S2.2



SECOND FLOOR FRAMING PLAN

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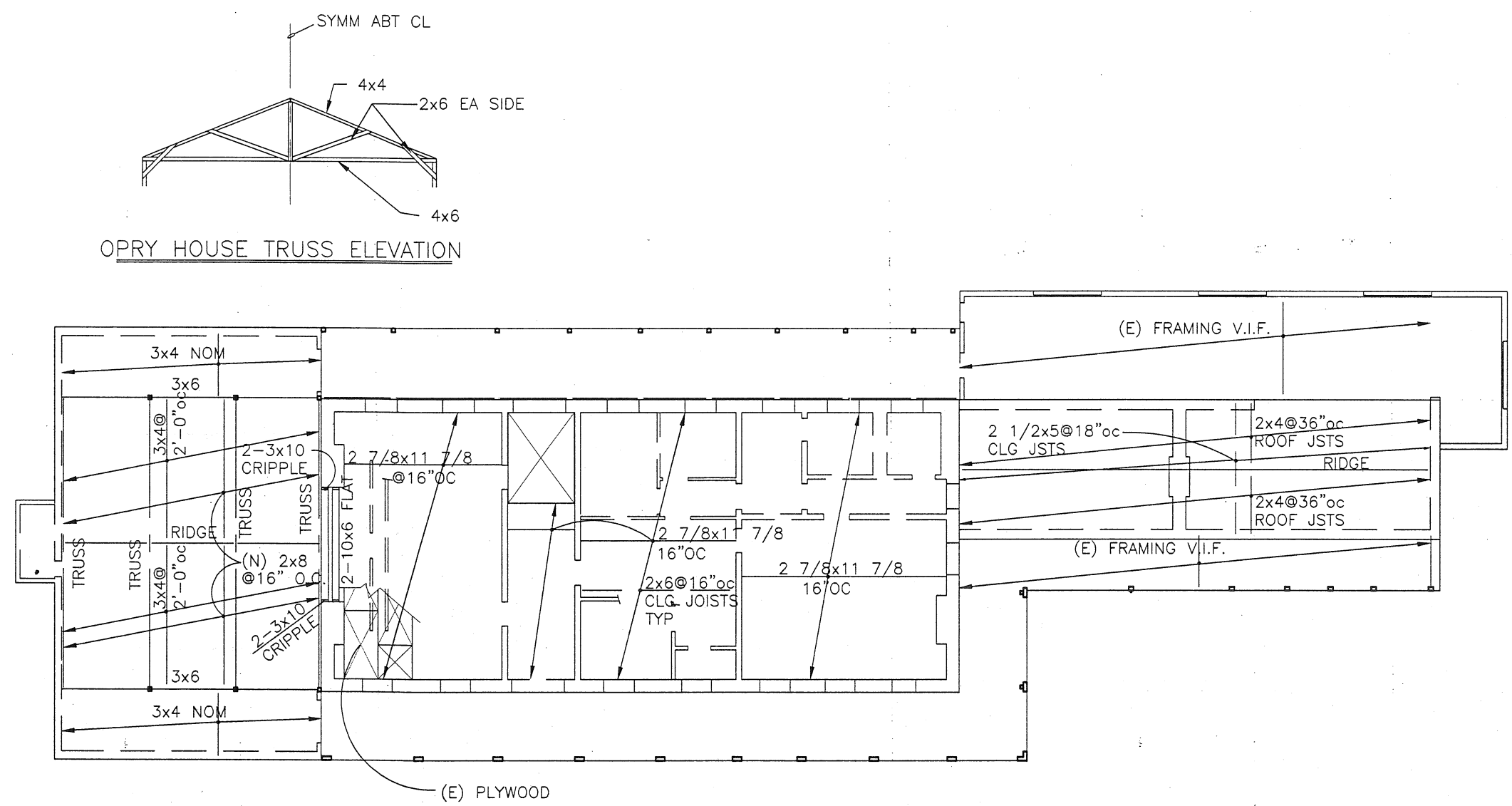
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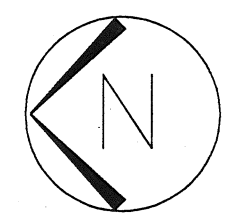
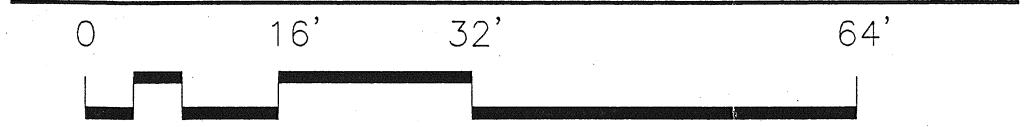
**THIRD FLOOR FRAMING PLAN
(EXISTING CONDITIONS)**

Sheet Number:

S2.3



THIRD FLOOR FRAMING PLAN



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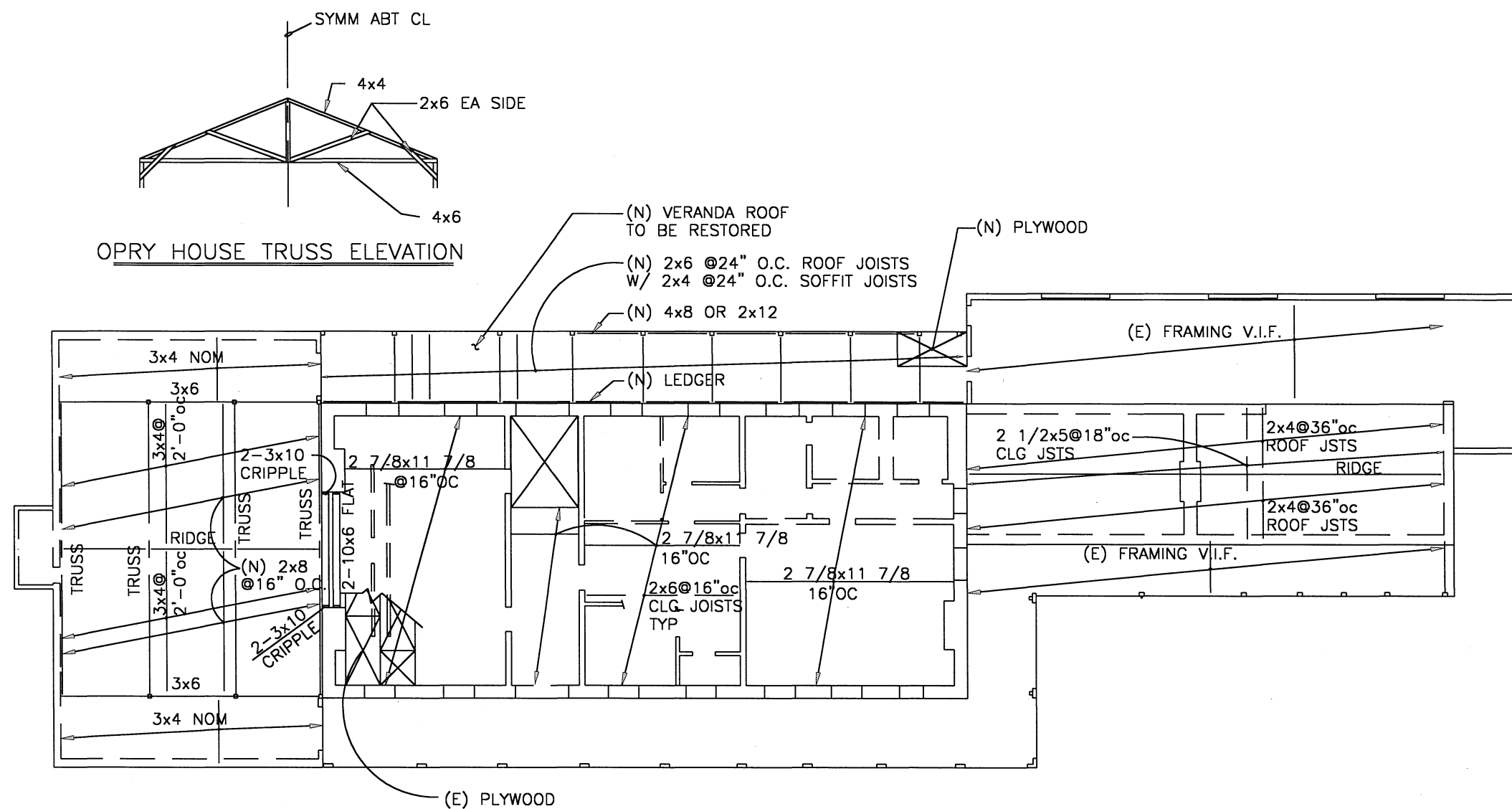
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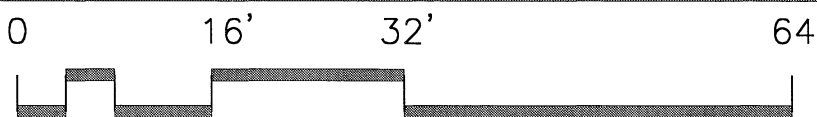
THIRD FLOOR
FRAMING PLAN
(EXISTING
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Sheet Number:

S2.3



THIRD FLOOR FRAMING PLAN



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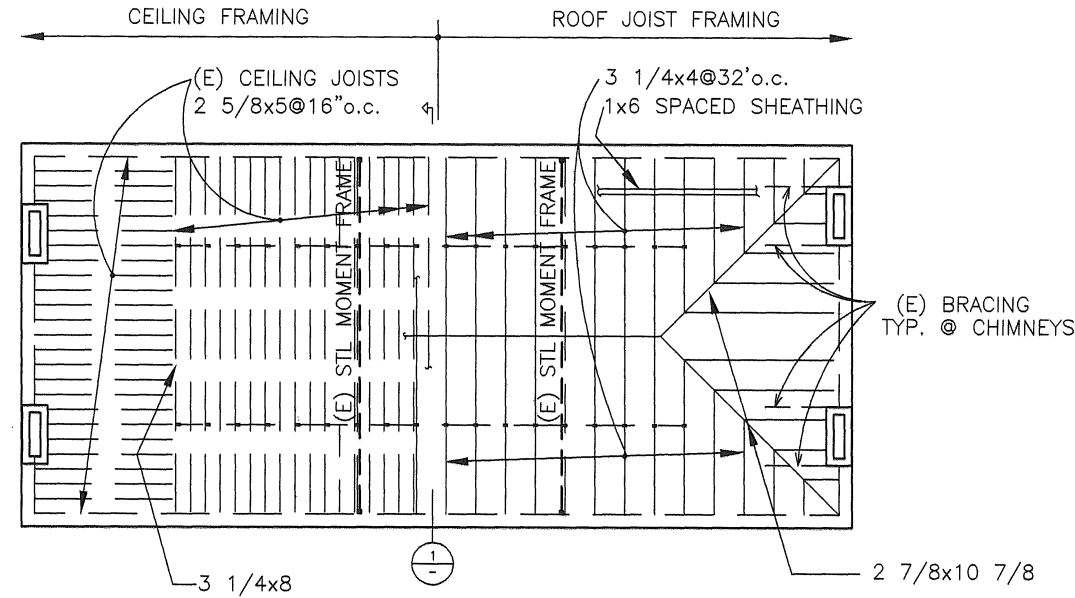
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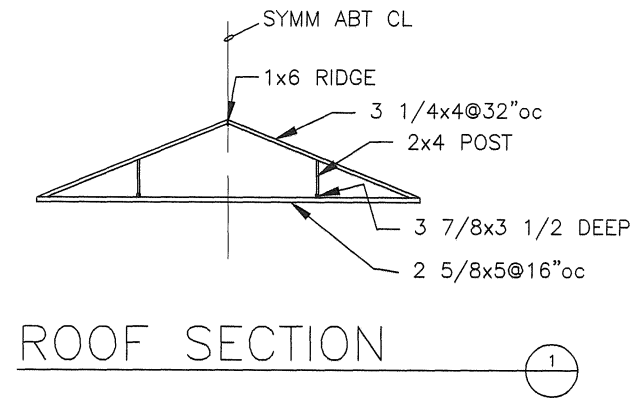
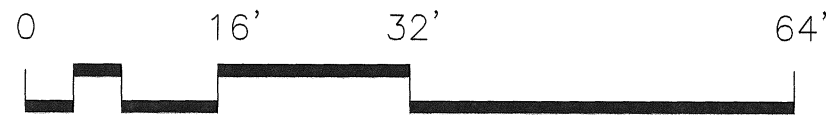
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**ROOF FRAMING PLAN
(EXISTING
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Sheet Number:

S2.4



ROOF FRAMING PLAN



ROOF SECTION

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298 Garden Hill Drive
Los Gatos, CA 95032

TENNEBAUM-MANHEIM ENGINEERS

STRUCTURAL DESIGN & ENGINEERING
414 Mason Street, Suite 605
San Francisco, CA 94102
415-772-9891

CONSULTANTS

ARCHITECT
Patri-Merker Architects
400 2nd Street, Suite 400
San Francisco, CA 94107
(415) 284-1100

MECHANICAL ENGINEER
Mechanical Design Studio
375 Fremont Street, Suite 250
San Francisco, CA 94105
(415) 284-0114

ELECTRICAL ENGINEER
Ackerman Practicon
801 East Charleston Road
Palo Alto, CA 94303
(650) 965-1000

Date: 8/25/99

Scale: AS NOTED

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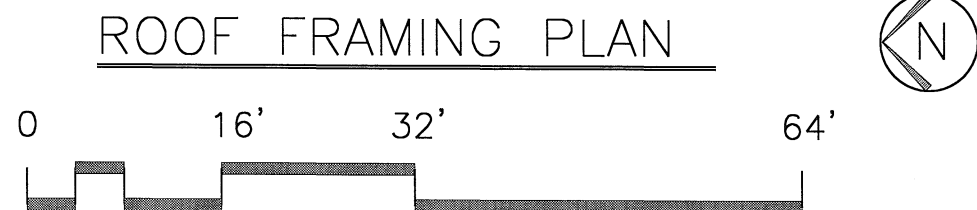
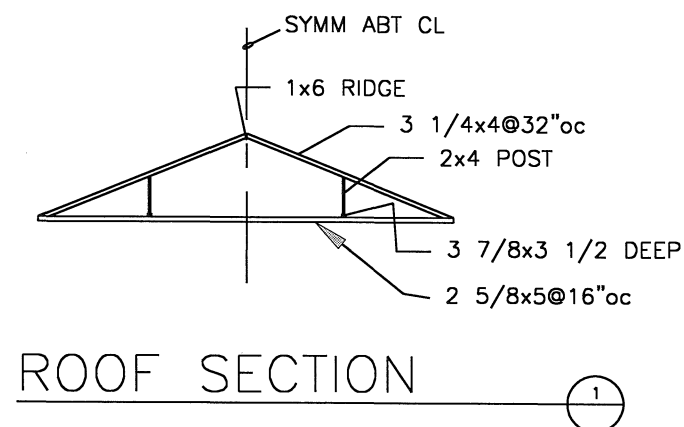
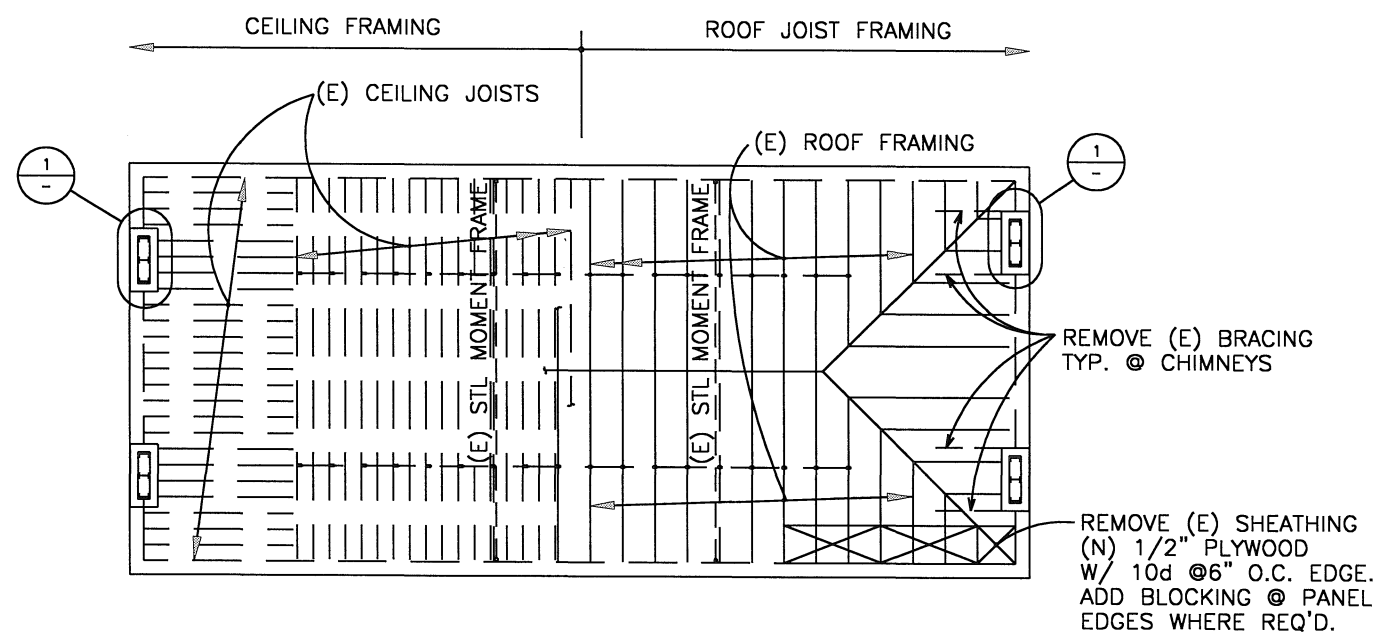
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Sheet Title:

**ROOF FRAMING PLAN
(EXISTING CONDITIONS)**

Sheet Number:

S2.4



CASA GRANDE

21350 ALMADEN RD.
SAN JOSE, CA

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CONSULTANTS

ARCHITECT

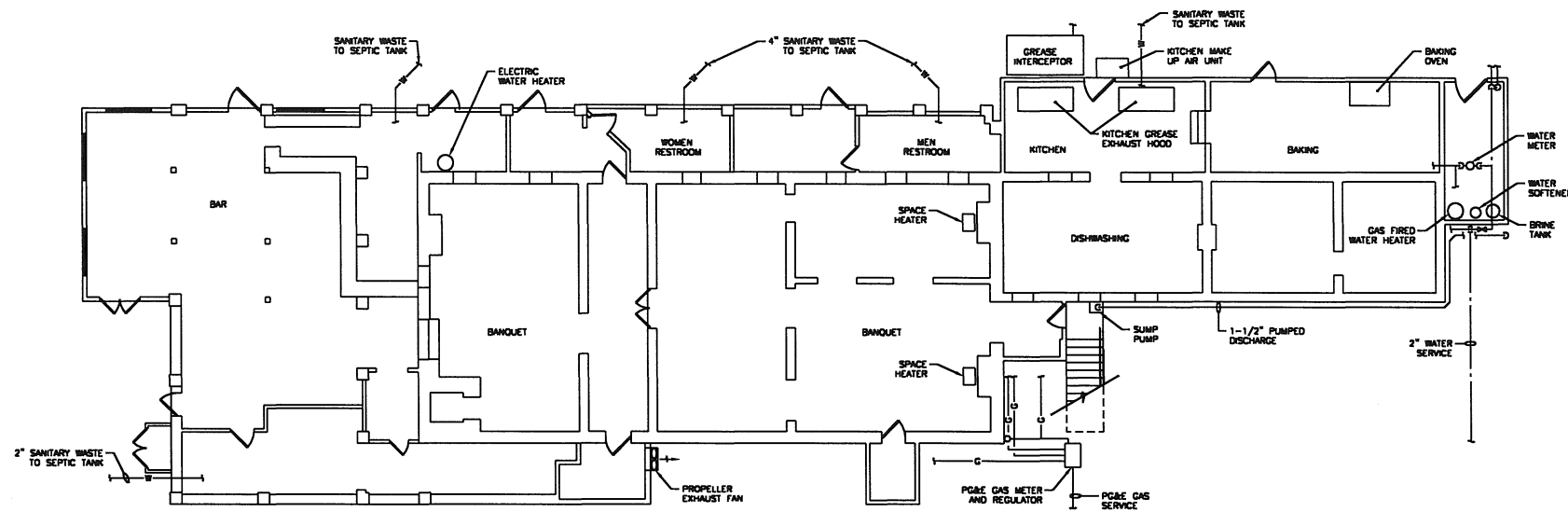
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400 2nd Street, Suite 400
San Francisco, CA 94107
(415) 284-1100

MECHANICAL ENGINEER

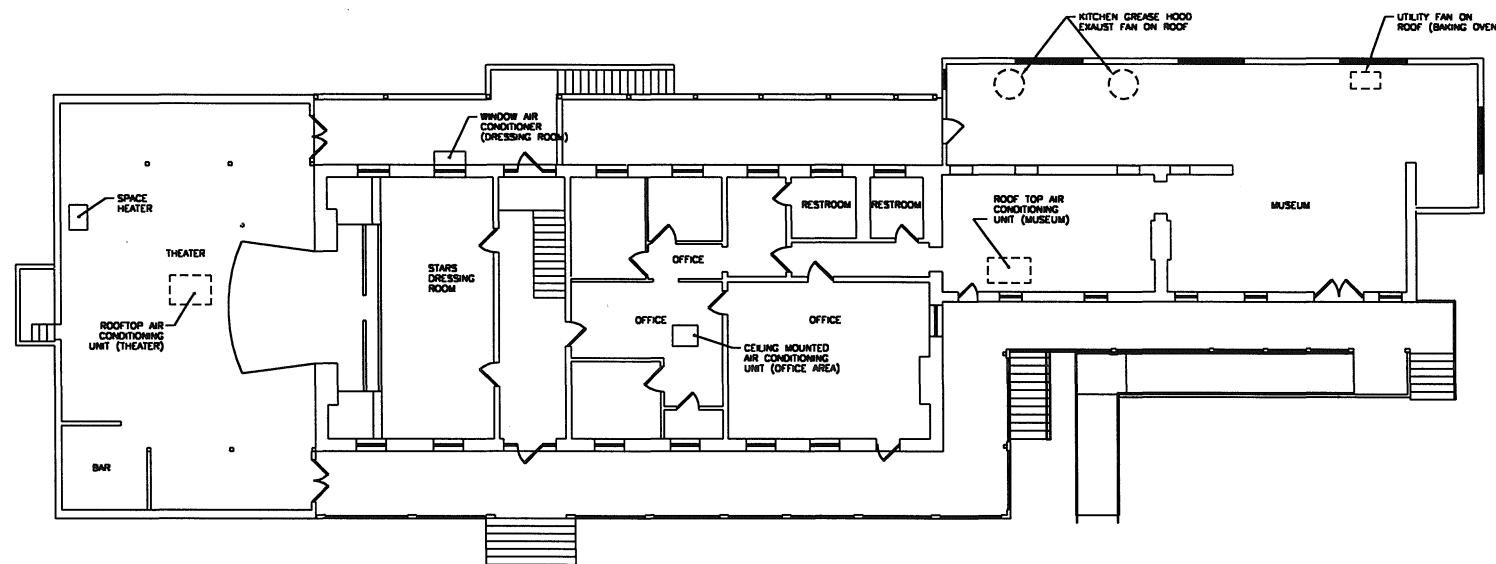
Mechanical Design Studio
375 Fremont Street, Suite 250
San Francisco, CA 94105
(415) 284-0114
Job No. 9073.00

ELECTRICAL ENGINEER

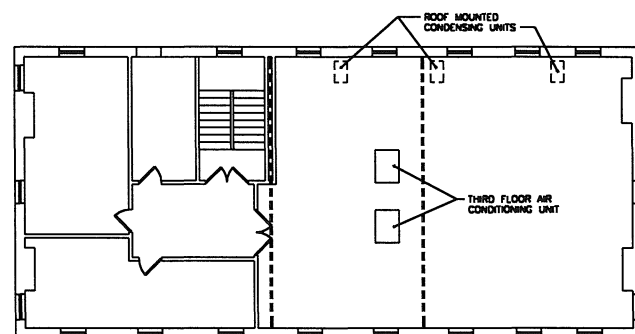
Ackerman Practicon
801 East Charleston Road
Palo Alto, CA 94303
(650) 965-1000



1 FIRST FLOOR PLAN - HVAC AND PLUMBING
SCALE: 1/8"=1'-0"



2 SECOND FLOOR PLAN - HVAC AND PLUMBING
SCALE: 1/8"=1'-0"



3 THIRD FLOOR PLAN - HVAC AND PLUMBING
SCALE: 1/8"=1'-0"

Printing	Date

Date: 8/23/98
Scale: AS NOTED
Drawn by:
TME Job Number: 9901

Sheet Title:

FLOOR PLANS

NOT PRINTED TO SCALE

Sheet Number:

M-1

RESTORATION DRAWINGS

CASA GRANDE

21350 ALMADEN RD.
SAN JOSE, CA

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Environmental Resources Agency
Parks and Recreation Department
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(650) 965-1000

Date: 9/22/99

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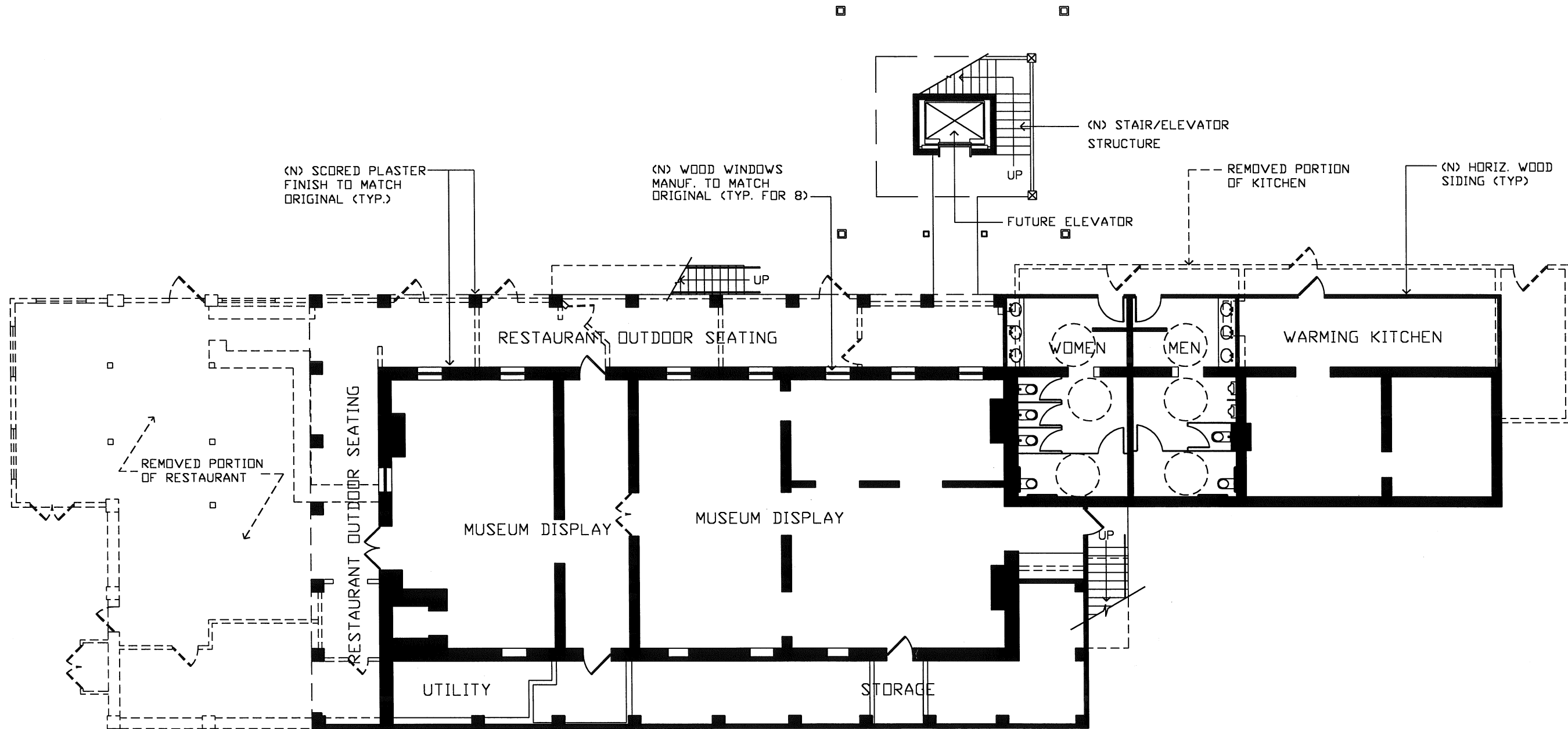
Drawn by:

TME Job Number: 9901

Sheet Title:

Sheet Number:

A2-1



PROPOSED LOWER FLOOR PLAN

NOT PRINTED TO SCALE



CASA GRANDE

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MECHANICAL ENGINEER
Mechanical Design Studio
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San Francisco, CA 94105
(415) 284-0114

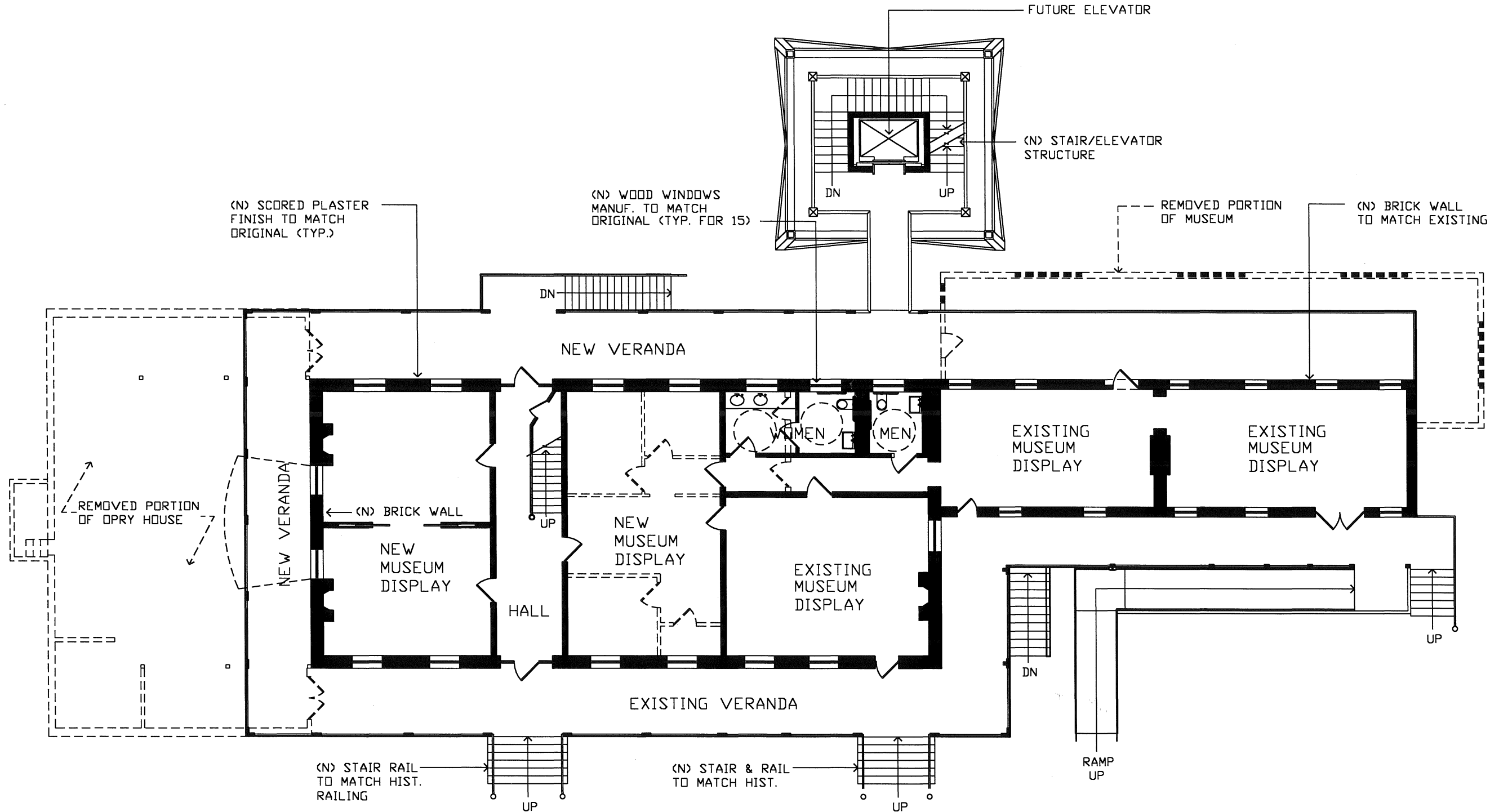
ELECTRICAL ENGINEER
Ackerman Practicon
801 East Charleston Road
Palo Alto, CA 94305
(650) 985-1000

Date: 9/22/99
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Drawn by:
TME Job Number: 9901

Sheet Title:

Sheet Number:

A2-2



PROPOSED MIDDLE FLOOR PLAN

NOT PRINTED TO SCALE



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ELECTRICAL ENGINEER

Ackerman Practicon
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Palo Alto, CA 94303
(650) 965-1000

Date: 9/27/99

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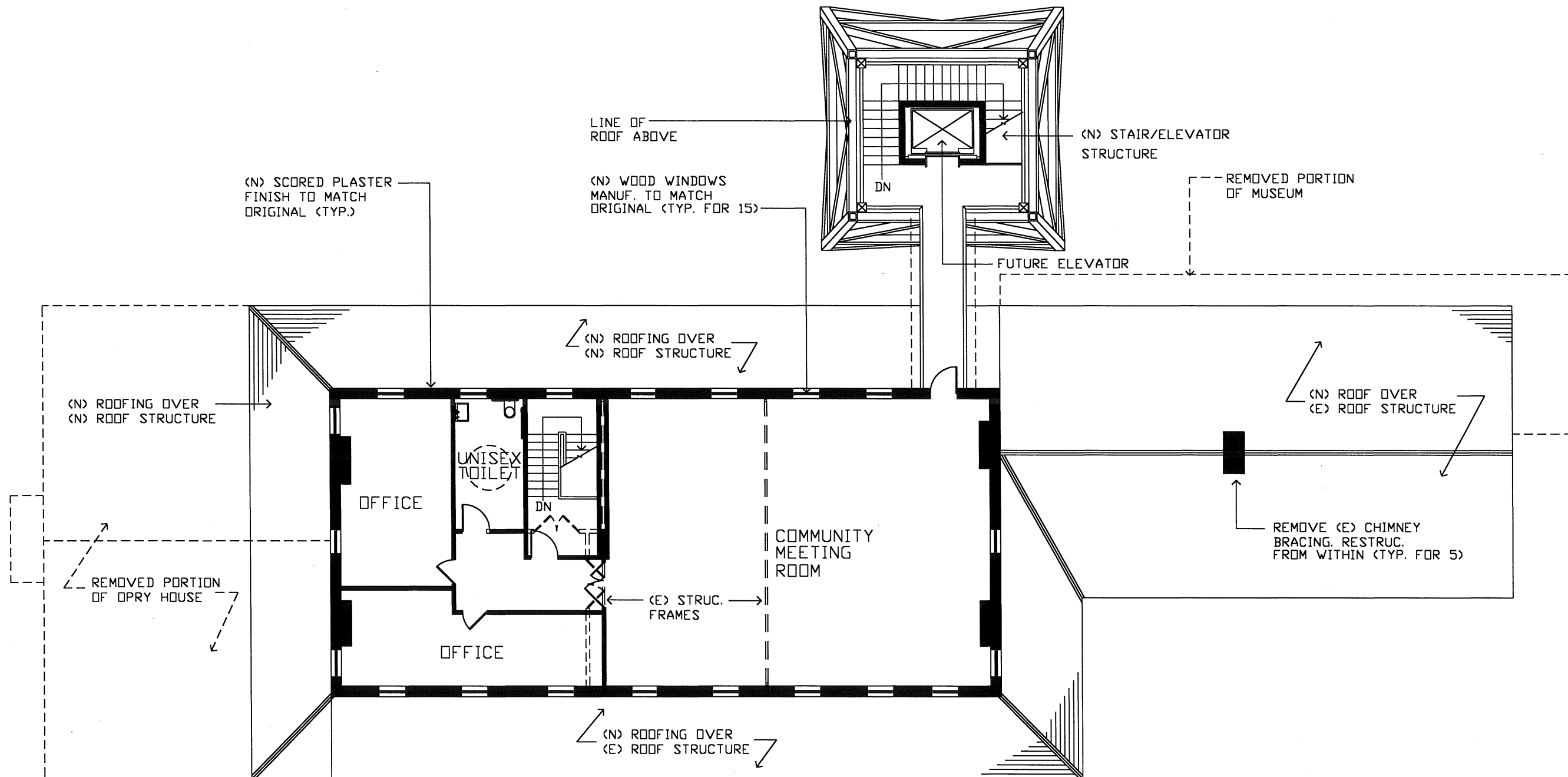
Drawn by:

TME Job Number: 9901

Sheet Title:

Sheet Number:

A2-3



PROPOSED UPPER FLOOR PLAN

NOT PRINTED TO SCALE



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Ackerman Practicon
801 East Charleston Road
Palo Alto, CA 94303
(650) 965-1000

Date:

Scale: AS NOTED

Drawn by: E.G.

TME Job Number: 9901

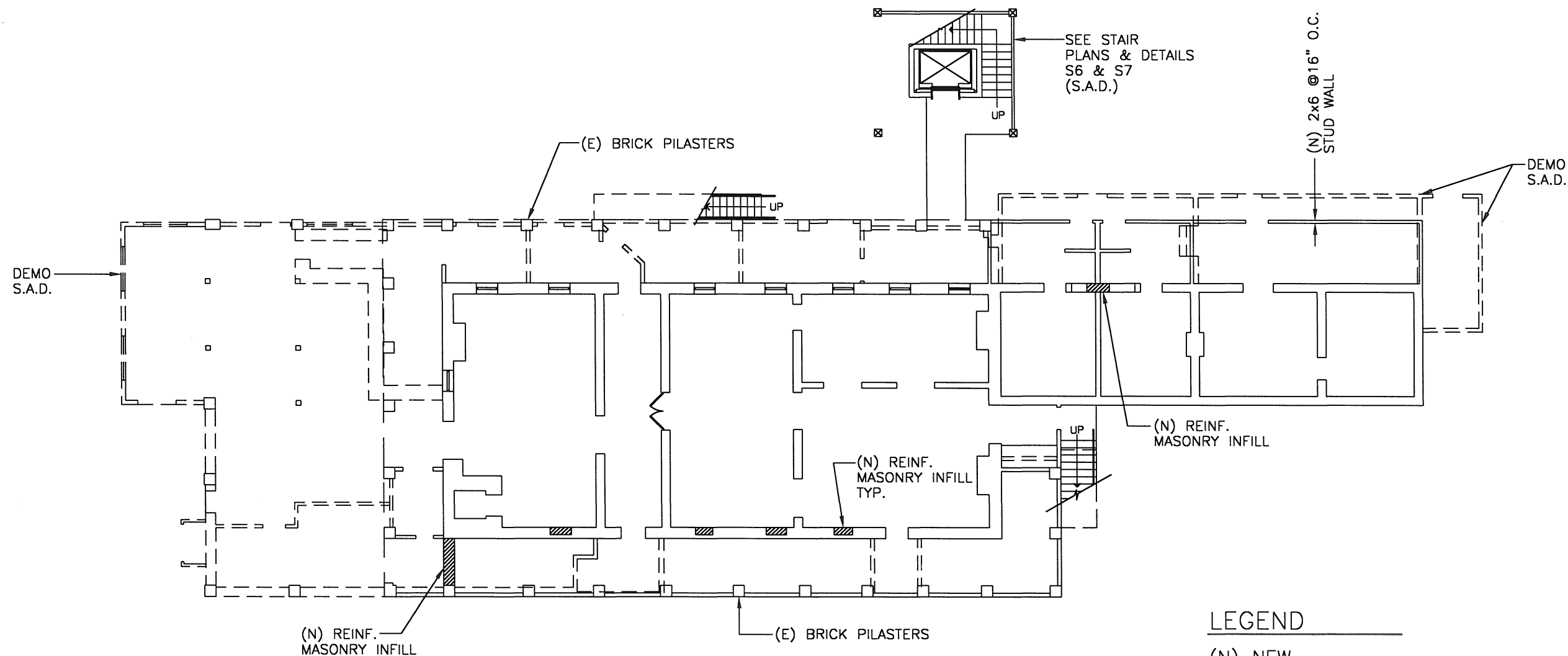
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**LOWER FLOOR/
FOUNDATION PLAN**

SCHEMATIC

Sheet Number:

S1



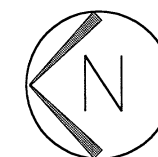
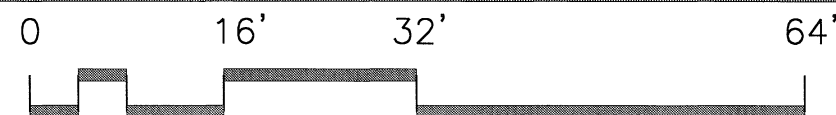
LEGEND

(N) NEW

(E) EXISTING

S.A.D. SEE ARCH. DRAWINGS

LOWER FLOOR / FOUNDATION PLAN



CASA GRANDE

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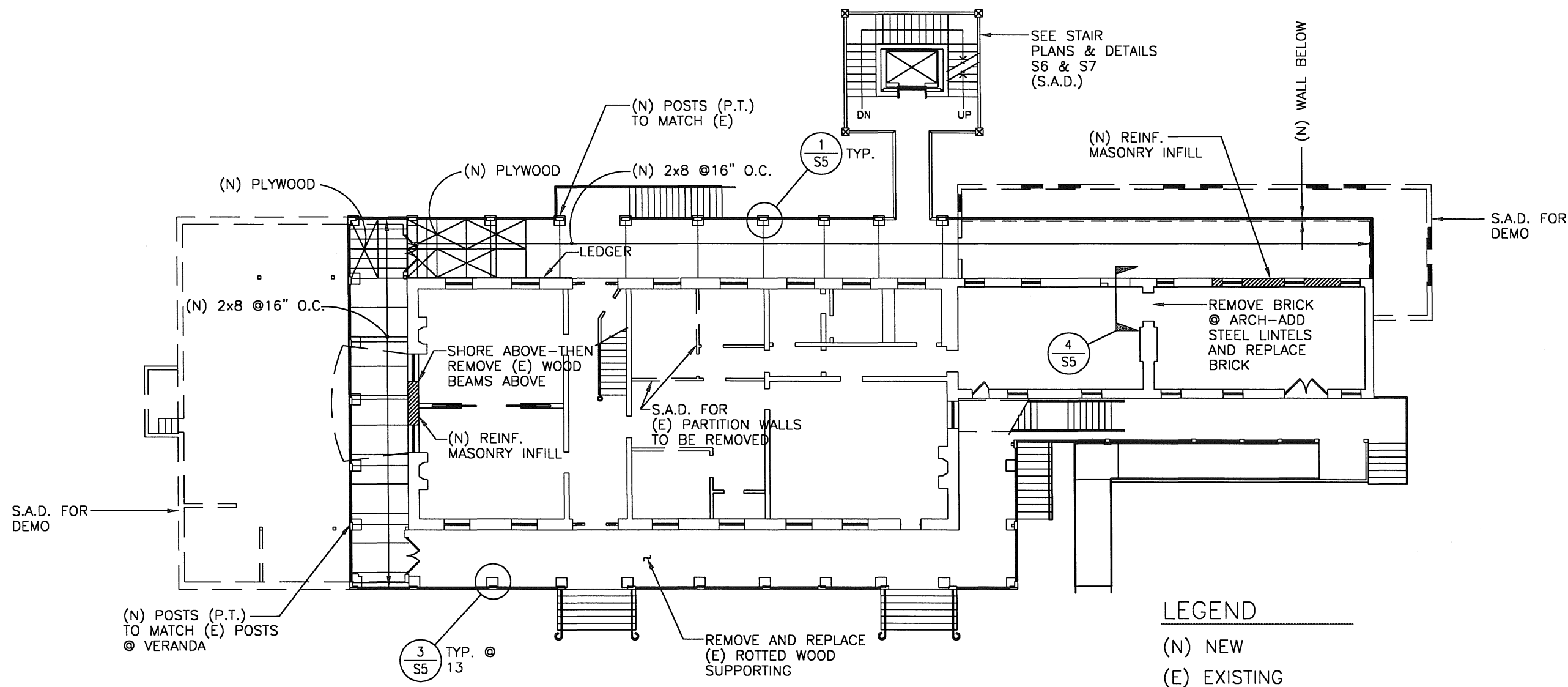
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Drawn by: E.G.
TME Job Number: 9901

Sheet Title:
MAIN FLOOR FRAMING PLAN

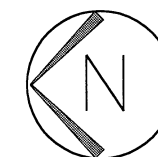
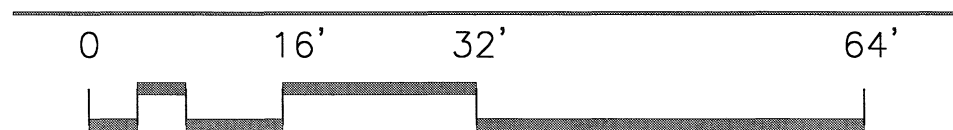
SCHEMATIC

Sheet Number:

S2



MAIN FLOOR FRAMING



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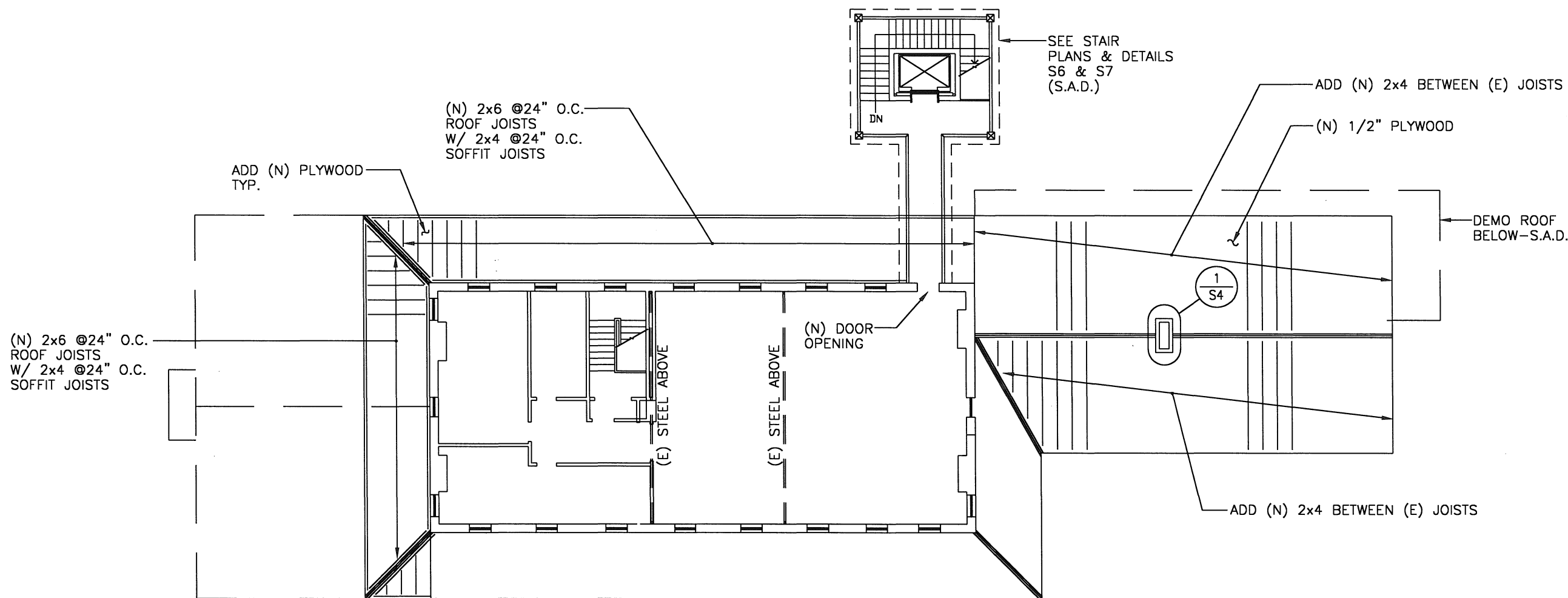
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Drawn by: E.G.
TME Job Number: 9901

Sheet Title:
UPPER FLOOR FRAMING PLAN

SCHEMATIC

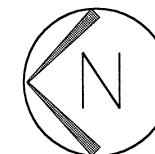
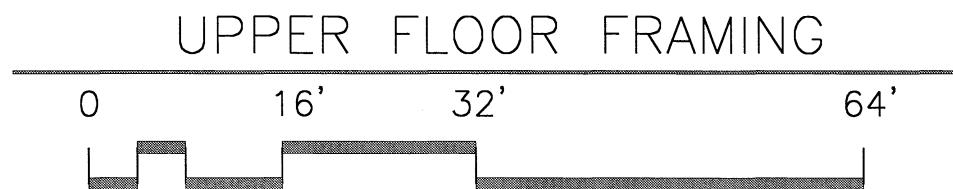
Sheet Number:

S3



LEGEND

- (N) NEW
- (E) EXISTING



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Ackerman Practicon
801 East Charleston Road
Palo Alto, CA 94303
(650) 965-1000

Date:

Scale: AS NOTED

Drawn by: E.G.

TME Job Number: 9901

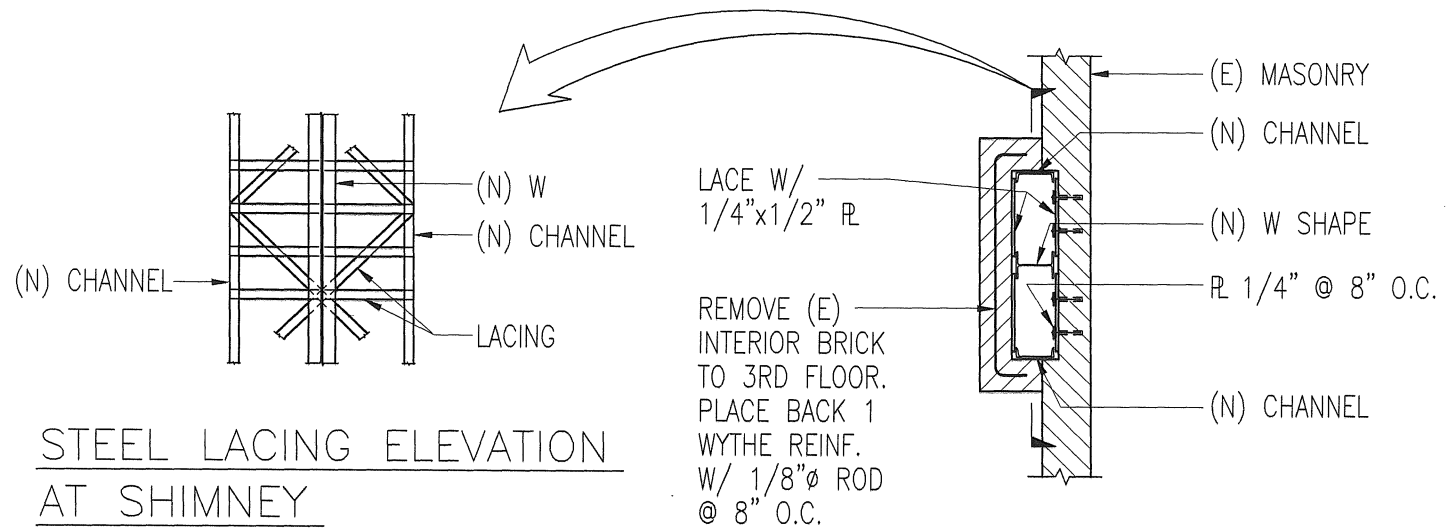
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ROOF FRAMING AND DETAILS

SCHEMATIC

Sheet Number:

S4

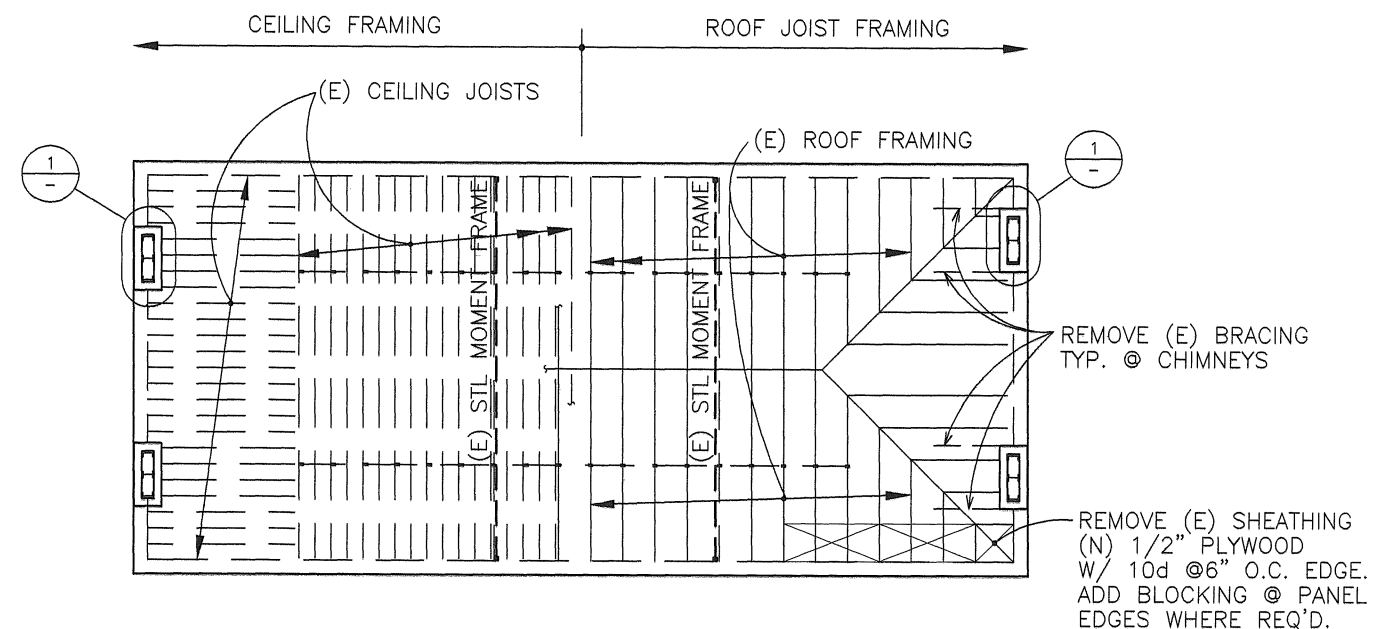


STEEL LACING ELEVATION
AT SHIMNEY

PLAN AT CHIMNEY

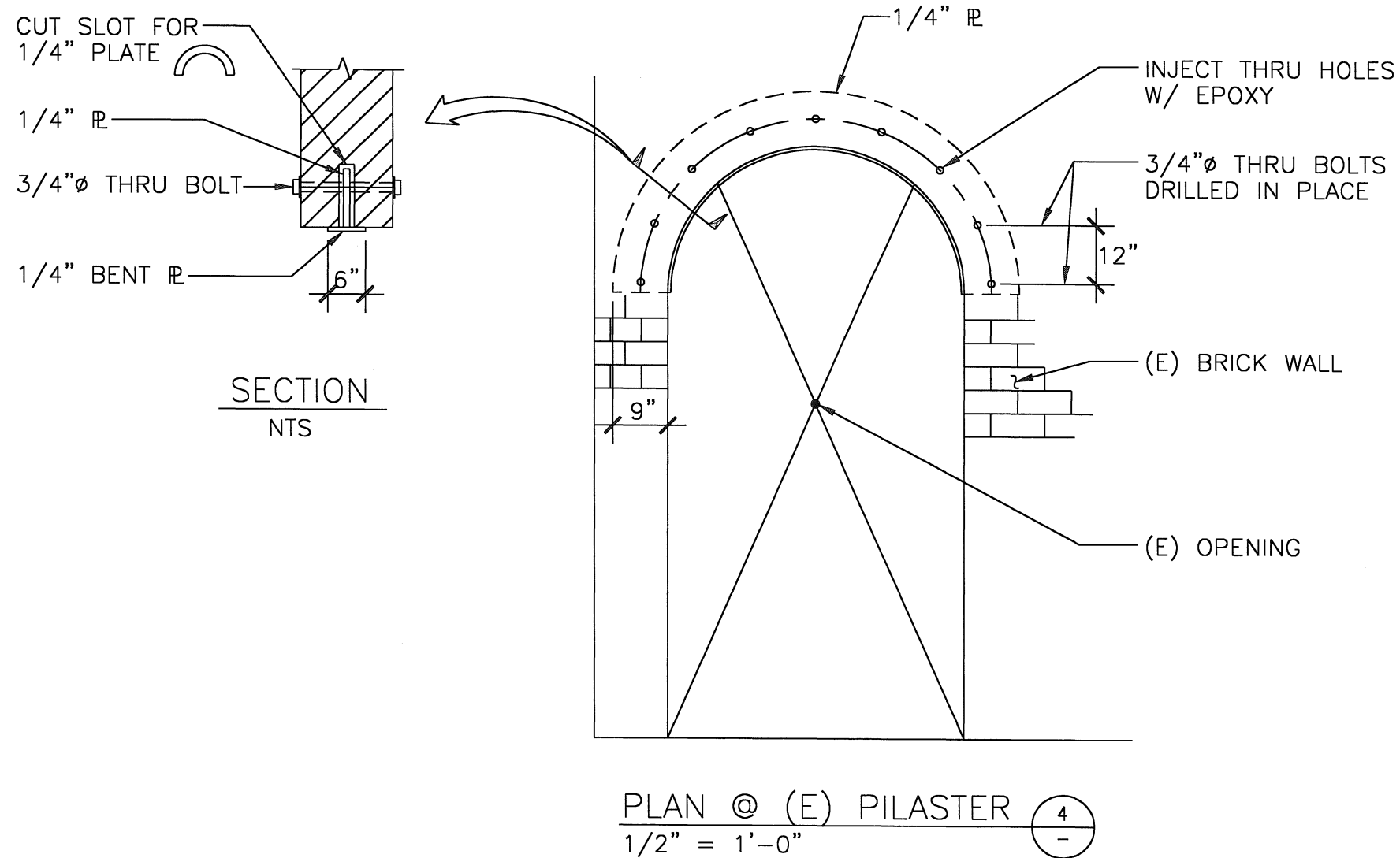
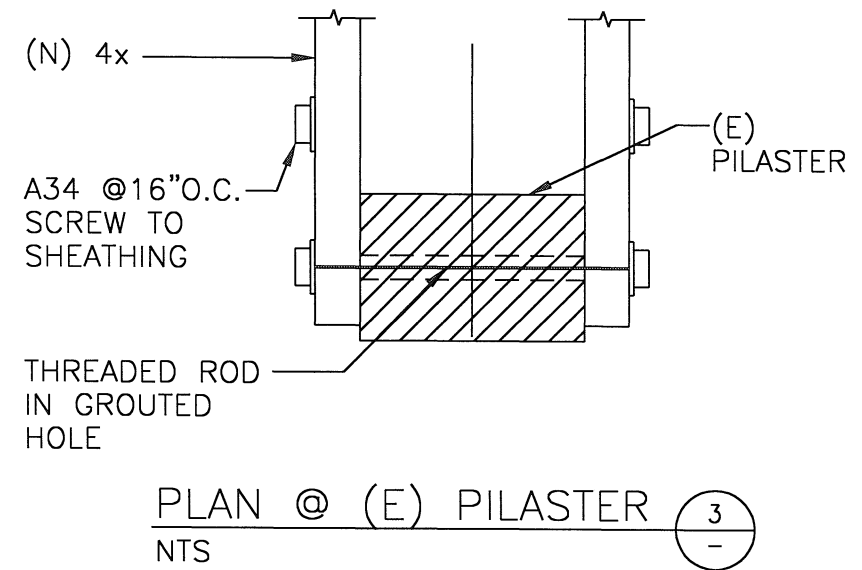
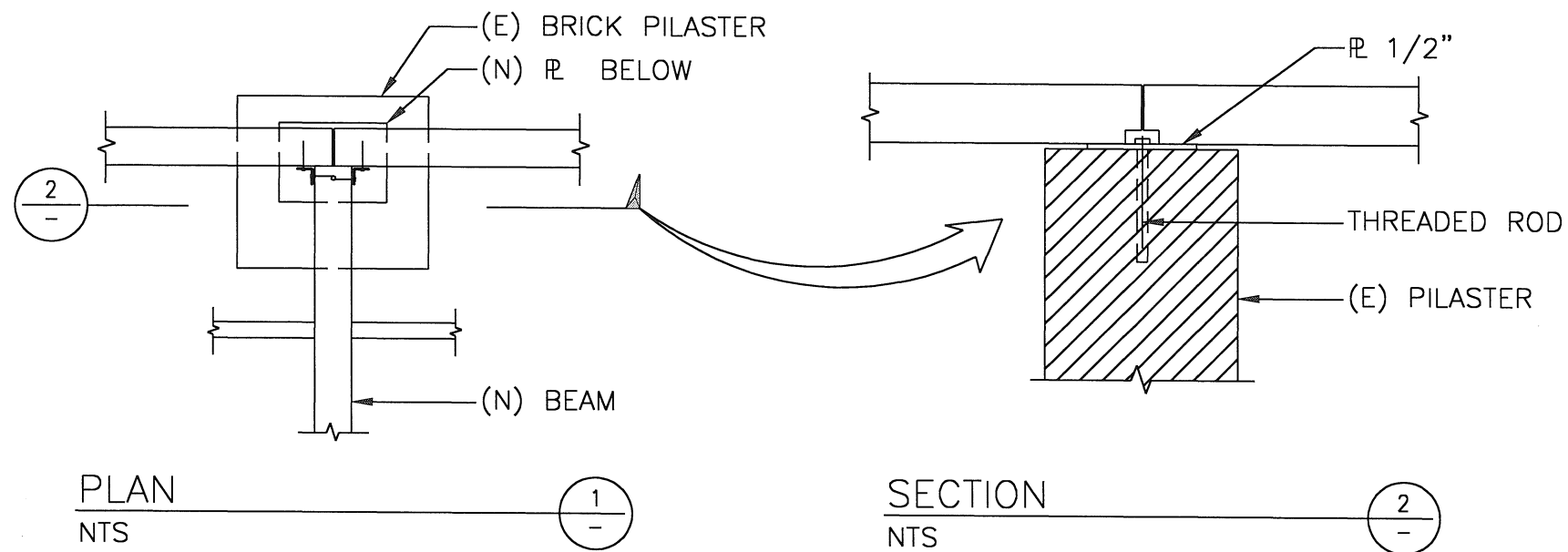
5 LOCATIONS

1
S4



ROOF FRAMING PLAN





CASA GRANDE

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Date:

Scale: AS NOTED

Drawn by: E.G.

TME Job Number: 9901

Sheet Title:

DETAILS

Sheet Number:

S5

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(650) 965-1000

Date:

Scale: 1/8"=1'-0"

Drawn by: E.G.

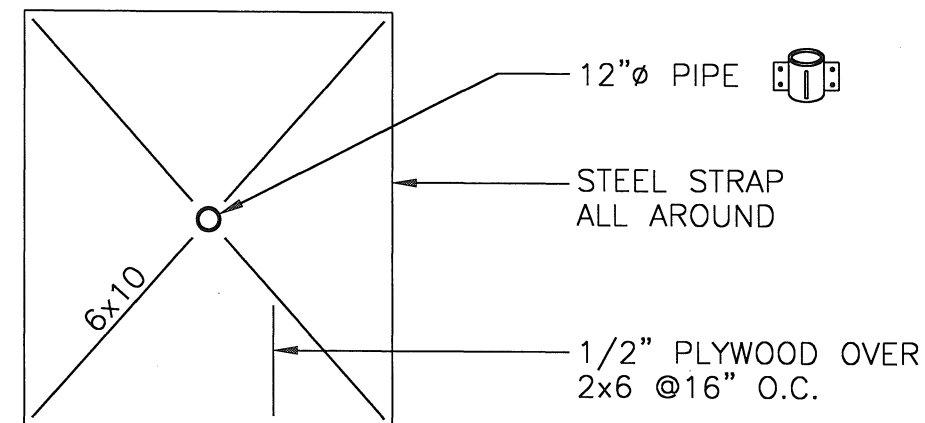
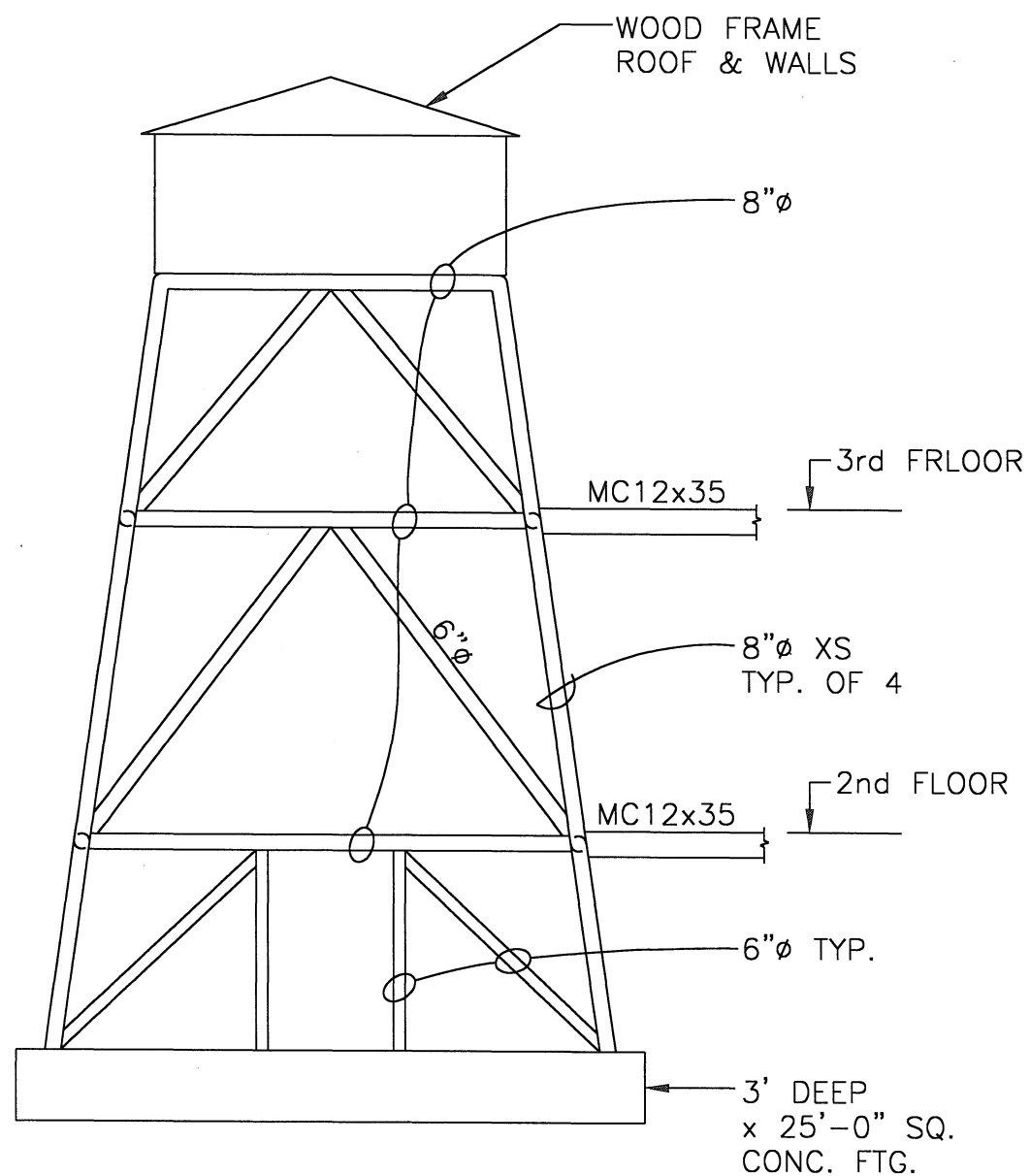
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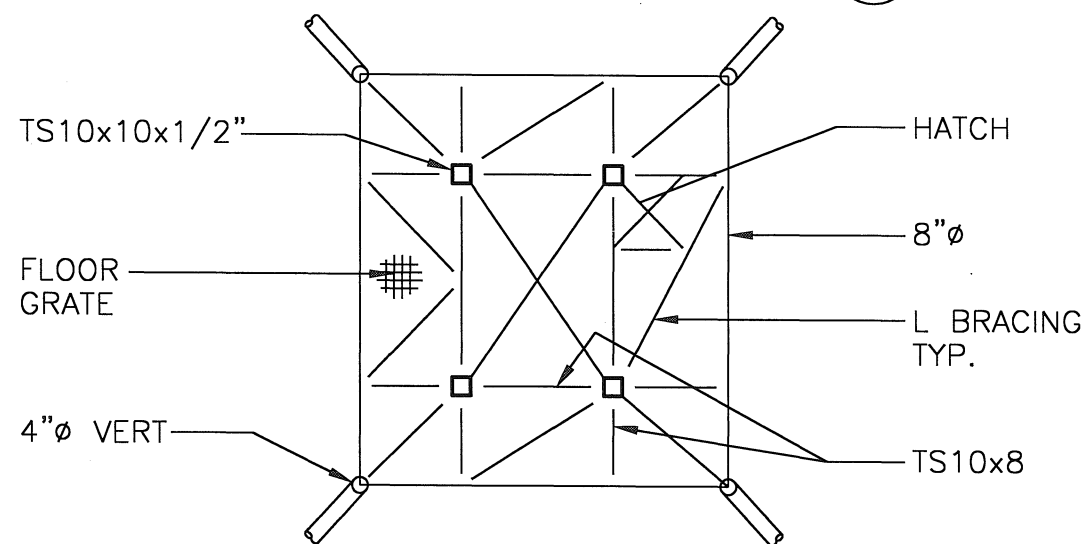
STAIR/ELEVATOR PLANS

Sheet Number:

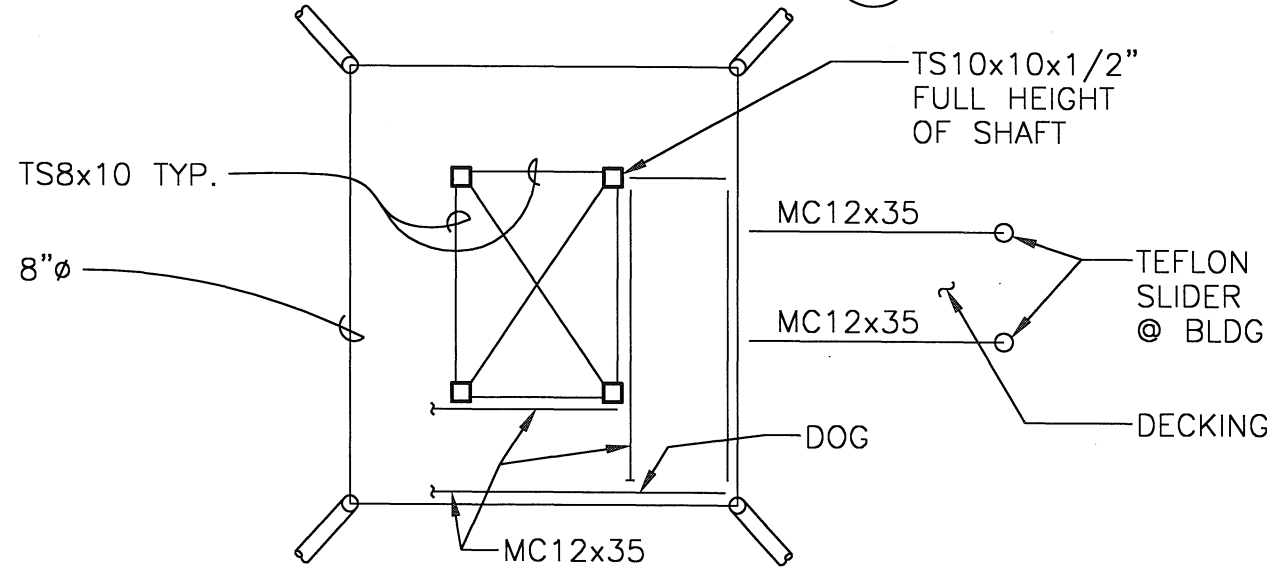
S6



P.H. ROOF 4



P.H. FLOOR 3



3RD FLOOR FRAMING 2

TYP. ELEVATION OF OUTER FRAMING 1

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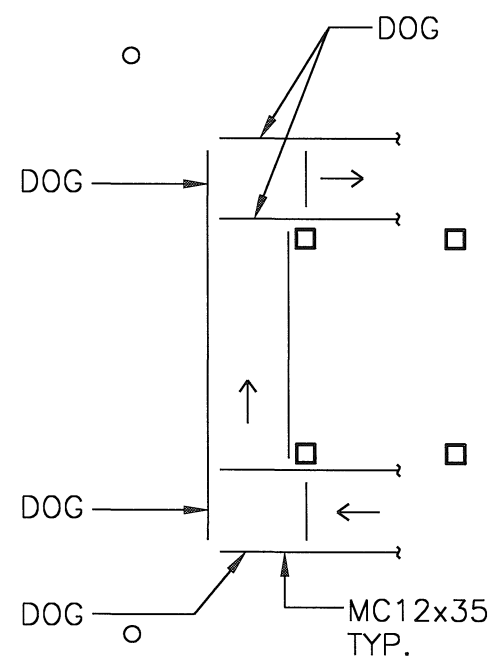
Patri-Merker Architects
400 2nd Street, Suite 400
San Francisco, CA 94107
(415) 284-1100

MECHANICAL ENGINEER

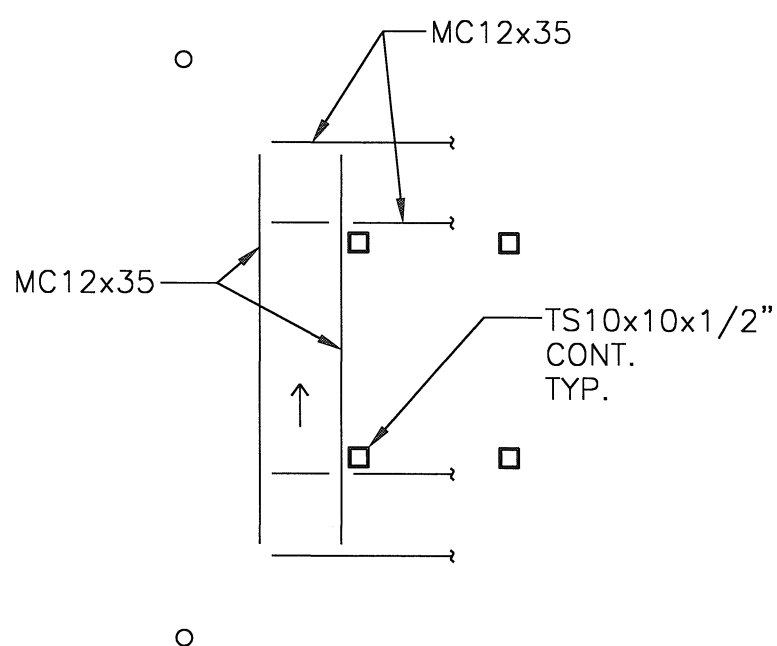
Mechanical Design Studio
375 Fremont Street, Suite 250
San Francisco, CA 94105
(415) 284-0114

ELECTRICAL ENGINEER

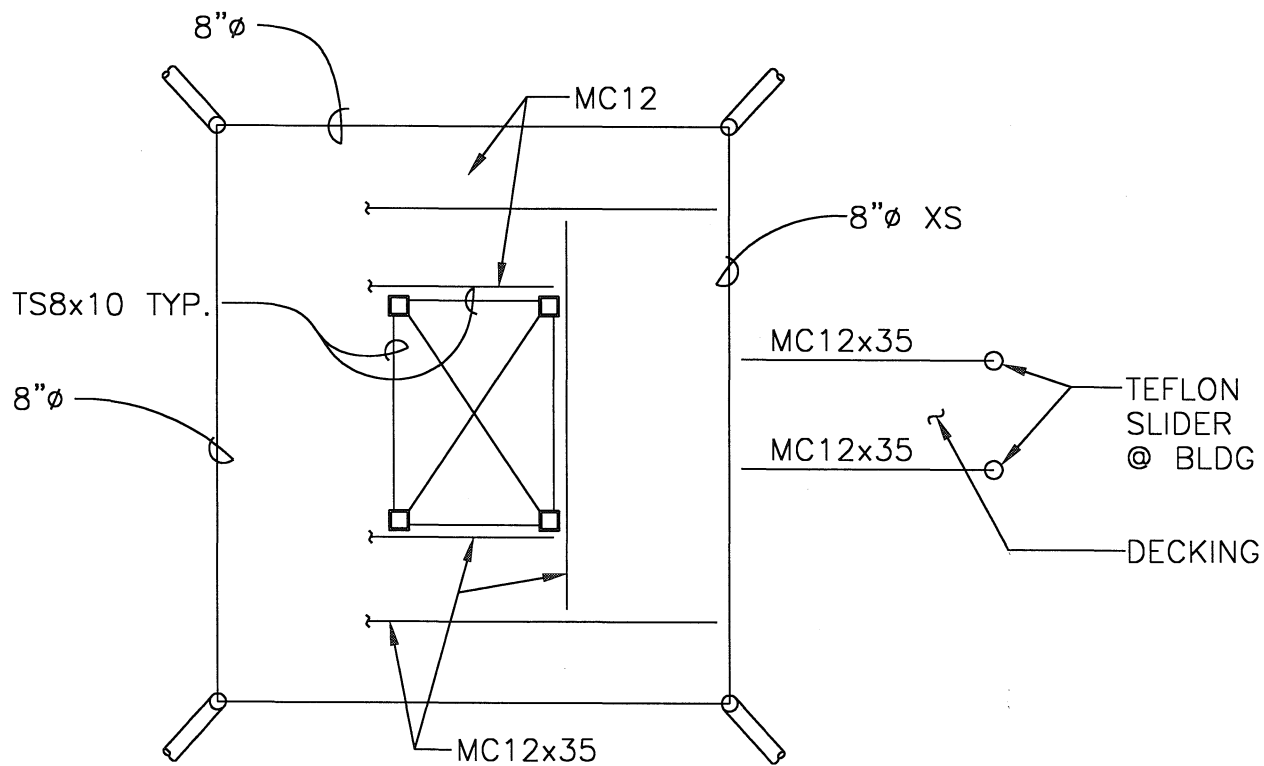
Ackerman Practicon
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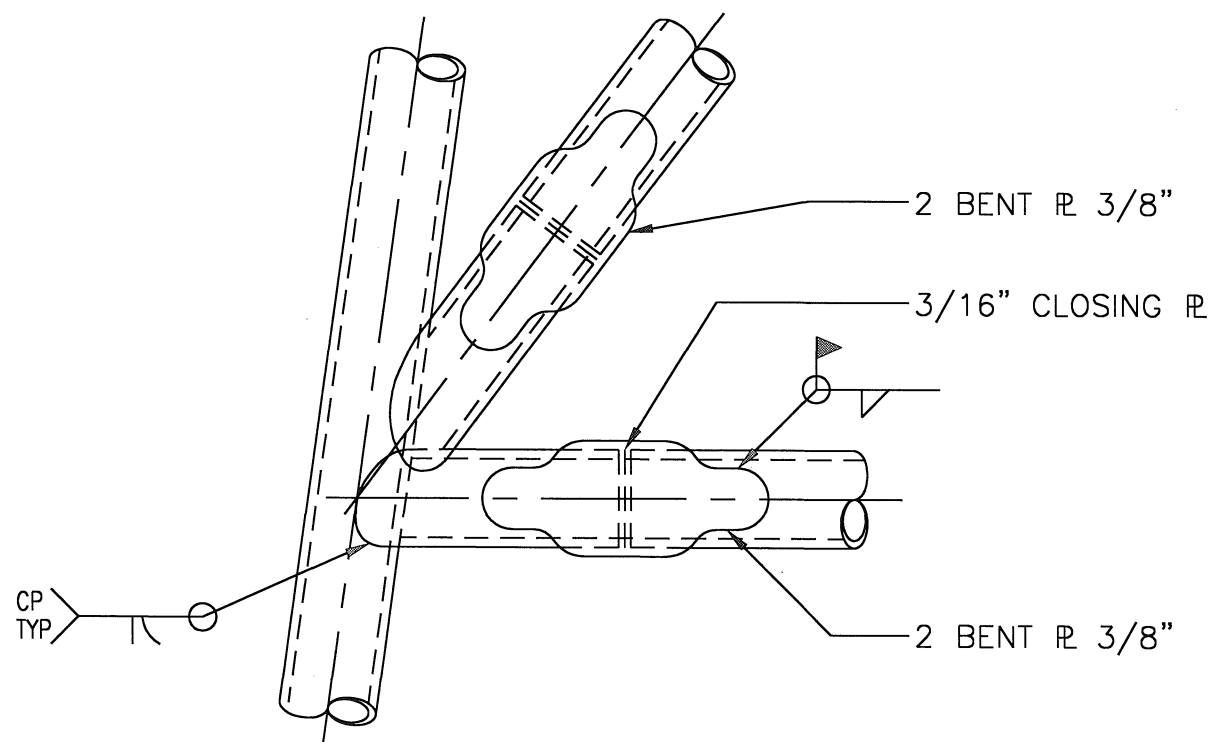
UPPER LANDING FRAMING PLAN 2



LOWEST LANDING FRAMING PLAN 3



2ND FLOOR FRAMING 1



TYP. CONNECTOR 4

Date:

Scale: AS NOTED

Drawn by: E.G.

TME Job Number: 9901

Sheet Title:

**STAIR/
ELEVATOR
DETAILS**

Sheet Number:

S7

NATIONAL REGISTER
NOMINATION FORMS

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC New Almaden Historic District

AND/OR COMMON

Same as above

2 LOCATION

STREET & NUMBER

CITY, TOWN

New Almaden

-- NOT FOR PUBLICATION

CONGRESSIONAL DISTRICT

10th

STATE

California

-- VICINITY OF

CODE

06

COUNTY

Santa Clara

CODE

085

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input checked="" type="checkbox"/> DISTRICT	<input type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input checked="" type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input checked="" type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input checked="" type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input checked="" type="checkbox"/> EDUCATIONAL <input checked="" type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	<input type="checkbox"/> partial PUBLIC ACQUISITION	<input type="checkbox"/> ACCESSIBLE	<input checked="" type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input checked="" type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER:

4 OWNER OF PROPERTY

NAME various private owners / Santa Clara County

STREET & NUMBER

/ 70 West Hedding Street

CITY, TOWN

San Jose

-- VICINITY OF

STATE

California

5 LOCATION OF LEGAL DESCRIPTIONCOURTHOUSE,
REGISTRY OF DEEDS, ETC. Registry of Deeds

STREET & NUMBER

CITY, TOWN

San Jose

STATE

California

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Almaden, Historic American Buildings Survey (HABS)

DATE

1936, 1977

 FEDERAL STATE COUNTY LOCALDEPOSITORY FOR
SURVEY RECORDS

Historic American Buildings Survey Office

CITY, TOWN

Washington

STATE

D.C.

Subject New Almaden "Casa Grande"

Date April, 1959 Locality New Almaden, California

By William C. Everhart



Negative No. 1240

Subject New Almaden "Casa Grande" 854

Date April, 1959 Locality New Almaden, California

By William C. Everhart



GPO-S.F.-F.S.O.

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" type="checkbox"/> GOOD	<input checked="" type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The former mercury mining town of New Almaden is now a sleepy residential village five miles south of San Jose. The town ambles along the tree-lined New Almaden Road which runs generally northeast to southwest parallel to Alamitas Creek. The canyon has more foliage than one is accustomed to in that area, and the village, which has suffered a multitude of vicissitudes since the mine closed, has a pleasant rural aspect. The whole area once belonged to the mining company and formed three towns, the Hacienda area (the area near the creek), and up on the hill, English Town and the Mexican Camp (or Spanish Town). The Hacienda is now privately owned and has several well cared for mining cabins, the toll house, and Casa Grande, the "bigh house" built for the mine superintendent. The ruins of the company store are also there. The Mine Hill area is owned by Santa Clara county and is to be used as a wilderness park. There are no surface remains in the Mexican Camp. In English town remains of a school house and two adobes exist, as well as the walls of the store, the abandoned cemetery and a 20th century reduction plant. The Hill is dotted with tall brick chimneys and flumes and honeycombed with old mine shafts.

Buildings at the Hacienda

1. Casa Grande (c. 1854). Built by Henry Halleck, the manager of the mines in the 1850's and later commander of Union Armies in the Civil War, the building was first planned to be a simple one story hotel. Construction was supervised by Francis Meyer, a skilled carpenter in the company's employ. Before the brick and adobe structure was completed, Halleck decided to enlarge it for his residence when he was at the mines. The building is a long rectangle, eight bays wide, two stories on the west or road side, three storied on the east side. The first story is adobe, the second story, brick. At one time the second story was covered with stucco and scored to resemble ashlar. The brick of the second story is exposed today, probably as a result of time and earthquake activity. A shed roof supported by lacy wooden pilars shades the first floor porch. The pilars and wooden balustrade are original. Similar balusters once lined the two staircases leading to the porch; they have been replaced by wrought iron. The door and window openings are simple, with stone lintels. A simple cornice decorates the second story. The hipped roof is pierced by two pairs of inside end chimneys with corbeled caps. Various wooden excressences have been tacked on to the ends of the building. The interior was richly furnished and heated by a dozen fireplaces with mantels inlaid with mother of pearl and imported from Spain by way of the Horn. One of the mantels is displayed at the New Almaden Museum. The grounds were well landscaped and included an artificial lake and a Chinese "pagoda" gazebo. The house was used by the next manager, Samuel Butterworth (1864-69), who was in with the San Francisco "bank crowd," for lavish entertaining, but over time the place suffered a variety of vicissitudes. After the last mine manager vacated early in the century, the house stood vacant and decaying. The New Idria Mine manager lived there occasionally between 1915 and 1925. Then it became the focal point of a subdivision scheme that failed. In 1927 it became the Club Almaden, and the new owner added a small stage and auditorium. After World

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War II it was sold again, but the restaurant failed, and Casa Grande suffered the final indignity of housing a bar with erotic dancers downstairs and prostitutes upstairs. It changed hands again in 1949 and was cleaned up. A new owner bought it in 1951, remodeled the north end of the second floor as a residence and used the downstairs as a club. It is currently operated as a club, the "Grande Ole Opry." The landscape details and the lake are long since gone.

2. The Bulmore and Carson Houses. Both these houses are early (c. 1845) adobes built by Indian labor. Originally three rooms with wooden floors and shingle roofs and interior chimneys, the Carson house got a frame addition around 1860. Today they are owned by Constance B. Perham, the owner and operator of the New Almaden Museum. The museum is in an addition to the Carson house, which also serves as Mrs. Perham's residence. The Bulmore house has the museum offices and shop.

3. Miners' Cottages. In the south end of town there are some remaining board and batten miners' cottages in more or less original condition.

4. The Toll House. At the point where the Mine Hill road begins, Manager Samuel Butterworth had the mine area fenced in the 1860's and set up a toll gate to keep out "undesirable elements" who arrived from San Jose on payday to help the miners spend their money. This long adobe building near the south end of town was once the toll keepers house. The shingle roof and shed roof supported by posts has recently been rehabilitated.

5. St. Anthony's Church (1900). On the north side of the creek stands this little shingle Gothic Revival church. Note the small spire and cross decorating the ridge of the entry porch.

Remains on Mine Hill

1. Mine Hill School (1860's). The first and largest school built to accommodate the children of workers at the mine, the building is located on a rise near the top of Mine Hill, facing southeast. The school was closed in 1910 and stood vacant until the 1930's when the CCC used it as a mess hall. It has been vacant and subject to vandalism since 1940. Originally a rectangular utilitarian structure, it was enlarged several times. By 1885 it had acquired symmetrical wings, a bracketed cornice, decorative window heads and a cupola. Much of that has been stripped from the building as it stood silent and forlorn on the hill.

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Also of interest are the brick walls of the old store and the rapidly deteriorating 20th century reduction plant.

The Mine Hill area is closed to visitors because it is riddled with old mine shafts.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input checked="" type="checkbox"/> OTHER (SPECIFY) Mining
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1845 to present

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The New Almaden Mine, the first quicksilver deposit discovered in North America, was one of the four major sources of the world's supply of quicksilver. Until the discovery of the cyanide process in 1887, quicksilver was the world's chief reduction agent of gold and silver. Metal from the New Almaden mine thus made possible the rapid development of the great gold and silver quartz mining industry of California and the Comstock Lode in Nevada in 1850's and 60's. Ranking as California's oldest mine, the New Almaden Mine has also produced more than \$70,000,000 in quicksilver, thus making it the most valuable single mine in that state.

HISTORY

The original discovery of the bright red, eye-catching mineral known as cinnabar was made long before the white man first visited California. Santa Clara Indians used cinnabar to paint their bodies a bright red. In 1824 information from the Indians led Antonio Surol, a Mexican, to New Almaden ore deposit, and believing it contained silver, he made an unsuccessful attempt to extract that metal. Effective discovery of the New Almaden mine, however, dated from 1845, when Andreas Castillero, a Mexican army officer, recognized and proved that the ore contained quicksilver or mercury. On November 22, 1845, Castillero filed a claim with the Mexican government for the land.

During the winter of 1846-47, Castillero sold part of his shares in his New Almaden mine, so-named after the world's greatest quicksilver mine, Almaden, in Spain, to the English firm of Barron, Forbes, & Co. of Tepic, Mexico, in order to obtain the capital required to develop his mine. In November 1847, Alexander Forbes of the English firm arrived, with a corps of Mexican miners and applicances for mining quicksilver. Crude refining methods resulted in a limited production of mercury in 1848.

The discovery of placer gold at Sutter's mill in January 1848 and the resultant exploitation of the vast deposits of the Mother Lode was soon to expand the demand for quicksilver enormously. During the early placer mining which prevailed in California from 1848 to 1860, mercury was thrown on the riffle bars or cleats of the pan or cradle, sluice box or Long Tom, to amalgamate with the small particles of floating gold.

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In the quartz mining, which was developed by California after 1852, quicksilver, which has the property of amalgamating with both gold and silver, was vital. Here the ground or powered gold-bearing ore was mixed with mercury and water, and the gold then separated by gravity process.

In 1850, under the superintendence of Henry W. Halleck, the New Almaden mines began large scale production, producing some 532,000 pounds of quicksilver that year. By 1854 production reached about 1,000,000 pounds a year, and New Almaden was second only to the Almaden mine in Spain, and outranked the Idria mine in Austria, and the Huancavelica mine in Peru in output. The gold mines of California used about 76,000 pounds a month in 1856 and in the 1860's the Comstock Lode in Nevada also became a good market. In 1865, the New Almaden mine contributed 60% of the California and Nevada consumption of mercury. By this date 1200 men, mostly Mexicans, worked at the mine, which had by then yielded a total of some \$20,000,000. By 1881 this mine had produced a total of 54,378,418 pounds of mercury. In 1864 the Quicksilver Mining Company of New York and Pennsylvania purchased the mine from the English company for \$1,700,000 and remained the owner until 1915. From 1867 to 1873 a combination of mine owners and the Bank of California formed an agreement which gave them a monopoly of quicksilver output in the United States and enabled them to fix prices.

After April 1873, mine production then fluctuated as new "pods" or ore pockets were discovered and exhausted, and shafts up to half a mile in depth were sunk. In 1927 no production was recorded for the first time since 1849 (except for the 1858-61 period, when the mine was closed because of a legal battle over its ownership), but the mine was reactivated during World War II. The claims are worked sporadically today.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

See Continuation Sheet

10 GEOGRAPHICAL DATA (See Continuation Sheet)

ACREAGE OF NOMINATED PROPERTY c. 3,200 acres

UTM REFERENCES

A	10	60,60,40	4,11,61,8,0	B	10	60,46,8,0	4,11,35,5,0
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
C	10	60,27,6,0	4,11,31,8,0	D	10	60,24,4,0	4,11,33,8,0
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING

VERBAL BOUNDARY DESCRIPTION

- E 10 ✓ 600820.4115720
- F 10 ✓ 600830.4116100
- G 10 602440.4116990
- H 10 603430.4117050

See Continuation Sheet

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

Marilynn Larew, Historian

ORGANIZATION

Historic Sites Survey Division, HCRS

DATE

3/30/78

STREET & NUMBER

1100 L Street NW.

TELEPHONE

202-523-5464

CITY OR TOWN

Washington,

STATE

D.C. 20240

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

FOR NPS USE ONLY	
I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER	DATE
DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION	DATE
ATTEST:	DATE
KEEPER OF THE NATIONAL REGISTER	

((NATIONAL HISTORIC LANDMARKS))

((NATIONAL HISTORIC LANDMARKS))

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Edgar H. Bailey, "The New Almaden Quicksilver Mines," in Geologic Guidebook of the San Francisco Bay Counties, (Bulletin 154, San Francisco, Division of Mines, Dec. 1951), 263-270; Donald C. Brown, "The New Almaden Quicksilver Mines, 1824-1890," unpublished M.A. thesis, San Jose State College, California, 1958; Henry W. Splitter, "Quicksilver at New Almaden," in Pacific Historical Review, XXVI (February, 1957); Kenneth M. Johnson, The New Almaden Quicksilver Mine, with an Account of the Land Claims Involving the Mine and its Role in California History (Georgetown, 1963); Hurbert H. Bancroft, History of California (7 vols., San Francisco, 1884-90), VI, 554-61; VII, 656-57; Rodman W. Paul, California Gold, The Beginning of Mining in the Far West (Cambridge, 1947), 272-76. HABS Santa Clara County Project, 1977.

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The national historic landmark boundary for the New Almaden Historic District coincides with the New Almaden Historic Area zoning as shown on the map marked "New Almaden Historic Area Rezoning (H2)." This includes the Hacienda area as well as Mine Hill.

Beginning at a point of intersection of the common boundary line between T8S, R1E and T9S, R1E with the City of San Jose boundary line; thence in a general southwesterly direction meandering along said city boundary line to a point of intersection with the southeasterly line of the tract of land conveyed to W. Henry Harper, et ux, by deed recorded August 4, 1959, in Book 4503 Official Records, at page 76; thence S 77° 52' 30" W, 200' along the southwesterly prolongation of said southeasterly line; thence S 20° 00' W, 500.97'; thence S 35° 35' W 1649.5'; thence S 0° 17' 20" E, 55.49'; thence S 89° 42' 40" W, 823.50'; thence N 0° 17' 20" W, 55.49' to a point of intersection with the southerly boundary line of the San Vicente Rancho; thence N 89° 43' W, 1757.17' along the southerly boundary line of said San Vicente Rancho and the northwesterly prolongation thereof to a point of intersection with the northwesterly right of way line of Alamitos Road; thence in a general northeasterly direction along said northwesterly right of way line to a point being the most northerly corner of the 50.33 acre parcel of land conveyed to the Santa Clara Valley Water Conservation District, recorded April 25, 1935 in Book 724 Official Records, at page 454; thence along the boundary line of said 50.33 acre parcel as follows: S 48° 32' W 1090.85; thence S 12° 35' E, 389.14'; thence S 78° 33' W, 195.0'; thence N 76° 37' W, 830.0'; thence S 62° 23' W, 987.55'; thence N 34° 52' W, 530.99'; thence S 23° 53' W, 440.0'; thence S 77° 43' W, 215.0'; thence N 18° 17' W, 424.0'; thence S 38° 01' W, 963.0'; thence N 86° 37' 680' to a point of intersection with the northeasterly right of way line of Hicks Road; thence in a general northwesterly direction along said northeasterly right of way line to a point of intersection with the southwesterly boundary line of lot 38 of the Rancho De Los Capitancillos known as the Fossatt Claim; thence along the boundary line of said lot 38 as follows: N 30° W, 250.0', more or less; thence N 1° 00' E, 691.02'; thence N 40° 45' E, 353.10'; thence N 13° W, 335.94'; thence N 31° W, 163.02'; thence N 11° 15' W, 199.32'; thence N 19° W, 465.30'; thence N 32° W, 244.86'; thence N 35° 30' W, 149.82'; thence N 64° W, 256.08'; thence N 71° W, 300.96'; thence N 50° W, 270.60'; thence N 31° 15' W, 1017.06'; thence N 48° W, 5973.0'; thence due north to a point of intersection with the southwesterly prolongation of the southerly boundary line (bearing N 78° 40' E) of the 16.5 acre tract of land described in the deed from Richard Hyde Lord Sexton, et al to Phillip S. Schneider et ux recorded December 30, 1954 in Book 3047 Official Records, at page 92; thence along the said prolongation and the southerly boundary line bearing N 78° 40' E, 240.50'; thence continuing along the southerly boundary line of said 16.5 acre tract as follows: N 82° 50' E, 99.79'; thence S 87° 02' E, 92.80'; thence E, 75.00' to a point being the southeasterly corner of said 16.5 acre tract; thence

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N 693.70' and W 75.00' to a point of intersection with a westerly line of the Rancho De Los Capitancillos; thence along said westerly line of said Rancho, N 858.00' to a point being the southwesterly corner of the 138.50 acre tract of land described in the deed from the Quicksilver Mining Company to W. S. Clayton, et al, recorded November 23, 1912 in Book 395 of Deeds, page 197, Santa Clara County Records; thence along the southerly boundary line of said 138.50 acre tract as follows: S 83° 00' E, 799.92'; thence N 83° 55' E, 737.88'; thence S 54° 52' E, 2372.14' to a point being the most southerly corner of the said 138.50 acre tract; thence S. 54° 32' E, 202.59' to a line parallel to and distant therefrom 993.40 southwesterly at right angles from the southwesterly line of the Almaden Road; thence along said parallel line S 49° 39' E, 900' and S 49° 30' E. 1215.53' approximately to a point of intersection with the northwesterly boundary line of that tract of land conveyed to Louis A. Altieri, by deed recorded March 4, 1949 in Book 1754 Official Records, at page 56; thence northeasterly along said boundary line and its northeasterly prolongation to a point of intersection with the northeasterly line of Almaden Road; thence northwesterly along the northeasterly line of said road to a point of intersection with the most northwesterly boundary line of that tract of land conveyed to Fred G. Meyer, by deed recorded August 21, 1967 in Book 7845 Official Records, at page 288; thence N 58° 26' 00" E, 828.96' along said northwesterly boundary line and its northeasterly prolongation to a point of intersection with the northwesterly prolongation of a line parallel to and distant therefrom 1,000.00' northeasterly at right angles from the northeasterly line of the Almaden Road; thence southeasterly along said parallel line to a point of intersection with the City of San Jose boundary line; thence southwesterly along said city boundary line to the point of beginning.

Negative No. 1241

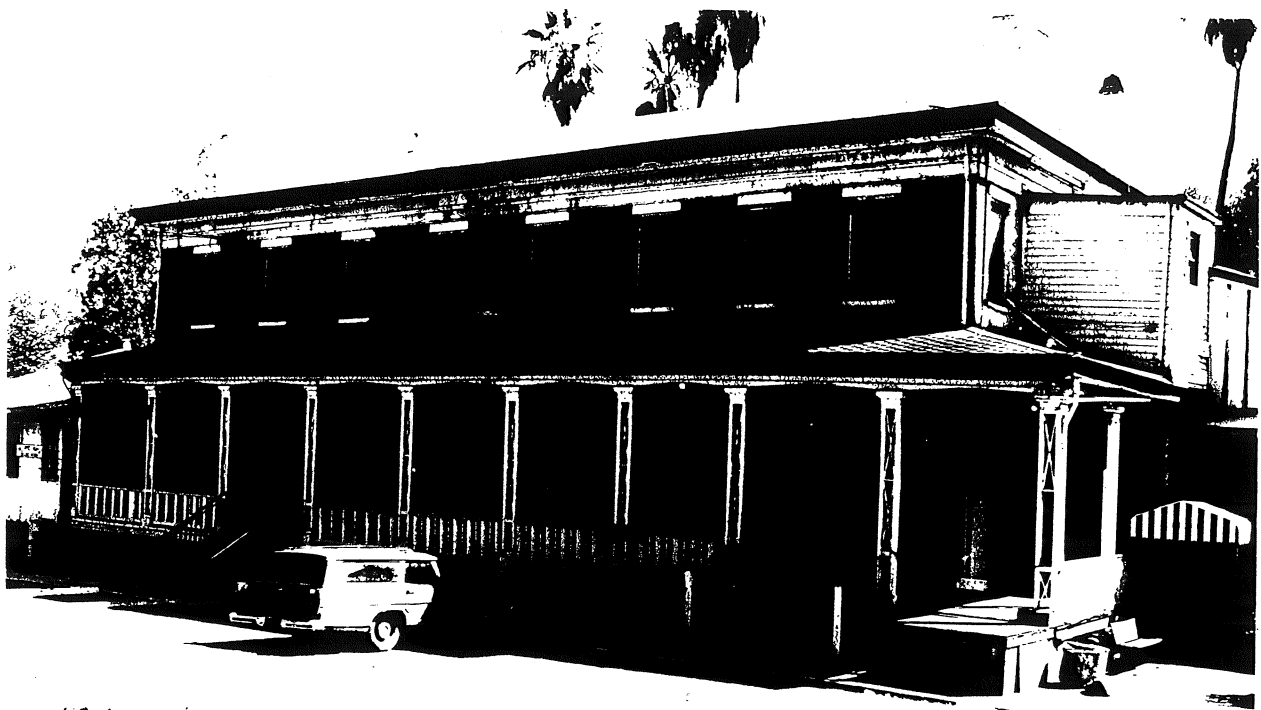
Subject New Almaden "Casa Grande"

Date April, 1959 Locality New Almaden, California

By William C. Everhart



GPO-S.F.-F.S.O.



1977

floor at ground level. The walls are thick masonry construction of local serpentine rock and primitive lime mortar. Appears to have been built in early 1840s. The added second story walls are brick and seem to be about 1880. County owned.

4. Orvis Stevens House and smaller original House, East Emado Lane, Coyote--The small original house is older than 1867 when Orvis Stevens bought the land. The main house was built in 1882. It is a large two story frame house with 15 rooms.

5. Coyote Ranch, South of Metcalf Road, Coyote--This two story frame house was built about 1873. It has a porch that goes halfway around the house on the ground floor; has lovely wood in interior and a beautiful fireplace. Land was originally owner by William Fisher. Captain Fremont wintered here in 1846. He stayed until the middle of February using the time to purchase horses, obtain supplies and thoroughly refit his party. (This was shortly before the Mexican War). The house was built by Ficaró Fisher, son of William.

6. Tom Sugishita House, 1 driveway south of Emado Lane, Coyote--This small frame house now covered with imitation brick and with an addition on the south, was built in 1863. It is said to be the oldest remaining house in Coyote. Square nails and redwood lumber were used in its construction.

NEW ALMADEN *

1. Pfeiffer House, Graystone Lane, Almaden--Jacob Pfeiffer brought his family to the area in 1875. He went to work in "Goodrich's Freestone Quarry" and soon took it over, leasing it until his death in 1905. He and his sons mined the gray stone, cutting it by hand, and hauling it by wagon and later by rail all over California. Agnews State Hospital, Stanford University, San Jose Art Museum, Knox-Goodrich Building, and Santa Clara County's Old Hall of Records were built of stone from this quarry.

2. Hacienda Hotel, 21747 Bertram Road, Almaden--Almaden Quicksilver Mining Company originally owned the hotel and used it for unmarried mine employees. Later it was converted into a small hotel to accomodate visitors to the mining settlement. Standing vacant for many years, it has been remodeled into a restaurant. The original hotel burned down; new building constructed by the mining company in the 1870's.

3. Casa Grande, Almaden Road, New Almaden--This building was built in 1854 as a residence for managers of New Almaden Quicksilver Mine. It was used for this purpose until the 1920's. Among its occupants was the Director General Henry W. Halleck.



Casa Grande, New Almaden