CITY OF GUADALUPE REQUEST FOR PROPOSALS (RFP)

City of Guadalupe

City Hall Repair Project
Design Services

RFP SUBMITTAL DEADLINE – Friday, November 22, 2024, by 5:00 PM

CONTACT: **Jeff van den Eikhof, PE**
City Engineer, City of Guadalupe
918 Obispo Street, Guadalupe, CA 93434
805-470-1910 Office
E-mail: jeff@eikhofdesigngroup.com

Submit Questions or Comments to the above e-mail by Friday, November 8, 2024, by 5:00 PM

City of Guadalupe
REQUEST FOR PROPOSALS

City Hall Repair Project
Design Services

The City of Guadalupe, California, is soliciting proposals from qualified firms or teams of consultants to provide architectural and engineering services for a project to repair the City Hall Building.

NOTICE OF REQUEST FOR PROPOSALS:

Notice is hereby given that proposals for the following project will be received via e-mail until 5**:00 p.m.** on **Friday, November 22, 2024**. The subject line of the e-mail must be "**City Hall Repair Project Design Services"** and sent to **jeff@eikhofdesigngroup.com.**

BACKGROUND AND PROJECT DESCRIPTION:

The City of Guadalupe ("City"), California, is an incorporated city of 8,200 located in northern Santa Barbara County, approximately four miles inland from the Pacific Ocean along the scenic coastal Highway 1. The City is approximately 1.4 square miles and is situated in the heart of the fertile Santa Maria Valley, an agricultural region of statewide and national importance.

The City of Guadalupe, a General law city, was incorporated in 1925. The Guadalupe City Hall, located at 918 Obispo Street, Guadalupe, CA 93434, was constructed in 1930. This approximately 30,000 square-foot single-story building requires various structural and non-structural repairs, as identified in a recent Qualitative Structural Evaluation Report completed by Ashley & Vance Engineering, Inc. (Exhibit C). In general, seismic deficiencies, structural member rot and deterioration, water damage from roof leaks, and general building life cycle deterioration have been identified as priorities for repair and improvement.

The evaluation report was limited to a qualitative assessment based on visual observations, as no destructive testing or calculations were performed. Based on this evaluation report, repairs and improvements were recommended for:

- Structural deficiencies (Section 5.1)
- Structural deterioration (Section 5.2)
- Non-structural deficiencies (Section 5.3)
- Priority Cosmetic building repairs (Upon direction from City staff)

Additionally, further investigative work and studies may be necessary to prepare the design plans for permitting and competitive bidding. The additional evaluations, inspections, and surveys identified in the Qualitative Structural Evaluation Report included the following:

- Seismic evaluation shall utilize the ASCE 41-17 Tier 1, Structural, and the ASCE 41-17, Non-Structural checklists as a screening tool
- Complete inspection of the building by a Certified Building Inspector.

- Asbestos and lead abatement survey
- Foundation specialist to perform a manometer survey of the building to identify areas of settlement and provide remediation measures.

The Asbestos and Lead Abatement Survey work will be completed through a separate contract. The Consultant must provide all other necessary services to prepare plans and specifications for construction.

The City of Guadalupe is seeking a qualified architectural and engineering design firm to prepare detailed construction plans for the priority structural deficiencies, non-structural deficiencies, and deterioration repairs and improvements. The City has received time-sensitive grant funding for the design work, which must be awarded by the end of 2024 and expended by June 2026. The City anticipates constructing the priority repairs and improvements as funding becomes available.

SCOPE OF SERVICES:

• Listed in Exhibit B below.

PRELIMINARY RFP TIMETABLE

RFP Announced	Friday, October 10, 2024
Deadline for RFP Questions	Friday, November 8, 2024, by 12:00 PM
Responses to RFP Questions	Friday, November 16, 2024 by 5:00 PM
Proposals Due	Friday, November 22, 2024, by 5:00 PM
Council Approval	December 10, 2024
Notice to Proceed	December 16, 2024

RFP QUESTIONS

Submit questions to Jeff van den Eikhof via e-mail at jeff@eikhofdesigngroup.com by **Friday, November 8, 2024**. **Include "RFP Questions" in the subject line of the e-mail**. Questions via phone will not be accepted. Pertinent questions and answers will be formalized and issued as an addendum to this RFP by the end of business on **Friday, November 16, 2024**.

RFP LOCATION ON THE CITY WEBSITE

http://ci.guadalupe.ca.us/document-category/bid-packages/

PROPOSAL REQUIREMENTS

The following format and content shall be adhered to by each architecture and engineering team and presented in the following order:

1. Cover Letter
   Provide a maximum two-page "Cover Letter" and introduction, including the name and address of the submitting organization, together with the signature, name, title, address, telephone, and fax numbers, and e-mail address of the contact person(s) empowered to bind the architecture and engineering team and to make representation for the organization. This cover letter should also state the architecture and engineering team's acceptance of the City's Contract for Consulting Services agreement format as provided in Exhibit A. If the architecture and engineering team proposes any changes to this format, said proposed changes should be outlined in the cover letter.

2. Table of Contents
   Each submission shall include an index of the major topics contained in the proposal, and all pages shall be numbered.

3. Consultant Qualifications
   Outline your architecture and engineering teams' qualifications for providing the services requested. List a minimum of 5 projects similar to this project. Provide a complete listing of all staff proposed to work on this project, including copies of their resumes and titles. Any multi-organization submission should identify the qualifications of each organization in relationship to this project and must list the tasks to which each team will be assigned and who the lead organization will be.

4. Organization Chart
   Each submission shall include an organizational chart showing how the work will flow between key staff and each organization if there are multiple organizations.

5. Work Plan and Schedule
   Outline in detail the recommended work plan to be followed by staff assigned by your architect and engineering team(s) to work on this project. Indicate the number of staff personnel to be assigned to each task as well as the expected amount of time needed to complete each item in the scope of work shown above. Present a schedule that reflects the anticipated starting date of the project, outline the significant items shown in the scope of work, and the estimated completion date for each item.

6. Additional Data
   The submission shall include any other data the applicant deems essential to the evaluation of the qualifications statements, and the ability or capacity to complete this project to the highest standards.

Scoring Criteria

Criteria	Points
Design experience with similar projects.	Maximum points 40
Qualifications, background, and prior experience of the architecture and engineering team (all key team members) in performing services for similar projects.	Maximum points 20
Management, team organization, and skills of key staff.	Maximum points 15
Breadth of team experience. Are all elements of the project represented?	Maximum points 15
Submitted references from similar projects.	Maximum points 10
Maximum Points	**100**

Point scoring, as noted above, will be used to determine the most qualified submission. Should there be more than one submission, within 5% of the highest scoring submission, the City will use the submitted (see Estimated Budget/Timeline, above) Work Plan and Schedule and Price Estimate to negotiate/determine the final, winning submission.

The City may add to this process by selecting the top two architecture and engineering teams to be interviewed by a City Selection Team.

The City will then begin the negotiations for an agreement with the selected architecture and engineering team.

PROPOSAL SUBMITTAL

The Consultant shall submit its proposal via e-mail to jeff@eikhofdesigngroup,con with "City Hall Repair Project Design Services-Proposal" in the subject line.

ESTIMATED BUDGET/TIMELINE

The Consultant shall submit an estimated budget/timeline for their services via a separate email to jeff@eikhofdesigngroup.com with "City Hall Repair Project Design Services – Budget" in the subject line. The budget shall be broken down by task as outlined in Exhibit C, and include an estimate of the time/cost per employee/service item. A fee schedule shall be included with the budget.

ESTIMATED BUDGET/TIMELINE

The chosen Consultant will be expected to execute a standard City agreement, attached as Exhibit A hereto. Any requested revisions to the agreement must be included with the proposal.

EXHIBIT A

AGREEMENT FOR CONSULTANT SERVICES
BETWEEN
THE CITY OF GUADALUPE
AND

THIS AGREEMENT FOR CONSULTANT SERVICES (the "**Agreement**") is made and entered into this _____ day of _____ 2024, by and between the CITY OF GUADALUPE, a municipal corporation ("City") and _____ ("**Consultant**").

In consideration of the mutual covenants and conditions set forth herein, the parties agree as follows:

Section 1. Term of Agreement. Subject to the provisions of Section 18 (Termination of Agreement) of this Agreement, the term of this Agreement shall be for a period of eighteen (18) months from the date of execution of this Agreement, as first shown above. Such term may be extended upon written agreement of both parties to this Agreement.

Section 2. Scope of Services. Consultant agrees to perform the services set forth in Exhibit A (Scope of Services) and made a part of this Agreement.

Section 3. Additional Services. Consultant shall not be compensated for any services rendered in connection with its performance of this Agreement which are in addition to or outside of those set forth in this Agreement or listed in Exhibit A, unless such additional services are authorized in advance and in writing by the City Council or City Administrator of City. Consultant shall be compensated for any such additional services in the amounts and in the manner agreed to by the City Council or City Administrator.

Section 4. Compensation and Method of Payment.

(a) Subject to any limitations set forth in this Agreement, City agrees to pay Consultant the amounts specified in Exhibit B (Compensation) and made a part of this Agreement.

(b) Each month Consultant shall furnish to City an original invoice for all work performed and expenses incurred during the preceding month. The invoice shall detail charges by the following categories: labor (Administration, ministerial, and discretionary review). City shall independently review each invoice submitted by Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement and Scope of Services. In the event that no charges or expenses are disputed, the invoice shall be approved and paid according to the terms set forth in subsection (c). In the event City disputes any charges or expenses, City shall return the original invoice to Consultant with specific items in

dispute identified for correction and re-submission. All undisputed charges shall be paid in accordance with this Agreement and Scope of Services.

(c) Except as to any charges for work performed or expenses incurred by Consultant, which are disputed by City, City will cause Consultant to be paid within forty-five (45) days of receipt of Consultant's invoice.

(d) Payment to Consultant for work performed pursuant to this Agreement shall not be deemed to waive any defects in work performed by Consultant.

(e) Consultant shall have the right to suspend services if not paid in accordance with this Agreement.

Section 5. Inspection and Final Acceptance. City may inspect and accept or reject any of Consultant's work under this Agreement, either during performance or when completed, if the work is found to be defective or not in compliance with the defined Scope of Services. Acceptance of any of the Consultant's work by City shall not constitute a waiver of any of the provisions of this Agreement, including but not limited to, Sections 15 and 16, pertaining to indemnification and insurance, respectively. Consultant agrees to cooperate in any such inspection.

Section 6. Ownership of Documents. All original maps, models, designs, drawings, photographs, studies, surveys, reports, data, notes, computer files, files and other documents prepared, developed or discovered by Consultant in the course of providing any services pursuant to this Agreement shall become the sole property of City and may be used, reused or otherwise disposed of by City without the permission of the Consultant. Reuse of any materials outside the scope of this Agreement shall be at the sole risk of the City.

Section 7. Consultant's Books and Records.

(a) Consultant shall maintain any and all documents and records demonstrating or relating to Consultant's performance of services pursuant to this Agreement. Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, or other documents or records evidencing or relating to work, services, expenditures and disbursements charged to City pursuant to this Agreement. Any and all such documents or records shall be maintained in accordance with generally accepted accounting principles and shall be sufficiently completed and detailed so as to permit an accurate evaluation of the services provided by Consultant pursuant to this Agreement. Any and all such documents or records shall be maintained for three (3) years from the date of execution of this Agreement and to the extent required by laws relating to the audits of public agencies and their expenditures, unless all documents and records are turned over to the City at the conclusion of the Agreement.

(b) Any and all records or documents required to be maintained pursuant to this section shall be made available for inspection, audit and copying, upon reasonable notice during regular business hours, upon written request by City or its designated representative. Copies of such documents or records shall be provided directly to the City for inspection, audit and copying

when it is practical to do so; otherwise, unless an alternative is mutually agreed upon, such documents and records shall be made available at Consultant's address indicated for receipt of notices in this Agreement. The City shall compensate the Consultant for all costs associated with providing these materials to the City.

(c) Where City has reason to believe that any of the documents or records required to be maintained pursuant to this section may be lost or destroyed due to dissolution or termination of Consultant's business, City may, by written request, require that custody of such documents or records be given to the requesting party and that such documents and records be maintained by the requesting party. Access to such documents and records shall be granted to City, as well as to its successors-in-interest and authorized representatives.

Section 8. Status of Consultant.

(a) Consultant is and shall at all times during the terms of this Agreement remain a wholly independent Consultant and not an officer, employee or agent of City. Consultant shall have no authority to bind City in any manner, nor to incur any obligation, debt or liability of any kind on behalf of or against City, whether by contract or otherwise, unless such authority is expressly conferred under this Agreement or is otherwise expressly conferred in writing by City.

(b) The Consultant shall not obtain any rights to retirement, health care or any other benefits which may otherwise accrue to City's employees. Consultant expressly waives any claim Consultant may have to any such rights.

Section 9. Standard of Performance. Consultant represents and warrants that it has the qualifications, experience and facilities necessary to properly perform the services required under this Agreement in a thorough, competent and professional manner. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all services described herein. In meeting its obligations under this Agreement, Consultant shall employ, at a minimum, generally accepted standards and practices utilized by persons engaged in providing services similar to those required of Consultant under this Agreement.

Section 10. Compliance With Applicable Laws, Permits and Licenses. Consultant shall keep itself informed of and comply with all applicable federal, state and local laws, statutes, codes, ordinances, regulations and rules in effect during the term of this Agreement applicable to Consultant. Consultant shall obtain any and all licenses, permits and authorizations necessary to perform the services set forth in this Agreement. Neither City, nor any elected or appointed boards, officers, officials, employees or agents of City, shall be liable at law or in equity as a result of any failure of Consultant to comply with this section.

Section 11. Nondiscrimination. Consultant shall not discriminate, in any way, against any person on the basis of race, color, religious creed, national origin, ancestry, sex, age, disability, marital status or sexual orientation in connection with or related to the performance of this Agreement.

Section 12. Unauthorized Aliens. Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. sections 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens for the performance of work and/or services covered by this Agreement, and should any liability or sanctions be imposed against City for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse City for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorney's fees, incurred by City.

Section 13. Conflicts of Interest. Consultant agrees to at all times avoid conflicts of interest with the interests of the City in the performance of this Agreement.

Section 14. Confidential Information; Release of Information.

(a) All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than City without prior written authorization from the City Administrator, except as may be required by law.

(b) Consultant shall not, without prior without prior written authorization from the City Administrator or unless requested by the City Attorney of City, voluntarily provide declarations, letters of support, testimony at depositions, responses to interrogatories or other information concerning the work performed under this Agreement. A response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives City notice of such court order or subpoena.

(c) If Consultant, or any officer, employee, agent or sub consultant of Consultant, provides any information or work product in violation of this section, then City shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorney's fees, caused by or incurred as a result of Consultant's conduct.

(d) Consultant shall promptly notify City should Consultant, its officers, employees, agents or sub consultants be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any party regarding this Agreement and the work performed thereunder. City retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with City and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by City to control, direct, or rewrite said response. Consultant shall be compensated for all costs associated with complying with this section.

Section 15. Indemnification.

(a) Indemnification and Defense for Professional Services: Pursuant to Civil Code section 2782.8, and to the fullest extent permitted by law, Consultant shall indemnify, defend, and hold harmless City and its respective elected and appointed boards, officials, officers, agents, employees, and volunteers (individually and collectively, "Indemnitees") from and against any and all claims, losses, liabilities, damages, costs and expenses, including reasonable attorney's fees and costs, to the extent they arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant. Consultant's duty to defend shall consist of reimbursement of defense costs incurred by City in direct proportion to the Consultant's proportionate percentage of fault. Consultant's percentage of fault shall be determined, as applicable, by a court of law, jury, or arbitrator. In the event any loss, liability, or damage is incurred by way of settlement or resolution without a court, jury or arbitrator having made a determination of the Consultant's percentage of fault, the parties agree to mediation with a third party neutral to determine the Consultant's proportionate percentage of fault for purposes of determining the amount of indemnity and defense cost reimbursement owed to the City.

(b) For All Other Liabilities: City and its respective elected and appointed boards, officials, officers, agents, employees, and volunteers (individually and collectively, "Indemnitees") shall have no liability to Consultant or any other person for, and Consultant shall indemnify, defend, protect and hold harmless Indemnitees from and against, any and all liabilities, claims, actions, causes of action, proceedings, suits, damages, judgments, liens, levies, costs and expenses of whatever nature, including reasonable attorney's fees and disbursements (collectively, "Claims") which Indemnitees may suffer or incur or to which Indemnitees may become subject by reason of or arising out of any injury to or death of any person(s), damage to property, loss of use of property, economic loss or otherwise occurring as a result of or allegedly caused by Consultant's performance of or failure to perform any services under this Agreement or by the negligent or willfully wrongful acts or omissions of Consultant, its agents, officers, directors, sub consultants or employees, committed in performing any of the services under this Agreement.

(c) The provisions of this section do not apply to Claims occurring as a result of the City's sole negligence or willfully wrongful acts or omissions.

(d) City agrees to indemnify Consultant for any such neglect or willfully wrongful acts committed by City or its officers, agents or employees.

Section 16. Insurance. Consultant agrees to obtain and maintain in full force and effect during the term of this Agreement, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work provided by Consultant in performance of this Agreement. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A: VII. All insurance policies shall be subject to approval by City as to form and content. These requirements are subject to amendment or waiver, if so approved in writing by City Administrator. Consultant agrees to provide City with copies of required policies upon request.

Consultant shall provide the following scope and limits of insurance:

A. Minimum Scope of Insurance: Coverage shall be at least as broad as:

(1) Insurance Services Office Form Commercial General Liability coverage (Occurrence Form CG 0001).

(2) Insurance Services Office Form No. CA 0001 covering Automobile Liability, including code 1 "any auto" and endorsement CA 0025, or equivalent forms subject to written approval of City.

(3) Workers' Compensation insurance as required by the Labor Code of the State of California and Employers' Liability insurance and covering all persons providing services on behalf of the Consultant and all risks to such persons under this Agreement.

(4) Errors and omission liability insurance appropriate to the Consultant's profession.

B. Minimum Limits of Insurance: If required, Consultant shall maintain limits of insurance no less than:

(1) General Liability: $1,000,000 general aggregate for bodily injury, personal injury and property damage.

(2) Automobile Liability: $1,000,000 per accident for bodily injury and property damage.

(3) Workers' Compensation and Employer's Liability: Workers' Compensation as required by the Labor Code of the State of California and Employer's Liability limits of $1,000,000 per accident.

(4) Errors and Omissions Liability $1,000,000 per claim.

C. Other Provisions: Insurance policies required by this Agreement shall contain the following provisions:

(1) All Policies: Each insurance policy required by this Agreement shall be endorsed and state the coverage shall not be suspended, voided, canceled by the insurer or other party to this Agreement, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested has been given to City.

(2) General Liability and Automobile Liability Coverages.

(a) City and its respective elected and appointed officers, officials, employees and volunteers are to be covered as additional insureds as respects: liability arising out of activities Consultant performs; products and completed operations of Consultant; premises owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations

on the scope of protection afforded to City, and its respective elected and appointed officers, officials or employees.

(b) Consultant's insurance coverage shall be primary insurance with respect to City, and its respective elected and appointed officers, officials, employees and volunteers. Any insurance or self insurance maintained by City, and its respective elected and appointed officers, officials, employees or volunteers, shall apply in excess of, and not contribute with, Consultant's insurance.

(c) Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(d) Any failure to comply with the reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to City, and its respective elected and appointed officers, officials, employees or volunteers.

(3) Workers' Compensation and Employer's Liability Coverage. Unless the City Administrator otherwise agrees in writing, the insurer shall agree to waive all rights of subrogation against City, and its respective elected and appointed officers, officials, employees and agents for losses arising from work performed by Consultant.

D. Other Requirements: Consultant agrees to deposit with City, at or before the effective date of this Agreement, certificates of insurance necessary to satisfy City that the insurance provisions of this Agreement have been met. The City Attorney may require that Consultant furnish City with copies of original endorsements effecting coverage required by this section. The certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. City reserves the right to inspect complete, certified copies of all required insurance policies at any time.

(1) Any deductibles or self-insured retentions must be declared to and approved by City. At the option of City, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects City or its respective elected or appointed officers, officials, employees and volunteers or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration, defense expenses and claims.

(2) The procuring of such required policy or policies of insurance shall not be construed to limit Consultant's liability hereunder nor to fulfill the indemnification provisions and requirements of this Agreement.

Section 17. Assignment. The expertise and experience of Consultant are material considerations for this Agreement. City has an interest in the qualifications of and capability of the persons and entities who will fulfill the duties and obligations imposed upon Consultant under the Agreement. In recognition of that interest, Consultant shall not assign or transfer this Agreement or any portion of this Agreement or the performance of any of Consultant's duties or obligations under this

Agreement without the prior written consent of the City Council. Any attempted assignment shall be ineffective, null and void, and shall constitute a material breach of this Agreement, entitling City to any and all remedies at law or in equity, including summary termination of this Agreement. City acknowledges, however, that Consultant, in the performance of its duties pursuant to this Agreement, may utilize sub consultants.

Section 18. Termination of Agreement.

(a) City may terminate this Agreement, with or without cause, at any time by giving thirty (30) days' written notice of termination to Consultant. In the event such notice is given, Consultant shall cease immediately all work in progress.

(b) Consultant may terminate this Agreement at any time upon thirty (30) days' written notice of termination to City.

(c) If either Consultant or City fail to perform any material obligation under this Agreement, then, in addition to any other remedies, either Consultant or City may terminate this Agreement immediately upon written notice.

(d) Upon termination of this Agreement by either Consultant or City, all property belonging exclusively to City which is in Consultant's possession shall be returned to City. Consultant shall furnish to City a final invoice for work performed and expenses incurred by Consultant, prepared as set forth in Section 4 of this Agreement. This final invoice shall be reviewed and paid in the same manner as set forth in Section 4 of this Agreement.

Section 19. Default. In the event that Consultant is in default under the terms of this Agreement, the City shall not have any obligation or duty to continue compensating Consultant for any work performed after the date of default and may terminate this Agreement immediately by written notice to Consultant.

Section 20. Excusable Delays. Consultant shall not be liable for damages, including liquidated damages, if any, caused by delay in performance or failure to perform due to causes beyond the control of Consultant. Such causes include, but are not limited to, acts of God, acts of the public enemy, and acts of federal, state or local governments, acts of the City, court orders, fires, floods, epidemics, strikes, embargoes, and unusually severe weather. The term and price of this Agreement shall be equitably adjusted for any delays due to such causes.

Section 21. Cooperation by City. All public information, data, reports and maps as are existing and available to City as public records, and which are necessary for carrying out the work as outlined in Exhibit A, shall be furnished to Consultant in every reasonable way to facilitate, without undue delay, the work to be performed under this Agreement.

Section 22. Notices. All notices required or permitted to be given under this Agreement shall be in writing and shall be personally delivered, or sent by telecopier or United States mail, postage prepaid, addressed as follows:

To City: **City Administrator**
City of Guadalupe
918 Obispo Street
Guadalupe, CA 93434

To Consultant:

Notice shall be deemed effective on the date personally delivered or transmitted by facsimile or, if mailed, three (3) days after deposit of the same in the custody of the United States Postal Service.

Section 23. Authority to Execute. The person or persons executing this Agreement on behalf of the Consultant represents and warrants that they have the authority to so execute this Agreement and to bind Consultant to the performance of its obligations hereunder.

Section 24. Binding Effect. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties.

Section 25. Modification of Agreement. No amendment to or modification of this Agreement shall be valid unless made in writing and approved by the Consultant and by the City Council. The parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

Section 26. Waiver. Waiver by any party to this Agreement of any term, condition or covenant of this Agreement shall not constitute a waiver of any other term, condition or covenant. Waiver by any party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision, nor a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by City of any work or services by Consultant shall not constitute a waiver of any provisions of this Agreement.

Section 27. Law to Govern; Venue. This Agreement shall be interpreted, construed and governed according to the laws of the State of California. In the event of litigation between the parties, venue in state trial courts shall lie exclusively in the County of Santa Barbara. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Los Angeles.

Section 28. Attorney's Fees, Costs and Expenses. In the event litigation or other proceeding is required to enforce or interpret any provision of this Agreement, the prevailing party in such litigation or other proceeding shall be entitled to any award of reasonable attorney's fees, costs and expenses, in addition to any other relief to which it may be entitled.

Section 29. Entire Agreement. This Agreement, including the attached exhibits, is the entire, complete, final and exclusive expression of the parties with respect to the matters addressed

therein and supersedes all other agreements or understandings, whether oral or written, or entered into between Consultant and City prior to the execution of this Agreement. No statements, representations or other agreements, whether oral or written, made by any party which are not embodied herein shall be valid and binding. No amendment to this Agreement shall be valid and binding unless in writing duly executed by the parties or their authorized representatives.

Section 30. Severability. If a term, condition or covenant of this Agreement is declared or determined by any court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of this Agreement shall not be affected thereby, and the Agreement shall be read and construed without the invalid, void or unenforceable provision(s).

Section 31. Preparation of Agreement. This Agreement is the product of negotiation and preparation by and among the parties and their respective attorneys. The parties, therefore, expressly acknowledge and agree that this Agreement shall not be deemed prepared or drafted by one party or another, or any party's attorney, and will be construed accordingly.

CITY:

CITY OF GUADALUPE

By: _____
Ariston D. Julian, Mayor

APPROVED AS TO FORM:

_____
Philip F. Sinco, City Attorney

CONSULTANT:

by: _____

Title:_____

EXHIBIT B

SCOPE OF WORK FOR PROPOSED:

Before starting the tasks described below, the Consultant shall prepare and submit a work plan for this project, summarizing the Consultant's approach to completing the tasks. The work plan shall include a detailed schedule of the engineering and design effort and shall show all major milestones along with the dates the Consultant plans to meet the milestones. The work plan shall be submitted to the City for review and approval before initiating work on the tasks discussed below. Consultant's services shall include but not be limited to the following major tasks:

- **TASK I- Project Meetings and Coordination**
- **TASK II- Preliminary Design and City Council Presentation**
- **TASK III– Contract Deliverable, Permitting and Bidding Services**
- **TASK IV- Engineering Services During Construction (ESDC)**

TASK I– Project Meetings and Coordination

A. Project Meetings

Meetings between the City and the Consultant shall be held, at a minimum, monthly for progress meetings at the start of each task and at the 60% and 95% submittals. The progress and coordination meetings can be held via Zoom or other online format.

The Consultant shall include a minimum of six (6) progress and coordination meetings and one (1) presentation to the City Council in the proposal. The City Council meeting will be held at a regularly scheduled meeting at the Guadalupe City Hall.

B. Coordination

The Consultant shall coordinate directly with the City Engineer or the City Engineer's representative. Regular email correspondence and project updates shall be made throughout the project.

TASK II – Preliminary Design and City Council Presentation

In July 2022, Ashley & Vance Engineering, Inc. completed a Qualitative Structural Evaluation Report that identified seismic deficiencies, structural member rot and deterioration, water damage from roof leaks, and general building life cycle deterioration for priority repair and improvement.

Based on the recommended repairs and improvements in the Evaluation Report, the Consultant shall perform the necessary investigations and inspections to prepare preliminary plans and estimates. The Consultant shall coordinate with City staff, prepare a range of magnitude cost estimates for the individual project components, and provide recommendations for prioritization and potential phasing if necessary.

In addition to the above, the Public Safety Division has received funding for upgrades to their facilities at City Hall. The Consultant shall prepare plans and specifications for the Public Safety Division so it can be bid separately from the other City Hall work. The work may include the following components:

- Police Showers & Locker Room
- Fire Showers & Locker Room

- Fire Sleeping Quarters
- Fire Engine Bay Remodel

The total funding available for the Public Safety upgrades is $264,000. The Consultant will work with the Public Safety Chief to adjust the scope of work to meet the available budget.

Based on interactions with City staff and the City Engineer, the Consultant shall make a PowerPoint presentation to the City Council with various options for their consideration.

TASK III– Contract Deliverables, Permitting and Bidding Services

A. ***65% and 95% Submittals***

Upon direction from the City Council, the Consultant shall prepare construction plans for the prioritized City Hall Repair Project components. The plans must include all the approved design elements.

The Consultant shall submit plans at the 60% and 95% design stages to the City Engineer or his representative for review in PDF format. The Consultant's schedule should include at least one week for each of the City's reviews. The plotted size of the plans shall be 24"x36". The Consultant shall submit an engineer's estimate of the project costs at the various review levels. The Consultant shall recommend and prepare various additive alternates if the estimated costs exceed the available funding. At the 95% design stage, the Consultant shall submit a draft copy of the project's technical specifications for review.

B. ***100% Submittal***

Upon approval of the plans at the 95% design stage, the Consultant shall prepare the 100% plans, engineer's estimate, and technical specifications for final review. There may be minor corrections necessary. Submit the signed and stamped documents electronically to the City Engineer. The City Engineer will prepare the Construction Document package for permitting and bidding.

The Consultant shall also submit an electronic copy of all final AutoCAD drawings (with x-refs and plot configuration files), technical specifications/special provisions in Microsoft Word format, and quantities/cost estimate in Microsoft Excel format.

C. ***Permitting and Bidding Process***

During the permitting and bidding process, the Consultant shall respond to corrections, answer all RFIs, and prepare an addenda as needed.

TASK IV– Engineering Services During Construction (ESDC)

The Consultant shall provide architectural/engineering services during construction. The services shall include answering design questions, preparing revisions, and providing other engineering services as needed. The work does not include inspections.

The Consultant shall include an estimate of the effort required for the ESDC. Work under this section will be on a time and materials basis.

EXHIBIT C

QUALITATIVE STRUCTURAL EVALUATION REPORT

Guadalupe City Hall

A&V PROJECT NO. 22391

Image Courtesy of City of Guadalupe
https://ci.guadalupe.ca.us/galleries/town-meeting/

PREPARED FOR

City of Guadalupe, California

11 JULY 2022

Ashley & Vance ENGINEERING, INC

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1. EXECUTIVE SUMMARY

The objective of this report is to perform a qualitative condition assessment of the existing building and identify structural deficiencies in the primary gravity, seismic and wind force resisting systems. Recommendations and preliminary cost estimates for remediation of deficiencies identified have been provided. It is our understanding that these recommendations will be implemented at the discretion of the City of Guadalupe based on level of importance, available funding and schedule.

Pursuant to the request of Shannon Sweeney, Public Works Director and City Engineer, we met with the Guadalupe City Staff on Monday May 2, 2022 to observe and asses the existing condition of the City Hall structure. Our observation was limited to the interior of all rooms with the exception of the last two rooms in the 10th street wing, the basement under the main entry, the upper media room, four crawl space access points, the belltower and exterior of the structure. Our evaluation is limited to a qualitative assessment based on visual observations as no destructive testing or calculations have been performed. All available reference documentation, provided by Shannon Sweeney of the City of Guadalupe, can be found listed in Section 2.

Through observation and review of reference documentation, various structural and non-structural elements of the building were found to be non-compliant with current standards. ASCE 41, Seismic Evaluation and Retrofit Rehabilitation, was utilized to determine non-conforming elements of the structure (Refer to Appendix A for additional information). Non-conforming structural elements include, but are not limited to the following:

1. Overall plan irregularities were observed and lack adequate reinforcement at re-entrant corners and diaphragm openings.
2. Horizontal (Roof/Floor) sheathing does not meet maximum aspect ratio and/or span requirements.
3. Most of the roof areas have inadequate connections and load transfer from roof diaphragm to supporting walls below.
4. Most sill plates observed were fastened with heavily corroded anchor bolts, insufficiently sized and spaced.
5. Connections were not observed between floor girders and supporting posts or between posts and supporting foundations.

Additionally, structural deterioration was observed and include, but are not limited to the following:

1. Corroded anchor bolts.
2. Rot was observed at floor joists and sill plates located at exterior wall lines. Rot was also present in roof joists and beams, specifically at rafter tails.
3. Settlement was observed in various locations throughout the structure including exterior colonnades and walls at the perimeter.
4. Evidence of water intrusion into the crawl space was observed below the floor framing.

Non-conforming non-structural elements include, but are not limited to the following:

1. Deterioration of exterior finishes was observed.
2. The roof has been reported to leak and the majority of the roof does not appear to drain to roof gutters.
3. Content anchorage of storage racks was not observed.

Upgrade recommendations for the deficiencies outlined above can be found in Section 6. An overview of the approximate upgrade costs associated with each item has been provided in Section 1.2.

1.1 BUILDING DATA

The following table provides an overview of the existing structure.

OVERVIEW	
APN	115-083-002
Address	918 Obispo St, Guadalupe, CA 93434
ASCE41 Building Type	W1, W2
Year Constructed	1930
Year(s) of Addition(s)	N/A
Approximate Building Area	30,000 sq. ft.
Number of Stories	1
Basement	Yes

Table 1: Building Data Overview

1.2 SUMMARY ESTIMATE OF UPGRADE COST

Estimated probable costs below have been provided with the following assumptions and exclusions. Refer to Section 7.0 for additional cost breakdown.

ASSUMPTIONS

1. Estimates are captured at the schematic design level only and are based on prevailing wage rates.
2. Construction is anticipated to be completed in a single phase, beginning March, 2023 and concluding September 2023.
3. Areas of construction are anticipated to be clear of owner equipment, furnishings and personnel as required.
4. Please note that some upgrade items may apply to more than one bid option (ie. removal of existing roofing is part of item S1 & NS1). For these items, the cost will only be included in a single option.

EXCLUSIONS

1. Furnishings & equipment
2. Travel & per diem costs
3. Dewatering of excavations
4. Hazardous material abatement
5. Removal of existing equipment or furnishings
6. Modifications to the existing sprinkler system
7. Modifications to the existing electrical system
8. Supply and installation of the Solar PV system
9. Foundation repair and replacement

BUILDING PARAMETERS	
Total Floor Area	32,250 SQ FT
Composite Shingle Roof Area	21,780 SQ FT
Building Perimeter	1,426 LINEAR FT
Shearwall Area	5,484 SQ FT
Stucco Replacement Area	6,064 SQ FT

Table 2: Building Parameters for Cost Estimates

PROBABLE UPGRADE COST SUMMARY	AREA (SQ FT)	COST/SQ FT	UPGRADE COST
Structural Upgrades	32,250	$26	$834,665
Non-Structural Upgrades	32,250	$34	$1,087,672
Content Upgrades	32,250	N/A	$9,427
Total	32,250	$50	$1,931,763

Table 3: Probable Upgrade Cost Summary

TOTAL UPGRADE COST BREAKDOWN	
Direct Cost Subtotal	$1,229,539
General Requirements	$95,605
Mark-Up Cost	$209,022
Contingency Cost	$397,598
Total Upgrade Cost	$1,931,763

Table 4: Total Upgrade Cost Breakdown

2. STRUCTURAL DESCRIPTION

The following is a description of the structure based on site observations, communication with City Staff and reviewed documentation.

2.1 BUILDING CONSTRUCTION HISTORY

The following is a description of the known history and data pertaining to this building.

APPROXIMATE DATE	DESCRIPTION
1930	Original Construction
1980's	Gymnasium framing repairs and strengthening
2011	Roof issues identified (no known repairs implemented)
2019	Floor issues and finish cracking identified at Fire Station
2019	Evaluation report (no known repairs implemented)
2020	Estimate for Floor Repairs provided (no known repairs implemented)
2021	Roof leaks identified (no known repairs implemented)
1956 - Current	Various interior & exterior alterations
Unknown	Floor framing repairs at Fire Station
Unknown	Replacement of posts at both exterior colonnades

Table 5: Building Construction Data

2.1.1 HISTORICAL BUILDING STATUS

The building is currently eligible for listing in the National (NR) or California (CR) Registers but does not appear to be listed at this time. Additional repairs and alterations may be required if the building is to be included on a historical registry. The schedule, cost and extent of any such repairs are unknown at this time and not included with this report.

2.2 STRUCTURAL DESCRIPTION

The following includes a description of the existing structure based on observation and available record documentation provided by city staff.

OBSERVATION OVERVIEW	
Site Visit Date	May 2, 2022
Engineer(s)	V. Ramos, I. Shoebridge
Number of Stories	1
Basement	Yes (Partial)

Table 6: Structural Observation Overview

Record documentation includes the following:

AVAILABLE RECORD DOCUMENTATION	
Structural Evaluation Report	Parolini, Michael, and Cheyne Kight. SSG Structural Engineers, San Luis Obispo, CA, 2019, pp. 1–10, Evaluation Report.
Structural Damage Notification	Received by Shannon Sweeney, FW: Foundation / Floor Damage, 25 Oct. 2019.
Known Roof Leak Locations	Sweeney, Shannon. “Roof Leaks 2021.”

Table 7: List of Record Documentation

2.2.1 VERTICAL LOAD-RESISTING ELEMENTS

O - Field Observations, T - Testing, D - Drawings

***Exact date and extent of retrofit is unknown*

GYMNASIUM

HORIZONTAL ELEMENTS

ROOF

Sheathing: Straight Sheathing	Source: O
Joists: 2x @ approximately 24" o.c. (Roof), 2x6 @ approximately 24" o.c. (Ceiling)	Source: O
Purlins: 6x @ approximately 8'-0" o.c.	Source: O
Beams: Site built timber trusses @ approximately 8'-0" o.c. Previously retrofitted**	Source: O

FLOOR

Sheathing: 1x Diagonal Sheathing	Source: O
Joists: 2x12 @ approximately 16" o.c.	Source: O
Girders: 6x8 @ approximately 8'-0" o.c.	Source: O
Basement: 8" Concrete Wall	Source: O

VERTICAL ELEMENTS

Columns: Unknown	Source: O
Walls: 2x8 @ 16" o.c. stud walls	Source: O
Floor Foundations: 6x posts and pad foundations	Source: O
Wall Foundations: Continuous foundations, 3x sill plates w/ anchor bolts @ 4'-0" o.c.	Source: O
Basement: 8" Elevated Concrete Slab w/ 1/2" sq. reinforcement @ ~8"o.c.	Source: O
Basement: Square Concrete Columns and Beams	Source: O

BUILDING ENTRY & WINGS

HORIZONTAL ELEMENTS

ROOF

Sheathing: Straight Sheathing	Source: O
Joists: 2x @ approximately 24" o.c. (Roof), 2x @ approximately 24" o.c. (Ceiling)	Source: O
Purlins: 6x @ approximately 8’-0” o.c.	Source: O

FLOOR

Sheathing: Diagonal Sheathing	Source: O
Joists: 2x @ approximately 16” o.c.	Source: O
Girders: 6x @ approximately 8’-0” o.c.	Source: O

VERTICAL ELEMENTS

Columns: Unknown	Source: O
Walls: 2x stud walls	Source: O
Floor Foundations: 6x posts and pad foundations	Source: O
Wall Foundations: Continuous foundations	Source: O

COLONNADES

HORIZONTAL ELEMENTS

ROOF

Sheathing: Straight Tongue-and-Groove Sheathing	Source: O
Joists: 4x @ approximately 24" o.c.	Source: O
Beams: 8x	Source: O

FLOOR

Type: Concrete Slab-on-Grade	Source: O

VERTICAL ELEMENTS

Columns: 8x8	Source: O
Walls: 2x stud walls	Source: O
Floor Foundations: Unknown	Source: O
Wall Foundations: Continuous foundations	Source: O

BUILDING BELL TOWER

HORIZONTAL ELEMENTS

ROOF

Unknown Source: O

FLOOR

Unknown Source: O

VERTICAL ELEMENTS

Walls: Unknown Source: O

Foundations: Unknown Source: O

2.2.2 LATERAL LOAD-RESISTING ELEMENTS

O - Field Observations, T - Testing, D - Drawings

***Exact date and extent of retrofit is unknown*

GYMNASIUM

HORIZONTAL ELEMENTS

Diaphragms: Straight sheathing acting as flexible diaphragm — Source: O

VERTICAL ELEMENTS

Shearwalls: Unknown — Source: O

(Plywood sheathing applied over wood studs assumed based on verbal description by City Staff)

BUILDING ENTRY & WINGS

HORIZONTAL ELEMENTS

Diaphragms: Straight sheathing acting as flexible diaphragm — Source: O

VERTICAL ELEMENTS

Shearwalls: Plaster applied to straight sheathing over wood studs — Source: O

COLONNADES

HORIZONTAL ELEMENTS

Diaphragms: Straight tongue-and-groove sheathing acting as flexible diaphragm — Source: O

VERTICAL ELEMENTS

Shearwalls: N/A — Source: O

BUILDING BELL TOWER

HORIZONTAL ELEMENTS

Diaphragms: Unknown — Source: O

VERTICAL ELEMENTS

Shearwalls: Unknown — Source: O

2.2.3 DIAGRAMMATIC PLAN VIEWS

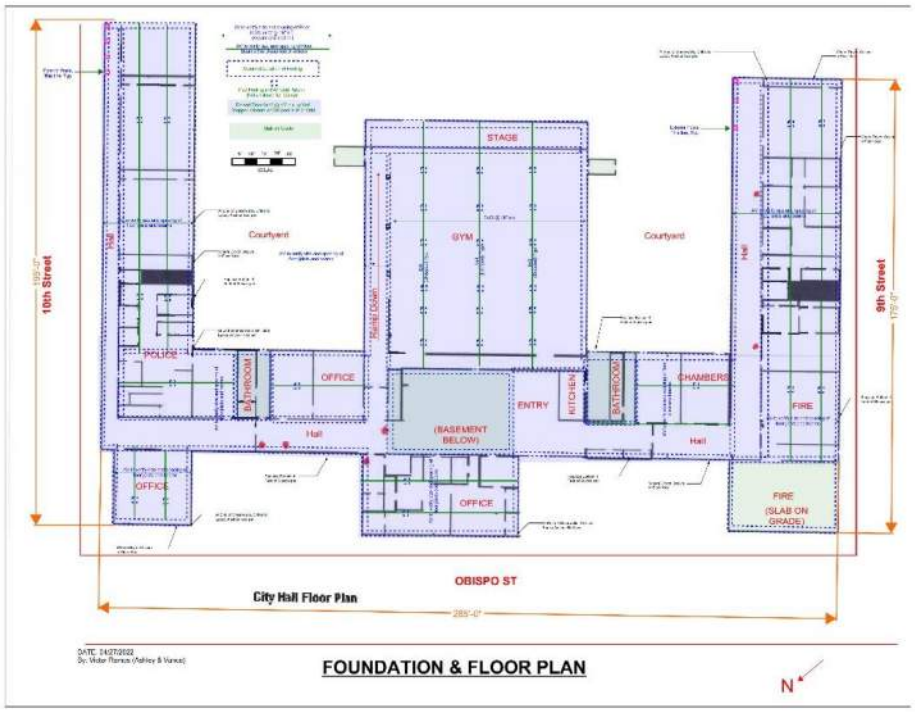

Figure 1: Diagrammatic Structural Foundation and Floor Plan.

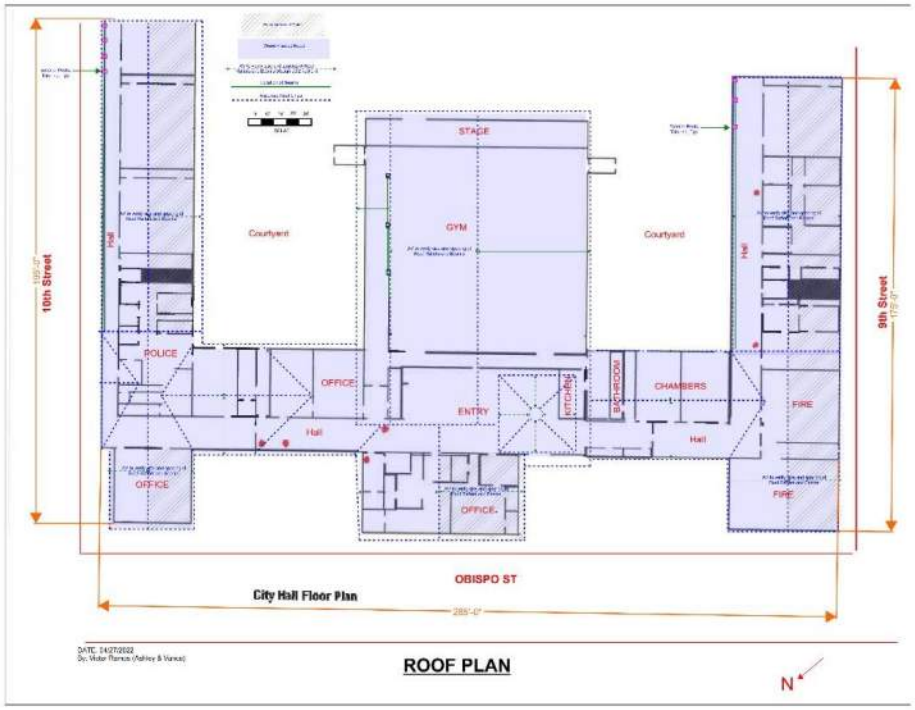

Figure 2: Diagrammatic Structural Roof Framing Plan.

3. SITE HAZARDS

The following section includes site hazard data, including general project information as well as site specific design criteria related to soils, seismic, wind and snow.

CRITERIA	
Coordinates	34.9694849, -120.5688772
Elevation	85 ft
Risk Category	IV

Table 8: Site Hazard Overview Design Criteria

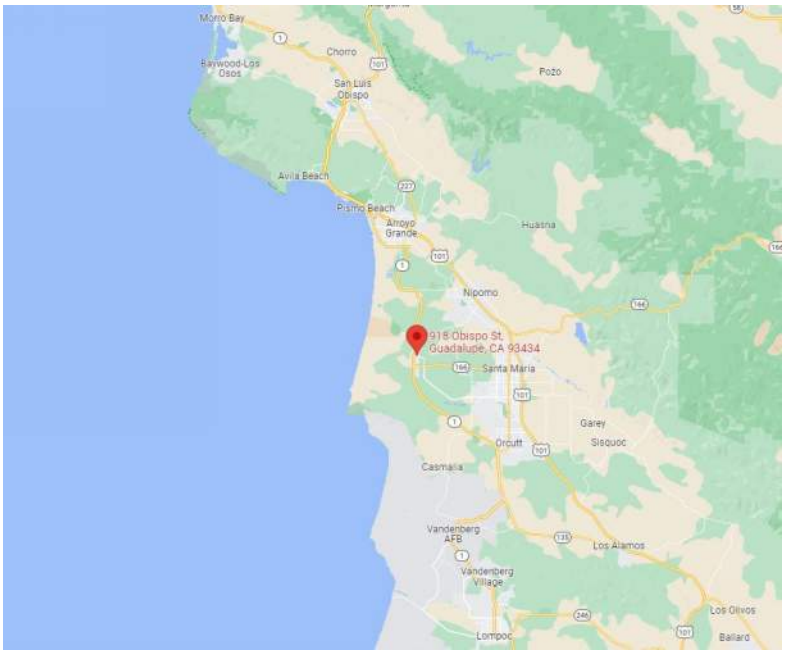

Figure 3: Area Map of Project Location.

3.1 SOILS

SUMMARY	
Description	Known as the Salinas series, the site consists of deep, well-drained soils that formed from sandstone and shale. [Courtesy of CA Soil Resource, UC Davis]
Soil Type	D - Default (Assumed)
Soils Stability	Unknown
Location	Cycles of rain and drought are common for this area and can result in expansion and contraction of soils, potentially causing foundation settlement and/or cracking.

Table 9: Soils Design Criteria

3.2 SEISMIC

BASIC PARAMETERS		
Name	Value	Description
Ss	0.899	MCER ground motion (period=0.2s)
S1	0.336	MCER ground motion (period=1.0s)
Sms	1.079	Site-modified spectral acceleration value
Sm1	*Null	Site-modified spectral acceleration value
SDS	0.719	Numeric seismic design value at 0.2s SA
SD1	*Null	Numeric seismic design value at 1.0s SA

Table 10: Seismic Design Criteria

*See ASCE 7-16, Section 11.4.8

Reference: ATC Hazards by Location

3.3 WIND

PARAMETER	DESCRIPTION
Wind Speed	102 mph (RC IV)
Site Exposure Category	C
Site Exposure Description	Located on a relatively flat site and approximately 6 miles from the coastline, the structure is surrounded by one to two stories buildings.

Table 11: Wind Design Criteria

Reference: ATC Hazards by Location

3.4 SNOW

Snow loading is not applicable for this location; therefore, evaluation and upgrade procedures are not applicable.

4. EVALUATION AND UPGRADE PROCEDURES

The objective of this report is to perform a qualitative condition assessment of the existing building and identify structural deficiencies in the primary gravity, seismic and wind force resisting systems. Recommendations and preliminary cost estimates for remediation of deficiencies identified have been provided. It is our understanding that these recommendations will be implemented at the discretion of the City of Guadalupe based on level of importance, available funding and schedule.

California Legislature determined in 1986 that buildings providing essential services should be capable of providing those services to the public after a disaster. This resulted in the Essential Services Buildings Seismic Safety Act (ESBSSA) of 1986 and requires in part that buildings be designed to resist forces generated by earthquake, gravity and wind (see California Health and Safety Code section 16001 for more information). Due to this building housing both fire and police services, it is our opinion that this building provides "essential services" and is subject to the requirements of the ESBSSA. Final determination and enforcement is made by the local building jurisdiction in conjunction with the Division of the State Architect (DSA). If the building is determined to be subject to the requirements of the ESBSSA, additional seismic strengthening upgrades may be required. The extent of these additional seismic strengthening upgrades is unknown at this time but at a minimum would likely include improvements such as: new roof and wall sheathing, new anchor bolts, new seismic clips at the roof and floor. A complete seismic analysis has not been performed at this time but preliminary seismic strengthening upgrades and initial cost estimates have been included as part of this report.

If the building is determined to not be subject to compliance with the ESBSSA and depending on the scope of work proposed, seismic strengthening may be minimized.

4.1 STRUCTURAL DEFICIENCIES

GRAVITY

EVALUATION PROCEDURE

The gravity (i.e. dead plus live loads) demand shall be evaluated based on acceptance criteria in accordance with the requirements of the applicable local building code.

UPGRADE PROCEDURE

Deficient and/or deteriorated members that do not meet the above evaluation procedure are recommended as a mandatory upgrade in compliance with full demand and capacity criteria of the current building code.

SEISMIC

EVALUATION PROCEDURE

Seismic evaluation shall utilize the ASCE 41-17 Tier 1, Structural and the ASCE 41-17, Non-Structural checklists as a screening tool (Refer to Appendix A). Critical structural and non-structural elements are identified as acceptable or deficient based on the checklists as well as engineering judgement.

Deficiencies are noted and evaluated utilizing the requirements of ASCE 41 for the above identified seismic demands and the associated acceptance criteria.

UPGRADE PROCEDURE

Deficient members that do not meet the above evaluation procedure are upgraded to be in compliance with the following demand and acceptance criteria. Considering the essential services that this building provides, a full lateral upgrade and analysis will be required. Initial estimates for the extent and cost of the upgrades have been provided.

WIND

EVALUATION PROCEDURE

The wind demand and acceptance criteria are in accordance with the requirements of the applicable local building code.

UPGRADE PROCEDURE

Considering the essential services that this building provides, a full lateral upgrade and analysis will be required. Initial estimates for the extent and cost of the upgrades have been provided.

SNOW

Snow loading is not applicable for this location; therefore, evaluation and upgrade procedures are not applicable.

4.2 STRUCTURAL DETETRIORATION

It is recommended that a certified building inspector be retained to perform a complete inspection of the building. Areas of rot, water and pest damage shall be identified and brought to the attention of a structural engineer. Based on the damage observed, the structural engineer shall provide recommended repairs. Structural repairs will be on a case-by-case basis.

Asbestos and lead abatement is beyond the scope of this report. It is recommended that a qualified professional be retained to survey the building and identify the presence of these materials along with the appropriate abatement measures. All areas where building modifications are proposed shall be abated in conformance with all applicable regulations.

4.3 ADDITIONAL DEFICIENCIES

Evidence of differential settlement and water intrusion around the building foundations were noted while onsite. Exposure to moisture can cause some types of soil to expand and contract. This repeating cycle of expansion and contraction can damage structural components and architectural finishes on buildings. While significant structural damage due to differential settlement was not observed, non-structural implications such cracking of finishes and uneven floors can be undesirable for owners and tenants. It is recommended that a foundation specialist perform a manometer survey of the building identifying areas of settlement and provide remediation measures. The extent of repairs, if deemed necessary, are unknown at this time.

4.4 MECHANICAL, ELECTRICAL, AND PLUMBING DEFICIENCIES

An evaluation of the existing mechanical, electrical and plumbing systems was not performed and it is recommended that a qualified mechanical, electrical and plumbing engineer(s) be retained to review the existing systems and make recommendations for the appropriate upgrades. The building mechanical systems could likely be improved to better heat and cool the building efficiently. The electrical system may be adequate for the building but improvements such as additional outlets, energy efficient lighting and emergency power and egress lighting may be required. The existing plumbing should be videotaped to identify blockages and assess the overall condition of the existing piping. New plumbing will likely be required if accessibility modifications are made to the restrooms.

4.5 ENERGY EFFICIENCY UPGRADES

Elements such as wall and roof insulation were not observed. While these are non-structural items, they do improve tenant comfort and the building's energy efficiency. A complete energy upgrade is likely not feasible but small improvements could be beneficial.

It's the understanding of this office that roof mounted solar panels may be added in the future. Based on our initial observations, limited areas of the existing roof structure would be potential candidates for the increased gravity loads imposed by solar arrays. Strengthening and or replacement of roof joists may be required. Ballasted solar arrays are not recommended and the system selected must be limited to a maximum distributed weight of 3 pounds per square foot (psf). A structural engineer should be retained to evaluate the existing building for the proposed solar arrays.

5. FINDINGS

5.1 STRUCTURAL DEFICIENCIES

Per ASCE 41-17, observed non-conforming structural elements of the existing structure are outlined below. Refer to Appendix A for the completed ASCE 41 checklists and additional information as required.

STRUCTURAL DEFICIENCIES				
REF.	**ITEM**	**DESCRIPTION**	**PHOTO NO.**	**TYPE***
S1	Roof Diaphragms	Portions of the existing roof diaphragms are inadequate	8, 12	EQ, W
S2	Roof to Wall Connections	Most of the roof areas have inadequate connections and load transfer from roof diaphragm to supporting walls below (See Note 1)	10, 12, 14	EQ, W
S3	Wall to Foundation Connections	Most of the sill plates observed had anchor bolts that were heavily corroded and likely insufficient size and spacing	40	EQ, W
S4	Floor Framing to Foundations	Connections were not observed between floor girders and posts or between posts and pad foundations.	18, 41, 42	EQ
S5	Structural Sheathing	Wall sheathing was not observed.	10	EQ, W

*G - Gravity, EQ - Earthquake, W - Wind, S - Snow

Note 1. Areas of the existing gymnasium appear to have been previously retrofitted. These connections have not been evaluated but may be adequate.

Table 12: Structural Deficiencies

5.2 STRUCTURAL DETERIORATION

Observed deterioration of structural elements of the existing structure are outlined below.

STRUCTURAL DETERIORATION			
REF.	**ITEM**	**DESCRIPTION**	**PHOTO NO.**
SD1	Corrosion	Corrosion observed in foundation anchor bolts	40
SD2	Rot	Significant rot was observed in the following locations: a) Floor joists and sill plates at exterior walls b) Roof joists and beams, specifically at rafter tails	31, 36, 37, 38, 39
SD3	Settlement	Evidence of differential settlement was observed at the exterior colonnades and exterior walls at various locations around the perimeter of the building	34, 56, 57, 58
SD4	Water Intrusion	Evidence of water intrusion at the roof and into the crawl space below the floor framing was observed	9, 16, 40

Note 1. Termite damage was not observed, but should be confirmed by a certified building inspector.

Table 13: Structural Deterioration

5.3 NON-STRUCTURAL DEFICIENCIES

NON-STRUCTURAL DEFICIENCIES			
REF.	**ITEM**	**DESCRIPTION**	**PHOTO NO.**
NS1	Cladding	Significant deterioration of exterior finishes and paint was observed. See Note 1	19, 20, 35
NS2	Roofing	The roof is reported to leak and the majority of the roof does not appear to drain to roof gutters. See Note 2	9, 43, 44, 45, 47, 52
NS3	ADA Compliance	See Note 3	N/A

Note 1. Exterior finishes and paint are an important part of building maintenance and should be repaired or replaced.
Note 2. City staff has identified areas where water leaks have been observed. A certified building inspector shall be retained to perform a thorough investigation of the existing building and provide a report identifying areas damaged by water intrusion, pests, etc. The report shall be used in conjunction with a structural engineer to determine the scope and evaluation of necessary repairs.
Note 3. In order to comply with ADA and State regulations regarding accessibility, a Certified Access Specialist (CASp) shall be retained to perform a consultation and inspection of all publicly accessible areas of the building. As part of the services provided by the CASp, a report should be included identifying all barriers to public access along with proposed improvements to remove barriers. This report will be used to determine the scope and valuation of the recommended improvements. Areas requiring accessibility shall be identified by the CASp and will likely include (but not limited to): entrances, egress, restrooms, parking, stairs and doors.

Table 14: Non-Structural Deficiencies

5.4 FURNISHINGS AND CONTENTS

CONTENT DEFICIENCIES			
REF.	**ITEM**	**DESCRIPTION**	**PHOTO NO.**
C1	Content Anchorage	Inadequate bracing and anchorage was observed for various contents, including file storage shelving	24, 25

Table 15: Content Deficiencies

6. RECOMMENDATIONS

An important distinction is to be made between code required repairs or improvements and cosmetic or convenience improvements. This distinction must be clearly defined by the City in conjunction with the structural engineer and other design professionals. The intent shall be to address the code required upgrades first and there may not be enough budget available to incorporate all cosmetic or convenience upgrades.

6.1 STRUCTURAL UPGRADE MEASURES

The following table includes structural deficiencies per Section 5.0 and proposed upgrade measures.

STRUCTURAL UPGRADES		
REF.	**DESCRIPTION**	**FIGURE NO.**
S1	Install plywood sheathing over existing straight sheathing.	67, 72, 73
S2	a) Install A35 clips and blocking between existing roof rafters to provide shear transfer from roof diaphragm to wall below. b) Install H1 clips at every existing roof rafter, connecting it to the wall below.	68, 69, 70, 71
S3 / SD1	Install post-installed anchor bolts at all exterior walls, connecting the existing sill plate to the existing concrete foundation below.	60, 61
S4	Provide connections from posts to beams and concrete foundations below.	63, 66, 74
S5	Install wall sheathing at various locations throughout the structure	62, 68, 69, 70, 71
SD2	a) Like-in-kind replacement of damaged sill plates, rim joists and floor joists around building perimeter b) Like-in-kind replacement of damaged existing roof joists and beams c) Like-in kind replacement of damaged existing wall framing	64, 76, 77

Table 16: Structural Upgrades

6.2 NON-STRUCTURAL UPGRADE MEASURES

The following table includes non-structural deficiencies per Section 5.0 and proposed upgrade measures.

NON-STRUCTURAL UPGRADES		
REF.	**DESCRIPTION**	**FIGURE NO.**
NS1	a) New roofing material shall weigh no more than existing roofing materials b) Install new roof gutters as required	72
NS2	Replace exterior finishes and install appropriate moisture barrier	65, 75
NS3	Install solar panels (Voluntary Upgrade)	67

Table 17: Non-Structural Upgrades

6.3 FURNISHINGS AND CONTENTS

The following table includes content deficiencies per Section 5.0 and proposed upgrade measures.

CONTENT UPGRADES		
REF.	**DESCRIPTION**	**FIGURE NO.**
C1	Provide adequate anchorage of contents including, but not limited to a) Storage racks b) Water heaters c) Suspended mechanical equipment	

Table 18: Content Upgrades

7. UPGRADE COST BREAKDOWN

The following tables provide a breakdown of the proposed upgrade costs as outlined in Section 1.

STRUCTURAL UPGRADES	UPGRADE COST
S1 - Roof Diaphragms	$131,383
S2 - Roof to Wall Connections	$9,500
S3 / SD1 - Wall to Foundation Connections	$60,789
S4 - Floor Framing to Foundation Connections	$162,534
S5 - Structural Sheathing	$196,208
SD2 - Rot Repair	$274,251
Total Structural Upgrade Cost:	$834,665

Table 19: Structural Upgrade Costs

NON-STRUCTURAL UPGRADES	UPGRADE COST
NS1 - Roofing and Roof Gutters	$759,370
NS2 - Exterior Finishes	$325,322
NS3 - Solar Panels*	$2,980
Total Non-Structural Upgrade Cost:	$1,087,672

Table 20: Non-Structural Upgrade Costs

*Cost and installation of solar PV system shall be provided by others. Approximate upgrade costs includes installation of new structural blocking only as required per Figure 67, Detail 8.

CONTENT UPGRADES	UPGRADE COST
C1 - Content Bracing and Anchorage	$9,427
Total Structural Upgrade Cost:	$9,427

Table 21: Content Upgrade Costs

8. REFERENCES

8.1 APPLICABLE CODES & STANDARDS

The design codes, standards and references below serve as the basis of this evaluation for building and nonbuilding structures including all lateral force resisting systems, components, and cladding.

- 2019 California Building Code (CBC).
- ASCE 7-16: Minimum Design Loads for Buildings and Other Structures.
- ASCE 41-17: Seismic Evaluation and Retrofit of Existing Buildings.

APPENDIX A:

CHECKLISTS

ASCE 41-17
Tier 1 Checklist

Checklist
The evaluation statements represent general configuration issues applicable for most buildings based on observed earthquake structural damage during actual earthquakes. This checklist should be completed for all buildings in Very Low, Low, Moderate, and High Seismicity for Immediate Occupancy Performance Levels.

Building Type W1
These buildings are single- or multi-family dwellings of one or more stories in height. Building loads are light and the framing spans are short. Floor and roof framing consists of wood joists or rafters on wood studs spaced no more than 24 inches apart. The first floor framing is supported directly on the foundation, or is raised up on cripple studs and post-and-beam-supports. The foundation consists of spread footings constructed on concrete, concrete masonry block, or brick masonry or even wood in older construction. Chimneys, where present, consist of solid brick masonry, masonry veneer, or wood frame with internal metal flues. Seismic forces are resisted by wood frame diaphragms and shear walls. Floor and roof diaphragms consist of straight or diagonal lumber sheathing, tongue-and-groove planks, oriented strand board, or plywood. Shear walls consist of straight or diagonal lumber sheathing, plank siding, plywood, oriented strand board, stucco, gypsum board, particle board, or fiberboard. Interior partitions are sheathed with plaster or gypsum board.

Building Type W1a
These buildings are multi-story, similar in construction to W1 buildings, but have plan areas on each floor typically greater than 3,000 square feet. Older construction often has open front garages at the lowest story.

Building Type W2
These buildings are buildings are commercial or industrial buildings with a floor area of 5,000 square feet or more There are few, if any, interior walls. The floor and roof framing consists of wood or steel trusses, glulam or steel beams, and wood posts or steel columns. Seismic forces are resisted by wood diaphragms and exterior stud walls sheathed with plywood, oriented strand board, stucco, plaster, straight or diagonal wood sheathing, or braced with rod bracing. Wall openings for storefronts and garages, where present, are framed by post-and-beam framing.

Table 17-1. Very Low Seismicity

Structural Components

C	NC	N/A	U	
☒	☐	☐	☐	LOAD PATH: The structure shall contain a complete, well-defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundations. (Commentary: Sec.A.2.1.1. Tier 2: Sec. 5.4.1.1)
☐	☐	☒	☐	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support are anchored for out-of-place forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections have adequate strength to resist the connection force calculated in the Quick Check Procedure of Section 4.4.3.7. (Commentary: Sec.A.5.1.1. Tier 2: Sec. 5.7.1.1)

Table 17-2. Collapse Prevention Basic Configuration Checklist

Low Seismicity

Building System-General

C	NC	N/A	U

☒ ☐ ☐ ☐ LOAD PATH: The structure shall contain a complete, well-defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundations. (Commentary: Sec.A.2.1.1. Tier 2: Sec. 5.4.1.1)

C NC N/A U
☒ ☐ ☐ ☐ ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building is greater than 4% of the height of the shorter building. This statement need not apply for the following building types: W1, W1a, and W2. (Commentary: Sec. A.2.1.2. Tier 2: Sec. 5.4.1.2)

C NC N/A U
☒ ☐ ☐ ☐ MEZZANINES: Interior mezzanine levels are braced independently from the main structure or are anchored to the seismic-force-resisting elements of the main structure. (Commentary: Sec. A.2.1.3, Tier 2: Sec. 5.4.1.3)

Building System - Building Configuration

C NC N/A U
☐ ☐ ☒ ☐ WEAK STORY: The sum of the shear strengths of the seismic-force-resisting system in any story in each direction shall not be less than 80% of the strength in the adjacent story above. (Commentary: Sec. A.2.2.2, Tier 2: Sec. 5.4.2.1)

C NC N/A U
☐ ☐ ☒ ☐ SOFT STORY: The stiffness of the seismic-force-resisting system in any story shall not be less than 70% of the seismic-force-resisting system stiffness in an adjacent story abovem or less than 80% of the average seismic-force-resisting system stiffness of the three stories above. (Commentary: Sec. A.2.2.3. Tier 2: Sec. 5.4.2.2)

C NC N/A U
☒ ☐ ☐ ☐ VERTICAL IRREGULARITIES: All vertical elements in the seismic-force-resisting system are continuous to the foundation. (Commentary: Sec. A.2.2.4. Tier 2: Sec. 5.4.2.3)

C NC N/A U
☐ ☐ ☒ ☐ GEOMETRY: There are no changes in the net horizontal dimension of the seismic-force-resisting system of more than 30% in a story relative to adjacent stories, excluding one-story penthouses and mezzanines. (Commentary: Sec. A.2.2.5. Tier 2: Sec. 5.4.2.4)

C NC N/A U
☐ ☐ ☒ ☐ MASS: There is no change in effective mass more than 50% from one story to the next. Light roofs, penthouses, and mezzanines need not be considered. (Commentary: Sec.A.2.2.6. Tier 2: Sec. 5.4.2.5)

C NC N/A U
☐ ☐ ☐ ☒ TORSION: The estimated distance between the story center of mass and the story center of rigidity is less than 20% of the building width in either plan dimension. (Commentary: Sec. A.2.2.7. Tier 2: Sec. 5.4.2.6)

Moderate Seismicity
(Complete the following items in addition to the items for Very Low Seismicity)

Geologic Site Hazards

C NC N/A U
☐ ☐ ☐ ☒ LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building's seismic performance shall not exist in the foundation soils at depths within 50 ft under the building. (Commentary: Sec. A.6.1.1. Tier 2: 5.4.3.1)

C NC N/A U
☒ ☐ ☐ ☐ SLOPE FAILURE: The building site is sufficiently remote from potential earthquake-induced slope failures or rockfalls to be unaffected by such failures or is capable of accommodating any predicted movements without failure. (Commentary: Sec. A.6.1.2 Tier 2: 5.4.3.1)

C NC N/A U
☐ ☐ ☐ ☒ SURFACE FAULT RUPTURE: Surface fault rupture surface and surface displacement at the building site are not anticipated. (Commentary: Sec. A.6.1.3. Tier 2: 5.4.3.1)

High Seismicity (Complete the following items in addition to the items for Moderate Seismicity)
Foundation Configuration

C NC N/A U
☐ ☐ ☐ ☒ OVERTURNING: The ratio of the least horizontal dimension of the seismic-force-resisting system at the foundation level to the building height (base/height) is greater than $0.6S_a$. (Commentary: Sec. A.6.2.1. Tier 2: Sec. 5.4.3.3)

C NC N/A U
☐ ☐ ☐ ☒ TIES BETWEEN FOUNDATION ELEMENTS: The foundation has ties adequate to resist seismic forces where footings, piles, and piers are not restrained by beams, slabs, or soils classified as Site Class A, B, or C. (Commentary: Sec. A.6.2.2. Tier 2: Sec. 5.4.3.4)

Table 17-3. Immediate Occupancy Basic Configuration Checlist
Very Low Seismicity

Building System - *General*

C NC N/A U
☒ ☐ ☐ ☐ LOAD PATH: The structure shall contain a complete, well-defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundations. (Commentary: Sec.A.2.1.1. Tier 2: Sec. 5.4.1.1)

C NC N/A U
☒ ☐ ☐ ☐ ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building is greater than 4% of the height of the shorter building. This statement need not apply for the following building types: W1, W1a, and W2. (Commentary: Sec. A.2.1.2. Tier 2: Sec. 5.4.1.2)

C NC N/A U
☒ ☐ ☐ ☐ MEZZANINES: Interior mezzanine levels are braced independently from the main structure or are anchored to the seismic-force-resisting elements of the main structure. (Commentary: Sec. A.2.1.3, Tier 2: Sec. 5.4.1.3)

Building System - Building Configuration

C NC N/A U
☐ ☐ ☒ ☐ WEAK STORY: The sum of the shear strengths of the seismic-force-resisting system in any story in each direction shall not be less than 80% of the strength in the adjacent story above. (Commentary: Sec. A.2.2.2, Tier 2: Sec. 5.4.2.1)

C NC N/A U
☐ ☐ ☒ ☐ SOFT STORY: The stiffness of the seismic-force-resisting system in any story shall not be less than 70% of the seismic-force-resisting system stiffness in an adjacent story abovem or less than 80% of the average seismic-force-resisting system stiffness of the three stories above. (Commentary: Sec. A.2.2.3. Tier 2: Sec. 5.4.2.2)

C NC N/A U
☒ ☐ ☐ ☐ VERTICAL IRREGULARITIES: All vertical elements in the seismic-force-resisting system are continuous to the foundation. (Commentary: Sec. A.2.2.4. Tier 2: Sec. 5.4.2.3)

C NC N/A U
☐ ☐ ☒ ☐ GEOMETRY: There are no changes in the net horizontal dimension of the seismic-force-resisting system of more than 30% in a story relative to adjacent stories, excluding one-story penthouses and mezzanines. (Commentary: Sec. A.2.2.5. Tier 2: Sec. 5.4.2.4)

C NC N/A U
☐ ☐ ☒ ☐ MASS: There is no change in effective mass more than 50% from one story to the next. Light roofs, penthouses, and mezzanines need not be considered. (Commentary: Sec.A.2.2.6. Tier 2: Sec. 5.4.2.5)

C NC N/A U
☐ ☐ ☐ ☒ TORSION: The estimated distance between the story center of mass and the story center of rigidity is less than 20% of the building width in either plan dimension. (Commentary: Sec. A.2.2.7. Tier 2: Sec. 5.4.2.6)

Low Seismicity (Complete the following items in addition to the items for Very Low Seismicity)

Geologic Site Hazards

C NC N/A U
☐ ☐ ☐ ☒ LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building's seismic performance shall not exist in the foundation soils at depths within 50 ft under the building. (Commentary: Sec. A.6.1.1. Tier 2: 5.4.3.1)

C NC N/A U
☒ ☐ ☐ ☐ SLOPE FAILURE: The building site is sufficiently remote from potential earthquake-induced slope failures or rockfalls to be unaffected by such failures or is capable of accommodating any predicted movements without failure. (Commentary: Sec. A.6.1.2 Tier 2: 5.4.3.1)

C NC N/A U
☐ ☐ ☐ ☒ SURFACE FAULT RUPTURE: Surface fault rupture surface and surface displacement at the building site are not anticipated. (Commentary: Sec. A.6.1.3. Tier 2: 5.4.3.1)

Moderate and High Seismicity (Complete the following items in addition to the items for Low Seismicity)

Foundation Configuration

C NC N/A U
☐ ☐ ☐ ☒ OVERTURNING: The ratio of the least horizontal dimension of the seismic-force-resisting system at the foundation level to the building height (base/height) is greater than $0.6S_a$. (Commentary: Sec. A.6.2.1. Tier 2: Sec. 5.4.3.3)

C NC N/A U
☐ ☐ ☐ ☒ TIES BETWEEN FOUNDATION ELEMENTS: The foundation has ties adequate to resist seismic forces where footings, piles, and piers are not restrained by beams, slabs, or soils classified as Site Class A, B, or C. (Commentary: Sec. A.6.2.2. Tier 2: Sec. 5.4.3.4)

Table 17-4. Collapse Prevention Structural Checklist for Building Types W1 and W1a

Very Low Seismicity

Seismic-Force-Resisting System

C NC N/A U
☒ ☐ ☐ ☐ REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2. (Commentary: Sec. A.3.2.1.1, Tier 2: Sec. 5.5.1.1)

C NC N/A U
☐ ☐ ☐ ☒ SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 4.5.3.3, is less than the following values (Commentary Sec. A.3.2.7.1, Tier 2: Sec. 5.5.3.1.1):

Structural panel sheathing	1,000 plf
Diagonal sheathing	700 plf
Straight sheathing	100 plf
All other considerations	100 plf

C NC N/A U
☐ ☐ ☒ ☐ STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings do not rely on exterior stucco walls as the primary seismic-force-resisting-system. (Commentary: Sec. A.3.2.7.2, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☐ ☐ ☒ ☐ GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard are not used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Commentary: Sec. A.3.2.7.3, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☒ ☐ ☐ ☐ NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 are not used to seismic forces. (Commentary Sec. A.3.2.7.4, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U

☐ ☐ ☒ ☐ WALLS CONNECTED THROUGH FLOORS: Shear walls have an interconnection between stories to transfer overturning and shear forces through the floor. (Commentary: Sec. A.3.2.7.5, Tier 2: Sec. 5.5.3.6.2)

C NC N/A U
☐ ☐ ☒ ☐ HILLSIDE SITE: For structures that are taller than on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1 to 2. (Commentary: Sec. A.3.2.7.6, Tier 2: Sec. 5.5.3.6.3)

C NC N/A U
☐ ☐ ☒ ☐ CRIPPLE WALLS: Cripple walls below first-floor-level shear walls are braced to the foundation with wood structural panels. (Commentary: Sec. A.3.2.7.7, Tier 2: Sec. 5.5.3.6.4)

C NC N/A U
☐ ☒ ☐ ☐ OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or are supported by adjacent construction through positive ties capable of transferring the seismic forces. (Commentary: Sec. A.3.2.7.8, Tier 2: Sec. 5.5.3.6.5)

Connections

C NC N/A U
☐ ☒ ☐ ☐ WOOD POSTS: There is a positive connection of wood posts to the foundation. (Commentary: Sec. A.5.3.3, Tier 2: Sec. 5.7.3.3)

C NC N/A U
☒ ☐ ☐ ☐ WOOD SILLS: All wood sills shall be bolted to the foundation. (Commentary: Sec. A.5.3.4, Tier 2: Sec. 5.7.3.3)

C NC N/A U
☐ ☒ ☐ ☐ GIRDER/COLUMN CONNECTION: There is a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Commentary: Sec. A.5.4.1, Tier 2: Sec. 5.7.4.1)

High Seismicity (Complete the Following Items in Addition to the ITEMS FOR Low and Moderate Seismicity)

Connections

C NC N/A U
☒ ☐ ☐ ☐ WOOD SILLS: Sill bolts are spaced at 6 ft or less with acceptable edge and end distance provided for wood and concrete. (Commentary: Sec. A.5.3.4, Tier 2: Sec. 5.7.3.3)

Diaphragms

C NC N/A U
☐ ☐ ☒ ☐ DIAPHRAGM CONTINUITY: The diaphragms are not composed of split-level floors and do not have expansion joints. (Commentary: Sec. A.4.1.1, Tier 2: Sec.5.6.1.1)

C NC N/A U
☐ ☐ ☐ ☒ ROOF CHORD CONTINUITY: All chord elements are continuous, regardless of changes in roof elevation. (Commentary: Sec. A.4.1.3, Tier 2: Sec. 5.6.1.1)

C NC N/A U
☐ ☒ ☐ ☐ PLAN IRREGULARTIES: There is tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. (Commentary: Sec. A.4.1.7, Tier 2: Sec. 5.6.1.4)

C NC N/A U
☐ ☒ ☐ ☐ DIAPHRAGM REINFORCEMENT AT OPENINGS: There is reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. (Commentary: Sec.A.4.1.8, Tier 2: Sec. 5.6.1.5)

C NC N/A U
☐ ☒ ☐ ☐ STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 1-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1, Tier 2: Sec.5.6.2)

C NC N/A U
☐ ☒ ☐ ☐ SPANS: All wood diaphragms with spans greater than 12 feet consist of wood structural panels or diagonal sheathing. (Commentary: Sec. A.4.2.2, Tier 2: Sec.5.6.2)

C NC N/A U

☐ ☐ ☒ ☐ UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 30 feet and aspect ratios less than or equal to 3-to-1 f. (Commentary: Sec. A.4.2.3 Tier 2: Sec.5.6.2)

C NC N/A U
☒ ☐ ☐ ☐ OTHER DIAPHRAGMS: The diaphragm does not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1, Tier 2: Sec.5.6.5)

Table 17-5. Immediate Occupancy Checklist for Building Types W1 and W1a

Very Low Seismicity
Seismic-Force-Resisting System

C NC N/A U
☒ ☐ ☐ ☐ REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2. (Commentary: Sec. A.3.2.1.1, Tier 2: Sec. 5.5.1.1)

C NC N/A U
☐ ☐ ☐ ☒ SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 4.5.3.3, is less than the following values (Commentary Sec. A.3.2.7.1, Tier 2: Sec. 5.5.3.1.1):

Structural panel sheathing	1,000 plf
Diagonal sheathing	700 plf
Straight sheathing	100 plf
All other considerations	100 plf

C NC N/A U
☐ ☐ ☒ ☐ STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings do not rely on exterior stucco walls as the primary seismic-force-resisting-system. (Commentary: Sec. A.3.2.7.2, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☐ ☐ ☒ ☐ GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard are not used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Commentary: Sec. A.3.2.7.3, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☒ ☐ ☐ ☐ NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 are not used to seismic forces. (Commentary Sec. A.3.2.7.4, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☐ ☐ ☒ ☐ WALLS CONNECTED THROUGH FLOORS: Shear walls have an interconnection between stories to transfer overturning and shear forces through the floor. (Commentary: Sec. A.3.2.7.5, Tier 2: Sec. 5.5.3.6.2)

C NC N/A U
☐ ☐ ☒ ☐ HILLSIDE SITE: For structures that are taller than on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1 to 2. (Commentary: Sec. A.3.2.7.6, Tier 2: Sec. 5.5.3.6.3)

C NC N/A U
☐ ☐ ☒ ☐ CRIPPLE WALLS: Cripple walls below first-floor-level shear walls are braced to the foundation with wood structural panels. (Commentary: Sec. A.3.2.7.7, Tier 2: Sec. 5.5.3.6.4)

C NC N/A U
☐ ☒ ☐ ☐ OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or are supported by adjacent construction through positive ties capable of transferring the seismic forces. (Commentary: Sec. A.3.2.7.8, Tier 2: Sec. 5.5.3.6.5)

Connections

C NC N/A U
☐ ☒ ☐ ☐ WOOD POSTS: There is a positive connection of wood posts to the foundation. (Commentary: Sec. A.5.3.3, Tier 2: Sec. 5.7.3.3)

C NC N/A U

☐ ☒ ☐ ☐ WOOD SILLS: All wood sills are bolted to the foundation. (Commentary: Sec. A.5.3.4, Tier 2: Sec. 5.7.3.3)

C NC N/A U
☐ ☒ ☐ ☐ GIRDER/COLUMN CONNECTION: There is a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Commentary: Sec. A.5.4.1, Tier 2: Sec. 5.7.4.1)

Foundation Systems

C NC N/A U
☐ ☐ ☒ ☐ DEEP FOUNDATIONS: Piles and piers are capable of transferring the lateral forces between the structure and the soil.

C NC N/A U
☐ ☒ ☐ ☐ SLOPING SITES: The difference in foundation embedment depth from one side of the building to another does not exceed one story.

Low, Moderate and High Seismicity (Complete the Following Items in Addition to the Items for Very Low Seismicity)

Seismic-Force -Resisting System

C NC N/A U
☐ ☒ ☐ ☐ HOLD-DOWN ANCHORS: All shear walls have hold-down anchors attached to the end studs constructed in accordance with acceptable construction practices.

C NC N/A U
☒ ☐ ☐ ☐ NARROW WOOD SHEAR WALS: Narrow wood shear walls with an aspect ration greater than 1.5 to 1 are not used to resist seismic forces.

Diaphragms

C NC N/A U
☐ ☐ ☒ ☐ DIAPHRAGM CONTINUITY: The diaphragms are not composed of split-level floors and do not have expansion joints. (Commentary: Sec. A.4.1.1, Tier 2: Sec.5.6.1.1)

C NC N/A U
☐ ☐ ☐ ☒ ROOF CHORD CONTINUITY: All chord elements are continuous, regardless of changes in roof elevation. (Commentary: Sec. A.4.1.3, Tier 2: Sec. 5.6.1.1)

C NC N/A U
☐ ☒ ☐ ☐ PLAN IRREGULARTIES: There is tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. (Commentary: Sec. A.4.1.7, Tier 2: Sec. 5.6.1.4)

C NC N/A U
☐ ☒ ☐ ☐ DIAPHRAGM REINFORCEMENT AT OPENINGS: There is reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. (Commentary: Sec.A.4.1.8, Tier 2: Sec. 5.6.1.5)

C NC N/A U
☐ ☒ ☐ ☐ STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 1-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1, Tier 2: Sec.5.6.2)

C NC N/A U
☐ ☒ ☐ ☐ SPANS: All wood diaphragms with spans greater than 12 feet consist of wood structural panels or diagonal sheathing. (Commentary: Sec. A.4.2.2, Tier 2: Sec.5.6.2)

C NC N/A U
☐ ☐ ☒ ☐ DIAGONALLY SHEATHED AND BLOCKED DIAPHRAGMS: All Diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 30 ft and aspect ratios less than or equal to 3 to 1. (Commentary: Sec: A.4.2.3, Tier 2: Sec.5.6.2)

C NC N/A U
☐ ☐ ☒ ☐ UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 30 feet and aspect ratios less than or equal to 3-to-1 f. (Commentary: Sec. A.4.2.3 Tier 2: Sec.5.6.2)

C NC N/A U

☒ ☐ ☐ ☐ OTHER DIAPHRAGMS: The diaphragm does not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1, Tier 2: Sec.5.6.5)

Connections

C NC N/A U
☒ ☐ ☐ ☐ WOOD SILLS BOLTS: Sill bolts are spaced at 4 ft or less with acceptable edge and end distance provided for wood and concrete. (Commentary: Sec. A.5.3.7, Tier 2: Sec. 5.7.3.3)

Table 17-6. Collapse Prevention Structural Checklist of Buildings Type W2

Low and Moderate Seismicity
Seismic-Force-Resisting System

C NC N/A U
☒ ☐ ☐ ☐ REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2. (Commentary: Sec. A.3.2.1.1, Tier 2: Sec. 5.5.1.1)

C NC N/A U
☐ ☐ ☐ ☒ SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 4.5.3.3, is less than the following values (Commentary Sec. A.3.2.7.1, Tier 2: Sec. 5.5.3.1.1):

Structural panel sheathing	1,000 plf
Diagonal sheathing	700 plf
Straight sheathing	100 plf
All other considerations	100 plf

C NC N/A U
☐ ☐ ☒ ☐ STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings do not rely on exterior stucco walls as the primary seismic-force-resisting-system. (Commentary: Sec. A.3.2.7.2, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☐ ☐ ☒ ☐ GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard are not used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Commentary: Sec. A.3.2.7.3, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☒ ☐ ☐ ☐ NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 are not used to seismic forces. (Commentary Sec. A.3.2.7.4, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☐ ☐ ☒ ☐ WALLS CONNECTED THROUGH FLOORS: Shear walls have an interconnection between stories to transfer overturning and shear forces through the floor. (Commentary: Sec. A.3.2.7.5, Tier 2: Sec. 5.5.3.6.2)

C NC N/A U
☐ ☐ ☒ ☐ HILLSIDE SITE: For structures that are taller than on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1 to 2. (Commentary: Sec. A.3.2.7.6, Tier 2: Sec. 5.5.3.6.3)

C NC N/A U
☐ ☐ ☒ ☐ CRIPPLE WALLS: Cripple walls below first-floor-level shear walls are braced to the foundation with wood structural panels. (Commentary: Sec. A.3.2.7.7, Tier 2: Sec. 5.5.3.6.4)

C NC N/A U
☐ ☒ ☐ ☐ OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or are supported by adjacent construction through positive ties capable of transferring the seismic forces. (Commentary: Sec. A.3.2.7.8, Tier 2: Sec. 5.5.3.6.5)

Connections

C NC N/A U

☐ ☒ ☐ ☐ WOOD POSTS: There is a positive connection of wood posts to the foundation. (Commentary: Sec. A.5.3.3, Tier 2: Sec. 5.7.3.3)

C NC N/A U
☒ ☐ ☐ ☐ WOOD SILLS: All wood sills are bolted to the foundation. (Commentary: Sec. A.5.3.4, Tier 2: Sec. 5.7.3.3)

C NC N/A U
☐ ☒ ☐ ☐ GIRDER/COLUMN CONNECTION: There is a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Commentary: Sec. A.5.4.1, Tier 2: Sec. 5.7.4.1)

High Seismicity (Complete the Following Items in Addition to the Items for Low and Moderate Seismicity)

Connections

C NC N/A U
☒ ☐ ☐ ☐ WOOD SILL BOLTS: Sill bolts are spaced at 6 feet or less with proper edge and end distance provided for wood and concrete. (Commentary: Sec. A.5.3.7, Tier 2: Sec.5.7.3.3)

Diaphragms

C NC N/A U
☐ ☐ ☒ ☐ DIAPHRAGM CONTINUITY: The diaphragms are not composed of split-level floors and do not have expansion joints. (Commentary: Sec. A.4.1.1, Tier 2: Sec.5.6.1.1)

C NC N/A U
☐ ☐ ☐ ☒ ROOF CHORD CONTINUITY: All chord elements are continuous, regardless of changes in roof elevation. (Commentary: Sec. A.4.1.3, Tier 2: Sec. 5.6.1.1)

C NC N/A U
☐ ☒ ☐ ☐ PLAN IRREGULARTIES: There is tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. (Commentary: Sec. A.4.1.7, Tier 2: Sec. 5.6.1.4)

C NC N/A U
☐ ☒ ☐ ☐ DIAPHRAGM REINFORCEMENT AT OPENINGS: There is reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. (Commentary: Sec.A.4.1.8, Tier 2: Sec. 5.6.1.5)

C NC N/A U
☐ ☒ ☐ ☐ STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 1-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1, Tier 2: Sec.5.6.2)

C NC N/A U
☐ ☒ ☐ ☐ SPANS: All wood diaphragms with spans greater than 12 feet consist of wood structural panels or diagonal sheathing. (Commentary: Sec. A.4.2.2, Tier 2: Sec.5.6.2)

C NC N/A U
☐ ☐ ☒ ☐ DIAGONALLY SHEATHED AND BLOCKED DIAPHRAGMS: All Diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 30 ft and aspect ratios less than or equal to 3 to 1. (Commentary: Sec: A.4.2.3, Tier 2: Sec.5.6.2)

C NC N/A U
☒ ☐ ☐ ☐ OTHER DIAPHRAGMS: The diaphragm does not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1, Tier 2: Sec.5.6.5)

Table 17-7. Immediate Occupancy Checklist for Building Type W2

Very Low Seismicity
Seismic-Force-Resisting System

C NC N/A U
☒ ☐ ☐ ☐ REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2. (Commentary: Sec. A.3.2.1.1, Tier 2: Sec. 5.5.1.1)

C NC N/A U

☐ ☐ ☐ ☒ SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 4.5.3.3, is less than the following values (Commentary Sec. A.3.2.7.1, Tier 2: Sec. 5.5.3.1.1):

Structural panel sheathing	1,000 plf
Diagonal sheathing	700 plf
Straight sheathing	100 plf
All other considerations	100 plf

C NC N/A U
☐ ☐ ☒ ☐ STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings do not rely on exterior stucco walls as the primary seismic-force-resisting-system. (Commentary: Sec. A.3.2.7.2, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☐ ☐ ☒ ☐ GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard are not used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Commentary: Sec. A.3.2.7.3, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☒ ☐ ☐ ☐ NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 are not used to seismic forces. (Commentary Sec. A.3.2.7.4, Tier 2: Sec. 5.5.3.6.1)

C NC N/A U
☐ ☐ ☒ ☐ WALLS CONNECTED THROUGH FLOORS: Shear walls have an interconnection between stories to transfer overturning and shear forces through the floor. (Commentary: Sec. A.3.2.7.5, Tier 2: Sec. 5.5.3.6.2)

C NC N/A U
☐ ☐ ☒ ☐ HILLSIDE SITE: For structures that are taller than on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1 to 2. (Commentary: Sec. A.3.2.7.6, Tier 2: Sec. 5.5.3.6.3)

C NC N/A U
☐ ☐ ☒ ☐ CRIPPLE WALLS: Cripple walls below first-floor-level shear walls are braced to the foundation with wood structural panels. (Commentary: Sec. A.3.2.7.7, Tier 2: Sec. 5.5.3.6.4)

C NC N/A U
☐ ☒ ☐ ☐ OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or are supported by adjacent construction through positive ties capable of transferring the seismic forces. (Commentary: Sec. A.3.2.7.8, Tier 2: Sec. 5.5.3.6.5)

C NC N/A U
☐ ☒ ☐ ☐ HOLD-DOWN ANCHORS: All shear walls have hold-down anchors attached to the end studs constructed in accordance with acceptable construction practices.

Connections

C NC N/A U
☐ ☒ ☐ ☐ WOOD POSTS: There is a positive connection of wood posts to the foundation. (Commentary: Sec. A.5.3.3, Tier 2: Sec. 5.7.3.3)

C NC N/A U
☒ ☐ ☐ ☐ WOOD SILLS: All wood sills shall be bolted to the foundation. (Commentary: Sec. A.5.3.4, Tier 2: Sec. 5.7.3.3)

C NC N/A U
☐ ☒ ☐ ☐ GIRDER/COLUMN CONNECTION: There is a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Commentary: Sec. A.5.4.1, Tier 2: Sec. 5.7.4.1)

Foundation Systems

C NC N/A U
☐ ☐ ☒ ☐ DEEP FOUNDATIONS: Piles and piers are capable of transferring the lateral forces between the structure and the soil.

C NC N/A U

☐ ☒ ☐ ☐ SLOPING SITES: The difference in foundation embedment depth from one side of the building to another does not exceed one story.

Low, Moderate, and High Seismicity (Complete the following Items in Addition to the Item for Very Low Seismicity)

C NC N/A U
☒ ☐ ☐ ☐ NARROW WOOD SHEAR WALS: Narrow wood shear walls with an aspect ration greater than 1.5 to 1 are not used to resist seismic forces.

Diaphragms

C NC N/A U
☐ ☐ ☒ ☐ DIAPHRAGM CONTINUITY: The diaphragms are not composed of split-level floors and do not have expansion joints. (Commentary: Sec. A.4.1.1, Tier 2: Sec.5.6.1.1)

C NC N/A U
☐ ☐ ☐ ☒ ROOF CHORD CONTINUITY: All chord elements are continuous, regardless of changes in roof elevation. (Commentary: Sec. A.4.1.3, Tier 2: Sec. 5.6.1.1)

C NC N/A U
☐ ☒ ☐ ☐ DIAPHRAGM REINFORCEMENT AT OPENINGS: There is reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. (Commentary: Sec.A.4.1.8, Tier 2: Sec. 5.6.1.5)

C NC N/A U
☐ ☒ ☐ ☐ STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 1-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1, Tier 2: Sec.5.6.2)

C NC N/A U
☐ ☒ ☐ ☐ SPANS: All wood diaphragms with spans greater than 12 feet consist of wood structural panels or diagonal sheathing. (Commentary: Sec. A.4.2.2, Tier 2: Sec.5.6.2)

C NC N/A U
☐ ☐ ☒ ☐ DIAGONALLY SHEATHED AND BLOCKED DIAPHRAGMS: All Diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 30 ft and aspect ratios less than or equal to 3 to 1. (Commentary: Sec: A.4.2.3, Tier 2: Sec.5.6.2)

C NC N/A U
☒ ☐ ☐ ☐ OTHER DIAPHRAGMS: The diaphragm does not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1, Tier 2: Sec.5.6.5)

Connections

C NC N/A U
☒ ☐ ☐ ☐ WOOD SILLS BOLTS: Sill bolts are spaced at 4 ft or less with acceptable edge and end distance provided for wood and concrete. (Commentary: Sec. A.5.3.7, Tier 2: Sec. 5.7.3.3)

NON-STRUCTURAL CHECKLIST
ASCE 41-17

Nonstructural Checklist
The following checklist was be completed for combinations of Performance Levels and Level of seismicity as required by Table 4-6. Checklist items are grouped by system or component type. Each item is preceded by an annotation indicating the Level(s) of Seismicity for which it is required, given a desired performance Level. The Performance Level is designated by LS for Life Safety or PR for Position Retention. The Levels of Seismicity is designated by L, M, or H, for Low, Moderate, and High, respectively. For example, the annotation "LS-H; PR-LMH" indicates that the checklist item is required in High Seismicity when the Performance Level is Life Safety and in Low, Moderate, or High Seismicity when the Performance Level is Position Retention.

A checklist item was be marked Compliant only when the following conditions are all true:

1. Supporting members relied on for compliance have complete load paths to supporting structural members.
2. Bracing members, connecting members, and supporting structural or architectural components relied on for compliance are of materials and dimensions suitable to the application.
3. Fasteners and connectors relied on for compliance are of materials and sizes suitable to the application.

For evaluation at the Life Safety Performance Level, a checklist item need not be marked Noncompliant if the noncompliance occurs only in locations where related damage would not cause severe injury or death to one or more people.

Life Safety Systems

C NC N/A U
☐ ☐ ☒ ☐ **LS-LMH; PR-LMH**. FIRE SUPRESSION PIPING: Fire suppression piping is anchored and braced in accordance with NFPA-13. (Commentary: Sec. A.7.13.1. Tier 2: Sec. 13.7.4)

C NC N/A U
☐ ☐ ☐ ☒ **LS-LMH; PR-LMH.** FLEXIBLE COUPLINGS: Fire suppression piping has flexible couplings in accordance with NFPA-13. (Commentary: Sec. A.7.13.2. Tier 2: Sec. 13.7.4)

C NC N/A U
☐ ☐ ☐ ☒ **LS-LMH; PR-LMH**. EMERGENCY POWER: Equipment used to power or control life safety system is anchored or braced. (Commentary: Sec. A.7.12.1. Tier 2: Sec. 13.7.7)

C NC N/A U
☐ ☐ ☐ ☒ **LS-LMH; PR-LMH**. STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts are braced and have flexible connections at seismic joints. (Commentary: Sec. A.7.14.1, Tier 2: Sec. 13.7.6)

C NC N/A U
☐ ☐ ☐ ☒ **LS-MH; PR-MH.**SPRINKLER CEILING CLEARANCE: Penetration through panelized ceilings for fire suppression devices provide clearances in according with NFPA-13. (Commentary: Sec. A.7.13.3. Tier 2: Sec. 13.7.4)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-LMH.** EMERGENCY LIGHTING: Emergency and egress lighting equipment is anchored or braced. (Commentary: Sec. A.7.3.1. Tier 2: Sec. 13.7.9)

Hazardous Materials

C NC N/A U
☐ ☐ ☒ ☐ **LS-LMH; PR-LMH.** HAZARDOUS MATERIAL EQUIPMENT: Equipment mounted on vibration isolators and containing hazardous material is equipped with restraints or snubbers. (Commentary: Sec. A.7.12.2, Tier 2: Sec. 13.7.1)

C NC N/A U

C	NC	N/A	U	
☐	☐	☒	☐	**LS-LMH; PR-LMH.** HAZARDOUS MATERIAL STORAGE: Breakable containers that hold hazardous material, including gas cylinders, are restrained by latched doors, shelf lips, wires, or other methods. (Commentary: Sec. A.7.15.1. Tier 2: Sec. 13.8.4)
☐	☐	☒	☐	**LS-MH; PR-MH.** HAZARDOUS MATERIAL DISTRIBUTION: Piping or ductwork conveying hazardous materials is braced or otherwise protected from damage that would allow hazardous material release. (Commentary: Sec. A.7.13.4, Tier 2: Sec. 13.7.3 and 13.7.5)
☐	☐	☒	☐	**LS-MH; PR: MH.** SHUT-OFF VALVES: Piping containing hazardous material, including natural gas, has shut-off valves or other devices to limit spills or leaks. (Commentary: Sec. A.7.13.3, Tier 2: Sec. 13.7.3 and 13.7.5)
☐	☐	☒	☐	**LS-LMH; PR-LMH.** FLEXIBLE COUPLINGS: Hazardous material ductwork and piping, including natural gas piping, has flexible couplings. (Commentary: Sec. A.7.15.4, Tier 2: Sec. 13.7.3 and 13.7.5)
☐	☐	☒	☐	**LS-MH; PR-MH.** PIPING OR DUCTS CROSSING SEISMIC JOINTS: Piping or ductwork carrying hazardous material that either crosses seismic joints or isolation planes or is connected to independent structures has couplings or other details to accommodate the relative seismic displacements. (Commentary: Sec. A.7.13.6, Tier 2: Sec. 13.7.3, 13.7.5, and 13.7.6)

Partitions

C	NC	N/A	U	
☐	☐	☒	☐	**LS-LMH; PR-LMH**. UNREINFORCED MASONRY: Unreinforced masonry or hollow-clay tile partitions are braced at a spacing of at most 10 ft in Low or Moderate Seismicity, or at most 6 ft in High Seismicity. (Commentary: Sec. A.7.1.1, Tier 2: Sec. 13.6.2)
☐	☐	☒	☐	**LS-LMH; PR-LMH**. HEAVY PARTITIONS SUPPORTED BY CEILINGS: The tops of masonry or hollow-clay tile partitions are not laterally supported by an integrated ceiling system. (Commentary: Sec. A.7.2.1, Tier 2: Sec. 13.6.2)
☐	☐	☒	☐	**LS-MH; PR-MH**. DRIFT: Rigid cementitious partitions are detailed to accommodate the following drift ratios: in steel moment frame, concrete moment frame, and wood frame buildings, 0.02; in other buildings, 0.005. (Commentary: Sec. A.7.1.2. Tier 2: Sec. 13.6.2)
☐	☐	☐	☒	**LS-not required; PR-MH.** LIGHT PARTITIONS SUPPORTED BY CEILINGS: The tops of gypsum board partitions are not laterally supported by an integrated ceiling system. (Commentary: Sec. A.7.2.1. Tier 2: Sec. 13.6.2)
☐	☐	☒	☐	**LS-not required; PR-MH.** STRUCTURAL SEPARATIONS: Partitions that cross structural separation have seismic or control joints. (Commentary: Sec. A.7.1.3. Tier 2: Sec. 13.6.2)
☒	☐	☐	☐	**LS-not required; PR-MH.** TOPS: The tops of ceiling-high framed or panelized partitions have lateral bracing to the structure at a spacing equal to or less than 6 ft. (Commentary: Sec. A.7.1.4. Tier 2: Sec. 13.6.2)

Ceilings

C	NC	N/A	U	
☐	☐	☒	☐	**LS-MH; PR-LMH.** SUSPENDED LATH AND PLASTER: Suspended lath and plaster ceilings have attachments that resist seismic forces for every 12 square feet of area. (Commentary: Sec. A.7.2.3. Tier 2: Sec. 13.6.4)
☐	☐	☒	☐	**LS-MH; PR-LMH.** SUSPENDED GYPSUM BOARD: Suspended gypsum board ceilings have attachments that resist seismic forces for every 12 square feet of area. (Commentary: Sec. A.7.2.3. Tier 2: Sec. 13.6.4)

C	NC	N/A	U	
☐	☐	☐	☒	**LS-not required; PR-MH.** INTEGRATED CEILINGS: Integrated suspended ceilings with continuous areas greater than 144 square feet and ceilings of smaller areas that are not surrounded by restraining partitions are laterally restrained at a spacing no greater than 12 ft with members attached to the structure above. Each restraint location has a minimum of four diagonal wires and compression strut, or diagonal members capable of resisting compression. (Commentary: Sec. A.7.2.2. Tier 2: Sec. 13.6.4)
☐	☒	☐	☐	**LS-not required; PR-MH.** EDGE CLEARANCE: The free edges of integrated suspended ceilings with continuous areas greater than 144 square feet have clearances from the enclosing wall or partition of at least the following: in Moderate Seismicity, ½ inch; in High Seismicity, ¾ inch. (Commentary: Sec. A.7.2.4, Tier 2: Sec. 13.6.4)
☐	☐	☒	☐	**LS-not required; PR-MH.** CONTINUITY ACROSS STRUCTURE JOINTS: The ceiling system does not cross any seismic joint and is not attached to the multiple independent structures. (Commentary: Sec. A.7.2.5, Tier 2: Sec. 13.6.4)
☐	☒	☐	☐	**LS-not required; PR-H.** EDGE SUPPORT: The free edges of integrated suspended ceilings with continuous areas greater than 144 square feet are supported by closure angles or channels not less than 2 inches wide. (Commentary: Sec. A.7.2.6. Tier 2: Sec. 13.6.4)
☐	☐	☒	☐	**LS-not required; PR-H.** SEISMIC JOINTS: Acoustical tile or lay-in panel ceilings have seismic separation joints such that each continuous portion of the ceiling is no more than 2500 square feet and has a ratio of long-to-short dimension no more than 4-tp-1. (Commentary: Sec. A.7.2.7. Tier 2: Sec. 13.6.4)

Light Fixtures

C	NC	N/A	U	
☐	☐	☐	☒	**LS-MH; PR-MH.** INDEPENDENT SUPPORT: Light fixtures that weigh more per square foot that the ceiling they penetrate are supported independent of the grid ceiling suspension system by a minimum of two wires at diagonally opposite corners of each fixture. (Commentary: Sec. A.7.3.2. Tier 2: Sec. 13.6.4 and 13.7.9)
☐	☐	☒	☐	**LS-not required; PR-H.** PENDANT SUPPORTS: Light fixtures on pendant supports are attached at a spacing equal to or less than 6 ft and, if rigidly supported, are free to move with the structure to which they are attached without damaging adjoining components. (Commentary: Sec. A.7.3.3, Tier 2: Sec. 13.7.9)
☐	☐	☒	☐	**LS-not required; PR-H.** LENS COVERS: Lens covers on light fixtures are attached with safety devices. (Commentary: Sec. A.7.3.4. Tier 2: Sec. 13.7.9)

Cladding and Glazing

C	NC	N/A	U	
☐	☐	☐	☒	**LS-MH; PR-MH**. CLADDING ANCHORS: Cladding components weighing more than 10 pounds over square feet are mechanically anchored to the structure at a spacing equal to or less than the following: for Life Safety in Moderate Seismicity, 6 ft; for Life Safety in High Seismicity and for Position Retention in and seismicity, 4 ft. (Commentary: Sec. A.7.4.1. Tier 2: Sec. 13.6.1)
☐	☐	☒	☐	**LS-MH; PR-MH.** CLADDING ISOLATION: For steel or concrete moment frame buildings, panel connections are detailed to accommodate a story drift ratio of at least the following: for Life Safety in Moderate Seismicity, 0.01; for Life Safety in High Seismicity and for Position Retention in any seismicity, 0.02. (Commentary: Sec. A.7.4.3, Tier 2: Sec. 13.6.1)
☐	☐	☒	☐	**LS-MH; PR-MH**. MULTI-STORY PANELS: For multi-story panels attached at more than one floor level, panel connections are detailed to accommodate a story drift ratio of at least the

following: for Life Safety in Moderate Seismicity, 0.01; for Life Safety in High Seismicity and for Position Retention in any seismicity, 0.02. (Commentary: Sec. A.7.4.4. Tier 2: Sec. 13.6.1)

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-MH.** PANEL CONNECTIONS: Cladding panels are anchored out of plane with a minimum number of connections for each wall panel, as follows: for Life Safety in Moderate seismicity, 2 connections; for Life Safety in High Seismicity and for Position Retention in any seismicity, 4 connections. (Commentary: Sec. A.7.4.5. Tier 2: Sec. 13.6.1.4)

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-MH.** BEARING CONNECTIONS: Where bearing connections are used, there is a minimum of two bearing connections for each cladding panel. (Commentary: Sec. A.7.4.6. Tier 2: Sec. 13.6.1.4)

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-MH**. INSERTS: Where concrete cladding components use inserts, the inserts have positive anchorage or are anchored to reinforcing steel. (Commentary: Sec. A.7.4.7. Tier 2: Sec. 13.6.1.4)

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-MH.** OVERHEAD GLAZING: Glazing panes of any size in curtain walls and individual interior or exterior panes more than 16 square feet in area are laminated annealed or laminated heat-strengthened glass and are detailed to remain in the frame when cracked. (Commentary: Sec. A.7.4.8: Tier 2: Sec. 13.6.1.5)

Masonry Veneer

C NC N/A U
☐ ☐ ☒ ☐ **LS-LMH; PR-LMH**. TIES: Masonry veneer is connected to the backup with corrosion-resistant ties. There is a minimum of one tie for every 2-2/3 square feet, and the ties have spacing no greater than the following: for Life Safety in Low or Moderate Seismicity, 36 inches; for Life Safety in High seismicity and for Position Retention in any seismicity, 24 inches. (Commentary: Sec. A.7.5.1, Tier 2: Sec. 13.6.1.2)

C NC N/A U
☐ ☐ ☒ ☐ **LS-LMH; PR-LMH.** SHELF ANGLES: Masonry veneer is supported by shelf angles or other elements at each floor above the ground floor. (Commentary: Sec.A.7.5.2. Tier 2: Sec. 13.6.1.2)

C NC N/A U
☐ ☐ ☒ ☐ **LS-LMH; PR-LMH.** WEAKENED PLANES: Masonry veneer is anchored to the backup adjacent to weakened planes, such as at the locations of flashing. (Commentary: Sec. A.7.5.3. Tier 2: Sec. 13.6.1.2)

C NC N/A U
☐ ☐ ☒ ☐ **LS-LMH; PR-LMH.** UNREINFORCED MASONRY BACK-UP: There is no unreinforced masonry backup. (Commentary: Sec. A.7.7.2. Tier 2: Sec. 13.6.1.1 and 13.6.1.2)

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-MH**. STUD TRACKS: For veneer with metal stud backup, stud tracks are fastened to the structure at a spacing equal to or less than 24 inches on center. (Commentary: Sec. A.7.6.1, Tier 2: Sec. 13.6.1.1 and 13.6.1.2)

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-MH.** ANCHORAGE: For veneer with concrete block or masonry backup, the backup is positively anchored to the structure at a horizontal spacing equal to or less than 4 ft along the floors and roof. (Commentary: Sec. A.7.7.1. Tier 2: Sec. 13.6.1.1 and 13.6.1.2)

C NC N/A U
☐ ☐ ☒ ☐ **LS-not required; PR-MH.** WEEP HOLES: In veneer anchored to stud walls, the veneer has functioning weep holes and base flashing. (Commentary: Sec. A.7.5.6, Tier 2: Sec. 13.6.1.2)

C NC N/A U
☐ ☐ ☒ ☐ **LS-not required; PR-MH.** OPENINGS: For veneer with metal stud backup, steel studs frame window and door openings. (Commentary: Sec. A.7.6.2, Tier 2: Sec. 13.6.1.1 and 13.6.1.2)

Parapets, Cornices, Ornamentation, and Appendages

C NC N/A U

C NC N/A U
☐ ☐ ☒ ☐ **LS-LMH; PR-LMH.** URM PARAPETS OR CORNICES: Laterally unsupported unreinforced masonry parapets or cornices have height-to-thickness ratios no greater than the following: for Life Safety in Low or Moderate seismicity, 2.5; for Life Safety in High seismicity and for Position Retention in any seismicity, 1.5. (Commentary: Sec. A.7.8.1, Tier 2: Sec. 13.6.5)

C NC N/A U
☐ ☐ ☐ ☒ **LS-LMH; PR-LMH.** CANOPIES: Canopies at building exits are anchored to the structure at a spacing no greater than the following: for Life Safety in Low or Moderate seismicity, 10 ft; for Life Safety in High Seismicity and for Position Retention in any seismicity, 6 ft. (Commentary: Sec. A.7.8.2, Tier 2: Sec. 13.6.6)

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-LMH.** CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 have vertical reinforcement. (Commentary: Sec. A.7.8.3. Tier 2: Sec. 13.6.5)

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-LMH.** APPENDAGES: Cornices, parapets, signs, and other ornamentation or appendages that extend above the highest point of anchorage to the structure or cantilever from components are reinforced and anchored to the structural system at a spacing equal to or less than 6 ft. This checklist item does not apply to parapets or cornices covered by other checklist items. (Commentary: Sec. A.7.8.4. Tier 2: Sec. 13.6.6)

Masonry Chimneys

C NC N/A U
☐ ☐ ☐ ☒ **LS-LMH; PR-LMH**. URM CHIMNEYS: Unreinforced masonry chimneys extend above the roof surface no more than the following: for Life Safety in Low or Moderate seismicity, 3 times the least dimension of the chimney; for Life Safety in High Seismicity and for Position Retention in any seismicity, 2 times the least dimension of the chimney. (Commentary: Sec. A.7.9.1, Tier 2: Sec. 13.6.7)

C NC N/A U
☐ ☐ ☐ ☒ **LS-LMH; PR-LMH.** ANCHORAGE: Masonry chimneys are anchored at each floor level, at the topmost ceiling level, and at the roof. (Commentary: Sec. A.7.9.2, Tier 2: Sec. 13.6.7)

Stairs

C NC N/A U
☐ ☐ ☒ ☐ **LS-LMH; PR-LMH.** STAIR ENCLOSURES: Hollow clay tile or unreinforced masonry walls around stair enclosures are restrained out of plane and have height-to-thickness ratios not greater than the following: for Life Safety in Low or Moderate seismicity, 15-to-1; for Life Safety in High Seismicity and for Position Retention in any seismicity, 12-to-1. (Commentary: Sec. A.7.10.1, Tier 2: Sec. 13.6.2 and 13.6.8)

C NC N/A U
☐ ☐ ☐ ☒ **LS-LMH; PR-LMH.** STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure does not rely on shallow anchors in concrete. Alternatively, the stair details are capable of accommodating the drift calculated using the Quick Check procedure of Section 4.5.3.1 without including any lateral stiffness contribution from the stairs. (Commentary: Sec. A.7.10.2. Tier 2: Sec. 13.6.8)

Contents and Furnishings

C NC N/A U
☐ ☐ ☒ ☐ **LS-MH; PR-MH.** INDUSTRIAL STORAGE RACKS: Industrial storage racks or pallet racks more than 12 ft high meet the requirements of ANSI/RMI MH 16.1 as modified by ASCE 7 Chapter 15. (Commentary: Sec. A.7.11.1. Tier 2: Sec. 13.8.1)

C NC N/A U
☐ ☐ ☒ ☐ **LS-H; PR-MH.** TALL NARROW CONTENTS: Contents more than 6 ft in high with a height-to-depth or height-to-width ratio greater than 3-to-1 are anchored to the structure or to each other. (Commentary: Sec. A.7.11.2. Tier 2: Sec. 13.8.2)

C NC N/A U

☐ ☐ ☐ ☒ **LS-H; PR-H.** FALL-PRONE CONTENTS: Equipment, stored items, or other contents weighing more than 20 lb whose center of mass is more than 4 ft above the adjacent floor level are braced or otherwise restrained. (Commentary: Sec. A.7.11.3. Tier 2: Sec. 13.8.2)

C NC N/A U
☐ ☐ ☒ ☐ **LS-not required; PR-MH.** ACCESS FLOORS: Access floors more than 9 inch high are braced. (Commentary: Sec. A.7.11.4. Tier 2: Sec. 13.8.3)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-MH.** EQUIPMENT ON ACCESS FLOORS: Equipment and other contents supported by access floor systems are anchored or braced to the structure independent of the access floor. (Commentary: Sec. A.7.11.5. Tier 2: Sec. 13.7.7 and 13.8.3)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** SUSPENDED CONTENTS: Items suspended without lateral bracing are free to swing from or move with the structure from which they are suspended without damaging themselves or adjoining components. (Commentary: Sec. A.7.11.6. Tier 2: Sec. 13.8.2)

Mechanical and Electrical Equipment

C NC N/A U
☐ ☐ ☐ ☒ **LS-H; PR-H.** FALL-PRONE EQUIPMENT: Equipment weighing more than 20 lb whose center of mass is more than 4 ft above the adjacent floor level, and which is not in-line equipment, is braced. (Commentary: Sec. A.7.12.4. Tier 2: Sec. 13.7.1 and 13.7.7)

C NC N/A U
☐ ☐ ☐ ☒ **LS-H; PR-H.** IN-LINE EQUIPMENT: Equipment installed in-line with a duct or piping system, with an operating weight more than 75 lb, is supported and laterally braced independent of the duct or piping system. (Commentary: Sec. A.7.12.5. Tier 2: Sec. 13.7.1)

C NC N/A U
☐ ☐ ☐ ☒ **LS-H; PR-MH.** TALL NARROW EQUIPMENT: Equipment more than 6 ft high with a height-to-depth or height-to-width ratio greater than 3-to-1 is anchored to the floor slab or adjacent structural walls. (Commentary: Sec. A.7.12.6. Tier 2: Sec. 13.7.1 and 13.7.7)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-MH.** MECHANICAL DOORS: Mechanically operated doors are detailed to operate at a story drift ratio of 0.01. (Commentary: Sec. A.7.12.7, Tier 2: Sec. 13.6.9)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** SUSPENDED EQUIPMENT: Equipment suspended without lateral bracing is free to swing from or move with the structure from which it is suspended without damaging itself or adjoining components. (Commentary: Sec. A.7.12.8, Tier 2: Sec. 13.7.1 and 13.7.7)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** VIBRATION ISOLATORS: Equipment mounted on vibration isolators is equipment with horizontal restraints or snubbers and with vertical restraints to resist overturning. (Commentary: Sec. A.7.12.9. Tier 2: Sec. 13.7.1)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H**. HEAVY EQUIPMENT: Floor-supported or platform-supported equipment weighing more than 400 lb is anchored to the structure. (Commentary: Sec. A.7.12.10. Tier 2: Sec. 13.7.1 and 13.7.7)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** ELECTRICAL EQUIPMENT: Electrical equipment is laterally braced to the structure. (Commentary: Sec. A.7.12.11. Tier 2: Sec. 13.7.7)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** CONDUIT COUPLINGS: Conduit greater than 2.5 inch trade size that is attached to panels, cabinets, or other equipment and is subject to relative seismic displacement has flexible couplings or connections. (Commentary: Sec. A.7.12.12. Tier 2: Sec. 13.7.8)

Piping

C NC N/A U

☐ ☐ ☐ ☒ **LS-not required; PR-H.** FLEXIBLE COUPLINGS: Fluid and gas piping has flexible couplings. (Commentary: Sec. A.7.13.2. Tier 2: Sec. 13.7.3 and 13.7.5)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** FLUID AND GAS PIPING: Fluid and gas piping is anchored and braced to the structure to limit spills or leaks. (Commentary: Sec. A.7.13.4. Tier 2: Sec. 13.7.3 and 13.7.5)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** C-CLAMPS: One-sided C-clamps that support piping larger than 2.5 inches in diameter are restrained. (Commentary: Sec. A.7.13.5, Tier 2: Sec. 13.7.3 and 13.7.5)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** PIPING CROSSING SEISMIC JOINTS: Piping that crosses seismic joints or isolation planes or is connected to independent structures has couplings or other details to accommodate the relative seismic displacements. (Commentary: Sec. A.7.13.6. Tier 2: Sec. 13.7.3 and 13.7.5)

Ducts

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** DUCT BRACING: Rectangular ductwork larger than 6 square ft in cross-sectional area and round ducts larger than 28 inches. in diameter are braced. The maximum spacing of transverse bracing does not exceed 30 ft. The maximum spacing of longitudinal bracing does not exceed 60 ft. (Commentary: Sec. A.7.14.2. Tier 2: Sec. 13.7.6)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H.** DUCT SUPPORT: Ducts are not supported by piping or electrical conduit. (Commentary: Sec. A.7.14.3. Tier 2: Sec. 13.7.6)

C NC N/A U
☐ ☐ ☐ ☒ **LS-not required; PR-H**. DUCTS CROSSING SEISMIC JOINTS: Ducts that cross seismic joints are isolation planes or are connected to independent structures have couplings or other details to accommodate the relative seismic displacements. (Commentary: Sec. A.7.14.5. Tier 2: Sec. 13.7.6)

Elevators

C NC N/A U
☐ ☐ ☒ ☐ **LS-H; PR-H.** RETAINER GUARDS: Sheaves and drums have cable retainer guards. (Commentary: Sec. A.7.16.1, Tier 2: Sec. 13.8.6)

C NC N/A U
☐ ☐ ☒ ☐ **LS-H; PR-H.** RETAINER PLATE: A retainer plate is present at the top and bottom of both car and counterweight. (Commentary: Sec. A.7.16.2, Tier 2: Sec. 13.8.6)

C NC N/A U
☐ ☐ ☒ ☐ **LS-not required; PR-H.** ELEVATOR EQUIPMENT: Equipment, piping, and other components that are part of the elevator system are anchored. (Commentary: Sec. A.7.16.3, Tier 2: Sec. 13.8.6)

C NC N/A U
☐ ☐ ☒ ☐ **LS-not required; PR-H.** SEISMIC SWITCH: Elevators capable of operating at speeds of 150ft/min or faster are equipped with seismic switches that meet the requirements of ASME A17.1 or have trigger levels set to 20% of the acceleration of gravity at the base of the structure and 50% of the acceleration of gravity in other locations. (Commentary: Sec. A.7.16.4. Tier 2: Sec. 13.8.6)

C NC N/A U
☐ ☐ ☒ ☐ **LS-not required; PR-H.** SHAFT WALLS: Elevator shaft walls are anchored and reinforced to prevent toppling into the shaft during strong shaking. (Commentary: Sec. A.7.16.5. Tier 2: Sec. 13.8.6)

C NC N/A U
☐ ☐ ☒ ☐ **LS-not required; PR-H.** COUNTERWEIGHT RAILS: All counterweight rails and divider beams are sized in accordance with ASME A17.1. (Commentary: Sec. A.7.16.6. Tier 2: Sec. 13.8.6)

C	NC	N/A	U	
☐	☐	☒	☐	**LS-not required; PR-H.** BRACKETS: The brackets that tie the car rails and the counterweight rail to the structure are sized in accordance with ASME A17.1. (Commentary: Sec. A.7.16.7. Tier 2: Sec. 13.8.6)
☐	☐	☒	☐	**LS-not required; PR-H.** SPREADER BRACKET: Spreader brackets are not used to resist seismic forces. (Commentary: Sec. A.7.16.8. Tier 2: Sec. 13.8.6)
☐	☐	☒	☐	**LS-not required; PR-H.** GO-SLOW ELEVATORS: The building has a go-slow elevator system. (Commentary: Sec. A.7.16.9. Tier 2: Sec. 13.8.6)

NOTES: NONE

APPENDIX B:

PHOTOGRAPHS

Figure 4: Gymnasium Interior 01

Figure 5: Gymnasium Interior 02

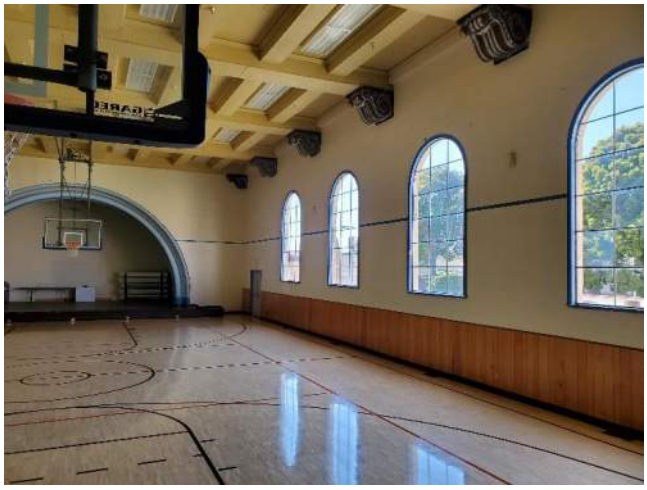

Figure 6: Gymnasium Interior 03

Figure 7: Interior Roof Framing at Gymnasium 01

Figure 8: Interior Roof Framing at Gymnasium 02

Figure 9: Interior Roof Framing at Gymnasium 03

Figure 10: Interior Roof Framing over Main Entry, Gymnasium 04

Figure 11: Interior Roof Framing over Main Entry, Gymnasium 05

Figure 12: Interior Roof Framing at Gymnasium 06

Figure 13: Interior Roof Framing at Gymnasium 07

Figure 14: Interior Roof Framing over Main Entry, Gymnasium 08

Figure 15: Interior Wall Separating Gymnasium and Stage.

Figure 17: Water Damage at Ceiling above Stage.

Figure 16: Floor Sheathing and Finishes at Stage.

Figure 18: Crawl Space Below Gymnasium.

Figure 19: Exterior Wall at Fire Department 01.

Figure 20: Exterior Wall at Fire Department 02.

Figure 21: Cantilevered Sheathing at Raised Floor.

Figure 22: Beam to Support

Figure 23: Interior Ceiling Finish.

Figure 24: Storage Racks - No Anchorage 01.

Figure 25: Storage Racks - No Anchorage 02.

Figure 26: Colonnade at Exterior Courtyard.

Figure 27: Exterior Courtyard and Bell Tower.

Figure 28: Exterior Courtyard.

Figure 29: Colonnade at Courtyard 01.

Figure 30: Column Base Connection at Colonnade.

Figure 31: Beam to Column Connection at Colonnade.

Figure 32: Exterior Wall at Courtyard 01.

Figure 33: Exterior Wall at Courtyard 02.

Figure 34: Exterior Crawl Space Vents at Courtyard.

Figure 35: Exterior Wall and Infill at Courtyard.

Figure 36: Structural Deterioration at Crawl Space Vents 01.

Figure 37: Structural Deterioration at Crawl Space Vents 02.

Figure 38: Structural Deterioration at Crawl Space Vents 03.

Figure 39: Structural Deterioration at Crawl Space Vents 04.

Figure 40: Crawl Space Framing and Sheathing.

Figure 41: Post, Beam, and Pad Foundations at Raised Floor.

Figure 42: Interior Support Line at Raised Floor.

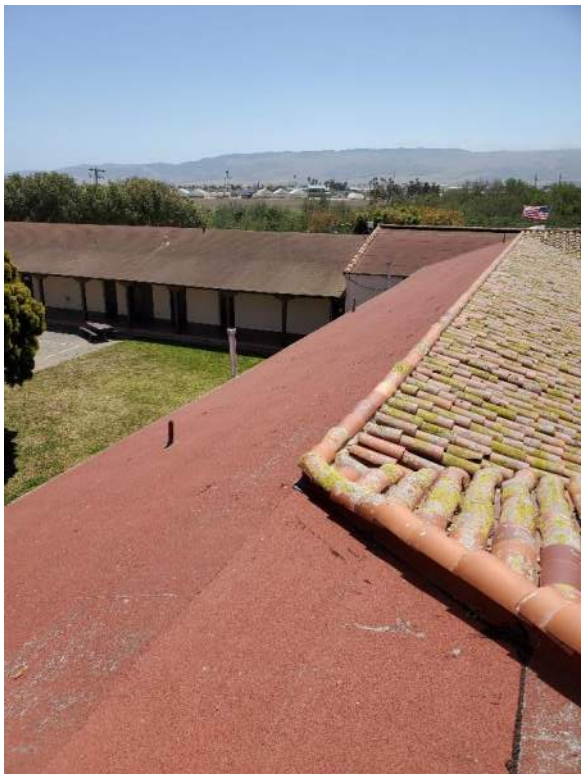

Figure 43: Roof Composition at Courtyard 01.

Figure 44: Roof Composition at Courtyard 02.

Figure 46: Roof at Mechanical Equipment.

Figure 45: Mechanical Equipment at Roof.

Figure 48: Interior Plaster Ceiling Needs Repair at Bell Tower.

Figure 47: Sloping and Drainage at Roof.

Figure 50: Interior of Bell Tower 01.

Figure 49: Exterior Finishes

Figure 52: Existing Gutters Require Maintenance.

Figure 51: Interior of Bell Tower 02.

Figure 54: Ceiling Framing 02.

Figure 53: Ceiling Framing 01.

Figure 56: Exterior Grading and Stucco at Foundation 03.

Figure 57: Exterior Grading and Stucco at Foundation 02.

Figure 55: Exterior Grading and Stucco at Foundation 01.

APPENDIX C:

SCHEMATIC STRUCTURAL PLAN VIEWS & DETAILS

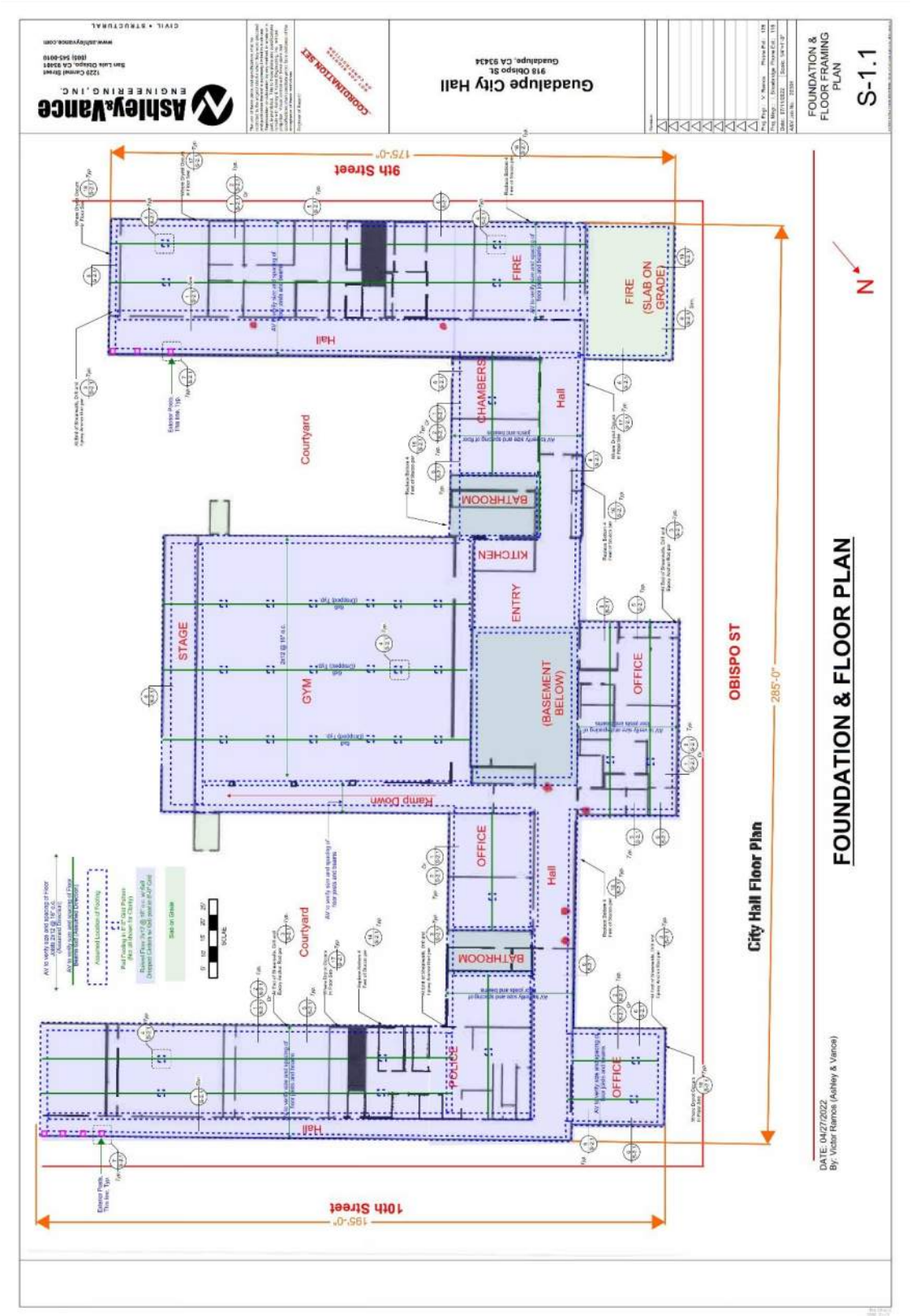

Figure 58: Enlarged Foundation & Floor Plan

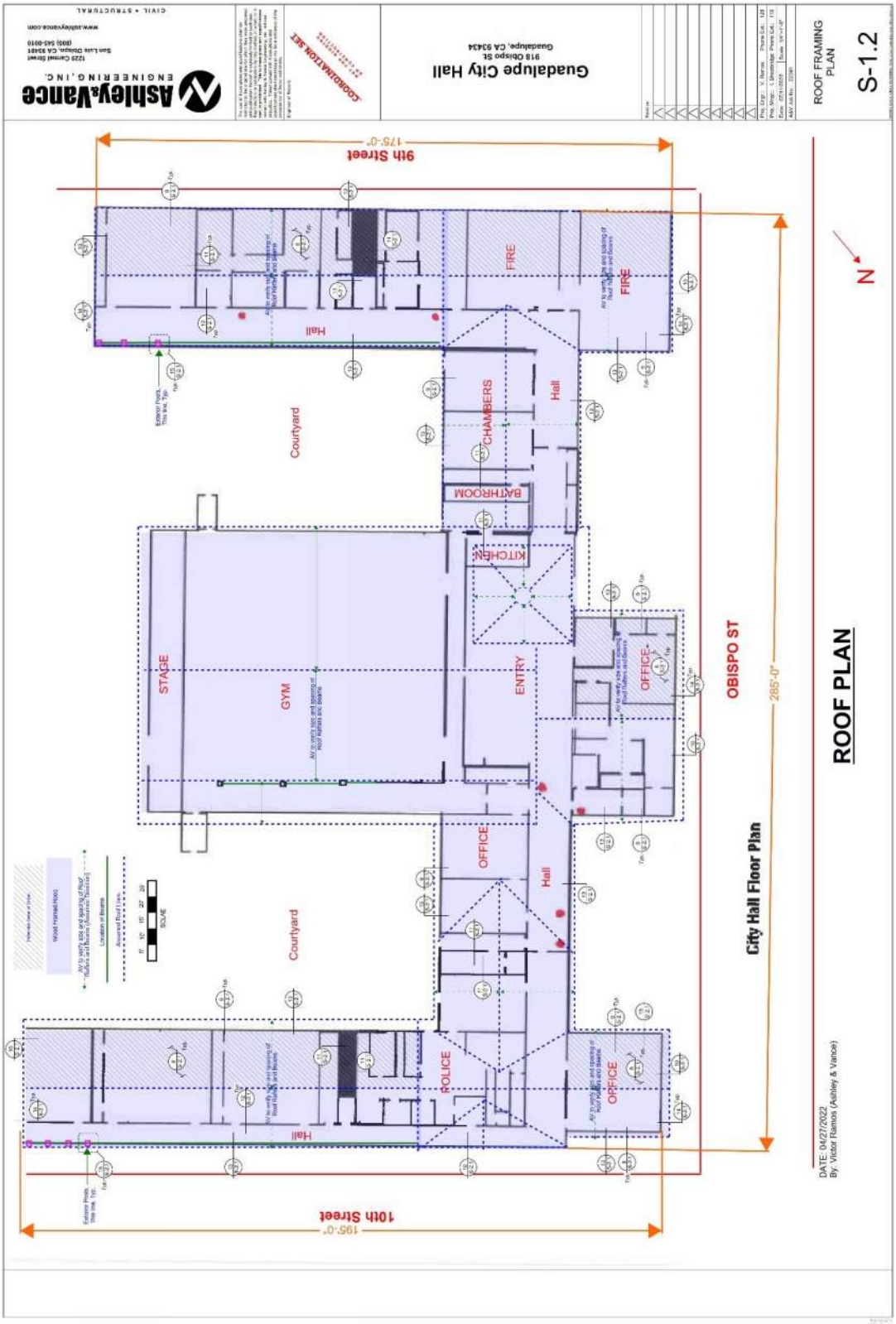

Figure 59: Enlarged Roof Plan

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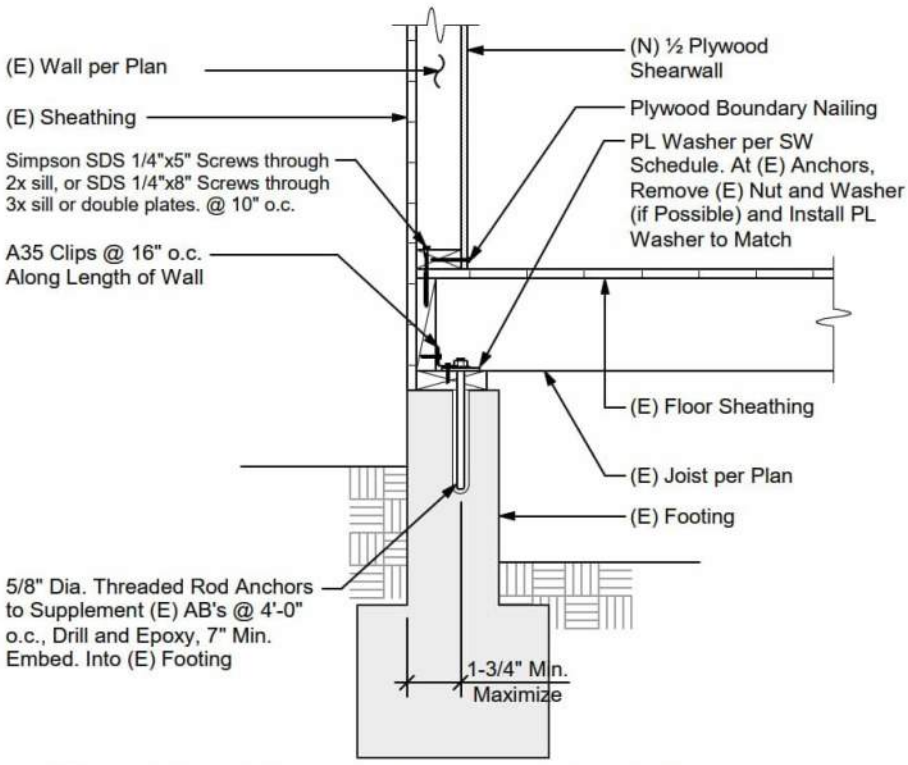

Figure 60: Detail 1 - Shearwall at Existing Footing

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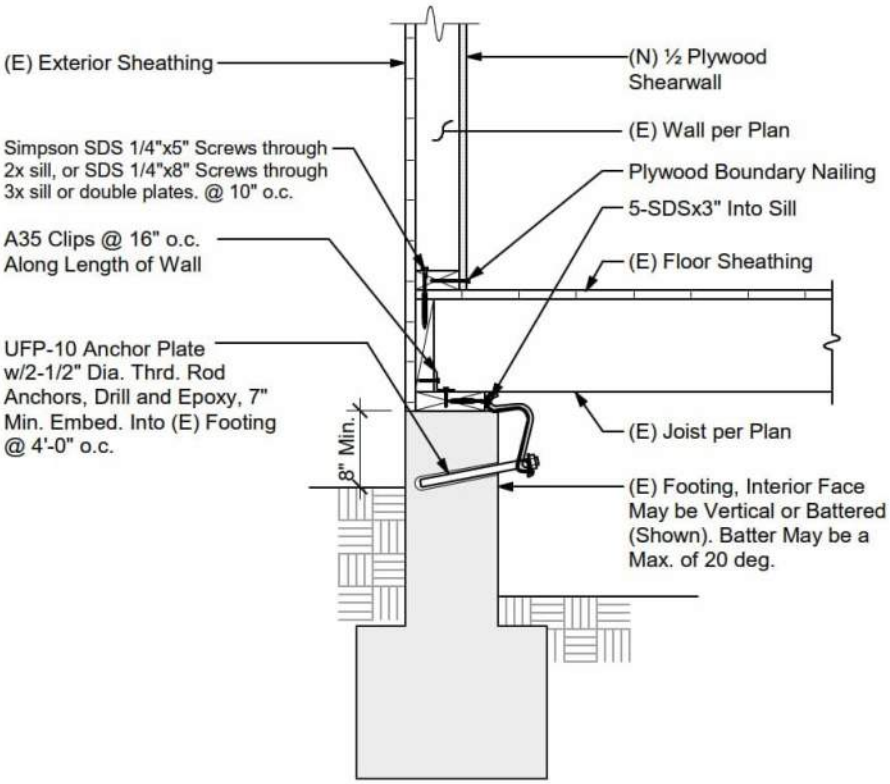

2 SHEARWALL AT EXISTING FOOTING
OPTION 2

Figure 61: Detail 2 - Shearwall at Existing Footing

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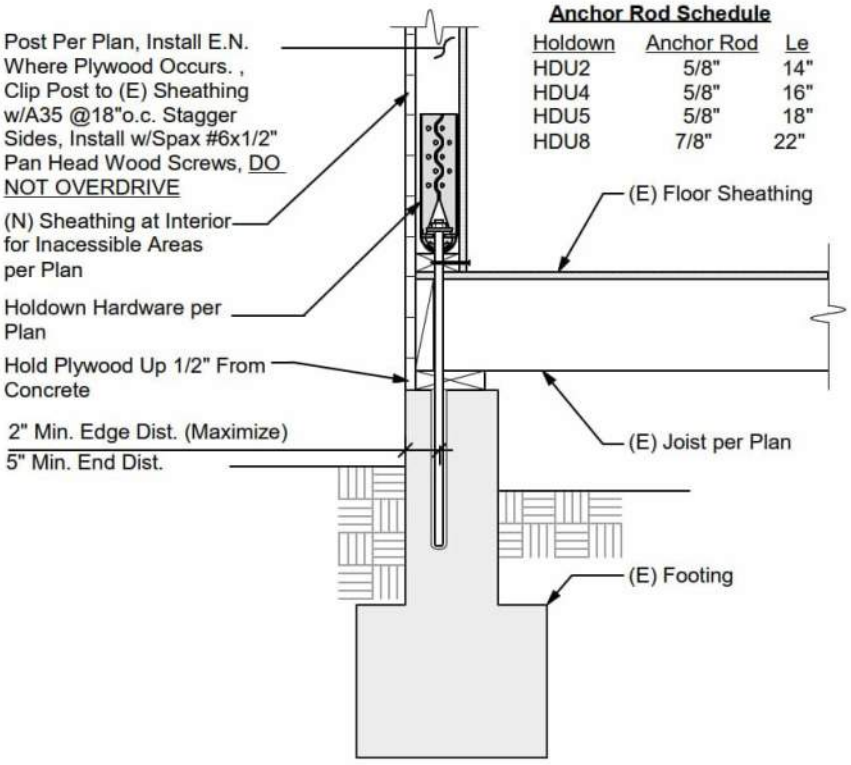

Anchor Rod Schedule

Holdown	Anchor Rod	Le
HDU2	5/8"	14"
HDU4	5/8"	16"
HDU5	5/8"	18"
HDU8	7/8"	22"

3 *HOLDOWN AT EXISTING FOOTING*

Figure 62: Detail 3 - Holdown at Existing Footing

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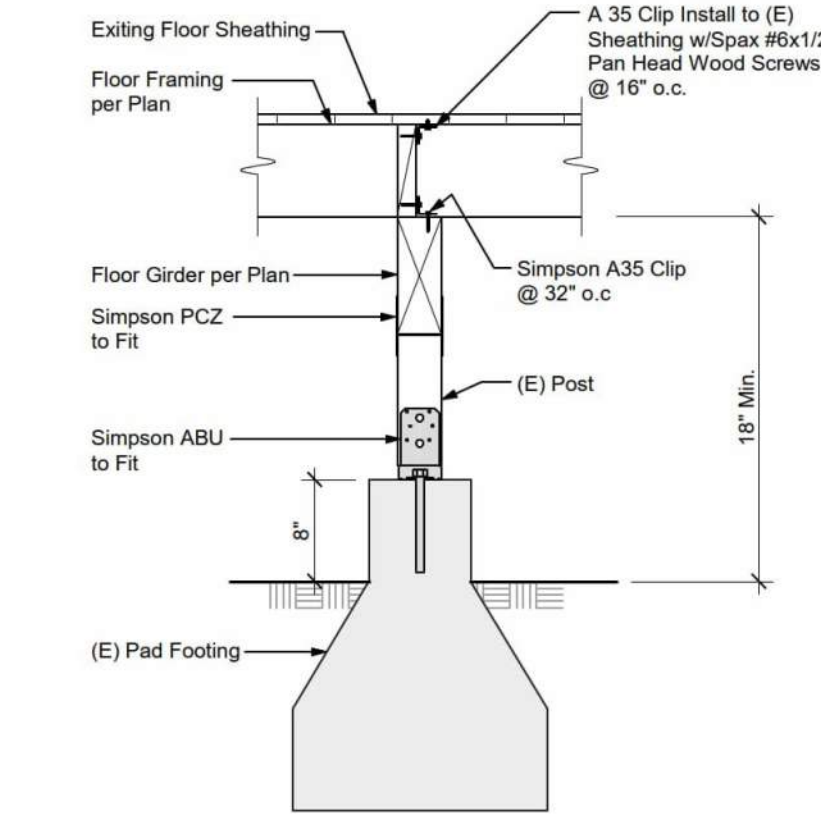

4 TYP. POST AND PIER FOUNDATION

Figure 63: Detail 4 - Typ. Post and Pier Foundation

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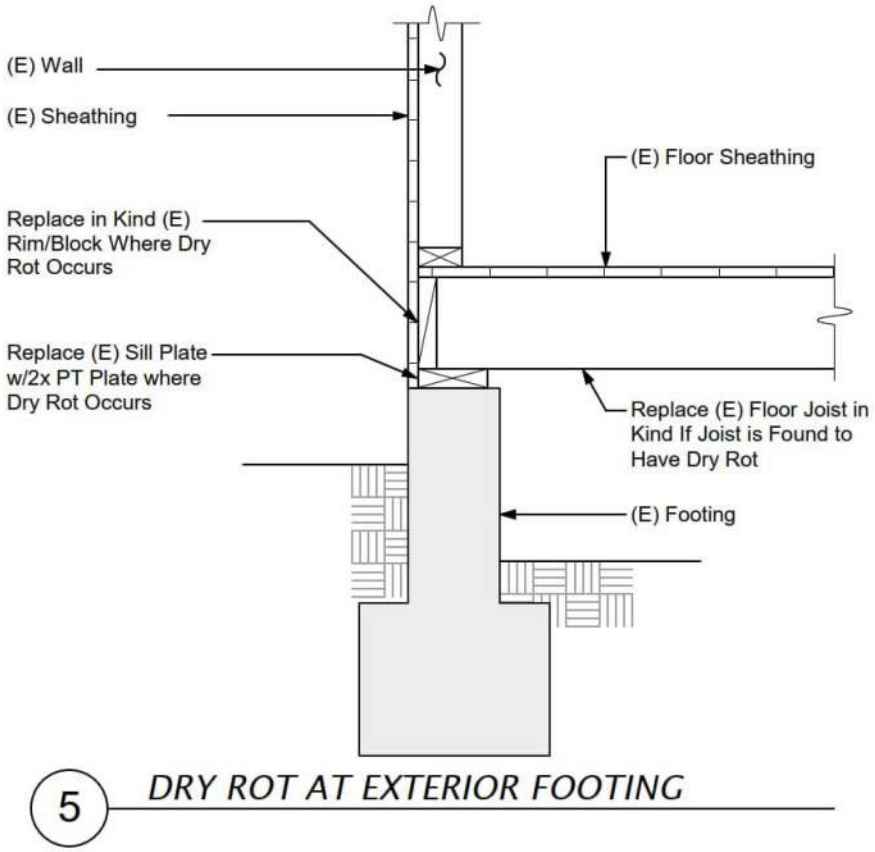

Figure 64: Detail 5 - Dry Rot at Exterior Footing

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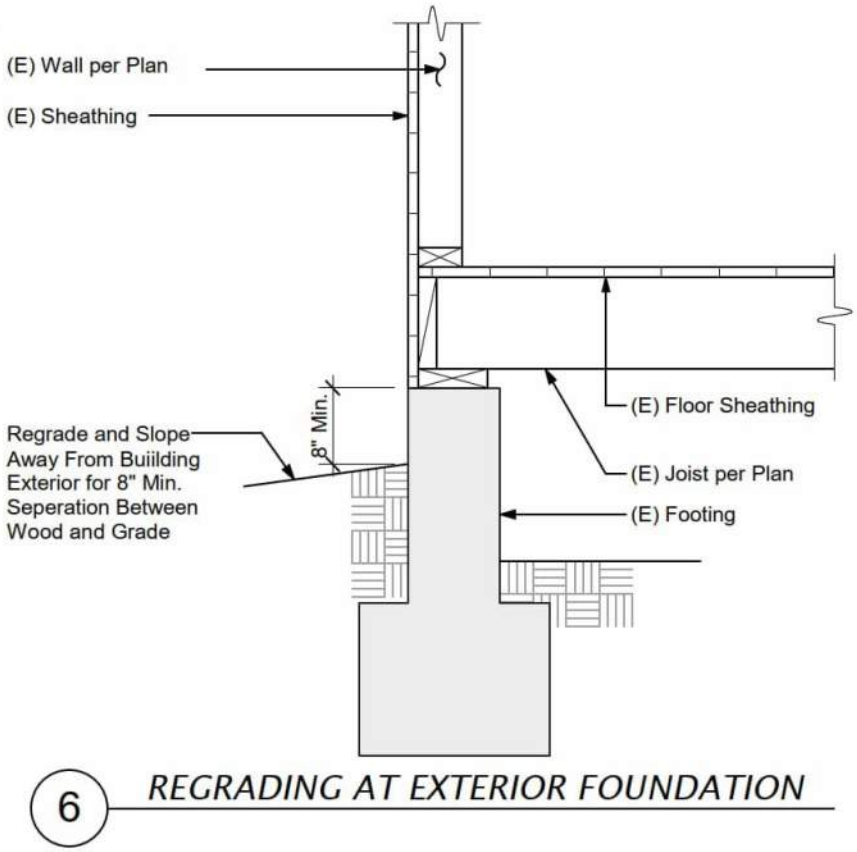

6 REGRADING AT EXTERIOR FOUNDATION

Figure 65: Detail 6 - Regrading at Exterior Foundation

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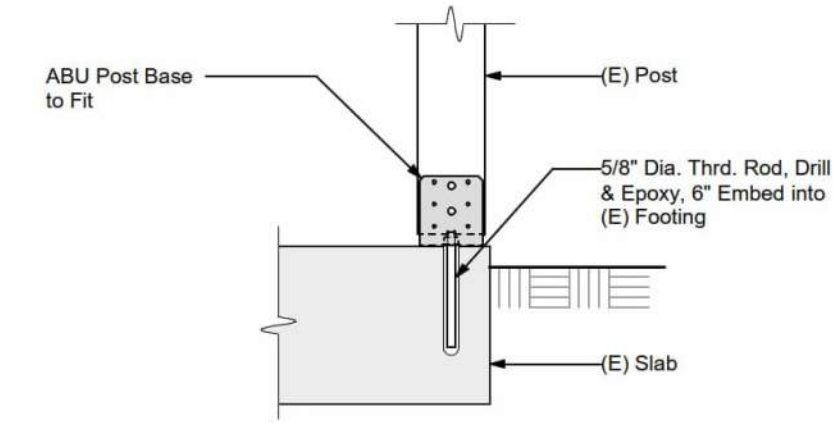

7 *POST BASE AT EXISTING SLAB*

Figure 66: Detail 7 - Post Base at Existing Slab

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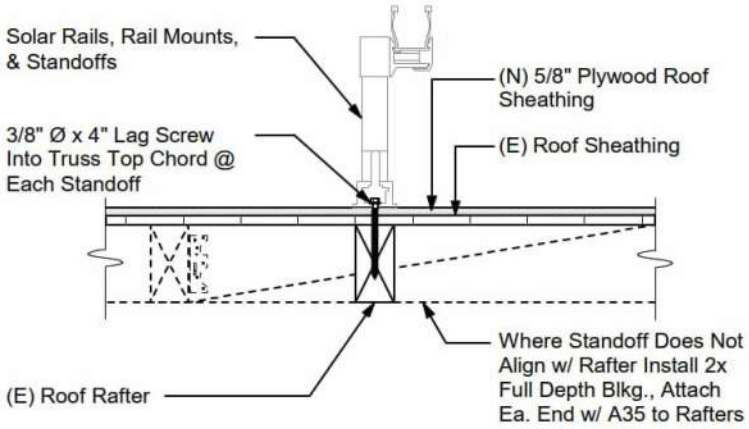

8 SOLAR STANDOFF TO ROOF FRAMING

Figure 67: Detail 8 - Solar Standoff to Roof Framing

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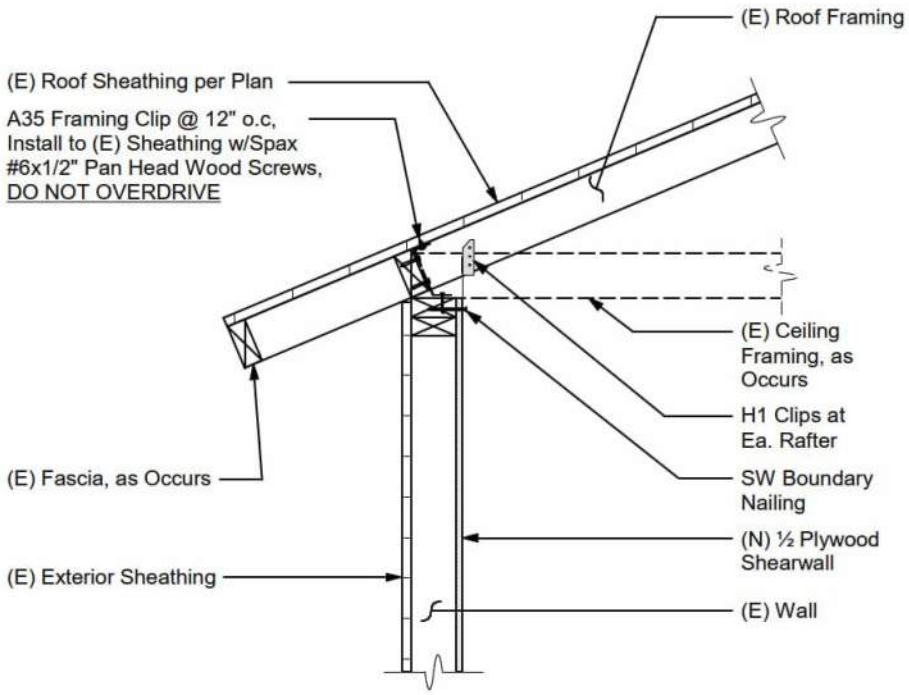

9 *SHEAR TRANSFER AT EXISTING ROOF*

Figure 68: Detail 9 - Shear Transfer at Existing Roof

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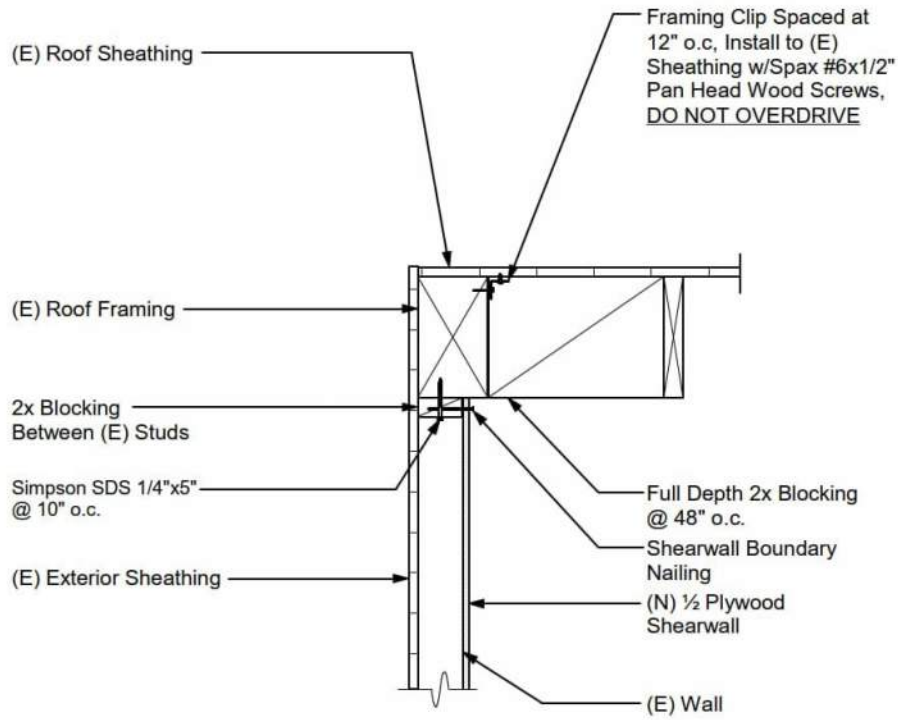

10 *SHEAR TRANSFER AT EXISTING ROOF*

Figure 69: Detail 10 - Shear Transfer at Existing Roof

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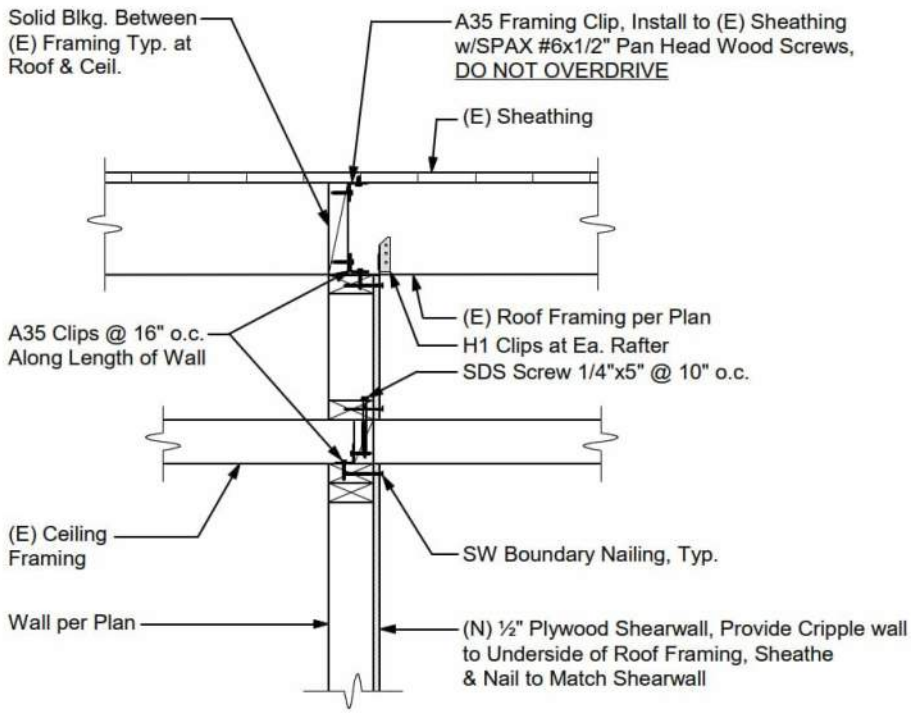

11 *SHEAR TRANSFER AT EXISTING ROOF*

Figure 70: Detail 11 - Shear Transfer at Existing Roof

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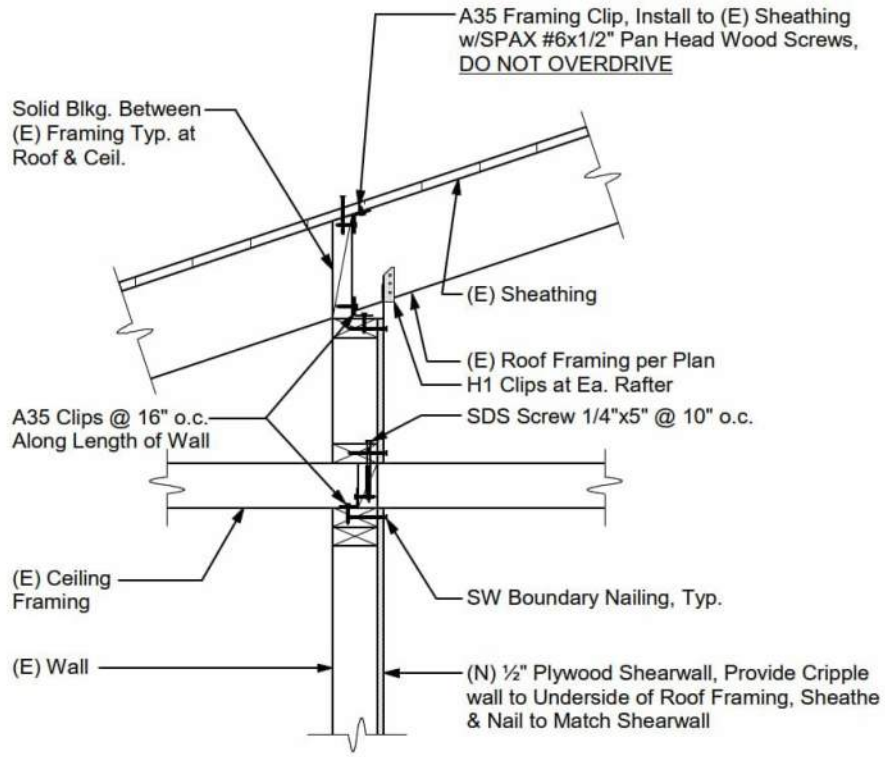

12 *SHEAR TRANSFER AT EXISTING ROOF*

Figure 71: Detail 12 - Shear Transfer at Existing Roof

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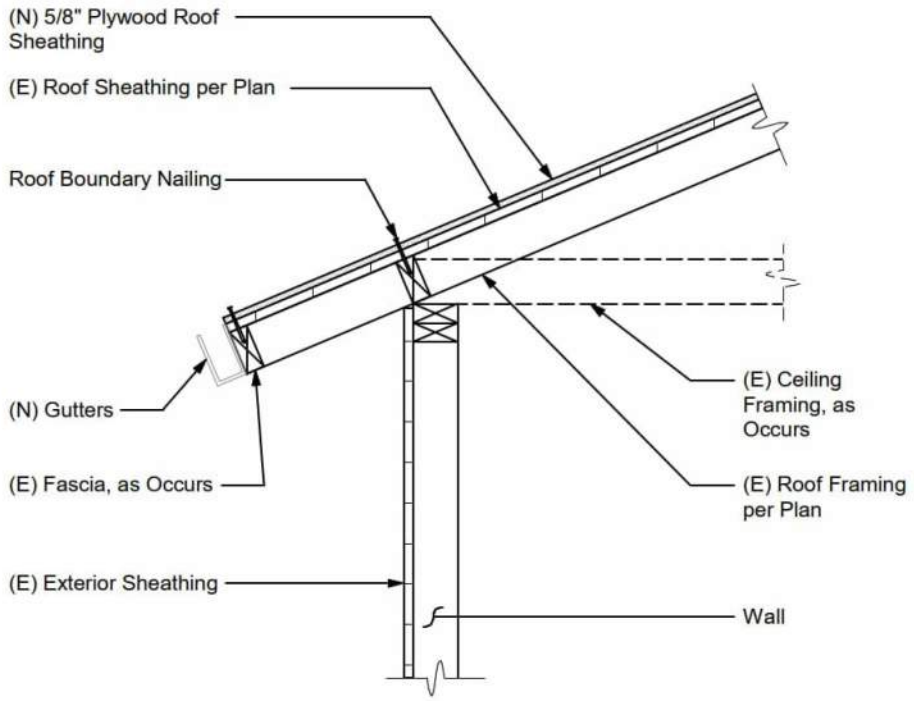

13 *NEW ROOFING*

Figure 72: Detail 13 - New Roofing

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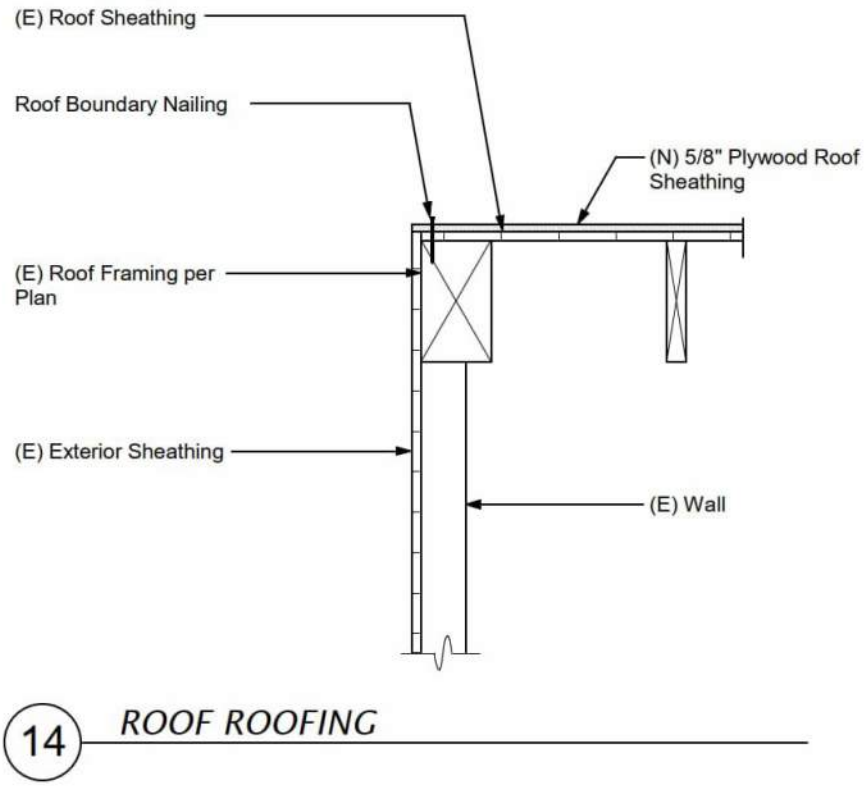

14 *ROOF ROOFING*

Figure 73: Detail 14 - New Roofing

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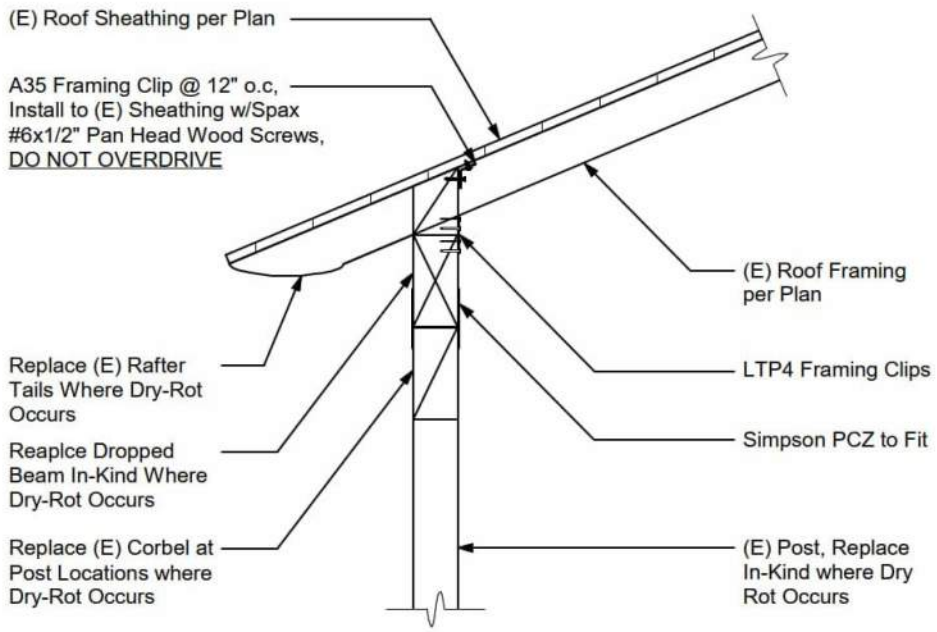
SKS: 015
Date: 7/11/2022



15 *FRAMING AT EXTERIOR POSTS*

Figure 74: Detail 15 - Framing at Exterior Posts

Ashley & Vance ENGINEERING, INC.

Guadalupe City Hall
918 Obispo St.
Guadalupe, CA 93434

Job No.: 22391
SKS: 016
Date: 7/11/2022

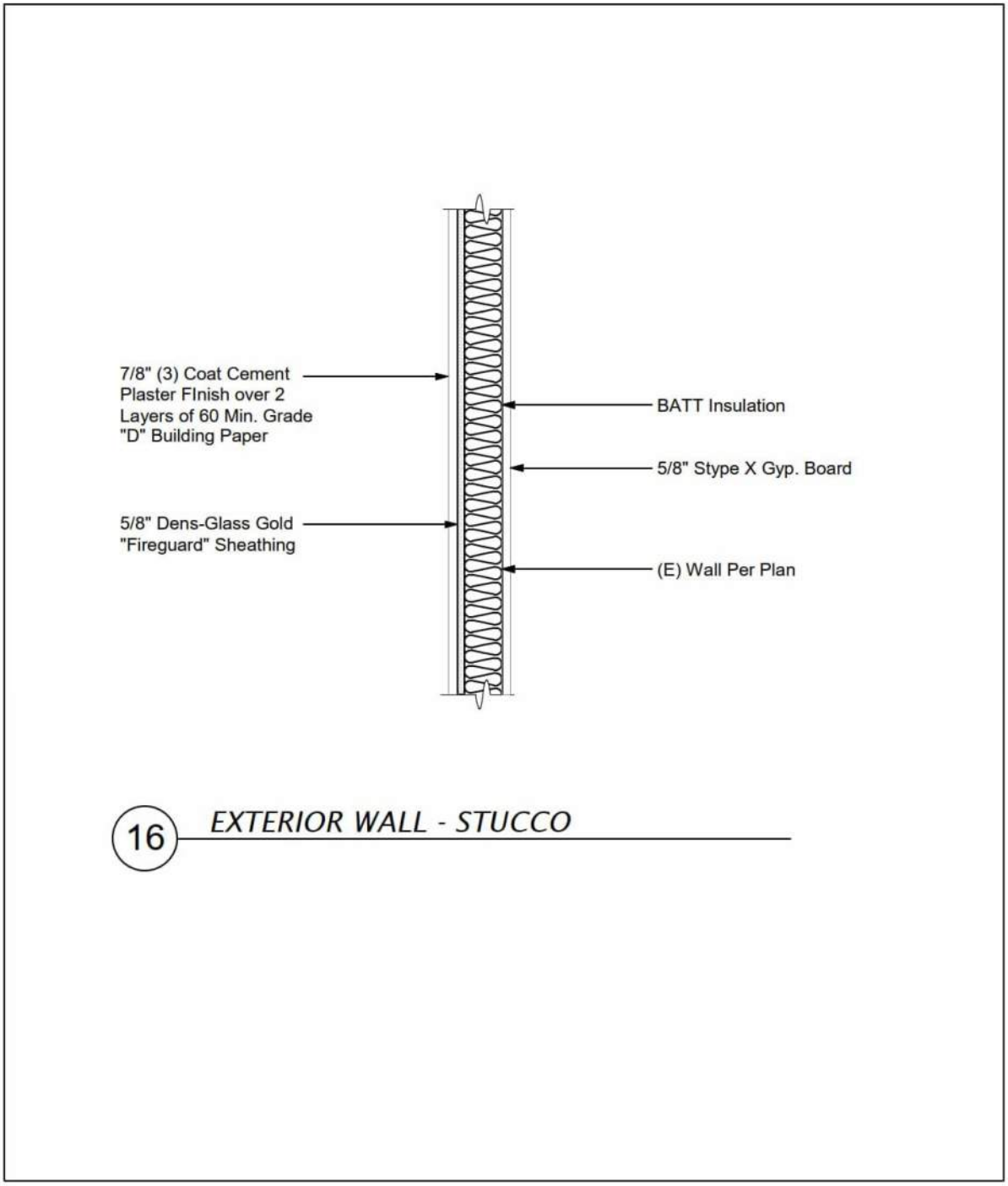
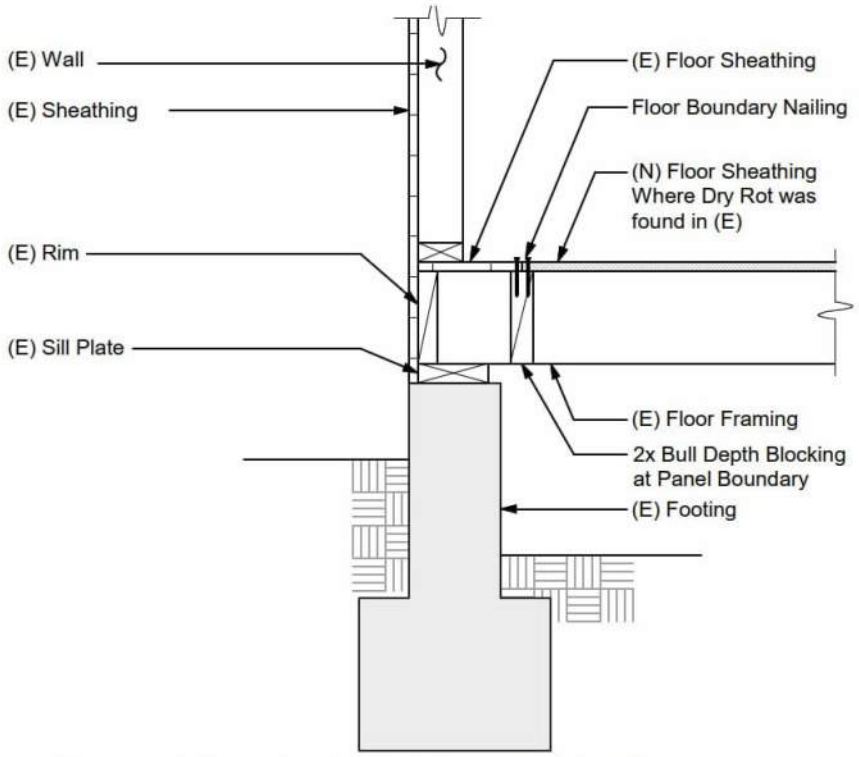


Figure 75: Detail 16 - Exterior Wall Stucco

Ashley & Vance ENGINEERING, INC.

Guadalupe City Hall
918 Obispo St.
Guadalupe, CA 93434

Job No.: **22391**
SKS: 017
Date: 7/11/2022



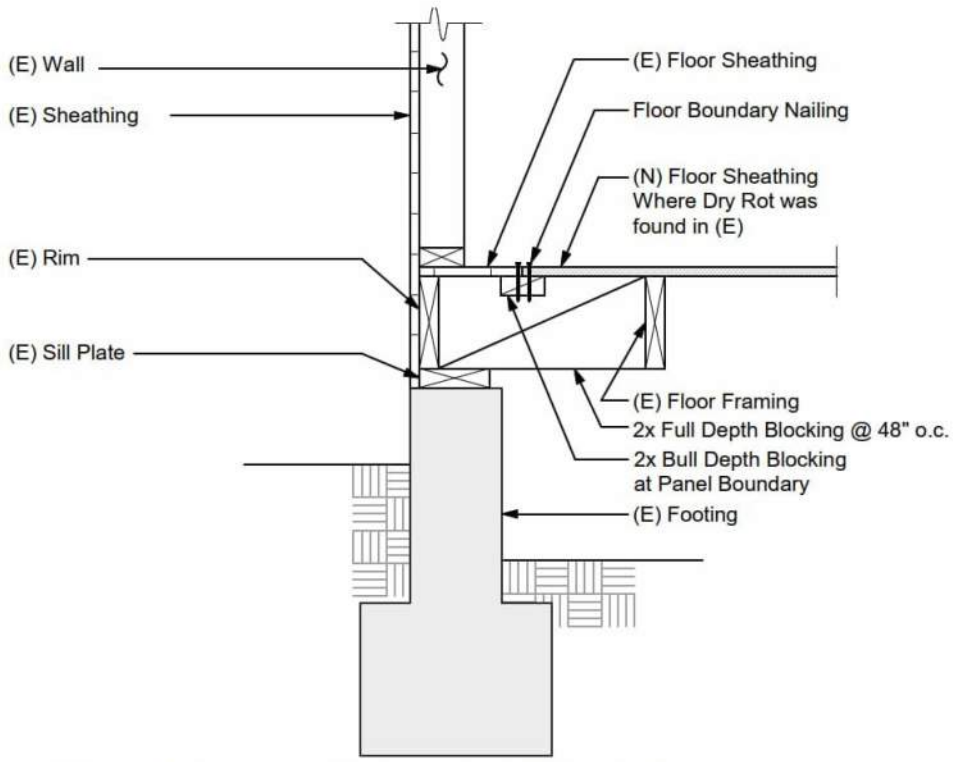
17 *DRY ROT AT FLOOR SHEATHING*

Figure 76: Detail 17 - Dry Rot at Floor Sheathing

Ashley & Vance ENGINEERING, INC.

Guadalupe City Hall
918 Obispo St.
Guadalupe, CA 93434

Job No.: 22391
SKS: 018
Date: 7/11/2022



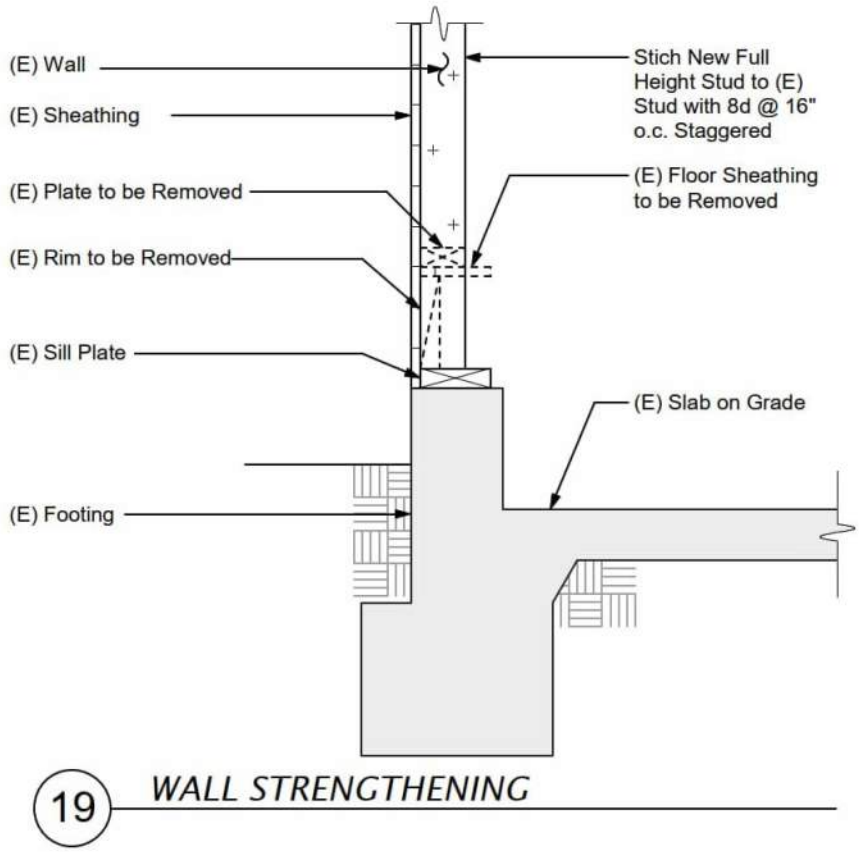
18 DRY ROT AT FLOOR SHEATHING

Figure 77: Detail 18 - Dry Rot at Floor Sheathing

Ashley & Vance ENGINEERING, INC.

Guadalupe City Hall
918 Obispo St.
Guadalupe, CA 93434

Job No.: **22391**
SKS: 019
Date: 7/11/2022



19 WALL STRENGTHENING

Figure 78: Detail 19 - Wall Strengthening

APPENDIX D:

PRELIMINARY DESIGN PARAMETERS

Ashley&Vance
ENGINEERING, INC

Job: 22391 - Guadalupe City Hall - City of Guadalupe **Load Sheet**

ROOF LOADS

Typical Roof Live Loads	**20.0** psf
Typical Roof Dead Loads	
Asphalt Shingles	**3.0** psf
1/2" Plywood	**1.7** psf
Wood Framing	**2.8** psf
10" Batt Insulation	**0.8** psf
5/8" Gyp. Board Ceiling	**2.8** psf
Misc. Mechanical / Solar	**3.9** psf
Total Dead Load	**15.0** psf
Clay Roof Dead Loads	
Two Piece Clay Roofing Tile	**11.0** psf
1/2" Plywood	**1.7** psf
Wood Framing	**2.8** psf
10" Batt Insulation	**0.8** psf
5/8" Gyp. Board Ceiling	**2.8** psf
Misc. Mechanical / Solar	**3.9** psf
Total Dead Load	**23.0** psf

FLOOR LOADS

Typical Floor Live Loads	**40** psf
Typical Floor Dead Loads	
Hardwood	**4.0** psf
3/4" Plywood	**2.5** psf
Wood Framing	**3.3** psf
10" Batt Insulation	**0.8** psf
5/8" Gyp. Board Ceiling	**2.8** psf
Misc. Loads	**1.6** psf
Total Dead Load	**15.0** psf
Partition Load	
Assumed Partition Load	**20** psf
Wall Dead Weight	**10** psf

Hazards by Location

Search Information

Address:	918 Obispo St, Guadalupe, CA 93434, USA
Coordinates:	34.9694849, -120.5688772
Elevation:	85 ft
Timestamp:	2022-05-17T20:15:21.096Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	IV
Site Class:	D-default

Basic Parameters

Name	Value	Description
S_S	0.899	MCE_R ground motion (period=0.2s)
S_1	0.336	MCE_R ground motion (period=1.0s)
S_{MS}	1.079	Site-modified spectral acceleration value
S_{M1}	* null	Site-modified spectral acceleration value
S_{DS}	0.719	Numeric seismic design value at 0.2s SA
S_{D1}	* null	Numeric seismic design value at 1.0s SA

* See Section 11.4.8

▾Additional Information

Name	Value	Description
SDC	* null	Seismic design category
F_a	1.2	Site amplification factor at 0.2s
F_v	* null	Site amplification factor at 1.0s
CR_S	0.909	Coefficient of risk (0.2s)
CR_1	0.914	Coefficient of risk (1.0s)
PGA	0.393	MCE_G peak ground acceleration
F_{PGA}	1.207	Site amplification factor at PGA
PGA_M	0.475	Site modified peak ground acceleration

T_L	8	Long-period transition period (s)
SsRT	0.899	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.989	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.571	Factored deterministic acceleration value (0.2s)
S1RT	0.336	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.367	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.642	Factored deterministic acceleration value (PGA)

* See Section 11.4.8

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

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5/17/22, 1:16 PM ATC Hazards by Location

ATC Hazards by Location

Search Information

Address: 918 Obispo St, Guadalupe, CA 93434, USA

Coordinates: 34.9694849, -120.5688772

Elevation: 85 ft

Timestamp: 2022-05-17T20:16:03.227Z

Hazard Type: Wind

ASCE 7-16		ASCE 7-10		ASCE 7-05	
MRI 10-Year	63 mph	MRI 10-Year	72 mph	ASCE 7-05 Wind Speed	85 mph
MRI 25-Year	70 mph	MRI 25-Year	79 mph		
MRI 50-Year	74 mph	MRI 50-Year	85 mph		
MRI 100-Year	78 mph	MRI 100-Year	91 mph		
Risk Category I	86 mph	Risk Category I	100 mph		
Risk Category II	91 mph	Risk Category II	110 mph		
Risk Category III	98 mph	Risk Category III-IV	115 mph		
Risk Category IV	102 mph				

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 and rounded up to the nearest whole integer. Per ASCE 7, islands and coastal areas outside the last contour should use the last wind speed contour of the coastal area – in some cases, this website will extrapolate past the last wind speed contour and therefore, provide a wind speed that is slightly higher. NOTE: For queries near wind-borne debris region boundaries, the resulting determination is sensitive to rounding which may affect whether or not it is considered to be within a wind-borne debris region.

Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

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https://hazards.atcouncil.org/#/wind?lat=34.9694849&lng=-120.5688772&address=918 Obispo St%2C Guadalupe%2C CA 93434%2C USA 1/2