



NOTICE OF INVITATION FOR BIDS FROM COMMERCIAL BUILDING CONTRACTORS

IFB NO. 02-2023

OSTERMAN GAS STATION STORM REPAIRS - AN HISTORIC BUILDING IN PEACH SPRINGS, ARIZONA

Notice is hereby given that the Hualapai Indian Tribe, hereinafter referred to as the "Tribe", is soliciting bids from commercial contractors to repair the historic Osterman Gas Station - the former Shell Gas Station - in Peach Springs, located on the Hualapai Reservation, Arizona.

The Tribe invites Indian and non-Indian owned firms to submit sealed bids. The Tribe will select the bidder whose bid does not substantially exceed the amount of funds available for construction of the project, subject to applicable Indian Preference requirements and assessments of the Bidder's responsiveness and responsibility under federal law. Funds are derived from the Arizona State Parks and private funds.

A complete copy of this IFB may be obtained from the tribe's website at: <http://hualapai-nsn.gov/>. Internet access is available at all public libraries. Any interested offerors without internet access may obtain a copy of this solicitation by calling (928) 769-1310, or a hard-copy may be obtained during regular business hours at the Hualapai Planning and Economic Development Department, 887 W. Route 66, Peach Springs, AZ. Respondents are invited to review the information and to submit their Bids in accordance with the criteria established within this IFB. Written questions regarding this IFB must be received by the Planning Department no later than **May 26, 2023**. Questions may then be responded to by written amendment to this document. **Oral statements or instructions shall not constitute an amendment to the IFB.**

All submittals must be received by the due date and time assigned at the submittal location specified herein. **Any response received at the specified submittal location after the due date and time assigned will be returned unopened.** The Tribe reserves the right to reject any or all submittals, or to withhold the award for any reason it may determine, and to waive or not to waive any informalities in any submittal. All information regarding the content of the specific submittals will remain confidential until a contract is finalized or all proposals are rejected.

SUBMITTAL DUE DATE: June 6, 2023, at 2:00 P.M. LOCAL AZ TIME
SUBMITTAL LOCATION: Hualapai Planning and Economic Development Dept
887 West Highway 66, Peach Springs, AZ 86434

VIRTUAL PRE-BID MEETING DATE: May 8, 2023
TIME: 10:30 A.M. LOCAL AZ TIME, Register in Advance:
https://us02web.zoom.us/meeting/register/tZllc-2vpjsqGNsGdg3sNd_s7ueKzRGA1Mv

ON-SITE PRE-BID MEETING DATE: May 10, 2023
TIME: 10:30 A.M. LOCAL AZ TIME
LOCATION: Hualapai Planning and Economic Development Dept
887 West Highway 66, Peach Springs, AZ 86434

QUESTIONS SHALL BE DIRECTED TO: Kevin A. Davidson
Planning and Economic Development Director
(928) 769-1310 kevin.davidson@hualapai-nsn.gov

INTRODUCTION/GENERAL PROJECT INFORMATION

The site is located at 888 Historic Route 66 on the Hualapai Indian Reservation in Peach Springs, Arizona. The building was constructed in 1929. It is an unoccupied, single-story, concrete block structure approximately 3,200 square feet in size that was formerly used as a gas station. It contains a large vehicle service area, a convenience store area, a restroom, office, utility room, and back room. A stairway in the back room on the southwestern portion of the building leads to the cellar. The building is on the National Register of Historic Places. Between 2010 and 2014 the building's roof was repaired and foundation stabilized. Storms in late 2021 and early 2023 have destroyed most of the roof structure and knocked down most of the east wall. In 2017, the building was assessed for hazardous materials with some lead paint found on the structure and on the ground around it (see attached report extract "Appendix J").

Prior to start of the work, the successful firm must possess both permit issued by Mohave County Development Services and the Tribal Environmental Review Commission. These permits are in process but require evidence of the contractor's license prior to being issued to the contractor. The successful firm must also complete and submit a Compliance Plan under the Tribe's Tribal Employment Rights Office (TERO) to assure that qualified Tribal members and Native Americans are given opportunities to perform work as employees of the firm or team.

CONTRACTOR QUALIFICATIONS

All Contractors shall be registered with the Arizona Registrar of Contractors. Any changes to these Contractors for the duration of the project shall require Tribal approval. All consultant members shall be considered subcontractors to the prime Contractor.

SCOPE OF WORK:

The Contractor shall construct the walls and roof of the historic building. The accompanying Construction Drawings and with appendices contains specific information about the scope of work.

PRE-CONSTRUCTION REQUIREMENTS FOR THE CONTRACTOR MAY INCLUDE, BUT IS NOT LIMITED TO:

1. Consult with the Tribe's representatives to define and clarify the Tribe's requirements for the project.
2. Provide construction schedule – Gantt Chart
3. Incorporate the comments and direction provided by the Tribe.
4. Address all Hualapai Tribal permitting requirements and pay all associated fees.
5. Submit Employment Compliance Plan per the tribe Tribal Employment Rights Ordinance (TERO) and pay associated TERO taxes.
6. Coordinate with various Tribal departments and other agencies, utility companies, etc.

CONSTRUCTION PHASE SERVICES BY THE CONTRACTOR MAY INCLUDE, BUT NOT BE LIMITED TO:

1. Adhere to AIA General Conditions Form A201
2. Provide a minimum of two (2) year warranty

COMPLETION REQUIREMENTS

1. Adhere to AIA General Conditions Form A201.

SELECTION PROCEEDURE

Selection of the Contractor is subject to a determination by the Tribe that the contractor is responsive, qualified, responsible, and eligible to contract for federally funded activities. In determining bidder(s) qualifications, the Tribe may require a meeting at its convenience within seven days of bid opening.

The Bid is subject to Indian Preference. If an Indian-owned firm’s price is within 8% of the low bid, the contract will be awarded to that firm. However, proposals by qualified non-Indian firms are strongly encouraged. The Community reserves the right to reject any and all proposals.

***ESTIMATED* SELECTION PROCESS CALENDAR OF EVENTS**

****The calendar of the various activities which make-up the Selection Process is as follows:**

<u>IFB ACTIVITY</u>	DATE	TIME
Advertise Request for Invitation for Bids (IFB)	4/21/23	
Virtual Pre-Bid Conference	5/8/23	10:30 AM
On-Site Pre-Bid Conference	5/10/23	10:30 AM
Last Day to Submit Written Comments & Substitutions	5/26/23	
Final Addendum Issued, as needed	5/30/23	
Submittal of Bids	6/6/23	2:00 PM
Evaluation and selection of Contractor (week of)	6/6/23	
Award of Contract (Estimated Date)	6/16/23	
Notice to Proceed and Commence Work	Date of Award + 15 Calendar Days	
Submittal of Schedule of Payment Items	Date of Award + 20 Calendar Days	
Substantial Completion	TBD by contractor, but not to exceed 8 months	
Final Completion	30 days after final completion	

All questions, whether they are of an administrative, contractual, or technical nature, shall be directed to the attention of **Kevin A. Davidson, Planning & Economic Development Director, (928) 769-1310, Kevin.Davidson@hualapai-nsn.gov**

TIME OF PERFORMANCE

Up to 240 days from Notice to Proceed.

INSTRUCTIONS TO BIDDERS

- 1. PRE-BID CONFERENCE:** The date and time of a pre-submittal conference, if applicable, is indicated on the cover page of this document. **While not mandatory, it is highly recommended that all interested Offerors attend this pre-submittal conference.** The purpose of this conference will be to clarify the contents of this solicitation in order to prevent any misunderstanding of the Tribe's position. Any doubt as to the requirements of this solicitation or any apparent omission or discrepancy should be presented to the Tribe at this conference. The Tribe will then determine the appropriate action necessary, if any, and may issue a written amendment to the solicitation. Oral statements or instructions will not constitute an amendment to this solicitation. Persons with a disability may request a reasonable accommodation by contacting **Kevin A. Davidson, (928) 769-1310**. Requests for accommodations must be made forty-eight (48) hours in advance of the event.
- 2. SUBMITTAL FORMAT: Original and 2 copies (3 total) of each bid submittal** should be turned in to the Planning and Economic Development Department, on any required forms and in the format specified in the solicitation. The original copy of the submittal should be clearly labeled "Original". **The sections of the submittal shall be tabbed and clearly identifiable.** The Tribe will not provide any reimbursement for the cost of developing or presenting submittals in response to the selection process. Failure to include any requested information may have a negative impact on the evaluation and/or may result in the rejection of the offeror's submittal.
- 3. INQUIRIES:** Any question related to this solicitation shall be directed to the Planning Director whose name appears on the front side of this document. Questions should be submitted in writing when time permits. The Planning Director may require any and all questions to be submitted in writing at their sole discretion. Any correspondence related to a solicitation should refer to the appropriate Solicitation number, page and paragraph number. However, the offeror must not place the number on the outside of an envelope containing questions since such an envelope may be identified as a sealed submittal and may not be opened until after the official submittal due time and date. Oral interpretations or clarifications will be without legal effect. Only questions answered by formal written solicitation amendment will be binding.
- 4. FAMILIARIZATION OF SCOPE OF WORK:** Before signing a contract, each Offeror shall familiarize itself with the Scope of Work, laws, regulations and other factors affecting performance of work. It shall carefully correlate its observations with requirements of the solicitation and negotiated contract and otherwise satisfy itself as to the expense and difficulties attending the performance of the work. The signing of a Contract will constitute a representation of compliance by the Offeror. There will be no subsequent financial adjustment, other than that provided by the Contract, for lack of such familiarization.
- 5. AMENDMENT OF SOLICITATION:** The bidder shall acknowledge receipt of a solicitation amendment by signing and returning the document by the specified due time and date.
- 6. CONFIDENTIAL INFORMATION:** If an individual believes that any portion of a submittal, offer, specification, protest, or correspondence contains information that should be withheld, then the Procurement Manager should be so advised in writing. The Tribe shall review all requests for confidentiality and provide a written determination. If the confidential request is denied, such information shall be disclosed as public information, unless the person utilizes the "Protest" provision.
- 7. VENDOR APPLICATION:** Prior to the award of a contract, the successful offeror shall have a completed vendor application on file with the Finance Department. Information may be obtained by contacting the Planning Department at **(928) 769-1310**.
- 8. PREPARATION OF SUBMITTAL:**

A. INSTRUCTIONS FOR SUBMITTAL: All submittals shall include any and all forms provided in this solicitation package. It is permissible to copy these forms as required. Facsimiles, telegraphic proposals, or mailgrams shall not be considered. The offer form shall be submitted with an original ink signature by the person authorized to sign the submittal. Erasures, interlineations, or other modifications in the submittal shall be initialed in original ink by the authorized person signing the Consultant offer. Periods of time, stated as a number of days, shall be in **consecutive calendar days**. It is the responsibility of all offerors to examine the entire IFB package, to seek clarification of any requirement that may not be clear, and to check all responses for accuracy before sending in a submittal.

1. BIDDING PROCEDURES

- A bid is invalid if it has not been deposited at the Hualapai Planning Office prior to the time and date for receipt of bids indicated or prior to any extension thereof issued to the Bidders via written addenda.
- Bids must be prepared on the **Bid Form** (see attached) with every blank space filled, the signature in longhand. Amounts must be in words as well as in figures. Should differences between words and figures occur, the amount stated in words shall govern. The Form must be executed in either ink or typewritten. Where the Bidder is a corporation, the Bid Form must be signed by the legal name of the corporation followed by the name of state of incorporation, date of incorporation and the legal signature of an officer authorized to bind the corporation to a contract.
- Bids shall be addressed to the Owner, as shown on the Bid Form, and delivered to the Project Manager in an opaque, sealed package.
- Each original and copy of the bid shall contain all elements of the bid including all required attachments in the order listed on the Bid Form.
- Each package shall be marked as "IFB No.02-2023; Do Not Open Until June 6, 2023" and shall bear the name of the Bidder and the name of the project.
- No bid may be modified or withdrawn after the bid opening for a period of 30 days except where the Award of the Contract has been delayed for at least 31 days.

2. BID GUARANTEE (Not applicable)

3. BIDDERS CERTIFICATION OF ELEGIBILITY

- Each person submitting a bid for any portion of the work contemplated by the bidding documents shall execute an affidavit, in the form provided by the owner (**Bidder's Eligibility**, see attached), to the effect that he or she is eligible to be awarded this contract under federal regulations. Such affidavit shall be attached to the bid.

4. NON-COLLUSIVE AFFIDAVIT

- Each person submitting a bid for any portion of the work contemplated by the bidding documents shall execute an affidavit, in the form provided by the Owner (**Non-Collusive Affidavit**, see attached), to the effect that he or she has not colluded with any other person, firm or corporation in regard to any bid submitted. Such affidavit shall be attached to the bid.

5. QUALIFICATIONS OF CONTRACTORS

- Bidders shall submit a properly executed Contractor's Qualification Statement, AIA Document A305, in their Bid Package.

6. SUBCONTRACTOR LIST FORM

- The Form (**Subcontractor List**, see attached) shall be submitted with the Bid and shall include the names of all subcontractors and their location by City and State. All other information (street address, telephone number, etc.) may be left blank at the time of Bid.
- Following Bid Opening, the apparent Low Bidder will be required to submit the fully executed Form within two business days of such notification.

7. CONSTRUCTION SCHEDULE

- The bidder shall include a draft construction schedule for the project in the Bid Package, including key elements of construction and stages of completion. The construction schedule will be utilized to negotiate a binding completion date prior to the execution of contract.

8. INDIAN PREFERENCE

- Completion of this bid solicitation is open to all qualified bidders. However, if a bid is received from at least one qualified Indian organization or Indian-owned economic enterprise, and this bid is within nine percent (9%) of the bid of the lowest responsible bidder, the contract will be awarded to the Indian-owned economic enterprise, (provided this bid does not exceed budgeted funds).
- If claiming a 9% Indian Preference in bidding, the Bidder shall include documentation of the ownership and structure of the firm. A sample form appears in at the end of this solicitation. Such documentation shall include the nature and extent of Indian ownership, a complete schedule of participating entities, and a copy of the latest Arizona Corporation Commission filing or equivalent. In addition, the documentation shall include a copy of the registration or membership of the identified owner in a recognized Indian Tribe or Alaskan Native Village. All submitted information shall be complete and verifiable through the applicable State corporation department, the Bureau of Indian Affairs, and/or the enrollment records of the applicable Indian Village, Tribe or Nation.

9. Contractor's License Law

- Contractor shall comply with, and require Subcontractors to comply with State Contractors License Law, and be duly registered and licensed thereunder. Provide photocopy of License attached to Bid Form.

10. SITE VISITATIONS

- Bidders are expected to fully inform themselves of the existing conditions. A registration list will be maintained at the conference to confirm attendance. Bidders may visit the site at other times; however, neither the Owner or the Project Manager will be available to accompany visits outside of the time set forth for the pre-bid conference. Bids submitted by a bidder whose name does not appear on the pre-bid conference registration list will be returned unopened.

11. BID DELIVERY

A sealed opaque package containing the required original and copies shall be delivered to the Hualapai Planning Department:

Hualapai Planning & Economic Development Department
P.O. Box 179 (USPS) or
887 Highway 66 (drop off location, FedEx, UPS, etc.)
Peach Springs, AZ 86434

The bid package shall include a label identifying the bidder and include the following:

IFB No. 02-2023

Osterman Gas Station Storm Repairs – an Historic Building in Peach Springs

Do Not Open Until June 6, 2023

12. TIME FOR RECEIVING BIDS

- Bids shall be delivered prior to the date and time set for Receipt of Bids in the Calendar of Events, which is 2:00 PM, Arizona Time, June 6, 2023. The exact closing time for bids will be established by the Project Manager.
- Bids received prior to the bid deadline will be securely kept, unopened. The Project Manager will decide when the specified time has arrived and no bid received thereafter will be considered. No responsibility will attach to the Owner or Project Manager for the premature opening of a bid not properly addressed and identified.
- Delivery may be by mail, delivery service or in-person; however, the bid must be received prior to the stated deadline. Faxed or emailed Bids will not be accepted.

13. MODIFICATIONS OF BIDS

- Modifications of bids will be considered if delivered in the appropriate number of originals and copies matching the required bid submittal. Modifications delivered by telefax will not be accepted or considered.
- Modifications must be set over the signature of the Bidder and must clearly identify the original bid submittal and must clearly indicate the purpose and extent of modification.
- Modifications must be received by the Date set for Receipt of Bids (see above).

14. REJECTION OF BIDS

- The Bidder acknowledges the right of the Owner to reject any or all bids, to waive any informality or irregularity in any bid received, or to withhold the award for any reason determined to be in the Owner's best interests. In addition, the Bidder recognizes the right of the Owner to reject a bid if the Bidder failed to furnish required bid security, or to submit the data required by the bidding Documents, or if the bid is incomplete or irregular.

15. WITHDRAWAL OF BIDS

- Prior to the bid opening, bids may be withdrawn upon the Project Manager's receipt of a written request dispatched by the bidder.
- After the bid opening, bids may not be withdrawn for a period of 30 days without the consent of the Owner.

Negligence on the part of the bidder in preparing his or her bid confers no right of withdrawal or modification of his or her bid after such bid has been opened.

16. OPENING OF BIDS

- Bids will be opened at the time and date set forth in the Calendar of Events.
- Bidders registering at the required pre-bid conference will be given directions to the Bid Opening location, which will be the Owner's Administrative Offices in Peach Springs, AZ.
- Every bid received within the time set for receiving bids shall be opened and publicly read aloud, irrespective of any irregularities therein.
- The Bid Opening shall be public and Bidders, their representatives and other persons properly interested may be present.

17. CONFIRMATION OF BIDS AND AWARD OF CONTRACT

- The contract will be awarded to the responsive and responsible bidder submitting the lowest proposal complying with the conditions of the Invitation to Bid and Instructions to Bidders, provided the bid is reasonable and it is to the interest of the Owner to accept it.
- Selection of the successful bidder is also subject to compliance with applicable federal codes as being responsible and responsive.
- The Owner also reserves the right to reject the bid of any bidder who has previously failed to perform properly, or to complete on time, contracts of a similar nature; who is not in a position to perform the contract, or who has habitually and without just cause neglected the payment of bills or otherwise disregarded obligations to subcontractors, material suppliers, or employees.
- In determining bidder(s) qualifications, the Owner may require a meeting, at the Owner's convenience, within ten (10) business days of the bid opening.
- The bidder to whom the award is made will be notified at the earliest possible date, which is estimated in the Calendar of Events.
- Bidders are hereby notified that a single lump sum contract will be awarded for this work.

18. EXECUTION OF CONTRACT: PERFORMANCE, PAYMENT SECURITY (Bids of \$100.00 more)

- Subsequent to the award of the contract and within seven days after the prescribed forms are presented for signature, the successful bidder shall execute and deliver to the Tribe a standard contract in such number of counterparts as the Tribe may require. Having satisfied all conditions of the award, as set forth elsewhere in these documents, the successful bidder shall, with the approval of the Tribe, present with the contract one of the following:
 - Performance and Payment Bond
 - The bond must be in a penal sum of at least the full amount of the contract as awarded, and secure the faithful

- performance of the contract and the payment of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services, of any nature, employed or used by him or her in performing the work. Such bond shall bear the same date as, or a date subsequent to, the date of the contract.
- On each bond, the rate of premium shall be stated, together with the total amount of the premium charge. The current power of attorney for the person who signs for any surety company shall be attached to such bond. The bond shall be in the form of a **Performance & Payment Bond** (see attached).
 - Surety companies executing bonds must either: (1) Appear on the Treasury Department's most current list (Circular 570 as amended) and must be authorized to transact business in the state of Arizona; or, (2) Be approved by the Owner, and licensed to transact insurance in the state of Arizona, or otherwise permitted to transact insurance under stated exceptions in the Insurance Law of the state of Arizona.
 - Bidders must submit with bond(s) a Certificate of Authority from the Arizona Dept. of Insurance certifying that the company issuing the bond is licensed to issue such bonds in Arizona.
- Letter of Credit
 - The Contractor shall furnish (1) a Letter of Credit (LOC) for at least twenty-five percent (25%) of the total contract price, and (2) a Completion Assurance Agreement. The LOC shall read as **Irrevocable Letter of Credit** (see attached). The LOC shall be irrevocable and unconditional, and shall be payable to the Owner according to the LOC's provisions and the provisions of the Completion Assurance Agreement. The LOC shall be interpreted and used in conjunction with **Completion Assurance Agreement** (see attached). The LOC shall be on the financial institution's letterhead, and signed by an officer of the institution legally authorized to execute it. The Completion Assurance Agreement shall be signed by the Contractor and the Owner.
 - Deposit of Cash or Securities
 - The Contractor shall establish in a bank or other financial institution acceptable to the Tribe an account in the name of the Tribe of not less than twenty percent (20%) of the contract amount. This account shall be in the form of Certificates of Deposit, other interest-bearing accounts, or Tribe-approved negotiable securities. The Contractor shall provide evidence of this account in the form of a letter from said institution to the Tribe agreeing to the terms of the procedure, along with such Certificates of Deposit or deposit acknowledgements as are applicable. This letter shall be on the institution's letterhead, and signed by an officer of the institution legally authorized to execute it. The letter shall read as **Cash Deposit Agreement** (see attached). The account will be administered in accordance with the terms of the letter evidencing it as a **Cash Deposit Agreement** (see attached).
 - Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

SPECIAL TERMS AND CONDITIONS

1. INSURANCE REPRESENTATIONS AND REQUIREMENTS:

- 1.1** Without limiting any obligations or liabilities of the Contractor, the Contractor shall purchase and maintain, at its own expense, hereinafter stipulated minimum insurance with insurance companies duly licensed by the State of Arizona with an AM Best, Inc. rating of FSC VIII A- or above with policies and forms satisfactory to the Tribe's Grants and Contracts Administrator. Failure to maintain insurance as specified herein may result in termination of this Contract at the Tribe's option.
- 1.2** By requiring insurance herein, the Tribe does not represent that coverage and limits will be adequate to protect the Contractor, his consultants or subcontractors. The Tribe reserves the right to review any and all of the insurance policies and/or endorsements cited in this Contract but the Tribe has no obligation to do so. Failure to demand such evidence of full compliance with the insurance requirements set forth in this Contract or failure to identify any insurance deficiency shall not relieve Contractor from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Contract.
- 1.3** All coverage and self-insured retention or deductible portions of insurance of Contractor, his consultants, and his subcontractors at any level, except Workers' Compensation insurance and Professional Liability insurance, if applicable, shall name by written endorsement to the fullest extent permitted by law for claims arising out of the performance of the Work included in this Contract, the Tribe and its agents, representatives, officers, directors, officials and employees as Additional Insured as specified under the respective coverage sections of this Contract. In addition, all coverage and self-insured retention or deductible portions of insurance of Contractor shall name by written endorsement to the fullest extent permitted by law for claims arising out of the performance of the Work included in this Contract his consultants and his subcontractors at any level as Additional Insured as specified under the respective coverage sections of this Contract.
- 1.4** All insurance required herein shall be maintained in full force and effect until all work or services required to be performed under the terms of this Contract is satisfactorily performed, completed and Final Payment has been made by Contractor. All insurance required herein shall be non-cancellable except by sixty (60) day written notice to the Tribe.
- 1.5** Contractor's, consultant's, and Subcontractor's insurance shall be primary insurance with respect to performance of the work included in this Contract and in the protection of the Tribe as Additional Insureds. The policies required by this Contract shall have attached an "Additional Insured Endorsement" form that includes the Tribe as well as its agents, representatives, officers, directors, officials, and employees as insured parties. The forms shall stipulate that the insurance afforded by the policies shall be by primary insurance and that any insurance, self-insured retention, deductibles, or risk retention programs maintained or participated in by the Tribe or its agents, representatives, officers, directors, officials and employees shall be excess and not contributory to insurance required herein.
- 1.6** In the event any insurance policies required to be furnished by Contractor for this Contract are written on a "claims made" basis, coverage shall extend, either by keeping coverage in force or purchasing an extended reporting option, for five (5) years past completion and acceptance of the work or services. Such continuing coverage shall be evidenced by submission of annual Certificates of Insurance citing applicable coverage is in force and containing the provisions as required herein for the five-year period. The obligation of the Architect to supply the same coverage is contingent upon the coverage being reasonably available and affordable.

- 1.7** Each policy of Contractor, Contractor’s consultants, and Subcontractors, including Workers’ Compensation insurance, shall contain a waiver of rights of recovery (subrogation) against the Tribe and its agents, representatives, officers, directors, officials, and employees for any claims arising out of the work or services of Contractor, consultant, or Subcontractor. Contractor shall arrange to have such subrogation waivers incorporated into each policy via formal written endorsement thereto.
- 1.8** The policies set forth in these requirements may provide coverage that contains deductibles or self-insured retention amounts. Such deductibles or self-insured retention shall not be applicable with respect to the policy limits provided to the Tribe. Contractor shall be solely responsible for any such deductible or self-insured retention amount. The Tribe, at its option, may require Contractor to secure payment of such deductible or self-insured retention by a surety bond or irrevocable and unconditional letter of credit.
- 1.9** For any work under this Contract subcontracted in any way, Contractor shall execute written agreement with each consultant or Subcontractor containing the indemnification provisions set forth herein and insurance requirements set forth herein protecting the Tribe and Contractor. Contractor shall be responsible for executing the agreement with consultant or subcontractor and providing the Tribe’s Grants and Contracts Administrator with certificates of insurance verifying the insurance requirements. Subject to the Tribe’s prior written approval, which approval shall not be unreasonably withheld, Contractor may, at Contractor’s option and at Contractor’s sole risk, allow minor subcontractors to deviate from these insurance requirements, for insurance other than professional liability, due to insurance market availability or affordability issues. Issuance of any such prior written approval is at the sole discretion of the Tribe and shall in no way relieve Contractor of any of its responsibilities under this Contract, nor shall it constitute a waiver of any claims or damages otherwise available by law or contract to the Tribe.
- 1.10** Prior to commencing any work or services under this Contract, Contractor shall furnish Contract’s Administrator with certificate(s) of insurance, or formal endorsements as required by this Contract, issued by the insurers of the Contractor, consultants, and Subcontractors as evidence that policies are placed with acceptable insurers as specified herein and provide the required coverage, conditions and limits of coverage specified in this Contract and that such coverage and provisions are in full force and effect. If a certificate of insurance is submitted as verification of coverage, the Tribe will reasonably rely upon the certificate of insurance as evidence of coverage but such acceptance and reliance shall not waive or alter in any way the insurance requirements or obligations of this Contract. If any of the policies required herein expire during the life of this Contract, it shall be Contractor’s responsibility to forward renewal certificates containing all insurance provisions required herein within Ten (10) Days after the renewal date. Additionally, certificates of insurance submitted without referencing the Project, the project number, and the contract number will be subject to rejection and returned or discarded. Certificates of insurance shall specifically include the following provisions:

 - a.** The Tribe and its agents, representatives, officers, directors, officials and employees are Additional Insured as follows:
(i) Commercial General Liability - Under Insurance Services Office, Inc., (“ISO”) current Form CG 20 10 or equivalent.
(ii) Auto Liability - Under current ISO Form CA 20 48 or equivalent.
(iii) Excess Liability - Follow Form to underlying insurance.
 - b.** Contractor’s, consultant’s, and Subcontractor’s insurance shall be primary insurance as respects performance of the Work included in this Contract.
 - c.** All policies, including Workers’ Compensation, waive rights of recovery (subrogation) against the Tribe and its agents, representatives, officers, directors, officials and employees for any claims arising out of work or services performed by Contractor under this Contract.
 - d.** A 60-day advance notice cancellation provision to be provided to the Tribe’s Grants and

- Contracts Administrator. If ACORD certificate of insurance form is used, the phrases in the cancellation provision “endeavor to” and “but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives” shall be deleted. Certificate forms other than ACORD form shall have similar restrictive language deleted.
- e. Certificates of Insurance and any notice of cancellation should be addressed as follows:

*The Hualapai Tribe
P.O. Box 179
Peach Springs, AZ 86434*

- 1.11** Contractor, his consultants, and subcontractors shall not fail to comply with the claim reporting provisions of the insurance policies required herein or cause a breach of any insurance policy warranty that would affect the coverage and protection of the Tribe provided by the policy.

1.12 Required Insurance Coverage

- 1.12.1** Contractor shall maintain “occurrence” form Commercial General Liability insurance with an unimpaired limit of not less than two million dollars (\$2,000,000.00) for each occurrence. The policy shall cover liability arising from premises, operations, independent contractors, products-completed operations, property damage, bodily injury, personal injury and advertising injury. Coverage under the policy will be at least as broad as ISO current policy Form CG 00 010 or equivalent thereof, including but not limited to, separation of insured’s clause; and shall not contain a sunset provision or commutation clause, nor any provision which would serve to limit third party action over claims. Further, the policy shall include coverage for the hazards commonly referred to as X (explosion), C (collapse), U (underground). The products and completed operations coverage shall extend for ten (10) years past acceptance, cancellation or termination of the Work. Said policy shall contain a severability of interest provision. To the fullest extent allowed by law, for claims arising out of the performance of this Contract, the Tribe and its agents, representatives, directors, officers, officials and employees shall be cited as an Additional Insured under ISO current Commercial General Liability Additional Insured Endorsement Form CG 20 10, or equivalent, which shall read “Who is an Insured (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of “your work” for that insured by or for you.” If any Excess insurance is utilized to fulfill the requirements of this paragraph, such Excess insurance shall be “follow form” equal or broader in coverage scope than underlying insurance.

- 1.12.2** Contractor, his consultants, and Subcontractors shall maintain Business Automobile Liability insurance with a limit of one million dollars (\$1,000,000) each occurrence on Contractor’s owned, hired and non-owned vehicles assigned to or used in the performance of the Contractor’s work or services under this Contract. Coverage will be at least as broad as ISO coverage code “1” “any auto” current policy form CA 00 01 or equivalent thereof. To the fullest extent allowed by law, for claims arising out of the performance of this Contract, the Tribe and its agents, representatives, officers, directors, officials and employees shall be cited as Additional Insureds under ISO Business Auto policy Designated Insured Endorsement form CA 20 48 or equivalent. If any Excess insurance is utilized to fulfill the requirements of this paragraph, such Excess insurance shall be “follow form” equal or broader in coverage scope than underlying insurance.

- 1.12.3** Contractor, his consultants, and Subcontractors shall maintain Workers’ Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of Contractor’s employees engaged in the performance of work or services under this Contract and shall also maintain Employers Liability Insurance of not less than one million dollars (\$1,000,000.00) for each accident, one million dollars (\$1,000,000.00) disease for each employee and one million dollars (\$1,000,000.00) disease policy limit.

- 1.12.4** Contractor shall be responsible for purchasing and maintaining Builder’s Risk and Course of

Construction insurance, including flood and earthquake insurance, to protect the Project from perils of physical loss, in an amount equal to the contract value. The insurance shall provide for all costs of replacement for the entire Project at the time of any loss. The insurance shall include as named insureds the Tribe, and its agents, representatives, officers, directors, officials, and employees, the Contractor, the Contractor's consultants and subcontractors and sub subcontractors and shall insure against loss from the perils of fire and all-risk coverage for physical loss or damage due to theft, lightning, vandalism, collapse, malicious mischief, riot, civil commotion, landslide, smoke, sprinkler leak, water damage, windstorm, hail, transit, flood, earthquake, testing, resulting loss arising from defective design, negligent workmanship or defective material during the Work until Final Payment. Contractor shall increase the coverage limits as necessary to reflect changes in the estimated replacement cost. Policy shall be endorsed such that the insurance shall not be canceled or lapse because of any partial use or occupancy by the Tribe.

1.13 Certificates of Insurance

Prior to commencing the Work under this Contract, Contractor shall furnish the Tribe's Grants and Contracts Administrator with certificates of insurance, and formal endorsements as required by this Contract, issued by Contractor's, consultant's, and Subcontractor's insurer(s), as evidence that policies providing the required coverage, conditions and limits required by this Contract are in full force and effect. Contractor may submit a written request to the Tribe to delay the purchase of certain of the policies required herein until Contractor mobilizes at the site. Unless otherwise specified in this Contract, in the event any insurance policy(ies) required by this Contract is(are) written on a "claims made" basis, coverage shall extend for five years past completion and acceptance of Contractor's work or services and as evidenced by annual certificates of insurance. If a policy does expire during the life of the Contract, a renewal certificate must be sent to the Tribe thirty (30) Days prior to the expiration date. All certificates of insurance required by this Contract shall be identified by Project name. The Tribe reserves the right to request and receive, within ten working days, certified copies of any or all of the above insurance policies and/or endorsements. Failure to demand such evidence of full compliance with the insurance requirements set forth in this Contract or failure to identify any insurance deficiency shall not relieve Contractor from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Contract. Contractor acknowledges that the Tribe's Grants and Contracts Administrator will review all required certificate(s) of insurance with endorsement(s) for verification of compliance with this Contract.

1.14 Cancellation and Expiration Notice

Insurance required herein shall not expire, be canceled, or materially changed without 60 days' prior written notice to the Tribe.

1.15 Failure of Compliance

Should the Contractor fail to provide and maintain in force any and all insurance, or insurance coverage required by this Contract or by law, or should a dispute arise between the Tribe and any insurance company of Contractor over policy coverage or limits of liability as required herein, the Tribe will be entitled to recover from Contractor all amounts payable, as a matter of law, to the Tribe or any other parties, had the required insurance or insurance coverage been in force. Said recovery will include, but is not limited to, interest for the loss of use of such amounts of money, plus all attorneys' fees, costs, and expenses incurred in securing such determination and any other consequential damages arising out of the failure of Contractor or insurance company to comply with the provisions of this Contract, or any policy required hereby, or any other requirements regarding insurance imposed by law. Nothing herein shall limit any damages for which Contractor is responsible as a matter of law.

1.16 Indemnity

To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the Tribe and its agents, representatives, officers, directors, officials, and employees of any of them from and against all claims, damages, losses and expenses (including but not limited to attorneys' fees, court costs and the cost of appellate proceedings) relating to, arising out of, or alleged to have resulted from either directly or indirectly the negligent acts, errors, mistakes, omissions, work or services of the Contractor, its employees, consultants, agents, or any tier of subcontractors in the performance of this Contract. Contractor's duty to defend, hold harmless and indemnify the Tribe and its agents, representatives, officers, directors, officials, and employees shall arise in connection with any claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death, or injury to, impairment or destruction of property, including loss of use resulting there from, caused by any negligent acts, errors, mistakes, omissions, work or services in the performance of this Contract including any employee of Contractor or any tier of consultant or subcontractor or any other person for whose acts, errors, mistakes, omissions, work or services the Contractor may be legally liable. The amount and type of insurance coverage requirements set forth herein are separate and independent from the indemnity provisions of this paragraph and will in no way be construed as limiting the scope and magnitude of the indemnity provisions of this paragraph.

2. **AMENDMENTS:** Amendments may be obtained from the Tribe's website at: www.hualapai-nsn.gov. It is the bidder's responsibility to obtain a copy of any amendment relevant to this solicitation. Internet access is available at all public libraries. Any interested offerors without internet access may obtain a copy of this solicitation by calling (928) 769-1310, or a copy may be picked up during regular business hours at the Planning Department, 887 Highway 66, Peach Springs, AZ 86434. The Tribe takes no responsibility for informing recipients of changes to the original solicitation document. Failure to submit signed amendments with the bid response may be grounds for deeming submittal non-responsive.

3. **CONFLICT OF INTEREST:** Sub consultants who design and/or develop specifications for materials for this project will be precluded from contract award for that item if a solicitation is issued for the item.

STANDARD TERMS AND CONDITIONS

1. DEFINITION OF KEY WORDS USED IN THIS SOLICITATION:

Shall, Will, Must: Indicates a mandatory requirement. Failure to meet these mandatory requirements may result in the rejection of submittal as non-responsive.

Should: Indicates something that is recommended but not mandatory. If the offeror fails to provide recommended information, the Tribe may, at its sole option, ask the offeror to provide the information or evaluate the submittal without the information.

May: Indicates something that is not mandatory but permissible.

For purposes of this solicitation, the following definitions shall apply:

- A. Hualapai Tribe** – The Tribe, Peach Springs, Arizona, 941 Hualapai Way, Peach Springs, AZ 86434
- B. Agency or User Department** – Used interchangeably to mean the Tribal department or division responsible for managing the project.
- C. Contractor or Firm** – Used interchangeably in referring to the person, firm or corporation with whom the Tribe has entered into the Contract.
- D. Joint Venture** – Two or more persons or entities combining their property, money, skills, and knowledge to form a distinct legal entity to carry out a single business enterprise for profit, pursuant to a written agreement.
- E. Contract** - The legal agreement executed between the Tribe and the Contractor.
- F. Tribe Project Manager** - The Tribal employee specifically designated as responsible for monitoring and overseeing the performance under this Contract, also referred to as the Tribe’s Designated Contract Representative.
- G. Procurement Manager** - The contracting authority for the Tribe, Peach Springs, AZ.
- H. Bid Documents** – This include the construction plans and specifications, the IFB document and its contract conditions, the General Conditions of the Contract for Construction (AIA Document A201 as amended herein), and all addenda issued prior to bid date.

2. CERTIFICATION: By signature in the offer section of the Bid Offer page, the Contractor certifies:

- A.** The submission of the offer did not involve collusion or other anti-competitive practices.
- B.** The Consultant shall not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11246.
- C.** The Consultant has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer.
- D.** The Consultant submitting the offer hereby certifies that the individual signing the offer is an authorized agent for the Consultant and has the authority to bind the Consultant to the Contract.

3. TERMINATION OF CONTRACT: This contract may be terminated at any time by mutual written consent, or by the Tribe, with or without cause, upon giving thirty (30) days written notice to you. The Tribe at its convenience, by written notice, may terminate this contract, in whole or in part. If this contract is terminated, the Tribe shall be liable only for payment under the payment provisions of this contract for services rendered and accepted material received by the Tribe

before the effective date of termination.

The Tribe reserves the right to cancel the whole or any part of this contract due to failure of contractor to carry out any term, promise, or condition of the contract. The Tribe will issue a written ten (10) day notice of default to contractor for acting or failing to act as in any of the following:

- A. In the opinion of the Tribe, contractor provides personnel that do not meet the requirements of the contract;
- B. In the opinion of the Tribe, contractor fails to perform adequately the stipulations, conditions or services/specifications required in this contract;
- C. In the opinion of the Tribe, contractor attempts to impose on the Tribe personnel or materials, products or workmanship, which is of an unacceptable quality.
- D. Contractor fails to furnish the required service and/or product within the time stipulated in the contract;
- E. In the opinion of the Tribe, contractor fails to make progress in the performance of the requirements of the contract and/or give the Tribe a positive indication that contractor will not or cannot perform to the requirements of the contract.

Each payment obligation of the Tribe created hereby is conditioned upon the availability of Tribal, State and Federal funds which are appropriated or allocated for the payment of such an obligation. If funds are not allocated by the Tribe and available for the continuance of service herein contemplated, the contract period for the service may be terminated by the Tribe at the end of the period for which funds are available. The Tribe shall notify contractor at the earliest possible time which service will or may be affected by a shortage of funds. No penalty shall accrue to the Tribe in the event this provision is exercised, and the Tribe shall not be obligated or liable for any future payments due or for any damages as a result of termination under this paragraph.

- 4. **RECORDS:** Internal control over all financial transactions related to this contract shall be in accordance with sound fiscal policies. The Tribe may, at reasonable times and places, audit the books and records of you or any and all of your subcontractors. Said audit shall be limited to this contract and its scope of services.
- 5. **INDEPENDENT CONTRACTOR:** It is clearly understood that each party shall act in its individual capacity and not as an agent, employee, partner, joint venture, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other party for any purpose whatsoever.

Contractor shall not be entitled to compensation in the form of salaries, or to paid vacation or sick days by the Tribe, and that such days do not accumulate for the use of same at a later date.

The Tribe will not provide any insurance coverage to the Contractor, including Workmen's Compensation coverage. The Contractor is advised that taxes or social security payments shall not be withheld from a Tribe payment issued hereunder and that Contractor should make arrangements to directly pay such expenses, if any.

- 6. **INDIAN PREFERENCE:** The Contractor and each of its subcontractors shall give preference in all hiring to Indians as required by the Indian preference in accordance with 25 U.S.C. § 450e(b). Except as set forth in 25 U.S.C. § 450e(b), Contractor, its subcontractor(s) and supplier(s) agree to adhere to a policy of equal employment opportunity and demonstrate an affirmative effort to recruit, hire, promote and upgrade the position of employees regardless of race, color, religion, ancestry, sex, age, disability, national origin, sexual orientation, gender identity, familial status, or marital status and who agree and are responsive to the Tribe's goals.

7. **HUMAN RELATIONS:** Contractor agrees to abide by the provisions of the Tribe's Procurement Code relating to provisions against discrimination required in all Tribe contracts.
8. **NON-EXCLUSIVE CONTRACT:** Any contract resulting from this solicitation shall be awarded with the understanding and agreement that it is for the sole convenience of the Tribe. The Tribe reserves the right to obtain like goods or services from another source when necessary.
9. **AMERICANS WITH DISABILITIES ACT:** Except as set forth in 42 U.S.C. § 2000e-2(i), this Contract is subject to all applicable provisions of the Americans with Disabilities Act (Public Law 101-336, 42 U.S.C. 12101-12213) and applicable federal regulations under the Act.
10. **CONFIDENTIALITY OF RECORDS:** The Contractor shall establish and maintain procedures and controls that are acceptable to the Tribe for the purpose of assuring that no information contained in its records or obtained from the Tribe or from others in carrying out its functions under the contract shall be used by or disclosed by it, its agents, officers, or employees, except as required to efficiently perform duties under the contract. Persons requesting such information should be referred to the Tribe. Contractor also agrees that any information pertaining to individual persons shall not be divulged other than to employees or officers of contractor as needed for the performance of duties under the contract, unless otherwise agreed to in writing by the Tribe.
11. **SHIPMENT UNDER RESERVATION PROHIBITED:** Contractor is not authorized to ship materials under reservation and no tender of a bill of lading shall operate as a tender of the materials. Non-compliance shall conform to the cancellation clause set forth within this document.
12. **GRATUITIES:** The Tribe may, by written notice to the Contractor, cancel this contract if it is found that gratuities, in the form of entertainment, gifts or otherwise, were offered or given by the contractor or any agent or representative of the Contractor, to any officer or employee of the Tribe amending, or the making of any determinations with respect to the performing of such contract. In the event this contract is canceled by the Tribe pursuant to this provision, the Tribe shall be entitled, in addition to any other rights and remedies, to recover or withhold from the Contractor the amount of the gratuity.
13. **APPLICABLE LAW:** This contract shall be governed by the laws of the Hualapai Tribe.
14. **CONTRACT:** The contract shall be based upon the Invitation for Bids issued by the Tribe and the offer submitted by the Contractor in response to the Invitation for Bids. The offer shall substantially conform to the terms, conditions, specifications and other requirements set forth within the text of the Invitation for Bids. The Tribe reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by the Tribe's Procurement Manager, shall be deemed non-responsive and the offer rejected. The contract shall contain the entire agreement between the Tribe and the Contractor relating to this requirement and shall prevail over any and all previous agreements, contracts, proposals, negotiations, purchase orders, or master agreements in any form.
15. **DISPUTE RESOLUTION:** All claims and controversies arising under this contract shall be resolved in the Hualapai Tribal Court.
16. **CONTRACT AMENDMENTS:** This contract shall be modified only by a written contract amendment signed by persons duly authorized to enter into contracts on behalf of the Contractor and the Tribe.
17. **PROVISIONS REQUIRED BY LAW:** Each and every provision of law and any clause required by law to be in the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

18. **SEVERABILITY:** The provisions of this contract are severable to the extent that any provision or application held to be invalid shall not affect any other provision or application of the contract which may remain in effect without the valid provision or application.
19. **PROTECTION OF TRIBAL BUILDINGS:** The Contractor shall use reasonable care to avoid damaging existing buildings, equipment, and vegetation (such as trees, shrubs, and grass) on Tribal property. If the Contractor fails to do so and damages such buildings, equipment and vegetation, the Contractor shall replace or repair the damage at no expense to the Tribe, as directed by the Procurement Manager. If the Contractor fails or refuses to make such repair or replacement, then the Contractor shall be liable for the cost thereof, which may be deducted from the contract price.
20. **INTERPRETATION - PAROL EVIDENCE:** This contract is intended by the parties as a final expression of their agreement and is intended also as a complete and exclusive statement of the terms of this agreement. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any term used in this contract. Acceptance or acquiescence in a course of performance rendered under this contract shall not be relevant to determine the meaning of this contract even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity to object.
21. **ASSIGNMENT - DELEGATION:** No right or interest in this contract shall be assigned by the contractor without prior written permission of the Tribe, and no delegation of any duty of Contractor shall be made without prior written permission of the Tribe's Procurement Manager. The Tribe shall not unreasonably withhold approval and shall notify the Contractor of the Tribe's position within fifteen (15) days of receipt of written notice by the Contractor.
22. **SUBCONTRACTS:** No subcontract shall be entered into by the Contractor with any other party to furnish any of the material/service specified herein without the advance written approval of the Tribe's Procurement Manager. All subcontracts shall comply with Federal and State laws and regulations which are applicable to the services covered by the subcontract and shall include all the terms and conditions set forth herein which shall apply with equal force to the subcontract, as if the subcontractor were the Contractor referred to herein. The Contractor is responsible for contract performance whether or not subcontractors are used. The Tribe shall not unreasonably withhold approval and shall notify the Contractor of the Tribe's position within fifteen (15) days of receipt of written notice by the Contractor.
23. **RIGHTS AND REMEDIES:** No provision in this document or in the Contractor's proposal shall be construed, expressly or by implication as a waiver by either party of any existing or future right and/or remedy available by law in the event of any claim or default or breach of contract. The failure of either party to insist upon the strict performance of any term or condition of the contract or to exercise or delay the exercise of any right or remedy provided in the contract, or by law, or the acceptance of materials or services, obligations imposed by this contract or by law, and shall not be deemed a waiver of any right of either party to insist upon the strict performance of the contract.
24. **WARRANTIES:** Contractor warrants that all material or service delivered under this contract shall conform to the specifications of this contract. Mere receipt of shipment of the material or service specified and any inspection incidental thereto by the Tribe, shall not alter or affect the obligations of the Contractor or the rights of the Tribe under the foregoing warranties. Additional warranty requirements may be set forth in this document.
25. **INDEMNIFICATION:** To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the Tribe, its Council members, officers, employees, agents and other officials (hereafter called "Tribe") from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, court costs or other alternative dispute resolution costs arising out of or resulting from Contractor's work or services; provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease, death, personal injury, or property damage, including the loss of use or diminution in value, resulting there from; but only to the extent caused in whole or in part by the actual or alleged negligent acts, errors or omissions of Contractor, or anyone for whose acts Contractor may be liable. Contractor shall not be obligated to indemnify, defend and hold harmless the Tribe for any claims to the extent that the injury or damage is attributable to or arose from the negligence or willful misconduct on the part of the Tribe, its agents or employees. The Tribe reserves the right, but

not the obligation, to participate in defense without relieving the Contractor of any obligation hereunder. The amount and type of insurance coverage requirements set forth in this contract shall in no way be construed as limiting the scope of the indemnity in this paragraph. The provisions of this Section shall survive the expiration or early termination of this Contract.

26. **OVERCHARGES BY ANTITRUST VIOLATIONS:** The Tribe maintains that, in actual practice, overcharges resulting from antitrust violations are borne by the purchaser. Therefore, to the extent permitted by law, the Contractor hereby assigns to the Tribe any and all claims for such overcharges as to the materials or services used to fulfill the contract.
27. **RIGHT TO ASSURANCE:** Whenever one party to this contract in good faith has reason to question the other party's intent to perform, the former party may demand that the other party give a written assurance of this intent to perform. In the event that a demand is made and no written assurance is given within five (5) days, the demanding party may treat this failure as an anticipatory repudiation with this contract.
28. **ADVERTISING:** Contractor shall not advertise or publish information concerning this contract without prior written consent of the Tribe.
29. **RIGHT TO INSPECT:** The Tribe may, at reasonable times, and at the Tribe's expense, inspect the place of a Contractor or subcontractor which is related to the performance of any contract as awarded or to be awarded.
30. **FORCE MAJEURE:**
 - A. Except for payment of sums due, neither party shall be liable to the other nor deemed in default under this contract if and to the extent that such party's performance of this contract is prevented by reason of Force Majeure. The term "Force Majeure" means an occurrence that is beyond the control of the party affected and occurs without its fault or negligence. Force Majeure shall not include late performance by a subcontractor unless the delay arises out of a Force Majeure occurrence in accordance with this Force Majeure term and condition.
 - B. If either party is delayed at any time in the progress of the work by Force Majeure, the delayed party shall notify the other party in writing of such delay, as soon as is practical, of the commencement thereof and shall specify the causes of such delay in such notice. Such notice shall be hand-delivered or mailed certified-return receipt and shall make a specific reference to this article, thereby invoking its provisions. The delayed party shall cause such delay to cease as soon as practicable and shall notify the other party in writing when it has done so. The time of completion shall be extended by contract modification for a period of time equal to the time that results or effects of such delay prevent the delayed party from performing in accordance with this contract.
31. **INSPECTION:** All material or service is subject to final inspection and acceptance by the Tribe. Material or service failing to conform to the specifications of this contract shall be held at Contractor's risk and may be returned to the Contractor. If so returned, all costs are the responsibility of the Contractor. Noncompliance shall conform to the cancellation clause set forth in this document.
32. **EXCLUSIVE POSSESSION:** All services, information, computer program elements, reports, and other deliverables which may be created under this contract are the sole property of the Tribe and shall not be used or released by the Contractor or any other person except with prior written permission by the Tribe.
33. **TITLE AND RISK OF LOSS:** The title and risk of loss of material or service shall not pass to the Tribe until the Tribe actually receives the material or service at the point of delivery, unless otherwise provided within this contract.
34. **NO REPLACEMENT OF DEFECTIVE TENDER:** Every tender of materials must fully comply with all provisions of this contract. If a tender is made which does not fully conform, this shall conform to the cancellation clause set forth within this document.

35. **DEFAULT IN ONE INSTALLMENT TO CONSTITUTE TOTAL BREACH:** Contractor shall deliver conforming materials in each installment or lot of this contract and may not substitute nonconforming materials. Delivery of nonconforming materials or a default of any nature, at the option of the Tribe, shall constitute breach of the contract as a whole. Noncompliance shall conform to the cancellation clause set forth within this document.
36. **LIENS:** All materials, services, and other deliverables supplied to the Tribe under this contract shall be free of all liens other than the security interest held by the Contractor until payment in full is made by the Tribe. Upon request of the Tribe, the Contractor shall provide a formal release of all liens.
37. **PAYMENT:** A separate invoice shall be issued for each shipment of material or service performed, and no payment shall be issued prior to receipt of material or service and correct invoice. The Tribe shall make every effort to process payment for the purchase of materials or services within thirty (30) calendar days after receipt of materials or services and a correct invoice.
38. **LICENSES:** Contractor shall maintain in current status all Federal, State, and local licenses and permits required for the operation of the business conducted by the Contractor as applicable to this contract.
39. **COST OF PROPOSAL PREPARATION:** The Tribe shall not reimburse the cost of developing, presenting, or providing any response to this solicitation. Offers submitted for consideration should be prepared simply and economically providing adequate information in a straightforward and concise manner.
40. **PUBLIC RECORD:** All proposals submitted in response to this request shall become the property of the Tribe and shall become a matter of public record available for review subsequent to the award notification.
41. **SUBSEQUENT EMPLOYMENT:** The Tribe may cancel this contract without penalty or further obligation if any person significantly involved in initiating, negotiating, securing, drafting, or creating the contract, on behalf of the Tribe is or becomes, at any time while the contract or any extension of the contract is in effect, an employee of, or a contractor to any other party to this contract with respect to the subject matter of the contract. Such cancellation shall be effective when written notice from the Procurement Manager is received by the parties to this contract, unless the notice specifies a later time.
42. **CLEAN UP:** The Contractor shall at all times keep the contract area, including storage areas used by the Contractor, free from accumulation of waste material or rubbish and, prior to completion of the work, remove any rubbish from the premises and all tools, scaffolding, equipment and materials not property of the Tribe. Upon completion of the repair, the Contractor shall leave the work and premises in clean, neat and workmanlike condition.
43. **PROJECT COMPLIANCE:** At a minimum, the project shall be designed to comply with all applicable Federal, State and Local regulations and any amendments thereto which are adopted during the life of this Contract.
44. **TERRORISM COUNTRY DIVESTMENTS:** The successful Contractor shall at no time during the term of the contract be in violation of the U.S. Export Administration Act.
45. **INDIAN PREFERENCE:** The Contractor and each of its subcontractors shall give preference in all hiring to Indians as required by the Indian preference in accordance with 25 U.S.C. § 450e(b).
46. **TERO:** The Contractor and each of its subcontractors agree to comply with its obligations under the Tribe's TERO Ordinance. The dollar value of all contracts is subject to a one percent TERO tax payable to the Tribe prior to commencement of work.

BID OFFER PAGE

TO THE HUALAPAI TRIBE:

The Undersigned hereby offers and agrees to enter into negotiations with the Tribe to provide the material or service in compliance with all terms, scope of work, conditions, specifications, and amendments in the solicitation.

For clarification of this offer, please contact:

Company Name

Name: _____

Address

Phone: _____

City State Zip

Fax: _____

Signature of Person Authorized to Sign

Printed Name

Title

ACCEPTANCE OF BID OFFER:

The offer is hereby accepted.

The Consultant is now bound to provide the materials or services listed in IFB #02-2023, including all terms, conditions, specifications, amendments, etc., and the Contractor's Bid Offer as accepted by Tribe/public entity.

The Consultant has been cautioned not to commence any billable work or to provide any material or service under this contract until Consultant receives this signed sheet, or written notice to proceed.

Awarded this ___ day of _____ 20___

Authorized signature / Chairwoman of the Hualapai Indian Tribe

Downtown Peach Springs Vicinity Map

Downtown Peach Springs' Central Business District



Photos of existing building



Bid Form

OSTERMAN GAS STATION STORM REPAIRS

Item No	Item Name	Units	Quantity	Unit Price	Total Price
	BASE BID: Concrete masonry wall repairs/reconstruction and installation of all reinforcing, all truss repairs, roof structure repairs, decking, and roofing for main roof within masonry walls.				
	ALTERNATE ADDITIVE BID No. 1: Structural repairs and replacements and re-roofing of open canopy area ("Porte-cochere") outside of building masonry walls.				
	ALTERNATE ADDITIVE BID No. 2: Abatement of lead paint on walls to be repaired and soils where contractor will stage construction				
	TERO Tax at 5% of Construction Cost				
	TOTAL FIXED PRICE BID:				
	UNIT PRICE No. 1: State cost per linear foot for new 40" wide steel roofing panels (10' to 20' length panel).				
	UNIT PRICE No. 2: State cost per 8" x 8" x 16" replica concrete masonry units in minimum quantity of 100 pieces.				

TOTAL BID WRITTEN IN WORDS: _____

We, the undersigned, propose to do all the work and furnish all the labor and materials necessary for the Storm Damage Repair of the wall and roof structures. We further declare that we have carefully read Invitation for Bid that we have made a personal examination of the site that we understand the exact Scope of the Project, and by making the Bid, declare that we are in compliance with all requirements thereof. We acknowledge receipt of the following Addenda and have included their provisions in this Bid.

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

In submitting this Bid, We agree:

1. To hold the Bid open until 30 days after date for receipt of bids.
2. To enter into and execute a Contract, and to furnish Performance and Payment Bonds and Insurance Certificates in accordance with the Contract Documents, within 24 hours after notice of award of contract.
3. To accomplish the work in accordance with the Contract Documents.
4. To provide substantial completion of the work by the date stated in the Calendar of Events and that failure to meet this provision will result in Owner applying provisions of liquidated damages of \$250 per day.

Rights: In submitting this bid, it is understood that the right is reserved by the Tribe to reject any and all bids. If written notice of the acceptance bid is mailed, telegraphed or delivered to the undersigned within thirty days after the opening thereof, or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver a contract in the prescribed form and furnish the required performance and payment security within ten (10) days after the contract is presented to him for a signature.

Bid Bond: Bid security in the sum of _____ dollars (\$_____) in the form of _____ is submitted herewith in accordance with the Invitation for Bids.

Non-Collusion: Attached hereto is an affidavit in proof that the undersigned has not colluded with any person with respect to the proposal.

Required Attachments: We have enclosed the following required items:

- 1) Bidder's Certification of Eligibility, 2) Non-Collusive Affidavit, 3) Contractors Qualifications, 4) Subcontractor List Form, 5) Evidence of Performance & Payment Bond (bids over \$100,000), 6) Preliminary Construction Schedule, 7) Indian Preference Documentation (if applicable; Form 01095 is optional), 8) Copy of Contractor's License(s)

Date _____

Contractor _____

By _____, Title _____

Address _____, Telephone _____

Surety _____, AZ License No. _____

(Seal if Corporation)

BIDDER'S CERTIFICATION OF ELIGIBILITY

By the submittal of this bid, the bidder certifies that to the best of its knowledge and belief, neither it, nor any person of firm that has an interest in the bidder's firm, nor any of the bidder's subcontractors, is ineligible to:

- (1) Be awarded contracts by any agency of the United States Government
- Or,
- (2) Participate in federal programs.

Name of Bidder

Address

By: _____

Title: _____

NOTE: This certification is a material representation of fact upon which reliance is placed when making award. If it is later determined that the bidder knowingly rendered an erroneous certification, the contract may be terminated for default, and the bidder may be debarred or suspended from participation in Federal programs.

AFFIDAVIT

State of _____

County of _____

_____, being first duly sworn, deposes and says:

That he/she is, _____ the party making the foregoing proposal for bid, that such proposal or bid is genuine and not collusive or sham; that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not, in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person to fix the bid price of affiant or of any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person interested in the proposed contract, and that all statements in said proposal for bid are true.

Invitation for Bid No. 01-2023

Location Peach Springs, Arizona

Signature

Name and Title

Date
(Signature should be notarized.)

Performance and Payment Bond¹

KNOW ALL MEN BY THESE PRESENTS: THAT we, _____, as PRINCIPAL, and _____ as SURETY, are held firmly bound unto _____ hereinafter called the Owner, in the penal sum of _____ (\$ _____), for the payment of which sum we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally.

WHEREAS, Principal has entered into a certain Contract with the Owner, dated _____, a copy of which is hereto attached and made a part hereof.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall in all respects fully perform the Contract and all duly authorized modifications thereof during its original term and any extensions thereof that may be granted and during any guaranty period for which the Contract provides, and if the Principal shall fully satisfy all claims arising out of the prosecution of the work under the Contract and shall fully indemnify the Owner for all expenses which it may incur by reason of such claims, including its attorney's fees and court costs, and if the Principal shall make full payment to all persons supplying labor, services, materials, or equipment in the prosecution of the work under the Contract, in default of which such persons shall have a direct right of action hereupon; and if the Principal shall pay or cause to be paid all sales and use taxes payable as a result of the performance of the Contract as well as payment of gasoline and special motor fuel taxes in the performance of the Contract and all motor vehicle fees required for commercial motor vehicles used in connection with the performance of the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect. No modification of the Contract or extension of the term thereof, nor any forbearance on the part of the Owner shall in any way release the Principal or the Surety from liability hereunder. Notice to the Surety of any such modification, extension, or forbearance is hereby waived.

IN WITNESS WHEREOF, the aforesaid Principal and Surety have executed this instrument and affixed their seals hereto, this _____ day of _____.

Principal Surety

Name and Title

(signatures must be notarized.)

(Power-of -Attorney for person signing for Surety Company must be attached to bond.)

The rate of premium on this bond is \$ _____ per thousand.

The total amount of premium charge \$ _____.

(The above is to be filled in by Surety Company.)

¹ Bids exceeding \$100,000 must provide bonding per Hualapai Procurement Procedures and Purchasing Manual, IV.C

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ Secretary of the corporation named as Principal in the foregoing bond; that _____ who signed the bond on behalf of the Principal, was then _____ of said corporation; that I know his/her signature thereto is genuine; and that said bond was fully signed, sealed and attested for and in behalf of said corporation by authority of its governing body.

DIRECTIONS FOR PREPARATION OF PERFORMANCE AND PAYMENT BOND

1. Individual sureties, partnerships or corporations not in the surety business are not acceptable.
2. The name of the Principal shall be shown exactly as it appears in the Contract.
3. The penal sum shall not be less than required by the Contract.
4. If the principals are partners or joint ventures, each member shall execute the bond as an individual and state his/her place of residence.
5. The official character and authority of the person(s) executing the bond for the Principal, if a corporation shall be certified by the Secretary of Assistant Secretary thereof under the corporate seal, or copies attached to such records of the corporation as will evidence the official character and authority of the officer signing, duly certified by the Secretary of Assistant Secretary, under the corporate seal, to be true copies.
6. The current power-of-attorney of the person signing for the surety company must be attached to the bond.
7. The date of the bond must not be prior to the date of the contract.
8. The following information must be placed on the bond by the surety company:
 - A. The rate of premium in dollars per thousand; and
 - B. The total dollar amount of premium charged.
9. Type or print the name underneath each signature appearing on the bond.
10. An executed copy of the bond must be attached to each copy of the Contract (original counterpart) intended for signing.

(On Bank letterhead)
IRREVOCABLE LETTER OF CREDIT

(Address to Owner)

Dear _____:

We hereby authorize you to draw on us to the aggregate amount of \$_____ in the event (name of contractor) defaults, or fails to complete construction and/or payments under that certain Construction Contract with you dated _____.

Such drafts must be accompanied by:

1. Completion Assurance Agreement dated _____ for the project known as Project Number _____.
2. Written certification by you that the proceeds of any draft drawn on this Letter of Credit will be used solely for the purposes and interests described in the Completion Assurance Agreement.

We warrant you that all drafts drawn in compliance with the terms of this Letter of Credit will be duly honored upon delivery of documentation specified and presented to this office until _____ or until fifteen months after the date of substantial completion of the Construction Contract dated between _____, the contractor, and _____, the Owner, as the said date of substantial completion is defined in said Construction Contract, whichever first occurs.

This Letter is irrevocable and shall be in full force and effect unless notification in writing is received by you canceling same.

This credit shall not be modified or amended except upon the written agreement of this Bank and the Owner.

Sincerely,

President

(cc: Contractor)

Completion Assurance Agreement

THIS AGREEMENT made this _____ day of _____ by and between the Hualapai Indian Tribe (Owner) and _____ (Contractor).

WITNESSETH

WHEREAS, the Contractor and the Owner have entered into a Construction Contract dated _____, providing for the construction of a project described in such Contract; and

WHEREAS, the Contractor desires to meet his obligations to supply 100 percent Performance and Payment Bonds with a substitution of another form of security; and

WHEREAS, the Owner has determined that a Letter of Credit arrangement would provide sufficient security in lieu of a performance and payment bond.

NOW THEREFORE, in consideration of the mutual promises and undertakings herein contained, and for the purpose of inducing the Owner to substitute a Letter of Credit arrangement for a Performance and Payment Bond, the parties hereto agree that:

1. The Contractor has provided the Owner with an unconditional, irrevocable, Letter of Credit (Fund), issued by a banking institution in the amount of \$ _____ to secure and indemnify the Owner for any expense, loss or damage suffered or sustained as a result of any default by the Contractor in the performance of its obligations under the Construction Contract. It is expressly understood and agreed that said Fund shall at all times be under the control of the Owner.

2. All disbursements from the Fund shall be authorized and made by the Owner.

3. The Fund shall be maintained as a separate trust account and may be drawn in increments up to its aggregate amount or the aggregate may be drawn. Any incremental draw will not impair or diminish the right of the Owner to make subsequent draws in any amount(s) up to the aggregate amount of the Fund. The proceeds of a draw may be disbursed as follows:

A. To the Contractor during the course of construction to promote the completion of the project, as may be deemed necessary by the Owner.

B. To the Owner the entire fund or balance remaining therein in the event of a default by the Contractor under the Construction Contract to be used by the Owner to indemnify it for any loss, damage or expense whatsoever which it may suffer by reason of the Contractor's failure to perform the Construction Contract.

C. To the Contractor the balance of such fund remaining after three months from the date that the work has been substantially completed in accordance with the Construction Contract (except for punch list items and items awaiting seasonal opportunity to complete) and accepted by the Contracting Officer, but only so long as the Project is free and clear of any liens, claims or encumbrances whatsoever. There shall be withheld from the payment of said balance an amount equal to 2½ percent of the total amount of the Construction Contract, which sum is to be retained in account for a period of fifteen months from the date of substantial completion or for

another period less than fifteen months if authorized by the Owner. Said sum shall be held as a Fund to guarantee against defects in construction due to faulty materials or workmanship or damage to the premises resulting from such defects, which defects or damage become apparent within one year from the date of substantial completion. Said sum may be used for the correction of defects or damage in the event the Contractor fails to make such corrections. The Contractor's liability for such corrections is not limited by the amount of such sum.

4. It is agreed the Contractor may provide a separate unconditional and irrevocable Letter of Credit to satisfy the requirement set forth in paragraph 3C above, that 2½ percent of the total Construction Contract amount, for latent defects, to be retained for fifteen months beyond the date of substantial completion. If such separate unconditional and irrevocable Letter of Credit is provided, it must be delivered to the Owner and made subject to this Completion Assurance Agreement before any balance remaining in the Fund is released to the Contractor or the Fund is canceled.

5. Any other provision of this Agreement notwithstanding, it is understood and agreed that no funds may be disbursed to the Contractor so long as there are any outstanding liens, claims or encumbrances against the project, written notice of which have been received by the Owner. If any such claims, liens and encumbrances have not been removed or resolved, and written notice of such removal or resolution received by the Owner by the date of substantial completion, the Owner may in its sole discretion exercise any of its rights under the Construction Contract General Conditions.

6. It is expressly understood by all parties hereto that in the event of a default by Contractor in any of its obligations under the Construction Contract, the entire Fund, any part thereof, or balance remaining therein may, at the option of the Owner, be paid to Owner together with an assignment of all rights granted to the Owner.

7. This agreement shall not alter or limit the obligations and liabilities of the Contractor under the Construction Contract, but shall be deemed to be additional security for the performance by the Contractor of its obligations thereunder.

8. It is understood and agreed in the event the fund is held by a depository, that the depository is not charged with any duty or responsibility to see to the performance of or compliance with any agreements between any of the parties hereto other than that of paying over the fund as directed in writing by the Owner, nor to see to the application of the Fund after making disbursements as so directed. It is expressly understood and agreed that any claim, controversy, dispute or disagreement which may exist between the Contractor and the owner shall have no effect whatsoever upon the obligation of the Depository to pay the Owner promptly upon receipt of a notice issued pursuant to the terms of the Fund and this Agreement.

9. Notwithstanding any other provision of the Construction Contract, it is agreed the fund will be administered pursuant to the terms of the Fund, this Agreement and any consistent provisions in the Construction Contract. Any inconsistent provisions in the Construction Contract shall be superseded and controlled by the Fund and this Agreement. It is expressly agreed that reference to this Agreement or collateral Construction Contract document does not make the issuance of the Fund conditional.

Contractor

Name and Title

Owner

Name and Title

Approved by Bank:

Name and Title

(Bank Letterhead)
CASH DEPOSIT LETTER

(Address to Owner)

Dear _____:

This will acknowledge that this Bank has established an account in the amount of \$_____ with funds received from _____.

This account has been issued in the name of _____ and the original certificate manifesting the same is being handed to you herewith. It is our understanding that this account is being established in lieu of performance and payment bonds customarily furnished in construction projects. The account shall serve as the "Fund" referred to in the Completion Assurance Agreement, dated _____, by and between the Owner and the Contractor.

The Bank shall pay over all or part of the funds in the account together with interest herein to the Owner, or to another as the Owner may designate, upon written notification by the Owner to the Bank of a default by the Contractor under the Construction Contract, or of the Contractor's failure to perform the Construction Contract.

The Bank shall pay over all or part of the funds in the account upon proper notification by the Owner without regard to any objections, claims, defenses, assertions, or actions by the Contractor or any other person or entity acting on behalf of the Contractor. The Bank specifically recognizes that any controversy, dispute, claim or disagreement which may exist between the Contractor and the Owner have no effect whatsoever upon the obligation of the Bank to pay the Owner promptly upon receipt of the notice referred to above.

Sincerely,

President

Cash Deposit Agreement

THIS AGREEMENT made this _____ day of _____ by and between the Hualapai Indian Tribe (Owner) and _____ (Contractor).

WITNESSETH

WHEREAS, the Contractor and the Owner have entered into a Construction Contract dated _____, providing for the construction of a project described in such Contract; and

WHEREAS, the Contractor desires to meet his/her obligations to supply 100 percent Performance and Payment Bonds with a substitution of another form of security; and

WHEREAS, the Owner has determined that a cash deposit arrangement would provide sufficient security in lieu of a Performance and Payment Bond.

NOW THEREFORE, in consideration of the mutual promises and undertakings herein contained, and for the purpose of inducing the Owner to substitute a cash deposit arrangement for a Performance and Payment Bond, the parties hereto agree that:

1. The Contractor has provided the Owner with a letter dated _____, from a banking institution evidencing the deposit of funds in an account (Fund) in the amount of \$ _____. The Fund has been established in the name of the Owner to secure and indemnify it for any expense, loss or damage suffered or sustained as a result of any default by the Contractor in the performance of its obligations under the Construction Contract. It is expressly understood and agreed that said Fund shall at all times be under the control of the Owner.
2. All disbursements from the Funds shall be authorized and made by the Owner.
3. The Fund shall be maintained as a separate trust account and may be drawn in increments up to its aggregate amount or the aggregate may be drawn. Any incremental draw will not impair or diminish the right of the Owner to make subsequent draws in any amount(s) up to the aggregate amount of the Fund. The proceeds of a draw may be disbursed as follows:
 - A. To the contractor during the course of construction to promote the completion of the project, as may be deemed necessary by the Owner.
 - B. To the Owner the entire Fund or balance remaining therein in the event of a default by the Contractor under the Construction Contract to be used by the Owner to indemnify it for any loss, damage or expense whatsoever which it may suffer by reason of Contractor's failure to perform the construction contract.
 - C. To the Contractor the balance of such Fund remaining after three months from the date that the work has been substantially completed in accordance with the Construction Contract (except for punch list items and items awaiting seasonal opportunity to complete) and accepted by the Contracting Officer in accordance with Section 20 of the General Conditions, but only so long as the Project is free and clear of any liens, claims or encumbrances whatsoever. There shall be withheld from the payment of said balance an amount equal to 2½ percent of the total amount of the Construction Contract, which sum is to be retained in account for a period of 15 months from the date of substantial completion or for another period less than 15 months if authorized by the Owner. Said sum shall be held as a Fund to guarantee against defects in construction due to faulty materials or workmanship or damage to the premises resulting from such defects, which defects or damage become apparent within one year after date of substantial completion. Said sum may be used for the correction of defects or damage in the event the Contractor fails to make such corrections. The Contractor's liability for such corrections is not limited by the amount of such sum.
4. It is agreed that Contractor may provide a separate unconditional and irrevocable Letter of Credit to satisfy the requirement set forth in paragraph 3C above that 2½ percent of the total Construction Contract amount, for

latent defects, to be retained for fifteen months beyond the date of substantial completion. If such separate unconditional and irrevocable Letter of Credit is provided, it must be delivered to the Owner and made subject to this Completion Assurance Agreement before any balance remaining in the fund is released to the Contractor or the Fund canceled.

5. Any other provision of this Agreement notwithstanding, it is understood and agreed that no funds may be disbursed to the Contractor so long as there are any outstanding liens, claims or encumbrances against the Project, written notice of which have been received by the Owner. If any such claims, liens and encumbrances have not been removed or resolved, and written notice of such removal or resolution receive by the Owner, by the date of substantial completion, the Owner may in its sole discretion exercise any of its rights under the General Conditions of the Construction Contract

6. It is expressly understood by all parties hereto that in the event of a default by the Contractor in any of its obligations under the Construction Contract, the entire Fund, any part thereof, or balance remaining, therein may, at the option of the Owner, be paid to the Owner together with an assignment of all rights granted to the Owner.

7. This Agreement shall not alter or limit the obligations and liabilities of Contractor under the Construction Contract, but shall be deemed to be additional security for the performance by the Contractor of its obligations thereunder.

8. It is understood and agreed that in the event the Fund is held by a depository, that the depository is not charged with any duty or responsibility to see to the performance of or compliance with any agreements between any of the parties hereto other than that of paying over the Fund as directed in writing by the Owner, nor to see to the application of the Fund after making disbursements as so directed. It is expressly understood and agreed that any claim, controversy, dispute or disagreement which may exist between the Contractor and the Owner shall have no effect whatsoever upon the obligation of the depository to pay the Owner promptly upon receipt of a notice issued pursuant to the terms of the Fund and this Agreement.

9. Notwithstanding any other provision of the Construction Contract, it is agreed the fund will be administered pursuant to the terms of the Fund, this Agreement and any consistent provisions in the Construction Contract. Any inconsistent provisions in the Construction Contract shall be superseded and controlled by the Fund and this Agreement. It is expressly agreed that reference to this Agreement or collateral Construction Contract document does not make the issuance of the Fund conditional.

Contractor

Owner

Name and Title

Name and Title

Approved by Bank:

INDIAN ENTERPRISE QUALIFICATION STATEMENT

The Undersigned certifies under oath the truth and correctness of all answers to questions made hereinafter:

1. Applicant wishes to qualify as:

An "Economic Enterprise" as defined in Section 3(e) of the Indian Financing Act of 1974 (P.L. 93-262); that is "any Indian-Owned...commercial, industrial or business activity established or organized for the purpose of profit: Provided, that such Indian Ownership shall constitute not less than 51 percent of the enterprise:

--or--

A "Tribal Organization" as defined in Section 4(c) of the Indian Self-Determination and Education Assistance Act (P.L. 93-63 8); that is: "the recognized governing body of any Indian Tribe; any legally established organization of Indians which is controlled, sanctioned or chartered by such governing body or which is democratically elected by the adult members of the Indian community to be served by such organization and which includes the maximum participation of Indians in all phases of its activities: Provided, that in any case where a contract is let or grant made to an organization to perform services benefiting more than one Indian Tribe, the approval of each such Indian Tribe shall be a prerequisite to the letting or making of such contract or grant..."

2. Name of Enterprise or Organization: _____

Address: _____

Telephone No.: _____

3. Check One:

- Corporation Joint Venture
 Partnership Other:
 Sole Proprietorship

4. Answer the following:

If a Corporation:

a. Date of incorporation: _____

b. State of incorporation: _____

c. Give the names and addresses of the officers of this Corporation and establish whether they are Indian (I) or Non-Indian (NI).

Name and I or % of Stock

Social Security No. NI Title Address Ownership

_____ President _____

_____ Vice-President _____

_____ Secretary _____ or Clerk

_____ Treasurer _____

d. Complete the following information on all stockholders who are not listed in c. above, owning 0% or more of the stock. Establish whether they are Indian (I) or Non-Indian (NI).

Name and I or % of Stock

Social Security No. NI Address Ownership

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

If a Sole Proprietorship or Partnership:

a. Date of Organization: _____

b. Give the following information on the individual or partners and establish whether they are Indian (I) or Non-Indian (NI).

Name and I or % of Stock

Social Security No. NI Address Ownership

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

If a Joint Venture:

a. Date of Joint Venture Agreement: _____

b. Attach the information for each member of the joint venture prepared in the appropriate format given above.

Give the name, address, and telephone number of the principal spokesperson of your organization:

Has any officer or partner of your organization listed in #4 been an officer or partner of another organization that failed in the last ten years to complete a contract? _____

If yes, state circumstances:

Has this enterprise failed in the last ten years to complete any work awarded to it or to complete the work on time? _____

If so, note when, where and why:

8. Will any officer or partner listed in #4 be engaged in out-side employment?

____ Yes ____ No

If Yes, complete:

Hours Per Week

Name/Title Outside the Enterprise

_____	_____
_____	_____
_____	_____

9. If the enterprise or anyone listed in #4 above, currently subject to an administrative sanction issued by any department or agency of the Federal Government?

Yes No

If Yes, complete:

Date of Type of Department

Name of person/business Action or Agency

10. Does this enterprise have any subsidiaries or affiliates or is it a subsidiary or affiliate of another concern?

Yes No

If Yes, complete:

Name and address of subsidiary, Description

affiliate or other concern of Relationship

11. Does this enterprise or any person listed in #4 above have or intend to enter into any type of agreement with any other concern or person which relates to or affects the on-going administration, management or operations of this enterprise? These include but are not limited to management, and joint venture agreements and any arrangement or contract involving the provision of such compensated services as administrative assistance, data processing, management consulting of all types, marketing, purchasing, production and other types of compensated assistance.

Yes No

If yes, attach a copy of any written agreement or an explanation of any oral or intended agreement.

12. Has this enterprise ever been subject to a judgment of any court or administrative sanction (Federal, State, or Tribal)?

Yes No

Has any individual listed in #4 ever been subject to judgment of any court or administrative sanction (Federal, State, or Tribal)?

Yes No

If the answer is Yes to either question, furnish details in a separate attachment.

13. Has any tax lien or other collection procedure been instituted against this enterprise or the individuals listed in #4 as a sole proprietor or partner in their capacities with this enterprise or other enterprise?

Yes No

If yes, furnish details in a separate exhibit.

14. Has this enterprise or any person listed in #4 ever been involved in a bankruptcy or insolvency proceeding?

Yes No

If yes, provide details in an attachment.

15. What dollar amount of Working Capital is available to your enterprise prior to the start of construction?

\$ _____

Explain the source of these funds:

Include a copy of the Company's most recent audited financial statement.

16. How will project development bookkeeping and payroll be maintained: (check one)

a. By contract with an outside professional accounting firm: _____

Name: _____ Address: _____

_____ Telephone: _____

b. Records are to be kept by enterprise personnel: _____

If "b" has been checked--state the qualifications of your personnel to perform this function:

c. Other: _____

17. Trade References (include addresses and phone numbers):

18. Bank and credit references (including addresses and phone numbers):

19. Indicate the core crew employees in your work force, their job titles, and whether they are Indian or Non-Indian. Core crew is defined as an individual who is either a current bonafide employee or who is not a current employee but who is regularly employed in a supervisory or other key skilled position when work is available.

b. Over the past three years, what has been the average number of employees:

20. Attach certification by a tribe or other evidence of enrollment in a federally recognized tribe for each officer, partner or individual designated as an Indian in #4.

- 21. Attach a certified copy of the charter, article of incorporation, by-laws, partnership agreement, joint venture agreement and/or other pertinent organizational documentation.
- 22. Explain in narrative form the stock ownership, structure, management, control, financing, and salary or profit sharing arrangements of the enterprise, if not covered in answers to specific questions heretofore. Attach copies of all shareholder agreements, including voting trust, employment contracts, agreements between owners and enterprise. Include information on salaries, fees, profit sharing, material purchases, and equipment lease or purchase arrangements.
- 23. Evidence relating to structure, management, control, and financing should be specifically included. Also, list the specific management responsibilities of each principal, sole proprietor, partner, or party to a joint venture (as appropriate) listed in response to #4.
- 24. Attach evidence that the enterprise (or an individual in it) is appropriately licensed for the type of work that is to be performed. Include Federal ID Number.
- 25. Attach a brief resume of the education, technical training, business, employment, design and/or construction experience for each officer, partner or sole proprietor listed in #4. Include references.

NOTES:

- I. Omission of any information may be cause for this statement not receiving timely and complete consideration.
- II. The persons signing below certify that all information in this INDIAN ENTERPRISE QUALIFICATION STATEMENT, including exhibits and attachments, is true and correct.
- III. Print and type name below all signatures.

If applicant is Sole Proprietor, Sign Below:

Name Date

If applicant is in a Partnership or Joint Venture, all Partners must sign below:

Name Date

Name Date

If applicant is a corporation, affix corporate seal

Corporate Seal

By: _____
President's Signature Date

Attested by: _____
Corporate Secretary's Signature Date

WARNING: U.S. Criminal Code, Section 1010, Title 18, U.S.C. provides in part:
"Whoever...makes, passes, utters, or publishes any statement, knowing the same to be false...shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

HUALAPAI CONTRACT CLAUSES TO ADD TO AIA DOCUMENT A104-2017

1. Indemnification.

Contractor shall be responsible for any wrongful or negligent acts or omissions performed by him, his employees or his subcontractors associated with his performance under this Contract and agrees to indemnify and hold the Tribe harmless from any liability or damage to person or property that arises from or is related to any such act or omission, including any attorney fees that may be incurred.

2. Confidentiality.

- a. Contractor acknowledges that all information related to Contractor's work under this Contract, including all findings, reports, and other information either provided directly or indirectly by the Tribe in connection with the Contract or developed, compiled or created by Contractor in performing his services under this Contract, and all improvements made or conceived by Contractor under this Contract, is confidential and proprietary information owned by, and of great value to, the Tribe. Accordingly, Contractor agrees not to disclose any such confidential information to any person without the prior, written authorization of the Chairman (or his written designee) of the Tribe.
- b. Regardless of how or when this Contract is terminated, within five (5) working days of completion of the work under this Contract, Contractor shall deliver to the Tribe all copies (including those on computer disk or other electronic medium) of all documents, drawings, specifications, and other materials or information which were furnished directly or indirectly by the Tribe to Contractor in connection with this Contract or which were prepared or acquired by Contractor in performance of services under this Contract.
- c. Contractor shall not use any of the proprietary information described in this paragraph for anyone other than the Tribe's benefit.

3. Intellectual Property.

The title to all work completed by Contractor under or associated with this Contract shall be in the Tribe. Contractor will promptly disclose to the Tribe all inventions, improvements, designs, publications and ideas made or conceived by Contractor in the course of or associated with providing services under this Contract, regardless of whether Contractor develops those inventions, improvements, designs, publications or ideas after the termination of this Contract. Contractor agrees to assign to the Tribe all right and title to all such inventions, improvements, designs, publications and ideas, and all copyrights, patents, and royalties associated with or derived from such ideas.

4. Governing Law.

This Contract shall be governed by the laws and ordinances of the Hualapai Indian Tribe. All claims arising under or related to this Contract shall be brought to the Contracting Officer, Grants & Contract Officer then to the Hualapai Tribal Court.

5. Environmental Compliance.

Contractor shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15).

6. Indian Preference.

The Contractor and each of his or her subcontractors shall give preference in all hiring to Indians as required by the Indian preference in accordance with 24 CFR 1003.510 and Hualapai Procurement Regulations.

7. Tribal Employment Rights.

- a. The Contractor shall comply with Tribal Ordinance Number 01-80, as amended.
- b. The Contractor shall pay a tax of 5% of the total amount of each contract (TERO Tax).

8. Interest of Members of Congress.

No member of, or delegate to, the Congress of the United States of America or Resident Commissioner shall be permitted to any share or part of this Contract or to any benefit that may arise from it.

9. Prohibition Against Liens.

The Contractor is prohibited from placing a lien on the Owner's property. This prohibition shall be placed in all subcontracts.

Construction Drawings – MOTLEY DESIGN GROUP

Osterman Gas Station Storm Repairs

Peach Springs, Arizona



▲ Issued for Bidding

Sheet Index

No.	Sheet Name	Rev. 1	Rev. 2
CS	Cover/Site		
A-01	Specifications		
A-02	Floor Plan/Details		
A-03	Roof Framing Plan		
A-04	Roof Plan		
A-05	Elevations - North and West		
A-06	Elevations - South and East		
A-07	Building Sections A and B		
A-08	Building Sections C and D		
A-09	Truss Elevations		
A-10	Porte-Cochere Rehabilitation		
A-11	Details and Schedules		

Code Information

Reviewers:
Hualapai Fire Department, Mohave County Development Services

Applied Code IBC 2018
Seismic Design Category = B
Construction Type- V-B
Occupancy- Mixed, B & S1
Future Change to Group B Throughout
Gross Floor Area:
Building- 3092 S.F.
Porch Roof- 637 S.F.
Total Provided- 3729 S.F.
Allowable Area: 9000 S.F. Plus Allowed Increases
(Table 503)
Provided Height: 13 Ft/ 1 Story
Allowed Height: 2 Stories

PROJECT OUTLINE:
This project encompasses repairs and reinforcements of an existing structure. The building has been unoccupied for a period exceeding six years. The building will not be occupied at completion of work under this contract. It is assumed that additional work will be performed prior to occupancy as required by building code.

SPECIAL INSPECTION REQUIREMENTS:

The following work shall receive Special Structural Inspection in accordance with Section 1701 of the International Building Code.

Work that is covered up prior to inspection will be exposed at the contractor's expense and readied for inspection. Work that cannot be uncovered will be removed and reconstructed.

Reinforcing Steel in Masonry - Periodic
Masonry Grouting Operations & Testing - Continuous
Post Installed Epoxy Anchors - Continuous

Testing and sampling of materials to be in accordance with International Building Code Special Inspection requirements but not less than every 50 cubic yards or days pour of concrete and per 50 cubic yards or days pour of grout. Mortar to tested in accordance with IBC requirements. All shop drawings and submittals shall be presented to the Engineer at least 10 working days prior to being needed on job.

All inspections shall be performed in accordance with International Building Code requirements by qualified certified inspectors. Notification of first inspection shall be 72 hours in advance (three working days) of the requested inspection date. Special inspector shall be notified 24 hours in advance of all required subsequent inspections (72 hours for weekend work).

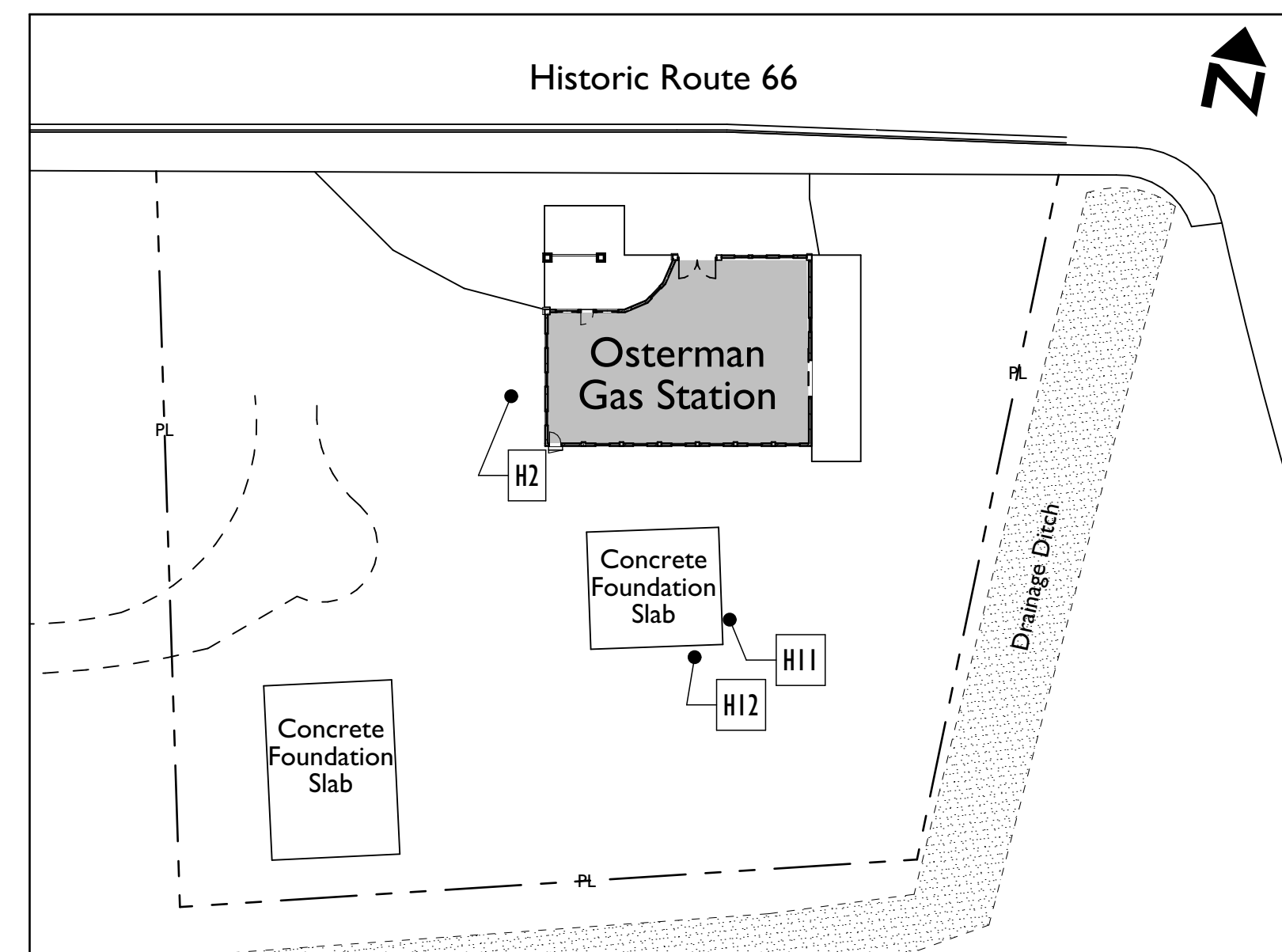
Project Directory

OWNER: Hualapai Tribe
Kevin Davidson
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Peach Springs, AZ 86434
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ARCHITECT: Robert Graham AIA
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STRUCTURAL: Mel Slaysman, P.E.
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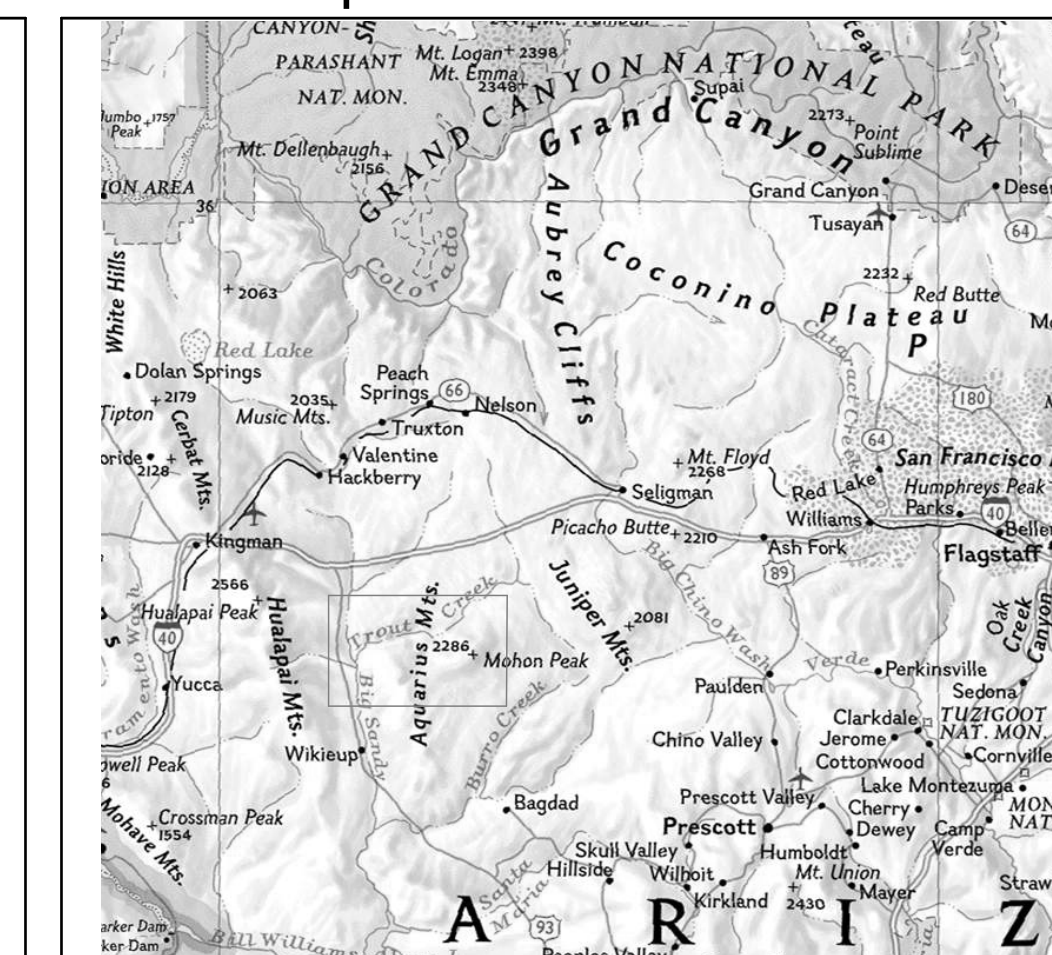
Site Work - Lead Remediation Locations



Vicinity Map - Peach Springs



Location Map



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Design Group, LLC

Architecture - Historic Preservation - Planning - Landscape Design
1114 Grand Avenue - Phoenix AZ 85007 - 602.254.5599 - motleydesigngroup.com

PROJECT: Osterman Gas Station Storm Repairs

ADDRESS: Peach Springs AZ

PROJECT NO.: 22-018

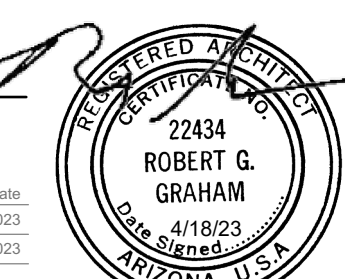
SHEET TITLE:

Cover/Site

DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 02, 4/18/2023

SHEET REVISION HISTORY

Rev.	Change Name	Date
01	ESI Requirements	4/12/2023
02	Issued for Bidding	4/18/2023



Sheet No.

CS

Specifications

1. GENERAL REQUIREMENTS

1.1 SCOPE OF WORK: Provide all labor, materials, equipment, and transportation necessary for complete and proper execution of the Work, unless such work is specifically noted as "Not in Contract", "N.I.C.", "By Owner" or "By Others".

1.2 FIELD CONDITIONS: Verify all dimensions, elevations, and site conditions prior to commencing work, and notify the Architect of all discrepancies. Bring all conflicts present in the drawings to the attention of the Architect and obtain resolution prior to proceeding with construction.

1.3 SUBSTITUTIONS: No substitutions shall be made without approval of the Architect. Where the Contractor wishes to request a change, either due to field conditions of material or detail substitution, he shall submit to the Architect completed documentation including drawings and required engineering prior to construction of the specific area, allowing ample time for review.

1.4 CODES: All work shall comply with prevailing building codes in the jurisdiction having responsibility for the project, as identified in the project summary or code data.

1.5 PERMITS: Provide all necessary permits and approvals necessary by governing authorities.

1.6 CUTTING AND PATCHING: All trades shall do their own cutting, fitting, patching, etc. to make the several parts come together properly and fit it to receive or to be received by work of other trades. Obtain Architect's approval before cutting and/or patching any structural building element.

1.7 METHODS AND TECHNIQUES OF CONSTRUCTION: The contract drawings and specifications represent the finished structure. They do not indicate the method of construction. The Contractor shall provide all measures necessary to protect the structure and any surrounding structures during construction. Such measures shall include, but not be limited to, bracing and shoring for loads due to construction equipment. Observation visits by the Architect or his consultants shall not include inspection of such items.

1.8 MATERIALS PLACEMENT: Construction materials shall be spread out if placed on framed floor or roofs. Load shall not exceed the design live load per square foot.

1.9 GENERAL CONDITIONS: AIA Document A201, latest edition as of the date of this contract, is hereby made a part of this contract by reference.

1.10 CLEAN-UP: Keep the premises clean and free from accumulated waste materials or rubbish at all times. At the completion of Work, remove all such materials and all tools, scaffolding and surplus materials and clean all parts of the work, including broom cleaning and vacuuming; removal of stickers, labels, and paint smears; etc.

1.11 SUBMITTAL PROCEDURES: Submit product data, shop drawings, and samples required by these specifications. Submit samples, including color selection samples, in the form and number required by the relevant section of the specifications. Submit all written and graphic materials in electronic PDF format, unlocked (allowing markup), via email, FTP transfer website, or digital media such as CD-ROM or DVD. Each submittal shall be compiled into a single PDF file. The first page of the PDF file shall be a transmittal page identifying the project, project location, Contractor, Architect, submittal identification and number, and space for Contractor's review and approval and 3" x 5" minimum space for Architect's review stamp. Allow 5 working days for Architect's review of all submittals unless a longer time is specified elsewhere.

1.12 CLOSEOUT SUBMITTALS: At substantial completion of the work, provide two loose-leaf copies of Owner's Manual including all operating instructions, maintenance instruction, and parts lists for all mechanical and electrical systems installed as a part of the Work.

1.13 HISTORIC PRESERVATION: The existing building is a historic structure listed on the National Register of Historic Places. The intent of the construction documents is to preserve the historic elements of the building while enhancing structural stability and adding new elements in a sensitive manner. All rehabilitation and repair treatments shall be executed in a manner as to avoid damage to existing materials to remain. Cleaning shall be done using the gentlest possible means. Where possible, deteriorated features are to be repaired rather than replaced. Where materials must be replaced, new materials shall match the old in design, color, texture, and other visual qualities, and, where possible, materials.

2. SITE WORK

2.1 SELECTIVE DEMOLITION: Completely demolish and remove all existing building elements and components indicated, including all appurtenances related or connected to demolished elements. Demolish and remove those building elements in conflict with installation of new work, even if not specifically noted. Undertake demolition using the gentlest means possible. Hand demolition is encouraged and preferred over power-driven and machine demolition. Debris shall become the property of the contractor unless noted otherwise. Carefully remove items and materials indicated to be salvaged for reuse and reinstallation in the building.

3. CONCRETE - None in this project

4. MASONRY

4.1 CONCRETE UNIT MASONRY: Materials shall conform to the following: Masonry units: Existing intact salvaged units shall be reused wherever possible. Additional replacement units shall be provided on a unit price basis (approx. 250-300 sf of surface area estimated). New units shall be custom molded to match existing by taking a casting from an intact unit, or using replica original molds. Concrete mix for new units shall as a minimum match the compressive strength of existing units at 28 days and finished units shall substantially match the texture of the existing units. Reinforcing: See 4.2 below. Mortar: See 4.3 below. Grout: See 4.4 below.

4.2 MASONRY REINFORCING: Materials shall conform to ASTM A-615, Grade 40, F_y=40,000 psi. Welded wire fabric shall conform to ASTM A82.

Latest ACI code and detailing manual applies.

Lap splices: Unless noted otherwise, lap splices in concrete beams and slabs shall be Class B tension splices. Stagger alternate splices a minimum of one lap length. All splice locations subject to approval. Provide bent corner bars to match and lap with horizontal bars at corners and intersections of footings. Reinforcing bar spacings given are maximum centers. All bars to be continuous unless otherwise noted. Place bars per CRSI Specifications and Handbook. Dowel all vertical reinforcing to foundation. Securely tie all bars in location before placing concrete or grout.

4.3 LIME MORTAR: Mortar used to repair and re-point historic brick masonry shall be lime based mortar, mixed and proportioned to match existing hardness and compressive strength. For bidding purposes, provide as follows:

Materials:

Lime: ASTM C207, Type S, high plasticity.

Cement: ASTM C150, Type I, white, or gray if a darker color mortar is to be matched.

Sand: ASTM C144; color and texture to match sand in original mortar. Washed bar or beach sand is recommended. If crushed sand is used, working characteristic may be improved by adding portland cement not to exceed 20% of the total cement/lime binder.

Water: potable.

Admixtures: None.

Mixes: 1 part portland cement, 3 parts lime, 8-12 parts sand, as required to match existing.

Exact mix will relate to the grain size and sharpness of the sand. Provide test mix bathes for comparison to the historic condition. Mix final "job-size" batch once the correct sand color, cement content, etc. have been determined through small tests, to ensure that on-site mixing conditions will result in the same final product.

Mixing:

Mix hydrated lime: Add hydrated lime to water. Stir and hoe the mass to form a thick cream. Allow to stand at least 24 hours before use.

Prepare roughage premix (for later use): Accurately proportion the sand and lime using measuring boxes constructed to contain the exact volume of each ingredient required to make one batch. Mix sand and lime thoroughly for about ten minutes. Store in plastic-lined drums and seal until required. When required for use, add and mix the correct proportion of gauging cement as specified and use immediately.

Add cements to lime and aggregate mixes immediately before the use of the mortar. Perform all batching with wooden boxes or plastic pails of known volume to ensure standardization and conformity of

measurement. Shovel measurement of materials is not permitted. Use box sizes that are sufficient for producing a batch size equal to one mixer load. Mix dry ingredients thoroughly, approximately five minutes, before adding any water.

Add a small amount of water so the mortar is just wet enough to hang on a trowel.

Mix mortars at least 10 minutes before using to improve workability and ensure thorough mixing. Automatic mixers should have rubber blades. Clean mixing boards and mixing machines thoroughly after each use to prevent hardened lumps of mortar from contaminating the next batch of mortar. Repointing mortars may sit 1-2 hours after initial mixing and then may be remixed to a workable consistency. This is done to reduce shrinkage.

Test the mix by holding a trowel with mortar on it upside down and shaking it once. If the mortar falls off without shaking, it has too much sand. If more than one shake is required, the lime content must be decreased.

Coloring Mortars: Take samples of freshly-broken mortar from the original masonry pointing. Note color of aggregate for color-matching. Prepare test patties of mortar approximating the inner color of the sample and set aside to dry for at least 72 hours. Drying time may be accelerated by placing the patty sample in an oven or over a hot plate. Break the sample test patties and compare the inner portions to the original.

Use repointing mortar within approximately 1-2 hours of final mixing. Retemper the mortar as necessary to maintain workability. Retempering is permitted. Remixing is not. Add water at the mortar-board using a spray bottle to replace only water lost through evaporation. Use all mortar within two hours of gauging. Throw out left-over mortar. Do not retemper or remix mortars after this time has elapsed. This time limit may vary depending upon the outside temperature; longer on cold days, shorter on hot days.

4.4 GROUTING MASONRY WALLS

Grout materials: f'c=2000 psi @ 28 days.

Mixes per ACI-530. Parts by volume:

1 part Portland Cement

0-1/20 part hydrated lime or lime putty

2-1/4 ro 3 parts fine aggregate (sand)

Slump: 8" to 11".

Vibrate in grouted vertical cells immediately after placing and again approximately five minutes later. Grout in 5" lifts with 3" dia. cleanouts core drilled or neatly made as approved by Architect (provide mockup for approval). All cells containing reinforcing bars, inserts, or bolts shall be filled solid with grout. For new walls, when grouting is stopped for one hour or longer, horizontal construction joints shall be formed by stopping the grout pour 1-1/2" below the top of the uppermost unit.

4.5 EPOXY SET BOLTS: Anchors shall be as manufactured by the Hilti North America of Plano, TX (hilti.com), type HIT-RE 100 + HAS-R 304/316 SS 5/8. Install in strict conformance with manufacturer's written instructions.

5. METALS

5.1 METAL FABRICATIONS: Submit shop drawings of all steel fabrications. Provide steel fabrications of ASTM A-36 steel for steel shapes, ASTM A-500 or A-501 for tubing. All steel shapes, tubes, and expanded metal shall be G-90 hot dip galvanized. Exposed welds shall be ground smooth, with all weld spatter removed. Comply with AWI guidelines. Shop fabricate elements to the extent practical. Shop prime all fabrications, and touch up field welds prior to painting. Grind smooth and touch up all sharp edges, corners, and burrs.

6. WOOD AND PLASTICS

6.1 ROUGH CARPENTRY

All lumber shall bear the stamp of a recognized lumber grading agency. Erect all wood framing in a workmanlike manner. Materials shall be as follows:

Vertical framing: Douglas Fir No. 2

Horizontal framing: Douglas Fir No. 1

Plywood: 5-ply CDX, plywood shall conform to PS 1-83

Rough hardware: As manufactured by Simpson

All nails to be common nails, sizes as indicated on nailing schedule and on drawings. Where nails are not specifically called out, IBC table 2304.9.1 shall apply. All floors to be glued and nailed.

Western Lumber Grading Rules and National Design Specification values to apply to all lumber.

Treated lumber: Provide decay-treated lumber where indicated. Where "Redwood" is indicated on drawings, either redwood or treated wood may be provided at Contractor's option. Lumber indicated to be decay-treated lumber shall be pressure treated with chromated copper arsenate or other approved chemicals. Each piece of treated lumber shall bear the AWPAs grade mark of LP2 (above ground use).

7. MOISTURE AND THERMAL PROTECTION

7.1 METAL ROOFING PANELS: Re-use existing salvaged panels in good condition stored on site, as approved by Architect. New panels shall be supplied as needed under a lineal-foot unit price. New corrugated metal panels shall be profile C-37-7/8" manufactured by Morin Corporation division of Metecno. Gauge: 22. Finish: G-90 galvanized. Panel width 40", panel length as required to span roof slope in one piece, to a maximum of 20 feet. Anchorage system shall be exposed, using #10 TEK screws of length required for min. 1" embedment in structural wood, in oversize holes with neoprene washers at 8" o.c. Lap side seams 4 inches. Attach panels to roof members as detailed. Replace ridge and edge flashings as required under Base Bid. System shall include preformed ridge accessories and closure pieces for a complete installation. Supply ridge/valley flashings and closures as detailed in material of same material and finish.

7.2 BUILT-UP BITUMINOUS ROOFING (BUR): Repair/replace damaged areas as follows: Provide 3-ply built-up roofing system with mineral surface cap sheet. Roofing shall have a UL Class "B" rating and a 10-year warranty. Roof system shall be Manville specification 3GNC or equal.

7.3 METAL SHINGLE ROOFING shall be "Victorian" pattern shingles manufactured by Berridge Manufacturing Company, Houston, Texas. Shingles made from ASRM 653A/ 653M 24-gauge sheet steel with G90 zinc coating. Shingles to be prefinished with manufacturer's standard fluorocarbon coating system, color as selected from manufacturer's standard range. Install over 2 layers APP-modified bitumen base sheet. Manufacture all visible flashings, ridge caps, drip edges, etc. of matching prefinished sheet steel. Install underlayment and shingles in conformance with manufacturer recommendations and recommendations of NCRA Steep Roofing Manual. Nail shingles by driving nails to point where nail heads just clear surface of shingle, so shingles hang on nails. Do not overdrive nails, putting pressure on underlying shingles, and do not underdrive nails, putting strain on overlying shingles. Cut and fit shingles neatly around vents, pipes, and other projections. Set ridge and hip shingles as recommended by shingle manufacturer.

7.4 SEALANTS Apply sealants in conformance with manufacturer's directions. Thickness of sealant shall be ½ the width of the joint unless otherwise directed by manufacturer or drawings. Provide back-up rod or other accessories as required for proper performance. Provide sealants as follows:

EXTERIOR GENERAL PURPOSE: (Masonry and concrete, vertical control and expansion joints, door and window frame perimeter; flashing joints; thresholds; juncture of dissimilar materials.) One part polyurethane, FS-TT-5-00230-C, Type II, Class A, Color as selected.

8. DOORS, WINDOWS, and GLASS - None in this project

9. FINISHES

9.1 PAINTING/STAIN: Provide paints as manufactured by Dunn-Edwards or approved equal. Systems shall be equal to the following:

A. Exterior and Interior Ferrous Metals: One coat Bloc-Rust BRPR-1 or shop prime, two coats Evershield Exterior Semi Gloss EYSH50.

B. Interior and Exterior Concrete Block: One coat Rust-Oleum Semi-Transparent Concrete Stain

C. Interior Wallboard: One coat Vinylastic VNSL00, two coats SUPREMA, Interior Flat Paint SPM10.

D. Interior Wood Trim and Doors Receiving Paint Finish: One coat ULTRA-GRIP Series Select, Zero VOC Primer UGSL00, two coats SUPREMA, Interior Semi-Gloss Paint SPMAS0.

E. Interior Wood Trim and Doors Receiving Stain Finish: ZENITH Interior Wiping Oil Stain, 3 coats DEFTHANE, Polyurethane Clear Satin.

F. Interior Ferrous Metals: One coat Bloc-Rust BRPR-1 or shop prime, two coats SUPREMA, Interior Semi-Gloss Paint SPMAS0.

Bid and Contract Information

A. Form of contract will be a modified version of AIA Document A104-2017, "Standard Abbreviated Form of Agreement Between Owner and Contractor", to comply with the Hualapai Tribe's procurement rules, and includes the General Conditions of the Contract in its articles. Contract method shall be Stipulated Sum. Forms are available from the American Institute of Architects; a draft sample is available from the Architect. The Hualapai Tribe will provide clauses to add to the contract. Where the following contract and bid information is in conflict with the pre-printed sample form of contract, these notes will govern.

B. Bid Structure: This bid is divided into a Base Bid and several Alternate Additive Bids, as set forth below. The Owner reserves the right to award the base bid only, any of the alternate bids, or reject all bids.

a. BASE BID: Concrete masonry wall repairs/reconstructions and installation of reinforcing, all truss repairs, roof structure repairs, decking, and roofing for main roof within masonry walls.

b. ALTERNATE ADDITIVE BID No. 1: Structural repairs and replacements and re-roofing of open canopy area ("Porte-cochere") outside of building masonry walls.

c. ALTERNATE ADDITIVE BID No. 2: Abatement of lead paint on walls to be repaired and soils where contractor will stage construction (see attached HUD Standard pp. 12-33 to 12-56).

d. UNIT PRICE No. 1: State cost per linear foot for new 40" wide steel roofing panels (10' to 20' length panel).

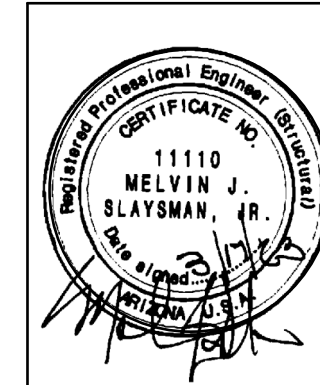
e. UNIT PRICE No. 2: State cost per 8" x 8" x 16" replica concrete masonry units in minimum quantity of 100 pieces.

C. Bonding: Provide performance and Payment bonds equal to 100% of the bid amount, written on AIA Document A312 or equal.

D. Insurance: Provide Contractor's Liability insurance in the amount of \$2,000,000. Business Automobile Liability insurance with a limit of \$1,000,000 for each occurrence. Employers Liability Insurance of not less than \$1,000,000.00 for each accident.

E. Contract Time: Submit proposed Contract Time as part of the bid submission.

F. Qualifications: Submit statement of qualifications with the bid showing successful completion of at least three historic preservation projects that were required to comply with the Secretary of the Interior's Standards for Rehabilitation. Provide project name, description, and client contact information.



The structural portion of these drawings have been reviewed by this engineer for conformance of the structural components to local codes and conditions. This review and sealing of drawings is for the structural portion only. No review or check for code compliance of architectural, ADA, electrical, mechanical, or civil was done by this engineer and is specifically excluded.



PROJECT: **Osterman Gas Station Storm Repairs**

ADDRESS: **Peach Springs AZ**

PROJECT NO.: 22-018

SHEET TITLE:

Specifications

DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023

SHEET REVISION HISTORY

Rev# | Date | Change Name

01 | 4/18/2023 |

02 |

03 |

04 |

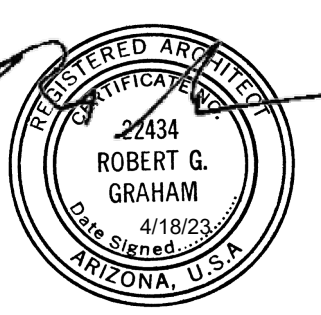
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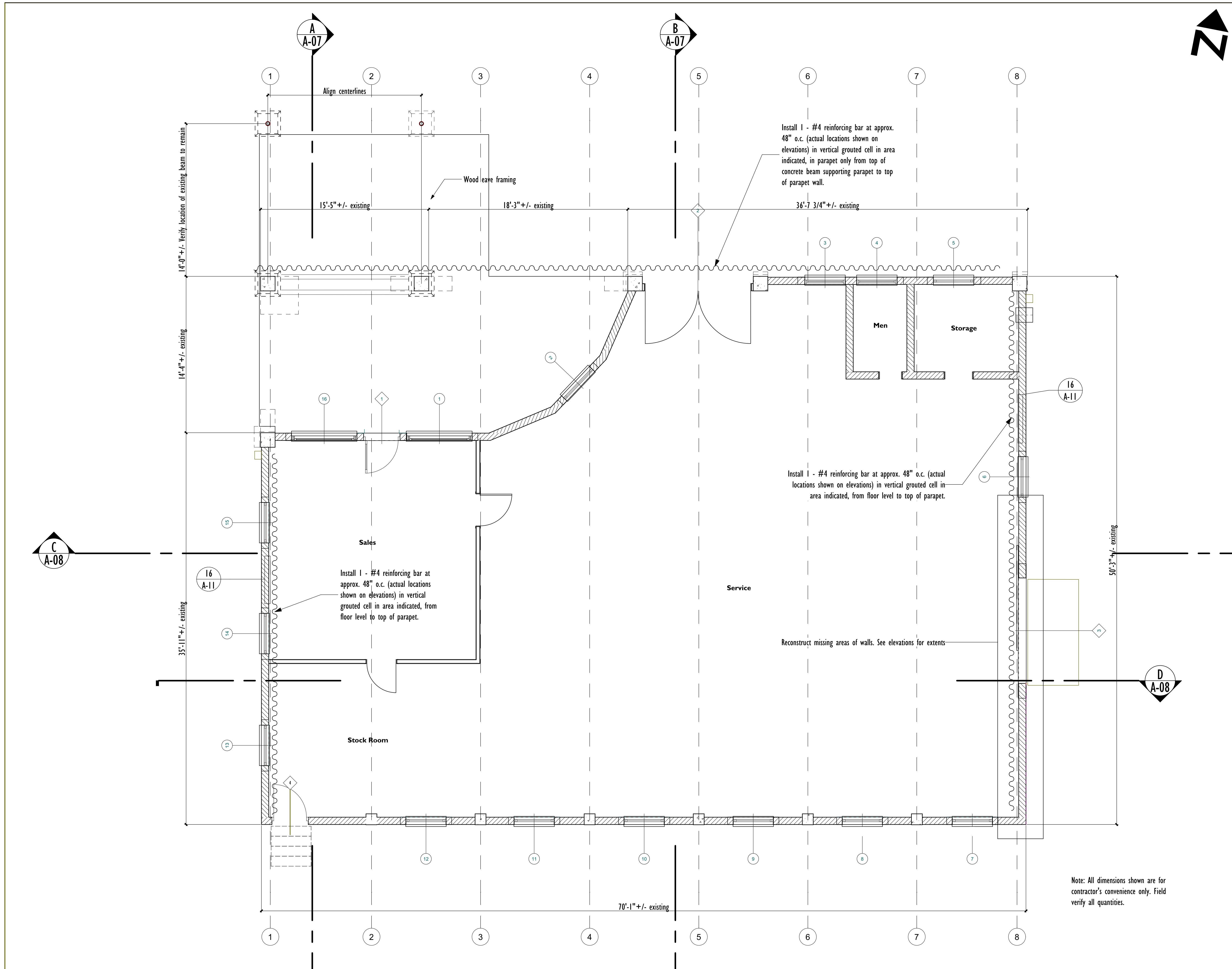
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Sheet No.

A-01



The structural portion of these drawings have been reviewed by this engineer for conformance of the structural components to local codes and conditions. This review and sealing of drawings is for the structural portion only. No review or check for code compliance of architectural, ADA, electrical, mechanical, or civil was done by this engineer and is specifically excluded.

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PROJECT: **Osterman Gas Station Storm Repairs**
 ADDRESS: **Peach Springs AZ**
 PROJECT NO.: 22-018
 SHEET TITLE: **Floor Plan/Details**
 DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
 SHEET REVISION HISTORY

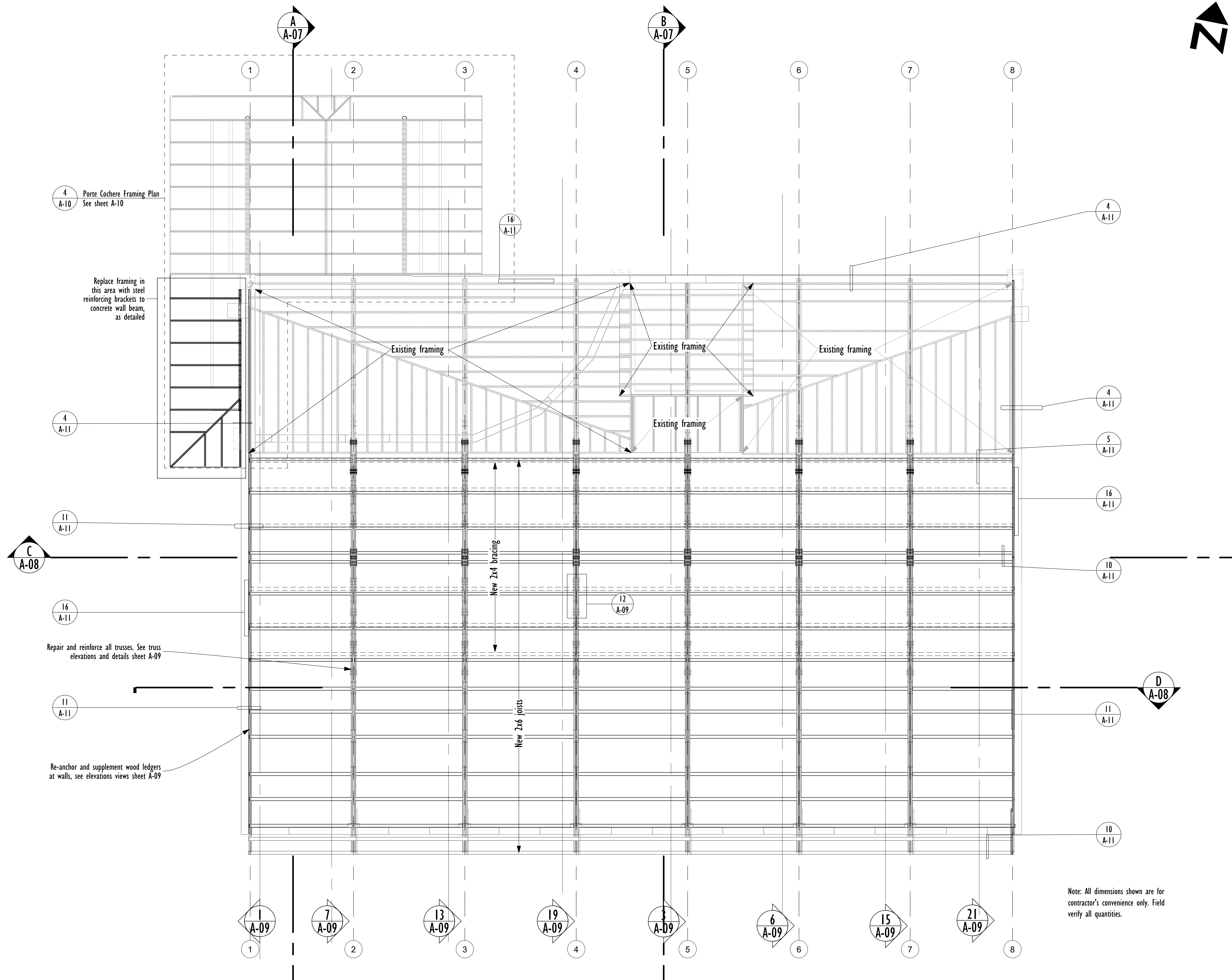
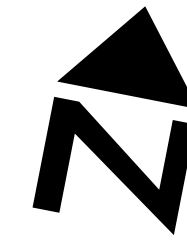
Rev	Chgd	Change Name	Date
01			4/18/2023

Professional Engineer Seal: MELVIN J. SLAYSMAN, JR., No. 22434, ARIZONA, U.S.A.

Professional Engineer Seal: ROBERT G. GRAHAM, No. 418/23, ARIZONA, U.S.A.

Sheet No. **A-02**

Note: All dimensions shown are for contractor's convenience only. Field verify all quantities.



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PROJECT: **Osterman Gas Station Storm Repairs**
 ADDRESS: **Peach Springs AZ**
 PROJECT NO.: 22-018
 SHEET TITLE: **Roof Framing Plan**
 DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
 SHEET REVISION HISTORY

Rev	Chg	Change Name	Date
01			4/18/2023

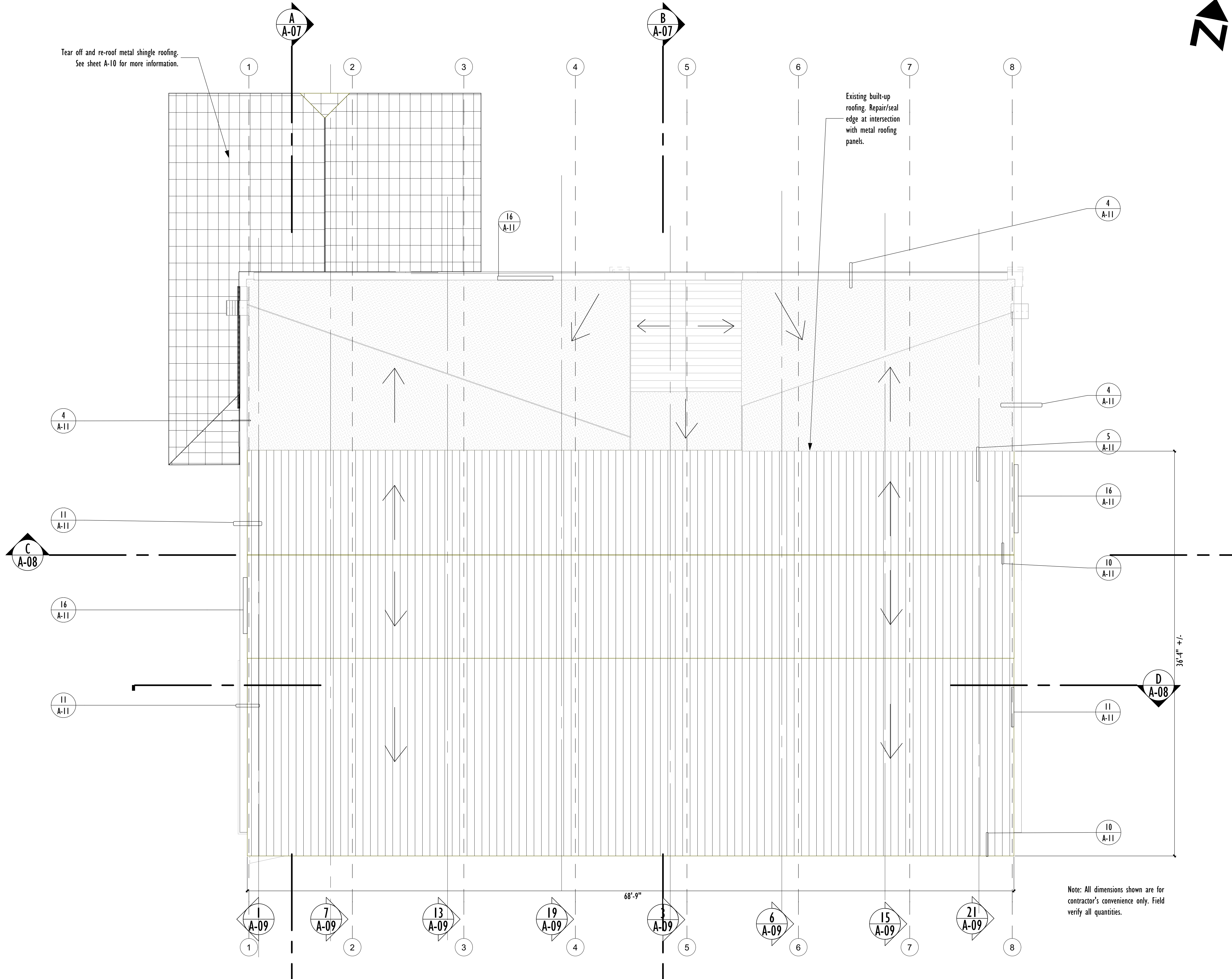
ROBERT G. GRAHAM
 2434
 4/18/23
 PHOENIX, ARIZONA, U.S.A.

Sheet No. **A-03**



Tear off and re-roof metal shingle roofing. See sheet A-10 for more information.

Existing built-up roofing. Repair/seal edge at intersection with metal roofing panels.



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PROJECT: **Osterman Gas Station Storm Repairs**
 ADDRESS: **Peach Springs AZ**
 PROJECT NO.: 22-018
 SHEET TITLE: **Roof Plan**
 DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
 SHEET REVISION HISTORY

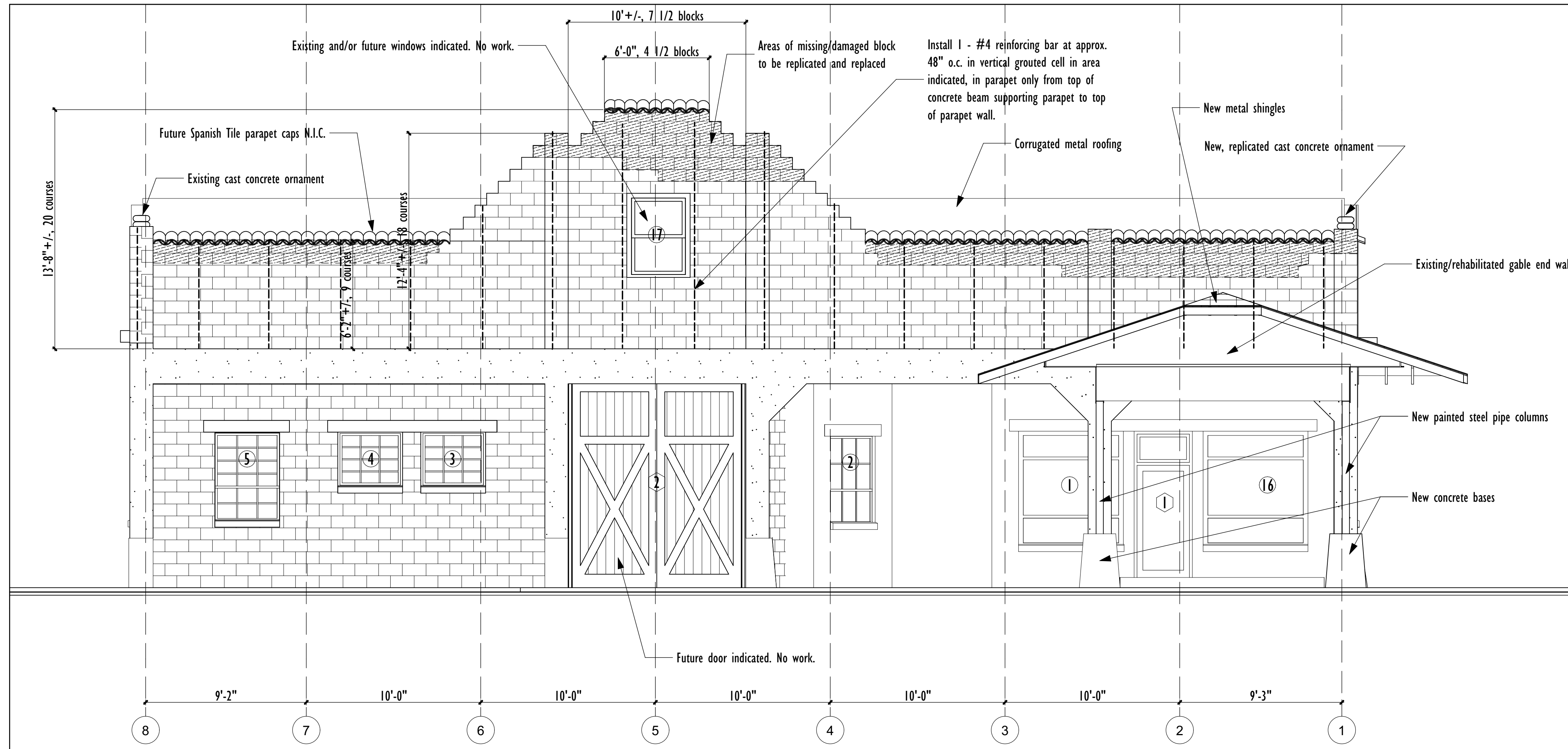
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01			4/18/2023

ROBERT G. GRAHAM
 22434
 4/18/23
 ARIZONA, U.S.A.

Sheet No. **A-04**

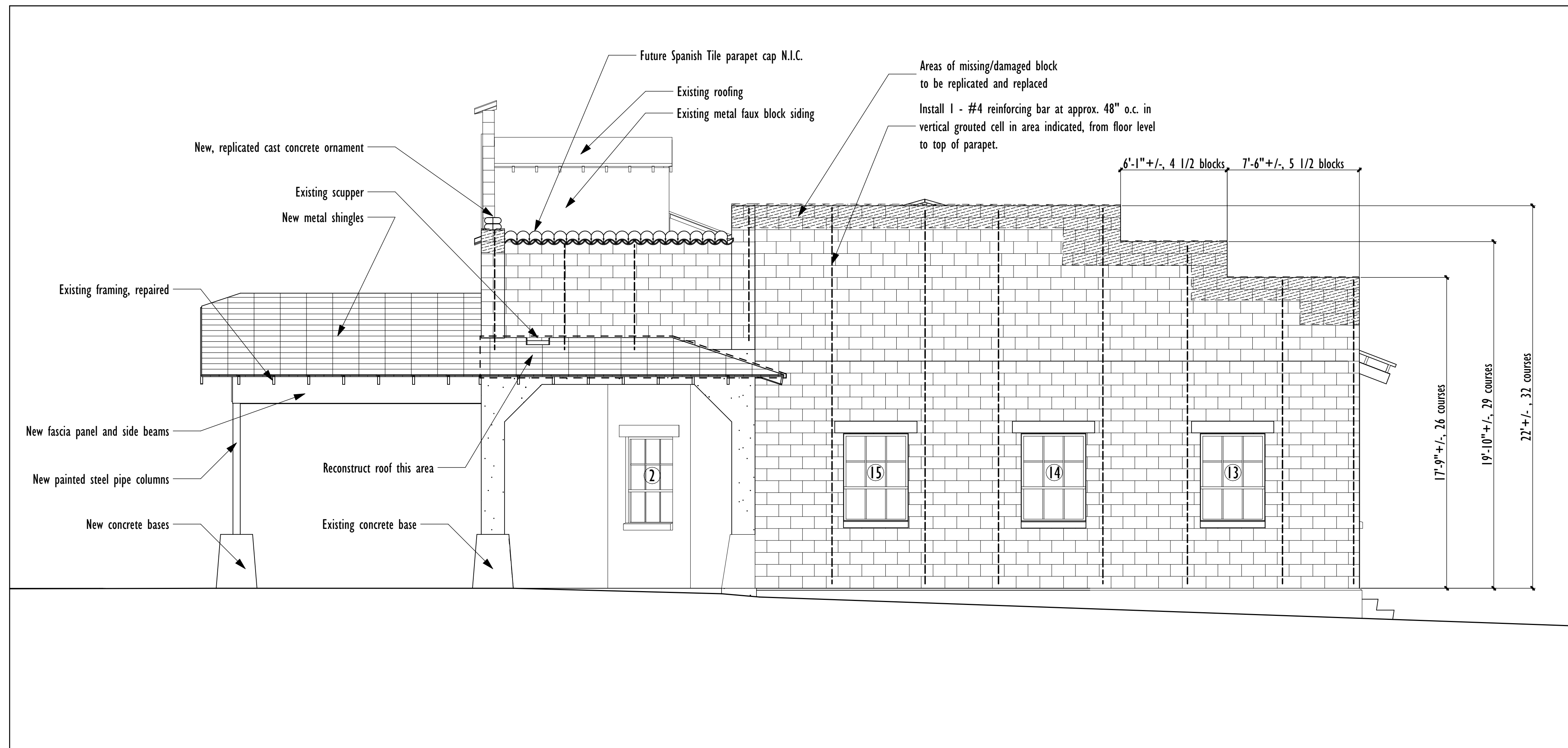
North Elevation

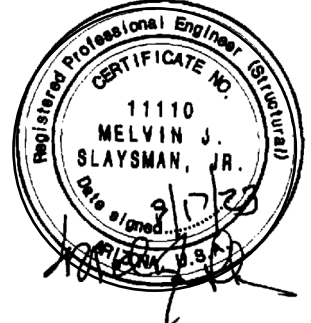
1/4" = 1'-0"



West Elevation

1/4" = 1'-0"



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Architecture - Historic Preservation - Planning - Landscape Design
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PROJECT: **Osterman Gas Station Storm Repairs**
ADDRESS: **Peach Springs AZ**
PROJECT NO.: 22-018
SHEET TITLE:
Elevations - North and West

DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
SHEET REVISION HISTORY

Rev	Chgd	Change Name	Date
01			4/18/2023

Sheet No. **A-05**

NOTE: This working drawing package, project manual, and unpublished instruments of service of the author, is for use on this project only and is prepared for use in conjunction with the author's interpretations, observations, decisions and administration as described in AIA Doc. A201, without which desired results cannot be assured. Alteration, reproduction, or use in part or in whole, for other purposes without the author's written consent may violate Act 17 U.S.C. par. 301 (1991). COPYRIGHT NOTIFICATION: All instruments of architectural service, the designs, details, and concepts incorporated into this work are protected by copyright laws of the United States of America.

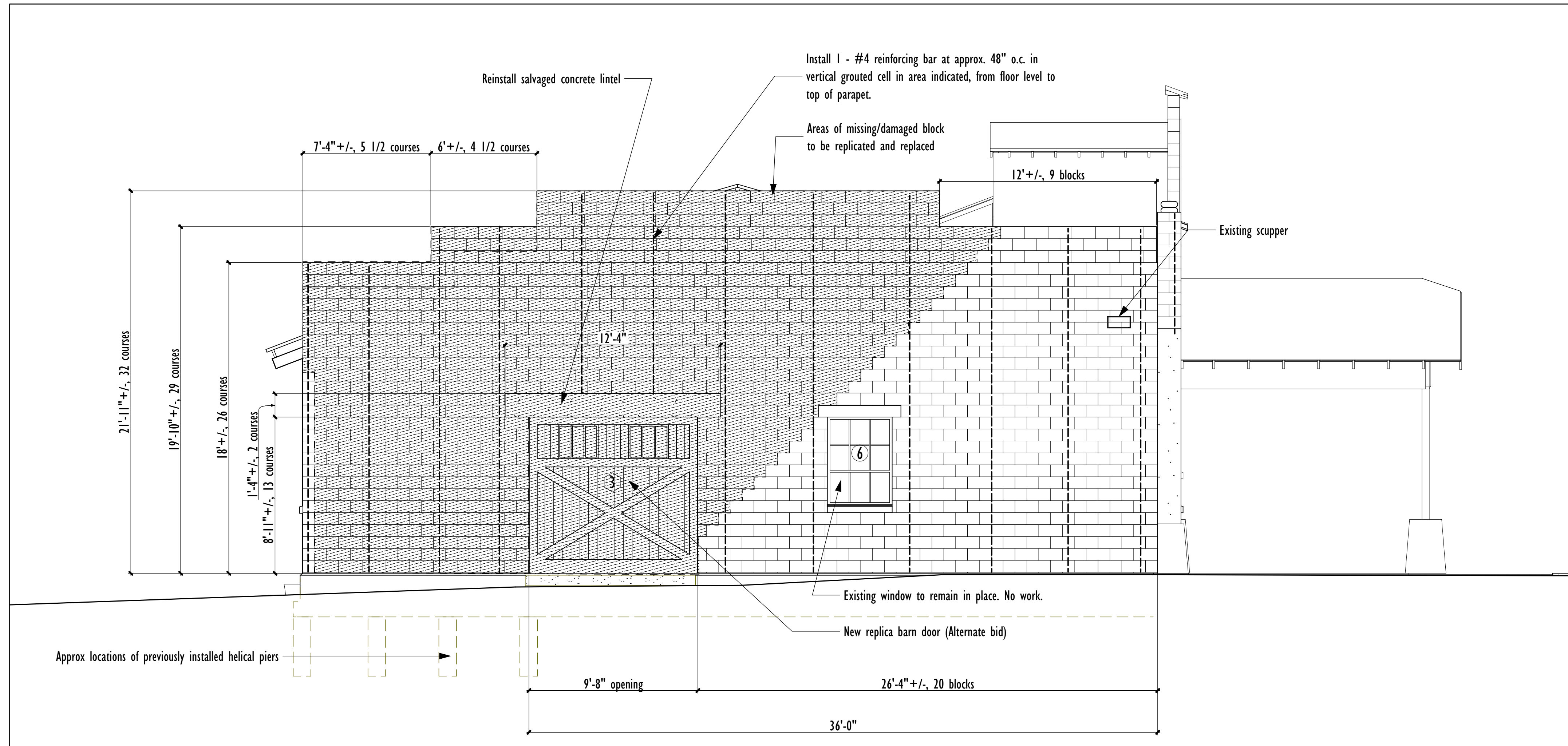
South Elevation

1/4" = 1'-0"



East Elevation

1/4" = 1'-0"



11110
MELVIN J.
SLAYSMAN, JR.
Professional Engineer
No. 17272
Arizona

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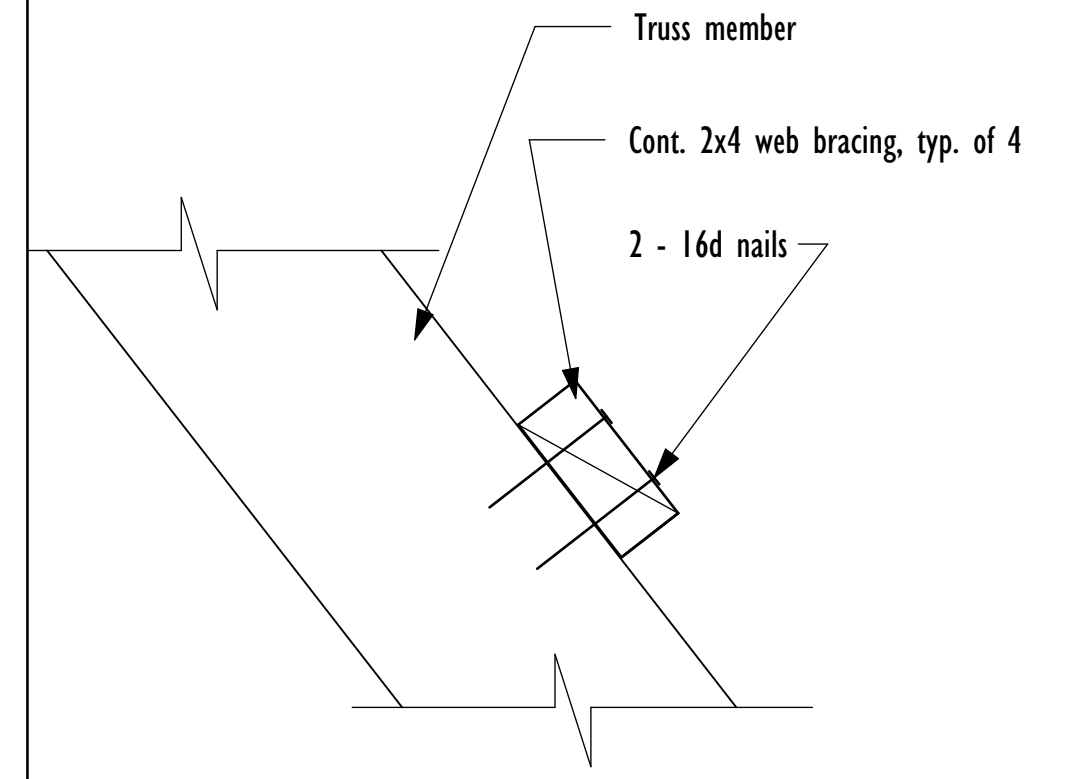
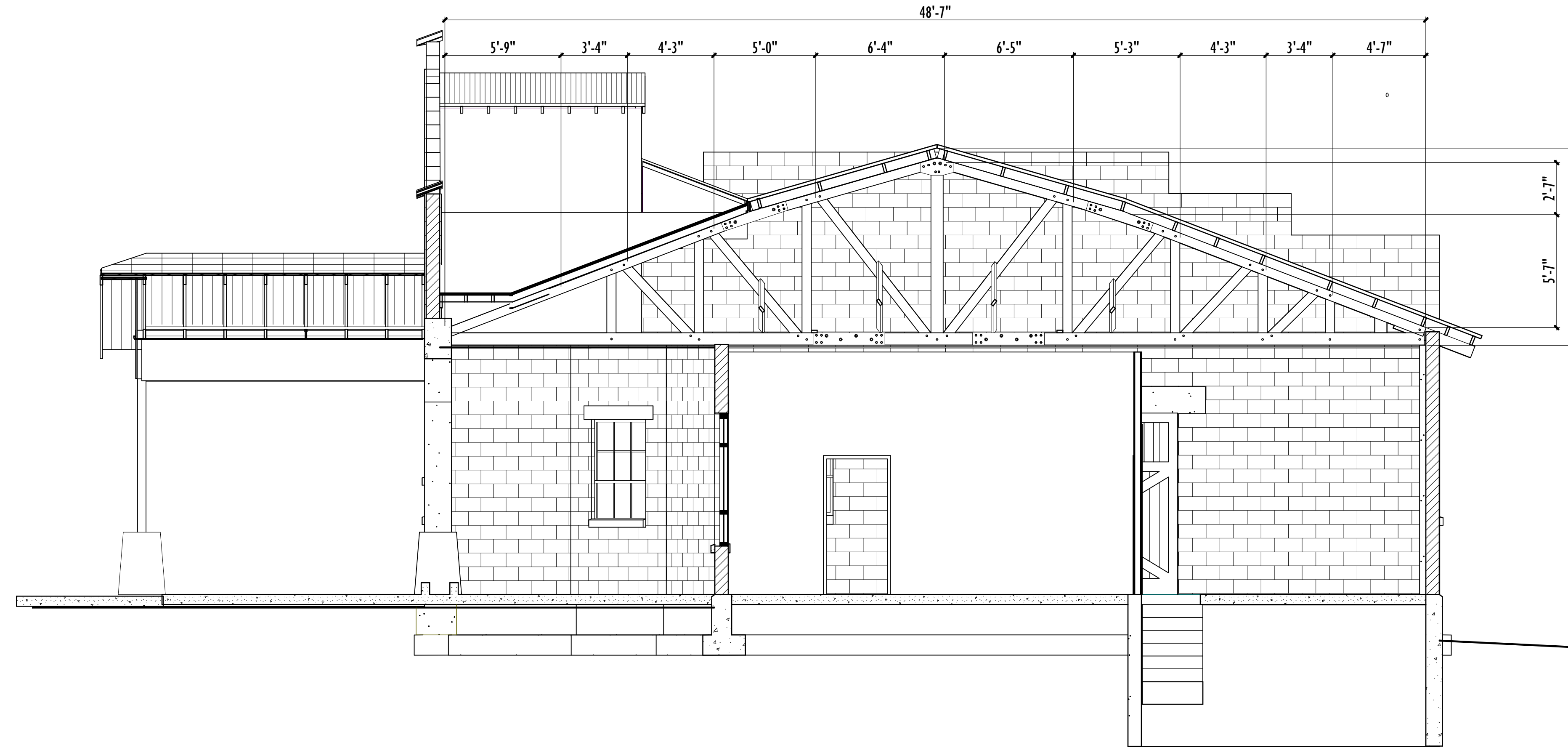
PROJECT: **Osterman Gas Station Storm Repairs**
ADDRESS: **Peach Springs AZ**
PROJECT NO.: 22-018
SHEET TITLE: **Elevations - South and East**
DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
SHEET REVISION HISTORY

Rev#	Chd	Change Name	Date
01			4/18/2023

ROBERT G. GRAHAM
Professional Engineer
No. 22434
Arizona

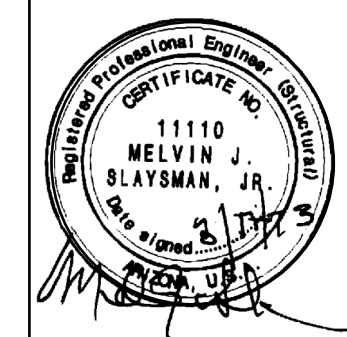
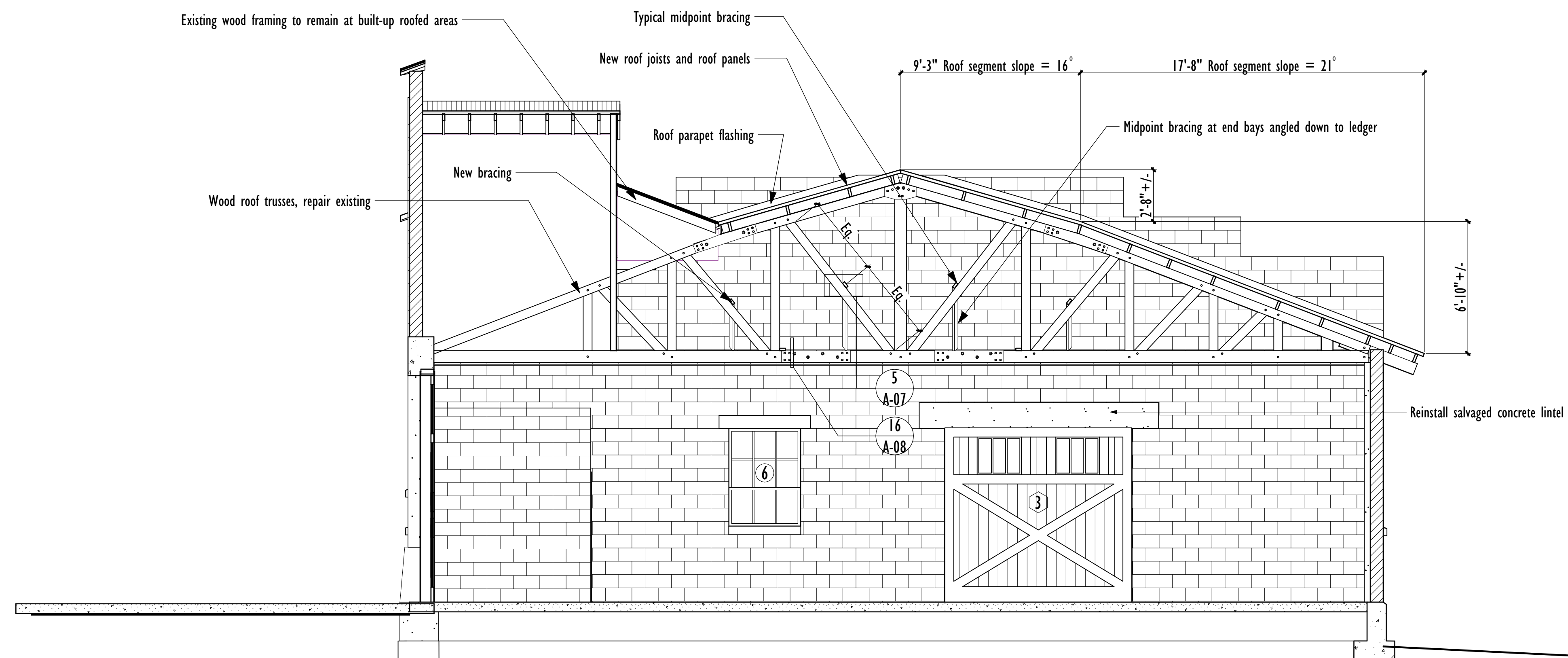
Sheet No. **A-06**

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General Truss Notes

1. Notes and detail cuts are typical of all trusses.
2. New details are typical of all trusses.
3. Connection plates are one (1) inch OSB board - exterior grade
4. Bolts are ASTM A-307 Grade, machine bolts.
5. All bolts are to have cut washers installed at head and nut ends.
6. All bolts are 5/8 inches in diameter.
7. Verify existing bolt sizes in field.
8. All bolts to be tightened "snug fit".
9. Replace all damaged, cracked and broken members.
10. Trusses are not exact construction. Field verify all dimensions and materials.
11. All truss bracing to be in-place prior to loading or working on roof. Contractor is responsible for any additional bracing that may be required to stabilize construction loads for roof trusses.
12. Provide miscellaneous missing blocking at connections.
13. Deck - corrugated steel galvanized. Screw down with #10 screws with neoprene washers. See specification.
14. Install 2x6 blocking between joists at trusses and ledgers.
15. Install Simpson H 2.5 joist anchor at each joist to truss and ledger.



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PROJECT: Osterman Gas Station Storm Repairs

ADDRESS: Peach Springs AZ

PROJECT NO.: 22-018

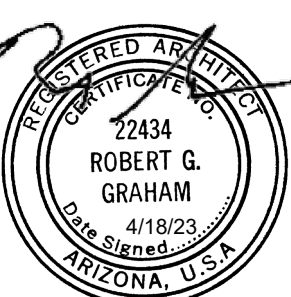
SHEET TITLE:

Building Sections A and B

DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023

SHEET REVISION HISTORY

Rev	Chg	Change Name	Date
01			4/18/2023

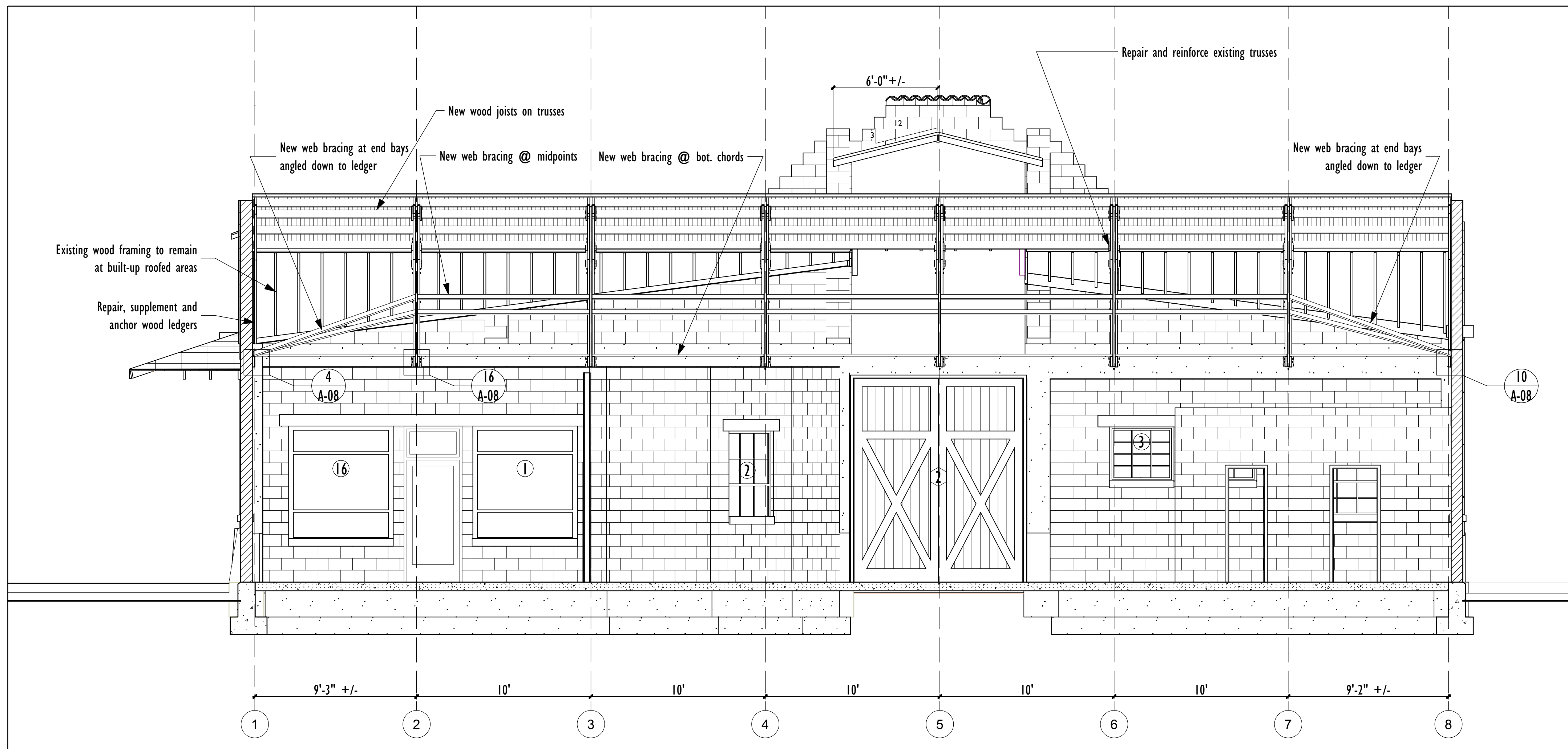


Sheet No.

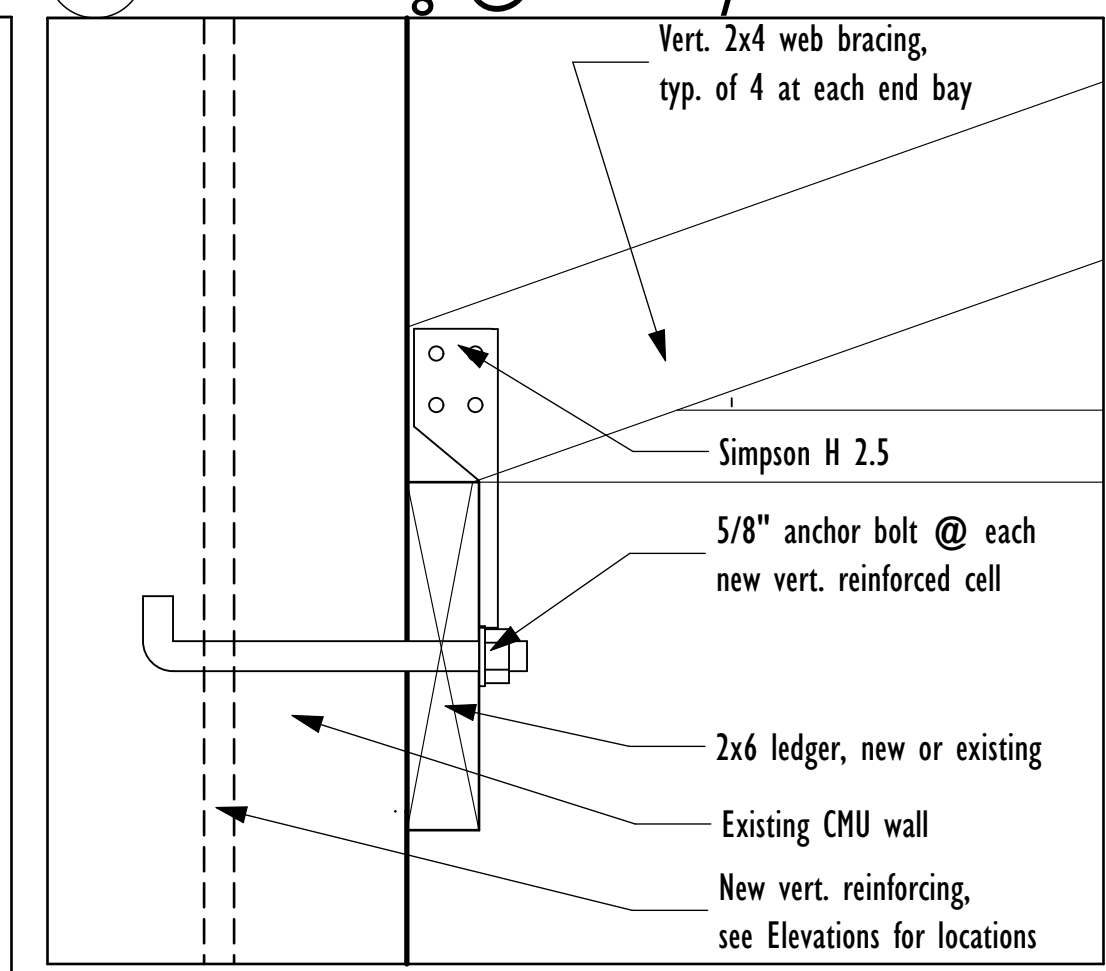
A-07

C - C

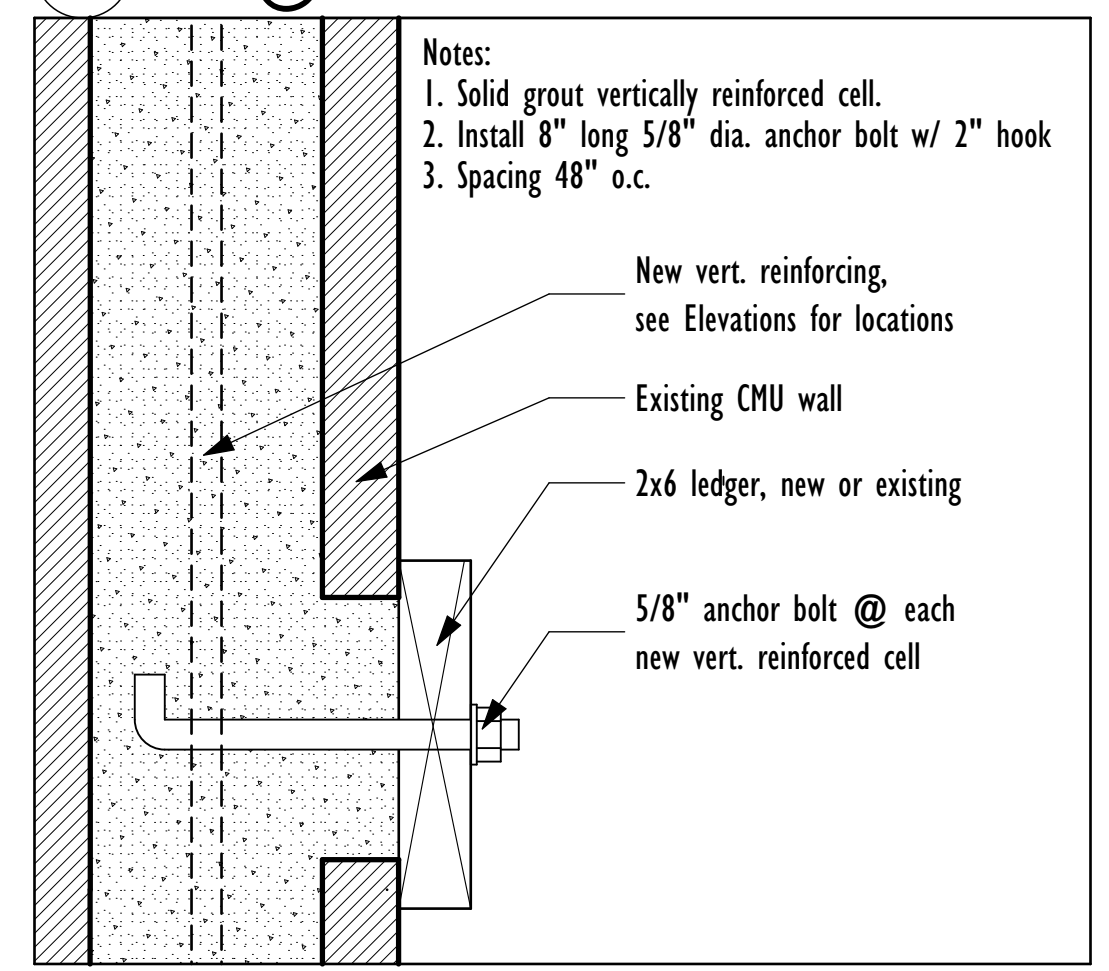
1/4" = 1'-0"



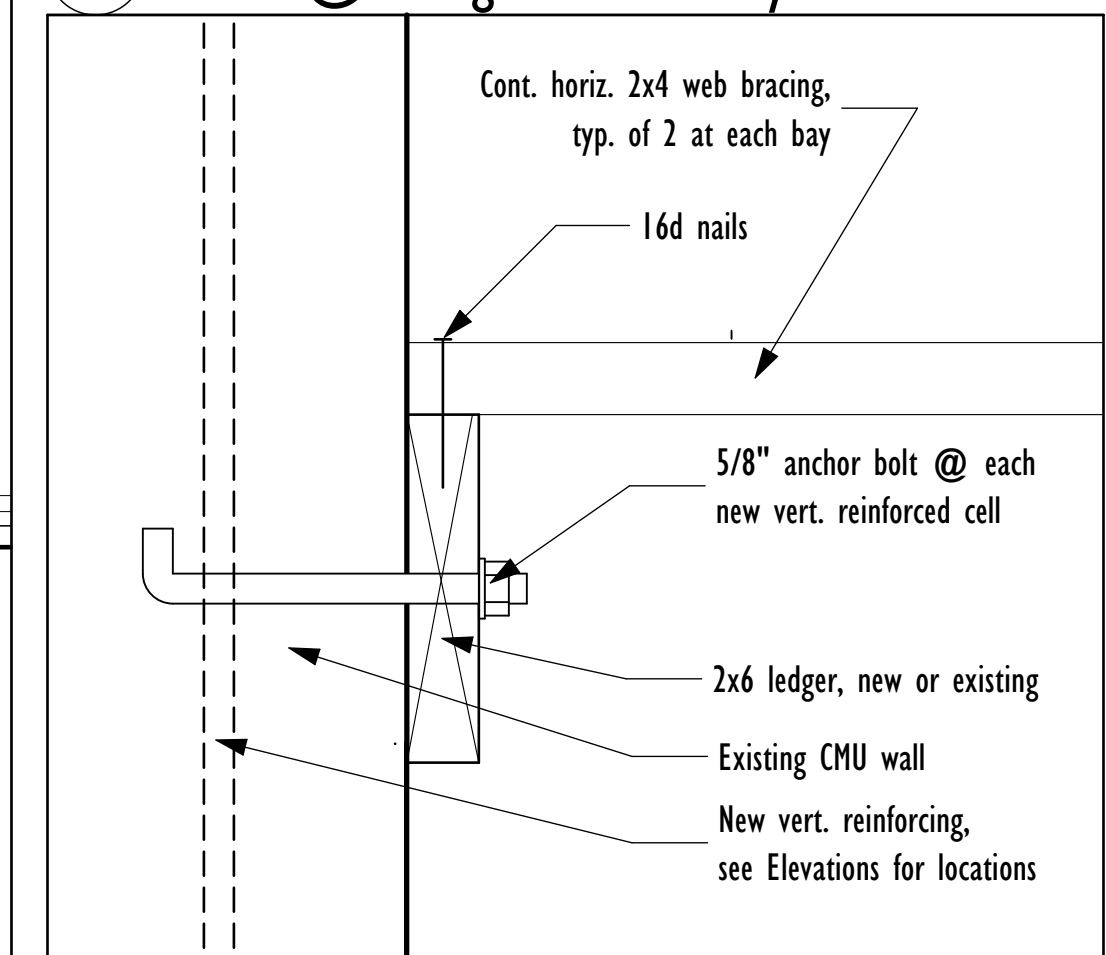
4 Web Bracing @ End Bays 3" = 1'-0"



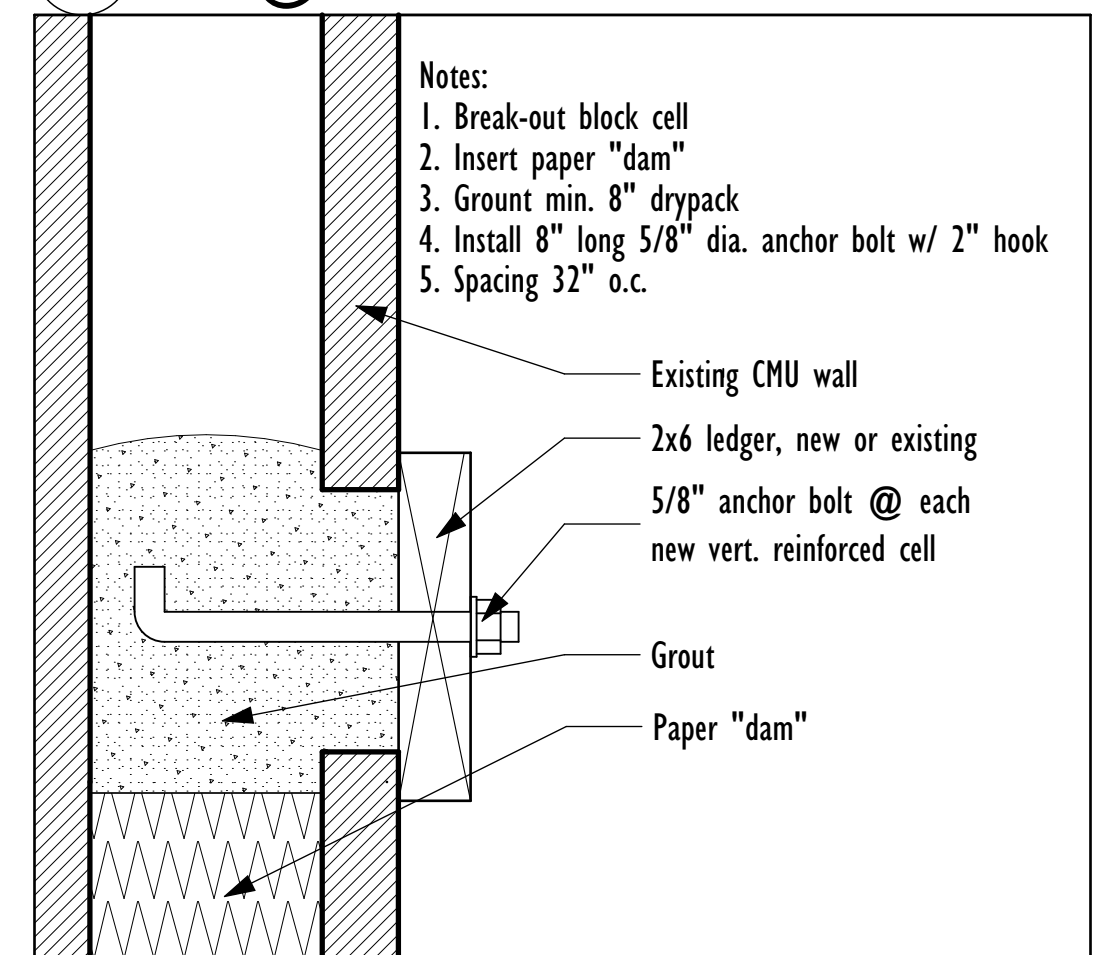
5 A.B. @ Vert. Reinf Cell 3" = 1'-0"



10 Brace @ Ledger - End Bays 3" = 1'-0"

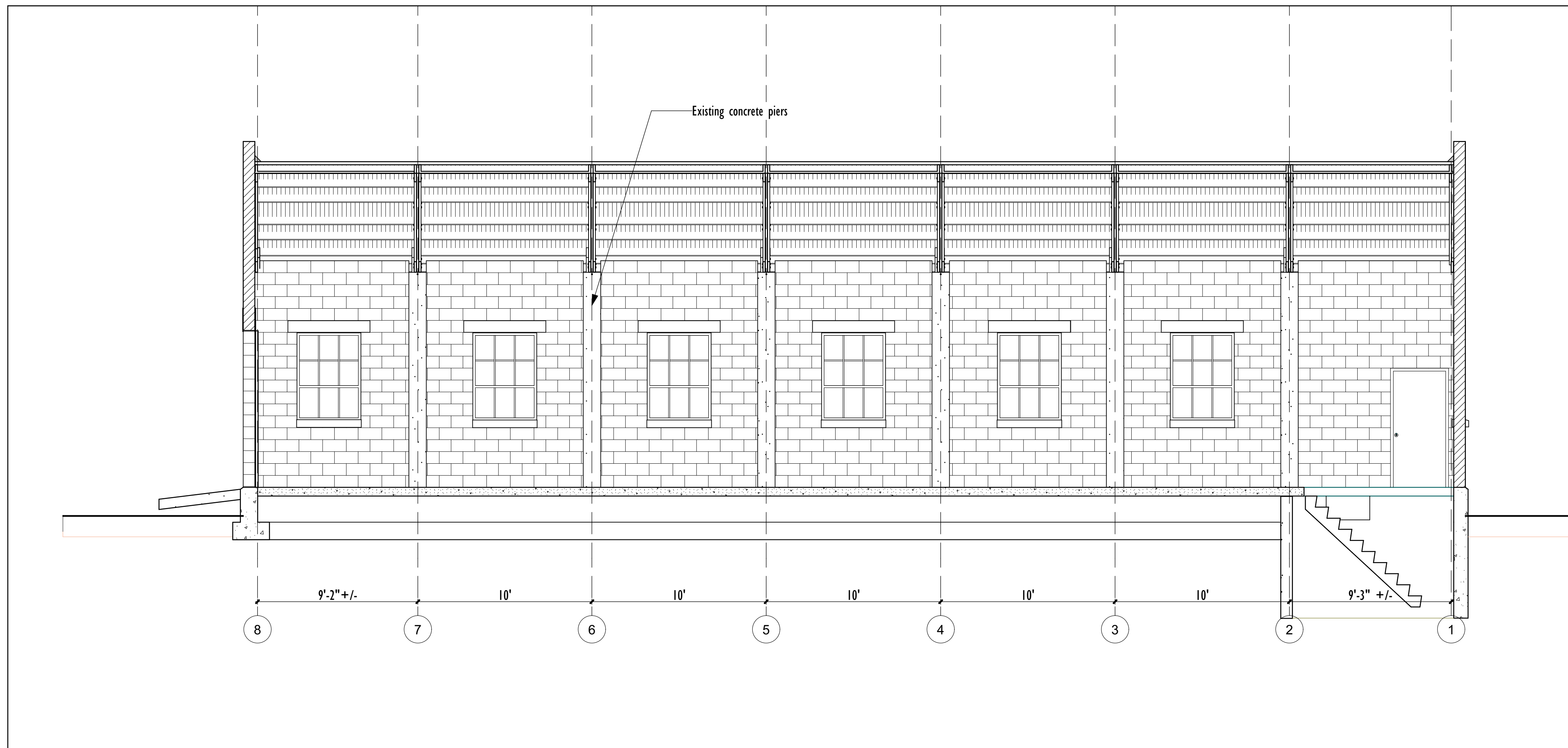


11 A.B. @ Non-Vert. Reinf. Cell 3" = 1'-0"

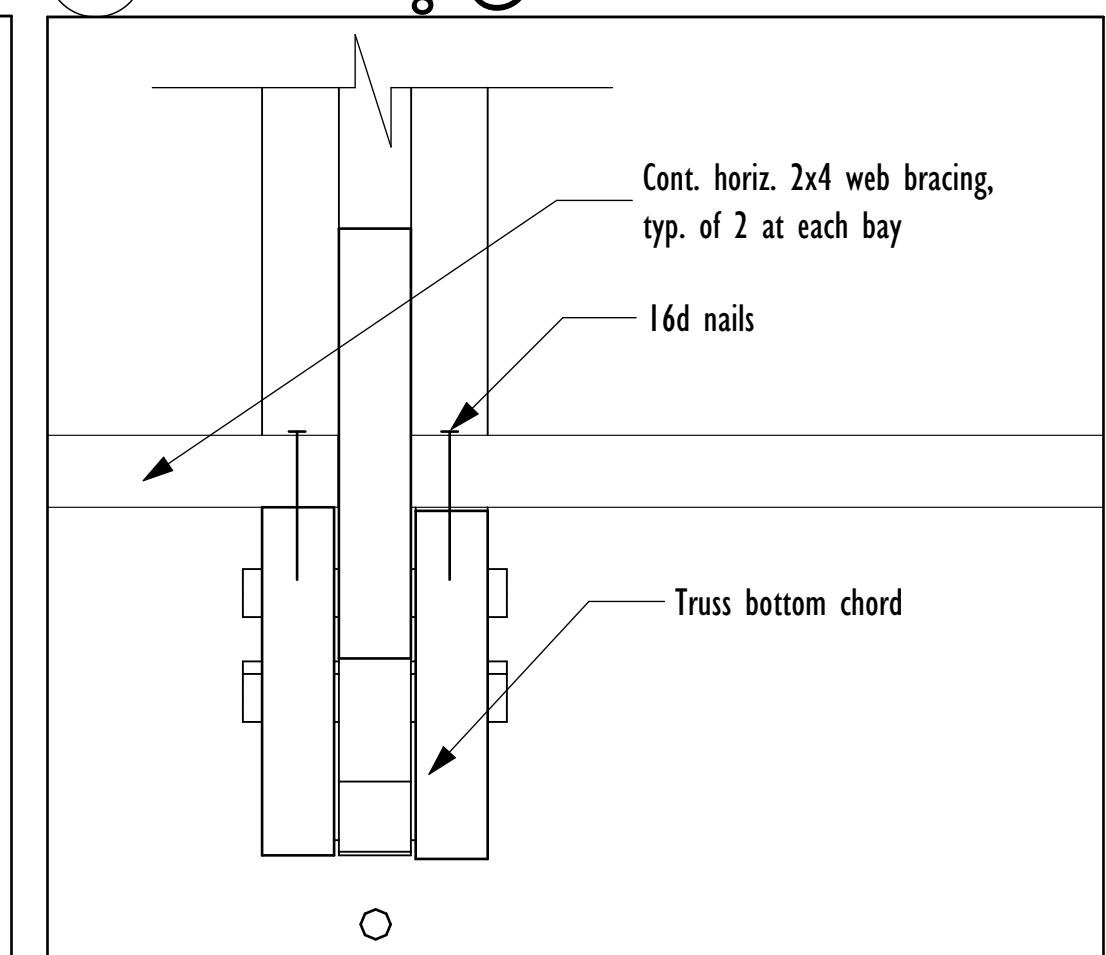


D - D

1/4" = 1'-0"



16 Web Bracing @ Bot. Chord 3" = 1'-0"



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PROJECT: Osterman Gas Station Storm Repairs
ADDRESS: Peach Springs AZ
PROJECT NO.: 22-018
SHEET TITLE: Building Sections C and D
DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
SHEET REVISION HISTORY

Rev	Chgd	Change Name	Date
01			4/18/2023

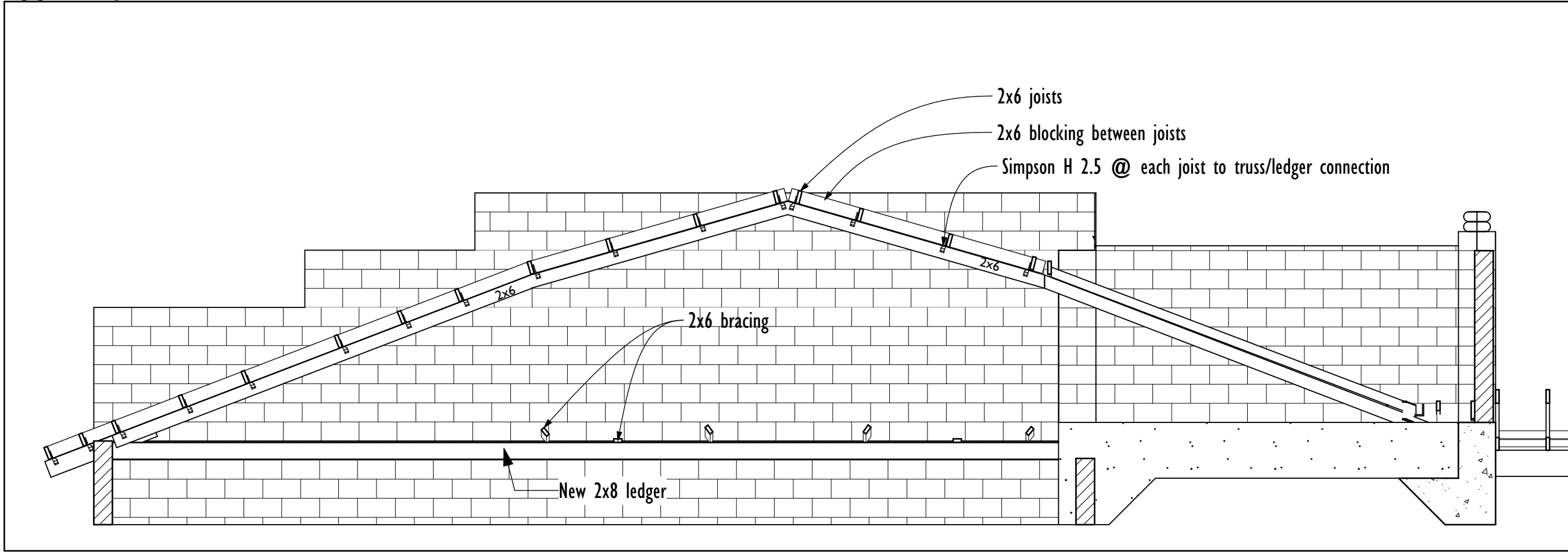
ROBERT G. GRAHAM
4/18/23
PHOENIX, ARIZONA, U.S.A.

Sheet No. **A-08**

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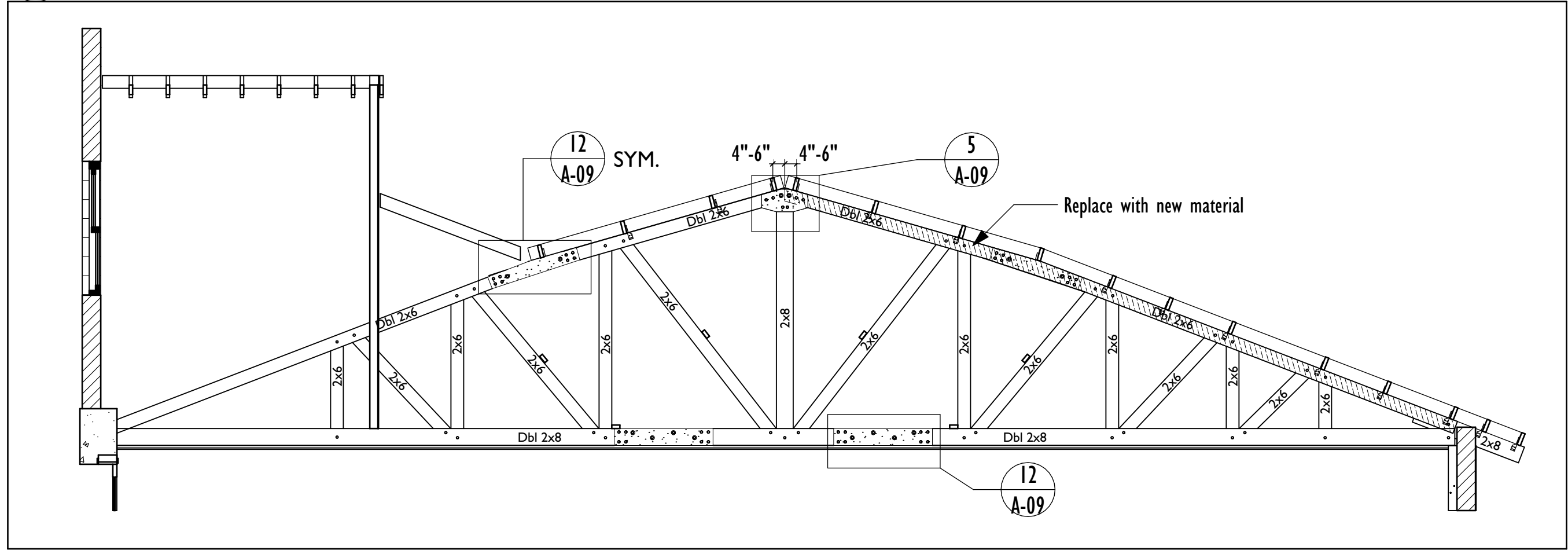
1 Ledger @ 1

1/4" = 1'-0"



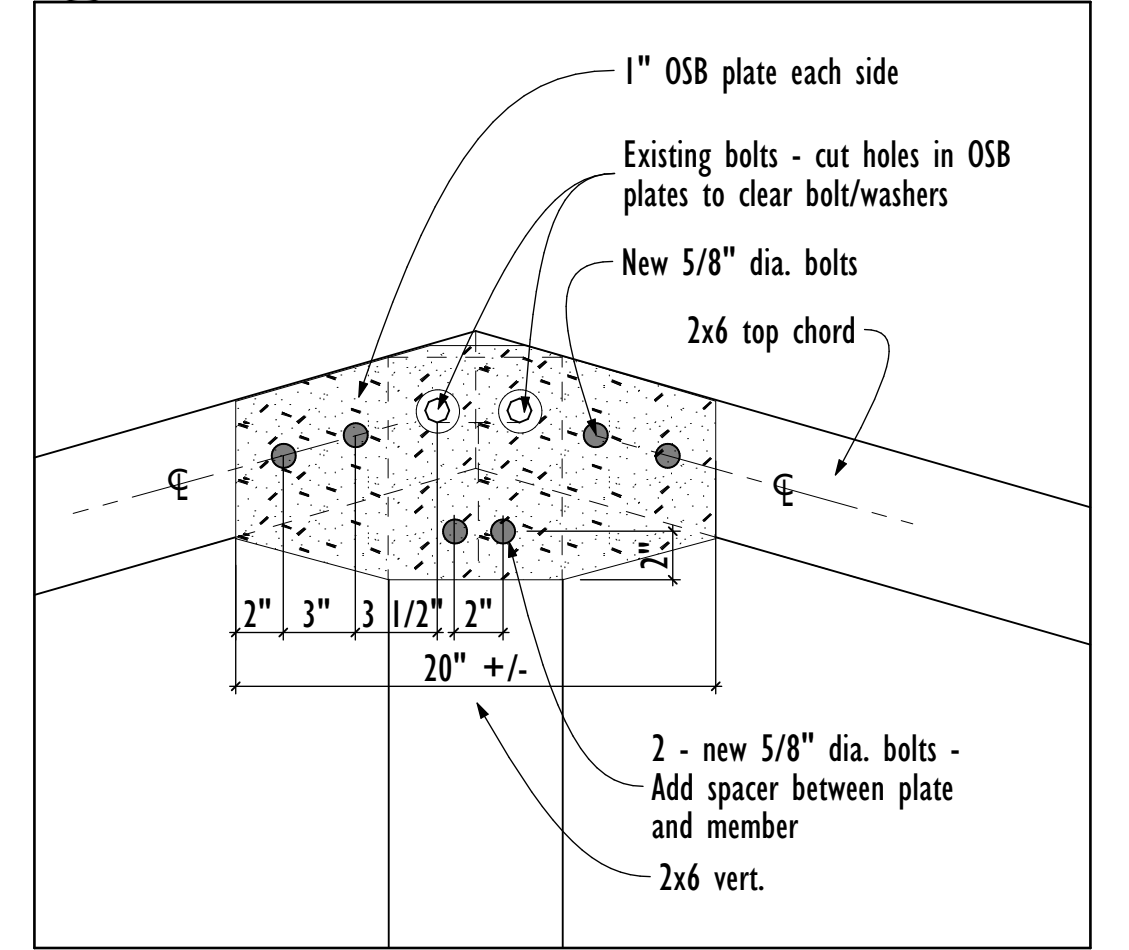
3 Truss @ 5

1/4" = 1'-0"



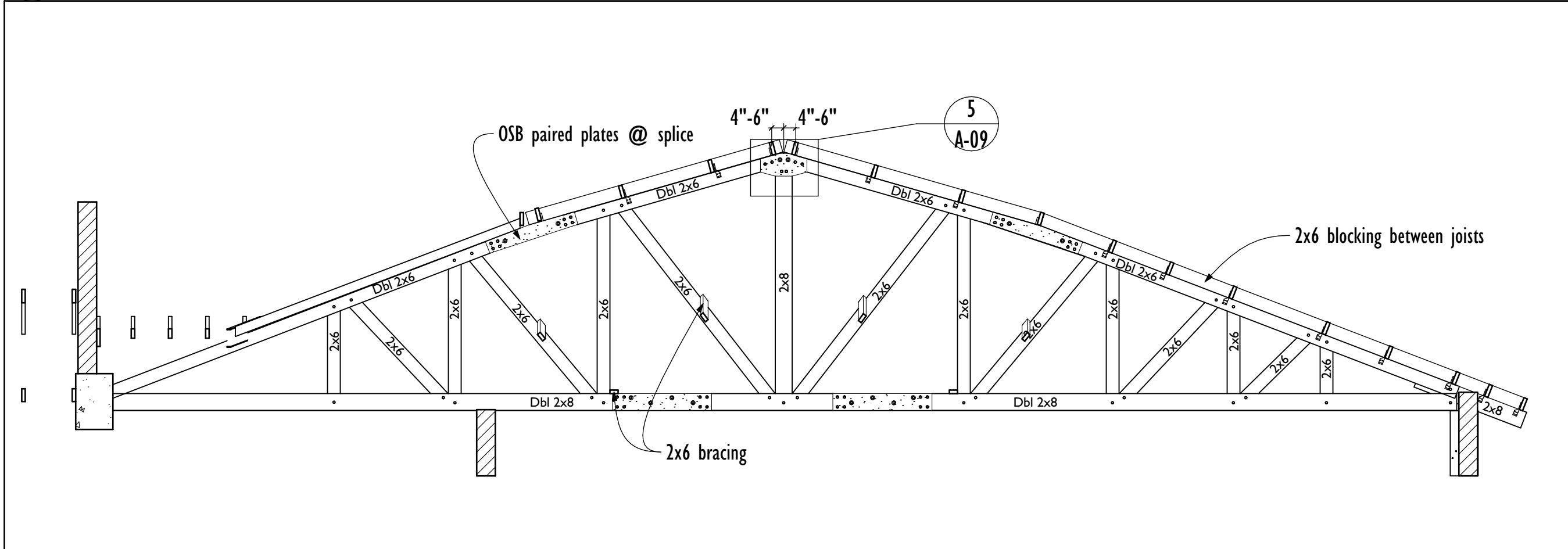
5 Truss Top Chord OSB Plates

1/2" = 1'-0"



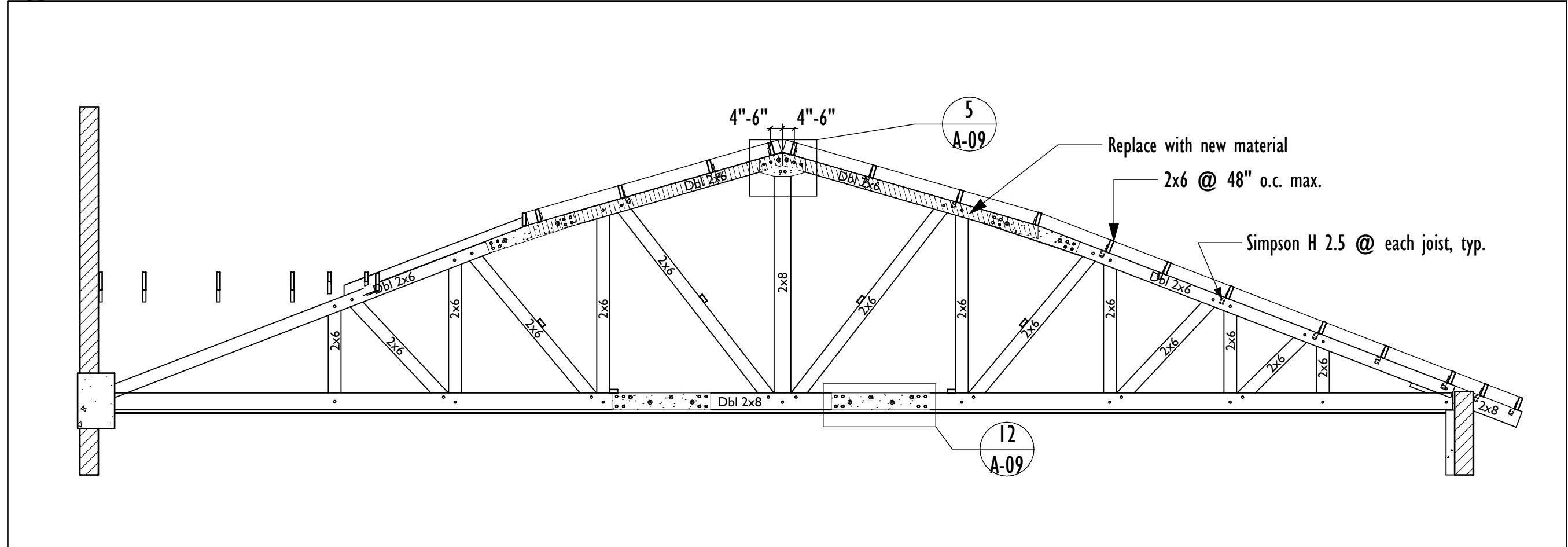
7 Truss @ 2

1/4" = 1'-0"



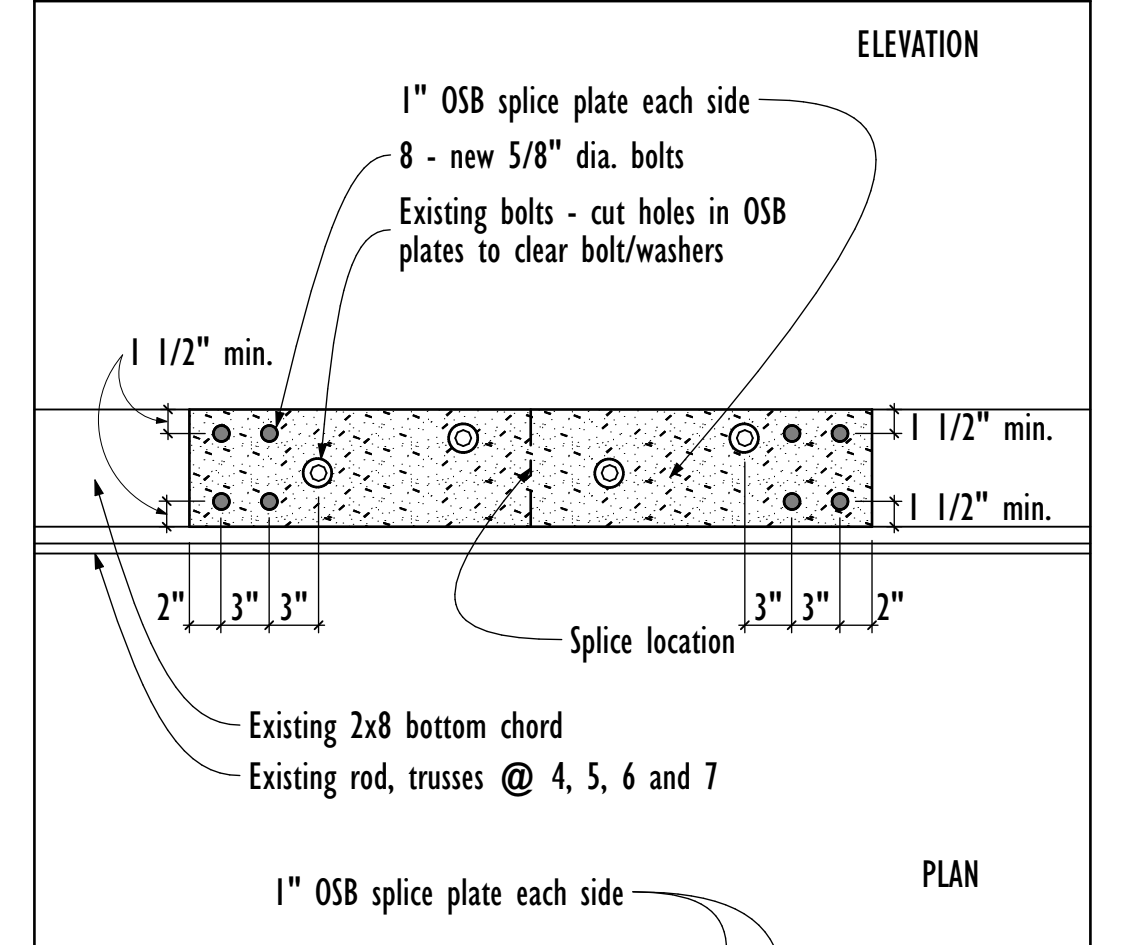
6 Truss @ 6

1/4" = 1'-0"



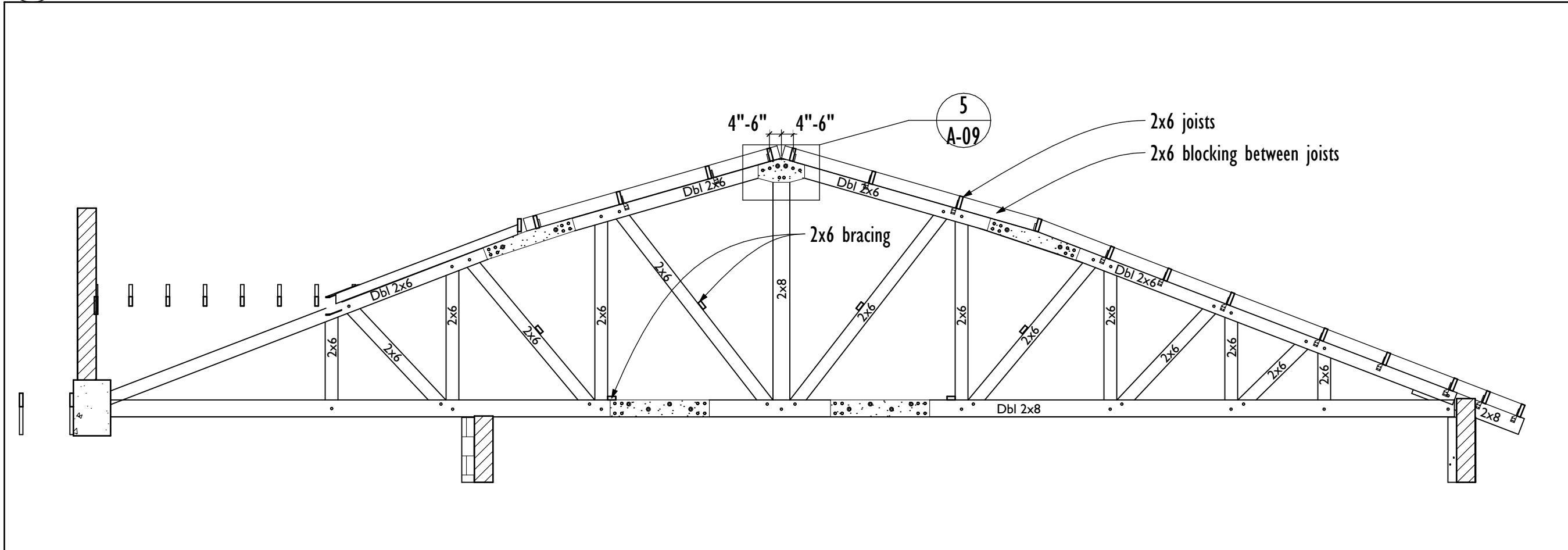
12 Truss OSB Plates @ Splices

1" = 1'-0"



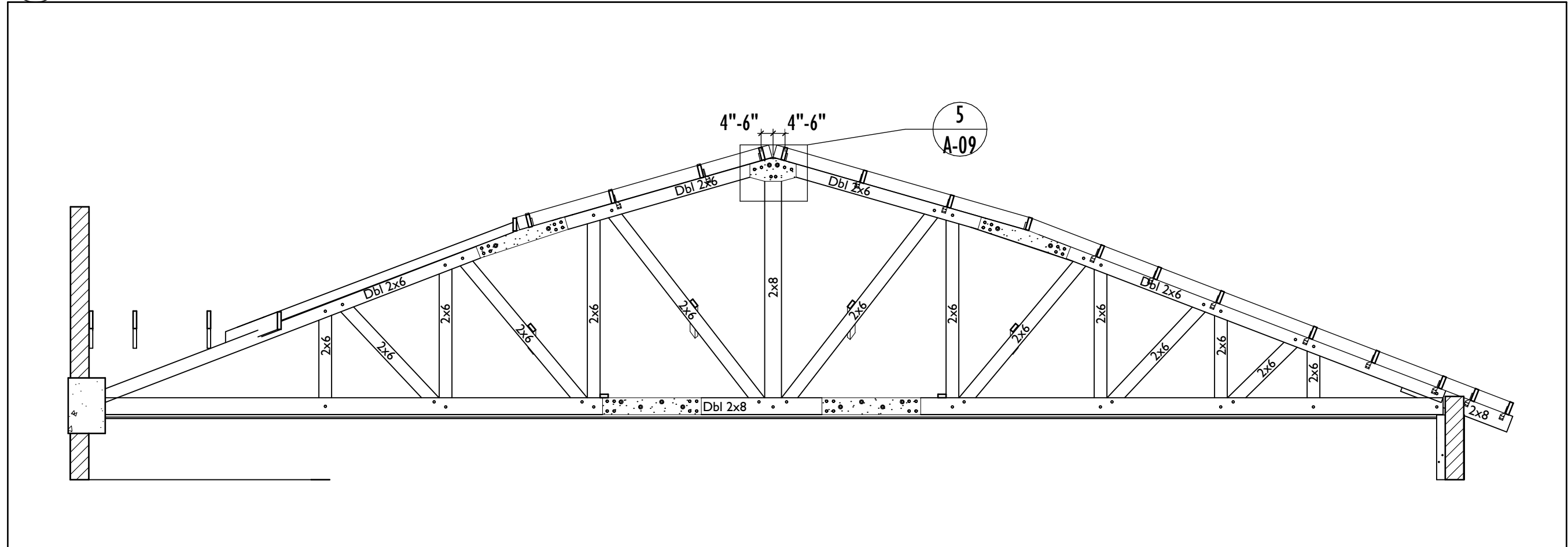
13 Truss @ 3

1/4" = 1'-0"



15 Truss @ 7

1/4" = 1'-0"



- Notes:
1. Field verify spacing of existing bolts.
2. Verify space filler - add material as necessary for full bearing
3. For existing bolts - cut circular holes in OSB plates same dia. as bolt washer

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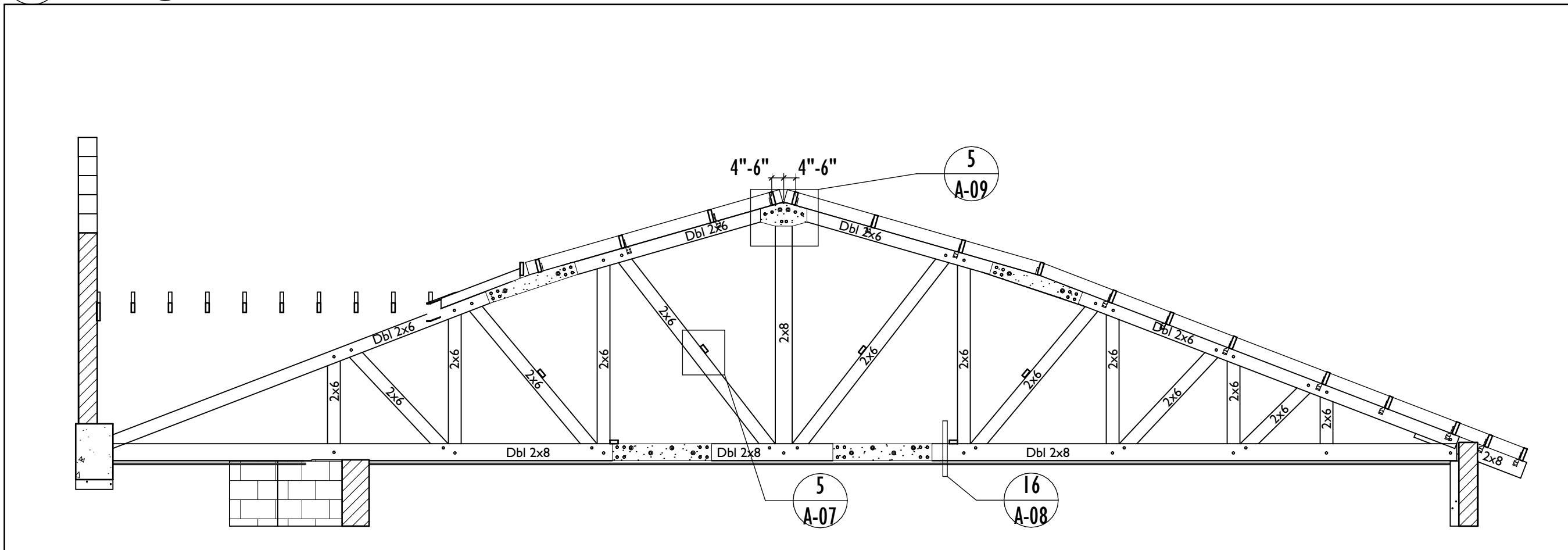
PROJECT: Osterman Gas Station Storm Repairs
ADDRESS: Peach Springs AZ
PROJECT NO.: 22-018
SHEET TITLE: Truss Elevations
DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
SHEET REVISION HISTORY

11110 MELVIN J. SLAYSMAN, JR.
Professional Engineer
No. 17423
Arizona, U.S.A.

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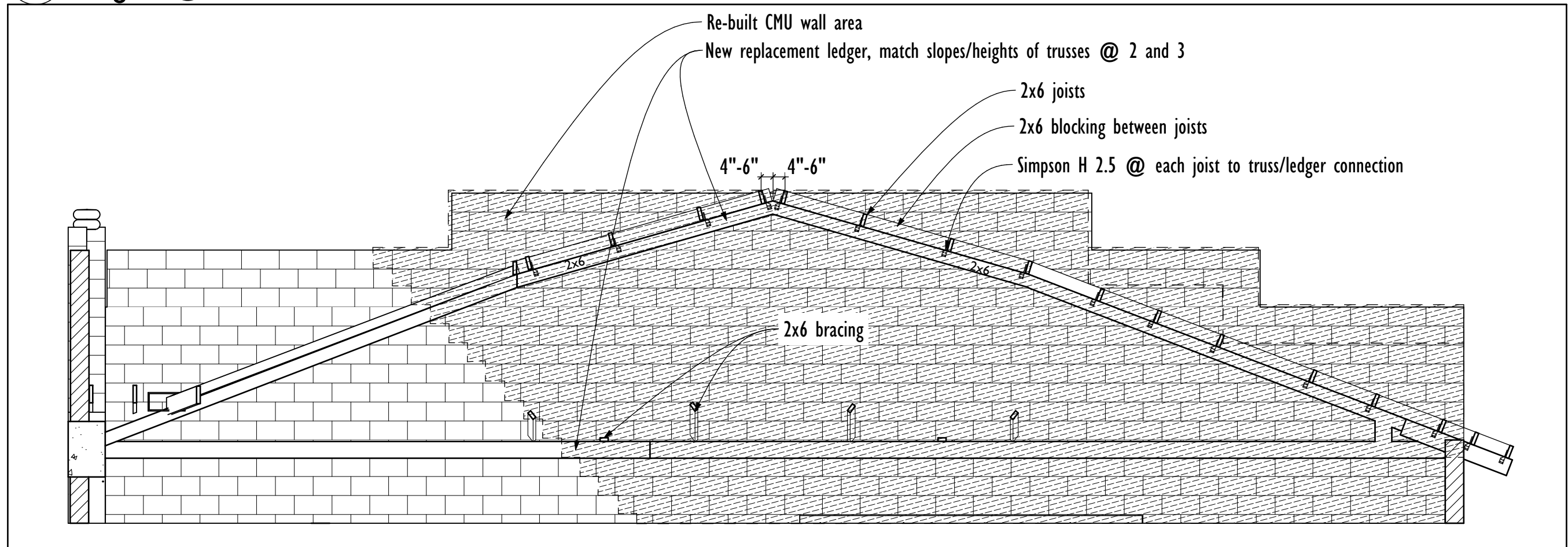
19 Truss @ 4

1/4" = 1'-0"



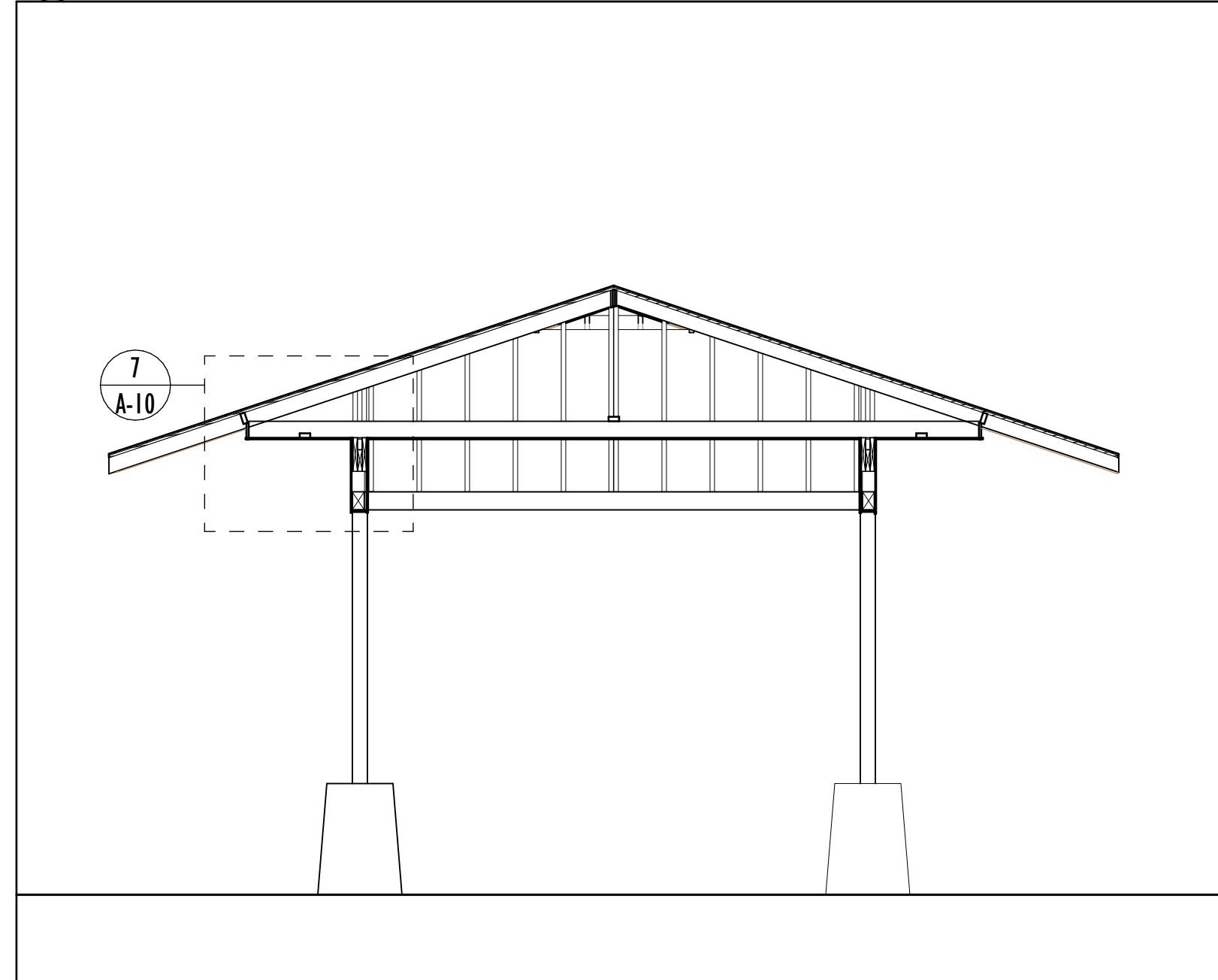
21 Ledger @ 8

1/4" = 1'-0"

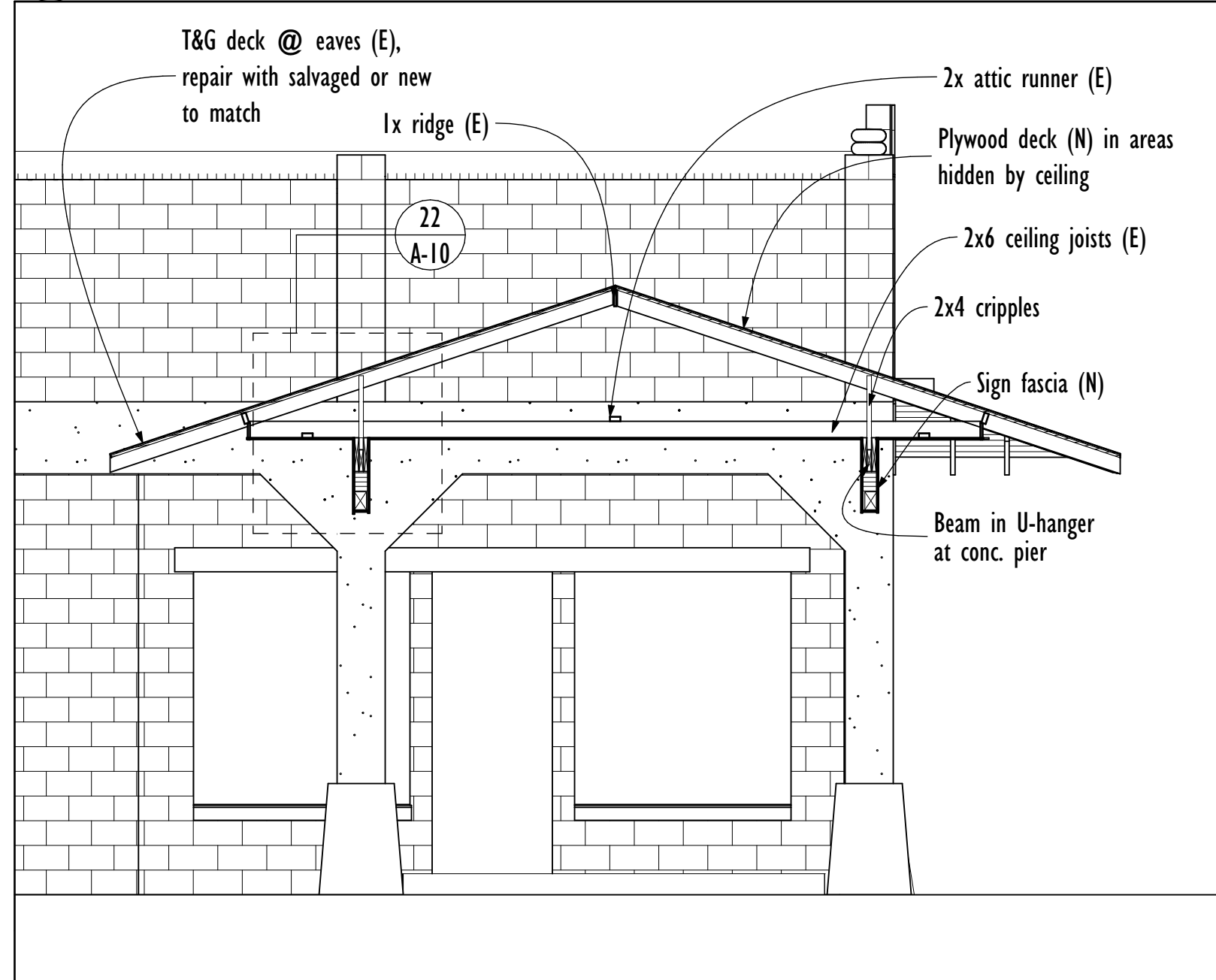


Sheet No. **A-09**

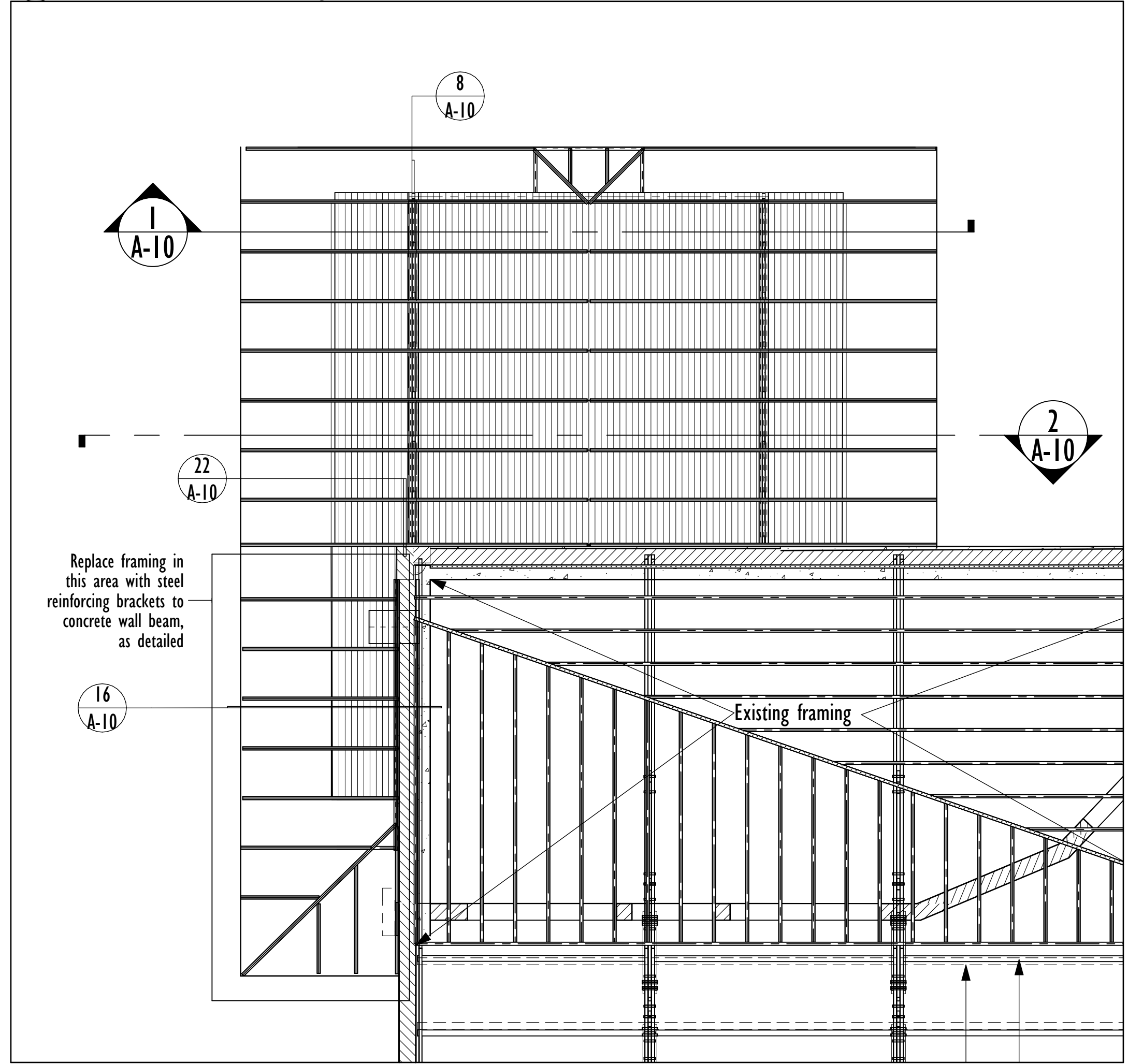
1 Section - Porte-Cochere Rehabilitation 1/4" = 1'-0"



2 Section - Porte-Cochere Rehabilitation 1/4" = 1'-0"



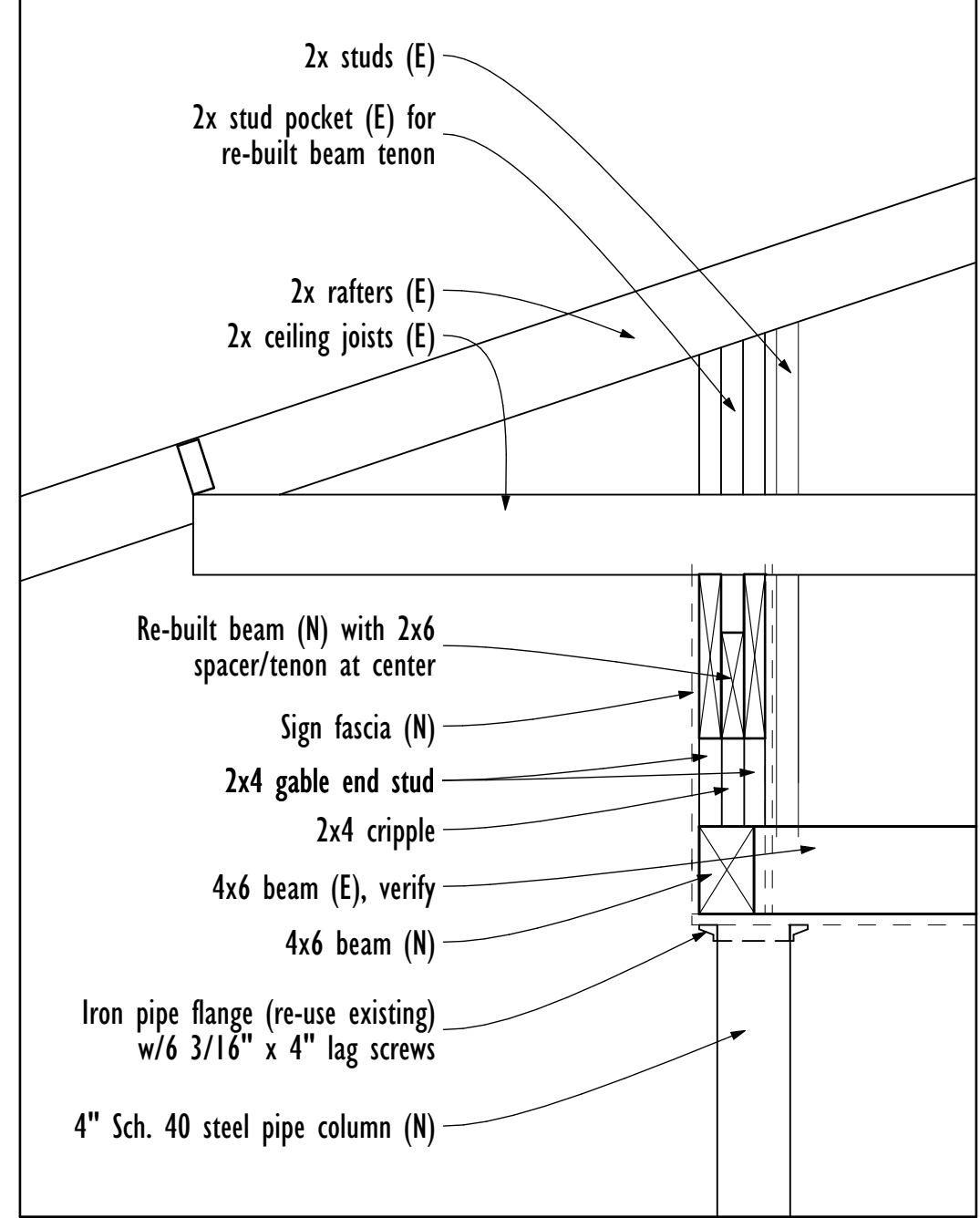
4 Porte Cochere Framing Plan 1/4" = 1'-0"



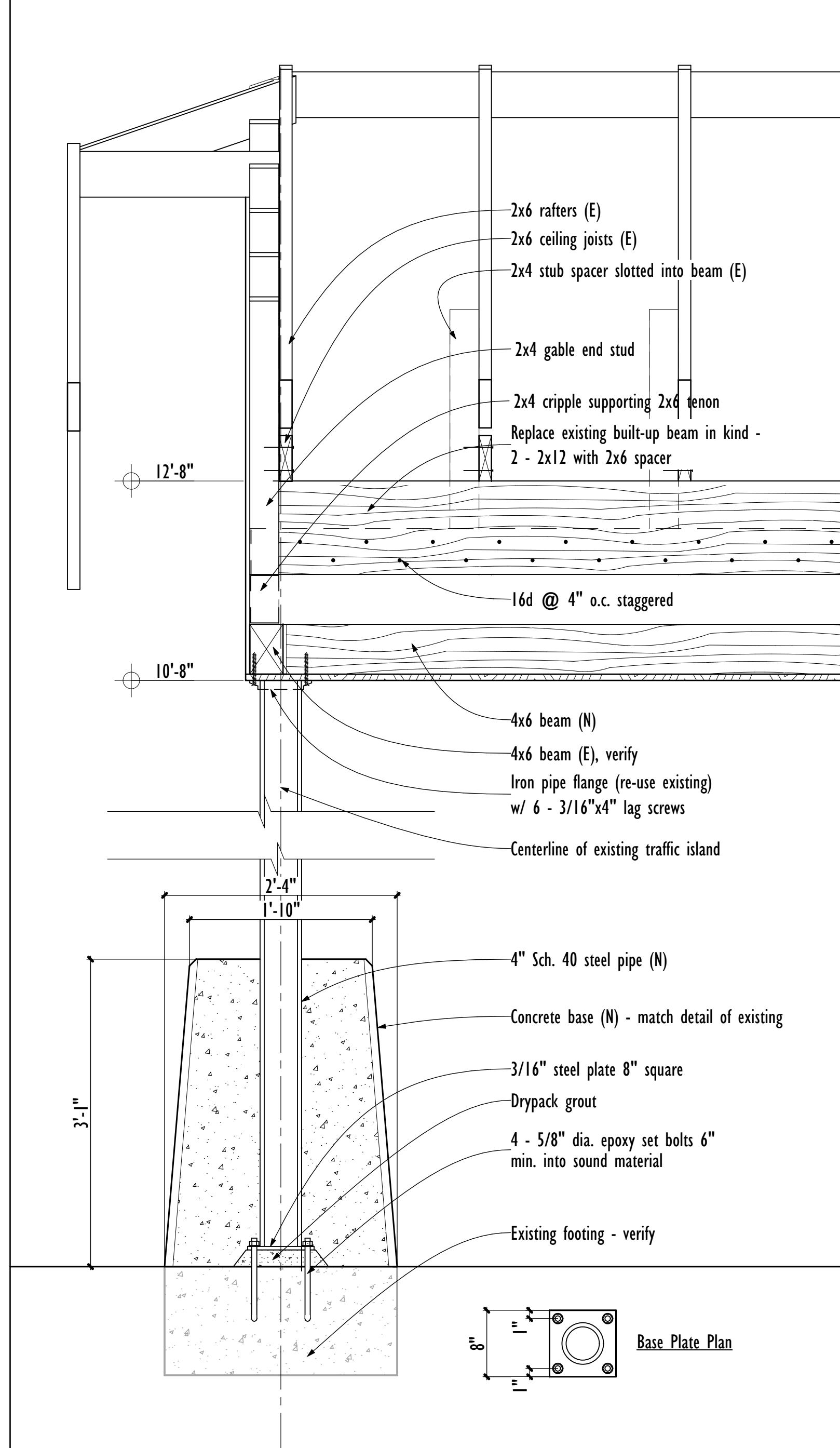
General Rehab Notes

- The following notes apply to the canopy (a.k.a. Porte-Cochere) north and west of the exterior masonry walls of the building.
- Shore and brace roof structure as needed.
 - Remove and dispose of all metal shingle roofing.
 - Remove existing decking in concealed ceiling areas. Evaluate condition of T&G decking at exposed eaves and remove deteriorated areas.
 - Remove and dispose of all plywood ceiling material and gable end covering.
 - Remove built-up side beams (2-2x12 with 2x6 spacer) as indicated and replace with new, in-kind.
 - Remove all eave fascias and all added sister rafters at eaves.
 - Remove all wood structure at cantilevered roof area as indicated.
 - Remove existing steel pipe columns. Salvage connection flanges.
 - Construct new pipe columns and bases as detailed.
 - Jack or lift all existing sagged roof rafters into alignment and re-nail as necessary to supports. Note deteriorated rafters that cannot be placed back into position and report to Architect.
 - Sister or replace damaged rafters under unit price.
 - Reconstruct cantilevered eave area as detailed with added steel angle brackets. Include T&G decking for this area in base price.
 - Provide new 5/8" plywood decking at concealed ceiling areas. Replace deteriorated T&G decking in-kind as needed under unit price.
 - Re-roof with new metal shingle system as indicated.
 - Provide beadboard wood ceiling except at exposed eaves.
 - Provide finish coverings for new perimeter board beam and gable end as detailed.
 - Paint all exposed wood, steel columns, and concrete pole bases.

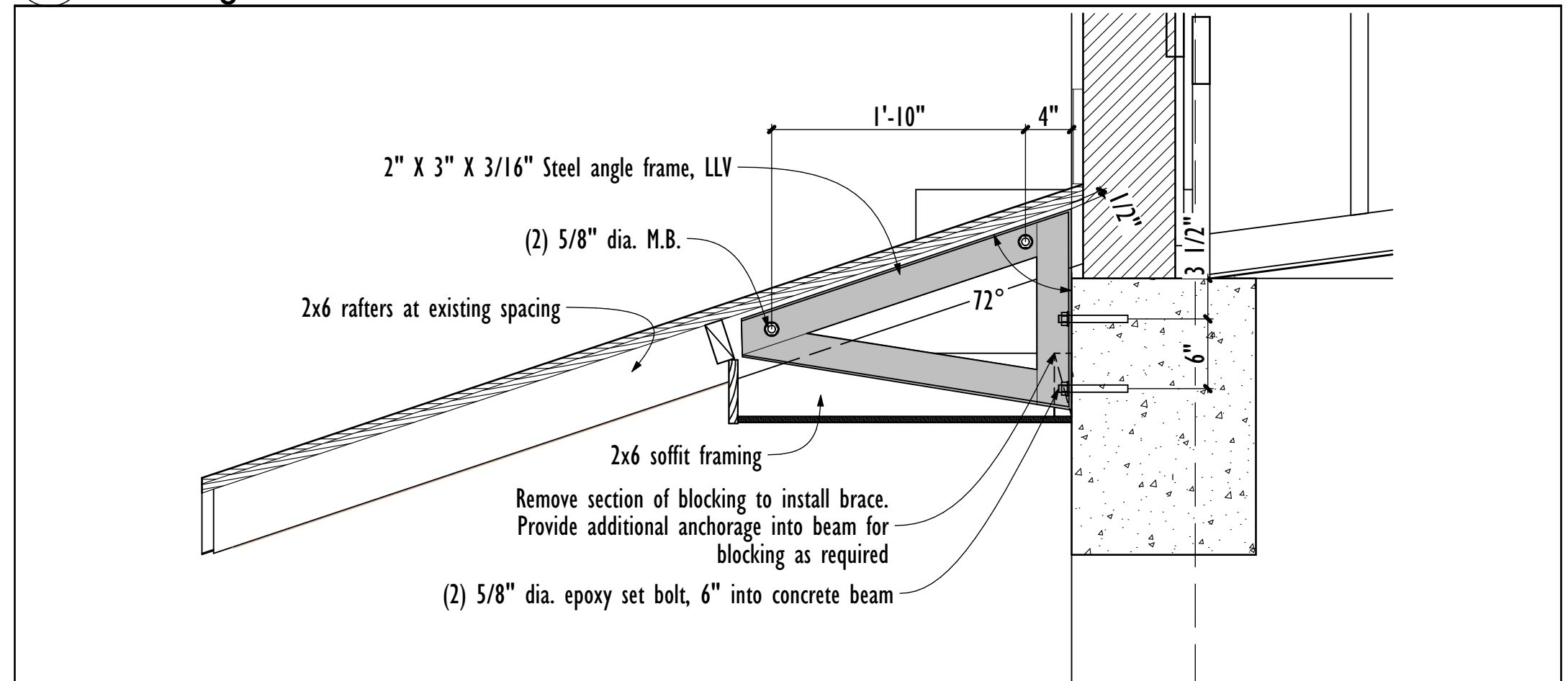
7 Framing @ New Pipe Col. 1" = 1'-0"



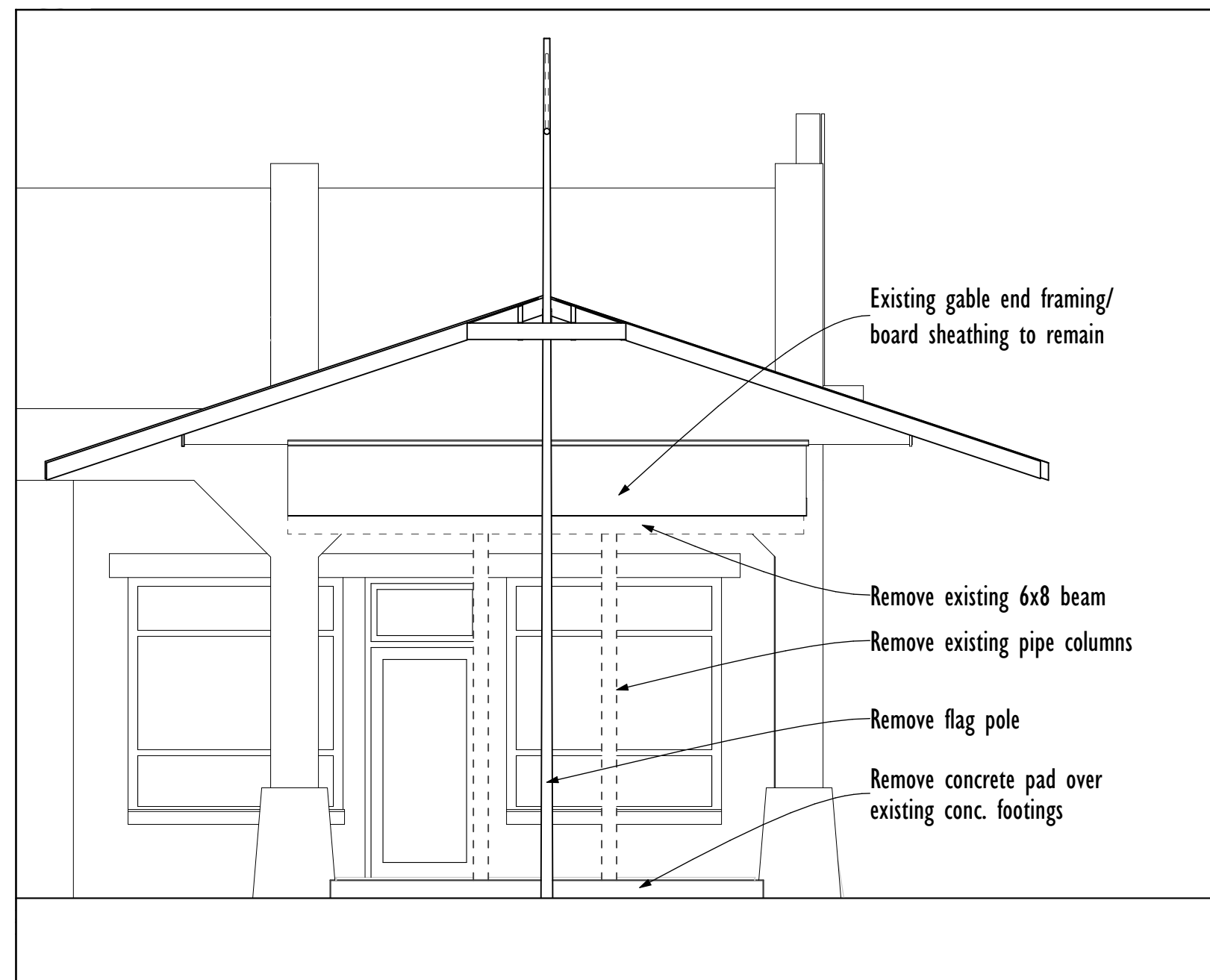
8 Section @ New Pipe Column 1" = 1'-0"



16 Overhang Reinforcement 1" = 1'-0"

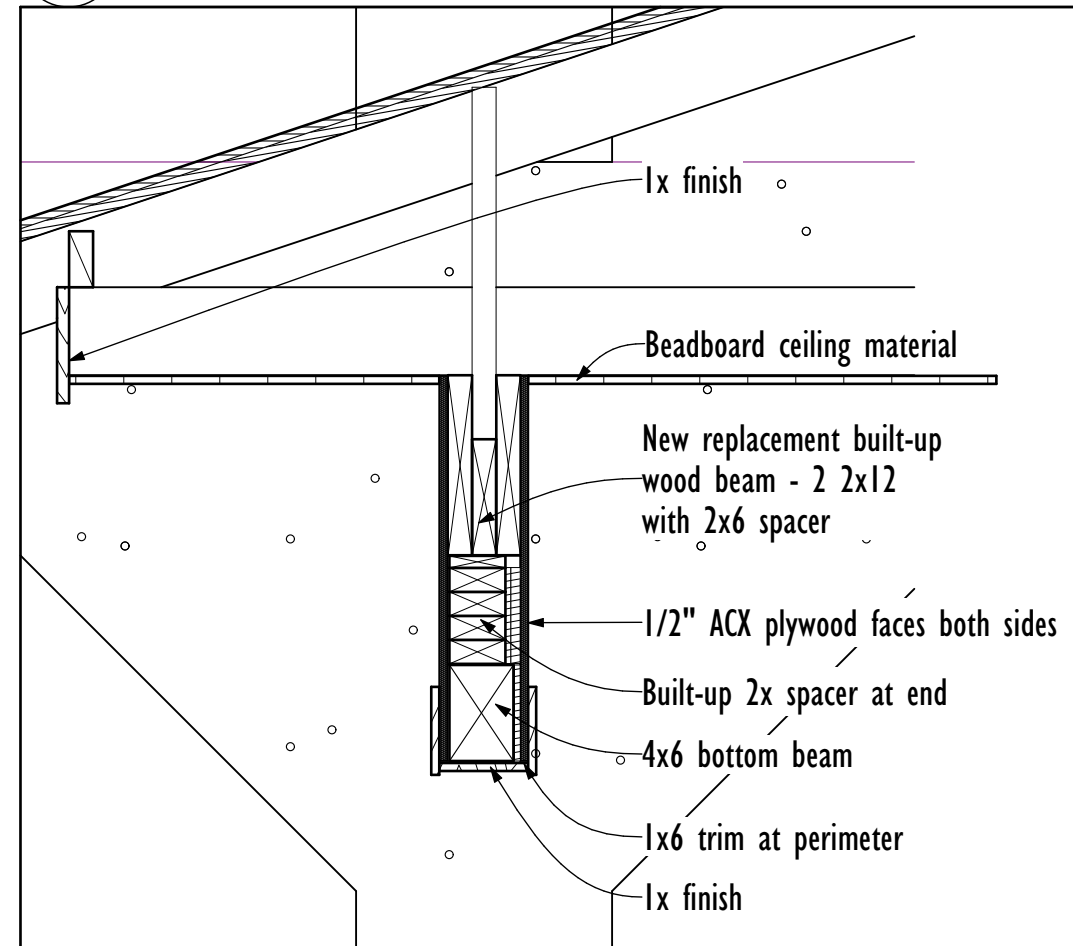


North Elevation - Porte-Cochere - Demolition 1/4" = 1'-0"

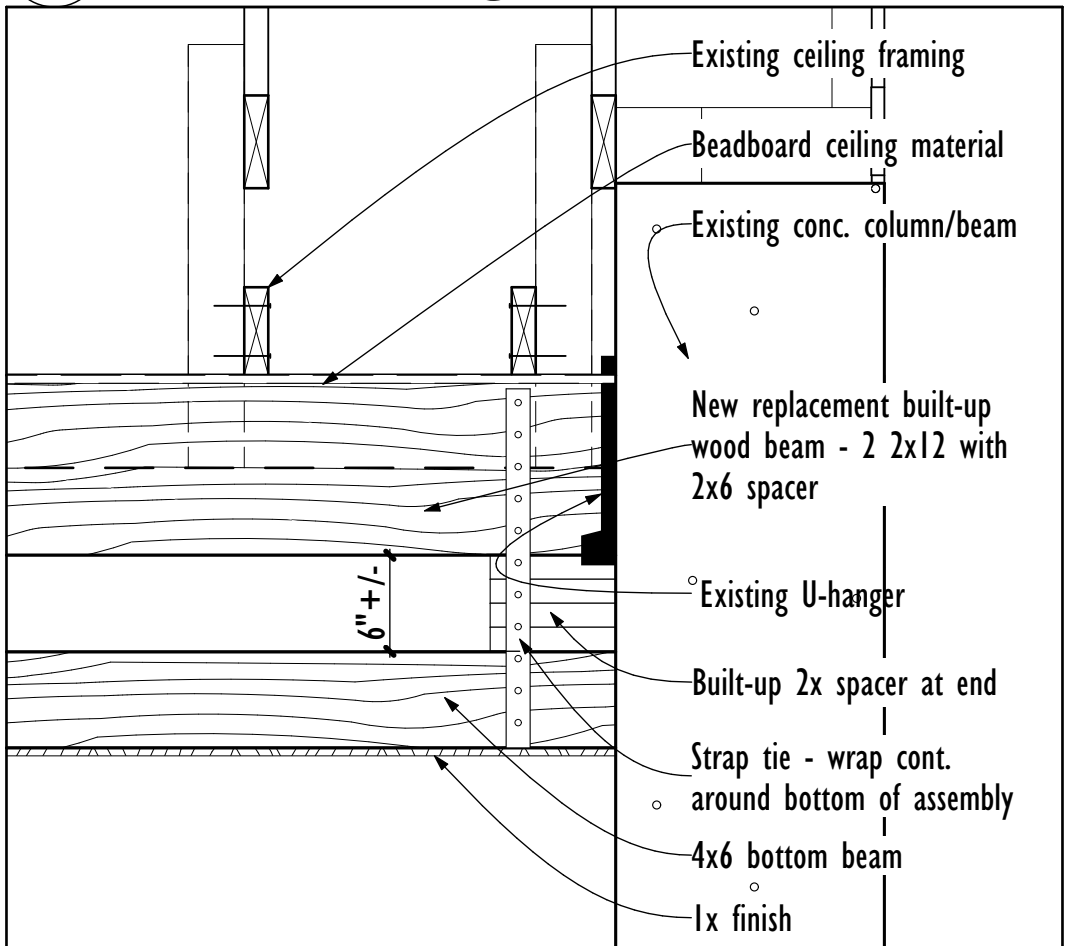


Professional Engineer Seal for Melvin J. Slayman, Jr., No. 11110, State of Arizona. Text: The structural portion of these drawings have been reviewed by this engineer for conformance of the structural components to local codes and conditions. This review and sealing of drawings is for the structural portion only. No review or check for code compliance of architectural, ADA, electrical, mechanical, or civil was done by this engineer and is specifically excluded.

22 Wood Beam Section 1" = 1'-0"



22 Wd. Bm. Elev. @ Conc. Beam 1" = 1'-0"



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PROJECT: Osterman Gas Station Storm Repairs
 ADDRESS: Peach Springs AZ
 PROJECT NO.: 22-018
 SHEET TITLE: Porte-Cochere Rehabilitation
 DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
 SHEET REVISION HISTORY

Rev	Chg	Change Name	Date
01			4/18/2023

Professional Engineer Seal for Robert G. Graham, No. 22434, State of Arizona. Text: Robert G. GRAHAM, 4/18/23, Phoenix, AZ, U.S.A.

Sheet No. **A-10**

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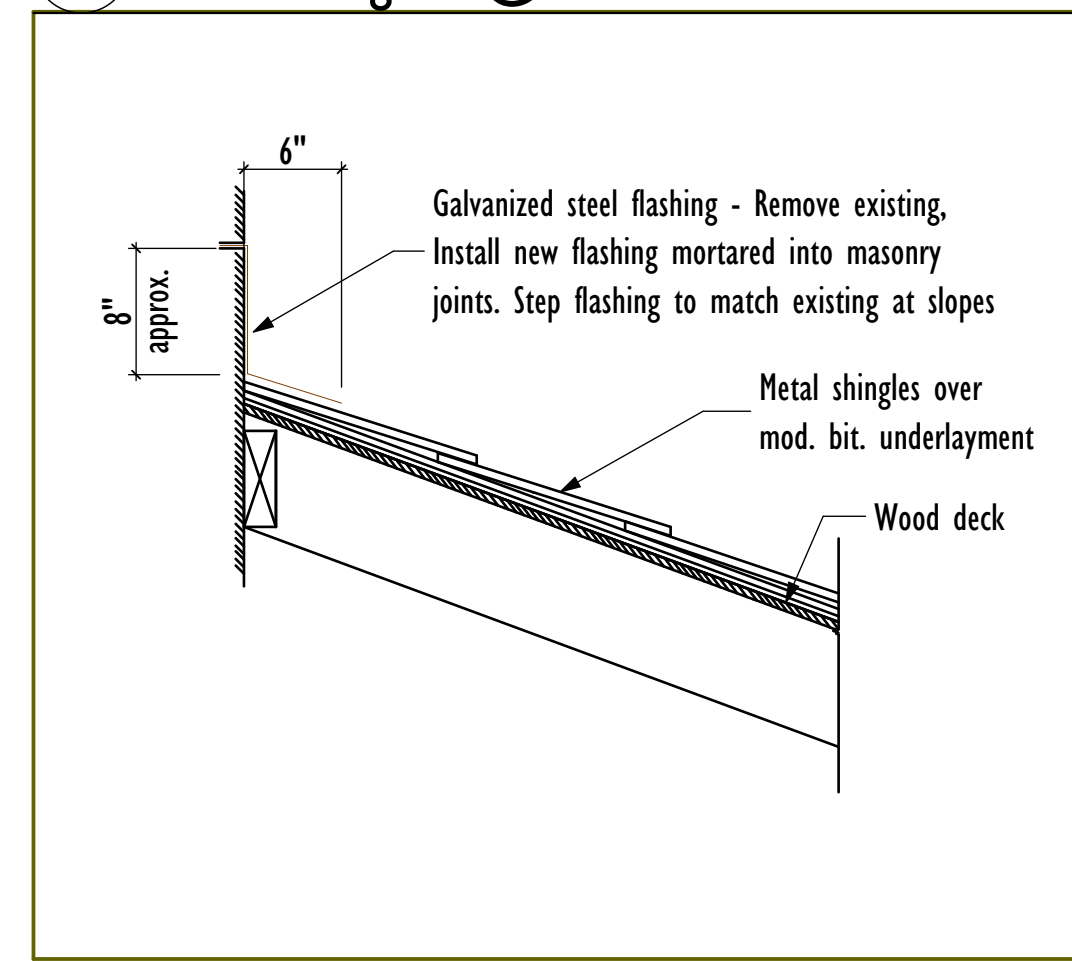
Door Schedule

MARK	New/ Existing	SIZE W x H	TYPE	OPERATION	EXISTING CONDITIONS					Notes
					Frame	Sash	Finish	Glazing	Hardware	
1	E	3'-0"×7'-0"	Wood							No work - protect in place
2	N	9'-8"×11'-8"	Wood	Swing						N.I.C. - Future phase
3	N	9'-8"×9'-0"	Wood	Sliding						New - as alternate bid. See bid schedule.
4	E	3'-0"×6'-8"	Wood							No work - protect in place

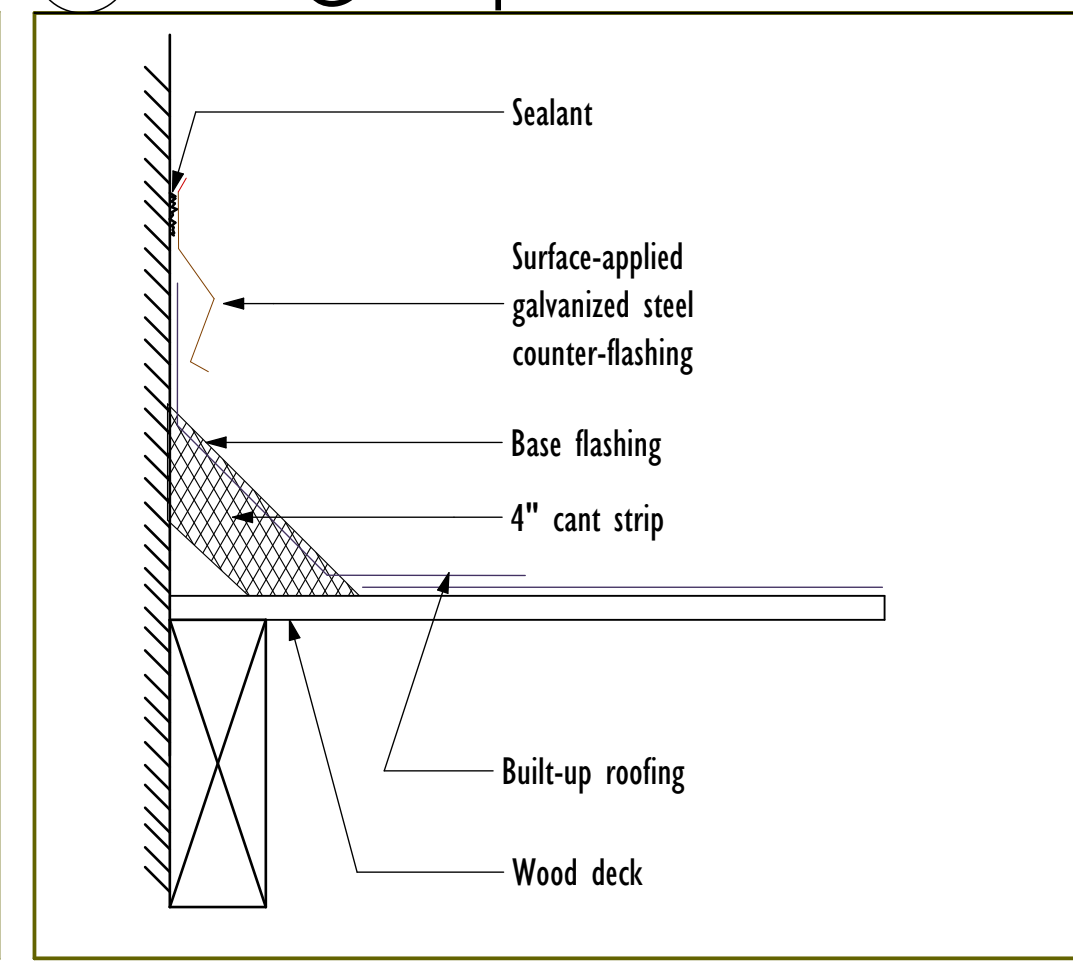
Window Schedule

MARK	New/ Existing	SIZE W x H	TYPE	OPERATION	EXISTING CONDITIONS					Notes
					Frame	Sash	Finish	Glazing	Hardware	
1	E	6'×6'-7"	Wood	Fixed						No work - protect in place
2	E	3'-8"×5'	Steel	Hopper						No work - protect in place
3	E	3'-8"×3'-2"	Steel	Fixed						No work - protect in place
4	E	3'-8"×3'-2"	Steel	Fixed						No work - protect in place
5	E	3'-8"×5'	Steel	Hopper						No work - protect in place
6	E	3'-8"×5'	Steel	Hopper						No work - protect in place
7	E	3'-8"×5'	Steel	Hopper						No work - protect in place
8	E	3'-8"×5'	Steel	Hopper						No work - protect in place
9	E	3'-8"×5'	Steel	Hopper						No work - protect in place
10	E	3'-8"×5'	Steel	Hopper						No work - protect in place
11	E	3'-8"×5'	Steel	Hopper						No work - protect in place
12	E	3'-8"×5'	Steel	Hopper						No work - protect in place
13	E	3'-8"×5'	Steel	Hopper						No work - protect in place
14	E	3'-8"×5'	Steel	Hopper						No work - protect in place
15	E	3'-8"×5'	Steel	Hopper						No work - protect in place
16	E	2'-6"×1'-6"	Steel	Hopper						No work - protect in place
16	E	6'×6'-7"	Wood	Fixed						No work - protect in place
17	N	3'-4"×4'-8"	Wood	DH						N.I.C. - Future phase

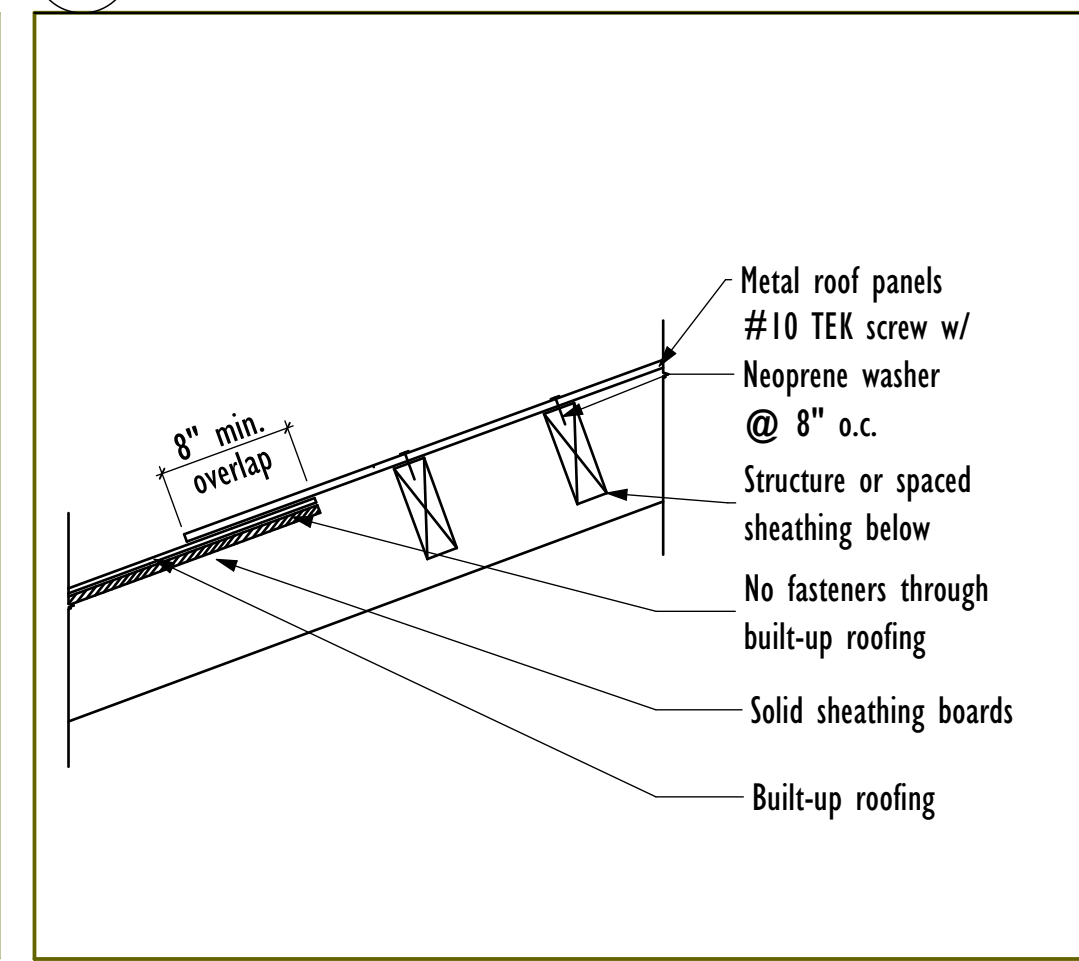
4 Metal Shingles @ Wall 1" = 1'-0"



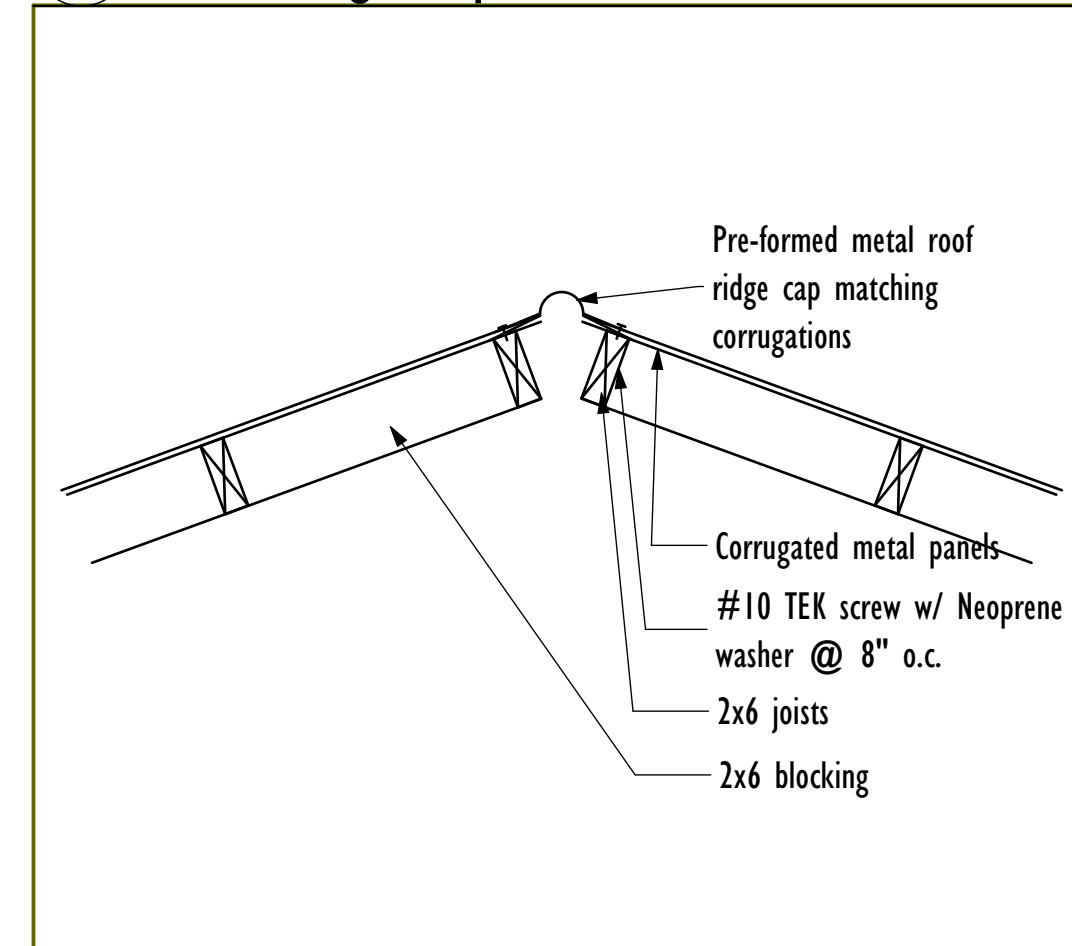
4 B.U.R. @ Parapet 3" = 1'-0"



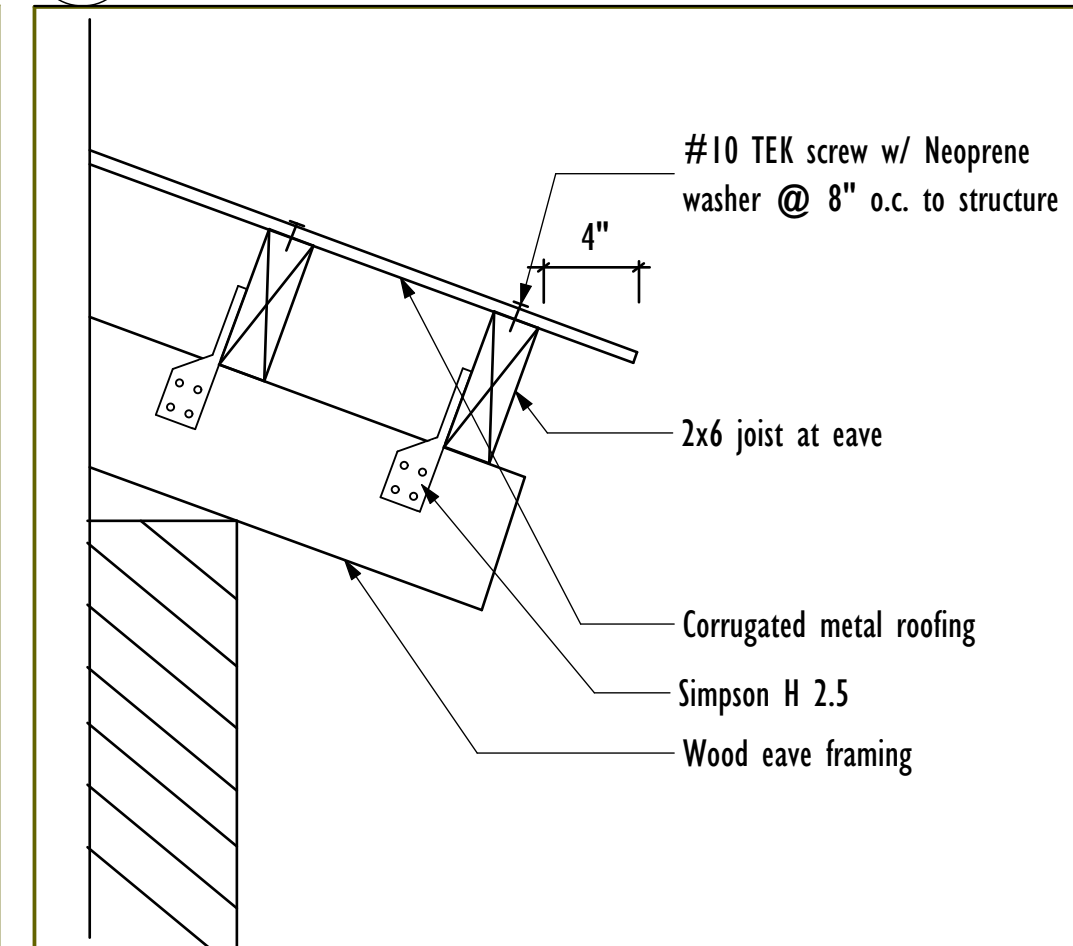
5 B.U.R./Metal Transition 1" = 1'-0"



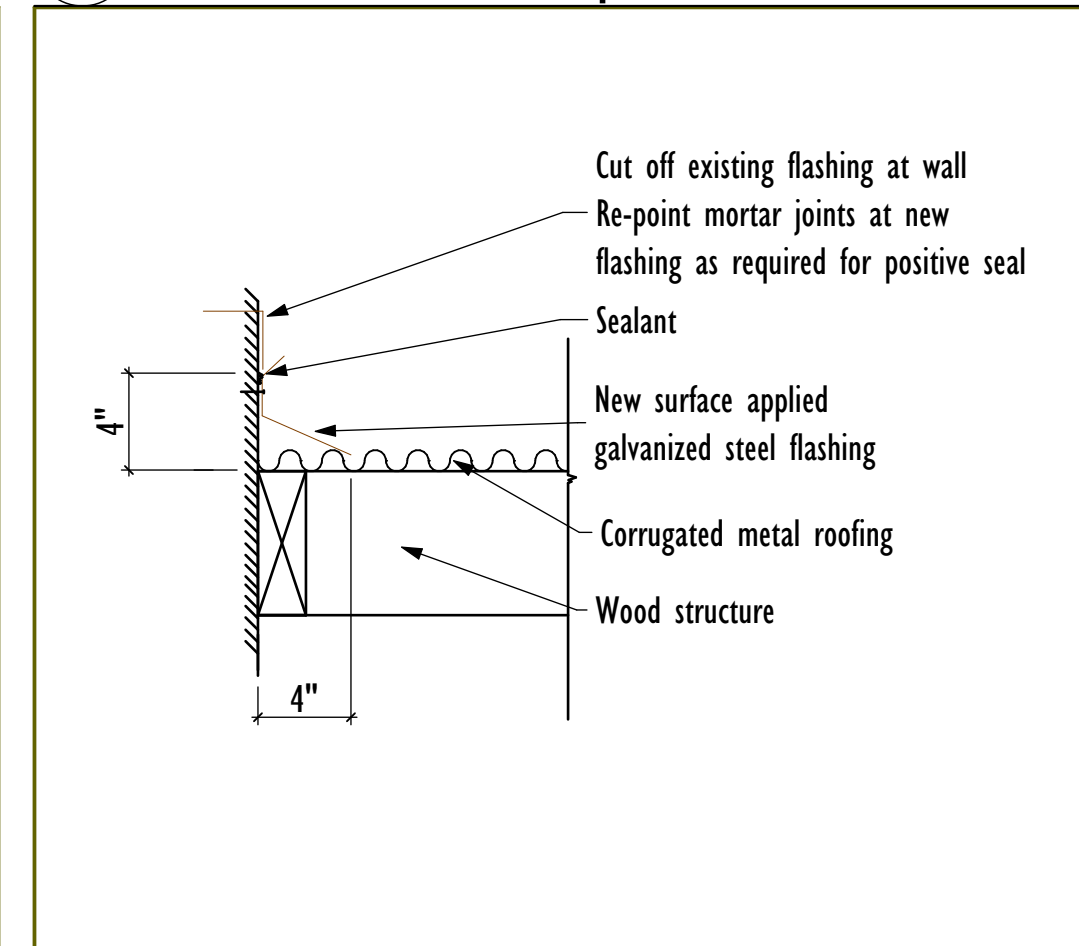
10 Metal Ridge Cap 3/4" = 1'-0"



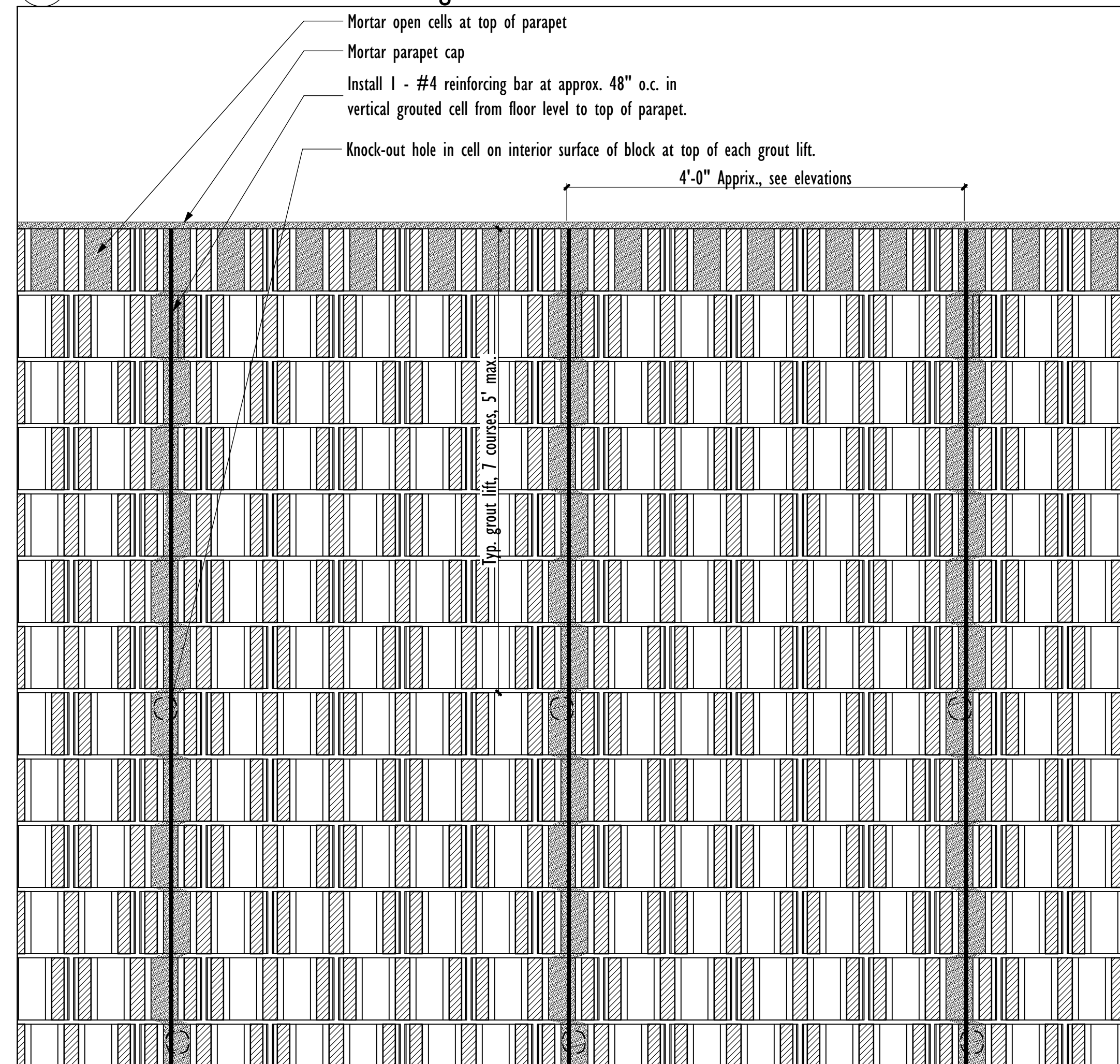
10 Metal Roof Eave 1 1/2" = 1'-0"



11 Metal Roof @ Parapet 1 1/2" = 1'-0"



16 CMU Wall Section w/ Reinforcing 1" = 1'-0"



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PROJECT: Osterman Gas Station Storm Repairs
ADDRESS: Peach Springs AZ
PROJECT NO.: 22-018
SHEET TITLE: Details and Schedules
DATE OF ISSUE: 3/15/2023 CURRENT REVISION: 01, 4/18/2023
SHEET REVISION HISTORY

Rev	Chgd	Change Name	Date
01			4/18/2023

11110 MELVIN J. SLAYSMAN, P.E.
22434 ROBERT G. GRAHAM
4/18/23
PHOENIX, ARIZONA, U.S.A.

Sheet No. **A-11**

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APPENDIX J - WESTON REPORT

APPENDIX J
Lead-Based Paint Screening Report



**Survey of Commercial Property for Lead-Based Paint:
888 Historic Route 66, Peach Springs, AZ**

Prepared for: Barbara Wethington
Weston Solutions, Inc
960 W. Elliot Rd., Ste. 101
Tempe, AZ 85284

Fiberquant Job #2017-07854 (XRF)

Introduction

At the client's request, a commercial structure was screened for lead-based paint (LBP). The property surveyed was located at 888 Historic Route 66 in Peach Springs, Arizona. The property was built in the 1920s.

The survey was conducted and interpreted by Michael Cook under the employment of Fiberquant Analytical Services (EPA firm certification number AZ-2033-4, expires 2/11/2018). Michael has successfully completed the Federal EPA course and testing for lead-based paint for the State of Arizona (EPA certification # AZ-R-8745-2, Expires 6/18/2018).

Executive Summary

Several components tested were found to be positive for lead-based paint (i.e., containing ≥ 1.0 mg Pb/cm² with 95% confidence).

Procedures

The property was visited on August 15, 2017. Selected sites on the interior and exterior were surveyed for the presence of lead-based-paint (LBP) using a spectrum analyzer portable X-ray fluorescence (XRF) paint tester, Radiation Monitoring Devices (RMD) model LPA-1, serial number 01604 (cobalt 57 source assay date 01/26/2017). The performance characteristic sheet for this instrument is available on the Internet at <http://www.hud.gov/offices/lead/lbp/hudguidelines/allpcs.pdf>. The spectrum analyzer automatically subtracts from a spectrum the fluorescence from the substrate of the paint so as to give an accurate reading of lead content without taking of samples or stripping of paint. This is performed via a computer program stored in the analyzer, which gives an instantaneous readout of the lead content of a site in mg/cm². The instrument performance is checked before and after the job or unit (minimum every 4 hours) by reading a 1.0 mg/cm² sample three times.

The LPA-1 operates in two modes, 1) time corrected, for performing calibrations and comparisons to physical samples, and 2) quick, for normal testing. According to the EPA Performance

Characteristics Sheet for the LPA-1, the quick mode gives correct threshold-type readings needing no substrate corrections. That is, the instrument counts a sufficient amount of time to determine to 95% confidence whether a given site is $>1.0 \text{ mg/cm}^2$. The closer the site is to 1.0, the longer the counting time. If a 95% confidence statement cannot be made after 60 sec., the instrument indicates an inconclusive. If inconclusive, a physical sample may be taken for testing in the lab if the result of the site is important. However, in a room or unit showing a mixture of positive and negative samples, it is unimportant whether one more site is positive or negative, and in that case the inconclusive will be left as inconclusive.

Three reports of data are attached: 1) The "Detailed Report" indicates the location, substrate, color, and analytical result of each tested site and the results. 2) The "Summary Report" lists the same information, but only for those samples determined to be positive for lead-based paint. 3) The "Distribution Report" shows the % of each component to be positive. The Detailed Report and the Summary Report both contain a description of the paint condition. These descriptions will include either an "I" for intact, an "F" for fair, or a "P" for poor. It is important to consider the condition of the paint, as it can be an indicator of lead dust hazards.

Results

Several components tested were found to be positive for lead-based paint (i.e., containing $\geq 1.0 \text{ mg Pb/cm}^2$ with 95% confidence). Those were exterior door and window components, column bases, foundation, and the exterior B wall; interior walls, window and door components, and the stringer on the stairs to the cellar. Please refer to the attached "Summary Report" for those components that were tested and found to be positive.

The Occupational Safety and Health Administration (OSHA) Lead in Construction Standard states that "negative" readings (i.e. those below the HUD/EPA definition of what constitutes LBP [1.0 mg/cm^2]) do not relieve contractors from performing exposure assessments (personal air monitoring) on their employees per the OSHA Lead Standard, and should not be interpreted as lead free. Although a reading may indicate "negative", airborne lead concentrations still may exceed the OSHA Action Level or the OSHA Permissible Exposure Limit (PEL) depending on the work activity.

Michael A. Cook



8/17/2017

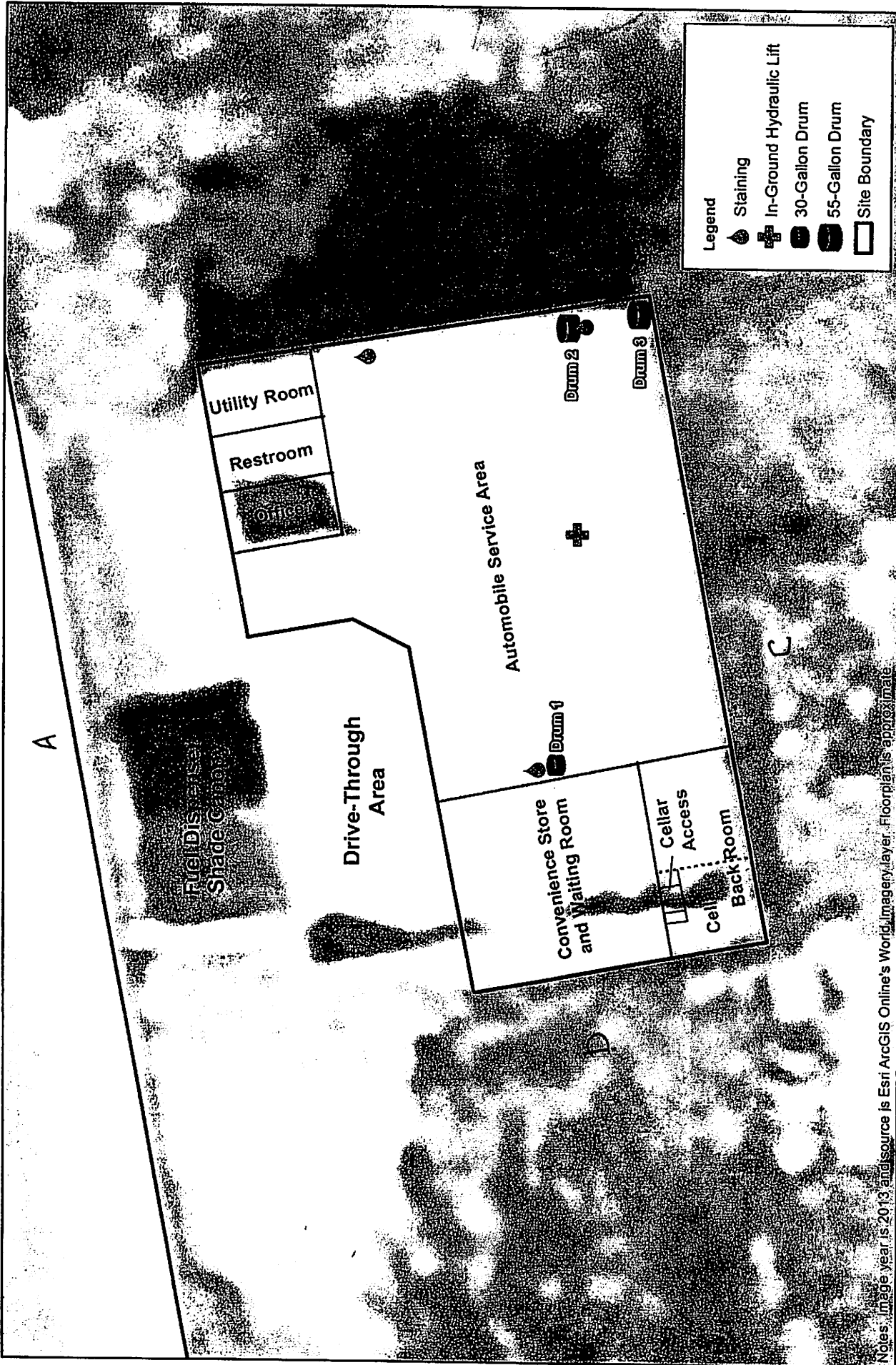
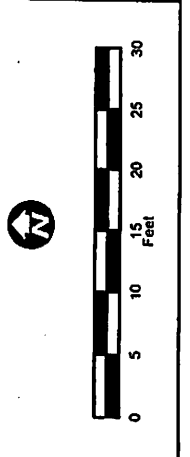


FIGURE 3
Site Building Layout
 Hualapai Tribe Targeted Brownfields Assessment
 John Osterman Gas Station
 888 Route 66
 Peach Springs, Hualapai Indian Reservation, Arizona



PREPARED FOR:
 EPA Region 9
 Pacific
 Southwest

PREPARED BY: WESTON SOLUTIONS
 Weston Solutions, Inc.
 960 W Elliot Rd, Suite 101
 Tempe, Arizona 85284



Notes: image year is 2013 and source is Esri ArcGIS Online's World Imagery Layer. Floorplan is approximate.

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Weston Solutions, Inc.

Inspection Date: 08/15/17 888 Historic Route 66
 Report Date: 8/15/2017 Peach Springs, AZ
 Abatement Level: 1.0
 Report No. S#01604 - 08/15/17 12:10
 Total Readings: 74 Actionable: 34
 Job Started: 08/15/17 12:10
 Job Finished: 08/15/17 13:42

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Exterior Room 001 Exterior									
062	A	Window	Rgt	Rgt casing	D	Wood	Red	8.6	QM
063	A	Window	Rgt	Sill	D	Block	Red	4.9	QM
061	A	Door	Rgt	Lft casing	D	Wood	Red	9.6	QM
064	A	Column Base	Rgt		D	Concrete	Red	1.5	QM
067	B	Wall	L Rgt		D	Block	White	7.2	QM
070	D	Foundation	Rgt		D	Concrete	White	1.3	QM
Interior Room 001 ServiceArea									
008	D	Wall	L Ctr		D	Metal	White	2.6	QM
Interior Room 002 Office									
011	A	Wall	L Rgt		D	Plaster	White	4.7	QM
015	A	Window	Ctr	Sash	D	Metal	Green	1.7	QM
012	B	Wall	U Rgt		D	Plaster	White	5.3	QM
013	C	Wall	L Lft		D	Plaster	White	5.4	QM
Interior Room 003 Restroom									
017	A	Wall	U Rgt		D	Plaster	White	7.5	QM
021	A	Window	Ctr	Sash	D	Metal	Green	1.6	QM
018	B	Wall	L Lft		D	Plaster	White	5.0	QM
019	C	Wall	U Rgt		D	Plaster	White	4.2	QM
023	C	Door	Ctr	Lft casing	D	Wood	White	4.7	QM
024	C	Door	Ctr	Lft jamb	D	Wood	White	3.2	QM
022	C	Door	Ctr	U Lft	D	Wood	White	7.1	QM
020	D	Wall	L Lft		D	Plaster	White	5.5	QM
025	D	Partition	Ctr		D	Metal	White	1.3	QM
Interior Room 004 Utility Rm.									
033	C	Door	Ctr	U Lft	D	Wood	White	2.8	QM
Interior Room 005 Back Room									
040	A	Door	Ctr	Lft jamb	D	Wood	White	4.4	QM
038	A	Door	Ctr	U Ctr	D	Wood	White	2.4	QM
037	B	Wall	L Lft		D	Metal	White	1.7	QM
Interior Room 006 Cellar									
046	A	Stairs	Rgt	Stringer	D	Wood	White	7.8	QM
Interior Room 007 Store									
048	A	Wall	U Rgt		D	Plaster	White	>9.9	QM

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Weston Solutions, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
052	A	Window	Rgt	Rgt casing	D	Wood	White	1.6	QM
053	A	Window	Rgt	Sill	D	Wood	White	2.1	QM
057	A	Door	Ctr	Lft casing	D	Wood	White	1.6	QM
058	A	Door	Ctr	Lft jamb	D	Wood	White	2.1	QM
049	B	Wall	L Lft		D	Plaster	White	9.5	QM
050	C	Wall	U Rgt		D	Plaster	White	6.8	QM
051	D	Wall	L Lft		D	Plaster	White	8.5	QM
054	D	Window	Ctr	Sash	D	Metal	White	5.2	QM

Calibration Readings

----- End of Readings -----

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Weston Solutions, Inc.

Inspection Date: 08/15/17 888 Historic Route 66
 Report Date: 8/15/2017 Peach Springs, AZ
 Abatement Level: 1.0
 Report No. S#01604 - 08/15/17 12:10
 Total Readings: 74
 Job Started: 08/15/17 12:10
 Job Finished: 08/15/17 13:42

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Exterior Room 001 Exterior									
066	A	Wall	U Lft		D	Block	White	0.4	QM
062	A	Window	Rgt	Rgt casing	D	Wood	Red	8.6	QM
063	A	Window	Rgt	Sill	D	Block	Red	4.9	QM
061	A	Door	Rgt	Lft casing	D	Wood	Red	9.6	QM
060	A	Door	Rgt	U Ctr	D	Wood	Black	-0.1	QM
059	A	Garage Door	Lft		D	Wood	White	0.0	QM
071	A	Crprt Ceil	Ctr		D	Wood	White	0.2	QM
064	A	Column Base	Rgt		D	Concrete	Red	1.5	QM
065	A	Column	Rgt		D	Concrete	White	0.2	QM
067	B	Wall	L Rgt		D	Block	White	7.2	QM
068	C	Wall	L Lft		D	Block	White	-0.1	QM
069	D	Wall	L Rgt		D	Block	White	0.4	QM
070	D	Foundation	Rgt		D	Concrete	White	1.3	QM
Interior Room 001 ServiceArea									
004	A	Wall	U Rgt		D	Block	White	0.6	QM
005	B	Wall	L Lft		D	Block	White	0.4	QM
006	C	Wall	U Rgt		D	Block	White	0.0	QM
010	C	Window	Ctr	Sash	D	Metal	White	0.0	QM
007	D	Wall	L Lft		D	Metal	White	0.3	QM
008	D	Wall	L Ctr		D	Metal	White	2.6	QM
009	D	Wall	L Rgt		D	Block	White	0.2	QM
Interior Room 002 Office									
011	A	Wall	L Rgt		D	Plaster	White	4.7	QM
015	A	Window	Ctr	Sash	D	Metal	Green	1.7	QM
012	B	Wall	U Rgt		D	Plaster	White	5.3	QM
014	B	Ceiling			D	Wood	White	0.2	QM
013	C	Wall	L Lft		D	Plaster	White	5.4	QM
Interior Room 003 Restroom									
017	A	Wall	U Rgt		D	Plaster	White	7.5	QM
021	A	Window	Ctr	Sash	D	Metal	Green	1.6	QM
018	B	Wall	L Lft		D	Plaster	White	5.0	QM
016	B	Ceiling			D	Wood	White	0.0	QM
019	C	Wall	U Rgt		D	Plaster	White	4.2	QM
023	C	Door	Ctr	Lft casing	D	Wood	White	4.7	QM
024	C	Door	Ctr	Lft jamb	D	Wood	White	3.2	QM
022	C	Door	Ctr	U Lft	D	Wood	White	7.1	QM
020	D	Wall	L Lft		D	Plaster	White	5.5	QM
025	D	Partition	Ctr		D	Metal	White	1.3	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Weston Solutions, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
026	D	Cabinet	Ctr		D	Wood	Stained	0.0	QM
027	D	Cabinet Door	Ctr		D	Wood	Stained	0.0	QM
Interior Room 004 Utility Rm.									
028	A	Wall	U Rgt		D	Plaster	White	-0.1	QM
032	A	Window	Ctr	Sash	D	Metal	White	-0.1	QM
029	B	Wall	L Lft		D	Plaster	White	-0.2	QM
030	C	Wall	U Rgt		D	Plaster	White	0.1	QM
034	C	Door	Ctr	Lft casing	D	Wood	White	0.5	QM
035	C	Door	Ctr	Lft jamb	D	Wood	White	0.7	QM
033	C	Door	Ctr	U Lft	D	Wood	White	2.8	QM
031	D	Wall	L Lft		D	Plaster	White	0.0	QM
Interior Room 005 Back Room									
036	A	Wall	U Rgt		D	Metal	White	0.4	QM
039	A	Door	Ctr	Rgt casing	D	Wood	White	0.0	QM
040	A	Door	Ctr	Lft jamb	D	Wood	White	4.4	QM
038	A	Door	Ctr	U Ctr	D	Wood	White	2.4	QM
037	B	Wall	L Lft		D	Metal	White	1.7	QM
041	D	Window	Ctr	Sash	D	Metal	White	0.1	QM
Interior Room 006 Cellar									
043	A	Wall	U Rgt		D	Concrete	White	-0.1	QM
042	A	Ceiling			D	Concrete	White	0.0	QM
046	A	Stairs	Rgt	Stringer	D	Wood	White	7.8	QM
044	B	Wall	U Lft		D	Concrete	White	-0.2	QM
045	D	Wall	L Lft		D	Concrete	White	-0.2	QM
Interior Room 007 Store									
048	A	Wall	U Rgt		D	Plaster	White	>9.9	QM
047	A	Ceiling			D	Wood	White	0.1	QM
052	A	Window	Rgt	Rgt casing	D	Wood	White	1.6	QM
053	A	Window	Rgt	Sill	D	Wood	White	2.1	QM
057	A	Door	Ctr	Lft casing	D	Wood	White	1.6	QM
058	A	Door	Ctr	Lft jamb	D	Wood	White	2.1	QM
056	A	Door	Ctr	U Lft	D	Wood	White	-0.1	QM
049	B	Wall	L Lft		D	Plaster	White	9.5	QM
055	B	Door	Ctr	U Ctr	D	Wood	Orange	0.1	QM
050	C	Wall	U Rgt		D	Plaster	White	6.8	QM
051	D	Wall	L Lft		D	Plaster	White	8.5	QM
054	D	Window	Ctr	Sash	D	Metal	White	5.2	QM
Calibration Readings									
001								1.1	TC
002								1.1	TC
003								1.0	TC
072								1.0	TC
073								0.9	TC
074								0.9	TC

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Weston Solutions, Inc.

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
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----- End of Readings -----

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: Weston Solutions, Inc.

Inspection Date: 08/15/17 888 Historic Route 66
 Report Date: 8/15/2017 Peach Springs, AZ
 Abatement Level: 1.0
 Report No. S#01604 - 08/15/17 12:10
 Total Reading Sets: 68
 Job Started: 08/15/17 12:10
 Job Finished: 08/15/17 13:42

Structure	Total	Structure Distribution			
		Positive	Negative	Inconclusive	
Cabinet	1	0 <0%>	1 <100%>	0 <0%>	
Cabinet Door	1	0 <0%>	1 <100%>	0 <0%>	
Ceiling	4	0 <0%>	4 <100%>	0 <0%>	
Column	1	0 <0%>	1 <100%>	0 <0%>	
Column Base	1	1 <100%>	0 <0%>	0 <0%>	
Crprt Ceil	1	0 <0%>	1 <100%>	0 <0%>	
Door Lft casing	4	3 <75%>	1 <25%>	0 <0%>	
Door Lft jamb	4	3 <75%>	1 <25%>	0 <0%>	
Door Rgt casing	1	0 <0%>	1 <100%>	0 <0%>	
Door U Ctr	3	1 <33%>	2 <67%>	0 <0%>	
Door U Lft	3	2 <67%>	1 <33%>	0 <0%>	
Foundation	1	1 <100%>	0 <0%>	0 <0%>	
Garage Door	1	0 <0%>	1 <100%>	0 <0%>	
Partition	1	1 <100%>	0 <0%>	0 <0%>	
Stairs Stringer	1	1 <100%>	0 <0%>	0 <0%>	
Wall	30	14 <47%>	16 <53%>	0 <0%>	
Window Rgt casing	2	2 <100%>	0 <0%>	0 <0%>	
Window Sash	6	3 <50%>	3 <50%>	0 <0%>	
Window Sill	2	2 <100%>	0 <0%>	0 <0%>	
Inspection Totals:	68	34 < 50%>	34 < 50%>	0 < 0%>	

ABATEMENT PROCEDURES - HUD



Section IV

I. Paint Removal Methods

A. Introduction

“Paint removal” means the separation of the paint from the substrate using heat guns, chemicals, or certain contained abrasive measures, either onsite or offsite. As an abatement technique, paint removal is usually reserved for limited areas and for those surfaces where historic preservation requirements may apply.

While paint removal can be performed safely and effectively, it also demands the highest level of control and worker protection for several reasons. Paint removal usually creates the greatest hazard for the worker, either from the hazards associated with the removal process (e.g., heat, chemicals, and sharp tools) or from the lead that becomes airborne or is left as a residue on the surface after removal. Extensive onsite paint removal should usually have an Interior Worksite Preparation Level 4 and an Exterior Worksite Preparation Level 3. Lower levels are possible if the size of the area to be treated is small (see Chapter 8). Because of the lead residues left behind by all paint removal methods, particularly on porous surfaces such as wood or masonry, more extensive cleaning is usually required to meet clearance criteria. Paint removal methods also generate a significant amount of hazardous waste and may be the most costly of all lead abatement methods (HUD, 1991).

In spite of these limitations, paint removal has the benefit of a low reevaluation failure rate. If some lead-based paint is left in the dwelling, its condition will need to be monitored by the owner and by a certified risk assessor based on the Reevaluation Schedule for the specific property (see Chapter 6).

B. Prohibited Methods

Certain methods of lead-based paint removal are absolutely prohibited, either because of unacceptably high worker exposures to lead

or release of lead into the environment through production of dust or fumes or both.

1. Open Flame Burning or Torching

Burning, torching, fossil fuel-powered heat plates, welding, cutting torches, and heat guns operating at temperatures greater than 1,100 °F are prohibited as a means of paint removal because of the high temperatures generated in the process. So-called heat plates (those using propane to heat a grid, which in turn heats the paint) are also prohibited because of the high temperatures generated. At these temperatures, lead fumes may be produced.

Lead fumes are formed when lead is heated into a gas. The gas cools when it comes into contact with the cooler surrounding air and condenses into very small particles. These particles travel easily, are readily inhaled and absorbed into the body, and are difficult to clean up. Several researchers have found that worker exposures are extraordinarily high when doing this kind of work (NIOSH, 1992a; Jacobs, 1991b; Rekus, 1988). The fumes may also travel throughout the dwelling, contaminating all surfaces with which they come into contact. Other hazardous substances may be released from the paint film using heat.

Using cutting torches to remove fire escapes, railings, or other metal components coated with lead-based paint is also prohibited unless the paint is removed first. Similarly, welding of painted metal components (such as preprimed structural steel) is prohibited by Occupational Safety and Health Administration (OSHA) regulations (29 CFR 1926.354(d)).

2. Machine Sanding or Grinding Without a HEPA Exhaust Tool

Machine sanding or grinding is prohibited (regardless of the grit used) because of the large volume of leaded dust generated. As a result of these methods, workers have been exposed to extremely high leaded dust levels, and blood lead levels in resident children have increased (Amitai, 1991; Farfel, 1990; Jacobs, 1991b). However, machine sanding with a HEPA



Figure 12.12a Open Flame Burning Is Prohibited.



Figure 12.12b Open-Faced Power Sanding or Grinding Is Prohibited.

exhaust tool is permitted and is discussed further below. Extensive dry hand sanding is not recommended, but wet sanding can be done if no electrical outlets are nearby. Limited dry sanding or scraping near electrical circuits is permitted.

3. Uncontained Hydroblasting or High-Pressure Water Wash

Uncontained hydroblasting and high-pressure water washing are prohibited. Because of the potential for widespread environmental contamination, such activities should be undertaken with full containment. All water should be captured, contained, and treated as potentially hazardous waste (contact the local water and sewage agency for guidance on local requirements). Since capturing and containing *all* water is not feasible, this method of paint removal is not permitted for lead-based paint abatement work in housing.

4. Abrasive Blasting or Sandblasting

Traditional abrasive blasting or sandblasting is prohibited in residential structures, regardless of whether the abrasive material is recycled or if the area is fully contained. These methods produce widespread dust contamination; full containment is nearly impossible to maintain and guarantee in a residential environment. Abrasive blasting should only be carried out using HEPA vacuum local exhaust equipment, which is discussed below.

If for some reason abrasive blasting must be done in a residential structure, the area must be sealed and placed under negative pressure with at least 10 air changes per hour. If the exterior must be blasted, the entire building must be covered with a tent and placed under negative pressure with at least 10 air changes per hour. In both cases, all exhaust air must be passed through a HEPA filter. Fresh air should be provided to the containment zone at a lower rate than the exhaust airflow to maintain the negative pressure zone.

C. Methods Not Recommended

1. Dry Scraping

Dry scraping is not recommended because of the large volume of particulate matter that is generated (including high levels of leaded dust).

The two situations where dry scraping is appropriate include scraping surfaces near electrical outlets, which cannot be wet scraped because of the obvious electrocution hazard, and scraping when using a heat gun since this cannot be performed wet. For both of these cases, dry scraping is only appropriate for limited surface areas.

2. Chemical Paint Removers Containing Methylene Chloride

Chemical paint removers containing methylene chloride are not recommended, although they are still widely sold in paint stores. This also applies to methylene chloride paint removers that have waxes or other coatings to retard evaporation. Some local regulations may prohibit the use of methylene chloride. Since methylene chloride evaporates readily and is colorless and odorless at the permissible exposure limit, workers may be unaware of their exposure. Methylene chloride can cause liver and kidney damage and carbon monoxide poisoning (as a metabolite) and is suspected to cause cancer (ACGIH, 1992; IARC, 1990). Air-purifying respirators with organic vapor cartridges *do not provide adequate protection* against methylene chloride. In those projects where methylene chloride must be used, air-supplied respirators (or self-contained breathing apparatuses) are required under OSHA regulations (29 CFR 1910.134).

D. Recommended Methods

1. Heat Guns

Since open flame burning is prohibited, heat removal methods are limited to electric-powered flameless heat guns.

Before beginning work, fuses and an adequate electrical supply should be verified. Larger fuses should not be installed because of the possibility

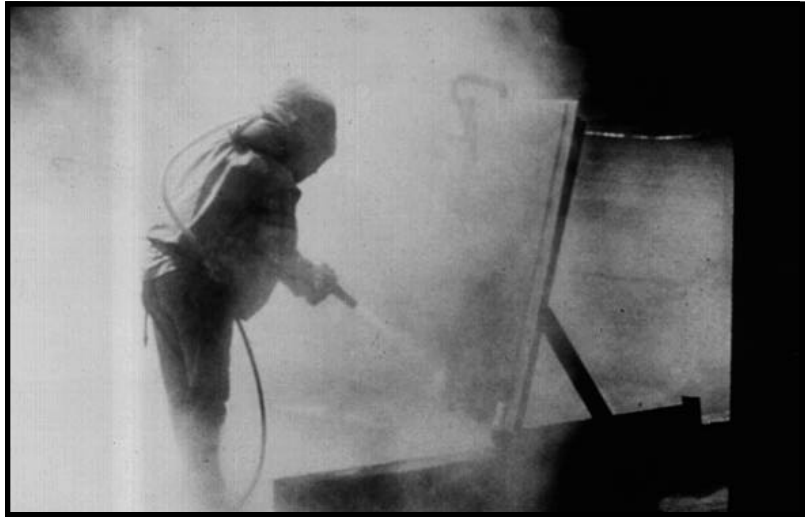


Figure 12.13 Traditional Abrasive Blasting Is Prohibited (note the visible dust surrounding the worker).



Figure 12.14 Do Not Wet Painted Surfaces Near Electrical Circuits.

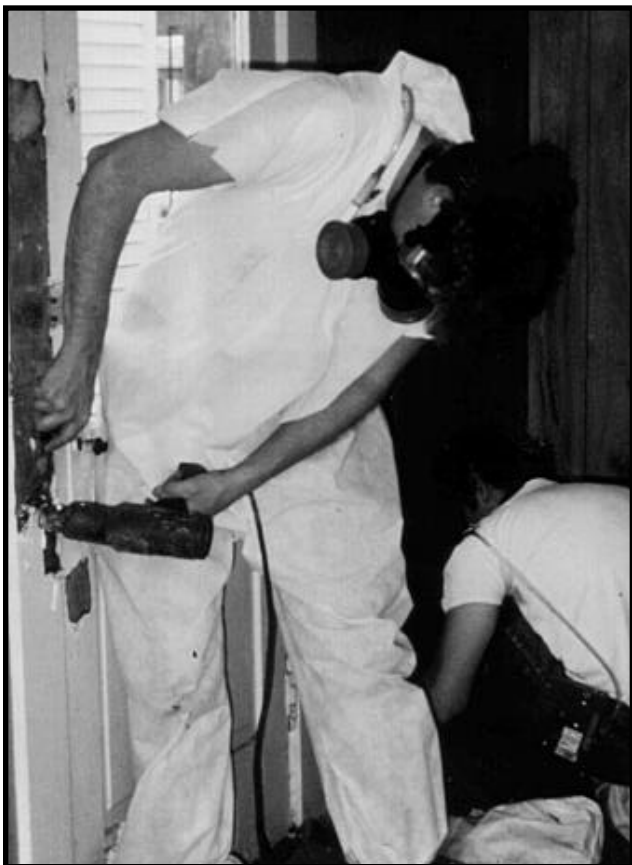


Figure 12.15 Heat Guns Operating Below 1,100 °F Are Useful for Limited Areas.

of creating a fire hazard. A portable electric generator may be needed, especially if several heat guns will be required. Care should be exercised around wallpaper, insulation, and other flammable materials. An accessible garden hose with a pressure-release spray nozzle, a crowbar to remove smoldering wood, and a long-handled sledgehammer to open up walls exposed to smoldering insulation should be readily available. Under OSHA regulations (29 CFR 1926.150), a fully charged ABC-type 20-pound (minimum) fire extinguisher must be available within 100 feet of the work area. Work should be conducted only in well-ventilated spaces, since other hazardous materials may be released when heating old painted surfaces (NIOSH, 1990).

While there is little danger of producing dangerous levels of lead fumes at temperatures below 1,100 °F, significant airborne particulate lead is generated by the accompanying scraping of the paint. Also, significant amounts of potentially harmful organic vapors can be released from the action of the heat upon the paint, even at temperatures below 1,100 °F. For this reason, air-purifying respirators should be outfitted with both a HEPA-filtered cartridge and an organic vapor cartridge. Organic vapor cartridges may not be available for some powered air-purifying respirators.

Depending on the size of the area and the substrate, paint removal by heat gun can be a slow, labor-intensive process and may result in a high final clearance failure rate if used extensively and without proper cleanup. Removing paint completely, particularly from crevices, requires attention to detail. Significant leaded residue may remain on surfaces unless cleanup is thorough. Heat guns do not appear to be particularly effective on metal or masonry substrates, which are too porous to be scraped effectively; the heat may cause small particles to fly up and hit the worker, causing burns or eye damage. Although heat guns work well on wood, they will usually damage drywall and plaster.

Workers may tend to place the nozzle of the heat gun too close to the surface, burning out the heating elements prematurely. One way to prevent this is to attach a small metal wire cage or extension tube to the end of the heat gun to prevent it from being placed too close. For most heat guns, the optimal distance from the surface is 3 to 6 inches. The heat gun is recommended only for limited surface areas in well-ventilated spaces. Other problems with heat guns include additional fire hazards from dry rot, insulation, and dust, especially in window troughs, roof areas, and hollow porch columns. Scraping often leaves the substrate very rough and may singe adjacent wallpaper. Telephone wires mounted on baseboards can melt, and heat can crack glass with a cold exterior or dry glazing.

To use heat guns properly, allow the heat stream leaving the gun to merely soften the paint. Do

not allow the paint film to scorch or smoke. At the very first sign of paint softening, blistering, or bubbling, discontinue the use of heat and immediately scrape the loose paint off the surface.

2. Mechanical Removal Methods

HEPA Sanding

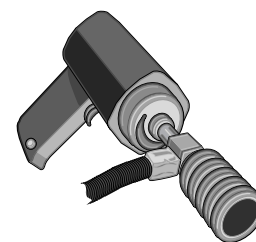
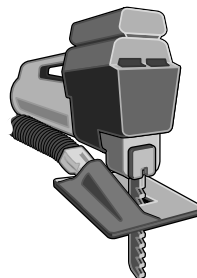
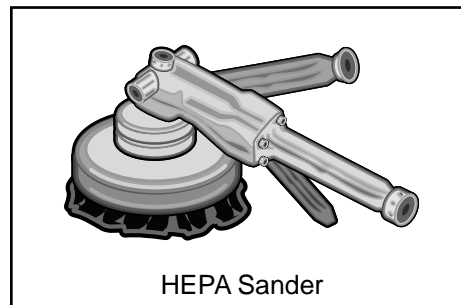
HEPA sanders are valuable for surface preparation prior to repainting. Since chemical stripping sometimes raises the grain of the wood and some removal methods are not effective at removing all visible traces of paint, some sanding prior to repainting may be needed. Sanding can cause generation of significant levels of airborne and settled lead dust; therefore, HEPA-assisted sanders are recommended whenever sanding must be done. HEPA sanders do not work well on detailed moldings.

HEPA sanding uses traditional electric sanders, such as disc sanders or orbital or vibrating sanders, equipped with specially designed shrouds or containment systems that are placed under a partial vacuum (also known as local exhaust ventilation). All exhaust air is passed through a HEPA filter (often using an ordinary HEPA vacuum) to reduce the amount of airborne particulate lead. The HEPA vacuum must be correctly sized to provide adequate airflow to permit the system to operate properly. If hoses are longer than normal, a larger HEPA vacuum may be needed to handle the increased pressure drop.

There are two main types of HEPA sanders. The first uses a flexible shroud to surround the sanding head, with the HEPA vacuum hose attached to the shroud. The shroud must be in constant contact with the surface to be effective. If the shroud extends beyond the surface being sanded, large amounts of particulate lead will be released into the air. In addition, this configuration makes it impossible to sand to the edge of protruding surfaces, such as baseboards or window and door casings.

The second type of HEPA sander pierces the sandpaper with holes through which the vacuum draws the dust. This allows the

Figure 12.16 HEPA Vacuum Power Tools.



instrument to be used to the edge of protruding surfaces. However, care must be exercised to keep the sandpaper flat on the surface. Neither one of these methods is completely effective; respirators are always recommended. Worker fatigue can also prevent the worker from holding the tool flush with the surface, making it necessary to provide frequent breaks or rotate workers.

Wet Scraping

Wet scraping is feasible on most surfaces and results in lower lead exposures than dry scraping. Since surfaces near electrical outlets should never be moistened (due to the electrocution hazard), these areas should be dry scraped.

Wet scraping can be performed by using a spray bottle or sponge attached to a paint scraper. Wet scraping is often used to remove loose and

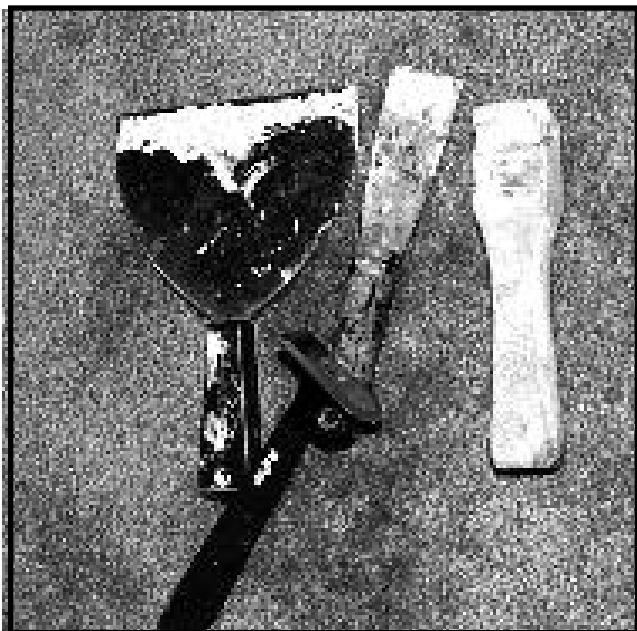


Figure 12.17 Scraping Tools.



Figure 12.18 Vacuum Blasting.

flaking paint prior to paint film stabilization or encapsulation. If wet scraping is employed as an abatement technique, a more durable covering than new paint is needed.

Working a few square feet at a time, the surface should be lightly misted with water from a garden sprayer or plant mister. Using a paint scraper, loose material should be scraped from the surface and deposited on the containment plastic. Damp paint chips should be cleaned up as soon as possible so that they are not tracked throughout the work area or crushed beneath the feet of workers.

Scraper blades should be kept sharp to minimize abrasion and gouging. Additional scraper blades should be on hand and should be selected for the type of surface being scraped. To obtain a smooth finish, it may be necessary to follow wet scraping with wet sanding. A variety of scraping tools are available from hardware and paint supply stores.

HEPA Vacuum Blasting

HEPA vacuum blasting is simply abrasive blasting with a shroud under a vacuum that is attached to the blast head. All exhaust air is passed through a HEPA filter, using a properly sized HEPA vacuum system. Vacuum blasting is appropriate for metal, brick, concrete, and other masonry surfaces. To date, attempts to use the process on wood, plaster, and other soft materials have not been successful, as they usually cause severe substrate damage.

Various blasting media can be used (e.g., aluminum oxide, metal shot, walnut shells) depending on the type of substrate. Blast heads, usually a brush-type arrangement, come in various sizes and shapes. The blast head must remain in continuous contact with the surface to avoid dispersal of both the blast medium and particulate lead. The equipment can be outfitted with a device that separates the blast media from the paint, effectively recycling the blast material, and dramatically reducing the volume of waste.

This is particularly important, since the blast material will probably be treated as hazardous waste.

Use of the equipment for long periods of time can result in worker fatigue, particularly if working with the arms above the head. Since fatigue can cause a worker to momentarily lose contact with the surface, resulting in the release of leaded dust, the goal is to minimize the degree to which workers must reach above their shoulders. Scaffolding and platforms should be constructed to minimize such stress and frequent work breaks should be taken. Vacuum blasting is not typically used in interior residential work.

HEPA Vacuum Needle Gun

The HEPA vacuum needle gun is similar to vacuum blasting in concept but avoids the use of a blast medium. In the vacuum needle gun, metal needles rapidly pound against the painted surface, dislodging the paint. The HEPA vacuum, which is connected to the gun head, draws paint chips and dust into the vacuum, minimizing the dispersion of the particulate.

The needle gun is appropriate for metal surfaces but may cause significant damage to masonry. Problems of worker fatigue are similar to those encountered in vacuum blasting. Losing shroud contact with the surface can cause the deposition of significant amounts of chips onto the containment surface. Chips should be cleaned up as soon as possible following the work to avoid tracking.

One way of maintaining the seal with the surface is to select the proper shroud for the shape of the surface treated. At least one manufacturer (Penntek) has developed different shrouds for corners, edges, and flat surfaces. Needle guns are not effective in capturing large paint chips, so use of plastic sheeting underneath is required.

3. Chemical Removal Methods

Chemical removal may result in less leaded dust generation than other removal methods. It is often used in situations where historic preservation requirements apply. However, it may leave leaded residues on porous surfaces, which may pose a hazard to resident children in the future.

One study has demonstrated that windows treated with chemical paint removers had high leaded dust levels a few months after treatment, even though cleanup and clearance had been conducted properly (Farfel, 1992).

Other drawbacks to chemical removal include high cost and potential harm to workers from splashes and chemical burns if proper gloves, face shields, and clothing are not provided. Proper ventilation is necessary when using chemical paint removal. Plastic may not be effective in protecting floors and may have to be augmented by paper or cardboard. Chemical residues can be tracked into other areas on workers' shoes if proper decontamination is not conducted. Adjacent surfaces, especially plaster, can also be damaged. High humidity may retard the chemical remover's effectiveness. If protective clothing is penetrated and becomes matted against the skin, it must be removed *immediately*. A full shower is strongly



Figure 12.19a. Needle Gun With HEPA Exhaust Ventilation (without shroud).



Figure 12.19b. Needle Gun With HEPA Exhaust Ventilation (with shroud).



Figure 12.20 Proper Protective Gear, Including Gloves, Faceshield, Goggles, and Eyewash is Required When Working With Chemical Paint Removers.



Figure 12.21 Use Punches To Identify the Location of Components Before Sending Them Offsite for Paint Removal.

recommended; the skin must be washed and thoroughly rinsed.

Chemical paint removal can be broken into two broad categories: offsite paint removal and onsite paint removal.

Offsite Paint Removal

Offsite paint removal is preferred, since most of the contamination and residues are generated away from the dwelling. The general approach is as follows.

Building components to be stripped must first be removed from the building. Misting with water prior to removal will help minimize the amount of airborne lead. The painted seam between the component and the wall should first be cut with a utility razor knife to minimize damage to the adjacent plaster. If there is more than one similar component, they should be labeled using a punch system in an obscure location (e.g., the bottom or side of a door), then wrapped in plastic and sealed with tape to avoid the spread of contamination during transport. Tag systems are not recommended since they must be removed when the component is dipped. Markers should not be used since they will dissolve during stripping. The punch will identify exactly where the component came from, eliminating the need for changing doors or other retrofitting problems.

Potential damage to components during stripping includes damage to hardware (this should be removed before stripping), broken glass, loss of glue joints and fillers, damage to wood fibers (wood swelling), and raising of the wood grain. The component may even fall apart and have to be blocked and reglued. Old glazing compounds on windows may also be weakened. The stripping firm should be instructed to *thoroughly* wash and neutralize the components after stripping.

Before materials are returned from the paint stripper, they should be wrapped in 6-mil plastic and sealed with tape. This will minimize contamination of those handling the materials since leaded residue may remain on the surface. Materials should remain sealed in plastic until other onsite dust-generating activities are concluded and the dust cleaned up.

Before reinstallation, the treated components should be cleaned using the standard HEPA/wet wash/HEPA cycle to remove any residues left by the paint stripper. Components must be

completely dry before repainting. Always check the pH after cleaning and *before* repainting.

Onsite Paint Removal

Many paint removers must be allowed to remain on the surface anywhere from 1 hour to a day or more to accomplish effective stripping. Most paint removers are efficient within a limited temperature range and may be completely ineffective in cold weather. The contractor must therefore be certain of weather conditions prior to outdoor application. Also, rain can cause environmental contamination from the lead and the chemical remover.

Paint removers are either caustic or noncaustic. The noncaustic chemical removers are generally safer to use than the caustic ones (assuming the former do not contain methylene chloride). Material Safety Data Sheets should always be consulted to determine potential chemical hazards.

When using chemical strippers, security is important, particularly with the caustics. Caustic paint removers can cause severe skin burn and eye damage to workers and children who may gain access to the work area. Pain receptors in the eyes are not as sensitive to caustic substances as they are to acids, so workers may suffer damage without immediately realizing it.

The use of chemically resistant clothing; long neoprene, nitrile, rubber, or PVC gloves; and face shields is mandatory under OSHA regulations. OSHA also requires a portable eyewash station whenever eye-irritating paint removers are used in housing.

An abundant source of running water in the abatement area for flushing chemicals from skin or eyes is required by OSHA regulations. The water should come from a nearby tap or portable eyewash stations. If contact with the eyes occurs, a full 15-minute rinse of the eyes is necessary onsite, *before the individual leaves to seek medical attention*, since permanent damage to the eyes occurs quickly. While 15 minutes may seem excessive, a quick rinse is ineffective, and permanent damage usually occurs on the way to seek medical attention.

Usually, noncaustic strippers are not as effective at removing multiple layers of paint in a single application, compared to the caustic products. When using noncaustic removers, small areas should be tested before full-scale treatment to determine their efficacy. For vertical surfaces, adhesion of the liquid or gel-type paint removers should also be tested to determine runoff potential (particularly a problem in warm weather). Most caustic paint removers work best on nonporous surfaces such as steel. They generally should not be used on aluminum or glass surfaces.

Paint removers that contain volatile substances should be used only in areas equipped with mechanical ventilation and only when workers are properly equipped with gloves, face shields, protective clothing, and respirators, as needed.

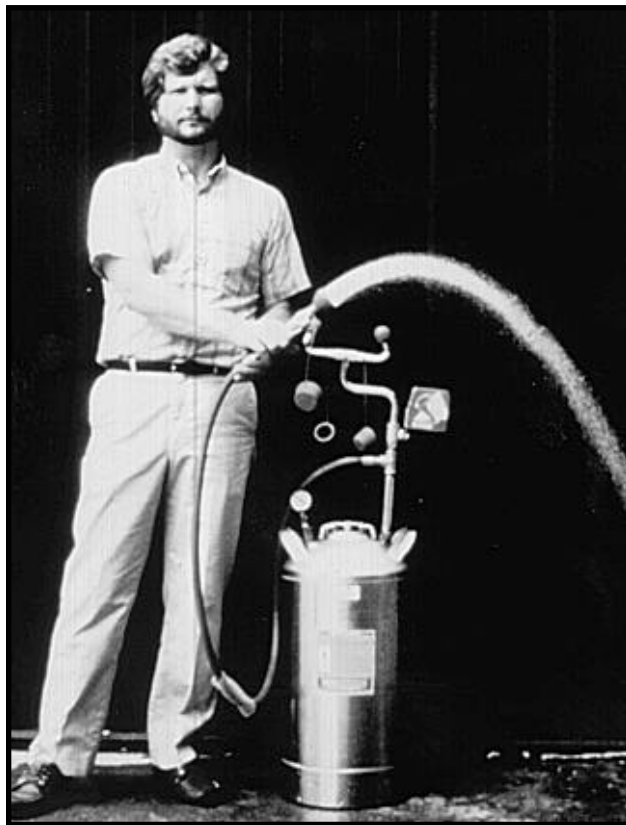


Figure 12.22 Eye Wash Stations Are Required When Caustic or Chemical Paint Removers Are Used.



Figure 12.23a Neutralize Surfaces When Using Caustic Paint Removers.



Figure 12.23b Neutralize Surfaces With a Glacial Acetic Acid Wash When Using Caustic Paint Removers.

The paint remover should be applied with a spatula, trowel, brush, or spray gun. Spray gun use should be minimized since worker exposures are greater. The time the remover must stay on the surface will depend upon the number of layers of paint, the type of paint, the temperature, and the humidity, and can range from a few hours to a day or more. The paint remover should not be allowed to dry out. Some manufacturers provide a polyethylene or paper blanket that is pressed into the surface to retard drying; others contain a film that is formed on the surface of the paint remover as it sits to prevent drying. Caution must be used when applying the paint remover overhead in order to avoid dripping onto workers below.

After the appropriate period of time, the softened paint should be removed using a scraper or putty knife and the material deposited in a watertight and corrosion-proof container (usually supplied by the manufacturer). The waste should be submitted for "Toxicity Characteristic Leaching Procedure" (TCLP) tests to determine if it qualifies as hazardous waste. Alternatively, the owner can assume that it is hazardous waste and manage it accordingly (see Chapter 10). Chemical stripper waste is almost always hazardous waste. The stripped surface must be thoroughly cleaned to remove lead and paint remover residues.

With wood surfaces, it is important to complete the entire neutralization and cleaning process without letting the surface dry. If the wood dries before cleanup is complete, the pores in the wood may close, locking potentially significant lead residues inside. When repainting, some of the lead residue may leach into the new paint.

Alkali neutralization and residue removal are accomplished as follows. Immediately after paint removal (while wood surfaces are still damp), the surface should be thoroughly scrubbed with a solution of glacial acetic acid. Use of vinegar to neutralize the alkali should be avoided since vinegar may be inadequate as a neutralizing agent and will also result in a significantly larger volume of liquid (and potentially hazardous) waste.

Glacial acetic acid is hazardous and can cause skin burns and eye damage. It should be used carefully and only with neoprene, nitrile, rubber, or PVC gloves; chemically resistant clothing; eye shields; a NIOSH-approved acid gas cartridge; and a HEPA filter on air-purifying respirators.

The damp, stripped surface should be thoroughly scrubbed with the acetic acid solution. The solution should be monitored with pH litmus paper and discarded if the pH exceeds 6. After use, the solution should be placed in corrosion-proof containers and treated as potentially hazardous waste. Sponges and other cleaning materials should not be reused but deposited

in double 4-mil or single 6-mil trash bags that are sealed, labeled, and put in a secure waste storage area.

Following neutralization, the damp surface should be thoroughly scrubbed with a high-phosphate detergent or other cleaner. Scrubbing should continue until no residues are visible. The cleaning solution should be changed when it becomes dirty. Following the detergent scrub, a clean water wash should be performed to remove residue. The pH of the water wash should be checked after use. If the pH exceeds 8, further neutralization of the surface with the acetic acid solution is necessary prior to repainting since an alkaline surface will cause the new paint to fail in a matter of days or weeks.

Surfaces should be completely dry before repainting. For wood surfaces, this may take several days to a week. If the moisture has raised the grain and sanding of wood surfaces is required before repainting, a HEPA sander should be used.

Since porous surfaces such as wood or masonry may still have slight alkali residues, some types of oil paints should not be used after caustic paint remover application. To do so may result in saponification (a “soap-making” reaction between the paint and the substrate, leading to rapid paint failure). Therefore, latex paints are probably most appropriate. Wood surfaces (especially exterior ones) can deteriorate after paint removers have been applied, making new paint difficult to apply. Also, the new paint may not last long on deteriorated substrates. Some old plasters with a high pH may require special primers, which are no longer manufactured. A special sealant may be needed on such surfaces. The specific paint remover manufacturer should be contacted for further guidance on appropriate paints to use.

High-pressure water removal of caustic paint removers should be avoided since control of solid and liquid contamination is difficult. Release of solids or liquids into the soil is likely to result in costly cleanup. Care must be used when applying caustic paint removers to friction surfaces, such as window jambs. Such surfaces are often weathered, making residue removal even more difficult. If these residues are embedded in a coat of new paint, the friction caused by opening and closing the windows can lead to the release of leaded dust.

E. Waste Disposal

Wastes produced during paint removal are highly concentrated, but low in volume. The waste may be exempt from some hazardous waste regulations if less than 220 pounds is generated per month (see Chapter 10). Many local jurisdictions pick up small amounts of hazardous waste on certain days. If offsite paint removal is performed, the waste is the responsibility of the facility performing the removal.



Figure 12.24 Use Litmus Paper on a Bare Stripped Surface Before Repainting.



Soil and Exterior Dust Abatement: How To Do It

1. Determine if a soil lead hazard exists. For a hazard to exist, a total of at least 9 square feet of soil in a single yard or area must be bare and soil concentrations must exceed either 2,000 $\mu\text{g/g}$ of lead for the yard or building perimeter or 400 $\mu\text{g/g}$ of lead for small, high-contact play areas (pending the development of an EPA soil standard). Bare soil above these levels should be treated by either interim controls or abatement. Soil abatement is most appropriate when levels of lead are extraordinarily high (greater than 5,000 $\mu\text{g/g}$) and when use patterns indicate contact frequency and exposure will be high.
2. Collect preabatement soil samples to determine baseline levels. These samples need not be analyzed if postabatement soil samples are below applicable clearance levels.
3. Determine the method of soil abatement (soil removal and replacement, soil cleaning, or paving). Soil cultivation (rototilling or turning over the soil) is not recommended.
4. If paving, use a high-quality concrete or asphalt. Observe normal precautions associated with traffic load weight and thermal expansion and contraction. Obtain any necessary permits. Keep soil cultivation to a minimum.
5. If removing and replacing soil:
 - a. Determine if waste soil will be placed in an onsite or offsite burial pit. Prepare vehicle operation and soil movement plan. Test new replacement soil (should not contain more than 200 $\mu\text{g/g}$ lead).
 - b. Contact the local United Utilities Protection Service (UUPS), Miss Dig, Miss Utility, or the American Public Works Association at (816) 472-6100, ext. 584, to determine location of underground utilities, including water, gas, electric, cable TV, and sewer, or contact each utility individually. Mark all locations to be avoided.
 - c. Remove fencing if necessary to allow equipment access and define site limits with temporary fencing, signs, or yellow caution tape.
 - d. Tie and protect existing trees, shrubs, and bushes.
 - e. Have enough tools to avoid handling clean soil with contaminated tools.
 - f. Remove soil.
 - g. Clean all walkways, driveways, and street areas near abatement area.
 - h. Replace soil at proper grade to allow drainage. Replacement soil should be at least 2 inches above existing grade to allow for settling.
 - i. Install new soil covering (grass or sod) and maintain it through the growing season.
 - j. Have enough workers and equipment available to complete the job in 1 day.



Step-by-Step Summary (continued)



6. Determine if soil waste is hazardous and manage it accordingly (see Chapter 10).
7. Conduct final cleanup and clearance.
8. Provide walk-off doormats to residents and educate them on the benefits of removing shoes at the dwelling entryway.



Section V

I. Soil and Exterior Dust Abatement

A. Introduction

Lead-contaminated soil and exterior dust have been shown to cause elevations in blood lead levels of children in a number of studies (EPA, 1993c). Exposure to lead in soil and exterior dust can occur both outside during play and inside from soil and dust carried into houses on shoes, clothing, pets, or other means.

Soil can become contaminated over a period of years from the shedding of lead-based paint on nearby buildings, windblown leaded dust from adjacent areas, and fallout of leaded dust from the atmosphere (either from a local point source or from leaded gasoline emissions in the past). Uncontrolled paint removal from nearby houses or painted steel structures can also result in contaminated soil (controlling soil lead levels should be a consideration in every exterior lead-based paint abatement project).

Soil lead hazards are determined by measuring the concentration of lead in the soil, examining the location and use of the soil, and determining the degree to which the soil is "bare" (see Chapter 5). For a yard or area to require hazard control, a total of at least 9 square feet of bare soil must be present. Any size bare area in a play area containing more than 400 $\mu\text{g/g}$ of lead is a hazard. Appendix 13.3 contains details on a sampling method to measure lead in soil. When assessing the condition of the surface cover, it is important to determine why the soil is bare. Bare soil is common in the following areas and circumstances:

- ◆ Heavily used play areas.
- ◆ Pathways.
- ◆ Areas shaded by trees or buildings.
- ◆ Areas with damaged grass.
- ◆ Drought conditions.

Measuring the lead content of soil will aid in the selection of an appropriate abatement method that has a reasonable likelihood of being maintained. Soil *abatement* (as opposed to interim controls) is generally appropriate when lead is present in extraordinarily high concentrations (more than 5,000 $\mu\text{g/g}$), use patterns indicate exposures are likely, or interim controls are likely to be ineffective (e.g., planting grass in high-traffic areas). Soil interim controls were covered in Chapter 11, Section V. This section describes soil treatments that should be effective for at least 20 years.

Preabatement soil samples should be collected but not necessarily analyzed until postabatement soil samples have been collected, analyzed, and compared to clearance standards. If postabatement soil levels are below applicable limits, the preabatement samples need not be analyzed (see Chapter 15).

B. Soil Abatement Methods

Soil abatement methods include:

- ◆ Soil removal and replacement followed by offsite or onsite disposal.
- ◆ Soil cultivation (rototilling).
- ◆ Soil treatment and replacement.
- ◆ Paving with concrete or asphalt.

Soil removal is discussed in detail below; however, before choosing to remove contaminated soil, other treatment options should be considered. The advantages of using soil treatment methods (as opposed to soil removal) are threefold (Elias, 1988):

- ◆ The costs of hauling large quantities of contaminated soil are eliminated or greatly reduced.
- ◆ Disposal sites for soil are not needed except for a much smaller volume of wastes generated during the treatment process.
- ◆ The need for uncontaminated replacement soil is greatly reduced.

1. Soil Removal and Replacement

For most soil removal projects, removal of 6 inches of topsoil is adequate. The depth of soil lead contamination is usually restricted to the top of the soil, with contamination decreasing markedly below the top few inches. However, in urban areas it is not uncommon for the contamination to extend to up to 1 or 2 feet in depth. This may be because these areas were once the location of buildings contaminated with lead-based paint. Alternatively, past practices may have resulted in a gradual buildup of the elevation of the soil grade over time. In such circumstances, the removal of the top layer of soil may leave behind contaminated soil at lower depths. In mixed residential/industrial areas, or where industry once existed, the depth of the contamination may vary widely. The desired decision on the depth of removal should also consider the depth of soil disturbance during the course of usual activities, such as gardening. If the top layer of soil will not be penetrated, then it should not be necessary to remove lead-contaminated soil at deeper levels, since there will be no exposure.

In the EPA Urban Soil Lead Abatement Project (EPA, 1993c), the depth chosen for demonstration purposes was 6 inches. In residential areas in Canada, where secondary lead smelters are the primary source of contamination, soil also was removed to a depth of 6 inches (Stokes, 1988). Guidelines for soil removal developed by the Ontario Ministry of the Environment (1987) recommended removal of the top 12 inches. The 12-inch recommendation was based in part on earlier experiences where considerable recontamination was observed 7 to 8 years after soil was removed to a 6-inch depth (Stokes, 1987). However, the reason for the recontamination was thought to be due to contamination of the replacement soil by adjacent polluted soil that had not been removed (Jones, 1987), not by contaminated soil from deeper levels.

For practical purposes, properly conducted soil removal to a depth of 6 inches should suffice in urban residential areas that are restricted to grass, shrubs, or shallow gardens. However, the

depth of soil contamination should be assessed at each site, and the decision regarding depth should be made based on the results of the soil sampling and anticipated use of the land. For most residential areas, the depth of removal will not exceed 6 inches. Records of the soil sampling and abatement that occurs should be maintained with the permanent records of the property. These records will alert property owners who are planning excavations to depths below the abatement depth, such as for water or sewer line work, to use caution to avoid contaminating the surface soil with excavated soil. The owners should be advised to sample the soil below the abatement depth to determine the lead concentrations so that procedures can be implemented to segregate this deeper soil, if contaminated, and to use it as fill for the deeper areas of the excavation when the work is completed. The maximum allowable lead concentration in replacement soil shall not exceed 200 µg/g.

Types of Equipment

Removal and replacement of soil in residential abatement situations may take place in both large and small sites. Some urban yards are very small, consisting of only a few square feet; others are larger, but are sometimes surrounded by buildings. Therefore, residential soil abatement will often require the use of extensive manual labor in addition to mechanical soil removal. When soil is removed by hand, it generally can be loaded into wheelbarrows and then offloaded to other vehicles to be transported to the disposal site. Rather than offload the wheelbarrows to dump trucks, it is usually more efficient to dump the soil directly into rolloff containers, which are then loaded onto trucks for transport to the disposal site.

Sod and Seeded Grass Maintenance

All grass sod planted as part of the abatement operation should be maintained until the end of the growing season. This maintenance should include initial frequent watering to establish the rooting of the sod and germination of the grass seed, followed by watering on a regular basis to keep the grass in a healthy state. Under some



conditions, seeding the soil may be practical, but often it is not realistic to restrict use of the soil area for the length of time needed to establish newly seeded grass.

Utilities

The owner or contractor should contact the local United Utilities Protection Service (UUPS), “Miss Dig,” or “Miss Utility” (coordinated information sources for all utilities) before beginning work to obtain exact locations of all underground utility lines. If a utilities information service does not exist in the community, the individual utilities should be contacted directly. The American Public Works Association (APWA)—(816) 472-6100, ext. 584—can also provide local phone numbers for utility line identification services (APWA, 1993).

Care should be taken to protect existing utilities during abatement to prevent any damage to existing underground and overhead utilities and to prevent any harm to human life and property. If a contractor is used, the owner should require the contractor to protect the existing utilities and to make good any damage to these utilities as quickly as possible.

Existing Fences

Care should be taken while removing existing fencing for worksite access. Such fencing should be salvaged and reinstalled (if it does not contain lead-based paint) to the satisfaction of the owner. In some cases, fencing may have to be replaced.

Protection of Adjacent Areas

When working adjacent to excluded areas, including sidewalks, fences, trees, and patios, the soil should be excavated at a 45° (1:1) slope away from the excluded areas so that contamination does not wash or roll into the excluded area.

Inclement Weather

Removal and/or replacement operations should be suspended at any time when satisfactory control of the overall operation cannot be

maintained on account of rain, wind, or other unsatisfactory weather or ground conditions. Determination of such conditions should be made by the owner or project consultant. When such conditions exist, the work area should be cleaned up immediately and work suspended. High winds can disperse contaminated soil and dust to offsite areas and runoff from rain can carry contamination outside the abatement area.

Vehicle Operation

Prior to hauling contaminated soil, a vehicle operation plan should be prepared for the equipment and hauling vehicle operators, which includes but is not limited to information on the cleaning of vehicles, securing of tarps and tailgates, ticketing of trucks, unloading of material, and handling of spilled soil.

All trucks, hauling vehicles, and containers loaded with contaminated soil should be inspected for loose material adhering to the outside of the body, chassis, or tires before departure from the worksite. Such material should be cleaned up before the vehicle leaves for the disposal site. If the truck tires made contact with the contaminated soil, they should be cleaned before the trucks leave the work area. The tires should be brushed off on a plastic sheet and the contaminated soil loaded onto the truck or returned to the lot being excavated.

Soil should be loaded directly into dump trucks or disposal containers from the worksite. If possible, there should be no “double handling” of contaminated material, such as shoveling the soil into a wheelbarrow, moving it to another location, dumping it, and shoveling it again into another container. This double handling not only wastes time but also increases the likelihood of spreading the contamination and tends to make site cleanup more difficult.

All soil removed from the worksite should be placed in dump trucks for transport to the disposal site. The trucks should have secure fitting tarps and sealed tailgates to reduce leakage as much as possible.

Loaded trucks or containers may be left onsite overnight provided they are secured to prevent access or leakage. It is not advisable to leave loaded trucks or containers onsite over the weekend. Any piece of equipment, whether a dump truck or excavation equipment, should be cleaned before it is removed from the site. Before decontamination, the equipment should be placed on 6-mil polyethylene plastic. Decontamination of equipment can be achieved by first scraping soil from all surfaces and then brushing to remove all visible soil, using water spray to prevent dispersion. The soil removed must be contained for appropriate disposal.

Final Grade

The final grades of replaced soil should be 2 inches above existing grades to allow for settling and to ensure that all drainage is away from existing structures.

Existing Vegetation

A number of precautions are needed to protect existing vegetation, such as bushes and trees. It is advisable to tie trees and shrubs to ensure stability.

Hand tools are needed to scrape soil from around roots without undermining or damaging them. Any large roots should be left undisturbed.

Tool Contamination

To minimize the cross-contamination between excavation and replacement worksites, separate tools should be provided for the excavation and replacement operations. A less expensive alternative is to employ an acceptable method for decontamination of tools, workers' clothing, and footwear. The decontamination should include physically removing as much soil as possible and then washing and rinsing the contaminated items with water.

All workers should clean their boots thoroughly before leaving the work area. The soil removed from boots should be disposed of either in a truck used for hauling contaminated soil or left in the worksite.

Soil Replacement and Cleanup

Prior to soil replacement, all walks, driveways, lanes, and streets adjacent to the excavation area should be cleaned of all contaminated soil. All loose soil should be scraped, washed, and swept from the above-mentioned surfaces. No clean soil should be placed down until all contamination has been removed from these areas.

At the completion of the workday, all loose contaminated soil within the limits of the work area should be collected. The collected soil should be transferred to a dump truck or other container for subsequent disposal.

All hard surfaces, such as sidewalks, paved driveways, and patios, should be cleaned at the completion of each workday. This daily cleanup should consist of scraping, washing, vacuuming, and wet sweeping all soil from the above-mentioned surfaces.

Cleanup procedures should begin early enough so that they can be completed before the end of the workday.

Prevention of Contamination From Underlying Soil

Regardless of the depth of removal, the possibility of contamination of the replacement soil from the underlying unexcavated soil exists, particularly from future activities. One way to minimize this occurrence is by laying a water-permeable fabric (geotextile) or similar lining at the bottom of the excavated areas to provide a visual demarcation between replaced soil and original soil (Weitzman, 1993). This liner can serve as a warning for persons digging in the future to exercise caution so that contaminated soil beneath the liner does not become mixed with the replacement soil.

Contaminated Soil Load Manifest System

In order to keep track of the contaminated soil being hauled away from the site, a load manifest system should be used to keep an exact record of the time and location of disposal. The manifest should consist of a two-part ticket, with one ticket given to the owner at the time of truck



departure and the other held by the hauler. The disposal site ticket should be presented to the site owner or inspector technician before the end of the workday on which the material was deposited in the dump site. The purpose of the manifest system is to ensure that the contaminated soil is not used as fill in other residential areas.

If the soil is considered to be hazardous waste, the EPA manifest system must be used before any transportation or disposal offsite occurs (see Chapter 10). Even if the soil is not hazardous waste, it should be manifested using an alternative system such as the one described above.

Prevention of Offsite Movement of Contaminated Soil

Contaminated soil should be removed from the site as soon as possible to prevent wind and water erosion. To prevent offsite migration and to avoid the possibility of tampering by children, piles of contaminated soil should not be left onsite overnight. Wind erosion can occur on any site. Water erosion is more likely on hilly sites or during heavy precipitation. Exposed sites can be covered with plastic and secured in place to prevent offsite migration of contaminated soil. An alternative method is to wet down the site at the end of the workday to prevent wind erosion. Similar problems will be encountered when contaminated soil is stockpiled during the day prior to disposal at the end of the day. In this case, wind and water erosion should be controlled by using a combination of plastic sheeting and silt fencing.

Site Control

The following precautions should be taken:

- ◆ To prevent the spread of contaminated soil, secure working limits should be defined for each area of excavation. Access to this area should be restricted to authorized personnel with entrances and exits controlled.
- ◆ The abatement work area should be enclosed with temporary fencing or adequate barricades to prevent unauthorized personnel or animals from entering the work area.
- ◆ Yellow caution tape should be installed across doors leading to abatement areas.
- ◆ Access routes to homes should be maintained at all times. Such routes should not require passing through the area of excavation.
- ◆ The removal of a partial grass cover in preparation for the laying of sod or grass seeding may *temporarily* increase the amount of bare contaminated soil. Onsite exposure could result from children playing on the exposed soil. Abatement workers can control this during the day by means of adequate site control. However, control is difficult, if not impossible, after the end of the workday. Lead hazard warning signs should be posted to warn residents.
- ◆ In order to minimize inconvenience to residents and neighbors and to minimize exposure, abatement of a particular site should be completed within 1 workday.

2. Soil Cultivation

Since soil lead concentration often decreases with increasing depth, soil mixing can be considered to be an abatement strategy. If the average lead concentration of the soil to be abated is below 1,500 $\mu\text{g/g}$, thorough mixing is an adequate abatement method. Pilot testing may be necessary to determine the type of mixing process needed. Rototilling may not be effective.

3. Soil Cleaning

The following soil treatment methods are being investigated for possible use on residential sites:

- ◆ Magnetic separation.
- ◆ Froth flotation.
- ◆ Washing.

Magnetic separation and froth flotation are currently under development and are not addressed in these *Guidelines*. The method that has received the most attention thus far is soil washing. Soil washing is a waterborne process for mechanically scrubbing soils to remove lead

and other contaminants (EPA, 1990b). The soil is removed from the yard but usually washed onsite. The process removes contaminants in one of two ways: by dissolving or suspending them in the wash solution (which is later treated by conventional wastewater treatment) or by concentrating them into a smaller volume of soil through simple particle size separation techniques. Soils containing coarse sand and gravel are more responsive to cleaning techniques than soils containing a large amount of clay and silt. If the washing process involves the addition of surfactants or other chemicals to separate the lead-containing particles, care must be taken to ensure that amounts remaining in the remediated soil do not interfere with reuse of the soil at the site. Most soil washing in the United States has been done at Superfund sites. Soil washing has not yet been attempted at residential sites. EPA is currently investigating the applicability of soil washing to residential soil abatement.

4. Paving

If contaminated soil is present in high-traffic areas, the soil can be covered by a high-quality concrete or asphalt. In this case, contaminated soil need not be removed before paving. Normal precautions associated with thermal expansion or contraction and traffic load should be considered. Hard surfaces are not appropriate in play areas where falls are possible from slides, jungle gyms, etc. The Consumer Product Safety Commission has developed recommendations for fall surfaces in public play areas (CPSC, 1991).

C. Exterior Dust Control

Lead in exterior dust can be a source of exposure to children because it can be tracked inside and carried on the skin, especially the hands (Bornschein, 1986). For example, in older urban areas in Cincinnati, exterior leaded dust concentrations are on average about four times higher than interior leaded dust concentrations, and exterior lead surface loadings are much higher than for interior dust (Clark, 1993).

Just as children can be directly exposed to leaded soil, they can also be exposed to exterior leaded dust. Exterior dust can also migrate by various means (children, adults, pets, or wind) to the interior of homes where there are many opportunities for exposure to children. Exterior leaded dust concentrations up to 50,000 $\mu\text{g/g}$ (equivalent to 5 percent lead in dust) have been measured in urban areas in the EPA Soil Lead Abatement Demonstration Project (EPA, 1993c).

If only an individual property is involved in the exterior dust control activity, the type of equipment that can be used will be limited by the size of the area involved and the person responsible for the area. Owners are not required to clean streets, for example. Because of the mobility of exterior dust, the length of time that the dust cleanup remains effective will be limited by the size of the abatement area and therefore may need to be repeated periodically.

Exterior dust control consists of two components:

- ◆ Controlling sources of lead-contaminated dust.
- ◆ Removing lead-contaminated dust from paved areas.

Without adequate control of the sources of lead in exterior dust, recontamination of the exterior areas will occur. Studies of a schoolyard area indicated that leaded dust concentrations equalled preabatement levels within 1 year in Winnipeg, Ontario (Stokes, 1988). Recontamination of some paved areas in Cincinnati occurred within a few days (Clark, 1991) indicating that repeated cleaning and control of the *sources* of the lead are necessary.

1. Types of Equipment

Exterior dust cleanup consists of removing as much dust and dirt as possible from all paved surfaces on the property or properties involved. Lead-contaminated dust can be found on paved surfaces such as sidewalks, patios, driveways,



parking areas, etc. For multiple adjacent properties that are being abated, cleanup of streets, alleys, or other common areas should be considered, although this is normally a municipal responsibility. Brick-paved areas present the biggest challenge in removing exterior dust because they contain numerous cracks. For individual properties, hosing off walkways and play areas periodically may reduce exterior leaded dust levels.

In order to meet this cleaning challenge, it is necessary to have available the most efficient hard-surface vacuum cleaning equipment. Many commercial contract cleaning firms located in urban areas have such equipment.

There are at least three different types of suitable paved-surface cleaning machines:

- ◆ Hand-pushed HEPA vacuum cleaners.
- ◆ Vacuum-assisted sweepers, which are similar to the traditional broom sweeper, with the added feature of a slight vacuum that assists in controlling dust and transporting material from the broom bristles to the hopper.
- ◆ Vacuum sweepers, which lift material from paved surfaces—some are equipped with curb brushes to assist in transporting the material from the edge of the cleaning area to the vacuum head and into the hopper.

EPA research has found that regenerative air machines, which depend on rapidly moving air to capture particles from the source of the pavement, frequently remove only a small fraction of the dust and thus may not be suitable for lead abatement work (Pitt, 1985).

2. Evaluation of Equipment

A number of pavement cleaning machines were tested as part of the Cincinnati Soil Lead Abatement Demonstration Project (Clark, 1993). The machines tested were the vacuum-assisted sweeper, the vacuum sweeper, and the regenerative air machine. Initial tests demonstrated that several machines operated



Figure 12.25 Paving Bare Soil May Be the Best Option for High-Traffic Areas.

above the 90-percent efficiency level. A machine performing at the 90-percent efficiency level will pick up 90-percent of the available dirt after two passes. Equipment tested involved both large machines suitable for streets and parking lots and some walk-behind, vacuum-assisted broom sweepers suitable for sidewalks and other smaller areas. Several larger machines performed at or above the 90-percent efficiency rate. Some of the smaller walk-behind sweepers did not perform at an acceptable level of efficiency.

Care must be taken when emptying the collected dust from the machines. The most appropriate method to minimize dust release is to dampen the contents of the hopper using an accessible hose. If water is to be used for dust control, it will be necessary to devise a means of containing excess water. This can be achieved by placing 6-mil polyethylene plastic on the ground where the equipment is being emptied and carefully collecting the water after the hopper has been emptied. It is also necessary to perform this operation in a secure area so that children are not exposed.



3. Removal of Heavy Accumulation

The first step in cleaning an area should be the removal of heavy accumulations of dust and debris. The heavily accumulated areas can be cleaned either by manually removing the material with scrapers, shovels, or brooms or by vacuuming the heavily accumulated areas if vacuuming proves to be adequate in removing the contamination. Just as in handling lead-contaminated soil, the heavy accumulations of exterior dust should be dampened.

4. Vacuum Cleaning

Small areas, such as sidewalks and patios that are inaccessible to larger cleaning machines, may be cleaned with an acceptable HEPA filter-equipped vacuum cleaner. Surfaces should be vacuumed continuously until no additional visible dust is being removed by further vacuuming.