



**CALIENTE UNION PACIFIC DEPOT EXTERIOR RESTORATION**

**Project Owner**

**CITY OF CALIENTE**

**CONTRACT DOCUMENTS AND SPECIFICATIONS**

## **TABLE OF CONTENTS**

<b>SECTION ONE:</b>	Advertisement for Bids
<b>SECTION TWO:</b>	Notice and Instruction for Bidders
<b>SECTION THREE:</b>	Information for Bidders
<b>SECTION FOUR:</b>	Bid Form and Supplements to be submit with Bid Contractors Qualifications Statement; List of Subcontractors Major Materials Suppliers Information; CDBG Certificates
<b>SECTION FIVE:</b>	Notice of Award, Agreement, Notice to Proceed
<b>SECTION SIX:</b>	Performance Bond and Payment Bond
<b>SECTION SEVEN:</b>	General Conditions
<b>SECTION EIGHT:</b>	Supplemental Conditions
<b>SECTION NINE:</b>	Federal Forms Completed by Awarded Contractors
<b>SECTION TEN:</b>	Change Order
<b>SECTION ELEVEN:</b>	Technical Specifications

**SECTION ONE:**  
**ADVERTISEMENT FOR BIDS**

**ADVERTISEMENT FOR BIDS PWP-LI-2022-229  
CALIENTE UNION PACIFIC DEPOT EXTERIOR  
RESTORATION**

Separate sealed Bids for CALIENTE UNION PACIFIC DEPOT EXTERIOR RESTORATION will be received by the City of Caliente, the Owner, at the office of the City of Caliente, P.O. Box 1006, if mailed by U.S. Mail, and to be delivered by Hand, UPS or Fed Ex to 100 Depot Avenue, Caliente, NV 89008 on March 17, 2022 by 5:30 pm. The Bids will then be publicly opened and read aloud only at a regularly scheduled Caliente City Council meeting on March 17, 2022 at 6:00 pm, located at 100 Depot Avenue, Caliente, NV 89008. No decision will be made at this meeting.

The Work consists of exterior restoration of the historic Caliente Union Pacific Depot more particularly described in the contract document and all other requirements as required by Contract Documents. The Contract Documents may be examined at the following locations: Bidding Documents may be viewed on the City of Caliente's Website at [cityofcaliente.com](http://cityofcaliente.com) or by calling the City of Caliente at 775-726-8341 for an in-person appointment. At the request of prospective Bidders, the Contract Documents can be sent electronically. Questions and requests for Contract Documents should be directed to Heritage Architecture & Planning, 619-239-7888 ext. 281, Carmen Pauli.

Each Bid must be submitted on the prescribed form (separate Bid package) to included Bid Form, Contractor Qualifications Statement, List of Subcontractors and List of Major Material Suppliers, also accompanied by a certified check or Bid Bond in an amount of not less than five percent (5%) of the base Bid amount. Successful Bidders will be required to furnish both a payment Bond and performance Bond in the full amount of the contract price.

The BIDDER understands the Contractor and any Sub Contractor must be registered on SAMS.Gov and provide the Duns and Cage Numbers. The Bid cannot be awarded until Contractors and Sub Contractors Duns and Cage Numbers have been provided. The Owner will not award the contract to a Bidder who, at the time of submitting a Bid, was not properly licensed under the provisions of Chapter 624 of NRS or if the Contract would exceed the limit of the Bidders license.

A Pre-Bid conference for the project will be held at 2:00 p.m. on February 23, 2022. Attendance at the Pre-Bid conference is encouraged but not required. The Pre-Bid will begin at the project site, located 100 Depot Avenue, Caliente, NV 89008.

The City of Caliente is an equal opportunity provider and employer. Bidders are to base their Bids on the Project funding being provided in whole or in part by Community Development Block Grant Program (CDBG) and the City of Caliente. The Bidder must take affirmative steps to assure that disadvantaged businesses are used when possible as sources of supplies, construction, and services. The goals for minority and female participation are 12% and 10%, respectively. Executive Order 11246, Standard Federal Equal Employment Opportunity Construction Contract Specifications, apply on this Project. Davis Bacon Wage Rates apply on this project.

The Owner reserves the right to reject any or all Bids, including, without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the work.

CITY OF CALIENTE BY: LINDA LARSON-BUTLER, DEPUTY CITY CLERK

**SECTION TWO:**

**NOTICE**

**AND INSTRUCTIONS TO BIDDERS**

## NOTICE TO BIDDERS

Separate sealed Bids for CALIENTE UNION PACIFIC DEPOT EXTERIOR RESTORATION will be received by the City of Caliente, the **Owner**, at the office of the Deputy City Clerk, P.O. Box 1006, if mailed by U.S. Mail and to be delivered by UPS or Fed Ex to 100 Depot Avenue, Caliente, NV 89008 until **5:30 P.M.**, local time, on **MARCH 17, 2022**. The Bids will then be publicly opened and read aloud only at the regularly scheduled Caliente City Council meeting on **MARCH 17, 2022 AT 6:00 PM** located at the Caliente Union Pacific Depot, 100 Depot Avenue, Caliente, NV 89008. No decision will be made at this meeting.

The Work consists of exterior restoration of the historic Caliente Union Pacific Depot, more particularly described in the contract document and all other requirements as required by Contract Documents. The Contract Documents may be examined at the following locations: Bidding Documents may be viewed on the City of Caliente's Website at [cityofcaliente.com](http://cityofcaliente.com) or by calling the City of Caliente at 775-726-3841 for an in-person appointment. At the request of prospective Bidders, the Contract Documents can be sent electronically. Questions and requests for Contract Documents should be directed Heritage Architecture & Planning, 619-239-7888 ext. 281, Carmen Pauli.

Each Bid must be submitted on the prescribed form (separate Bid package) to include Bid Form, Contractor Qualifications Statement, List of Subcontractors and List of Major Material Suppliers, CDBG Certificates, also accompanied by a certified check or Bid Bond in an amount of not less than five percent (5%) of the base Bid amount. Successful Bidders will be required to furnish both a payment Bond and performance Bond in the full amount of the contract price.

All bids must be made on the blank form of proposal attached hereto. All bids must be completed with all blanks filled in, and signed by authorized representative of the Bidder. All bidders must complete the forms in blue ink or be typewritten. Bids not submitted on the required form, and or not fully completed or not signed by authorized representative of the bidder shall be deemed nonresponsive and shall not be considered, subject to the right of the County to waive minor technical defects that do not give the bidder an advantage over other bidders, at its sole discretion.

If the contract bid exceeds \$10,000, a bidder must comply with the bid. "Equal Opportunity Clause," will be a part of all construction contracts exceeding \$10,000.

A bidder may withdraw any proposal submitted prior to the hour set for the closing of the bids provided the request is signed in a manner identical with the proposal being withdrawn.

The undersigned BIDDER understands that this contract must be concurred in by the COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM (HUD).

The BIDDER understands that this contract is subject to the Certifications and Supplemental General Conditions included with the bid packet.

The BIDDER understands the Contractor and any Sub Contractor must be registered on SAMS.Gov. And provide the Duns and Cage Number. Bid cannot be awarded until Contractors and Sub Contractors Duns and Cage Numbers have been provided.

The **Owner** reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced or conditional Bids. Owner also reserves the right to waive all minor informalities not involving price, time or changes in the work.

CITY OF CALIENTE, DEPUTY CITY CLERK  
By: LINDA LARSON-BUTLER

## **Instructions to Bidders**

### **ARTICLE 1 - Defined Terms**

**1.01.1** Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplemental Conditions. Additional terms used in these Instructions to Bidders have the meaning indicated below which are applicable to both singular and plural thereof:

A. *Bidder* --The individual or entity who submits a Bid directly to **OWNER**.

B. *Issuing Office* --The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered. The Issuing Office is **CITY OF CALIENTE, 100 DEPOT AVENUE OR P.O. BOX 1006, CALIENTE, NV 89008**

C. *Successful Bidder* --The lowest responsible Bidder submitting a responsive Bid to whom **OWNER** (on basis of **OWNER**'s evaluation as hereinafter provided) makes an award.

### **ARTICLE 2 - Copies of Bidding Documents**

**2.01** A complete digital (PDF) copy of the Bidding Documents may be obtained by contacting the Heritage Architecture & Planning, 619-239-7888 ext. 281, Carmen Pauli..

**2.02** Complete sets of Bidding Documents shall be used in preparing Bids; **OWNER does not** assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

**2.03** **OWNER** in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

### **ARTICLE 3 – Qualifications of Bidders**

**3.01** Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

### **ARTICLE 4 – Examination of Bidding Documents, Other Related Data and Site**

#### **4.01** Additional Owner Provided Information

It is the responsibility of each Bidder before submitting a Bid to:

- A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda; Become familiar with and satisfy Bidder as to all Federal, State, and local Laws and Regulations that may affect cost, progress, and performance of the Work;



- B. Become aware of the general nature of the work to be performed as indicated in the Bidding Documents; Promptly give OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by OWNER is acceptable to Bidder; and
- C. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- D. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given OWNER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by OWNER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

#### **ARTICLE 5 - Interpretations and Addenda**

- 5.01** All questions about the meaning or intent of the Bidding Documents are to be submitted to OWNER in writing. Interpretations or clarifications considered necessary by OWNER in response to such questions will be issued by Addenda delivered to all parties recorded by OWNER as having received the Bidding Documents. Questions received less than five days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 5.02** Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents as deemed advisable by the **OWNER**.
- 5.03** Addenda will be provided to each bidder obtaining a set of Bidding Documents.

#### **ARTICLE 6 - Bid Security**

- 6.01** A Bid must be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of Bidder's maximum Bid price and in the form of a certified check or bank money order or a Bid bond issued by a surety.
- 6.02** The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- 6.03** Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

#### **ARTICLE 7 - Contract Times**

- 7.01** The number of days within which or the dates by which, the Work is to be Substantially Completed and ready for final payment, are set forth in the Agreement.

## **ARTICLE 8 - Liquidated Damages**

**8.01** Provisions for liquidated damages are set forth in the Agreement.

## **ARTICLE 9 - Substitute and “Or-Equal” Items**

**9.01** The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or “or-equal” materials and equipment as described in the General Conditions of the Agreement, or those substitute materials and equipment approved by **OWNER** and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or “or-equal” item. Request for Owner’s clarification of materials and equipment considered “or-equal” prior to the Effective Date of Agreement must be received by the **OWNER** at least 10 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Owner as a substitute unless written request for approval has been submitted by Bidder and has been received by Owner at least 15 days prior to the date for receipt of Bids. Each such request shall conform to the requirements of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Owner’s decision of approval or disapproval of a proposed item will be final. If Owner approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

**9.02** All prices that Bidder sets forth in its Bid shall be based on the presumption that the **CONTRACTOR** will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

**9.03** If an award is made, **CONTRACTOR** shall be allowed to submit proposed substitutes and “or-equals” in accordance with the General Conditions.

## **ARTICLE 10 – Preparation of Bid**

**10.01** The Bid Form is included with the Bidding Documents. Additional copies may be obtained from owner.

**10.02** All blanks on the Bid Form shall be completed in ink and the Bid signed in BLUE ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form.

**10.03** A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be provided on the Bid Form.

**10.04** A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title Must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be provided on the Bid Form.

**10.05** A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

- 10.06** A Bid by an individual shall show the Bidder's name and business address.
- 10.07** A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid Form. The official address of the joint venture must be provided on the Bid Form.
- 10.08** All names shall be printed in ink below the signatures.
- 10.09** The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid Form.
- 10.10** The postal and email addresses and telephone number for communications regarding the Bid shall be shown.
- 10.11** Forms for Subcontractors. The lists required must include a description of the labor or portion of the work which each first-tier subcontractor name in the list will be provided. The Prime contract must list its self for any work not listed on this form.
- 10.12** A contractor whose bid is accepted shall not substitute a subcontractor for any subcontractor who is named in the bid unless the County's authorized representative approves the substitution and the substitution will not increase

#### **ARTICLE 11 – Submittal of Bid**

- 11.01** With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form and supplements. The unbound copy of the Bid Form is to be completed and submitted with all of the attachments outlined in the Bid Form.
- 11.02** A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title, the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED". When using the mail or other delivery system, the Bidder is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the Advertisement for Bid. Bids delivered via facsimile will not be accepted and will be returned to the Bidder. A mailed Bid shall be addressed to **OWNER** at the address listed in Form.
- 11.03** Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened

#### **ARTICLE 12 – Modification and Withdrawal of Bid**

- 12.01** A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

**12.02** If within 24 hours after Bids are opened any Bidder files a duly signed written notice with **OWNER** and promptly thereafter demonstrates to the reasonable satisfaction of **OWNER** that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid or negotiated, that Bidder will be disqualified from further bidding on the Work. This provision to withdraw a Bid without forfeiting the Bid security does not apply to Bidder's error in judgment in preparing the Bid.

### **ARTICLE 13 - Opening of Bids**

**13.01** Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternatives, if any, will be made available to Bidders after the opening of Bids.

### **ARTICLE 14 - Bids to Remain Subject to Acceptance**

**14.01** All Bids will remain subject to acceptance for the period of time stated in the Bid form, but **OWNER** may, at its sole discretion, release any Bid and return the Bid security prior to the end of this period.

### **ARTICLE 15 – Evaluation of Bids, Award of Contract and Protest Procedures**

**15.01** **OWNER** reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. **OWNER** further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsive. **OWNER** also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

**15.02** More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

**15.03** In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

**15.04** In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

**15.05** **OWNER** may conduct such investigations as **OWNER** deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents. If the Contract is to be awarded, **OWNER** will award the Contract to the responsible Bidder whose Bid, conforming with all the material terms and conditions of the Instructions to Bidders, is lowest, price and other factors considered.

**15.06** Bid Protest Procedure – Any protest of the proposed contract award shall be submitted in writing to the **OWNER** on or before 5 p.m. of the fifth working day following the day upon which the **BIDS ARE OPENED**. The protest must include a bond, or other form of security acceptable to the **OWNER**, in an amount equal to 10% of the bidder’s bid price (including any alternates being recommended for award) or \$150,000, whichever is less, the name, address, and telephone number of the person representing the protesting party. In addition, The party filing the protest must have submitted a bid for the Project.

- (a) Subcontractor of a party filing a bid for the Project may not submit a bid protest.
- (b) The protest must contain a complete statement of the basis for the protest, and refer to the specific portion of the Contract Documents or the specific statute that forms the basis for the protest.
- (c) The party filing the protest must concurrently transmit a copy of the protest to the proposed awardee.

Any Bidder’s failure to fully comply with these procedures shall constitute a waiver of any right to further pursue a bid protest under NRS 338.142 or filing of any other legal proceedings.

The **OWNER** shall review all timely protests prior to the award of contract. The **OWNER** shall not be required to hold an administrative hearing to consider any protests, but may do so at its option. At the time of the **Owner’s** consideration of the project award, the **OWNER** shall also consider the merits of any timely protests. The **OWNER** may either reject the protest and award the project to the lowest responsible bidder or accept the protest and award the project to the next lowest responsible bidder. Nothing in this section shall be construed as a waiver of the **Owner’s** right to reject all bids.

**15.07** Concurrence by the Funding Agency in the Award of the Contract is required before the Contract is effective.

## **ARTICLE 16 - Contract Security and Insurance**

**16.01** The General Conditions, as may be modified by the Supplementary Conditions, sets forth **Owner’s** requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to **OWNER**, it shall be accompanied by such bonds and insurance documentation.

## **ARTICLE 17 – Signing of Agreement**

**17.01** When **OWNER** issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to **OWNER**. Within 30 days thereafter, **OWNER** shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents of the General Conditions.

**17.02** This Contract is expected to be funded in part with Community Development Block Grant Funds (HUD) Refer to the Supplementary Conditions for Federal Requirements.

**17.03** Concurrence by the Funding Agency in the Award of the Contract is required before the Contract is effective.

#### **ARTICLE 18 – D-U-N-S Numbers**

**18.01** All bidders must obtain a D-U-N-S number in prior to award of bid for the project. This number is a unique nine-digit identification number for each physical location of your business. D-U-N-S Number assignment is free for all businesses required to register with the federal government for contracts or grants. Registration is done through the US Government’s System for Award Management (SAM). Please visit [sam.gov](http://sam.gov) to register. In addition, the following websites will provide additional assistance in obtaining your D-U-N-S number. -  
<http://www.sba.gov/content/getting-d-u-n-s-number> -  
<http://www.grantsoffice.com/eFUNDED/tabid/867/EntryID/139/SAM-Registration-easier-said-than-Done.aspx>

# **SECTION THREE**

## **INFORMATION FOR BIDDERS**

The Owner may waive any informality of minor defects or reject any and all Bids. Any Bid may be withdrawn prior to the above scheduled time for the opening of Bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be considered. No Bidder may withdraw a Bid within thirty (30) days after the actual date of the opening thereof. Should there be reasons why the Contract cannot be awarded within the specified period; the time may be extended by mutual agreement between the Owner and the Bidder.

Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule by examination and of the review of the Specifications including Addenda. After Bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

The Contract Documents contain the provisions required for the construction of the project. Information obtained from an officer, agent, or employee of the Owner or any other person shall not affect the risks or obligations assumed by the Contractor or relieve the Contractor from fulfilling any of the conditions of the Contract.

The party to whom the Contract is awarded will be required to execute the Agreement within fifteen (15) calendar days from the date when Notice of Award is delivered to the Bidder. The Notice of Award shall be accompanied by the necessary Agreement, Payment Bond, Performance Bond and Certificate of Insurance. In case of failure of the Bidder to execute and return the Agreement, Payment Bond, Performance Bond, the Owner may consider the Bidder in default.

The Owner, within thirty (30) days of receipt of the Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the Owner not execute the Agreement within such period, the Bidder may, by Written Notice, withdraw the signed Agreement. Such Notice of Withdrawal shall be effective upon receipt of the Notice by the Owner.

The Notice to Proceed shall be issued within twenty-one (21) days of the execution of the Agreement by the Owner. Should there be reasons why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual Agreement between the Owner and Contractor. If the Notice to Proceed has not been issued within the twenty-one (21) day period or within the period mutually agreed upon, the Contractor may terminate the Agreement without further liability on the part of either party.

The Owner may make such investigations as deemed necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request.

The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the work contemplated therein. A conditional or qualified Bid will not be accepted.

Award will be made to the lowest responsive, responsible Bidder. The lowest responsive, responsible Bidder will be determined by: (1) lowest overall cost to the Owner, (2) evaluation of Bidder's experience and, (3) a Bidder's proposal that complies with all the requirements prescribed in this document. If an award is made it will be based upon the Base Bid and any Alternates selected.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout.

**FEDERAL DUNS NUMBER AND SAM REGISTRATION INFORMATION**

**ALL CONTRACTORS, SUBCONTRACTORS MUST BE IN SAM.GOV AND DEBARRED PRIOR TO IMPLEMENTING AWARD OF BID. THE REGISTRATION IN SAM.GOV MUST BE UPDATED ANNUALLY.**



## **CONTRACTOR'S LIABILITY INSURANCE**

General Conditions shall provide coverage for not less than the following amounts or greater where required by laws and regulations:

General Liability which shall include completed operations and product liability coverage and eliminate the exclusion with respect to property under the care, custody, and control of Contractor:

- a. General Aggregate \$2,000,000
- b. Products-Completed Operations Aggregate \$1,000,000
- c. Personal and Advertising Injury \$1,000,000
- d. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
- e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverage where applicable.
- f. Excess or Umbrella Liability:
  - (1) General Aggregate \$1,000,000
  - (2) Each Occurrence \$1,000,000 Automobile Liability
- a. Bodily Injury:
  - (1) Each Person \$1,000,000
  - (2) Each Accident \$1,000,000
- b. Property Damage:
  - (1) Each Accident \$1,000,000
- c. Combined Single Limit of \$1,000,000

The Contractual Liability coverage shall provide coverage for not less than the following amounts:

- a. Bodily Injury:
  - (1) Each Accident \$1,000,000
  - (2) Annual Aggregate \$1,000,000
- b. Property Damage:
  - (1) Each Accident \$1,000,000
  - (1) Annual Aggregate \$1,000,000

### **Nevada State Industrial Insurance**

Contractor shall purchase and maintain for the period of the Contract, full Nevada State Industrial Insurance coverage for all persons whom it employs or may employ in performing or furnishing any of the work under the Contract. This insurance shall be in strict accordance with the requirements of the most current and applicable Nevada State Industrial Insurance laws, including any amended laws taking affect during the term of the Contract. Before beginning work under the Contract, Contractor shall furnish Owner a Certificate of Compliance with the Nevada State Industrial Insurance Act as required by NRS Chapter 616.

## **SECTION FOUR:**

# **BID FORM AND SUPPLEMENTS TO BE SUBMITTED WITH BID**

BID FORM  
BID SCHEDULE  
BID BOND

EXPERIENCE QUALIFICATIONS – EXHIBIT 3

DESIGNATION OF SUBCONTRACTORS – EXHIBIT 4

ONE PERCENT LIST

AFFIDAVIT OF NON COLLUSION EXHIBIT 5

CERTIFICATION OF BIDDER REGARDING PENALTIES FOR NON-COMPLIANCE WITH  
NEVADA PREVAILING WAGE REQUIREMENTS EXHIBIT 6

CERTIFICATION OF BIDDER/CONTRACTOR REGARDING EQUAL EMPLOYMENT  
OPPORTUNITY

CERTIFICATION OF PROPOSED SUBCONTRACTOR REGARDING EQUAL EMPLOYMENT  
OPPORTUNITY

CERTIFICATION OF PROPOSED CONTRACTOR REGARDING SECTION 3 AND SEGREGATED  
FACILITIES

CERTIFICATION OF PROPOSED SUBCONTRACTOR REGARDING SECTION 3 AND  
SEGREGATED FACILITIES

LOBBY ASSURANCES – BIDDER MAIN CONTRACTOR

LOBBY ASSURANCES SUBCONTRACTOR

CERTIFICATION OF CONTRACTOR OR SUBCONTRACTOR REGARDING DEBARMENT,  
SUSPENSION, INELIGIBILITY OR VOLUNTARY EXCLUSION

# Bid Form

## Contract Identification:

**CALIENTE UNION PACIFIC DEOPT RESTORATION**

### ***EXHIBIT 1- BID FORM***

**THIS FORM, FULLY COMPLETED, MUST BE USED FOR ALL BIDS**

#### **ARTICLE 1 - Bid Recipient**

*1.01 This Bid is submitted To:*

**City of Caliente, Deputy Clerks Office  
100 Depot Avenue  
P.O. BOX 1006  
Caliente, NV 89008**

*1.02* The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with **OWNER** in the form included in the Bidding Documents including Technical Specifications and also in accordance with the “Standards Specifications and Details for Public Works Construction” Most current Revised Editions, and amendments (orange book) to perform and furnish all labor, materials, tools, equipment, apparatus, facilities, transportation, incidental items and permits (except as otherwise stated in the Contract Documents) for the construction of the project as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

#### **ARTICLE 2 – Bidder’s Acknowledgments**

*2.01* Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of **OWNER**.

#### **ARTICLE 3 – Bidder’s Representations**

*3.01* In submitting this Bid, Bidder represents that: A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents and hereby acknowledges receipt of the following Addenda.

Addendum No. Addendum Date

\_\_\_\_\_  
\_\_\_\_\_

Bidder is familiar with and is satisfied as to all Federal, State and local Laws and Regulations that may affect cost, progress and performance of the Work.

Bidder has carefully studied that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

Bidder is aware of the general nature of the Work to be performed by Owner and others at the relates to the Work as indicated in the Bidding Documents.

Bidder has given OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by OWNER is acceptable to Bidder.

The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

Bidder hereby agrees to commence work under this Contract on or before a date to be specified in the Notice to proceed and to fully complete the project within one hundred eighty (180) consecutive calendar days thereafter. Bidder further agrees to pay as liquidated damages, the sum of **\$200.00** for each consecutive calendar day thereafter as provided in the General Conditions.

Bidder agrees to perform all the work described in the Contract Documents for the following unit prices and/or lump sum as indicated.

The undersigned Bidder understands that this bid must be concurred in by the Community Development Block Grant Program.

The Bidder will submit a delivery schedule and execute a contract within 15 days after notification of contract award.

It is understood that time is of the essence in the bid and the bidder agrees to commence within 10 days after the Notice to Proceed and complete work within **180** calendars days.

#### **ARTICLE 4 – Bidder's Certification**

**4.01** Bidder further represents that;

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding;
- D. The undersigned Bidder agrees to abide by the requirement of Executive Order No. 11246, as amended; and
- E. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract.
  - 1. “Corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
  - 2. “fraudulent practice” means an intentional misrepresentation of facts made to (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
  - 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

## **ARTICLE 5.**

Bidder acknowledges that: (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor’s overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents and Notice of Award.

## **ARTICLE 6 – Time of Completion**

**6.01** Bidder agrees that the Work will be substantially complete and will be completed and ready for final Payment in accordance with the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

**6.02** Bidder accepts the provisions of the Agreement as to liquidated damages.

## **ARTICLE 7 – Attachments to This Bid**

**7.01** The following documents are attached to and made a condition of this Bid:

- A. CONTRACTOR AND SUBCONTRACTOR CERTIFICATION REGARDING EQUAL OPPORTUNITY
- B. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY OR VOLUNTARY EXCLUSION

- C. CONTRACTOR AND SUBCONTRACTOR LOBBY ASSURANCES
- D. CERTIFICATION REGARDING SECTION 3 AND SEGREGATED FACILITY (CONTRACTOR AND SUBCONTRACTOR)
- E. REQUIRED BID SECURITY
- F. EXPERIENCE QUALIFICATIONS
- G. DESIGNATION OF SUBCONTRACTORS
- H. ONE PERCENT LIST
- I. AFFIDAVIT OF NON COLLUSION
- J. CERTIFICATION OF BIDDER REGARDING PENALTIES FOR NON-COMPLIANCE WITH NEVADA PREVAILING WAGE REQUIREMENTS

**ARTICLE 8 – Defined Terms**

**8.01** The terms used in this Bid with initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

**ARTICLE 9 – Bid Submittal**

**9.01** This Bid is submitted by: \_\_\_\_\_  
 Bidder’s Business address: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Facsimile: \_\_\_\_\_  
 Submitted on \_\_\_\_\_, 20\_\_\_\_.  
 State Contractor License No. \_\_\_\_\_  
 Employer’s Tax ID No. \_\_\_\_\_  
 Bidder’s D-U-N-S No. \_\_\_\_\_ (See Section 00300 for D-U-N-S and SAM Registration)  
 If Bidder is:

**An Individual**

Name (typed or printed): \_\_\_\_\_  
 By: \_\_\_\_\_  
 (Individual’s signature)  
 Doing business as: \_\_\_\_\_

**A Partnership**

Partnership Name: \_\_\_\_\_ (SEAL)  
 By: \_\_\_\_\_  
 (Signature of general partner – attach evidence of authority to sign)  
 Name (typed or printed): \_\_\_\_\_

**A Corporation**

Corporation Name: \_\_\_\_\_

\_\_\_\_\_  
State of Incorporation: \_\_\_\_\_ (SEAL)  
Type (General Business, Professional, Service, Limited Liability): \_\_\_\_\_  
By: \_\_\_\_\_  
(Signature – attach evidence of authority to sign)  
Name (typed or printed): \_\_\_\_\_  
Title: \_\_\_\_\_  
Attest: \_\_\_\_\_  
(Signature of Corporate Secretary)  
Date of Qualification to do business in Nevada is \_\_\_\_\\_\_\_\_\\_\_\_\_.

**A Joint Venture**

Name of Joint Venturer: \_\_\_\_\_  
First Joint Venturer Name: \_\_\_\_\_  
\_\_\_\_\_  
(SEAL)

By: \_\_\_\_\_  
(Signature of first joint venture partner – attach evidence of authority to sign)  
Name (typed or printed): \_\_\_\_\_  
Title: \_\_\_\_\_  
Second Joint Venturer Name: \_\_\_\_\_  
\_\_\_\_\_  
(SEAL)

By: \_\_\_\_\_  
(Signature of second joint venture partner – attach evidence of authority to sign)  
Name (typed or printed): \_\_\_\_\_  
Title: \_\_\_\_\_

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

## BASE BID SCHEDULE

Item No.	Description	Unit	Bid Unit Price	Bid Amount
1	Exterior of Caliente Depot excluding City Offices	1	\$	\$
2	Exterior of City Offices	1	\$	\$
3		1	\$	\$
4		1	\$	\$
	Total Base Bid	1	\$	\$

## ADDITIVE ALTERNATES

Item No.	Description	Unit	Bid Unit Price	Bid Amount
A1			\$	\$
A2			\$	\$

Bidder acknowledges that:

- a. Bid Award will be based upon the Base Bid only. Additive alternates, if any, will be selected after award of the Contract for the prices stated.
- b. Each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
- c. Each Bid Price includes all sales taxes



**EXHIBIT 2 - BID**  
**(To Accompany Bid Form)**

KNOW ALL MEN BY THESE PRESENTS, THAT WE, THE UNDERSIGNED,

\_\_\_\_\_, as PRINCIPAL,  
\_\_\_\_\_, as SURETY,

are hereby held and firmly bound unto the CITY OF CALIENTE, NEVADA, as OWNER

\_\_\_\_\_ in the penal sum of at  
\_\_\_\_\_ least **FIVE (5% ) percent**  
and \_\_\_\_\_ of the total amount of bid  
equal to:

(Written Form)

\_\_\_\_\_  
(Numbers) \$ \_\_\_\_\_ for the payment of which, well and truly to be made,  
we hereby jointly and severally bind ourselves, our heirs, executors, administrators,  
successors and assigns.

The condition of the above obligation is such that whereas the Principal is herewith  
submitting to the CITY OF CALIENTE, NEVADA, a certain Bid for the:

**CALIENTE UNION PACIFIC DEPOT RESTORATION**

NOW, THEREFORE,

- (a) If the Principal shall not withdraw said Bid within thirty (30) days after the opening of the same, or
- (b) If said Bid shall be rejected, or in the alternate,
- (c) If said Bid shall be accepted and the Principal shall within **Fifteen (15) calendar days** after receipt of Notice of Award, execute and deliver a contract in the form of Contract specified in the Contract Documents (properly completed in accordance with said Bid) and shall furnish a bond with good and sufficient surety or sureties for his faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials

in connection therewith, then this obligation shall be void, otherwise the same shall remain in force and effect and the Principal and Surety will pay unto the Owner the penal sum hereof; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such Bid; and said Surety does not hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto Affixed and these presents to be signed by their proper officers this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_ ;

PRINCIPAL:

SURETY: \_\_\_\_\_

BY:

(SEAL)

\_\_\_\_\_

\_\_\_\_\_

**EXHIBIT 3- EXPERIENCE QUALIFICATIONS  
(To Accompany Bid Form)**

The Bidder has been engaged in the contracting business, under the present business name for 5 years.

The Bidder, as a contractor, has never failed to satisfactorily complete a contract awarded to contractor except as follows:

The firm in its current organization shall have successfully completed minimum of five building restoration or rehabilitation projects in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* within the last ten years. Such experience must be demonstrated by providing the following information for a minimum of five projects. Additional supplemental information may be include as an attachment if additional space is required.

<b>YEAR</b>	<b>CONTRACT AMOUNT</b>	<b>DESCRIPTION OF WORK</b>	<b>LOCATION &amp; FOR WHOM PERFORMED</b>	<b>CONTACT NAME</b>	<b>PHONE #</b>

The following is a list of plant and equipment owned by the Bidder, which is definitely available for use on the proposed work as required, Attach additional sheets if required:

SIGNED: \_\_\_\_\_

DATE: \_\_\_\_\_

**EXHIBIT 4- DESIGNATION OF SUBCONTRACTORS**

**FIVE PERCENT LIST  
NRS 338.141(1) (b)  
(To Accompany Bid)**

State law requires that the prime contractor on this project submit a "5% List" with his or her bid. The 5% List must include the name of the prime contractor and the name of each first tier subcontractor who will provide labor or a portion of the work for which the prime contractor and (if applicable) the first tier subcontractor will be paid an amount exceeding 5 percent of the prime contractor's total bid.

A PRIME CONTRACTOR BIDDING ON A PUBLIC WORK MUST INCLUDE HIS OR HER NAME ON THE 5% LIST!

*IMPORTANT: A BID WITHOUT A TIMELY, COMPLETE AND CORRECT 5% LIST THAT COMPLIES WITH NRS 338.141 WILL BE AUTOMATICALLY DEEMED NOT RESPONSIVE!*

The 5% List must also contain a description of the labor or portion of the work which the prime contractor will perform and which each first-tier subcontract will provide to the prime contractor. In order to help you complete the 5% List, the County is providing you with this form.

*IMPORTANT: THE PRIME CONTRACTOR MUST BE INCLUDED ON THIS LIST OR THE BID WILL BE REJECTED!*

*IMPORTANT: IN ACCORDANCE WITH THE ORANGE BOOK, THE PRIME*

Name of Prime Contractor/First Tier Subcontractor(s)	Contractor's License Number	Description of Labor or Work	Percentage of Work Done

*CONTRACTOR MUST PERFORM AT LEAST 50% OF THE WORK!*

*(Use additional sheets if necessary)*

**ONE PERCENT LIST  
NRS 338.141(1) (b) (2)  
(To Accompany Bid)**

State law requires that if a prime contractor's bid is one of the three lowest bids, within 2 hours after bid opening the prime contractor must submit a "1% List" if the prime contractor is employing a first tier subcontractor who will provide labor or a portion of the work who will not be paid an amount exceeding \$250,000.

**IMPORTANT: A BID WITHOUT A TIMELY, COMPLETE AND CORRECT 1% LIST THAT COMPLIES WITH NRS 338.141 WILL BE AUTOMATICALLY DEEMED NOT RESPONSIVE!**

The 1% List must contain the name and contractor's license number of each first tier subcontractor who will provide labor or a portion of the work for which the first tier subcontractor will be paid 1 percent of the prime contractor's total bid or \$50,000, whichever is greater.

A prime contractor must include his or her name on the 1% List, together with:

- (1) a description of the labor or portion of the work that the prime contractor will perform; or
- (2) a statement that the prime contractor will perform all work other than that being performed by a subcontractor listed on the 5% List or the 1% List.

The 1% List must contain a description of the labor or portion of the work which each first tier subcontract will provide to the prime contractor. In order to help you complete the 1% List, the County is providing you with this form.

**IMPORTANT: THE PRIME CONTRACTOR MUST BE INCLUDED ON THIS LIST!**

**IMPORTANT: IN ACCORDANCE WITH THE ORANGE BOOK, THE PRIME CONTRACTOR MUST PERFORM AT LEAST 50% OF THE WORK!**

Name of Prime Contractor/First Tier Subcontractor(s)	Contractor's License Number	Description of Labor or Work	Percentage of Work Done

*(Use additional sheets if necessary)*

**EXHIBIT 5 - AFFIDAVIT OF NON-COLLUSION**

STATE OF \_\_\_\_\_ )SS.  
COUNTY OF \_\_\_\_\_

\_\_\_\_\_ (Name of party signing this affidavit and the

Proposal Form) \_\_\_\_\_ (Title), being duly sworn to depose and say:

That \_\_\_\_\_ (Name of person, firm, association, or corporation) has not, either directly or indirectly, entered into agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this contract.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

(SEAL)

**CERTIFICATION OF BIDDER REGARDING PENALTIES FOR NON-COMPLIANCE WITH NEVADA PREVAILING WAGE REQUIREMENTS**

The undersigned bidder, proposed contractor or subcontractor certifies that:

1. This contract is for a public work project as set forth in Nevada Revised Statutes Chapter 338.
2. A contractor engaged on public works shall forfeit, as a penalty to the public body in behalf of which the contract has been made and awarded to the contractor, not less than \$20 nor more than \$50 for each calendar day or portion thereof that each workman employed on the public work:
  - (a) Is paid less than the designated rate for any work done under the contract, by the contractor or any subcontractor under him.
  - (b) Is not reported to the labor commissioner and the public body awarding the contract as required pursuant to NRS 338.070.
3. If a penalty is imposed pursuant to this section, the costs of the proceeding, including investigative costs and attorney's fees, may be recovered by the labor commissioner.

Name of Bidder

Name and Title of Authorized Representative \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_

**COMMUNITY DEVELOPMENT BLOCK GRANT  
CERTIFICATION OF BIDDER/CONTRACTOR REGARDING  
EQUAL EMPLOYMENT OPPORTUNITY**

**INSTRUCTIONS**

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after the bid opening. No contract shall be awarded unless such report is submitted.

**CERTIFICATION**

“The Bidder (Contractor) shall complete the following statement by checking the appropriate boxes.

The Bidder (Contractor) has  has not  participated in a previous contract or subcontract subject to the equal opportunity clause prescribed by Executive Order 10925, or Executive Order 11114, or Executive Order 11246.

The Bidder (Contractor) has  has not  submitted all compliance reports in connection with any such contract due under the applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed subcontractors will be obtained prior to award of subcontracts.

If the Bidder (Contractor) has participated in a previous contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Bidder (Proposer) shall submit a compliance report on Standard Form 100, 'Employee Information Report EEO-1' prior to the award of contract.” See [www.eeoc.gov](http://www.eeoc.gov) for more information.

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Name & Title of Bidder/Contractor (Please Type)

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Signature Date



NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM  
CERTIFICATION OF PROPOSED SUBCONTRACTOR REGARDING  
EQUAL EMPLOYMENT OPPORTUNITY

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after the bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION

“The Subcontractor shall complete the following statement by checking the appropriate boxes. The Subcontractor has  has not  participated in a previous contract or subcontract subject to the equal opportunity clause prescribed by Executive Order 10925, or Executive Order 11114, or Executive Order 11246.

The Subcontractor has  has not  submitted all compliance reports in connection with any such contract due under the applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed subcontractors will be obtained prior to award of subcontracts.

If the Subcontractor has participated in a previous contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Subcontractor shall submit a compliance report on Standard Form 100, 'Employee Information Report EEO-1' prior to the award of contract.” See [www.eeoc.gov](http://www.eeoc.gov) for more details.

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Name & Address of Subcontractor (Please Type)

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Signature Date

**NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM  
LOBBYING ASSURANCES – BIDDER/MAIN CONTRACTOR**

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub awards at the all tiers (including subcontracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

Signature \_\_\_\_\_

Bidder/Main Contractor: Authorized Official Date

**NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM  
LOBBYING ASSURANCES - SUBCONTRACTOR**

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub awards at the all tiers (including subcontracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

Signature \_\_\_\_\_

Subcontractor: Authorized Official Date

**NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM  
CERTIFICATION OF CONTRACTOR OR SUBCONTRACTOR REGARDING  
DEBARMENT, SUSPENSION, INELIGIBILITY OR  
VOLUNTARY EXCLUSION**

The undersigned contractor or subcontractor certifies, to the best of his knowledge and belief, that:

1. Neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this contract by any Federal department, agency, or program.
  
2. Where either the contractor or subcontractor is unable to certify to any of the above statements, the contractor or subcontractor shall attach an explanation as to why a certification cannot be submitted.

\_\_\_\_\_  
Name of Contractor or Subcontractor

\_\_\_\_\_  
Name and Title of Authorized Representative

\_\_\_\_\_  
Signature Date

**COMMUNITY DEVELOPMENT BLOCK GRANT  
CERTIFICATION OF PROPOSED CONTRACTOR REGARDING SECTION 3 AND  
SEGREGATED FACILITIES**

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Name of Contractor Project Name and Number

The undersigned hereby certifies that:

a) Section 3 provisions are included in the contract:

b) A written Section 3 Clause was prepared and submitted as part of the bid proceedings (If the project exceeds \$200,000);

c) No segregated facilities will be maintained.

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Print or type Name & Title of Person Signing

---

Signature Date

Directions: This certification is to be completed by the contractor and submitted with the bid document. Subparagraph c) does not preclude contractors from providing separate lavatories or changing facilities for men and women.

**COMMUNITY DEVELOPMENT BLOCK GRANT  
CERTIFICATION OF PROPOSED SUBCONTRACTOR REGARDING SECTION 3 AND  
SEGREGATED FACILITIES**

---

Name of Subcontractor Project Name and Number

The undersigned hereby certifies that:

- a) Section 3 provisions are included in the contract:
- b) A written Section 3 Clause was prepared and submitted as part of the bid proceedings (If the project exceeds \$200,000)
- c) No segregated facilities will be maintained.

---

Print or type Name & Title of Person Signing

**SECTION FIVE**  
**NOTICE OF AWARD**  
**AGREEMENT**

**NOTICE OF AWARD**

TO

PROJECT DESCRIPTION: **CALIENTE UNION PACIFIC DEPOT RESTORATION**

The Owner has considered the Bid submitted by you for the above-referenced work in response to its Advertisement for Bids and Information for Bidders.

You are hereby notified that your Bid has been accepted for the Project in the amount of

**Total Base Bid: \$**

You are required by the Information for Bidders to execute the Agreement within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said bonds within fifteen (15) days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid as abandoned. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this    day of \_\_\_\_\_, 20.

OWNER:

CITY OF CALIENTE

BY \_\_\_\_\_  
STEVE ROWE, Mayor

**ACCEPTANCE OF NOTICE**

Receipt of the above Notice of Award is hereby acknowledged by:

\_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_, 20

By: \_\_\_\_\_

Title: \_\_\_\_\_



## AGREEMENT

THIS AGREEMENT, made this \_\_\_\_ day of \_\_\_\_\_, 2022, by and between the City of Caliente hereinafter called the “Owner” and \_\_\_\_\_ doing business as (an individual) or (a partnership) or (a corporation), hereinafter called the “Contractor”.

WITNESSED: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The Contractor will commence and complete the following work on the **CALIENTE UNION PACIFIC DEPOT RESTORATION**

2. The Contractor will furnish all the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the Project described herein.

3. The Contractor will commence the work required by the Contract Documents within five (5) calendar days after the date of the Notice to Proceed and will complete the same within **ONE HUNDRED AND EIGHTY** calendar days unless the period for completion is extended otherwise by the Contract Documents.

4. The Contractor agrees to perform all the work described in the Contract Documents and comply with the terms therein for the sum of \$ \_\_\_\_\_ or as shown in the Bid Schedule a copy of which is attached.

5. The term “Contract Documents” means and includes the following:

- (A) ADVERTISEMENT FOR BIDS
- (B) NOTICE AND INSTRUCTION FOR BIDDERS
- (B) INFORMATION FOR BIDDERS
- (C) BID PROPOSAL
- (D) BID SCHEDULE
- (E) CERTIFICATION
- (F) NOTICE OF AWARD
- (G) AGREEMENT
- (H) PAYMENT BOND
- (I) PERFORMANCE BOND
- (J) CERTIFICATE OF INSURANCE
- (K) NOTICE TO PROCEED
- (L) GENERAL CONDITIONS
- (M) SUPPLEMENTAL CONDITIONS
- (N) SECTION 3 CLAUSE
- (O) FEDERAL FORMS TO BE COMPLETED BY AWARDED CONTRACTOR
- (P) TECHNICAL SPECIFICATIONS

6. The Owner will pay to the Contractor in the manner and at such times set forth in the General Conditions, such amounts as required by the Contract Documents.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized officials, this Agreement in triplicate, each of which shall be deemed an original on the date first above written.

OWNER:  
CITY OF CALIENTE

BY \_\_\_\_\_  
STEVE ROWE, Mayor

ATTEST: \_\_\_\_\_  
Clerk

CONTRACTOR:

\_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_  
(Please Print)

Address: \_\_\_\_\_

Employer Identification Number \_\_\_\_\_

Telephone Number (\_\_\_\_) \_\_\_\_\_

(SEAL)

ATTEST: \_\_\_\_\_

Name: \_\_\_\_\_  
(Please Print)

Title: \_\_\_\_\_

**SECTION SIX**

**PAYMENT BOND**

**PERFORMANCE BOND**

**NOTICE TO PROCEED**

**PERFORMANCE BOND**

KNOW ALL PERSONS BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called Principal, and  
(Corporation, Partnership, or Individual)

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto \_\_\_\_\_

\_\_\_\_\_  
(Name of Owner)

\_\_\_\_\_  
(Address of Owner)

hereinafter called Owner, in the total aggregate penal sum of \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$\_\_\_\_\_) in lawful money of the  
United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors,  
administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with  
the OWNER, dated the \_\_\_\_ day of \_\_\_\_\_, 2021, a copy of which is hereto attached and made a part hereof  
for the construction of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WITNESS WHEREOF, this instrument is executed in \_\_\_\_ counterparts, each of  
which shall be deemed an original, this the \_\_\_\_ day of \_\_\_\_\_, 2021.

ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Principal) Secretary  
(SEAL)

By \_\_\_\_\_ (s)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
Surety

\_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Witness as to Surety Attorney-in-Fact

By \_\_\_\_\_

\_\_\_\_\_  
(Address)

NOTE: Date of Bond must not be prior to date of Contract.  
If CONTRACTOR is partnership, all partners should execute Bond.

**PAYMENT BOND**

KNOW ALL PERSONS BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_ hereinafter called PRINCIPAL and  
(Corporation, Partnership or Individual)

\_\_\_\_\_  
(Name of Surety)

hereinafter called SURETY, are held and firmly bound unto \_\_\_\_\_

\_\_\_\_\_  
(Name of Owner)

\_\_\_\_\_  
(Address of Owner)

hereinafter called Owner, and unto all persons, firms, and corporations who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors and assigns in the total aggregate penal sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_, 2021, a copy of which is hereto attached and made a part hereof for the construction of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in such contract, and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such Work, and for all labor costs incurred in such Work including that by a Subcontractor, and to any mechanic or materialman lienholder whether it acquires its lien by operation of State or Federal law; then this obligation shall be void, otherwise to remain in full force and effect.

WITNESS WHEREOF, this instrument is executed in \_\_\_\_ counterparts, each of which shall be deemed an original, this \_\_\_\_ day of \_\_\_\_\_, 2021.

(SEAL)

ATTEST:

\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_  
(Address)  
\_\_\_\_\_

PRINCIPAL:

By \_\_\_\_\_

\_\_\_\_\_  
(Address)  
\_\_\_\_\_

(SEAL)

ATTEST:

\_\_\_\_\_  
Witness as to Surety Attorney-in-Fact

\_\_\_\_\_  
(Address)  
\_\_\_\_\_

SURETY:

By \_\_\_\_\_

\_\_\_\_\_  
(Address)  
\_\_\_\_\_

NOTE: Date of Bond must not be prior to date of Contract.  
If CONTRACTOR Is partnership, all partners should execute Bond.

**NOTICE TO PROCEED**

TO:

DATE:

**PROJECT: CALIENTE UNION PACIFIC DEPOT RESTORATION**

You are hereby notified to commence work in accordance with the Agreement dated \_\_\_\_\_ on or before \_\_\_\_\_, and you are to complete the work within **ONE HUNDRED AND EIGHTY (180)** consecutive calendar days thereafter. The date of completion of all work is therefore \_\_\_\_\_.

OWNER:  
CITY OF CALIENTE

BY \_\_\_\_\_  
STEVE ROWE, Mayor

(

**ACCEPTANCE OF NOTICE**

Receipt of above Notice to Proceed is hereby acknowledged by \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, 20.

\_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Employer Identification Number \_\_\_\_\_

Telephone Number (\_\_\_\_) \_\_\_\_\_



## **SECTION SEVEN**

### **GENERAL CONDITIONS**

## **GENERAL CONDITIONS**

### **DEFINITIONS**

1.1 Whenever used in the Contract Documents, the following terms shall have the meanings indicated and shall be applicable to both the singular and plural thereof:

1.2 **ADDENDA** - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings and Specifications, by additions, deletions, clarifications, or corrections.

1.3 **BID** - The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the work to be performed.

1.4. **BIDDER** - Any person, firm, or corporation submitting a bid for the work.

1.5 **CHANGE ORDER** - A written order to the Contractor authorizing an addition, deletion, or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

1.6 **CONTRACT DOCUMENTS** - The Contract, including Advertisement Bids, Information for Bidders, Bid, Notice of Award, Agreement, Notice to Proceed, General Conditions, Change Orders, Technical Specifications, and Addenda.

1.7 **CONTRACT PRICE** - The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

1.8 **CONTRACT TIME** - The number of calendar days stated in the Contract Documents for the completion of the work.

1.9 **CONTRACTOR** - The person, firm, or corporation with whom the Owner has executed the Agreement.

1.10 **FIELD ORDER** - A written order effecting a change in the work not involving an adjustment in Contract Price or an extension of the Contract Time, issued by the Owner to the Contractor during construction.

1.11 **NOTICE OF AWARD** - Written notice of the acceptance of the Bid from the Owner to the successful Bidder.

1.12 **NOTICE TO PROCEED** - Written communication issued by the Owner to the Contractor authorizing him/her to proceed with the work and establishing the date for commencement of the work.

1.13 **OWNER** - A public or quasi-public body or authority, corporation, association, partnership, or an individual for whom the work is to be performed.

1.14 **PROJECT** - The undertaking to be performed as provided in the Contract Documents.

1.15 RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the Owner who is assigned to the project site or any part thereof.

1.16 SPECIFICATIONS - A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship and including the General Conditions and Supplemental General Conditions.

1.17 SUBCONTRACTOR - An individual firm, or corporation having a direct contract with the Contractor or with any Subcontractor for the performance of a part of the work at the site.

1.18 SUBSTANTIAL COMPLETION - The date certified by the Owner when the construction of the project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.

1.19 SUPPLIER - Any person or organization who supplies materials or equipment for the work, including that fabricated to special design, but who does not perform labor at the site.

1.20 WORK - All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.

1.21 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at the last given address, or delivered in person to said party or their authorized representative on the work.

## 2. SCHEDULES, REPORTS AND RECORDS

2.1 The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, reports, estimates, records and other data where applicable as are required by the Contract Documents for the work to be performed.

2.2 Prior to the first partial payment estimate, the Contractor shall submit construction progress schedules showing the order in which the Contractor proposes to carry out the work, including dates at which the various parts of the work will be started, estimated date of completion of each part and, as applicable:

2.3 The Contractor shall also submit a schedule of payments that the Contractor anticipates will be earned during the course of the work.

## 3. SPECIFICATIONS

3.1 The intent of the Specifications is that the Contractor shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the work in accordance with the Contract Documents and all incidental work necessary to complete the Project in an acceptable manner, ready for use, occupancy or operation by the Owner.

#### 4. MATERIALS, SERVICES AND FACILITIES

4.1 It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the work within the specified time.

4.3 Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

4.4 Materials, supplies, and equipment shall be in accordance with samples submitted by the Contractor and approved by the Owner.

4.5 Materials, supplies and equipment to be incorporated into the work shall not be purchased by the Contractor or Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

#### 5. CHANGES IN THE WORK

5.1 The Owner may, at any time, as the need arises, order changes without the scope of the work, without invalidating the Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the work, an equitable adjustment shall be authorized by Change Order.

5.2 The Owner, also, may at any time, by issuing a Field Order, make changes in details of the work. The Contractor shall proceed with the performance of any changes in the work so ordered by the Owner unless the Contractor believes that such Field Order entitles the Contractor to a change in Contract Price or time, or both, in which event the Contractor shall give the Owner written notice thereof within seven (7) days after the receipt of the ordered change. Thereafter the Contractor shall document the basis for the change in Contract Price or time within thirty (30) days. The Contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the Owner.

#### 6. CHANGES IN CONTRACT

6.1 All changes which affect the cost or time of the construction of the project must be authorized by means of a Change Order. The Change Order will include extra work, work for which quantities have been altered from those shown in the bidding schedule, as well as decreases or increases in the quantities of installed units which are different than those shown in the bidding schedule because of final measurements. All changes should be recorded on a Change Order as they occur. Each Change Order must contain complete and detailed justification for all items addressed by the Change Order.

6.2 The value of any work covered by a Change Order or of any claim for increase or decrease in the Contract Price shall be determined by one or more of the following methods in the order of precedence listed below:

- a. Unit prices previously approved.
- b. An agreed lump sum.
- c. Force Account as stated in the most current edition of Caltrans Standard

Specifications except that the negotiated total markup including overhead and profit is limited to a maximum 15 percent for the Contractor doing the work and a maximum of an additional 5 percent for the prime Contractor if the work is performed by any Subcontractor. For joint ventures, each is considered a prime Contractor.

## 7. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

7.1 The date of beginning and the time for completion of the work are essential conditions of the Contract Documents and the work embraced shall be commenced on the date specified in the Notice to Proceed.

7.2 The Contractor will proceed with the work at such rate of progress to insure full completion within the Contract Time. It is expressly understood and agreed, by and between the Contractor and the Owner that the Contract Time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

7.3 If the Contractor shall fail to complete the work within the Contract Time, or extension of time granted by the Owner, then the Contractor will pay to the Owner the amount for liquidated damages as specified in the bid for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.

7.4 The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following and the Contractor has promptly given Written Notice of such delay to the Owner.

7.4.1 To any preference, priority or allocation order duly issued by the Owner.

7.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and

7.4.3 To any delays of Subcontractors occasioned by any of the causes specified in this article.

## 8. SUSPENSION OF WORK, TERMINATION, AND DELAYS

8.1 The Owner may suspend the work or any portion thereof for a period of not more than ninety (90) days or such further time as agreed upon by the Contractor, by written notice to the Contractor, which shall fix the date on which work shall be resumed. The Contractor will resume that work on the dates so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributing to any suspension.

8.2 If the Contractor is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the Contractor or for any of its property, or if Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or repeatedly fails to supply sufficient skilled workmen or suitable material or equipment, or repeatedly fails to make prompt payments to Subcontractors or for labor, materials or equipment or disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the work or disregards the authority of the Owner, or otherwise violates any provision of the Contract Documents,

then the Owner may, without prejudice to any other right or remedy after giving the Contractor a minimum of ten (10) days from delivery of a Written Notice, terminate the services of the Contractor and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the work by whatever method the Owner may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract Price exceeds the direct or indirect costs of completing the project, including compensation for additional professional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor will pay the difference to the Owner.

8.3 Where the Contractor's services have been terminated by the Owner, said termination shall not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due to the Contractor will not release the Contractor from compliance with the Contract Documents.

8.4 After ten (10) days from delivery of a written notice to the Contractor, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the Contract. In such case the Contractor shall be paid for all work executed and any expense sustained plus reasonable profit.

8.5 If, through no act or fault of the Contractor, the work is suspended for a period of more than ninety (90) days by the Owner or under an order of court or other public authority, or the Owner fails to act on any request for payment within thirty (30) days after it is submitted, or the Owner fails to pay the Contractor substantially the sum approved or awarded by arbitrators within thirty (30) days after its approval and presentation, then the Contractor may, after ten (10) days from delivery of a Written Notice to the Owner, terminate the Contract and recover from the Owner payment for all work executed and all expenses sustained. In addition and in lieu of terminating the Contract, if the Owner has failed to act on a request for payment or if the Owner has failed without good cause to make any payment as aforesaid, the Contractor may, upon ten (10) days Written Notice to the Owner, stop the work until paid all amounts then due, in which event and upon resumption of the work, Change Orders shall be issued for adjusting the Contract Price or extending the Contract Time or both to compensate for the costs and delay attributable to the stoppage of the work.

8.6 If the performance of all or any portion of the work is suspended, delayed, or interrupted as a result of a failure of the Owner to act within the time specified in the Contract Documents, or if no time is specified, within a reasonable time, an adjustment in the Contract Price or an extension of the Contract Time, or both, shall be made by Change Order to compensate the Contractor for the costs and delay necessarily caused by the failure of the Owner.

## 9. PAYMENTS TO CONTRACTOR

9.1 The Contractor will indemnify and hold the Owner or the Owner's agents harmless from all claims growing out of the lawful demand of subcontractors, laborer, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the work. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so the Owner may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of the Contract Documents, but in no event shall the provision of this sentence be construed to impose any obligations upon the Owner to either the Contractor, or any third party. In paying any unpaid bills of the Contractor, any

payment so made by the Owner shall be considered as a payment made under the Contract Documents by the Owner to the Contractor and the Owner shall not be liable to Contractor for any such payments made in good faith.

9.2 The Schedule of Values found in the Bid Schedule will serve as a basis for progress payments.

9.3 The Owner agrees to pay the Contractor a 10% deposit of bid award upon execution of contract.

9.4 The Contractor may submit progress payments not more often than once a month.

9.5 Thirty days after presentation of progress payment the payment will be due and payable.

9.6 The final progress payment shall be submitted upon delivery of the vehicle and acceptance by Owner. The Owner shall make payment within thirty days of submission of final payment

9.7 If the Owner fails to make payment within the time specified, in addition to other remedies available to Contractor, there shall be added to each such payment, interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the Contractor.

9.8 The Owner may withhold or, on account of subsequently discovered evidence, nullify, in whole or part, any approved partial payment estimate to such extent as may be necessary to protect the Owner from loss on account of:

- a. Defective work not remedied.
- b. Claims filed or reasonable evidence indicating probable filing of claims.
- c. Failure of Contractor to make payments properly to Subcontractors or for material or labor.
- d. A reasonable doubt that the work can be completed for the balance then unpaid.
- e. Damage to another contractor.
- f. Performance of work in violation of the terms of the Contract Documents.

## 10. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

10.1 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. Any payment, however, final or otherwise, shall not release the Contractor from any obligations under the Contract Documents.

## 11. ASSIGNMENTS

11.1 Neither the Contractor nor the Owner shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or at any right, title or interest therein, or any obligations thereunder, without written consent of the other party.

## 12. INDEMNIFICATION

12.1 The Contractor will indemnify and hold harmless the Owner and its agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of work, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use

there from; and is caused in whole or in part by any negligent or willful act or omission of the Contractor, and Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

12.2 In any and all claims against the Owner, or any of their agents or employees, by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for those acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under worker's compensation acts, disability benefit acts or other employee benefit acts.

12.3 The obligation of the Contractor under this paragraph shall not extend to the liability of the Owner, its agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or Specifications.

### 13. SUBCONTRACTING

13.1 The Contractor may utilize the services of specialty subcontracts on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

13.2 The Contractor shall be fully responsible to the Owner for the acts and omissions of its Subcontractors, and of persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by the Contractor.

13.3 The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind Subcontractor to the Contractor by the terms of the Contract Documents insofar as applicable to the work of Subcontractors and give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.

13.4 Nothing contained in this Contract shall create any contractual relation between any Subcontractor and the Owner.

### 14. GUARANTEE

14.1 The Contractor shall guarantee to owner that all work will be in accordance with the technical specifications found in the contract documents all materials and equipment furnished and work performed in accordance with technical specification found in contract documents for a period of one (1) year from the date of Substantial Completion. The Contractor warrants and guarantees for a period of one (1) year from the date of Substantial Completion of the work, that the completed work is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reasons of such defects including the repairs of the damage of other parts of the work resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the OWNER may do so and charge the Contractor the cost thereby incurred.

### 15. ARBITRATION



15.1 All claims, disputes, and other matters in question arising out of, or relating to, the Contract Documents or the breach thereof, except for claims which have been waived by making an acceptance of final payment as provided in the General Conditions, may be decided by arbitration if the parties mutually agree. Any agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. Any dispute requiring arbitration must be handled in accordance with the industry's rules for arbitration as administered by the American Arbitration Association or the Nevada Arbitration Association. The award rendered by the arbitrator shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

15.2 Notice of the request for arbitration shall be filed in writing with the other party to the Contract Documents and a copy shall be filed with the Owner. Request for arbitration shall in no event be made on any claim, dispute, or other matter in question which would be barred by the applicable statute of limitations.

15.3 The Contractor will carry on the work and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

15.4 Arbitration awards must be presented in writing and include the following elements:

- a. Legal "findings of fact" established by the arbiter.
- b. Specific breakdown of the dollar amounts allocated for each issue under arbitration.
- c. The arbiter's "conclusions of law".
- d. A summary of evidence.
- e. Reasons underlying the arbiter's award.

## 16. TAXES

16.1 The Contractor will pay all sales, consumer, use, and other similar taxes required by the laws of the place where the work is performed.

## 17. ACCESS TO CONTRACTOR'S RECORDS

The Owner, The State of Nevada or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor which are directly pertinent to a specific Federal Loan Program for the purpose of making audits, examinations, excerpts, and transcriptions.

# **SECTION EIGHT**

## **SUPPLEMENTAL CONDITIONS**

**Equal Opportunity Clause for Contracts under \$10,000**

**Equal Opportunity Clause for construction over \$10,000**

**Standard Federal Equal Employment Opportunity Construction Contract Specification**

**Section 3 Provisions for Contracts**

**Section 3 Clause**

**Federal Labor Standards Provisions**

**Federal Minimum Hourly Wage Rates (Davis Bacon)**

**Certification of Compliance with Air and Water Acts**

**Special Conditions Pertaining to Hazards Safety Standards and Accident Prevention**

**Unfair Trade Practices**

## **COMMUNITY DEVELOPMENT BLOCK GRANT**

### **Supplemental Condition #1**

#### **EQUAL OPPORTUNITY CLAUSE FOR CONTRACTS UNDER \$10,000**

Note: This clause must be included in all contracts and subcontracts \$10,000 and under. During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of the race, color, religion, sex, or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

(2) The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by Contracting Officer setting forth the provisions of this nondiscrimination clause. The Contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) Contractors shall incorporate foregoing requirements in all subcontracts.

## **NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

### **Supplemental Condition #2**

#### **EQUAL OPPORTUNITY CLAUSE FOR CONSTRUCTION OVER \$10,000**

Note: This clause must be included in all construction contracts and subcontracts \$10,000 and over.

During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of the race, color, religion, sex, or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

(2) The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by Contracting Officer setting forth the provisions of this nondiscrimination clause. The Contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with

procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 504 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality, or subdivision of such government which does not participate in work on or under the contract. The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings. (33F.R. 7804, May 28, 1968, as amended at 34 FR 744, Jan. 17, 1969; 40 FR 14083, Mar. 28, 1975)

## **NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

Supplemental General Condition #3

### **STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS**

#### **(CONSTRUCTION OVER \$10,000)**

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted.

b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

(i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin.

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race.

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent or the Pacific Islands).

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The

overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally-assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or woman sent by the contractor or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligation.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions, including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.



- h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
  - i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
  - j. Encourage present minority and female employees to recruit other minority persons and women and where reasonable, provide after school summer and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.
  - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60.3.
  - l. Conduct at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
  - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.
  - n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
  - o. Document and maintain a record of all solicitations of offers for subcontractors from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more, or their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other

similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the Executive Order if a specific minority group of women is under utilized).

10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications shall implement affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep

records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required To maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other Laws, which establish different standards of compliance or upon the application of Requirements for the hiring of local or other area residents (e.g. those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

## COMMUNITY DEVELOPMENT BLOCK GRANT SECTION 3 PROVISIONS FOR CONTRACTS

### **PURPOSE**

To ensure that employment and other economic opportunities generated by the Community Development Block Grant (CDBG) funds shall, to the greatest extent Feasible, be directed to low- and very low-income persons, particularly those who reside. In government-assisted housing, and to business concerns which provide economic Opportunities to low- and very low-income persons.

### **APPLICABILITY**

The requirements apply to contractors and subcontractors performing work on Section 3 covered project(s) for which the project amount exceeds \$200,000.

### **DEFINITIONS**

*Applicant* means any entity which makes an application for CDBG funds, and includes but is not limited to, any State, unit of local government, public housing agency, Indian Housing authority, Indian tribe, or other public body, public or private nonprofit Organization, private agency or institution, mortgagor, developer, limited dividend Sponsor, builder, property manager, community housing development organization (CHO), resident management corporation, resident council, or cooperative association.

*Contractor* means any entity entering into a contract with:

- (1) A recipient to perform work in connection with the expenditure of public housing financial assistance or for work in connection with a Section 3 project; or
- (2) A subrecipient for work in connection with a Section 3 project.

*Labor hours* means the number of paid hours worked by persons on a Section 3 project or by persons employed with funds that include public housing financial assistance.

*Low-income person* means a person as defined in Section 3(b)(2) of the 1937 Act.

*Material supply contracts* means contracts for the purchase of products and materials, including, but not limited to, lumber, drywall, wiring, concrete, pipes, toilets, sinks, carpets, and office supplies.

**COMMUNITY DEVELOPMENT BLOCK GRANT  
SECTION 3 PROVISIONS FOR CONTRACTS (continue)**

*Professional services* means non-construction services that require an advanced degree or professional licensing, including, but not limited to, contracts for legal services, financial consulting, accounting services, environmental assessment, architectural services, and civil engineering services.

*Public housing financial assistance* means assistance as defined in § 75.3(a)(1).

*Public housing project* is defined in 24 CFR 905.108.

*Recipient* means any entity that receives directly from HUD public housing financial assistance or housing and community development assistance that funds Section 3 projects, including, but not limited to, any State, local government, instrumentality, PHA, or other public agency, public or private nonprofit organization.

*Section 3* means Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. 1701u).

*Section 3 business concern* means:

(1) A business concern meeting at least one of the following criteria, documented within the last six-month period:

(i) It is at least 51 percent owned and controlled by low- or very low-income persons;

(ii) Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers; or

(iii) It is a business at least 51 percent owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.

(2) The status of a Section 3 business concern shall not be negatively affected by a prior arrest or conviction of its owner(s) or employees.

(3) Nothing in this part shall be construed to require the contracting or subcontracting of a Section 3 business concern. Section 3 business concerns are not exempt from meeting the specifications of the contract.

**COMMUNITY DEVELOPMENT BLOCK GRANT  
SECTION 3 PROVISIONS FOR CONTRACTS (continue)**

*Section 3 project* means a project defined in § 75.3(a)(2).

*Section 3 worker* means:

(1) Any worker who currently fits or when hired within the past five years fit at least one of the following categories, as documented:

(i) The worker's income for the previous or annualized calendar year is below the income limit established by HUD.

(ii) The worker is employed by a Section 3 business concern.

(iii) The worker is a YouthBuild participant.

(2) The status of a Section 3 worker shall not be negatively affected by a prior arrest or conviction.

(3) Nothing in this part shall be construed to require the employment of someone who meets this definition of a Section 3 worker. Section 3 workers are not exempt from meeting the qualifications of the position to be filled.

*Section 8-assisted housing* refers to housing receiving project-based rental assistance or tenant-based assistance under Section 8 of the 1937 Act.

*Service area or the neighborhood of the project* means an area within one mile of the Section 3 project or, if fewer than 5,000 people live within one mile of a Section 3 project, within a circle centered on the Section 3 project that is sufficient to encompass a population of 5,000 people according to the most recent U.S. Census.

*Small PHA* means a public housing authority that manages or operates fewer than 250 public housing units.

*Subcontractor* means any entity that has a contract with a contractor to undertake a portion of the contractor's obligation to perform work in connection with the expenditure of public housing financial assistance or for a Section 3 project.

COMMUNITY DEVELOPMENT BLOCK GRANT  
SECTION 3 PROVISIONS FOR CONTRACTS (continue)

*Subrecipient* has the meaning provided in the applicable program regulations or in 2 CFR 200.93.

*Targeted Section 3 worker* has the meanings provided in §§ 75.11, 75.21, or 75.29, and does not exclude an individual that has a prior arrest or conviction.

*Very low-income person* means the definition for this term set forth in section 3(b)(2) of the 1937 Act.

*YouthBuild programs* refers to YouthBuild programs receiving assistance under the Workforce Innovation and Opportunity Act (29 U.S.C. 3226).

# NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

Supplemental Condition #4

## FEDERAL LABOR STANDARDS PROVISIONS

**Federal Labor Standards Provisions U.S. Department of Housing and Urban Development** Office of Labor Relations Previous editions are obsolete Page 1 of 5 form **HUD-4010** (06/2009) ref. Handbook 1344.1 **Applicability**

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

**A. 1. (i) Minimum Wages.** All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

**(ii) (a)** Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.



**(b)** If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

**(c)** In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

**(d)** The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

**(iii)** Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

**(iv)** If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

**NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

Supplemental Condition #5

**FEDERAL MINIMUM HOURLY WAGE RATES (DAVIS-BACON)**

**\*\*INSERT THE CURRENT FEDERAL WAGE RATE DETERMINATION HERE.\*\***

Minimum wage rates for this project have been established by both the State of Nevada and the Federal Government. The higher wage rate for each job classification shall apply.



	Rates	Fringes
CARPENTER (Includes Drywall Hanging and Form Work).....	\$ 33.63	18.33

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ELEC0401-010 08/01/2021

	Rates	Fringes
ELECTRICIAN.....	\$ 29.40	11.16

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IRON0118-008 07/01/2021

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 48.12	25.45

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\* LAB00169-035 10/01/2021

	Rates	Fringes
LABORER		
(1) Common or General.....	\$ 28.55	14.88
(3) Concrete Saw (Hand Held/Walk Behind), Mason Tender- Cement/Concrete.....	\$ 28.80	14.88
(4) Pipelayer.....	\$ 29.05	14.88

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PAIN0567-014 07/01/2020

	Rates	Fringes
PAINTER		
Brush and Roller.....	\$ 29.80	13.44
Drywall Finishing/Taping....	\$ 35.20	14.02
Spray.....	\$ 29.80	13.44

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PLAS0797-008 10/01/2021

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 34.50	12.45

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\* SHEE0026-008 09/01/2021

	Rates	Fringes
SHEET METAL WORKER (HVAC Unit Installation Only).....	\$ 37.70	28.06

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SUNV2014-004 09/08/2016

	Rates	Fringes
HVAC MECHANIC: HVAC DUCT INSTALLATION ONLY.....	\$ 43.01	21.60
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 45.02	10.71
OPERATOR: Grader/Blade.....	\$ 37.68	6.04
OPERATOR: Loader.....	\$ 46.74	3.97

PLUMBER.....\$ 29.19 16.12

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union, which prevailed in the survey for this classification, which in this example would be Plumbers 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Division National Office Branch of Wage Surveys. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"





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BOIL0092-001 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 37.31	31.46

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BRNV0003-003 07/01/2021

	Rates	Fringes
BRICKLAYER.....	\$ 44.07	17.91
MARBLE SETTER.....	\$ 44.85	17.71
TERRAZZO WORKER/SETTER.....	\$ 44.85	17.71
TILE FINISHER.....	\$ 30.89	13.75
TILE SETTER.....	\$ 42.22	17.81

Zone Pay

- Zone 1 - Free Zone - 0-40 Miles
- Zone 2 - \$3.75 - 41-50 Miles
- Zone 3 - \$5.00 - 51-70 Miles
- Zone 4 - \$10.00 - 71 Miles and Over

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CARP1607-002 07/01/2020

	Rates	Fringes
MILLWRIGHT.....	\$ 48.15	18.06

Zone Pay

- Zone 1: Free Zone
- Zone 2: \$2.50 - 20-40 miles
- Zone 3: \$4.25 - over 40 miles

-----  
CARP1977-005 07/01/2020

	Rates	Fringes
CARPENTER.....	\$ 47.23	17.98

ZONE PAY:

- Zone 1: Free Zone
- Zone 2: \$2.50 - 40-60 miles
- Zone 3: \$4.25 - Over 60 miles

-----  
ELEC0357-003 06/01/2020

	Rates	Fringes
ELECTRICIAN.....	\$ 52.50	22.15

ZONE PAY:

- Zone 1: \$0.00 - 0-25 miles
- Zone 2: \$2.50 - 26-55 miles
- Zone 3: \$3.50 - Over 55 miles

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ELEV0018-006 01/01/2021

Rates	Fringes
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ELEVATOR MECHANIC.....\$ 59.32 35.83

FOOTNOTE:

- a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 0 months to 5 years of service.
- b. PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

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ENGI0012-005 10/01/2021

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 49.19	27.65
GROUP 2.....	\$ 50.14	27.65
GROUP 3.....	\$ 50.43	27.65
GROUP 4.....	\$ 51.92	27.65
GROUP 5.....	\$ 53.02	27.65
GROUP 6.....	\$ 52.14	27.65
GROUP 7.....	\$ 53.24	27.65
GROUP 8.....	\$ 52.25	27.65
GROUP 9.....	\$ 53.35	27.65
GROUP10.....	\$ 52.37	27.65
GROUP11.....	\$ 53.47	27.65
GROUP12.....	\$ 52.54	27.65

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Air Compressor; Pump or Generator Operator; Engineer- Oiler and Signalman; Blade Operator; Rotary Drill Tender (Rotary and Core); Steam Cleaner/Pressure Washer; Switchman or Brakeman; Gupie Operator(Cement).

GROUP 2: Concrete Mixer Operator; Skid Type Conveyor and Beltman; Fireman; Generator; Pump or Compressor Operator (2 to 5 Units inclusive, over 5 units; \$0.10 per hour for each additional unit up to 10 units; portable units); Generator; Pump or Compressor Plant; Hydrostatic Pump Motorman (rotary and core); PJU Side Dump Jack; Screening and Conveyor machine Operator (or similar type); Skiploader; Wheeltype; Ford; Ferguson; Jeep or similar type, 3/4 yard or less (without drag-type attachments); Temporary Heating Plant Operator; Truck Crane Oiler.

GROUP 3: A-frame or Winch Truck Operator; Bobcat or similar type (Skid Steer); Derrickman (Rotary and Core); Dinky Locomotive or Tunnel Motor operator; Elevator Hoist Operator; Equipment Greaser; Ford, Ferguson or similar type (with drag-type attachments); Global Position Systems Chainman and Rodman; Hydra-Hammer or similar type equipment; Material Hoist/Outside manlift Operator; Power concrete Curing Machine; Power Concrete Saw Operator (or similar type); Power-Driven Jumbo Form Setter; Ross Carrier Operator; Self-Climbing Scaffold (or similar type); Self-propelled Tar Pipelining Machine; Stationary Pipe Wrapping ang Cleaning Machine Operator; Towblade Operator.

GROUP 4: Asphalt Plant Fireman; Boring Machine; Boring System Electronic Tracking Locator; Boxman or Mixer Box (concrete or asphalt plant); Fishing Tool Engineer; Highline Cableway Signalman; Horizontal Directional

Drilling Machine; Instrumentman; Locomotive Engineer; Micro Tunneling (above ground tunnel); Mud Plant Operator; Power Sweeper Operator; Roller Operator, Compacting; Screed Operator; Seeder Trenching Machine Operator (up to 6ft. depth capacity, manufacturer's rating) Vacuum Truck.

GROUP 5: Asphalt or Concrete Spreading; Mechanical Tamping or Finishing Machine Operator- roller (all types and sizes); soil, cement, asphalt finish; Asphalt Plant Engineer; Deck Engine; Grade Checker; Pavement- breaker; Pneumatic heading shield- Tunnel; Road Oil Mixing Machine; Forklift, under five tons; Rubber-tired, heavy duty equipment (Oshkosh; DW Euclid, Letourneau; Laplant-Choate, or similar type equipment with any type attachments); Skidloader; wheeltype, over 3/4 yds., up to and including 1 1/2-yards; Slip Form Pump (power-driven hydraulic lifting device for concrete forms); Tractor Operator Drag-Type Shovel; Bulldozer; Tamper Scraper and Push Tractor.

GROUP 6: Batch Plant; Bulk Plant Concrete Mixer-paving; Concrete Mobile Mixer; Concrete Pump or Pumpcrete Gun; Crushing Plant Engineer; Dandy Digger; Driller (rotary and core); Elevating Grade; Forklift, over 5 tons; Grade-all; Heavy Duty Welder; Highline Cableway; Hoist (Chicago boom and mine); Jumbo Pipe Carrier; Kolman Belt Loader and similar type; Lift slab machine; Loader Operator- Athey, Euclid, Hancock, Sierra or similar type; Machinist; Micro Tunnel System (below ground); Motor Patrol (any type or size); Ozzie Padder (or similar type), Pneumatic Concrete Placing Machine Hackley- Presswell or similar type; Pneumatic Pipe Ramming Tool (and similar types); Rotomill; Sewer Plant; Shovel, Backhoe, Dragline, Clamshell, Derrick, Derrick Barge, Crane Piledriver and Mucking Machine; Shuttle Buggy; Skiploader, wheeltype, over 1-1/2 yds.; Surface Heater and Planer; Tractor Loader - Crawler type all types and sizes; Tractor, with boom attachments; Traveling Pipe Wrapping, Cleaning and Bending Machine; Trenching Machine (over 6 ft. depth capacity, manufacturer's rating); Tunnel Boring Machine; Water pull (compaction); water Well Driller.

GROUP 7: Heavy Duty Repairman; Body and Fender Mechanic; Global Position Systems Party Chief; Heavy Duty Welder.

GROUP 8: Combination Heavy Duty Repairman and Welder.

GROUP 9: Rubber Tired, Tandem, Multiple Engine, Earth-Moving Equipment; Sewer Treatment Plant Operator.

GROUP 10: Drilling Machine Operator, Bucket or Auger Types (Calweld 200 Bucket or similar types-Watson 3000 or 5000 Auger or similar types - Texoma 900 Auger or similar types - drilling depth of 105' Maximum), Dual Drum Mixer, Heavy Duty Repairman-Welder Combination, Monorail Locomotive Operator (diesel, gas or electric), Motor Patrol - Blade Operator (single engine), Multiple Engine Tractor Operator (Euclid and similar type - except Quad 9 Cat.), Pneumatic Pipe Ramming Tool and similar types, Press-Stressed Wrapping Machine Operator (2 Operators required), Rubber-Tired Earth Moving Equipment Operator (single engine, over 50 yds. and up to 50 yds. struck), Tower Crane Repairman, Tractor Loader Operator (crawler and wheel-type over 6 1/2 yds.), Welder-Certified, Woods Mixer Operator (and similar Pugmill equipment)

GROUP 11: Dynamic Compactor LDC350 (or similar types) Heavy Duty Repairman-Welder Combination (Multi-Shift), Welder-Certified (Multi-Shift)

GROUP 12: Auto Grader Operator, Automatic Slip Form Operator, Drilling Machine Operator, Bucket or Auger Types (Calweld, Auger 200 CA or similar types - Watson, Auger 6000 or similar types-Hughes Super Duty, Auger 200 or similar types-drilling depth of 175' maximum), Hoe Ram or similar with compressor, Mass Excavator Operator - less than 750 cu. yds., Mechanical Finishing Machine Operator, Mobile Form Traveler Operator, Motor Patrol Operator (multi-engine), Pipe Mobile Machine Operator, Rubber-Tired Earth Moving Equipment Operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck), Rubber-Tired Self-Loading Scraper Operator (paddle-wheel-Auger type of self-loading-two or more units), Vermeer Rock Trencher (or similar type)

Zone Pay

- Zone 1: \$0.00 - 0-32.5 Miles
- Zone 2: \$3.00 - 32.5-45 Miles
- Zone 3: \$4.00 - 45-60 Miles
- Zone 4: \$4.50 - over 60 Miles

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IRON0416-004 07/01/2021

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 57.40	28.15

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IRON0433-007 07/01/2021

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 57.40	28.15
IRONWORKER, STRUCTURAL.....	\$ 57.40	28.15

-----  
LABO0872-002 07/02/2021

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 31.00	31.16
GROUP 2.....	\$ 31.21	31.16
GROUP 3.....	\$ 31.31	31.16
GROUP 3A.....	\$ 31.81	31.16
GROUP 4.....	\$ 31.40	31.16
GROUP 5.....	\$ 31.50	31.16
GROUP 6A.....	\$ 32.74	31.16
GROUP 6B.....	\$ 32.24	31.16
GROUP 6C.....	\$ 31.99	31.16
GROUP 6D.....	\$ 32.60	31.16
GROUP 6E.....	\$ 32.24	31.16
GROUP 6F.....	\$ 38.70	31.16
GROUP 7.....	\$ 31.31	31.16
GROUP 8.....	\$ 32.40	29.74
GROUP 9A.....	\$ 29.50	29.74
GROUP 9B.....	\$ 28.00	29.74

GROUP 1: Traffic Control Tech, All pressure washing, all surface preparation for patching and grouting, dry packing of concrete and filling of form bolt holes, Subgrade,

finish/fine grade with use of granule or non-granule material, vapor barriers, lasers, string line, setting and leveling on highway and street paving, sidewalk, driveways, airport runways and similar type heavy construction, Gas and oil pipeline laborer, Guinea chaser, Laborer, general, construction, demolition, surgical demolition, selective demolition or Solar- Stringing of posts, installation of posts and piles, installation and bolting together of all rakes, tray tables and torque tubes. Running all bobcats, skid steers, forklifts, Turchis or similar equipment for post installation. Trashing out crates, card board boxes and trash within the solar arrays and Solar project boundaries, Laborer, packing rod steel and pans, Laborer, temporary water lines (portable type), Laborer, loading and unloading solar panels, crates and pallets, Laborer, handling, installing, and setting of all solar panels/wire management but not connections, Landscape gardener (Must have knowledge of plant materials and how to plant them. Lays out plant arrangements to-follow the landscape plan), Stone pavers, Nurseryman, Tarman and mortar man, kettle man, potman and man applying asphalt, lay cold creosote, fine and similar type materials. (?Applying? means applying, dipping, brushing or handling of such materials for pipe wrapping and water proofing.), Underground laborer, including caisson bellows, Window cleaner, Scaffold Erector - (Excludes Tenders), Fence Erector, Mortarless, barrier wall and/or retaining walls; Digging post holes with spade. Post hole digger or power-driven auger; Aligning post through the use of lines or by sighting; Material Handler - for all trades, including but not limited to stacking and packing of all drywall, Taping mud, paint, wallpaper, wall coverings and material associated there with including Demolition of said materials.

GROUP 2: Asphalt raker, ironer, spreader, and luteman, Buggymobile man, Cesspool digger and installer, Chuck tender (except tunnels), Gas and oil pipeline wrapper, pot tender and form man, Making and caulking of all non-metallic pipe joints, Operators and tenders of pneumatic and electric tools, video x-ray, vibrating machines, hand propelled trenching machines, vacuum truck/hydro excavation operation, impact wrench multi-plate and similar mechanical tools not separately classified herein, Riprap stonepaver, Roto-scraper, Sandblaster (pot tender), Septic tank digger and installer (lead man), Tank scaler and cleaner, Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredders.

GROUP 3: Cutting torch operator, Welding in connection with laborers work, Gas and oil pipeline wrapper, Gas and oil pipeline laborer, certified Jackhammer and/or pavement beaker, Installing, Laying and the connections of all metallic and non-metallic pipe, p.v.c. and drop inlet and duct bank, including landscape sprinklers, sewer pipe, drain pipe and underground tile, Cement dumper (on one yard or larger mixers and handling bulk cement), Concrete core cutter, Concrete curer, impervious membrane and oiler of all materials, Concrete saw man, excluding tractor type, cutting scoring old or new concrete, Operator of cement grinding machine, Rock slinger Scaler (using boswain chair or safety belt or power tools under 100 feet), Forklift - A journeyman shall hold Forklift certification at time of referral for duration of employment, Bobcat/skidsteer,

Gannon tractor, Working Dust control monitor, Single Axle water and Single Axle Dump Trucks, Hodcarrier-Mason Tender/Mason Finisher, Decorative Rock Installer - (Ponds, Waterfalls, etc.) Concrete striking, floating, epoxy finish, self-leveling material, and overlay, Shotcrete/Gunnite.

GROUP 3A: Placement of all concrete, including red concrete by any means, Concrete Specialist, Mud cutter, Concrete vibrator operator, all sizes, Concrete Dumper, slickline/Hoseman/Dumpman

GROUP 4: Cribber or shorer, lagging, sheeting, trench bracing, hand guided lagging hammer Head rock slinger, Powderman-blaster, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing, Sandblaster (nozzleman), Steel header-board man, Construction Specialist

GROUP 5: Driller (core, diamond or wagon), Air track drill (all types), Joy driller model TW-M-2A. Gardner-Denver model DH 143 and similar type drills (in accordance with Memorandum of Understanding between Laborers and Operating Engineers dated Miami, Florida, February 3, 1954), Gas and oil pipeline fusion, Gas and oil pipeline wrappers, 6" pipe and over

GROUP 6A: Shaft, Raise, Stope Miner

GROUP 6B: Miner - Tunnel (Hardrock)

GROUP 6C: Bull Gang, Mucker, Trackman

GROUP 6D: Miner - Welder

GROUP 6E: Pipe Jacking, Micro-Tunneling, Tunnel Boring Machine

GROUP 6F: High Scaler

GROUP 7: Asbestos Abatement, lead abatement, hazardous waste abatement, petro-chemical abatement, radiation remediation, microbial remediation

GROUP 8: Plaster Tender

GROUP9A: Flagger, flagperson pilotcar

GROUP9B: Shop Maintenance, watchmen

Zone Pay

Zone 1- (0-50 Miles) - Base Wage Rate

Zone 2- (50 Miles and over) - \$3.75 above base wage rate including Laughlin, NV

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PAIN0159-003 07/01/2021

	Rates	Fringes
PAINTER (Including Drywall Finishing and Paper Hanging).....	\$ 44.12	20.16

Zone Pay

Zone 1: \$0.00 - 0-40 Miles

Zone 2: \$2.50 - 41-60 Miles

Zone 3: \$4.25 - Over 60 Miles

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PLAS0797-002 07/01/2021

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 44.35	16.98

Zones:

Zone 1 - 0-50 miles from Las Vegas, NV City Hall: Base Rate  
 Zone 2 - Over 50 miles from Las Vegas, NV City Hall: Base Rate + \$4.00/hr

The Area within Boulder City and up to 5 miles from city hall by legal paved roadway (from the downtown area of Boulder City) shall receive Zone 1 rate.

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 PLUM0525-001 10/01/2021

	Rates	Fringes
PIPEFITTER.....	\$ 50.25	24.05
PLUMBER.....	\$ 50.25	24.05

ZONE PAY:

Zone 1: \$0.00 - 0-20 miles  
 Zone 2: \$3.75 - 21-45 miles  
 Zone 3: \$7.50 - 46-75 miles  
 Zone 4: \$11.25 - Over 76 miles

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 \* ROOF0162-002 08/01/2021

	Rates	Fringes
ROOFER (including Waterproofing).....	\$ 32.21	10.22

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 SFNV0669-001 06/07/2021

	Rates	Fringes
SPRINKLER FITTER.....	\$ 48.58	18.73

Zone Pay

Zone A: Pay report to Las Vegas = \$0.00  
 Zone B: Pay report to NNSS = \$2.00  
 Zone C: Pay report to TTR = \$2.50

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 SHEE0088-001 06/07/2021

	Rates	Fringes
SHEET METAL WORKER.....	\$ 50.62	29.11

Zone Pay

Zone 1- Free Zone - 0-30 Miles  
 Zone 2- \$2.50 - 30-50 Miles  
 Zone 3- \$3.50 - 50-100 Miles  
 Zone 4- \$5.00 - over 100 Miles

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 TEAM0631-004 10/01/2020

Rates Fringes

TRUCK DRIVER

GROUP 1.....	\$ 39.99	21.58
GROUP 2.....	\$ 41.08	21.58
GROUP 3.....	\$ 40.16	21.58
GROUP 4.....	\$ 40.36	21.58
GROUP 5.....	\$ 41.08	21.58

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Truck Greaser; Light Vehicle Dispatcher; Tireman: Light Duty Driver.

GROUP 2: Forklift Driver; Equipment Parts; Warehouseman; Fleet Operations Dispatcher; Heavy Duty Drivers.

GROUP 3: Extra Heavy Duty Driver; Forklift Driver (over 15 tons).

GROUP 4: Bootman; Off-Road and Special Equipment Driver.

Zone Pay

- Zone 1: \$0.00 1-20 miles
- Zone 2: \$1.50 20-40 miles
- Zone 3: \$2.50 40-60 miles
- Zone 4: \$3.50 over 60 miles

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the



cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union, which prevailed in the survey for this classification, which in this example would be Plumbers 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Division National Office Branch of Wage Surveys. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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U.S. Department of Labor  
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U.S. Department of Labor  
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Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====  
END OF GENERAL DECISION"

## **NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

Supplemental Condition #6

### **STATE MINIMUM HOURLY WAGE RATES**

**\*\*INSERT THE CURRENT STATE PREVAILING WAGE RATES FOR PUBLIC WORKS HERE.\*\***

Minimum wage rates for this project have been established by both the State of Nevada and the Federal Government. The higher wage rate for each job classification shall apply.

# STATE OF NEVADA

STEVE SISOLAK  
GOVERNOR

TERRY REYNOLDS  
DIRECTOR

SHANNON M. CHAMBERS  
LABOR COMMISSIONER



OFFICE OF THE LABOR COMMISSIONER  
3300 WEST SAHARA AVENUE, SUITE 225  
LAS VEGAS, NEVADA 89102  
PHONE: (702) 486-2650  
FAX (702) 486-2660

OFFICE OF THE LABOR COMMISSIONER  
1818 COLLEGE PARKWAY, SUITE 102  
CARSON CITY, NV 89706  
PHONE: (775) 684-1890  
FAX (775) 687-6409

## 2022 PREVAILING WAGE RATES SOUTHERN NEVADA RURAL COUNTIES

(ESMERALDA, LINCOLN, AND NYE)

**DATE OF DETERMINATION: October 1, 2021**

**APPLICABLE FOR PUBLIC WORKS PROJECTS OVER \$100,000 BID/AWARDED  
OCTOBER 1, 2021 THROUGH SEPTEMBER 30, 2022**

Pursuant to Nevada Revised Statutes (NRS) section 338.030(9)(a), "If the contract for a public work: (a) Is to be awarded pursuant to a competitive bidding process, the prevailing wages in effect at the time of the opening of the bids for a contract for a public work must be paid until the completion or termination of the contract or for the 36 months immediately following the date on which the bids were opened, whichever is earlier." For contracts not awarded pursuant to competitive bidding, please see NRS section 338.030(9)(b). However, if a project exceeds 36 months new wage rates may apply pursuant to NRS section 338.030(9)(10). Prevailing Wage Rates may be adjusted based on Collective Bargaining Agreements (CBA's) and adjustments to those agreements. (See NRS 338.030)

**PREVAILING WAGE DETERMINATIONS** - NRS 338.030 subsection 7, the wages so determined must be:

- (a) Issued by the Labor Commissioner on October 1 of the odd-numbered year in which the survey was conducted and, except as otherwise provided in subsection 8, remain effective for 2 years after that date; and
- (b) Made available by the Labor Commissioner to any public body which awards a contract for any public work.

Senate Bill 243 passed during the 80th Nevada Legislative Session (2019) and set forth in NRS section 338.025, now requires the Labor Commissioner to calculate the Prevailing Wage Rates by region. NRS section 338.025 Prevailing wage regions. For the purpose of determining the prevailing rate of wages pursuant to NRS section 338.030, four prevailing wage regions are hereby established in this State as follows:

1. The Washoe Prevailing Wage Region consisting of Washoe County;
2. The Northern Rural Prevailing Wage Region consisting of Carson City and the counties of Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Storey, Pershing and White Pine;
3. The Clark Prevailing Wage Region consisting of Clark County; and
4. The Southern Rural Prevailing Wage Region consisting of the counties of Esmeralda, Lincoln and Nye.

**OBJECTIONS TO PREVAILING WAGE DETERMINATIONS** – NRS section 338.030 subsection 2. Objections to the Prevailing Wage Determinations must be submitted within 30 days after the Prevailing Wage Determinations are issued.

Pursuant to NRS section 338.030 subsection 8, the Labor Commissioner will review the prevailing wage rates in each even-numbered year to determine if adjustments should be made.

**As Amendments/Revisions are made to the wage rates, they will be posted on the website for each respective Region. Please review regularly for any Amendments/Revisions that are posted or contact our offices directly for further assistance.**

<a href="#">Air Balance Technician</a>	<a href="#">4</a>
<a href="#">Alarm Installer</a>	<a href="#">5</a>
<a href="#">Boilermaker</a>	<a href="#">7</a>
<a href="#">Bricklayer</a>	<a href="#">8</a>
<a href="#">Carpenter</a>	<a href="#">10</a>
<a href="#">Cement Mason</a>	<a href="#">13</a>
<a href="#">Electrician – Communication Technician</a>	<a href="#">16</a>
<a href="#">Electrician - Lineman</a>	<a href="#">18</a>
<a href="#">Electrician – Neon Sign</a>	<a href="#">20</a>
<a href="#">Electrician - Wireman</a>	<a href="#">21</a>
<a href="#">Elevator Constructor</a>	<a href="#">23</a>
<a href="#">Equipment Greaser</a>	<a href="#">25</a>
<a href="#">Fence Erector</a>	<a href="#">26</a>
<a href="#">Field Soils and Material Tester</a>	<a href="#">27</a>
<a href="#">Flagperson</a>	<a href="#">28</a>
<a href="#">Floorcoverer</a>	<a href="#">29</a>
<a href="#">Glazier</a>	<a href="#">31</a>
<a href="#">Highway Striper</a>	<a href="#">33</a>
<a href="#">Hod Carrier-Brick Mason</a>	<a href="#">34</a>
<a href="#">Hod Carrier – Plasterer Tender</a>	<a href="#">35</a>
<a href="#">Ironworker</a>	<a href="#">37</a>
<a href="#">Laborer</a>	<a href="#">40</a>
<a href="#">Mechanical Insulator</a>	<a href="#">44</a>
<a href="#">Millwright</a>	<a href="#">46</a>
<a href="#">Operating Engineer</a>	<a href="#">48</a>
<a href="#">Operating Engineer – Cranes, Piledriving and Hoisting Equipment</a>	<a href="#">49</a>
<a href="#">Operating Engineer – Surveyor</a>	<a href="#">50</a>
<a href="#">Operating Engineer – Tunnel</a>	<a href="#">50</a>
<a href="#">Painter</a>	<a href="#">53</a>
<a href="#">Piledriver (Non-Equipment)</a>	<a href="#">55</a>
<a href="#">Plasterer</a>	<a href="#">57</a>
<a href="#">Plumber/Pipefitter</a>	<a href="#">59</a>
<a href="#">Refrigeration</a>	<a href="#">61</a>
<a href="#">Roofer</a>	<a href="#">63</a>
<a href="#">Sheet Metal Worker</a>	<a href="#">66</a>
<a href="#">Sprinkler Fitter</a>	<a href="#">67</a>
<a href="#">Taper</a>	<a href="#">68</a>
<a href="#">Tile/Terrazzo Worker/Marble Mason</a>	<a href="#">70</a>
<a href="#">Traffic Barrier Erector</a>	<a href="#">72</a>
<a href="#">Truck Driver</a>	<a href="#">73</a>
<a href="#">Well Driller</a>	<a href="#">74</a>
<b>Group Classification</b>	
<a href="#">Labor Group Classifications</a>	<a href="#">75</a>
<a href="#">Operating Engineers Classifications</a>	<a href="#">78</a>
<a href="#">Truck Driver Group Classifications</a>	<a href="#">89</a>

**NRS section 338.010 subsection (25) “Wages” means:**

- a) The basic hourly rate of pay; and
- b) The amount of pension, health and welfare, vacation and holiday pay, the cost of apprenticeship training or other similar programs or other bona fide fringe benefits which are a benefit to the worker.

**NRS section 338.035 Bona Fide Fringe Benefits** - Discharge of part of obligation of contractor or subcontractor engaged on public work to pay wages by making certain contributions in name of workman. “Bona fide fringe benefit” means a benefit in the form of a contribution that is made not less frequently than monthly to an independent third party pursuant to a fund, plan or program: (a) Which is established for the sole and exclusive benefit of a worker and his or her family and dependents; and (b) For which none of the assets will revert to, or otherwise be credited to, any contributing employer or sponsor of the fund, plan or program. The term includes, without limitation, benefits for a worker that are determined pursuant to a collective bargaining agreement and included in the determination of the prevailing wage by the Labor Commissioner pursuant to NRS section 338.030.

Please see NRS sections 338.010, 338.020, and 338.035 and Nevada Administrative Code (NAC) sections 338.0097 and 338.092 through 338.100 for further details on “Bona fide fringe benefits” and reporting requirements and exceptions.

**Job Descriptions for Recognized Classes of Workers**

Regarding job descriptions for public works projects, please take notice of the following:

1. The job description links have been redacted to include ONLY the scope of work for the craft.
2. Pursuant to NAC section 338.0095(1)(a) - A worker employed on a public work must be paid the applicable prevailing rate of wage for the type of work that the worker actually performs on the public work and in accordance with the recognized class of the worker.
3. The work description for a particular class is not intended to be jurisdictional in scope.
4. Any person who believes that a type of work is not classified, or who otherwise needs clarification pertaining to the recognized classes or job descriptions, shall contact the Labor Commissioner in writing for a determination of the applicable classification and pay rate for a particular type of work.
5. The job descriptions set forth or referenced herein supersede any, and all descriptions previously agreed upon by the Labor Commissioner in any settlement agreements or stipulations arising out of contested matters.
6. The following specific provisions, where applicable, shall prevail over any general provisions of the job descriptions:
  - Amendments to the prevailing wage determinations.
  - Group Classifications and/or descriptions recognized by the Labor Commissioner and included with wage determinations for a particular type of work in a particular county.

**Zone Rates**

The zone rate has been added to each applicable craft.

**Premium Pay** Premium pay for hours worked in excess of a shift of 8 hours or 12 hours, or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday.

Craft: AIR BALANCE TECHNICIAN (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Air Balance Technician Journeyman.....	81.48
Air Balance Technician-Foreman.....	86.65
Air Balance Technician-General Foreman.....	91.81

**ADD ZONE RATE**

In addition to SHEET METAL WORKER rates add the applicable amounts per hour, calculated on a radius from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 30 miles	\$0.00
Zone 2	31 to 50 miles	\$2.50
Zone 3	51 to 100 miles	\$3.50 (including Laughlin)
Zone 4	Over 100 miles	\$5.00

**ADD PREMIUM PAY**

All work performed outside the regular working hours and performed during the regular work week shall be at one and one-half (1½) times the straight time rate of pay. Sunday and Holidays shall be paid at double (2) times the straight time of pay.

**RECOGNIZED HOLIDAYS**

New Year’s Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday following Thanksgiving Day, Christmas Eve Day, Christmas Day, or days locally observed as such, and Sunday shall be recognized as holidays.

**JOB DESCRIPTION:** Excerpt from Sheet Metal Local 88 Collective Bargaining Agreement

(a) Manufacture, fabrication, assembling, handling, erection, installation, dismantling, conditioning, adjustment, alteration, repairing and servicing of all ferrous or nonferrous metal work and all other materials used in lieu thereof and of all HVAC systems, air veyor systems, exhaust systems, and air-handling systems regardless of material used including the setting of all equipment and all reinforcements in connection therewith; (b) all lagging over insulation and all duct lining; (c) testing and balancing of all air handling equipment and duct work; (d) the preparation of all shop and field sketches whether manually drawn or computer assisted used in fabrication and erection, including those taken from original architectural and engineering drawings or sketches; (e) metal exterior wall systems, metal roofing and underlayment regardless of material used; (f) any and all auditing, commissioning and testing, of all HVAC in connection with a building rating methods; detailing, shop fabrication, field installation and performance oriented tasks and (g) all other work included in the jurisdictional claims of International Association of Sheet Metal, Air, Rail and Transportation Workers.

Craft: ALARM INSTALLER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

See Amendment 4 Job Description

Alarm Installer.....	71.92
Alarm Installer-Foreman.....	77.60
Alarm Installer-General Foreman.....	83.39

**ADD ZONE RATE**

In addition to Alarm Installer rates add the applicable amounts per hour, based on a radius from the intersection of Main and Fremont in Las Vegas:

Zone 1	0 to 25 miles	\$0.00
Zone 2	25 to 55 miles	\$2.50
Zone 3	56 to 85 miles	\$3.50
Zone 4	86 miles and over	\$4.50

**ADD PREMIUM PAY**

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours worked in one day or a shift.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Saturday, Sunday, or Holidays from midnight to midnight.
3. For all hours worked by an employee in a week in which the employer has not established a regular five-day work week daily shift employee.

**SHIFT DIFFERENTIAL**

1. Second Shift (Swing) will be paid a premium of 15% for all hours worked.
2. Third Shift (Graveyard) will be paid a premium of 30% for all hours worked.

**HIGH TIME**

All employees working within 5 feet of a direct fall of sixty (60) feet or more shall be paid an additional one-half (1/2) the straight time hourly rate.

**FULL PROTECTIVE GEAR**

Employees required to wear both full protective clothing (coveralls, bootees, gloves, caps, etc.) and full face respirator shall receive ten percent (10%) above their rate of pay.

**RECOGNIZED HOLIDAYS**

New Year’s Day, Martin Luther King Holiday\*, Washington’s Birthday (President’s Day), Memorial Day, Independence Day, Labor Day, Nevada Day\*, Veteran’s Day, Thanksgiving Day, Friday following Thanksgiving Day, Christmas Day

**JOB DESCRIPTION:** Excerpt from Agreement between NECA and Local Union 357, IBEW

See Amendment 4 Job Description



Installation, maintenance, service and testing of all apparatus, fire alarm systems and interconnection cables, including fiber optics and/or ethereal aid associated with systems utilizing the transmission including ultra-high frequencies, video, and digital for the commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background music, intercom and telephone interconnect, inventory control systems, microwave transmission, Halon systems, CO2, FM200, intergen, also all other suppression systems, multi-media, multiplex, PCM (Pulse Code Modulation), SCADA (Supervisory Control and Data Acquisition), nurse call system, radio page, school intercom and sound, burglar alarms and low voltage master clock systems, and data systems that transmit or receive information and control and all other systems which are intrinsic to the above listed systems.

Installations of raceway systems are not covered under the terms of this Agreement (excluding Ladder Rack for the purpose of the above listed systems). Chases and/or nipples (not to exceed 10 ft.) may be installed on open wiring systems. Removal and discarding of all packaging and waste materials related to the above scope of work, excluding demolition waste.

### **Senior Technician**

~~Pull cable, install and trim devices, terminate loops, circuits or other data gathering points. Terminate energized main control panels, racks or other head end equipment as well as test all circuits from the field to the main control panels and/or equipment. A senior technician will supervise and coordinate all work under this Agreement.~~

### **Installer Technician / Installer Technician**

~~Pull cable, trim devices, terminate loops, circuits or other data gathering points. Terminate non-energized main control panels, racks, or other head end equipment, as well as test all circuits from the field device to the non-energized panels and / or equipment. The Installer Technicians and Installer Technician Apprentices shall not energize, or work on any energized circuits, loops or equipment, except under the direction of the onsite Senior Technician.~~

### **See Amendment 4 – Job Description**

Craft: BOILERMAKER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Boilermaker.....65.94

**BOILERMAKER**, includes but is not limited to:

1. Constructing, assembling, maintaining and repairing stationary steam boilers and boiler house auxiliaries;
2. Aligning structures or plate sections to assemble boiler frame tanks or vats;
3. Assisting in the testing of assembled vessels, directing cleaning of boilers and boiler furnaces;
4. Inspecting and repairing boiler fittings, including, without limitation, safety valves, regulators, automatic-control mechanisms, water columns and auxiliary machines.

**ADD PREMIUM PAY**

Premium pay for hours worked in excess of a shift of 8 hours or 12 hours or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday.

Craft: BRICKLAYER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Bricklayer.....61.98

**ADD ZONE PAY**

In addition to BRICKLAYER rates add the applicable amounts per hour, calculated based on a road of over fifty (50) miles from the City Hall of Las Vegas, Nevada:

Zone 1	0-40 Miles	\$0.00
Zone 2	41-50 Miles	\$2.50
Zone 3	51-70 Miles	\$5.00
Zone 4	Over 70 Miles	\$7.50

The area within the city limits of Boulder City and Primm, Nevada shall be considered free zones.

**ADD PREMIUM PAY**

**Section A.**

Hours. The standard workday shall consist of eight (8) continuous hours of work between the hours of 5:30 a.m. and 4:30 p.m.

**Section B.**

Overtime All work in excess forty (40) hours during the established work week shall be paid at the rate of one and one half (1-1/2) times the hourly base wage rate in effect. Employees will be paid one and one-half (1-1/2) times the hourly wage rate for all hours worked over eight (8) in a single day, and double time (2x) after ten (10) hours in a single day.

1. Employees will be paid double time for hours worked on Union recognized Holidays.
2. Employees will be paid double time on Sundays.
3. Work performed on Saturday will be paid at one and one-half (1-1/2) times the regular wage rate, in accordance with Article XVII, Section D. Work performed on Saturdays in excess of eight (8) hours shall be paid at double the applicable hourly rate.

**Section C.**

1. The first shift shall be the regular day shift insofar as computing wage payments is concerned, and the first day shift shall work a regular eight-hour shift, with a one half-hour unpaid lunch period midway through the shift. The normal starting time for the first shift shall be between 5:30-10:00 a.m.
2. If two work shifts are established, the second shift shall consist of eight (8) hours of continuous work, with a one half-hour unpaid lunch period midway through the shift. Employees working on the second shift shall receive eight hours times the basic straight time rate plus an additional fifty cents (\$.50) per hour for each of those eight hours.
3. If three work shifts are established, the third shift shall consist of seven hours of continuous work, plus one half-hour unpaid lunch period midway through the shift. Employees working on the third shift shall receive the basic straight time rate plus three dollars and twenty-five cents (\$3.25) for each of those seven hours.

4. Time worked in excess of seven hours on the third shift shall be paid at the appropriate overtime rate.

### **RECOGNIZED HOLIDAYS**

Holidays. The Employer agrees to recognize the following holidays: New Year's Day, Presidents' Day, Memorial Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day, Friday following Thanksgiving Day, and Christmas Day. Any holiday falling on a Sunday will be observed on the Monday following, and any holiday falling on a Saturday will be observed on the preceding Friday.

**Job Descriptions** Excerpt from Bricklayer and Allied Craftworkers Local Union No. 13 Collective Bargaining Agreement

Brick Masonry shall consist of, but not be limited to, the following work procedures and installation of the following materials:

A. The laying of brick made from any material in, under or upon any structure or form of work where bricks are used, whether in the ground, or over its surface, or beneath water; in commercial and residential buildings, rolling mills, iron works, blast or smelter furnaces, lime or brick kilns; in mines or fortifications, and in all underground work, such as sewers, telegraph, electric and telephone conduits; including the installation of substitutes for brick such as all carbon materials, Karbate, Impervite or mixtures, all acid resistant materials, all terra cotta and porcelain materials, except where the foregoing materials are manufactured to substitute for tile as provided for under the category of Section 8, C, of this Code.

B. All cutting of joints, pointing, cleaning and cutting of brick walls, fireproofing, block-arching, terra cotta cutting and setting, the laying and cutting of all tile plaster, mineral-wool, cork blocks and glass masonry, or any substitute for above materials, the laying of all pipe sewers or water mains and the filling of all joints on the same when such sewers or conduits are of any vitreous material, burnt clay or cement, or any substitute material used for the above purpose, the cutting, rubbing and grinding of all kinds of brick and the setting of all cut stone trimmings on brick buildings, and the preparation and erection of plastic, castables or any refractory materials.

C. Cleaning, grouting, pointing, and other work necessary to achieve and complete the work under the foregoing categories; all waterproofing and black mastic waterproofing, silicone and/or substitutes sandwiched between masonry units in the interior of the wall.

D. All terra cotta called unit tile in sizes over 6"x12" regardless of method of installation; all quarry tile over 9"x9"x1 1/4" in size; split brick or quarry tile or similar material if bedded and jointed with one operation. The bedding, jointing, and pointing of the above materials shall be the work of the craft installing same.

E. All burnt clay extruded cellular products regardless of trade name or method of installation when used as a veneer on structures; all clay products known as terra cotta tile, unit tile, ceramic veneer and machine-made terra cotta and like materials in sizes larger than 6"x12", regardless of the method of installation. Where the preponderance of material to be installed is of the above size, and when material of lesser sizes is to be used in connection therewith, the bricklayers shall install all such materials. Brick paving comes under bricklayers' trade classification.

F. The preparation, setup, calibration, operation, cleaning, and routine maintenance of any mechanical devices or robotics used to install masonry units and materials.

**Craft: CARPENTER (Union Rate)**

**Prevailing wage rates include the base rate as well as all applicable fringes**

Carpenter Journeyman.....	67.61
Carpenter Welder .....	68.61
Carpenter Foreman.....	71.84
Carpenter General Foreman.....	76.49

**ADD ZONE RATE**

In addition to CARPENTER rates add the applicable amounts per hour, calculated from Maryland Parkway and Charleston Boulevard, Las Vegas:

Zone 1	0 to 40 Miles	\$0.00
Zone 2	40 to 60 Miles	\$2.50
Zone 3	Over 60 Miles	\$4.25
	Colorado River Region	\$2.00

**ADD PREMIUM PAY**

First two (2) hours outside the regular constituted shift shall be at the rate of time and one-half (1½X).

Saturdays up to the first ten (10) hours shall be at the rate of time and one-half (1½X). All additional hours and Sundays and holidays shall be the rate of double time (2X). When working on Sundays and holidays, there will be one dollar and fifty cents (\$1.50) per hour additional paid to Pension Annuity.

**RECOGNIZED HOLIDAYS**

New Year's Day, Washington's Birthday (President's Day), Memorial Day, 4th of July, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day.

**JOB DESCRIPTION** Excerpt from Southwest Regional Council of Carpenters and Affiliated Local Unions Master Labor Agreement

200. Building, heavy highway, and engineering construction, including the construction of, in whole or in part, or improvement or modification thereof, including any structure or operations which are incidental thereto, the assembly, operation, maintenance and repair of equipment, and facilities, used in connection with the performance of the aforementioned work and services and including without limitation the following types or classes of work.

201. Street and highway work, elevated highways, viaducts, bridges, abutments, retaining walls, subways, water supply, water development, reclamation, irrigation, draining and flood control projects, water mains, pipelines, sanitation and sewer projects, dams, aqueducts, canals, reservoirs, intakes, channels, levees, dikes, revetments, foundations, pile driving, piers, locks, dikes rivers and harbor projects, breakwaters, jetties, dredging, tunnels and building inspection. The handling, cleaning, erection, installation and dismantling of machinery, equipment and all work on robotics, included but not limited to rigging, handling, installation, maintenance, programming and the use of all stationary and/or portable robots. This shall include the use of all robots used in any industry, including the nuclear field.

202. The construction, erection, alteration, repair, modification, demolition, addition or improvement, in whole or in part, of any building structure, including oil or gas refineries and incidental structures,

solar energy installations and appurtenances which are incidental thereto, or the installation, operation, maintenance and repair equipment, and other facilities used in connection with the performance of such building construction except where such structures are an incidental or supplemental part of highway and engineering construction, as defined in this Section.

203. The Contractor shall construct all wood panel forms, and frame walls to be used on the jobsite for a specific project and such work shall be performed only by carpenters under the terms of this Agreement.

204. Any wood panel forms that are constructed by the carpenters under the provisions of this Agreement may be reused on any jobsite by any Contractor.

205. Any modifications of wood panel forms shall be performed only under the provisions of this Agreement.

206. The provisions of this Agreement shall apply to all standard manufactured commercial brand forms for the placement of concrete where field assembly and disassembly is required. The installation, stripping, and disassembly of forms, which may be reused on any jobsite by any contractor and shoring, will be in accordance with the provisions of this Agreement.

207. This Agreement shall cover all work in connection with Hico and similar type beams including, but not limited to the unloading, carrying, spotting and stacking the initial delivery, the installation, and stripping and removing of Hico shores.

208. This Agreement shall cover all work in connection with Plywood Decking including, but not limited to, the carrying, stacking, installation, and removal.

209. This Agreement shall cover all work in connection with Beam Sides and Beam Soffits, including, but not limited to the cutting, setting, removal, relocation and stacking of Beam Sides and Soffits, bracing and pads.

210. This Agreement shall cover all concrete form work, including, but not limited to, the fabrication, constructing, placing, erection, rigging and hoisting, stripping and removing of all forms and the operation of the fork lift, Leod, Pettibone or mobile equipment to perform all of the above work. This agreement also covers concrete floor polishing.

211. This Agreement shall cover all work in connection with precast, prestressed concrete stone or fabricated units, including, but not limited to, lightweight precast, GFRC, Stone Panels (excluding solid Marble and Granite), Dryvit Exterior Insulating Finish Systems, (EFIS) or any other system of panels that is attached to the interior or exterior of any building or structure; any pre-fabricated concrete stone or imitation stone included as part of the exterior wall system; and any prestressed or precast structural framing members, columns, lintels, and beams and metal studs in reference to all the above work. This Agreement shall include theming work utilizing the materials mentioned above. This Agreement shall cover all types of exhibit work traditionally performed by carpenters.

212. The laying out of all work and operation of all tools and equipment for cutting, handling, assembling and fabrication whether performed at the jobsite or a panelization compound of any and all structural members, including but not limited to those required for pre-fabricated flat curtain wall panels and continuous aesthetic trims or "pop-outs", i.e., cornice work and/or horizontal and vertical banding of any type where such metal framing must be added (to the flat panel) to minimize overall EFIS foam thicknesses and thereby comply with local codes for EFIS curtain walls.

213. Pre-fabrication of materials outside this agreement is permissible under the following situations:

213.1 Custom or specialty non-linear trims, such as ornate column bases, capitals, medallions, and so forth may be all or partially framed outside this agreement if the framing itself is required to affect the assembly of applicable profiled elements thereon for the purpose of shipment to the jobsite; and also, where EPS (foam) profiles or elements are desirable to compete with more costly exterior elements such as GFRC and FRP.

214. This Agreement shall cover all work in connection with tilt-up slabs, including but not limited to, benchmarks, lay out, setting of all forms, block outs, metal door and window jambs, templates for bolts, lift points, knee braces, all stripping of forms (whether or not to be reused), rigging, setting, plumbing, and lining, welding, drilling, cleaning, ledger bolts, setting ledgers, setting of expansion joints and caulking. Also, to include forms for stairs and loading docks (setting and stripping), installation of all doors including roll-up, installation of laminated beams or precast structures, and operation of the forklift to perform all of the above work.

215. This Agreement shall cover all work in connection with the hoisting of materials, which are to be used by the carpenters including but not limited to the rigging, guiding, and handling.

216. This Agreement shall cover all work in connection with self-supporting scaffolds over fourteen (14) feet in height or scaffold built for special purposes including, but not limited to, handling, building, erecting and disassembling. Building, erecting and dismantling of any and all motorized or mechanical mast climbing and swinging stage type scaffolds for multi-craft use. Scaffolds erected and dismantled by the scaffold contractors, shall be the work of the carpenters.

217. This Agreement shall cover all work in connection with office modular furniture systems including, but not limited to the unloading by any means, stockpiling, distribution to point of, erection, carrying, handling, transportation, uncrating, installation, cleaning and/or staging of all office, commercial, industrial, institutional, and hotel furniture, furniture systems, furnishing, etc., including (regardless of their materials or method or manner of installation, attachment or connection). Also included will be layout work including the use of level, transit and any other instrument or tool (or adaptable tool) required for the work herein described.

218. This Agreement shall cover asbestos abatement and other work involving the removal of hazardous materials. In the event this work is subcontracted by the Contractor, (Section III shall not apply as stated below). Section III shall not apply but the Contractor agrees to utilize his best efforts to ensure that the work is done by a contractor signatory to an agreement with the Union, provided suitable and competitive signatory contractors are available.

219. Repairs necessitated by defects of material or workmanship or adjustments of newly purchased and/or installed equipment or machinery will not be subject to this Agreement when such repairs and/or adjustments are made by the manufacturer thereof or his agents or employees pursuant to the terms of a manufacturer's guarantee and the Union will not hamper such manufacturer or his agents or employees on such exempted work.

Craft: CEMENT MASON (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Cement Mason.....	61.48
Cement Mason – Foreman.....	65.86
Cement Mason – General Foreman .....	68.04

**ADD ZONE RATE**

In addition to CEMENT MASON rates add the applicable amounts per hour, calculated based on a radius from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 50 Miles	\$0.00
Zone 2	Over 50 Miles	\$4.00

**ADD PREMIUM PAY**

**OVERTIME** – The first two (2) hours worked outside the regularly constituted shift shall be at the rate of time and one-half (1 ½). All additional hours shall be at the rate of double time (2x). On Saturday work, the first ten (10) hours shall be at time and one-half (1 ½) and all additional hours at double time (2x). Sundays and Holidays shall be at double time (2x). All hours worked after ten (10) hours are at the rate of double time (2x) Monday through Saturday.

For employees on a second shift, all hours worked in excess of seven and one-half (7 ½) hours shall be paid for at the appropriate overtime rate as described above. For employees on a third shift, all hours worked in excess of seven (7) hours shall be paid for at the appropriate overtime rate as described above.

**RECOGNIZED HOLIDAYS**

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day and the following Friday following Thanksgiving Day, and Christmas

**JOB DESCRIPTIONS**

1. All building construction, including but not limited to the construction, erection, alteration, repair, modification, demolition, addition, or improvement in whole or in part of any building structure.
2. All heavy, highway and engineering construction, including but not limited to construction, improvement, modification, demolition, of all or any part of streets and highways (including sidewalks, curbs and gutters), bridges, viaducts, rail roads, tunnels, airports, water supply, irrigation, flood control and drainage systems, sewers and sanitation projects, dams, power houses, refineries, aqueducts, canals, river and harbor projects, wharves, docks, breakwaters, jetties, quarrying of breakwater or rip-rap stone, or operation incidental to such heavy construction work.
3. All concrete construction such as buildings, bridges, silos, elevators, smoke stacks, curbs and gutters, sidewalks, streets and roads, paving, alleys and roofs, of mass or reinforced concrete slabs and all flat surfaces of cement, rock asphalt, the placing, pouring and spreading and finishing of all types of bituminous concrete including all types of asphalt floors and pavements, the operation and control of all types of Vacuum Mats used in the drying of cement floors in



preparing same for finish, the operations of laser screeds, roller screeds and any other mechanical screeds, all power driven floats and troweling machines shall be that of the Cement Mason. Cement Masons shall perform all mastic flooring work, whether laid free handed or in pre-cast form on the job; otherwise known as asphalt or mastic, tile, and all other types of resilient floor covering.

4. Cement Masons shall perform the placing with material hose or chute or other device, screeding and finishing of all concrete and pervious concrete surfaces (including gunite, shotcrete and the handling of the cement gun or nozzle), underlayment, overlayers, the stamping, coloring, sealing, curing, waxing, broadcasting of colored stone chips, powdered steel, or coloring powder on concrete, including decorative finishes such as stenciling, staining, dyeing, densification, concrete polishing, sand blasting, grinding and the washing of all concrete construction. The forming and construction involved with any concrete countertop work (including additives and mosaics such as but not limited to glass and specialty aggregates and exposed aggregate). The use of any color pigment when mixed with cement base material including all specialty finishes such as acids staining, alcohol stain, etc., in any other form; mosaic and nail coat whether done by brush, broom, trowel, float, or any other process including operation of machine for scoring floors, or any purpose they may be used for in connection with Cement Masons' trade. All custom and specialty imitation finishes, including but not limited to all ceramic materials, custom rock, brick and block veneer, limitation marble, stone, wood and any other limitation theme. All concrete repair, restoration and inspection work whether architectural or structural, including but not limited to coatings of cement and epoxy coatings of cement based, epoxy and urethanes, injections of epoxies and other repair materials and the use of fiber wrap and other materials used for the structural repair and renovation. Caulking of any type will be the work of the cement mason. Cement Masons shall have jurisdiction over the setting, building, fabricating and installation of all forms, perimeter forms, screeds, bulkheads, batter boards, pour strips, camfer strips for the purpose of containing, shaping or molding concrete, grout, epoxy grout, or any exotic or cement based material on a given line, shape or grade regardless of the composition of the form material. Formwork shall include but not be limited to foundations, sidewalks, curbs and gutters, steps, catch basin and drain inlets, walks, decks, stoops, approaches, etc. and shall include the preparation and setting of all screeds or lines and the use of the level, laser level, transit and builders level in connection with the forming, placement and finishing of all concrete and cement based surfaces or any other method used to determine grade elevation or line. Setting lines for concrete road machines and curb & gutter machines.

5. The mixing, placing, rodding, spreading and finishing of all top materials, sills, coping, steps, stairs, and risers and running all cement, epoxies, and plastic material shall be the work of Cement Masons, all preparatory work on concrete construction to be finished, rubbed, such as sand blasting, cutting of nails, wires, wall ties, etc. All concrete repair processes including below grade and underground including the repair or modification in horizontal or vertical pipe, all vault pouring, pipe banding and shafting, patching, brushing, chipping and bush-hammering, rubbing or grinding if done by machine or hand, diamond or carborundum stone of all concrete construction, setting of all strips, screeds, stakes and grades and curb forms and all glass set in cement. The pointing and patching and caulking around all steel or metal window frames that touch concrete and all concrete segments such as tilt wall and pre-cast. The laying and finishing of Gypsum Material Roof. All dry packing, damp packing, pouring of grout, grouting and the pouring, mixing, handling, placing and pumping of all liquid grouts, epoxy grouts, damming or backer rod, caulking including all prep work for caulking, forming and operation of pressure pots in connection with all grouting operations as well as any finishing where required, and finishing in connection with setting all machinery such as engines, pumps, generators, air compressors, tanks, base plates, column plates, pipe restraints and so forth, which is set on concrete foundations. Grouting of window and door frames shall be the work of the Cement Mason. The saw cutting, scoring of joints, architectural cuts, the use of

soft cut machines for construction joints , expansion or control or the cutting of any line that will be finished back to in old or new concrete shall continue to be the work of the Cement Mason.

6. All prefabricated and prestressed concrete construction on the job site and in the shop, including the supervision of same, such as sidewalks, steps, floor slabs, beams, joists, walls and columns, also the screeding, finishing, rubbing, grouting, pointing, patching and paint prep of same. The finishing of all concrete surfaces by sandblasting, the washout method, bush hammering or any other method and the sealing of these same surfaces shall be the work of the Cement Mason.

7. The curing of finished concrete, pervious concrete and grouting, wherever necessary, whether by chemical compounds or otherwise, shall be part of the jurisdiction of the Cement Mason.

8. All scarifying of concrete and underlayment/overlayments, for any purpose including but not limited to bush hammering, needle grinding, water blasting, air blasting, bead blasting and sanding.

9. The placing, spreading, screeding, darbying, trowel finishing of all types of magnesium oxychloride cement composition floors, shall be the work of the Cement Mason: including all types of oxychloride granolithic, resinous, epoxy, m ma (or similar product) and terrazzo composition floors, hand grinding or machine grinding; the preparation of all sub-floor surfaces; the mixing, handling and application of any and all bonding agents by any means or methods; bonding; the preparation and all installation of ground or base courses, steps and cove base. All magnesite composition installation work of the OPCMIA shall be done under the supervision of a competent and qualified Cement Mason.

10. Cement Masons claim the waterproofing of all work included in their jurisdiction , such as Thoroseal, Ironite, Plaster weld and any similar products, regard less of the tools used or the method of application, or color of materials used, and regard less of the type of base these materials may be applied to.

11. Cement Masons shall also have jurisdiction over all work or processes which represent technological change, replacement, modification or substitution for the work described above. In addition, Cement Masons shall perform any and all work and use any and all new materials or techniques involved in cement construction including but not limited to what is known as green or sustainable construction technology.

Craft: ELECTRICIAN COMMUNICATION TECHNICIAN (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Installer/Technician.....	51.37
Senior Installer/Technician.....	71.92
Installer/Technician Foreman.....	77.60
Installer/Technician General Foreman .....	83.39

**ADD ZONE RATE**

In addition to ELECTRICIAN-Communication Technician, rates, add the applicable amounts per hour, calculated based on a radius from City Hall of Las Vegas:

Zone 1	0 to 25 miles	\$0.00
Zone 2	25 to 55 miles	\$2.50
Zone 3	56 to 85 miles	\$3.50
Zone 4	86 miles and over	\$4.50

**ADD PREMIUM PAY**

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours worked in one day or a shift.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Saturday, Sunday, or Holidays from midnight to midnight.
3. For all hours worked by an employee in a week in which the employer has not established a regular five-day work week daily shift employee.

**SHIFT DIFFERENTIAL**

1. Second Shift (Swing) will be paid a premium of 15% for all hours worked.
2. Third Shift (Graveyard) will be paid a premium of 30% for all hours worked.

**HIGH TIME**

1. All employees working within 5 feet of a direct fall of sixty (60) feet or more shall be paid an additional one-half (1/2) the straight time hourly rate.

**FULL PROTECTIVE GEAR**

1. Employees required to wear both full protective clothing (coveralls, bootees, gloves, caps, etc.) and full face respirator shall receive ten percent (10%) above their rate of pay.

**RECOGNIZED HOLIDAYS**

New Year's Day, Martin Luther King Holiday, Washington's Birthday (President's Day), Memorial Day, Independence Day, Labor Day, Nevada Day, Veteran's Day, Thanksgiving Day, Friday following Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement between NECA and Local Union 357, IBEW

Installation, maintenance, service and testing of all apparatus, fire alarm systems and interconnection cables, including fiber optics and/or ethereal aid associated with systems utilizing the transmission including ultra-high frequencies, video, and digital for the commercial, education, security and

entertainment purposes for the following: TV monitoring and surveillance, background music, intercom and telephone interconnect, inventory control systems, microwave transmission, Halon systems, CO2, FM200, intergen, also all other suppression systems, multi-media, multiplex, PCM (Pulse Code Modulation), SCADA (Supervisory Control and Data Acquisition), nurse call system, radio page, school intercom and sound, burglar alarms and low voltage master clock systems, and data systems that transmit or receive information and control and all other systems which are intrinsic to the above listed systems.

Installations of raceway systems are not covered under the terms of this Agreement (excluding Ladder Rack for the purpose of the above listed systems). Chases and/or nipples (not to exceed 10 ft.) may be installed on open wiring systems. Removal and discarding of all packaging and waste materials related to the above scope of work, excluding demolition waste.

**Senior Technician**

Pull cable, install and trim devices, terminate loops, circuits or other data gathering points. Terminate energized main control panels, racks or other head end equipment as well as test all circuits from the field to the main control panels and/or equipment. A senior technician will supervise and coordinate all work under this Agreement.

**Installer Technician / Installer Technician**

Pull cable, trim devices, terminate loops, circuits or other data gathering points. Terminate non-energized main control panels, racks, or other head end equipment, as well as test all circuits from the field device to the non-energized panels and / or equipment. The Installer Technicians and Installer Technician Apprentices shall not energize, or work on any energized circuits, loops or equipment, except under the direction of the onsite Senior Technician.

Craft: ELECTRICIAN LINEMAN/GROUNDMAN/HEAVY EQUIPMENT OPERATOR  
(Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Groundman.....	47.62
Lineman.....	71.60
Foreman.....	78.38
General Foreman.....	85.39
Heavy Equipment Operator.....	58.42

**ADD PREMIUM PAY**

All work performed on the above holidays and Sunday shall be paid at double (2x) the straight time rate of pay.

(a) All work performed over ten (10) hours on Saturday shall be paid at double (2x) the straight time rate of pay. This does not apply to any work performed under a customer-controlled wage package.

(b) All worked performed after twelve (12) consecutive hours shall be paid at double (2x) the straight time rate of pay. This does not apply to any work performed under a customer-controlled wage package.

(c) All work performed outside of the regular scheduled workday, other than as described above, shall be paid at the rate of one and one-half times (1½ x) the straight time rate of pay.

**RECOGNIZED HOLIDAYS**

New Year's Day, Martin Luther King Holiday, Washington's Birthday (President's Day), Memorial Day, Independence Day, Labor Day, Nevada Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement between Western Line Contractors NECA and Local Union 396, IBEW

Outside, overhead and underground construction and maintenance work on electrical transmission lines, switch yards, substations and distribution systems which shall include:

1. Pole line work (whether built of wood, metal or other material): the digging and back-filling of holes for poles or anchors (by hand or mechanical equipment); the loading or unloading, handling, sorting and moving of materials; the assembly or erection of all materials including the guying, stringing of conductors and fiber optics or other work necessary on through to the ultimate completion of such pole work.

2. Steel or metal structures used for the purpose of carrying electrical wire, conductors, or equipment (this includes transmission towers, outdoor substations, switch racks, or similar electrical structures); the moving of men, tools or equipment; the loading or unloading, handling, sorting and moving of materials; the assembly and erection of all materials used on the job site, including the assembly of the grillage and foundations, on through to the ultimate completion of such structures. Work covered shall include the grounding of all such structures except the bonding of stub-angle to rebar cage; the stringing and installation of wires, cables and insulators or other electrical equipment suspended from structure; also the handling and placing of transformers or O.C.B.'s and other related electrical equipment.

The moving of men, tools or equipment; the loading or unloading, handling, sorting and moving of materials; the assembly of all electrical materials on race-ways such as ducts, shall be performed by workmen under the Agreement. This shall also include CIC (cable in conduit), CC (coillable conduit), the placing of fish wire, the pulling of cables or wires through such race-ways, installing and making up of termination and the splicing of such conductors.

Street lighting systems where such work properly comes under the outside jurisdiction shall be handled in the same manner as pole line construction.

Installing and maintaining the catenary and trolley work and bonding of rails shall be handled in the same manner as pole line, and steel construction.

In connection with all of the above items, it is understood the scope of this Agreement shall include not only new installation work but shall also govern the repair, maintenance or dismantling of such structures, lines or equipment; the handling and operating of all equipment used to transport men, tools and/or materials on the job site as well as the equipment used to move, raise or place materials used in the Outside Branch of the Electrical Industry shall be performed by workmen under this Agreement unless otherwise excluded herein.

Craft: ELECTRICIAN – NEON SIGN  
(Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Electrician Neon Sign Journeyman.....	54.88
Electrician Neon Sign Foreman.....	55.88

**ADD PREMIUM PAY**

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift, either before or after the shift.
2. For up to 8 hours worked on Saturday from midnight to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over eleven (11) hours in one day or shift, Monday thru Friday.
2. For all hours worked in excess of 8 hours on Saturday, Sundays or Holidays.

**SHIFT DIFFERENTIAL**

Second Shift (Swing) will be an additional \$0.75 cents per hour.

Third Shift (Graveyard) will be an additional \$1.00 per hour.

**HIGH TIME (Working at heights)**

1. All employees working at height of 65 feet and subject to a direct fall shall be paid an additional \$2.25 per hour in addition to their normal rate for a minimum of 2 hours.
2. All employees working at height of 125 feet or when repelling below 65 feet shall be paid an additional \$3.25 per hour in addition to their normal rate for a minimum of 4 hours.

**FOREMAN**

1. First employee on the job must have a CDL and Welder certification and shall be paid \$1.00 per hour in addition to their normal rate of pay.
2. When supervising (5) or more workers shall be paid an additional \$1.25 per hour.

**RECOGNIZED HOLIDAYS**

New Year’s Day, Martin Luther King Holiday, Washington’s Birthday (President’s Day), Memorial Day, Independence Day, Labor Day, Nevada Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:**

includes but is not limited to:

1. Installing, servicing and repairing plastic, neon and illuminated signs;
2. Ascending ladders or operating hydraulic or electric hoist to install, service, or examine sign to determine cause of malfunction;
3. Wiring, rewiring or removing defective parts and installing new parts using electrician's tools;
4. Removing sign or part of sign for repairs, such as structural fabrication, scroll repair, or transformer repair;

Craft: ELECTRICIAN WIREMAN (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Wireman.....	72.28
Wireman-Cable Splicer.....	72.79
Wireman Forman.....	78.00
Wireman General Foreman.....	83.74

**ADD ZONE RATE**

In addition to ELECTRICIAN-Wireman, rates, add the applicable amounts per hour, calculated based on a radius from City Hall of Las Vegas:

Zone 1	0 to 25 miles	\$0.00
Zone 2	25 to 55 miles	\$2.50
Zone 3	56 to 85 miles	\$3.50
Zone 4	86 miles and over	\$4.50

**ADD PREMIUM PAY**

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours worked in one day or a shift.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Saturday, Sunday, or Holidays from midnight to midnight.
3. For all hours worked by an employee in a week in which the employer has not established a regular five-day work week daily shift employee.

**SHIFT DIFFERENTIAL**

1. Second Shift (Swing) will be paid a premium of 15% for all hours worked.
2. Third Shift (Graveyard) will be paid a premium of 30% for all hours worked.

**HIGH TIME**

1. All employees working within 5 feet of a direct fall of sixty (60) feet or more shall be paid an additional one-half (1/2) the straight time hourly rate.

**FULL PROTECTIVE GEAR**

1. Employees required to wear both full protective clothing (coveralls, bootees, gloves, caps, etc.) and full face respirator shall receive ten percent (10%) above their rate of pay.

**WELDERS**

1. Wiremen when welding shall be paid a premium of five percent 5% over their normal rate of pay.

**RECOGNIZED HOLIDAYS**

New Year's Day, Martin Luther King Holiday, Washington's Birthday (President's Day), Memorial Day, Independence Day, Labor Day, Nevada Day, Veteran's Day, Thanksgiving Day, Friday following Thanksgiving Day, Christmas Day.



**JOB DESCRIPTION:** Excerpt from Agreement between NECA and Local Union 357, IBEW

Workmen employed under the terms of this Agreement shall perform all electrical electronic construction, installation or erection work and all electrical-electronic maintenance thereon, including the final running tests.

This shall include the installation and maintenance of temporary wiring and the installation of all electrical lighting, heating and power equipment.

This agreement covers the installation, construction and maintenance of any electrical system that is covered by the National Electrical Code. The contractor and the workers employed under the terms of this agreement shall perform the following work: Blueprint reading, layout, the handling, moving and installation and/or removal of all electrical or electronic material, equipment or apparatus including rigging, forklift operations, movement and transport of all electrical equipment and material by any means; install all raceways, temporary or permanent whether inside, outdoors, underground, concealed, surface or overhead, and poles specifically used to support electrical fixtures or equipment. Raceways are to include any enclosed metallic or nonmetallic materials and their encasement, designed expressly for holding electrical wires, cables or bus bars and the support thereof. The installation of bonding and grounding systems, lightning protection, cathodic protection, current carrying conductors, fiberoptic conductors, cables, pull ropes or wires and the operation of equipment to install such; energized or de-energized systems; all electrical or electronic construction and erection work; installation and connecting of motors, controllers, generators, all lighting fixtures, supports and controllers. The work shall also include installing temporary lighting, landscape lighting, lighting systems and the adjusting, focusing or refocusing thereof. Installation of all electrical and electronic equipment, electronic systems, communication systems, photo-voltaic systems, solar and wind generating systems, fire alarm, voicedata-video systems, audio, security, CCTV, and surveillance with all related control wiring, terminations and devices, up to and including the final running test and any related instrumentation work. Such work as welding, heat stress for welds, burning, brazing, bending, drilling and shaping of all copper, channel iron, angle iron, I beams and brackets to be used in connection with the installation and erection of electrical wiring or equipment. The installation and maintenance of all temporary wiring and of all electrical lighting, heating, power equipment and generating systems. The cutting, threading, bending of all conduit whether metallic or non-metallic, by hand or machine and installation of such conduit.

The work also covers the installation of street lighting, traffic signals and intelligent transportation systems and all associated work. Removal and discarding of all packaging and waste materials related to the above scope of work, excluding demolition waste. All work, including medium voltage (15KV), of joining, splicing, and insulating, and the placing of flame proof covering where wiped lead joints are necessary, shall be performed by cable splicers. Journeymen only shall be used in assisting cable splicers. Cable splicers shall not be required to work on wires or cables where the difference in potential is over three hundred (300) volts between any two (2) conductors or between any conductor and ground, unless assisted by another journeyman. In no case shall cable splicers be required to work on energized cables carrying in excess of four hundred and forty (440) volts.

Craft: ELEVATOR CONSTRUCTOR (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Elevator Constructor-Journeyman Mechanic.....	92.65
Elevator Constructor-Journeyman Mechanic In Charge.....	99.82

**ADD PREMIUM PAY**

Work performed on Construction Work on Saturdays, Sundays and before and after 30 the regular working day on Monday to Friday, inclusive, shall be classed as overtime, and paid for at double the rate of single time.

**RECOGNIZED HOLIDAYS**

New Year's Day, Memorial Day, Independence Day, Labor Day, Nevada Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement of International Union of Elevator Constructors

- Renewal of all ropes.
- Renewal of brake linings (except small machines).
- Shortening of all hoisting and counterweight cables.
- Replacement of any traveling cable exceeding 50 feet in length.
- Safety test where test weights are required.
- Replacement of crosshead, counterweight or deflector sheave bearings.
- Rescoring of sheaves or drums.
- Replacement of worm and gears.
- Rebabbiting of bearings.
- Hydraulic repair work except cleaning, oiling, greasing, belts, small valves, adjusting and one man pressure relief valve test performed.
- Adjusting or readjusting using test weights.
- Realigning guide rails.
- Replacing crossheads, stiles, safeties or equalizers.
- Hoistway door closers with hydraulic or pneumatic checks.
- Installing sound isolation.
- Replacement of door hangers (except for freight bi-parting doors).
- All door closer work (except for freight biparting doors).
- Rewiring car switches, governors and selectors or any other apparatus in the car.
- Refastening guide rails.
- Replacing or repairing car floor covering.
- Rewiring or reinstalling limit switches.
- Replacing automatic rail or track oilers.
- Armature repairs.
- Renewing of car shoes or roller guides.
- Repairs to cab or car gate. Renewal of motor bearings.
- Replacing thrust bearings.
- Rewiring controllers.
- Installation and/or replacement of the following (except when the completion of such work requires more than eight (8) hours, excluding travel time, it shall be performed by a team): Proximity devices (door protection only).
- Emergency lighting (battery chargers and lights).
- Braille Plates.

Telephones/Communication Devices (with existing wiring and box in place).  
Fixture Cover Plates (no wiring).  
Key switches/Security devices (with existing wiring, excluding full Fireman's Service Operation).  
Controller Wiring Changes (minor changes).  
Fixture Replacement (in existing locations only).  
Replacement of relays, timers, or mechanical devices with solid state devices and circuitry.  
The replacement of equipment on existing elevator installations.  
When escalators are prepared and/or disassembled for cleaning, oiling, greasing, adjusting and minor replacement, (minor replacement meaning work requiring one (1) hour or less), the work shall not be classed as repair work. When escalators are prepared and/or disassembled for cleaning, etc., purposes as mentioned above, and any replacement and/or repairs requiring more than one (1) hour, only the replacement and/or repairs shall be classed as repair work. When escalators are prepared and/or disassembled primarily for replacement and/or repairs, all work shall be classed as repair work.

Craft: EQUIPMENT GREASER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

See Amendment 2

Equipment Greaser (Rack).....	78.68
Equipment Greaser (Greaser Truck).....	82.27
Equipment Greaser (Greaser Truck/Multi-Shift).....	81.17
Equipment Greaser Tunnel (Greaser Truck).....	81.87

**ADD ZONE RATE**

In addition to: EQUIPMENT GREASER (RACK) rates add the applicable amounts per hour calculated from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 32.5 miles	\$0.00
Zone 2	32.5 to 45 miles	\$3.00
Zone 3	45 to 60 miles	\$4.00
Zone 4	over 60 miles	\$4.50

**ADD PREMIUM PAY**

All time worked before 6:00 A.M. and after 5:00 P.M., or all time worked in excess of eight (8) consecutive hours, exclusive of meal periods, and all work performed on Saturdays, Sundays and holidays, shall be paid at the applicable overtime rate.

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

Craft: FENCE ERECTOR (Non-Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Fence Erector.....20.23

**JOB DESCRIPTION**

**FENCE ERECTOR**

Includes but is not limited to:

1. Erecting or repairing chain link, wooden, tortoise, wire/wire mesh, or temporary fencing;
2. Mixing and pouring concrete around bases of posts and tamping soil into post hole to embed post;
3. Digging post holes with a spade, post hole digger or power-driven auger;
4. Aligning posts through the use of lines or by sighting;
5. Verifying vertical alignment of posts with a plumb bob or spirit level;

Craft: FIELD SOILS AND MATERIAL TESTER (Non-Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Field Asphaltic Concrete (Soils and Material Tester).....	44.52
Field Soils and Material Tester.....	44.52

Craft: FLAG PERSON (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Flag Person.....59.39

**ADD ZONE RATE**

In addition to: FLAGPERSON rates add the applicable amounts per hour, calculated based on a miles from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 50 miles	\$0.00
Zone 2	50 miles and Over	\$3.75 including Laughlin area

**ADD PREMIUM PAY**

The first three (3) hours worked outside the regular constituted shift shall be at the rate of time and one half. All additional hours shall be at double time. On Saturday work, the first (10) hours shall be at time and one half and all additional hours at double time. Sundays and holidays shall be at double time.

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION**

**FLAG PERSON**, includes but is not limited to:

1. Directing movement of vehicular traffic through construction projects;
2. Distributing traffic control signs and markers along site in designated pattern;
3. Informing drivers of detour routes through construction sites;

Craft: FLOOR COVERER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Floor Coverer Journeyman.....	56.08
Floor Coverer Foreman.....	62.10

**ADD PREMIUM PAY**

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For first three (3) hours worked over eight (8) on a regular five (5) day week.
2. For all hours worked on Saturday. Employees shall not work less than four (4) hours.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked beyond eleven (11) hours shall be paid at two (2 X) times the straight time rate.
2. For all hours worked on Saturday beyond 8 hours (2 X) times the straight time rate.
3. For hours worked Sunday and Recognized Holidays. Employees shall not be employed for less than four (4) hours.

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement between Painters and Allied Trades DC 15 and So NV PDCA

\*Shift Differential: To be paid for all work performed between the hours of 5 pm to 5 am and it will be compensated at \$2.00 per hour in addition to the applicable wages. Overtime that falls between these hours will still be paid at the appropriate overtime rate.

- a. The installation of resilient flooring, wall, ceiling and countertop materials commonly referred to as carpet, linoleum, vinyl, rubber, cork, asphalt, vinyl composites, synthetic grass, wood, epoxy, urethane, plastics, metal, and all similar materials in sheet, tile, or liquid form;
- b. Installation on floors, walls, ceilings, stairs, countertops, fixtures, furnishings, or exterior applications on structures, patios, pool perimeters, area ways, all other like or similar applications, whether permanent or temporary;
- c. Measuring, cutting, fabrication, packaging, pickup, delivery and handling of materials and tools that are used by the floorcovering industry;
- d. Preparatory removal of floorcovering, wallcovering, adhesive and underlayments. The sanding, patching, sealing, and priming of the installation surface;
- e. Installation of lining felt, carpet, pad, underlayment compositions, leveling compounds, or any material used as a base for the finished surface;
- f. Applications and fitting of fasteners, protective and decorative trim relating to the installation such as tackless strip, tape, nosing, top set or butt-to-base, cap, corner beads, edging, hinging, and all other accessories, and related sundries;
- g. Repair, finishing, coating, sculpturing, banding, insets, and such other processes relating to the industry;



h. Installation of decorative moldings and accessories attached with adhesive such as those manufactured by Johnsonite and other manufacturers.

This Agreement shall also cover the loading, unloading and operation of work trucks utilized by employees classified herein. Such vehicles shall be defined to mean those that are driven from the shop to the job and from job -to-job and job-to-shop and which remain at the job site while the employees are engaged in the performance of work covered by the contract.

It shall further cover and apply to the stocking and handling of all material herein above listed after the first unloading by common carrier.

Craft: GLAZIER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Glazier Journeyman.....	78.80
Glazier Foreman.....	83.86
Glazier Superintendent.....	86.39

**ADD PREMIUM PAY**

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For first two (2) hours worked over eight (8) on a regular five (5) day week.
2. For all hours worked on Saturday. Employees shall not work less than four (4) hours.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked beyond ten (10) hours shall be paid at two (2 X) times the straight time rate.
2. For all hours worked on Saturday beyond 8 hours (2 X) times the straight time rate.
3. For hours worked Sunday and Recognized Holidays. Employees shall not be employed for less than four (4) hours.

\*Also, if there is less than 10 hours between shifts, the 2nd shift becomes an extension of the 1st shift.

\*Shift Differential: To be paid for all work performed between the hours of 5 pm to 5 am and it will be compensated at 10% differential for all hours worked including overtime. Overtime that falls between these hours will still be paid at the appropriate overtime rate.

**20.1 High Pay** – work that is thirty (30) or more feet in height above grade on an elevated, mechanically operated platform (including but not limited to: swing stage, boatswain chair, crane basket, heck lift, boom lift), rappelling work, work at slab edge outside the perimeter safety cable or work at slab edge inside the perimeter safety cable if the work being performed puts the employee in a free fall situation because the perimeter safety cable is no longer at or near waist level shall be paid at the rate of one dollar (\$1.00) per hour above the straight time rate for actual hours worked. High time shall be paid in addition to all other premiums involved.

**25.2 Foremen:**

**a)** The selection of the individual to act as foreman shall be at the discretion of the Employer. On outside jobs lasting three (3) days or more and which four (4) workers or more are employed, one (1) foreman will be designated and he shall be paid ten percent (10%) per hour over the highest journeyman Glazier supervised. Inside foreman shall receive ten percent (10%) per hour above the journeyman’s wage scale.

**b)** When a glazier is requested to perform welding on the job site, he/she will be compensated one dollar (\$1.00) over his regular rate of pay. All equipment, including hoods, leather and gloves, will be supplied by the Employer.

**RECOGNIZED HOLIDAYS**

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement between DC 16 and Glazing Contractors Associations of NV and Independent Contractors

General Glazing shall include the layout and setting by hand or with machines, cutting, preparing handling or removal of the following and incidental and supplemental to such work: setter of art glass, prism glass, beveled glass, leaded glass, automobile glass, window glass, mirrors of all types, wire glass, ribbed glass, ground glass, colored glass, figured glass, vitrolite glass, carrara glass, and all other types of opaque glass; glass chalk boards, structural glass, tempered and laminated glass, thiokal, neoprene and all other types of glass cements, all types of insulating glass units, solar heat collectors containing glass or glass substitutes, glass hand rail, electric glass, bathroom fixtures, all plastics when used in place of glass, all other similar materials when used in place of moldings, tubber, lead and all types of mastic in wood, iron, aluminum or sheet metal, sash skylights, doors, frames, stone, wall cases, show cases, books cases, sideboards, partitions, automatic doors, automatic sliding doors, revolving doors, luminous ceilings, gaskets, and plastic mirrors, the installation of the above materials, temporary or permanent, on or for any building in the course of repair, remodel, construction or alteration.

The installation of all glass framing or support systems for the same such as extruded, rolled or fabricated metals or any materials that replace the same, such as plastics, metal tubes, mullions, metal facing materials, muttins, facia trim moldings, porcelain panels, skylights, showcase doors and relative materials, including those in any or all of the buildings related to the store front and window wall, curtain wall, stop wall, skylight and dome construction. Glazing and installation of door and window frames, such as patio sliding or fixed doors, vented or fixed windows, shower doors, bath tub enclosures, screens storm stash where the glass becomes an integral part of the finished products, the tinting and coating of glass for the reflecting of heat and light, showcase tops, glass shelving of all types and table tops. In addition, such caulking, glass to glass, glass to metal, metal to concrete and panel to panels.

Production, maintenance, including all incidental and supplemental to, but not limited to Employees, and Employees who are engages int eh cutting, preparing, handling and selecting of glass and /or mirror, bevellers, silverers, blockers, scratch polishers, sand-blasters, flat glass wheel cutters, miters cutters, engraver, hole-drilling machine operations, belt sanding, automatic beveling, multi-grove edging machines, semi- and automatic-cutting machines, grinding, polishing unpacking ad racking or glass, glass packing, glass and mirror cleaning, mirror stripping, all operations in the manufacturing, framing and fabrication and assembling of all insulating units, assembling of all glass insulated solar heat collectors containing glass or glass substitutes, molding or mirrors, manufactured and assembly of sliding glass or mirror doors, the operating of all machines and equipment for these operations, oven operations, glass hangers, glass benders and operators, safety glass fabricators, inspectors, janitors, maintenance mechanics, loading and unloading or truck and railroad cars.

Craft: Highway Striper (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Highway Striper.....60.89

**ADD ZONE RATE**

In addition to: FLAGPERSON rates add the applicable amounts per hour, calculated based on a miles from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 50 miles	\$0.00
Zone 2	50 miles and Over	\$3.75 including Laughlin area

**ADD PREMIUM PAY**

The first three (3) hours worked outside the regular constituted shift shall be at the rate of time and one half. All additional hours shall be at double time. On Saturday work, the first (10) hours shall be at time and one half and all additional hours at double time. Sundays and holidays hall be at double time.

**RECOGNIZED HOLIDAYS**

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:**

**HIGHWAY STRIPER**, includes but is not limited to:

1. Painting highways, streets and parking surfaces by using manually propelled or mechanically propelled machines, brushes, rollers or spray guns;
2. Installing any device or application of any material used in lieu of paint for traffic direction, including, without limitation, buttons, tapes, plastics, rumble bars and other similar materials;

Craft: Hod Carrier-Brick Mason Tender (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Hod Carrier-Brick Mason Tender.....61.20

**ADD ZONE RATE**

In addition to: HOD CARRIER-PLASTERER – BRICK MASON TENDER rates add the applicable amounts per hour, calculated based on a miles from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 50 miles	\$0.00
Zone 2	50 miles and Over	\$3.75 including Laughlin area

**ADD PREMIUM PAY**

The first three (3) hours worked outside the regular constituted shift shall be at the rate of time and one half. All additional hours shall be at double time. On Saturday work, the first (10) hours shall be at time and one half and all additional hours at double time. Sundays and holidays shall be at double time.

**RECOGNIZED HOLIDAYS**

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:**

**HOD CARRIER-BRICK MASON TENDER**, includes but is not limited to:

1. Tending to or assisting brick masons, bricklayers and stonemasons;
2. Mixing, packing, wheeling and tempering mortar and fire clay;
3. Mixing, supplying and holding materials or tools;
4. Mixing, handling and conveying all other materials used by brick masons, bricklayers and stone masons;
5. Building scaffolds, trestles, boxes and swinging staging used exclusively by bricklayers and stone masons;
6. Hanging cables and placing putlogs;
7. Carrying bricks and mortar in a hod;
8. Cleaning work area and equipment of bricklayers and stone masons

Craft: Hod Carrier-Plasterer Tender (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Hod Carrier-Plasterer Tender-Journeyman.....	62.29
Hod Carrier-Plasterer Tender- Foreman.....	65.14
Hod Carrier-Plasterer Tender-General Foreman.....	68.14

**ADD ZONE RATE**

In addition to: HOD CARRIER-PLASTERER – BRICK MASON TENDER rates add the applicable amounts per hour, calculated based on a miles from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 50 miles	\$0.00
Zone 2	50 miles and Over	\$3.75 including Laughlin area

**ADD PREMIUM PAY**

The first three (3) hours worked outside the regular constituted shift shall be at the rate of time and one half. All additional hours shall be at double time. On Saturday work, the first (10) hours shall be at time and one half and all additional hours at double time. Sundays and holidays shall be at double time.

**RECOGNIZED HOLIDAYS**

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement between NCA/AGC and Laborers Local 872

Plaster Tending shall consist of preparation of materials and the handling and conveying of materials to be used by mechanics of other crafts, whether such preparation is by hand or any other process. After the material has been prepared, tending shall include the supplying and conveying of said material and other materials, to such mechanic, whether by bucket, hod, wheelbarrow, buggy, or other motorized unit for such purpose, including forklifts. 2. Unloading, handling and distribution of all materials, fixtures, furnishings, and appliances from point of delivery to stockpiles and from stockpiles to approximate point of installation. 3. Drying of plaster, concrete, mortar, or other aggregate, when done by salamander heat or other drying process. 4. Cleaning and clearing of all debris, including all clean-up regardless of craft, construction clean- up including final construction clean-up before TCO is issued will be performed by Laborers. If clean-up composite crews are utilized, the work shall be performed by Laborers only. Wire brushing of windows, scraping of floor, removal of surplus material from all fixtures within confines of structure and cleaning of all debris in building and construction. The general clean up, including sweeping, cleaning, wash down and wiping of construction facility, equipment; and furnishing and removal and loading or burning of all debris including crates, boxes, and packaging waste material. Washing or cleaning of walls, partitions, ceilings, windows, bathrooms, kitchens, laboratories and all fixtures and facilities therein. Clean up, mopping, washing, waxing and polishing or dusting of all floors. Tool trailers and light tool repair. 5. The aging and curing of concrete, mortar, and other materials applied to walls, floors, ceilings, and foundations of buildings and structures, highways, airports, overpasses and underpasses, tunnels, bridges, approaches, viaducts, ramps or other similar surfaces by any mode or method. 6. Laborers will perform the erection, planking, and removal of all scaffolds for lathers, plasterers, bricklayers, and other construction trade crafts as well as the building, planking or installation and removal of all staging, swinging and hanging scaffolds, including maintenance thereof. Where self-supported scaffolds or specially designed scaffolds are built by Carpenters, Laborers shall tend Carpenters on erection thereof; the dismantling of said scaffolds as well as preparation for foundation or mud stills of said scaffolds and maintenance of same shall be done by Laborers. 7. Dust

control/single axle dump trucks and water trucks on intermittent use. 8. Street sweepers and vacuum trucks. 9. Contractor will supply all protective clothing for hazardous conditions, hardhat, safety glasses, hearing protection, concrete boots, rubber gloves, concrete shovels, asbestos suits, and respirators per OSHA (29 CFR Part 1926 Subpart E-P.P.E. and LifeSaving Devices). The Employer is not responsible for steel-toe boots unless mandated by awarding body or State law. No employee covered under this Agreement shall wear any company logo without the Laborers logo when required to wear a Company uniform.

**Craft: Ironworker (Union Rate)**

**Prevailing wage rates include the base rate as well as all applicable fringes**

**SEE AMENDMENT 1a**

Ironworker-Journeyman.....	79.60
Ironworker - Foreman.....	81.20
Ironworker -General Foreman.....	85.93

**ADD ZONE RATE**

**SEE AMENDMENT 1 or 1a**

In addition to Iron Worker rates add the applicable amounts per day, calculated based on a road mile from the Las Vegas City Hall.

Zone 1	60 – 75 miles	\$25.00
Zone 2	75 - 100 miles	\$50.00
Zone 3	100 miles and over	\$60.00

**ADD PREMIUM PAY**

One and one half (1X) the regular straight time hourly rate shall be paid:

1. For the first two (2) hours worked in excess of eight (8) on a regular workday Monday-Friday
2. For the first eight (8) hours on Saturday

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over ten (10) hours in one day or shift.
2. For any hours worked on Sunday.
3. For all hours worked over eight (8) on Saturday
4. For all hours worked on Holidays

**Shift Pay**

1. 2nd shift add 6% of hourly wage
2. 3rd shift add 13% of hourly wage
3. Dedicated shift add 6% of hourly wage

**RECOGNIZED HOLIDAYS**

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB CLASSIFICATION:** Excerpt from Agreement between NV AGC and DC of Ironworkers

Field fabrication and/or erection or deconstruction of structural, ornamental and reinforcing steel, including but not limited to the fabrication, rigging and signaling, erection and construction of all iron and steel, ornamental lead, bronze, brass, copper and aluminum, plastics and all other substitute materials, including, but not limited to, composites, carbon fiber and fiberglass, all barrier railings, handrail, aluminum, steel, glass and plastic, reinforced concrete structures or parts thereof; bridges, viaducts, inclines, dams, docks, dredges, vessels, locks, gates, guides, aqueducts, reservoirs, spillways, flumes, caissons, cofferdams, subways, tunnels, cableways, tramways, monorails, blast furnaces, stoves, kilns, coolers, crushers, agitators, pulverizers, mixers, concentrators, ovens, cupolas, roof decking such as but not limited to “Cofar”, “Trusdeck”, Mahon “M”; smoke conveyors, penstocks, flag poles, drums, shafting, shoring, fur and storage rooms, fans and hot rooms, stacks, bunkers, conveyors, dumpers, elevators, vats, tanks, enamel tanks, enamel vats, towers, pans, hoppers, plates, anchors, caps, corbels, lintels, Howe and combination trusses, grillage and foundation work, grating, bucks, partitions, hanging ceilings, hangers, clips, brackets, flooring, floor construction and domes,



rolling shutters, curtains, frames; aluminum, rolling fire, won and iron doors, including supports; cast tiling, air ducts, duct and trench frames and plates; wire work, railings, wire cable including pipe, guards, fencing, grill work, sidewalk and vault lights, skylights, roofs, canopies, light steel framing, marquees, awnings and other related equipment elevator and dumb waiter enclosures, elevator cars, tracks, fascias, aprons, operating devices, steel and aluminum sash, hardware and screens, frames, fronts, lockers, racks, book stacks, tables, shelving, metal furniture, seats, chutes, escalators, stairways including pre-engineered stairs, ventilators, boxes, fire escapes, signs, jail and cell work, safes, vaults, vault doors, safe deposit boxes, corrugated sheets when attached to steel frames, including insulation; frames in support of boilers; materials altered in field such as framing, cutting, bending, drilling, burning and welding including by acetylene gas and electric machines; metal forms and false work pertaining to concrete construction; seismic isolation systems and dampening systems including base isolators, sectional water tube and tubular boilers and stokers; traveling sheaves, vertical hydraulic elevators, bulkheads, skip hoists, making and installation of articles made of wire and fibrous rope, rigging in connection with pumps, compressors, forced and induced draft fans, air meters, Bailey meters, agitators, oxygen converters, cindering machines, pelletizing machines, reactor vessels, reactor spheres, completed tanks and assembled sections of completed tanks, scroll cases, refineries, hydroelectric power houses and steam plants, cogeneration plants, vessels and government departments; false work, travelers, scaffolding, pile drivers, sheet piling, derricks and powered derrick swinger including the erection, installation, handling and operating. Cranes erection, installation, handling and operating of same on all forms and types of construction work. The operation of Valla and Spider type battery and/or propane powered portable floor cranes having no operator seat utilized to install ironworker scope of work and the same on all forms and types of construction work. Crane work at the ports, including hammer-head cranes, container cranes and rubber tire cranes. Offloading, relocations, and commissioning of all burning and removal of sea bracing track layout; erection of apex boom extensions, back reach extensions, and rail replacement. Includes all welding, containment and structural modifications of the aforementioned items; railroad bridge work including maintenance thereof; moving, hoisting and lowering of machinery, modules, skid modules and placing of same on foundation, including bridges, cranes, intermittent use forklifts, derricks, buildings, piers and vessels; loading, unloading, necessary maintenance, erection, installation, removal, wrecking and dismantling of all of the above and all reinforcing work and submarine diving in connection with or about same; erection of steel towers, chutes and spouts for concrete where attached to towers and handling and fastening of cables and guys for same; unloading, racking, sorting, cutting, bending, hoisting, placing and tying including the use of any and all mechanical tying devices, burning and welding including stud welding of all iron, steel and metal in reinforced concrete construction including mesh for floor arches and the making of hoops and stirrups, metal forms and metal supports thereof; jacking of slip forms, installation of all wire, cable, parabolic cans, steel and all other materials, including, but not limited to, composites, carbon fiber and fiberglass, used for the purposes of prestressing including grouting of ducts, post stressing concrete girders, beams, columns, etc.; loading, unloading, hoisting, handling, signaling, placing and erection of all prestressed, post stressed, precast materials, G.F.R.C., Dryvit System, including the securing by bolting and/or welding and the installation of steeltex and wire mesh of any type when used for reinforced concrete construction; erection of all curtain wall; glass handrail; stay in place deck; automated and/or mechanical parking structures; offloading, staging, hoisting and setting of modular structures and micro-units; curtain wall systems and associated sealants. Window wall and entrances, panels, insulated and non-insulated, factory and field assembled, porcelain enameled panels, ceramic, laminated spandrelite, louvers and sunscreens; application of thiokol, neoprene and other sealants used to seal materials installed by Iron Workers; installation and handling of phenolic panels, including but not limited to, Trespa products and all similarly related materials and/or systems; installation of metal window stools and sills; installation of aluminum, bronze and steel thresholds; erection and dismantling of all types of cranes and changing of booms; erection of rock, sand and gravel plants, dismantling and loading out conveyors, aggregate plants, batch plants, ableways, refrigeration plants, etc.; erection and dismantling of Monigan walking dragline, launchhammer bucket wheel excavator and other trenching equipment; signaling on highlines, whirley

cranes and derricks, buck hoists, man hoists, fork lifts, material towers and scanning antennae; metal and steel supports of all types; fabrication, assembling and erection of offshore drilling platforms or similar installations; dust collectors, precipitators, multi-plate, specialty welding processes, unloading, loading, hoisting, handling and rigging of all building materials delivered to the job site; hanging ceilings, tees, channels, beams, acoustical elements, sound barriers, computer floors, etc.; installation of stage rigging (including counterweights), curtains, draperies, traverse rods, tracks, cables, window cleaning equipment, powered work platforms, including and loading and unloading, erection installation and removal of powered chassis mounted elevating mast climbing work platforms, rigging in connection with display shows; ski lifts, etc.; wrecking of bridges, viaducts, elevated roads and structural steel and iron in buildings; all steel frames for openings, all porches, verandas, canopies and balconies; all overhead travelers, duo rails, tram rails; erection, setting, repairing of guard or collision rails on bridges and approaches, road ways or any other structures; handling and setting of all types of steel and metal joists, including metal box joists for truss lab and preformed keystone shaped metal joists; erection of steel and metal houses and packaged buildings; all translucent and plastic material on steel frame construction; the erection of solar energy systems, including but not limited to, photo voltaic, heliostat and parabolic systems, energy producing windmill type towers, wind turbine erection to included, but not limited to, prep work, boltup, tensioning or torque of bolts on base and all tower section turbine and blade assemblies; nuclear reactors, electromagnetic shielding plates and atomic vessels including all component parts; the plumbing, aligning and leveling of all materials and equipment through the use of optical instruments, LASER beams, etc., and the use of instruments to establish layout, installation and disposition of ironworker installed scope of work, excluding any independent 3rd party surveyor work; the unloading, distributing, stockpiling and handling of all materials coming under the jurisdictional claims of the UNION such as to rail heads, storage yards, loading and unloading, hoisting, handling, signaling of all fabricated material and equipment at the jobsite (except FOB deliveries) related to the Iron Workers jurisdiction that is within the individual employers' contractual scope of work including from and to barge and ships to a lay down yard or construction project, etc., shall be done by the Iron Workers.

All reinforcing work in connection with field fabrication, including but not limited to the pre-assembly of reinforcing cages, loading and unloading, handling, racking, sorting, cutting, bending, hoisting, intermittent use of forklifts, placing, burning, welding and tying of all material including the use of any and all mechanical tying devices, or substitute materials, including but not limited to, composites, carbon fiber and fiberglass, stainless steel, used to reinforce concrete construction shall be done by Iron Workers within the individual employers' scope of work at the jobsite, excluding FOB deliveries. A working Iron Worker shall be employed for maintenance on jobs of substantial size while concrete is being poured on reinforcing steel, wire mesh and paper back steeltex but will not be required as a stand-by man. All work in connection with the installation, alignment, repair & modification of panelized roofing systems, pre-engineered fabric structures, aluminum clarifier coverings, carports, ministorages, and dock planks. All work in connection with the installation, alignment, repair and modification of bleachers, planking and stadium seating. All work in connection of installation of amusement rides including, but not limited to, the erection and alignment of all track, machinery and related components.

**Craft: Laborer (Union Rate)**

**Prevailing wage rates include the base rate as well as all applicable fringes**

Group 1.....	60.89
Group 1A.....	59.39
Group 2.....	61.10
Group 3.....	61.20
Group 3A.....	61.70
Group 4.....	61.29
Group 5.....	61.39
Group 6A.....	64.05
Group 6B.....	63.55
Group 6C.....	63.30
Group 6D.....	63.91
Group 6E.....	63.55
Group 6F.....	70.01
Group 7.....	61.20

Foreman \$3.00 above highest paid journeyman supervised.  
 General Foreman \$3.00 above highest paid foreman supervised.

**ADD ZONE RATE**

In addition to: Laborer rates add the applicable amounts per hour, calculated based on a miles from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 50 miles	\$0.00
Zone 2	50 miles and Over	\$3.75 including Laughlin area

**ADD PREMIUM PAY**

The first three (3) hours worked outside the regular constituted shift shall be at the rate of time and one half. All additional hours shall be at double time. On Saturday work, the first (10) hours shall be at time and one half and all additional hours at double time. Sundays and holidays shall be at double time.

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement between NCA/AGC and Labor Local 872

In addition to the foregoing, this Agreement covers all watchmen, flagmen (all crafts), fire watchmen, traffic control person, including the operation of appropriate vehicles, laborers, construction specialists, concrete specialists, foremen (general, grade, pipe, concrete, forms, seeding, asphalt, clearing and grubbing, clean-up stone-laying) in the performance of: the laying of all types of pipe and conduit; the spreading, and pouring and raking and tamping of all asphalt and concrete materials and the bull floating (strike off) of all concrete; the laying of all types of stone or manufactured curb, rip-rap, paving blocks, concrete blocks (paving), slope paving, Belgium Block; assembling and placing of Gabion and all similar types of baskets; the handling, loading and unloading and stringing of all materials, the handling, loading and stringing of all wood products by hand or power; the sharpening of all air tool bits and drills and bull points; laying, spreading and storing of all tarpaulins, the operation and maintenance of Bo Mag Rollers; (tending of all Crafts regardless of work being performed in Southern Nevada by any and all methods; any and all types of heaters, fans, air conditioners, or other cooling devices to be

tended, handled and fueled by laborers at all times; the handling, laying and placing of forms used for curbing, gutters, roads, and sidewalks and the stripping of same, the placing, setting and maintenance of all flares, blinker lights and reflectors; the cutting and chipping of all joints; the handling, loading, unloading, distributing and erecting of chain-link fence; handling and erecting of wire fence; overhead signs; handling and moving all furniture; handling and placing of wire mesh on roads and bridges; guard rails; the sandblasting and applying of sealers and hardeners and epoxy on concrete and asphalt work; asphalt striping and other asphalt painting; the nozzle operations on sandblasting and guniting operations; the signing of all materials, manufactured or otherwise, which are handled or put in place by laborers, the handling, the loading and unloading and distribution and installation of all guard rails, highway signs, and road markers; attending to, handling, and fueling single diaphragm pumps, insulation pumps, plasterer pumps, monocoat pumps, grout pumps, and pumps up to and including 2" pumps; laying out, moving, connecting, storing and handling all hoses for all pumps; the operating of all types of machines used to seal any type of joints; the operating and servicing of mortar mixers (including, but not limited to, maxi mixers and/or mega mixers) and conveyers used in laborers' and bricklayers work regardless of number; the operating and servicing of all rock drilling machines; the blasting and dynamiting of all rock; welding (excluding machinery, tools, structural steel); installation of manholes and catch basins; the placing of all pre-cast and pre-stressed materials, except when placed or installed by the manufacturer pursuant to its collective bargaining agreement; handling, unloading, loading, assembling and laying of all multiplate; the operating of all air, gas, electric, oil and other types of motor driving tools including all pusher type equipment; all walk behind saws, all concrete saws, drilling and coring equipment; all casings and augers on all drilling rigs; the handling, tending and maintaining of all generators; lasers when used for laborers work on grading, setting and leveling; landscape nurseries; sound barrier installation; demolition or dismantling for all purposes; hazardous waste work to include chemical cleanup, drum handlers, transformers, divers, infra-red destruction machines, plasma arc plants, warehouse storage loading and unloading, safety men, asbestos removal, video x-ray operation; the unloading, loading, handling, stringing, and tending of all brick, all block, all stone and all other masonry products; the paving of all stone and brick products; mason finisher; water proofing, IBC barrier, except on structures; the operating and maintaining of the hydraulic seeder, concrete curb machine, asphalt curb machine, snorkel, stump remover, self-propelled concrete saw, hydraulic motorized pin puller, scissor cars and all aerial man lifts. Bobcat incidental to trade and forklift. Installation and maintenance of all playground fixtures and equipment. The foregoing applies in the performance of all the aforementioned work and all other work coming under the jurisdiction of LIUNA unless state or local requirements dictate otherwise

This Agreement also covers all removal, abatement, encapsulation or decontamination of asbestos, lead and other toxic and hazardous waste or materials, which shall include but not be limited to: the erection, building, moving, servicing and dismantling of all enclosures, scaffolding, barricades, decontamination facilities, negative air machines for asbestos removal, etc.; the operation and servicing of all tools and equipment normally used in asbestos removal or abatement of such waste or materials, including, without limitation, negative air machines for asbestos removal; the sorting, labeling, bagging, cartoning, crating, packaging and movement of such waste or materials for disposal; the clean-up of work site and all other work and stand-by time incidental to the removal, abatement, encapsulation or decontamination of such waste or materials; and the performance of safety watch duties on job sites where work is performed under this Agreement. E.

This Agreement also covers the following, but is not limited to:

1. The preparation of trenches, and footings for above ground or underground lines or cables.
2. The handling of all rods, mesh and material for use in reinforcing concrete construction.
3. The rigging of pipe.
4. Trenches, Manholes-Cutting of streets and ways for laying of pipes, cables or conduits for all purposes; digging of trenches, ditches, manholes, etc.; handling and conveying all materials; concreting, backfilling, grading and resurfacing and all other labor connected therewith. Clearing and

site preparation as described herein. Cutting or jack hammering of streets, roads, sidewalks or aprons by hand or the use of air or other tools. Use and maintenance of all walk behind concrete saws, drilling and coring equipment, all augers and casings on drilling rigs. The leveling, grading and other preparation prior to laying pipe or conduit for any purpose. Loading, unloading, sorting, stockpiling, wrapping, coating, treating, handling, distribution, laying and making of joints of water mains, water pipes, gas mains and all pipe including placing, setting and removal of skids. Cribbing, driving of sheet piling, lagging and shoring of all ditches, trenches and manholes. Handling, mixing or pouring of concrete and handling and placing of other materials for saddles, beds, or foundations for the protection of pipes, wires, conduits, etc. Backfilling and compacting of all ditches, resurfacing of roads, streets, etc., and/or restoration of lawns and landscaping, welding, joining, underwater cable installation. Trenchless technology and directional boring shall be the work of the Laborer.

**5. Sewers, Drains, Culverts and Multiplate** - Unloading, sorting, stockpiling, coating, treating, handling, distribution and lowering or raising of all pipe or multiplate. All digging, driving of sheet piling, lagging, bracing, shoring, and cribbing; breaking of concrete backfilling, tamping, resurfacing and paving of all ditches in preparation for the laying of all pipe. Pipe laying, leveling and making of the joint of any pipe used for main or side sewers and storm sewers. All of the laying of clay, terra-cotta, ironstone, vitrified concrete, ductile iron, or other pipe and the making of joints for main or side sewers and storm sewers and all the pipe for drainage. Unloading, handling, distribution, assembly in place, bolting and lining up of sectional metal or other pipe, including corrugated pipe. Laying of lateral sewer pipe from main sewer or side sewer to building or structure. Laying, leveling and making of the joint of all multicell conduit or multi-purpose pipe. Cutting of holes in walls, footings, piers or other obstructions for the passage of pipe or conduit for any purpose and the pouring of concrete to secure said holes. Digging under streets, roadways, aprons or other paved surfaces for the passage of pipe, by hand, earth auger or any other method and manual and hydraulic jacking of pipe under said surfaces. Installation of septic tanks, cesspools and drain fields. Oil, brine, chemical transmission lines and related work, fiber optics, communication lines and cathodic protection.

**6. Drilling and Blasting** - All work of drilling, jack hammering, and blasting. Operation of all rock and concrete drills, including handling, carrying, laying out of hoses, steel handling, installation of all temporary lines and handling and laying of all blasting mats. All work in connection with blasting, handling and storage of explosives, carrying to point of blasting, loading holes, setting fuses, making primers and exploding charges. All securing of surface with wire mesh and any other material and setting of necessary bolts and rods to anchor same. All high scaling and other rock breaking and removal after blast. Handling and laying of nets and other safety devices and signaling, flagging, road guarding.

**7. Signal Men** -Signal men on all construction work defined herein, including traffic control signal men or flagmen at construction sites.

**8. Use of Tools** -Operation of all hand, pneumatic, electric, motor combustion or air-driven tools or equipment necessary for the performance of work described herein.

**9. All clean-up**, including general, construction, janitorial, final, and micro cleaning; all cleaning and removal of debris, rubbish, and refuse of any type and kind for all trades on all jobs, and final cleaning operation on any project or part thereof before the project or any part thereof is turned over to the owner.

F. This Agreement shall also cover all work traditionally performed by Laborers within the jurisdiction of this Agreement.

## ARTICLE X ADDENDUM A - TUNNEL WORK

1. This Addendum A shall cover the construction, alteration, or renovation of all tunnels, shafts, adits, silos, raises, ventilation raises, ducts, underground chambers and all other work where miners are required to work below the surface of the earth and which falls within the jurisdiction of the Laborers International Union of North America.

2. Tunnel work shall be defined as the actual boring, driving, and concreting of tunnels. A shaft and/or silo shall be defined as sinking of any vertical, inclined or declined shaft (including stations) by using shaft sinking methods. Any mining performed off the completed shaft shall be considered tunnel work. Laborers Local 872 Job Description pg. 4 In the event a dispute arises in the differentiation between a tunnel or shaft, the Contractor and the Union shall meet to resolve the dispute.

Craft: Mechanical Insulator (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Mechanical Insulator-Journeyman .....	70.48
Mechanical Insulator-Foreman.....	74.46
Mechanical Insulator-General Foreman .....	78.44

**ADD ZONE RATE**

In addition to MECHANICAL INSULATOR rates add the applicable amounts per hour, calculated based on a road mile figured from Clark County Courthouse:

Zone 1	20-45 miles	\$4.00
Zone 2	45-75 miles	\$5.00
Zone 3	75-150 miles	\$7.00
Zone 4	150 miles and over	\$8.00

**ADD PREMIUM PAY**

Premium pay for hours worked in excess of a shift of 8 hours or 12 hours or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday

- Swing Shift 10% per hour \$4.98
- Grave Shift 15% per hour \$7.46

**RECOGNIZED HOLIDAYS**

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement between Int’ Assoc. of Heat & Frost Insulators and Allied Workers Local 135

This work includes the preparation, alteration, application, erection, assembling, molding, spraying, pouring, mixing, hanging, adjusting, repairing, dismantling, reconditioning, maintenance, finishing, and/or weatherproofing of cold or hot thermal insulation with such materials as may be specified when those materials are to be installed for thermal purposes and fire protection purposes in voids, or to create voids, or on piping, fittings, HVAC ductwork, grease ducts, valves, boilers, ducts, flues, tanks, vats, equipment, or on any hot or cold surfaces for the purpose of thermal control or to be installed for sound attenuation purposes on mechanical devices, equipment, piping, surfaces related in an integral way to the insulation of such mechanical devices, equipment and piping, Nanotechnology, energy audits, thermography, and thermal imaging. This work also includes all labor connected with the handling, truck driving and distribution of thermal insulation on the job premises. This article does not include pre-manufactured insulation or insulation accessories.

3. All duct lining, plenum lining and duct wrapping, done on the jobsite for acoustical or thermal purposes will be the work.

4. All asbestos abatement (removal), toxic waste cleanup, handling and/or the removal of hazardous waste materials from the aforementioned subsection (2) of this Article II, Section A, and the preparation therefore will be the work of this Local Union. Hazardous and toxic materials are any and all materials, which are defined by O.S.H.A. or E.P.A.

5. All thermal tape, pads, mitered fittings (insulation, metal or plastic), batts and lags shall be fabricated by the Employees covered by this Collective Bargaining Agreement when such fabricated items are to be installed by Asbestos Workers, regardless of the location the Employer chooses to have such items fabricated, within the territorial jurisdiction.

6. This Agreement covers the rates of pay, hours and other terms and conditions of employment with firestopping or fireproofing technicians, and apprentices engaged in the manufacture, fabrication, assembling, molding, handling, erection, spraying, pouring, mixing, hanging, preparation, application, adjusting, alteration, repairing, dismantling, reconditioning, testing, and maintenance of the following, when applied by a machine or other application methods of all firestopping materials including, but not limited to: intumescent firestop sealant, intumescent firestop blocks, elastomeric firestop sealant, self-leveling firestop sealant, trowelable firestop compound, firestop collars, composite sheets, putty pads, fire containment pillows, wrap strips, putty sticks, firestop mortar, firestop mastic, refractory ceramic fiber blanket for kitchen exhaust and fire rated duct systems, or other materials used in connection with labor, and to include other fire protection materials such as boots and cable coatings which are connected with the handling or distributing of the above insulating materials, or the repair and maintenance of all equipment, on the job premises. The types of work shall include, but not be limited to: top of wall, curtain wall, fire rated wall penetrations, grease ducts, stairwell pressurization systems, beam, column, and deck fireproofing. Application of materials or devices within or around penetrations and openings in all rated wall or floor assemblies, in order to prevent the passage of fire, smoke, or other gases. The application included all components involved in creating the rated barrier at perimeter slab edges and exterior cavities, the head of gypsum board or concrete walls, joints between rated wall or floor components, and sealing of penetrating items and blank openings.



Craft: MILLWRIGHT (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Millwright Journeyman.....	68.61
Millwright Welder.....	69.61
Millwright Foreman.....	72.67
Millwright General Foreman.....	77.14

**ADD ZONE RATE**

In addition to MILLWRIGHT rates add the applicable amounts per hour, calculated from Maryland Parkway and Charleston Boulevard, Las Vegas:

Zone 1	0 to 20 Miles	\$0.00
Zone 2	20 to 40 Miles	\$2.50
Zone 3	Over 40 Miles	\$4.25

**ADD PREMIUM PAY**

First two (2) hours outside the regular constituted shift shall be at the rate of time and one-half (1½X).

Saturdays up to the first ten (10) hours shall be at the rate of time and one-half (1½X). All additional hours and Sundays and holidays shall be the rate of double time (2X). When working on Sundays and holidays, there will be one dollar and fifty cents (\$1.50) per hour additional paid to Pension Annuity.

**RECOGNIZED HOLIDAYS**

New Year's Day, Washington's Birthday (President's Day), Memorial Day, 4th of July, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day.

**JOB DESCRIPTION** Excerpt from Southwest Regional Council of Carpenters and Affiliated Local Unions Master Labor Agreement

5006.18

The work of the millwrights, as spelled out in the Jurisdictional Claims Handbook referenced in Paragraph 5006.17 above, is as follows: The term "MILLWRIGHTS AND MACHINE ERECTORS" shall mean the, unloading, hoisting, rigging, skidding, moving, dismantling, aligning, erecting, assembling, repairing, maintaining and adjusting of all machinery and equipment installed either in buildings, factories, structures, or processing areas, either undercover, underground or elsewhere required to process material, handle, manufacture or service, be it powered or receiving power manually, by steam, gas, electric, gasoline, diesel, nuclear, solar, water, air or chemically; and in industries such as and including but not limited to the following (which are identified for the purpose of description: woodworking plants, canning industries, steel, coffee roasting plants, paper and pulp, cellophane, stone crushing, gravel and sand washing and handling, refineries, grain storage and handling, asphalt plants, sewage disposal and water plants, laundry, bakery, mixing plants, can, bottle and bag packing plants, textile mills, paint mills, breweries and milk processing plants, power plants, aluminum processing or manufacturing plants, and the amusement or entertainment field.

5006.19

Also included are installation of mechanical equipment in atomic energy plants, installation of reactors in power plants, installation of control rods and equipment in reactors, installation of mechanical

equipment in rocket missile bases, launchers, launching gantry, floating bases, hydraulic escape doors and any and all component parts thereto either assembled, semi-assembled or disassembled.

#### 5006.20

Further included is the installation of, but not limited to the following: setting of all engines, motors, generators, air compressors and fans, pumps, scales, hoppers, conveyors of all types and sizes and their supports, escalators, man lifts, moving machinery, mechanical operator and/or automatic doors, roll-up doors, mechanical stage equipment, amusement devices, mechanical pin setters and spotters in bowling alleys, refrigeration equipment and installation of all types of equipment necessary and required to process material either in manufacturing or servicing, the handling and installation of pulleys, gears, sheaves, fly wheels, air and vacuum drives, worm drives and gear drives directly or indirectly coupled to motors, belts, chains, screws, legs, boots, guards, boot tanks, all bin valves, turn heads and indicators, shafting, bearing, cable sprockets, cutting all key seats in new and old work, troughs, chippers, filters, calendars, rolls, winders, reminders, slitters, cutters and wrapping machines; blowers, forging machines, rams, hydraulic or otherwise, planing, extruder, ball, dust collectors, equipment in meat packing plants and splicing of ropes and cables.

#### 5006.21

Additionally included are the laying out, fabrication and installation of protection equipment, including machinery guards, the making and setting of templates for machinery, fabrication of bolts, nuts, pins and drilling of holes for any equipment which the millwrights install regardless of materials; all welding and burning regardless of type; fabrication of all lines, hose or tubing used in lubricating machinery installed by millwrights; grinding, cleaning, servicing and machine work necessary for any part of any equipment installed by the millwrights; and the breaking in and trial run, of any equipment or machinery installed by the millwrights

#### 5006.22

When requested in writing by the Millwright Union, individual Employers who are parties to this Agreement shall furnish signed letters promptly on a date mutually agreed upon by both parties, but in no case more than thirty (30) days, on the letterhead of the individual Employer stating he is employing or had employed millwrights on a specific type of work and a specific job and paid the negotiated scale of wages and fringe benefits for such work.

#### 5006.23

The individual Employer and the Local Union will cooperate promptly in attempting to resolve jurisdictional disputes that may arise on any job or project.

Craft: OPERATING ENGINEER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Operating Engineers	(SEE GROUP CLASSIFICATIONS)
Group 1.....	78.44
Group 2.....	79.39
Group 3.....	79.68
Group 4.....	81.17
Group 5.....	82.27
Group 6.....	81.39
Group 7.....	82.49
Group 8.....	81.50
Group 9.....	82.60
Group 10.....	81.62
Group 11.....	82.72
Group 12.....	81.79
Group 13.....	81.89
Group 14.....	81.92
Group 15.....	82.00
Group 16.....	82.12
Group 17.....	82.29
Group 18.....	82.39
Group 19.....	82.50
Group 20.....	82.62
Group 21.....	82.79
Group 22.....	82.89
Group 23.....	83.00
Group 24.....	83.12
Group 25.....	83.29
Add \$.50 per hour for "Special" Shift.....	
Add \$1.00 per hour for "Special" Shift.....	

[Add Zone Rates See Below](#)

[Add Premium Pay](#)

[Operating Engineers JOB DESCRIPTION:](#) See Below

Craft: OPERATING ENGINEER (Union Rate)  
**CRANES, PILEDRIVING, & HOISTING EQUIPMENT**

**Prevailing wage rates include the base rate as well as all applicable fringes**

Operating Engineers	(SEE GROUP CLASSIFICATIONS)
Group 1.....	81.03
Group 2.....	81.17
Group 3.....	81.39
Group 4.....	81.50
Group 5.....	81.62
Group 6.....	81.79
Group 7.....	81.96
Group 8.....	82.12
Group 9.....	82.80
Group 10.....	82.96
Group 11.....	83.26
Group 12.....	83.59
Group 13.....	83.96
Group 14.....	84.80
Group 15.....	84.96
Group 16.....	85.01
Group 17.....	85.51
Group 18.....	85.96
Group 19.....	87.54
Group 20.....	88.15
Group 21.....	88.76
Group 22.....	89.52
Group 23.....	89.98
Group 24.....	90.48
Add \$.50 per hour for "Special" Shift.....	
Add \$1.00 per hour for "Special" Shift.....	

[Add Zone Rates See Below](#)

[Add Premium Pay](#)

[Operating Engineers JOB DESCRIPTION:](#) See Below

Craft: OPERATING ENGINEER (Union Rate)  
**SURVEYOR**

**Prevailing wage rates include the base rate as well as all applicable fringes**

Operating Engineers	(SEE GROUP CLASSIFICATIONS)
Group 1.....	80.36
Group 2.....	81.17
Group 3.....	81.39
Group 4.....	81.67
Group 5.....	81.79
Group 6.....	81.89
Group 7.....	81.92
Group 8.....	82.29
Group 9.....	82.42
Group 10.....	82.92

[Add Zone Rates See Below](#)

[Add Premium Pay](#)

[Operating Engineers JOB DESCRIPTION](#): See Below

Craft: OPERATING ENGINEER (Union Rate)  
**TUNNEL**

**Prevailing wage rates include the base rate as well as all applicable fringes**

Operating Engineers	(SEE GROUP CLASSIFICATIONS)
Group 1.....	80.29
Group 2.....	81.24
Group 3.....	81.53
Group 4.....	81.67
Group 5.....	81.89
Group 6.....	82.00
Group 7.....	82.12
Group 8.....	82.29
Group 9.....	82.49

**ADD ZONE RATE**

In addition to: **OPERATING ENGINEER, CRANES, PILEDRIVING, & HOISTING EQUIPMENT, SURVEYOR AND TUNNEL** rates add the applicable amounts per hour calculated from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 32.5 miles	\$0.00
Zone 2	32.5 to 45 miles	\$3.00
Zone 3	45 to 60 miles	\$4.00
Zone 4	over 60 miles	\$4.50

**ADD PREMIUM PAY**

All time worked before 6:00 A.M. and after 5:00 P.M., or all time worked in excess of eight (8) consecutive hours, exclusive of meal periods, and all work performed on Saturdays, Sundays and holidays, shall be paid at the applicable overtime rate.

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**Operating Engineers JOB DESCRIPTION:** Excerpt from NCA and Operating Engineers Local 12

- a. It shall cover work on building, heavy highway and engineering construction, including the construction of, in whole or in part, or the improvement or modification therefore, including any structure or operations which are incidental thereto, the assembly, operation, maintenance and repair of all equipment, vehicles and other facilities, including helicopters used in connection with the performance of the aforementioned work and services and including without limitation the following types of classes of work:
- b. Street and highway work, grading and paving, excavation of earth and rock, grade separations, elevated highways, viaducts, bridges, abutments, retaining walls, subways, airport grading, surfacing and drainage. Electric transmission line and conduit projects, water supply, water development, reclamation, irrigation, drainage and flood control projects, water mains, pipelines sanitation and sewer projects, dams, aqueducts, canals, reservoirs, intakes, channels, levees, revetments, quarrying of breakwater or riprap stone, foundations, pile driving, piers, locks, dikes, river and harbor projects, breakwater, jetties, dredging and tunnels, soil testing and building/inspector. The handling, installation, maintenance, programming and the use of all stationary and/or portable robots. This shall include the use of all robots used in any industry including the nuclear field.
- c. It shall cover all work with the exceptions of the initial setting, positioning and programming of the base station in conjunction with Global Positioning Systems/GPS on the job site.
- d. The construction, erection alteration, repair, modification demolition, addition or improvement, in whole or in part, of building structure including Power Plants, Mines, Solar Energy installations and appurtenances, oil or gas refineries and incidental structures, and including any grading, excavation, or similar operations which are incidental thereto, or the installation, operation, maintenance and repair or equipment, and other facilities used in connection with the performance of such building construction, except where such structures are an incidental or supplemental part of highway and engineering construction, as defined in this Article.
- e. All concrete form work, including but not limited to, the fabrication, construction, placing, erection, rigging and hoisting, stripping and removing of all forms and operation of the forklift lead, pettibone or mobile equipment in reference to all the above work.
- f. All work in connection with tiltup slabs, including but not limited to benchmarks, layout, setting of all forms, blockouts, metal door and window jambs, templates for bolts, lift points, knee braces, all stripping of forms (whether or not to be reused) rigging, setting, plumbing and lining, welding, drilling, ledger bolts, setting of expansion joints and caulking. Also to include forms for stairs and

loading docks (setting and stripping), installation of all doors including roll-up, installation of laminated beams or precast structures, and operation of the forklift in reference to all of the above work.

- g. All work in connection with the hoisting or materials which are to be used by the Carpenters or Building Tradesmen will be rigged, guided and handled by employees covered by the Agreement.
- h. The layout, rigging, tagging, signaling, cutting, burning, welding chain sawing, driving, setting and pulling of all soldier piles, sheet piles, soldier beams and casing, together with all necessary walling, shoring, underpinning, struts, bracing, capping and lagging necessary for construction of subterranean structures of all types to include, but not limited to subways, subway stations, buildings, storm drains, sewers, pipelines and all open cut and over construction projects. Fabrication, construction removal and stripping of all forms both inside and outside the tunnels and drains to include form liners and membranes, whether they be spray on, glue on tack on, composed of any and all building materials to include plastic, neoprene, high density polyethylene, vinyl cork or any other natural or artificial material. Construction of all covers and access mats to include all necessary rigging for setting and removing, whether intermittently or regularly. Installation and removal of all timber decking.
- i. All office modular furniture systems including, but not limited to: the unloading by any means, stockpiling, distribution to point of erection, carrying, handling transportation, uncrating, installing, cleaning, and/or staging of all office, commercial industrial, institutional, and hotel furniture systems, furnishing, etc., including (but not limited to) all components parts (regardless of their materials or method or manner of installation, attachment or connection). Also included will be layout work including the use of level, transit and any other instrument or tool (or adaptable tool) required for the work herein described.
- j. The placing, handling, moving and erection of all materials which fall within the description of work set forth in the Agreement from the site of delivery on the job to the point of the job where the work is to be performed. The erecting and moving all scaffolds and the moving and handling of all materials to be used in erection of scaffolding.

Craft: PAINTER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Painter-Journeyman.....	64.23
Painter-Foreman.....	68.20
Painter-General Foreman.....	72.53

**ADD ZONE RATE**

In addition to: PAINTER rates add the applicable amounts per hour Zone Pay shall commence from Maryland Parkway and Charleston Boulevard and shall be paid as follows:

Zone 1	0 to 40 miles	\$0.00
Zone 2	40 to 60 miles	\$2.50
Zone 3	over 60 miles	\$4.25
Laughlin		\$2.00

**RECOGNIZED HOLIDAYS**

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**ADD PREMIUM PAY**

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For first three (3) hours worked over eight (8) on a regular five (5) day week.
2. For all hours worked on Saturday. Employees shall not work less than four (4) hours.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked beyond eleven (11) hours shall be paid at two (2 X) times the straight time rate.
2. For all hours worked on Saturday beyond 8 hours (2 X) times the straight time rate.
3. For hours worked Sunday and Recognized Holidays. Employees shall not be employed for less than four (4) hours paid at two (2X) times the straight time rate.

\*If there is less than 8 hours between shifts then the 2nd shift becomes a continuation of the 1st shift, and if the majority of the work performed is outside of the regular day shift then it is 7-1/2 hours for 8.

\*Shift Differential: To be paid for all work performed between the hours of 4:30 pm to 5 am and it will be compensated at \$2.00 per hour in addition to the applicable wages. Overtime that falls between these hours will still be paid at the appropriate overtime rate.

**Section 3. SPECIALTY PREMIUM PAY**

a) High Pay- work on an elevated, mechanically operated platform (including but not limited to: swing stage, boatswain chair, crane basket, heck lift) or rappelling work over forty (40) feet, up to and including one hundred (100) feet in height shall be paid at the rate of eighty-five cents (\$0.85) per hour above the base classification. All work over one hundred (100) feet shall be paid at the rate of two dollars (\$2.00) per hour above the base classification.

b) High pay shall be paid in addition to all other premiums involved.

c) Down Hole – Down hole time shall pay in the same increments as high pay.



d) Hazard Pay - Employees required to work inside tunnels, tubes or piping such as work involved at water treatment plants and mining operations shall receive a premium of thirty-five cents (\$0.35) per hour above the base classification. Hazard pay shall be paid in addition to all other premiums involved.

e) Employees working with or applying creosote, coal or hot tar epoxies shall be furnished uniforms or clothing described by OSHA.

f) If a worker is entitled to receive premium pay at any time during his shift he shall receive the premium for the entire shift.

Section 4. INDUSTRIAL PAINTING - Employees performing painting work on industrial projects shall be paid an additional fifty cents (\$0.50) per hour above the Taxable Net Wage Rate in addition to any other high time or premium pay.

**JOB DESCRIPTION:** Excerpt from Agreement between PDCA and Allied Trades DC 15

Work will include, but not be limited to: (1) preparation of any surface that is to receive any coating. This is to include, but not be limited to caulking, puttying, spackling, bondo, fiberglass applications and repairs, sealers and primers. The application and removal of all types of coatings and coating systems in relation to all painting, decorating, protective coatings, coating and staining of concrete floors and toppings, waterproofing, masonry restoration, fireproofing, fire retarding, metal polishing, refinishing, sealing, lining, fiber glassing, E-Glass fiberglass, GRG, GFRC, plaster cast, carbon fiber, encapsulating, insulating, metalizing, flame spray, Exterior Insulating Finishing Systems, the application of Venetian Plasters and/or Polymers; (2) each and all such applications, and similar or substitute applications, on all surfaces, interior and exterior, to include, but not be limited to: residences; buildings; structures; industrial, power, chemical and manufacturing plants; bridges; tanks; vats; pipes; stacks; light and high tension poles; parking, traffic and air strip lines; trucks; automobile and railroad cars; ships; aircraft; and all machinery and equipment; (3) any and all material used in preparation, application or removal of any paint, coatings or applications, including, but not limited to: the handling and use of thinners, dryers, sealers, binders, pigments, primers, extenders, air and vapor barriers, emulsions, waxes, stains, mastics, plastics, enamels, acrylics, epoxies, epoxy injection and T-Lock welding, alcahyeds, sheet rubber, foams, seamless and tile-like coatings, etc.; (4) all preparation for and removal of any and all materials for finishes, such as deep cleaning, patching, all levels of finishing, taping/finishing, skim coating, pointing, caulking, high pressure water, chemical and abrasive blasting, environmental blasting, wet/dry vacuum work, chemical stripping, scraping, air tooling, bleaching, steam cleaning, asbestos and lead abatement/removal; (5) the inspection of all coatings and/or coating systems during their applications will be performed by members of this International Union.

**Craft: PILEDRIVER (Union Rate)**

Driverman, Rigman, Bridge and Dock Carpenter.....	67.81
Piledriver Certified Welder.....	68.81
Piledriver-Foreman.....	72.06
Diver-Diving (wet pay).....	120.79
Stand-By Diver.....	73.06
Tender.....	72.06

**ADD ZONE RATE**

In addition to PILEDRIVER rates add the applicable amounts per hour, calculated from Maryland Parkway and Charleston Boulevard, Las Vegas:

Zone 1	0 to 40 miles	\$0.00
Zone 2	40 to 60 miles	\$2.50
Zone 3	over 60 miles	\$4.25
	Colorado River Region	\$2.00

**ADD PREMIUM PAY**

First two (2) hours outside the regular constituted shift shall be at the rate of time and one-half (1½X).

Saturdays up to the first ten (10) hours shall be at the rate of time and one-half (1½X). All additional hours and Sundays and holidays shall be the rate of double time (2X). When working on Sundays and holidays, there will be one dollar and fifty cents (\$1.50) per hour additional paid to Pension Annuity.

**RECOGNIZED HOLIDAYS**

New Year's Day, Washington's Birthday (President's Day), Memorial Day, 4th of July, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day.

**JOB DESCRIPTION** Excerpt from Southwest Regional Council of Carpenters and Affiliated Local Unions Master Labor Agreement

**104.1** The Carpenters claim the layout, rigging, tagging, signaling, cutting, burning, welding, chain sawing, driving, setting and pulling of all soldier piles and soldier beams together with all necessary waling, shoring, underpinning, struts, bracing, capping and lagging necessary for construction of subterranean structures of all types to include, but not limited to subways, subway stations, buildings, storm drains, sewers, pipelines and all open cut and cover construction projects. The Carpenters further claim construction of all covers and access mats to include all necessary rigging for setting and removing, whether intermittently or regularly and installation and removal of timber decking.

**(a)** In addition to the work identified in Article I, the Pile Divers claim the operation of the following types of equipment when the operation of same is incidental to that work which falls under the jurisdiction of the United Brotherhood of Carpenters and Joiners of America or Pile Drivers Local Union No. 2375; mechanical forklifts of all types, boom trucks and any other mobile equipment as assigned by the employer necessary to complete the work. In addition, the operation of the power pack and vibratory hammer controls when driving or pulling, sheet pile, pile, soldier beams, cassinos or casing.

**(1)** In the construction of waterfront and marine facilities, such as docks, piers, wharves, bulkheads, jetties, and similar structures, the pile driver classification should continue to apply, up to and including the decking thereof.

**(2)** On all pile driving and caisson work on both land and water, the Pile Driver classification should apply.

- (3)** In the construction of wooden bridges whether over land or over water, when composed of heavy timber, the Pile Driver classification should apply.
- (4)** In the construction of concrete or steel bridges over land, the Pile Driver classification shall apply to the driving of piles and/or caisson work including the forms required for the capping of the piles or caissons immediately top of the piles or caissons. The capping of the piles is herein interpreted as being that concrete, wood, or other material resting on the top of the piles where driven or placed and does not include any further form work above the capping. In many instances it has been found that the capping is called the girder. The above shall apply on such concrete or steel bridges constructed over land, highways, railroads, overpasses and include cloverleaves, interchanges, etc.
- (5)** In the construction of concrete or steel bridges over water, the Pile Driver classification shall apply up to and including all of the form work to the top of the column, piers, or abutments supporting the steel and/or any other superstructures.
- (6)** In the erection of false work, when necessary for the support of work under the Pile Driver classification, then such false work shall fall within their classification. False work necessary for the support of work under the Carpenter classification shall be done within such Carpenter classification, with the exception that where pile driving or power equipment is used for heavy timber false work, then such work shall come under the Pile Driver classification. This would include all rigging, signaling and tagging incidental to the placing of the heavy timber.
- (7)** In the construction of open-cut sewers, the Pile Driver classification shall apply on all piling including wood, steel or concrete sheet piling, all bracing timber and form work incidental to the construction thereof.

Craft: PLASTERER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Plasterer-Journeyman.....	59.96
Plasterer-Foreman.....	64.26
Plasterer-General Foreman.....	66.40

**ADD ZONE RATE**

In addition to PLASTERER rates employees performing work on Public Works Projects shall be entitled to the following wage rates for all hours worked, calculated on an air mile radius from the Clark County Regional Justice Center:

Zone 1	0 to 50 miles	\$0.00
Zone 2	Over 50	\$4.00

**ADD PREMIUM PAY**

**OVERTIME** – The first two (2) hours worked outside the regularly constituted shift shall be at the rate of time and one-half (1 ½). All additional hours shall be at the rate of double time (2x). On Saturday work, the first ten (10) hours shall be at time and one-half (1 ½) and all additional hours at double time (2x). Sundays and Holidays shall be at double time (2x). All hours worked after ten (10) hours are at the rate of double time (2x) Monday through Saturday.

For employees on a second shift, all hours worked in excess of seven and one-half (7 ½) hours shall be paid for at the appropriate overtime rate as described above. For employees on a third shift, all hours worked in excess of seven (7) hours shall be paid for at the appropriate overtime rate as described above.

**HIGH TIME** – On jobs where employees are required to work from swinging scaffold, suspended from a rope or cable, bosun chair, brackets, cantilevers or outrigger from the ground, they shall receive an additional one dollar (\$1.00) per hour.

**NOZZLE MAN** – The nozzle man applying fireproofing material shall receive an additional \$2.00 per hour for the period in which he operates any nozzle.

**RECOGNIZED HOLIDAYS**

New Year's Day, Memorial Day, 4th of July, Labor Day, Admissions Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day.

**JOB DESCRIPTION:** Excerpt from Agreement So NV. Plasterers & AGC/NCA/UBCA

This includes but is not limited to: Smooth and finish surfaces of poured or full systems of EIFS including sticking and shaping of foam pieces or surfaces by adhesive or mechanical installation, all sprayed or troweled on fireproofing, interior cover coats including all plastering systems recognized by our International Association; installation of all types of lath and all lathing trims in any interior or exterior applications; installation and patching of GFRG and GFRC pieces with adhesive or mechanical fastening systems; all cutting, shaping, rodding, carving, leveling, brooming of rock, water and pool features including all interior swimming pool finishes, but not limited to pebbletech or white plaster finishes; all Venetian or decorative interior plaster; all acoustical finish systems including, but not limited to, Baswaphon.

Plasterers shall also have jurisdiction over all work or processes which represent technological change, replacement, modification or substitution for the work described above. In addition, Plasterers shall perform any and all work and use any and all new materials or techniques involved in plaster construction including but not limited to what is known as green or sustainable construction technology.

Craft: PLUMBER/PIPEFITTER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Plumber/Pipefitter-Journeyman.....	71.71
Plumber/Pipefitter-Foreman.....	77.02
Plumber/Pipefitter-General Foreman.....	82.34

**ADD ZONE RATE**

In addition to PLUMBER/PIPEFITTER rates employees performing work on Public Works Projects shall be entitled to the following wage rates for all hours worked, calculated on an air mile radius from the Clark County Regional Justice Center:

Zone 1	0 to 20 miles	\$0.00
Zone 2	20 to 45 miles	\$3.75
Zone 3	45 to 75 miles	\$7.50
Zone 4	75 miles and over	\$11.25

**ADD PREMIUM PAY**

Overtime – Overtime worked on a regular work day, Monday through Friday, will be paid at a rate of one and one-half (1 ½) times the regular rate of pay for the first two hours worked before or after the regular eight (8) hour shift, and at two (2) times the regular rate of pay for all hours in excess of ten (10) hours. The first ten (10) hours worked on a Saturday will be paid at a rate of one and one-half (1 ½) times the regular rate of pay, and all hours in excess of ten (10), and Sundays and holidays will be paid at two (2) times the regular rate of pay. A work week may consist of four (4) consecutive ten (10) hour days, at regular rate of pay Monday through Thursday with no rotating shifts. Overtime after ten (10) hours per day or forty (40) hours in the four-day week shall be paid at two (2) times the regular rate of pay. Fridays and/or Saturdays will be paid at time and one-half (1 ½) the regular rate of pay for the first eight (8) hours of work. Hours worked after eight (8) hours on Friday and Saturday, and all hours worked on Sunday and holidays shall be at two (2) times the regular rate of pay. An eight (8) hour break between shifts shall be observed.

Shiftwork – Shift work is permitted when the shifts are of five (5) or more day’s duration. The first shift shall work a regular eight (8) hour day between the hours of 6 a.m. and 4:30 p.m. The second shift shall work a minimum of eight (8) hours, not including a one-half (½) hour lunch period on the employee's own time and shall receive an additional two (2) dollars per hour. The third shift shall work a minimum of eight (8) hours, not including a one-half (½) hour lunch period on the employee’s own time and shall receive an additional four (4) dollars per hour. A second work shift extending past midnight shall be paid at the third shift rate for the entire second shift.

**RECOGNIZED HOLIDAYS**

Holidays - All work performed on the following holidays shall be paid at two (2) times the regular hourly wages: New Year's Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. If any of the above holidays fall on a Sunday, the Monday following shall be observed as the holiday. If any of the above holidays fall on a Saturday, the Friday preceding shall be observed as the legal holiday.

**JOB DESCRIPTION** Excerpt from Agreement between MCA and Plumber Pipefitters Serv. Tech  
Local 525

Installation of all plumbing, pipe fitting, and refrigeration systems and component parts thereof, including fabricating, assembling, erecting, installing, testing, balancing, dismantling, repairing, reconditioning, adjusting, altering, servicing and handling, unloading, distributing, tying on and hoisting of all piping materials, by any method, including all hangers and supports of every description, the unloading and setting of kitchen equipment, the testing and balancing of all plumbing and pipefitting systems or component parts thereof, the operation of pumps, air compressors and welding machines, as well as equipment used on building and construction work in conjunction with the work of the trade, as a time and labor saving device.

**Craft: REFRIGERATION MECHANIC (Union Rate)**

**Prevailing wage rates include the base rate as well as all applicable fringes**

Refrigeration-Journeyman.....	71.71
Refrigeration -Foreman.....	77.02
Refrigeration -General Foreman .....	82.34

**ADD ZONE RATE**

In addition to REFRIGERATION MECHANIC rates employees performing work on Public Works Projects shall be entitled to the following wage rates for all hours worked, calculated on an air mile radius from the Clark County Regional Justice Center:

Zone 1	0 to 20 miles	\$0.00
Zone 2	20 to 45 miles	\$3.75
Zone 3	45 to 75 miles	\$7.50
Zone 4	75 miles and over	\$11.25

**ADD PREMIUM PAY**

Overtime – Overtime worked on a regular work day, Monday through Friday, will be paid at a rate of one and one-half (1 ½) times the regular rate of pay for the first two hours worked before or after the regular eight (8) hour shift, and at two (2) times the regular rate of pay for all hours in excess of ten (10) hours. The first ten (10) hours worked on a Saturday will be paid at a rate of one and one-half (1 ½) times the regular rate of pay, and all hours in excess of ten (10), and Sundays and holidays will be paid at two (2) times the regular rate of pay. A work week may consist of four (4) consecutive ten (10) hour days, at regular rate of pay Monday through Thursday with no rotating shifts. Overtime after ten (10) hours per day or forty (40) hours in the four-day week shall be paid at two (2) times the regular rate of pay. Fridays and/or Saturdays will be paid at time and one-half (1 ½) the regular rate of pay for the first eight (8) hours of work. Hours worked after eight (8) hours on Friday and Saturday, and all hours worked on Sunday and holidays shall be at two (2) times the regular rate of pay. An eight (8) hour break between shifts shall be observed.

Shiftwork – Shift work is permitted when the shifts are of five (5) or more day’s duration. The first shift shall work a regular eight (8) hour day between the hours of 6 a.m. and 4:30 p.m. The second shift shall work a minimum of eight (8) hours, not including a one-half (½) hour lunch period on the employee's own time and shall receive an additional two (2) dollars per hour. The third shift shall work a minimum of eight (8) hours, not including a one-half (½) hour lunch period on the employee’s own time and shall receive an additional four (4) dollars per hour. A second work shift extending past midnight shall be paid at the third shift rate for the entire second shift.

**RECOGNIZED HOLIDAYS**

Holidays - All work performed on the following holidays shall be paid at two (2) times the regular hourly wages: New Year's Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. If any of the above holidays fall on a Sunday, the Monday following shall be observed as the holiday. If any of the above holidays fall on a Saturday, the Friday preceding shall be observed as the legal holiday.

**JOB DESCRIPTION**

1. Installing and repairing industrial and commercial refrigeration systems;



2. Mounting compressors, condensers and other refrigeration components to the frame of a refrigerator by using hand tools and acetylene welding equipment;
3. Assembling structural and functional components needed for refrigeration, including, without limitation, controls, switches, gauges, wiring harnesses, valves, pumps, compressors, condensers, cores and pipes;
4. Installing expansion and control valves by using hand tools and acetylene welding equipment;
5. Cutting, bending, threading and connecting pipe from functional components to water, power or refrigeration systems;
6. Fabricating and assembling components and structural portions of a refrigeration system;

Craft: ROOFER (Union Rate)  
(Does not include sheet metal roofs)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Rofer-Journeyman.....	42.43
Rofer-Foreman.....	48.87

**ADD PREMIUM PAY**

Any work performed in excess of ten (10) hours per day or forty (40) hours per week shall be paid at the rate of one and one half (1 1/2) times the regular straight time rate of pay.

Two times (2x) the regular wage shall be paid for all work performed on Sundays.

Two times (2x) the regular wage shall be paid for work performed on a Holiday designated under this Agreement.

Work performed on a Saturday shall be paid at the regular wage unless the work qualifies for overtime under the terms of this section.

**RECOGNIZED HOLIDAYS**

New Year's Day, Washington's Birthday (President's Day), Memorial Day, 4th of July, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day.

**JOB DESCRIPTION** Excerpt from Roofers, Waterproofers, and Allied Workers Local 162

Slate and Tile roofers shall include in their work jurisdiction the following work processes and types of materials. These shall include but not limited to:

1. All slate where used for roofing of any size, shape or color, used in any manner laid, including flat or promenade slates, with necessary metal flashing to make water-tight.
2. All tile where used for roofing of any size, shape or color, used in any manner laid, including flat or promenade tile, with necessary metal flashing to make watertight.
3. All asbestos shingles where used for roofing of any size, shape or color, and in any manner, laid with necessary metal flashing to make watertight.
4. All cementing in, on or around the said slate or tile roof or promenade.
5. All laying of felt, paper, membranes, ice shields, vapor barriers or similar underlayments on substrates.
6. All dressing, punching and cutting of all roof slate or tile.
7. All operation of slate cutting or punching machinery.
8. All substitute material taking the place of slate or tile, as asbestos slate or tile, cement or composition tile, including shingles of composition wood and metal tile.
9. All removal of slate or tile roofing as defined above when a roof is to be reapplied in their place.
10. All solar or photovoltaic cell-type roofing systems used to transform solar energy to electrical energy.

Section 4. Composition roofers and damp and waterproof workers shall include in their work jurisdiction the following work processes and types of materials. These shall include but not limited to:

1. All organic or inorganic felts and fabrics that comprise the reinforcing membrane of built-up roofing and waterproofing systems.
2. All waterproofing using bituminous products whether structures are above or below grade.

3. All forms of plastic, slate, slag, gravel, or rock roofing, including all types of aggregates, blocks, bricks, stones or pavers used to ballast or protect Inverted Roof Membrane Assembly (IRMA) roofs, or roofs of similar construction where the insulation is laid over the roof membrane.
4. All kinds of asphalt and composition roofing and waterproofing.
5. All base flashings, curb flashings, and counter flashings of bituminous composition used to roof or waterproof intersections of horizontal surfaces.
6. All components of composition roofing systems used to seal the roof, including but not limited to compression seals, termination bars, lath, roof cement and reinforcements, caulking and sealants.
7. All kinds of coal tar pitch and coal tar bitumen roofing and waterproofing.
8. All cleaning, preparing, priming and sealing of roof decks and surfaces that receive roofing, dampproofing and/or waterproofing.
9. All rock asphalt and composition roofing.
10. All rock asphalt mastic when used for damp and waterproofing.
11. All prepared paper roofing.
12. All mineral surfaced roofing, including 90lb., and 818, whether nailed, mopped with bitumen, or applied with mastic or adhesive.
13. All compressed paper, chemically prepared paper, and burlap when used for roofing or damp and waterproofing purposes, with or without coating.
14. All substrates used on the roof deck for fireproofing or any materials used as a support or nailing surface for the roofing system over the deck.
15. All damp resisting preparations when applied with a mop, brush, roller, swab, trowel, or spray system inside or outside of structure.
16. All damp course, sheeting or coating on all foundation work.
17. All tarred floors.
18. All wood block floors that are set in and/or coated with bituminous products.
19. All waterproofing of shower pans and/or stalls.
20. All laying of tile, wood block or brick, when laid in pitch, tar, asphalt mastic, marmolite, or any form of bituminous products.
21. All forms of insulation used as part of, or in connection with, roofing, waterproofing or dampproofing.
22. All forms of composite insulations having nailable surfaces (e.g. plywood, pressboard, chipboard, drywall, or other laminates) bonded to the insulation wherever such composite insulations are used as an integral thermal insulating component of the roofing system.
23. All forms of protection boards, walkway pads and roof treads used in composition roofing or waterproofing to protect the membrane from damage.
24. All types of coatings, toppings and finishes used on the roof surfaces.
25. All solar or photovoltaic cell-type structures that are used as substitutes for ballast or membrane protection.
26. All solar or photovoltaic cell-type roof membrane systems used to transform solar energy to electrical energy.

Section 5. Composition roofers and damp and waterproof workers shall also include in their work jurisdiction the following work processes and types of materials. These shall include but not limited to:

1. All forms of elastomeric and/or plastic (elasto-plastic) roofing systems, both sheet and liquid applied, whether single-ply or multi-ply. These shall include but not limited to:
  - a. PVC (polyvinyl chloride systems)
  - b. Butyl Rubber
  - c. EPDM (Ethylene-propylene diene monomer)
  - d. PIB (polyisobutylene)
  - e. CPE (chlorinated polyethylene)
  - f. CSPE (chlorosulfonated polyethylene)

g. Modified bitumens

h. TPO Membrane (Thermo Plastic Olefin)

2. All sealing and caulking of seams and joints on these roofing systems by heat or solvent welding or by adhesives or butyl tapes or any other means.
3. All base flashings, curb flashings and counter flashings of elasto-plastic composition as outlined
4. All components of elasto-plastic roofing systems used to seal the roof including but not limited to, compression seals, termination bars, caulking and sealants.
5. All insulations applied with the above systems, whether laid dry, mechanically fastened, or attached with adhesives, to include any gypsum board and/or fire barrier required.
6. All forms of composite insulations having nailable surfaces (e.g. plywood, chipboard, drywall, or other laminates) bonded to the insulation wherever such composite insulations are used as an integral thermal insulating component of the roofing system.
7. All types of aggregates, blocks, bricks, stones, or units of photovoltaic cell construction used to ballast these elasto-plastic systems.
8. All types of aggregates, blocks, stones, pavers or units of photovoltaic cell construction used to ballast or protect Inverted Roofing Membrane Assembly (IRMA) roofs, or roofs of similar construction where the insulation is laid over the roof membrane.
9. All sealing and caulking of seams and joints on these elasto-plastic systems to ensure water-tightness.
10. All liquid-type elasto-plastic preparations for roofing, damp or waterproofing when applied with a squeegee, trowel, roller or spray equipment, whether applied inside or outside of the building.
11. All sheet-type, elasto-plastic systems, whether single or multi-ply for waterproofing either inside or outside of a building.
12. All cleaning, preparing, priming and sealing of surfaces to be roofed, dampproofed or waterproofed, whether done by roller, mop, swab, three-knot brush, squeegee, spray systems, or any other means of application.
13. All types of pre-formed panels and rolls used in waterproofing (Volclay, Bentonite etc.)
14. All applications of protection boards to prevent damage to the dampproofing or waterproofing membrane by other crafts or during back-filling operations.
15. All handling of roofing, damp and waterproofing materials.
16. All hoisting and storing of roofing, damp and waterproofing materials.
17. All types of spray-in-place foams such as urethane, polyurethane, or polyisocyanurate, the machinery and equipment used to apply them, and the coatings that are applied over them.
18. All types of resaturants, coatings, mastics and toppings when used for roof maintenance and repairs.
19. All wrapping and/or coating of underground pipelines with bitumastic enamel or cold process, polykin tape, tapecoat, or other asphaltic coatings or tape inside or outside of pipe, whether done by roller, mop, swab, three-knot brush, or spray systems. Preparation of surface by sand blasting or wire brushing.
20. All operation of jeeper or holiday detectors.
21. All Zonolite or Cellular Concrete Roof Insulation and all materials, the machinery and equipment used to apply them.
22. All materials laminated to roofing and/or insulation systems.

Craft: SHEET METAL WORKERS (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Sheet Metal Worker Journeyman.....	81.48
Sheet Metal Worker -Foreman.....	86.65
Sheet Metal Worker -General Foreman.....	91.81

**ADD ZONE RATE**

In addition to SHEET METAL WORKER rates add the applicable amounts per hour, calculated on a radius from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 30 miles	\$0.00
Zone 2	31 to 50 miles	\$2.50
Zone 3	51 to 100 miles	\$3.50 (including Laughlin)
Zone 4	Over 100 miles	\$5.00

**ADD PREMIUM PAY**

All work performed outside the regular working hours and performed during the regular work week shall be at one and one-half (1½) times the straight time rate of pay. Sunday and Holidays shall be paid at double (2) times the straight time of pay.

**RECOGNIZED HOLIDAYS**

New Year's Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday following Thanksgiving Day, Christmas Eve Day, Christmas Day, or days locally observed as such, and Sunday shall be recognized as holidays.

**JOB DESCRIPTION:** Excerpt from Sheet Metal Local 88 Collective Bargaining Agreement

(a) Manufacture, fabrication, assembling, handling, erection, installation, dismantling, conditioning, adjustment, alteration, repairing and servicing of all ferrous or nonferrous metal work and all other materials used in lieu thereof and of all HVAC systems, air veyor systems, exhaust systems, and air-handling systems regardless of material used including the setting of all equipment and all reinforcements in connection therewith; (b) all lagging over insulation and all duct lining; (c) testing and balancing of all air handling equipment and duct work; (d) the preparation of all shop and field sketches whether manually drawn or computer assisted used in fabrication and erection, including those taken from original architectural and engineering drawings or sketches; (e) metal exterior wall systems, metal roofing and underlayment regardless of material used; (f) any and all auditing, commissioning and testing, of all HVAC in connection with a building rating methods; detailing, shop fabrication, field installation and performance oriented tasks

Craft: SPRINKLER FITTER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Sprinkler Fitter-Journeyman.....	70.58
Sprinkler Fitter-Foreman.....	73.33
Sprinkler Fitter-General Foreman.....	75.58

**RECOGNIZED HOLIDAYS**

New Year's Day, Memorial Day, 4th of July, Labor Day, Thanksgiving Day, Christmas Day.

**ADD PREMIUM PAY**

Premium pay for hours worked in excess of a shift of 8 hours or 12 hours or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday.

**JOB DESCRIPTION** Excerpt from between National Fire Sprinkler Assoc. and Road Sprinklerfitters Local 669

Installing, dismantling, maintenance, repairs, adjustments and corrections of all fire protection and fire control systems Including the unloading, handling by hand, power equipment and installation of all piping or tubing, appurtenances and equipment pertaining thereto, including both overhead and underground water mains, fire hydrants and hydrant mains, standpipes, and hose connections to sprinkler systems, sprinkler tank heaters, air lines and thermal systems used in connection with sprinkler and alarms systems, also all tanks and pumps connected thereto. Also including shall be CO2 and Cardox Systems, Dry Chemical Systems, Foam Systems and all other fire protection systems, but excluding steam fire protection systems.

Craft: TAPER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Taper-Journeyman.....	64.23
Taper-Foreman.....	68.20
Taper-General Foreman.....	72.53

**ADD ZONE RATE**

In addition to: TAPER rates add the applicable amounts per hour Zone Pay shall commence from Maryland Parkway and Charleston Boulevard and shall be paid as follows:

Zone 1	0 to 40 miles	\$0.00
Zone 2	40 to 60 miles	\$2.50
Zone 3	over 60 miles	\$4.25
Laughlin		\$2.00

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**ADD PREMIUM PAY**

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For first three (3) hours worked over eight (8) on a regular five (5) day week.
2. For all hours worked on Saturday. Employees shall not work less than four (4) hours.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked beyond eleven (11) hours shall be paid at two (2 X) times the straight time rate.
2. For all hours worked on Saturday beyond 8 hours (2 X) times the straight time rate.
3. For hours worked Sunday and Recognized Holidays. Employees shall not be employed for less than four (4) hours paid at two (2X) times the straight time rate.

\*If there is less than 8 hours between shifts then the 2nd shift becomes a continuation of the 1st shift, and if the majority of the work performed is outside of the regular day shift then it is 7-1/2 hours for 8.

\*Shift Differential: To be paid for all work performed between the hours of 4:30 pm to 5 am and it will be compensated at \$2.00 per hour in addition to the applicable wages. Overtime that falls between these hours will still be paid at the appropriate overtime rate.

**Section 3. SPECIALTY PREMIUM PAY**

a) High Pay- work on an elevated, mechanically operated platform (including but not limited to: swing stage, boatswain chair, crane basket, heck lift) or rappelling work over forty (40) feet, up to and including one hundred (100) feet in height shall be paid at the rate of eighty-five cents (\$0.85) per hour above the base classification. All work over one hundred (100) feet shall be paid at the rate of two dollars (\$2.00) per hour above the base classification.

b) High pay shall be paid in addition to all other premiums involved.

c) Down Hole – Down hole time shall pay in the same increments as high pay.

d) Hazard Pay - Employees required to work inside tunnels, tubes or piping such as work involved at water treatment plants and mining operations shall receive a premium of thirty-five cents (\$0.35) per hour above the base classification. Hazard pay shall be paid in addition to all other premiums involved.

e) Employees working with or applying creosote, coal or hot tar epoxies shall be furnished uniforms or clothing described by OSHA.

f) If a worker is entitled to receive premium pay at any time during his shift he shall receive the premium for the entire shift.

Section 4. INDUSTRIAL PAINTING - Employees performing painting work on industrial projects shall be paid an additional fifty cents (\$0.50) per hour above the Taxable Net Wage Rate in addition to any other high time or premium pay.

**JOB DESCRIPTION:** Excerpt from Agreement between PDCA and Allied Trades DC 15  
Excerpt from Drywall Finishing work will include, but not be limited to: (1) the preparation or leveling of any surface or substrate which is to receive a coating, finish and/or wall covering; this will include, but not be limited to, all levels of finishing and/or spackling of all surfaces, including gypsum wallboard taping and finishing, fire taping and all firestopping systems, glaze coatings, skim coating or any other finishing system, spotting of nails, finishing of corner beads/flex beads. Patching and sanding is within the system of preparing surfaces for finishes. (2) all stucco and dryvit systems will be performed by members of this International Union.



Craft: TILE SETTER/TERRAZZO WORKER/MARBLE MASON (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Tile Setter/Terrazzo Worker/Marble Mason- Finisher.....	44.94
Tile Setter.....	60.28
Terrazzo Worker/Marble Mason .....	62.91

**ADD ZONE RATE**

In addition to: TILE/TERRAZZO WORKER/MARBLE MASON rates add the applicable amounts per hour Zone Pay shall commence from Maryland Parkway and Charleston Boulevard and shall be paid as follows:

Zone 1	0 to 40 miles	\$0.00
Zone 2	40 to 50 miles	\$3.75
Zone 3	50 to 70 miles	\$5.00
Zone 4	Over 70 miles	\$10.00

**ADD PREMIUM PAY**

All work in excess of forty (40) hours during the established work week shall be paid at the rate of one and one-half (1-1/2) times the hourly base wage rate in effect.

Employees shall be paid one and one-half (1-1/2) times the hourly wage rate for all hours worked over eight (8) in a single day and double time after ten (10) hours in a single day, Monday through Friday, except recognized holidays.

Daily Overtime Saturdays the first ten (10) hours performed on Saturday shall be paid at one and one-half (1-1/2) times the straight time wage rate.

Daily Overtime Sunday- Employees shall be paid double time on Sundays if forty (40) straight time hours have been worked during the proceeding work week.

Holidays shall be paid double time for hours owed on recognized holidays.

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day. Any holiday falling on a Sunday will be observed on Monday.

**JOB DESCRIPTION:** Excerpt from Agreement between BAC 13 Nevada of the Mountain West Administrative District Council Master Labor Agreement

***FINISHER'S WORK:***

Finisher's work shall consist of assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments. required to complete the proper installation of the work covered by Sections 5, 7 and 8 of this Code.

## *TILE LAYERS' WORK:*

Tile laying shall consist of, but not be limited to, the following work procedures and installation of the following materials:

A. The laying, cutting or setting of all tile where used for floors, walls, ceilings, walks, promenade roofs, stair treads, stair risers, facings, hearths, fireplaces, and decorative inserts, together with any marble plinths, thresholds or window stools used in connection with any tile work; also, preparing and setting all concrete, cement, brickwork, or other foundation or materials that may be required to properly set and complete such work; setting or bedding all tiling, stone, marble, composition, glass, mosaic, or other materials forming the facing, hearth or fireplace of a mantel, or the mantel complete, together with setting of all cement, brickwork, or other materials required in connection with the above work; also the slabbing and fabrication of tile mantels, counters and tile panels of every description, and the erection and installation of same; the building, shaping, forming, construction or repairing of all fireplace work, whether in connection with a mantel hearth facing or not, and the setting and preparing of all material, such as cement, plaster, mortar, brickwork, iron work or other materials necessary for the proper and safe construction and completion of such work, except that a mantel made exclusively of brick, marble or stone, shall be conceded to be bricklayers', marble setters' or stonemasons' work, respectively.

B. It will be understood that the word "tile" refers to all burned clay products, as used in the tile industry, either glazed or unglazed, and to all composition materials made in single units up to 15"x20"x2", except quarry tiles larger than 9"x9"x1 1/4", also to mixtures in tile form of cement, plastics and metals that are made for and intended for use as a finished floor surface, whether upon interior or exterior floors, stair treads, promenade roofs, garden walks, interior walls, ceilings, swimming pools, and all places where tile may be used to form a finished surface for practical use, sanitary finish or decorative purposes, for setting all accessories in connection therewith, or for decorative inserts in other materials.

C. All terra cotta called unit tile in sizes of 6"x12" or under, regardless of method of installation, quarry tile 9"x9"x1 1/4" or less; split brick or quarry tile or similar material where the bed is floated or screeded and the joints grouted. Where the work is installed by tile layers, the grouting and cleaning shall be supervised by the mechanic. The bedding, jointing, and pointing of the above materials shall be the work of the craft installing the same. All clay products known as terra cotta tile, unit tile, ceramic veneer and machine-made terra cotta, and like materials in sizes 6"x12" and less regardless of the method of installation. Where the preponderance of materials to be installed comes within the provisions of this Section and when there is also some material in excess of the sizes provided for in this Section, the tile setter shall install all such materials.

D. The preparation, setup, calibration, operation, cleaning, and routine maintenance of any mechanical devices or robotics used to install tile and related materials, or that otherwise assist the tile layer in performing any of the work described in Article II and Code 1 of the IU Constitution, as well as the preparation and ongoing maintenance of the work area to allow proper installation of tile and related materials.

Craft: TRAFFIC BARRIER ERECTOR (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Traffic Barrier Erector.....60.89

**ADD ZONE RATE**

In addition to: TRAFFIC BARRIER ERECTOR rates add the applicable amounts per hour, calculated based on a miles from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 50 miles	\$0.00
Zone 2	50 miles and Over	\$3.75 including Laughlin area

**ADD PREMIUM PAY**

The first three (3) hours worked outside the regular constituted shift shall be at the rate of time and one half. All additional hours shall be at double time. On Saturday work, the first (10) hours shall be at time and one half and all additional hours at double time. Sundays and holidays shall be at double time.

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION**

Erects or places instruments to provide directional assistance to traffic on or near the public works construction project.

Craft: Truck Driver (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Truck Driver	(SEE GROUP CLASSIFICATIONS)
Group 1.....	61.52
Group 2.....	61.62
Group 3.....	61.83
Group 4.....	62.01
Group 5.....	62.16
Group 6.....	62.51
Foreman \$1.00 above highest paid journeyman supervised.	

**ADD ZONE RATE**

In addition to: TRUCK DRIVER rates add the applicable amounts per hour Zone Pay shall commence from Maryland Parkway and Charleston Boulevard and shall be paid as follows:

Zone 1	0 to 20 miles	\$0.00
Zone 2	20 to 40 miles	\$1.50
Zone 3	40 to 60 miles	\$2.50
Zone 4	Over 60 miles	\$3.50

**ADD PREMIUM PAY**

All time worked in excess of eight (8) consecutive hours, exclusive of meal period, or all time worked in excess of forty (40) hours per week and all work performed on Saturday and Sunday, and holidays shall be paid at the overtime rate.

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

**JOB DESCRIPTION**

Driving a tractor trailer combination or a truck transport goods or materials at the site of a public work or between sites of a public work.  
(Also, see descriptions listed with Truck Driver rates, if any)

Craft: WELL DRILLER (Non-Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Well Driller.....43.88

**JOB DESCRIPTIONS**

1. Setting, operating or tending to portable drilling rig machinery and related equipment to drill wells;
2. Extending stabilizing jackscrews to support and level a drilling rig;
3. Installing water well pumps;
4. Drillings wells for industrial water supplies, irrigation water supplies or water supplies for any other purpose; dewatering or other similar purposes; exploration; hole drilling for geologic and hydrologic information; and core drilling for geologic information.

# GROUP CLASSIFICATIONS

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## LABORER

### Group 1

- Traffic Control Tech and working Traffic Control Supervisor
- All pressure washing, all surface preparation for patching and grouting, dry packing of concrete and filling of form bolt holes
- Subgrade, finish/fine grade with use of granule or non-granule material, vapor barriers, lasers, string line, setting and leveling on highway, street paving, sidewalk, driveways, airport runways and similar type heavy construction
- Gas and oil pipeline
- Guinea chaser
- Laborer, general, construction, demolition, surgical demolition, selective demolition or Solar- Stringing of posts, installation of posts and piles, installation and bolting together of all rakes, tray tables and torque tubes. Running all bobcats, skid steers, forklifts, Turchis or similar equipment for post installation. Trashing out crates, card board boxes and trash within the solar arrays and Solar project boundaries.
- Laborer, packing rod steel and pans
- Laborer, temporary water lines (portable type)
- Laborer, loading and unloading solar panels, crates and pallets
- Laborer, handling, Installing, and setting of all solar panels/ wire management but not connections Landscape gardener (Must have knowledge of plant materials and how to plant them. Lays out plant arrangements to-follow the landscape plan)
- Stone pavers
- Nurseryman
- Tarman and mortar man, kettle man, potman and man applying asphalt, lay cold creosote, fine and similar type materials. ("Applying" means applying, dipping, brushing or handling of such materials for pipe wrapping and water proofing.)
- Underground laborer, including caisson bellows
- Window cleaner
- Scaffold Erector - (Excludes Tenders)
- Fence Erector includes but not limited to: erecting or repairing, Chain Link, wooden, metal, vinyl, steel, tortoise, wire/ wire mesh or temporary fence. Mortarless, Barrier Wall and/or Retaining Walls; Digging post holes with spade. Post hole digger or power-driven auger; Aligning post through the use of lines or by sighting; verifying vertical alignment of post with a plumb bob or spirit level.
- Mechanical Stabilized Earth Wall
- Material Handler - for all trades, including but not limited to stacking and packing of all drywall, taping mud, paint, wallpaper, wall coverings and material associated there with including Demolition of said materials.
- All Construction cleanup and Final clean-up (picking up debris, sweeping, scraping and janitorial work, including final clean-up), on all jobsites shall be the work of the Laborers, including mass jobsite clean-up by All Contractors and Sub- Contractors. except as provided in Group 1A
- Tool Crib
- Light Tool Repairman Certified
- Firewatch
- Rigging and signaling when assigned by the Contractor and/or performing the work of a

Laborer or tending another craft

**Group 1A**

- Flagger/flag person
- Pilot car

Final clean up subject to this rate shall mean:

- Polishing furniture
- Polishing stainless steel in hotel kitchens
- Sweeping and vacuuming hallways and finished rooms and completed casino areas
- Washing windows on first floor and similar duties

**Group 2**

- Asphalt raker, ironer, spreader, and luteman Buggymobile man
- Cesspool digger and installer Chuck tender (except tunnels)
- Gas and oil pipeline wrapper, pot tender and form man Making and caulking of all non-metallic pipe joints
- Operators and tenders of pneumatic and electric tools, video x-ray, vibrating machines, hand propelled trenching machines, vacuum truck/ hydro excavation operation, and all associated components for its operation, impact wrench multi-plate and similar mechanical tools not separately classified herein Riprap stonepaver
- Rota-scraper
- Sandblaster (pot tender)
- Septic tank digger and installer (lead man) Tank scaler and cleaner
- Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredders

**Group 3**

- Cutting torch operator Welding in connection with laborers work Gas and oil pipeline wrapper
- Gas and oil pipeline laborer, certified Jackhammer and/or pavement beaker
- Installing, laying and the connections of all metallic and non-metallic pipe, p.v.c. and drop inlet and duct bank, including landscape sprinklers, sewer pipe, drain pipe and underground tile
- Cement dumper (on one yard or larger mixers and handling bulk cement) Concrete core cutter
- Concrete curer, impervious membrane and oiler of all materials
- Concrete saw man,excluding tractor type, cutting scoring old or new concrete Operator of cement grinding machine
- Rock slinger
- Scaler (using boswain chair or safety belt or power tools under 100 feet)
- Forklift - A journeyman shall hold Forklift certification at time of referral for duration of employment. Bobcat/skid steer, Gannon tractor
- Working Dust control monitor, Single Axle water and Single Axle Dump Trucks Hodcarrier-Mason Tender/Mason Finisher
- Decorative Rock Installer - (Ponds, Waterfalls, etc.) Concrete striking, floating, epoxy finish, self-leveling material, and overlay
- Shotcrete/Gunnite

**Group 3A**

- Placement of all concrete, including red concrete by any means Concrete Specialists
- Mudd Cutter
- Concrete vibrator operator, all sizes
- Concrete Dumper
- Slickline/Hoseman/Dumpman

#### **Group 4**

- Cribber or shorer, lagging, sheeting, trench bracing, hand guided lagging hammer head rock slinger
- Powderman-blaster, all work of loading holes, placing and blasting of all powder and explosives if whatever type, regardless of method used for such loading and placing
- Sandblaster (nozzleman) Steel header-board man Construction Specialist

#### **Group 5**

- Driller (core, diamond or wagon),
- Air track drill (all types)
- Joy driller model TW-M-2A. Gardner-Denver model DH 143 and similar type drills (in accordance with Memorandum of Understanding between Laborers and Operating Engineers dated Miami, Florida, February 3, 1954)
- Gas and oil pipeline fusion
- Gas and oil pipeline wrappers, 6" pipe and over

#### **Group 6**

- Miner and Bullgang
- Shaft, Raid, Stope, Miner
- Miner-Tunnel (Hardrock)
- Bull Gang
- Mucker
- Trackman
- Miner-Welder Pipe Jacking
- Micro-Tunneling
- Tunnel Boring Machine
- High-Scaler

#### **Group 7**

- Asbestos Abatement
- Lead Abatement
- Hazardous Waste Abatement
- Petro-Chemical Abatement
- Radiation Remediation
- Microbial Remediation
- \$.50 wage rate above group III when wearing protective suite or respirator
- Employees shall be properly certified and/or licensed at time of dispatch.



**OPERATING ENGINEER, includes but is not limited to:**

**Group 1**

- Bargeman
- Blade Operator Assistant
- Brakeman
- Compressor Operator
- Ditch Witch, with seat or similar type equipment
- Elevator Operator - inside
- Engineer Oiler
- Forklift Operator (under 5 Tons)
- Generator Operator
- Generator, Pump or Compressor Plant Operator
- Inertial Profiler
- Pump Operator
- Signalman
- Steam Cleaner/Pressure Washer
- Switchman

**Group 2**

- Asphalt-Rubber Plant Operator (Nurse Tank Operator)
- Concrete Mixer Operator - Skip type
- Conveyor Operator
- Fireman
- Forklift Operator (over 5 Tons)
- Heliostat assembly System (Operator Related Work)
- Hydrostatic Pump Operator
- Oiler Crusher (Asphalt or Concrete Plant)
- PJU Side Dump Jack
- Profilograph
- Rotary Drill Helper (Oilfield)
- Screening and Conveyor Machine Operator (or similar types)
- Skiploader (wheel type up to ¾ yd. without attachment)
- Tar Pot Fireman
- Temporary Heating Plant Operator
- Trenching Machine Oiler

**Group 3**

- Asphalt-Rubber Blend Operator
- Bobcat or similar type (Skid Steer)
- Ford Ferguson (with dragtype attachments)
- Helicopter Radioman (ground)
- Stationary Pipe Wrapping and Cleaning Machine Operator

**Group 4**

- All Terrain Placers/All Terrain Stone Slingers
- Asphalt Plant Fireman
- Backhoe Operator (Mini-Max or similar type)
- Boring Machine and/or pilot Tube Machine Operator
- Boring System Electronic Tracking Locator

- Boxman or Mixerman (Asphalt or Concrete)
- Chip Spreading Machine Operator
- Concrete Cleaning Decontamination Machine Operator
- Concrete Pump Operator (small portable)
- Drilling Machine Operator, Small Auger Types (Texoma Super Economatic, or similar types - Hughes 100 or 200, or similar types - drilling depth of 30' maximum)
- Excavator Track/Rubber-Tired-wth all attachments (Operating weight under 21,000lbs)
- Guard Rail Post Driver Operator
- Highline Cableway Signalman
- Horizontal Directional Drilling Machine
- Hydraulic Casing Oscillator Operator-drilling depth of 30'maximum
- Hydrovac Operator
- Hydra-Hammer-Aero Stomper
- Micro Tunneling (above ground tunnel)
- Power Concrete Curing Machine Operator
- Power Concrete Saw Operator
- Power - Driven Jumbo Form Setter Operator
- Power Sweeper Operator
- Rock Wheel Saw/Trencher
- Roller Operator (compacting)
- Screed Operator (Asphalt or Concrete)
- Trenching Machine Operator (up to 6 ft.)
- Vacuum or Muck Truck

#### **Group 5**

- Equipment Greaser (Grease Truck/Multi-Shift)

#### **Group 6**

- Articulating Material Hauler
- Asphalt Plant Engineer
- Batch Plant Operator
- Bit Sharpener
- Concrete Joint Machine Operator (canal and similar type)
- Concrete Placer Operator
- Concrete Planer
- Dandy Digger
- Deck Engine Operator
- Deck Engineer
- Derrickman (Oilfield type)
- DeSanding Plant Operator
- Drilling Machine Operator, Bucket or Auger Types (Calweld 100 Bucket or similar types - Watson 1000 Auger or similar types - Texoma 330, 500 or 600 Auger or similar types - drilling depth of 45' maximum)
- Drilling Machine Operator (including water wells)
- Force Feed Loader
- High Rail Swivel Dump
- Hydraulic Casing Oscillator Operator
- Hydro Seeder Machine Operator (straw, pulp or seed)

- Jackson Track Maintainer, or similar type
- Kalamazoo Switch Tamper, or similar type
- Machine Tool Operator
- Maginnis Internal Full Slab Vibrator
- Mechanical Berm, curb or gutter (concrete or asphalt)
- Mechanical Finisher Operator (concrete, Clary-Johnson-Bidwell or similar)
- Micro Tunnel System (below ground)
- MST 2200, Track Dumps
- Pavement Breaker Operator (truck mounted)
- Prentice High Rail Loader
- Railcar Mover
- Road Oil Mixing Machine Operator
- Roller Operator (asphalt or finish)
- Rubber-Tired Earth Moving Equipment (single engine, up to and including 25 yds. struck)
- Self-Propelled Tar Pipelining Machine Operator
- Rumble Strip Grinder
- Skiploader Operator (crawler and wheel type, over  $\frac{3}{4}$  yd. and up to and including  $1\frac{1}{2}$  yds.)
- Slip Form Pump Operator (power driven hydraulic lifting device for concrete forms)
- Tractor Operator - Bulldozer, Tamper-Scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types)
- Tugger Hoist Operator (1 drum)
- Ultra High-Pressure Waterjet Cutting Tool System Operator
- Vacuum Blasting Machine Operator
- Volumetric Mixer Operator
- Welder - General

#### **Group 7**

- Welder - General (Multi-Shift)

#### **Group 8**

- Asphalt or Concrete Spreading Operator (Tamping or Finishing)
- Asphalt Paving Machine Operator (Barber Greene or similar type)
- Asphalt-Rubber Distributor Operator
- Backhoe Operator (up to and including  $\frac{3}{4}$  yd.) Small Ford, Case or similar.
- Backhoe Operator (over  $\frac{3}{4}$  yd. and up to 5 cu. yd. M.R.C)
- Barrier Rail mover
- Cast in Place Pipe Laying Machine Operator
- Cold Foamed Asphalt Recycler
- Combination Mixer and Compressor Operator (Gunite Work)
- Compactor Operator - self propelled
- Concrete Mixer Operator - Paving
- Crushing Plant Operator (Non-Portable)
- Drill Doctor
- Drilling Machine Operator, Bucket or Auger Types (Calweld 150 Bucket or similar types - Watson 1500, 2000, 2500 Auger or similar types - Texoma 700, 800 Auger or similar types - drilling depth of 60' maximum)
- Elevating Grader Operator
- Excavator Track/Rubber-Tired- with all attachments (operating Weight 21,000 lbs-1000,000 lbs.

- Global Positioning Systems/GPS
- Grade Checker
- Gradall Operator
- Grouting Machine Operator
- Heavy Duty Repairman
- Heavy Equipment Robotics Operator
- Hydraulic Casing oscillator Operator-drilling depth of 60' maximum
- Hydraulic Operated-drilling depth of 60" maximum
- Hydraulic Operated Grout Plant (excludes hand loading)
- Kalamazoo Ballast Regulator or similar type
- Klemm drill Operator or similar types
- Kolman Belt Loader and similar type
- Le Tourneau Blob Compactor or similar type
- Lo Drill
- Loader Operator (Athey, Euclid, Sierra and similar types)
- Master Environmental Maintenance Mechanic
- Mobark Chipper or similar types
- Ozzie Padder or similar types
- PC 490 Slot Saw
- Pneumatic Concrete Placing Machine Operator (Hackley-Presswell or similar type)
- Portable Crushing Plant Operator
- Prentice 721E Hydro-Ax
- Pumpcrete Gun Operator
- Rock Drill or similar types
- Rotary Drill Operator (excluding Caison type)
- Roto Mill Operator
- Rubber-Tired Earth Moving Equipment Operator (single engine, Caterpillar, Euclid, Athey Wagon, and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck)
- Rubber-Tired Earth Moving Equipment Operator (multiple engine - up to and including 25 yds. struck)
- Rubber-Tired Scraper Operator (self-loading paddle wheel type - John Deere, 1040 and similar single unit)
- Self-Propelled Curb and Gutter Machine Operator
- Shuttle Buggy
- Skiploader Operator (crawler and wheel type over 1½ yds. up to and including 6½ yds.)
- Soil Remediation Plant Operator (C.M.I. Enviro Tech Thermal or Similar Types) (Oiler Required Group II)
- Soil Stabilizer and Reclaimer
- Surface Heaters and Planer Operator
- Somero SXP Laser screed
- Speed Swing Operator
- Tractor Compressor Drill Combination Operator
- Tractor Operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar - Bulldozer, Tamper, Scraper and Push Tractor, single engine)
- Tractor Operator (boom attachments)
- Traveling Pipe Wrapping, Cleaning and Bending Machine Operator

- Trenching Machine Operator (over 6 ft. depth capacity, manufacturer's rating  
Trenching Machine with Road Miner Attachment (over 6 ft. depth capacity, manufacturer's rating)
- Ultra High-Pressure Waterjet Cutting Tool System Mechanic
- Water Pull (compaction)

### **Group 9**

- Heavy Duty Repairman (Multi-Shift)

### **Group 10**

- Backhoe Operator (over 5 cu.yds. M.R.C)
- Drilling Machine Operator, Bucket or Auger Types (Calweld 200 B
- Bucket or similar types - Watson 3000 or 5000 Auger or similar types - Texoma 900 Auger or similar types - drilling depth of 105' maximum)
- Dual Drum Mixer
- Heavy Duty Repairman-Welder Combination
- Hydraulic Casing Oscillator Operator-drilling depth of 105' maximum
- Monorail Locomotive Operator (diesel, gas or electric)
- Motor Patrol - Blade Operator (single engine)
- Multiple Engine Tractor Operator (Euclid and similar type - except Quad 9 Cat.)
- Pneumatic Pipe Ramming Tool and similar types
- Pre-Stressed Wrapping Machine Operator (2 Operators required)
- Rubber-Tired Earth Moving Equipment Operator (single engine, over 50 yds. struck)
- Rubber-Tired Earth Moving Equipment Operator (multiple engine, Euclid, Caterpillar and similar - over 25 yds. and up to 50 yds. struck)
- Tower Crane Repairman
- Tractor Loader Operator (crawler and wheel-type over 6½ yds.)
- Welder-Certified
- Woods Mixer Operator (and similar Pugmill equipment)

### **Group 11**

- Dynamic Compactor LDC350 (or similar types)
- Heavy Duty Repairman-Welder Combination (Multi-Shift)
- Welder-Certified (Multi-Shift)

### **Group 12**

- Auto Grader Operator
- Automatic Slip Form Operator
- Backhoe Operator (over 7 cu. Yds, M.R.S)
- Drilling Machine Operator, Bucket or Auger Types (Calweld, Auger 200 CA or similar types - Watson, Auger 6000 or similar types- Hughes Super Duty, Auger 200 or similar types - drilling depth of 175' maximum)
- Excavator Track/Rubber Tired – with all attachments (Operating Weight 100,000 lbs. – 200,000 lbs.)
- Excavator Track/Rubber Tired – with all attachments (Operating Weight 100,000 lbs. – 200,000 lbs.)
- Hoe Ram or similar with Compressor
- Hydraulic Casing Oscillator Operator – drilling depth of 175' maximum
- Mass Excavator Operator - Less than 750 cu. yds.
- Mechanical Finishing Machine Operator

- Mobile Form Traveler Operator
- Motor Patrol Operator (multi-engine)
- Pipe Mobile Machine Operator
- Rubber-Tired Earth Moving Equipment Operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)
- Rubber-Tired Self-Loading Scraper Operator (paddle-wheel-Auger type self-loading - two (2) or more units)
- Vermeer Rock Trencher (or similar type)

### **Group 13**

- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Push-Pull System (single engine, up to and including 25 yds. struck)

### **Group 14**

- Canal Liner Operator (not less than four (4) employees – Operator, Oiler, Welder, Mechanic, Grade Checker required)
- Canal Trimmer Operator
- Drilling machine Operator, Bucket or auger Types (Calweld, Auger 200 CA or similar types – Watson, August 6000 or similar types-Hughes Super Duty, Auger 200 or similar types – drilling depth of 300” maximum)
- Remote Controlled Earth Moving Equipment Operator (no one (1) Operator shall operate more than two (2) pieces of earth moving equipment at one time - One Dollar (\$1.00) per hour additional to base rate)
- Wheel Excavator Operator (over 750 cu. yds. per hour)

### **Group 15**

- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Push-Pull System (single engine, Caterpillar, Euclid, Athey Wagon, and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck)
- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Push-Pull System (multiple engine - up to and including 25 yds. struck)

### **Group 16**

- Excavator track/Rubber-Tired-with all attachments (Operating Weight exceeding 200,000lbs)
- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Push-Pull System (single engine, over 50 yds. struck)
- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Push-Pull System (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

### **Group 17**

- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Push-Pull System (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)
- Tandem Tractor Operator (operating crawler type tractors in tandem - Quad 9 and similar type)

### **Group 18**

- Rubber-Tired Earth Moving Equipment Operator, operating in Tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

### **Group 19**

- Rotex Concrete Belt Operator (or similar types)
- Rubber-Tired Earth Moving Equipment Operator, operating in Tandem (scrapers, belly dumps, and similar types in any combination, including compaction units - single engine, Caterpillar, Euclid, Athey Wagon, and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck)
- Rubber-Tired Earth Moving Equipment Operator, operating in Tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

### **Group 20**

- Rubber-Tired Earth Moving Equipment Operator, operating in Tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck)
- Rubber-Tired Earth Moving Equipment Operator, operating in Tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

### **Group 21**

- Rubber-Tired Earth Moving Equipment Operator, operating in Tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

### **Group 22**

- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, up to and including 25 yds. struck)

### **Group 23**

- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, Caterpillar, Euclid, Athey Wagon, and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck)
- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (multiple engine, up to and including 25 yds. struck)

### **Group 24**

- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, over 50 yds. struck)
- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (multiple engine, Euclid, Caterpillar and similar, over 25 yds. & up to 50 yds. struck)

### **Group 25**

- Concrete Pump Operator - truck mounted (Oiler required when boom over 105' or 36 meters)
- Pedestal Concrete Pump Operator
- Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

## **OPERATING ENGINEER-CRANES, PILEDRIVING AND HOISTING EQUIPMENT**

### **Group 1**

- A-Frame or Winch Truck Operator
- Ross Carrier Operator (jobsite)

### **Group 2**

- Bridge-Type Unloader and Turntable Operator
- Helicopter Hoist Operator

### **Group 3**

- Hydraulic Boom Truck (Pitman)
- Knuckleboom
- Spyder Crane (or similar type)
- Stinger Crane (Austin-Western or similar type)
- Tugger Hoist Operator (1 drum)

### **Group 4**

- Bridge Crane Operator
- Creter Crane Operator
- Hoist Operator (Chicago Boom and similar type)
- Lift Mobile Operator
- Lift Slab Machine Operator (Vagtborg and similar types)
- Material Hoist/Manlift Operator
- PD10 Pile driver (or similar types)
- Polar Gantry Crane Operator
- Prentice Self-Loader
- Self-Climbing Scaffold (or similar type)
- Shovel, Dragline, Clamshell Operator (over 3/4 yd. and up to 5 cu. yds. M.R.C.)
- Silent Piler
- Snobble Unit (pin-n-go or similar type)
- Tugger Hoist Operator (2 drum)

### **Group 5**

- Pedestal Crane Operator
- Shovel, Dragline, Clamshell Operator (over 5 cu. yds. M.R.C.)
- Tower Crane Repairman
- Tugger Hoist Operator (3 drum)

### **Group 6**

- Crawler Transporter Operator (Track or Rubber-Tired, Goldhofer or similar type)
- Derrick Barge Operator (under 25 tons, up to and including 50 tons M.R.C.)
- Hoist Operator, Stiff Legs, Guy Derrick or similar type (up to and including 25 ton M.R.C.)
- Shovel, Dragline, Clamshell Operator (over 7 cu. yds. M.R.C.)

### **Group 7**

- Derrick Barge Operator (over 25 tons, up to and including 50-ton M.R.C.)
- Highline Cableway Operator
- Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 25 tons, up to and including 50-ton M.R.C.)



- K-Crane
- Polar Crane Operator
- Self-Erecting Tower Crane Operator Maximum Lifting Capacity ten (10) tons. One (1) ton operator).

**Group 8**

- Oiler (40 tons up to including 200 tons M.R.C)

**Group 9**

- Oiler (Over 200 tons)

**Group 10**

- ABI/Fundex Machine
- Derrick Barge Operator (over 50 tons, up to and including 100-ton M.R.C)
- Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 50 tons, up to and including 100-ton M.R.C)
- Vibrocat Stone Column Operator or similar types

**Group 11**

- Crane Heavy Duty Repairman

**Group 12**

- Crane Operator (up to and including 40-ton capacity)

**Group 13**

- Derrick Barge Operator (over 100 tons, up to and including 200-ton M.R.C.)
- Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 100 tons, up to and including 200-ton M.R.C)

**Group 14**

- Luffing Boom Oiler

**Group 15**

- Derrick Barge Operator (over 200 tons, up to and including 300-ton M.R.C.)
- Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 200 tons, up to and including 300-ton M.R.C.)

**Group 16**

- Crane Operator (over 40 tons, up to and including 79-ton M.R.C.)

**Group 17**

- Crane Operator (over 80 Tons, up to and including 150-ton M.R.C.)

**Group 18**

- Derrick Barge Operator (over 300 tons)
- Helicopter Pilot
- Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 300 tons)
- Tower Crane Operator (over 300 tons)

**Group 19**

- Crane Operator (over 150 tons, up to and including 200-ton M.R.C.)

**Group 20**

- Crane Operator (over 200 tons, up to and including 250-ton M.R.C.)

**Group 21**

- Crane Operator (over 250 tons, up to and including 300-ton M.R.C.)

**Group 22**

- Crane Operator (over 300 tons, up to and including 350-ton M.R.C.)

**Group 23**

- Crane Operator (over 350 tons, up to and including 500-ton M.R.C.)

**Group 24**

- Crane Operator (over 500 tons M.R.C.)
- 

**SURVEYOR GROUP CLASSIFICATIONS**

**Group 1**

- Chainman

**Group 2**

- Rodman

**Group 3**

- Instrument man

**Group 4**

- Global Position Systems Chainman and Rodman
- Hydrographic Engineering Technician I (Chainman)
- Wild Gyroscope Instrumentman

**Group 5**

- Party Chief

**Group 6**

- E.D.M. or Fathometer Instrument man

**Group 7**

- Certified Party Chief

**Group 8**

- Hydrographic Engineer Party Chief

**Group 9**

- Certified Hydrographic Engineer Party Chief
- Global Position Systems Party Chief

**Group 10**

- Chief of Parties

- Two (2) or more crews
- 

## **OPERATING ENGINEER-Tunnel**

### **Group 1**

- Heavy Duty Repairman Helper

### **Group 2**

- Skiploader (wheel type up to  $\frac{3}{4}$  yd. without attachment)

### **Group 3**

- Chainman
- Power - Driver Jumbo Form Setter Operator

### **Group 4**

- Dinkey Locomotive or Motorman (up to and including 10 tons)
- Rodman

### **Group 5**

- Bit Sharpener
- Equipment Greaser (Grease Truck)
- Instrumentman
- Slip Form Pump Operator (power driven hydraulic lifting device for concrete forms)
- Tugger Hoist Operator (1 drum)
- Tunnel Locomotive Operator (over 10 and up to and including 30 tons)
- Welder - General

### **Group 6**

- Backhoe Operator (up to and including  $\frac{3}{4}$  yd.) Small Ford, Case or similar
- Drill Doctor
- Grouting Machine Operator
- Heading Shield Operator
- Heavy Duty Repairman
- Jumbo Pipe Carrier
- Loader Operator (Athey, Euclid, Sierra and similar types)
- Mucking Machine Operator (1/4 yd.)
- Pneumatic Concrete Placing Machine Operator (Hackley-Presswell or similar type)
- Pneumatic Heading Shield (tunnel)
- Pumpcrete Gun Operator
- Tractor Compressor Drill Combination Operator
- Tugger Hoist Operator (2 drum)
- Tunnel Locomotive Operator (over 30 tons)

### **Group 7**

- Heavy Duty Repairman-Welder Combination

### **Group 8**

- Party Chief

### **Group 9**

- Certified Chief of Party
  - Tunnel Mole Boring Machine Operator
- 

### **TRUCK DRIVER, includes but is not limited to:**

#### **Group 1**

- Drivers of dump trucks (less than 12 yds. water level), drivers of trucks (legal payload capacity less than 15 tons), water and fuel truck drivers under 2,500 gal, pickup driver, service station attendant, teamster equipment (highest rate paid for dual craft operation), warehousemen, drivers of busses on site used for transportation of up to sixteen (16) passengers.

#### **Group 2**

- Drivers of dump trucks (12 yds but less than 16 yds water level), drivers of trucks (legal payload capacity between 15 and 20 tons), drivers of transit mix trucks (under 3 yds), dumpcrete trucks (less than 6 ½ yds water level), gas and oil pipeline working truck drivers, including winch truck and all sizes of trucks, water and fuel truck drivers (2,500 gal to 4,000 gal), truck greaser, drivers of busses (on jobsite used for transportation or more than sixteen (16) passengers), warehouse clerk.

#### **Group 3**

- Drivers of dump trucks (16 yds up to and including 22 yds water level), drivers of trucks (legal payload cap. 20 tons but less than 25 tons), drivers of dumpster trucks, drivers of transit-mix trucks (3 yds but less than 6 yds), dumpcrete trucks (6 ½ yds water level and over), fork lift driver, Ross Carrier driver, highway water and fuel drivers (4,001 gallon but less than 6,000 gallon), stock room clerk, tireman.

#### **Group 4**

- Drivers of transit-mix trucks (6 yds or more), drivers of dump trucks (over 22 yds. water level), drivers of trucks (legal payload capacity 25 tons and over) drivers of fuel and water trucks (6,000 gallon and over).

#### **Group 5**

- Drivers of trucks and trailers in combination (six axles or more).

#### **Group 6**

- All Off-road Equipment, Truck Repairman, Transport Drivers and Drivers of Road Oil Spreader Trucks, DW 10 and DW 20 Euclid-type equipment Letourneau pulls, Terra Cobras and similar types of equipment, also PB and similar type trucks when performing work within the Teamster jurisdiction, regardless of types of attachment, including power units pulling off-highway belly dumps in tandem.
-

Skip



State of Nevada Department of Business & Industry

NV.gov Agencies Jobs

# Office of the Labor Commissioner

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## 2021-2022 Prevailing Wage Rate Amendment 1

### Amendment 1

- AMENDMENT 1
- Classification – Ironworker Zone Rate correction
- County – All Regions
- Effective – October 4, 2021

The following represents the amended wage rates.

#### ADD ZONE RATE

In addition to Iron Worker rates add the applicable amounts per DAY, calculated based on a road mile from the Reno or Las Vegas City Hall.

Zone 1-	60 - 75 Miles	\$20.00
Zone 2-	75 - 100 Miles	\$25.00
Zone 3-	100 miles and over	\$75.00

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## 2021-2022 Prevailing Wage Rate Amendment 1a

### Amendment 1a

- AMENDMENT 1a
- Classification – Ironworker Wage and Zone Rate combined
- County – All Regions
- Effective – October 11, 2021

The following represents the amended wage rates.

Craft: Ironworker (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

-	
Ironworker - Journeyman.....	79.90
Ironworker - Foreman.....	81.20
Ironworker - General Foreman.....	85.93

### ADD ZONE RATE

In addition to Iron Worker rates add the applicable amounts per day, calculated based on a road mile from the Reno or Las Vegas City Hall.

Zone 1	60 – 75 miles	\$20.00
Zone 2	75 - 100 miles	\$25.00
Zone 3	100 miles and over	\$75.00

### ADD PREMIUM PAY

One and one half (1X) the regular straight time hourly rate shall be paid:

For the first two (2) hours worked in excess of eight (8) on a regular workday Monday-Friday

For the first eight (8) hours on Saturday

Double the regular straight time hourly rate shall be paid for all time:

For all hours worked over ten (10) hours in one day or shift.

For any hours worked on Sunday.

For all hours worked over eight (8) on Saturday

For all hours worked on Holidays

Shift Pay

1. 2nd shift add 6% of hourly wage
2. 3rd shift add 13% of hourly wage
3. Dedicated shift add 6% of hourly wage

**RECOGNIZED HOLIDAYS**

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

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## 2021-2022 Prevailing Wage Rate Amendment

### Amendment

- AMENDMENT 2
- Classification – Equipment Greaser
- County – Clark County and Southern Rural Regions
- Effective – October 4, 2021

The following represents the amended wage rates.

Craft: EQUIPMENT GREASER (Union Rate)

**Prevailing wage rates include the base rate as well as all applicable fringes**

Equipment Greaser (Rack).....	79.68
Equipment Greaser (Greaser Truck) .....	81.17
Equipment Greaser (Greaser Truck/Multi-Shift).....	82.27
Equipment Greaser Tunnel (Greaser Truck) .....	81.89

### ADD ZONE RATE

In addition to: EQUIPMENT GREASER (RACK) rates add the applicable amounts per hour calculated from the City Hall of Las Vegas, Nevada:

Zone 1	0 to 32.5 miles	\$0.00
Zone 2	32.5 to 45 miles	\$3.00
Zone 3	45 to 60 miles	\$4.00
Zone 4	over 60 miles	\$4.50

### ADD PREMIUM PAY

All time worked before 6:00 A.M. and after 5:00 P.M., or all time worked in excess of eight (8) consecutive hours, exclusive of meal periods, and all work performed on Saturdays, Sundays and holidays, shall be paid at the applicable overtime rate.

### RECOGNIZED HOLIDAYS

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.





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## 2021-2022 Prevailing Wage Rate Amendment 4

### Amendment 4

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- AMENDMENT 4
- Classification – Alarm Installer Job Description
- County – Clark County and Southern Nevada Rural Regions
- Effective – October 28, 2021

The following represents the amended job classification description.

Craft: ALARM INSTALLER

Excerpt from Agreement between NECA and Local Union 357, IBEW

Installation, maintenance, service and testing of all apparatus, fire alarm systems and interconnection cables, including fiber optics and/or ethereal aid associated with systems utilizing the transmission including ultra high frequencies, video, and digital for education, security and entertainment purposes for the following:

TV monitoring and surveillance, background music, intercomand telephone interconnect, inventory control systems, microwave transmission, Halon systems, C02, FM200, intergen, also all other suppression systems, multi-media, multiplex, PCM(Pulse Code Modulation), SCADA(Supervisory Control and Data Acquisition), nurse call system, radio page, school intercomand sound, burglar alarms and low voltage master clock systems, and data systems that transmit or receive information and control and all other systems which are intrinsic to the above listed systems.

Installations of raceway systems are not covered under the terms of this Agreement (excluding Ladder Rack for the purpose of the above listed systems). Chase and or nipples (not to exceed 10ft.) may be installed on open wiring system. Removal and discarding of all packaging and waste materials related to the above scope of work, excluding demolition waste.

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## **NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

### Supplemental Condition #7

#### **CERTIFICATION OF COMPLIANCE WITH AIR AND WATER ACTS**

(Applicable to Federally assisted construction contracts and related subcontracts exceeding \$100,000)

Compliance with Air and Water Acts During the performance of this Contract, the Contractor and all subcontractors shall comply with the requirements of the Clean Air Act, as amended, 42 USC 1857 et seq., the Federal Water Pollution Control Act, as amended, 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended. In addition to the foregoing requirements, all nonexempt contractors and subcontractors shall furnish to the owner, the following:

(1) A stipulation by the Contractor or subcontractors, that any facility to be utilized in the performance of any nonexempt contract or subcontract, is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.

(2) Agreement by the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

(3) A stipulation that as a condition for the award of the contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized, or to be utilized for the contract is under consideration to be listed under the EPA List of Violating Facilities.

(4) Agreement by the Contractor that he will include, or cause to be included, the criteria and requirements in paragraph (1) through (4) of this section in every nonexempt subcontract and requiring that the Contractor will take such action as the Government may direct as a means of enforcing such provisions.

## **NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

### Supplemental Condition #8

#### **SPECIAL CONDITIONS PERTAINING TO HAZARDS SAFETY STANDARDS AND ACCIDENT PREVENTION**

##### A. Lead-Based Paint Hazards (Applicable to contracts or rehabilitation of residential structures)

The construction or rehabilitation of residential structures is subject to the HUD Lead-Based paint regulations, 24 CFR Part 35. The Contractor and Subcontractors shall comply with the provisions for the elimination of lead base paint hazards under sub-part B of said regulations. The Owner will be responsible for the inspections and certifications required under Section 35.14 (f) thereof.

##### B. Use of Explosives

When the use of explosives is necessary for the prosecution of the work, the Contractor shall observe all local, state and Federal laws in purchasing and handling explosives. The Contractor shall take all necessary precautions to protect completed work neighboring property, water lines, or other underground structures. Where there is danger to structures or property from blasting, the charges shall be reduced and the material shall be covered with suitable timber, steel or rope mats.

The Contractor shall notify all owners of public utility property of intention to use explosives close to such property, at least 8 hours before blasting is done. Any supervision or direction of use of explosives by the engineer does not in any way reduce the responsibility of the Contractor or his Surety for damages that may be caused by such use.

##### C. Danger Signals and Safety Devices

The Contractor shall make all necessary precautions to guard against damages to property and injury to persons. He shall put up and maintain in good condition, sufficient red or warning lights at night suitable barricades and other devices necessary to protect the public. In case the Contractor fails or neglects to take such precautions, the Owner may have such lights and barricades installed and charge the cost of this work to the Contractor. Such action by the Owner does not relieve the Contractor of any liability incurred under these specifications or contract.

## NEVADA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

### Supplemental Condition #9

#### UNFAIR TRADE PRACTICES

Grantees or sub grantee recipients entering into contracts public construction, alteration, or repair of any public building or public works project subject to the prohibitions described in this Notice shall include the following provisions in all such contracts:

##### Restrictions on Public Buildings and Public Works Projects

(a) Definitions. "Component," as used in this clause, means those articles, materials, and supplies incorporated directly into the product.

"Contractor or subcontractor of a foreign country," as used in this clause, means any Contractor or subcontractor that is a citizen or national of a foreign country or is controlled directly or indirectly by citizens or nationals of a foreign country. A contractor or subcontractor shall be considered to be a citizen or national of a foreign country, or controlled directly or indirectly by citizens or nationals of a foreign country –

- (1) If 50 percent or more of the Contractor or subcontractor is owned by a citizen or a national of the foreign country;
- (2) If the title to 50 percent or more of the stock of the Contractor or subcontractor is held subject to trust or fiduciary obligation in favor of citizens or nationals of the foreign country;
- (3) If 50 percent or more of the voting power in the Contractor or subcontractor is vested in or exercisable on behalf of a citizen or national of the foreign country;
- (4) In the case of a partnership, if any general partner is a citizen of the foreign country;
- (5) In the case of a corporation, if its president or other chief executive officer or the chairman of its board of directors is a citizen of the foreign country or the majority of any number of its directors necessary to constitute a quorum are citizens of the foreign country or the corporation is organized under the laws of the foreign country or any subdivision, territory, or possession thereof; or
- (6) In the case of a contractor or subcontractor who is a joint venture, if any participant firm is a citizen or national of a foreign country or meets any of the criteria in subparagraphs (a) (1) through (5) of this clause.

"Product", as used in this clause, means construction materials – i.e., articles, materials, and supplies brought to the construction site for incorporation into the public works

project, including permanently affixed equipment, instruments, utilities, electronic or other devices, but not including vehicles or construction equipment. In determining the origin of a product, the grantee or sub grantee will consider a product as produced in a foreign country if it has been assembled or manufactured in the foreign country, or if the cost of the components mined, produced, or manufactured in the foreign country exceed 50 percent of the cost of all its components.

(b) Restrictions. The Contractor shall not (1) knowingly enter into any subcontract under this contract with a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the United States Trade Register (USTR) (see paragraph (c) of this clause), or (2) supply any product under this contract of a country included on the list of foreign countries that discriminate against U.S. firms published by the USTR.

(c) USTR List. The USTR published an initial list in the Federal Register on December 30, 1987 (53 FR 49244), which identified one country – Japan. The USTR can add other countries to the list, or remove countries from it, in accordance with section 109 (c) of Pub. L. 100-202.

(d) Certification. The Contractor may rely upon the certification of a prospective subcontractor that it is not a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR and that products supplied by such subcontractor for use on the Federal public works project under this contract are not products of a foreign country included on the list of foreign countries that discriminate against U.S. firms published by the USTR, unless such Contractor has knowledge that the certification is erroneous.

(e) Subcontracts. The Contractor shall incorporate this clause, modified only for the purpose of properly identifying the parties, in all subcontracts. This paragraph (e) shall also be incorporated in all subcontracts.

## **SECTION NINE**

### **FORMS TO BE COMPLETED BY AWARDED CONTRACTORS**

#### **TABLE OF CONTENTS FOR SECTION NINE:**

1. Wage Comparison Worksheet
2. Employee Rate of Pay
3. Election of Scheduled Work Week
4. WH347 Certified Payroll Record
5. Non Performance Report
6. Certification of Understanding and Authorization
7. Certification of Applicable Fringe Benefit Payment
8. Authorization for Deductions
9. Grantees Notification of Contractors and Subcontractors
10. Contract and Subcontract Activity – HUD
11. Mandatory Job Site Postings
12. Section 3 Compliance Forms
13. Certified Payrolls Info
14. Senate Bill 207 Apprenticeship Utilization Act Info



The contractor has to designate the hours and days, if they pick 4-10's each employee has to sign the Election of Scheduled work hours. Once one is picked it is the same for the life of the project.

Nevada Governor's Office of  
**ECONOMIC DEVELOPMENT**  
**COMMUNITY DEVELOPMENT BLOCK GRANT**

**WAGE COMPARISON WORKSHEET**

**CHECK ONE:**

- 5 – 8 hour days
- 4 – 10 hour days

Project Name \_\_\_\_\_ Location \_\_\_\_\_ Date \_\_\_\_\_

Date & Modification of Federal Wage Rates

Date of State Rates

Classification	Group		Area Zone		Federal Rate			State Rate			Rate To Be Paid			Fed/State
	Fed	State	Fed	State	Base Rate*	Fringe Benefit	Total	Base Rate*	Fringe Benefit	Total	Base Rate	Fringe Benefit	Total	
Notes:														

The higher base rate will determine whether the contractor will pay Davis-Bacon (Federal) or State rates for each classification. This only applies to contracts \$250,000 and over; only the Federal Wage Rates need to be used for contracts \$2,000 to \$100,000, if the total project cost is less than \$100,000.

Note\* Add the zone rate or travel differential to the base rate to get the total base rate.

Use additional forms if necessary. **CONTRACTOR SIGNATURE & DATE:** \_\_\_\_\_

**Company Name:** \_\_\_\_\_

**PAYROLL**

(For Contractor's Optional Use; See Instructions at [www.dol.gov/whd/forms/wh347instr.htm](http://www.dol.gov/whd/forms/wh347instr.htm))



U.S. Wage and Hour Division

Rev. Dec. 2008

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

OMB No.: 1235-0008  
Expires: 01/31/2015

NAME OF CONTRACTOR  OR SUBCONTRACTOR  ADDRESS

PAYROLL NO. FOR WEEK ENDING PROJECT AND LOCATION PROJECT OR CONTRACT NO.

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT OR ST	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS					(9) NET WAGES PAID FOR WEEK
				HOURS WORKED EACH DAY										FICA	WITH- HOLDING TAX	OTHER	TOTAL DEDUCTIONS		
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

**Public Burden Statement**

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210





**NON-PERFORMANCE PAYROLL REPORT FOR PUBLIC WORKS PROJECTS**

Pursuant to Chapter 338 of the NRS and NAC, respectively, the contractor and each subcontractor shall keep or cause to be kept an accurate record showing the name and the actual per diem, wages and benefits paid to each workman employed by him in connection with the public work. The contractor or subcontractor shall ensure that a copy of the record for each calendar month is received by the public body awarding the contract no later than 15 days after the end of the month.

Report # \_\_\_\_\_ Regular Weekly Report Y/N \_\_\_\_\_ Final Report for Project Y/N \_\_\_\_\_

Bid/Project # \_\_\_\_\_ PWP- \_\_\_\_\_

Project Title

Prime Contractor Name

Subcontractor Name

Public Body Awarding Contract

Payroll period \_\_\_\_\_, \_\_\_\_\_ to \_\_\_\_\_, \_\_\_\_\_.  
Month and Day Year Month and Day Year

I hereby certify that no employees or owner/operators were used on the construction of this Public Works project during the payroll period above.

Name/Print \_\_\_\_\_ Signature \_\_\_\_\_ Title \_\_\_\_\_

\_\_\_\_\_ Date

**CERTIFICATION OF UNDERSTANDING  
AND AUTHORIZATION**

PROJECT NAME: \_\_\_\_\_

PROJECT NUMBER: \_\_\_\_\_

The following person(s) is designated as the payroll officer for the undersigned and is authorized to sign the Federal Statement of Compliance which will accompany our weekly certified payroll reports for this project:

\_\_\_\_\_  
IRS Employer Identification Number

\_\_\_\_\_  
Authorized Payroll Officer (signature)

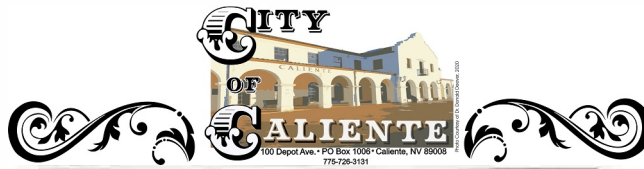
\_\_\_\_\_  
Name of Authorized Payroll Officer  
(Print or type)

\_\_\_\_\_  
Prime Contractor/Subcontractor  
(Print or Type name of firm)

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Title (Print or type)

\_\_\_\_\_  
Date



**CERTIFICATION FOR APPLICABLE FRINGE BENEFIT PAYMENTS**

PROJECT NAME: \_\_\_\_\_

PROJECT NUMBER: \_\_\_\_\_

Classification/ Fringe Benefits Provided	Name, Address and Telephone Number of Plan/Fund/Program
1) _____	_____
<u>Health and Welfare</u> \$ _____	_____
<u>Pension</u> \$ _____	_____
<u>Vacation</u> \$ _____	_____
<u>Apprenticeship/Training</u> \$ _____	_____
<u>Other</u> \$ _____	_____
2) _____	_____
<u>Health and Welfare</u> \$ _____	_____
<u>Pension</u> \$ _____	_____
<u>Vacation</u> \$ _____	_____
<u>Apprenticeship/Training</u> \$ _____	_____
<u>Other</u> \$ _____	_____
3) _____	_____
<u>Health and Welfare</u> \$ _____	_____
<u>Pension</u> \$ _____	_____
<u>Vacation</u> \$ _____	_____
<u>Apprenticeship/Training</u> \$ _____	_____
<u>Other</u> \$ _____	_____

OR: (CHECK IF APPLICABLE)

\_\_\_\_\_ I CERTIFY THAT I DO NOT MAKE PAYMENTS TO APPROVED FRINGE BENEFIT PLANS, FUNDS OR PROGRAMS.

\_\_\_\_\_  
Contractor/Subcontractor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

**AUTHORIZATION FOR DEDUCTIONS**

The undersigned authorize deductions, as noted, to be made from their wages. It is understood that these deductions:

- (a) are in the interest of the employee,
- (b) are not a condition of employment,
- (c) provide no direct or indirect financial benefit accruing to the employer, and
- (d) are not otherwise forbidden by law.

EMPLOYEE'S NAME	EMPLOYEE'S SIGNATURE	DATE	DEDUCTIONS

\_\_\_\_\_  
CONTRACTOR NAME (Print or type)

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED REPRESENTATIVE OF EMPLOYER

\_\_\_\_\_  
AUTHORIZED REPRESENTATIVE'S NAME AND TITLE (PRINT OR TYPE)

\_\_\_\_\_  
DATE

**GRANTEE'S NOTIFICATION OF CONTRACTS AND SUBCONTRACTS AWARDED**

<b>Email or Mail To:</b>  <i>Nevada Governor's Office of</i> <b>ECONOMIC DEVELOPMENT</b> <b>COMMUNITY DEVELOPMENT BLOCK GRANT</b>  808 West Nye Lane Carson City, NV 89703 775-687-9900	Date Submitted to CDBG:	
	Grantee- City/County:	
	Project Name:	
	Grant #:	Contract Award Date:
	Bid Open Date:	Total Contract/s Value: \$

Contractor's and Subcontractor's Name and Address *Denote PRIME	Contractor License Number	Contractor Federal Tax ID Number	Awarded Contract Amount	Wage Decision Number	MOD Number	Modification Date	Estimated		Crafts to be used
							Start Date	Completion Date	

# Contract and Subcontract Activity

U.S. Department of Housing and Urban Development

OMB Approval No.: 2577-0088 (exp.10/31/2000)

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not conduct or sponsor, and a person is not required to respond to, a collection information unless that collection displays a valid OMB control number.

Executive Orders 12432 and 11625 requires Federal agencies to promote Minority Business Enterprise (MBE) participation in their programs and prescribes additional arrangements for developing and coordinating a National Program for MBE. Pursuant to Executive Order 12432, the Department of Commerce requires an annual report on MBE achievements. The information provided on Public and Indian Housing Programs will be used to monitor and evaluate HA performance and to develop and submit the Annual Report to the President. Responses to the collection of information are voluntary. The information requested does not lend itself to confidentiality.

1. Grantee/Project Owner/Developer/Sponsor/Builder/Agency	Check if: PHA <input type="checkbox"/> IHA <input type="checkbox"/>	2. Location (City, State, ZIP Code)		
3a. Name of Contact Person	3b. Phone Number (Including Area Code)	4. Reporting Period <input type="checkbox"/> Oct. 1 - Sept. 30 (Annual-FY)	5. Program Code (Not applicable for CPD programs.) See explanation of codes at bottom of page. Use a separate sheet for each program code.	6. Date Submitted to Field Office

Grant/Project Number or HUD Case Number or other identification of property, subdivision, dwelling unit, etc. <i>7a.</i>	Amount of Contract or Subcontract <i>7b.</i>	Type of Trade Code (See below) <i>7c.</i>	Contractor or Subcontractor Business Racial/Ethnic Code (See below) <i>7d.</i>	Woman Owned Business (Yes or No) <i>7e.</i>	Prime Contractor Identification (ID) Number <i>7f.</i>	Sec. 3 <i>7g.</i>	Subcontractor Identification (ID) Number <i>7h.</i>	Sec. 3 <i>7i.</i>	Contractor/Subcontractor Name and Address <i>7j.</i>					
									Name	Street	City	State	Zip Code	

- |  |  |  |
|--|--|--|
| <b>CPD:</b><br>1 = New Construction<br>2 = Education/Training<br>3 = Other   | <b>7c: Type of Trade Codes:</b><br><b>Housing/Public Housing:</b><br>1 = New Construction    6 = Professional<br>2 = Substantial Rehab.    7 = Tenant Services<br>3 = Repair    8 = Education/Training<br>4 = Service    9 = Arch./Engrg. Appraisal<br>5 = Project Mangt.    0 = Other | <b>7d: Racial/Ethnic Codes:</b><br>1 = White Americans<br>2 = Black Americans<br>3 = Native Americans<br>4 = Hispanic Americans<br>5 = Asian/Pacific Americans<br>6 = Hasidic Jews |
| <b>5: Program Codes</b> (Complete for Housing and Public and Indian Housing programs only):<br>1 = All insured, including Section 8    5 = Section 202<br>2 = Flexible Subsidy    6 = HUD-Held (Management)<br>3 = Section 8 Noninsured, Non-HFDA    7 = Public/Indian Housing<br>4 = Insured (Management) |  |  |

This report is to be completed by grantees, developers, sponsors, builders, agencies, and/or project owners for reporting contract and subcontract activities of \$10,000 or more under the following programs: Community Development Block Grants (entitlement and small cities); Urban Development Action Grants; Housing Development Grants; Multi-family Insured and Noninsured; Public and Indian Housing Authorities; and contracts entered into by recipients of CDBG rehabilitation assistance.

Contracts/subcontracts of less than \$10,000 need be reported only if such contracts represent a significant portion of your total contracting activity. Include only contracts executed during this reporting period.

This form has been modified to capture Section 3 contract data in columns 7g and 7i. Section 3 requires that the employment and other economic opportunities generated by HUD financial assistance for housing and community development programs shall, to the greatest extent feasible, be directed toward low- and very low-income persons, particularly those who are recipients of government assistance for housing. Recipients using this form to report Section 3 contract data must also use Part I of form HUD-60002 to report employment and training opportunities data. Form HUD-2516 is to be completed

for public and Indian housing and most community development programs. Form HUD-60002 is to be completed by all other HUD programs including State administered community development programs covered under Section 3.

A Section 3 contractor/subcontractor is a business concern that provides economic opportunities to low- and very low-income residents of the metropolitan area (or nonmetropolitan county), including a business concern that is 51 percent or more owned by low- or very low-income residents; employs a substantial number of low- or very low-income residents; or provides subcontracting or business development opportunities to businesses owned by low- or very low-income residents. Low- and very low-income residents include participants in Youthbuild programs established under Subtitle D of Title IV of the Cranston-Gonzalez National Affordable Housing Act.

The terms "low-income persons" and "very low-income persons" have the same meanings given the terms in section 3(b)(2) of the United States Housing Act of 1937. Low-income persons mean families (including single persons) whose incomes do not exceed 80 per centum of the median income for the area, as determined by the Secretary, with adjustments for smaller and larger families, except that the Secretary may establish

income ceilings higher or lower than 80 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of prevailing levels of construction costs or unusually high or low-income families. Very low-income persons means low-income families (including single persons) whose incomes do not exceed 50 per centum of the median family income for the area, as determined by the Secretary with adjustments for smaller and larger families, except that the Secretary may establish income ceilings higher or lower than 50 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of unusually high or low family incomes.

Submit two (2) copies of this report to your local HUD Office within ten (10) days after the end of the reporting period you checked in item 4 on the front.

Complete item 7h, only once for each contractor/subcontractor on each semi-annual report.

Enter the prime contractor's ID in item 7f, for all contracts and subcontracts. Include only contracts executed during this reporting period. PHAs/IHAs are to report all contracts/subcontracts.

### Community Development Programs

1. **Grantee:** Enter the name of the unit of government submitting this report.
3. **Contact Person:** Enter name and phone of person responsible for maintaining and submitting contract/subcontract data.
- 7a. **Grant Number:** Enter the HUD Community Development Block Grant Identification Number (with dashes). For example: B-32-MC-25-0034. For Entitlement Programs and Small City multi-year comprehensive programs, enter the latest approved grant number.
- 7b. **Amount of Contract/Subcontract:** Enter the dollar amount rounded to the nearest dollar. If subcontractor ID number is provided in 7f, the dollar figure would be for the subcontract only and not for the prime contract.
- 7c. **Type of Trade:** Enter the numeric codes which best indicates the contractor's/subcontractor's service. If subcontractor ID number is provided in 7f., the type of trade code would be for the subcontractor only and not for the prime contractor. The "other" category includes supply, professional services and all other activities except construction and education/training activities.
- 7d. **Business Racial/Ethnic/Gender Code:** Enter the numeric code which indicates the racial/ethnic /gender character of the owner(s) and controller(s) of 51% of the business. When 51% or more is not owned and controlled by any single racial/ethnic/gender category, enter the code which seems most appropriate. If the subcontractor ID number is provided, the code would apply to the subcontractor and not to the prime contractor.
- 7e. **Woman Owned Business:** Enter Yes or No.
- 7f. **Contractor Identification (ID) Number:** Enter the Employer (IRS) Number of the Prime Contractor as the unique identifier for prime recipient of HUD funds. Note that the Employer (IRS) Number must be provided for each contract/subcontract awarded.
- 7g. **Section 3 Contractor:** Enter Yes or No.
- 7h. **Subcontractor Identification (ID) Number:** Enter the Employer (IRS) Number of the subcontractor as the unique identifier for each subcontract awarded from HUD funds. When the subcontractor ID Number is provided, the respective Prime Contractor ID Number must also be provided.
- 7i. **Section 3 Contractor:** Enter Yes or No.
- 7j. **Contractor/Subcontractor Name and Address:** Enter this information for each firm receiving contract/subcontract activity only one time on each report for each firm.

### Multifamily Housing Programs

1. **Grantee/Project Owner:** Enter the name of the unit of government, agency or mortgage lender submitting this report.
3. **Contact Person:** Same as item 3 under CPD Programs.
4. **Reporting Period:** Check only one period.
5. **Program Code:** Enter the appropriate program code.
- 7a. **Grant/Project Number:** Enter the HUD Project Number or Housing Development Grant or number assigned.
- 7b. **Amount of Contract/Subcontract:** Same as item 7b. under CPD Programs.
- 7c. **Type of Trade:** Same as item 7c. under CPD Programs.
- 7d. **Business Racial/Ethnic/Gender Code:** Same as item 7d. under CPD Programs.
- 7e. **Woman Owned Business:** Enter Yes or No.
- 7f. **Contractor Identification (ID) Number:** Same as item 7f. under CPD Programs.
- 7g. **Section 3 Contractor:** Enter Yes or No.
- 7h. **Subcontractor Identification (ID) Number:** Same as item 7h. under CPD Programs.
- 7i. **Section 3 Contractor:** Enter Yes or No.
- 7j. **Contractor/Subcontractor Name and Address:** Same as item 7j. under CPD Programs.

### Public Housing and Indian Housing Programs

- PHAs/IHAs are to report all contracts/subcontracts. Include only contracts executed during this reporting period.
1. **Project Owner:** Enter the name of the unit of government, agency or mortgage lender submitting this report. Check box as appropriate.
  3. **Contact Person:** Same as item 3 under CPD Programs.
  4. **Reporting Period:** Check only one period.
  5. **Program Code:** Enter the appropriate program code.
  - 7a. **Grant/Project Number:** Enter the HUD Project Number or Housing Development Grant or number assigned.
  - 7b. **Amount of Contract/Subcontract:** Same as item 7b. under CPD Programs.
  - 7c. **Type of Trade:** Same as item 7c. under CPD Programs.
  - 7d. **Business Racial/Ethnic/Gender Code:** Same as item 7d. under CPD Programs.
  - 7e. **Woman Owned Business:** Enter Yes or No.
  - 7f. **Contractor Identification (ID) Number:** Same as item 7f. under CPD Programs.
  - 7g. **Section 3 Contractor:** Enter Yes or No.
  - 7h. **Subcontractor Identification (ID) Number:** Same as item 7h. under CPD Programs.
  - 7i. **Section 3 Contractor:** Enter Yes or No.
  - 7j. **Contractor/Subcontractor Name and Address:** Same as item 7j. under CPD Programs.



## **MANDATORY JOB SITE POSTINGS**

The State Prevailing wages, Davis-Bacon Wage Determination(s) and the Employee Rights Under the Davis-Bacon Act (aka Whistleblower) poster (Form WH-1321) - both English and Spanish where Spanish is commonly spoken - shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

### SECTION 3:

All contractors and subcontractors shall comply with Section 3 requirements set forth at 24 CFR 75 of the federal regulation which states that, to the greatest extent possible, businesses and employers working on HUD-funded projects must make a good faith effort to train and employ low-income individuals living in the local area and also to contract with businesses owned by or that employ Section 3 workers.

## Section 3 Clause

ALL SECTION 3 COVERED CONTRACTS SHALL INCLUDE THE FOLLOWING CLAUSE (REFERRED TO AS THE SECTION 3 CLAUSE):

A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR 75, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 75 regulations.

C. The contractor agrees to send to each labor organization or representative or workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR 75, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR 75. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR 75.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR 75 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR 75.

F. Noncompliance with HUD's regulations in 24 CFR 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

G. With respect to work performed in connection with Section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment

shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

#### CONTRACTOR'S REQUIREMENTS

- The Prime Contractor must submit a Section 3 plan to the Sub-Recipient outlining Section 3 hiring and employment opportunities.
- The Prime Contractor must notify all sub-contractors of their responsibilities under Section 3
- The Prime Contractor must provide a permeant workforce breakdown of all current employees and identify those Section 3 workers that were hired within the last five years.
- The Prime Contractor must provide an estimated breakdown of potential hires for the awarded project and timeline of anticipated hiring
- The Prime Contractor must refrain from contracting with sub-contractors as to whom they have received notice or have knowledge that the sub-contractors have been found in violation of the regulations in 24 CFR 75.
- Maintain records that document a good faith effort to utilize Section 3 workers and Target Section 3 workers as trainees and employees. (Required of both contractor and subcontractor.) and any other qualitative efforts to comply with Section 3.

Recordkeeping requirements for recipients are found at 24 CFR § 75.31. The contractor is required to maintain documentation to demonstrate compliance with the regulations and is responsible for requiring their subcontractors to maintain or provide any documentation that will assist recipients in demonstrating compliance, including documentation that shows hours worked by Section 3 workers and Targeted Section 3 workers.

SAMPLE CONTRACTOR SECTION 3 PLAN

(Name of contractor) agrees to implement the following specific affirmative steps directed at increasing the utilization of lower income residents and businesses within the City or County of

- A. To implement Section 3 requirements by seeking the assistance of local officials in determining the exact boundaries of the applicable project area
- B. To attempt to recruit from within the City/County the necessary number of lower income residents through: local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within or serving the project area
- C. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists
- D. To insert this Section 3 plan in all bid documents, and to require all bidders to submit a Section 3 affirmative action plan including utilization goals and the specific steps planned to accomplish these goals
- E. To ensure that all appropriate project area business concerns are notified of pending sub contractual opportunities
- F. To maintain records, including copies of correspondence, memoranda, etc., which document that all the above affirmative action steps have been taken.
- G. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this Section 3 plan
- H. To list all permanent workforce for this project by job title
- I. To list all projected workforce needs for this project by job classification and time frame for potential hire.

As officers and representatives of (Name of contractor)

We, the undersigned, have read and fully agree to the above and become a party to the full implementation of this program.

Title \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

**CONTRACTOR PERMANENT WORK FORCE FORM**

This form is used to determine the Section 3 Workers already employed by the bidding contractor.

Project Name: \_\_\_\_\_ Name of Contractor: \_\_\_\_\_

Address: \_\_\_\_\_ Date: \_\_\_\_\_

This form will be compared to Davis -Bacon Payrolls during construction to ensure compliance.

Employee Name	Job Title	Certified Section 3 Worker Yes or No	Monthly Salary	Salary Below 80% of Median

I certify the above employees are permanent employees of . I certify the above employees are on our regular monthly payroll and have their W-2 tax forms for our records. These records will be available to the city/county for the above referenced project for verification purposes. I understand that falsifying information is perjury and subject to legal ramifications.

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**SECTION 3 CONTRACTOR ESTIMATED PROJECT  
WORKFORCE BREAKDOWN**

Job Category	Total Estimated Positions	No. of Positions Currently Occupied by Permanent Employees	No. of Vacant Positions	No. of Positions to be Filled With Targeted and/or Section 3 Workers and estimate of hire date
<b>Officers/Supervisors</b>				
<b>Professionals</b>				
<b>Technicians</b>				
<b>Office</b>				
<b>Clerical</b>				
<b>Trade</b>				
<b>Journeyman</b>				
<b>Apprentices</b>				
<b>Trainees</b>				
<b>Others</b>				
<b>Others</b>				
<b>Others</b>				
<b>Total</b>				

## **CERTIFIED PAYROLLS**

The CONTRACTOR shall prepare and submit Certified Payroll Reports weekly and provide all information as requested by the Owner. The CONTRACTOR may utilize Form WH-347 or a similar form that at a minimum contains the same information.

For weeks when no work is performed, the CONTRACTOR shall prepare and submit a Certified Non-Performance Payroll Report. The CONTRACTOR may utilize the State of Nevada Non-performance Payroll Form.



## FEDERAL & STATE PREVAILING WAGES

The higher of the Federal or State prevailing wage rates, as established by the Davis-Bacon Act and the Nevada Labor Commission shall be paid for all classifications of labor on this project. Should a classification be missing from the Davis-Bacon rates the CONTRACTOR shall complete a request of authorization for additional classification or rate form SF1444 in its entirety and submit it to the OWNER for approval and submission to the U.S. Department of Labor. Also, in accordance with NRS 338, the hourly and daily wage rates for the State and Davis-Bacon must be posted at the work site by CONTRACTOR.

Although the Prevailing Wages are provided in this bid document, the bidder is responsible to verify if any up-dates or addendums have been issues for either the Federal Davis-Bacon wage determination(s) or State prevailing wage rates. Davis-Bacon wage determinations are published on the Wage Determinations On Line website (<https://www.wdol.gov/>). Nevada State Prevailing wages are published on the Nevada Labor Commissioner's website (<http://labor.nv.gov/PrevailingWage/PublicWorks/PrevailingWages/>). The successful bidder will be required to provide the current Federal and State Prevailing Wages used in preparation of their bid (wage comparison worksheet).

The CONTRACTOR and each subcontractor shall keep an accurate payroll record, showing the name, address, work classification, straight time, and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in connection with the project. The weekly payroll records shall be certified and shall be submitted to the OWNER within seven (7) days after the regular pay date for the pay period. Submission of the certified payrolls shall be a condition precedent for processing the progress payment. The CONTRACTOR shall collect the wage reports from the Sub-Contractors and ensure the receipt of a certified copy of each weekly payroll for submission to the OWNER as one complete package.

Pursuant to NRS 338.060 and 338.070, the Contractor hereby agrees to forfeit, as a penalty to the OWNER, not less than Twenty Dollars (\$20) nor more than Fifty Dollars (\$50) for each calendar day or portion thereof that each worker employed on the Contract is paid less than the designated rate for any work done under the Contract, by the CONTRACTOR or any subcontractor under him/her, or is not reported to the OWNER as required by NRS 338.070.

STEVE SISOLAK  
Governor

SHANNON M. CHAMBERS  
Labor Commissioner

RICHARD WILLIAMS  
State Apprenticeship Director

## STATE OF NEVADA



Office of the Labor Commissioner

### STATE APPRENTICESHIP COUNCIL

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## NEW APPRENTICE VERIFICATION PROCESS

On July 1, 2021, the Nevada State Office of the Labor Commissioner (OLC) took over jurisdiction of the Nevada State Apprenticeship Council (NSAC) based on the passage of Assembly Bill (AB) 459 – 81<sup>st</sup> Regular Session of the Nevada Legislature (2021). NSAC is designated as the State Apprenticeship Agency (SAA) pursuant to AB 459 and works with the United States Department of Labor as the SAA.

A Registered Apprentice in the State of Nevada must be registered with the Bureau of Apprenticeship and Training of the Office of Apprenticeship, Training, Employer and Labor Services of the Employment and Training Administration of the United States Department of Labor or its successor **and** the State Apprenticeship Council. (Emphasis added). The Registered Apprentice is paid pursuant to terms of the Apprenticeship Agreement/Standards for the type of work covered by the Registered Apprenticeship Program Agreement/Standards as approved by the State Apprenticeship Council and/or Nevada Revised Statutes (NRS) section 610 or Nevada Administrative Code (NAC) section 610. (See NRS 338.080)

The OLC is simplifying the registered apprentice verification process as follows:

1. The Contractor/Subcontractor shall upload the Registered Apprentice Dispatch forms, agreements, documents, etc., from the Registered Apprenticeship Program documenting/verifying that the Registered Apprentice was dispatched, sent to, and/or provided to that contractor/subcontractor into the certified payroll report (CPR) system, such as LCP Tracker. A dispatch form is the form from the Registered Apprenticeship Program sending the apprentice to the contractor/subcontractor.
2. A list of the current registered apprentices will be posted to the OLC website and the NSAC link at [https://labor.nv.gov/Wages/Nevada\\_State\\_Apprenticeship\\_Council/](https://labor.nv.gov/Wages/Nevada_State_Apprenticeship_Council/) with the title:

#### List of Current Registered Apprentices

\*Updated Weekly\*

- [Apprentice Status History Report](#)
3. The Contractor/Subcontractor and/or Awarding/Public Body will review the OLC list of the Current Registered Apprentices on the spreadsheet to verify registration and/or print out the single page that has the Registered Apprentice(s) name on the spreadsheet. **DO NOT PRINT OUT THE ENTIRE SPREADSHEET AND SUBMIT.**
  4. The registration shall be verified and confirmed by the Awarding/Public Body and the Registered Apprentice can be approved on the CPR.

## **KEY POINTS OF THE NEW APPRENTICE VERIFICATION PROCESS:**

- Contractors/Subcontractors and/or Awarding/Public Bodies will **NOT** need to submit an “Apprenticeship Verification” form to the NSAC.
- Contractors/Subcontractors are responsible for uploading and submitting the Registered Apprentice Dispatch forms, agreements, documents, etc., into the CPR payroll system for the Public Works Project and reviewing the OLC list of the current registered apprentices on the spreadsheet to verify registration.
- The Awarding/Public Body can then review those documents and the OLC list of the current Registered Apprentices on the spreadsheet to verify registration so that the Awarding/Public Body can verify and approve the Registered Apprentice on the CPR.

The Awarding/Public Bodies should verify and review/certify that the Registered Apprentice is registered and that the supporting documents were electronically uploaded before the CPR can be approved. However, it will be up to each contractor/subcontractor to make sure the necessary registered apprenticeship dispatch forms, agreements, documents, etc., are uploaded and submitted with the CPR(s) along with verifying the OLC list of the current registered apprentices on the spreadsheet.

This Apprentice Verification Process streamlines and simplifies the process and ensures that the Registered Apprentice is: 1.) Registered with the Bureau of Apprenticeship and Training of the Office of Apprenticeship, Training, Employer and Labor Services of the Employment and Training Administration of the United States Department of Labor or its successor **and** the State Apprenticeship Council; and 2.) Assists with validating registered apprentice %’s for purposes of Senate Bill 207 (2019) – Apprenticeship Utilization Act (AUA) as set forth in Nevada Revised Statutes (NRS) section 338.01165.

The Awarding/Public Bodies and Contractors and/or Subcontractors must ensure compliance with the AUA and NRS section 338.01165 unless a Waiver has been granted by the Labor Commissioner. Apprentices shall be used and reported for at least 10 % of the total hours of labor worked on vertical construction and 3 % of the total hours of labor worked for horizontal construction for each apprenticed craft or type of work to be performed on the public works project when more than three employees of each a craft are employed at the site of work.

**Apprenticeship Ratio:** The Contractor/Subcontractor, Awarding/Public Body must review the Apprenticeship Standards to see if they provide for a ratio of registered apprentices to journeymen. If the ratio is not complied with, the registered apprentice is to be paid at full journeyman rate for the type of work performed. (See NAC 338.0095). Awarding /Public Bodies and Contractors/Subcontractors should contact the Registered Apprenticeship Program directly, to obtain a copy of the Registered Apprenticeship Program Standards to verify the proper apprenticeship ratio.



STEVE SISOLAK  
GOVERNOR

TERRY REYNOLDS  
DIRECTOR

SHANNON CHAMBERS  
LABOR COMMISSIONER

Department of Business & Industry  
OFFICE OF THE LABOR COMMISSIONER

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**JANUARY 28, 2020**

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**ADVISORY OPINION - NEVADA ADMINISTRATIVE CODE § 607.650  
SENATE BILL 207 APPRENTICESHIP UTILIZATION ACT  
EFFECTIVE JANUARY 1, 2020**

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Pursuant to Nevada Administrative Code (NAC) Section 607.650, the Labor Commissioner is issuing the following Advisory Opinion regarding Senate Bill (SB) 207. The Labor Commissioner has received multiple inquiries, opinion requests, comments, suggestions, and proposals on how Senate Bill 207 should be interpreted, implemented, and enforced. The Labor Commissioner also met with various stakeholders.

This Advisory Opinion is intended to provide as much guidance as possible on Senate Bill 207. However, it must be recognized that not every working environment or situation may be encompassed by the answers and guidance set forth in this Advisory Opinion. The Labor Commissioner will continue to work with stakeholders, public/awarding bodies, contractors/subcontractors, and employers and employees on Senate Bill 207. However, the Labor Commissioner will attempt to interpret, implement, and enforce Senate Bill 207 based on the plain language of the bill and the intent of the Legislative Sponsors of the bill to ensure that apprenticeship utilization takes place on public works projects in the State of Nevada.

**KEY HIGHLIGHTS OF SENATE BILL (SB 207) – EFFECTIVE JANUARY 1, 2020:**

The Legislature hereby finds and declares that: 1. A skilled workforce in construction is essential to the economic well-being of this State; 2. Apprenticeship programs are a proven method of training a skilled workforce in construction; and 3. Requiring the use of apprentices on the construction of public works will ensure the availability of a skilled workforce in construction in the future for this State.

Sec. 1.7. 1. Notwithstanding any other provision of this chapter and except as otherwise provided in this section, a contractor or subcontractor engaged in vertical construction who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 10 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

2. Notwithstanding any other provision of this chapter and except as otherwise provided in this section, a contractor or subcontractor engaged in horizontal construction who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 3 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

<https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6351/Text>

**DEFINITIONS FOR PUBLIC BODY AND PUBLIC WORK AND AWARDING BODY NEVADA REVISED STATUTES (NRS) SECTION 338.010(17)(18) AND NEVADA ADMINISTRATIVE CODE (NAC) SECTION 338**

17. **“Public body”** means the State, county, city, town, school district or any public agency of this State or its political subdivisions sponsoring or financing a public work.

18. **“Public work”** means any project for the new construction, repair or reconstruction of a project financed in whole or in part from public money for:

- (a) Public buildings;
- (b) Jails and prisons;
- (c) Public roads;
- (d) Public highways;
- (e) Public streets and alleys;
- (f) Public utilities;
- (g) Publicly owned water mains and sewers;
- (h) Public parks and playgrounds;
- (i) Public convention facilities which are financed at least in part with public money; and
- (j) All other publicly owned works and property.

**NAC 338.0054 “Awarding body” defined.** (NRS 338.012) “Awarding body” means a public body, as that term is defined in [NRS 338.010](#), or any authorized agent or representative of a public body.

**DEFINITIONS FOR HORIZONTAL AND VERTICAL CONSTRUCTION NRS 338.010(12)(23)**

**Horizontal Construction** NRS 330.010 - Subdivision 13. “Horizontal Construction” means the construction of any fixed work, including any irrigation, drainage, water supply, flood control, harbor, railroad, highway, tunnel, airport or airway, sewer, sewage disposal plant or water treatment facility and any ancillary vertical components thereof, bridge, inland waterway, pipeline for the transmission of petroleum or any other liquid or gaseous substance, pier, and work incidental thereto. The term does not include vertical construction, the construction of any terminal or other building of an airport or airway, or the construction of any other building.

**Vertical Construction** NRS 338.010 - Subdivision 24. “Vertical Construction” means the construction or remodeling of any building, structure or other improvement that is predominantly vertical, including, without limitation, a building, structure or improvement for the support, shelter and enclosure of persons, animals, chattels or movable property of any kind, and any improvement appurtenant thereto.

## **WHAT IS COMPLEX AND/OR HAZARDOUS?**

Tasks routinely and customarily performed by an apprentice in an apprenticed craft or type of work, unless specifically prohibited by the applicable Apprenticeship Program or Apprenticeship Standards, are not considered to be either uniquely hazardous or complex tasks for the purpose of enforcement of the provisions of Senate Bill 207 and any regulations adopted pursuant thereto.

## **SENATE BILL 207 ONLY APPLIES TO PUBLIC WORKS PROJECTS OF \$100,000 OR MORE.**

Assembly Bill 136 passed during the 2019 Nevada Legislative Session changed the public works project amount that triggers prevailing wage laws from \$250,000 to \$100,000. The Sponsor of Senate Bill 207, Senator Brooks, stated that the intent of Senate Bill 207 was to apply to public works projects based on prevailing wage laws and the amount that triggers prevailing wage laws. The Legislature determined that amount to be \$100,000. Therefore, Senate Bill 207 only applies to public works projects of \$100,000 or more.

Please see the testimony of Senator Brooks below from the April 25, 2019, Assembly Committee on Government Affairs:

Senator Brooks: "Right now, this would apply to public works projects. I know there is a piece of legislation coming from the Assembly that addresses where that dollar threshold is to trigger a public works project. Right now, I believe \$250,000 on a publicly funded project triggers the prevailing wage requirements that this would apply to. I believe that there is a piece of legislation, and I tend to believe it will be successful, that lowers that threshold to \$100,000. Nothing in this bill specifically refers to that but it points back to statutes that create the need to trigger prevailing wage."

## **SENATE BILL 207 DOES NOT APPLY TO DAVIS-BACON OR 100% FEDERALLY FUNDED PROJECTS.**

Senate Bill 207 is a state law that applies to state public works projects based on the definition set forth above in NRS Section 338.010 subdivision 17.

Senate Bill 207 does not apply to 100% federally funded projects and/or those projects that fall exclusively under the federal Davis-Bacon Act requirements for compliance and/or enforcement.

For projects that have a mix of state and federal funding, the public/awarding body should include the provisions of Senate Bill 207 as part of their bid documents and apply Senate Bill 207 on those projects.

The public/awarding body can work with their federal funding agencies and seek a determination from them as to whether Senate Bill 207 should apply based on the funding structure of the project. The Labor Commissioner will consider this information in determining whether Senate Bill 207 applies on those types of projects.

## **THE LABOR COMMISSIONER TYPICALLY DOES NOT HAVE JURISDICTION OVER THE BIDDING PROCESS.**

NRS section 338.013 requires an identifying number from the Labor Commissioner. Please see below.

### **NRS 338.013 Inclusion of identifying number from Labor Commissioner in advertisement or solicitation and bids and other responsive documents; reports by public bodies and contractors to Labor Commissioner.**

1. A public body that undertakes a public work shall request from the Labor Commissioner and include in any advertisement or other type of solicitation, an identifying number with a designation of the work. That number must be included in any bid or other document submitted in response to the advertisement or other type of solicitation.

2. Each public body which awards a contract for any public work shall report its award to the Labor Commissioner within 10 days after the award, giving the name and address of the contractor to whom the public body awarded the contract and the identifying number for the public work.

3. Each contractor engaged on a public work shall report to the Labor Commissioner and the public body that awarded the contract the name and address of each subcontractor whom the contractor engages for work on the project within 10 days after the subcontractor commences work on the contract and the identifying number for the public work.

4. The public body which awarded the contract shall report the completion of all work performed under the contract to the Labor Commissioner before the final payment of money due the contractor by the public body.

The bidding requirements and provisions set forth in NRS 338.1373 et seq. fall under the jurisdiction of the public/awarding bodies, with limited exceptions where the Labor Commissioner can get involved in the bidding and award of contracts if potential violations of prevailing wage and public works laws may be occurring.

Therefore, each public/awarding body is encouraged to work with their respective attorneys/counsel to develop forms and a process to implement Senate Bill 207. Examples and guidance have been provided on how to include the requirements of Senate Bill 207 in bid documents and in determining what is a responsive bid. The Labor Commissioner will not take over or assume any of the bidding and award duties of the public/awarding body as required by existing laws and regulations.

### **DEFINITION OF APPRENTICE NAC 338.**

NAC 338.0052 "Apprentice" defined. ([NRS 338.012](#)) "Apprentice" means a person employed and individually registered in a bona fide apprenticeship program with:

1. The Bureau of Apprenticeship and Training of the Office of Apprenticeship, Training, Employer and Labor Services of the Employment and Training Administration of the United States Department of Labor or its successor; and

2. The State Apprenticeship Council pursuant to [chapter 610](#) of NRS and any regulations adopted pursuant thereto.

**THE LABOR COMMISSIONER DOES NOT HAVE JURISDICTION OVER THE APPROVAL AND REGISTRATION OF APPRENTICESHIP PROGRAMS OR APPRENTICES IN THE STATE OF NEVADA.**

In 2017, the Nevada Legislature moved the Nevada State Apprenticeship Council to the Governor's Office of Workforce Innovation. For a list of Registered Apprenticeship Programs, apprenticeship questions, issues and/or complaints regarding Registered Apprenticeship Programs, and the verification and/or qualifications and/or work of an apprentice that is dispatched should be directed to the Registered Apprenticeship Program or the Nevada State Apprenticeship Council.

Please follow the link to their website. <http://owinn.nv.gov/Apprenticeship/AboutSAC/>.

**THERE ARE NO REGISTERED APPRENTICESHIP PROGRAMS IN MY JURISDICTION.**

A Request for Waiver may be submitted by the public/awarding body. Please follow the link to the Advisory Opinion on "Jurisdiction(s)" for purposes of Senate Bill 207.

[http://labor.nv.gov/uploadedFiles/labornvgov/content/Apprenticeship\\_Utilization\\_Act/AO-2019-03%20AUA%20Jurisdiction%20definition.pdf](http://labor.nv.gov/uploadedFiles/labornvgov/content/Apprenticeship_Utilization_Act/AO-2019-03%20AUA%20Jurisdiction%20definition.pdf)

**DOES THE AWARDING BODY STILL NEED TO REQUEST A WAIVER IF THERE IS NO REGISTERED APPRENTICESHIP PROGRAM IN THE JURISDICTION?**

Yes, a Request for Waiver still needs to be submitted.

However, the Labor Commissioner will not require a Request for Waiver for the Truck Driver Job Classification in the State of Nevada based on the fact that there currently are no Registered Apprenticeship Programs for Truck Drivers in the State of Nevada, and because of the volume of waivers that could be generated simply for the Truck Driver Job Classification.

**HOW MANY APPRENTICESHIP PROGRAMS DO I HAVE TO REQUEST APPRENTICES FROM?**

A contractor/subcontractor that has more than three workers employed on a public work within the same apprenticed craft or type of work needs to request apprentices from every Registered Apprenticeship Program for that craft or type of work performed in their jurisdiction. This could include requesting apprentices from both a Union Apprenticeship Program and a Non-Union Apprenticeship Program. (See above for Advisory Opinion on "Jurisdiction(s)" for purposes of Senate Bill 207)



For example, the Laborers Job Classification and Job Description may also include Brick and Hod Plaster Carriers, Flaggers, Cement Masons, Fence Erectors, Asbestos Abatement, and Landscaping. Similarly, the Carpenters Job Classification and Job Description may also include different types of work performed. The Labor Commissioner will likely view each different Job Description within the broader Job Classification as separate crafts or types of work for purposes of SB207.

The contractor/subcontractor should identify the craft or type of work to be performed and determine how that work is bid and assigned according to area practice and within that jurisdiction. The Labor Commissioner does not have jurisdiction over jurisdictional disputes involving collective bargaining agreements where contractors/subcontractors and/or the Unions are claiming a type of work that has been assigned according to area practice and is set forth in the collective bargaining agreements.

Please also see the sample Project Workforce Checklist on the link below.

[http://labor.nv.gov/Apprenticeship\\_Utilization\\_Act/Apprenticeship\\_Utilization\\_Act/](http://labor.nv.gov/Apprenticeship_Utilization_Act/Apprenticeship_Utilization_Act/)

### **WHAT HAPPENS IF THE DISPATCHED APPRENTICE DOES NOT SHOW UP OR THERE ARE OTHER ISSUES WITH THE APPRENTICE?**

The contractor/subcontractor should contact the Registered Apprenticeship Program and notify them that the apprentice did not show up. The contractor/subcontractor should also document the incident and notify the prime contractor and/or public/awarding body of the situation.

Apprenticeship questions, issues and/or complaints regarding Registered Apprenticeship Programs and the verification and/or qualifications and/or work of an Apprentice that is dispatched should be directed to the Registered Apprenticeship Program or the State of Nevada Apprenticeship Council.

Please follow the link to their website. <http://owinn.nv.gov/Apprenticeship/AboutSAC/>.

### **WHAT HAPPENS IF THE CONTRACTOR/SUBCONTRACTOR IS ONLY GOING TO HAVE MORE THAN 3 WORKERS PER CRAFT OR TYPE OF WORK TO BE PERFORMED FOR ONE DAY OR A LIMITED PERIOD OF TIME?**

The Labor Commissioner cannot possibly address every individual situation that could arise on a public works jobsite. In the event that a contractor/subcontractor is required or finds the need to bring on additional workers that triggers the requirements of Senate Bill 207, the contractor/subcontractor should make every effort to bring on an apprentice to comply with the requirements of Senate Bill 207.

The Labor Commissioner also recognizes that there may be situations where the contractor/subcontractor only has more than 3 workers within a specific apprenticed craft or type of work for a day or for a limited period where it may not be reasonable and/or practical to request and/or obtain apprentice(s). The contractor/subcontractor should document the reason for the increase in workers and why it was necessary, and work with the prime contractor and/or public/awarding body to determine if the increase in workers will be temporary or a long-term situation.

The contractor/subcontractor should then determine if the contractor/subcontractor needs to request apprentices or if the public/awarding body should seek a Request for Waiver from the Labor Commissioner. In situations like this, the Labor Commissioner may look at the project as a whole and will review the actions of the contractor/subcontractor and public/awarding body to determine if their actions were reasonable and not an attempt to circumvent the requirements of Senate Bill 207.

In addition, in cases of emergencies, the law provides an exemption to prevailing wage requirements, and therefore the requirements of Senate Bill 207. (See also NRS sections 338.011 and 338.090.)

## **HOW WILL SENATE BILL 207 BE ENFORCED?**

The plain language of Senate Bill 207 provides that it will be enforced contractor by contractor, subcontractor by subcontractor, and project by project. Therefore, the general/prime contractor cannot satisfy the 10% or 3% requirement on the project for all their subcontractors. If a subcontractor has more than 3 workers for an apprenticed craft or a type of work performed, they will need to comply with the requirements of Senate Bill 207 separately. Similarly, a general/prime contractor that has more than 3 workers within an apprenticed craft or type of work performed will need to comply with the requirements of Senate Bill 207 separately.

So for example, if you have 4 Electricians who each work a 40 hour week,  $40 \times 4 = 160$ , and that was the total hours they worked on the entire project. Because there were more than 3 workers per craft or type of work performed that would trigger the requirements of Senate Bill 207. Depending upon whether it was Vertical Construction = 10% or Horizontal Construction = 3% of the total hours of the project for that craft or type of work performed would have to be hours worked by an Apprentice based on the 160 total project hours.

It is important to look at and recognize the craft or the type of work performed. For example, the Flagger Job Classification is listed as separate, but the assignment of this work typically falls under the Laborers through collective bargaining agreements and area practice. However, a Flagger performs a distinct type of work from a general Laborer. So, if there are more than 3 Flaggers on a public works jobsite, there will need to be an apprentice on the jobsite for that craft or type of work performed, or a waiver obtained. Senate Bill 207 specifically specifies "craft" or "type of work performed." Prevailing wage laws require that workers are paid based on the type of work the worker actually performs. Senate Bill 207 reinforces this requirement by requiring apprentices specifically for the craft or type of work performed.

The Laborer and Operator Job Classifications contain Groups. The Groups will not be considered separately but will be counted together towards the more than 3 workers threshold. As stated above, exceptions to this could be Laborers if they are performing a separate and distinct type of work, such as a Flagger. If there is an Operator Group 1 worker, an Operator Group 2 worker, an Operator Group 4 worker, and an Operator Group 5 worker, they will all be counted together as 4 Operators, thereby triggering the requirements of Senate Bill 207.

There may be situations where the Labor Commissioner may need to look at and/or review the project on a broader basis or as a “whole” to determine compliance with Senate Bill 207. While the law does not necessarily provide any “carve outs” to not enforce the law contractor by contractor, subcontractor by subcontractor, or project by project, the Labor Commissioner will review compliance with Senate Bill 207 and compliance with prevailing wage laws based on the facts and evidence presented and the actions of the contractors, subcontractors, and public/awarding bodies.

## **WHAT HAPPENS IF THE PUBLIC/AWARDING BODY AND/OR LABOR COMMISSIONER FIND I COMMITTED A VIOLATION?**

The law provides for notice, due process, and an opportunity to be heard. NAC sections 338.105 through 338.116 set forth the provisions governing the investigation, determination, objection, and hearing process. NRS section 338.015 also provides for notice and an opportunity for a hearing before an administrative penalty may be imposed. The Labor Commissioner does have the authority to impose administrative penalties of up to \$5,000 per violation against contractors, subcontractors, and public/awarding bodies.

Contractors, subcontractors, and public/awarding bodies should comply with the certified payroll reporting and review requirements set forth in NRS and NAC section 338 to monitor and review compliance with Senate Bill 207 and prevailing wage laws.

In the event a claim/complaint is filed with the Labor Commissioner it will follow the process set forth in NAC sections 338.106 through 338.116 and/or NRS section 338.015, and any other applicable laws and regulations.

Failure to maintain proper documentation and/or submit required reports, such as certified payroll reports, could result in potential violations and disqualification.

Intentional and/or purposeful actions that demonstrate an intent to circumvent the requirements of Senate Bill 207 and prevailing wage laws may result in administrative penalties and disqualification.

## **CONCLUSION**

In this Advisory Opinion, the Labor Commissioner has attempted to provide guidance on the interpretation and implementation of Senate Bill 207. The Labor Commissioner will defer to the legislative intent, plain language, legislative testimony, and intent of Senate Bill 207 should additional questions arise.

The Labor Commissioner has made every effort to address the questions, concerns, and issues raised relating to Senate Bill 207. To the extent that a question, concern, or issue is not addressed in this Advisory Opinion, it is recommended that you contact the Office of the Labor Commissioner and submit your question(s) in writing to [AUA@labor.nv.gov](mailto:AUA@labor.nv.gov) or contact our office at the phone numbers and address locations listed on the first page of this Advisory Opinion.

Please be advised that the Labor Commissioner may revisit the interpretation and implementation of Senate Bill 207 as needed through an additional Advisory Opinion or through the Administrative Rulemaking process.

Sample Forms and information on SB 207 can be found at:

[http://labor.nv.gov/Apprenticeship\\_Utilization\\_Act/Apprenticeship\\_Utilization\\_Act/](http://labor.nv.gov/Apprenticeship_Utilization_Act/Apprenticeship_Utilization_Act/)

Sincerely,

A handwritten signature in blue ink, appearing to read "Shannon M. Chambers". The signature is fluid and cursive, with a long horizontal stroke at the end.

Shannon M. Chambers  
Labor Commissioner  
Office of the Labor Commissioner State  
of Nevada  
Department of Business and Industry

## APPRENTICESHIP UTILIZATION ACT – SENATE BILL 207 (2019)

The Legislature hereby finds and declares that: 1. A skilled workforce in construction is essential to the economic well-being of this State; 2. Apprenticeship programs are a proven method of training a skilled workforce in construction; and 3. Requiring the use of apprentices on the construction of public works will ensure the availability of a skilled workforce in construction in the future for this State.

Sec. 1.7. 1. Notwithstanding any other provision of this chapter and except as otherwise provided in this section, a contractor or subcontractor engaged in vertical construction who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 10 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

2. Notwithstanding any other provision of this chapter and except as otherwise provided in this section, a contractor or subcontractor engaged in horizontal construction who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 3 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

**Horizontal Construction** NRS 338.010 - Subdivision 13. “Horizontal Construction” means the construction of any fixed work, including any irrigation, drainage, water supply, flood control, harbor, railroad, highway, tunnel, airport or airway, sewer, sewage disposal plant or water treatment facility and any ancillary vertical components thereof, bridge, inland waterway, pipeline for the transmission of petroleum or any other liquid or gaseous substance, pier, and work incidental thereto. The term does not include vertical construction, the construction of any terminal or other building of an airport or airway, or the construction of any other building.

**Vertical Construction** NRS 338.010 - Subdivision 24. “Vertical Construction” means the construction or remodeling of any building, structure or other improvement that is predominantly vertical, including, without limitation, a building, structure or improvement for the support, shelter and enclosure of persons, animals, chattels or movable property of any kind, and any improvement appurtenant thereto.

**Complex or Hazardous Work** - The Labor Commissioner will view complex and hazardous work to include, but not be limited to, work performed on a public work project that is traditionally not performed by Apprentices pursuant to their Apprentice Agreement, Collective Bargaining Agreement, and/or any other written justification demonstrating that the work to be performed should not be performed by Apprentices.

A Public Body/Awarding Body, upon the request of a contractor or subcontractor, **MAY** submit a request for a modification or waiver of the percentage of hours of labor of one or more apprentices prior to (1) the bid advertisement; (2) the bid opening; or (3) the award of the contract if, “Good Cause” exists. The Labor Commissioner may also grant a waiver from the requirements of SB 207 after work on the public work has commenced.

Sample Forms and information on SB 207 can be found at:

[http://labor.nv.gov/Apprenticeship\\_Utilization\\_Act/Apprenticeship\\_Utilization\\_Act/](http://labor.nv.gov/Apprenticeship_Utilization_Act/Apprenticeship_Utilization_Act/)

Additional information on Public Works Projects and Prevailing Wages by region can be found at [www.labor.nv.gov](http://www.labor.nv.gov) or by following the links below.

[http://labor.nv.gov/PrevailingWage/Public\\_Works\\_Prevailing\\_Wages/](http://labor.nv.gov/PrevailingWage/Public_Works_Prevailing_Wages/)

<http://labor.nv.gov/uploadedFiles/labornvgov/content/home/features/PWP%20Handbook%20June%202019.pdf>

## GUIDELINES FOR AWARDING BODIES AND CONTRACTORS/SUBCONTRACTORS

1. Senate Bill 207 applies to Public Works Projects (NRS 338.010 – Subdivision 23) over \$100,000. (Exemptions may apply – See NRS sections 338.011 and 338.090.)
2. For each Public Works Project (PWP) Bid Advertisement, Bid Opening, and Contract, the Public Body/Awarding Body should include the requirements of Senate Bill 207. The Public Body/Awarding Body should also determine if the PWP requires the performance of uniquely complex or hazardous work.
3. Contractors/Subcontractors should determine if they can meet the Apprentice % requirements set forth in SB 207 or need to request Apprentices from a Registered Apprenticeship Program. Contractors/Subcontractors can request Apprentices using the Apprentice Request Form or request Apprentices in writing from a Registered Apprenticeship Program. *(Written documentation will be required by the Labor Commissioner if a Request for Waiver is submitted.)*
4. If the Apprentice Request is approved and Apprentices are dispatched, an Apprentice Agreement may need to be executed between the Registered Apprenticeship Program and the Contractor/Subcontractor.
5. Apprentice Issues - Issues and/or complaints regarding the qualifications and/or work of an Apprentice that is dispatched should be directed to the Registered Apprenticeship Program or the State of Nevada Apprenticeship Council. Please follow link <http://owinn.nv.gov/Apprenticeship/AboutSAC/>.
6. A Request for Waiver **MAY** be submitted by the **PUBLIC BODY/AWARDING BODY** to the Office of the Labor Commissioner if: (1) No Registered Apprentice Programs exist in the jurisdiction for the craft/type of work required for the PWP; (2) A request for Apprentices was denied or not acted upon within 5 business days; or (3) The PWP requires the performance of uniquely complex or hazardous work.
7. **ONLY THE PUBLIC BODY/AWARDING BODY CAN SUBMIT A REQUEST FOR WAIVER. REQUESTS FOR WAIVERS SHOULD BE SUBMITTED AS SOON AS POSSIBLE.**
8. Within 15 days of receipt of the Request for Waiver, the Office of the Labor Commissioner will issue a Decision/Determination granting or denying the Request for Waiver on the form that was submitted.
9. The Public Body/Awarding Body, Contractor, or Subcontractor can appeal the Decision/Determination within 10 days of issuance.
10. The Public Body/Awarding Body shall monitor the PWP consistent with the laws and regulations set forth in Nevada Revised Statutes (NRS) section 338 and Nevada Administrative Code (NAC) section 338. If a Waiver has not been granted the Public Body/Awarding Body shall ensure that certified payroll reports and any other required documentation are submitted and maintained demonstrating compliance with SB 207.

### **For additional information please contact us at:**

Office of the Labor Commissioner  
1818 College Parkway, Suite 102  
Carson City, NV 89706 775-684-1890

[AUA@labor.nv.gov](mailto:AUA@labor.nv.gov)

Office of the Labor Commissioner  
3300 W. Sahara Avenue, Suite 225  
Las Vegas, NV 89102 702-486-2650

[AUA@labor.nv.gov](mailto:AUA@labor.nv.gov)

TOLL FREE: 1-800-992-0900 Ext. 4850 - [www.labor.nv.gov](http://www.labor.nv.gov)

**SECTION TEN:**

**CHANGE ORDER FORM**

# Change Order

**No.** \_\_\_\_\_

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_

Project:	Owner: <b>City of Caliente</b>	Owner's Contract No.:
Contract:	Date of Contract:	
Contractor:	Engineer's Project No.:	

**The Contract Documents are modified as follows upon execution of this Change Order:**

Description: Change of Contract Time and Contract Date

Attachments (list documents supporting change):

**CHANGE IN CONTRACT PRICE:**

**CHANGE IN CONTRACT TIMES:**

Original Contract Price:

\$ \_\_\_\_\_

[Increase] [Decrease] from previously approved  
Change Orders No. \_ to No. \_ :

\$

Contract Price prior to this Change Order:

\$

[Increase] [Decrease] of this Change Order:

\$

Contract Price incorporating this Change Order:

\$

Original Contract Times:  Working days  Calendar days

Substantial completion (days or date):

Ready for final payment (days or date):

[Increase] [Decrease] from previously approved Change Orders  
No. to No.

Substantial completion (days):

Ready for final payment (days):

Contract Times prior to this Change Order:

Substantial completion (days or date): \_\_\_\_\_

Ready for final payment (days or date): \_\_\_\_\_

[Increase] [Decrease] of this Change Order:

Substantial completion (days or date): \_\_\_\_\_

Ready for final payment (days or date): \_\_\_\_\_

Contract Times with all approved Change Orders:

Substantial completion (days or date)

Ready for final payment (days or dates)

RECOMMENDED:

By: n/a

Engineer (Authorized Signature)

Date: \_\_\_\_\_

ACCEPTED:

By: \_\_\_\_\_

Owner (Authorized Signature)

Date: \_\_\_\_\_

ACCEPTED:

By: \_\_\_\_\_

Contractor (Authorized)

Date: \_\_\_\_\_



## **SECTION ELEVEN**

### **TECHNICAL SPECIFICATIONS**

SEE ATTACHED TECHNICAL SPECIFICATION

**ABBREVIATIONS**

A.F.F.	ABOVE FINISH FLOOR	JT.	JOINT
ACOUS.	ACOUSTIC(AL)	LAV.	LAVATORY
ADJ.	ADJUSTABLE/ADJACENT	LT.	LIGHT/LITE
ALT.	ALTERNATE		
ARCH.	ARCHITECT(URAL)		
BD.	BOARD	MAX.	MAXIMUM
BLK(G).	BLOCK(ING)	MECH.	MECHANICAL
BN.	BOUNDARY NAIL	MEMB.	MEMBER/MEMBRANE
BOT.	BOTTOM	MFR.	MANUFACTURE(R)
		MIN.	MINIMUM
CAB.	CABINET	MISC.	MISCELLANEOUS
CBC	CALIFORNIA BUILDING CODE	MTD.	MOUNTED
C.J.	CONTROL JOINT/CEILING JOIST	MTL.	METAL
C.L.	CENTER LINE		
CLG.	CEILING	N	NORTH
CLR.	CLEAR/COLOR	(N)	NEW
C.O.	CLEANOUT/CASE OPENING	N.I.C.	NOT IN CONTRACT
COL.	COLUMN	NO.	NUMBER
CONC.	CONCRETE	N.S.F.	NET SQUARE FEET
CONT.	CONTINUOUS	N.T.S.	NOT TO SCALE
C.T.	CERAMIC TILE		
C.F.C.	CALIF. FIRE CODE	O.C.	ON CENTER
		O.S.H.A.	DIVISION OF OCCUPATIONAL SAFETY & HEALTH
DET.	DETAIL	OZ.	OUNCE
DIA.	DIAMETER		
DIM.	DIMENSION	P.C.	PORTLAND CEMENT
DN.	DOWN	PL.	PLATE/PROPERTY LINE
DWG.	DRAWING	PLYWD.	PLYWOOD
		PNT.	PAIN
		PR.	PAIR
(E)	EXISTING	RAD.	RADIUS
EA.	EACH	REINF.	REINFORCING
E.J.	EXPANSION JOINT	REQD.	REQUIRED
EL.	ELEVATION (VERTICAL)	RESIL.	RESILIENT
ELEC.	ELECTRIC(AL)	R.J.	ROOF JOIST
ENCL.	ENCLOSURE	R.O.	ROUGH OPENING
EQ.	EQUAL		
EXP.	EXPANSION	S	SOUTH
EXT.	EXTERIOR	SCH	SCEDULE
		SHT.	SHEET
FDN.	FOUNDATION	SHTG.	SHEATHING
FD	FLOOR DRAIN	SIM.	SIMILAR
F.F.	FINISH FLOOR	SLNT.	SEALANT
FIN.	FINISH(ED)	S.O.G.	SLAB ON GRADE
FLR(G)	FLOOR(ING)	SPEC.	SPECIFICATIONS
F.O.C.	FACE OF CONCRETE	SO.	SQUARE
F.O.F.	FACE OF FINISH	STD.	STANDARD
F.O.M.	FACE OF MASONRY	STL.	STEEL
F.O.S.	FACE OF STUD	STOR.	STORAGE
FT.	FOOT/FEET	STRUCT.	STRUCTURAL
FTG.	FOOTING	SUSP.	SUSPENDED
		TEL.	TELEPHONE
GAL.	GALLON	T.O.	TOP OF
GA.	GAUGE	TS	TUBE STEEL
		TYP.	TYPICAL
HAP	HERITAGE ARCHITECTURE AND PLANNING	UL	UNDERWRITER'S LAB.
H.B.	HOSE BIB	U.N.O.	UNLESS NOTED OTHERWISE
HDWR	HARDWARE		
HR.	HOUR		
H.V.A.C	HEATING, VENTILATING & AIR COND.	VAR	VARIES
		V.T.R.A.	VENT THROUGH ROOF
I.C.B.O.	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS		
IN.	INCH/INCHES	W	WEST
INSUL.	INSULATION	W.C.	WATER CLOSET
INT.	INTERIOR	WD.	WOOD
INU.	CABINET	WDW	WINDOW

**SYMBOL LEGEND**

<b>DETAIL TARGET</b>	<b>DIMENSION</b>
— DETAIL NUMBER	DIMENSION TO FACE OF STUD OR FACE OF CONCRETE U.N.O.
— SHEET NUMBER	DIMENSION TO FACE OF FINISH
<b>BUILDING SECTION TARGET</b>	<b>DEMOLITION KEYNOTE</b>
— SECTION NUMBER	
— SHEET NUMBER	<b>IMPROVEMENT KEYNOTE</b>
<b>DOOR NUMBER TARGET</b>	
	<b>WALL TYPE INDICATION</b>
	W4
<b>WINDOW NUMBER</b>	<b>FIRE EXTINGUISHER AND CABINET</b>
	F.E.C.
<b>VERTICAL ELEVATION TARGET</b>	<b>FLOORING MATERIAL CHANGE</b>
	CPT-2 T-1

CITY OF CALIENTE, NEVADA  
**CALIENTE UNION PACIFIC DEPOT**  
 EXTERIOR RESTORATION



**GENERAL NOTES**

- THE CALIENTE UNION PACIFIC DEPOT IS LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES.
- IT IS THE RESPONSIBILITY OF ALL SUBCONTRACTORS TO APPROVE ANY WORK PREVIOUSLY PERFORMED BY OTHERS UPON WHICH THEIR WORK RELIES. PERFORMANCE OF WORK ASSUMES ACCEPTANCE OF PREVIOUS WORK BY OTHERS. IT IS THE RESPONSIBILITY OF ALL SUBCONTRACTORS TO NOTIFY THE GENERAL CONTRACTOR OF PREVIOUSLY PERFORMED DEFECTIVE WORK PRIOR TO BEGINNING THEIR OWN WORK.
- DETAILS MARKED AS "TYPICAL" SHALL APPLY TO ALL SIMILAR CASES UNLESS SPECIFICALLY INDICATED OTHERWISE.
- WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS. VERIFY WITH ARCHITECT.
- WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL GOVERN. DIMENSIONS ARE TO CENTERLINE OF COLUMNS OR BEAMS, FACE OF CONCRETE, OR FACE OF STUDS, UNLESS OTHERWISE NOTED. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE SLAB UNLESS OTHERWISE NOTED.
- DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO PROCEEDING WITH WORK. ANY DISCREPANCIES BETWEEN THE CONDITIONS INDICATED AND THE ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION PRIOR TO PROCEEDING.
- SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION INDUSTRY STANDARDS. ANY QUESTIONS REGARDING THE INTERPRETATION OF SYMBOLS AND ABBREVIATIONS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION PRIOR TO CONSTRUCTION.
- ALL WORK SHALL COMPLY WITH THE PROJECT SPECIFICATIONS.
- CONTRACTOR TO CONFIRM AND PROVIDE TEMPORARY FALL PROTECTION AS REQUIRED BY SCOPE OF WORK.
- CONTRACTOR TO PROVIDE CONSTRUCTION RECORD DRAWINGS FOLLOWING SUBSTANTIAL COMPLETION. SUCH RECORDS SHALL BE CLEAR, CONCISE, LEGIBLE, AND ACCURATE.
- ANY CONSTRUCTION WORK THAT CREATES AN OBSTRUCTION TO SPRINKLERS OR WHICH DISRUPTS PROPER AND EFFECTIVE FIRE SPRINKLER WATER DISTRIBUTION/DISCHARGE PATTERNS SHALL BE MITIGATED PER NFPA 13 REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT EXISTING BUILDING AND SITE FEATURES THROUGHOUT THE CONSTRUCTION PERIOD. ANY DAMAGE RESULTING FROM CONSTRUCTION OR STAGING SHALL BE REPAIRED IN-KIND BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE BUILDING WILL REMAIN FULLY OCCUPIED THROUGHOUT CONSTRUCTION. CONTRACTOR TO MAINTAIN SAFE ACCESSIBLE PATH OF TRAVEL TO BUILDING ENTRANCES AND COORDINATE WITH UNIVERSITY AS REQUIRED FOR ACCESS TO INTERIOR AREAS IMPACTED BY SCOPE OF WORK.
- THE BUILDING MAY CONTAIN HAZARDOUS MATERIALS. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS FOR THE TREATMENT OF HAZARDOUS MATERIALS.

**APPLICABLE CODES**

- 2018 INTERNATIONAL BUILDING CODE (IBC)
- 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
- 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)
- 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2018 UNIFORM PLUMBING CADE (UPC)
- 2018 UNIFORM MECHANICAL CODE (UMC)
- 2017 NATIONAL ELECTRICAL CODE (NEC)
- THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES
- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

**PROJECT TEAM**

**OWNER/CLIENT**  
 CITY OF CALIENTE  
 100 DEPOT AVENUE  
 P.O. BOX 1006  
 CALIENTE, NV 89008  
 CONTACT: LINDA LARSON-BUTLER  
 PHONE: 775.726.3131  
 E-MAIL: llarson-butler@cityofcaliente.com

**EXECUTIVE ARCHITECT**  
 HERITAGE ARCHITECTURE & PLANNING  
 633 FIFTH AVENUE  
 SAN DIEGO, CA 92101  
 CONTACT: CARMEN PAULI  
 PHONE: (619) 239 7888  
 E-MAIL: carmen@heritagearchitecture.com

**SCOPE OF WORK**

THE HISTORIC CALIENTE UNION PACIFIC DEPOT IS LOCATED AT 100 DEPOT AVENUE IN CALIENTE, NEVADA. THE SCOPE OF WORK FOR THIS PROJECT WILL INCLUDE THE FOLLOWING ITEMS:

- RESTORATION OF ALL EXISTING WOOD WINDOWS AND EXTERIOR DOORS
- REPAIR AND STABILIZATION OF EXTERIOR PLASTER COLUMN CAPITALS.
- PATCHING AND REPAIR OF EXTERIOR PLASTER
- RESTORATION OF EAST ARCADE
- RESTORATION OF NORTH ARCADE (WEST END).
- PREP, PRIME, AND PAINTING OF ALL EXTERIOR SURFACES.

ADDITIVE ALTERNATE ITEMS: TO BE DETERMINED

**SHEET INDEX**

T-001	TITLE SHEET
A-101	FIRST FLOOR PLAN
A-102	SECOND FLOOR PLAN
A-103	ENLARGED EAST ARCADE PLANS
A-104	ENLARGED NORTH ARCADE PLANS (WEST END)
A-105	EXTERIOR ELEVATIONS
A-201	WINDOW SCHEDULE AND NOTES
A-202	DOOR SCHEDULES AND NOTES
A-203	WINDOW AND DOOR TYPES AND DETAILS
A-301	COLUMN CAPITAL DETAILS
A-302	COLUMN CAPITAL DETAILS
A-303	COLUMN CAPITAL AND MISC. DETAILS

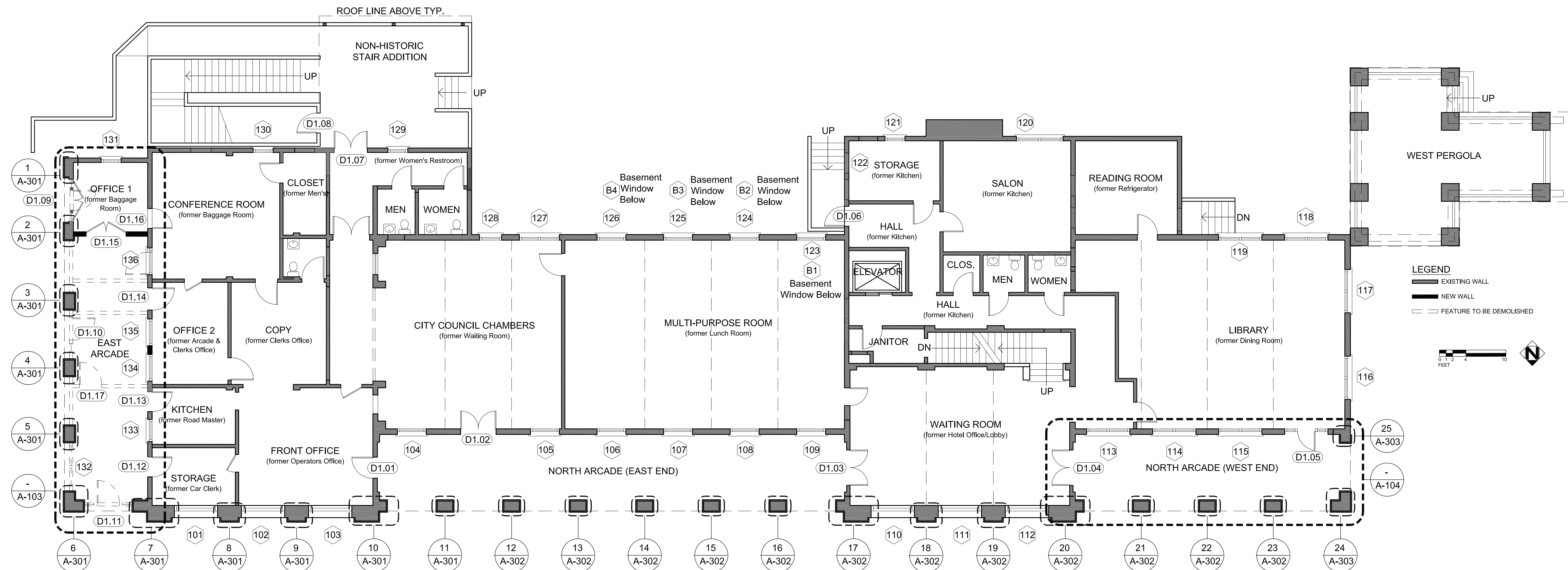
**VICINITY MAP**



03/03/2021	06/24/2021	09/03/2021			
50% CDS SUBMITTAL	90% CDS SUBMITTAL	100% CDS SUBMITTAL			
<p><b>City of Caliente</b></p>					
<p><b>HERITAGE ARCHITECTURE &amp; PLANNING</b></p>					
<p>LICENSED ARCHITECT                  CARMEN PAULI                  C-28831                  02-28-23                  RENEWAL DATE                  STATE OF CALIFORNIA</p>					
DES:					
DR:					
NOT FOR CONSTRUCTION					
CALIENTE UNION PACIFIC DEPOT					
EXTERIOR RESTORATION					
TITLE SHEET					
PROJ. NO. 2019.076					
SHEET #					
<b>T-001</b>					
SHEET OF					

**GENERAL NOTES:**

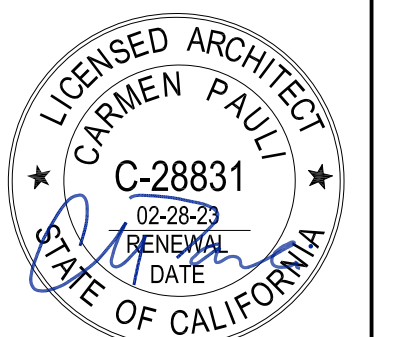
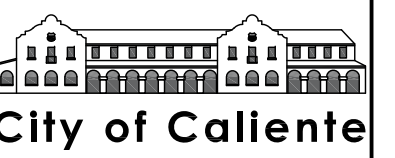
- BUILDING WILL REMAIN FULLY OCCUPIED THROUGHOUT CONSTRUCTION. CONTRACTOR TO MAINTAIN SAFE ACCESSIBLE PATH OF TRAVEL TO ALL BUILDING ENTRANCES.
- CONTRACTOR SHALL PROTECT SURROUNDING VEGETATION AND SITE FEATURES WITHIN THE PROJECT SITE.
- GENERAL CONTRACTOR SHALL COORDINATE CONSTRUCTION FENCE, STAGING AREAS, & ACCESS ROUTES WITH CITY.
- CONTRACTOR TO COORDINATE WITH CITY FOR ANY INTERRUPTION IN UTILITY SERVICE.
- EXISTING BUILDING MAY HAVE ASBESTOS CONTAINING MATERIALS, LEAD BASED PAINT, AND LEAD CONTAINING MATERIALS. COORDINATE ABATEMENT AND ENVIRONMENTAL CONTROL AS REQUIRED PER SCOPE SHOWN. REFER TO LIMITED LEAD BASED PAINT SURVEY PROVIDED BY CITY.



**FIRST FLOOR PLAN**

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

03/03/2021	06/24/2021	09/03/2021
50% CDS SUBMITTAL	90% CDS SUBMITTAL	100% CDS SUBMITTAL



DES:  
DR:

NOT FOR CONSTRUCTION

CALIENTE UNION PACIFIC DEPOT  
EXTERIOR RESTORATION  
FIRST FLOOR PLAN

PROJ. NO. 2019.076

SHEET #

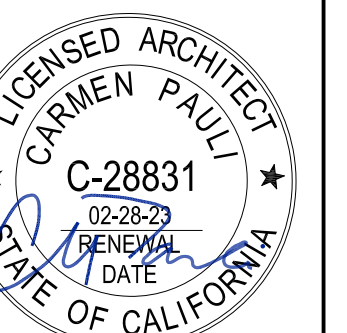
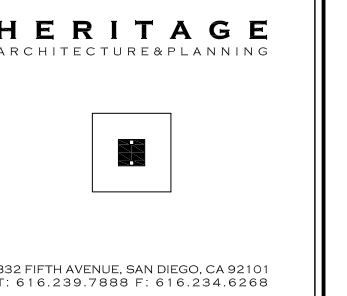
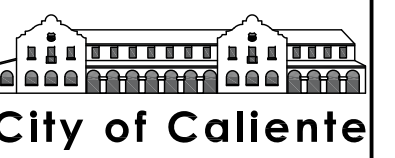
A-101

SHEET OF

**GENERAL NOTES:**

- BUILDING WILL REMAIN FULLY OCCUPIED THROUGHOUT CONSTRUCTION. CONTRACTOR TO MAINTAIN SAFE ACCESSIBLE PATH OF TRAVEL TO ALL BUILDING ENTRANCES.
- CONTRACTOR SHALL PROTECT SURROUNDING VEGETATION AND SITE FEATURES WITHIN THE PROJECT SITE.
- GENERAL CONTRACTOR SHALL COORDINATE CONSTRUCTION FENCE, STAGING AREAS, & ACCESS ROUTES WITH CITY.
- CONTRACTOR TO COORDINATE WITH CITY FOR ANY INTERRUPTION IN UTILITY SERVICE.
- EXISTING BUILDING MAY HAVE ASBESTOS CONTAINING MATERIALS, LEAD BASED PAINT, AND LEAD CONTAINING MATERIALS. COORDINATE ABATEMENT AND ENVIRONMENTAL CONTROL AS REQUIRED PER SCOPE SHOWN. REFER TO LIMITED LEAD BASED PAINT SURVEY PROVIDED BY CITY.

03/03/2021	06/24/2021	09/03/2021
50% CDS SUBMITTAL	90% CDS SUBMITTAL	100% CDS SUBMITTAL



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NOT FOR CONSTRUCTION

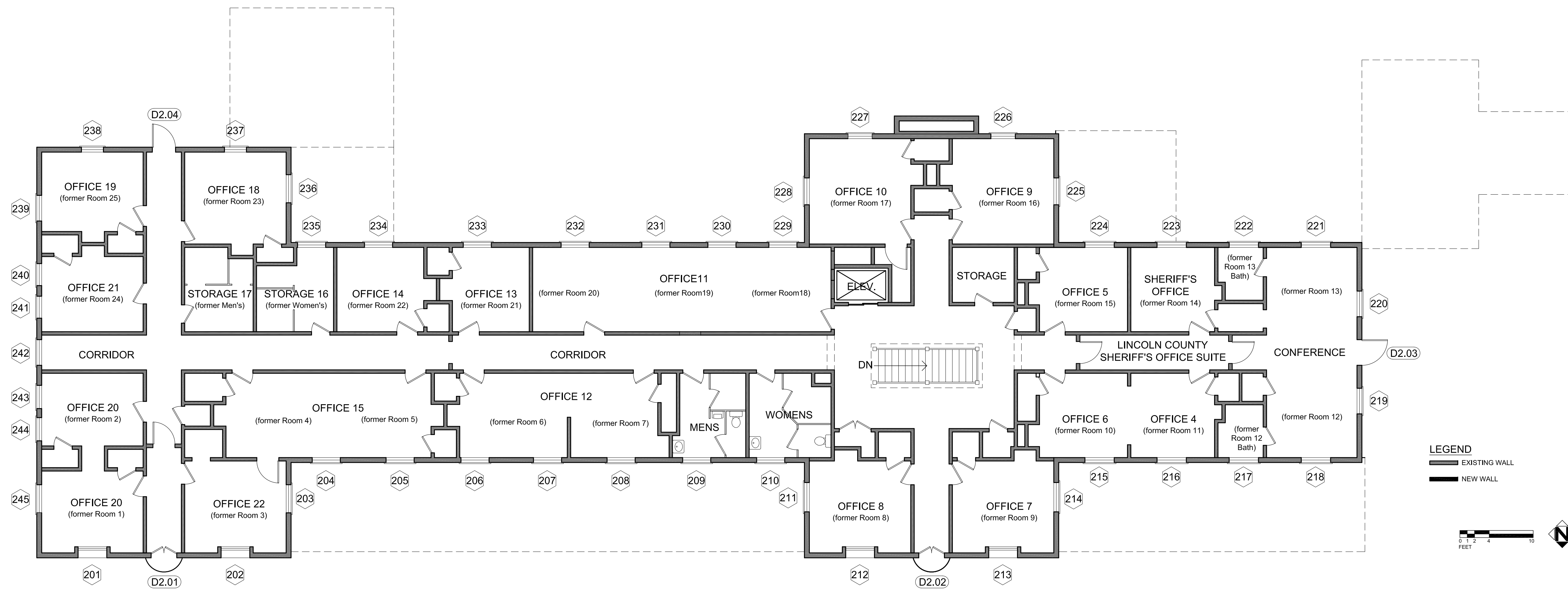
CALIENTE UNION PACIFIC DEPOT  
EXTERIOR RESTORATION  
SECOND FLOOR PLAN

PROJ. NO. 2019.076

SHEET #

A-102

SHEET OF



**SECOND FLOOR PLAN**

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

**GENERAL NOTES:**

- BUILDING WILL REMAIN FULLY OCCUPIED THROUGHOUT CONSTRUCTION. CONTRACTOR TO MAINTAIN SAFE ACCESSIBLE PATH OF TRAVEL TO ALL BUILDING ENTRANCES.
- CONTRACTOR SHALL PROTECT SURROUNDING VEGETATION AND SITE FEATURES WITHIN THE PROJECT SITE.
- GENERAL CONTRACTOR SHALL COORDINATE CONSTRUCTION FENCE, STAGING AREAS, & ACCESS ROUTES WITH CITY.
- CONTRACTOR TO COORDINATE WITH CITY FOR ANY INTERRUPTION IN UTILITY SERVICE.
- EXISTING BUILDING MAY HAVE ASBESTOS CONTAINING MATERIALS, LEAD BASED PAINT, AND LEAD CONTAINING MATERIALS. COORDINATE ABATEMENT AND ENVIRONMENTAL CONTROL AS REQUIRED PER SCOPE SHOWN. REFER TO LIMITED LEAD BASED PAINT SURVEY PROVIDED BY CITY.

**DEMOLITION KEY NOTES:**

- DEMOLISH (E) WALL IN-FILL BETWEEN HISTORIC ARCHED OPENING. REPAIR/REPLACE PLASTER FINISH ON ARCH IN-KIND (BOTH SIDES).
- DEMOLISH (E) INTERIOR WALL.
- DEMOLISH (E) DOOR.
- REMOVE AND SALVAGE (E) DOOR.
- DEMOLISH (E) WINDOW.
- REMOVE AND SALVAGE (E) SAFE. RELOCATE WITHIN BUILDING AS DIRECTED BY CITY.
- DEMOLISH (E) SUSPENDED CEILING, DEMOLISH AND CAP MECHANICAL DUCTS. DEMOLISH LIGHT FIXTURES, DEMOLISH AND RECONNECT FIRE SPRINKLER LINES. DEFERRED APPROVAL ITEM. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL OF CITY PRIOR TO CONSTRUCTION.

**FLOOR PLAN KEY NOTES:**

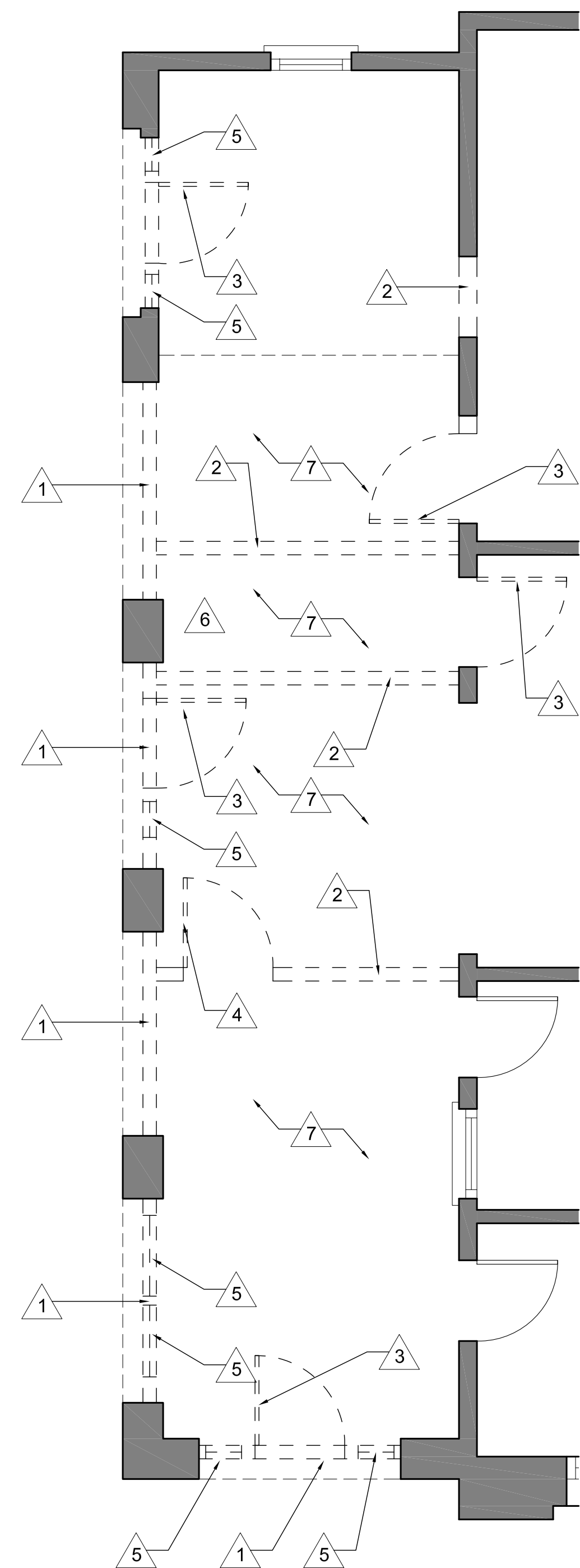
- SEE SHEET A-101 FOR COLUMN CAPITAL NOTES AND REFERENCED DETAILS ON SHEET A-301.
- (N) DOOR SEE DOOR SCHEDULE.
- (N) FRAMED OPENING WITH SALVAGED DOOR, SEE DOOR SCHEDULE.
- (N) WINDOW. SEE WINDOW SCHEDULE.
- DEMOLISH (E) FLOOR FINISHES AND SAW CUT AND REMOVE (E) CONCRETE FLOOR. INSTALL (N) INTEGRALLY COLORED CONCRETE FLOOR TO MATCH HISTORIC FLOOR AT NORTH ARCADE.
- (N) WOOD THRESHOLD. SEE DOOR SCHEDULE FOR ADDITIONAL NOTES.

**REFLECTED CEILING PLAN NOTES:**

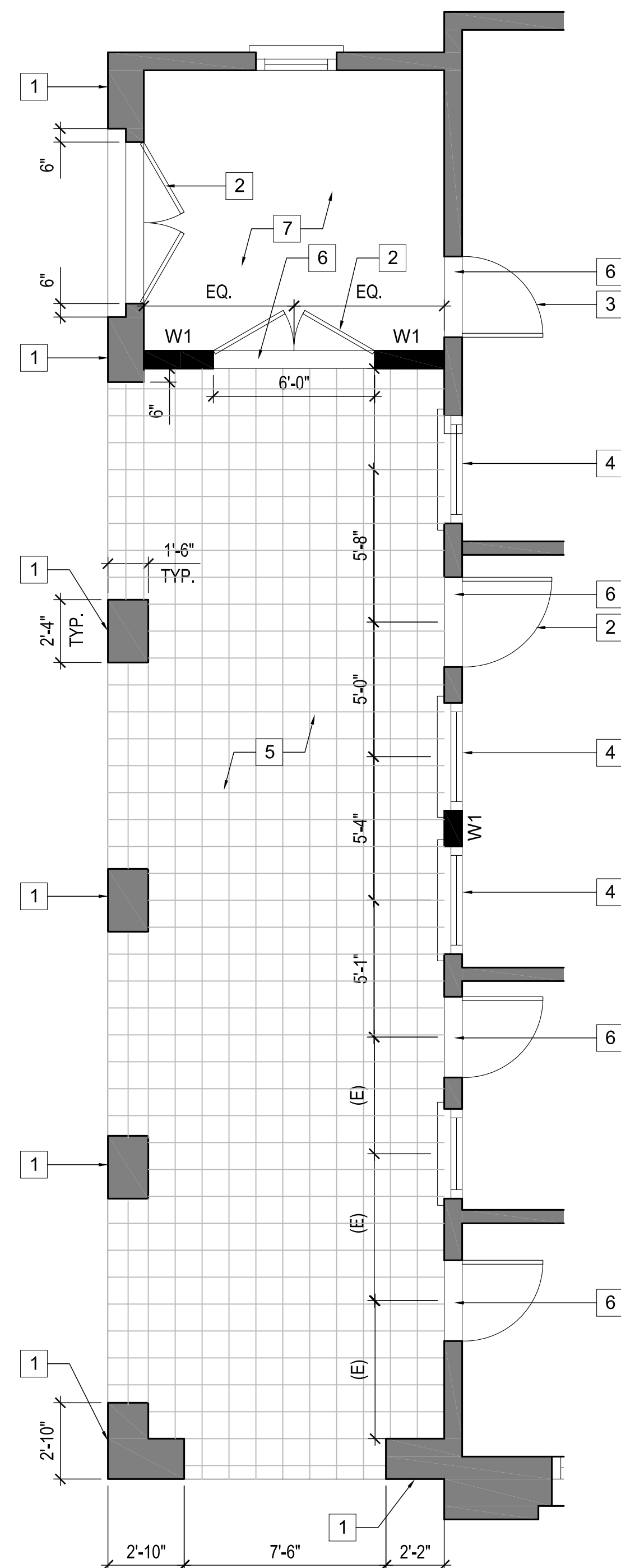
- (N) LIGHT FIXTURE. SEE FIXTURE SCHEDULE.
- REPAIR (E) PLASTER CEILING AND PATCH HOLES FROM PREVIOUS EQUIPMENT. INSTALL (N) FIRE SPRINKLER PIPES ABOVE CEILING WITH CONCEALED PENDANT HEADS AS REQUIRED FOR ARCADE SPACE. DEFERRED APPROVAL ITEM. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL OF CITY PRIOR TO CONSTRUCTION.
- (E) SUSPENDED CEILING FINISH AND RECESSED LIGHTING TO REMAIN. REPAIR AFTER CONSTRUCTION OF ADJACENT WALL.

**LIGHT FIXTURE SCHEDULE**

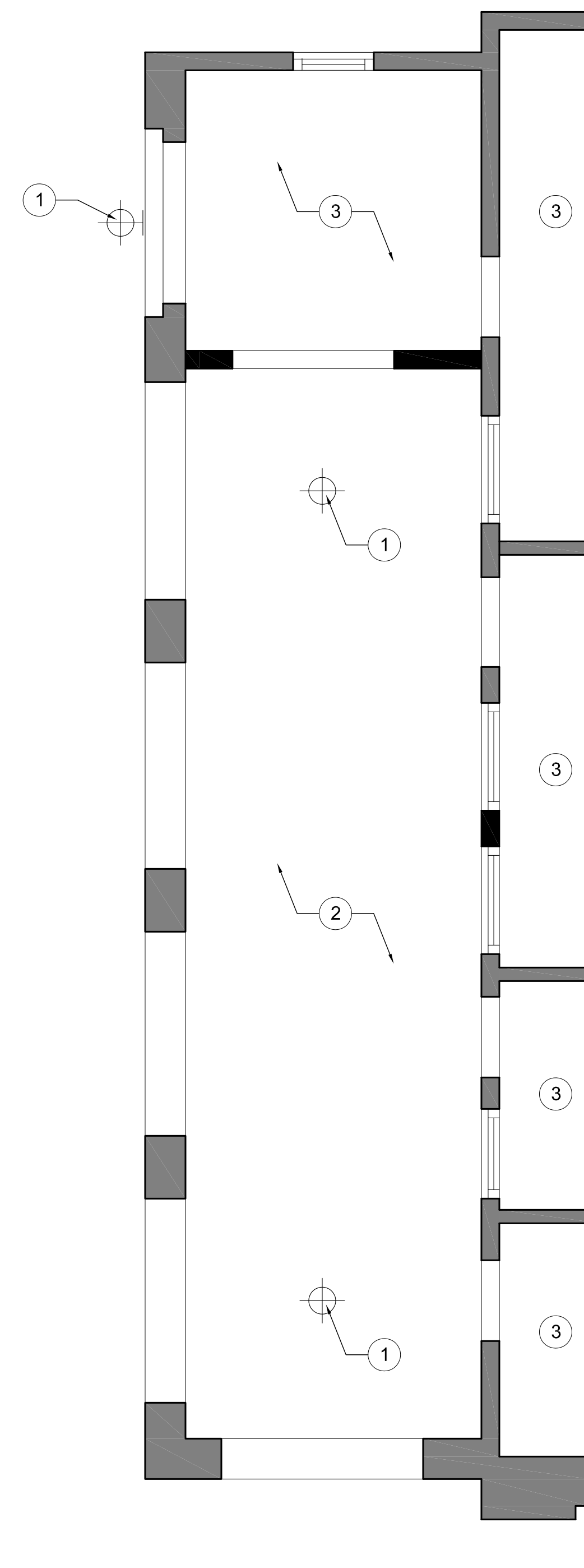
TYPE	SYMB.	DESCRIPTION/MANUFACTURER
A		MANORA HOUSE HANGING PORCH PENDANT MANUFACTURER: HINKLEY LIGHTING MODEL: 1412BK FINISH: SATIN BLACK  WEBLINK: <a href="https://www.houseofantiquehardware.com/porch-ceiling-lights-manora-house-hanging-porch-lantern?sc=9&amp;category=1861936">https://www.houseofantiquehardware.com/porch-ceiling-lights-manora-house-hanging-porch-lantern?sc=9&amp;category=1861936</a>
B		CARSON GOOSE-NECK WALL SCONCE MANUFACTURER: REJUVENATION MODEL: A2949 SHADE: COPPER PENNY ANGLED DOME OPTIONS: WITH WIRE BULB GUARD FINISH: STANDARD BLACK W/ COPPER PENNY SHADE  WEBLINK: <a href="https://www.rejuvenation.com/catalog/products/carson-goose-neck-warehouse/configurations/60bfe7743a46fb65e9a57eb5/customize/summary">https://www.rejuvenation.com/catalog/products/carson-goose-neck-warehouse/configurations/60bfe7743a46fb65e9a57eb5/customize/summary</a>



**DEMO PLAN**



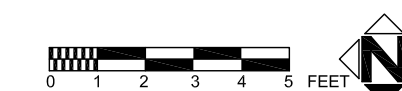
**FLOOR PLAN**



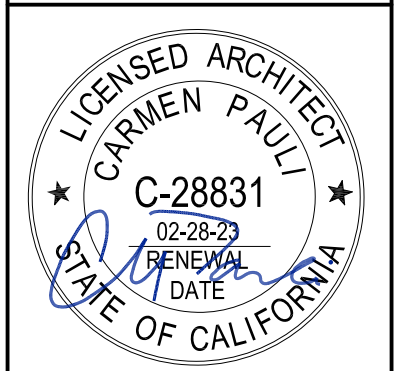
**REFLECTED CEILING PLAN**

**EAST ARCADE PLANS**

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



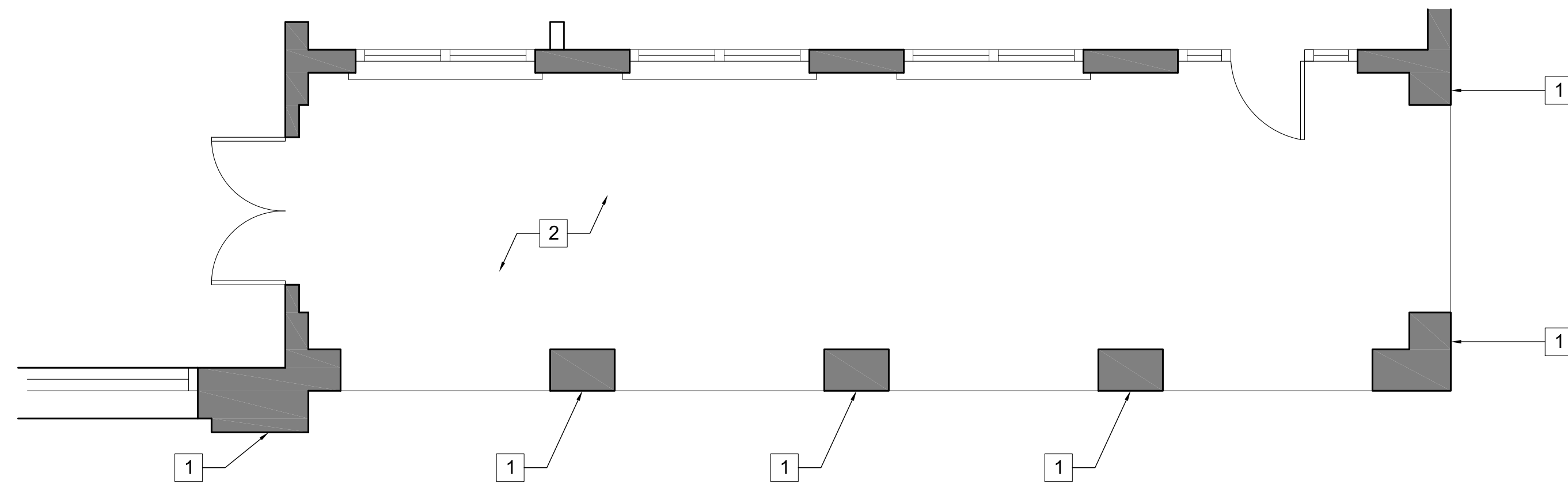
03/03/2021	06/24/2021	09/03/2021			
50% CDS SUBMITTAL	90% CDS SUBMITTAL	100% CDS SUBMITTAL			



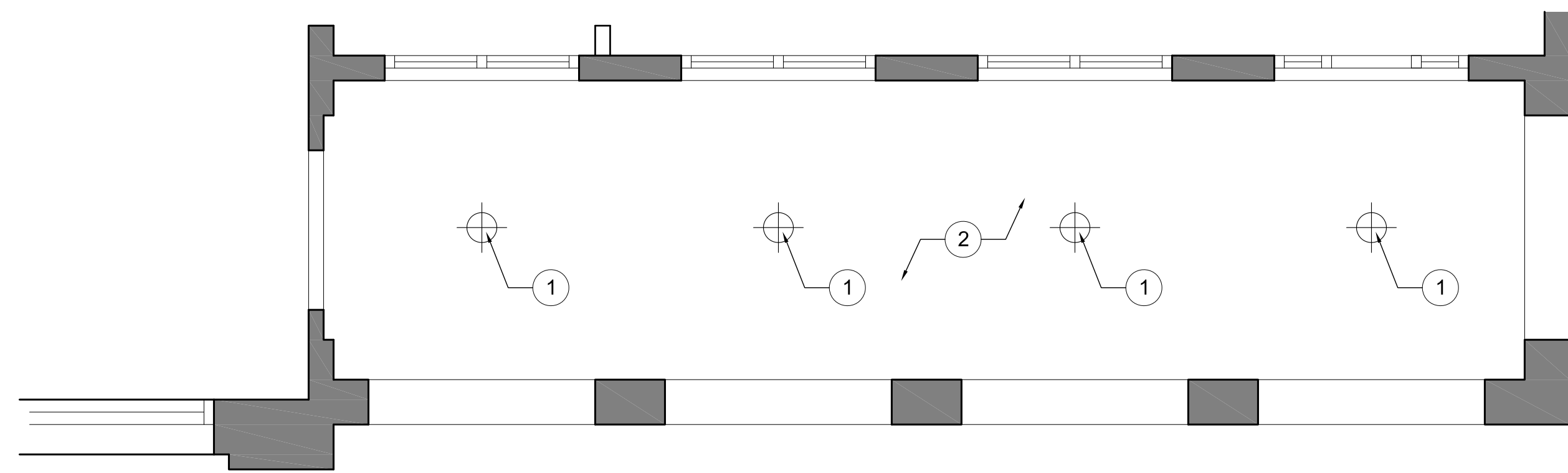
DES:  
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NOT FOR CONSTRUCTION

CALIENTE UNION PACIFIC DEPOT  
EXTERIOR RESTORATION  
ENLARGED EAST ARCADE PLANS

PROJ. NO. 2019.076  
SHEET #  
**A-103**  
SHEET OF



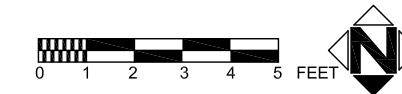
**FLOOR PLAN**



**REFLECTED CEILING PLAN**

**NORTH ARCADE PLANS (WEST END)**

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



**GENERAL NOTES:**

1. BUILDING WILL REMAIN FULLY OCCUPIED THROUGHOUT CONSTRUCTION. CONTRACTOR TO MAINTAIN SAFE ACCESSIBLE PATH OF TRAVEL TO ALL BUILDING ENTRANCES.
2. CONTRACTOR SHALL PROTECT SURROUNDING VEGETATION AND SITE FEATURES WITHIN THE PROJECT SITE.
3. GENERAL CONTRACTOR SHALL COORDINATE CONSTRUCTION FENCE, STAGING AREAS, & ACCESS ROUTES WITH CITY.
4. CONTRACTOR TO COORDINATE WITH CITY FOR ANY INTERRUPTION IN UTILITY SERVICE.
5. EXISTING BUILDING MAY HAVE ASBESTOS CONTAINING MATERIALS, LEAD BASED PAINT, AND LEAD CONTAINING MATERIALS. COORDINATE ABATEMENT AND ENVIRONMENTAL CONTROL AS REQUIRED PER SCOPE SHOWN. REFER TO LIMITED LEAD BASED PAINT SURVEY PROVIDED BY CITY.

**FLOOR PLAN KEY NOTES:**

- 1 SEE SHEET A-101 FOR COLUMN CAPITAL NOTES AND REFERENCED DETAILS ON SHEET A-301.
- 2 (E) CONCRETE FLOOR, CLEAN AND PROTECT IN PLACE..

**REFLECTED CEILING PLAN NOTES:**

- 1 (N) LIGHT FIXTURE. SEE FIXTURE SCHEDULE.
- 2 DEMOLISH (E) PLYWOOD CEILING FINISH AND LIGHT FIXTURES. INSTALL (N) 5/8" EXTERIOR GRADE TYPE X GYP BOARD WITH PLASTER SKIM COAT TEXTURED TO MATCH ADJACENT PLASTER. REMOVE (E) FIRE SPRINKLER PIPES AND INSTALL (N) FIRE SPRINKLER PIPES ABOVE CEILING WITH CONCEALED PENDANT HEADS AS REQUIRED FOR ARCADE SPACE. DEFERRED APPROVAL ITEM. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL OF CITY PRIOR TO CONSTRUCTION.

**LIGHT FIXTURE SCHEDULE**

TYPE	SYMB.	DESCRIPTION/MANUFACTURER
A		<p>MANOR HOUSE HANGING PORCH PENDANT            MANUFACTURER: HINKLEY LIGHTING            MODEL: 1412BK            FINISH: SATIN BLACK</p> <p>WEBLINK:  <a href="https://www.houseofantiquehardware.com/porch-ceiling-lights-manor-house-hanging-porch-lantern?sc=9&amp;category=1861936">https://www.houseofantiquehardware.com/porch-ceiling-lights-manor-house-hanging-porch-lantern?sc=9&amp;category=1861936</a></p>

03/03/2021	06/24/2021	09/03/2021			
50% CDS SUBMITTAL	90% CDS SUBMITTAL	100% CDS SUBMITTAL			



DES:  
DR:

NOT FOR CONSTRUCTION

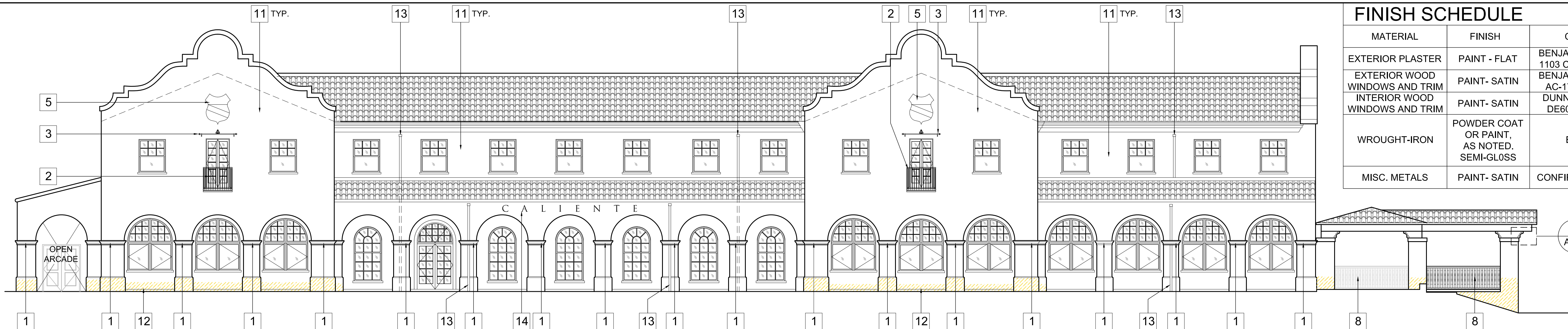
CALIENTE UNION PACIFIC DEPOT  
 EXTERIOR RESTORATION  
 ENLARGED NORTH ARCADE PLANS

PROJ. NO. 2019.076

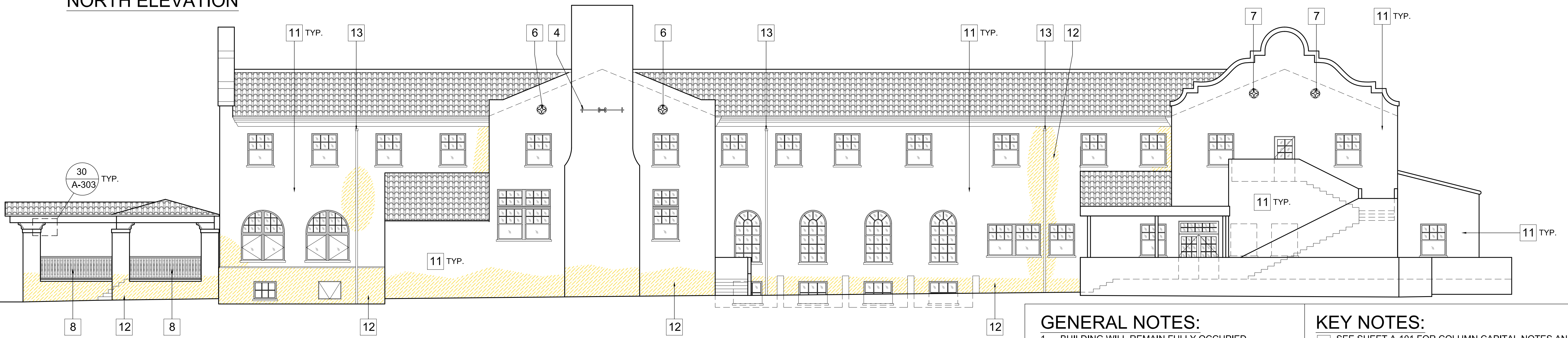
SHEET #

**A-104**

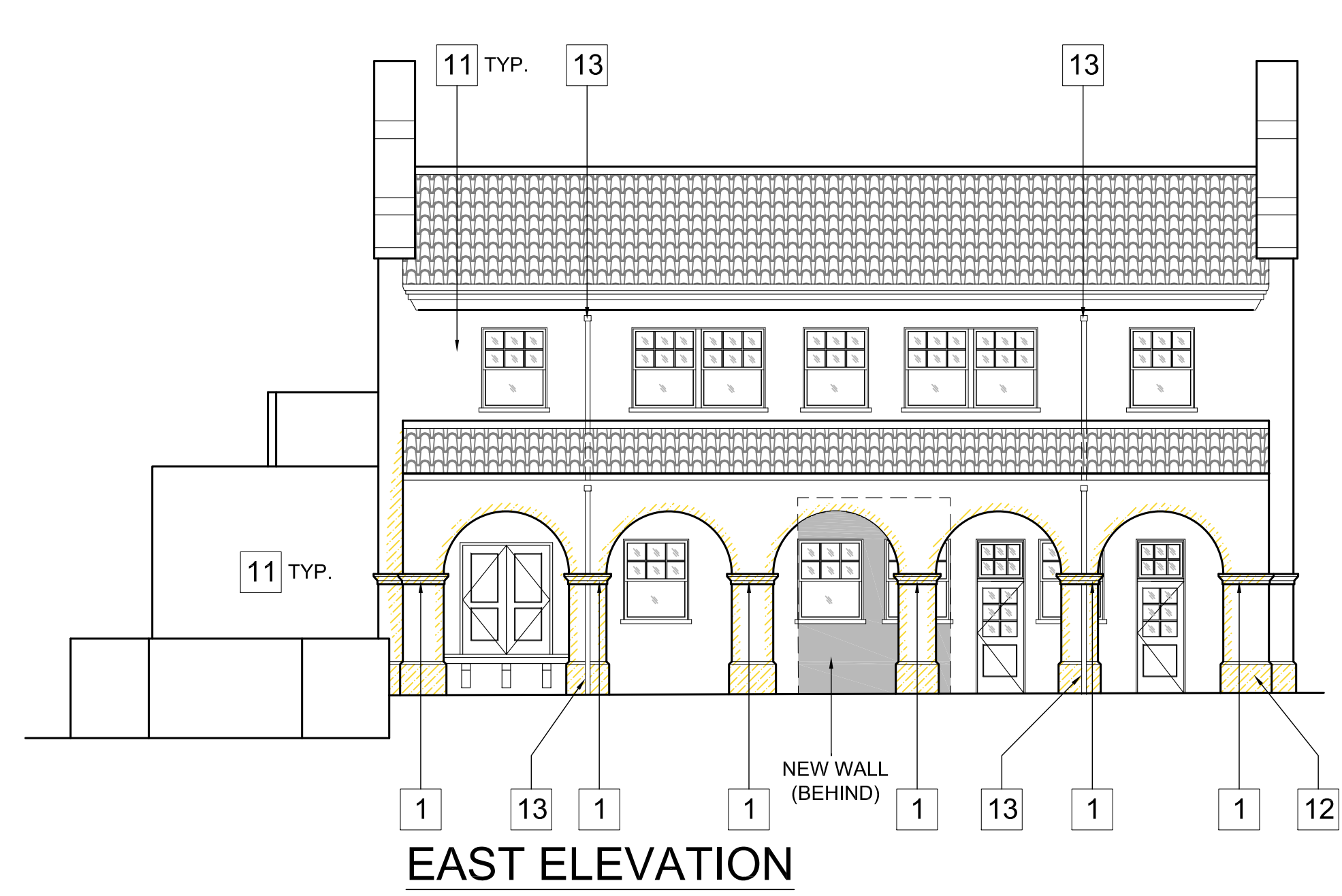
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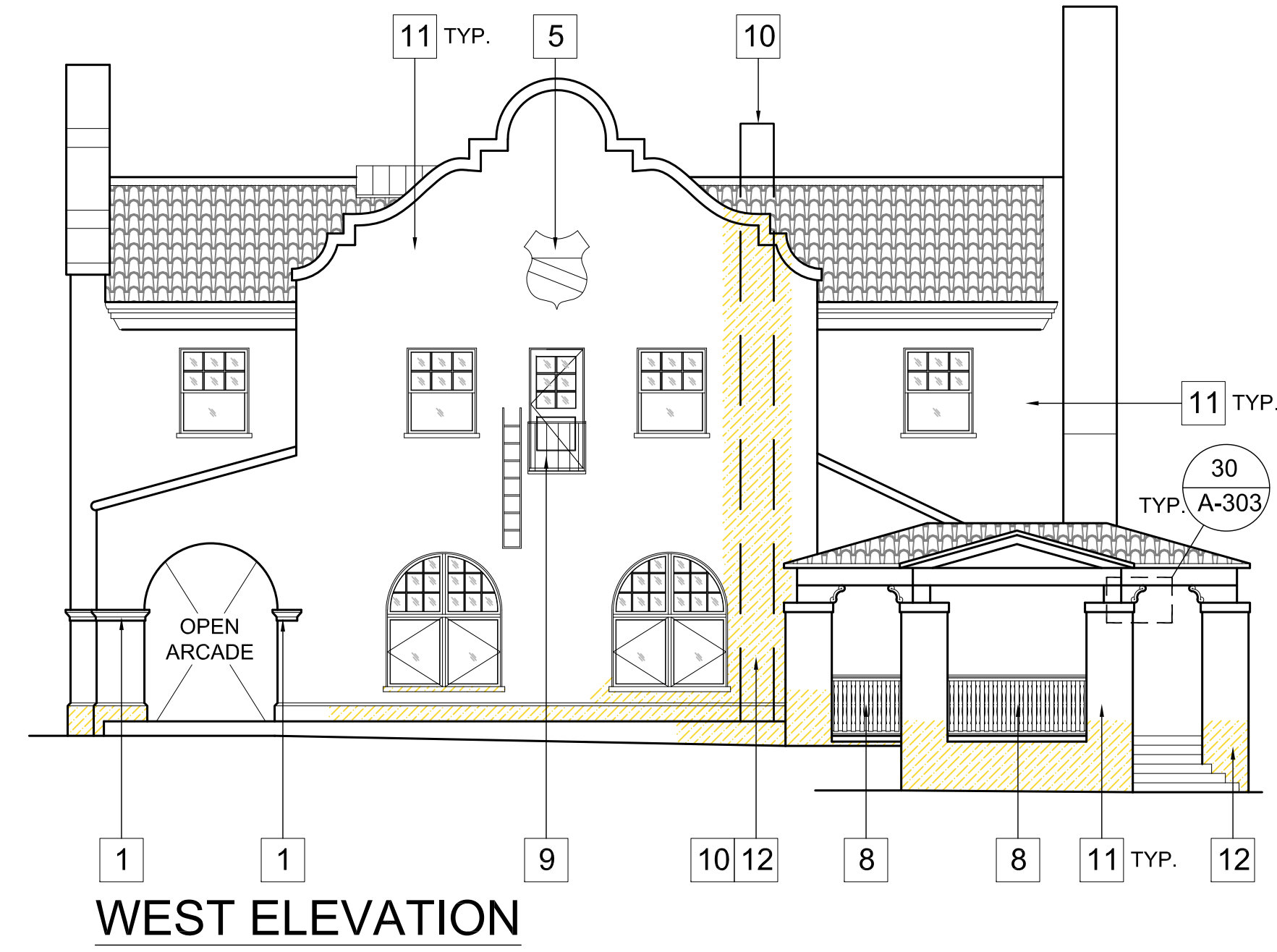
NORTH ELEVATION



SOUTH ELEVATION



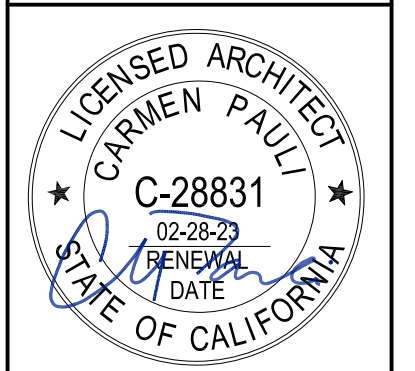
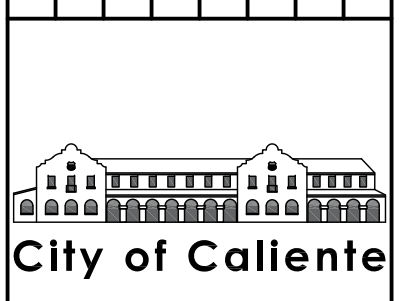
EAST ELEVATION



WEST ELEVATION

FINISH SCHEDULE		
MATERIAL	FINISH	COLOR
EXTERIOR PLASTER	PAINT - FLAT	BENJAMIN MOORE 1103 CAMEL BACK
EXTERIOR WOOD WINDOWS AND TRIM	PAINT - SATIN	BENJAMIN MOORE AC-17 SEA PINE
INTERIOR WOOD WINDOWS AND TRIM	PAINT - SATIN	DUNN EDWARDS DE6049 CHAPS
WROUGHT-IRON	POWDER COAT OR PAINT, AS NOTED, SEMI-GLOSS	BLACK
MISC. METALS	PAINT - SATIN	CONFIRM W/ ARCH.

03/03/2021	06/24/2021				
50% CDS SUBMITTAL	90% CDS SUBMITTAL	100% CDS SUBMITTAL			



DES:  
DR:  
  
NOT FOR CONSTRUCTION

- GENERAL NOTES:**
- BUILDING WILL REMAIN FULLY OCCUPIED THROUGHOUT CONSTRUCTION. CONTRACTOR TO MAINTAIN SAFE ACCESSIBLE PATH OF TRAVEL TO ALL BUILDING ENTRANCES.
  - CONTRACTOR SHALL PROTECT SURROUNDING VEGETATION AND SITE FEATURES WITHIN THE PROJECT SITE.
  - GENERAL CONTRACTOR SHALL COORDINATE CONSTRUCTION FENCE, STAGING AREAS, & ACCESS ROUTES WITH CITY.
  - CONTRACTOR TO COORDINATE WITH CITY FOR ANY INTERRUPTION IN UTILITY SERVICE.
  - EXISTING BUILDING MAY HAVE ASBESTOS CONTAINING MATERIALS, LEAD BASED PAINT, AND LEAD CONTAINING MATERIALS. COORDINATE ABATEMENT AND ENVIRONMENTAL CONTROL AS REQUIRED PER SCOPE SHOWN.
  - THESE ELEVATIONS ARE COMPILED FROM EXISTING DRAWINGS. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
  - SEE FLOOR PLANS FOR ADDITIONAL NOTES.
  - TYPICAL, ALL PREVIOUSLY PAINTED EXTERIOR SURFACES INCLUDING PLASTER/STUCCO, METAL, AND WOOD WHETHER SHOWN ON THESE DRAWINGS OR NOT SHALL BE PREPPED, PRIMED, AND PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND EXTENT OF WORK PRIOR TO BIDDING.
  - TYPICAL, ALL EXPOSED EXTERIOR METAL FLASHING, TRIM, PIPES, AND CONDUIT WHETHER SHOWN ON THESE DRAWINGS OR NOT SHALL BE PREPPED AND PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND EXTENT OF WORK PRIOR TO BIDDING.
  - CLEAN ALL WINDOWS AT SUBSTANTIAL COMPLETION.

- KEY NOTES:**
- SEE SHEET A-101 FOR COLUMN CAPITAL NOTES AND REFERENCED DETAILS ON SHEET A-301.
  - (E) HISTORIC WROUGHT-IRON BALCONY. REMOVE, SANDBLAST, POWDER COAT, AND REINSTALL.
  - (E) HISTORIC WROUGHT-IRON CURTAIN ROD AND BRACKETS. REMOVE, SANDBLAST, POWDER COAT, AND REINSTALL.
  - (E) HISTORIC WROUGHT-IRON CHIMNEY BRACE. PREP PRIME AND PAINT.
  - (E) TERRA COTTA SHIELD. PREP PRIME AND PAINT PER DET. 31/A-303.
  - (E) HISTORIC CLAY TILE VENT. STRIP PAINT AND RESTORE.
  - REPLICATE MISSING HISTORIC CLAY TILE VENT IN-KIND PER DET. 28/A-303.
  - RECONSTRUCT WOOD BALCONY RAILING PER DET. 29/A-303.
  - (E) NON-HISTORIC MTL. FIRE ESCAPE. PREP, PRIME AND PAINT.
  - DEMOLISH (E) NON-HISTORIC ANTENNA STRUCTURE AND REPAIR AFFECTED ADJACENT SURFACES.
  - PREP PRIME AND PAINT (E) EXTERIOR PLASTER PER SPECIFICATIONS.
  - AREA OF SEVERELY DAMAGED PLASTER. REMOVE AND REPLACE DAMAGED PLASTER, WIRE LATH, BUILDING PAPER, AND WOOD SHEATHING. PREP PRIME AND PAINT PER SPECIFICATIONS.
  - (E) COPPER GUTTER, CONNECTOR HEAD, AND DOWNSPOUT. REMOVE PAINT TO CLEAN METAL.
  - (E) CALIENTE SIGN. PROTECT IN PLACE, PREP, PRIME AND PAINT SEMI-GLOSS BLACK.

CALIENTE UNION PACIFIC DEPOT  
EXTERIOR RESTORATION  
EXTERIOR ELEVATIONS

PROJ. NO. 2019.076  
SHEET #  
**A-105**  
SHEET OF

## WINDOW SCHEDULE

OPENING NUMBER	WINDOW SIZE (W x H) *	REPAIR CLASS	WINDOW TYPE	MATERIAL	EXT. FINISH	INT. FINISH	GLASS	FRAME MAT.	EXT. FINISH	INT. FINISH	HEAD	JAMB	SILL	KEYNOTES
B1	4'-3" x 3'-4"	N/A	D	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3
B2	4'-3" x 3'-4"	N/A	D	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3
B3	4'-3" x 3'-4"	4	D	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 4
B4	4'-3" x 3'-4"	4	D	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 4
101	6'-6" X 7'-7"	3	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	
102	6'-6" X 7'-7"	3	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	5
103	6'-6" X 7'-7"	3	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	
104	4'-0" X 8'-0"	2	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 7
105	4'-0" X 8'-0"	2	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	7
106	4'-0" X 8'-0"	2	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	7, 8
107	4'-0" X 8'-0"	2	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	7, 8
108	4'-0" X 8'-0"	2	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	7, 8
109	4'-0" X 8'-0"	2	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	7, 8
110	5'-6" X 9'-6"	3	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	2 (1 CASEMENT SASH LOCK), 8
111	5'-6" X 9'-6"	2	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	8
112	5'-6" X 9'-6"	2	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	8
113	6'-6" X 7'-7"	2	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	8
114	6'-6" X 7'-7"	2	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	8
115	6'-6" X 7'-7"	2	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	8
116	6'-6" X 7'-7"	3	A	WD	P-SG	P-SG	WG	WD	P-SG	P-SG	(E)	(E)	(E)	8
117	6'-6" X 7'-7"	3	A	WD	P-SG	P-SG	WG	WD	P-SG	P-SG	(E)	(E)	(E)	8
118	6'-6" X 7'-7"	4	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 8
119	6'-6" X 7'-7"	4	A	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 8
120	7'-0" X 9'-6"	4	E	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	2/A-203	3/A-203	4/A-203	1, 5, 9
121	3'-0" X 9'-6"	4	F	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	2/A-203	3/A-203	4/A-203	1, 9
122	3'-0" X 9'-6"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	(E)	(E)	(E)	3, 10
123	4'-0" X 8'-0"	3	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	2 (1 DH SASH LOCK), 7, 8
124	4'-0" X 8'-0"	4	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1
125	4'-0" X 8'-0"	3	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	2 (1 DH SASH LOCK), 7, 8
126	4'-0" X 8'-0"	4	B	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1 (UPPER SASH), 2, 8
127	5'-8" X 5'-2"	3	G	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6
128	3'-0" X 5'-2"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6
129	3'-0" X 5'-2"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	
130	3'-0" X 5'-2"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	
131	3'-0" X 5'-2"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	5
132	6'-6" X 4'-10"	N/A	G (SIM.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	(E)	(E)	(E)	DEMOLISH WINDOW
133	3'-0" X 5'-2"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	7, 8
134	3'-0" X 5'-2"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	2/A-203	3/A-203	4/A-203	1, 2
135	3'-0" X 5'-2"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	2/A-203	3/A-203	4/A-203	1, 2
136	3'-0" X 5'-2"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 2
201	3'-2" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
202	3'-2" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
203	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	REPLACE MEETING RAIL, 12
204	3'-10" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
205	3'-10" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
206	3'-10" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	11, 12
207	3'-10" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 11, 12
208	3'-10" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 12
209	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
210	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 6, 12
211	3'-10" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 12
212	3'-2" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
213	3'-2" X 4'-10"	2	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 12
214	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 12
215	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 12
216	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
217	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
218	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12, 13
219	3'-2" X 4'-10"	3	C	WD	P-SG	P-SG	WG	WD	P-SG	P-SG	(E)	(E)	(E)	12
220	3'-2" X 4'-10"	4	C	WD	P-SG	P-SG	WG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 6, 12
221	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
222	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 12
223	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 12
224	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 12
225	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 12
226	3'-2" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
227	3'-2" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
228	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
229	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12, 14
230	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12, 14
231	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12, 14
232	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12, 14
233	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 12, 14
234	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 12, 14
235	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12, 14
236	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 11, 12, 14
237	3'-2" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12, 14
238	3'-2" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12, 14
239	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
240	3'-2" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 12
241	3'-2" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
242	3'-10" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	6, 12
243	3'-2" X 4'-10"	3	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	12
244	3'-2" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 12
245	3'-10" X 4'-10"	4	C	WD	P-SG	P-SG	RG	WD	P-SG	P-SG	(E)	(E)	(E)	1, 12

\* CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION OF NEW FEATURES.

## WINDOW GENERAL NOTES

### TYPICAL ALL EXISTING WINDOWS:

- ALL WINDOWS SHALL BE RETURNED TO FULL WORKING ORDER U.N.O. (ALL SASHES, INCLUDING UPPER SASHES OF DOUBLE HUNG WINDOWS).
- REFERENCES TO WINDOWS ARE INTENDED TO INCLUDE THE ENTIRE WINDOW ASSEMBLY - SASHES, FRAMES (HEAD, JAMBS, AND SILLS) AND ALL ASSOCIATED WINDOW HARDWARE.
- FOR DOUBLE-HUNG WINDOWS; CONTRACTS SHALL ASSUME REPLACEMENT OF 100% OF ALL SASH CORDS AND UP TO 20% OF ALL SASH WEIGHTS AND PULLEYS.
- CONTRACTOR TO ASSUME ALL WINDOW SASHES IN REPAIR CLASSES 3 AND 4 WILL BE TEMPORARILY REMOVED FOR REPAIR/RESTORATION IN SHOP.
- CONTRACTOR TO FIELD VERIFY CONDITION OF WINDOWS AND SCOPE OF REPAIR PRIOR TO PREPARATION OF BID. REFER TO HISTORIC TREATMENT NOTES IN THESE DRAWINGS AND PROJECT SPECIFICATIONS.
- EXISTING FINISH ON WINDOWS IS ASSUMED TO INCLUDE LEAD-BASED PAINTS. PAINT PREP SHALL INCLUDE PAINT REMOVAL AND SANDING AS NEEDED TO PRODUCE A SMOOTH SUBSTRATE READY FOR NEW PAINT. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS FOR THE TREATMENT AND DISPOSAL OF HAZARDOUS MATERIALS.
- PRIOR TO SUBSTANTIAL COMPLETION CLEAN ALL WINDOWS INSIDE AND OUT.
- CONTRACTOR TO ASSUME IN-KIND REPLACEMENT OF 50% OF ALL WOOD GLAZING STOPS.
- CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION OF NEW FEATURES.

### REPAIR CLASSES FOR WINDOWS ARE AS FOLLOWS:

- "1" - ROUTINE MAINTENANCE
- "2" - STABILIZATION & MINOR PARTS REPLACEMENT
- "3" - SPLICES & MAJOR PARTS REPLACEMENT
- "4" - REPLACE ENTIRE WINDOW

## WINDOW KEY NOTES

\*NOTED ON KEY NOTES COLUMN OF WINDOW SCHEDULE.

- REPLICATE HISTORIC WOOD WINDOW IN-KIND.
- REPLACE MISSING WINDOW HARDWARE.
- WINDOW MISSING/OPENING BLOCKED. DO NOT REPLICATE MISSING WINDOW. LEAVE OPENING AS-IS.
- INTERIOR OF WINDOW BLOCKED. PAINT INTERIOR SIDE OF GLASS BLACK.
- REMOVE AIR CONDITIONING UNIT AND REPLICATE MISSING WINDOW SASH.
- REPLACE BROKEN GLASS.
- REMOVE PAINT AND/OR DECALS FROM GLASS.
- REMOVE PAINT FROM (E) WINDOW HARDWARE, CLEAN, AND RE-FINISH.
- REMOVE EXISTING NON-HISTORIC WINDOW AND INSTALL NEW REPLICATED WOOD WINDOW. REFER TO WINDOW SCHEDULE FOR NEW OPENING SIZE AND ADJUST ROUGH OPENING SIZE AS NEEDED. PATCH AFFECTED EXTERIOR AND INTERIOR PLASTER AS NEEDED AFTER INSTALLATION OF NEW WINDOW, PRIME, AND PAINT.
- FORMER WINDOW LOCATION. REMOVE (E) PLYWOOD PANEL AND INSTALL NEW PLASTER FINISH AT EXTERIOR, PRIME AND PAINT.
- REMOVE AC VENT/EQUIPMENT.
- REMOVE EXISTING SASH LOCK AND INSTALL NEW SASH LOCK.
- EXISTING HISTORIC WOOD FRAMED INSECT SCREEN. RESTORE/RECONSTRUCT AND REINSTALL.
- REMOVE UV FILM COATED GLASS AND INSTALL NEW RESTORATION GLASS (ENTIRE WINDOW).

## SCHEDULE LEGEND

DH	DOUBLE-HUNG WINDOW
(E)	EXISTING
F	FIXED WINDOW
MTL	METAL
(N)	NEW
P-F	PAINT FINISH, FLAT
P-SG	PAINT FINISH, SEMI-GLOSS
P-G	PAINT FINISH, HIGH GLOSS
RG	RESTORATION GLASS, (ALL GLASS IS RG U.N.O.)
WD	WOOD
WG	WIRE GLASS (AS NOTED, WEST FACING WINDOWS)

## GENERAL HISTORIC TREATMENT NOTES

THE FOLLOWING TEXT IS AN EXCERPT FROM THE PROJECT SPECIFICATIONS (FOR REFERENCE), REFER TO THE SPECIFICATIONS FOR COMPLETE TEXT.

### HISTORIC TREATMENT PROCEDURES

- GENERAL: HAVE HISTORIC TREATMENT OF WOOD WINDOWS DIRECTED AND PERFORMED BY A QUALIFIED WINDOW RESTORATION CONTRACTOR WITH PREVIOUS EXPERIENCE IN THE RESTORATION OF HISTORIC WOOD WINDOWS. ENSURE THAT EXPERIENCED FIELD SUPERVISORS ARE PRESENT WHEN HISTORIC TREATMENT OF WOOD WINDOWS BEGINS AND DURING ITS PROGRESS. IN TREATING HISTORIC ITEMS, DISTURB THEM AS MINIMALLY AS POSSIBLE AND AS FOLLOWS:
  - APPLY EACH PRODUCT ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS UNLESS OTHERWISE INDICATED.
  - STABILIZE AND REPAIR WOOD WINDOWS TO REESTABLISH STRUCTURAL INTEGRITY AND WEATHER RESISTANCE WHILE MAINTAINING THE EXISTING FORM OF EACH ITEM.
  - REPAIR ITEMS IN PLACE WHERE POSSIBLE AND RETAIN AS MUCH ORIGINAL MATERIAL AS POSSIBLE.
  - REPLACE OR REPRODUCE HISTORIC ITEMS WHERE INDICATED OR SCHEDULED. REPLACED AND REPRODUCED FEATURES SHALL MATCH THE ORIGINAL FEATURE IN-KIND.
  - INSTALL TEMPORARY PROTECTIVE MEASURES TO PROTECT WOOD WINDOW WORK THAT IS INDICATED TO BE COMPLETED LATER.
- MECHANICAL ABRASION: WHERE MECHANICAL ABRASION IS NEEDED, USE ONLY THE GENTLEST MECHANICAL METHODS, SUCH AS SCRAPING AND NATURAL-FIBER BRISTLE BRUSHING, THAT WILL NOT ABRASE WOOD SUBSTRATE, REDUCING CLARITY OF DETAIL. DO NOT USE ABRASIVE METHODS SUCH AS SANDING, WIRE BRUSHING, OR POWER TOOLS EXCEPT AS INDICATED AS PART OF THE HISTORIC TREATMENT PROGRAM AND AS APPROVED BY ARCHITECT.
- REPAIR AND REFINISH EXISTING HARDWARE: DISMANTLE WINDOW HARDWARE, REPAIR AND REFINISH IT TO MATCH FINISH SAMPLES.
- REPAIR WOOD WINDOWS: MATCH EXISTING MATERIALS AND FEATURES, RETAINING AS MUCH ORIGINAL MATERIAL AS POSSIBLE TO PERFORM REPAIRS.
  - UNLESS OTHERWISE INDICATED, REPAIR WOOD WINDOWS BY CONSOLIDATING, PATCHING, SPLICING, OR OTHERWISE REINFORCING WOOD WITH NEW WOOD MATCHING EXISTING WOOD OR WITH SALVAGED, SOUND, ORIGINAL WOOD.
  - WHERE INDICATED, REPAIR WOOD WINDOWS BY LIMITED REPLACEMENT MATCHING EXISTING MATERIAL.
- PROTECTION OF OPENINGS: WHERE SASH OR WINDOWS ARE INDICATED FOR REMOVAL, COVER RESULTANT OPENINGS WITH TEMPORARY ENCLOSURES SO THAT OPENINGS ARE WATER-TIGHT DURING REPAIR PERIOD.
- IDENTIFY REMOVED WINDOWS, SASH, AND MEMBERS WITH NUMBERING SYSTEM CORRESPONDING TO WINDOW LOCATIONS TO ENSURE REINSTALLATION IN SAME LOCATION. KEY WINDOWS, SASH, AND MEMBERS TO DRAWINGS SHOWING LOCATION OF EACH REMOVED UNIT. PERMANENTLY STAMP UNITS IN A LOCATION THAT WILL BE CONCEALED AFTER REINSTALLATION.

### GLAZING:



## DOOR SCHEDULE

OPENING NUMBER	DOOR SIZE	REPAIR CLASS	DOOR TYPE	MATERIAL	INT. FINISH	FRAME MAT.	EXT. FIN	HEAD	JAMB	THRESH	KEYNOTES
D1.01	3'-3" X 6'-10"	2	1	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D1.02	5'-4" X 6'-10"	2	2	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D1.03	5'-5" X 6'-10"	2	2	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D1.04	5'-5" X 6'-10"	2	2	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D1.05	2'-8" X 6'-8"	2	3	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D1.06	2'-10" X 6'-8"	4	4	WD	P-SG	WD	P-SG	(N)	(N)	(N)	1, 4
D.107	6'-0" X 6'-10"	2	6	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D.108	3'-0" X 6'-8"	1	11	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D.109	6'-0" X 6'-0"	4	12	WD	P-SG	WD	P-SG	(N)	(N)	(N)	1, 4
D1.10	3'-0" X 7'-0"	N/A	10	WD	P-SG	WD	P-SG	N/A	N/A	N/A	DEMOLISH DOOR
D1.11	3'-0" X 7'-0"	N/A	8	WD	P-SG	WD	P-SG	N/A	N/A	N/A	DEMOLISH DOOR
D1.12	3'-0" X 6'-10"	3	5	WD	P-SG	WD	P-SG	(E)	(E)	(E)	2
D1.13	3'-0" X 6'-10"	3	5	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D1.14	3'-0" X 6'-10"	4	5	WD	P-SG	WD	P-SG	(N)	(N)	(N)	1, 4
D1.15	6'-0" X 6'-10"	4	12	WD	P-SG	WD	P-SG	(N)	(N)	(N)	1, 4
D1.16	2'-10" X 6'-8"	4	13	WD	P-SG	WD	P-SG	(N)	(N)	(N)	3, 5: USE SALVAGED DOOR AND HARDWARE FROM D1.17
D1.17	2'-10" X 6'-8"	N/A	13	WD	P-SG	WD	P-SG	(E)	(E)	(E)	REMOVE AND SALVAGE DOOR FOR D1.16
D2.01	3'-6" X 7'-2"	3	7	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D2.02	3'-6" X 7'-2"	3	7	WD	P-SG	WD	P-SG	(E)	(E)	(E)	
D2.03	3'-0" X 6'-8"	4	4	WD	P-SG	WD	P-SG	(N)	(N)	(N)	1, 4
D2.04	2'-10" X 6'-8"	4	4	WD	P-SG	WD	P-SG	(N)	(N)	(N)	1, 4

\* CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION OF NEW FEATURES.  
 \* DIMENSIONS SHOWN ARE FOR DOORS ONLY, WINDOW SIDELIGHT/TRANSOM DIMENSIONS NOT SHOWN

## HISTORIC TREATMENT NOTES

REFER TO HISTORIC TREATMENT NOTES ON SHEET A-201

## DOOR GENERAL NOTES

- TYPICAL ALL EXISTING DOORS:
- ALL DOORS SHALL BE RETURNED TO FULL WORKING ORDER.
  - ALL DOOR SIDELIGHTS AND TRANSOMS SHALL BE FIXED IN CLOSED POSITION (NON-OPERATIONAL).
  - CONTRACTOR TO FIELD VERIFY CONDITION OF DOORS AND SCOPE OF REPAIR PRIOR TO PREPARATION OF BID. REFER TO HISTORIC TREATMENT NOTES IN THESE DRAWINGS AND PROJECT SPECIFICATIONS.
  - EXISTING FINISH ON DOORS IS ASSUMED TO INCLUDE LEAD-BASED PAINTS. PAINT PREP SHALL INCLUDE PAINT REMOVAL AND SANDING AS NEEDED TO PRODUCE A SMOOTH SUBSTRATE READY FOR NEW PAINT. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS FOR THE TREATMENT AND DISPOSAL OF HAZARDOUS MATERIALS.
  - PRIOR TO SUBSTANTIAL COMPLETION CLEAN ALL GLASS INSIDE AND OUT.
  - CONTRACTOR TO ASSUME IN-KIND REPLACEMENT OF 50% OF ALL WOOD GLAZING STOPS.
  - ALL NEW GLASS IN DOORS AND ADJACENT SIDELIGHT WINDOWS SHALL BE TEMPERED.
  - CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION OF NEW FEATURES.



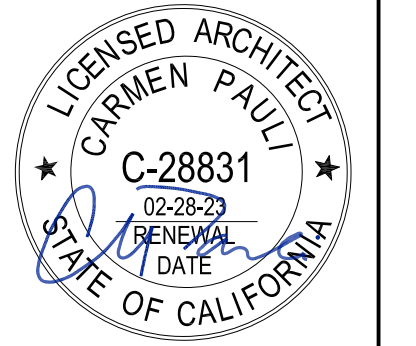
REPAIR CLASSES FOR WINDOWS ARE AS FOLLOWS:  
 "1" - ROUTINE MAINTENANCE  
 "2" - STABILIZATION & MINOR PARTS REPLACEMENT  
 "3" - SPLICES & MAJOR PARTS REPLACEMENT  
 "4" - REPLACE ENTIRE DOOR

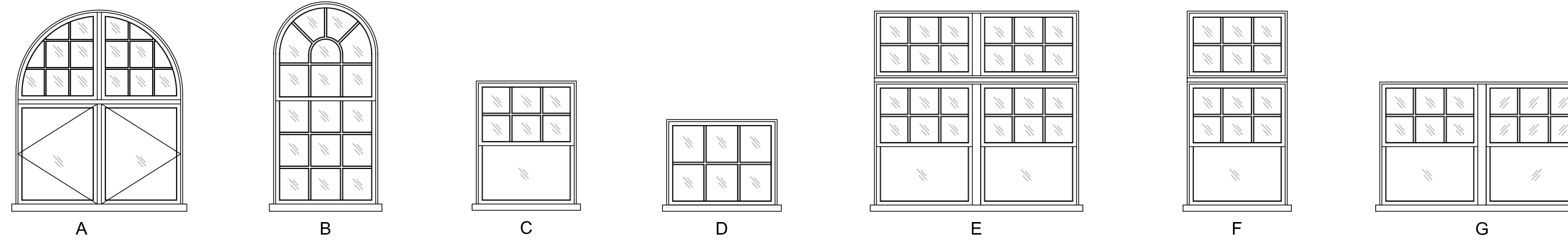
## DOOR KEY NOTES

- \*NOTED ON KEY NOTES COLUMN OF DOOR SCHEDULE.
- REMOVE EXISTING NON-HISTORIC DOOR AND INSTALL NEW REPLICATED WOOD DOOR. REFER TO DOOR SCHEDULE FOR DOOR SIZE AND ADJUST ROUGH OPENING SIZE AS NEEDED. PATCH AFFECTED EXTERIOR AND INTERIOR PLASTER AS NEEDED AFTER INSTALLATION OF NEW DOOR, PRIME, AND PAINT
  - REPLICATE MISSING TRANSOM WINDOW.
  - INSTALL SALVAGED DOOR IN NEW DOOR FRAME.
  - NEW DOOR, PROVIDE NEW DOOR HARDWARE PER HARDWARE SCHEDULE.
  - SALVAGED HISTORIC DOOR, REUSE/REINSTALL SALVAGED DOOR HARDWARE.

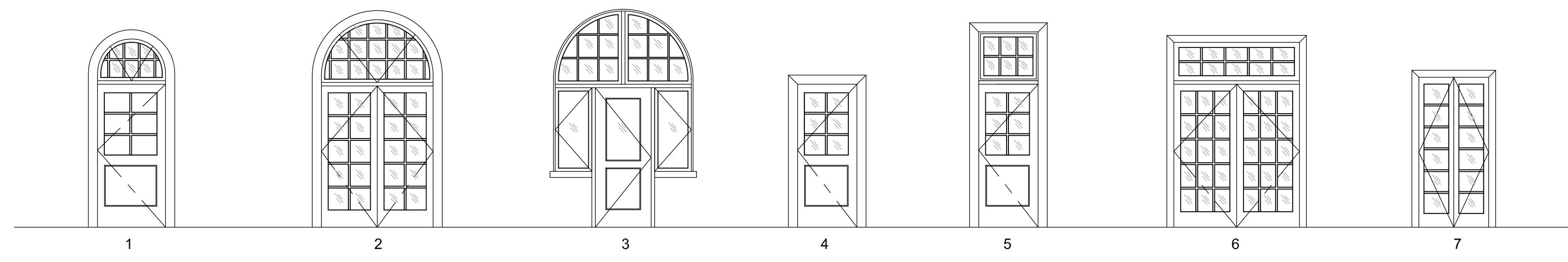
## SCHEDULE LEGEND

DH	DOUBLE-HUNG WINDOW
(E)	EXISTING
F	FIXED
MTL	METAL
(N)	NEW
P-F	PAINT FINISH, FLAT
P-SG	PAINT FINISH, SEMI-GLOSS
P-G	PAINT FINISH, HIGH GLOSS
RG	RESTORATION GLASS, (ALL GLASS IS RG U.N.O.)
WD	WOOD

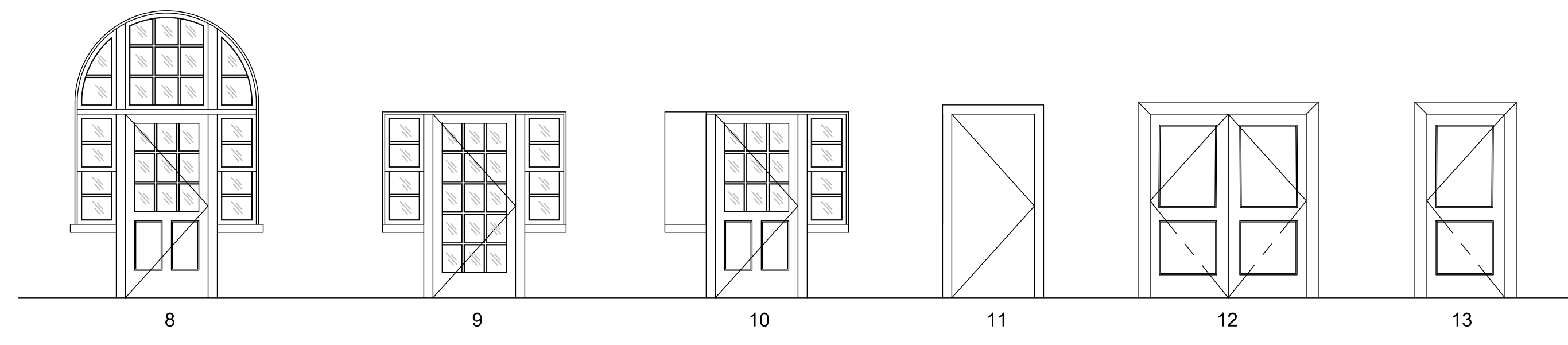
03/03/2021	06/24/2021	09/03/2021									
50% CDS SUBMITTAL	90% CDS SUBMITTAL	100% CDS SUBMITTAL									
 <b>City of Caliente</b>											
 <b>HERITAGE ARCHITECTURE PLANNING</b>											
 <b>LICENSED ARCHITECT CARMEN PAULI C-28831</b>											
<b>NOT FOR CONSTRUCTION</b>											
<b>CALIENTE UNION PACIFIC DEPOT</b>											
<b>EXTERIOR RESTORATION</b>											
<b>DOOR SCHEDULE AND NOTES</b>											
PROJ. NO. 2019.076											
SHEET #											
<b>A-202</b>											
SHEET OF											



WINDOW TYPES



DOOR TYPES

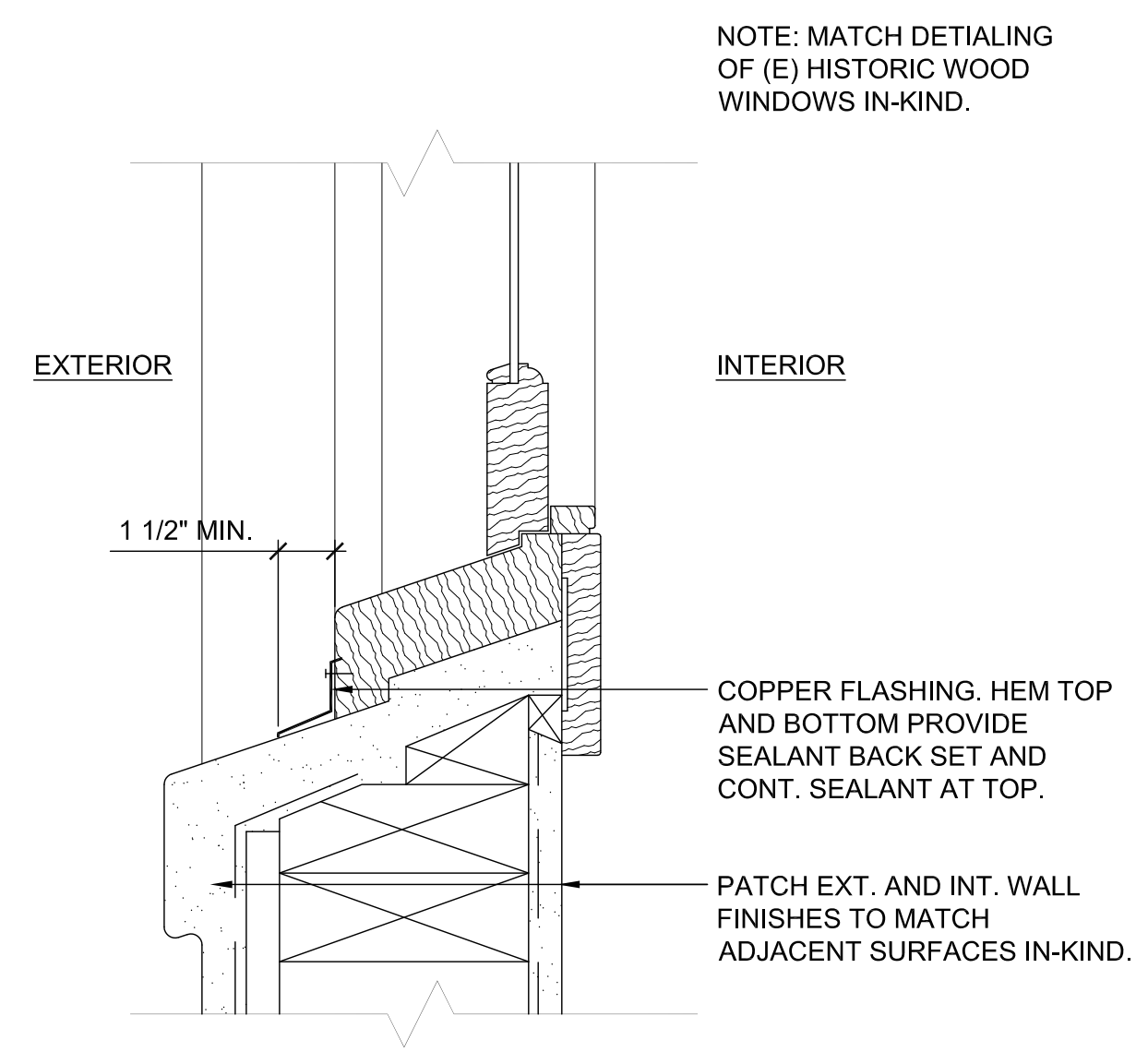


5

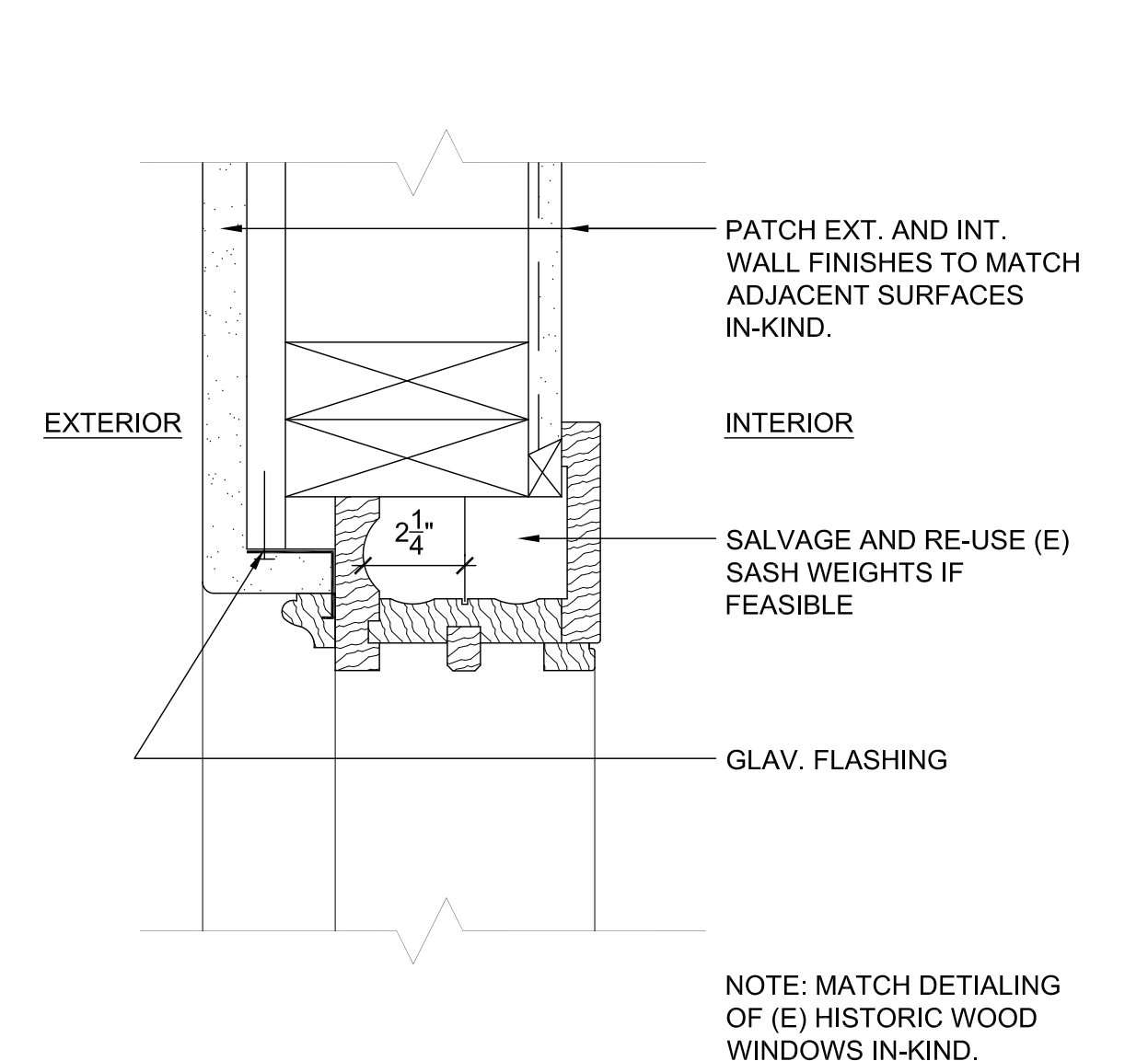
6 DOOR AND WINDOW TYPES (REFER TO DOOR AND WINDOW SCHEDULES)

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

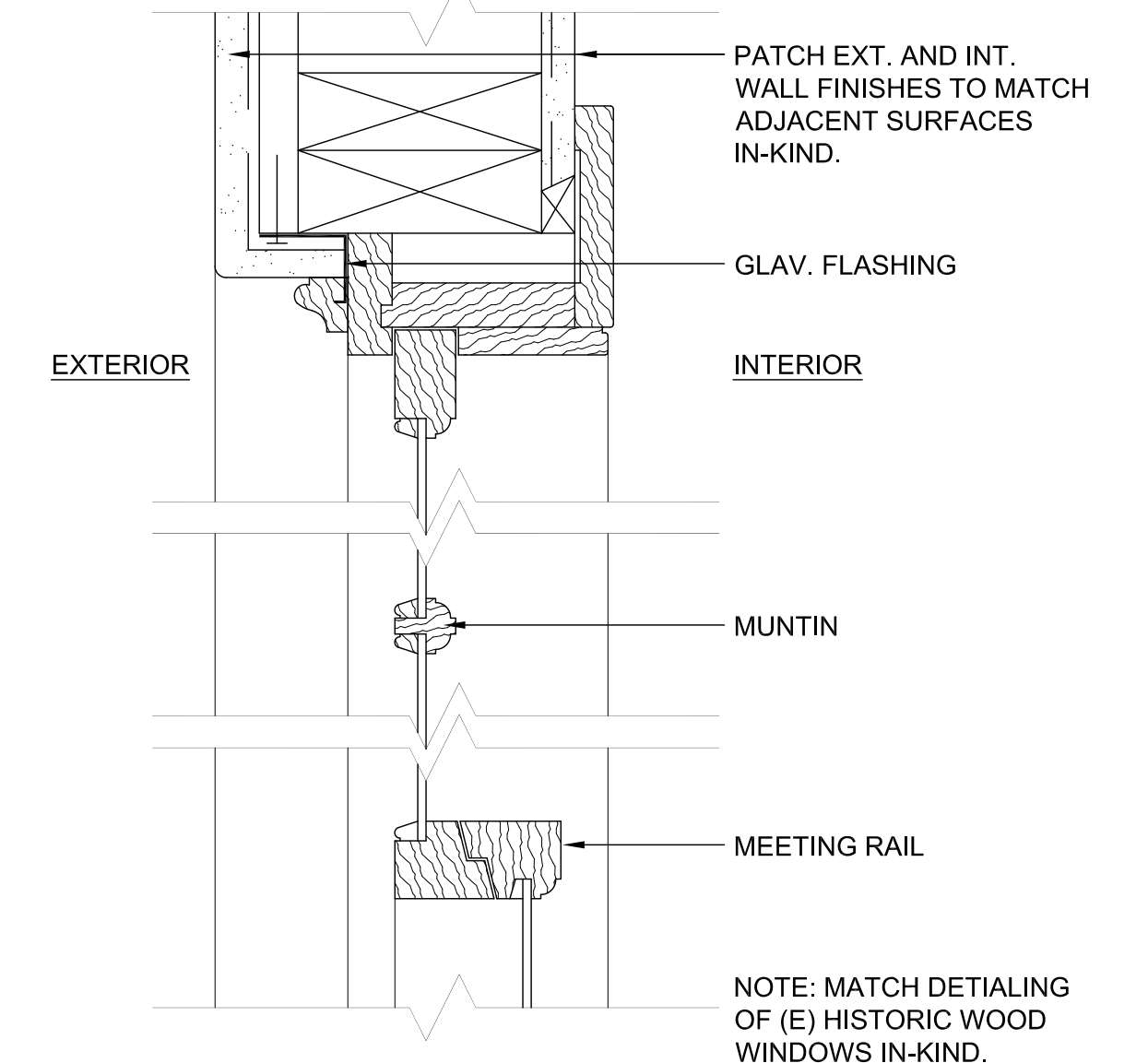
1



NOTE: MATCH DETAILING OF (E) HISTORIC WOOD WINDOWS IN-KIND.



NOTE: MATCH DETAILING OF (E) HISTORIC WOOD WINDOWS IN-KIND.



NOTE: MATCH DETAILING OF (E) HISTORIC WOOD WINDOWS IN-KIND.

7 DH WINDOW SILL

SCALE: 3" = 1'-0"

4

DH WINDOW JAMB

SCALE: 3" = 1'-0"

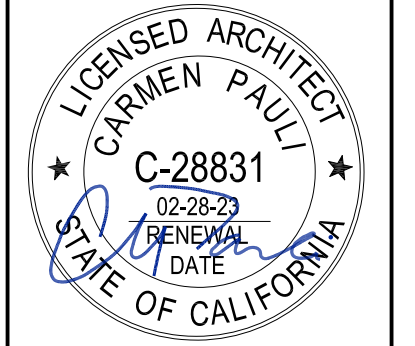
3

DH WINDOW HEAD

SCALE: 3" = 1'-0"

2

03/03/2021	50% CDS SUBMITTAL
06/24/2021	90% CDS SUBMITTAL
09/03/2021	100% CDS SUBMITTAL



DES:  
DR:

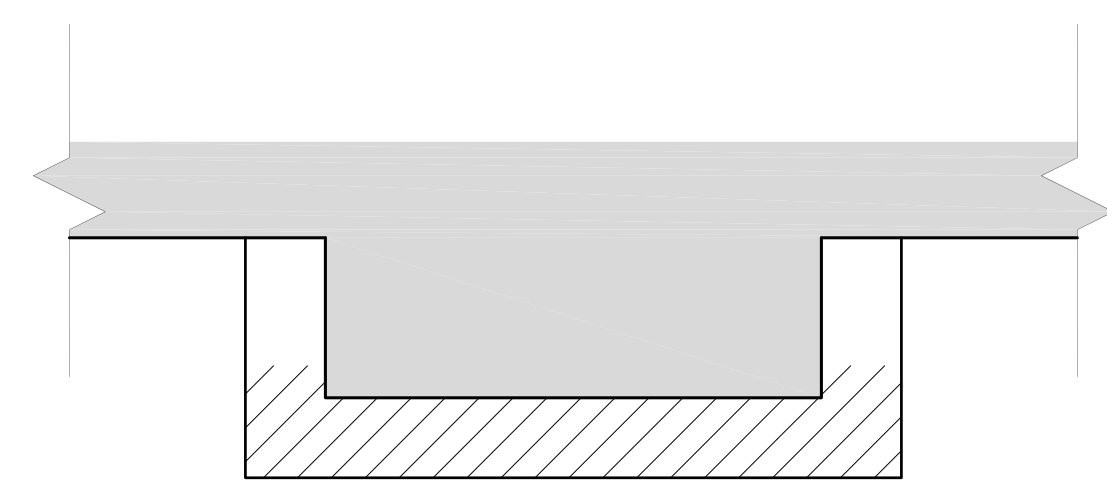
NOT FOR CONSTRUCTION

CALIENTE UNION PACIFIC DEPOT  
EXTERIOR RESTORATION  
WINDOW AND DOOR TYPES AND DETAILS

PROJ. NO. 2019.076

SHEET #  
**A-203**

SHEET OF

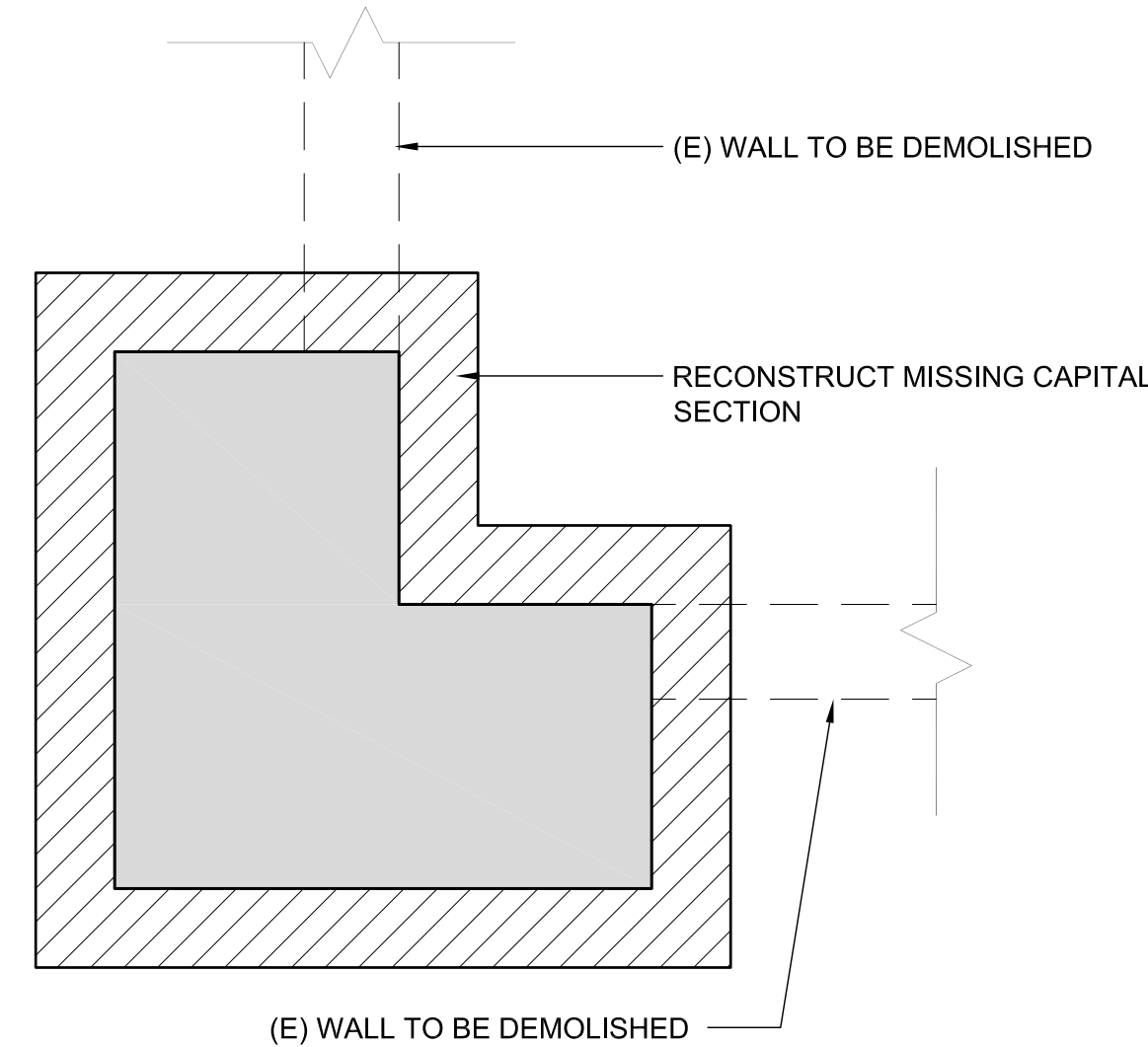


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

9

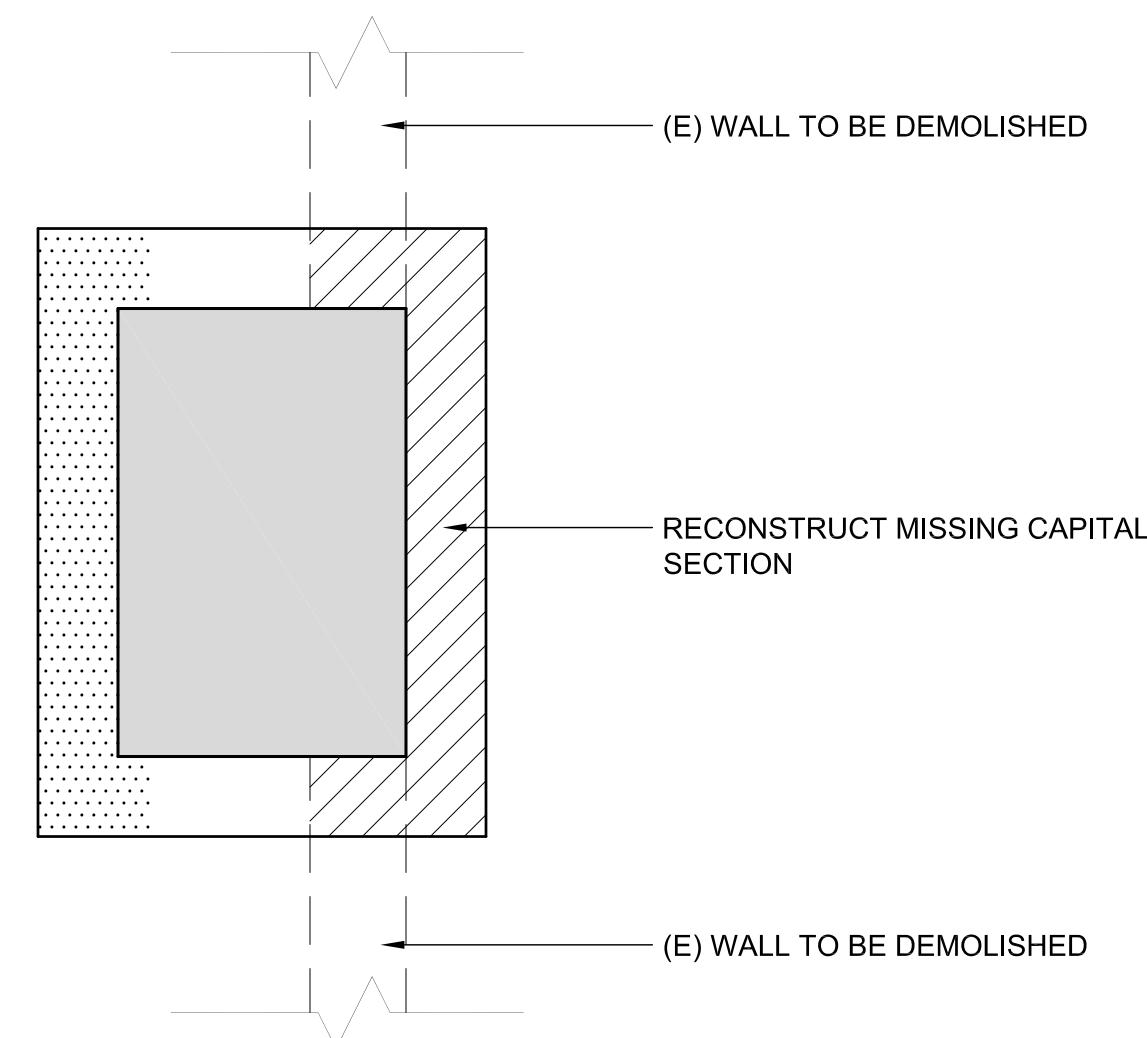


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

6



REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

3

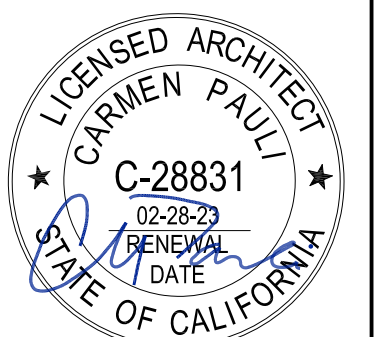
REPAIR NOTES

1. TYPICAL ALL CAPITALS, REMOVE DETERIORATED PAINT AND PLASTER TO SOUND SUBSTRATE, REPAIR AS NOTED, PATCH ALL CRACKS AND SPALLS, PREP, PRIME, AND PAINT.
3. CONTRACTOR TO FIELD VERIFY CONDITION AND SCOPE OF REPAIR PRIOR TO PREPARATION OF BID.
4. EXISTING FINISHES ARE ASSUMED TO INCLUDE LEAD-BASED PAINTS. PAINT PREP SHALL INCLUDE PAINT REMOVAL AS NEEDED TO PRODUCE SUBSTRATE READY FOR NEW PAINT. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS FOR THE TREATMENT AND DISPOSAL OF HAZARDOUS MATERIALS.
5. REFER TO DET. 26/A-303 FOR TYPICAL COLUMN CAPITAL DIMENSIONS.
6. REFER TO DET. 27/A-303 FOR CAPITAL FRAMING/REPLACEMENT.
7. THESE NOTES APPLY TO ALL COLUMN CAPITALS.

REPAIR LEGEND

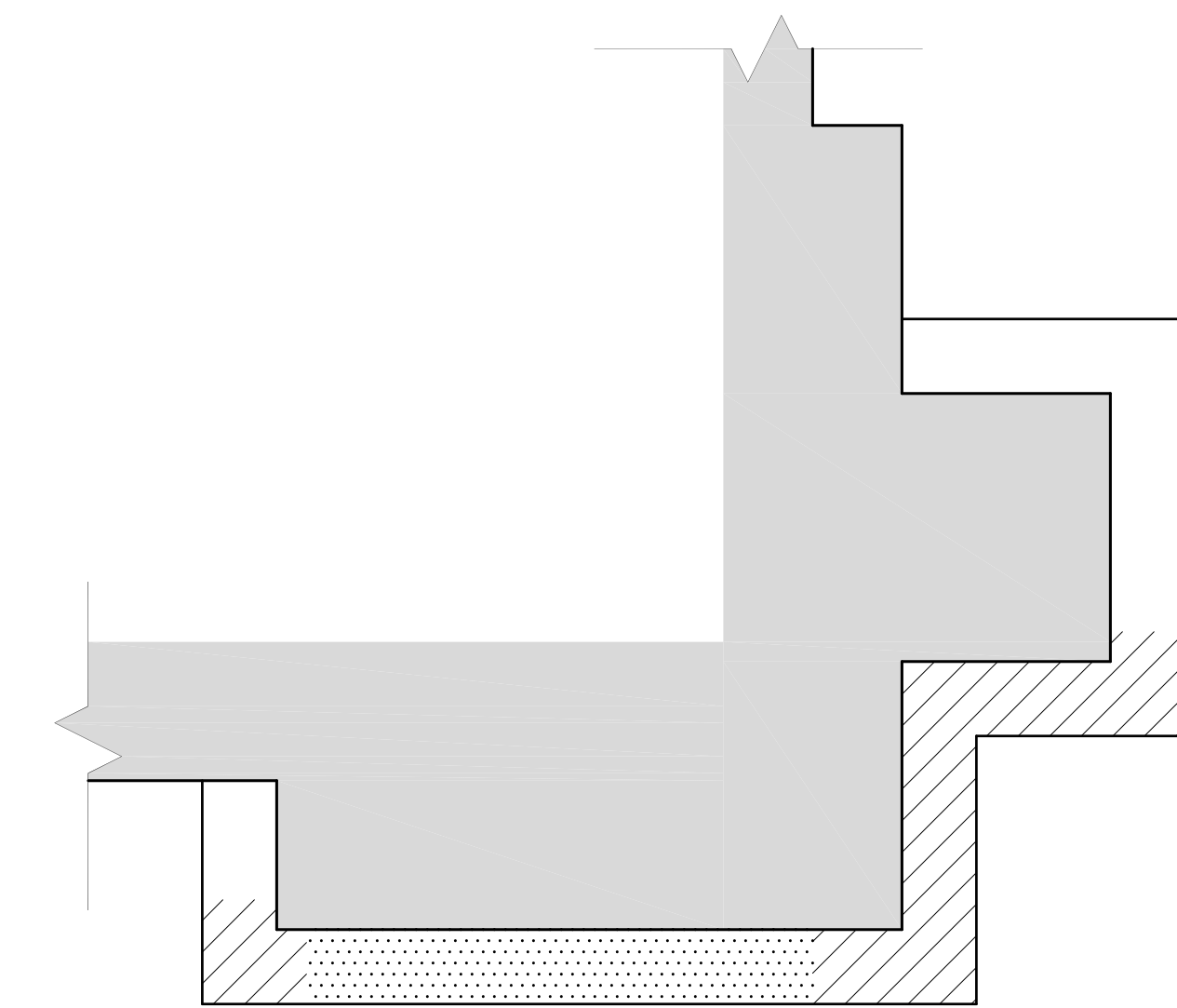
- REMOVE DETERIORATED SECTION OF (E) CAPITAL INCLUDING PLASTER, WIRE LATH, BUILDING PAPER, AND WOOD FRAMING. RECONSTRUCT COLUMN CAPITAL IN-KIND (SEE DET. 27/A-303).
- REMOVE PREVIOUS PLASTER PATCH AND REPAIR IN-KIND
- TYPICAL AT (E) COLUMN CAPITALS, INSPECT PLASTER AND REPAIR IN-KIND.
- (E) BUILDING WALL PROTECT IN PLACE

03/03/2021	06/24/2021	09/03/2021			
50% CDS SUBMITTAL	90% CDS SUBMITTAL	100% CDS SUBMITTAL			



DES:  
DR:

NOT FOR CONSTRUCTION

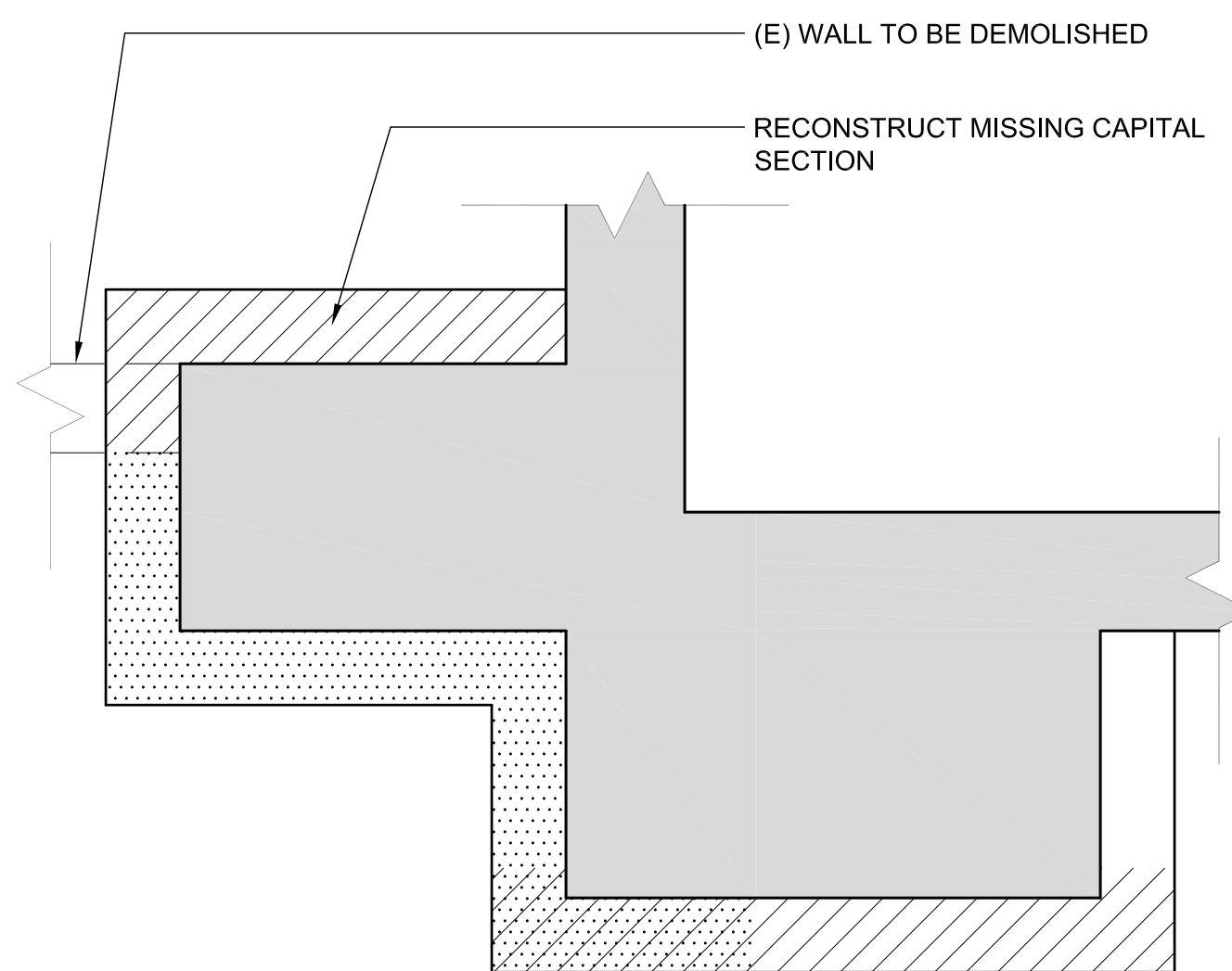


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

10

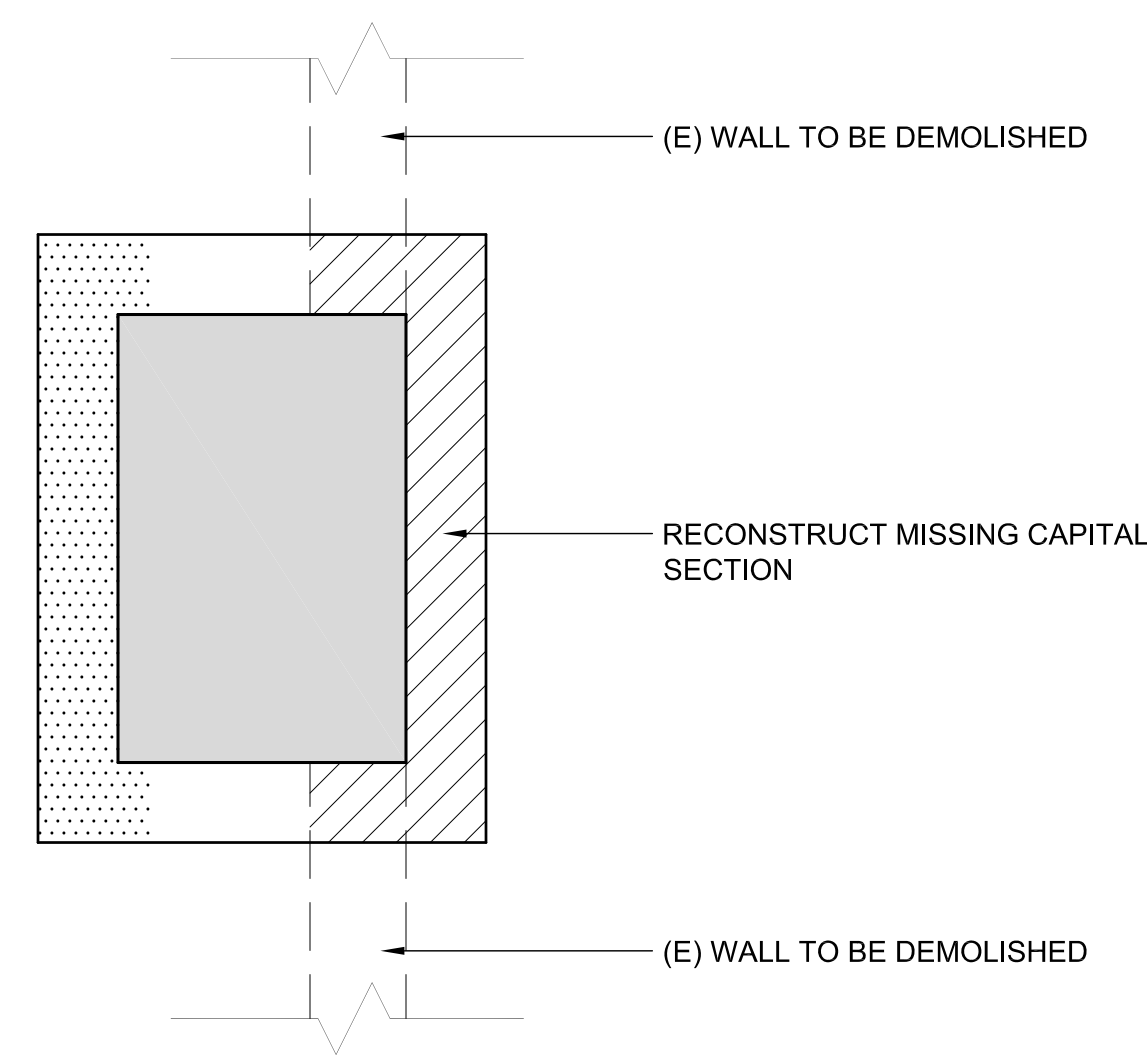


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

7

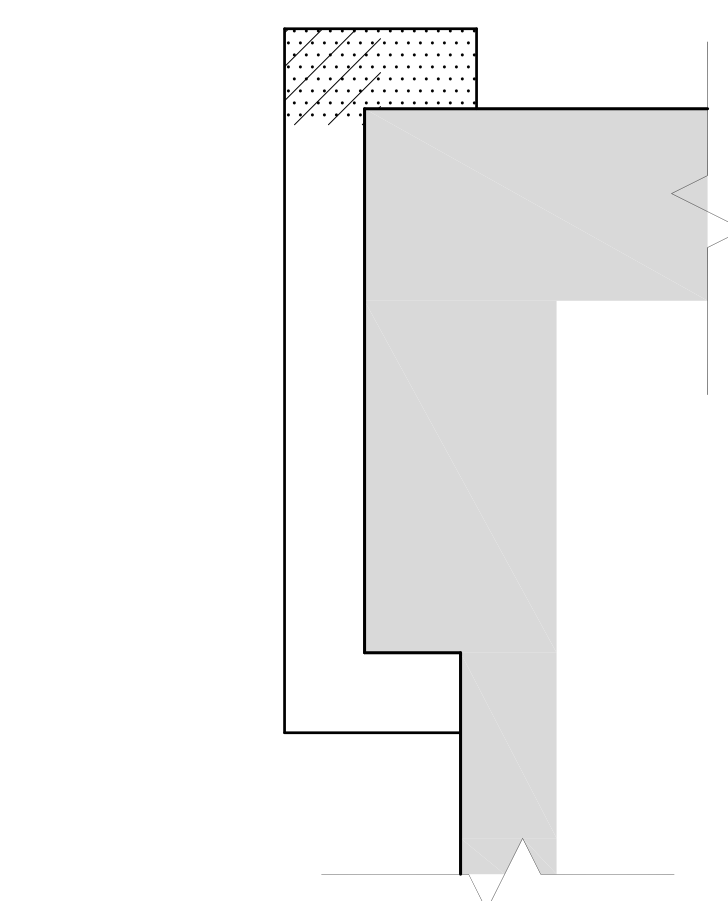


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

4

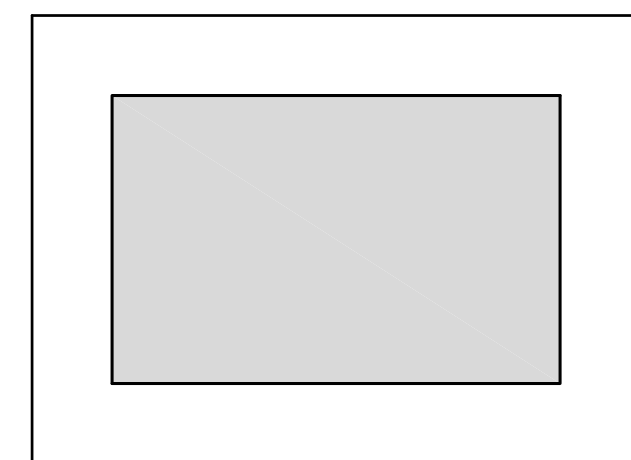


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

1

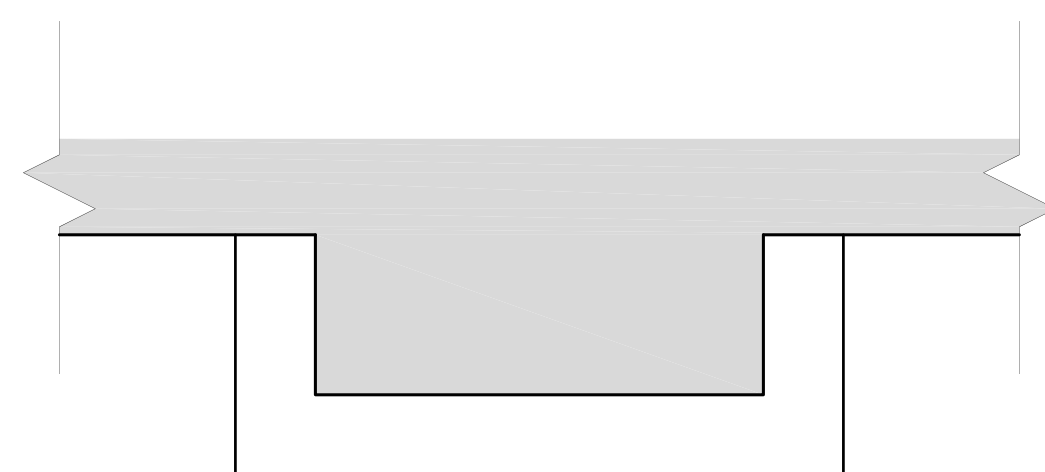


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

11

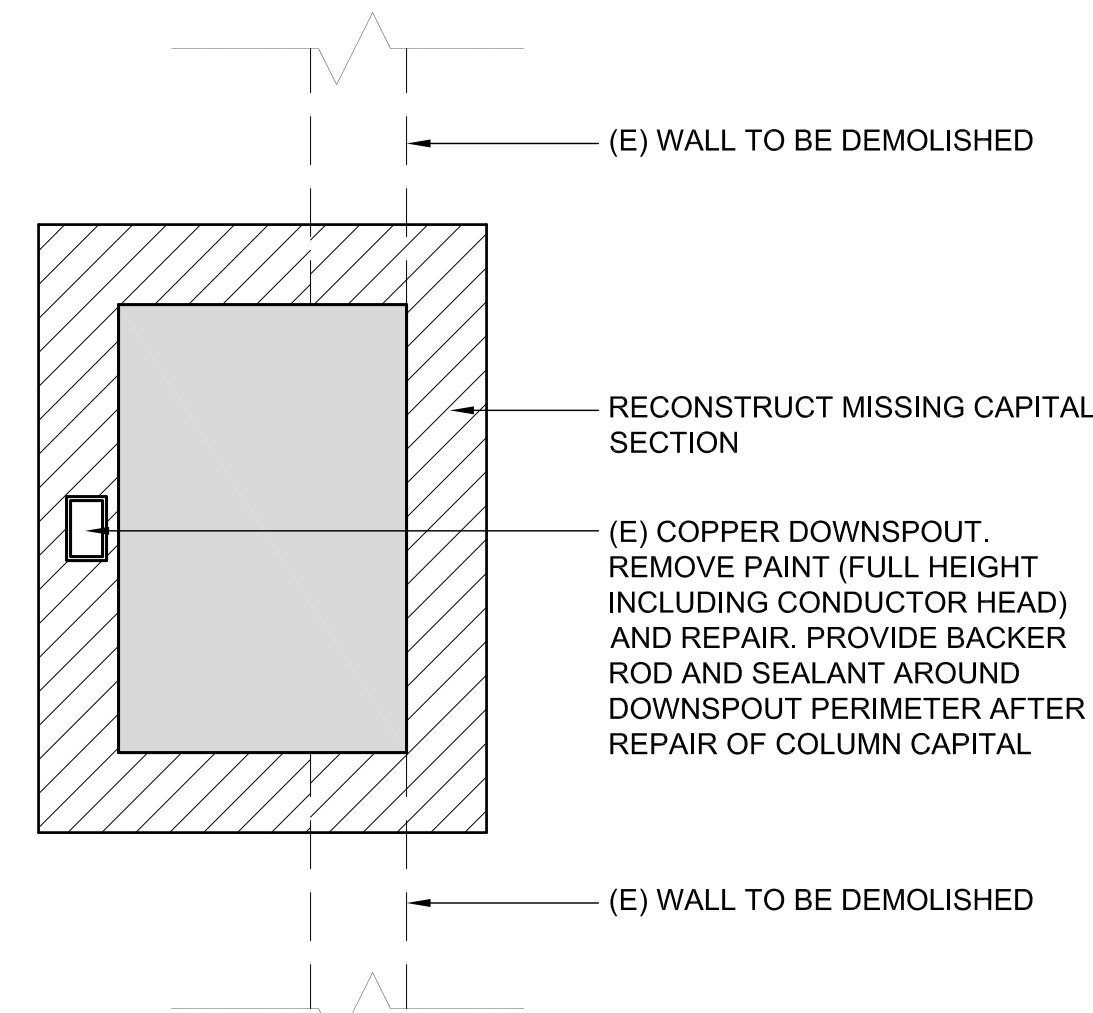


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

8

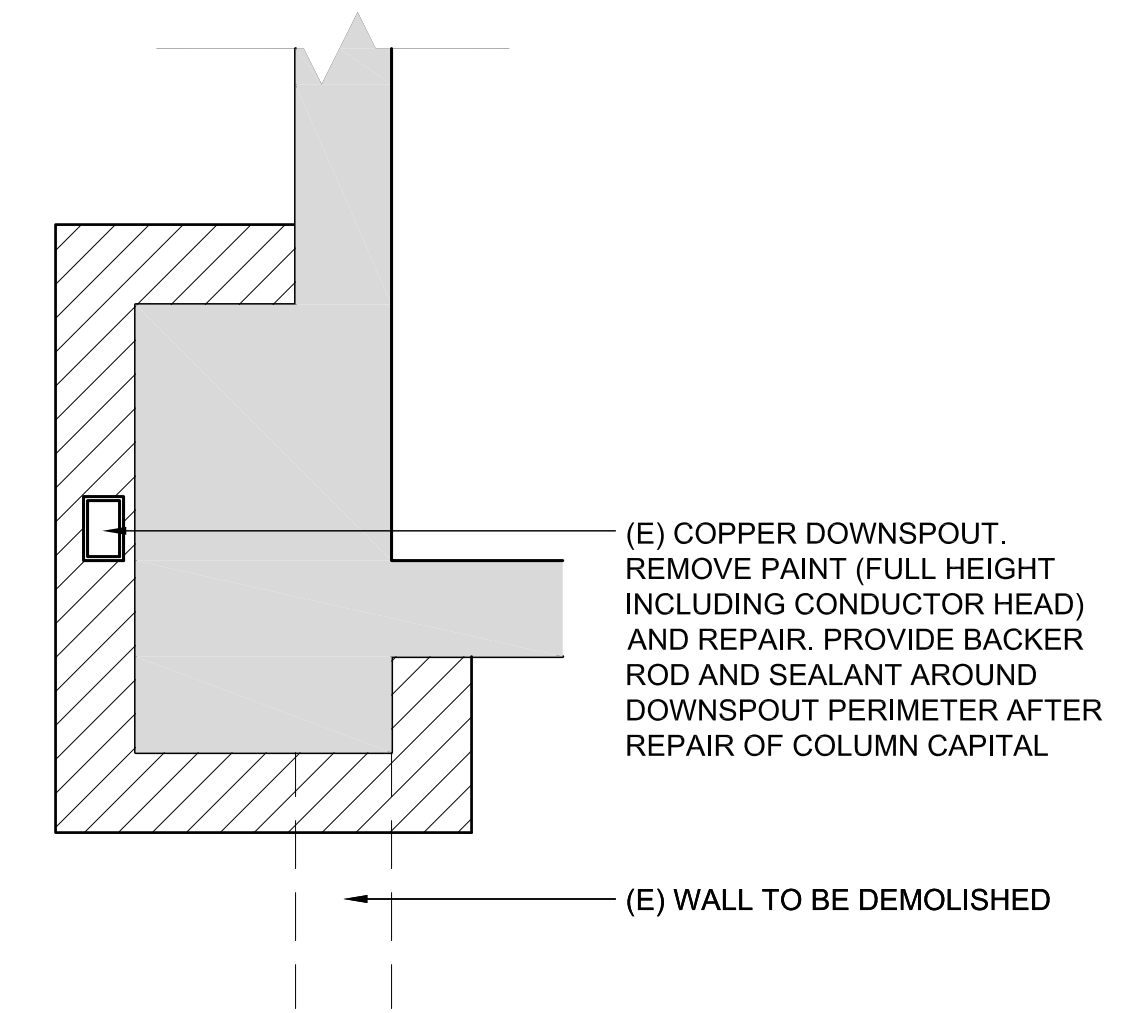


REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

5



REFER TO REPAIR NOTES THIS SHEET

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

2

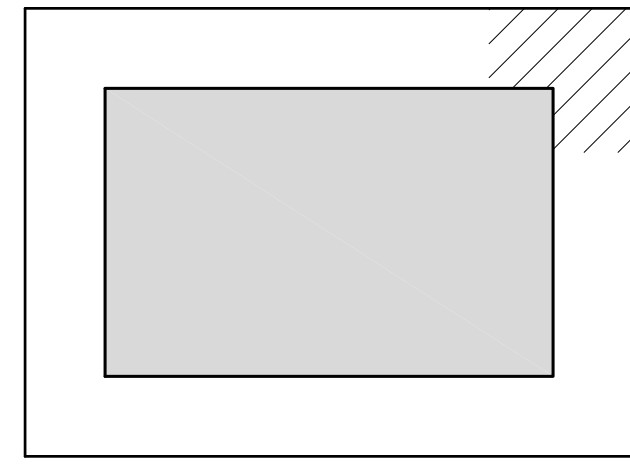
CALIENTE UNION PACIFIC DEPOT  
EXTERIOR RESTORATION  
COLUMN CAPITAL DETAILS

PROJ. NO. 2019.076

SHEET #

A-301

SHEET OF

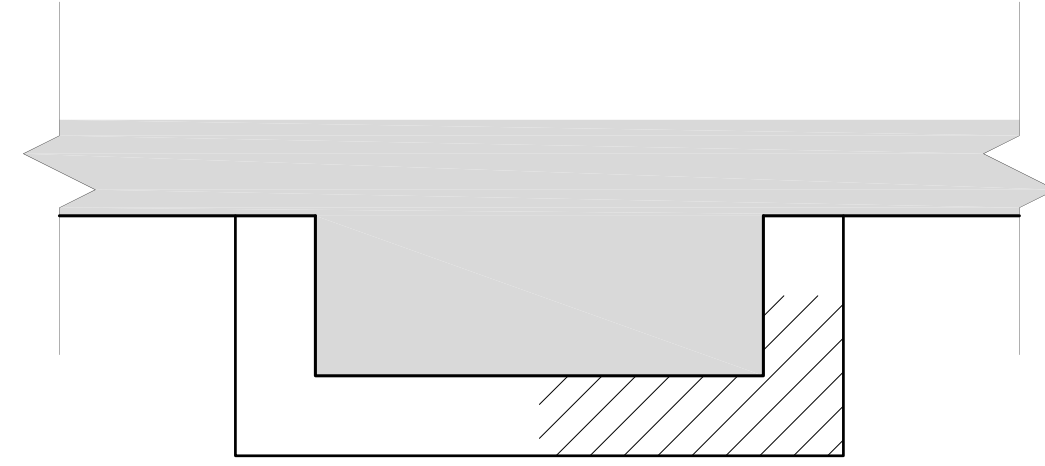


REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

21

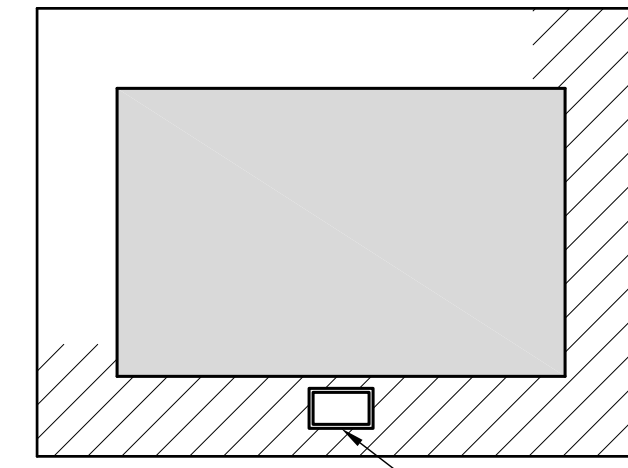


REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

18



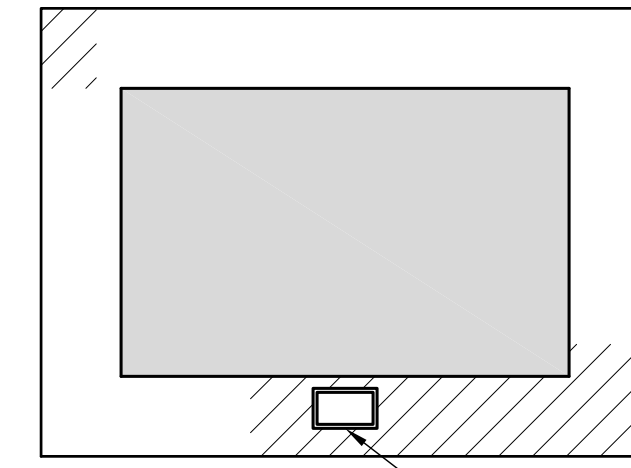
(E) COPPER DOWNSPOUT. REMOVE PAINT (FULL HEIGHT INCLUDING CONDUCTOR HEAD) AND REPAIR. PROVIDE BACKER ROD AND SEALANT AROUND DOWNSPOUT PERIMETER AFTER REPAIR OF COLUMN CAPITAL

REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

15



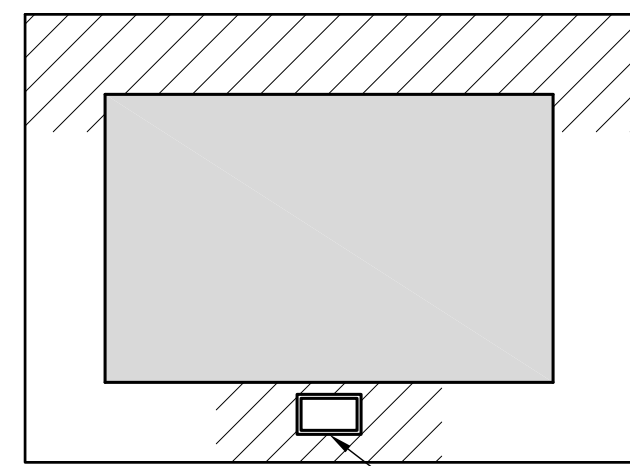
(E) COPPER DOWNSPOUT. REMOVE PAINT (FULL HEIGHT INCLUDING CONDUCTOR HEAD) AND REPAIR. PROVIDE BACKER ROD AND SEALANT AROUND DOWNSPOUT PERIMETER AFTER REPAIR OF COLUMN CAPITAL

REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

12



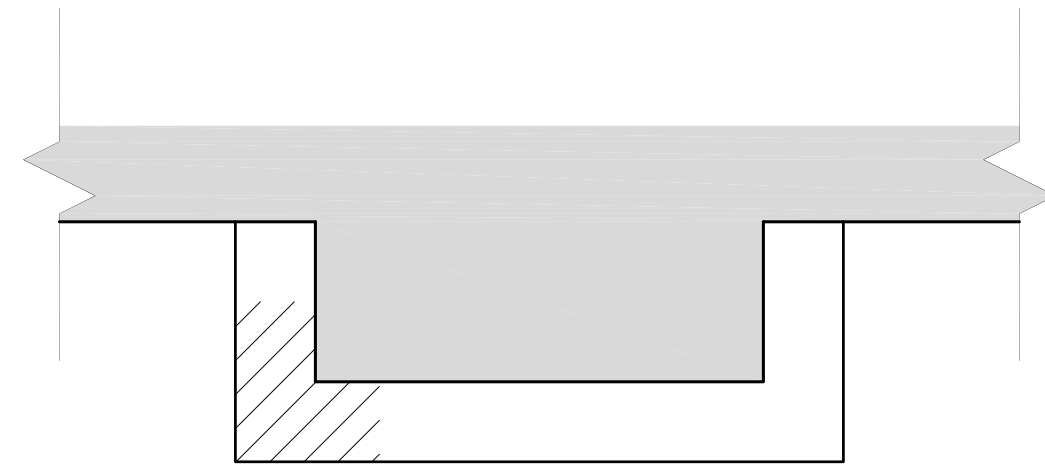
(E) COPPER DOWNSPOUT. REMOVE PAINT (FULL HEIGHT INCLUDING CONDUCTOR HEAD) AND REPAIR. PROVIDE BACKER ROD AND SEALANT AROUND DOWNSPOUT PERIMETER AFTER REPAIR OF COLUMN CAPITAL

REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

22

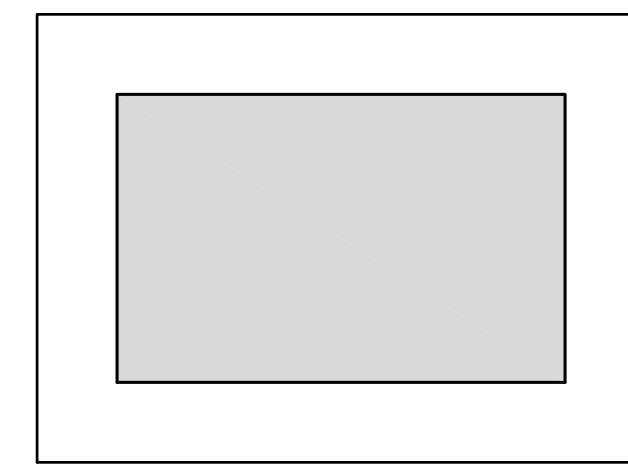


REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

19

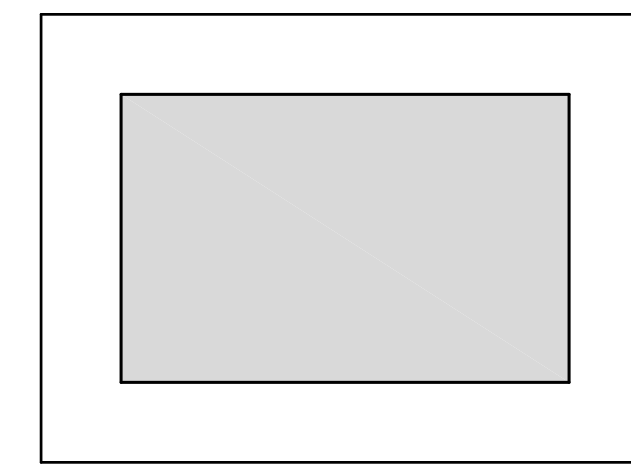


REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

16

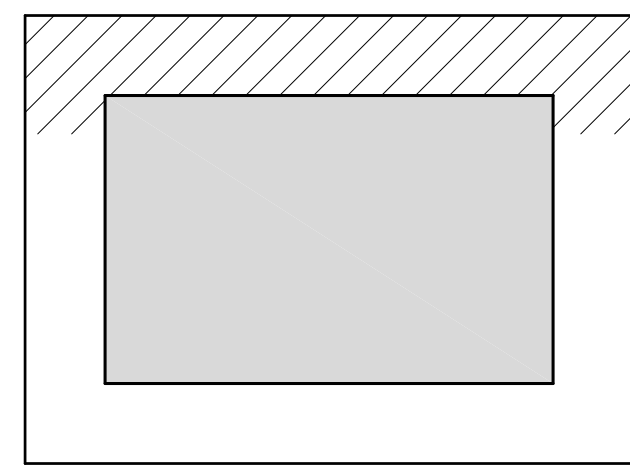


REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

13

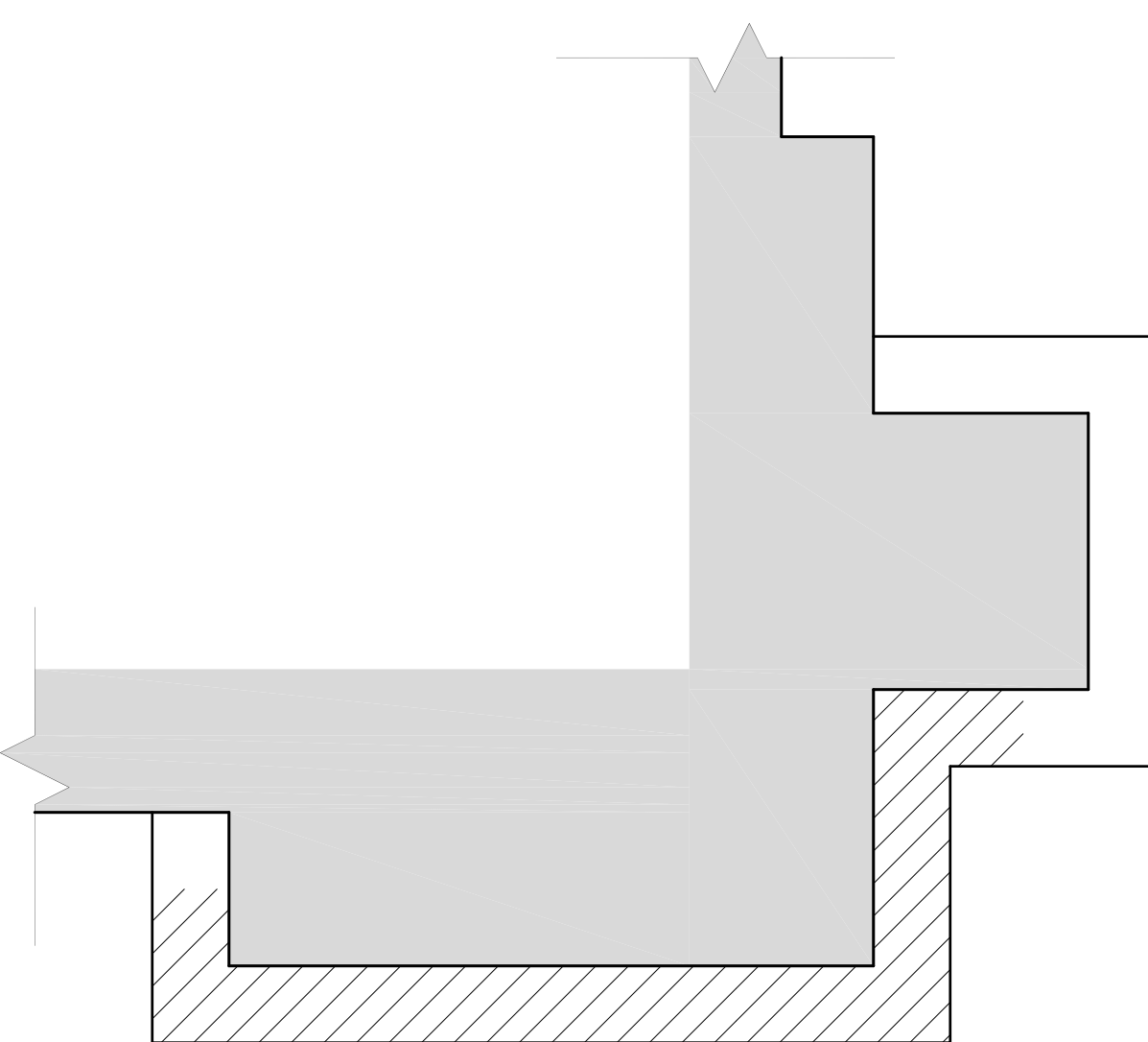


REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

23

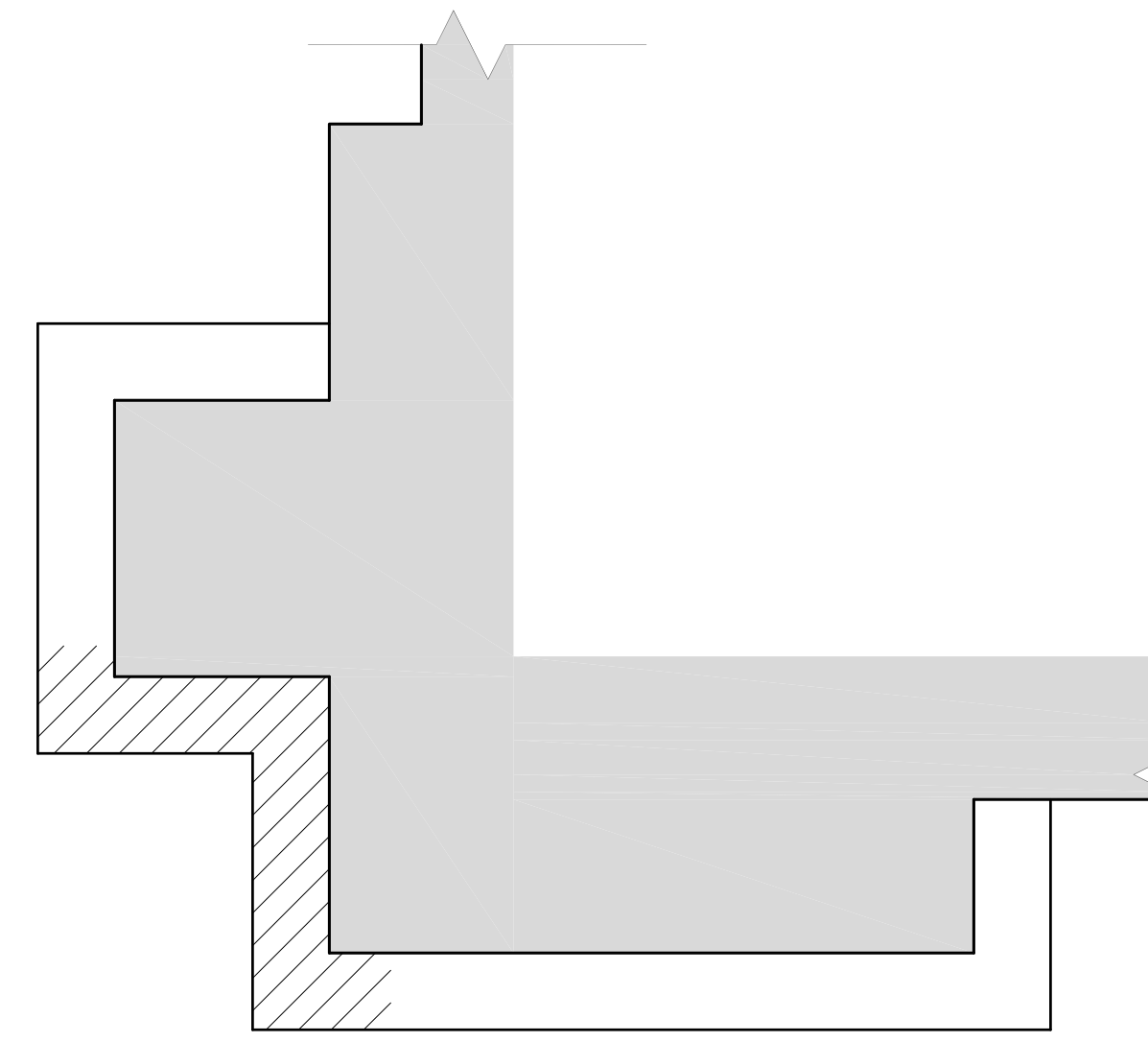


REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

20

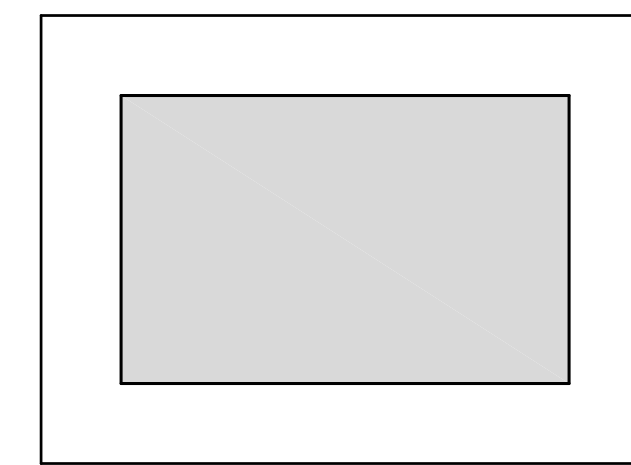


REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

17



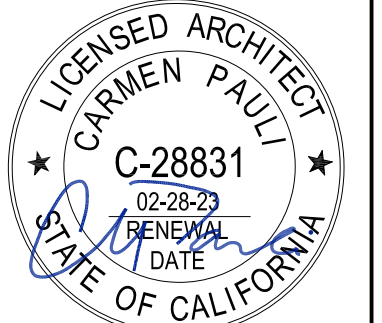
REFER TO REPAIR NOTES ON SHEET A-301

COLUMN CAPITAL PLAN

SCALE: 1" = 1'-0"

14

03/03/2021									
50% CDS SUBMITTAL	06/24/2021								
90% CDS SUBMITTAL									
100% CDS SUBMITTAL	09/03/2021								



DES:  
DR:

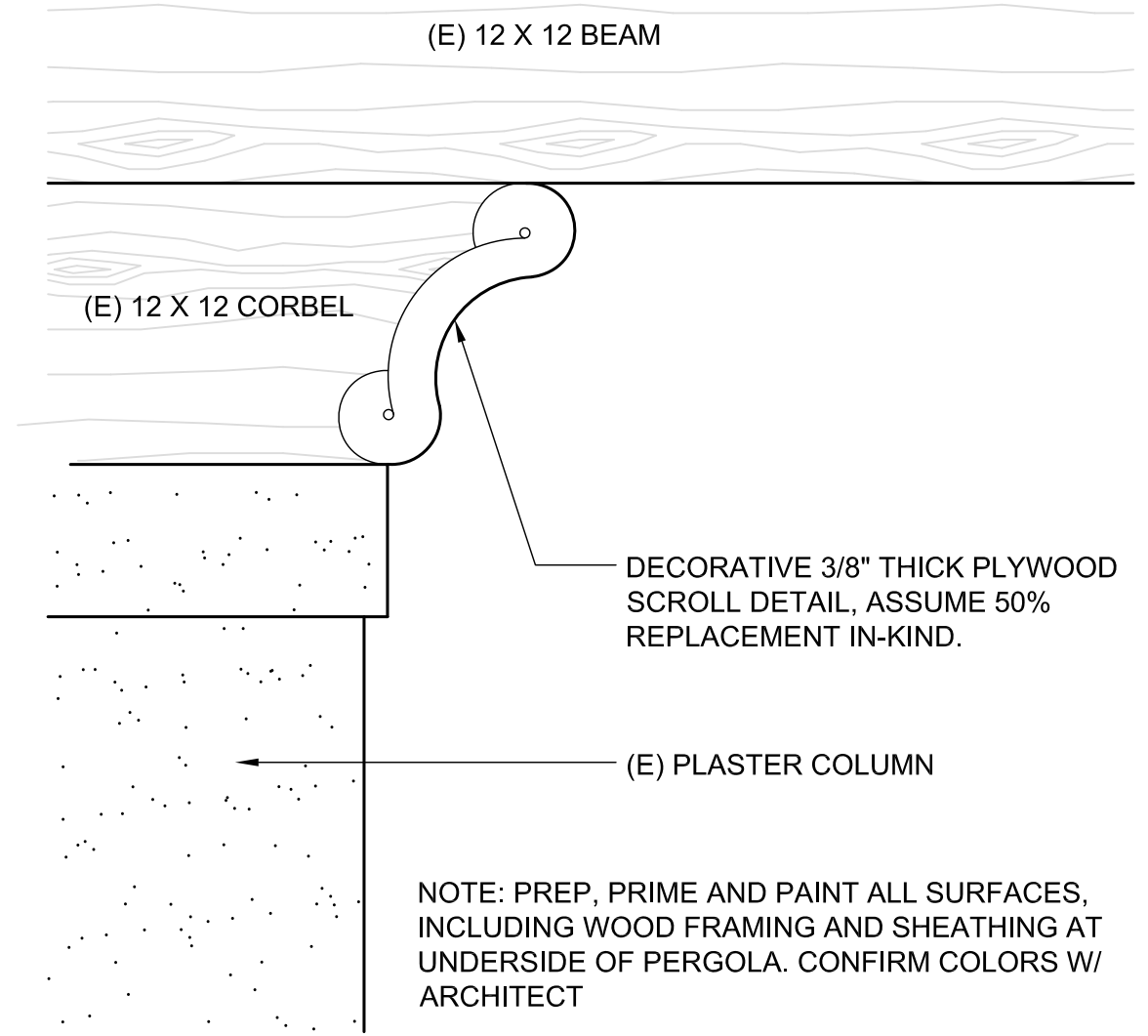
NOT FOR CONSTRUCTION

CALIENTE UNION PACIFIC DEPOT  
EXTERIOR RESTORATION  
COLUMN CAPITAL DETAILS

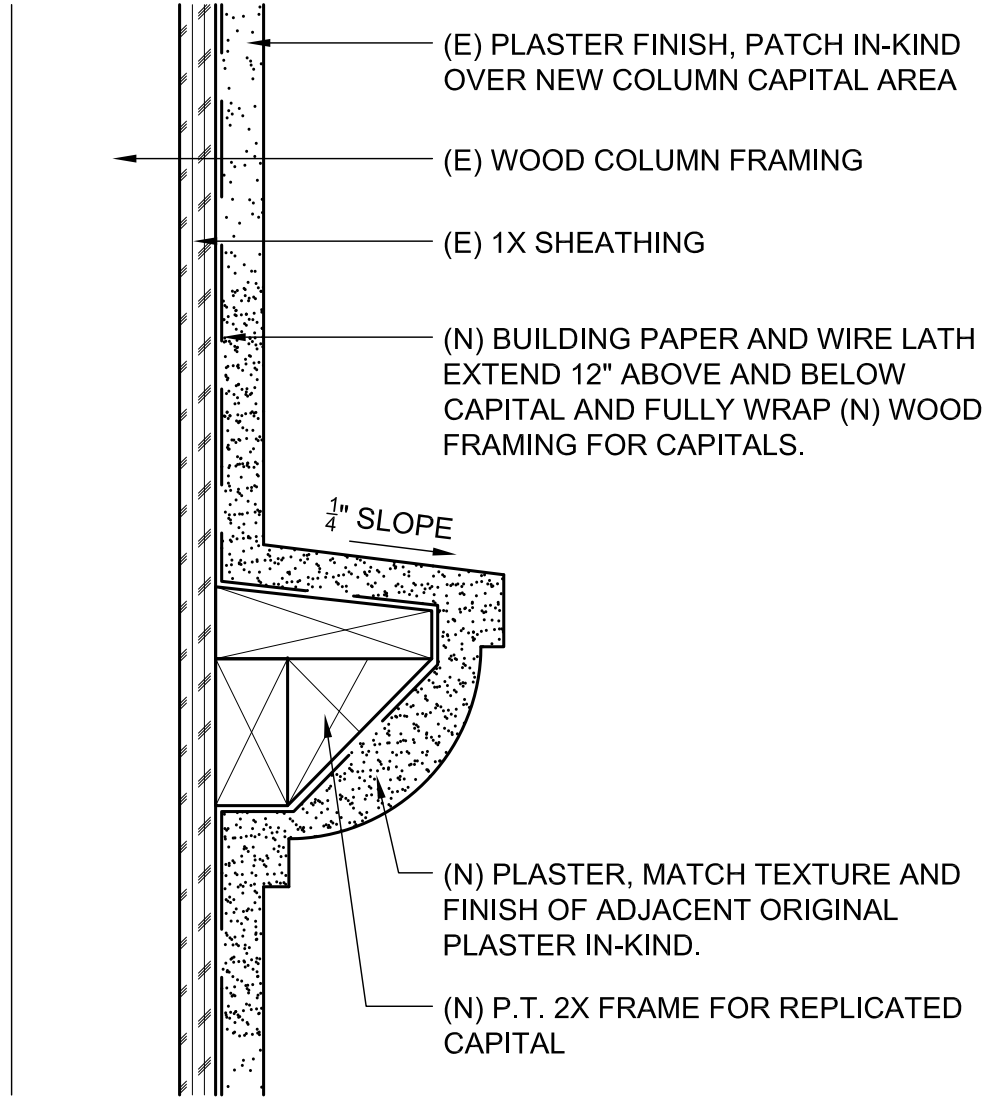
PROJ. NO. 2019.076

SHEET #  
**A-302**

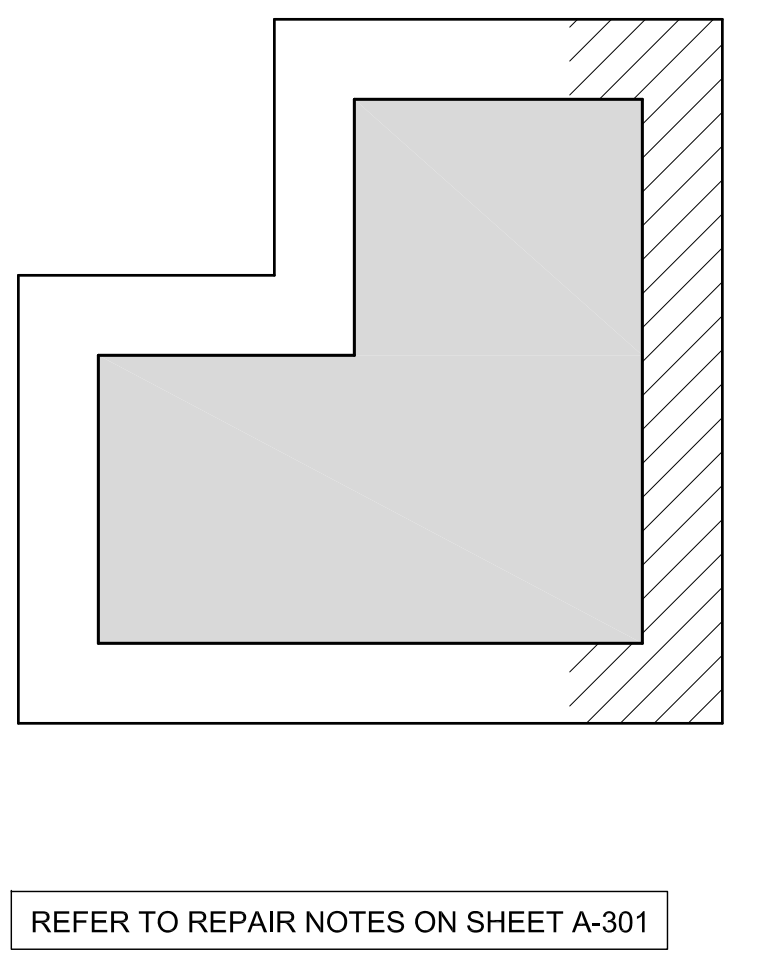
SHEET OF



PERGOLA CORBEL SCALE: 1 1/2" = 1'-0" 30



CAPITAL REPLACEMENT SCALE: 3" = 1'-0" 27

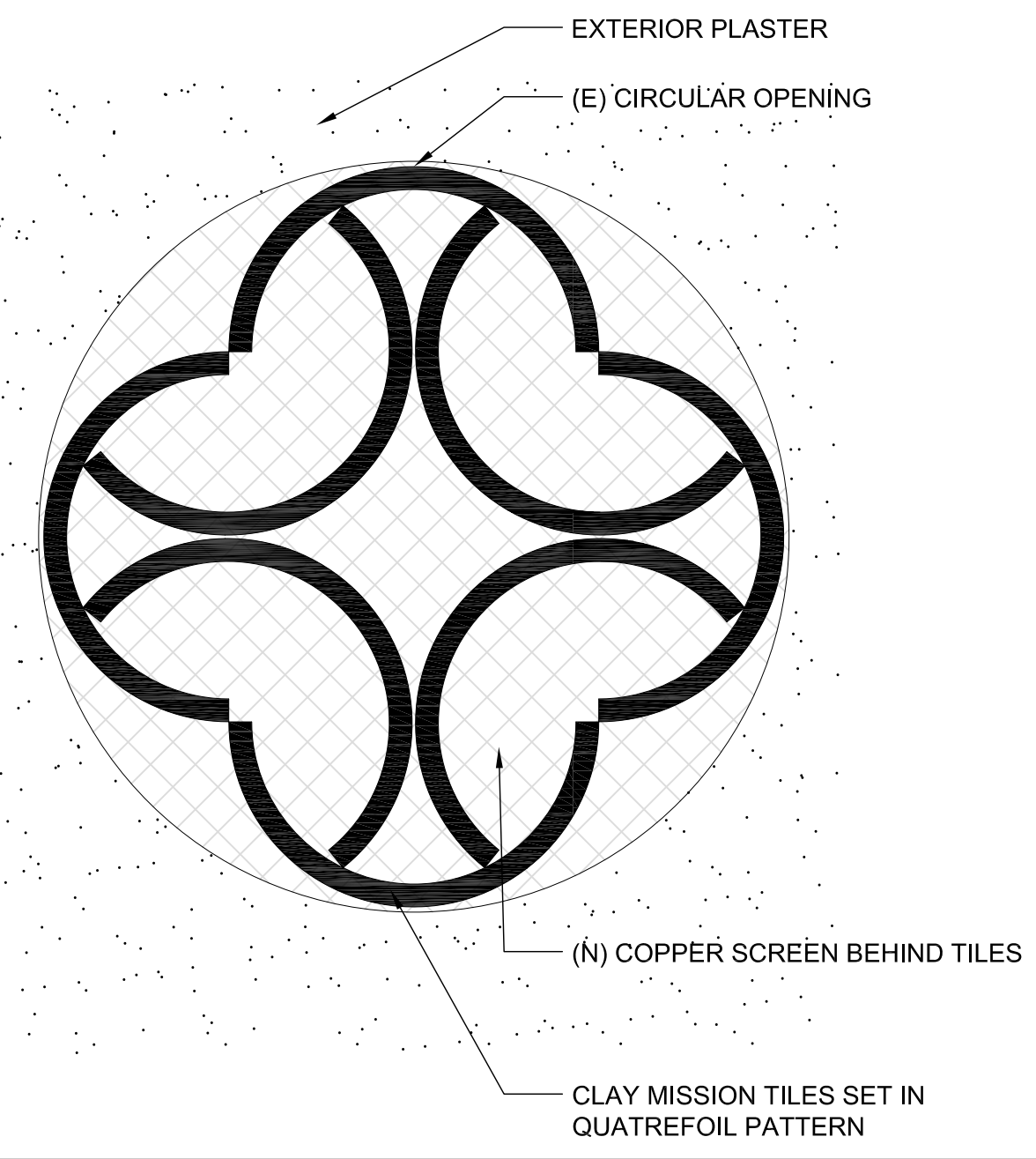


COLUMN CAPITAL PLAN SCALE: 1" = 1'-0" 24

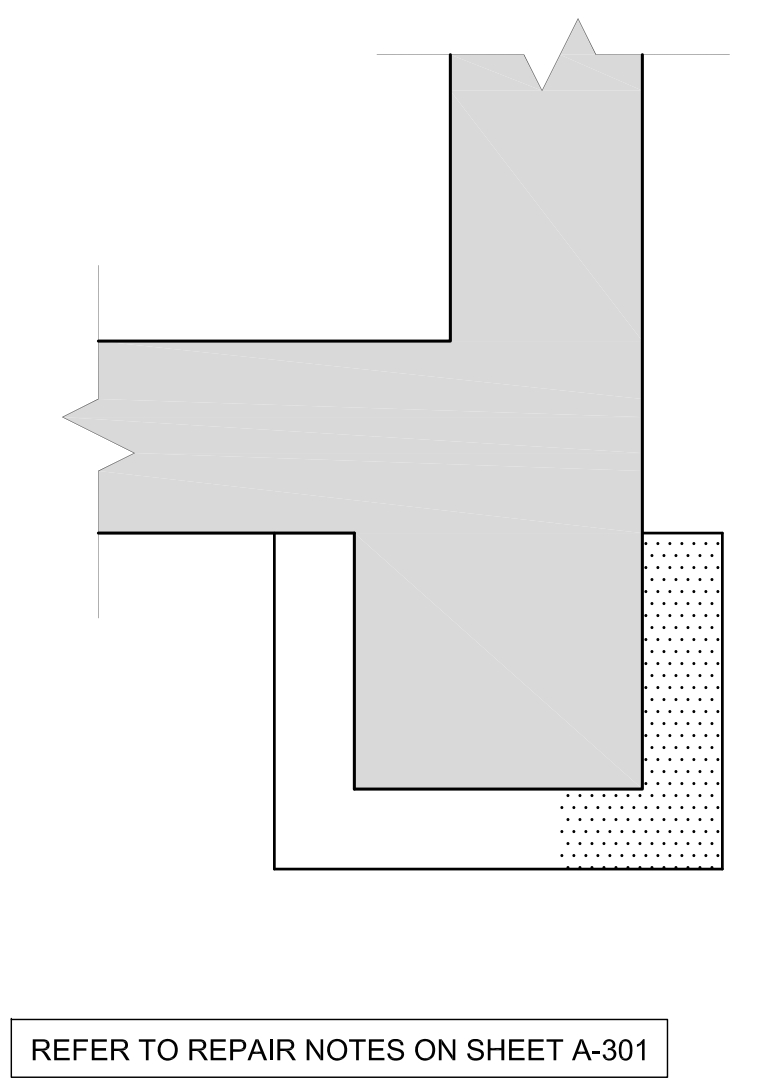


REPAINT HISTORIC LOGO ON (E) SHIELDS (3 LOCATIONS)  
 COLORS:  
 BLUE: DUNN EDWARDS DE 5881 NEWBURY PORT  
 RED: DUNN EDWARDS DEA103 STRIKING RED  
 WHITE: DUNN EDWARDS DEW398 ABALONE

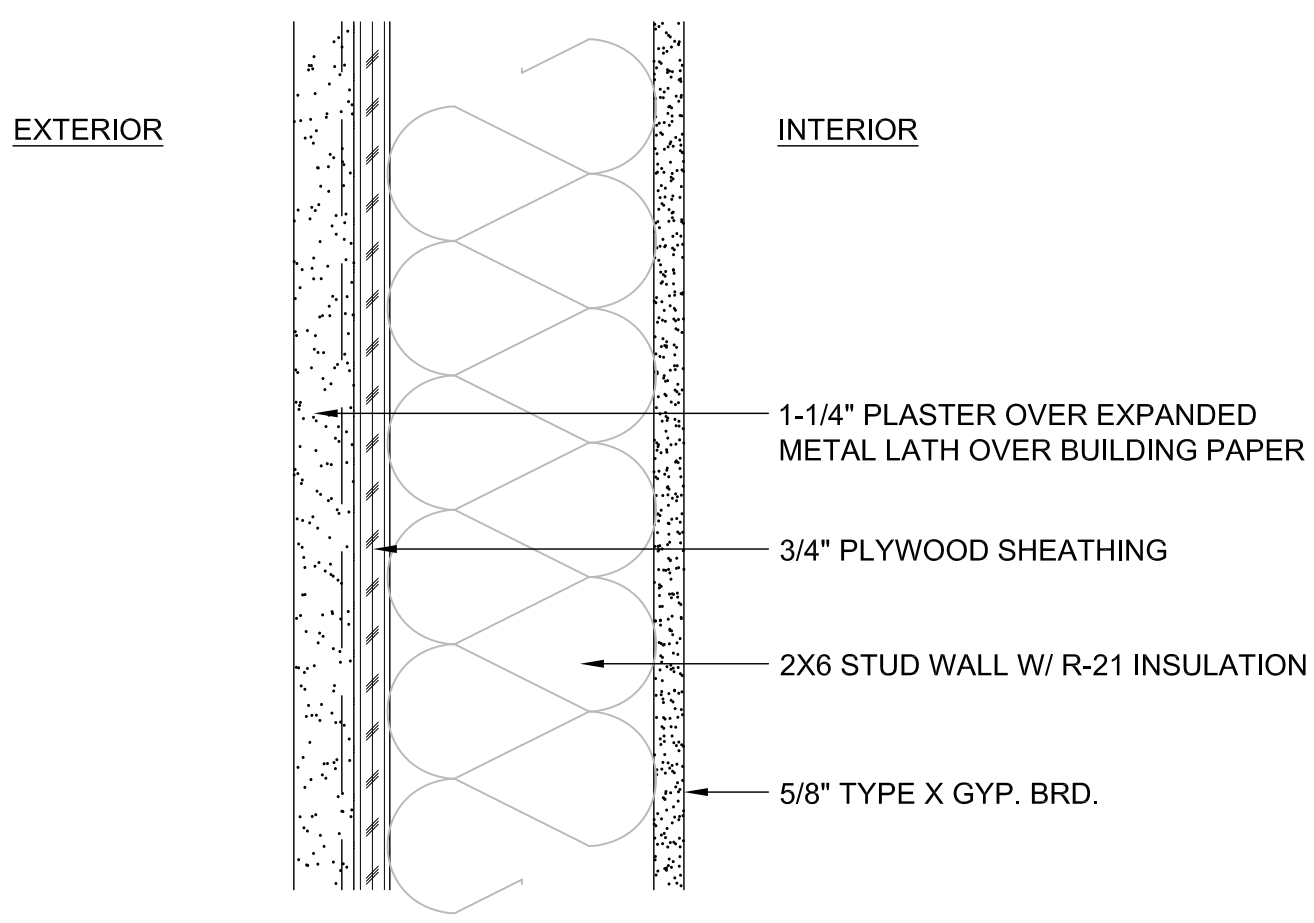
UP LOGO FOR SHIELDS SCALE: 1 1/2" = 1'-0" 31



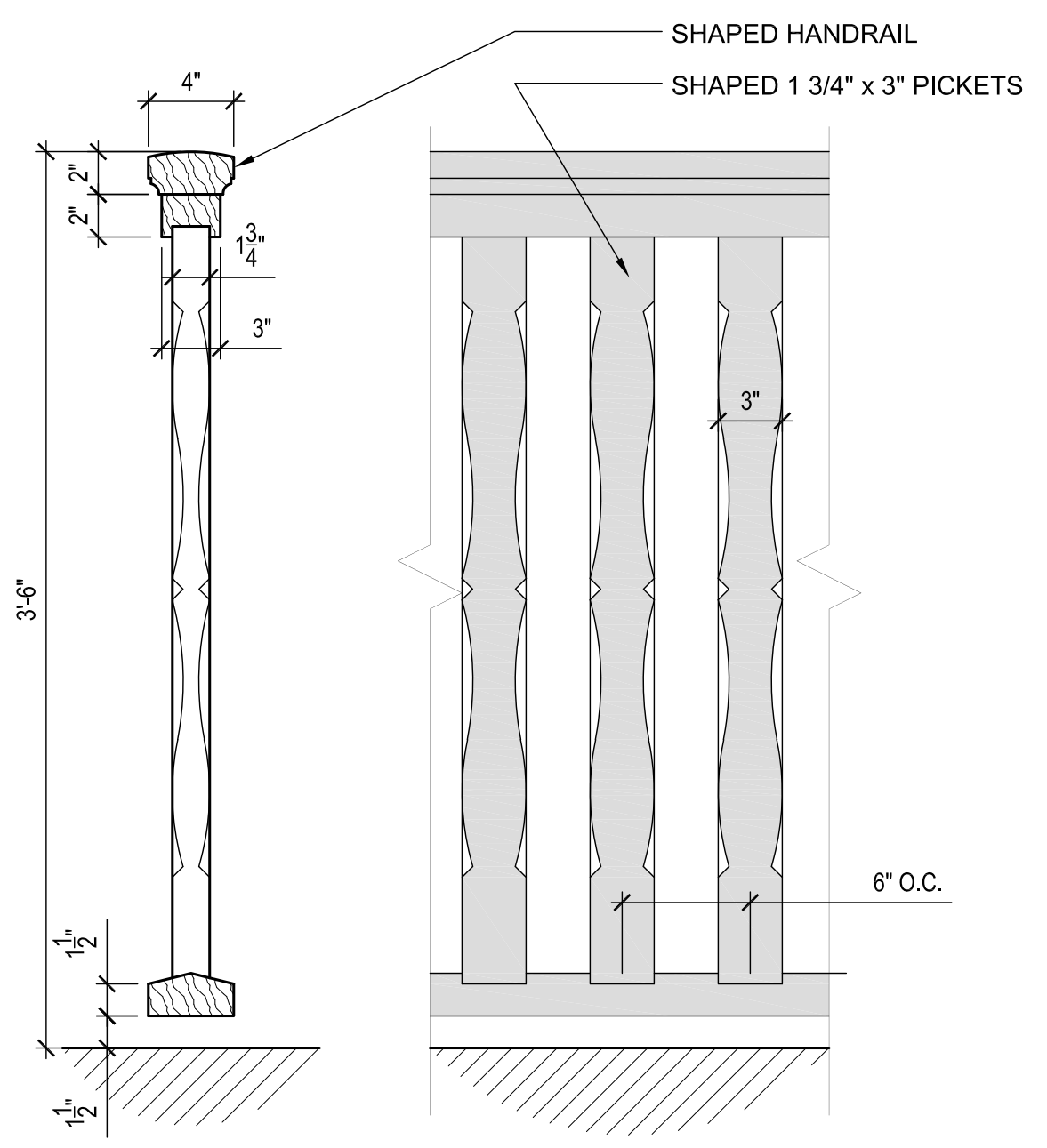
CLAY TILE VENT SCALE: 3" = 1'-0" 28



COLUMN CAPITAL PLAN SCALE: 1" = 1'-0" 25



WALL TYPE - W1 SCALE: 3" = 1'-0" 31

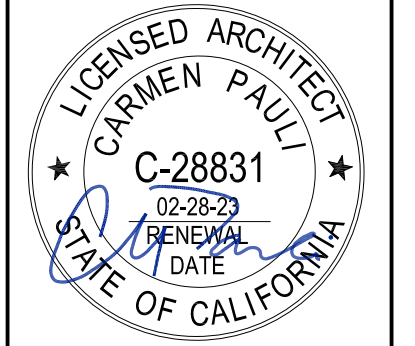


PERGOLA HANDRAIL SCALE: 1 1/2" = 1'-0" 29



TYP. COLUMN ELEV. SCALE: 1" = 1'-0" 26

03/03/2021					
50% CDS SUBMITTAL	06/24/2021				
90% CDS SUBMITTAL					
100% CDS SUBMITTAL	09/03/2021				



DES:  
DR:

NOT FOR CONSTRUCTION

CALIENTE UNION PACIFIC DEPOT  
 EXTERIOR RESTORATION  
 COLUMN CAPITAL AND MISC. DETAILS

PROJ. NO. 2019.076

SHEET #  
A-303

SHEET OF

CALIENTE UNION PACIFIC DEPOT  
RESTORATION

# TECHNICAL SPECIFICATIONS



DECEMBER 8, 2021

00 01 10  
**TABLE OF CONTENTS**

00 01 10 .....TABLE OF CONTENTS

**DIVISION 1 – GENERAL REQUIREMENTS**

01 32 00 ..... CONSTRUCTION PROGRESS DOCUMENTATION  
01 32 33 ..... PHOTOGRAPHIC DOCUMENTATION  
01 33 00 ..... SUBMITTAL PROCEDURES  
01 43 39 ..... MOCK-UPS  
01 50 00 ..... TEMPORARY FACILITIES AND CONTROLS

**DIVISION 2 - SITE CONSTRUCTION**

[02 20 00](#) ..... EXISTING CONDITIONS ASSESSMENT  
[02 41 19](#) ..... SELECTIVE DEMOLITION  
02 42 96 ..... HISTORIC TREATMENT PROCEDURES

**DIVISION 3 – CONCRETE**

[03 30 53](#) ..... MISCELLANEOUS CAST-IN-PLACE CONCRETE

**DIVISION 4 – MASONRY**

**DIVISION 5 - METALS**

**DIVISION 6 - WOOD AND PLASTICS**

[06 10 53](#) ..... MISCELLANEOUS ROUGH CARPENTRY  
[06 20 13](#) ..... EXTERIOR FINISH CARPENTRY

**DIVISION 7 - THERMAL AND MOISTURE PROTECTION**

[07 92 00](#) ..... JOINT SEALANTS

**DIVISION 8 - DOORS AND WINDOWS**

[08 01 15.93](#)..... HISTORIC TREATMENT OF WOOD WINDOWS  
[08 14 33](#) ..... STILE AND RAIL WOOD DOORS  
[08 52 00](#) ..... WOOD WINDOWS  
[08 71 00](#) ..... DOOR HARDWARE

**DIVISION 9 - FINISHES**

[09 24 00](#) ..... CEMENT PLASTERING  
[09 91 13](#) ..... EXTERIOR PAINTING

**DIVISION 10 – SPECIALTIES**

**DIVISION 11 – EQUIPMENT**

**DIVISION 12 - FURNISHINGS**

**DIVISION 13 - SPECIAL CONSTRUCTION**

**DIVISION 14 - CONVEYING SYSTEMS**

**TABLE OF CONTENTS**

**DIVISION 21 – FIRE SUPPRESSION**

**DIVISION 22 - PLUMBING**

**DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING**

**DIVISION 26 – ELECTRICAL**

**DIVISION 27 - COMMUNICATIONS**

**DIVISION 28 – ELECTRONIC SAFETY AND SECURITY**

**DIVISION 31 - EARTHWORK**

**DIVISION 32 – EXTERIOR IMPROVEMENTS**

**DIVISION 33 – UTILITIES**

**APPENDIX**

SWCA - EXTERIOR CONDITIONS ASSESSMENT OF CALIENTE RAILROAD DEPOT, JUNE 2015

PRESERVATION BRIEF 09 - REPAIR OF HISTORIC WOODEN WINDOWS

PRESERVATION BRIEF 22 – THE PRESERVATION AND REPAIR OF HISTORIC STUCCO



## SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Startup construction schedule.
  - 2. Contractor's Construction Schedule.
  - 3. Construction schedule updating reports.
  - 4. Daily construction reports.
  - 5. Material location reports.
  - 6. Site condition reports.
  - 7. Unusual event reports.
- B. Related Requirements:
  - 1. Section 011200 "Multiple Contract Summary" for preparing a combined Contractor's
  - 2. Section 012900 "Payment Procedures" for schedule of values and requirements for use of cost-loaded schedule for Applications for Payment.

#### 1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
  - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
  - 2. Predecessor Activity: An activity that precedes another activity in the network.
  - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the schedule of values for completing an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships.

Network calculations determine the critical path of Project and when activities can be performed.

- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.
  - 1. Float time **is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.**
  - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
  - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for completing an activity as scheduled.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
  - 1. Working electronic copy of schedule file.
  - 2. PDF file.
- B. Startup construction schedule.
  - 1. Submittal of cost-loaded startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- D. Construction Schedule Updating Reports: Submit with Applications for Payment.
- E. Daily Construction Reports: Submit at **monthly** intervals.
- F. Material Location Reports: Submit at **monthly** intervals.
- G. Site Condition Reports: Submit at time of discovery of differing conditions.
- H. Unusual Event Reports: Submit at time of unusual event.
- I. Qualification Data: For scheduling consultant.

## 1.5 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of values, **list of subcontracts**, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.
  - 2. Coordinate each construction activity in the network with other activities, and schedule them in proper sequence.

## 1.6 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
- B. Time Frame: Extend schedule from date established for **the Notice to Proceed** to date of **Final Completion**.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
  - 1. Activity Duration: Define activities so no activity is longer than **20** days, unless specifically allowed by Architect.
  - 2. Temporary Facilities: Indicate start and completion dates for the following as applicable:
    - a. Securing of approvals and permits required for performance of the Work.
    - b. Temporary facilities.
    - c. Construction of mock-ups, prototypes and samples.
    - d. Owner interfaces and furnishing of items.
    - e. Interfaces with Separate Contracts.
    - f. Regulatory agency approvals.
    - g. Punch list.
  - 3. Procurement Activities: Include procurement process activities for the following long lead-time items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  - 4. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
  - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

6. Punch List and Final Completion: Include not more than 15 days for completion of punch list items and Final Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Work Restrictions: Show the effect of the following items on the schedule:
    - a. Coordination with existing construction.
    - b. Limitations of continued occupancies.
    - c. Uninterruptible services.
    - d. Partial occupancy before Substantial Completion.
    - e. Use-of-premises restrictions.
    - f. Provisions for future construction.
    - g. Seasonal variations.
- E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
1. Unresolved issues.
  2. Unanswered Requests for Information.
  3. Rejected or unreturned submittals.
  4. Notations on returned submittals.
  5. Pending modifications affecting the Work and the Contract Time.
- F. Contractor's Construction Schedule Updating: At **monthly** intervals, update schedule to reflect actual construction progress and activities. Issue schedule two days before each regularly scheduled progress meeting.
1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  3. As the Work progresses, indicate Final Completion percentage for each activity.
- G. Recovery Schedule: When periodic update indicates the Work is **14** or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- H. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
  2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have

completed their assigned portion of the Work and are no longer involved in performance of construction activities.

## 1.7 GANTT-CHART SCHEDULE REQUIREMENTS

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's Construction Schedule within **30** days of date established for **the Notice of Award**.
  - 1. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

## 1.8 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
  - 1. List of subcontractors at Project site.
  - 2. List of separate contractors at Project site.
  - 3. Approximate count of personnel at Project site.
  - 4. Equipment at Project site.
  - 5. Material deliveries.
  - 6. High and low temperatures and general weather conditions, including presence of rain or snow.
  - 7. Testing and inspection.
  - 8. Accidents.
  - 9. Meetings and significant decisions.
  - 10. Unusual events.
  - 11. Stoppages, delays, shortages, and losses.
  - 12. Meter readings and similar recordings.
  - 13. Emergency procedures.
  - 14. Orders and requests of authorities having jurisdiction.
  - 15. Change Orders received and implemented.
  - 16. **Construction** Change Directives received and implemented.
  - 17. Services connected and disconnected.
  - 18. Equipment or system tests and startups.
  - 19. Partial completions and occupancies.
  - 20. Substantial Completions authorized.
- B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013200

## SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
  - 1. Preconstruction photographs.
  - 2. Concealed Work photographs.
  - 3. Periodic construction photographs.
  - 4. Final Completion construction photographs.
  - 5. Preconstruction video recordings.
  - 6. Periodic construction video recordings.
  - 7. Construction webcam.
- B. Related Requirements:
  - 1. Section 017700 "Closeout Procedures" for submitting photographic documentation as Project Record Documents at Project closeout.
  - 2. Section 024119 "Selective Demolition" for photographic documentation before selective demolition operations commence.

#### 1.3 INFORMATIONAL SUBMITTALS

- A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each **photograph**. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.
- B. Digital Photographs: Submit image files within **three** days of taking photographs.
  - 1. Submit photos **on CD-ROM or thumb-drive**, or by **uploading to web-based software site**. Include copy of key plan indicating each photograph's location and direction.
  - 2. Identification: Provide the following information with each image description **in file metadata tag**:
    - a. Name of Project.
    - b. Name and contact information for photographer.
    - c. Name of Architect.

- d. Name of Contractor.
- e. Date photograph was taken.
- f. Description of location, vantage point, and direction.
- g. Unique sequential identifier keyed to accompanying key plan.

#### 1.4 FORMATS AND MEDIA

- A. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of **12** megapixels, and at an image resolution of not less than **3200 by 2400** pixels. Use flash in low light levels or backlit conditions.
- B. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
- C. Metadata: Record accurate date and time from camera.
- D. File Names: Name media files with **date** and sequential numbering suffix.

#### 1.5 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs with maximum depth of field and in focus.
  - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.
- B. Preconstruction Photographs: Before commencement of the Work, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points.
  - 1. Take sufficient quantity of photographs to show existing conditions adjacent to property before starting the Work.
  - 2. Take sufficient quantity of photographs of existing building, to accurately record physical conditions at start of construction.
  - 3. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- C. Concealed Work Photographs: Before proceeding with installing work that will conceal other work, take photographs sufficient in number, with annotated descriptions, to record nature and location of concealed Work, including, but not limited to, the following:
  - 1. Underground utilities.
  - 2. Underslab services.
  - 3. Piping.
  - 4. Electrical conduit.
  - 5. Waterproofing and weather-resistant barriers.
- D. Periodic Construction Photographs: Take **20** photographs **weekly**. Select vantage points to show status of construction and progress since last photographs were taken.



- E. Final Completion Construction Photographs: Take **50** photographs after date of Substantial Completion for submission as Project Record Documents. **Architect** or Owner will inform photographer of desired vantage points.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013233

## SECTION 013300 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

##### B. Related Requirements:

1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
3. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
4. Section 013233 "Photographic Documentation" for submitting preconstruction photographs, periodic construction photographs, and Final Completion construction photographs.
5. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.

#### 1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

#### 1.3 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Format: Arrange the following information in a tabular format:
  - a. Scheduled date for first submittal.
  - b. Specification Section number and title.
  - c. Submittal Category: Action; informational.
  - d. Name of subcontractor.
  - e. Description of the Work covered.
  - f. Scheduled date for Architect's final release or approval.

#### 1.4 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Architect.
4. Name of Contractor.
5. Name of firm or entity that prepared submittal.
6. Names of subcontractor, manufacturer, and supplier.
7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier and alphanumeric suffix for resubmittals.
8. Category and type of submittal.
9. Submittal purpose and description.
10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
11. Drawing number and detail references, as appropriate.
12. Indication of full or partial submittal.
13. Location(s) where product is to be installed, as appropriate.
14. Other necessary identification.
15. Remarks.
16. Signature of transmitter.

B. Options: Identify options requiring selection by Architect.

C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

D. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

## 1.5 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Email: Prepare submittals as PDF package and transmit to Architect by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect.
    - a. Architect will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. **Architect reserves** the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on **Architect's** receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow **7** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. **Architect** will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow **7** days for review of each resubmittal.
  4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow **15** days for initial review of each submittal.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
  2. Note date and content of revision in label or title block, and clearly indicate extent of revision.

3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

## 1.6 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Standard color charts.
    - d. Statement of compliance with specified referenced standards.
    - e. Testing by recognized testing agency.
    - f. Application of testing agency labels and seals.
    - g. Notation of coordination requirements.
    - h. Availability and delivery time information.
  4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams that show factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  5. Submit Product Data before Shop Drawings, and before or concurrently with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

- a. Identification of products.
  - b. Schedules.
  - c. Compliance with specified standards.
  - d. Notation of coordination requirements.
  - e. Notation of dimensions established by field measurement.
  - f. Relationship and attachment to adjoining construction clearly indicated.
  - g. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.
1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package.
  2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
    - a. Project name and submittal number.
    - b. Generic description of Sample.
    - c. Product name and name of manufacturer.
    - d. Sample source.
    - e. Number and title of applicable Specification Section.
    - f. Specification paragraph number and generic name of each item.
  3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics and identification information for record.
  4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
  5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit **two** full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
  6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- a. Number of Samples: Submit **three** sets of Samples. Architect will retain **one** sample sets and Owner will retain one sample set; remainder will be returned. **Mark up and retain one returned Sample set as a project record Sample.**
  - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
  - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least **three** sets of paired units that show approximate limits of variations.
  
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
  
- E. Certificates:
  - 1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
  - 2. Installer Certificates: Submit written statements on manufacturer's letterhead, certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
  - 3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
  - 4. Material Certificates: Submit written statements on manufacturer's letterhead, certifying that material complies with requirements in the Contract Documents.
  - 5. Product Certificates: Submit written statements on manufacturer's letterhead, certifying that product complies with requirements in the Contract Documents.
  - 6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of AWS B2.1/B2.1M on AWS forms. Include names of firms and personnel certified.
  
- F. Test and Research Reports:
  - 1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
  - 2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - a. Name of evaluation organization.
  - b. Date of evaluation.
  - c. Time period when report is in effect.
  - d. Product and manufacturers' names.
  - e. Description of product.
  - f. Test procedures and results.
  - g. Limitations of use.

## 1.7 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit **digitally signed PDF file**, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

## 1.8 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.



- B. Contractor's Approval: Indicate Contractor's approval for each submittal with a **uniform approval stamp**. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
  - 1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

#### 1.9 ARCHITECT'S REVIEW

- A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, **and return**.
  - 1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect will **return without review** submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

## SECTION 014339 - MOCKUPS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Integrated exterior mockups.

B. Related Requirements:

1. Section 014000 "Quality Requirements" for quality assurance requirements for aesthetic and workmanship mockups specified in other Sections.

#### 1.2 DEFINITIONS

- A. Integrated Exterior Mockups: Mockups of the exterior envelope constructed on-site as **freestanding temporary built elements** or **part of permanent construction**, consisting of multiple products, assemblies, and subassemblies.

#### 1.3 QUALITY ASSURANCE

A. Build mockups to do the following:

1. Verify selections made under Sample submittals.
2. Demonstrate aesthetic effects.
3. Demonstrate the qualities of products and workmanship.
4. Demonstrate acceptable coordination between components and systems.
5. Perform preconstruction testing, such as window air- and water-leakage testing.

- B. Fabrication: Before fabricating or installing portions of the Work requiring mockups, build mockups for each form of construction and finish required. Use materials and installation methods as required for the Work.

1. Build mockups of size indicated.
2. Build mockups in location indicated or, if not indicated, as directed by Architect.
3. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed unless otherwise indicated.

C. Notifications:

1. Notify Architect **seven** days in advance of the dates and times when mockups will be constructed.
  2. Allow **seven** days for initial review and each re-review of each mockup.
- D. Approval: Obtain Architect's approval of mockups before starting fabrication or construction of corresponding Work.
1. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
  2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### 1.4 COORDINATION

- A. Coordinate schedule for construction of mockups, so construction, testing, and review of mockups do not impact Project schedule.

### PART 2 - PRODUCTS

#### 2.1 INTEGRATED EXTERIOR MOCKUPS

- A. Construct mockups to demonstrate constructability, coordination of trades, and sequencing of Work; and to ensure materials, components, subassemblies, assemblies, and interfaces integrate into a system complying with indicated performance and aesthetic requirements.
- B. Build integrated exterior mockups using installers and construction methods that will be used in completed construction.
- C. Use specified products that have been approved by Architect. Coordinate installation of materials and products specified in individual Specification Sections that include Work included in integrated exterior mockups.
- D. Photographic Documentation: Document construction of integrated exterior mockups with photographs in accordance with Section 013233 "Photographic Documentation." Provide photographs showing details of interface of different materials and assemblies.
- E. Retain approved mockups constructed in place. Incorporate fully into the Work.

### PART 3 - EXECUTION

END OF SECTION 014339

## SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

#### 1.3 USE CHARGES

- A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Architect, **occupants of Project**, testing agencies, and authorities having jurisdiction.
- B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use **without metering and without payment of use charges**. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use **without metering and without payment of use charges**. Provide connections and extensions of services [**and metering**] as required for construction operations.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
- B. Implementation and Termination Schedule: Within **15** days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.
- C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

- D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.
  - 1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
  - 2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
  - 3. Indicate methods to be used to avoid trapping water in finished work.
- F. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. HVAC system isolation schematic drawing.
  - 3. Location of proposed air-filtration system discharge.
  - 4. Waste-handling procedures.
  - 5. Other dust-control measures.
- G. Noise and Vibration Control Plan: Identify construction activities that may impact the occupancy and use of existing spaces within the building or adjacent existing buildings, whether occupied by others, or occupied by the Owner. Include the following:
  - 1. Methods used to meet the goals and requirements of the Owner.
  - 2. Concrete cutting method(s) to be used.
  - 3. Location of construction devices on the site.
  - 4. Show compliance with the use and maintenance of quieted construction devices for the duration of the Project.
  - 5. Indicate activities that may disturb building occupants and that are planned to be performed during non-standard working hours as coordinated with the Owner.

## 1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in **the United States Access Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1**.

## 1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Portable Chain-Link Fencing: Minimum **2-inch (50-mm)**, **0.148-inch- (3.8-mm-)** thick, galvanized-steel, chain-link fabric fencing; minimum **6 feet (1.8 m)** high with galvanized-steel pipe posts; minimum **2-3/8-inch- (60-mm-)** OD line posts and **2-7/8-inch- (73-mm-)** OD corner and pull posts, with **1-5/8-inch- (42-mm-)** OD top and bottom rails. Provide **concrete** or **galvanized-steel** bases for supporting posts.
- B. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain-link fence, sized to height of fence, in color selected by Architect from manufacturer's standard colors.

### 2.2 TEMPORARY FACILITIES

- A. Field Offices: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
  - 1. Store combustible materials apart from building.

### 2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  - 2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

## PART 3 - EXECUTION

### 3.1 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

### 3.2 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  - 1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- C. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
  - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed.
    - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    - b. Maintain negative air pressure within work area, using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
  - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

### 3.3 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
  1. Use of Permanent Toilets: Use of Owner's existing or new toilet facilities **is not permitted**.
- D. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
- E. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
  1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

### 3.4 SUPPORT FACILITIES INSTALLATION

- A. Comply with the following:
  1. Provide construction for temporary field offices, shops, and sheds located within construction area or within **30 feet (9 m)** of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
  2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
  1. Protect existing site improvements to remain, including curbs, pavement, and utilities.
  2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: **Use designated areas of Owner's existing** parking areas for construction personnel.
- D. Storage and Staging: **Use designated areas of Project site** for storage and staging needs.
- E. Existing Elevator Use: Use of Owner's existing elevator is not permitted.



- F. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
  - 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.
- G. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

### 3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
  - 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
  - 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- D. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- F. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.
- G. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

- H. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
  2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition in accordance with requirements of authorities having jurisdiction.
  3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
  4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign, stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

### 3.6 MOISTURE AND MOLD CONTROL

- A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.
- B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
  2. Protect stored and installed material from flowing or standing water.
  3. Keep porous and organic materials from coming into prolonged contact with concrete.
  4. Remove standing water from decks.
  5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
  2. Keep interior spaces reasonably clean and protected from water damage.
  3. Periodically collect and remove waste containing cellulose or other organic matter.
  4. Discard or replace water-damaged material.
  5. Do not install material that is wet.
  6. Discard and replace stored or installed material that begins to grow mold.
  7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.
- D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
  - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for **48** hours are considered defective and require replacing.
  - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for **48** hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
  - c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within **48** hours.

### 3.7 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

## SECTION 02 22 00

### EXISTING CONDITIONS ASSESSMENT

#### PART 1 - GENERAL

##### 1.1 SUMMARY

###### A. Section Includes:

1. Examination and documentation of existing conditions, prior to starting construction.

##### 1.2 VERIFICATION OF EXISTING CONDITIONS

- ###### A. Visual Record:
- Prior to commencing with the Work, Contractor and Owner will tour the Project Site together to examine and record damage to existing building; adjacent curbs, roads, paved parking areas, landscaping, and other improvements within the Project Limits, adjacent property and access routes. The Record of existing conditions shall be signed by all parties making the tour and shall serve as a basis for determination of subsequent damage due to Contractor's operations. Photographs and/or video taping shall be used to serve as part of the Record. Any such damage not noted in the original survey, but subsequently discovered, shall be reported to the City's Representative in a timely manner.

1. The Record of conditions shall be the responsibility of the Contractor. Conduct surveys and take photographs to accurately record the existing conditions.
  - a. This record shall be signed by all parties making the tour.
  - b. Any cracks, sags, or damage to the adjacent buildings and improvements not noted in the original survey, but subsequently discovered, shall be reported to City's Representative.

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION (Not Used)

END OF SECTION 02 22 00

**SECTION 024119**  
**SELECTIVE DEMOLITION**

**PART 1 - GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

**B. Related Requirements:**

1. Section 024296 Historic Treatment Procedures.

**1.2 DEFINITIONS**

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

**1.3 MATERIALS OWNERSHIP**

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

**1.4 PREINSTALLATION MEETINGS**

- A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection , for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
  1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
  2. Interruption of utility services. Indicate how long utility services will be interrupted.
  3. Coordination for shutoff, capping, and continuation of utility services.
  4. Use of elevator and stairs.
  5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by salvage and demolition operations. Comply with Section 013233 "Photographic Documentation." Submit before Work begins.
- D. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

#### 1.7 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
  1. Before selective demolition, Owner will remove the following items:
    - a. Furniture in area of work (existing office area at east arcade restoration).
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

- D. Hazardous Materials: Present in buildings and structures to be selectively demolished. A report on the presence of hazardous materials on file for review and use. Examine report to become aware of locations where hazardous materials are present.
  - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
  - 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
- E. Historic Areas: Demolition and hauling equipment and other materials shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection, by 12 inches (300 mm) or more.
- F. Storage or sale of removed items or materials on-site is not permitted.
- G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

## 1.8 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

## 1.9 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- B. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
  - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- D. Survey of Existing Conditions: Record existing conditions by use of measured drawings preconstruction photographs or video.
  - 1. Inventory and record the condition of items to be removed and salvaged.
  - 2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

### 3.2 PREPARATION

### 3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Arrange to shut off utilities with utility companies.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
    - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.



- e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
- f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
- g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

### 3.4 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  - 1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.5 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  - 5. Maintain fire watch during and for at least 24 hours after flame-cutting operations.
  - 6. Maintain adequate ventilation when using cutting torches.

7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  10. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Work in Historic Areas: Selective demolition may be performed only in areas of Project that are not designated as historic. In historic spaces, areas, and rooms, or on historic surfaces, the terms "demolish" or "remove" shall mean historic "removal" or "dismantling" as specified in Section 024296 "Historic Removal and Dismantling."
- D. Removed and Salvaged Items:
1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- E. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- F. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.
- C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.

### 3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
  - 4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.

### 3.8 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

## SECTION 024296

### HISTORIC TREATMENT PROCEDURES

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract apply to this Section.

##### 1.2 SUMMARY

- A. Section includes general protection and treatment procedures for entire Project.
- B. Related Requirements:
  - 1. Section 099113 Exterior Painting for specific requirements for prepping and repainting of paint finishes.
  - 2. Preservation Briefs in the Appendix.

##### 1.3 DEFINITIONS

- A. Dismantle: To disassemble and detach items by hand from existing construction to the limits indicated, using small hand tools and small one-hand power tools, so as to protect nearby historic surfaces; and legally dispose of dismantled items off-site, unless indicated to be salvaged or reinstalled.
- B. Existing to Remain: Existing items that are not to be removed or dismantled.
- C. Historic: Spaces, areas, rooms, surfaces, materials, finishes, and overall appearance which are important to the successful preservation as determined by Architect.
- D. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish as approved by Architect.
- E. Reconstruct: To remove existing item, replicate damaged or missing components, and reinstall in original position.
- F. Reinstall: To protect removed or dismantled item, repair and clean it as indicated for reuse, and reinstall it in original position, or where indicated.
- G. Remove: Specifically for historic spaces, areas, rooms, and surfaces, the term means to detach an item from existing construction to the limits indicated, using hand tools and hand-operated power equipment, and legally dispose of it off-site, unless indicated to be salvaged or reinstalled.
- H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.
- I. Restore: To consolidate, replicate, reproduce, repair, and refinish as required to achieve the indicated results.

- J. Retain: To keep existing items that are not to be removed or dismantled.
- K. Reversible: New construction work, treatments, or processes that can be removed or undone in the future without permanently damaging historic materials.
- L. Salvage: To protect removed or dismantled items and reinstall or deliver them to Owner ready for reuse.

#### 1.4 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during removal and dismantling work remain Owner's property. Carefully dismantle and salvage each found item or object.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Inventory of Salvaged Items: After removal or dismantling work is complete, submit a list of items that have been salvaged.

#### 1.6 QUALITY ASSURANCE

- A. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, rag buckets, and other fire-prevention devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and personnel. Include fire watch's training, duties, and authority to enforce fire safety.
- B. Mockups: Prepare mockups of specific historic treatment procedures specified in this Section to demonstrate aesthetic effects and to set quality standards for materials and execution.
- C. Regulatory Requirements: Comply with notification regulations of authorities having jurisdiction before beginning removal and dismantling work. Comply with hauling and disposal regulations of authorities having jurisdiction.
- D. Standards: Comply with ANSI/ASSE A10.6.

#### 1.7 STORAGE AND PROTECTION OF HISTORIC MATERIALS

- A. Historic Materials for Reinstallation:
  - 1. Repair and clean historic items as indicated and to functional condition for reuse.
  - 2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
  - 3. Protect items from damage during transport and storage.
  - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make item functional for use as indicated.
- B. Existing Historic Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after historic treatment and construction work in the vicinity is complete.

- C. Storage and Protection: When taken from their existing locations, catalog and store historic items within a weathertight enclosure where they are protected from wetting by rain, condensation, or ground water, and from freezing temperatures.
  - 1. Identify each item with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
  - 2. Secure stored materials to protect from vandalism and theft.

## 1.8 PROJECT CONDITIONS

- A. General Size Limitation in Historic Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection, by 12 inches or more.
- B. Owner may occupy portions of building immediately adjacent to removal and dismantling area. Conduct removal and dismantling work so Owner's operations will not be disrupted.
- C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Notify Architect of discrepancies between existing conditions and drawings before proceeding with removal and dismantling work.
- E. Hazardous Materials: It is anticipated that hazardous materials (such as lead paint) will be encountered in the Work. Contractor should coordinate necessary abatement with the Owner's approval.
- F. Sale of removed or dismantled items is not permitted unless otherwise indicated.

## PART 2 - PRODUCTS - (Not Used)

## PART 3 - EXECUTION

### 3.1 HISTORIC REMOVAL AND DISMANTLING EQUIPMENT

- A. Removal Equipment: Use only hand-held tools except as follows or unless otherwise approved by Architect on a case-by-case basis.
- B. Dismantling Equipment: Use manual, hand-held tools, except as follows or otherwise approved by Architect on a case-by-case basis:
  - 1. Hand-held power tools and cutting torches are permitted only as submitted in the historic treatment program. They must be adjustable so as to penetrate or cut only the thickness of material being removed.
  - 2. Pry bars more than 18 inches long and hammers weighing more than 2 lb are not permitted for dismantling work.

### 3.2 EXAMINATION

- A. Preparation for Removal and Dismantling: Examine construction to be removed or dismantled to determine best methods to safely and effectively perform removal and dismantling work. Examine adjacent work to determine what protective measures will be necessary. Make explorations, probes, and inquiries as necessary to determine condition of construction to be removed or dismantled and location of utilities and services to remain that may be hidden by construction that is to be removed or dismantled.
  - 1. Verify that affected utilities have been disconnected and capped.
  - 2. Inventory and record the condition of items to be removed and dismantled for reinstallation or salvage.
  - 3. Before removal or dismantling of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.
  - 4. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures as a result of removal and dismantling work.
- B. Perform surveys as the Work progresses to detect hazards resulting from historic treatment procedures.

### 3.3 PROTECTION, GENERAL

- A. Ensure that supervisory personnel are on-site and on duty when historic treatment work begins and during its progress.
- B. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from historic treatment procedures.
- C. Temporary Protection of Historic Materials:
  - 1. Protect existing historic materials with temporary protections and construction. Do not damage or remove existing materials, unless directed otherwise.
  - 2. Do not attach temporary protection to historic surfaces except as indicated as part of the historic treatment program and approved by Architect.
- D. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.
- E. Utility and Communications Services:
  - 1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by the historic treatment work before commencing operations.
  - 2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for the historic treatment work.
  - 3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.
- F. Existing Roofing: Prior to the start of work in an area, install roofing protection.

### 3.4 PROTECTION DURING APPLICATION OF CHEMICALS

- A. Protect motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm or damage resulting from applications of chemical cleaners and paint removers.
- B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in historic treatment program. Use covering materials and masking agents that are waterproof, UV resistant, and will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials staining.
- C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.
- D. Neutralize and collect alkaline and acid wastes and legally dispose of off Owner's property.
- E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

### 3.5 PROTECTION FROM FIRE

- A. General: Follow fire-prevention plan and the following.
  1. Comply with NFPA 241 requirements unless otherwise indicated.
  2. Remove and keep area free of combustibles including, rubbish, paper, waste, and chemicals, except to the degree necessary for the immediate work.
  3. Prohibit smoking by all persons within Project work and staging areas.
- B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or highly combustible materials, including welding, torch-cutting, soldering, brazing, paint removal with heat, or other operations where open flames or implements utilizing high heat or combustible solvents and chemicals are anticipated.
- C. Fire Extinguishers, Fire Blankets, and Rag Buckets: Maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire watch are trained in fire-extinguisher and blanket operation.

### 3.6 GENERAL HISTORIC TREATMENT

- A. Ensure that supervisory personnel are present when historic treatment work begins and during its progress.
- B. Halt the process of deterioration and stabilize conditions unless otherwise indicated. Perform work as indicated on drawings. Follow the procedures in subparagraphs below and procedures approved in historic treatment program:
  1. Retain as much existing material as possible; repair and consolidate rather than replace.
  2. Use additional material or structure to reinforce, strengthen, prop, tie, and support existing material or structure.
  3. Use reversible processes wherever possible.
  4. Use historically accurate repair and replacement materials and techniques unless otherwise indicated.



- 5. Record existing work before each procedure (preconstruction) and progress during the work with digital preconstruction documentation photographs.
- C. Notify Architect of visible changes in the integrity of material or components whether due to environmental causes including biological attack, UV degradation, freezing, or thawing; or due to structural defects including cracks, movement, or distortion.
- D. Where missing features are indicated to be repaired or replaced, provide features whose designs are based on accurate duplications rather than on conjectural designs, subject to approval of Architect.
- E. Where Work requires existing features to be removed or dismantled and reinstalled, perform these operations without damage to the material itself, to adjacent materials, or to the substrate.
- F. Identify new and replacement materials and features with permanent marks hidden in the completed work to distinguish them from original materials. Record a legend of identification marks and the locations of the items on record drawings.

### 3.7 HISTORIC REMOVAL AND DISMANTLING

- A. General: Have removal and dismantling work performed by a qualified historic contractor. Ensure that historic removal and dismantling specialist's field supervisors are present when removal and dismantling work begins and during its progress.
- B. Perform work according to the historic treatment program and approved mockups.
  - 1. Provide supports or reinforcement for existing construction that becomes temporarily weakened by the work, until the work is completed.
  - 2. Perform cutting by hand or with small power tools wherever possible. Cut holes and slots neatly to size required, with minimum disturbance of adjacent work.
  - 3. Do not operate air compressors inside building, unless approved by Architect in each case.
  - 4. Do not drill or cut columns, beams, joints, girders, structural slabs, or other structural supporting elements, without having Contractor's professional engineer's written approval for each location before such work is begun.
  - 5. Do not use explosives.
- C. Unacceptable Equipment: Keep equipment that is not permitted for historic removal or dismantling work away from the vicinity where such work is being performed.
- D. Removing and Dismantling Items on or near Historic Surfaces:
  - 1. Use only dismantling tools and procedures within 12 inches of historic surface. Protect historic surface from contact with or damage by tools.
  - 2. Unfasten items to be removed, in the opposite order from which they were installed.
  - 3. Support each item as it becomes loosened to prevent stress and damage to the historic surface.
  - 4. Dismantle anchorages.
- E. Loose Plaster: Identify loose or non-historic plaster and separate it from its substrate by tapping with a hammer and prying with a chisel or screwdriver. Do not use pry bars. Leave sound, firmly adhered plaster in place. Do not damage, remove, or dismantle historic plasterwork except where indicated or where it is an immediate hazard to personnel and as approved by Architect.

END OF SECTION 024296

## SECTION 03 30 53 - MISCELLANEOUS CAST-IN-PLACE CONCRETE

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes cast-in-place concrete, including reinforcement, concrete materials, mixture design, placement procedures, and finishes.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Other Action Submittal:
  - 1. Design Mixtures: For each concrete mixture.

#### 1.3 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. Comply with the following sections of ACI 301 , unless modified by requirements in the Contract Documents:
  - 1. "General Requirements."
  - 2. "Formwork and Formwork Accessories."
  - 3. "Reinforcement and Reinforcement Supports."
  - 4. "Concrete Mixtures."
  - 5. "Handling, Placing, and Constructing."
  - 6. "Lightweight Concrete."
- C. Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

### PART 2 - PRODUCTS

#### 2.1 FORMWORK

- A. Furnish formwork and formwork accessories according to ACI 301 .

#### 2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 , deformed.
- B. Plain-Steel Wire: ASTM A 82/A 82M, as drawn.

- C. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from as-drawn steel wire into flat sheets.
- D. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

### 2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source throughout Project:
  - 1. Portland Cement: ASTM C 150, **Type I**.
- B. Normal-Weight Aggregate: ASTM C 33, graded, **1-1/2-inch** nominal maximum aggregate size.
- C. Water: ASTM C 94/C 94M.

### 2.4 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
  - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
  - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
  - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
  - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
  - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
  - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

### 2.5 RELATED MATERIALS

- A. Vapor Retarder: Plastic sheet, ASTM E 1745, Class A or B.
- B. Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils thick; or plastic sheet, ASTM E 1745, Class C.
- C. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

### 2.6 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth or cotton mats.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.

- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
- F. Clear, **Waterborne**, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

## 2.7 CONCRETE MIXTURES

- A. Comply with ACI 301 requirements for concrete mixtures.
- B. Normal-Weight Concrete: Prepare design mixes, proportioned according to ACI 301 , as follows:
  - 1. Minimum Compressive Strength: **3500 psi** at 28 days.
  - 2. Maximum Water-Cementitious Materials Ratio: **0.45**.
  - 3. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.
  - 4. Air Content: Maintain within range permitted by ACI 301 . Do not allow air content of trowel-finished floor slabs to exceed 3 percent.

## 2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M **and ASTM C 1116/C 1116**, and furnish batch ticket information.
  - 1. When air temperature is above 90 deg F , reduce mixing and delivery time to 60 minutes.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
  - 1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
  - 2. For mixer capacity larger than 1 cu. yd. , increase mixing time by 15 seconds for each additional 1 cu. yd. .
  - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

## PART 3 - EXECUTION

### 3.1 FORMWORK

- A. Design, construct, erect, brace, and maintain formwork according to ACI 301 .

### 3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

### 3.3 VAPOR RETARDERS

- A. Install, protect, and repair vapor retarders according to ASTM E 1643; place sheets in position with longest dimension parallel with direction of pour.
  - 1. Lap joints 6 inches and seal with manufacturer's recommended adhesive or joint tape.

### 3.4 STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
  - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

### 3.5 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Locate and install so strength and appearance of concrete are not impaired, at locations indicated or as approved by University's Representative.
- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least **one-fourth** of concrete thickness, as follows:
  - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with groover tool to a radius of 1/8 inch . Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.
  - 2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
- D. Isolation Joints: Install joint-filler strips at junctions with slabs-on-grade and vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
  - 1. Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

### 3.6 CONCRETE PLACEMENT

- A. Comply with ACI 301 for placing concrete.
- B. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301 .
- C. Do not add water to concrete during delivery, at Project site, or during placement.
- D. Consolidate concrete with mechanical vibrating equipment.

### 3.7 FINISHING FORMED SURFACES

- A. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch .
  - 1. Apply to concrete surfaces **exposed to public view**.
- B. Rubbed Finish: Apply the following rubbed finish, defined in ACI 301 , to smooth-formed finished as-cast concrete where indicated:
  - 1. Smooth-rubbed finish.
  - 2. Grout-cleaned finish.
  - 3. Cork-floated finish.
- C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

### 3.8 FINISHING UNFORMED SURFACES

- A. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface.
  - 1. Do not further disturb surfaces before starting finishing operations.
- C. Scratch Finish: Apply scratch finish to surfaces indicated and surfaces to receive concrete floor topping or mortar setting beds for ceramic or quarry tile, portland cement terrazzo, and other bonded cementitious floor finishes, unless otherwise indicated.
- D. Float Finish: Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, fluid-applied or direct-to-deck-applied membrane roofing, or sand-bed terrazzo.
- E. Trowel Finish: Apply a hard trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system.
- F. Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling, to surfaces indicated and to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set methods. Immediately after second troweling, and when concrete is still plastic, slightly scarify surface with a fine broom.
- G. Nonslip Broom Finish: Apply a nonslip broom finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

### 3.9 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- D. Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:
  - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
  - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches , and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
  - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
  - 4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

### 3.10 FIELD QUALITY CONTROL

- A. Testing Agency: University will engage a qualified testing agency to perform tests and inspections.
- B. Tests: Perform according to ACI 301 .
  - 1. Testing Frequency: One composite sample shall be obtained for each day's pour of each concrete mix exceeding 5 cu. yd. but less than 25 cu. yd. , plus one set for each additional 50 cu. yd. or fraction thereof.
  - 2. Testing Frequency: One composite sample shall be obtained for each 100 cu. yd. or fraction thereof of each concrete mix placed each day.

3.11 REPAIRS

- A. Remove and replace concrete that does not comply with requirements in this Section.

END OF SECTION 03 30 53



## SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Framing with dimension lumber.

#### 1.3 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal (38 mm actual) size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater size but less than 5 inches nominal (114 mm actual) size in least dimension.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preserved treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
  - 3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D5664.
  - 4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
  - 1. Preservative-treated wood.
  - 2. Fire-retardant-treated wood.
  - 3. Power-driven fasteners.
  - 4. Post-installed anchors.

5. Metal framing anchors.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  1. Factory mark each piece of lumber with grade stamp of grading agency.
  2. Dress lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal (38-mm actual) thickness or less, 19 percent for more than 2-inch nominal (38-mm actual) thickness unless otherwise indicated.

### 2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
  1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
  1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece.
- D. Application: Treat items indicated on Drawings, and the following:
  1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  2. Wood sills, sleepers, blocking, and similar concealed members in contact with masonry or concrete.
  3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.

4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.
5. Wood floor plates that are installed over concrete slabs-on-grade.

## 2.3 DIMENSION LUMBER FRAMING

- A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade of any of the following species:
1. Hem-fir (north); NLGA.
  2. Mixed southern pine or southern pine; SPIB.
  3. Spruce-pine-fir; NLGA.
  4. Hem-fir; WCLIB or WWPA.
  5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
  6. Western woods; WCLIB or WWPA.
- B. Other Framing: No. 2 any of the following species:
1. Hem-fir (north); NLGA.
  2. Southern pine; SPIB.
  3. Douglas fir-larch; WCLIB or WWPA.
  4. Spruce-pine-fir; NLGA.
  5. Douglas fir-south; WWPA.
  6. Hem-fir; WCLIB or WWPA.
  7. Douglas fir-larch (north); NLGA.
  8. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.

## 2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
1. Blocking.
  2. Nailers.
  3. Rooftop equipment bases and support curbs.
  4. Cants.
  5. Furring.
  6. Grounds.
  7. Utility shelving.
- B. Dimension Lumber Items: Construction or No. 2 grade lumber of any of the following species:
1. Hem-fir (north); NLGA.
  2. Mixed southern pine or southern pine; SPIB.
  3. Spruce-pine-fir; NLGA.
  4. Hem-fir; WCLIB or WWPA.
  5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
  6. .
- C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

- D. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

## 2.5 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
  - 1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

## 2.6 METAL FRAMING ANCHORS

- A. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A653/A653M, G60 (Z180) coating designation.
  - 1. Use for interior locations unless otherwise indicated.
- B. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A653/A653M; Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 (Z550) coating designation; and not less than 0.036 inch (0.9 mm) thick.
  - 1. Use for wood-preservative-treated lumber and where indicated.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry accurately to other construction. Locate furring, nailers, blocking, [grounds, ]and similar supports to comply with requirements for attaching other construction.
- C. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels.
- D. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- E. Do not splice structural members between supports unless otherwise indicated.
- F. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches (406 mm) o.c.
- G. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches (2438 mm) o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
  2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches (2438 mm) o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal (38-mm actual) thickness.
  3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. (9.3 sq. m) and to solidly fill space below partitions.
  4. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet (6 m) o.c.
- H. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- I. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
1. Use inorganic boron for items that are continuously protected from liquid water.
  2. Use copper naphthenate for items not continuously protected from liquid water.
- J. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- K. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
  2. ICC-ES evaluation report for fastener.
- L. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.
- 3.2 INSTALLATION OF WOOD BLOCKING AND NAILER
- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

- C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches (38 mm) wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

### 3.3 INSTALLATION OF WOOD FURRING

- A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.
- B. Furring to Receive Plywood or Hardboard Paneling: Install 1-by-3-inch nominal- (19-by-63-mm actual-) size furring horizontally and vertically at 24 inches (610 mm) o.c.
- C. Furring to Receive Plaster Lath: Install 1-by-2-inch nominal- (19-by-38-mm actual-) size furring vertically at 16 inches (406 mm) o.c.

END OF SECTION 061053

## SECTION 062013 - EXTERIOR FINISH CARPENTRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Exterior wood trim.
  - 2. Custom fabricated exterior wood guardrails

#### 1.3 ACTION SUBMITTALS

- A. Product Data: Provide complete shop drawings (plans, elevations, details, attachment) for wood guardrails for review and approval by architect prior to fabrication.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation.
  - 1. Protect materials from weather by covering with waterproof sheeting, securely anchored.
  - 2. Provide for air circulation around stacks and under coverings.

#### 1.5 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecast weather conditions permit work to be performed and at least one coat of specified finish can be applied without exposure to rain, snow, or dampness.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
  - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with applicable rules of any rules-writing agency certified by the American Lumber Standard Committee's (ALSC) Board of Review. Grade lumber by an agency certified by the ALSC's Board of Review to inspect and grade lumber under the rules indicated.
  - 1. Factory mark each piece of lumber with grade stamp of inspection agency, indicating grade, species, moisture content at time of surfacing, and mill.
  - 2. For exposed lumber, mark grade stamp on end or back of each piece[, or omit grade stamp and provide certificates of grade compliance issued by inspection agency.
- B. Softwood Plywood: DOC PS 1.
- C. Hardboard: ANSI A135.4.

### 2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Water-Repellent Preservative Treatment by Nonpressure Process: AWPA N1; dip, spray, flood, or vacuum-pressure treatment.
  - 1. Preservative Chemicals: 3-iodo-2-propynyl butyl carbamate (IPBC), combined with an insecticide containing chloropyrifos (CPF).
  - 2. Use chemical formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants in solution to distinguish treated material from untreated material.
- B. Preservative Treatment by Pressure Process: AWPA U1; Use Category [UC3a] [UC3b].
  - 1. Kiln dry lumber and plywood after treatment to a maximum moisture content of 19 and 18 percent, respectively.
  - 2. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
  - 3. For exposed items indicated to receive transparent finish, do not use chemical formulations that contain colorants or that bleed through or otherwise adversely affect finishes.
  - 4. Do not use material that is warped or does not comply with requirements for untreated material.
  - 5. Mark lumber with treatment-quality mark of an inspection agency approved by the ALSC's Board of Review.
    - a. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece.
  - 6. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
    - a. For exposed plywood indicated to receive a stained or natural finish, mark back of each piece.
  - 7. Application: Where indicated on Drawings.



## 2.3 EXTERIOR TRIM

- A. Lumber Trim for Painted Finish:
  - 1. Species and Grade: Redwood; RIS Clear All Heart.
  - 2. Maximum Moisture Content: 15 percent with at least 85 percent of shipment at 12 percent or less.
  - 3. Finger Jointing: Not allowed.
  - 4. Face Surface: Surfaced (smooth).
- B. Lumber Trim for Painted Finish:
- C. Moldings for Painted Finish: MMPA WM 4, N-grade wood moldings, without finger jointing, made from kiln-dried stock to patterns included in MMPA's "WM/Series Softwood Moulding Patterns."
  - 1. Species: Redwood.
  - 2. Finger Jointing: Not allowed.
- D. MDO Trim: Exterior Grade B-B MDO plywood.
- E. Primed Hardboard Trim: ANSI A135.6, primed with manufacturer's standard exterior primer. Recommended by manufacturer for exterior use.

## 2.4 MISCELLANEOUS MATERIALS

- A. Fasteners for Exterior Finish Carpentry: Provide nails or screws, in sufficient length to penetrate not less than 1-1/2 inches (38 mm) into wood substrate.
  - 1. For redwood, provide stainless steel fasteners.
  - 2. For prefinished items, provide matching prefinished aluminum fasteners where face fastening is required.
  - 3. For pressure-preservative-treated wood, provide stainless steel fasteners.
  - 4. For applications not otherwise indicated, provide stainless steel fasteners.
- B. Wood Glue: Waterproof resorcinol glue recommended by manufacturer for exterior carpentry use.
- C. Insect Screening for Soffit Vents: Copper mesh, sized to fit opening.
- D. Sealants: Latex, complying with ASTM C834 Type OP, Grade NF and applicable requirements in Section 079200 "Joint Sealants," and recommended by sealant and substrate manufacturers for intended application.

## 2.5 FABRICATION

- A. Back out or kerf backs of standing and running trim wider than 5 inches (125 mm), except members with ends exposed in finished work.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Prime lumber and moldings to be painted, including both faces and edges, unless factory primed.
  - 1. Cut to required lengths and prime ends.
  - 2. Comply with requirements in Section 099113 "Exterior Painting."

### 3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
- B. Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials.
  - 1. Use concealed shims where necessary for alignment.
  - 2. Scribe and cut exterior finish carpentry to fit adjoining work.
  - 3. Refinish and seal cuts as recommended by manufacturer.
  - 4. Install to tolerance of 1/8 inch in 96 inches (3 mm in 2438 mm) for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch (0.8-mm) maximum offset for flush installation and 1/16-inch (1.5-mm) maximum offset for reveal installation.
  - 5. Coordinate exterior finish carpentry with materials and systems in or adjacent to it.
  - 6. Provide cutouts for mechanical and electrical items that penetrate exterior finish carpentry.

### 3.4 INSTALLATION OF STANDING AND RUNNING TRIM

- A. Install flat-grain lumber with bark side exposed to weather
- B. Install trim with minimum number of joints as is practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches (610 mm) long, except where necessary.
  - 1. Use scarf joints for end-to-end joints.
  - 2. Stagger end joints in adjacent and related members.
- C. Fit exterior joints to exclude water.

1. Cope at returns and miter at corners to produce tight-fitting joints, with full-surface contact throughout length of joint.
  2. Plane backs of casings to provide uniform thickness across joints, where necessary for alignment.
- D. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.

### 3.5 ADJUSTING

- A. Replace exterior finish carpentry that is damaged or does not comply with requirements.
1. Exterior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.
- B. Adjust joinery for uniform appearance.

### 3.6 CLEANING

- A. Clean exterior finish carpentry on exposed and semiexposed surfaces.
- B. Touch up factory-applied finishes to restore damaged or soiled areas.

### 3.7 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 062013

## SECTION 079200

### JOINT SEALANTS

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Silicone joint sealants.
  - 2. Urethane joint sealants.
- B. Related Requirements:

##### 1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

##### 1.3 ACTION SUBMITTALS

- A. Product Data:
  - 1. Joint-sealants.
  - 2. Joint sealant backing materials.
- B. Samples for Initial Selection: Manufacturer's standard color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
  - 3. Joint-sealant formulation.
  - 4. Joint-sealant color.

##### 1.4 INFORMATIONAL SUBMITTALS

- A. Test and Evaluation Reports:
  - 1. Preconstruction Laboratory Test Schedule: Include the following information for each joint sealant and substrate material to be tested:
    - a. Joint-sealant location and designation.
    - b. Manufacturer and product name.
    - c. Type of substrate material.
    - d. Proposed test.

- e. Number of samples required.
    - 2. Preconstruction Laboratory Test Reports: For each joint sealant and substrate material to be tested from sealant manufacturer, indicating the following:
      - a. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
      - b. Interpretation of test results and written recommendations for primers and substrate preparation are needed for adhesion.
    - 3. Preconstruction Field-Adhesion-Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on testing specified in "Preconstruction Testing" Article.
  - B. Field Quality-Control Submittals:
    - 1. Field-Adhesion-Test Reports: For each sealant application tested.
  - C. Sample warranties.
- 1.5 CLOSEOUT SUBMITTALS
- A. Warranty Documentation:
    - 1. Manufacturers' special warranties.
    - 2. Installer's special warranties.
- 1.6 QUALITY ASSURANCE
- A. Qualifications:
    - 1. Installers: Authorized representative who is trained and approved by manufacturer.
    - 2. Testing Agency: Qualified in accordance with ASTM C1021 to conduct the testing indicated.
- 1.7 MOCKUPS
- A. Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.
- 1.8 PRECONSTRUCTION TESTING
- A. Preconstruction Laboratory Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
    - 1. Adhesion Testing: Use ASTM C794 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.

2. Compatibility Testing: Use ASTM C1087 to determine sealant compatibility when in contact with glazing and gasket materials.
- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:
1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
  2. Conduct field tests for each kind of sealant and joint substrate.
  3. Notify Architect seven days in advance of dates and times when test joints will be erected.
    - a. Test Method: Test joint sealants in accordance with Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
      - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
  4. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
  5. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

## 1.9 FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C)].
  2. When joint substrates are wet.
  3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

## 1.10 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Five years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 JOINT SEALANTS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

### 2.2 SILICONE JOINT SEALANTS

- A. Silicone, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
  - a. Dow Corning Corporation.
  - b. Sika Corporation.
  - c. Tremco Incorporated.

### 2.3 URETHANE JOINT SEALANTS

- A. Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
  - a. BASF Corporation; Construction Systems.
  - b. Sherwin-Williams Company (The).
  - c. Tremco Incorporated.

### 2.4 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

## 2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Concrete.
  - 3. Remove laitance and form-release agents from concrete.
  - 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
    - a. Metal.
    - b. Glass.



- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealant from surfaces adjacent to joints.
  - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  - 3. Provide concave joint profile in accordance with Figure 8A in ASTM C1193 unless otherwise indicated.
    - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

### 3.4 FIELD QUALITY CONTROL

#### A. Tests and Inspections:

1. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
  - a. Extent of Testing: Test completed and cured sealant joints as follows:
    - 1) Perform 10 tests for the first 100 ft. of joint length for each kind of sealant and joint substrate.
  - b. Test Method: Test joint sealants in accordance with Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
2. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

#### B. Prepare test and inspection reports.

### 3.5 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.6 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 079200

## SECTION 080152

### HISTORIC TREATMENT OF WOOD WINDOWS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:
  1. Wood window repair.
  2. Reglazing.
  3. Window hardware repair, refinishing, and replacement.

\*\* Note: Refer to the window schedule in the drawings for detailed direction.

- B. Related Sections:
  1. Preservation Briefs: Appendix.

##### 1.3 DEFINITIONS

- A. General: See Division 02 Section "Historic Treatment Procedures" for other definitions.
- B. Wood Window Component Terminology: As identified in AWI's "Architectural Woodwork Quality Standards." Wood window components for historic treatment work include the following classifications:
  1. Frame Components: Head, jamb, and sill.
  2. Sash Components: Stile and rails, parting bead, ogee lugs, stop, and muntins.
  3. Exterior Trim: Exterior casing, corner blocks, and sill.
  4. Interior Trim: Casing, stool, corner blocks, and apron.
- C. Design Reference Sample: A sample that represents Architect's pre-bid selection of work to be matched; it may be existing work or specially produced for Project.
- D. Glazing: Includes glass, glazing points, glazing tapes, glazing sealants, and glazing compounds.
- E. Window: Includes window frame, sash, transoms, and screens, unless otherwise indicated by the context.

##### 1.4 SUBMITTALS

- A. Qualification Data: for contract performing Historic treatment of wood windows scope, provide qualification information, including references, demonstrating required qualifications as stipulated in this specification.

- B. Product Data:
  - 1. Submit technical information, details and repair recommendations for each wood window.
- C. Shop Drawings: Elevations and details; show location of each item, identify repairs, components used, and method of attachment.

#### 1.5 QUALITY ASSURANCE

- A. All work shall comply with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (Latest Edition).
- B. All work shall comply with Preservation Brief #9: Repair of Historic Wooden Windows (Refer to Appendix).
- C. Wood Window Standard: NWWDA I.S.2; except where more stringent requirements are indicated.
- D. Mockups: Build window restoration mockups to demonstrate aesthetic effects and set quality standards for materials and execution. Prepare mockups so they are inconspicuous or reversible.
  - 1. Locate mockups on the building where directed by Architect.
  - 2. Wood Window Repair: Prepare one entire window unit to serve as mockup to demonstrate sample repairs of wood window members including frame, sash, glazing, and hardware.
  - 3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- E. WI Quality Standard: Comply with WI's "Manual of Millwork" for construction, finishes, grades of wood windows, and other requirements.
- F. Qualifications:
  - 1. Manufacturer shall have five (5) years of experience for restorations and fabrications similar in type and scope to this project.
  - 2. Installer shall have five (5) years of experience for installations similar in scope to this project.

#### 1.6 PROJECT CONDITIONS

- A. Environmental Conditions: Comply with manufacturer's instructions for window installation under anticipated weather conditions.
- B. Fit work to actual construction. Take field measurements before fabricating woodwork.
- C. Coordinate window repair work with other work to avoid damage.

#### 1.7 SEQUENCING AND SCHEDULING

- 1. Stamp each window frame with permanent opening-identification number in inconspicuous location.
- 2. Allow installation of temporary protection and security at window openings.
- 3. Clean surfaces.
- 4. General Wood-Repair Sequence:
  - a. Remove loose flaky paint to sound, smooth substrate.

- b. Rack frames slightly; inject adhesive into mortise and tenon joints.
  - c. Repair wood by consolidation, member replacement, partial member replacement, and patching.
  - d. Sand, prime, fill, sand again, and prime surfaces again for refinishing according to create smooth flat substrate for final paint finish.
  - e. The presence of lead-based paint shall not alter the paint prep requirements. The contractor shall be responsible for HAZMAT remediation (if lead based paint is present) and shall comply with all federal, state, and local provisions for the treatment of hazardous materials.
- 5. Repair and refinish original hardware. Replace missing hardware to match.
  - 6. Install glazing.
  - 7. Prime and repaint sashes, frames, and trim.
  - 8. Reinstall units.
  - 9. Install remaining hardware and add weather stripping.

## 1.8 DELIVERY, STORAGE AND HANDLING

- A. Storage and Protection:
  - 1. Store materials under cover, off the ground, and supported to prevent warpage.
  - 2. Store material in a dry, covered area protected from the weather.

## PART 2 - PRODUCTS

### 2.1 REPLACEMENT WOOD MATERIALS

- A. Wood (for replacement members): Clear fine-grained lumber; kiln dried to a moisture content of 6 to 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch (0.8 mm) deep by 2 inches (51 mm) wide.
  - 1. Species: Match species of existing historic windows.

### 2.2 WOOD REPAIR MATERIALS

- A. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated due to weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood.
  - 1. Products: Subject to compliance with requirements, provide the following:
    - a. Abatron, Inc.; LiquidWood.
- B. Wood-Patching Compound: Two-part epoxy-resin wood-patching compound; knife-grade formulation as recommended by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated due to weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge.
  - 1. Products: Subject to compliance with requirements, provide the following:
    - a. Abatron, Inc.; WoodEpoxy.

### 2.3 GLAZING MATERIALS

- A. Glass for replica historic windows: Light Restoration Glass by Bendheim, or equal.

- B. Glass for non-original windows: Standard float glass.
- C. Tempered or laminated as required by code.

## 2.4 WINDOW HARDWARE

- A. General: Clean, repair, and reuse historic hardware. Where missing, match historic hardware of extant windows - in kind.
- B. All double-hung units to utilize sash lift, sash lock, pulleys, sash cords, and counterweights to match historic.
- C. All casement units to utilize hinges and sash locks to match historic.
- D. All hopper and awning units to utilize hinges, stops/guides, and sash locks to match historic.
- E. Each window unit may contain more than one individual unit function (double-hung, casement, hopper, awning, etc.). Hardware sets for each overall window shall include all required hardware to make each sash that comprises the entire unit fully operational to match the historic condition.

## 2.5 MISCELLANEOUS MATERIALS

- A. Cleaning Materials:
  - 1. Detergent Solution: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium polyphosphate, 1/2 cup (125 mL) of laundry detergent that contains no ammonia, 5 quarts (5 L) of 5 percent sodium hypochlorite bleach, and 15 quarts (15 L) of warm water for each 5 gal. (20 L) of solution required.
  - 2. Mildewcide: Provide commercial proprietary mildewcide or a solution prepared by mixing 1/3 cup (80 mL) of household detergent that contains no ammonia, 1 quart (1 L) of 5 percent sodium hypochlorite bleach, and 3 quarts (3 L) of warm water.
- B. Adhesives: Wood adhesives for exterior exposure, with minimum 15- to 45-minute cure at 70 deg F (21 deg C), in gunnable and liquid formulations as recommended by adhesive manufacturer for each type of repair.
- C. Fasteners: Fasteners of same basic metal as fastened metal unless otherwise indicated. Use metals that are noncorrosive and compatible with each material joined.
  - 1. Match existing fasteners in material and type of fastener unless otherwise indicated.
  - 2. Use concealed fasteners for interconnecting wood components.
  - 3. Use concealed fasteners for attaching items to other work unless exposed fasteners are the existing fastening method.
  - 4. For exposed fasteners, use Phillips-type machine screws of head profile flush with metal surface unless otherwise indicated.
  - 5. Finish exposed fasteners to match finish of metal fastened unless otherwise indicated.
- D. Anchors, Clips, and Accessories: Fabricate anchors, clips, and window accessories of aluminum, nonmagnetic stainless steel, or hot-dip zinc-coated steel complying with requirements in ASTM B 633 for SC 3 (Severe) service condition.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect adjacent materials from damage by historic treatment of wood windows.
- B. Examine existing window conditions for repair and refer to the Window Schedule.
- C. Clean existing wood windows of mildew, algae, moss, plant material, loose paint, grease, dirt, and other debris by scrubbing with bristle brush or sponge and detergent solution. Scrub mildewed areas with mildewcide. After cleaning, rinse thoroughly with fresh water. Allow to dry before repairing or painting.
- D. Condition replacement wood members and replacement windows to prevailing conditions at installation areas before installing.

### 3.2 HISTORIC TREATMENT PROCEDURES, GENERAL

- A. General: Have historic treatment of wood windows directed and performed by a qualified historic treatment specialist. Ensure that historic treatment specialist's field supervisors are present when historic treatment of wood windows begins and during its progress. In treating historic items, disturb them as minimally as possible and as follows:
  - 1. Apply each product according to manufacturer's written instructions unless otherwise indicated.
  - 2. Stabilize and repair wood windows to reestablish structural integrity and weather resistance while maintaining the existing form of each item.
  - 3. Repair items in place where possible and retain as much original material as possible.
  - 4. Replace or reproduce historic items where indicated or scheduled.
  - 5. Install temporary protective measures to protect wood window work that is indicated to be completed later.
  - 6. Repair or replace glazing putty as required.
- B. Mechanical Abrasion: Where mechanical abrasion is needed for the work, use only the gentlest mechanical methods, such as scraping and natural-fiber bristle brushing that will not abrade wood substrate, reducing clarity of detail. Do not use abrasive methods such as sanding, wire brushing, or power tools except as indicated as part of the historic treatment program and as approved by Architect.
- C. Repair and Refinish Existing Hardware: Dismantle window hardware; repair and refinish it to match finish samples. Replace missing hardware in-kind.
- D. Repair Wood Windows: Match existing materials and features, retaining as much original material as possible to perform repairs.
  - 1. Unless otherwise indicated, repair wood windows by consolidating, patching, splicing, or otherwise reinforcing wood with new wood matching existing wood or with salvaged, sound, original wood.
  - 2. Where indicated, repair wood windows by limited replacement matching existing material.
- E. Protection of Openings: Where sash or windows are indicated for removal, cover resultant openings with temporary enclosures so that openings are weathertight during repair period.
- F. Identify removed windows, sash, and members with numbering system corresponding to window locations to ensure reinstallation in same location. Key windows, sash, and members to Drawings showing location of each removed unit. Permanently stamp units in a location that will be concealed after reinstallation.

### 3.3 GLAZING

- A. Remove cracked and damaged glass and glazing materials from openings and prepare surfaces for reglazing.

### 3.4 WOOD WINDOW PATCH-TYPE REPAIR

- A. General: Patch and fill wood members that are damaged and exhibit depressions, holes, or similar voids, and that have limited rotted or decayed wood.
  - 1. Remove sash from windows before performing patch-type repairs at meeting or sliding surfaces unless otherwise indicated. Reglaze units prior to reinstallation.
  - 2. Verify that surfaces are sufficiently clean and free of paint residue prior to patching.
  - 3. Treat wood members with wood consolidant prior to application of patching compound. Coat wood surfaces by brushing, applying multiple coats until wood is saturated and refuses to absorb more. Allow treatment to harden before filling void with patching compound.
  - 4. Remove rotted or decayed wood down to sound wood.
- B. Apply wood-patching compound to fill depressions, nicks, cracks, and other voids created by removed or missing wood.
  - 1. Prime patch area with application of wood consolidant or manufacturer's recommended primer.
  - 2. Mix only as much patching compound as can be applied according to manufacturer's written instructions.
  - 3. Apply patching compound in layers as recommended by manufacturer until the void is completely filled.
  - 4. Finish patch surface to match contour of adjacent wood member. Sand patching compound smooth and flush, matching contour of existing wood member.
  - 5. Clean spilled compound from adjacent materials immediately.

### 3.5 FABRICATION

- A. Fabricate missing or severely damaged features at the direction of the Architect. Do not dispose of historic (original) pieces without prior authorization from the Architect.
- B. Fabrications shall exactly match historic originals in material, size, shape, finish, detailing, attachment, and appearance.

### 3.6 INSTALLATION

- A. Do not begin repair work until potentially damaging construction operations are complete in the installation area.
- B. Field Joinery: Comply with requirements of the woodworking standard for shop joinery.
- C. Make joints neatly, with uniform appearance.
- D. Install work in correct location, plumb and level, without rack or warp.
- E. Conceal all shims.



- F. Repair damage and defective work to eliminate visual and functional defects; where repair is not possible, replace work.
- G. Provide support and anchor, to allow proper sash operation.

### 3.7 ADJUSTMENT

- A. Adjust existing and replacement operating sash, screens, hardware, weather stripping, and accessories for a tight fit at contact points and weather stripping for weathertight closure. Lubricate hardware and moving parts.

### 3.8 CLEANING AND PROTECTION

- A. Protect window surfaces from contact with contaminating substances resulting from construction operations. Monitor window surfaces adjacent to and below exterior concrete and masonry during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances contact window surfaces, remove contaminants immediately according to glass manufacturer's written recommendations.
- B. Clean exposed surfaces immediately after historic treatment of wood windows. Avoid damage to coatings and finishes. Remove excess sealants, glazing and patching materials, dirt, and other substances.
- C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- D. Prior to substantial completion all windows shall be washed inside and out.
- E. Remove all overpaint from glazing and hardware.

END OF SECTION 080152

## SECTION 081433

### STILE AND RAIL WOOD DOORS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. Exterior stile and rail wood doors.
  - 2. Factory fitting stile and rail wood doors to frames and factory machining for hardware.
  - 3. Factory priming.

##### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

##### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product, including the following:
  - 1. Details of construction and glazing.
  - 2. Door frame construction.
  - 3. Factory-machining criteria.
  - 4. Factory-priming specifications.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each type of door; construction details not covered in Product Data, including those for stiles, rails, panels, and moldings (sticking); and other pertinent data, including the following:
  - 1. Door schedule indicating door and frame location, type, size, fire protection rating, and swing.
  - 2. Door elevations, dimensions and location of hardware, lite locations, and glazing thickness.
  - 3. Details of frame for each frame type, including dimensions and profile.
  - 4. Details of electrical raceway and preparation for electrified hardware, access control systems, and security systems.
  - 5. Dimensions and locations of mortises and holes for hardware.
  - 6. Clearances and undercuts.
  - 7. Requirements for veneer matching.
  - 8. Doors to be factory primed and application requirements.

C. Samples for Verification:

1. For each wood species and transparent finish, provide set of three Samples showing typical range of color and grain to be expected in finished Work.
2. Corner sections of doors, approximately 8 by 10 inches (200 by 250 mm), with door faces and edges representing actual materials to be used.

1.5 CLOSEOUT SUBMITTALS.

- A. Special warranties.
- B. Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Certification: Licensed participant in AWI's Quality Certification Program.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.
- B. Package doors individually in opaque plastic bags or cardboard cartons.
- C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.8 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature and relative humidity levels designed for building occupants for the remainder of construction period.

1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace doors and frames that fail in materials or workmanship within specified warranty period.
  1. Failures include, but are not limited to, the following:
    - a. Delamination of veneer.
    - b. Warping (bow, cup, or twist) more than 1/4 inch (6.4 mm) in a 42-by-84-inch (1067-by-2134-mm) section.
    - c. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch (0.25 mm in a 76.2-mm) span.
  2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors and frames.
  3. Warranty shall be in effect during specified period of time from date of Substantial Completion.
  4. Warranty Period for Exterior Doors: Five years.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Source Limitations: Obtain stile and rail wood doors from single manufacturer.
- B. Exterior Door Thermal Transmittance: Maximum whole fenestration product U-factor of 0.25 (1.41), according to AAMA 1503, ASTM E1423, or NFRC 100.

### 2.2 MATERIALS

- A. Use only materials that comply with referenced standards and other requirements specified.
  - 1. Assemble exterior doors, including components, with wet-use adhesives complying with ASTM D5572 for finger joints and with ASTM D5751 for joints other than finger joints.
  - 2. Assemble interior doors, including components, with either dry-use or wet-use adhesives complying with ASTM D5572 for finger joints and with ASTM D5751 for joints other than finger joints.
- B. Panel Products: Any of the following unless otherwise indicated:
  - 1. Hardboard complying with ANSI A135.4.
- C. Safety Glass: Provide laminated or tempered products complying with testing requirements in 16 CFR 1201, for Category II materials, unless those of Category I are expressly indicated and permitted .

### 2.3 EXTERIOR STILE AND RAIL WOOD DOORS

- A. Exterior Stile and Rail Wood Doors: Exterior custom doors complying with the AWI, AWMAC, and WI's Architectural Woodwork Standards, and with other requirements specified.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. T.M. Cobb
    - b. Or Approved Equal.
  - 2. Performance Grade: WDMA I.S. 6A As indicated on Drawings.
  - 3. Architectural Woodwork Standards Grade: Custom.
  - 4. Panel Designs: Match historic panel design in-kind.
    - a. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval.
    - b. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
  - 5. Finish: Paint Grade.
  - 6. Wood Species and Cut for Transparent Finish: Match existing.
  - 7. Stile and Rail Widths: As indicated on Drawings.
    - a. Stiles, Top and Intermediate Rails: As indicated on Drawings, to match historic.
    - b. Bottom Rails: As indicated on Drawings, to match historic.

8. Raised-Panel Thickness: As indicated on Drawings, to match historic.
9. Molding Profile (Sticking): As indicated on Drawings, to match historic.
10. Glass: Light Restoration Glass by Bendheim.
11. Mark, label, or otherwise identify stile and rail wood doors as complying with WDMA I.S. 6A and grade specified.

## 2.4 STILE AND RAIL WOOD DOOR FABRICATION

- A. Fabricate stile and rail wood doors in sizes indicated for field fitting.
- B. Factory machine doors for hardware that is not surface applied.
  1. Locate hardware to comply with DHI-WDHS-3.
  2. Comply with final hardware schedules, door frame Shop Drawings, BHMA-156.115-W, and hardware templates.
  3. For doors scheduled to receive electrified locksets, provide factory-installed raceway and wiring to accommodate specified hardware.
  4. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before factory machining.
- C. Glazed Openings: Trim openings indicated for glazing with solid-wood moldings, with one side removable. Miter wood moldings at corner joints.
- D. Transom and Side Panels:
  1. Fabricate matching panels with same construction, exposed surfaces, and finish as specified for associated doors.
  2. Finish bottom edges of transoms and top edges of rabbeted doors same as door stiles.
  3. Fabricate door and transom panels with full-width, solid-lumber meeting rails.
  4. Provide factory-installed spring bolts for concealed attachment into jambs of metal door frames.
- E. Exterior Doors: Factory treat exterior doors with water-repellent preservative after fabrication has been completed but before shop priming.
  1. Comply with WDMA I.S. 4.
  2. Flash top of outswinging doors with manufacturer's standard metal flashing.

## 2.5 FACTORY PRIMING

- A. faces, all four edges, edges of cutouts, and mortises with one coat of wood primer specified in Section 099113 "Exterior Painting."

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine doors and installed door frames, with Installer present, before hanging doors.
  1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.

2. Reject doors with defects.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

A. Install doors and frames to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

B. Job-Fitted Doors:

1. Align and fit doors in frames with uniform clearances and bevels as indicated below.

a. Do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors.

2. Machine doors for hardware.

3. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.

4. Clearances:

a. Provide 1/8 inch (3.2 mm) at heads, jambs, and between pairs of doors.

b. Provide 1/2 inch (13 mm) from bottom of door to top of decorative floor finish or covering unless otherwise indicated on Drawings.

c. Where threshold is shown on Drawings or scheduled, provide 1/4 inch (6.4 mm) from bottom of door to top of threshold unless otherwise indicated.

C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

D. Factory- Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

### 3.3 FIELD QUALITY CONTROL

A. Repair or remove and replace installations where inspections indicate that they do not comply with specified requirements.

B. Reinspect repaired or replaced installations to determine if replaced or repaired door installations comply with specified requirements.

C. Prepare and submit separate inspection report for each fire-rated door assembly indicating compliance with each item listed in NFPA 80.

### 3.4 ADJUSTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081433

## SECTION 085200

### WOOD WINDOWS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section includes custom-fabricated wood windows.

##### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 2. Review, discuss, and coordinate the interrelationship of wood windows with other exterior wall components. Include provisions for anchoring, flashing, weeping, sealing perimeters, and protecting finishes.
  - 3. Review and discuss the sequence of work required to construct a watertight and weathertight exterior building envelope.
  - 4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

##### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes for wood windows.
- B. Shop Drawings: For custom fabricated wood windows.
  - 1. Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.
- C. Samples: For each exposed product and for each color specified, 2 by 4 inches (50 by 100 mm) in size.

- D. Samples for Verification: For wood windows and components required, prepared on Samples of size indicated below:
  - 1. Exposed Finishes: 2 by 4 inches (50 by 100 mm).
  - 2. Exposed Hardware: Full-size units.
- E. Product Schedule: For wood windows. Use same designations indicated on Drawings.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For each type of wood window, for tests performed by a qualified testing agency.
- C. Field quality-control reports.
- D. Sample Warranties: For manufacturer's warranties.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An installer acceptable to wood window manufacturer for installation of units required for this Project.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
  - 1. Build mockup of typical wall area as shown on Drawings.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### 1.7 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace wood windows that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Failure to meet performance requirements.
    - b. Structural failures including excessive deflection, water leakage, and air infiltration.
    - c. Faulty operation of movable sash and hardware.
    - d. Deterioration of materials and finishes beyond normal weathering.
    - e. Failure of insulating glass.
  - 2. Warranty Period:
    - a. Window: 10 years from date of Substantial Completion.
    - b. Glazing Units: 10 years from date of Substantial Completion.



## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Source Limitations: Obtain wood custom fabricated windows from single source from single manufacturer.

### 2.2 WINDOW PERFORMANCE REQUIREMENTS

- A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.

### 2.3 WOOD WINDOWS

- A. Wood Windows: Custom historic replications.

- 1. T.M. Cobb.
- 2. Or equal.

- B. Operating Types: Provide the following operating types in locations indicated on Drawings:

- 1. Casement.
- 2. Single hung.
- 3. Double hung.
- 4. Fixed.
- 5. Hopper.

- C. Frames and Sashes: Fine-grained wood lumber complying with AAMA/WDMA/CSA 101/I.S.2/A440; kiln dried to a moisture content of not more than 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch (0.8 mm) deep by 2 inches (51 mm) wide; water-repellent preservative treated.

- 1. Exterior Finish: Unfinished wood.
  - a. Exposed Unfinished Wood Surfaces: Manufacturer's standard paint-grade species.

- D. Glass: Clear annealed glass, ASTM C1036, Type 1, Class 1, q3.

- 1. Kind: Fully tempered where indicated on Drawings.

- E. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.

- F. Hardware, General: Provide custom hardware to match historic fabricated from solid brass, or other corrosion-resistant material compatible with adjacent materials; designed to smoothly operate, tightly close, and securely lock windows, and sized to accommodate sash weight and dimensions.

1. Exposed Hardware Color and Finish: As selected by Architect from manufacturer's full range..

G. Projected Window Hardware:

1. Hinges: Match historic.
2. Single-Handle Locking System: Match historic.
3. Limit Devices: Where applicable, match historic.

H. Hung Window Hardware:

1. Counterbalancing Mechanism: Match historic. Complying with AAMA 902, concealed, of size and capacity to hold sash stationary at any open position.
2. Locks and Latches: Match historic. Allow unobstructed movement of the sash across adjacent sash in direction indicated and operated from the inside only.

- I. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.

- J. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.

1. Exposed Fasteners: Do not use exposed fasteners to greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

## 2.4 INSECT SCREENS

- A. General: Custom fabricate wood framed insect screens to match historic where indicated on drawings.

- B. Copper Wire Fabric: 18-by-16 (1.1-by-1.3-mm) mesh of 0.011-inch- (0.28-mm-) diameter, coated aluminum wire.

1. Wire-Fabric Finish: Natural (unfinished).

## 2.5 FABRICATION

- A. Custom fabricate wood windows in sizes indicated. Include a complete system for installing and anchoring windows.

- B. Glaze wood windows in the factory.

- C. Weather strip each operable sash to provide weathertight installation.

- D. Mullions: Windows shall be custom-fabricated true divided light windows to match historic in-kind. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.
- C. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight window installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E2112.
- B. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

### 3.3 FIELD QUALITY CONTROL

- A. Windows will be considered defective if they do not pass tests and inspections.

### 3.4 ADJUSTING, CLEANING, AND PROTECTION

- A. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.
- B. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
  - 1. Keep protective films and coverings in place until final cleaning.
- C. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.
- D. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written instructions.

END OF SECTION 085200

## SECTION 087100 - DOOR HARDWARE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
  - 1. Swinging doors.
- B. Door hardware includes, but is not necessarily limited to, the following:
  - 1. Mechanical door hardware.
- C. Related Sections:
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
  - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
  - 2. ICC/IBC - International Building Code.
  - 3. NFPA 70 - National Electrical Code.
  - 4. NFPA 101 - Life Safety Code.
  - 5. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
  - 1. ANSI/BHMA Certified Product Standards - A156 Series.
  - 2. ANSI/UL 294 - Access Control System Units.
  - 3. UL 305 - Panic Hardware.
  - 4. ANSI/UL 437- Key Locks.

#### 1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
  2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
  3. Content: Include the following information:
    - a. Type, style, function, size, label, hand, and finish of each door hardware item.
    - b. Manufacturer of each item.
    - c. Fastenings and other pertinent information.
    - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    - e. Explanation of abbreviations, symbols, and codes contained in schedule.
    - f. Mounting locations for door hardware.
    - g. Door and frame sizes and materials.
    - h. Warranty information for each product.
  4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- D. Informational Submittals:
1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.
- 1.4 QUALITY ASSURANCE
- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
  - B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).
  - C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

- D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
  - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
  - 1. Function of building, purpose of each area and degree of security required.
  - 2. Plans for existing and future key system expansion.
  - 3. Requirements for key control storage and software.
  - 4. Installation of permanent keys, cylinder cores and software.
  - 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
  - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
  - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
  - 3. Review sequence of operation narratives for each unique access controlled opening.
  - 4. Review and finalize construction schedule and verify availability of materials.
  - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

#### 1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

#### 1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
  - 1. Structural failures including excessive deflection, cracking, or breakage.
  - 2. Faulty operation of the hardware.
  - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
  - 1. Five years for exit hardware.
  - 2. Twenty five years for manual overhead door closer bodies.

#### 1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

## PART 2 - PRODUCTS

### 2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
  - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

### 2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
  - 1. Quantity: Provide the following hinge quantity:
    - a. Two Hinges: For doors with heights up to 60 inches.
    - b. Three Hinges: For doors with heights 61 to 90 inches.
    - c. Four Hinges: For doors with heights 91 to 120 inches.
    - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
  - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
    - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
    - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
  - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
    - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
    - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
  - 4. Hinge Options: Comply with the following:
    - a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
  - 5. Manufacturers:
    - a. Bommer Industries (BO).
    - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).



## 2.3 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
- C. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
  - 1. Threaded mortise cylinders with rings and cams to suit hardware application.
  - 2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
  - 3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
  - 4. Tubular deadlocks and other auxiliary locks.
  - 5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
  - 6. Keyway: Manufacturer's Standard.
- D. Keying System: Each type of lock and cylinders to be factory keyed.
  - 1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
  - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
  - 3. Existing System: Field verify and key cylinders to match Owner's existing system.
- E. Key Quantity: Provide the following minimum number of keys:
  - 1. Change Keys per Cylinder: Two (2)
  - 2. Master Keys (per Master Key Level/Group): Five (5).
  - 3. Construction Keys (where required): Ten (10).
- F. Construction Keying: Provide construction master keyed cylinders.
- G. Key Registration List (Bitting List):
  - 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
  - 2. Provide transcript list in writing or electronic file as directed by the Owner.

## 2.4 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
  - 1. Manufacturers:
    - a. Corbin Russwin Hardware (RU) - ML2000 Series.

## 2.5 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
  2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
  3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
  4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:
1. Strikes for Mortise Locks and Latches: BHMA A156.13.
  2. Strikes for Bored Locks and Latches: BHMA A156.2.
  3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
  4. Dustproof Strikes: BHMA A156.16.

## 2.6 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
  2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
  3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
  4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
  5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
    - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
    - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
  6. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.

7. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
  8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
  9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
  10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
1. Manufacturers:
    - a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
    - b. Sargent Manufacturing (SA) - 80 Series.

## 2.7 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
  2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
  3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
  4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
  5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
  6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Manufacturers:
    - a. Corbin Russwin Hardware (RU) - DC6000 Series.

- b. Norton Door Controls (NO) - 7500 Series.

## 2.8 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
  - 1. Manufacturers:
    - a. Hiawatha, Inc. (HI).
    - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

## 2.9 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
  - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
  - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
  - 1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
  - 2. Reese Enterprises, Inc. (RE).

## 2.10 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

## 2.11 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

### 3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

### 3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
  - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
  - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

### 3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

### 3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

### 3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

### 3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

### 3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handling and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

- B. Manufacturer's Abbreviations:

1. MK - McKinney
2. OT - Other
3. RO - Rockwood
4. RU - Corbin Russwin
5. YA - Yale
6. PE - Pemko

#### **Hardware Sets**

##### **Set: 1.0**

Doors: D1.06, D2.04

3 Hinge, Full Mortise, Hvy Wt	T4A3786 NRP	US10BE	MK
1 Rim Exit Device, Exit Only	ED5200 EO M110	613E	RU
1 Exit Device Trim	LC MO-NTT610-NR	613E	YA
1 Cylinder	Match Existing		OT
1 Surface Closer	DC6200 A3	613E	RU
1 Threshold	171D or Per Sill Detail		PE
1 Head and Jamb Gasketing	303DS		PE
1 Rain Guard	346D		PE

1 Sweep	18062DNB		PE
1 Hardware	Reuse remaining		OT

**Set: 2.0**

Doors: D2.03

3 Hinge, Full Mortise, Hvy Wt	T4A3786 NRP	US10BE	MK
1 Rim Exit Device, Exit Only	ED5200 EO M110	613E	RU
1 Surface Closer	DC6200 A3	613E	RU
1 Threshold	171D or Per Sill Detail		PE
1 Head and Jamb Gasketing	303DS		PE
1 Rain Guard	346D		PE
1 Sweep	18062DNB		PE
1 Hardware	Reuse remaining		OT

**Set: 3.0**

Doors: D1.01, D1.02, D1.03, D1.04, D1.05, D1.07, D1.08, D1.10, D1.11, D1.12, D1.13, D1.17, D2.01, D2.02

1 Hardware	Reuse existing		OT
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**Set: 4.0**

Doors: D1.14

3 Historic Replica Hinges	House of Antique Hardware: Period Hardware : Colonial / Arts & Crafts 4" Solid Brass Door Hinge with Ball Finials	613	OT
1 Entrance Lock	ML2054 SPAR MSR LC	613E	RU
1 Cylinder	Match Existing		OT
1 Door Stop/Holder	495	BLK	RO
1 Threshold	171D or Per Sill Detail		PE
1 Head and Jamb Gasketing	303DS		PE
1 Rain Guard	346D		PE
1 Sweep	18062DNB		PE

**Set: 5.0**

Doors: D1.16

3 Historic Replica Hinges	House of Antique Hardware: Period Hardware : Colonial / Arts & Crafts 4" Solid Brass Door Hinge with Ball Finials	613	OT
1 Entrance Lock	ML2054 SPAR MSR LC	613E	RU
1 Cylinder	Match Existing		OT
1 Door Stop/Holder	495	BLK	RO



**Set: 6.0**

Doors: D.109, D1.15

6 Historic Replica Hinges	House of Antique Hardware: Period Hardware : Colonial / Arts & Crafts 4" Solid Brass Door Hinge with Ball Finials	613	OT
2 Surface Bolt	580	US10BE	RO
1 Entrance Lock	ML2054 SPAR MSR LC	613E	RU
1 Cylinder	Match Existing		OT
1 Door Stop/Holder	495	BLK	RO
1 Door Stop	456-RKW	US10BE	RO
1 Threshold	171D or Per Sill Detail		PE
1 Head and Jamb Gasketing	303DS		PE
1 Rain Guard	346D		PE
2 Sweep	18062DNB		PE

END OF SECTION 087100

## SECTION 092400 - CEMENT PLASTERING

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Exterior vertical plasterwork (stucco).
2. Exterior horizontal and nonvertical plasterwork (stucco).

#### 1.2 PREINSTALLATION MEETINGS

- ##### A. Preinstallation Conference: Conduct conference at Project site.

#### 1.3 ACTION SUBMITTALS

- ##### A. Product Data: For each type of product.

- ##### B. Samples: For each type of factory-prepared finish coat and for each color and texture specified.

- ##### C. Store materials inside under cover, and keep them dry and protected against damage from weather, moisture, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

- ##### D. Samples for Initial Selection: For each type of factory-prepared finish coat and for each color and texture specified.

- ##### E. Samples for Verification: For each type of factory-prepared finish coat and for each color and texture specified, 12 by 12 inches (305 by 305 mm), and prepared on rigid backing.

#### 1.4 QUALITY ASSURANCE

- ##### A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Build mockups for each substrate and finish texture indicated for cement plastering, including accessories. Provide mock-up demonstrating in-kind match to existing historic plaster.

a. Size: 100 sq. ft. (9 sq. m) in surface area.

2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.5 FIELD CONDITIONS

- A. Comply with ASTM C926 requirements.
- B. Exterior Plasterwork:
  - 1. Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.
  - 2. Apply plaster when ambient temperature is greater than 40 deg F (4.4 deg C).
  - 3. Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.
- C. Factory-Prepared Finishes: Comply with manufacturer's written recommendations for environmental conditions for applying finishes.

## PART 2 - PRODUCTS

### 2.1 METAL LATH

- A. Expanded-Metal Lath: ASTM C847, cold-rolled carbon-steel sheet with ASTM A653/A653M, G60 (Z180), hot-dip galvanized-zinc coating.
  - 1. Diamond-Mesh Lath: Self-furring, 3.4 lb/sq. yd. (1.8 kg/sq. m).
- B. Paper Backing: FS UU-B-790a, Type I, Grade B, Style 1a vapor-retardant paper.
  - 1. Provide paper-backed lath at exterior locations.

### 2.2 ACCESSORIES

- A. General: Comply with ASTM C1063, and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.

### 2.3 MISCELLANEOUS MATERIALS

- A. Water for Mixing and Finishing Plaster: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.
- B. Fasteners for Attaching Metal Lath to Substrates: ASTM C1063.
- C. Wire: ASTM A641/A641M, Class 1 zinc coating, soft temper, not less than 0.0475-inch (1.21-mm) diameter unless otherwise indicated.

### 2.4 PLASTER MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I.
  - 1. Color for Finish Coats: Gray.

- B. Lime: ASTM C206, Type S; or ASTM C207, Type S.
- C. Sand Aggregate: ASTM C897.
  - 1. Color for Job-Mixed Finish Coats: White.

## 2.5 PLASTER MIXES

- A. General: Comply with ASTM C926 for applications indicated.
- B. Base-Coat Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork as follows:
  - 1. Portland Cement Mixes:
    - a. Scratch Coat: For cementitious material, mix 1 part portland cement and 0 to 3/4 parts lime. Use 2-1/2 to 4 parts aggregate per part of cementitious material.
    - b. Inner Brown Coat: For cementitious material, mix 1 part portland cement and 0 to 3/4 parts lime. Use 3 to 5 parts aggregate per part of cementitious material, but not less than volume of aggregate used in scratch coat.
    - c. Outer Brown Coat: same as inner brown coat.
- C. Job-Mixed Finish-Coat Mixes:
  - 1. Portland Cement Mix: For cementitious materials, mix 1 part portland cement and 3/4 to 1-1/2 parts lime. Use 1-1/2 to 3 parts aggregate per part of cementitious material.
- D. Factory-Prepared Finish-Coat Mixes: For ready-mixed finish-coat plasters, comply with manufacturer's written instructions.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.
- B. Prepare smooth, solid substrates for plaster according to ASTM C926.

### 3.3 INSTALLING METAL LATH

- A. Metal Lath: Install according to ASTM C1063.
  - 1. On Solid Surfaces, Not Otherwise Furred: Install self-furring, diamond-mesh lath.

### 3.4 INSTALLING ACCESSORIES

- A. Install according to ASTM C1063 and at locations indicated on Drawings.
- B. Reinforcement for External (Outside) Corners:
  - 1. Install lath-type, external-corner reinforcement at exterior locations.
  - 2. Install cornerbead at interior locations.

### 3.5 PLASTER APPLICATION

- A. General: Comply with ASTM C926.
  - 1. Do not deviate more than plus or minus 1/4 inch in 10 feet (6 mm in 3 m) from a true plane in finished plaster surfaces when measured by a 10-foot (3-m) straightedge placed on surface.
  - 2. Finish plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground unless otherwise indicated. Where casing bead does not terminate plaster at metal frame, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.
  - 3. Provide plaster surfaces that are ready to receive field-applied finishes indicated.
- B. Bonding Compound: Apply on unit masonry and concrete substrates for direct application of plaster.
- C. Walls; Base-Coat Mixes for Use over Metal Lath: For scratch and brown coats, for three-coat plasterwork with 3/4-inch total thickness, as follows:
  - 1. Portland cement mixes.
- D. Ceilings; Base-Coat Mixes for Use over Metal Lath: For scratch and brown coats, for three-coat plasterwork and having 3/4-inch (19-mm) total thickness for metal lath on concrete, as follows:
  - 1. Portland cement mixes.
- E. Plaster Finish Coats: Apply to provide sand float finish to match historic plaster in-kind. Coordinate area of historic plaster for finish match with architect.

### 3.6 PLASTER REPAIRS

- A. Repair or replace work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

### 3.7 CLEANING AND PROTECTION

- A. Remove temporary protection and enclosure of other work after plastering is complete. Promptly remove plaster from door frames, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION 092400

## SECTION 099113 - EXTERIOR PAINTING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following new and previously painted exterior substrates:
  - 1. Plaster.
  - 2. Metal.
  - 3. Wood, including interior side of window sashes.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
  - 1. Submit Samples on rigid backing, 8 inches square.
  - 2. Label each Sample for location and application area.
- C. Product List: For each product indicated, include the following:
  - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
  - 2. VOC content.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Coating Maintenance Manual: Provide coating maintenance manual including area summary with finish schedule, area detail designating location where each product/color/finish was used, product data pages, material safety data sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

#### 1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Paint: provide 1 gallon of each material and color applied.

#### 1.6 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
    - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
    - b. Other Items: Architect will designate items or areas required.
  - 2. Final approval of color selections will be based on mockups.
    - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
  - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Handling: Deliver products to Project site in an undamaged condition in manufacturer's original sealed containers, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. Packaging shall bear the manufacture's label with the following information:
  - 1. Product name and type (description).
  - 2. Batch date.
  - 3. Color number.
  - 4. VOC content.
  - 5. Environmental handling requirements.
  - 6. Surface preparation requirements.
  - 7. Application instructions.
- B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.

#### 1.8 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
- C. Hazardous Materials: Hazardous materials including lead paint may be present in buildings and structures to be painted. A report on the presence of known hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.



1. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified.
2. Perform preparation for painting of substrates known to include lead paint in accordance with EPA Renovation, Repair and Painting Rule and additional requirements of authorities having jurisdiction.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Sherwin-Williams Company products indicated or comparable product from one of the following:
  1. Dunn Edwards.
  2. Or approved equal.
- B. Comparable Products: Comparable products of approved manufacturers will be considered in accordance with Section 016000 "Product Requirements," and the following:
  1. Products are approved by manufacturer in writing for application specified.
  2. Products meet performance and physical characteristics of basis of design product including published ratio of solids by volume, plus or minus two percent.
- C. Source Limitations: Obtain paint materials from single source from single listed manufacturer.
  1. Manufacturer's designations listed on a separate color schedule are for color reference only and do not indicate prior approval.

### 2.2 PAINT, GENERAL

- A. Material Compatibility:
  1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.
- C. Colors: As selected by Architect from manufacturer's full range

### 2.3 SOURCE QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
  1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
  2. Testing agency will perform tests for compliance with product requirements.
  3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying

paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers. Where acceptability of substrate conditions is in question, apply samples and perform in-situ testing to verify compatibility, adhesion, and film integrity of new paint application.
  - 1. Report, in writing, conditions that may affect application, appearance, or performance of paint.
- B. Substrate Conditions:
  - 1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
    - a. Concrete: 12 percent.
    - b. Masonry (Clay and CMU): 12 percent.
    - c. Wood: 15 percent.
    - d. Portland Cement Plaster: 12 percent.
    - e. Gypsum Board: 12 percent.
  - 2. Portland Cement Plaster Substrates: Verify that plaster is fully cured.
  - 3. Exterior Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- C. Proceed with coating application only after unsatisfactory conditions have been corrected; application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

- D. Concrete and Masonry Substrates: Remove all loose or peeling paint, efflorescence, and chalk using mechanical means and high-pressure power washing. The surface must be clean, dry, dull, and sound prior to priming and painting. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Metal Substrates: Remove all rust, scale, and loose or peeling paint. Clean using methods recommended in writing by paint manufacturer but not less than the following:
  - 1. SSPC-SP 2, "Hand Tool Cleaning."
  - 2. SSPC-SP 3, "Power Tool Cleaning."
- F. Wood Substrates:
  - 1. Remove all loose or peeling paint by scraping, sanding, or other mechanical means. The surface must be clean, dry, dull, and sound prior to priming and painting.
  - 2. Sand surfaces that will be exposed to view, and dust off.

### 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in manufacturer product data pages.
  - 1. Use applicators and techniques suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
  - 3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
  - 4. Paint entire exposed surface of window frames and interior sides of sashes.
  - 5. All new and existing previously painted substrates are to receive a full coat of primer.
  - 6. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- B. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
  - 1. Paint the following work where exposed to view:
    - a. Equipment, including panelboards.
    - b. Uninsulated metal piping.
    - c. Uninsulated plastic piping.
    - d. Pipe hangers and supports.
    - e. Metal conduit.
    - f. Plastic conduit.

### 3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
  - 1. Contractor shall touch up and restore painted surfaces damaged by testing.

2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.6 EXTERIOR PAINTING SCHEDULE

Products listed in schedule are products of the Sherwin-Williams Company; Contact: John Dumesnil, 619-665-9341 or [john.t.dumesnil@sherwin.com](mailto:john.t.dumesnil@sherwin.com).

- A. Plaster, Nontraffic Surfaces:
  1. Latex System:
    - a. Prime Coat: Primer sealer, latex, exterior: S-W Loxon Concrete & Masonry Primer Sealer, LX2W50, at 8.0 mils wet, 3.2 mils dry.
    - b. Intermediate Coat: Latex, exterior, matching topcoat.
    - c. Topcoat: Latex, exterior, flat: S-W Superpaint Exterior Latex Flat, A80 Series, at 4.0 mils wet, 1.4 mils dry, per coat.
- B. Metal Substrates:
  1. Water-Based Light Industrial Coating System:
    - a. Prime Coat: Primer, water-based, anti-corrosive for metal: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series, 5.0 to 10.0 mils wet, 2.0 to 4.0 mils dry.
    - b. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
    - c. Topcoat: Light industrial coating, exterior, water based, semi-gloss: S-W Pro Industrial Acrylic Semi-Gloss Coating, B66-650 Series, at 2.1 to 4.2 mils dry, per coat.
- C. Wood Substrates: Including exposed wood items not indicated to receive shop-applied finish.
  1. Latex System:
    - a. Prime Coat: Primer, water-based for exterior wood: S-W PrimeRX Acrylic Peel Bonding Primer, B51T600, at 8.0 mils wet, 3.6 mils dry.
    - b. Intermediate Coat: Latex, exterior, matching topcoat.

- c. Topcoat: Latex, exterior, satin: S-W Superpaint Exterior Latex Satin, A89 Series, at 4.0 mils wet, 1.5 mils dry, per coat.

END OF SECTION 099113



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# Exterior Condition Assessment of Caliente Railroad Depot DRAFT

Prepared for

**City of Caliente, Nevada**

Prepared by

**SWCA Environmental Consultants**

June 2015



# EXTERIOR CONDITION ASSESSMENT OF CALIENTE RAILROAD DEPOT

Prepared for

**City of Caliente**  
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Caliente, Nevada 89008

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June 23, 2015  
DRAFT





## **EXECUTIVE SUMMARY**

*To be written for final report.*

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# CONTENTS

<b>Executive Summary .....</b>	<b>i</b>
<b>1.0 Introduction.....</b>	<b>1</b>
1.1. Historic Structure Report Format.....	2
1.1.1. Introduction.....	2
1.1.2. Part I. Developmental History .....	3
1.1.3. Part II. Treatment and Work Recommendations.....	3
1.1.4. Notes, Bibliography, and Appendices.....	3
1.2. Scope of Work for Exterior Condition Assessment.....	3
1.3. Methodology .....	4
<b>2.0 History.....</b>	<b>5</b>
<b>3.0 Physical Description.....</b>	<b>7</b>
<b>4.0 Material Characterization and Analysis.....</b>	<b>10</b>
4.1. Stucco Characterization .....	10
4.2. Stucco Analysis.....	12
4.3. Paint Characterization.....	13
4.4. Analysis for Lead Paint.....	14
<b>5.0 Condition Assessment and Recommendations .....</b>	<b>16</b>
5.1. Foundation .....	16
5.2. Walls .....	18
5.2.1. Stucco Cracking .....	18
5.2.2. Stucco Delamination .....	19
5.2.3. Stucco Loss .....	20
5.2.4. Exposed and Corroded Lath.....	20
5.2.5. Paint Failure .....	21
5.2.6. Repair Failure.....	22
5.3. Column Capitals.....	23
5.4. Roof and Drainage System .....	27
5.5. Windows and Doors.....	30
5.6. Pergola .....	31
<b>6.0 Summary and Conclusions.....</b>	<b>33</b>
6.1. Treatment Approach .....	33
6.1.1. Secretary of the Interior’s Standards for Preservation .....	34
6.1.2. Secretary of the Interior’s Standards for Rehabilitation.....	34
6.2. Immediate Preservation Actions (1-2 Years).....	35
6.2.1. Foundation .....	35
6.2.2. Walls .....	35
6.2.3. Column Capitals.....	36
6.2.4. Roof and Drainage System .....	36
6.2.5. Windows and Doors.....	37
6.2.6. Pergola .....	37
6.3. Medium-Term Preservation Actions (2–5 years).....	37
6.3.1. Foundation .....	37
6.3.2. Walls .....	37

6.3.3.	Column Capitals.....	39
6.3.4.	Roof and Drainage System .....	39
6.3.5.	Windows and Doors.....	39
6.3.6.	Pergola .....	39
6.4.	Long-Term Preservation Actions (5–10 years).....	39
6.5.	Cyclical Preservation Actions .....	39
6.5.1.	Yearly.....	39
6.5.2.	Every 5 Years.....	40
6.5.3.	Every 10 Years.....	40
<b>7.0</b>	<b>References Cited.....</b>	<b>41</b>

## APPENDICES

<b>Appendix A.</b>	Results of Lead Paint Analysis (EMS Laboratories, Inc. 2015)
<b>Appendix B.</b>	Results of Stucco Analysis (Highbridge Materials Consulting, Inc. 2015)
<b>Appendix C.</b>	Original Design Drawings for Caliente Depot (Parkinson and Parkinson 1922)
<b>Appendix D.</b>	Annotated Condition Assessment Photographs
<b>Appendix E.</b>	Keeping It Clean: Removing Exterior Dirt, Paint, Stains and Graffiti from Historic Masonry Buildings (Grimmer 1988)
<b>Appendix F.</b>	The Preservation and Repair of Historic Stucco (Grimmer 1990)
<b>Appendix G.</b>	Exterior Paint Problems on Historic Woodwork (Weeks and Look 1982)
<b>Appendix H.</b>	Painting Exterior Stucco (U.S. General Services Administration 2012)

## FIGURES

<b>Figure 1.</b>	Northwest side (façade) of Caliente Depot, 2015.....	1
<b>Figure 2.</b>	Northeast side of Caliente Depot, 2015. ....	1
<b>Figure 3.</b>	Southeast side (rear) of Caliente Depot, 2015. ....	2
<b>Figure 4.</b>	Southwest side of Caliente Depot, 2015. ....	2
<b>Figure 5.</b>	Undated photograph of original Caliente Depot, which was destroyed by fire in 1922.Courtesy City of Caliente Boxcar Museum. ....	5
<b>Figure 6.</b>	Undated image (ca. 1920s) of Caliente Railroad Depot before enclosure of the northeast arcade. Note the light paint color of windows. Courtesy City of Caliente Boxcar Museum. ....	6
<b>Figure 7.</b>	Undated image (ca. 1930s) of Caliente Railroad Depot before full enclosure of the northeast arcade. Note the light paint color of windows. Courtesy City of Caliente Boxcar Museum.....	8
<b>Figure 8.</b>	Undated image (ca. 1930s) of Caliente Railroad Depot before full enclosure of the northeast arcade. Note the light paint color of windows. Courtesy City of Caliente Boxcar Museum.....	8
<b>Figure 9.</b>	Undated image (ca. 1940s or 1950s?) of Caliente Railroad Depot. By this time the northeast arcade has been fully enclosed and the windows and doors are painted a darker color than the walls. Courtesy City of Caliente Boxcar Museum. ....	8
<b>Figure 10.</b>	Detail of wall construction system, showing diagonal wood sheathing over wood-framed walls, wood blocking for the capital, a layer of black building paper to which expanded metal lath is nailed, and finally several layers of stucco and paint.....	10

<b>Figure 11.</b> Detail of stucco system, including 1) a base layer of building paper, 2) expanded metal lath nailed in place, 3) a scratch coat extruded through the lath to provide a key, 3) two brown coats, 4) a finish coat, and 5) multiple layers of paint. Scale is marked in 1-inch increments. ....	11
<b>Figure 12.</b> Original appearance of finish coat used for wall surfaces on the Depot. Note the exposed aggregate and slightly rough finish. Traces of the original tan paint are visible near the center of the image. Scale is marked in 1-inch increments. ....	12
<b>Figure 13.</b> Original appearance of finish coat used for column capitals. Note the lack of visible aggregate and smooth finish. Scale is marked in 1-inch increments. ....	12
<b>Figure 14.</b> Stucco sample taken from the base of Column NW 06 on the northwest façade, central arcade. Scale is marked in 1-inch increments. ....	13
<b>Figure 15.</b> Traces of the original tan paint are visible to the right of the scale. Scale is marked in 1-inch increments. ....	14
<b>Figure 16.</b> Detail of poured concrete foundation on northwest wall where overlying stucco layer has failed. Note absence of building paper and metal lath. ....	17
<b>Figure 17.</b> Detail of original surface of concrete foundation on southeast wall, where lines from formwork are visible at 6-inch intervals. ....	17
<b>Figure 18.</b> An example of a downspout draining directly against the foundation on the southeast side of the building. All water runoff should be directed away from the building or into an underground collection and dispersal system. ....	17
<b>Figure 19.</b> Mechanical equipment on the southeast side of the building may trap water and debris against the foundation and buttresses, and may mask damaging conditions unless this area is regularly inspected. ....	18
<b>Figure 20.</b> Hairline cracks in the stucco that have telegraphed into overlying paint layers. ....	19
<b>Figure 21.</b> Delaminating stucco at the second floor level on the northwest side of the Depot. ....	20
<b>Figure 22.</b> Exposed and corroded lath at the base of a column on the pergola. ....	21
<b>Figure 23.</b> Failure to remove deteriorated paint layers prior to the application of new paint has led to cracking, alligatoring, blistering, detachment, and full loss of paint layers. ....	22
<b>Figure 24.</b> Excess moisture around this downspout on the northwest side of the Depot has caused peeling and loss of paint layers. ....	22
<b>Figure 25.</b> This repair coat of stucco was applied to a column base on the northwest side of the building. Failure to remove deteriorated paint layers prior to application has led to early failure and loss. ....	23
<b>Figure 26.</b> A column capital (NE 04) in very good condition, exhibiting few cracks or repairs (Ranking = 1). ....	25
<b>Figure 27.</b> A column capital (NE 03) in good condition, exhibiting repairs and some surface cracks on the top side (Ranking = 2). ....	26
<b>Figure 28.</b> A column capital (NE 02) in fair condition, exhibiting repairs, full-depth cracks, and loose materials on the top side (Ranking = 3). ....	26
<b>Figure 29.</b> A column capital (NE 05) in poor condition, exhibiting failed repairs, full-depth cracks, and loose materials on the top and sides (Ranking = 4). ....	26
<b>Figure 30.</b> A column capital (NW 01) in very poor condition, exhibiting complete loss and exposing the building paper and wooden sheathing and blocking (Ranking = 5). ....	27
<b>Figure 31.</b> Original (dark) and replacement (red-orange) roof tiles over the arcade on the northwest side of the Depot. The flashing between the tiles and the wall is aged but generally in good condition. ....	28
<b>Figure 32.</b> The skylight above the original men’s toilet on the southeast side of the building. Failed flashing has resulted in water damage to the interior ceiling. ....	28

**Figure 33.** A poor connection between the gutter and downspout has caused water damage to the adjacent paint and stucco. .... 29

**Figure 34.** Overflowing gutters have caused paint loss and stucco erosion on the building exterior, as well as damage to the interior wall of historic Room 22. .... 29

**Figure 35.** A failed connection between a downspout and drain on the southeast side of the building. The location and condition of the drain field is unknown. .... 29

**Figure 36.** Windows and doors protected by arcades are in very good condition, despite minor alterations like painted glazing. .... 30

**Figure 37.** Failed paint layers and cracked, weathered wood are common on window sills and the bottom rails of window sashes. .... 30

**Figure 38.** A general view of the pergola, view facing north. .... 31

**Figure 39.** Decorative wood scrollwork (detached on the right and missing on the left), which was applied to the scrolled brackets supporting the pergola roof. .... 32

**Figure 40.** An intact wood railing spanning between columns of the pergola. Note the notched and beveled balusters. .... 32

## TABLES

**Table 1.** Summary of Analysis for Lead Paint on Exterior Painted Surfaces at Caliente Depot ..... 15

**Table 2.** Summary of Capital Conditions at the Caliente Depot ..... 24

## 1.0 INTRODUCTION

The City of Caliente, Nevada, (the City) owns the historic Caliente Railroad Depot (Depot), designed by the renowned Los Angeles firm of Parkinson and Parkinson in 1922 and built in 1923; it was listed on the National Register of Historic Places in 1973 (Figures 1–4). The building no longer serves as a depot and instead houses the City’s offices, library, and museum, among other functions. The City has received a matching grant from the Nevada State Historic Preservation Office (SHPO) to fund a historic structure report (HSR) in order to document the history of the building, preserve its historic character, and plan for compatible repairs, upgrades, and maintenance. The completion of the HSR will also allow the City to apply for certain grants and funds that can assist in covering costs for the preservation of the building.



**Figure 1.** Northwest side (façade) of Caliente Depot, 2015.



**Figure 2.** Northeast side of Caliente Depot, 2015.





Figure 3. Southeast side (rear) of Caliente Depot, 2015.



Figure 4. Southwest side of Caliente Depot, 2015.

## 1.1. Historic Structure Report Format

The Technical Preservation Services division of the National Park Service has published guidelines for “The Preparation and Use of Historic Structure Reports” (Slaton 2005). In summary, activities involved in the preparation of an HSR include a preliminary meeting and walk-through, historical research, an existing condition survey, measured drawings and record photography, materials investigation and testing, an evaluation of significance, selection of a treatment approach, and the development of work recommendations. This work is typically summarized in a written report that may include the following:

### 1.1.1. Introduction

- A. *Study Summary*: A brief statement of the purpose, findings, and recommendations of the study.
- B. *Project Data*: A summary of project administrative data (e.g., location, ownership, and landmark status) and the methodology and project participants.

### **1.1.2. Part I. Developmental History**

- A. *Historical Background and Context*: A brief history of the building and its context, its designers and builders, and persons associated with its history and development.
- B. *Chronology of Development and Use*: A description of original construction, modifications, and uses, based on historic documentation and physical evidence.
- C. *Physical Description*: A description of elements, materials, and spaces of the building, including significant and non-significant spaces and features.
- D. *Evaluation of Significance*: A discussion of significant features, original and non-original materials and elements, and identification of the period(s) of significance.
- E. *Condition Assessment*: A description of the condition of exterior building materials and elements, and causes of deterioration.
- F. *Material Analysis*: An analysis of selected exterior building materials, as requested or needed, to document the composition of original materials in order to understand building technology and causes of deterioration, and/or to specify compatible repair materials and techniques.

### **1.1.3. Part II. Treatment and Work Recommendations**

- A. *Historic Preservation Objectives*: A description and rationale for the recommended treatment (preservation, rehabilitation, restoration, or reconstruction) and how it meets the project goals for use of the building.
- B. *Requirements for Work*: An outline of the laws, regulations, and functional requirements that are applicable to the recommended work (e.g., life safety, fire protection, energy conservation, hazardous materials abatement, and handicapped accessibility).
- C. *Work Recommendations and Alternatives*: A presentation of tasks recommended to realize the proposed treatment approach, an evaluation of proposed solutions, and a description of specific recommendations for work, including alternate solutions, if appropriate.

### **1.1.4. Notes, Bibliography, and Appendices**

- A. To include figures, tables, historic and current measured drawings, historic and current photographs, reference documents, materials analysis reports, etc.

While the City secures matching funds for the grant, the SHPO has released emergency funds for a selective condition assessment and material analysis of the Depot exterior. This is in response to the loss of a stuccoed column capital on the building façade, as well as other deterioration conditions affecting the stucco. It is anticipated that the remainder of HSR tasks for the building exterior will be addressed as a future phase of the HSR.

## **1.2. Scope of Work for Exterior Condition Assessment**

For this project, SWCA Environmental Consultants (SWCA) conducted the following tasks in order to complete the portions of the HSR that address the condition assessment and material analysis of exterior building materials. This information will serve as a useful tool for the City in addressing current emergency issues relating to the deterioration and loss of historic building materials, as well as long-term planning for the preservation of the building exterior.

1. Preliminary meeting and walk-through between the City and SWCA to discuss the City's current concerns regarding the condition of the Depot exterior.

2. Digital photographic documentation of the Depot exterior, including important features and deterioration conditions.
3. Physical description of exterior building materials and features.
4. Condition assessment of exterior building materials and features, recorded in photographs taken under Task 2.
5. Summary meeting between the City and SWCA to discuss fieldwork findings and preliminary recommendations for the building.
6. Material analysis and testing for lead paint on the exterior in order to understand the need for lead abatement measures during rehabilitation work.
7. Material analysis of one sample of historic exterior stucco to characterize the material composition of the scratch and finish coats and make recommendations for appropriate repair materials.
8. Preparation of report summarizing the results of the condition assessment and material analysis, with recommendations for repair, restoration, and/or replacement.

### **1.3. Methodology**

SWCA served as the primary historic preservation consultant, contracting material testing services to qualified vendors as required. Fieldwork for the condition assessment was conducted by Anne Oliver, SWCA Historic Architecture Team Lead, on March 23 and 24, 2015. The assessment was conducted by visually inspecting the building exterior using binoculars or examining areas from the second floor windows of the building as necessary. The exterior was photographed using a single-lens-reflex digital camera set to obtain high resolution images. Written notes about building construction, materials, and deterioration conditions were taken, and an attempt was made to pinpoint the most likely causes of deterioration. Common deterioration conditions were enumerated and recorded graphically on photographs of the building. General observations of the building interior were also made in an effort to determine whether exterior conditions were caused or exacerbated by the building's structural, mechanical, electrical, plumbing, or other systems, or whether interior deterioration conditions could reveal the presence of exterior issues.

Eight samples of paint and painted stucco were collected from representative areas on the building exterior. These were submitted to EMS Laboratories, Inc., which tested the samples for lead content (EMS Sample Nos. 165612-1 through 165612-8).<sup>1</sup> The results are discussed in the Material Analysis section of this report, and the laboratory report is contained in Appendix A.

One sample of stucco was collected from the northwest (façade) side of the building, at the base of a column along the central arcade (see Figure 14). The sample was submitted to Highbridge Materials Consulting, Inc., which conducted a petrographic examination, chemical analysis, and acid digestion of two stucco layers.<sup>2</sup> This information was used to characterize the historic stucco, understand deterioration conditions when possible, and provide information on the composition and ratio of binder and aggregate, which will facilitate the development of a compatible repair material. The results are discussed in the Material Analysis section of this report, and the laboratory report is contained in Appendix B.

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<sup>1</sup> EMS Laboratories, Inc., 117 W. Bellevue Drive, Pasadena, CA 91105-2548, (626)568-4065, [www.emslabs.com](http://www.emslabs.com). EMS Laboratories is accredited under the Environmental Protection Agency's National Lead Laboratory Accreditation Program (NLLAP), and is recognized for its ability to accurately analyze paint chips for lead.

<sup>2</sup> Highbridge Materials Consulting, Inc., 404 Irvington Street, Pleasantville, NY 10570, (914)502-0100, [www.highbridgematerials.com](http://www.highbridgematerials.com). SWCA's contact was John J. Walsh, President/Senior Petrographer.

## 2.0 HISTORY

Caliente sprang to life as a railroad town in 1901, when it was platted at the juncture of Clover Creek and Meadow Valley Wash in anticipation of a rail line that would connect Salt Lake City, Utah, and Los Angeles, California. After a fierce dispute between the San Pedro, Los Angeles, and Salt Lake Railroad and the Union Pacific Railroad (UP), the parties signed a joint ownership agreement of the line, but it was the UP that transfigured the town. Caliente became a UP division office and the main facility between Salt Lake City and Los Angeles for its steam-powered system (James and Harvey 2009).

For many years Caliente was a division point between Las Vegas and Milford, Utah. Engine and trail crews changed here. In the days of steam locomotives, Caliente also was the center of a helper district – the terminal for locomotives and crews that assisted trails upgrade between Carp and Caliente, Caliente and Crestline, and Modena and Crestline. (Thomas 1973)

To support the UP's operations, an extensive rail yard was established, including a water tank, multiple train sheds and repair shops, and a roundhouse; in addition, a row of 24 houses was eventually built to provide company housing in town (Averett 1995; Thomas 1973). The first depot was a relatively small, wood-sided building in the Victorian Stick style (Figure 5), but this was destroyed by fire in 1922 (Averett 1995). The new depot was built in about the same location and was completed in 1923; it incorporated not only a waiting room, restrooms, and baggage facilities, but the UP division offices, a lunch counter, dining room, and kitchen on the first floor, and a manager's apartment and 20 hotel rooms on the second floor (Figure 6). (Original plans and elevations are contained in Appendix C.) The hotel rooms were used by both travelers and railroad officers, while “a separate adjacent dormitory...served layover crews in the last years of the Age of Steam” (Thomas 1973).



**Figure 5.** Undated photograph of original Caliente Depot, which was destroyed by fire in 1922. Courtesy City of Caliente Boxcar Museum.

The new depot was designed in 1922 by the architectural firm of John B. Parkinson and Donald B. Parkinson, a father-son team based in Los Angeles. John Parkinson (1861–1935) was born in England, where he was apprenticed to an architect and engineer as a young man. He emigrated to the United States in 1882, and by 1889 had established his first architectural practice in Seattle, Washington, where he was soon appointed architect for the Seattle Schools. The nationwide depression that began in 1893 left him without work, and he moved to Los Angeles to establish a new practice the following year. Parkinson became one of the leading architects in the city, designing Los Angeles City Hall, numerous commercial buildings in the downtown area, and Memorial Coliseum, among other major commissions. His son

Donald Parkinson (1895–1945) joined the practice in 1920, and the firm designed a number of major railroad depots, including the Caliente Depot (1922), Union Station in Ogden (1924), and Union Station in Los Angeles (1926) (Ochsner 1994; Powell 1972).



**Figure 6.** Undated image (ca. 1920s) of Caliente Railroad Depot before enclosure of the northeast arcade. Note the light paint color of windows. Courtesy City of Caliente Boxcar Museum.

The hotel part of the Depot closed before World War II, but the rail yard remained very active through the war, when 17 helper crews were assigned to Caliente and about 150 people were employed in the locomotive, car, and agent departments (James and Harvey 2009; Thomas 1973).

Following the war Caliente's importance as a railroad center began to decline. The diesel locomotives, which replaced the steam engines in the late 1940s and early 1950s, could be run in multiples with one crew eliminating the need for helpers, nor did they require fuel, water, and servicing as frequently. (Thomas 1973)

The division office was closed, and, in 1948, shop facilities were moved to Las Vegas, Nevada (Thomas 1973). In the ensuing years, the roundhouse, water tank, excess yard tracks, and dormitory were removed from the site. In 1970 the UP leased the unused Depot to the City of Caliente for 10 years at the price of \$1 (James and Harvey 2009; Thomas 1973). And in December of 1972, the UP deeded the building to the City outright while continuing to lease 2.2 acres of adjacent grounds (Averett 1995). The City undertook a restoration project in 1972, retaining the exterior appearance of the building while converting the interior from a depot to a city hall and civic center. The Depot was listed on the National Register of Historic Places in 1973 (see Thomas 1973).

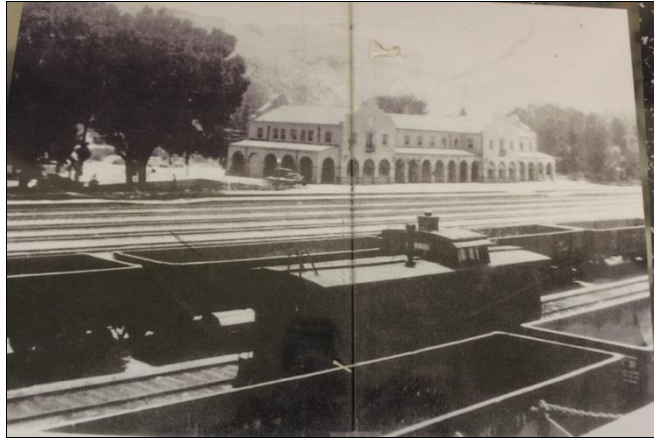
Today the Caliente Depot houses the City's offices, a library, and a gallery on the first floor, and the upstairs rooms are rented to the police and local businesses. The landmark building is the most prominent in town and is open to visitors; its interpretation is supplemented by a small museum housed in a box car on the grounds southwest of the building.

### **3.0 PHYSICAL DESCRIPTION**

When first built, the Depot faced the railroad tracks to the northwest and was flanked by the rail yard and support buildings on its other sides; it measured about 54 feet wide by 341 feet long. Designed in the Mission Revival style, the Depot had tall, scrolled parapets on the gable ends and long, open arcades lining the first floor along the northwest, northeast, and southwest sides. The southeast side was used for service activities and was treated more simply. The building foundation was of poured concrete, while the wood-framed walls and parapets were finished with stucco. The wood-framed roof was clad in red terra cotta tiles. Arched openings were most common for the wood-framed windows and doors on the first floor, while second floor windows were rectangular and fitted with six-over-one light wood sashes. The gable ends on the second floor of the northwest façade were accented with narrow double doors opening onto ornamental iron balconies. Painted plaster casts of the UP shield emblem, reading “Union Pacific Railroad – The Overland Route,” finished the gable ends at the attic level on the northwest and southwest sides.

The exterior of the building has been altered in only minor ways over the years. At an early date, likely soon after construction of the building was complete, a roofed, T-shaped pergola and raised concrete terrace were added on the southeast side of the building. The construction methods and materials were nearly identical to those used on the Depot, in particular the wood-framed piers finished with stucco. The piers support scrolled wood blocks that in turn support heavy wood beams and a low, hipped roof covered with terra cotta tiles. Low wood railings with carved balusters originally spanned most of the openings between piers, although several of the railings have been lost.

The other major early alterations are concentrated at the first floor level on the northeast side of the building. This area was originally designed and built as an open arcade with an enclosed baggage room filling the bay at the far end (see first floor plan and drawing in Appendix C). The arcade apparently was built to plan, although the second bay from the rear was completely walled by about the 1930s (Figures 7 and 8). An undated photograph depicts that, perhaps by the 1940s, the first archway on the northeast side (closest to the rear of the building) remained a doorway, the second enclosed archway had been fitted with a tall door, the third and fourth archways had been enclosed with a low door flanked by windows, and the fifth archway (closest to the façade) had been fitted with a pair of windows. In addition, the opening on the northwest side had been converted to a doorway flanked by sidelights and capped with arched windows (Figure 9). The three center openings on the northeast side were altered again at a later date to partially or completely fill the openings with stucco. The National Register of Historic Places nomination form states that this arcade was enclosed in 1963 to create an interior room (Thomas 1973) (see Appendix C). The historic photographs and the style and materials of the doors and windows indicate that this change was of an earlier date (ca. 1940s), thus the nomination form may be referring to the removal of second-generation door and window openings and their replacement with stuccoed walls.



**Figure 7.** Undated image (ca. 1930s) of Caliente Railroad Depot before full enclosure of the northeast arcade. Note the light paint color of windows. Courtesy City of Caliente Boxcar Museum.



**Figure 8.** Undated image (ca. 1930s) of Caliente Railroad Depot before full enclosure of the northeast arcade. Note the light paint color of windows. Courtesy City of Caliente Boxcar Museum.



**Figure 9.** Undated image (ca. 1940s or 1950s?) of Caliente Railroad Depot. By this time the northeast arcade has been fully enclosed and the windows and doors are painted a darker color than the walls. Courtesy City of Caliente Boxcar Museum.

Since the City assumed ownership, no significant changes have been made to the northwest (façade) or northeast sides of the building. Alterations have been confined almost entirely to the southeast (rear) and southwest sides, and include the following:

*Southeast side*

- Concrete staircase and a pair of steel doors added to provide basement access into the former “Refrigerator and Mechanical” room.<sup>3</sup>
- Basement staircase leading to the former “Battery Room” removed.
- Concrete staircase from parking lot to northeast side of former first-floor “Kitchen” added.
- Open staircase added against southeast gable end of northeast crosswing to provide emergency egress from the second floor ca. 1985–1986, including conversion of second floor window to door, and handicapped-accessible ramp also added from northeast parking lot to southeast entrance Nevada (personal communication, Keith Larson, former Caliente mayor, to Anne Oliver, SWCA).
- Application of new stucco layer to entire southeast gable end of north cross-wing, likely ca. 1985 when staircase added.
- Wood-framed shed roof built over terrace at the base of the emergency staircase.
- Heating and air conditioning units installed on grade behind chain link fence.

*Southwest side*

- Central window on second floor of gable end converted to a doorway fitted with a steel door leading to metal fire escape.
- Open-lattice, two-story communications tower abutted to gable end.

The last major repair cycle to the building occurred in about 1995, when a thin coat of stucco was applied to selected areas of the exterior walls by contractor Karl Volk of Panaca, Nevada (personal communication, Keith Larson, former Caliente mayor, to Anne Oliver, SWCA). Based on visual observations, these areas included wall bases and column capitals along the northwest and northeast sides, as well as the tops and sides of all gable-end parapets. It appears that the stucco walls were also repainted at this time.

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<sup>3</sup> Room names are taken from the original drawings; see Appendix C.



## 4.0 MATERIAL CHARACTERIZATION AND ANALYSIS

One of the greatest concerns at the Depot is the performance of the stucco and paint that were used to finish the exterior walls. Material characterization and analysis focused on these elements to provide a better understanding the original composition and subsequent deterioration mechanisms affecting the stucco; to provide information important for developing appropriate stucco repair materials; and to determine the presence of lead paint and the need for hazardous materials abatement in any repair work.

The architectural drawings and physical evidence indicate that, above the concrete foundation, the exterior walls of the Depot were originally wood-framed and then clad with diagonal wood sheathing. This was followed by a layer of building paper, then expanded metal lath, and finally a four-layer stucco system. Projecting details like the column capitals and (most likely) the cornice beneath the roof gutters were also blocked out in wood and finished with stucco (Figure 10). It appears that all of the stucco was originally painted, as were the wood windows and doors, the metal gutters along the eaves, and the metal downspouts, although a paint study is required to confirm these observations.<sup>4</sup>



**Figure 10.** Detail of wall construction system, showing diagonal wood sheathing over wood-framed walls, wood blocking for the capital, a layer of black building paper to which expanded metal lath is nailed, and finally several layers of stucco and paint.

### 4.1. Stucco Characterization

The stucco comprises a four-coat system with a total thickness of about 1¼ inches (Figure 11). These coats would have been applied over a period of several days or weeks during building construction.

- *Scratch coat:* The scratch coat was applied directly over the expanded metal lath, which served to key the stucco to the wood-framed and wood-sheathed walls. This layer is generally ¼ inch thick and is characterized by small, angular aggregate. Using the Munsell color notation system, the color of the scratch coat is “pale yellow” (2.5Y 7.5/2).<sup>5</sup>

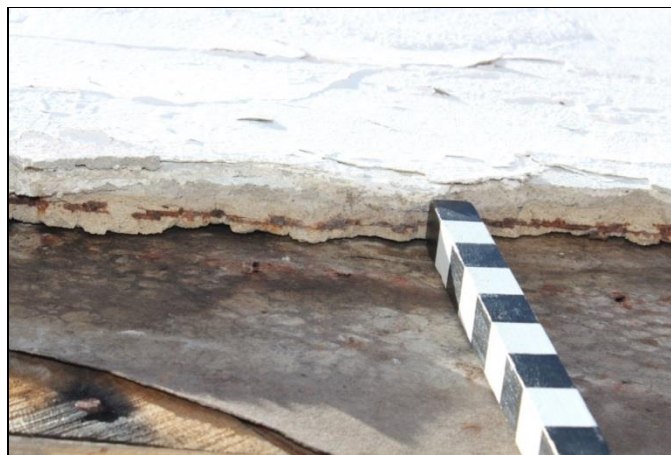
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<sup>4</sup> A historic paint study is advised in order to understand the original appearance of the Depot and its change over time, identify paint stratigraphy for the historic record, identify appropriate paint colors if the intent is to restore the building to its original appearance, and identify deteriorated paint types to make better judgments about the most effective methods for their removal. Painted finishes on all building elements (walls, doors, windows, trim, gutters, downspouts, and pergola) should be included in the study.

<sup>5</sup> The Munsell color notation system is organized around the three variables that combine to describe all color: hue (a color’s relation to red, yellow, green, blue, and purple); value (its lightness); and chroma (its strength). The first set of letters and

- *Brown coat (inner layer)*: The inner layer of the brown (or intermediate) coat is also about ¼ inch thick and is identical in appearance and color to the scratch coat.
- *Brown coat (outer layer)*: The outer brown (or intermediate) coat was applied directly over the inner brown coat. It is generally 3/8” – 5/8” thick. Aggregate is larger than that used in the scratch coat and includes large, reflective grains. The color is the same as the scratch coat.
- *Finish coat*: Two types of finish stucco were used on the Depot, the first for flat walls and the second for sculpted areas like the column capitals and, most likely, the cornice (although the latter was not closely inspected nor sampled, and this has not been confirmed).
  - *Type 1*: The finish coat for flat walls was applied directly over the brown coat. It is generally ¼ inch thick and very similar in appearance to the scratch coat and inner brown coat (Figure 12). The color is the same as the scratch coat.
  - *Type 2*: The finish coat for column capitals was applied directly over the brown coat and is generally 1/4 inch thick. It has a very low aggregate content, making it more workable and allowing for a very smooth finish (Figure 13). Using the Munsell color notation system, the color is light grey (2.5Y 7/1.5). It is likely that the Type 2 finish coat was used on the cornices as well, although these were not closely inspected or sampled for the project.

The original stucco has been repaired or resurfaced in many areas on the Depot. This is discussed further in Section 5.2.6.



**Figure 11.** Detail of stucco system, including 1) a base layer of building paper, 2) expanded metal lath nailed in place, 3) a scratch coat extruded through the lath to provide a key, 3) two brown coats, 4) a finish coat, and 5) multiple layers of paint. Scale is marked in 1-inch increments.

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numbers describe its hue, the first number of the second set its value, and the second number of the second set its chroma. Each notation, or range of notations, is given a standard color name.



**Figure 12.** Original appearance of finish coat used for wall surfaces on the Depot. Note the exposed aggregate and slightly rough finish. Traces of the original tan paint are visible near the center of the image. Scale is marked in 1-inch increments.



**Figure 13.** Original appearance of finish coat used for column capitals. Note the lack of visible aggregate and smooth finish. Scale is marked in 1-inch increments.

## 4.2. Stucco Analysis

A large sample of original stucco was collected from the base of a column on the northwest façade for material analysis (Figure 14). This is Column NW 06 as referenced in Table 2. Findings are as follows:

- All of the stucco layers consist of similar materials. Only the outer brown coat appears to differ somewhat in composition. The other layers are more similar to the finish coat.
- All layers contain a granitic natural sand with a mild excess of fines relative to modern standards. The outer brown coat has a similarly graded sand but with a coarser top end. All layers contain well-hydrated gray portland cement and high-calcium hydrated lime as the binder. No supplementary cementitious materials, limestone plasticizer, air-entrainment, or pigments were identified. No internal fiber reinforcement is present.

- The outer brown coat is cement-rich with a cement-to-lime ratio estimated at 1.0:0.12 and a binder-to-sand ratio of 1.0:3.0 (Type C by modern standards). The finish coat has an estimated cement-to-lime ratio of 1.0:0.6 and a binder-to-sand ratio of 1.0:2.6.
- The materials are all adequately mixed, and the constituent layers are well consolidated and compacted against one another. There is no evidence for trowel scoring (which was sometimes done to provide a mechanical key for the subsequent stucco layer).
- The cement is well hydrated and cured throughout most of the stucco depth. However, a thin layer of surface paste is more porous with a greater quantity of unhydrated cement, and this is attributed to early drying shortly after application (most likely caused by some combination of high temperatures, low humidity, wind, and/or the failure to shelter the stucco from direct sun and wind during initial cure). The presence of this weaker layer may explain the thin-layer stucco detachment observed on the northwest side of the Depot, although further focused testing would be needed to confirm this initial finding.
- Other than this, no deleterious mineralizations or microcracking were observed. Carbonation is nearly complete, although the denser outer brown coat is less thoroughly carbonated.
- Prior to curing, the finish coat was given a float-type finish that was well executed.

The full analytical report is included as Appendix B. Based on the testing results, recommendations for developing compatible repair materials are presented in Section 6.2.2.



**Figure 14.** Stucco sample taken from the base of Column NW 06 on the northwest façade, central arcade. Scale is marked in 1-inch increments.

### **4.3. Paint Characterization**

The windows and doors of the Depot were originally painted, and it appears that the walls were too. A technical paint study was not part of this project, but visual observations indicate that the walls were originally painted a light yellowish-tan, likely with an oil-based or mineral paint, which is still visible in areas where later paint layers have failed (Figure 15). The stucco has been re-painted numerous times over the years. One early layer is a dark green paint found only at the bases of walls on the public

façades.<sup>6</sup> All parts of the walls were later painted yellowish-tan, followed by a pale green paint. Based on appearance and deterioration characteristics (cupping, well-defined cracks, map cracking or alligating, brittleness), these early layers are oil or alkyd paints.

The 1973 National Register of Historic Places nomination states that the exterior walls were painted white, and they remain so today. Based on appearance and deterioration characteristics (peeling, detachment in sheets, elastic appearance), most or all of these white layers appear to be water-based latex paints (vinyl and/or acrylic). Under certain conditions the application of latex paint over oil paint can be problematic; this is discussed further in Section 5.

Based on visual inspection, it appears that windows and doors were originally painted a light color similar to the walls (see Figures 6–8). By about the 1940s or 1950s, they were painted a dark color, most likely a reddish-brown similar to the present color (see Figure 9). More detailed and definitive information on exterior paint layers, colors, and composition can be provided if and when a formal paint study is conducted as part of the HSR.



**Figure 15.** Traces of the original tan paint are visible to the right of the scale. Scale is marked in 1-inch increments.

#### **4.4. Analysis for Lead Paint**

Lead was commonly added to historic paints to speed drying, increase durability, and provide moisture resistance. The health and environmental hazards associated with its use have long been known, but it was not until 1971 that federal law mandated a lead content of 1% or less, and in 1977 the U.S. Consumer Product Safety Commission banned the use of lead in household paints to trace amounts (Agency for Toxic Substances and Disease Registry 2007).

In recent years, both federal and state agencies have enacted measures to minimize or permanently eliminate hazards associated with older lead-based paints. For instance, since 2010 the Environmental Protection Agency’s (EPA’s) Lead Renovation, Repair and Painting Rule (RRP Rule) has required that all firms “performing renovation, repair, and painting projects that disturb lead-based paint in homes, child care facilities, and pre-schools built before 1978 be certified by the EPA (or an EPA-authorized state) or use certified renovators who are trained by EPA-approved training providers and follow lead-safe work

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<sup>6</sup> An undated photograph (ca. 1950s?) of the Depot with a dark band at the wall bases on the northwest and southwest sides is available in the Caliente Boxcar Museum. This is the first photograph in which the paint color for windows and doors appears darker than the walls.

practices” (EPA 2015). While many public and commercial buildings do not fall under the RRP Rule, measures to minimize or abate lead risks are typically undertaken to protect the health and safety of workers employed on projects that may disturb lead-based paint, and also to comply with federal and state guidelines on the proper disposal of debris and waste from the renovation project or intentional abatement work.

Given the age of the Depot, the presence of lead paint is considered highly likely and, if present, an important factor in the design and cost of any exterior repair work. To identify the presence of lead on painted surfaces, eight samples were collected from the building exterior and tested for lead concentration by an EPA-accredited laboratory (see Appendix A).<sup>7</sup> Results are summarized in Table 1.

**Table 1.** Summary of Analysis for Lead Paint on Exterior Painted Surfaces at Caliente Depot

Sample No.	Sample Location	Lead Concentration (ppm)	Lead Content (% by weight)
01	From stucco on arcade wall, northwest façade	35,000	3.5%
02	From wood window frame under arcade, northwest façade	160,000	16.0%
03	From wood window frame, southeast side of building	150,000	15.0%
04	From stucco on southeast side of building	28,000	2.8%
05	From wood baluster of pergola	12,000	1.2%
06	From metal downspout on northwest façade	3,000	0.3%
07	From stucco on northwest façade	63,000	6.3%
08	From stucco on northwest façade	23,000	2.3%

Today, paint intended for residential use is limited to a trace amount of 600 parts per million (ppm), or 0.06%. All eight samples significantly exceed this limit. The lowest lead content is found in the sample taken from a metal downspout, but this still has a lead content of 0.3% and exceeds the limit by 500%. Paint samples taken from exterior stucco have a higher lead content, ranging from about 2% to 6%, while paint samples from the wood windows have a very high lead content of up to 16%.<sup>8</sup>

<sup>7</sup> Paint samples were collected and analyzed for informational purposes only, namely to confirm the presence of lead on exterior building surfaces. The sampling and testing summarized above do not constitute a certified lead risk assessment, nor is SWCA a certified lead risk assessment or abatement firm.

<sup>8</sup> Lead contents for some historic paints were much higher. For example, “lead white” house paint manufactured before 1955 contained up to 50% lead (Agency for Toxic Substances and Disease Registry 2007).

## 5.0 CONDITION ASSESSMENT AND RECOMENDATIONS

The condition assessment of the Depot included a visual inspection of the exterior building elements to provide the City with sufficient information for preservation planning over the next 10 years. Each major condition was assigned a number, and these numbers were used to record the presence of each condition on photographs of the building exterior (Appendix D). In the following sections, conditions affecting the foundation, walls, roof system, windows, doors, and pergola are summarized, illustrated, and described. Possible causes of deterioration are discussed when applicable, and each section includes recommendations for preservation and maintenance; the latter are summarized and expanded upon in Section 6.0. The condition of the stucco was assessed in additional detail, particularly the arcade column capitals; these have become the City's main concern following the failure and loss of the capital at the north corner of the building.

Many deterioration conditions are linked to the high-desert climate in Caliente. On average, the City receives 9.42 inches of rain and 8.00 inches of snow per year.<sup>9</sup> More than half of the precipitation falls between November and March, when average low temperatures are below freezing and average highs are about 30 degrees warmer. This combination of moisture and repeated freeze-thaw cycling can be highly damaging to building materials. Summer temperatures are also extreme, with highs averaging from 89 to 95 degrees between June and August. The high temperatures and low humidity may have affected the building during construction by causing rapid concrete curing rates and subsequently by causing stress in building materials with high coefficients of thermal expansion and resultant deterioration from repeated expansion and contraction.

### 5.1. Foundation

The Depot foundation is of poured concrete and forms the walls of the basement level. On the northeast, northwest, and southwest sides of the building, the foundation extends about 18 inches above grade to form a water table at the wall bases. On these walls, the poured concrete was finished with a stucco layer about 1 inch thick; no building paper or lath was used (Figure 16). The water table appears to extend across the bases of the arcade columns as well, but these elements are wood-framed and stuccoed like the walls, and poured concrete was not used. On the southeast side of the building the water table is present only at the south corner, thus the un-stuccoed foundation is visible in a few areas at the wall base and retains marks from original formwork (Figure 17).

The foundation exterior appears to be in very good condition. Although water has entered the basement during periodic major floods in the valley, no significant damage was incurred. City staff report no concerns with water infiltration or damage in the basement (personal communication, Stana Hurlburt, Caliente mayor, to Anne Oliver, SWCA), and this was supported by a brief visual inspection.

To prevent problems in the future, the roof drainage system should be repaired and maintained to direct water away from the foundation walls. At present, several downspouts on the southeast side of the building are not aligned with ground drains or simply drain against the foundation (Figure 18). On the northwest and northeast sides, the condition of existing ground drains is uncertain, nor is it known where the runoff is directed or what the condition of the drainage field might be. An assessment and any necessary repairs to this system are recommended.

The installation of mechanical equipment close to the foundation walls and buttresses on the southeast side also has the potential to cause problems, specifically if water and/or debris begin to collect in these areas and increase moisture levels or if problems go unnoticed because these areas are no longer readily visible (Figure 19). Cyclical inspections, prompt correction of drainage issues, and the removal of accumulated leaves or other debris is recommended.

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<sup>9</sup> Weather data comes from <http://www.usclimatedata.com/climate/caliente/nevada/united-states/usnv0012>, accessed June 2, 2015.



**Figure 16.** Detail of poured concrete foundation on northwest wall where overlying stucco layer has failed. Note absence of building paper and metal lath.



**Figure 17.** Detail of original surface of concrete foundation on southeast wall, where lines from formwork are visible at 6-inch intervals.



**Figure 18.** An example of a downspout draining directly against the foundation on the southeast side of the building. All water runoff should be directed away from the building or into an underground collection and dispersal system.





**Figure 19.** Mechanical equipment on the southeast side of the building may trap water and debris against the foundation and buttresses, and may mask damaging conditions unless this area is regularly inspected.

## 5.2. Walls

Deterioration conditions affecting the walls are generally confined to the stucco and paint layers, and include cracking, delamination, loss, exposed and corroded lath, paint failure, and repair failure (see Appendix D). Most conditions are caused either by moisture or the application of new paint or stucco over earlier deteriorated layers. No significant structural issues, such as wall displacement or cracks associated with movement, were noted.

### 5.2.1. Stucco Cracking

Cracks in the stucco are of several types: hairline cracks that telegraph through the overlying paint layers, moderately sized cracks often associated with a delaminating finish coat (discussed further in the next section), and open cracks that may penetrate through all four stucco layers.

Hairline cracks appear to be related to shrinkage cracks that formed immediately after application as the stucco cured. The condition is most common on the northwest side of the building, where conditions of cure may have been unfavorable (e.g., high or low temperatures, direct sunlight, low humidity, and/or wind that caused rapid curing). Mechanical stresses from heating and cooling are now relieved along these joints, and the minor movements associated with this process can cause hairline cracks or ruptures in the overlying paint layers as well (Figure 20).

This type of cracking is to be expected in historic stucco. Because little or no water penetrates through the cracks, they do not pose a physical hazard to the building. However, the telegraphing of hairline cracks into the paint layers can create an unsightly appearance and early failure of paint layers, particularly in film-forming latex paints that may rupture and peel along stress lines. The condition may be improved by removing overlying paint layers, filling cracks with a fine slurry of compatible stucco mix, and repainting.

Open cracks are generally confined to the column capitals on the northeast, northwest, and southeast sides of the Depot. These are discussed further in Section 5.3.



**Figure 20.** Hairline cracks in the stucco that have telegraphed into overlying paint layers.

### **5.2.2. Stucco Delamination**

In general, the stuccoed walls are quite sound, with no bulging or cracking to indicate failure between original layers or failure between the stucco and lath. However, delamination does occur in isolated areas on the northwest side of the building (Figure 21). These include the second floor walls of the south and central recessed bays, and the back sides of the columns and arches under the central arcade. Unusually, the delamination does not occur between the finish and outer brown coat but within the finish coat itself. The delaminating layer is about 1/32–1/16 inch thick and includes the painted finishes and the outer skin of the finish coat, which was originally about 1/4 inch thick. The cause of this condition is unclear but may have to do with conditions at the time of application (temperature, humidity, wind speed and direction, and rate of curing) or variations in the material composition of the finish coat. Mechanical stresses induced by the drying and shrinkage of latex paints, as well as the weight of multiple paint layers, may also contribute to the condition.

Delamination can be addressed by removing the delaminated layer with hand tools, brushing the new surface to remove loose debris, and then applying a new finish coat using a stucco mix compatible in color, texture, and material composition (see Sections 6.2.2 and 6.3.2 for specific stucco repair mixes and general recommendations for stucco application). The exposed older surface should be rough enough to provide an adequate key for the new finish coat, but, if not, a bonding agent can be used between the old and new material. The new finish coat should be in plane with the adjacent historic finish and worked to match its pattern and texture.



**Figure 21.** Delaminating stucco at the second floor level on the northwest side of the Depot.

### **5.2.3. Stucco Loss**

Full loss of stucco is rare on the Depot walls and is confined to the base of the northwest wall, where physical impact or rising damp has caused cracking and detachment of several stucco sections, each about 6 inches high. Depending on location, this has exposed either the wood-framed and sheathed wall or the poured concrete foundation (see Figures 14 and 16). The former should be repaired by removing all loose or damaged material (including stucco, lath, building paper, and, if necessary, the wood sheathing); squaring sound stucco edges to accommodate new materials; replacing damaged wood members; applying new building paper and lath; and then applying compatible stucco to match the adjacent historic stucco. The latter can be repaired by removing all loose materials, squaring off sound edges, thoroughly wetting the existing concrete, and applying new stucco compatible in material, color, and texture to the original. If necessary, a bonding agent can be used between the old and new materials.

### **5.2.4. Exposed and Corroded Lath**

In limited areas stucco loss has exposed the metal lath, which is generally corroded due to contact with moisture (Figure 22). These areas should be repaired by removing all loose stucco and lath to the substrate (usually the wood framing and sheathing), repairing the substrate as necessary, squaring off the adjacent edges of sound stucco, then reapplying the full wall sequence to include building paper, lath, and stucco (see Sections 6.2.2 and 6.3.2 for specific stucco repair mixes and general recommendations for stucco application).



**Figure 22.** Exposed and corroded lath at the base of a column on the pergola.

### **5.2.5. *Paint Failure***

Paint failure is the most common condition on the Depot walls and can take the form of linear cracking, map cracking (or alligatoring), peeling, blistering, detachment, and full loss. The conditions are caused by cracks and movement in the underlying stucco (see Section 5.2.1 and Figure 20), failure to remove hardened and deteriorated underlying paint layers prior to the application of new paint (Figure 23), and excess moisture, particularly around poorly functioning downspouts and gutters (Figure 24). The failure to remove, scrape, or sand the edges of deteriorated paint layers has also created an uneven finish on the walls, which is visually disruptive.

In general, removing paint from historic buildings should be avoided unless deterioration conditions are severe (see Appendix H for further discussion). Unfortunately, this is the case in several areas on the Depot walls; here the general approach should be to 1) correct all drainage issues, 2) remove paint to the next sound layer using the gentlest means possible, and 3) repaint using an appropriate primer and paint system (see Sections 6.2.2 and 6.3.2 for further discussion). Because of the complex mix of paint types and conditions, a trial testing program for paint removal will be required. Also, because of the presence of lead paint, proper procedures for both personal protection and the removal and disposal of hazardous materials should be followed.



**Figure 23.** Failure to remove deteriorated paint layers prior to the application of new paint has led to cracking, alligating, blistering, detachment, and full loss of paint layers.



**Figure 24.** Excess moisture around this downspout on the northwest side of the Depot has caused peeling and loss of paint layers.

### **5.2.6. Repair Failure**

The stucco on the walls of the Depot has been repaired numerous times over the years. Known repairs include the north gable end on the southeast side of the building, which was entirely re-stuccoed (most likely when the exterior staircase was added in the mid-1980s); spot repairs applied to the parapets, column capitals, and wall bases in the 1990s; and miscellaneous patches applied at different times throughout the building's history. In general, the repairs do not appear to be causing damage to the building and, in fact, have likely prolonged the life of vulnerable elements like the parapets and capitals. However, differences in surface texture make some of the repairs visually incompatible with adjacent historic stucco, while application of repairs over deteriorated materials like flaking paint has led to failure and loss (Figure 25).

Removing visually incompatible repairs that are otherwise in good condition will cause more damage than is warranted; these should be left in place. However, cracked or detached repairs should be removed and the condition of the underlying historic material evaluated. Sound historic stucco should not be re-covered with new stucco (as was done in Figure 25); instead, deteriorated paint should be removed and the historic stucco should be repainted. Damaged historic stucco can be repaired as discussed elsewhere.



**Figure 25.** This repair coat of stucco was applied to a column base on the northwest side of the building. Failure to remove deteriorated paint layers prior to application has led to early failure and loss.

### **5.3. Column Capitals**

The 25 column capitals on the northeast, northwest, and southwest sides of the building are very vulnerable to deterioration because they project from the building façade and are unprotected from weather on their flat top sides (Figures 26–30). Most capitals have been patched or repaired with new stucco, particularly on the top sides, but many of these repairs have since cracked and failed (see Figure 27).

Open cracks are the most common and threatening condition because they allow water to penetrate and damage a capital's structural core (see Figures 28 and 29). Water may be present in the form of snow or rain that accumulates on the top surface of the capital or because of a leaking downspout, and it can cause multiple types of mechanical stress. As water freezes, the expanding ice crystals can exert enormous pressure within the pores of the stucco; repeated freeze-thaw cycling will lead to fine cracks, which in turn allow more water to enter the stucco to create larger cracks. Water will also corrode the metal lath. The formation of corrosion products can crack the stucco, and the subsequent disintegration of the lath will cause the stucco key to fail and lead to further cracking of the unsupported material. If water penetrates through the building paper, the underlying wood sheathing or capital blocking will swell, again exerting pressure that can both loosen attachments to the framing and eventually weaken and crack the stucco. The presence of a downspout provides further potential for damage; water may penetrate around the joints where it passes through the capital, the downspout itself may leak, and the metal downspout's greater coefficient of thermal expansion may exert additional pressure on the stucco.

The first step in addressing open cracks is to make any necessary repairs to the roof drainage system, particularly malfunctioning gutters and downspouts. Not much can or should be done to correct issues inherent in the flat-topped and projecting capital design. However, loose stucco should be removed and open cracks should be filled with compatible repair material; in addition, the top surface of the capitals can be gently sloped to shed water.

Open cracks and subsequent water penetration have caused the loss of one side of the column capital on the north corner of the building (NW 01; see Figure 30). Reconstruction of the capital is required, which will include removing all loose or damaged material (including stucco, lath, building paper, and, if necessary, the wood sheathing and blocking); squaring sound stucco edges to accommodate new materials; replacing damaged wood members; applying new building paper and lath; and then applying compatible stucco to match the adjacent historic stucco (see Sections 6.2.2 and 6.3.2 for specific stucco repair mixes and general recommendations for stucco application).

Deterioration conditions affect the other capitals to varying degrees. Beginning at the northeast side of the building and continuing counterclockwise around the northwest and southwest sides, the capitals were assessed in detail and given a condition ranking ranging from 1 (very good) to 5 (very poor) (Table 2; see Figures 26–30 for an example of each ranking). The capitals of the columns supporting the pergola were also inspected; these have generally seen fewer repairs.

In summary, 10 of the 25 capitals are in very good condition and require no treatment other than regular monitoring and repair (highlighted in green in Table 2). Eight capitals are in good condition but require immediate minor repairs to fill cracks in the historic or repair stucco (highlighted in yellow). Seven capitals are in fair to very poor condition (highlighted in red) and require immediate major repairs, including the removal or loose or damaged stucco and repairs, possible structural repairs, and filling of full-depth cracks. As always, drainage issues should be addressed prior to any treatment, particularly around the downspouts that pass through capitals NE 02 and NE 05. Only one pergola capital requires extensive repairs. The others are in good condition, but all loose material should be removed and small cracks filled with repair stucco to prevent future deterioration.

**Table 2.** Summary of Capital Conditions at the Caliente Depot

Capital No.	Condition Ranking	Comments
NE 01	2	Some open cracks, failed repairs
NE 02	3	Downspout passes through, many open cracks and loose material on top side
NE 03	2	Erosion on top side, minor repairs, no open cracks
NE 04	1	Nearly all new stucco on top side, some open cracks
NE 05	4	Downspout passes through, extensive cracking and loose material, some repairs
NW 01 (corner)	5, 3	Total failure of northeast side (5), northwest side cracked (3)
NW 02	3	Complete failure of repair coat, some cracks including large open crack at back, some loss from front face
NW 03	2	Fine cracks, mostly at north end, but no previous repairs
NW 04	4	Complete failure of repair coat, hole in top, lath visible, much loss of material from front sides
NW 05	2	Extensive repair coat, much cracking
NW 06	1	Minor erosion on top side
NW 07	1	Downspout passes through, extensive repair coat, minor cracking
NW 08	1	Excellent condition

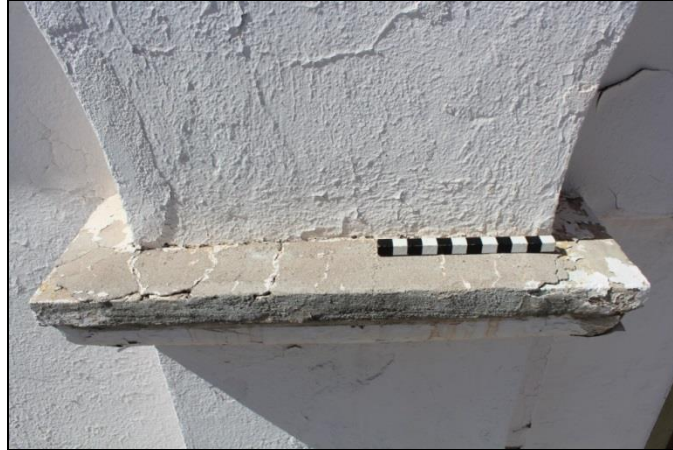
**Table 2.** Summary of Capital Conditions at the Caliente Depot

Capital No.	Condition Ranking	Comments
NW 09	1	Excellent condition
NW 10	2	Downspout passes through, some repair and cracking on underside near downspout
NW 11	1	Excellent condition
NW 12	3	Open cracks, some repairs, greatest concern is displaced front corner on the north side
NW 13	2	Extensive repairs on top side, good condition, concern is cracks and detached pieces on underside of south corner
NW 14	3	Open cracks, especially at the corners
NW 15	2	Extensive repairs but open cracks on top side
NW 16	1	Excellent condition
NW 17	1	Downspout passes through but excellent condition
NW 18	1	Open cracks at north front corner and at rear, otherwise good
NW 19 (corner)	2	Extensive repairs may mask some conditions, but presently limited to surface erosion, cracks on north front corner
SW 01	1	Repairs on south side, but good condition
Pergola	1, 4	Tops of all columns are exposed to weather and have open cracks, but are generally in good condition (1). Primary concern is northwest face of southwest corner column, which is cracked and detaching (4).



**Figure 26.** A column capital (NE 04) in very good condition, exhibiting few cracks or repairs (Ranking = 1).





**Figure 27.** A column capital (NE 03) in good condition, exhibiting repairs and some surface cracks on the top side (Ranking = 2).



**Figure 28.** A column capital (NE 02) in fair condition, exhibiting repairs, full-depth cracks, and loose materials on the top side (Ranking = 3).



**Figure 29.** A column capital (NE 05) in poor condition, exhibiting failed repairs, full-depth cracks, and loose materials on the top and sides (Ranking = 4).



**Figure 30.** A column capital (NW 01) in very poor condition, exhibiting complete loss and exposing the building paper and wooden sheathing and blocking (Ranking = 5).

## 5.4. Roof and Drainage System

The roof and drainage system at the Depot are critical elements in protecting the building interior from damage and directing water away from building exterior. The roof materials, including the terra cotta tiles and flashing, are aged but in good condition (Figure 31). A number of tiles have been replaced, and while the new color does not match the original, it is a relatively minor visual disruption. The attic was not accessible, but no water damage is associated with leaks in the roof tiles, only the flashing. For example, the water damage in the ceiling of historic Room 17, on the second floor, was caused by failed flashing between the parapet and the roof; the flashing has since been repaired.

Two metal-framed skylights are original to the building (see Appendix C). These are in good condition but it appears that the flashing has failed around the northern skylight, resulting in water damage in the ceiling of the original men's toilet (Figure 32). On the southeast side of the building, failed flashing between the shed roof and the wall, in combination with an overflowing gutter, may be the cause of the water damage on the interior wall of historic Room 22, on the first floor. In the future, regular inspection and repair of the roof tiles, skylights, and flashing will be important in maintaining the roof in good condition.

Although the separate elements of the drainage system, including gutters and downspouts, are in good condition, the connections between them range from fair to poor and require immediate attention. Failed connections between gutters and downspouts have led to water damage of paint and stucco (Figure 33), and failed joints or cracks in downspouts have caused damage to walls and capitals. Overflowing gutters (caused by debris blockage, failed joints, or inadequate slope) have caused water damage and erosion of exterior stucco and paint, as well as damage to the interior walls of the historic "Office" and restroom area on the first floor, and historic Rooms 9 and 22 on the second floor (Figure 34). Failed connections between downspouts and drains have led to excess moisture at foundations and water damage of walls (Figure 35). Prior to any other preservation work at the Depot, a full inspection of the drainage system is recommended, followed by repairs to existing gutters, downspouts, and drains, or replacement in kind. The location, nature, and condition of the drain field should also be ascertained and any issues addressed.



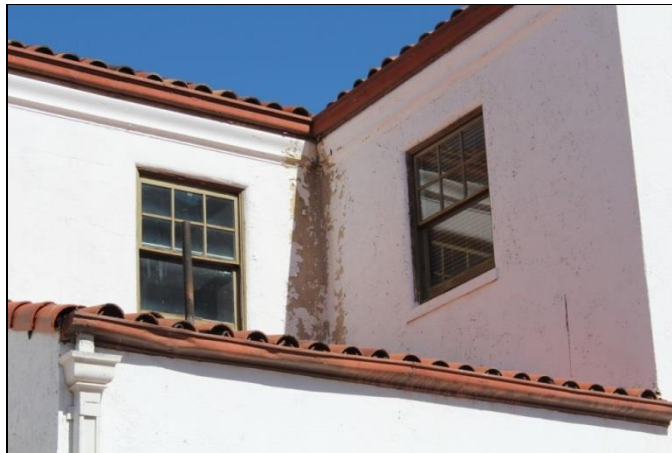
**Figure 31.** Original (dark) and replacement (red-orange) roof tiles over the arcade on the northwest side of the Depot. The flashing between the tiles and the wall is aged but generally in good condition.



**Figure 32.** The skylight above the original men's toilet on the southeast side of the building. Failed flashing has resulted in water damage to the interior ceiling.



**Figure 33.** A poor connection between the gutter and downspout has caused water damage to the adjacent paint and stucco.



**Figure 34.** Overflowing gutters have caused paint loss and stucco erosion on the building exterior, as well as damage to the interior wall of historic Room 22.



**Figure 35.** A failed connection between a downspout and drain on the southeast side of the building. The location and condition of the drain field is unknown.

## 5.5. Windows and Doors

The condition of windows and doors is largely a function of location. Those protected by arcades are generally in excellent condition, although the removal and repair of past alterations like boarded window sections and painted glazing would help to restore integrity (Figure 36). Unprotected first floor windows, particularly sills and the bottom rails of sashes, are in fair to poor condition, although deterioration conditions are generally limited to paint loss and cracked, weathered wood (Figure 37). Doors are generally better maintained, although several on the southeast side of the building were added when other additions were made and are not historic.

The historic windows and doors retain a very high degree of integrity, and it will be important address deterioration conditions in the near future to preserve these important features. Treatments should focus on windows and will involve putty removal and replacement, paint removal, sanding, priming, and painting. Very little glazing replacement or wood repair appears necessary except where sections of windows have been removed, and it appears that most windows remain operable. Testing revealed high levels of lead in the paint, and, therefore, all necessary procedures for personal protection, paint removal, and disposal of hazardous waste should be followed.



**Figure 36.** Windows and doors protected by arcades are in very good condition, despite minor alterations like painted glazing.



**Figure 37.** Failed paint layers and cracked, weathered wood are common on window sills and the bottom rails of window sashes.

## 5.6. Pergola

The pergola may not be original to the 1923 Depot, but it is now one of the few remaining site features from the historic period and an important landscape element (Figure 38). The conditions of the stuccoed, wood-framed pergola columns and capitals have been discussed in previous sections. The only other element of concern is the scrollwork, which is nailed to the carved wood brackets supporting the roof and the wood railings. The scrolls are thin wood veneers; these have dried and cracked over time, and in several areas sections of the scrolls have detached or been lost (Figure 39). All previously painted wooden members of the pergola roof should be painted or stained to match the original color, which will help to restore moisture to the scrolls and provide weathering protection. Loose scrolls can be reattached while missing sections can be replaced in kind.

The wood railings comprise a bottom rail, a top rail with rail cap, and rectangular balusters with notched and beveled edges (Figure 40). The rails are seated directly into the wood-framed columns and have subsequently been provided with additional support in the form of blocks and shims beneath the bottom rail. Some sections of railing are missing altogether, while others are missing balusters. Deterioration conditions include paint loss and cracked, weathered wood, particularly on the rails and the lower ends of the balusters.

The railings are generally in good condition when present. Recommended treatments include reattaching loose elements; scraping, sanding, priming, and painting all railings; and replacing missing balusters and railings to match the originals. The railings and other painted elements of the pergola should be included in a paint study, if conducted as a future phase of the HSR.



**Figure 38.** A general view of the pergola, view facing north.



**Figure 39.** Decorative wood scrollwork (detached on the right and missing on the left), which was applied to the scrolled brackets supporting the pergola roof.



**Figure 40.** An intact wood railing spanning between columns of the pergola. Note the notched and beveled balusters.

## 6.0 SUMMARY AND CONCLUSIONS

The Caliente Depot is of sound construction and has aged well over the years. Most exterior deterioration conditions are cosmetic and result from deferred maintenance rather than inherent building deficiencies. The exception is the thin-layer stucco detachment found only on the northwest side of the building, but this condition can be addressed through the removal of damaged layers and the application of compatible repair stucco.

Deferred maintenance, however, has reached a critical point where certain building components have begun to suffer irreversible damage. This is the case where the faulty roof drainage system has caused erosion and delamination of paint and stucco, where cracks in columns have allowed water to penetrate to the structural core, and where the unpainted wood of windows and sills has been exposed to ultraviolet light for a prolonged period and has now dried and cracked. The City has very limited resources to care for such a large building, and it will be necessary to prioritize and plan strategically for repair and maintenance work.

In the following sections, a treatment approach is recommended that meets national standards for preservation. Using this approach as a guide, preservation recommendations for each exterior building element are organized into those requiring immediate action (taking place in 1–2 years), short-term action (2–5 years), long-term action (5–10 years), and cyclical action (from 1 to 10 years). In summary, the highest priority actions are to repair the roof drainage system and correct all drainage issues, repair the column capitals, and rehabilitate windows and doors in poor condition. Addressing these issues now will prevent further deterioration, loss of historic materials, and more costly repairs in the future. Stucco and paint repairs are also important but less critical, and can be phased over the next 5 years.

### 6.1. Treatment Approach

In recognition of its historic significance, the Caliente Depot has been documented and listed on historic inventories and registers at the national and state levels. Listing confers recognition on the building but imposes no other restrictions on its treatment and use. It does, however, make the building eligible for a Federal Historic Preservation Tax Credit (if rehabilitated or restored for an income-producing use) and for other grants. To receive the federal tax credit and preservation grants, all repair or rehabilitation work must typically meet the Secretary of the Interior's Standards for Rehabilitation, as described below.

In the United States, national standards and guidelines for the treatment of historic properties are set by the Secretary of the Interior (Secretary), and these are used as the basis for managing historic properties at the state and local levels. The Secretary defines four approaches for the treatment of historic buildings:

- *Preservation* focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.
- *Rehabilitation* acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.
- *Restoration* returns a property to its condition at a particular period of time in its history, while removing evidence of other periods.
- *Reconstruction* re-creates vanished or non-surviving portions of a property for interpretive purposes. (National Park Service 2015)

From 1923 through 1972, no treatment approach was consciously applied to the Depot. Under City ownership, the approach has been one of preservation for the exterior and rehabilitation for the interior, which remains an appropriate treatment strategy today.



### **6.1.1. Secretary of the Interior's Standards for Preservation**

As the Secretary notes, "When the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations, Preservation may be considered as a treatment" (Weeks and Grimmer 1995). The Secretary's standards for preservation of historic properties are listed below. By adhering to these standards during the design and implementation of repair and maintenance work on the building exterior, the historic qualities of the Depot will be maintained.

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken. (Weeks and Grimmer 1995)

### **6.1.2. Secretary of the Interior's Standards for Rehabilitation**

The Secretary's standards for rehabilitation, as listed below, are similar to those for preservation, although the focus shifts from the comprehensive preservation of existing historic material to the selective preservation of character-defining features. The standards for rehabilitation also allow for additions and/or new construction that may be necessary to accommodate a new or expanded use, and these can be used to guide future work on the Depot interior. Should needs change in the future, rehabilitation is also an appropriate treatment approach for the Depot exterior.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. (Weeks and Grimmer 1995)

## **6.2. Immediate Preservation Actions (1-2 Years)**

### **6.2.1. Foundation**

None required.

### **6.2.2. Walls**

Conduct a trial treatment program to determine 1) the most effective method(s) for removing failed paint layers from the historic stucco and 2) specifications for compatible repair stucco.

- Hire a qualified paint removal company to conduct experiments with paint removal methods. Work should begin by using the gentlest means possible, namely scraping and sanding by hand to expose the next sound layer (which may be an underlying paint layer or the historic stucco surface). If this method is unsatisfactory, very low-pressure abrasion methods and/or chemical paint removers can be tried. Because multiple types of paint are present, more than one removal method may be required.<sup>10</sup> And because of the presence of lead paint, proper health and safety procedures for both personal protection and the removal and disposal of hazardous materials must be followed. See Appendix E for further information on removing paint from historic stucco.

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<sup>10</sup> Prior to paint removal, a paint study is advised not only to collect information for the historic record but to identify deteriorated paint types to make better judgments about the most effective methods for their removal during the trial paint removal program. Painted finishes on all building elements (walls, doors, windows, trim, gutters, downspouts, and pergola) should be included in the study.

- Using the results of the stucco analysis (see Appendix B), prepare test batches of repair stucco in order to arrive at a specifiable mix that is compatible in material composition and texture to the historic finish coat (Type 1 finish coat). (Because the stucco will be painted, color matching is not critical in this case.) Work should be conducted by a historic architect, architectural conservator, and/or masonry or plaster contractor familiar with historic building materials and their repair. The first mixes should use the materials and ratios detailed in the analysis:
  - Binder to sand ratio = 1.0 : 2.6 (by volume, with lime as dry hydrate)
  - Binder should be a mixture of weak grey Portland cement and high-calcium hydrated lime, ratio = 1.0 : 0.64 (by volume, with lime as dry hydrate)
  - Sand should be angular to sub-angular, clean granitic sand or masonry sand with a particle size distribution similar to the historic finish coat (see Table 7.2 in Appendix B).

Based on initial results, materials and ratios can be adjusted to achieve a finish stucco similar in hardness and texture to the original. Materials should also conform to American Society for Testing and Materials (ASTM) standards as closely as possible while still approximating the historic stucco composition (see Grimmer 1990:15 in Appendix F for a summary).

### **6.2.3. Column Capitals**

As part of the trial treatment program for the walls, develop a stucco repair mixture for the column capitals (Type 2 finish coat). As with the wall stucco, a sample can be professionally analyzed to provide guidance, or it is probably possible to achieve a good mix by sieving larger aggregate from the repair stucco developed for the walls.

### **6.2.4. Roof and Drainage System**

Because this system is so critical in preventing deterioration of other building elements, its repair is of the highest priority and should be addressed before any other preservation actions are undertaken.

- Contract with a roofing specialist experienced with historic buildings and materials to conduct a comprehensive inspection of aging elements like roof flashing and poorly functioning elements like gutters and downspouts. It will also be important to locate, inspect, and assess the condition of the ground drains and drainage field, although this system appears to function adequately at present and can be addressed as a medium-term action.
- Implement a comprehensive repair program that emphasizes the retention and repair of all visible historic building elements (e.g., gutters and downspouts) and their replacement in kind only when necessary. Elements like flashing around roof joints and skylights are not character-defining and can be repaired or replaced with the most effective methods and materials.
- Roof tiles appear to be in good condition based on a preliminary inspection from the ground. Any missing tiles identified during the inspection should be replaced immediately, while less critical issues of loose or cracked tiles can be addressed in the medium term.
- If a paint study is conducted, include an evaluation of gutters and downspouts and consider the possibility that these elements were not painted originally. Address issues of paint removal and reapplication for downspouts and gutters as part of the trial testing program for the walls.

### **6.2.5. Windows and Doors**

Engage a contractor experienced with the repair and restoration of historic wood windows to develop a comprehensive rehabilitation program. Window repairs can be time-consuming and costly, and the program should offer a phased approach that addresses windows in the poorest condition first. Most doors and many windows are in good condition, and these will only require routine scraping, priming, and painting. These should be scheduled for treatment in the last phase of the rehabilitation program, possibly as a medium-term or long-term action.

Treatments for deteriorated windows, particularly on the southwest and southeast side, and on the upper floor of the northwest side, may include putty removal and replacement; partial or full paint removal; sanding, priming, and painting; some glazing replacement; and some wood repair or replacement, particularly for deteriorated sills and rails. It may be necessary to remove some windows for repair or rebuilding. When paint deterioration is very extensive, it may be easier to remove the windows to strip the paint off-site.<sup>11</sup> Testing revealed high levels of lead in the paint, and, therefore, all necessary procedures for personal protection, paint removal, and disposal of hazardous waste should be followed.

### **6.2.6. Pergola**

Identifying methods and materials for stucco repair and paint removal will be adequately addressed under the trial testing program for the walls. No other actions are required.

## **6.3. Medium-Term Preservation Actions (2–5 years)**

### **6.3.1. Foundation**

None required.

### **6.3.2. Walls**

Conduct a comprehensive stucco repair project. This should be carried out by a professional plasterer experienced with historic buildings, if possible in collaboration with a historic architect, conservator, or other qualified preservation professional. Specific guidelines are provided below, and additional information and general guidelines for stucco repair are provided in Appendix F.

- Remove deteriorated paint from the walls using the method(s) identified in the trial treatment program. This may expose further areas of deterioration that will need to be addressed.
- Remove cracked or detached repairs and evaluate the condition of the underlying historic material. Address deterioration conditions as described below.
- To repair delamination, remove detached layers to expose a sound underlying stucco layer. Use only hand tools, and take care not to damage adjacent areas of sound stucco. Edges of the exposed area should be squared to provide adequate mechanical support for new material. Clean the surface to remove loose debris, and ensure that the underlying historic stucco surface is

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<sup>11</sup> A good summary of how to address exterior paint deterioration on historic woodwork is provided in Appendix G. As the authors emphasize, “removing paint from historic buildings – with the exception of cleaning, light scraping, and hand sanding... should be avoided...” If conditions warrant removal, the approach should be “to remove paint to the next sound layer using the gentlest means possible, then to repaint” (Weeks and Look 1982:2).

sound. (If the exposed area is shallower than ¼ inch, it may be necessary to remove additional sound material to depth of ¼ inch to ensure adequate long-term performance of new material.) Apply a new finish coat to match the plane of the historic wall. The exposed older surface should be rough enough to provide an adequate key for the new finish coat, but, if not, a bonding agent can be used between the old and new material. The new finish coat should be in plane with the adjacent historic finish and worked to match its pattern and texture.

- To repair hairline cracks, fill with a fine slurry of stucco repair mix. To repair wide cracks, remove all loose material and square off edges of sound stucco on either side of the crack, wide enough to create an adequate key for new material. Depending on the substrate (wood sheathing or concrete), repair as described in the next paragraph.
- To repair areas of full loss over wood-framed walls, remove all loose or damaged material (including stucco, lath, building paper, and, if necessary, the wood sheathing); square sound stucco edges to accommodate new materials; replace damaged wood members; apply new building paper and lath; and then apply repair stucco to match the adjacent historic stucco. To repair areas of full loss over concrete walls, remove all loose materials, square off sound edges, thoroughly wet the existing concrete, and apply repair stucco. If necessary, a bonding agent can be used between the old and new materials.
- To repair areas where metal lath is exposed, remove all loose stucco and lath to the substrate (usually the wood framing and sheathing), repair the substrate as necessary, square off the adjacent edges of sound stucco, then reapply the full wall sequence to include building paper, lath, and stucco.

After all stucco repairs are complete, repaint the walls of the Depot. Because multiple paint types have been used in the past, consult closely with an experienced paint contractor and a reputable manufacturer (e.g., Sherwin Williams or Benjamin Moore) to identify additional surface preparation measures that may be necessary, as well as the best primer and paint system. The assumption is that after scraping failed paint layers and making stucco repairs, the Depot walls will present a complicated mix of new, unpainted stucco, unpainted historic stucco, older oil-based paints on historic stucco, and sound latex paint over older oil paints and historic stucco. As an example of the potential complexities, an oil-based primer is generally recommended over old oil paints because it will penetrate any remaining chalky residue and will provide a flat, porous surface to which new paint will adhere. Conversely, the use of oil paints is not recommended over latex paints. The selection of both an experienced contractor and the appropriate paint system will be critical in ensuring good and lasting paint performance. Some general guidance is provided in Appendix H; important points are highlighted below.

- Paint only under the appropriate environmental conditions, including temperature, humidity, and sun exposure (see Appendix H, Section 1.04). Also be mindful of environmental conditions for at least 24 hours after application.
- Ensure that historic stucco is clean and dry, all stucco repairs have been made, and all new repairs are clean and dry. Remaining historic oil paints may have a chalky surface that should be washed off to ensure adequate adhesion of new paint layers (see Appendix H, Section 3.01).
- If an oil-based primer and/or paint is used, stucco repairs must cure for a year prior to application OR a masonry conditioner must be applied prior to painting.
- Immediately after application of the primer, apply two coats of paint from the same manufacturer at the recommended spread rate. If a latex paint is selected, acrylic should be used rather than vinyl because it is more alkali-resistant, an important consideration when painting stucco.

### **6.3.3. Column Capitals**

Implement a comprehensive treatment program for the column capitals. Remove loose historic stucco and repairs from the tops and sides of all capitals. Repair or replace the underlying lath, building paper, and wood blocking as required, and rebuild the stucco layers in wide cracks and areas of loss. Fill fine cracks with a slurry of the stucco repair mix. After top surfaces have been repaired, finish the work by applying a gently sloped stucco layer to shed water; this should not be visible from the ground. The use of a water repellent or sealant is not recommended.

Address paint deterioration and the application of new paint as described for the walls.

### **6.3.4. Roof and Drainage System**

If not previously addressed, locate, inspect, and assess the condition of ground drains; make repairs or replace as needed. Reattach loose roof tiles and replace cracked tiles as required. Scrape and paint gutters and downspouts when walls are repainted using paints appropriate for metal substrates.

### **6.3.5. Windows and Doors**

Continue repairs to windows and doors (see Section 6.2.5).

### **6.3.6. Pergola**

Implement stucco repairs using the materials and methods described for walls.

Reattach loose sections of wood scrollwork and replace missing sections in kind. Stain all previously treated wooden members to match the original color, which will help to restore moisture to the scrolls and other woodwork, and provide weathering protection.

For the railings, reattach loose elements; scrape, sand, prime, and paint all railings as described for windows; and replace missing balusters and railings to match the originals.

## **6.4. Long-Term Preservation Actions (5–10 years)**

Few long-term actions for the preservation and maintenance of the building exterior are anticipated other than to address any short-term or medium-term action items that could not be funded or implemented on schedule. In particular, repairs to windows and doors in sound condition may extend into this period.

## **6.5. Cyclical Preservation Actions**

### **6.5.1. Yearly**

*Foundation:* Inspect areas behind mechanical equipment on southeast side of building. Remove debris and correct drainage issues as needed. Also, after any floods, inspect the basement walls and floors for signs of water damage, and repair as needed.

*Walls:* Inspect the walls near gutters and downspouts and around the foundations to identify moisture damage as quickly as possible. Correct drainage issues and make spot repairs to stucco and paint as required.

*Column capitals:* Inspect the capitals near gutters and beneath downspouts to identify moisture damage as quickly as possible. Correct drainage issues and make spot repairs to capitals as required.

*Roof and drainage system:* Clean and maintain gutters and downspouts.

### **6.5.2. Every 5 Years**

*Column capitals:* Inspect the top sides of capitals using a ladder for access. Note any cracks or other deterioration issues and repair as required.

### **6.5.3. Every 10 Years**

*Walls:* With proper surface preparation and application, exterior paint on exposed walls can have a performance life of 10 years or more. Plan to scrape and repaint some walls, particularly on the northeast and northwest sides of the building, about every 10 years. Walls beneath arcades and on the more sheltered southeast and southwest sides may require less frequent repainting.

*Roof and drainage system:* Access all parts of the roof and conduct a comprehensive inspection of parapets, roof tiles, skylights, flashing, and the drainage system. Make repairs as required, and repaint as needed.

*Windows and doors:* As with walls, plan to scrape and paint windows, particularly in exposed locations, about every 10 years.

*Pergola:* Plan to scrape and paint the pergola, particularly the railings and other exposed locations, every 7–10 years.

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# Preservation Briefs: 9

## The Repair of Historic Wooden Windows

John H. Myers

The windows on many historic buildings are an important aspect of the architectural character of those buildings. Their design, craftsmanship, or other qualities may make them worthy of preservation. This is self-evident for ornamental windows, but it can be equally true for warehouses or factories where the windows may be the most dominant visual element of an otherwise plain building (see figure 1). Evaluating the significance of these windows and planning for their repair or replacement can be a complex process involving both objective and subjective considerations. The *Secretary of the Interior's Standards for Rehabilitation*, and the accompanying guidelines, call for respecting the significance of original materials and features, repairing and retaining them wherever possible, and when necessary, replacing them in kind. This Brief is based on the issues of significance and repair which are implicit in the standards, but the primary emphasis is on the technical issues of planning for the repair of windows including evaluation of their physical condition, techniques of repair, and design considerations when replacement is necessary.



Figure 1. Windows are frequently important visual focal points, especially on simple facades such as this mill building. Replacement of the multi-pane windows here with larger panes could dramatically change the appearance of the building. The areas of missing windows convey the impression of such a change. Photo: John T. Lowe

Much of the technical section presents repair techniques as an instructional guide for the do-it-yourselfer. The information will be useful, however, for the architect, contractor, or developer on large-scale projects. It presents a methodology for approaching the evaluation and repair of existing windows, and considerations for replacement, from which the professional can develop alternatives and specify appropriate materials and procedures.

### Architectural or Historical Significance

Evaluating the architectural or historical significance of windows is the first step in planning for window treatments, and a general understanding of the function and history of windows is vital to making a proper evaluation. As a part of this evaluation, one must consider four basic window functions: admitting light to the interior spaces, providing fresh air and ventilation to the interior, providing a visual link to the outside world, and enhancing the appearance of a building. No single factor can be disregarded when planning window treatments; for example, attempting to conserve energy by closing up or reducing the size of window openings may result in the use of *more* energy by increasing electric lighting loads and decreasing passive solar heat gains.

Historically, the first windows in early American houses were casement windows; that is, they were hinged at the side and opened outward. In the beginning of the eighteenth century single- and double-hung windows were introduced. Subsequently many styles of these vertical sliding sash windows have come to be associated with specific building periods or architectural styles, and this is an important consideration in determining the significance of windows, especially on a local or regional basis. Site-specific, regionally oriented architectural comparisons should be made to determine the significance of windows in question. Although such comparisons may focus on specific window types and their details, the ultimate determination of significance should be made within the context of the whole building, wherein the windows are one architectural element (see figure 2).

After all of the factors have been evaluated, *windows should be considered significant to a building if they:* 1) are original, 2) reflect the original design intent for the building, 3) reflect period or regional styles or building practices, 4) reflect changes to the building resulting from major periods or events, or 5) are examples of exceptional craftsmanship or design. Once this evaluation of significance has been completed, it is possible to pro-

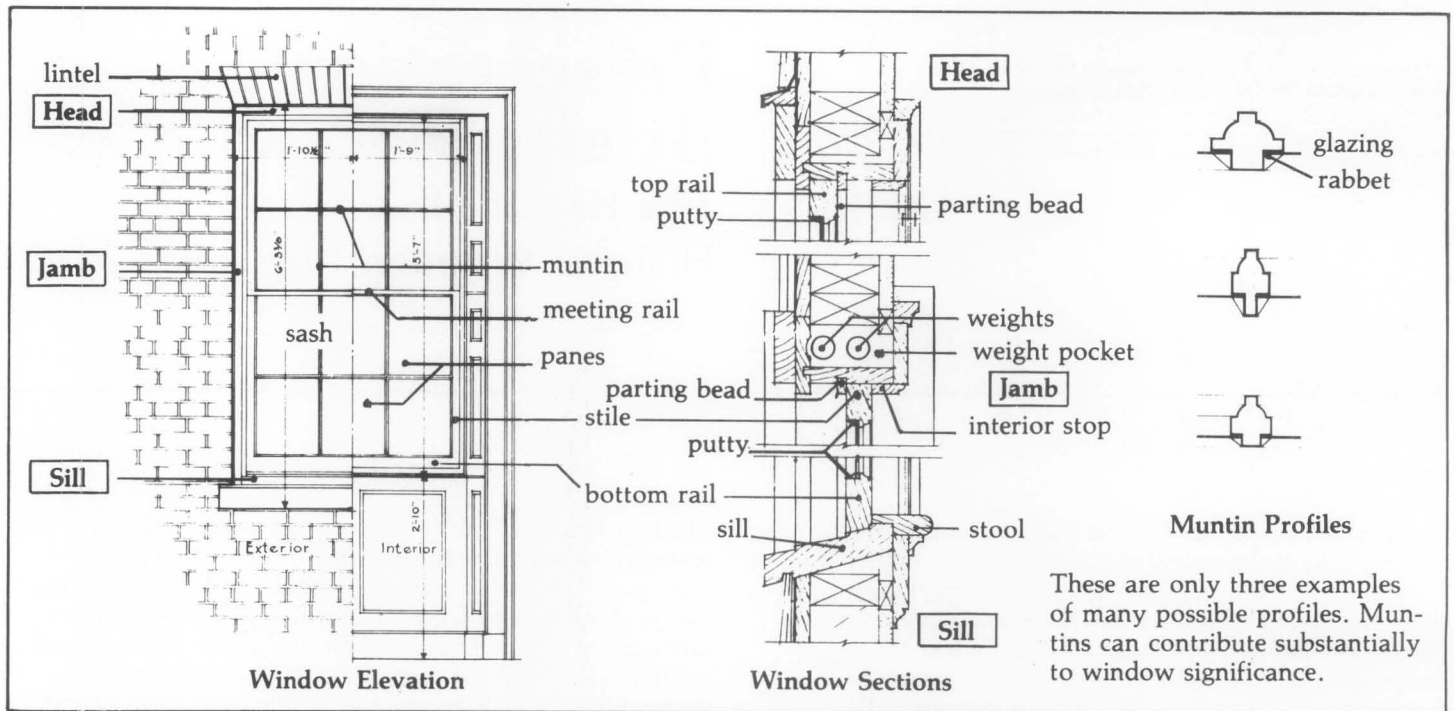


Figure 2. These drawings of window details identify major components, terminology, and installation details for a wooden double-hung window.

ceed with planning appropriate treatments, beginning with an investigation of the physical condition of the windows.

### Physical Evaluation

The key to successful planning for window treatments is a careful evaluation of existing physical conditions on a unit-by-unit basis. A graphic or photographic system may be devised to record existing conditions and illustrate the scope of any necessary repairs. Another effective tool is a window schedule which lists all of the parts of each window unit. Spaces by each part allow notes on existing conditions and repair instructions. When such a schedule is completed, it indicates the precise tasks to be performed in the repair of each unit and becomes a part of the specifications. In any evaluation, one should note at a minimum, 1) window location, 2) condition of the paint, 3) condition of the frame and sill, 4) condition of the sash (rails, stiles and muntins), 5) glazing problems, 6) hardware, and 7) the overall condition of the window (excellent, fair, poor, and so forth).

Many factors such as poor design, moisture, vandalism, insect attack, and lack of maintenance can contribute to window deterioration, but moisture is the primary contributing factor in wooden window decay. All window units should be inspected to see if water is entering around the edges of the frame and, if so, the joints or seams should be caulked to eliminate this danger. The glazing putty should be checked for cracked, loose, or missing sections which allow water to saturate the wood, especially at the joints. The back putty on the interior side of the pane should also be inspected, because it creates a seal which prevents condensation from running down into the joinery. The sill should be examined to insure that it slopes downward away from the building and allows water to drain off. In addition, it may be advisable to cut a dripline along the underside of the sill. This almost invisible treatment will insure proper water run-off, particu-

larly if the bottom of the sill is flat. Any conditions, including poor original design, which permit water to come in contact with the wood or to puddle on the sill must be corrected as they contribute to deterioration of the window.

One clue to the location of areas of excessive moisture is the condition of the paint; therefore, each window should be examined for areas of paint failure. Since excessive moisture is detrimental to the paint bond, areas of paint blistering, cracking, flaking, and peeling usually identify points of water penetration, moisture saturation, and potential deterioration. Failure of the paint should not, however, be mistakenly interpreted as a sign that the wood is in poor condition and hence, irreparable. Wood is frequently in sound physical condition beneath unsightly paint. After noting areas of paint failure, the next step is to inspect the condition of the wood, particularly at the points identified during the paint examination.

Each window should be examined for operational soundness beginning with the lower portions of the frame and sash. Exterior rainwater and interior condensation can flow downward along the window, entering and collecting at points where the flow is blocked. The sill, joints between the sill and jamb, corners of the bottom rails and muntin joints are typical points where water collects and deterioration begins (see figure 3). The operation of the window (continuous opening and closing over the years and seasonal temperature changes) weakens the joints, causing movement and slight separation. This process makes the joints more vulnerable to water which is readily absorbed into the end-grain of the wood. If severe deterioration exists in these areas, it will usually be apparent on visual inspection, but other less severely deteriorated areas of the wood may be tested by two traditional methods using a small ice pick.

An ice pick or an awl may be used to test wood for soundness. The technique is simply to jab the pick into a wetted wood surface at an angle and pry up a small sec-

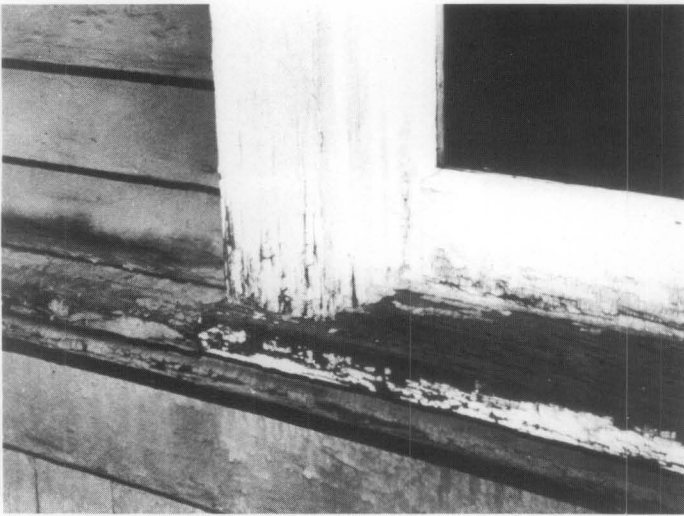


Figure 3. Deterioration of poorly maintained windows usually begins on horizontal surfaces and at joints where water can collect and saturate the wood. The problem areas are clearly indicated by paint failure due to moisture. Photo: Baird M. Smith, AIA

tion of the wood. Sound wood will separate in long fibrous splinters, but decayed wood will lift up in short irregular pieces due to the breakdown of fiber strength.

Another method of testing for soundness consists of pushing a sharp object into the wood, perpendicular to the surface. If deterioration has begun from the hidden side of a member and the core is badly decayed, the visible surface may appear to be sound wood. Pressure on the probe can force it through an apparently sound skin to penetrate deeply into decayed wood. This technique is especially useful for checking sills where visual access to the underside is restricted.

Following the inspection and analysis of the results, the scope of the necessary repairs will be evident and a plan for the rehabilitation can be formulated. Generally the actions necessary to return a window to "like new" condition will fall into three broad categories: 1) routine maintenance procedures, 2) structural stabilization, and 3) parts replacement. These categories will be discussed in the following sections and will be referred to respectively as Repair Class I, Repair Class II, and Repair Class III. Each successive repair class represents an increasing level of difficulty, expense, and work time. Note that most of the points mentioned in Repair Class I are routine maintenance items and should be provided in a regular maintenance program for any building. The neglect of these routine items can contribute to many common window problems.

Before undertaking any of the repairs mentioned in the following sections all sources of moisture penetration should be identified and eliminated, and all existing decay fungi destroyed in order to arrest the deterioration process. Many commercially available fungicides and wood preservatives are toxic, so it is extremely important to follow the manufacturer's recommendations for application, and store all chemical materials away from children and animals. After fungicidal and preservative treatment the windows may be stabilized, retained, and restored with every expectation for a long service life.

### Repair Class I: Routine Maintenance

Repairs to wooden windows are usually labor intensive and relatively uncomplicated. On small scale projects this

allows the do-it-yourselfer to save money by repairing all or part of the windows. On larger projects it presents the opportunity for time and money which might otherwise be spent on the removal and replacement of existing windows, to be spent on repairs, subsequently saving all or part of the material cost of new window units. Regardless of the actual costs, or who performs the work, the evaluation process described earlier will provide the knowledge from which to specify an appropriate work program, establish the work element priorities, and identify the level of skill needed by the labor force.

The routine maintenance required to upgrade a window to "like new" condition normally includes the following steps: 1) some degree of interior and exterior paint removal, 2) removal and repair of sash (including reglazing where necessary), 3) repairs to the frame, 4) weatherstripping and reinstallation of the sash, and 5) repainting. These operations are illustrated for a typical double-hung wooden window (see figures 4a-f), but they may be adapted to other window types and styles as applicable.

Historic windows have usually acquired many layers of paint over time. Removal of excess layers or peeling and flaking paint will facilitate operation of the window and restore the clarity of the original detailing. Some degree of paint removal is also necessary as a first step in the proper surface preparation for subsequent refinishing (if paint color analysis is desired, it should be conducted prior to the onset of the paint removal). There are several safe and effective techniques for removing paint from wood, depending on the amount of paint to be removed. Several techniques such as scraping, chemical stripping, and the use of a hot air gun are discussed in "Preservation Briefs: 10 Paint Removal from Historic Woodwork" (see Additional Reading section at end).

Paint removal should begin on the interior frames, being careful to remove the paint from the interior stop and the parting bead, particularly along the seam where these stops meet the jamb. This can be accomplished by running a utility knife along the length of the seam, breaking the paint bond. It will then be much easier to remove the stop, the parting bead and the sash. The interior stop may be initially loosened from the sash side to avoid visible scarring of the wood and then gradually pried loose using a pair of putty knives, working up and down the stop in small increments (see figure 4b). With the stop removed, the lower or interior sash may be withdrawn. The sash cords should be detached from the sides of the sash and their ends may be pinned with a nail or tied in a knot to prevent them from falling into the weight pocket.

Removal of the upper sash on double-hung units is similar but the parting bead which holds it in place is set into a groove in the center of the stile and is thinner and more delicate than the interior stop. After removing any paint along the seam, the parting bead should be carefully pried out and worked free in the same manner as the interior stop. The upper sash can be removed in the same manner as the lower one and both sash taken to a convenient work area (in order to remove the sash the interior stop and parting bead need only be removed from one side of the window). Window openings can be covered with polyethylene sheets or plywood sheathing while the sash are out for repair.

The sash can be stripped of paint using appropriate techniques, but if any heat treatment is used (see figure 4c), the glass should be removed or protected from the sudden temperature change which can cause breakage. An



Figure 4a. The following series of photographs of the repair of a historic double-hung window use a unit which is structurally sound but has many layers of paint, some cracked and missing putty, slight separation at the joints, broken sash cords, and one cracked pane. Photo: John H. Myers



Figure 4b. After removing paint from the seam between the interior stop and the jamb, the stop can be pried out and gradually worked loose using a pair of putty knives as shown. To avoid visible scarring of the wood, the sash can be raised and the stop pried loose initially from the outer side. Photo: John H. Myers



Figure 4c. Sash can be removed and repaired in a convenient work area. Paint is being removed from this sash with a hot air gun while an asbestos sheet protects the glass from sudden temperature change. Photo: John H. Myers

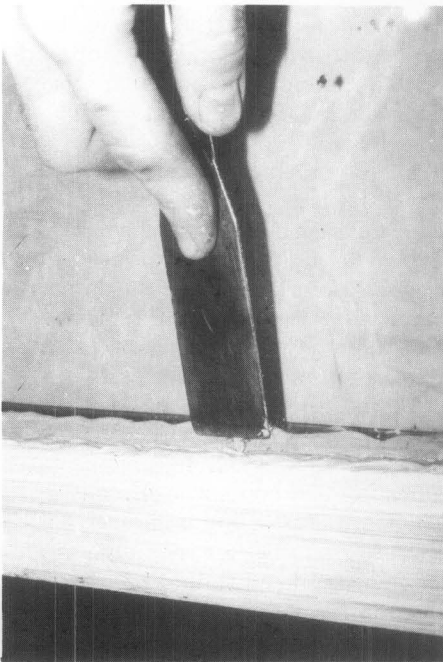


Figure 4d. Reglazing or replacement of the putty requires that the existing putty be removed manually, the glazing points be extracted, the glass removed, and the back putty scraped out. To reglaze, a bed of putty is laid around the perimeter of the rabbet, the pane is pressed into place, glazing points are inserted to hold the pane (shown), and a final seal of putty is beveled around the edge of the glass. Photo: John H. Myers



Figure 4e. A common repair is the replacement of broken sash cords with new cords (shown) or with chains. The weight pocket is often accessible through a removable plate in the jamb, or by removing the interior trim. Photo: John H. Myers



Figure 4f. Following the relatively simple repairs, the window is weathertight, like new in appearance, and serviceable for many years to come. Both the historic material and the detailing and craftsmanship of this original window have been preserved. Photo: John H. Myers

overlay of aluminum foil on gypsum board or asbestos can protect the glass from such rapid temperature change. It is important to protect the glass because it may be historic and often adds character to the window. Deteriorated putty should be removed manually, taking care not to damage the wood along the rabbet. If the glass is to be removed, the glazing points which hold the glass in place can be extracted and the panes numbered and removed for cleaning and reuse in the same openings. With the glass panes out, the remaining putty can be removed and the sash can be sanded, patched, and primed with a preservative primer. Hardened putty in the rabbets may be softened by heating with a soldering iron at the point of removal. Putty remaining on the glass may be softened by soaking the panes in linseed oil, and then removed with less risk of breaking the glass. Before reinstalling the glass, a bead of glazing compound or linseed oil putty should be laid around the rabbet to cushion and seal the glass. Glazing compound should only be used on wood which has been brushed with linseed oil and primed with an oil based primer or paint. The pane is then pressed into place and the glazing points are pushed into the wood around the perimeter of the pane (see figure 4d). The final glazing compound or putty is applied and beveled to complete the seal. The sash can be refinished as desired on the inside and painted on the outside as soon as a "skin" has formed on the putty, usually in 2 or 3 days. Exterior paint should cover the beveled glazing compound or putty and lap over onto the glass slightly to complete a weathertight seal. After the proper curing times have elapsed for paint and putty, the sash will be ready for reinstallation.

While the sash are out of the frame, the condition of the wood in the jamb and sill can be evaluated. Repair and refinishing of the frame may proceed concurrently with repairs to the sash, taking advantage of the curing times for the paints and putty used on the sash. One of the most common work items is the replacement of the sash cords with new rope cords or with chains (see figure 4e). The weight pocket is frequently accessible through a door on the face of the frame near the sill, but if no door exists, the trim on the interior face may be removed for access. Sash weights may be increased for easier window operation by elderly or handicapped persons. Additional repairs to the frame and sash may include consolidation or replacement of deteriorated wood. Techniques for these repairs are discussed in the following sections.

The operations just discussed summarize the efforts necessary to restore a window with minor deterioration to "like new" condition (see figure 4f). The techniques can be applied by an unskilled person with minimal training and experience. To demonstrate the practicality of this approach, and photograph it, a Technical Preservation Services staff member repaired a wooden double-hung, two over two window which had been in service over ninety years. The wood was structurally sound but the window had one broken pane, many layers of paint, broken sash cords and inadequate, worn-out weatherstripping. The staff member found that the frame could be stripped of paint and the sash removed quite easily. Paint, putty and glass removal required about one hour for each sash, and the reglazing of both sash was accomplished in about one hour. Weatherstripping of the sash and frame, replacement of the sash cords and reinstallation of the sash, parting bead, and stop required an hour and a half. These times refer only to individual operations; the entire proc-

ess took several days due to the drying and curing times for putty, primer, and paint, however, work on other window units could have been in progress during these lag times.

## Repair Class II: Stabilization

The preceding description of a window repair job focused on a unit which was operationally sound. Many windows will show some additional degree of physical deterioration, especially in the vulnerable areas mentioned earlier, but even badly damaged windows can be repaired using simple processes. Partially decayed wood can be water-proofed, patched, built-up, or consolidated and then painted to achieve a sound condition, good appearance, and greatly extended life. Three techniques for repairing partially decayed or weathered wood are discussed in this section, and all three can be accomplished using products available at most hardware stores.

One established technique for repairing wood which is split, checked or shows signs of rot, is to: 1) dry the wood, 2) treat decayed areas with a fungicide, 3) water-proof with two or three applications of boiled linseed oil (applications every 24 hours), 4) fill cracks and holes with putty, and 5) after a "skin" forms on the putty, paint the surface. Care should be taken with the use of fungicide which is toxic. Follow the manufacturers' directions and use only on areas which will be painted. When using any technique of building up or patching a flat surface, the finished surface should be sloped slightly to carry water away from the window and not allow it to puddle. Caulking of the joints between the sill and the jamb will help reduce further water penetration.

When sills or other members exhibit surface weathering they may also be built-up using wood putties or home-made mixtures such as sawdust and resorcinol glue, or whitening and varnish. These mixtures can be built up in successive layers, then sanded, primed, and painted. The same caution about proper slope for flat surfaces applies to this technique.

Wood may also be strengthened and stabilized by consolidation, using semi-rigid epoxies which saturate the porous decayed wood and then harden. The surface of the consolidated wood can then be filled with a semi-rigid epoxy patching compound, sanded and painted (see figure 5). Epoxy patching compounds can be used to build up



Figure 5. This illustrates a two-part epoxy patching compound used to fill the surface of a weathered sill and rebuild the missing edge. When the epoxy cures, it can be sanded smooth and painted to achieve a durable and waterproof repair. Photo: John H. Myers

missing sections or decayed ends of members. Profiles can be duplicated using hand molds, which are created by pressing a ball of patching compound over a sound section of the profile which has been rubbed with butcher's wax. This can be a very efficient technique where there are many typical repairs to be done. Technical Preservation Services has published *Epoxy for Wood Repairs in Historic Buildings* (see Additional Reading section at end), which discusses the theory and techniques of epoxy repairs. The process has been widely used and proven in marine applications; and proprietary products are available at hardware and marine supply stores. Although epoxy materials may be comparatively expensive, they hold the promise of being among the most durable and long lasting materials available for wood repair.

Any of the three techniques discussed can stabilize and restore the appearance of the window unit. There are times, however, when the degree of deterioration is so advanced that stabilization is impractical, and the only way to retain some of the original fabric is to replace damaged parts.

### Repair Class III: Splices and Parts Replacement

When parts of the frame or sash are so badly deteriorated that they cannot be stabilized there are methods which permit the retention of some of the existing or original fabric. These methods involve replacing the deteriorated parts with new matching pieces, or splicing new wood into existing members. The techniques require more skill and are more expensive than any of the previously discussed alternatives. It is necessary to remove the sash and/or the affected parts of the frame and have a carpenter or woodworking mill reproduce the damaged or missing parts. Most millwork firms can duplicate parts, such as muntins, bottom rails, or sills, which can then be incorporated into the existing window, but it may be necessary to shop around because there are several factors controlling the practicality of this approach. Some woodworking mills do not like to repair old sash because nails or other foreign objects in the sash can damage expensive knives (which cost far more than their profits on small repair jobs); others do not have cutting knives to duplicate muntin profiles. Some firms prefer to concentrate on larger jobs with more profit potential, and some may not have a craftsman who can duplicate the parts. A little searching should locate a firm which will do the job, and at a reasonable price. If such a firm does not exist locally, there are firms which undertake this kind of repair and ship nationwide. It is possible, however, for the advanced do-it-yourselfer or craftsman with a table saw to duplicate moulding profiles using techniques discussed by Gordie Whittington in "Simplified Methods for Reproducing Wood Mouldings," *Bulletin of the Association for Preservation Technology*, Vol. III, No. 4, 1971, or illustrated more recently in *The Old House*, Time-Life Books, Alexandria, Virginia, 1979.

The repairs discussed in this section involve window frames which may be in very deteriorated condition, possibly requiring removal; therefore, caution is in order. The actual construction of wooden window frames and sash is not complicated. Pegged mortise and tenon units can be disassembled easily, if the units are out of the building. The installation or connection of some frames to the surrounding structure, especially masonry walls, can complicate the work immeasurably, and may even require

dismantling of the wall. It may be useful, therefore, to take the following approach to frame repair: 1) conduct regular maintenance of sound frames to achieve the longest life possible, 2) make necessary repairs in place wherever possible, using stabilization and splicing techniques, and 3) if removal is necessary, thoroughly investigate the structural detailing and seek appropriate professional consultation.

Another alternative may be considered if parts replacement is required, and that is sash replacement. If extensive replacement of parts is necessary and the job becomes prohibitively expensive it may be more practical to purchase new sash which can be installed into the existing frames. Such sash are available as exact custom reproductions, reasonable facsimiles (custom windows with similar profiles), and contemporary wooden sash which are similar in appearance. There are companies which still manufacture high quality wooden sash which would duplicate most historic sash. A few calls to local building suppliers may provide a source of appropriate replacement sash, but if not, check with local historical associations, the state historic preservation office, or preservation related magazines and supply catalogs for information.

If a rehabilitation project has a large number of windows such as a commercial building or an industrial complex, there may be less of a problem arriving at a solution. Once the evaluation of the windows is completed and the scope of the work is known, there may be a potential economy of scale. Woodworking mills may be interested in the work from a large project; new sash in volume may be considerably less expensive per unit; crews can be assembled and trained on site to perform all of the window repairs; and a few extensive repairs can be absorbed (without undue burden) into the total budget for a large number of sound windows. While it may be expensive for the average historic home owner to pay seventy dollars or more for a mill to grind a custom knife to duplicate four or five bad muntins, that cost becomes negligible on large commercial projects which may have several hundred windows.

Most windows should not require the extensive repairs discussed in this section. The ones which do are usually in buildings which have been abandoned for long periods or have totally lacked maintenance for years. It is necessary to thoroughly investigate the alternatives for windows which do require extensive repairs to arrive at a solution which retains historic significance and is also economically feasible. Even for projects requiring repairs identified in this section, if the percentage of parts replacement per window is low, or the number of windows requiring repair is small, repair can still be a cost effective solution.

### Weatherization

A window which is repaired should be made as energy efficient as possible by the use of appropriate weatherstripping to reduce air infiltration. A wide variety of products are available to assist in this task. Felt may be fastened to the top, bottom, and meeting rails, but may have the disadvantage of absorbing and holding moisture, particularly at the bottom rail. Rolled vinyl strips may also be tacked into place in appropriate locations to reduce infiltration. Metal strips or new plastic spring strips may be used on the rails and, if space permits, in

the channels between the sash and jamb. Weatherstripping is a historic treatment, but old weatherstripping (felt) is not likely to perform very satisfactorily. Appropriate contemporary weatherstripping should be considered an integral part of the repair process for windows. The use of sash locks installed on the meeting rail will insure that the sash are kept tightly closed so that the weatherstripping will function more effectively to reduce infiltration. Although such locks will not always be historically accurate, they will usually be viewed as an acceptable contemporary modification in the interest of improved thermal performance.

Many styles of storm windows are available to improve the thermal performance of existing windows. The use of exterior storm windows should be investigated whenever feasible because they are thermally efficient, cost-effective, reversible, and allow the retention of original windows (see "Preservation Briefs: 3"). Storm window frames may be made of wood, aluminum, vinyl, or plastic; however, the use of unfinished aluminum storms should be avoided. The visual impact of storms may be minimized by selecting colors which match existing trim color. Arched top storms are available for windows with special shapes. Although interior storm windows appear to offer an attractive option for achieving double glazing with minimal visual impact, the potential for damaging condensation problems must be addressed. Moisture which becomes trapped between the layers of glazing can condense on the colder, outer prime window, potentially leading to deterioration. The correct approach to using interior storms is to create a seal on the interior storm while allowing some ventilation around the prime window. In actual practice, the creation of such a durable, airtight seal is difficult.

## Window Replacement

Although the retention of original or existing windows is always desirable and this **Brief** is intended to encourage that goal, there is a point when the condition of a window may clearly indicate replacement. The decision process for selecting replacement windows should *not* begin with a survey of contemporary window products which are available as replacements, but should begin with a look at the windows which are being replaced. Attempt to understand the contribution of the window(s) to the appearance of the facade including: 1) the pattern of the openings and their size; 2) proportions of the frame and sash; 3) configuration of window panes; 4) muntin profiles; 5) type of wood; 6) paint color; 7) characteristics of the glass; and 8) associated details such as arched tops, hoods, or other decorative elements. Develop an understanding of how the window reflects the period, style, or regional characteristics of the building, or represents technological development.

Armed with an awareness of the significance of the existing window, begin to search for a replacement which retains as much of the character of the historic window as possible. There are many sources of suitable new windows. Continue looking until an acceptable replacement can be found. Check building supply firms, local woodworking mills, carpenters, preservation oriented magazines, or catalogs or suppliers of old building materials, for product information. Local historical associations and state historic preservation offices may be good sources of

information on products which have been used successfully in preservation projects.

Consider energy efficiency as one of the factors for replacements, but do not let it dominate the issue. Energy conservation is no excuse for the wholesale destruction of historic windows which can be made thermally efficient by historically and aesthetically acceptable means. In fact, a historic wooden window with a high quality storm window added should thermally outperform a new double-glazed metal window which does not have thermal breaks (insulation between the inner and outer frames intended to break the path of heat flow). This occurs because the wood has far better insulating value than the metal, and in addition many historic windows have high ratios of wood to glass, thus reducing the area of highest heat transfer. One measure of heat transfer is the U-value, the number of Btu's per hour transferred through a square foot of material. When comparing thermal performance, the lower the U-value the better the performance. According to *ASHRAE 1977 Fundamentals*, the U-values for single glazed wooden windows range from 0.88 to 0.99. The addition of a storm window should reduce these figures to a range of 0.44 to 0.49. A non-thermal break, double-glazed metal window has a U-value of about 0.6.

## Conclusion

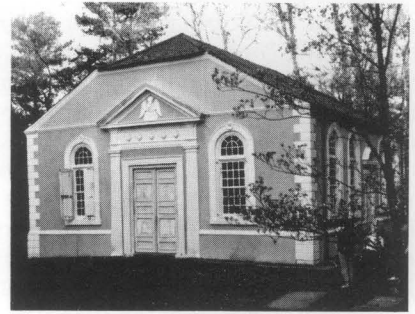
Technical Preservation Services recommends the retention and repair of original windows whenever possible. We believe that the repair and weatherization of existing wooden windows is more practical than most people realize, and that many windows are unfortunately replaced because of a lack of awareness of techniques for evaluation, repair, and weatherization. Wooden windows which are repaired and properly maintained will have greatly extended service lives while contributing to the historic character of the building. Thus, an important element of a building's significance will have been preserved for the future.

## Additional Reading

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# 22 PRESERVATION BRIEFS



## The Preservation and Repair of Historic Stucco

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The term "stucco" is used here to describe a type of exterior plaster applied as a two-or-three part coating directly onto masonry, or applied over wood or metal lath to a log or wood frame structure. Stucco is found in many forms on historic structures throughout the United States. It is so common, in fact, that it frequently goes unnoticed, and is often disguised or used to imitate another material. Historic stucco is also sometimes incorrectly viewed as a sacrificial coating, and consequently removed to reveal stone, brick or logs that historically were never intended to be exposed. Age and lack of maintenance hasten the deterioration of many historic stucco buildings. Like most historic building materials, stucco is at the mercy of the elements, and even though it is a protective coating, it is particularly susceptible to water damage.

Stucco is a material of deceptive simplicity: in most cases its repair should not be undertaken by a property

owner unfamiliar with the art of plastering. Successful stucco repair requires the skill and experience of a professional plasterer. Therefore, this Brief has been prepared to provide background information on the nature and components of traditional stucco, as well as offer guidance on proper maintenance and repairs. The Brief will outline the requirements for stucco repair, and, when necessary, replacement. Although several stucco mixes representative of different periods are provided here for reference, this Brief does not include specifications for carrying out repair projects. Each project is unique, with its own set of problems that require individual solutions.

### Historical Background

Stucco has been used since ancient times. Still widely used throughout the world, it is one of the most common of traditional building materials (Fig. 1). Up until

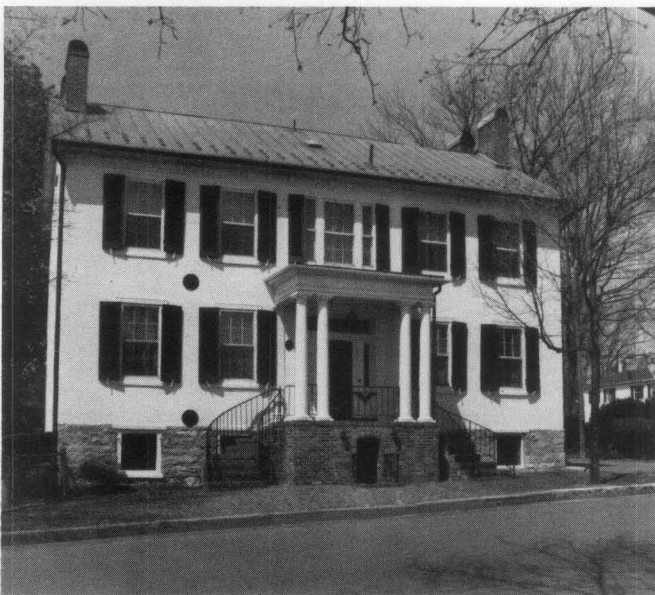


Fig. 1. These two houses in a residential section of Winchester, Virginia, illustrate the continuing popularity of stucco (a) from this early 19th century, Federal style house on the left, (b) to the English Cotswold style cottage that was built across the street in the 1930's. Photos: Anne Grimmer.

the late 1800's, stucco, like mortar, was primarily lime-based, but the popularization of portland cement changed the composition of stucco, as well as mortar, to a harder material. Historically, the term "plaster" has often been interchangeable with "stucco"; the term is still favored by many, particularly when referring to the traditional lime-based coating. By the nineteenth century "stucco," although originally denoting fine interior ornamental plasterwork, had gained wide acceptance in the United States to describe exterior plastering. "Render" and "rendering" are also terms used to describe stucco, especially in Great Britain. Other historic treatments and coatings related to stucco in that they consist at least in part of a similarly plastic or malleable material include: parging and pargeting, wattle and daub, "cob" or chalk mud, pisé de terre, rammed earth, briqueté entre poteaux or bousillage, half-timbering, and adobe. All of these are regional variations on traditional mixtures of mud, clay, lime, chalk, cement, gravel or straw. Many are still used today.

### The Stucco Tradition in the United States

Stucco is primarily used on residential buildings and relatively small-scale commercial structures. Some of the earliest stucco buildings in the United States include examples of the Federal, Greek and Gothic Revival styles of the eighteenth and the nineteenth centuries that emulated European architectural fashions. Benjamin Henry Latrobe, appointed by Thomas Jefferson as Surveyor of Public Buildings of the United States in 1803, was responsible for the design of a number of important stucco buildings, including St. John's Church (1816), in Washington, D.C. (Fig. 2). Nearly half a century later Andrew Jackson Downing also advocated the use of stucco in his influential book *The Architecture of Country Houses*, published in 1850. In Downing's opinion, stucco was superior in many respects to plain brick or stone because it was cheaper, warmer and dryer, and could be "agreeably" tinted. As a result of his advice, stuccoed Italianate style urban and suburban villas proliferated in many parts of the country during the third quarter of the nineteenth century.

### Revival Styles Promote Use of Stucco

The introduction of the many revival styles of architecture around the turn of the twentieth century, combined with the improvement and increased availability of portland cement resulted in a "craze" for stucco as a building material in the United States. Beginning about 1890 and gaining momentum into the 1930's and 1940's, stucco was associated with certain historic architectural styles, including: Prairie; Art Deco, and Art Moderne; Spanish Colonial, Mission, Pueblo, Mediterranean, English Cotswold Cottage, and Tudor Revival styles; as well as the ubiquitous bungalow and "four-square" house (Fig. 3). The fad for Spanish Colonial Revival, and other variations on this theme, was especially important in furthering stucco as a building material in the United States during this period, since stucco clearly looked like adobe (Fig. 4).

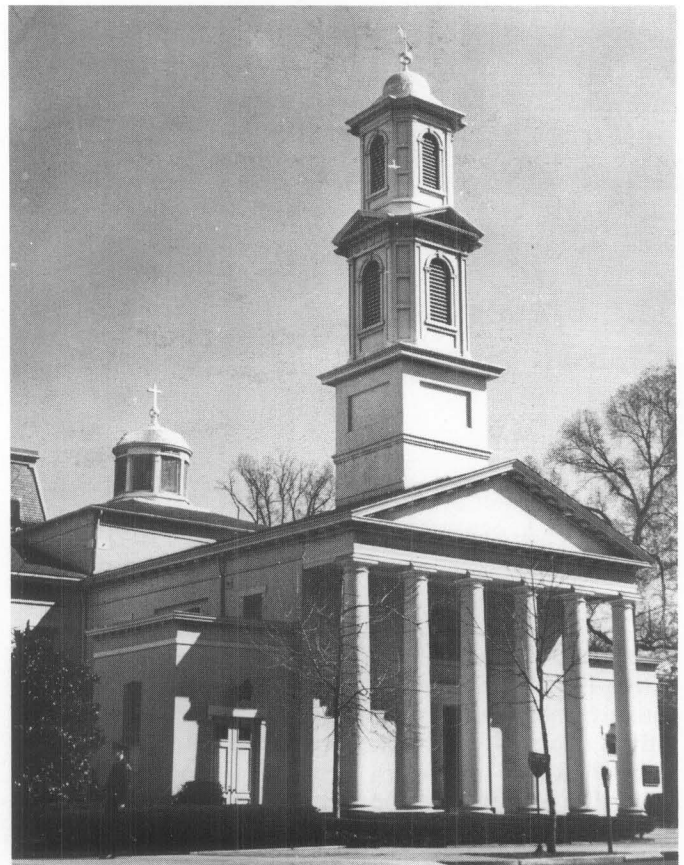


Fig. 2. St. John's Church, Washington, D.C., constructed of brick and stuccoed immediately upon completion in 1816, reflects the influence of European, and specifically English, architectural styles. Photo: Russell Jones, HABS Collection.

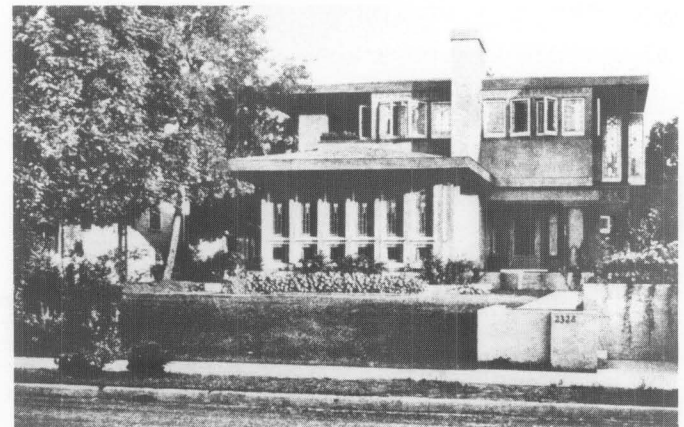


Fig. 3. The William Gray and Edna S. Purcell House, Minneapolis, Minnesota, was designed in 1913 by the architects Purcell and Elmslie in the Prairie style. Stuccoed in a salmon-pink, sand (float) finish, it is unusual in that it featured a 3-color geometric frieze stencilled below the eaves of the 2nd story. The Minneapolis Institute of Art has removed the cream-colored paint added at a later date, and restored the original color and texture of the stucco. Photo: Courtesy MacDonald and Mack Partnership.

Although stucco buildings were especially prevalent in California, the Southwest and Florida, ostensibly because of their Spanish heritage, this period also spawned stucco-coated, revival-style buildings all over the United States and Canada. The popularity of stucco as a cheap, and readily available material meant that by the 1920's, it was used for an increasing variety of building types. Resort hotels, apartment buildings, private mansions and movie theaters, railroad stations, and even gas stations and tourist courts took advantage

of the "romance" of period styles, and adopted the stucco construction that had become synonymous with these styles (Fig. 5).

### A Practical Building Material

Stucco has traditionally been popular for a variety of reasons. It was an inexpensive material that could simulate finely dressed stonework, especially when "scored" or "lined" in the European tradition. A stucco coating over a less finished and less costly substrate such as rubblestone, fieldstone, brick, log or wood frame, gave the building the appearance of being a more expensive and important structure. As a weather-repellent coating, stucco protected the building from wind and rain penetration, and also offered a certain amount of fire protection. While stucco was usually applied during construction as part of the building design, particularly over rubblestone or fieldstone, in some instances it was added later to protect the structure, or when a rise in the owner's social status demanded a comparable rise in his standard of living.

### Composition of Historic Stucco

Before the mid-to-late nineteenth century, stucco consisted primarily of hydrated or slaked lime, water and sand, with straw or animal hair included as a binder. Natural cements were frequently used in stucco mixes after their discovery in the United States during the 1820's. Portland cement was first manufactured in the United States in 1871, and it gradually replaced natural cement. After about 1900, most stucco was composed primarily of portland cement, mixed with some lime. With the addition of portland cement, stucco became even more versatile and durable. No longer used just as a coating for a substantial material like masonry or log, stucco could now be applied over wood or metal lath attached to a light wood frame. With this increased strength, stucco ceased to be just a veneer and became a more integral part of the building structure.



Fig. 4. The elaborate Spanish Colonial Revival style of this building designed by Bertram Goodhue for the 1915 Panama California Exposition held in San Diego's Balboa Park emphasizes the sculptural possibilities of stucco. Photo: C. W. Snell, National Historic Landmark Files.



Fig. 5. During the 19th and 20th centuries stucco has been a popular material not only for residential, but also for commercial buildings in the Spanish style. Two such examples are (a) the 1851 Ernest Hemingway House, Key West, Florida, built of stuccoed limestone in a Spanish Caribbean style; and (b) the Santa Fe Depot (Union Station), San Diego, California, designed by the architects Bakewell and Brown in 1914 in a Spanish Colonial Revival style, and constructed of stucco over brick and hollow tile. Photos: (a) J.E. Brooks, HABS Collection, (b) Marvin Rand, HABS Collection.

Today, gypsum, which is hydrated calcium sulfate or sulfate of lime, has to a great extent replaced lime. Gypsum is preferred because it hardens faster and has less shrinkage than lime. Lime is generally used only in the finish coat in contemporary stucco work.

The composition of stucco depended on local custom and available materials. Stucco often contained substantial amounts of mud or clay, marble or brick dust, or even sawdust, and an array of additives ranging from animal blood or urine, to eggs, keratin or gluesize (animal hooves and horns), varnish, wheat paste, sugar, salt, sodium silicate, alum, tallow, linseed oil, beeswax, and wine, beer, or rye whiskey. Waxes, fats and oils were included to introduce water-repellent properties, sugary materials reduced the amount of water needed and slowed down the setting time, and alcohol acted as an air entrainer. All of these additives contributed to the strength and durability of the stucco.

The appearance of much stucco was determined by the color of the sand—or sometimes burnt clay, used in the mix, but often stucco was also tinted with natural pigments, or the surface whitewashed or colorwashed after stuccoing was completed. Brick dust could provide color, and other coloring materials that were not affected by lime, mostly mineral pigments, could be added to the mix for the final finish coat. Stucco was

also marbled or marbleized—stained to look like stone by diluting oil of vitriol (sulfuric acid) with water, and mixing this with a yellow ochre, or another color (Fig. 6). As the twentieth century progressed, manufactured or synthetic pigments were added at the factory to some prepared stucco mixes.

### Methods of Application

Stucco is applied directly, without lath, to masonry substrates such as brick, stone, concrete or hollow tile (Fig. 7). But on wood structures, stucco, like its interior counterpart plaster, must be applied over lath in order to obtain an adequate key to hold the stucco. Thus, when applied over a log structure, stucco is laid on horizontal wood lath that has been nailed on vertical wood furring strips attached to the logs (Fig. 8). If it is applied over a wood frame structure, stucco may be applied to wood or metal lath nailed directly to the wood frame; it may also be placed on lath that has been attached to furring strips. The furring strips are themselves laid over building paper covering the wood sheathing (Fig. 9). Wood lath was gradually superseded by expanded metal lath introduced in the late-nineteenth and early-twentieth century. When stuccoing over a stone or brick substrate, it was customary to cut back or rake out the mortar joints if they were not already recessed by natural weathering or



Fig. 6. Arlington House, Arlington, Virginia, was built between 1802–1818 of brick covered with stucco. It was designed by George Hadfield for George Washington Parke Custis, grandson of Martha Washington, and was later the home of Robert E. Lee. This photograph taken on June 28, 1864, by Captain Andrew J. Russell, a U.S. Signal Corps photographer, shows the stucco after it had been marbled during the 1850's. Yellow ochre and burnt umber pigments were combined to imitate Sienna marble, and the stucco, with the exception of the roughcast foundation, was scored to heighten the illusion of stone. Photo: National Archives, Arlington House Collection, National Park Service.



Fig. 7. Patches of stucco have fallen off this derelict 19th century structure exposing the rough-cut local stone substrate. The missing wood entablature on the side and the rough wood lintel now exposed above a second-floor window, offer clues that the building was stuccoed originally. Photo: National Park Service Files.



Fig. 8. Removal of deteriorated stucco in preparation for stucco repair on this late-18th century log house in Middleway, West Virginia, reveals that the stucco was applied to hand-riven wood lath nailed over vertical wood strips attached to the logs. Photo: Anne Grimmer.

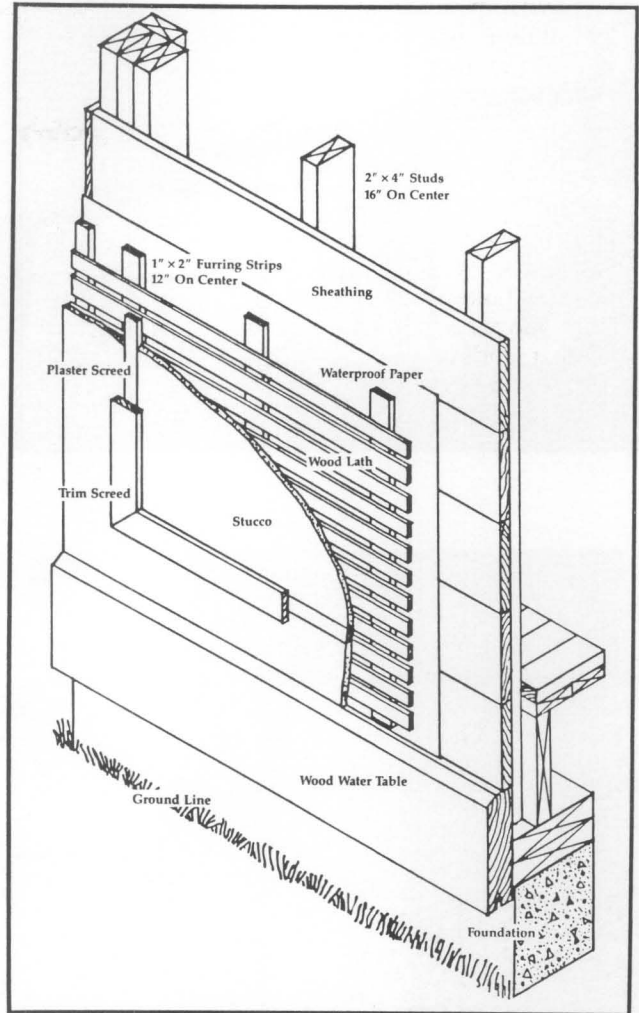


Fig. 9. This cutaway drawing shows the method of attachment for stucco commonly used on wood frame or balloon frame structures from the late-19th to the 20th century. Drawing: Brian Conway, "Illinois Preservation Series Number 2: Stucco."

erosion, and sometimes the bricks themselves were gouged to provide a key for the stucco. This helped provide the necessary bond for the stucco to remain attached to the masonry, much like the key provided by wood or metal lath on frame buildings.

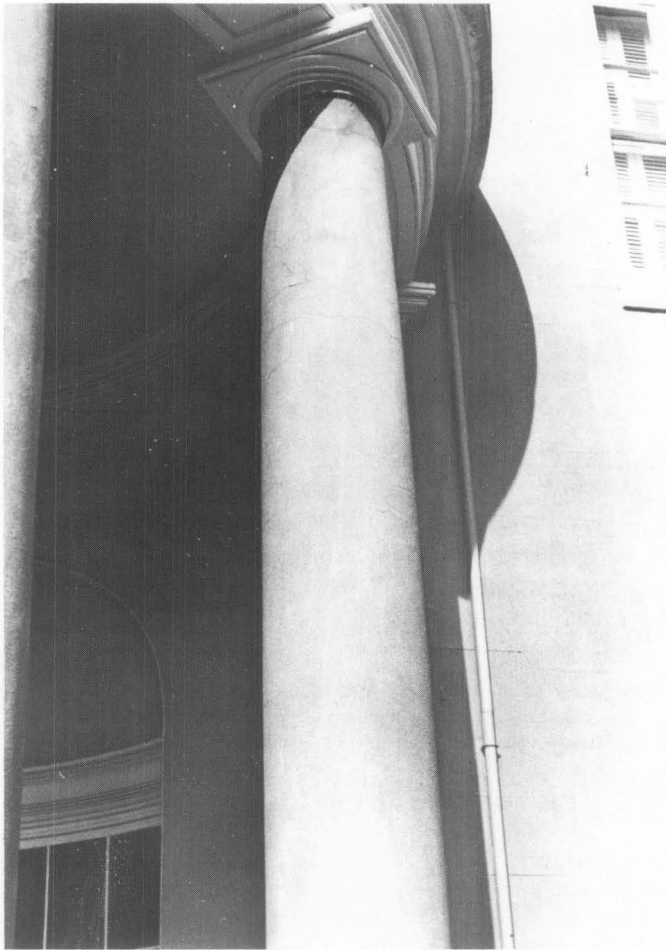
Like interior wall plaster, stucco has traditionally been applied as a multiple-layer process, sometimes consisting of two coats, but more commonly as three. Whether applied directly to a masonry substrate or onto wood or metal lath, this consists of a first "scratch" or "pricking-up" coat, followed by a second scratch coat, sometimes referred to as a "floating" or "brown" coat, followed finally by the "finishing" coat. Up until the late-nineteenth century, the first and the second coats were of much the same composition, generally consisting of lime, or natural cement, sand, perhaps clay, and one or more of the additives previously mentioned. Straw or animal hair was usually added to the first coat as a binder. The third, or finishing coat, consisted primarily of a very fine mesh grade of lime and sand, and sometimes pigment. As already noted, after the 1820's, natural cement was also a common ingredient in stucco until it was replaced by portland cement.



A



B



C



D

Fig. 10. (a) Tudor Place, Washington, D.C. (1805–1816), was designed by Dr. William Thornton. Like its contemporary, Arlington House, it is stuccoed and scored, with a roughcast base, but here the stucco is a monochromatic sandstone color tinted by sand and mineral pigments (b). Although the original stucco was replaced in the early-20th century with a portland cement-based stucco, the family, who retained ownership until 1984 when the house was opened to the public, left explicit instructions for future stucco repairs. The mix recommended for repairing hairline cracks (c), consists of sharp sand, cement and lime, burnt umber, burnt sienna, and a small amount of raw sienna. Preparation of numerous test samples, the size of “a thick griddle cake,” will be necessary to match the stucco color, and when the exact color has been achieved, the mixture is to be diluted to the “consistency of cream,” brushed on the wall and rubbed into the cracks with a rubber sponge or float. Note the dark color visible under the eaves intended to replicate the stronger color of the original limewashed stucco (d). Photos: Anne Grimmer.

Both masonry and wood lath must be kept wet or damp to ensure a good bond with the stucco. Wetting these materials helps to prevent them from pulling moisture out of the stucco too rapidly, which results in cracking, loss of bond, and generally poor quality stuccowork.

### Traditional Stucco Finishes

Until the early-twentieth century when a variety of novelty finishes or textures were introduced, the last coat of stucco was commonly given a smooth, troweled finish, and then scored or lined in imitation of ashlar. The illusion of masonry joints was sometimes enhanced by a thin line of white lime putty, graphite, or some other pigment. Some nineteenth century buildings feature a water table or raised foundation of rough-cast stucco that differentiates it from the stucco surface above, which is smooth and scored (Fig. 10). Other novelty or textured finishes associated with the "period" or revival styles of the early-twentieth century include: the English cottage finish, adobe and Spanish, pebble-dashed or dry-dash surface, fan and sponge texture, reticulated and vermiculated, roughcast (or wet dash), and sgraffito (Fig. 11).

### Repairing Deteriorated Stucco

#### Regular Maintenance

Although A. J. Downing alluded to stuccoed houses in Pennsylvania that had survived for over a century in relatively good condition, historic stucco is inherently not a particularly permanent or long-lasting building material. Regular maintenance is required to keep it in good condition. Unfortunately, many older or historic buildings are not always accorded this kind of care.

Because building owners knew stucco to be a protective, but also somewhat fragile coating, they employed a variety of means to prolong its usefulness. The most common treatment was to whitewash stucco, often annually. The lime in the whitewash offered protection and stability and helped to harden the stucco. Most importantly, it filled hairline cracks before they could develop into larger cracks and let in moisture. To improve water repellency, stucco buildings were also sometimes coated with paraffin, another type of wax, or other stucco-like coatings, such as oil mastics.

#### Assessing Damage

Most stucco deterioration is the result of water infiltration into the building structure, either through the roof, around chimneys, window and door openings, or excessive ground water or moisture penetrating through, or splashing up from the foundation. Potential causes of deterioration include: ground settlement, lintel and door frame settlement, inadequate or leaking gutters and downspouts, intrusive vegetation, moisture migration within walls due to interior condensation and humidity, vapor drive problems caused by furnace, bathroom and kitchen vents, and rising damp resulting from excessive ground water and poor drainage around the foundation. Water infiltration will cause wood lath to rot, and metal lath and nails to rust, which eventu-



Fig. 11. The Hotel Washington, Washington, D.C. (1916–1917), is notable for its decorative *sgraffito* surfaces. Stucco panels under the cornice and around the windows feature classical designs created by artists who incised the patterns in the outer layer of red-colored stucco while still soft, thereby exposing a stucco undercoat of a contrasting color. Photo: Kaye Ellen Simonson.

ally will cause stucco to lose its bond and pull away from its substrate.

After the cause of deterioration has been identified, any necessary repairs to the building should be made first before repairing the stucco. Such work is likely to include repairs designed to keep excessive water away from the stucco, such as roof, gutter, downspout and flashing repairs, improving drainage, and redirecting rainwater runoff and splash-back away from the building. Horizontal areas such as the tops of parapet walls or chimneys are particularly vulnerable to water infiltration, and may require modifications to their original design, such as the addition of flashing to correct the problem.

Previous repairs inexpertly carried out may have caused additional deterioration, particularly if executed in portland cement, which tends to be very rigid, and therefore incompatible with early, mostly soft lime-based stucco that is more "flexible." Incompatible

repairs, external vibration caused by traffic or construction, or building settlement can also result in cracks which permit the entrance of water and cause the stucco to fail (Fig. 12).

Before beginning any stucco repair, an assessment of the stucco should be undertaken to determine the extent of the damage, and how much must be replaced or repaired. Testing should be carried out systematically on all elevations of the building to determine the overall condition of the stucco. Some areas in need of repair will be clearly evidenced by missing sections of stucco or stucco layers. Bulging or cracked areas are obvious places to begin. Unsound, punky or soft areas that have lost their key will echo with a hollow sound when tapped gently with a wooden or acrylic hammer or mallet.

### Identifying the Stucco Type

Analysis of the historic stucco will provide useful information on its primary ingredients and their proportions, and will help to ensure that the new replacement stucco will duplicate the old in strength, composition, color and texture as closely as possible. However, unless authentic, period restoration is required, it may not be worthwhile, nor in many instances possible, to attempt to duplicate *all* of the ingredients (particularly some of the additives), in creating the new stucco mor-

tar. Some items are no longer available, and others, notably sand and lime—the major components of traditional stucco—have changed radically over time. For example, most sand used in contemporary masonry work is manufactured sand, because river sand, which was used historically, is difficult to obtain today in many parts of the country. The physical and visual qualities of manufactured sand versus river sand, are quite different, and this affects the way stucco works, as well as the way it looks. The same is true of lime, which is frequently replaced by gypsum in modern stucco mixes. And even if identification of all the items in the historic stucco mix were possible, the analysis would still not reveal how the original stucco was mixed and applied.

There are, however, simple tests that can be carried out on a small piece of stucco to determine its basic make-up. A dilute solution of hydrochloric (muriatic) acid will dissolve lime-based stucco, but not portland cement. Although the use of portland cement became common after 1900, there are no precise cut-off dates, as stuccoing practices varied among individual plasterers, and from region to region. Some plasterers began using portland cement in the 1880's, but others may have continued to favor lime stucco well into the early-twentieth century. While it is safe to assume that a late-eighteenth or early-nineteenth century stucco is lime-based, late-nineteenth or early-twentieth century

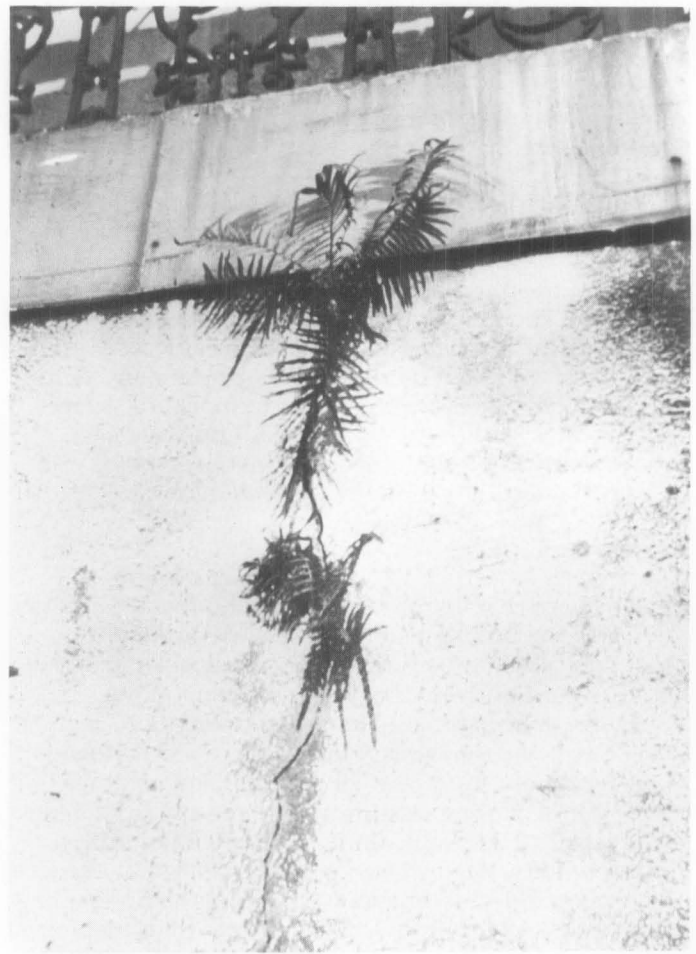
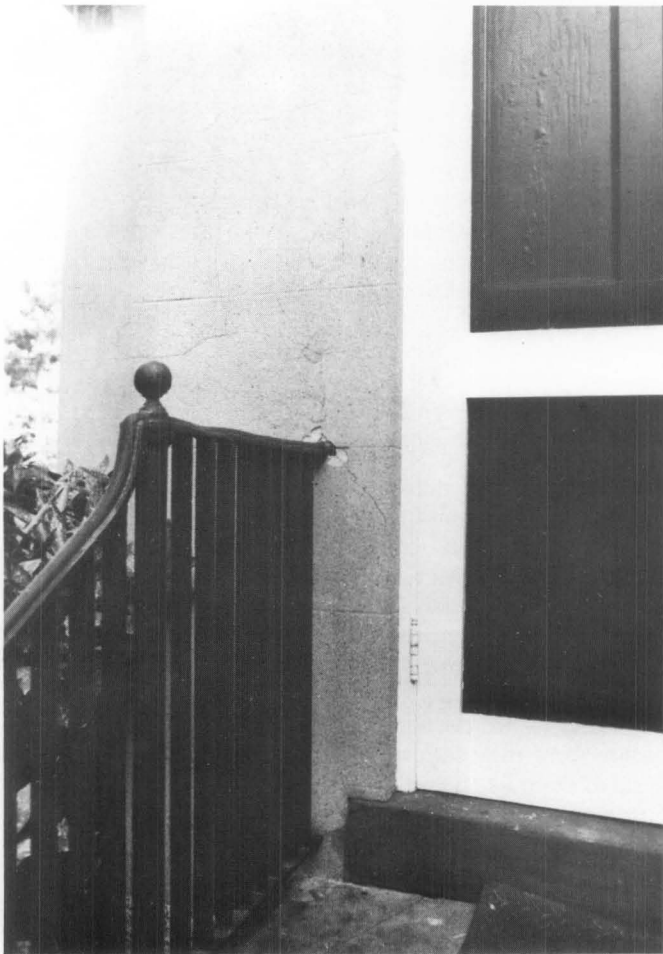


Fig. 12. (a) Water intrusion caused by rusting metal, or (b) plant growth left unattended will gradually enlarge these cracks, resulting in spalling, and eventually requiring extensive repair of the stucco. Photos: National Park Service Files.





Fig. 13. (a) In preparation for repainting, hairline cracks on this Mediterranean style stucco apartment building were filled with a commercial caulking compound; (b) dirt is attracted and adheres to the texture of the caulked areas, and a year after painting, these inappropriate repairs are highly obvious. Photos: Anne Grimmer.

stucco may be based on either lime or portland cement. Another important factor to take into consideration is that an early lime-stucco building is likely to have been repaired many times over the ensuing years, and it is probable that at least some of these patches consist of portland cement.

### Planning the Repair

Once the extent of damage has been determined, a number of repair options may be considered. Small hairline cracks usually are not serious and may be sealed with a thin slurry coat consisting of the finish coat ingredients, or even with a coat of paint or white-wash. Commercially available caulking compounds are not suitable materials for patching hairline cracks. Because their consistency and texture is unlike that of stucco, they tend to weather differently, and attract more dirt; as a result, repairs made with caulking compounds may be highly visible, and unsightly (Fig. 13). Larger cracks will have to be cut out in preparation for more extensive repair. Most stucco repairs will require the skill and expertise of a professional plasterer (Fig. 14).

In the interest of saving or preserving as much as possible of the historic stucco, patching rather than wholesale replacement is preferable. When repairing heavily textured surfaces, it is not usually necessary to replace an entire wall section, as the textured finish, if well-executed, tends to conceal patches, and helps them to blend in with the existing stucco. However, because of the nature of smooth-finished stucco, patching a number of small areas scattered over one elevation may not be a successful repair approach unless the stucco has been previously painted, or is to be painted following the repair work. On unpainted stucco such patches are hard to conceal, because they may not match exactly or blend in with the rest of the historic stucco surface. For



Fig. 14. This poorly executed patch is not the work of a professional plasterer. While it may serve to keep out water, it does not match the original surface, and is not an appropriate repair for historic stucco. Photo: Betsy Chittenden.

this reason it is recommended, if possible, that stucco repair be carried out in a contained or well-defined area, or if the stucco is scored, the repair patch should be "squared-off" in such a way as to follow existing scoring. In some cases, especially in a highly visible location, it may be preferable to restucco an entire wall section or feature. In this way, any differences between the patched area and the historic surface will not be so readily apparent.

Repair of historic stucco generally follows most of the same principles used in plaster repair. First, all deteriorated, severely cracked and loose stucco should be removed down to the lath (assuming that the lath is securely attached to the substrate), or down to the masonry if the stucco is directly applied to a masonry substrate. A clean surface is necessary to obtain a good

bond between the stucco and substrate. The areas to be patched should be cleaned of all debris with a bristle brush, and all plant growth, dirt, loose paint, oil or grease should be removed (Fig. 15). If necessary, brick or stone mortar joints should then be raked out to a depth of approximately 5/8" to ensure a good bond between the substrate and the new stucco.

To obtain a neat repair, the area to be patched should be squared-off with a butt joint, using a cold chisel, a hatchet, a diamond blade saw, or a masonry bit. Sometimes it may be preferable to leave the area to be patched in an irregular shape which may result in a less conspicuous patch. Proper preparation of the area to be patched requires very sharp tools, and extreme caution on the part of the plasterer not to break keys of surrounding good stucco by "over-sounding" when removing deteriorated stucco. To ensure a firm bond, the new patch must not overlap the old stucco. If the stucco has lost its bond or key from wood lath, or the lath has deteriorated or come loose from the substrate, a decision must be made whether to try to reattach the old lath, to replace deteriorated lath with new wood lath, or to leave the historic wood lath in place and supplement it with modern expanded metal lath. Unless authenticity is important, it is generally preferable (and easier) to nail new metal lath over the old wood lath to support the patch. Metal lath that is no longer

securely fastened to the substrate may be removed and replaced in kind, or left in place, and supplemented with new wire lath.

When repairing lime-based stucco applied directly to masonry, the new stucco should be applied in the same manner, directly onto the stone or brick. The stucco will bond onto the masonry itself without the addition of lath because of the irregularities in the masonry or those of its mortar joints, or because its surface has been scratched, scored or otherwise roughened to provide an additional key. Cutting out the old stucco at a diagonal angle may also help secure the bond between the new and the old stucco. For the most part it is not advisable to insert metal lath when restuccoing historic masonry in sound condition, as it can hasten deterioration of the repair work. Not only will attaching the lath damage the masonry, but the slightest moisture penetration can cause metal lath to rust. This will cause metal to expand, eventually resulting in spalling of the stucco, and possibly the masonry substrate too.

If the area to be patched is properly cleaned and prepared, a bonding agent is usually not necessary. However, a bonding agent may be useful when repairing hairline cracks, or when dealing with substrates that do not offer a good bonding surface. These may include dense stone or brick, previously painted or stuccoed

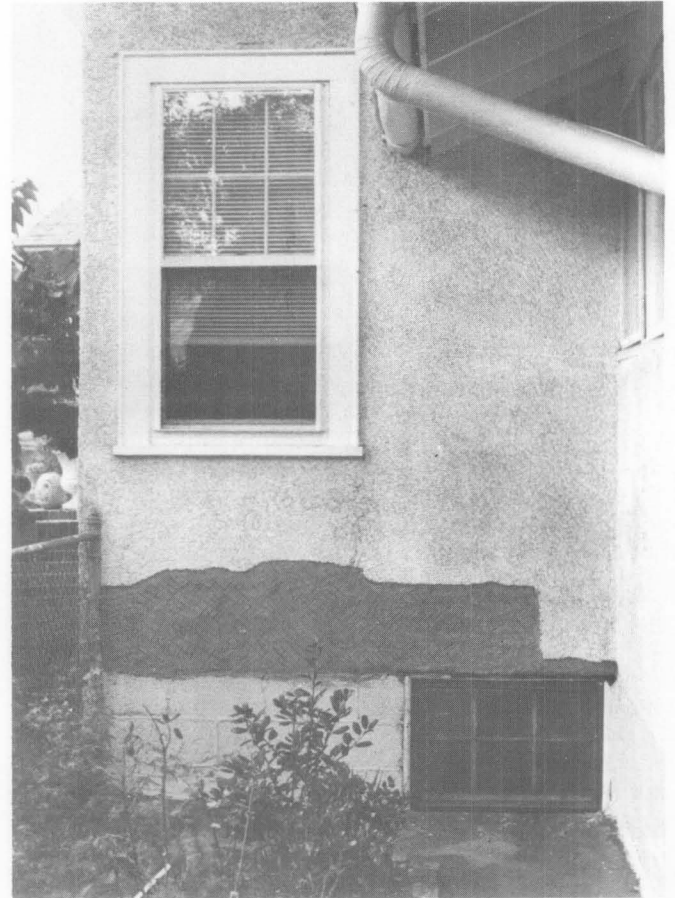
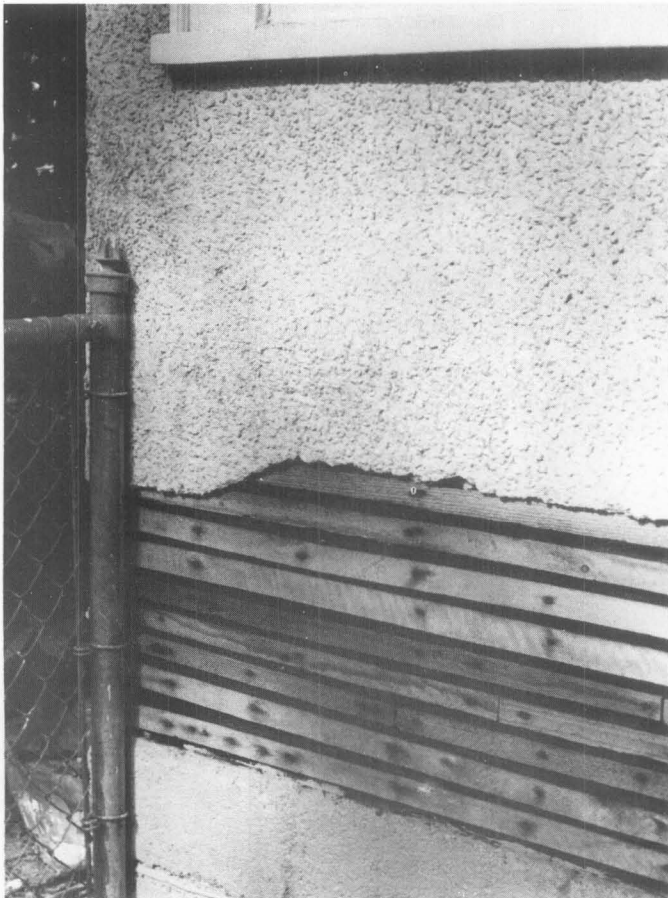


Fig. 15. (a) After reattaching any loose wood lath to the furring strips underneath, the area to be patched has been cleaned, the lath thoroughly wetted, and (b) the first coat of stucco has been applied and scratched to provide a key to hold the second layer of stucco. Photos: Betsy Chittenden.

masonry, or spalling brick substrates. A good mechanical bond is always preferable to reliance on bonding agents. Bonding agents should not be used on a wall that is likely to remain damp or where large amounts of salts are present. Many bonding agents do not survive well under such conditions, and their use could jeopardize the longevity of the stucco repair.

A stucco mix compatible with the historic stucco should be selected after analyzing the existing stucco. It can be adapted from a standard traditional mix of the period, or based on one of the mixes included here. Stucco consisting mostly of portland cement generally will not be physically compatible with the softer, more flexible lime-rich historic stuccos used throughout the eighteenth and much of the nineteenth centuries. The differing expansion and contraction rates of lime stucco and portland cement stucco will normally cause the stucco to crack. Choosing a stucco mix that is durable and compatible with the historic stucco on the building is likely to involve considerable trial and error, and probably will require a number of test samples, and even more if it is necessary to match the color. It is best to let the stucco test samples weather as long as possible—ideally one year, or at least through a change of seasons, in order to study the durability of the mix and its compatibility with the existing stucco, as well as the weathering of the tint if the building will not be painted and color match is an important factor. If the test samples are not executed on the building, they should be placed next to the stucco remaining on the building to compare the color, texture and composition of the samples with the original. The number and thickness of stucco coats used in the repair should also match the original.

After thoroughly dampening the masonry or wood lath, the first, scratch coat should be applied to the masonry substrate, or wood or metal lath, in a thickness that corresponds to the original if extant, or generally about 1/4" to 3/8". The scratch coat should be scratched or cross-hatched with a comb to provide a key to hold the second coat. It usually takes 24–72 hours, and longer in cold weather, for each coat to dry before the next coat can be applied. The second coat should be about the same thickness as the first, and the total thickness of the first two coats should generally not exceed about 5/8". This second or leveling coat should be roughened using a wood float with a nail protruding to provide a key for the final or finish coat. The finish coat, about 1/4" thick, is applied after the previous coat has initially set. If this is not feasible, the base coat should be thoroughly dampened when the finish coat is applied later. The finish coat should be worked to match the texture of the original stucco (Fig. 16).

### Colors and Tints for Historic Stucco Repair

The color of most early stucco was supplied by the aggregate included in the mix—usually the sand. Sometimes natural pigments were added to the mix, and eighteenth and nineteenth-century scored stucco was often marbled or painted in imitation of marble or granite. Stucco was also frequently coated with whitewash or a colorwash. This tradition later evolved

into the use of paint, its popularity depending on the vagaries of fashion as much as a means of concealing repairs. Because most of the early colors were derived from nature, the resultant stucco tints tended to be mostly earth-toned. This was true until the advent of brightly colored stucco in the early decades of the twentieth century. This was the so-called "Jazz Plaster" developed by O.A. Malone, the "man who put color into California," and who founded the California Stucco Products Corporation in 1927. California Stucco was revolutionary for its time as the first stucco/plaster to contain colored pigment in its pre-packaged factory mix.

When patching or repairing a historic stucco surface known to have been tinted, it may be possible to determine through visual or microscopic analysis whether the source of the coloring is sand, cement or pigment. Although some pigments or aggregates used traditionally may no longer be available, a sufficiently close color-match can generally be approximated using sand, natural or mineral pigments, or a combination of these. Obtaining such a match will require testing and comparing the color of dried test samples with the original. Successfully combining pigments in the dry stucco mix prepared for the finish coat requires considerable skill. The amount of pigment must be carefully measured for each batch of stucco. Overworking the mix can make the pigment separate from the lime. Changing the amount of water added to the mix, or using water to apply the tinted finish coat, will also affect the color of the stucco when it dries.

Generally, the color obtained by hand-mixing these ingredients will provide a sufficiently close match to cover an entire wall or an area distinct enough from the rest of the structure that the color differences will not be obvious. However, it may not work for small patches conspicuously located on a primary elevation, where color differences will be especially noticeable. In these instances, it may be necessary to conceal the repairs by painting the entire patched elevation, or even the whole building.

Many stucco buildings have been painted over the years and will require repainting after the stucco repairs have been made. Limewash or cement-based paint, latex paint, or oil-based paint are appropriate coatings for stucco buildings. The most important factor to consider when repainting a previously painted or coated surface is that the new paint be compatible with any coating already on the surface. In preparation for repainting, all loose or peeling paint or other coating material not firmly adhered to the stucco must be removed by hand-scraping or natural bristle brushes. The surface should then be cleaned.

Cement-based paints, most of which today contain some portland cement and are really a type of limewash, have traditionally been used on stucco buildings. The ingredients were easily obtainable. Furthermore, the lime in such paints actually bonded or joined with the stucco and provided a very durable coating. In many regions, whitewash was applied annually during spring cleaning. Modern, commercially available pre-mixed masonry and mineral-based paints may also be used on historic stucco buildings.



Fig. A

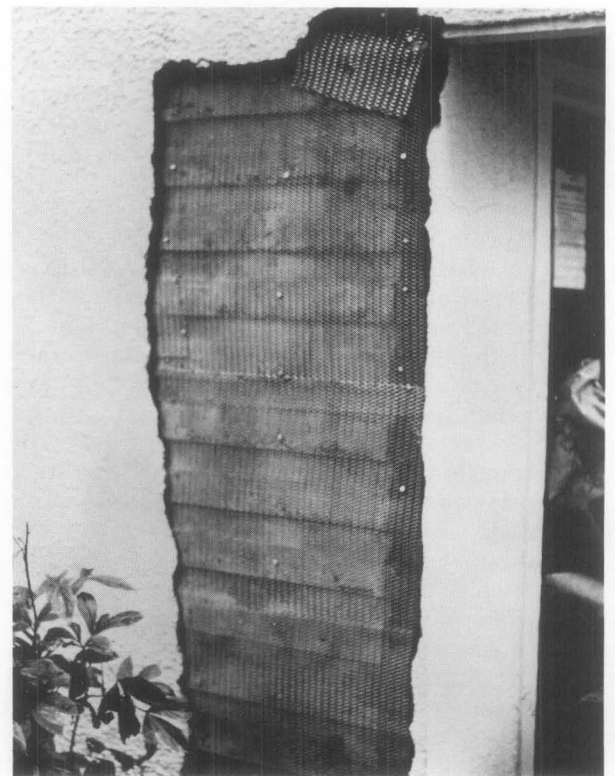


Fig. B

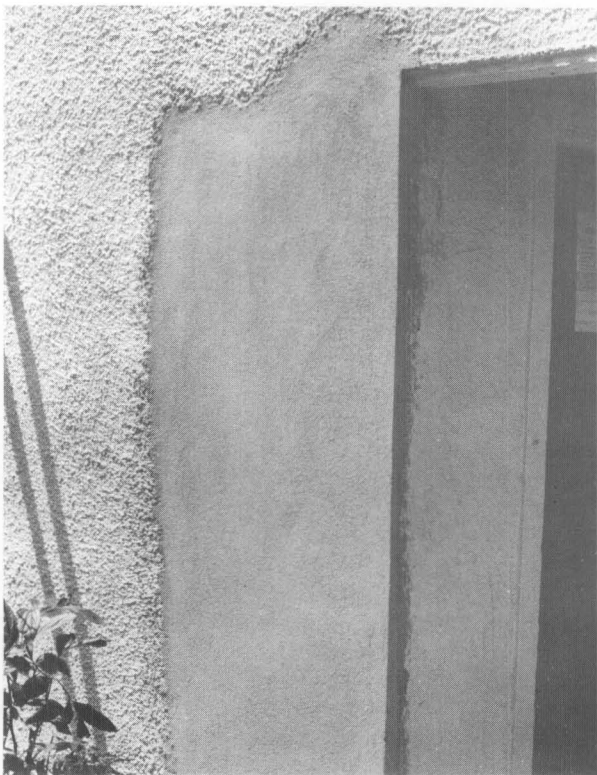


Fig. C

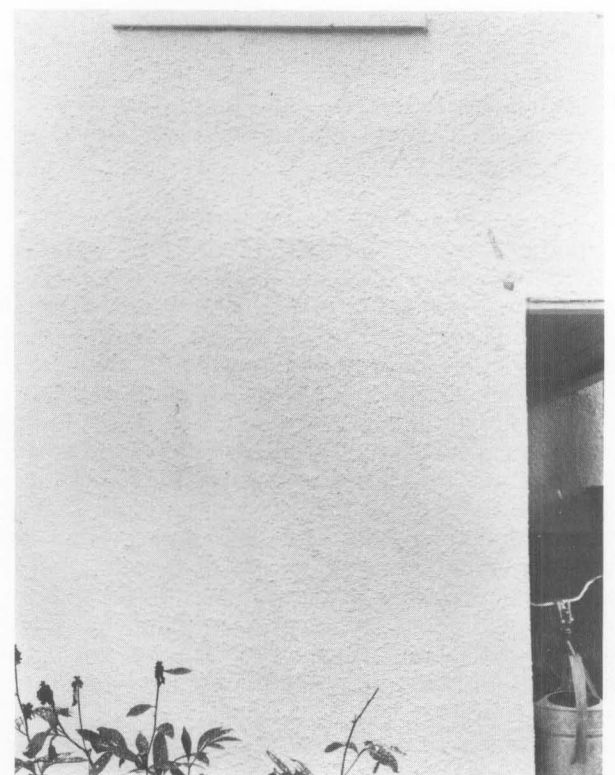


Fig. D

Fig. 16. (a) In preparation for stucco repair, this plasterer is mixing the dry materials in a mortar box with a mortar hoe (note the 2 holes in the blade), pulling it through the box using short choppy strokes. After the dry materials are thoroughly combined, water is added and mixed with them using the same choppy, but gradually lengthening stokes, making sure that the hoe cuts completely through the mix to the bottom of the box. (b) The deteriorated stucco has been cut away, and new metal lath has been nailed to the clapboarding in the area to be patched. (Although originally clapboarded when built in the 19th century, the house was stuccoed around the turn-of-the-century on metal lath nailed over the clapboard.) (c) The first, scratch coat and the second coat have been applied here, and await the spatterdash or rough-cast finish of the final coat (d) which was accomplished by the plasterer using a whisk broom to throw the stucco mortar against the wall surface. This well-executed patch is barely discernable, and lacks only a coat of paint to make it blend completely with the rest of the painted wall surface. Photos: Anne Grimmer.

If the structure must be painted for the first time to conceal repairs, almost any of these coatings may be acceptable depending on the situation. Latex paint, for example, may be applied to slightly damp walls or where there is an excess of moisture, but latex paint will not stick to chalky or powdery areas. Oil-based, or alkyd paints must be applied only to dry walls; new stucco must cure up to a year before it can be painted with oil-based paint.

### Contemporary Stucco Products

There are many contemporary stucco products on the market today. Many of them are not compatible, either physically or visually, with historic stucco buildings. Such products should be considered for use only after consulting with a historic masonry specialist. However, some of these prepackaged tinted stucco coatings may be suitable for use on stucco buildings dating from the late-nineteenth or early-twentieth century, as long as the color and texture are appropriate for the period and style of the building. While some masonry contractors may, as a matter of course, suggest that a water-repellent coating be applied after repairing old stucco, in most cases this should not be necessary, since color-washes and paints serve the same purpose, and stucco itself is a protective coating.

### Cleaning Historic Stucco Surfaces

Historic stucco buildings often exhibit multiple layers of paint or limewash. Although some stucco surfaces may be cleaned by water washing, the relative success of this procedure depends on two factors: the surface texture of the stucco, and the type of dirt to be removed. If simply removing airborne dirt, **smooth unpainted stucco**, and **heavily-textured painted stucco** may sometimes be cleaned using a low-pressure water wash, supplemented by scrubbing with soft natural bristle brushes, and possibly non-ionic detergents. Organic plant material, such as algae and mold, and metallic stains may be removed from stucco using poultices and appropriate solvents. Although these same methods may be employed to clean **unpainted rough-cast, pebble-dash, or any stucco surface featuring exposed aggregate**, due to the surface irregularities, it may be difficult to remove dirt, without also removing portions of the decorative textured surface. Difficulty in cleaning these surfaces may explain why so many of these textured surfaces have been painted.

### When Total Replacement is Necessary

Complete replacement of the historic stucco with new stucco of either a traditional or modern mix will probably be necessary only in cases of extreme deterioration—that is, a loss of bond on over 40–50 per cent of the stucco surface. Another reason for total removal might be that the physical and visual integrity of the historic stucco has been so compromised by prior incompatible and ill-conceived repairs that patching would not be successful.

When stucco no longer exists on a building there is more flexibility in choosing a suitable mix for the replacement. Since compatibility of old and new stucco will not be an issue, the most important factors to con-

sider are durability, color, texture and finish. Depending on the construction and substrate of the building, in some instances it may be acceptable to use a relatively strong cement-based stucco mortar. This is certainly true for many late-nineteenth and early-twentieth century buildings, and may even be appropriate to use on some stone substrates even if the original mortar would have been weaker, as long as the historic visual qualities noted above have been replicated. Generally, the best principle to follow for a masonry building is that the stucco mix, whether for repair or replacement of historic stucco, should be somewhat weaker than the masonry to which it is to be applied in order not to damage the substrate.

### General Guidance for Historic Stucco Repair

A skilled professional plasterer will be familiar with the properties of materials involved in stucco repair and will be able to avoid some of the pitfalls that would hinder someone less experienced. General suggestions for successful stucco repair parallel those involving restoration and repair of historic mortar or plaster. In addition, the following principles are important to remember:

- Mix only as much stucco as can be used in one and one-half to two hours. This will depend on the weather (mortar will harden faster under hot and dry, or sunny conditions); and experience is likely to be the best guidance. Any remaining mortar should be discarded; it should not be retempered.
- Stucco mortar should not be over-mixed. (Hand mix for 10–15 minutes after adding water, or machine mix for 3–4 minutes after all ingredients are in mixer.) Over-mixing can cause crazing and discoloration, especially in tinted mortars. Over-mixing will also tend to make the mortar set too fast, which will result in cracking and poor bonding or keying to the lath or masonry substrate.
- Wood lath or a masonry substrate, but not metal lath, must be thoroughly wetted before applying stucco patches so that it does not draw moisture out of the stucco too rapidly. To a certain extent, bonding agents also serve this same purpose. Wetting the substrate helps retard drying.
- To prevent cracking, it is imperative that stucco not dry too fast. Therefore, the area to be stuccoed should be shaded, or even covered if possible, particularly in hot weather. It is also a good idea in hot weather to keep the newly stuccoed area damp, at approximately 90 per cent humidity, for a period of 48 to 72 hours.
- Stucco repairs, like most other exterior masonry work, should not be undertaken in cold weather (below 40 degrees fahrenheit, and preferably warmer), or if there is danger of frost.

## Historic Stucco Textures

Most of the oldest stucco in the U.S. dating prior to the late-nineteenth century, will generally have a **smooth, troweled finish** (sometimes called a **sand or float finish**), possibly scored to resemble ashlar masonry units. Scoring may be incised to simulate masonry joints, the scored lines may be emphasized by black or white penciling, or the lines may simply be drawn or painted on the surface of the stucco. In some regions, at least as early as the first decades of the nineteenth century, it was not uncommon to use a **roughcast finish** on the foundation or base of an otherwise **smooth-surfaced** building (Fig. a). **Roughcast** was also used as an overall stucco finish for some outbuildings, and other less important types of structures.

A wide variety of decorative surface textures may be found on revival style stucco buildings, particularly residential architecture. These styles evolved in the late-nineteenth century and peaked in popularity in the early decades of the twentieth century. Frank Lloyd Wright favored a **smooth finish** stucco, which was imitated on much of the Prairie style architecture inspired by his work. Some of the more picturesque surface textures include: **English Cottage** or **English Cotswold finish**; **sponge finish** (Fig. b); **fan texture**; **adobe finish** (Fig. c), and **Spanish or Italian**

**finish**. Many of these finishes and countless other regional and personalized variations on them are still in use.

The most common early-twentieth century stucco finishes are often found on bungalow-style houses, and include: **spatter** or **spatterdash** (sometimes called **roughcast**, **harling**, or **wetdash**), and **pebbledash** or **drydash**. The **spatterdash** finish is applied by throwing the stucco mortar against the wall using a whisk broom or a stiff fiber brush, and it requires considerable skill on the part of the plasterer to achieve a consistently rough wall surface. The mortar used to obtain this texture is usually composed simply of a regular sand, lime, and cement mortar, although it may sometimes contain small pebbles or crushed stone aggregate, which replaces one-half the normal sand content. The **pebbledash** or **drydash finish** is accomplished manually by the plasterer throwing or "dashing" dry pebbles (about 1/8" to 1/4" in size), onto a coat of stucco freshly applied by another plasterer. The pebbles must be thrown at the wall with a scoop with sufficient force and skill that they will stick to the stuccoed wall. A more even or uniform surface can be achieved by patting the stones down with a wooden float. This finish may also be created using a texturing machine (Figs. d-f illustrate 3 versions of this finish. Photos: National Park Service Files).

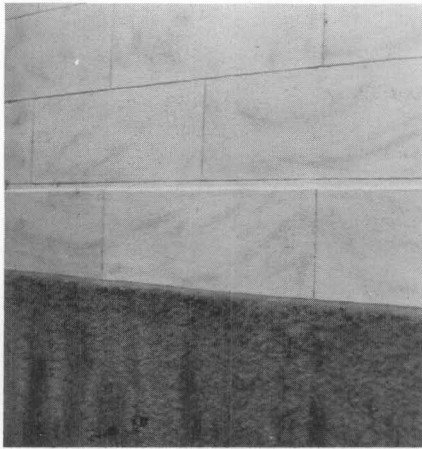


Fig. A



Fig. B



Fig. C

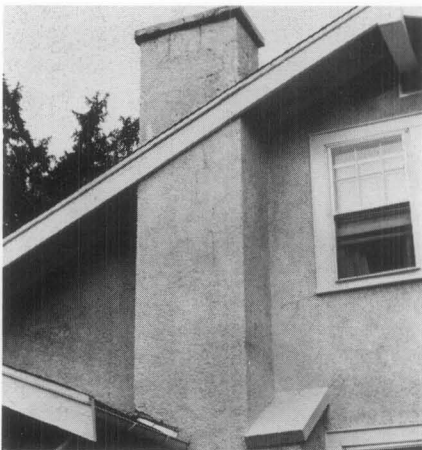


Fig. D

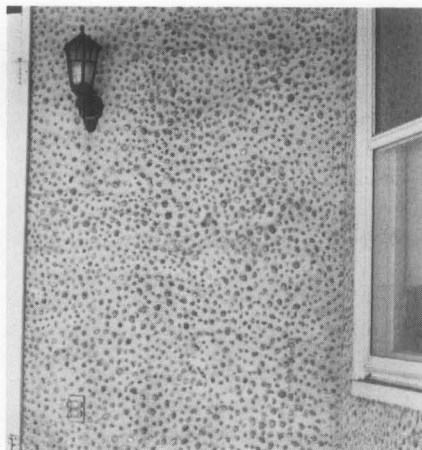


Fig. E

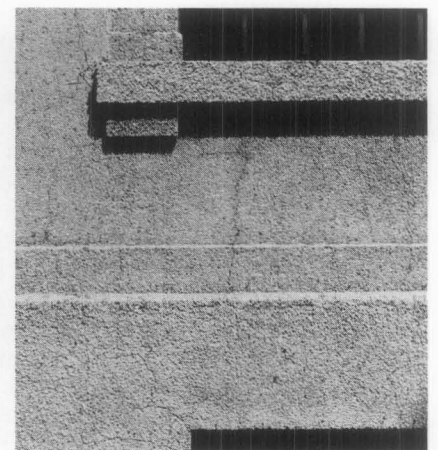


Fig. F

## Summary

Stucco on historic buildings is especially vulnerable not only to the wear of time and exposure to the elements, but also at the hands of well-intentioned "restorers," who may want to remove stucco from eighteenth and nineteenth century structures, to expose what they believe to be the original or more "historic" brick, stone or log underneath. Historic stucco is a character-defining feature and should be considered an important historic building material, significant in its own right. While many eighteenth and nineteenth century buildings were stuccoed at the time of construction, others were stuccoed later for reasons of fashion or practicality. As such, it is likely that this stucco has acquired significance over time, as part of the history and evolution of a building. Thus, even later, non-historic stucco should be retained in most instances; and similar logic dictates that new stucco should not be applied to a historic building that was not stuccoed previously. When repairing historic stucco, the new stucco should duplicate the old as closely as possible in strength, composition, color and texture.

### Mixes for Repair of Historic Stucco

Historic stucco mixes varied a great deal regionally, depending as they did on the availability of local materials. There are probably almost as many mixes that can be used for repair of historic stucco as there are historic stucco buildings. For this reason it is recommended that at least a rudimentary analysis of the existing historic stucco be carried out in order to determine its general proportions and primary ingredients. However, if this is not possible, or if test results are inconclusive, the following mixes are provided as reference. Many of the publications listed under "Selected Reading" include a variety of stucco mixes and should also be consulted for additional guidance.

**Materials Specifications** should conform to those contained in *Preservation Briefs 2: Repointing Mortar Joints in Historic Brick Buildings*, and are as follows:

- Lime should conform to ASTM C-207, Type S, Hydrated Lime for Masonry Purposes.
- Sand should conform to ASTM C-144 to assure proper gradation and freedom from impurities. Sand, or other type of aggregate, should match the original as closely as possible.
- Cement should conform to ASTM C-150, Type II (white, non-staining), portland cement.
- Water should be fresh, clean and potable.
- If hair or fiber is used, it should be goat or cattle hair, or pure manilla fiber of good quality, 1/2" to 2" in length, clean, and free of dust, dirt, oil, grease or other impurities.
- Rules to remember: More lime will make the mixture more plastic, but stucco mortar with a very large proportion of lime to sand is more likely to crack because of greater shrinkage; it is also weaker and slower to set. More sand or aggregate, will minimize shrinkage, but make the mixture harder to trowel smooth, and will weaken the mortar.

### Soft Lime Stucco (suitable for application to buildings dating from 1700-1850)

*A.J. Downing's Recipe for Soft Lime Stucco*

- 1 part lime
- 2 parts sand

(A.J. Downing, "The Architecture of Country Houses," 1850)

### *Vieux Carre Masonry Maintenance Guidelines*

Base Coats (2):

- 1 part by volume hydrated lime
- 3 parts by volume aggregate [sand]—size to match original
- 6 pounds/cubic yards hair or fiber

Water to form a workable mix.

Finish Coat:

- 1 part by volume hydrated lime
- 3 parts aggregate [sand]—size to match original

Water to form a workable mix.

Note: No portland cement is recommended in this mix, but if it is needed to increase the workability of the mix and to decrease the setting time, the amount of portland cement added should never exceed 1 part to 12 parts lime and sand.

("Vieux Carre Masonry Maintenance Guidelines," June, 1980.)

### *"Materials for Soft Brick Mortar and for Soft Stucco"*

- 5 gallons hydrated lime
- 10 gallons sand

- 1 quart white, non-staining portland cement (1 cup only for pointing)

Water to form a workable mix.

(Koch and Wilson, Architects, New Orleans, Louisiana, February, 1980)

### *Mix for Repair of Traditional Natural Cement or Hydraulic Lime Stucco*

- 1 part by volume hydrated lime
- 2 parts by volume white portland cement
- 3 parts by volume fine mason's sand

If hydraulic lime is available, it may be used instead of lime-cement blends.

("Conservation Techniques for the Repair of Historical Ornamental Exterior Stucco, January, 1990)



### Early-twentieth century Portland Cement Stucco

- 1 part portland cement
- 2 1/2 parts sand

Hydrated lime = to not more than 15% of the cement's volume

Water to form a workable mix.

The same basic mix was used for all coats, but the finish coat generally contained more lime than the undercoats. ("Illinois Preservation Series No. 2: Stucco," January, 1980)

### American Portland Cement Stucco Specifications (c. 1929)

Base Coats:

- 5 pounds, dry, hydrated lime
- 1 bag portland cement (94 lbs.)

Not less than 3 cubic feet (3 bags) sand (passed through a #8 screen)

Water to make a workable mix.

Finish Coat:

Use WHITE portland cement in the mix in the same proportions as above.

To color the stucco add not more than 10 pounds pigment for each bag of cement contained in the mix.

## Selected Reading

- Ashurst, John, and Nicola Ashurst. *Practical Building Conservation, English Heritage Technical Handbook, Volume 3. Mortars, Plasters and Renders*. New York: Halsted Press, 1988.
- Conway, Brian D. *Illinois Preservation Series Number 2: Stucco*. Springfield, IL: Illinois Department of Conservation, Division of Historic Sites, 1980.
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- Johnson, LeRoy, Jr. (editor). *Handbook of Maintenance Techniques for Building Conservation in the Strand Historic District, Galveston, Texas*. (Revised edition originally published in 1980 as *Preservation Maintenance Handbook*, prepared by Michael Emrick, AIA, for the Galveston Historical Foundation.) Austin, TX: Texas Historical Commission, 1984.
- Jowers, Walter. "Bungalow Building Materials: How to Repair Stucco." *The Old-House Journal*. Vol. XIII, No. 4 (May 1985), pp. 80-83.
- MacDonald, Marylee. *Preservation Briefs 21: Repairing Historic Flat Plaster-Walls and Ceilings*. Washington, D.C.: National Park Service, U.S. Department of the Interior, 1989.
- Mack, Robert C., AIA, de Teel Patterson Tiller, and James S. Askins. *Preservation Briefs 2: Repointing Mortar Joints in Historic Brick Buildings*. Washington, D.C.: National Park Service, U.S. Department of the Interior, 1980.
- McKee, Harley J., FAIA. *Introduction to Early American Masonry—Stone, Brick, Mortar and Plaster*. Washington, D.C.: National Trust for Historic Preservation and Columbia University, 1973.
- Matero, Frank G., Mary Hardy, Antonio Rava and Joel Snodgrass. *Conservation Techniques for the Repair of Historical Ornamental Exterior Stucco*. (With a Case Study for the Repair of the Cabildo Pedimental Sculpture). Report prepared for the Division of Historic Preservation, Office of Cultural Development, Louisiana Department of Culture, Recreation and Development by The Center for Preservation Research, Columbia University, New York. January 1990.

*Portland Cement Plaster (Stucco) Manual*. Skokie, IL: Portland Cement Association, 1980.

Van Den Branden, F., and Thomas L. Hartsell. *Plastering Skills*. Second edition. Homewood, IL: American Technical Publishers, Inc., 1984.

*Vieux Carre Masonry Maintenance Guidelines*. Revised from the initial report prepared by Mary L. Oehrlein in 1977. New Orleans, LA: Vieux Carre Commission, 1980.

*Whitewash & Coldwater Paints*. Bulletin No. 304-G. Washington, D.C.: National Lime Association, 1955.

Worsham, Gibson. "Exterior Plaster Restoration at the Lord Morton House, Lexington, Kentucky." *Association for Preservation Technology Bulletin*. Vol. XIII, No. 4 (1981), pp. 27-33.

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*Cover Photograph: St. James Church, Goose Creek, Berkeley County, South Carolina (1713-1719), is constructed of brick covered with stucco. Although much restored, it is notable for its ornamental stucco detailing, including rusticated quoins, cherub head "keystones" above the windows, flaming hearts, and a pelican in piety—symbol of the sacrament, in the pediment over the front door. Photo: Gary Hume.*