



Oregon State University

INVITATION TO BID #199279

FOUNDATION BUILDING ROOF REPAIRS

ISSUE DATE: May 9, 2019

ITB CLOSING (DUE) DATE: June 6, 2019 at 2:00PM Pacific Time

MANDATORY PRE-BID CONFERENCE: May 15, 2019 at 2:00PM Pacific Time in the Foundation Building
Conference Board Room located at 850 SW 35th, Corvallis, OR 97331.

QUESTION DEADLINE: May 24, 2019 at 5:00 PM Pacific Time

PROJECT NUMBER: 2163-19

CONTRACT ADMINISTRATOR:

Kelly Oar, Purchasing Analyst III

Construction Contract Administration

Oregon State University

644 SW 13th Ave.

Corvallis, OR 97333

Phone: (541) 737-4672

FAX: (541) 737-5546

Email: kelly.oar@oregonstate.edu

AWARD DECISION APPEALS:

Hanna Emerson, Construction Contracts Manager

Construction Contract Administration

Oregon State University

644 SW 13th Ave.

Corvallis, OR 97333

Phone: (541) 737-7342

FAX: (541) 737-5546

Email: hanna.emerson@oregonstate.edu



PROJECT MANUAL

OREGON STATE UNIVERSITY FOUNDATION BUILDING REROOFING PROJECT

ARCHITECT:

MCBRIDE ARCHITECTURE, P.C.
P.O. BOX 12574
PORTLAND, OREGON 97212
PHONE: (503) 916-1808
PHIL STRAND, RCI
PROJECT MANAGER
mac@mcbriearchitecture.com



OWNER:

OREGON STATE UNIVERSITY
CAPITAL PLANNING & DEVELOPMENT
3015 SW WESTERN BLVD.
CORVALLIS, OREGON 97333
PHONE: (541) 231-5368
RICK FREEMAN
CONSTRUCTION MANAGER
rick.freeman@oregonstate.edu

April 15, 2019

Project Number: 18026.02

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McBRIDE ARCHITECTURE, P.C.

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Prepared by McBride dated 04/15/2019

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Prepared by McBride dated 04/15/2019

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NOTICE OF OPPORTUNITY - ADVERTISEMENT FOR BIDS

FOUNDATION BUILDING ROOF REPAIRS

Oregon State University ("Owner") is accepting sealed bids for a public improvement project at Construction Contracts Administration, Oregon State University, 644 SW 13th Ave., Corvallis, Oregon, until **2:00 PM local time on June 6, 2019**, for the Foundation Building Roof Repairs project located on the campus of Oregon State University, Corvallis, Oregon.

A **MANDATORY PRE-BID CONFERENCE** examination of the site and conditions will take place on **May 15, 2019 at 2:00 PM**. Bidders shall meet with the Owner's Representative in the Boardroom/conference room at the Foundation Building located at 850 SW 35th St Corvallis, OR 97330. Attendance will be documented through a sign-in sheet prepared by the Owner's Representative. Prime bidders who arrive more than 5 minutes after start time of the meeting (as stated in the solicitation and by the Owner's Authorized Representative's watch) or after the discussion portion of the meeting (whichever comes first) shall not be permitted to sign in and will not be permitted to submit a bid on the project.

Bids will be due **June 6, 2019 at 2:00 PM**, local time, at the Property Services Building, 644 SW 13th Ave., Corvallis, Oregon by the Owner's representative or designee.

Plans and specifications for this bid are available at the following website: <https://bid.oregonstate.edu/>

All bidders must comply with requirements of the prevailing wage law in ORS 279C.800 through ORS 279C.870. All bidders must be registered with the Construction Contractor's Board at the time of bid submission. No bid will be considered unless fully completed in the manner provided in the "Instructions to Bidders" upon the Bid Form provided. OSU encourages bids from Minority, Women, and Emerging Small Businesses.

OREGON STATE UNIVERSITY

By: Kelly Oar
Purchasing Analyst III
Oregon State University

PUBLICATION AND DATE:

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OREGON STATE UNIVERSITY

INSTRUCTIONS TO BIDDERS

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INSTRUCTIONS TO BIDDERS

OSU Policies and Standards govern this OSU procurement process. Those standards can be viewed at: <http://policy.dev.acquia.cws.oregonstate.edu/policy-standards-manual>

Article 1. Definitions

1.1. Capitalized words used herein but not defined shall have the meaning set forth in the OSU General Conditions and OSU Policies and Standards. The following terms used herein shall have the meaning set forth below:

“Bid Form”- refers to OSU form provided by Owner to be completed by Bidder.

“Project Manual”- The Project Manual includes, but is not necessarily limited to, the following: the Advertisement for Bids or Notice of Contracting Opportunity, these Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, Bid Bond, OSU General Conditions, Supplemental General Conditions (if any), Sample Supplement or Agreement, Performance Bond, Payment Bond, and the Plans and Specifications.

Article 2. Scope of Work

2.1 The Work contemplated in this document shall be for the Owner in connection with the Project described in the Project Manual.

Article 3. Examination of Site and Conditions

3.1 Before making a Bid, the Bidder shall examine the Work site to ascertain its physical condition. The Bidder shall be responsible for being fully informed as to the quality, quantity and sources of supply of the materials listed on the Project Manual. Failure to comply with this Section will not release Contractor from entering into the Contract nor excuse Contractor from performing the Work in strict accordance with the terms of the Contract Documents.

3.2 The Owner will not be responsible for any loss or unanticipated costs which may arise as a result of Contractor's failure to be fully informed in advance with regard to all conditions pertaining to the Work and the character of the Work required.

3.3. No statement made by any officer, agent, or employee of the Owner in relation to the physical conditions pertaining to the Work site or quality, quantity, and supply of materials will be binding on the Owner, unless included in writing in the Project Manual or an Addendum.

Article 4. Substitute Materials Approval Process

4.1 Prior to submitting a Bid including a Substitution, the Bidder must first seek approval of the Substitution from the Architect (or Engineer, as appropriate hereafter) by submitting a written request for approval at least 10 calendar days prior to the Closing Date and Time. The Bidder submitting the request shall be responsible for its timely delivery.

4.2 Substitution approval requests shall be accompanied by samples, records of performance, certified copies of tests by impartial and recognized laboratories, and such other information as the Architect may request.

4.3 Within a reasonable time after receiving such a request the Owner (or Architect if so designated) will consider whether the Substitution sought by Bidder is of equal value, utility, as the designated product in the Project Manual.

If the requested Substitution is approved an Addendum to the Project Manual shall be issued. A copy of each Addendum shall become a part of the Project Manual.

4.4 When the Architect approves a Substitution by Addendum, it is with the understanding that the Contractor guarantees the substituted article or material to be equal or better than the one specified.

Article 5. Interpretation of Project Manual

5.1 A Bidder in doubt as to the meaning of any part of the Project Manual may submit a written request for an interpretation to the Architect at any time prior to 10 calendar days prior to the Closing Date and Time.

5.2 Any interpretation of the Project Manual will be made only by a duly issued Addendum. The Owner will not be responsible for any other explanation or interpretation of the Project Manual nor for any other approval of a particular manufacturer's process or item.

5.3 To establish a basis of quality, certain processes, types of machinery and equipment or kinds of materials may be specified in the Project Manual either by description of process or by designating a manufacturer by name and referring to a brand or product designation or by specifying a kind of material. Whenever a process is designated or a manufacturer named, brand or item designation given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether they do so or not.

Article 6. Execution of the Bid Form

6.1 The Bid Form relates to Bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished by the Owner will be considered as the Bid. Each Bidder shall Bid upon the Work exactly as set forth in the Bid Form. The Bidder shall include in the Bid a sum to cover the cost of all items contemplated by the Project Manual. Bids that fail to address alternates set forth on the Bid Form may be considered non-responsive.

6.2 Each Bid Form must: 1) Be completed in accordance with these instructions; 2) Include the appropriate signatures as noted on the Bid Form; 3) Include numbers pertaining to base Bids stated both in writing and in figures; and 4) Include the Bidder's typed or clearly printed address.

6.3 When Bidding on an alternate for which there is no charge, the Bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates is shown on the Bid Form, the Bidder shall indicate whether each is "add" or "deduct."

Article 7. Prohibition of Alterations to Bid

7.1 Bids which are incomplete, or contain ambiguities or conditions not provided for in the Bid Form, may be rejected.

Article 8. Submission of Bid

8.1 Each Bid shall be sealed in an envelope, properly addressed to the appropriate project representative of the Owner, showing on the outside of the envelope the name of the Bidder and the name of the project. Bids will be received at the time and place stated in the Advertisement for Bids.

Article 9. Bid Closing and Opening of Bids

9.1 All Bids must be received by the Owner before the Closing Date and Time. Any Bids received after the Closing

Date and Time will be rejected and returned to the Bidder unopened.

9.2 At the time of opening and reading of Bids, each Bid received, irrespective of any irregularities or informalities, will be publicly opened and read aloud.

Article 10. Acceptance or Rejection of Bids by Owner

10.1 Unless all Bids are rejected, the Owner will award the Contract based on the lowest responsive Bid from a responsible Bidder. If that Bidder does not execute the Contract, the Contract will be awarded to the next lowest responsible Bidder or Bidders in succession.

10.2 The procedures for Contract awards shall be in compliance with the provisions of OSU Standards adopted by the Owner.

10.3 The Owner reserves the right to reject all Bids and to waive minor informalities.

10.4 The Owner reserves the right to hold the Bid and any required Bid security, of the three lowest Bidders for a period of 30 calendar days from the time of Bid opening pending award of the Contract. Following award of the Contract, any Bid security furnished by the three lowest Bidders may be held 20 calendar days pending execution of the Contract. All other Bids will be rejected and Bid security returned.

10.5 In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

10.6 If Owner has not accepted a Bid within 30 calendar days after the opening of the Bids, each of the three lowest Bidders may withdraw the Bid submitted and request the return of any Bid security then held.

Article 11. Withdrawal of Bid

11.1 At any time prior to the Closing Date and Time a Bidder may withdraw its Bid. This will not preclude the submission of another Bid by such Bidder prior to the Closing Date and Time.

11.2 After the Closing Date and Time, no Bidder will be permitted to withdraw its Bid within the time period specified in Article 10 for award and execution, except as provided for in that Article.

Article 12. Execution of Contract, Agreement, Performance Bond and Payment Bond

12.1 The Owner will provide the successful Bidder with Contract Documents within 10 calendar days after the award of the Contract. The Bidder shall be required to execute the Contract as provided, including a Performance Bond and a Payment Bond from a surety company licensed to do surety business in the State of Oregon, within 20 calendar days after the award of the Contract. The Contract Documents shall be delivered to the Owner in the manner stated in the Notice of Award.

Article 13. Recyclable Products

13.1 Contractors must use recyclable products to the maximum extent economically feasible in the performance of the Contract.

Article 14. Security to Be Furnished by Each Bidder

14.1 Each Bid must be accompanied by either: 1) a cashier's check or a certified check drawn on a bank authorized to do business in the State of Oregon, or 2) a Bid Bond described hereinafter, executed in favor of Owner, for an amount equal to 10 percent of the total Bid amount as a guarantee that if awarded the contract the Bidder will execute the contract and give a Performance Bond and Payment Bond as required.

14.2 The Contractor's check or Bid Bond will be retained until the Contractor has entered into a Contract and furnished a 100 percent Performance Bond and 100 percent Payment Bond.

14.3 The Owner reserves the right to hold the Bid security as described in Article 10. Should the successful Bidder fail to execute and deliver the Contract as provided for in Article 12, including a satisfactory performance bond and payment bond within 20 calendar days after the Bid has been accepted by the Owner, then the Contract award may be canceled and the Bid security may be forfeited as liquidated damages, at the option of the Owner. The date of the acceptance of the Bid and the award of the contract as contemplated by the Project Manual shall mean the date of acceptance specified in the Notice of Award.

Article 15. Execution of Bid Bond

15.1 Should the Bidder elect to utilize a Bid Bond as described in Article 14 in order to satisfy the Bid security requirements, such form must be completed in the following manner:

15.1.1 Bid Bonds must be executed on OSU forms, which will be provided to all prospective Bidders by the Owner.

15.1.2 The Bid Bond shall be executed on behalf of a bonding company licensed to do business in the State of Oregon.

15.1.3 In the case of a sole individual, the Bid Bond need only be executed as principal by the sole individual. In the case of a partnership, the Bid Bond must be executed by at least one of the partners. In the case of a corporation, the Bid Bond must be executed by stating the official name of the corporation under which is placed the signature of an officer authorized to sign on behalf of the corporation followed by such person's official capacity, such as president, etc. This signature shall be attested by the secretary or assistant secretary of the corporation. The corporation seal should then be affixed to the Bid Bond. In the case of a limited liability company/corporation ("LLC"), the Bid Bond must be executed by stating the official name of the LLC under which is placed the signature of a member authorized to sign on behalf of the LLC.

15.1.4 The name of the surety must be stated in the execution over the signature of its duly authorized attorney-in-fact and accompanied by the seal of the surety corporation.

OREGON STATE UNIVERSITY

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

Project Name: FOUNDATION BUILDING ROOF REPAIRS

The following modify the Oregon State University “Instructions to Bidders” for this procurement. Where a portion of the Instructions to Bidders has been modified by these Supplemental Instructions to Bidders, the unaltered portions shall remain in effect.

SB-1, Revise Article 4 as follows:

Replace sub-paragraph 4.3 in its entirety with the following:

“4.3 Within a reasonable time after receiving such a request the Owner (or Architect if so designated) will consider whether the Substitution sought by Bidder is of equal value, utility, as the designated product in the Project Manual. If the requested Substitution is approved, an Addendum to the Project Manual shall be issued by the Owner to each planholder and shall become a part of the Project Manual.”

SB-2, Security to be Furnished by Each Bidder

Delete Article 14 of Instructions to Bidders in its entirety.

SB-3, Execution of Bid Bond

Delete Article 15 of Instructions to Bidders in its entirety.

SB-4 Add New Article 16:

“Article 16. Public Works Bond.

At the time of submission of its bid, each bidder shall have on file with the Construction Contractors Board a public works bond required by ORS 279C.836, unless otherwise exempt under that statute. Failure to have on file a public works bond at the time of submission of the bid may result in rejection of the bidder’s bid as non-responsive.”

OREGON STATE UNIVERSITY

BID FORM

PROJECT: FOUNDATION BUILDING ROOF REPAIRS

BID CLOSING: THURSDAY JUNE 6, 2019 2:00PM

BID OPENING: THURSDAY JUNE 6, 2019 2:00PM

FROM: Name of Contractor

TO: Oregon State University ("Owner")
Construction Contract Administration
644 SW 13th Ave.
Corvallis, Oregon 97333

1. The Undersigned (check one of the following and insert information requested):

- a. An individual doing business under an assumed name registered under the laws of the State of ...; or
b. A partnership registered under the laws of the State of ...; or
c. A corporation organized under the laws of the State of ...; or
d. A limited liability corporation/company organized under the laws of the State of ...;

hereby proposes to furnish all material and labor and perform all work hereinafter indicated for the above project in strict accordance with the Contract Documents for the Basic Bid as follows:

Dollars (\$)

and the Undersigned agrees to be bound by the following documents:

- Notice of Opportunity
• Supplemental Instructions to Bidders
• Performance Bond and Payment Bond
• Supplemental OSU General Conditions
• Prevailing Wage Rates
• Plans and Specifications
• ADDENDA numbered through, inclusive (fill in blanks)
• Instructions to Bidders
• Sample Contract
• OSU General Conditions
• Payroll and Certified Statement Form
• Drawings and Details

2. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items or work relating to the following Unit Price(s) as designated in the Specifications, for which any adjustments in the Contract amount will be made in accordance with Section D of the OSU General conditions.

UNIT PRICE #1 Price per Tubular Daylighting Device ADD (price per device): \$

3. The work shall be completed within the time stipulated and specified in Division 1, Section 01 11 00, of the Specifications.

4. The Undersigned certifies that: (1) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (2) The contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent of the Undersigned or its surety on any Bond furnished with the Bid and will not be communicated to such person prior to the official opening of the Bid.

5. The undersigned **HAS, HAS NOT** (*circle applicable status*) paid unemployment or income taxes in Oregon within the past 12 months and **HAS, HAS NOT** (*circle applicable status*) a business address in Oregon.

6. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage.

7. Contractor's CCB registration number is _____. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will render the bid unresponsive and it will be rejected, unless contrary to federal law.

8. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the Contract.

9. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is _____, Policy No. _____, and that Contractor shall submit Certificates of Insurance as required.

10. Contractor's Project Manager for this project is: _____,
Office Phone: _____ Cell Phone: _____.

11. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

12. The Undersigned agrees, if awarded the Contract, to execute and deliver to Owner, within twenty (20) calendar days after receiving the Contract Documents, an Agreement Form and a satisfactory Performance Bond and Payment Bond, each in an amount equal to one hundred (100) percent of the Contract sum, using forms provided by the Owner. The surety requested to issue the Performance Bond and Payment Bond will be: _____.

(*name of surety company - not insurance agency*) The Undersigned hereby authorizes said surety company to disclose any information to the Owner concerning the Undersigned's ability to supply a Performance Bond and Payment Bond each in the amount of the Contract.

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM _____

ADDRESS _____

FEDERAL TAX ID _____

TELEPHONE NO _____

FAX NO _____

SIGNATURE 1) _____

Sole Individual - Signature

Sole Individual - Printed Name

or 2) _____

Partner

or 3) _____

Authorized Officer of Corporation - Signature

Authorized Officer of Corporation Printed Name

(SEAL)

Attested: Secretary of Corporation

*Payment information will be reported to the IRS under the name and taxpayer ID # provided above.
Information not matching IRS records could subject Contractor to 31 percent backup withholding.*

******* END OF BID *******

OREGON STATE UNIVERSITY PUBLIC IMPROVEMENT CONTRACT

This Public Improvement Contract for the **(Insert Project Name)** (the "Contract"), made by and between Oregon State University, hereinafter called OWNER, and **(Insert Contractor's Name)** hereinafter called the CONTRACTOR (collectively the "Parties"), shall become effective on **(Insert contract award date)**, or the date this Contract has been signed by all the Parties, whichever is later.

1. Contract Price, Contract Documents and Work.

The CONTRACTOR, in consideration of the sum of _____ (the "Contract Price"), to be paid to the CONTRACTOR by OWNER in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Instructions to Bidders and other Contract Documents (as defined in the Oregon State University General Conditions referenced within the Instructions to Bidders), all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents. The Contract Price is the amount contemplated by the Base Bid adjusted for Alternates____, as indicated in the accepted Bid.

Also, the following documents are incorporated by reference in this Contract and made a part hereof if checked for inclusion [X]:

[] (RESERVED)

2. Representatives.

CONTRACTOR has named **(Insert Name)** its' Authorized Representative to act on its behalf. OWNER designates, or shall designate, its Authorized Representative as indicted below (check one):

A. [] Unless otherwise specified in the Contract Documents, the OWNER designates **(Insert Name)** as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to Contract performance, payment authorization, and to carry out the responsibilities of the OWNER.

B. [X] Name of OWNER'S Authorized Representative shall be submitted by OWNER in a separate writing.

3. Contract Dates.

COMMENCEMENT DATE: Within **(Insert # of Days)** days of the execution of the Contract ("Execution").

SUBSTANTIAL COMPLETION DATE: **(Insert # of Days)** from Contract Execution **(or a date certain)**.

FINAL COMPLETION DATE: **(Insert # of Days)** from Contract Execution **(or a date certain)**.

4. Integration

The Contract documents constitute the entire agreement between the parties. There are no other understandings, agreements or representations, oral or written, not specified herein regarding this Contract.

CONTRACTOR, by the signature below of its authorized representative, hereby acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.

In witness whereof, Oregon State University executes this Contract and the CONTRACTOR does execute the same as of the day and year indicated below.

CONTRACTOR DATA:

(Insert Contractor Name & Address)

CONTRACTOR NAME:

CONTRACTOR FEDERAL ID #

CONTRACTOR CCB #

[Payment information will be reported to the IRS under the name and taxpayer ID # provided above. Information must be provided prior to contract approval. Information not matching IRS records could subject Contractor to 31 percent backup withholding.]

CONTRACTOR SIGNATURE

By _____
Name/Title Date

Oregon State University

By _____

Ronald L. Adams
Interim Vice President for Administration

Date

OREGON STATE UNIVERSITY GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS

June 30, 2017

INSTRUCTIONS: The attached **Oregon State University General Conditions for Public Improvement Contracts** ("Public Improvement General Conditions") apply to all designated Public Improvement contracts. Changes to the Public Improvement General Conditions (including any additions, deletions or substitutions) should only be made by attaching Public Improvement Supplemental General Conditions. The text of these Public Improvement General Conditions should not otherwise be altered.

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- K.5 EXTRA MATERIALS
- K.6 ENVIRONMENTAL CLEAN-UP
- K.7 CERTIFICATE OF OCCUPANCY
- K.8 OTHER CONTRACTOR RESPONSIBILITIES
- K.9 SURVIVAL

**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

AMENDMENT, means a writing which, when fully executed by the Parties to this Contract, constitutes a change to a Contract Document. Amendments shall be issued in accordance with the changes provisions of Section D and, if applicable, establish a Contract Price or Contract Time adjustment.

APPLICABLE LAWS, means federal, state and local laws, codes, rules, regulations and ordinances applicable to the Work and to the Contract.

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

CHANGE ORDER, means a written order issued by the Owner to be later included as an Amendment. A Change Order shall not be effective until codified as an Amendment.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these Public Improvement General Conditions.

CONSTRUCTION CHANGE DIRECTIVE, means a written order by the Owner to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.

CONSTRUCTION SCHEDULE, means the schedule prepared by the Contractor in CPM format and approved by the Owner, and all adjustments thereto approved by the Owner, that describes sequence and timing of the Work.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Public Improvement Contract, Public Improvement General Conditions, Supplemental General Conditions if any, the accepted Offer, Plans, Specifications, Construction Change Directives, Solicitation Document and addenda thereto, Instructions to Offerors, and Supplemental Instructions to Offerors, the CM/GC's RFQ proposal, the GMP Amendment, and any other Amendment, the Construction Schedule prepared and approved in accordance with the Construction Documents, and all other required Submittals.

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the full execution of a Contract and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total of the awarded Offer amount, as increased or decreased by the price of approved alternates, as indicated in the Contract Documents.

CONTRACT TIME, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

CPM, means a critical path method format to be used for the Construction Schedule.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents, the cost of materials, including sales tax, cost of delivery; cost of labor, including social security, Medicare and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; project specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater); bond premiums, rental cost of equipment, and machinery required for execution of the Work; and the additional costs of field personnel directly attributable to the Work.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any, released.

FINAL PAYMENT, means the last payment to the Contractor, including retainage, in connection with the Work.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

MWESB REPORT, means an accurate report by the Contractor to the Owner identifying all Minority, Women and Emerging Small Business (MWESB) enterprises, as those terms are defined in ORS 200.005, receiving contracts throughout the course of the Work. An initial MWESB report is required (see Section E.2.9) and MWESB Reports are required annually (see Section E.2.9) and as a condition of final payment (see Section K.1). The initial report shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts. The annual reports shall include the total number of contracts and subcontracts awarded to MWESB enterprises, the dollar value of each, and the expenditure toward each contract and subcontract during the previous twelve (12) months. The final report shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts including all Contracts and Amendments incorporated during the course of the project. The reports shall only include enterprises certified with the State of Oregon as MWESB enterprises and shall include individual identification of each enterprise as a Minority business enterprise, a Women business enterprise, and/or an Emerging Small Business Enterprise, as applicable.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

OFFER, means a bid in connection with Instructions to Bidders or a proposal in connection with a Request for Proposals.

OFFEROR, means a bidder in connection with Instructions to Bidders or a proposer in connection with a Request for Proposals.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), expenses of Contractor's offices and supplies at the job site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the job site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means Oregon State University(OSU). Owner may elect, by written notice to Contractor, to delegate certain duties to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these Public Improvement General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PROJECT, means the development, design, construction

PUNCH LIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, Construction Change Directives, MWESB Reports, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these Public Improvement General Conditions, recording all Services performed.

SOLICITATION DOCUMENT, means Instructions to Bidders or Offerors or a Request for Proposal or a Request for Quotes.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a

supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACT, means a contract between the Contractor and a subcontractor for the performance of a portion of the Work.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor, to perform one or more items of the Work.

SUBMITTAL, means a shop drawing, product data, sample, catalog cut, or similar item for specific portions of the Work as required by the Construction Documents.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.3.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Approval of any substitute item shall be solely determined by the Owner. The decision of the Owner is final.

PUBLIC IMPROVEMENT SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these Public Improvement General Conditions. Public Improvement Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

WORK, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

A.2 SCOPE OF WORK

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the project described in the Contract Documents. The Contractor shall perform all Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents. Execution of the Contract by the Contractor is an express representation (1) that the Contractor understands the intent stated herein with respect to the Preconstruction Phase Services, and (2) the Contractor's execution of an Amendment, including the GMP Amendment, shall be an express and unqualified representation that the Contractor understands the intent stated herein and therein.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

A.3.1 Unless otherwise specifically defined in the Contract

Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

- (a) Amendments and Construction Change Directives, with those of later date having precedence over those of an earlier date;
 - (b) The Supplemental General Conditions;
 - (c) Public Improvement General Conditions;
 - (d) The Public Improvement Contract;
 - (e)) Construction Change Directive;
 - (f) Division One (General Requirements) of the Specifications;
 - (g) Detailed Schedules of finishes, equipment and other items included in the Specifications;
 - (h) Plans and Specifications (other than Division One and the Detailed Schedules to the Specifications);
 - (i) Large-scale drawings on Plans;
 - (j) Small-scale drawings on Plans;
 - (k) Dimension numbers written on Plans which shall prevail and take precedence over dimensions scaled from Plans;
 - (l) The Solicitation Document, and any addenda thereto.
 - (m) The Contractor's RFQ proposal.
- A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing.
- A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner in writing. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of the Owner (or Architect/Engineer) will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).
- A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication,

shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

- A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.
- A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.
- A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner and confirmed in writing, including without limitation, any nonconformity with Applicable Laws.
- A.4.4 If the Contractor believes that adjustments to cost or Contract Time is involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under this Contract are those of an independent contractor as defined in ORS 670.600.

Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

- A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.
- A.7.2 Contractor represents and warrants that Contractor is not an employee of the State of Oregon for purposes of performing Work under this Contract

SECTION B ADMINISTRATION OF THE CONTRACT

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

- B.1.1 The Owner shall administer the Contract as described in the Contract Documents (1) during construction (2) until Final Payment is due and (3) during the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.
- B.1.2 The Owner will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work. Inspection of the progress, quantity, or quality of the Work done by the Owner, any Owner representative, and public agency, the Architect/Engineer, or any inspector, shall not relieve the Contractor of any responsibility for the compliance of all Work with the Contract Documents.
- B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by

and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

B.2 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts. CONTRACTOR'S MEANS AND METHODS; MITIGATION OF IMPACTS

- B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.
- B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality.
- B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

B.3 MATERIALS AND WORKMANSHIP

- B.3.1 The intent of the Contract Documents is to provide for the construction and completion in every detail of the Work described. All Work shall be performed in a professional manner and unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.
- B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's expense.
- B.3.3 Work done and materials furnished shall be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.
- B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their

facilities.

ORS 671.560.

- B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project.

Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities.

B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS

- B.5.1 Contractor shall comply with Applicable Laws pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable: (i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659; as amended; (vi) ORS Chapter 659A; as amended; (vii) all regulations and administrative rules established pursuant to the foregoing laws; and (viii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.
- B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and
- (a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.
 - (b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or this Contract when performing the Work.
- B.5.3 Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.021 to 701.068 at the time they submit their bids to the Contractor.
- B.5.4 Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to

- B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-00100. You may obtain copies of the rules by calling the center at (503)232-1987.

- B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.6 SUPERINTENDENCE

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

B.7 INSPECTION

- B.7.1 Owner shall have access to the Work at all times.
- B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner, shall be removed and replaced at the Contractor's expense.
- B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.
- B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.
- B.7.5 If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the

Owner, the uncovering and restoration will be paid for pursuant to an Amendment.

- B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.
- B.7.7 When the United States government participates in the cost of the Work, or the Owner has an agreement with other public or private organizations, or if any portion of the Work is being performed for a third party or in close proximity to third party facilities, representatives of these organizations shall have the right to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

B.8 SEVERABILITY

If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

B.9 ACCESS TO RECORDS

- B.9.1 Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar Submittals, and shall at all times give the Owner access thereto.
- B.9.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

B.10 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

B.11 SUBCONTRACTS AND ASSIGNMENT

- B.11.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these Public Improvement General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.
- B.11.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.

- B.11.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.12 SUCCESSORS IN INTEREST

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

B.13 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor shall coordinate work with the other contractors or forces, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

B.14 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this

Contract. The Contractor of this Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

B.15 GOVERNING LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

B.16 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Benton County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the State of Oregon on any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION B.16.

B.17 ALLOWANCES

B.17.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

B.17.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
- (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Amendment. The amount of the Amendment shall reflect
 - (i) the difference between actual costs and the allowances under Section B.17.2(a) and (2)
 - (ii) changes in Contractor's costs under Section B.17.2(b).
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

B.18.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the Architect/Engineer), a schedule and list of

Submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review Submittals. Owner reserves the right to finally approve the schedule and list of Submittals. Submittals include, without limitation, Shop Drawings, product data, and samples which are described below:

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any sub-subcontractor), manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- (c) Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B.18.2 Shop Drawings, Product Data, Samples and similar Submittals are not Contract Documents. The purpose of their Submittal is to demonstrate for those portions of the Work for which Submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of Submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's Submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational Submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.

B.18.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar Submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer without action.

B.18.4 Approving and submitting shop drawings, product data, samples and similar Submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents.

B.18.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar Submittals until the respective Submittal has been approved by the Architect/Engineer.

B.18.6 The Work shall be in accordance with approved Submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar Submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) an Amendment or Construction Change Directive has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar Submittals by the Architect/Engineer's review or approval thereof.

B.18.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

B.19 SUBSTITUTIONS

The Contractor may make Substitutions only with the written consent of the Owner, after evaluation by the Owner and only in accordance with an Amendment or Construction Change Directive. Substitutions shall be subject to the requirements of the bid documents. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.20 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of

this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and terminate the Contract.

B.21 FUNDS AVAILABLE AND AUTHORIZED

If Owner fails to receive funding, appropriations, allocations or other expenditure authority as contemplated by Owner's budget and Owner determines, in its assessment and ranking of the policy objectives explicit or implicit in Owner's budget, Owner may other reserved rights, in addition to copyrights, are retained by Owner.

B.22 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

SECTION C WAGES AND LABOR

C.1 MINIMUM WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Documents establishing those conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI), are included as attachments to or are incorporated by reference in the Contract Documents. Pursuant to ORS 279C.830(1)(c), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS

C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner, on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of

hours worked, deductions made, and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.

C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements. Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

C.2.3 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:

C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.

C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.

C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.

C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

C.3.2 As a condition to Owner's performance hereunder, if Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract.

Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

C.3.3 Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the public contracting agency under such contract.

C.3.4 All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

C.4 PAYMENT FOR MEDICAL CARE

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, all sums of which the Contractor agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

(a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or

(b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and

(c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

**SECTION D
CHANGES IN THE
WORK**

D.1 CHANGES IN WORK

D.1.1 The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. An Amendment or Change Order is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All changes to the Work shall be documented and Amendments shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.
- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the project.
- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes,
- (h) Changed conditions.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply. Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) Unit pricing may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing, the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in D.1.3(c) shall

be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.

- (c) In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. In addition, the following markups shall be added to the Contractor's or Subcontractor's Direct Costs as full compensation for profit, Overhead and other indirect costs for Work directly performed with the Contractor's or Subcontractor's own forces:

On Labor.....	15%
On Equipment.....	10%
On Materials.....	10%

- (d) When adjustments to or deletions from the Work under D.1.3(c) are invoiced by an authorized Subcontractor at any level, each ascending tier Subcontractor or Contractor will be allowed a supplemental mark-up on each piece of subcontract Work covered by an Amendment as follows:

\$0.00 - \$5,000.00	10%,
and then Over \$5,000.00	5%

Notwithstanding the foregoing, the maximum aggregate markup to be billed shall not exceed 10% regardless of the number of Subcontract tiers.

Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to an Amendment or Change Order. Owner may establish a maximum cost for additional Work under this Section D.1.3, which shall not be exceeded for reimbursement without additional written authorization from Owner in the form of an Amendment or Change Order. Contractor shall not be required to complete such additional Work without additional authorization.

- D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment. Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of Owner's request for additional Work. Contractor agrees that this thirty (30) Day notice period is adequate time for it to request and document the amount of additional compensation or adjustment of Contract Time. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the

thirty (30) Day time limit, Contractor agrees its requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor's timely request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

- D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of any other part of the Work under this Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner's request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner's request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any Person, not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor's request for adjustment to compensation or Contract Time and the request is timely as set forth herein, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

- D.1.6 Contractor agrees that no request or Claim for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of Final Payment application under this Contract. Final Payment

application must be made by Contractor within the time required under Section E.6.4.

- D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes may be required and that there will be no compensation made, unless and only to the extent otherwise provided in the Contract Documents, to the Contractor directly related to the number of changes. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2 DELAYS

- D.2.1 Delays in construction include "Avoidable Delays", which are defined in Section D.2.1.1, and "Unavoidable Delays", which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

- D.2.1.1 Avoidable Delays include any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that:

- (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of other parts of the Work or the completion of the whole Work within the Contract Time.
- (c) Do not impact activities on the accepted CPM Construction Schedule.
- (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

- D.2.1.2 Unavoidable Delays include delays other than Avoidable Delays that are:

- (a) To the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
- (b) To the extent caused by any site conditions that differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor agrees to notify the Owner immediately of differing site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether the conditions differ materially from either the conditions stated in the Contract Documents or those that could reasonably be expected in execution of this particular Contract. If Contractor and the Owner agree that a differing site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.1.5 for adjustments to or deletions from Work. If the Owner disagrees that a differing site

condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

- (c) To the extent caused by Force Majeure acts, events or occurrences that could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (d) To the extent caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the Project in a manner that could not be avoided by rescheduling the Work or by implementing measures to protect against the weather so that the Work could proceed. A rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:

- (i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty- five percent (25 %) or more.
- (ii) daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the Project site shall be considered the official agency of record for weather information.

D.2.2 Contractor agrees it is not entitled to additional compensation or additional Contract Time for Avoidable Delays.

D.2.3 In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor must submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This

written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor agrees to submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process, provided Contractor has complied with the requirement in this Section D.2.3. Contractor agrees any Claim it may have is barred if Contractor does not comply with the requirements herein.

If Contractor does not timely submit the notices required under this Section D.2, then unless otherwise prohibited by law, Contractor's Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these Public Improvement General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Contractor agrees that, unless the Claim is made in accordance with these time requirements, Contractor voluntarily waived all rights to prosecute its Claim.

D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

D.3.3 The Owner will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment,

recommend approval of all or part of the Claim; or
(5) propose an alternate resolution.

D.3.4 The Owner's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.5 The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its request for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision. The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.

In the event that a lawsuit must be filed within this sixty (60) Day period in order to preserve a cause of action, the parties agree that, notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached on any issues through mediation, the plaintiff shall promptly cause to be entered by the Court a stipulated general judgment of dismissal with prejudice, or other appropriate order limiting the scope of litigation as provided in the settlement.

D.3.6 Should the parties arrive at an impasse regarding any Claims or disputed Claims, it is agreed that the parties shall participate in mediation as specified in Section D.3.5. The mediation process will be considered to have been commenced as of the date one party delivers to the other its request in writing to mediate. The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to comply with Owner's administrative rules governing the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality rules. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

D.3.7 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or Delay Work, in whole or in part, without a written stop work order from the Owner.

SECTION E PAYMENTS

E.1 SCHEDULE OF VALUES

The Contractor shall submit, at least ten (10) Days prior to submission of its first application for progress payment, a schedule of values ("Schedule of Values") for the contracted Work. This schedule shall provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work.

Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest for overdue invoices at the rate of two-thirds of one percent per month on the progress payment, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within forty-five (45) days from the latest of:

- (a) The date of the receipt of the accurate invoice;
- (b) The date Owner receives the correct application for payment if no invoice is received;
- (c) The date all goods and services have been received;
or
- (d) The date a Claim is made certain by agreement of the parties or by operation of law.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers (EFT) through Automated Clearing House (ACH) payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 .2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: _____
Dated: _____"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

(a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.

(b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.

(c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.

(d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.

(e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the project site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.

(f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of

payment covering the material and/or equipment stored and of payment for the storage site.

(g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under this Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.

(h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

(a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents,

(b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;

(c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Contractor and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2.);

(d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;

(e)) damage to the Work, Owner or another contractor;

(f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

(g) failure to carry out the Work in accordance with the Contract Documents; or

(h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

(a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by an Amendment or Change Order;

- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and
- (d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

E.2.9 Contractor shall submit its initial MWESB Report within ten (10) Days of Contractor's execution of the Contract, or if there will be a Guaranteed Maximum Price (GMP) Amendment, then within ten (10) Days of Contractor's execution of the GMP Amendment. Contractor shall submit annual MWESB Reports on June 30 of each year the Contract is active. Contracts (or GMP Amendments) first executed by Contractor within ninety (90) Days before June 30 of the year of execution by Contractor may at the discretion of Owner be exempt from submitting the annual MWESB Report otherwise due on that June 30. The final MWESB Report shall be filed with the application for final payment. Timely receipt of MWESB Reports by Owner shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Owner's receipt of payroll certification pursuant to Section C.2 of this Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed

under this Contract from any state agency other than the agency that is a party to this Contract.

E.5 RETAINAGE

E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in OSU Standard 580-063-0045.

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after 50 percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed at Owner's sole discretion and only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is 97-1/2 percent completed the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to 100 percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 Contractor may request in writing:

- (a) to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds and securities of equal value with Owner or in a custodial account or other mutually-agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner;
- (b) for construction projects over \$1,000,000, that retainage be deposited in an interest bearing account, established through the State Treasurer for state agencies, in a bank, savings bank, trust company or savings association for the benefit of Owner, with earnings from such account accruing to the Contractor; or
- (c) that the Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims in the manner and priority as set forth for retainage.

When the Owner has accepted the Contractor's election of option

(a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (c), Contractor shall accept like bonds from Subcontractors and suppliers on the project from which Contractor has required retainages.

E. 5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the Final Payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two-thirds of one percent per month on the final payment due Contractor, interest to commence forty-five (45) Days after the date which Owner receives Contractor's final approved application

for payment and Work under the Contract has been completed and accepted and to run until the date when final payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within fifteen (15) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty-five (45) Days after the end of the 15- Day period.

E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the controller of the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited.

E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.6 FINAL PAYMENT

E.6.1 Upon completion of all the Work under this Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to the Owner a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for Final Payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

E.6.2 Neither Final Payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after Final Payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to Final Payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver

required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

E.6.3 Acceptance of Final Payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.

E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay Final Payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its Final Payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

SECTION F JOB SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with this Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.

F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the job site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Work site safety. Work site safety shall be the responsibility of the Contractor.

F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.

F.2.4 Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the site.

F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials shall be conducted so no release will occur that may pollute or become hazardous.

F.2.6 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.

F.3 CUTTING AND PATCHING

F.3.1 Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.

F.3.2 Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner's choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorneys' fees), or any of them, resulting from

all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor's obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of this Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any Applicable Laws. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials brought onto the Work site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws, including but not limited to 40 CFR Part 302, Table 302.4 and in OAR 340-142- 0050, to applicable federal, state, and local regulatory and emergency response agencies. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law.)
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.
- (e) Summary of communications about the release between Contractor and members of the press or Stat, local or federal officials other than

Owner.

- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personal injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

- F.6.1 Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or well-being of Contractor's or any Subcontractor's work force, property or the environment.
- F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 FORCE MAJEURE

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.

SECTION G INDEMNITY, BONDING, AND INSURANCE

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

- G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, sub-subcontractors of any tier, suppliers, employees, guests, visitors, invitees and agents.
- G.1.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner, Architect/Engineer, Architect/Engineer's consultants, and their respective

officers, directors, agents, employees, partners, members, stockholders and affiliated companies (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses (including reasonable attorney fees), demands and actions of any nature whatsoever which arise out of, result from or are related to, (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1., (b) any accident or occurrence which happens or is alleged to have happened in or about the project site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects, (c) any failure of the Contractor or its Subcontractors, sub-subcontractors of any tier, suppliers, employees, or consultants to observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract, (d) the negligent acts or omissions of the Contractor, a Subcontractor, sub-subcontractor of any tier, a supplier, a consultant, or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140), and (e) any lien filed upon the project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

- G.1.3 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

G.2 PERFORMANCE AND PAYMENT SECURITY; PUBLIC WORKS BOND

- G.2.1 When the Contract Price is \$100,000 or more (or \$50,000 or more in the case of Contracts for highways, bridges and other transportation projects), the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.
- G.2.2 Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.
- G.2.3 Before execution of the Contract the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Laws 2015, Chapter 279C, and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the

Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

G.3 INSURANCE

G.3.1 Primary Coverage: Insurance carried by Contractor and Subcontractors under this Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under this Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

G.3.3 Builder's Risk Insurance:

G.3.3.1 Builder's Risk: During the term of this Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor if Contractor or its Subcontractors are negligent. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of this Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under this Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at their sole and absolute discretion.

G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.

G.3.3.4 Loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the

Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and

by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their sub-subcontractors of any tier in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

G.3.4 General Liability Insurance:

G.3.4.1 Commercial General Liability: Upon issuance of a Contract, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Contract, Commercial General Liability Insurance covering bodily injury and property damage in the amount of \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, no subcontractors' limitations, and blanket contractual liability coverage for the indemnities provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis.

G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on site.

G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Contract.

G.3.4.4 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of this Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).

G.3.4.5: Umbrella Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.

G.3.4.6 Pollution Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and

keep in effect during the term of this Contract, Pollution liability Insurance in minimum amounts of \$3,000,000 naming Owner as "additional insured," as noted in the "additional insured section below.

- G.3.5 Additional Insured: The general liability insurance coverage, professional liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under this Contract, and shall include completed operations coverage.

If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000 limit per occurrence. This policy must be kept in effect for at least 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

- G.3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to this Contract, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Work site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.

- G.3.7 Certificate(s) of Insurance: As evidence of the insurance coverage required by this Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for this contract. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included

hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Contract. The Owner has the right to require the Contractor at any time during the performance of the Work to furnish to Owner copies of the Contractor's actual policies.

SECTION H SCHEDULE OF WORK

H.1 CONTRACT PERIOD

- H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. If required by the Contract Documents, Contractor shall commence Work on the site within fifteen (15) Days of Notice to Proceed, unless directed otherwise.
- H.1.2 Unless specifically extended by an Amendment or Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2 (f) and shall be subject to the provisions of Section D.1.
- H.1.3 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

- H.2.1 Contractor shall provide, by or before the pre-construction conference, the initial as-planned Construction Schedule for review and acceptance by the Owner. The submitted Construction Schedule must illustrate Work by project components, labor trades, and long lead items broken down by building and/or floor where applicable. If Owner shall so elect, Contractor shall provide the Construction Schedule in CPM format showing the graphical network of planned activities, including i) a reasonably detailed list of all activities required to complete the Work; ii) the time and duration that each activity will take to completion; and iii) the dependencies between the activities. Construction Schedules lacking adequate detail, or unreasonably detailed, will be rejected. The Construction Schedule shall include the following: Notice to Proceed or the date the Work commences, if no Notice to Proceed is issued by Owner, Substantial Completion, and Final Completion. Construction Schedules shall be updated monthly, unless otherwise required by the Contract Documents, and submitted with the monthly application for payment. Acceptance of the Construction Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

H.3 PARTIAL OCCUPANCY OR USE

H.3.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

SECTION I CORRECTION OF WORK

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent re-inspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of

notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its own forces. If Owner completes the repairs using Owner's own forces, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's forces, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's forces who are required to monitor that contractor's work. Work performed by Owner using Owner's own forces or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions. In the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations.

I.2.2 Nothing in this Section I.2 provision shall negate guarantees or warranties for periods longer than one year including without limitation such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.

I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.

I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

SECTION J
SUSPENSION AND/OR TERMINATION OF THE
WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:

- (a) Failure of the Contractor to correct unsafe conditions;
- (b) Failure of the Contractor to carry out any provision of the Contract;
- (c) Failure of the Contractor to carry out orders;
- (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
- (e) Time required to investigate differing site conditions;
- (f) Any reason considered to be in the public interest.

J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.2 CONTRACTOR'S RESPONSIBILITIES

J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the project in every respect as though its prosecution had been continuous and without suspension.

J.2.3 COMPENSATION FOR SUSPENSION

J.2.4

J.2.1 Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

J.4.1 The Owner may, without prejudice to any other right or

remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:

- (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
- (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
- (c) If a receiver should be appointed on account of Contractor's insolvency;
- (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
- (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner; or
- (f) If Contractor is otherwise in breach of any part of the Contract.
- (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.

J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.5 TERMINATION FOR CONVENIENCE

J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of Owner or the public.

The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

J.6 ACTION UPON TERMINATION

J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they

relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.

J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.

I.6.3 Upon Owner's notice of termination pursuant to either Section

J.4 or J.5, if Owner shall so elect, Contractor shall assign the Owner such subcontracts and orders as Owner shall specify. In the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

SECTION K CONTRACT CLOSE OUT

K.1 RECORD DOCUMENTS

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire project to Owner. Record Documents shall depict the project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed, and accurate MWESB Reports.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all Submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver two (2) complete and approved sets of O & M Manuals in paper form and one (1) complete and approved set in electronic form to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

K.3 COMPLETION NOTICES

K.3.1 Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices

must be signed by the Contractor and the Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.

K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial Completion notice.

K.4 TRAINING

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. The O & M Manual shall be used as a basis for training. In addition to any off-site training required by the Contract Documents, training shall include a formal session conducted at the Work site after the equipment and/or system is completely installed and operational in its normal operating environment.

K.5 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

K.6 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

K.7 CERTIFICATE OF OCCUPANCY

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the sole fault or neglect of Owner.

K.8 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the

Owner all property of Owner issued to Contractor during construction such as keys, security passes, site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's forces continue with the Work.

K.9 SURVIVAL

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract.

OREGON STATE UNIVERSITY

SUPPLEMENTAL GENERAL CONDITIONS

To The

PUBLIC IMPROVEMENT GENERAL CONDITIONS

Project Name _____

The following modify the June 30, 2017 Oregon State University General Conditions (“OSU Public Improvement General Conditions”) for this Contract. Where a portion of the OSU General Conditions is modified by these Supplemental General Conditions, the unaltered portions shall remain in effect.

SG-1 Section B.4 is modified as follows: Revise to read:

“Contractor shall obtain and pay for all necessary permits and licenses, except for those specifically excluded in the Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Owner shall obtain and pay for the general building permit and pay for any specialty permits required for the Work. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities. The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent or other proprietary rights and save harmless and blameless from loss, on account thereof, Oregon State University, and its departments, divisions, members and employees.

SG-2 Section F.2.4 is modified as follows: Add the following:

“Contractor shall verify that all mechanical or electrical equipment in the construction areas that may be affected by the Work is in working order and shall notify the Owner, in writing, of any equipment not in working order prior to the start of the Work. Start of Work will be considered as acknowledgement that all equipment is in good working order. Contractor shall be required to restore equipment to its original, or better, condition upon completion of the Project.”

SG-3 Section H.2.1 is replaced with the following:

"Contractor shall provide, by or before the pre-construction conference, a detailed Construction Schedule for review and acceptance by the Owner. The submitted Construction Schedule must illustrate Work by significant project components, significant labor trades, long lead items, broken down by building and/or floor where applicable. Each Construction Schedule item shall account for no greater than 5% of the monetary value of the Project or 5% of the available time. Schedules with activities of less than one day or valued at less than 1% of the Contract shall be considered too detailed and shall not be accepted. Schedules lacking adequate detail, or unreasonably detailed, shall be rejected. Included within the Construction Schedule are the following: Notice to Proceed, Substantial Completion, and Final Completion. Contractor shall provide an updated, full project schedule with each payment request. In addition, twice monthly, the Contractor shall provide an updated three-week forward-looking Construction Schedule. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the contract completion date is float owned by the Project. Use of the float shall be negotiated. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract time but after Contractor's scheduled completion."

OREGON STATE UNIVERSITY

PERFORMANCE BOND

Bond No. _____
Solicitation _____
Project Name _____

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
<i>* If using multiple sureties</i>	Total Penal Sum of Bond:	\$ _____

We, _____ as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Oregon State University (OSU), the sum of (Total Penal Sum of Bond)

(Provided, that we the Sureties bind ourselves in such sum “jointly and severally” as well as “severally” only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety), and

WHEREAS, the Principal has entered into contract No. _____ with the OSU, the plans, specifications, terms and conditions of which are contained within the Contract resulting from the above-referenced Solicitation;

WHEREAS, the terms and conditions of the Contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of Contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called “Contract”); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall (1) faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, (2) shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, (3) shall save, defend, indemnify and hold harmless OSU and its officers, board members, employees, agents and other representatives, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by

the Principal or its subcontractors, and (4) shall in all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond, nor shall OSU be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279C and 352, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this _____ day of _____, 20__.

PRINCIPAL: _____

By _____

Signature

Official Capacity

Attest: _____

Corporation Secretary

SURETY: _____

[Add signatures for each surety if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each surety bond]

Name

Signature

Address

City

State

Zip

Phone

Fax

OREGON STATE UNIVERSITY

PAYMENT BOND

Bond No. _____
Solicitation _____
Project Name _____

_____ (Surety #1) Bond Amount No. 1: \$ _____
_____ (Surety #2)* Bond Amount No. 2:* \$ _____
* *If using multiple sureties* Total Penal Sum of Bond: \$ _____

We, _____, as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Oregon State University (OSU) the sum of (Total Penal Sum of Bond) _____ (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety), and

WHEREAS, the Principal has entered into contract No. _____ with OSU, the plans, specifications, terms and conditions of which are contained within the Contract resulting from the above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall (1) faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, (2) shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, (3) shall save, defend, indemnify and hold harmless OSU, and its officers, board members, employees, agents and other representatives, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, (4) shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; (5) shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its

subcontractors in connection with the performance of the Contract; (6) shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167;(7) shall permit no lien nor claim to be filed or prosecuted against the State or OSU on account of any labor or materials furnished; and (8) shall do all things required of the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond, nor shall OSU be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279C and 352, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this _____ day of _____, 20__.

PRINCIPAL: _____

By _____

Signature

Official Capacity

Attest: _____

Corporation Secretary

SURETY: _____

[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each bond]

Name

Signature

Address

City State Zip

Phone Fax

As indicated in the General Conditions of your contract(s) Section E.2.9, OSU requires that we gather MWESB (Minority, Women's Emerging Small Business) Contractor/Subcontractor information. This is an Oregon State University requirement and the information will be gathered annually and at time of final payment.

- **You must do this step first or the report will not let you add any information:** In Row 1 Column B there is a drop down menu. You must select yearend (if the job has not been completed) or final (if the job is completed and you have submitted for retention). Once you choose yearend or final in the drop down menu there will be areas highlighted in light green and red. Those are the areas that you are required to fill out. If you did not use or planning to use any MWESB then the left side of the report (Light Green area) still needs to be filled out and the red area needs to remain blank.
- If your agency is an MWESB or if you are using/used an MWESB subcontractor then you need to fill out the information in the report that is highlighted in light green and red (see instructions in the next bullet). If you are not an MWESB or used a Subcontractor that is an MWESB then you need to fill out the left side of the form (Light Green areas) and leave the red area blank.
- In row 2 Column B there is another drop down menu, click the drop down menu and choose Fiscal Year 2015.
- In Row 4 Column B there is another drop down menu, click there and choose OSU.

REPORT BEING SUBMITTED

Individual Contractor/Sub-Contractor/Supplier Data Entry Matrix

Name of MWESB General/Subcontractor/Supplier	State of Oregon MWESB Certification Number	Self-Identified or Other Certified	Initial Sub-Contract Value	Sub-Contract value billed within the fiscal year (July 1-June 30)	Final Sub-Contract Value	Minority-Owned	Women-Owned	Emerging Small Business

OVERALL PROJECT DATA

Reporting Period	2011
Campus	
General Contractor's Name	
Contract Number	
Project Name	
Contract Execution Date (Date Contract was Signed by the Owner)	
Date of Final Payment Application	
Initial Total Contract Value	
Total Contract Value billed within the fiscal year (July 1 - June 30)	
Final Total Contract Value	
Total Number of Subcontractors/Suppliers Used on Project	
Total Number of First-Tier Subcontractors/Suppliers Used on Project	
Number of First-Tier MWESB Subcontractors/Suppliers	

CALCULATED REPORTING DATA (Self Calculating - No Data Entry)

Number of MWESB Subcontractors/Suppliers	0
% MWESB Subcontractors/Suppliers	
% First-Tier MWESB Subcontractors/Suppliers	

CERTIFIED MWESB TOTALS

Value Awarded to MWESB Contractors/Suppliers	\$0.00
% Value Awarded to MWESB Contractors/Suppliers	
Value - minority-owned MWESB subcontractors/suppliers	\$0.00
% - minority-owned MWESB subcontractors/suppliers	
Value - women-owned MWESB subcontractors/suppliers	\$0.00
% - women-owned MWESB subcontractors/suppliers	
Value - emerging small business MWESB subcontractors/suppliers	\$0.00
% - emerging small business MWESB subcontractors/suppliers	

SELF-IDENTIFIED or OTHER CERTIFIED MWESB TOTALS

Value - self-identified or other certified subcontractors/suppliers	\$0.00
% - self-identified or other certified subcontractors/suppliers	

OVERALL PROJECT CONTRACT HISTORY

% Value Awarded to MWESB Contractors/suppliers at Initial Contract	#DIV/0!
% Value Awarded to MWESB Contractors/suppliers at Final Contract	#DIV/0!

FOR OFFICIAL USE ONLY:

Date Received by the Campus	
Initials of Campus staff who checked the document	

In compliance with Oregon Prevailing Wage Law, the following is incorporated into this Invitation to Bid:

The Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates as outlined in Sections C.1 and C.2 of the General Conditions. The resulting Contract is subject to the following BOLI wage rate requirements, which are incorporated herein by reference:

- April 1, 2019 PWR Apprenticeship Rates
- April 1, 2019 PWR Amendments
- January 1, 2019 Prevailing Wage Rates for Public Works Contracts in Oregon
- July 1, 2018 Definitions of Covered Occupations for Public Works Contracts in Oregon

These BOLI wage rates are available on line at:

http://www.boli.state.or.us/BOLI/WHD/PWR/pwr_state.shtml

SECTION 01 11 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY OF WORK

- A. The Work Contract consists of the demolition of roofing, roof replacement, sheet metal revisions, drainage revisions, mechanical & electrical disconnects and reconnects at the Foundation Building located at 820 SW 35th Street on the Oregon State University Campus, Corvallis, Oregon.
- B. Work shall be performed between June 17, 2019 to July 6, 2020, after signing of Contract on behalf of Oregon State University. Contractor shall coordinate with Owner a project schedule that falls between June 17, 2019 and July 6, 2020, and has a duration not to exceed 90 days without approval from the Project Manager. Contractor is expected to coordinate high impact activities and service interruption with the Project Manager to minimize disruptions to building occupants. Contract may not be signed prior to approval of the Contractor's Certificate of Insurance by Construction Contract Administration (CCA), Oregon State University. Work shall be completed on or before **July 6, 2020**.

1.02 CONTRACTORS USE OF PREMISES

- A. Contractor shall limit use of the Premises for work and storage to allow for:
 - 1. Owner occupancy, day and night.
 - 2. Public use, day and night.
 - 3. Security.
 - 4. Safe entry and exit for vehicles and pedestrians.
 - 5. Fire egress.
- B. Coordinate all operations with the Owner's Authorized Representative during the construction period. A 96 hour notification is required prior to scheduled utility shutdowns or street closures, but more lead time is often required to schedule around other critical activities.
- C. Limit Contractor's employee parking to locations designated at the Pre-construction Conference.
- D. Other construction projects may be taking place concurrent with this project. Coordinate work with other projects so there are no delays or hindrances to the progress on either project.

1.03 OWNER OCCUPANCY

- A. The Owner will occupy the Premises during the entire period of construction for the conduct of normal operations. Cooperate with Owner's Authorized Representative in construction operations to minimize conflict and to facilitate the Owner's usage especially in the following areas:
 - 1. Restricted access and parking.

2. Use of stairs.
 3. Storage space availability.
- B. Conduct operations in such a way to ensure the least inconvenience to the general public, including:
1. Limitations and easements.
 2. Emergency vehicle access.
 3. Building access to the public, day and night.

1.04 ASBESTOS AND OTHER HAZARDOUS MATERIAL

- A. The Owner has made a reasonable attempt to locate and identify asbestos or other hazardous material that may be encountered during the course of the Work.
- B. Information has been included on the plans and specifications for the Work, or is available from the Owners' Authorized Representative.
- C. If the Contractor observes or suspects the existence of asbestos, polychlorinated biphenyl (PCB) or other hazardous materials in the structure or components of the building, the Contractor shall immediately stop work and notify the Owner's Authorized Representative.
- C. The Owner will arrange for the removal of asbestos, polychlorinated biphenyl (PCB) or other hazardous materials as required by Facilities Services personnel or by separate contract.
- D. Schedule ten (10) days of slack or "down" time for the removal of hazardous materials without penalty to Owner for the delay of the Contract.

1.05 LEAD BASED PAINT

- A. We do not anticipate the removal of lead based paint in the project. If lead based paint is encountered notify the Owner's Authorized Representative.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

A Section Includes:

1. Unit Price procedures.
2. Measurement and payment.
3. Unit Price Schedule.

B Related Sections:

1. Document 004100 - Bid Form.
2. Section 086223 - Tubular Daylighting Devices.

1.02 QUALITY ASSURANCE

- A Applicable Sections of Specifications apply to Work under each Unit Price item.
- B Coordinate Work of related Sections, and modify surrounding Work as required.
- C Include incidental costs which may be required.
- D Determine quantities and extent of labor and materials required.
- E Actual quantities of unit price items of Work will be determined during construction and be as agreed to by the Owner's Authorized Representative.
- F Notify both Architect and Owner's Authorized Representative prior to any application of Unit Price Work.

1.03 UNIT PRICE SCHEDULE

- A Unit Price No. 1: Provide additional Tubular Daylighting Devices at locations to be determined by the Owner's Authorized Representative.
1. Seven (7) Tubular Daylighting Devices are included in Basic Bid.
 2. Contract amount will be added to or deducted from based on actual number of Tubular Daylighting Devices Provided.
 3. Reference Section 086223 – Tubular Daylighting Devices.
 4. Reference Drawing Sheet A4.1.

END OF SECTION

SECTION 01 24 76

APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Work of this Section includes forms and procedures for progress payments.
- B. Related work specified elsewhere.
 - 1. For the primary discussion of payments, refer to OSU General Conditions, Section E, as supplemented.
 - 2. In compliance with OSU General Conditions, Section K, no payments beyond 75% will be made by the Owner before two complete copies of the draft Operation and Maintenance Manuals have been received for review by the Owner.

1.02 APPLICATION FORMS

- A. For applications for payment, use sample contract payment request on company letterhead, or AIA Document G702, supported by AIA Document G703, Continuation Sheet, or similar document.
- B. Prepare the Schedule of Values in such a manner that each major item of Work and each subcontracted item of Work is shown as a line item broken down in terms of material and labor costs on AIA Document G703, Application Certification of Payment, Continuation Sheet or similar format. The sample continuation sheet shall be the minimum Schedule of Values breakdown.
- C. The Schedule of Values shall be submitted for review by the Owner prior to the first application for payment; and may be used when, and only when, accepted in writing by the Owner.
- D. Payment request is to include the Contractor's Federal Tax Identification number and return address.

1.03 PAYMENTS

- A. The Owner will make progress payments on account of the Contract once monthly for the scheduled duration of the project (i.e. three (3) payments on a three-month project), based on the value of work accomplished or materials on the job site, as stated in the Schedule of Values on the Application and Certificate Payment.
- B. Notwithstanding the foregoing, as this project is scheduled to take three (3) months to complete, Owner will only make three (3) payments, plus a final retainage payment, as applicable.
- C. Complete and forward Application to the Owner on or about the 15th day of each month for work performed the previous month and include certified payroll statements as specified in the OSU General Conditions.

- D. Submit one (1) copy of forms requesting payment to the Owner.
- E. Payments will be made on protected materials on hand at the job site properly stored, protected, and insured.
- F. Estimated quantities shall be subject to the Owner's review and judgment.

1.04 EARLY PURCHASE AND PAYMENT OF MATERIALS AND EQUIPMENT

- A. Order materials and equipment requiring a long lead or waiting time early so as not to delay progress of the Work.
- B. The Contractor will be reimbursed for early order materials or equipment upon receipt and verification of quality and quantity against submittals and shipping documents by the Owner's Authorized Representative.
- C. Receipt shall be to the job site or stored at Owner's other premises in an orderly and safe manner, secured from normal weather damage.
- D. Security remains the responsibility of the Contractor.

END OF SECTION

CONTRACT PAYMENT REQUEST

DATE: _____

TO: University Financial Services
Oregon State University
3015 SW Western Blvd
Corvallis, OR 97333

Payment Request No. _____ Contract No. _____ Period from _____ to _____

Project: _____

Original Contract Amount..... \$ _____

Change Orders (Net Amount) \$ _____

Contract Total to Date \$ _____

=====

Total Completed and Stored to Date \$ _____

Less Retainage (5%), if applicable \$ _____

Total Earned, Less Retainage (if applicable)..... \$ _____

Less Previous Payments \$ _____

Net Amount Due this Request \$ _____

The undersigned Contractor certifies that, to the best of his/her knowledge, information, and belief, the Work covered by this request has been completed in accordance with the Contract Documents, that all amounts have been paid for Work for which previous applications for Payment were issued and payments received from the Owner, and that the amount shown herein is now due.

Contractor: _____

By: _____ Date: _____

Federal Tax ID Number: _____

Address: _____

CONTINUATION SHEET

NOTES:

Amounts are stated to the nearest penny.
 Use Column I on Contracts where variable retainage for line items may apply,
 or if retainage is required.

Change Orders are usually listed as the last items of the basic schedule.

Project Name: _____

Application No.: _____

Date: _____

Period To: _____

WRN No.: _____

A	B	C	D	E	F	G		H	I
Item No.	Description of work	Scheduled Value	Work Completed		Materials Presently Stored (Not in D or E)	TOTAL Completed & Stored (D+E+F)	% Completed (G/C)	Balance to Finish (C-G)	Retainage
			From Previous Applications	This Period					
TOTALS									

Foundation Building Roof Repairs
May, 2019

SECTION 01 25 00

PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General requirements for the Work in relation to substitutions and product options.
- B. Submit to the Owner's property insurance carrier shop drawings, samples, and product data (such as manufacturer's standard schematic drawings and other literature) when required by individual Specifications sections.
- C. Related Work Specified Elsewhere
 - 1. Instructions to Bidders.
 - 2. OSU General Conditions.

1.02 REQUESTS FOR SUBSTITUTIONS

- A. Requests for substitution of products in place of those specified shall be in accordance with Instructions to Bidders, and as specified herein.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Investigate proposed products and determine that they are equal or superior in all respects to products specified.
- B. Provide same guarantee for accepted substitutions as for products specified.
- C. Coordinate installation of accepted substitutions into the Work, making such changes as may be required for the Work to be complete in all respects.

1.04 SUBSTITUTIONS DURING BIDDING

- A. Submit two (2) copies of the following information with each request to the Owner:
 - 1. CSI substitution request form.
 - 2. Comparison of proposed substitution with product, material or system specified.
 - 3. Complete data, substantiating compliance of proposed substitution with the Contract Documents.
 - 4. Test numbers and supporting reports, indicating compliance with referenced standards.
 - 5. Evidence that warranty requirements are acceptable.
 - 6. Details indicating specific deviations proposed for the substitution.
 - 7. Reference and applicable Specification sections.
 - 8. Applicable product samples.
- B. All substitution requests shall be received in the Owner's office no less than ten (10) calendar days before bid opening. Requests received after this date will not be considered.

1.05 SUBSTITUTIONS DURING CONSTRUCTION

- A. Substitutions will normally not be considered after date of Contract except when required due to unforeseen circumstances.
- B. Within a period of thirty (30) days after date of Contract, the Owner may, at its option, consider formal written requests for substitution of products in place of those specified, when submitted in accordance with the requirements stipulated herein.
- C. One or more of the following conditions must be documented in any such request:
 - 1. Required for compliance with final interpretation of code or insurance requirements.
 - 2. Required due to unavailability of a specified product.
 - 3. Required because of the inability of the specified product to perform properly or to fit in the designated space.
 - 4. Substitution would be substantially in the best interest of the Owner in terms of cost, time, or other considerations.

1.06 SUBSTITUTIONS NOT PERMITTED

- A. If implied on submittals without first requesting approval thereof.
- B. If acceptance will require substantial revision of the Contract Documents.

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: _____

PROJECT: _____

SPECIFIED ITEM:

Section	Page	Paragraph	Description
---------	------	-----------	-------------

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes description of changes to Contract Documents which proposed substitution will require for its proper installation.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on Drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.

The undersigned further states that the function, appearance and quality of the Proposed Substitution are equivalent or superior to the Specified Item.

Submitted by:

Signature _____

Firm _____

Address _____

Date _____

Telephone _____

Attachments:

For use by Design Consultant:

Accepted Accepted as noted

Not Accepted Received too late

By _____

Date _____

Remarks _____

SECTION 01 31 19

PROJECT MEETINGS

PART 1 GENERAL

1.01 PRE-CONSTRUCTION MEETING

- A. Architect/Engineer/Designer, Contractor and Owner will meet prior to start of the Work (within seven (7) days after notice to proceed) to discuss at least the following topics and any others of mutual interest.
1. Schedule of Values
 2. Permit Status/tree protection/erosion control
 3. List of sub-contractors
 4. Job inspections.
 5. Early purchase of, and/or lead time requirements for material and equipment/ prepurchase of equipment
 6. Monthly payment date/SOP for pay requests
 7. Portion of site to be occupied by construction.
 8. Parking/Staging areas
 9. Non-smoking campus requirements
 10. Maintenance of access and safety.
 11. Processing of field decisions and change orders
 12. Labor provisions/labor rates for subs
 13. Material submittals/deferred submittals
 14. Owner access during construction.
 15. Review of Contract Documents/review ADA requirements/cross-slopes
 16. Coordination procedures and separate contracts.
 17. Progress schedules.
 18. Critical Work sequencing.
 19. Safety and emergency procedures/24 hour contact numbers
 20. Security procedures.
 21. Hazardous materials.
 22. Progress meetings.
 23. Contract close-out.
- B. Location of Meeting: Project site

1.02 PROGRESS MEETINGS

- A. The Contractor will schedule and administer progress meetings and will:
1. Prepare agendas.
 2. Schedule progress meetings, frequency, time and day to be determined during pre-construction meeting.
 3. Make physical arrangements for and preside at meetings.
 4. Record minutes and include decisions.
 5. Distribute copies of minutes to participants within four (4) days after meetings.

- B. Location of Meetings: Project site.
- C. Attendance:
 - 1. The Owner or Owner's Authorized Representative.
 - 2. Contractor.
 - 3. Subcontractors affected by agenda.
 - 4. Project Architect/Engineer/as necessary.
 - 5. Owner will attend meeting to ascertain Work is expedited consistent with progress schedule and with Contract Documents.
- D. Minimum Agenda:
 - 1. Review and approve minutes from previous meeting.
 - 2. Review Work progress since previous meeting.
 - 3. Discuss field observations, and problems.
 - 4. Review delivery schedules, construction schedule, and identify problems which impede planned progress.
 - 5. Review proposed changes.
 - 6. Material submittals.
 - 7. Note all new subcontractors performing Work at the job site.

END OF SECTION

SECTION 01 33 23

SHOP DRAWINGS, PRODUCT DATA, SAMPLES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submit to the Owner shop drawings, samples, and product data (such as manufacturer's standard schematic drawings and other literature) when required by individual Specifications sections.
- B. Related Work Specified Elsewhere
 - 1. Instructions to Bidders.
 - 2. OSU General Conditions.

1.02 SUBMITTAL SCHEDULING

- A. For items requiring review by the Owner only, submittals shall be sent to the Owner at least 15 calendar days before the date each is required for fabrication or installation.
- B. Submittals to be reviewed by Owner's consultants shall be sent to the Owner at least 20 calendar days before the date each is required for fabrication or installation.
- C. Submittals to be reviewed by Owner's property insurance carrier shall be sent to Owner as directed in individual specification sections.
- D. Submittals involving Substitution requests or other modifications requiring review by the Owner and/or the Owner's consultants shall be sent to the Owner at least 20 calendar days before the date each is required for fabrication or installation.

1.03 SUBMITTAL CONTENT AND FORMAT

- A. General Requirements:
 - 1. Shop Drawings: Submit in electronic format and, if requested by Owner's Authorized Representative, submit one reproducible transparency and 1 print of each drawing.
 - 2. Product Data: Submit electronically, and if requested by Owner's Authorized Representative, up to 6 hard copies.
 - 3. Samples: Submit the number and type stated in each Specification Section. Submit a minimum of three sets of color samples where color selection is required.
 - 4. Submittals shall include:
 - a. Date and revision dates return date requested.
 - b. Project title and number.
 - c. The names of the Contractor, subcontractor, supplier, and manufacturer.
 - d. Identification of product or material, with Specification Section number.

- e. Relation to adjacent critical features of work or materials.
 - f. Field dimensions, clearly identified as such.
 - g. Applicable standards, such as ASTM number or Federal Specification.
 - h. Identification of deviations from Contract Documents, and for products accompanied by Substitution request as required by Section 01 25 00.
 - i. Contractor's stamp legibly signed, essentially as follows:
 - 1) The undersigned, acting on behalf of the Contractor, certifies that this submittal has been reviewed and is approved; products have been verified as being as specified, field measurements and field construction criteria have been or will be coordinated, and the submittal is in compliance with Contract Documents.
5. Re-submission Requirements:
- a. Revise initial drawings as required and resubmit as specified for initial submittal.
 - b. Indicate on drawings any changes which have been made other than those requested by the Owner or the owner's consultants.
6. The Owner may return without review any submittal not meeting the requirements listed above.
- B. Shop Drawings:
1. Present data in a clear and thorough manner.
 2. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on Contract Documents.
 3. Structural items shall be identified by location in the completed structure. Identify details by reference to contract sheet and detail numbers.
 4. Minimum sheet Size: 8 ½ x 11".
- C. Product Data:
1. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data:
 - a. Clearly mark each copy to identify pertinent product or models.
 - b. Show dimensions, weights, and clearances required.
 - c. Show performance data consisting of capabilities, ROM, KW, pressure drops, design characteristics and consumption; conforming as closely as possible to the test methods referenced in the Plans and Specifications.
 - d. Show wiring or piping diagrams and controls.
 2. Manufacturer's standard schematic drawings and diagrams:
 - a. Modify to delete information which is not applicable.
 - b. Supplement standard information to provide information specifically applicable to the Work.
- D. Samples:
1. Insure that samples are of sufficient size to indicate the general visual effect or color.
 2. Where samples must show a range of color, texture, finish, graining, or

- other property, submit sets of pairs illustrating the full scope of this range.
3. One (1) sample or one (1) set of approved samples will be retained by the Owner; final work will be measured against approved samples.

1.04 QUALITY ASSURANCE

- A. Process submittals in ample time for review, as applicable, so as to not delay the Work. All submittals shall be received by the Owner within ten (10) days after pre-construction.

1.05 DEFINITIONS

- A. The Owner will mark reviewed materials as follows:
 1. "No Exception Taken," which means fabrication, manufacture and/or installation may proceed.
 2. "Make Revisions Noted," which means fabrication, manufacture and/or installation may proceed with revisions as noted.
 3. "Revise and Resubmit," which means that fabrication, manufacture and/or installation may not proceed.
 4. "Rejected," which means do not proceed; make arrangements for the review of the proposed Work with the Owner as soon as possible.

1.06 PROCESSING

- A. Review submittals, make necessary corrections, and become familiar with the content of the submittals.
- B. Mark each item with Contractor's stamp.
- C. Accompany submittals with a transmittal letter bearing the project name, Contractor's name, number of items, and other pertinent data.
- D. Keep one copy of each reviewed submittal on the job site at all times.
- E. Be responsible for obtaining and distributing prints of shop drawings to the various suppliers, and the Owner once review process has been completed. Make prints of reviewed shop drawings only from transparencies which carry the appropriate stamp and endorsement.

END OF SECTION

Foundation Building Roof Repairs
May, 2019

SECTION 01 42 13

ABBREVIATIONS AND SYMBOLS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Words which may be found elsewhere in the Project Manual and Drawings are abbreviated in accordance with the standards set forth in the following table:

A/C	air conditioning	CFOI	contractor furnished owner installed
AB	anchor bolt	CG	corner guard
AC	asphaltic concrete	CH	ceiling height
ACT	acoustical tile	CI	cast iron
AD	area drain	CJ	control joint
ADD	addendum	CKBD	chalkboard
ADD'L	additional	CL	centerline
ADH	adhesive	CLG	ceiling
AFF	above finish floor	CLR	clear(ance)
AGG	aggregate	CM	construction manager
AL	aluminum	CMT	ceramic mosaic (tile)
ALLOW	allowable	CMU	concrete masonry unit
ALT	alternate	COL	column
ANOD	anodized	COM	communications
AP	access panel	CONC	concrete
APPRX	approximate	CONN	connect(ion)
ARCH	architect(ural)	CONST	construction
ASPH	asphalt	CONT	continuous or continue
AUTO	automatic	CONTR	contract(or)
AVE	avenue	CPT	carpet
		CRS	course(s)
BD	board	CS	countersink
BIT	bituminous	CSMT	casement
BLDG	building	CT	ceramic tile
BLKG	blocking	CTR	center
BM	bench mark, beam(s)	CVG	clear vertical grain
BOT	bottom	CW	cold water
BRZ	bronze	CWT	ceramic wall tile
BS	both side	CY	cubic yard
CB	catch basin	D	depth
CEM	cement	DEMO	demolish, demolition
CF	cubic foot	DEP	depressed

DF	drinking fountain	FD	floor drain, fire damper
DIA	diameter	FE	fire extinguisher
DIAG	diagonal	FEC	fire extinguisher cabinet
DIM	dimension	FF	factory finish
DISP	dispenser	FGL	fiberglass
DIV	division	FHMS	flathead machine screw
DL	dead load	FHWS	flathead wood screw
DMT	demountable	FIN	finish(ed)
DN	down	FLCO	floor cleanout
DP	dampproofing	FLR	floor(ing)
DR	door	FLUR	fluorescent
DS	downspout	FND	foundation
DT	drain tile	FOC	face of concrete
DTL	detail	FOIC	furnished by owner/installed by contractor
DW	dumbwaiter	FOIO	furnished by owner/installed by owner
DWG	drawing(s)	FOM	face of masonry
DWR	drawer	FP	fireproofing, flash point
EA	each	FPHB	freeze-proof hose bib
EB	expansion bolt	FR	fire resistive, fire rated
EF	each face	FRM	frame(d), (ing)
EJ	expansion joint	FS	full size
EL	elevation	FSS	finished structural slab
ELEC	electric(al)	FT	foot
EMBED	embedment	FTG	footing
EMER	emergency	FTS	finished topping slab
ENCL	enclose(ure)	GA	gage, gauge
EP	electrical panel board	GALV	galvanized
EQ	equal	GB	grab bar or gypsum board
EQUIP	equipment	GC	general contractor
EST	estimate	GI	galvanized iron
EVT	equiviscous temperature	GL	glass, glazing
EW	each way	GLS	glass resin wall surfacing
EWC	electric water cooler	GP	gypsum
EX.EXIT	existing	HB	hose bib
EXH	exhaust	HBD	hardboard
EXP	exposed	HC	hollow core
EXT	exterior	HD	heavy duty
FA	fire alarm	HDR	header
FAF	fluid applied flooring	HDW	hardware
FARF	fluid applied resilient floor	HM	hollow metal
FAS	fasten, fastener	HOR	horizontal
FBD	fiberboard		
FBT	finished blowing temperature		

HP	high point	MO#	model number
HR	hour	MOD	modular
HT	height	MPH	miles per hour
HTG	heating	MS	machine screw
HVAC	heating, ventilating, air conditioning	MTL	metal
HWD	hardwood	MULL	mullion
HWH	hot water heater	MWP	membrane waterproofing
ID	inside diameter, identification	NAT	natural, natural finish
IN	inch	NIC	not in contract
INCIN	incinerator	NO	number
INCL	include(d), ion)	NOM	nominal
INT	interior	NTS	not to scale
INV	invert	OA	overall
JB	junction box	OBS	obscure
JC	janitor's closet	OC	on center(s)
JT	joint	OD	outside diameter
KD	kiln dried	OF	overflow
KCP	Keene's cement plaster	OFCI	owner furnished contractor installed
KO	knockout	OFOI	owner furnished owner installed
KP	kick plate	OHMS	ovalhead machine screw
LAB	laboratory	OHWS	ovalhead wood screw
LAM	laminated	OPG	opening
LAV	lavatory	OPP	opposite
LBS	pounds	OZ	ounce(s)
LH	left hand	P	paint(ed)
LL	live load	PB	push button
LONGIT	longitudinal	PCF	pounds per cubic foot
LP	low point	PCP	putting coat plaster
LW	lightweight	PERF	perforate(d)
MAX	maximum	PL	plate, property line
MB	machine bolt	PLAM	plastic laminate
M. MECH	mechanic(al)	PLAS	plaster
MFR	manufacture(r)	PNL	panel
MH	manhole	PP	push plate
Min	minimum, minute	PR	pair
MISC	miscellaneous	PREP	prepare
MO	masonry opening	PSF	pounds per square foot
		PSI	pounds per square inch
		PT	point, pressure treated
		PTN	partition

PVC	polyvinyl chloride	SV	sheet vinyl
PWD	plywood		
QT	quarry tile	T	tread
R	rise	TBM	top bench mark
RA	return air	T&G	tongue and groove
RAD	radius	TB	towel bar
RCP	reflected ceiling plan	TC	top of curb
RD	roof drain	TEL	telephone
REF	reference	TEMP	tempered
REFR	refrigerator	THK	thickness
REINF	reinforce(ing)	TKBD	tackboard
REQ	required	TO	top of
RET'G	retaining	TP	top of paving
REV	revision(s), revised	TRANS	transverse
RH	right had	TS	top of slab
RM	room	TV	television
RO	rough opening	TW	top of wall
RSF	resilient sheet flooring	TYP	typical
		UNO	unless noted otherwise
SC	solid core	VAT	vinyl asbestos tile
SCHED	schedule	VB	vapor barrier
SEC	section	VCT	Vinyl Composition Tile
SF	square feet (foot)	VERT	vertical
SHT	sheet	VG	vertical grain
SHTHG	sheathing	VIF	verify in field
SIM	similar	VWC	vinyl wall covering
SL	sleeve		
SOG	slab on grade	W	width, wide, water
SPEC	specification(s)	W/	with
SQ	square	W/O	without
SS	storm sewer	WC	water closet
S4S	finished 4 sides	WD	wood, wood finish
SD	storm drain	WP	waterproof(ing)
ST	steel, street	WNS	wainscot
ST ST	stainless steel	WR	water resistant
STD	standard	WS	waterstop
STR	structural	WW	window wall
SUPP	supplement	WWC	wood wall covering
SUPT	support	WWF	woven wire fabric
SUSP	suspended		

B. Words which may be found elsewhere in the Project Manual and Drawings are abbreviated in accordance with the standards set forth in the following table:

&	and
λ	angle
@	at
ι	diameter, round
"	inches
:	is, shall b
'	feet
ζ	perpendicular
/	per
%	percent
#	pound, number
X	by (as in 2 by 4)

END OF SECTION

Foundation Building Roof Repairs
May, 2019

SECTION 01 42 16

DEFINITIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Words which may be found elsewhere in the Contract Documents are defined in accordance with the standards set forth in the following table:

Approve:

Where used in conjunction with Architect's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be limited to the Architect's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "approval" by Architect be interpreted as a release of Contract requirements.

As Detailed, As Shown:

Where "as detailed", "as shown" or words of similar importance are used, it shall be understood that reference to the Drawings accompanying the Specifications is made unless otherwise stated.

As Directed, As Required, As Authorized, As Reviewed, As Accepted:

Where "as directed", "as required", "as authorized", "as reviewed", "as accepted" or words of similar importance are used, it shall be understood that the direction, requirement, permission, authorization, review, or acceptance of the Architect is intended, unless otherwise stated.

As Indicated:

Where "as indicated" is used it shall be understood that reference to Drawings and/or Specifications is made unless otherwise stated.

Directed, Requested, etc.:

Terms such as "directed," "requested," "authorized," "selected," will be understood as "directed by Architect," "requested by Architect," and similar phrases shall not be interpreted to extend Architect's responsibility into Contractor's responsibility for construction supervision.

Furnish:

Except as otherwise defined in greater detail the term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.

Indicated:

The term "indicated" is a cross-reference to graphic representations, notes or schedules on drawings, to other paragraphs or schedules in the specifications

and to similar means of recording requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference and no limitation of location is intended except as specifically noted.

Install:

Except as otherwise defined in greater detail, the term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.

Installer:

The term "installer" is defined as the entity (person or firm) engaged by Contractor, or its subcontractor or sub-subcontractor for performance of a particular unit of Work at project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (Installers) be expert in operations they are engaged to perform.

Provide:

Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.

END OF SECTION

SECTION 01 42 19**REFERENCE STANDARDS****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Quality Assurance.
- B. Location of References.
- C. Schedule of References.

1.02 QUALITY ASSURANCE

- A. For products or quality of work specified by association, trade, or federal standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents.
- C. General Applicability of Standards: Except where Contract Documents include more stringent requirements, applicable standards of the construction industry have the same force and effect as if bound or copied directly into Contract Documents.
- D. Such standards are made a part of the Contract Documents by reference.
- E. Individual sections indicate which codes and standards the Contractor must keep at the project site, available for reference.
- F. Referenced industry standards take precedence over standards which are not referenced but recognized in industry as applicable.
- G. Non-referenced standards are not directly applicable to the Work, except as a general requirement of whether the Work complies with standards recognized in the construction industry.

1.03 LOCATION OF REFERENCES

- A. Valley Library, Oregon State University.

1.04 SCHEDULE OF REFERENCED ASSOCIATIONS

AIA American Institute of Architects

STANDARDS

01 42 19 - 2

	WWW.AIA.ORG
AISC	American Institute of Steel Construction WWW.AISC.ORG
AISI	American Iron and Steel Institute WWW.STEEL.ORG
ANSI	American National Standards Institute WWW.ANSI.ORG
APA	American Plywood Association WWW.APAWOOD.ORG
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers WWW.ASHRAE.ORG
ASTM	American Society for Testing and Materials WWW.ASTM.ORG
AWPA	American Wood Protection Association WWW.AWPA.COM
AWS	American Welding Society WWW.AWS.ORG
BIA	Masonry Institute of America WWW.MASONRYINSTITUTE.ORG
BOLI	Oregon Bureau of Labor and Industries WWW.BOLI.STATE.OR.US
CCB	Construction Contractors Board WWW.OREGON.GOV.CCB/
CDA	Copper Development Association WWW.COPPER.ORG
CISPI	Cast Iron Soil Pipe Institute WWW.CISPI.ORG
CSI	Construction Specification Institute WWW.CSINET.ORG
DEQ	Department of Environmental Quality (Oregon) WWW.OREGON.GOV/DEQ/

STANDARDS

01 42 19 - 3

DHI	Door and Hardware Institute WWW.DHI.ORG
DOT	Department of Transportation WWW.DOT.GOV
EPA	U.S. Environmental Protection Agency WWW.EPA.GOV
FM	Factory Mutual System WWW.FMGLOBAL.COM
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) WWW.GSA.GOV/PORTAL/CONTENT/103856
IBC	International Building Code WWW.ICCSAFE.ORG
ICBO	International Conference of Building Officials PUBLICECODES.CITATION.COM/ICOD/IBG/INDEX.HTM
IRS	Internal Revenue Service WWW.IRS.GOV
ISA	Instrumentation Systems and Automation Society WWW.ISA.ORG
NAAMM	National Association of Architectural Metal Manufacturers WWW.NAAMM.ORG
NBFU	National Board of Fire Underwriters WWW.NFPA.ORG
NEC	National Electric Code WWW.NECPLUS.ORG
NEMA	National Electrical Manufacturers' Association WWW.NEMA.ORG
NESC	National Electrical Safety Code WWW.IEEE.ORG
NFPA	National Fire Protection Association WWW.NFPA.ORG

STANDARDS

01 42 19 - 4

NRCA	National Roofing Contractors' Association WWW.NRCA.NET
OAR	Oregon Administrative Rules ARCWEB.SOS.STATE.OR.US/404.HTML
OESP	State of Oregon Electrical Specialty Code http://www.bcd.oregon.gov/programs/online_codes.html
ORS	Oregon Revised Statutes LANDRU.LEG.STATE.OR.US/ORS/
OSHA	Occupational Safety and Health Administration WWW.OSHA.GOV
OSSC	Oregon Structural Specialty Code http://www.bcd.oregon.gov/programs/online_codes.html
PS	Product Standard STANDARDS.GOV/STANDARDS.CFM
SDI	Steel Door Institute WWW.STEELDOOR.ORG
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association WWW.SMACNA.ORG
SPRI	Single Ply Roofing Institute WWW.SPRI.ORG
SSPC	Steel Structures Painting Council WWW.SSPC.ORG
SWRI	Sealing, Waterproofing and Restoration Institute WWW.SWIRONLINE.ORG
UBC	Uniform Building Code (See ICBO)
UFC	Uniform Fire Code WWW.NFPA.ORG
UL	Underwriters' Laboratories, Inc. WWW.UL.COM
UMC	Uniform Mechanical Code WWW.UBC.COM

REFERENCE

STANDARDS

01 42 19 - 5

UPC	Uniform Plumbing Code WWW.UBC.COM
WHL	Warnock Hersey Laboratories WWW.INTEK.COM/MARKS/WH/
WCLIB	West Coast Lumber Inspection Bureau WWW.WCLIB.ORG
WWPA	Western Wood Products Association WWW.WWPA.ORG

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Codes, regulations and permits.
- B. Procedures for quality control.

1.02 OWNER RESPONSIBILITIES

- A. Owner will employ and pay for services of an independent testing laboratory to perform inspection, sampling and testing as required by local building authority.
- B. Owner's Authorized Representative will provide on-site observation during construction.

1.03 CODES, REGULATIONS AND PERMITS

- A. All Work shall conform with the Oregon Structural Specialty Code (OSSC) based on the International Building Code (IBC), as amended by the State of Oregon Building Codes Division and the edition designated by the governing authority.
- B. Contractor shall comply with all applicable state and local construction codes.
- C. References to codes, Specifications and standards referred to in the Contract Documents shall mean, and are intended to be, the latest edition, amendment or revision of such reference standard in effect as of the date of these Contract Documents.
- D. The Owner shall be responsible for all permits and City of Corvallis plan review fees; the Contractor shall be responsible for all licenses and associated fees required for the Project.
- E. Contractor shall arrange and attend all required permit inspections and furnish evidence of approved City inspection reports per Section 01 77 00.

1.04 QUALITY OF WORK

- A. It is the true and specific intent of these Specifications that quality of Work on all phases of the construction and embracing all the trade sections shall be of high quality performed by workers skilled in their trade and performing their Work only according to the standard of best practice of the trade.
- B. All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with manufacturer's directions unless otherwise specified.
- C. If Work is required in a manner to make it impossible to produce first quality Work, or should discrepancies appear among Contract Documents, request interpretation from Architect before proceeding with Work.

- D. Failure to secure interpretation may cause rejection by Architect or owner of installation.

1.05 LAYOUT

- A. Be responsible for properly laying out the Work and for lines and measurements for the Work.
- B. Verify the figures shown on the drawings before laying out the Work and report errors or inaccuracies to the Architect before commencing Work.
- C. Strict compliance with maximum slopes is required. Accessible parking spaces and adjacent access aisles with slope exceeding 2% in any direction, as determined by OSU, shall be removed and replaced by the contractor at their expense.
- D. Strict compliance with maximum slopes is required. New sidewalks exceeding 1:20 slope or with cross slope exceeding 2%, as determined by OSU, shall be removed and replaced by the contractor at their expense. Ramps exceeding 1:16 slope or with cross slope exceeding 2%, as determined by OSU, shall be removed and replaced by the contractor at their expense.

1.06 SUPERVISION

- A. The Contractor shall maintain effective supervision on the project at all times Work is being performed.
- B. The superintendent shall be the same person throughout the project and shall attend the preconstruction conference.

1.07 INSPECTIONS AND TESTING

- A. Contractor shall notify the Owner at least twenty-four (24) hours in advance of any required progress inspection or final inspection including final punch list inspection.
- B. Cooperate with laboratory personnel, provide access to Work and furnish incidental equipment material and labor required for field testing and sample taking.

1.08 EVALUATION OF TESTS AND INSPECTIONS

- A. Results of laboratory and/or field control tests and inspections shall be the principal basis upon which satisfactory completion of Work shall be judged.
- B. If results of tests and inspections indicate Work is below requirements of Contract Documents, that portion of Work is subject to rejection.

1.09 ADJUSTMENTS

- A. Remove and replace Work so rejected at Contractor's expense including costs of subsequent tests and inspections until Work meets requirements of Contract Documents.

- B. The Owner reserves the right to perform any testing as may be required to determine compliance with the Contract Documents.
- C. Costs for such testing will be the Owner's responsibility unless testing indicates noncompliance. Cost for such testing indicating noncompliance shall be borne by the Contractor.
- D. Noncomplying Work shall be corrected and testing will be repeated until the Work complies with the Contract Documents.
- E. Contractor will pay costs for retesting noncomplying Work.

END OF SECTION

SECTION 01 51 00

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction.
- B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition".
- C. Electrical Service: Comply with NEMA, NEC and UL standards and regulations for temporary electric service; install service in compliance with National Electric Code (NFPA 70).
- D. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use; obtain required certifications and permits if required.

1.03 PROTECTION

- A. Protect sidewalks, asphalt paving, concrete, trees, shrubs, and lawn areas at all times from damage resulting from construction activities.
- B. Prevent materials from clogging catch basins and yard drains; leave drains clean and in proper working condition.
- C. Protect Existing Irrigation Systems:
 - 1. In the event damage occurs to an underground irrigation system as a direct result of a Contractor's activities, the Contractor shall repair/replace or be assessed a charge at the discretion of the Owner.
 - 2. If repairs are to be made by the Contractor, the repairs will be inspected by the Owner's Authorized Representative prior to backfilling.
 - 3. Any galvanized pipe that requires repair shall be repaired at a threaded coupling, not by use of a compression coupling.
- D. Protect Existing Air Handling Systems:
 - 1. Contractor shall be responsible for protection of the cleanliness of the existing air handling system at all times. This protection shall include:
 - a. During site work or building demolition, prefilters shall be provided and maintained on all building outside air intakes at all times throughout the construction duration.
 - b. During any interior work that may create dust in the interior space and

adjacent corridor/hallways, air filters shall be provided and maintained on all affected air return and exhaust grilles. Where air flow in or out of the space is not required, all air duct openings shall be temporarily blanked off with plywood or sheet metal.

- c. Prior to starting any work, the Contractor shall record and submit to the Owner's Authorized Representative, pressure readings across all existing air handler air filter banks before installation of new prefilters.
 - d. Upon completion of all Work affecting existing air handling systems, the Contractor shall remove all temporary filters, covers and associated parts and restore the system to its original operating condition unless otherwise stated elsewhere in the Contract Documents
- E. Clean, repair, resurface, or restore existing surfaces to their original, or better, condition, or completely replace such surfaces to match existing, where damaged by construction operations.
- F. Security is the responsibility of the Contractor.
- G. Construction Debris:
- 1. Debris shall not be allowed to remain around the buildings during performance of Work, but shall be disposed of as rapidly as it accumulates.
 - 2. On completion of Work, the buildings and grounds shall be left in a condition that is equal to or better than original condition.
 - 3. In case of failure to do so, the Owner may remove rubbish and charge the cost to the Contractor.
- H. The Contractor shall manage a safe job environment for both the safety of all the people around the Work site as well as the safety of the Owner's and general public's property.
- I. The Contractor shall provide and maintain suitable barricades, shelters, lights, and danger signals during the progress of the Work; they shall meet the requirements of the local building code and OSHA.

1.04 DRAINAGE

- A. Verify that all rain drains in the construction areas are in working order and notify the Owner's Authorized Representative in writing of any rain drains that are plugged, prior to the start of the Work.
- B. Start of Work will be considered as acknowledgment that all drains are clear and in good working order.
- C. All drains shall be left in a clean and proper working condition.

1.05 CONSTRUCTION PROJECT SAFETY FORM

- A. Contractor shall submit to the Owner, prior to signing the Contract, the completed "Construction Project Safety Form", which is provided with instructions at the end of this Section.

1.06 TEMPORARY UTILITIES

- A. Temporary Utilities:
 - 1. Prepare a schedule indicating dates for implementation and termination of each temporary utility.
 - 2. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of the permanent service.
- B. Conditions of Use:
 - 1. Keep temporary services and facilities clean and neat in appearance.
 - 2. Operate in a safe and efficient manner.
 - 3. Take necessary fire prevention measures.
 - 4. Do not overload facilities or permit them to interfere with progress.
 - 5. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.
- C. Electrical Service:
 - 1. Service limited to 20 amp 120V circuits will be paid for by the Owner.
 - 2. Connection to the service shall be the responsibility of the Contractor, with the Owner's approval.
 - 3. Coordinate with the Owner's Authorized Representative.
- D. Water Service:
 - 1. Service in reasonable quantities for the Project will be paid for by the Owner.
 - 2. Connection to the service shall be the responsibility of the Contractor, with the Owner's approval.
 - 3. Coordinate with the Owner's Authorized Representative.

1.07 TEMPORARY SUPPORT FACILITIES

- A. Temporary Sanitary Facilities:
 - 1. Provide and maintain an adequate number of facilities for the use of all persons employed on the Work during construction.
 - 2. Provide enclosed, weatherproof facilities with heat as required.
 - 3. Use of new or existing Owner's facilities will not be permitted.
- B. Temporary Heat and Ventilation:
 - 1. As necessary, provide temporary heat and ventilation required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
- C. Telephone Equipment: Provide telephone communications at project site.
- D. Existing Services:
 - 1. Do not interrupt any existing service.

2. Prior request and approval of the Owner's Representative will enable the Owner to shut down any utility required by the Work.
3. Contractor shall not shut down utilities.

1.08 TEMPORARY BARRIERS AND ENCLOSURES

- A. Provide barriers and fencing to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage.
- B. Provide Commercial grade chain link fence construction.
- C. Provide 6 foot high fence around construction site as directed by Owner's Authorized Representative; equip with vehicular and pedestrian gates with lock.
- D. Exterior Closures: Provide temporary secured, weather-tight closures at exterior openings, to permit acceptable working conditions and protection of the Work.
- E. Interior Closures:
 1. Provide temporary floor to ceiling partitions (not plastic sheeting) and ceilings as required to separate work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas, to reduce construction noise, and to prevent damage to existing materials and equipment.
 2. Paint surfaces exposed to view from Owner occupied areas.

1.09 ODORS

- A. Work that causes excessive odors shall be performed only after coordination with the Owner's Authorized Representative. Filtering of air intakes to units may be required to prevent odors and vapors from entering the buildings.
- B. Contractor shall provide 7 days advance notice to the Owner's Authorized Representative in order for advance notice to be forwarded to building occupants. Work stoppage may occur if advance notification has not been coordinated or odors and vapors from the work are found to generate complaints from building occupants.

1.10 FIRE SAFETY

- A. Ensure that required exit routes remain unobstructed while building is occupied.
- B. Abide by all fire safety requirements for buildings under construction, alteration or demolition as required by Article 87, of the Uniform Fire Code as adopted by the State of Oregon.
- C. An emergency telephone shall be provided on site. Cellular telephone equipment is acceptable.
- D. Fire Suppression Equipment:
 1. Install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers", and NFPA 241 "Standard for Safeguarding Construction, Alterations and

Demolition Operations".

2. Maintain equipment in working condition with current inspection certificate attached to each.
3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
4. Store combustible materials in containers in fire-safe locations.
5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes for fighting fires.
- 6.
6. Provide continual supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.
7. When possible, relocate hot work to a designated hot work area.
8. If the materials or equipment cannot be relocated to a designated hot work area, use the least hazardous form of hot work that will get the job done and prepare the area properly.
9. Manage mobile hot work using the formal hot work permit system. (mentioned in the next bullet point and also a directive in the OSU Hot Work Safety Program)
10. Make sure both fire protection and hot work equipment work properly.
11. Train all personnel involved in hot work operations and activities so that they have the understanding, knowledge, and skills necessary to safely perform their jobs.

1.11 CONSTRUCTION AIDS

- A. Scaffolding: comply with applicable OSHA requirements.
- B. Material Handling Equipment:
 1. Provide necessary cranes, hoists, towers, or other lifting devices.
 2. Use only experienced operators.
 3. Remove equipment as soon as possible after task is ended.
 4. Coordinate placement of such equipment with Owner's Authorized Representative.
 5. Obtain required permits and meet requirement of governing authorities regarding applicable regulations.
- C. Materials or debris shall not be allowed to free fall from building.
- D. The use of chutes or conveyors must be approved by Owner.

1.12 TEMPORARY CONTROLS

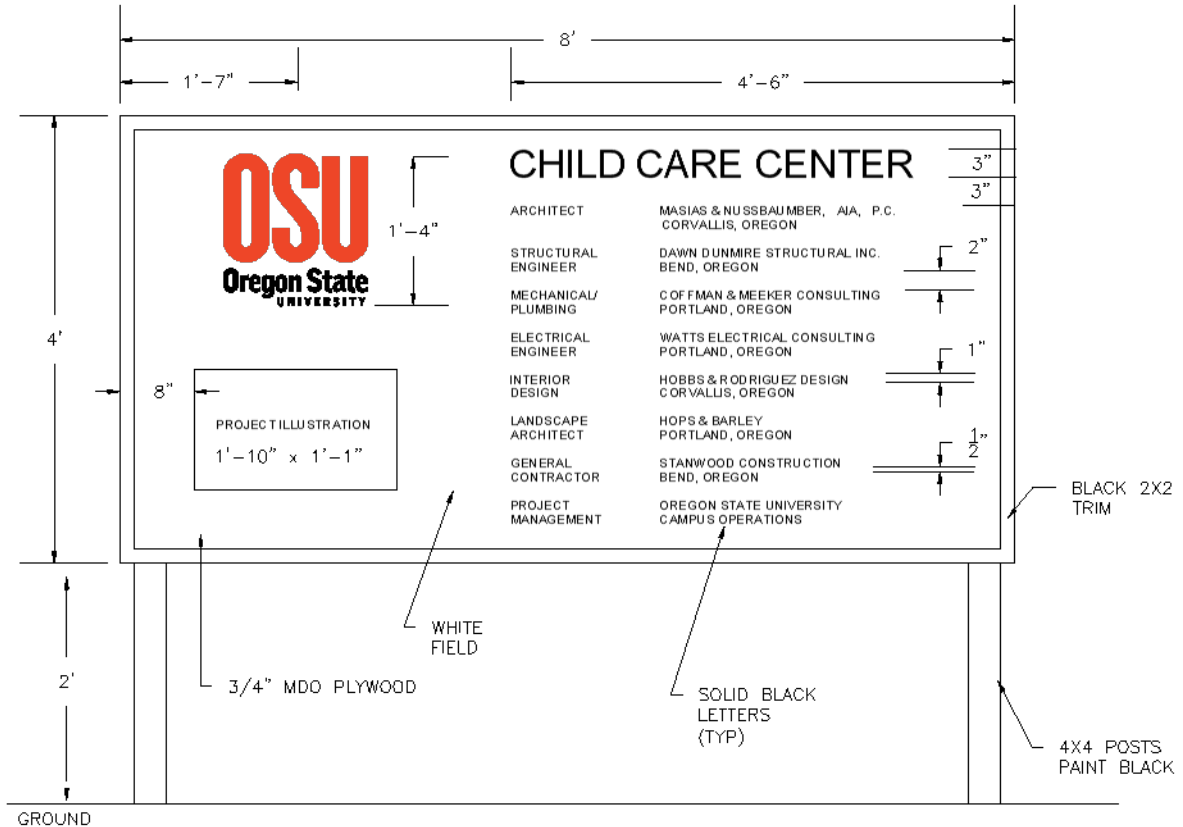
- A. Water Control:
 1. Maintain excavations free of water.
 2. Provide, operate, and maintain necessary pumping equipment.
- B. Protection:
 1. Protect installed Work and provide special protection where specified in individual specification sections.

2. Prohibit traffic or storage upon waterproofed or roofed surfaces.
- C. Security:
1. Provide security and facilities to protect Work and existing facilities and Owner's operations from unauthorized entry, vandalism, or theft.
 2. Coordinate operations with Owner's Authorized Representative.
- D. Temporary Traffic Control /Pedestrian Accessibility
1. A continuous route for all pedestrians, including persons with disabilities and bicyclists, shall be maintained at all times. When existing pedestrian facilities are disrupted, closed, or relocated in a construction zone, temporary pedestrian facilities shall be provided.
 2. Temporary pedestrian facilities should be safe and accessible. There should be no curbs or abrupt changes in grade that could cause tripping or be a barrier to wheelchair use.
 3. Signage shall be provided directing people to the temporary accessible route. The signage shall include the International Symbol of Accessibility.
 4. Contractors shall not block temporary walkways with vehicles, equipment, construction materials, signs, trash, or other objects that might prohibit pedestrian passage.
 5. Construction equipment and equipment operation must be separated from any open walkways. At construction zones, pedestrian fences or other protective barriers shall be provided to prevent access into the construction zone.

1.13 PROJECT SIGNAGE

- A. Contractor is permitted to post only one project identification sign based on the following example:

OSU TYPICAL JOB SIGN



1.14 PREPARATION

- A. Consult with Owner to review jobsite areas required for field offices, material storage and stockpiles, equipment storage, access to different locations, etc.

1.15 PERFORMANCE

- A. Confine equipment, apparatus, and storage of material to work limits. The Owner will not be responsible for protection of materials and equipment from damage, pilfering, etc.
- B. Install temporary facilities in such a manner that the installed work will not be damaged.
- C. Do not use facilities of existing building unless authorized in writing by the Owner.
- D. Effective September 1, 2012, OSU became a non-smoking campus and smoking is prohibited on all Campus property.
- E. Keep facilities well maintained.
- F. Relocate temporary facilities as required during job progress.

- G. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
1. Replace air filters and clean inside of ductwork and housings.
 2. Replace significantly worn parts and parts that have been subject to unusual operating conditions.
 3. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION

Oregon State University Construction and Maintenance Safety Requirements

EH&S, 130 Oak Creek Building, Corvallis, OR 97331-7405, (541) 737-2505,
FAX (541) 737-9090

Complete OSU Construction and Maintenance Safety Form - Send completed documents (including Site Safety Plan and all separate answer pages) to Construction Contract Administration along with the signed contract and bonds.

Project Isolation - All construction and remodeling activities regardless of size and/or scope must be fenced, barricaded, or otherwise protected to restrict entrance and to ensure the safety of those in the general area. See isolation requirements.

Site Safety Plan - A site safety plan will be required and will address:

- General Information
- Emergency Information
- Key Organization Personnel
- Hazard Evaluation/Facility Impact
- Emergency Procedures
- Work Zones
- Security Measures
- Fire Protection

A model plan is attached. This form can be used if another plan has not already been prepared. Contact OSU Environmental Health & Safety for more information 737-2505.

Isolation Requirements

General: All construction, maintenance, and remodeling activities, regardless of size or scope, must be fenced, barricaded, or otherwise isolated to restrict entrance and to ensure the safety of those in the general area.

Outdoor Activities: Outdoor projects require the following perimeter isolation:

- A six foot chain-link fence, with controlled access points, extending in all directions around the excavation or building site such that no area of the construction is accessible to pedestrians or unauthorized personnel or vehicles.
- Isolation area will include vehicle loading and unloading areas.
- At the University's option, other barricading plans may be accepted. These may apply to projects such as road resurfacing, parking lot striping, exterior building water proofing, deliveries, etc. Contact EH&S regarding other barricading plans.

Overnight: Any excavation across or adjacent to sidewalks or pathways which must be left open overnight, must be identified with working, blinking construction lights in addition to solid barricades

Indoor Activities: Indoor construction or maintenance projects which will create dust, potentially hazardous fumes or vapors, or offensive odors are subject to the following isolation:

- Areas where existing doors can provide isolation will be labeled "Construction Area-- Authorized Personnel Only".

- All other areas will be isolated by a solid barrier. The minimum barrier allowed is 4 mil poly sheeting sealed to prevent migration of dust.
- Mechanical ventilation may be required.
- A solid wall is required if building envelope is opened to the outside.

Contractor Responsibilities

- The contractor will provide all barricading, isolation, and fencing material. OSU will not provide any materials.
- The contractor will also provide all appropriate warning and detour signs when sidewalks, exits, or roads are closed.
- Contractor will provide all other construction area signs.

OSU Construction and Maintenance Safety Form

Send completed safety documents to Construction Contract Administration with contract and bonds.

Date: _____ Project: _____

Start Date: _____ Completion date: _____

Contractor: _____ Contact: _____

Work # _____ 24 hr #: _____

OSU Project Mgr: _____ Work / 24hr #'s: _____

Dept Contact: _____ OSU EH&S Contact: _____

Preconstruction meeting? **Y N** Date/Time/Location: _____

For the following items, prepare answers on a separate sheet for all items marked "Yes". Precede each answer with the appropriate item number. All boxes need to be checked

Y	N	For This Project	If YES, then:
		1 Will any confined spaces be accessed?	Describe location of entry Specify location of permit Notify EH&S prior to entry See SAF 209
		2 Will hot work be performed (welding, cutting, brazing, etc.)?	Provide min. 5# 2A10BC extinguisher within 10 ft If indoors - provide and describe ventilation See SAF 214
		3 Any products brought to campus?	Provide MSDS on site prior to first use; Make available to OSU on request
		4 Will lead paint be impacted?	Describe plan to limit contamination
		5 Will asbestos-containing-material be impacted?	Coordinate with OSU asbestos manager
		6 Will <u>any</u> materials (construction debris, soil, water, etc) be removed from campus?	Describe in detail identity and disposition of material (how, where)
		7 Any open trenches or holes?	Describe isolation procedures (see Page 1)
		8 Will a crane be used?	Describe crane safety plan (include plan to prevent loads above occupied areas)
		9 Is this project building a new facility, a major remodel?	Provide Site Safety plan Describe isolation procedures (see Page 1)
		10 Is this a minor remodeling project?	Provide, or fill out model Site Safety Plan form (see Page 3) Describe isolation procedures (see Page 1)
		11 Will air contamination be produced (e.g. dust, CO, solvent vapors, VOCs, odors)?	Describe project ventilation and isolation Indicate position of building air intake(s)
		12 Will there be noise > 85 dB?	Describe noise minimization plan
		13 Will this project use a scaffold or an external chute?	Describe isolation, dust control, installation
		14 Will this project involve a working surface >6' above a lower level	Describe fall protection
		15 Will any "blind" saw-cuts or penetrations be made in existing foundations, floors, ceilings and/or walls?	Describe plan for detecting and protecting power lines or other building utility lines.

EH&S Review: _____ Date: _____

Model Site Safety Plan

1. General Information

Contractor name _____
 Address _____
 City, State, Zip _____
 Site Safety Officer _____ Project Dates _____
 Project Name _____

2. Emergency Information

Emergency Response	911	OSU EH&S and OSU Facilities Services must be notified in the event of an emergency
Hazardous Materials Spill		
MSDS on-site location		
OSU EH&S	(541) 737-2505	
Facilities Services	(541) 737-2969	

3. Contractor Key Personnel

	Name	Phone	Emergency Contact
Company Owner			
Project Manager			
Job Supervisor			
Site Safety Officer			
Other Responsible Individual			
24 Hour Notification			

List of employees on site _____

4. Hazard Evaluation/ Facility Impact	
Physical	Yes / No
Heavy Equipment	
Noise	
Heat	
Elevation	
Radiation Materials	
Excavations	
Underground Utilities	
Confined Spaces	
Fire Prevention	
Electrical	

5. Emergencies
Services
Evacuation Route
First Aid Location
Hazardous Materials Spill Procedure

6. Work Zones

Material Storage _____
 Parking locations _____
 Individuals with OSU keys _____
 Access issues _____

7. Security measures

8. Fire protection

SECTION 01 56 39

TREE AND PLANTING PROTECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Section includes temporary fencing, barricades, and guards to protect trees, plants and groundcovers not indicated to be removed, as necessary and required to prevent damage above and below grade.

1.02 DEFINITIONS

- A. Dripline: Outer perimeter of branches of any tree or plant.
- B. Groundcover: Includes but not limited to plants and grass.

1.03 PERFORMANCE REQUIREMENTS

- A. The Contractor shall exercise utmost care to protect existing trees and plants designated to remain and shall comply with all protection requirements provided by Owner and City of Corvallis as conveyed through the Owner's Authorized Representative.
- B. The Contractor shall install tree protection fencing as detailed and shall prevent damage to shrubs, groundcover, trees, root systems, soil, bark, foliage, branches and limbs due to construction activities, including but not limited to:
 - 1. Soil contamination, erosion, and compaction.
 - 2. Excessive wetting, and ponding due to storm water, and construction run-off.
 - 3. Alteration of grade, stockpiling of soil, debris, and materials.
 - 4. Damage to soil, roots, bark, trunk, limbs, branches, and foliage.
 - 5. Prevent unauthorized cutting, breaking, skinning and bruising of roots, branches, and bark.

1.04 SUBMITTALS

- A. Procedural proposal for tree and plant protection, describe methods of protection, and stabilization, provide drawings and supporting documentation as directed.
- B. Contractor's Condition Inspection; include written report and color photographs.

1.05 PROJECT CONDITIONS

- A. Install protection during initial mobilization at the Work site, and maintain until substantial completion.
- B. If, in the opinion of the Owner's arborist, additional protection is required, the Contractor shall install additional fencing as directed and without cost to the Owner.
- C. The location and requirements for additional fencing shall be determined by the

Owner's arborist prior to, and at any time during the course of the Work.

- D. Fencing:
 - 1. Fencing shall be installed at the tree and plant protection areas as detailed on Plans, or as directed by the Owner's Authorized Representative.
 - 2. Tree and plant protection fences shall remain in place until all Work is completed and shall not be removed or relocated without the approval of the Owner's Authorized Representative.
- E. Driving and Parking:
 - 1. Not permitted off paved surfaces without the approval of the Owner's Authorized Representative.
 - 2. When approved, the Contractor shall place plywood of sufficient thickness and width to support vehicles and prevent rutting on the area to be driven on.
 - 3. Care shall also be taken with respect to existing lawn sprinkler systems.
- F. Storage of materials and Debris: Not permitted off paved surfaces.

PART 2 PRODUCTS

2.01 MANUFACTURED COMPONENTS

- A. Chain Link Fencing: 11 gage galvanized chain link, six feet. tall, and 1.5 inch inside diameter galvanized steel line posts and 2.5 inch inside diameter corner posts, provide lockable gates as necessary.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Inspect trees, plants, and groundcovers, document existing conditions prior to installation of protection.

3.02 EXECUTION

- A. Pruning and Cutting of Roots, Branches and Foliage:
 - 1. Review conditions with Architect or Owner prior to need for work, and proceed as directed.
 - 2. All pruning to be done by Owner's landscape maintenance personnel or ISA Certified arborist under the direction of Owner's Landscape Management Department.
 - 3. Perform pruning and cutting with sharp instruments intended for the purpose; do not break or chop.
- B. Root Cuttings:
 - 1. Carefully and cleanly cut roots and branches of trees indicated to be left standing where such roots and branches obstruct new construction.

2. Protect exposed roots with wet burlap until they can be covered with soil.
- C. Excavation and Trenching Within Drip Lines:
 1. Permitted where indicated, and at other specifically approved locations.
 2. Tunnel under or around roots by hand digging or boring.
 3. Do not cut main lateral roots and tap roots over one inch diameter; cut smaller roots which interfere with installation of new Work.
 4. Do not allow exposed roots to dry out before permanent backfill is placed; provide temporary earth cover, or pack with peat moss and wrap with burlap.
 5. Water and maintain roots in moist condition and temporarily support and protect from damage until permanently relocated and covered with backfill.
- D. Existing Grading: Maintain within drip line of trees and plants unless otherwise indicated on the drawing and approved by the Owner's Authorized Representative.
- E. Tree Protection:
 1. Provide temporary fence complying with Section 01 51 00 for protection of trees to remain.
 2. Extend fencing ten feet beyond dripline, except where greater distance is required for protection of Elm trees.
 3. Prevent entry into protected areas except as authorized in writing by the Owner's Authorized Representative.

3.03 REPAIR AND REPLACEMENT OF TREES AND PLANTS

- A. Repair trees or shrubs damaged by construction operations as directed by the Owner.
- B. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.
- C. Damaged Trees, Shrubs and Groundcover:
 1. Replace where Owner's Authorized Representative determines restoration to normal growth pattern is not possible; plant and maintain as directed.
 2. Replacement trees up to 13 inches caliper and shrubs up to 4 feet tall: Same size as damaged tree or shrub, species selected by the Owner's Authorized Representative.
 3. Trees over 13 inch caliper and shrubs greater than 4 feet tall: Compensate Owner as determined by an acceptable consulting arborist registered with the American Society of Consulting Arborists.
 4. Replacement groundcovers: Same size and quality as damaged species selected by Owner's Authorized Representative.

END OF SECTION

Foundation Building Roof Repairs
May, 2019

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Summary:
 - 1. Product options.
 - 2. Owner-furnished products.
 - 3. Product delivery, storage and handling.

1.02 PRODUCTS

- A. Products:
 - 1. New material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.
 - 2. Products may also include existing materials or components specifically identified for reuse.
- B. Use interchangeable components of the same manufacture for similar components.
- C. Unless otherwise specified, all material and equipment shall be new; free from defects impairing strength, durability, and appearance; of current manufacture.
- D. Items specified shall be considered minimum as to quality, function, capacity, and suitability for application intended.
- E. Items incorporated into the Work shall conform to applicable specifications and standards designated, and shall be of size, make, type, and quality specified.
- F. Design, fabricate, and assemble in accordance with current best engineering, industry, and shop practices.
- G. Manufacture like parts of duplicate units to standard size and gauge to make them interchangeable.
- H. Two or more items of the same kind shall be identical and made by the same manufacturer.

1.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- C. Products Specified by Naming One [or More] Manufacturer[s]: Products of manufacturer[s] named and meeting specifications, no options or substitutions

allowed.

D. Substitution Procedure: Under Section 01 25 00.

1.04 REUSE OF EXISTING PRODUCTS

- A. Except as specifically indicated or specified, materials and equipment removed from existing construction shall not be used in the completed Work.
- B. For material and equipment specifically indicated or specified to be reused in the Work:
 - 1. Use care in removal, handling, storage, and reinstallation to assure proper function in the completed Work.
 - 2. Arrange for transportation, storage, and handling of products which require off-site storage, restoration, or renovation.
 - 3. Remove and reinstall mechanical units, vents, guys, antennae, and electrical and grounding wires or conduits.

1.05 OWNER FURNISHED PRODUCTS

- A. Designate delivery dates of Owner-furnished items in the construction schedule.
- B. Receive, unload, store and handle Owner-furnished items at the site; protect from damage.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, store and protect products in accordance with manufacturer's instructions.
- B. Arrange deliveries in accordance with construction schedules; coordinate to avoid conflict with Work and site conditions.
- C. Deliver and store products in undamaged condition in manufacturer's original containers or packaging with identifying labels intact and legible.
- D. Inspect shipments to assure compliance with Contract Documents and reviewed submittals, and that products are undamaged.
- E. Prevent soiling or damage to products or packaging.
- F. Interior Storage: Maintain required temperature and humidity ranges. Verify that Owner furnished storage meets product manufacturer's requirements.
- G. Exterior Storage:
 - 1. Store materials above ground to prevent soiling and/or moisture infiltration.
 - 2. Cover materials with waterproof breathable sheet coverings; provide adequate ventilation.
 - 3. All storage locations to be approved in advance by the Owner.
- H. Arrange storage to provide access for inspection.
- I. Coordinate with Owner's Authorized Representative all on-site storage activities.
- J. Provide for security of stored products.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work.

1.02 RELATED SECTIONS

- A. Section 01 25 00, Product Substitution Procedures.
- B. Section 01 33 23, Shop Drawings, Product Data, Samples

1.03 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of the Work.
 - 2. Efficiency, maintenance, or safety of any operational element.
 - 3. Visual qualities of sight exposed elements.
 - 4. Work of Owner or separate contractor.
- B. Include in request:
 - 1. Identification of project.
 - 2. Location and description of affected work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed work, and products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on work of Owner or separate contractor.
 - 7. Written permission of affected separate contractor.
 - 8. Date and time work will be executed.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Product Substitution: For any proposed change in materials, submit request for substitution under provisions of Section 01 25 00.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.

- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of the Work from damage.
- C. Provide protection from elements for areas which may be exposed by uncovering work.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting and patching to complete work.
- B. Fit products together, to integrate with other work.
- C. Remove and replace defective or non-conforming work.
- D. Provide openings in the work for penetration of mechanical and electrical work.

3.04 PERFORMANCE

- A. Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- B. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval from Owner's Authorized Representative.
- C. Restore work with new products in accordance with requirements of Contract Documents.
- D. At penetrations of fire rated walls, partitions, ceiling or floor construction, completely seal voids with approved fire rated material, to full thickness of the penetrated element.
- E. Refinishing:
 - 1. Refinish surfaces to match adjacent finish.
 - 2. For continuous surfaces, refinish to nearest intersection or natural break.
 - 3. For an assembly, refinish entire unit.

END OF SECTION

SECTION 01 74 00

CLEANING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Related requirements specified elsewhere, cleaning for specific products or work: Specification section for that work.
- B. Maintain premises and public properties free from accumulations of waste, debris, and rubbish, caused by operations.
- C. At completion of Work remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.

1.02 QUALITY ASSURANCE

- A. Standards: Maintain project in accord with applicable safety and insurance standards.
- B. Hazard Control:
 - 1. Store volatile wastes in covered metal containers.
 - 2. Provide adequate ventilation during use of volatile or noxious substances.

1.03 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

1.04 DURING CONSTRUCTION:

- A. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- B. At reasonable intervals during progress of Work clean site and public properties, and dispose of waste materials, debris and rubbish.
- C. Provide on-site containers for collection of waste materials, debris and rubbish.
- D. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.
- E. Vacuum clean interior building areas when ready to receive finish painting, and continue vacuum cleaning on an as-needed basis until project is ready for Substantial Completion or occupancy.
- F. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.

1.05 FINAL CLEANING

- A. Employ experienced workers, or professional cleaners, for final cleaning.
- B. In preparation for Substantial Completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces.
- C. Remove grease, dust, dirt, stains, labels, and other foreign materials from exposed interior and exterior finished surfaces.
- D. Remove putty, paint, labels, lubricants, etc., from windows, mirrors, and sash, and then polish, taking care not to scratch glass.
- E. Vacuum carpeting (shampoo where required), removing debris and excess nap.
- F. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
- G. Replace air filters where units were operated during construction.
- H. Maintain cleaning until project, or portion thereof, is occupied by Owner.

END OF SECTION

SECTION 01 77 00

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 DESCRIPTION

- A. The requirements specified in this section relate to all Contractors individually performing under these Contract Documents:
 - 1. Project Record Documents.
 - 2. Final review and payment.
- B. Related work specified elsewhere:
 - 1. OSU General Conditions.
 - 2. Shop Drawings, Product Data and Samples, Section 01 33 23.

1.02 PROJECT RECORD DOCUMENTS

- A. The Project Record Documents shall be organized to include the following information:
 - 1. Table of Contents
 - 2. Project Team List
 - 3. Specifications (Including Addenda and Change Orders)
 - 4. Drawings
 - 5. Inspection Reports, as applicable
 - 6. Signed Warranty(ies)
 - 7. Maintenance Instructions
- B. Draft Project Record Documents shall be submitted for review upon 75% completion of the Work.
- C. Project Record Documents shall be submitted electronically to the Owner. Hard copies will not be accepted.
- D. The project team list shall include the name, address, and phone number of the Owner, Contractor, Inspector, Subcontractors, and the materials manufacturers.
- E. Legibly mark each Specification section to indicate actual as-built condition indicating changes in the Work made by addenda or change order or actual materials used and actual manufacturer(s) used.
- F. Maintain current and accurate as-built mark-ups during construction and make available to Owner's Authorized Representative upon request.
- G. Legibly mark the drawings to indicate actual as-built conditions indicating changes in the Work made by addenda or change order or actual conditions which differ from the drawings.
- H. Redraw or provide new drawings as required for a complete as-built set of drawings. The Contractor shall maintain current and accurate as-built mark-ups during construction and make available to Owner's Authorized Representative.

- I. Include inspection reports if applicable.
- J. Include, in a single section, all copies of the Project's labor and material warranties clearly marked to identify the Owner's responsibilities under the terms of each warranty and the section of Work that each warranty covers. One set must be clearly marked as containing original documents.
- K. In the case of an elevator installation, the Contractor's and manufacturer's warranty shall provide for the Owner's right to respond to emergency/car failure situations for the purpose of extricating individuals trapped in the elevator.
- L. Include maintenance instructions complete with technical information and name, address, and phone number of the Contractor(s) and manufacturer(s) of each material and product.

1.03 FINAL REVIEW AND PAYMENT

- A. Prior to completion, the Contractor shall inspect the Work and make a Punch-list noting all items that are incomplete and/or incorrect.
- B. The Contractor shall notify all Subcontractors in writing of incomplete and/or incorrect items. Notify far enough in advance of the completion date that the Work can be completed on schedule. Said Work shall be immediately corrected.
- C. Should conditions prevail which prohibit some elements of the Work from being accomplished, but the work-in-place will perform the primary function (i.e., painting cannot be completed due to high moisture content of masonry walls.) the Contractor shall record the reason with this Punch-list item requesting temporary delay in completion from the Owner in writing.
- D. Notify the Owner in writing that all items are completed and ready for final review or else that the Work product is fully usable, but some listed deficiencies remain to be completed. Submit all record documents at this time.
- E. The Owner will review all documents. When the documents include a Contractor's request for delay in completion, the Owner will review all Work which is certified as complete to the best knowledge of the Contractor. The Owner will also review the listed incomplete Work and assign a value to such uncompleted work.
- F. The Contractor shall make the required corrections to the Work expeditiously. A letter will be addressed to the Contractor informing the Contractor of the project status.
- G. When Contract closeout procedures are completed and all Punch-list deficiencies have been corrected, provide Owner with final corrected Project Record Documents based on Owner's preliminary review. Correct Project Record Documents shall be in electronic format.
- H. Final Completion by the Owner will be documented and the Contractor will receive written notice of acceptance of the Work and notification that final

payment may be billed and released.

- I. All warranties shall commence and become effective beginning on the date of Substantial Completion.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

A Section Includes:

1. Unit Price procedures.
2. Measurement and payment.
3. Unit Price Schedule.

B Related Sections:

1. Document 004100 - Bid Form.
2. Section 086223 - Tubular Daylighting Devices.

1.02 QUALITY ASSURANCE

- A Applicable Sections of Specifications apply to Work under each Unit Price item.
- B Coordinate Work of related Sections, and modify surrounding Work as required.
- C Include incidental costs which may be required.
- D Determine quantities and extent of labor and materials required.
- E Actual quantities of unit price items of Work will be determined during construction and be as agreed to by the Owner's Authorized Representative.
- F Notify [both Architect and Owner's Authorized Representative prior to any application of Unit Price Work.

1.03 UNIT PRICE SCHEDULE

- A Unit Price No. 1: Provide additional Tubular Daylighting Devices at locations to be determined by the Owner's Authorized Representative.
 1. Seven (7) Tubular Daylighting Devices are included in Basic Bid.
 2. Contract amount will be added to or deducted from based on actual number of Tubular Daylighting Devices Provided.
 3. Reference Section 086223 – Tubular Daylighting Devices.
 4. Reference Drawing Sheet A4.1.
- B Unit Price No. 2: None

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END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition, as indicated.
- B. Removal of roof related sheet metal systems.

1.02 REFERENCES

- A. 29 CFR 1926.1101. OSHA Occupational Exposure to Asbestos, Construction Industry Standard.
- B. U.S. Environmental Protection Agency National Emissions Standards for Hazardous Air Pollutants (NESHAPS). (Code of Federal Regulations Title 40, Part 61, Subparts A and M.).
- C. AA guide for Meeting DEQ Requirements: Handling Asbestos-Containing Roofing Materials (December 1994).
- D. DOT Regulations 49 CFR 171 & 172.

1.03 SUBMITTAL

- A. Schedule: Detailed schedule of demolition and removal Work.
- B. Shop Drawings: Demolition procedures and removal sequence, locations and construction of barricade, fences and temporary Work.

1.04 SUBSTRATE

- A. Accurately record actual substrate make-up and condition after elements are removed.
- B. Document with drawings and photographs.

1.05 QUALIFICATIONS

- A. Demolition Firm: Company experienced in performing the Work of this section with minimum three years experience.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable code for demolition of structures, safety of adjacent structures, dust control, and disposal.
- B. Obtain required permits from authorities.
- C. Conform to applicable regulatory procedures when discovering hazardous or contaminated materials.

1.07 PROTECTION

- A. Conduct Work with minimum interference to thoroughfares; maintain protected egress and access at all times; maintain disabled access.
- B. Do not close or obstruct sidewalks without authorization from the Owner's Authorized Representative.
- C. Protect adjacent building surfaces and property from damage during demolition operations.
- D. Provide and maintain suitable barricades, shelters, lights, and danger signals during the progress of the Work.
- E. If necessary, protect existing sidewalks and curbs with planking.

1.08 PREPARATION

- A. Protect existing landscaping and structures.
- B. Owner will trim trees and shrubbery if required. Coordinate with Owner's Authorized Representative.

1.09 REQUIREMENTS

- A. Conduct demolition to minimize interference with adjacent occupancies.
- B. Dangerous Condition:
 - 1. Cease operations immediately if any structures appear to be in danger.
 - 2. Notify Owner's Authorized Representative.
 - 3. Do not resume operations until directed.

1.10 DEMOLITION

- A. Demolish indicated structures and appurtenances in an orderly and careful manner.
- B. Except where noted otherwise, immediately remove demolished material from site.
- C. Pollution Controls:
 - 1. Use temporary enclosures and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level.
 - 2. Comply with governing regulations pertaining to environmental protection.
 - 3. Do not use water when it may create hazardous or objectionable conditions.
- D. Clean adjacent structures and improvements of dust, dirt and debris caused by demolition operations.

1.11 REMOVAL

- A. Transport demolished materials and dispose of off-site in a legal manner and location.
- B. Cover vehicles used for removal of demolished materials, so as to prevent debris from littering along the disposal route.
- C. Retrieve any fallen debris. Completely remove all existing roofing materials down to existing decks where shown.
- D. Ensure that substrate is clean and dry, smooth, free of protruding or loose fasteners and free of foreign material.

1.12 SALVAGE SCHEDULE

- A. General: Demolished material and equipment not designated for salvage becomes Contractor's property; remove promptly from the Project Site.
- B. Remove, store, and protect the following materials and equipment to be reused:
 - 1. Equipment indicated on drawings.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Shop fabricated steel items.
2. Roof access platform.
3. Shop metal finishing.
4. Powder Coated Assembly.

B. Related Sections:

1. Section 061010 - Rough Carpentry.
2. Section 075215 - SBS Modified Bitumen Roofing (Cold)
3. Section 076200 - Sheet Metal Flashing and Trim.

1.02 REFERENCES

- A. ASTM A36 - Structural Steel.
- B. ASTM A53/A53M - Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- C. ASTM A123/A123M - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- D. ASTM A153/A153M - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- E. ASTM A283/A283M - Low and Intermediate Tensile Strength Carbon Steel Plates.
- F. ASTM A500 - Cold Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.
- G. ASTM A501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
- H. ASTM A992/A992M - Structural Steel Shapes.
- I. AISC (American Institute of Steel Construction) - Design, Fabrication, and Erection of Structural Steel for Buildings.

- J. AWS (American Welding Society) A2.0 - Standard Welding Symbols.
- K. AWS D1.1/D1.1M - Structural Welding Code - Steel.
- L. SSPC (Steel Structures Painting Council) SP COM - Surface Preparation Commentary for Steel and Concrete Substrates.
- M. ASTM E935 - Standard Test Methods for Permanent Metal Railing Systems and Rails for Buildings.
- N. ANSI A1264.1 - Safety Requirements for Workplace Floor and Wall Openings, Stairs, and Railing Systems.
- O. ANSI/ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- P. OSHA (Occupational Safety and Health Administration) 29 CFR 1910.23 - Guarding floor and wall openings.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 SUBMITTALS

- A. Submit in accordance with Section 013323.
- B. Product Data: Manufacturer's product sheets and installation instructions.
- C. Shop Drawings:
 - 1. Show layout, profiles, and product components, including anchorage, accessories, finish colors and textures.
 - 2. Indicate sizes, connection attachments, reinforcing, size and type of fasteners.
 - 3. Include erection drawings, elevations, and details where applicable.
 - 4. Indicate welded connections using standard AWS A2.0 welding symbols; indicate net weld lengths.
- D. Samples: Selection and verification samples for finishes, colors and textures.

- E. Quality Control:
 - 1. Certified test reports, showing compliance with specified performance characteristics and physical properties.
 - 2. Product certificates, signed by manufacturer, certifying products comply with specified performance characteristics and physical requirements.
 - 3. Manufacturer's field reports.

- F. Closeout:
 - 1. Project Record Documents:
 - 2. Operation and maintenance data for installed products, including methods for maintaining, and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 3. Warranty documents specified herein.

1.05 QUALITY ASSURANCE

- A. Manufacturer and Installer Qualifications: Minimum 5 years experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.

- B. Regulatory Requirements: Comply with applicable Building Code requirements.

- C. Field measure areas of Work prior to submittal and fabrication. Allow for fitting and trimming when taking field measurements.

- D. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturer's installation instructions and warranty requirements.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Comply with manufacturer's ordering instructions and lead time requirements; deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.

- B. Storage: Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

- C. Handling: Avoid damage to Powder Coating.

1.07 WARRANTIES

- A. Powder Coating: Standard warranty document executed by authorized company official, 5 years commencing on Date of Substantial Completion.
- B. Installer: Standard warranty document executed by authorized company official, 2 years commencing on Date of Substantial Completion

PART 2 PRODUCTS

2.01 STEEL MATERIALS

- A. Steel Sections: ASTM A36.
- B. Steel Pipe: ASTM A501 or ASTM A53 Grade B.
- C. Steel Tubing: ASTM A500, Grade B.
- D. Plates: ASTM A283.

2.02 ACCESSORIES

- A. Bolts, Nuts, and Washers: Galvanized to ASTM A153.
- B. Welding Materials: AWS D1:1; type required for materials being welded.
- C. Anchors:
 - 1. Rawl Drilling and Anchoring Systems, Rawl Stud.
 - 2. ITT Phillips, Red Head, Hilti acceptable.
 - 3. Epoxy Set Anchors:
 - a. Hilti Fastening Systems, Hilti-Hit C-20
 - b. Anchor It, HST 200 acceptable.
 - c. Use ASTM A36 threaded rod with taper cut end.
- D. Shop and Touch-up Primer: SSPC 15, Type 1, red oxide.

2.03 FABRICATION

- A. Fit and shop assemble in largest practical sections, for delivery to site.

- B. Comply with AWS Code and AISC Specifications.
- C. Fabricate items with joints tightly fitted and secured.
- D. Continuously seal joined members by continuous welds.
- E. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where indicated otherwise.
- G. Galvanize all steel items in accordance with ASTM A123 unless indicated otherwise.

2.04 FINISHES

- A. Steel:
 - 1. Preparation: Comply with applicable requirements of SSPC-SP COM.
 - 2. Remove rust, scale, grease, and foreign matter prior to finishing.
 - 3. Do not prime paint surfaces to be embedded in concrete or masonry, nor where field welding is required.
- B. Powder Coat Painted Steel:
 - 1. Factory-applied.
 - 2. Color: Selected from Manufacturer's standards.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
- B. Report to the Owner's Authorized Representative any deviations between Contract Documents and site conditions.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Comply with manufacturer's product data, technical bulletins, and catalog and carton installation instructions.
- B. Install items plumb and level, accurately fitted, free from distortion or defects.
- C. Measure from established lines and levels with lines visually parallel.
- D. Provide temporary bracing and shoring where required; remove upon completion of installation.
- E. Field Welding: Comply with AWS Code.

3.03 ADJUSTING

- A. Repair or replace damaged installed products.

3.04 CLEANING

- A. Remove temporary coverings and protection of adjacent work areas.
- B. Clean installed products in accordance with manufacturer's instructions prior to acceptance.
- C. Remove construction debris from project site and legally dispose thereof.

3.05 PROTECTION

- A. Protect installed product and finish surfaces from damage during subsequent construction.

3.06 SCHEDULE

- A. Roof Access Platform & Ladder Assembly:

END OF SECTION

GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Wood framing.
 - 2. New perimeter curbs.
 - 3. New divider curb where indicated.
 - 4. Treated wood.
 - 5. Curb extensions.

- B. Related Sections:
 - 1. Section 075215 - SBS Modified Bitumen Roofing (Cold).
 - 2. Section 076200 - Sheet Metal Flashing and Trim.

1.02 REFERENCES

- A. ASTM C79/C79M - Treated Core and Non-treated Core Gypsum Sheathing Board.

- B. APA (American Plywood Association) - Product Standard PS-1.

- C. WCLIB (West Coast Lumber Inspection Bureau) - Standard Grading Rules No. 17.

- D. WWPA (Western Wood Products Association) - Lumber Standard PS-20.

- E. AWWPA (American Wood Preservers' Association):- Book of Standards.

1.03 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. New perimeter curbs.
 - 2. New equipment curbs.
 - 3. Revised equipment curbs.
 - 4. Blocking.

- B. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 5 years experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.
- B. Regulatory Requirements: Comply with applicable Building Code requirements.
- C. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturer's installation instructions and warranty requirements.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Delivery:
 - 1. Comply with manufacturer's ordering instructions and lead time requirements; deliver products with identification labels intact.
 - 2. Protect wood from moisture absorption during transportation and storage.
- B. Storage:
 - 1. Store products protected from exposure to harmful weather.
 - 2. Store wood above grade, permit ventilation.
 - 3. Cover with secure, breathable, weather resistant covers.
- C. Handling: Avoid damage to products.

PART 2 PRODUCTS

2.01 LUMBER MATERIALS

- A. Non-structural Light Framing: Coast Region Douglas Fir, WCLIB construction or No. 2, S4S, Moisture content maximum 19 percent.
- B. Blocking, Insulation Stops and Nailers: Coast Region Douglas Fir, WCLIB construction or No. 2, S4S, Moisture content maximum 19 percent.
- C. Fire Treated Lumber: Coast Region Douglas Fir, WCLIB Construction or No. 2, KDAT, S4S, pressure treated per applicable requirements of AWPA C20 Exterior type.

- D. Preservative Treated Plywood: Thicknesses shown, C/D exterior, Standard PS 1; pressure treated per applicable requirements of AWPA C9, CCA, .25 retention.
- E. Fire Treated Plywood: Thicknesses shown, C/D exterior, Standard PS 1; pressure treated per applicable requirements of AWPA C27 Exterior type FRT, UL labeled.
- F. Framing: Hem-Fir or Douglas Fir-Larch No. 2 and better, S4S.
- G. Joists and Rafters: Douglas Fir-Larch No. 2 and better, KD, S4S.
- H. Plywood Wall Sheathing: APA Rated, $\frac{3}{4}$ inch, Pressure Treated.

2.02 ACCESSORIES

- A. Fasteners: Galvanized steel for exterior, high humidity, and treated wood locations, plain finish elsewhere.
- B. Expansion Anchors:
 - 1. $\frac{1}{2}$ inch diameter expansion anchors, minimum 3 inch embedment. Powers Fasteners; Power Stud, Power Bolt or equal.
 - 2. Drive pins, size indicated or $\frac{3}{16}$ inch diameter minimum for anchorage to concrete or masonry; Powers, Red Head, Hilti acceptable
- C. Die Stamped Connectors: galvanized steel.
- D. Joist Hangers: Galvanized steel, sized to suit framing conditions.
- E. Anchors: Expansion shield and lag bolt type for anchorage to solid masonry or concrete.
- F. Building Paper: No. 30 ASTM asphalt felt.

2.03 WOOD TREATMENT

- A. Wood Preservative (Pressure Treatment): AWPA Treatment C1 using water borne preservative with 0.25 percent retainage.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection: Verify substrate conditions are acceptable for product installation.
- B. Report to the Owner's Authorized Representative any deviations between Contract Documents and site conditions.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Provide temporary shoring and bracing members as required to achieve proper alignment of the structure, and of sufficient strength to bear imposed loads.

3.03 ERECTION - FRAMING

- A. Comply with WWPA technical bulletins and erection recommendations.
- B. Erect wood framing members in accordance with applicable code.
- C. Place members level and plumb. Place horizontal members crown side up.
- D. Curb all roof openings except where curbs are provided. Construct curb members of single pieces per side.
- E. Extend existing curbs to 12 inches minimum above roof deck.

3.04 ADJUSTING

- A. Repair or replace damaged installed products.

3.05 CLEANING

- A. Remove construction debris from project site and legally dispose thereof.

3.06 PROTECTION

- A. Protect installed product and finish surfaces from damage during subsequent construction.

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Rough Carpentry: 061010

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END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Deck preparation.
2. Tapered insulation and cricket systems.
3. Cold adhesive applied SBS modified bitumen roofing.
4. Granule surface cap sheet.
5. Splash Blocks (concrete).

B. Related Sections:

1. Section 024110 - Selective Demolition.
2. Section 061010 - Rough Carpentry.
3. Section 076200 - Flashing and Sheet Metal.
4. Section 221426 - Roof Drains.
5. Section 230000 - Basic Mechanical.
6. Section 260000 - Basic Electrical.

1.02 REFERENCES

- A. ASTM D41 - Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.
- B. ASTM D2178 - Asphalt Glass Felt Used in Roofing and Waterproofing.
- C. ASTM D4586 - Asphalt Roof Cement, Asbestos-Free.
- D. ASTM D5147 - Test Methods for Sampling and Testing Modified Bituminous Sheet Material.
- E. ASTM D5849 - Test Method for Evaluating Resistance of Modified, Bituminous Roofing Membranes to Cyclic Joint Displacement.
- F. ASTM D6163 - Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
- G. ASTM E84 - Test Method for Surface Burning Characteristics of Building Materials.
- H. ASTM E108 - Test Methods for Fire Tests of Roof Coverings.

- I. ASTM E119 - Test Methods for Fire Tests of Building Construction and Materials.
- J. ASTM E136 - Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.
- K. NRCA (National Roofing Contractors Association) - Roofing and Waterproofing Manual.
- L. FM (Factory Mutual) 1-90 for wind uplift and fastening.
- M. ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.) for insulation R-values.
- N. UL (Underwriters Laboratories) - Roofing Materials and Systems Directory.

1.03 SYSTEM DESCRIPTION

- A. Design Requirements: Fully Warranted Class A.
- B. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 SUBMITTALS

- A. Submit in accordance with Section 013323.
- B. Product Data:
 - 1. Manufacturer's product sheets and installation instructions.
 - 2. Manufacturer's published specifications.
 - 3. Manufacturer's product data sheets for related components.
 - 4. FM approved fastening pattern.
- C. Shop Drawings:
 - 1. Show layout, profiles, and product components, including anchorage, accessories, finish colors and textures.
 - 2. Insulation and cricket system.
- D. Samples: Selection and verification samples for finishes, colors and textures.

- E. Quality Control:
 - 1. Certified independent test reports, showing compliance with specified performance characteristics and physical properties.
 - 2. Evidence of UL and FM approvals.
 - 3. Certificate of Analysis indicating; Product Identification, Date of manufacture, Lot Number, Dimensions & Mass and Physical Properties, typical of Sample in the Appendix at end of this section.
 - 4. Product certificates, signed by manufacturer, certifying products comply with specified performance characteristics and physical requirements.
 - 5. Manufacturer's field reports.
 - 6. Copy of warranty.

- F. Closeout:
 - 1. Project Record Documents:
 - 2. Operation and maintenance data for installed products, including methods for maintaining, and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 3. Warranty documents specified herein.
 - 4. Per Section 017700, Contract Closeout.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All products furnished by or approved by roofing manufacturer for entire roof assembly.

- B. Installer Qualifications:
 - 1. Minimum 5 years commercial experience in performing this work, having specialized in installation of work similar to that required for this project.
 - 2. Approved by and certified in writing by roofing Manufacturer.
 - 3. Been in continuous business for past 3 years.
 - 4. Completed at least three successful installations of specified materials and systems on projects of similar scope.
 - 5. Provide all personnel trained in application of materials and systems and maintain supervision as required.
 - 6. Foreman: Have at least five years experience supervising the installation of SBS Roof Systems of similar application and scope. Provide evidence in writing if requested by Owner.
 - 7. When requested, submit certificate indicating qualification.

- C. Standards: Comply with applicable requirements of NRCA Roofing and

Waterproofing Manual.

- D. Regulatory Requirements: Comply with applicable Building Code requirements.
- E. Insulation Fire Performance Characteristics: Provide insulation materials which are identical to those whose fire performance characteristics, as listed for each material or assembly of which insulation is a part, have been determined by testing, per methods indicated below, by UL or other testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1. Surface Burning Characteristics: ASTM E84.
 - 2. Fire Resistance Ratings: ASTM E119.
 - 3. Combustibility Characteristics: ASTM E136.
- F. Underwriter's Laboratories and/or Warnock Hersey tested and listed for a Class A rating when installed on incombustible decks for roof slopes and application shown.
- G. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturer's installation instructions and warranty requirements.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Comply with manufacturer's ordering instructions and lead time requirements; deliver products in original, unopened, undamaged containers with identification labels intact.
- B. Storage:
 - 1. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - 2. Store materials in dry, protected areas.
 - 3. Store roll goods on end. 'Flattened' rolls are unacceptable.
 - 4. Control temperature of storage areas in accordance with manufacturer's instructions.
- C. Handling: Exercise care in handling, loading, unloading and storing products to avoid damage.

1.07 PROJECT CONDITIONS

- A. Environmental Requirements:

1. Do not apply materials during precipitation of any form (rain, dew, ice, frost, snow), or if such precipitation is imminent.
2. Do not apply materials when water in any form (i.e., rain, dew, ice, frost, snow) is present on deck.
3. Do not apply materials during ambient temperatures of 40°F and below (including wind chill).

1.08 WARRANTIES

A. Manufacturer's Warranty:

1. Manufacturer's standard warranty document executed by authorized company official.
2. Single source 20 year combined 10+10 renewable, no dollar limit warranty signed by a corporate officer covering roofing materials, insulation materials and installation of the materials, and related systems. Include all roof related items and installations. Warranty to commence on the Date of Substantial Completion.

B. Installer:

1. Two (2) years material and labor, from date of Substantial Completion.
2. Warrant all roofing, flashing and roof insulation against defects.
3. Maintain roofed areas in watertight condition during this period.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Siplast:

1. Siplast Paradiene 2030 FR.
2. Or approved equals.

2.02 INSULATION MATERIALS

A. Base Insulation Layer.

1. Base Layer (mechanically attached): Rigid closed-cell polyisocyanurate foam board minimum 20 psi compressive strength and 2 pcf density, complying with ASTM C591, aged R value of 5.6 per inch of thickness, flame spread rating of 25 (ASTM E84), both sides of board faced with glass fiber mat; 1.6" thick. Supplied or approved by Roofing Materials Manufacturer.
2. Submit Manufacturer approved fastener and fastening pattern.

- B. Top Insulation Layer.
 - 1. Top Layer (adhered to Base layer): Rigid closed-cell polyisocyanurate foam board minimum 20 psi compressive strength and 2 pcf density, complying with ASTM C591, aged R value of 5.6 per inch of thickness, flame spread rating of 25 (ASTM E84), both sides of board faced with glass fiber mat; 1.6" thick. Supplied or approved by Roofing Materials Manufacturer

- C. Tapered Insulation and/or Cricket Units (adhered):
 - 1. Rigid closed-cell polyisocyanurate foam board minimum 20 psi compressive strength and 2 pcf density, complying with ASTM C591, aged R value of 5.6 per inch of thickness, flame spread rating of 25 (ASTM E84), both sides of board faced with glass fiber mat; tapered ¼ inch per foot or as indicated on drawings, 4 feet by 4 feet stock. Supplied or approved by Roofing Materials Manufacturer.
 - 2. Overlay (adhered): See Overlay Board, below

- D. Overlay (Separation) Board:
 - 1. Gypsum Roof Board: Silicone treated, glass mat faced, gypsum panel, UL Class A, FMRC 90 psf uplift, thickness ¼". GP DensDeck, Prime.

- E. Fiber Cants: Rigid perlite board, 2 or 3 inch minimum, as shown.

2.03 ROOF MEMBRANE MATERIALS

- A. Membrane Properties:
 - 1. Passes cyclic fatigue resistance for new material per ASTM D5849 (minimum 500 cycles @ 14 deg. F).
 - 2. Passes cyclic fatigue resistance for over aged material per ASTM D5849 (minimum 200 cycles @ 14 deg. F).
 - 3. Passes ASTM E108, for class A fire rating.

- B. Roof Membrane Materials:
 - 1. Base Sheet: Asphalt coated fiberglass base sheet; Siplast Parabase.
 - 2. Base Ply Sheet: Random glass mat reinforced SBS modified asphalt sheet, minimum thickness 87 mils, smooth surface; Siplast Paradiene 20.
 - 3. Top Ply Sheet: Random glass mat reinforced SBS modified bitumen, minimum thickness 94 mils., granule surfaced, Color A-9 Gray, fire rated; Siplast Paradiene 30 FR.

- C. Reinforcing Sheet: Random glass mat reinforced SBS modified bitumen,

minimum weight 62 pounds per 100 square feet; Siplast Paradiene 20 SA.

- D. Flashing Sheet: Granule surfaced, fiberglass or polyester reinforced SBS modified bitumen; Siplast Paradiene 40 FR.
- E. Cold Adhesive: PA 311 Adhesive.
- F. Flashing Cement: ASTM D 4586, Type II PA-828 Flashing Cement.

2.04 ACCESSORIES

- A. Fasteners:
 - 1. Corrosion resistant and cut resistant.
 - 2. Approved by Roofing Materials Manufacturer.
- B. Overlay Board Adhesive: Para-Stik.
- C. Walkway Pads: Modified bitumen coated polyester fabric with contrasting color granule surface. Siplast Paratread.
- D. Pipe Flashings: Four pound de-silverized lead.
- E. Plastic Cement: ASTM D 4586, Type II.
- F. Asphalt Primer: Comply with ASTM D41.
- G. Sealant: In contact with roof membrane materials, neoprene as approved by membrane Manufacturer.
- H. Pitch Pan Grout: Non-metallic type; Upson. Target acceptable.
- I. Pitch Pan Sealant: Two part chemical curing polyurethane base, black pitch pocket sealant.
- J. Liquid Applied Flashing System: ParaPro 123 Flashing System.
- K. Mineral Granules: Armor Gray to match top ply sheet granules.
- L. Fall Protection Anchors: Guardian Fall Protection, CB 18 Series Anchors or approved equal.

- M. Warning Line: Tremco AlphaGuard MT System. Base Coat and Safety Yellow Top Coat. Apply 3 inch wide lines. Mask to prevent seepage and obtain straight lines. Or approved equal.
- N. Pipe Supports: Miro; RAH Series Supports.
- O. Cleaning Agent: TSP (trisodium phosphate).
- P. Metal Flashings: Specified under Section 076200.
- Q. General: Provide all accessory products required for a complete and proper roofing system.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Make investigations as to conditions that will be encountered in performing Work.
- B. Inspection: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
- C. Report to the Owner's Authorized Representative any deviations between Contract Documents and site conditions.
- D. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Notify the Owner's Authorized Representative at least 48 hours prior to any roofing Work.
- B. Protection:
 - 1. Provide temporary coverings and protection of adjacent work areas.
 - 2. Provide tarps or plastic sheeting to protect opened roofs and flashings and to prevent entrance of moisture into existing structure, until new roof is in a watertight condition; have handy in case of emergency.
 - 3. Do not open up more roof surface than can be covered and/or protected in event of sudden rainfall.

4. Ensure that bitumen will not enter the building interior.

C. Surface Preparation:

1. Existing Roofing Removal: Specified under Section 024110 - Selective Demolition.
2. Substrate: Ensure surfaces are clean and dry, smooth, free of fins, raised edges, sharp edges, protruding or loose nails and free of foreign material.
3. Prepare surfaces and details in accordance with manufacturer's instructions.
4. Replace existing sheet metal counter flashings as shown. Prepare substrates as required to receive new material.

3.03 INSULATION INSTALLATION

- A. Mechanically fasten base layer and tapered insulation at metal decks.
- B. Adhere base layer and tapered insulation at concrete decks.
- C. Adhere overlay board to polyiso insulation.

3.04 MEMBRANE INSTALLATION

A. Roofing Membrane Plies:

1. Install sheathing paper and base sheet over wood deck. Lap each side-lap minimum 4", and end lap 6". Fasten to meet FM 1-90 Wind Uplift.
2. Adhere base ply sheet to overlay board.
3. Install membrane in accordance with manufacturer's application instructions, immediately following insulation assembly as a continuous operation where applicable.
4. Install membrane immediately following insulation assembly, as a continuous operation.
5. At low slope roofs, lay all plies of roofing free of wrinkles, creases or fish-mouths; at right angles to slope of deck.
6. Lay sheets directly into adhesive, behind applicator. Exert sufficient pressure during application to eliminate air pockets.
7. Fully bond sheets to prepared substrate, and to each other, with minimum 3 inch side and 6 inch end laps.
8. Do not stack lap seams.
9. All plies nominal 1½ gallons per 100 square feet of adhesive; total coverage, leaving no voids.
10. Set each ply sheet in solid uniform coating of adhesive. Laps: totally

sealed, avoid buck water laps.

11. Fully bond top ply sheet to ply sheet surface, with minimum 3 inch side and 6 inch end laps.

B. Roofing Membrane Details:

1. Prime all metal flanges and concrete and masonry surfaces with uniform coating of asphalt primer.
2. Provide continuous reinforcing sheet in all waterways, including valleys and crickets.
3. Pay particular attention to manufacturer's seam sealing instructions.
4. Step in T-joints; fully sealed and without voids. (Other methods to improve T-joint seal include 45 degree cut and finishing mopping at joint area).
5. At end of day's Work or when precipitation is imminent, provide water cut-off at open edges. Use adhesive or plastic cement and non-porous roofing felts, constructed to withstand protracted periods of service. Completely remove cut-offs prior to resumption of roofing.

C. Granule Surface Cap: Fully bond top ply sheet to ply sheet surface, with minimum 3 inch side and 6 inch end laps.

D. Flashings:

1. Bridge all junctures of vertical and horizontal surfaces with 45 degree cant strips.
2. Install reinforcing sheet and flashing sheets as shown.
3. Secure top edge of flashing sheets at vertical surfaces at 8 inches on center using fasteners appropriate to substrate.
4. Provide corner patches or folded corners at base flashing corners. Blind cut corners are not acceptable.
5. Apply granules at all laps to cover and protect all exposed adhesive.

E. ParaPro 123 Flashings:

1. Prepare surface for application.
2. Mask area.
3. Apply catalyzed resin at a rate of 0.19 kg.sf.
4. Embed fleece before resin sets up, no air pockets.
5. Apply second layer of catalyzed resin, completely saturate fleece at a rate of 0.12 kg.sf.
6. Remove masking.

F. Install new primed lead flashing at all pipe penetrations. Set flange in plastic

cement on top of base sheet. Provide reinforcing sheet.

- G. Install new primed lead flashing in plastic cement and install reinforcing sheet at drain sumps as shown.

3.05 FIELD QUALITY CONTROL

A. Inspection:

1. Technical representative of roofing manufacturer: Periodically observe Work; observe deck preparation, general installation procedures.
2. Technical representative: Perform a punch list inspection of completed roofing, indicating items in need of attention, including conformance to manufacturer's instructions and Contract Documents; provide documentation.
3. Work shall not proceed until such observations have been made and conditions have been approved in writing by technical representative.

3.06 ADJUSTING

- A. Repair or replace damaged installed products.

3.07 CLEANING

A. Remove temporary coverings and protection of adjacent work areas.

1. Clean installed products in accordance with manufacturer's instructions prior to Final Completion. Remove excess asphalt and adhesives from finished surfaces.
2. Remove equipment from site.
3. Remove construction debris from site and legally dispose thereof.
4. Leave job site in clean condition.

3.08 PROTECTION

1. Protect installed product and finish surfaces from damage during subsequent construction.

APPENDIX ON FOLLOWING PAGE

**SIPLAST
 CERTIFICATE OF ANALYSIS**

DATE: 06/05/2000 LOT NUMBER : Q-2 157 1001-5012

MATERIAL TYPE: Paradiene 30 FR White

DIMENSIONS & MASS

	<u>MINIMUM SPECIFICATION</u>	<u>AVERAGE TESTED VALUE ±STANDARD DEVIATION</u>	<u>ACTUAL MINIMUM</u>
LENGTH (ft.):	33.5	33.6 ± .0	33.5
WIDTH (in.):	39.0	39.4 ± .0	39.4
THICKNESS AT SELVAGE (mils):	94	100 ± 2.8	96
TOTAL THICKNESS (mils):	N/A	133 ± 4.0	126
WEIGHT (lbs/roll):	90	95.9 ± 2.2	91.3
SELVAGE WIDTH (in.):	2.2	2.5 ± .1	2.4

PHYSICAL & MECHANICAL PROPERTIES¹

	<u>SPECIFICATION</u>	<u>AVERAGE TESTED VALUE ±STANDARD DEVIATION</u>
LOW TEMP. FLEXIBILITY (°F):	-13	-13 ± 0.0
GRANULE EMBEDMENT (avg. grams loss/sample):	1.50max	.6 ± .2
BREAKING LOAD (lb/in.):	30avg	36 ± 2.9
ULTIMATE ELONGATION ² (%):	55avg	61 ± 2.5
COMPOUND STABILITY (°F):	248	248 ± 0.0
DIMENSIONAL STABILITY (%):	n/a	
RESISTANCE TO THERMAL SHOCK ³ (%):	n/a	

¹Tested in Accordance with ASTM D-5147

²Defined as the point on the load-elongation curve where the load value has decreased to 5% of the maximum value obtained.

³Tested according to UEAtc (Union of European Agreement for technical construction)



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END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Copings and Cap Flashings.
2. Metal Counter Flashings.
3. Metal Flashings.
4. Stainless Steel Reglet Flashings.

B. Related Sections:

1. Section 061010 - Rough Carpentry.
2. Section 075215 - SBS Modified Bitumen Roofing (Cold).
3. Section 079200 - Joint Sealers.
4. Section 099100 - Painting.
5. Section 230000 - Basic Mechanical.
6. Section 260000 - Basic Electrical.

1.02 REFERENCES

- A. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
- B. ASTM A525 - Steel Sheet, Zinc Coated, (Galvanized) by the Hot-Dip Process.
- C. ASTM A792/A792M - Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- D. ASTM B209 - Aluminum and Aluminum Alloy Sheet and Plate.
- E. AA (Aluminum Association) - Aluminum Construction Manual: Aluminum Sheet Metal Work and Building Construction.
- F. ANSI/ASTM B32 - Solder Metal.
- G. ASTM B749 - Lead and Lead Alloy Strip, Sheet, and Plate Products.
- H. ASTM D41 - Asphalt Primer.
- I. ASTM D226 - Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.

- J. ASTM D1970 - Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam.
- K. ASTM D4586 - Asphalt Roof Cement, Asbestos Free.
- L. AISI (American Iron and Steel Institute) - Stainless Steel: Uses in Architecture.
- M. NAAMM (National Association of Architectural Metal Manufacturers) - Metal Finishes Handbook.
- N. NRCA (National Roofing Contractors Association) - Roofing Manual.
- O. SMACNA (Sheet Metal and Air Conditioning Contractors' National Association) - Architectural Sheet Metal Manual.
- P. FS (Federal Specification) O-F-506 - Flux, Soldering, Paste and Liquid.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 SUBMITTALS

- A. Submit in accordance with Section 013323.
- B. Product Data: Manufacturer's product sheets and installation instructions.
- C. Shop Drawings:
 - 1. Show layout, profiles, and product components, including anchorage, accessories, finish colors and textures.
 - 2. Include jointing patterns, jointing details, fastening methods, and installation details.
- D. Samples:
 - 1. Selection and verification samples for finishes, colors and textures.
 - 2. Three (3) sets metal samples, illustrating full color range.
- E. Quality Control:
 - 1. Certified test reports, showing compliance with specified performance characteristics and physical properties.

2. Product certificates, signed by manufacturer, certifying products comply with specified performance characteristics and physical requirements.

F. Closeout:

1. Project Record Documents:
2. Operation and maintenance data for installed products, including methods for maintaining, and precautions against cleaning materials and methods detrimental to finishes and performance.
3. Warranty documents specified herein.
4. Per Section 017700, Contract Closeout.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: Minimum 5 years commercial experience in performing this work, having specialized in work similar to that required for this project. When requested, submit certificate indicating qualification.
- B. Installer Qualifications: Minimum 5 years commercial experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.
- C. Standards: Comply with applicable requirements of NRCA Roofing Manual, and SMACNA Architectural Sheet Metal Manual.
- D. Regulatory Requirements: Comply with applicable Building Code requirements.
- E. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturer's installation instructions and warranty requirements.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Comply with manufacturer's ordering instructions and lead time requirements; deliver products in original, unopened, undamaged containers with identification labels intact.
- B. Storage:
 1. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 2. Stack preformed and Pre-coated material to prevent twisting, bending, or abrasion, and to provide ventilation.
 3. Prevent contact with materials during storage which may cause

discoloration, staining, or damage.

- C. Handling: Handle products according to manufacturer' recommendations and so as not to damage them prior to installation.

1.07 WARRANTIES

- A. Manufacturer: Manufacturer's standard Kynar Finish warranty, document executed by authorized company official, 25 years commencing on Date of Substantial Completion.
- B. Installer: Provide 2 years, commencing on Date of Substantial Completion, including coverage of materials and installation and resulting damage to building resulting from failure to resist penetration of moisture.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pre-Coated Galvanized Steel: ASTM A525, G90; 24 gauge core steel, pre-coated with "Kynar 500" or "Hylar 5000" coating of selected color. The color selected from manufacturer's full range of standard colors.
- B. Aluminum: ASTM B209, 0.03 inch thick; "Kynar 500" or "Hylar 5000" coating color to match existing finish.
- C. Lead: ASTM B749, 4 pounds per square foot minimum.
- D. Zinc-Aluminum Coated Steel Sheet: ASTM A792, Zincolume, Coating class AZ55, 24 gauge.

2.02 ACCESSORIES

- A. Fasteners: Galvanized steel or Stainless steel with soft neoprene washers at exposed fasteners. Finish exposed fasteners same as flashing metal.
 - 1. Rawl Zamac Nailins with EPDM washers at masonry/concrete substrates.
 - 2. Woodfast metal to wood screws at wood substrates.
 - 3. Self-tapping sheet metal screws at metal substrates.
- B. Underlayment: ASTM D226; No. 15 asphalt saturated roofing felt.

- C. Self Adhering Underlayment: Rubberized asphalt self-adhering sheet, with high strength polyethylene film on one side, minimum 40 mils thick; Carlisle WIP 300 High Temp, or approved equal.
- D. Plastic Cement: ASTM D4586, asbestos free, asphaltic.
- E. Provide various additional items as required for a complete and weatherproof installation.
- F. Sealant and Joint Filler: Specified under Section 079200.
- G. Reglets: Recessed stainless steel, spring lock design.
- H. Solder: FS QQ-S-571; ANSI/ASTM B32; 50/50 type.
- I. Flux: FS O-F-506. Special stainless steel flux.
- J. Provide various additional items as required for a complete and weatherproof installation.

2.03 FABRICATION

- A. Field measure site conditions prior to fabrication.
- B. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- C. Fabricate cleats and starter strips of same material as sheet, 22 gauge, minimum 3 inches wide, inter-lockable with sheet, unless shown otherwise.
- D. Form pieces in longest practical lengths.
- E. Hem exposed edges on underside ½-inch; miter and seam corners.
- F. Form flashing material with flat seam.
- G. Form copings with standing seams.
- H. Form counter flashings with lapped seams.
- I. Seal metal joints. After soldering, remove flux. Wipe and wash solder joints clean.

- J. Fabricate vertical faces with bottom edge formed outward ¼-inch and hemmed to form drip.
- K. Scuppers: Stainless steel, with soldered lead flanges.

2.04 FINISHES

- A. Field Painted Where Indicated:
 - 1. Metal Paint Primer: Phosphoric acid etch followed by zinc oxide alkyd, flat finish.
 - 2. Shop prepare and paint prime all exposed ferrous and galvanized metal surfaces.
- B. Metal Roof Primer: Asphaltic to comply with ASTM D41.
- C. Protective Back Paint: Zinc Chromate Alkyd.
- D. Protective Coating: FS-TT-C-494 Bituminous coating compound.
- E. Touch-up Paint: To match Pre-coated metal, from coating manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection:
 - 1. Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
 - 2. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
 - 3. Verify membrane termination and base flashings are in place, sealed, and secure.
 - 4. Verify field measurements, site conditions.
- B. Report to the Owner's Authorized Representative any deviations between Contract Documents and site conditions.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protection: Provide temporary coverings and protection of adjacent work areas.
- B. Surface Preparation:
 - 1. Substrate: Ensure surfaces are clean and dry, smooth, free of fins, raised edges, sharp edges, protruding or loose nails and free of foreign material.
 - 2. Prepare surfaces and details in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Comply with manufacturers' product data, technical bulletins, and catalog and carton installation instructions.
- B. Install Work in accordance with reviewed submittals.
- C. Install starter and edge strips, and cleats.
- D. Install reglets true to lines and levels. Seal top of reglets with sealant. Surface mounted reglets not acceptable unless indicated in the drawings.
- E. Provide self adhering underlayment and slip sheet behind all finish metal such as copings, and wall metal.
- F. Secure flashings in place using concealed fasteners. Use exposed fasteners only in locations indicated.
- G. Seam and seal all joints.
- H. Protective coat dissimilar metals and isolate from each other.
- I. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

3.04 ADJUSTING

- A. Repair or replace damaged installed products.

3.05 CLEANING

- A. Remove temporary coverings and protection of adjacent work areas.
 - 1. Clean installed products in accordance with manufacturer's instructions prior to Final Completion.

2. Promptly remove metal filings from sheet metal.
3. Promptly remove metal scraps from roofing.
4. Touch-up paint Pre-coated metal.
5. Leave sheet metal in clean, finished condition.
6. Remove construction debris from project site and legally dispose thereof.

3.06 PROTECTION

- A. Protect installed product and finish surfaces from damage during subsequent construction.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Substrate preparation.
 - 2. Sealant and backing.
- B. Related Sections:
 - 1. Section 076200 - Flashing and Sheet Metal.

1.02 REFERENCES

- A. ASTM C920 - Elastomeric Joint Sealants.
- B. ASTM C1193 - Guide for Use of Joint Sealants.
- C. ASTM C1330 - Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
- D. ASTM D5893 - Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.
- E. ANSI/ASTM D1056 - Flexible Cellular Materials: Sponge or Expanded Rubber.
- F. FS TT-S-001657 - Sealing Compound, Single Component, Butyl Rubber Based, solvent Release Type.
- G. FS TT-S-00227 - Sealing Compound: Elastomeric Type, Multi-Component.
- H. FS TT-S-00230 - Sealing Compound: Elastomeric Type, Single Component.
- I. SWRI (Sealing, Waterproofing and Restoration Institute) - Sealant and Caulking Guide Specification.
- J. SWRI – Applying Liquid Sealants: Applicator Training Program, Section 10 – Testing Sealant Work.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer

without defects, damage or failure.

1.04 SUBMITTALS

- A. Submit in accordance with Section 013323.
- B. Product Data:
 - 1. Manufacturer's product sheets and installation instructions.
 - 2. Indicate sealant chemical characteristics, performance criteria, limitations, color availability, manufacturer's installation instructions.
- C. Samples:
 - 1. Selection and verification samples for finishes, colors and textures.
- D. Quality Control:
 - 1. Certified test reports, showing compliance with specified performance characteristics and physical properties.
 - 2. Product certificates, signed by manufacturer, certifying products comply with specified performance characteristics and physical requirements.
- E. Closeout:
 - 1. Operation and maintenance data for installed products, including methods for maintaining, and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 2. Warranty documents specified herein.
 - 3. Per Section 017700, Contract Closeout.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Capable of providing field service representation during construction, approving acceptable installer and approving application method; regularly engaged in manufacturing and marketing of specified products.
- B. Installer Qualifications: Minimum 5 years commercial experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.
- C. Standard: Comply with applicable requirements of SWRI Guide Specification.
- D. Regulatory Requirements: Comply with applicable Building Code requirements.

- E. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturer's installation instructions and warranty requirements.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Comply with manufacturer's ordering instructions and lead time requirements; deliver products in original, unopened, undamaged containers with identification labels intact.
- B. Storage: Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

1.07 PROJECT CONDITIONS

- A. Environmental Requirements:
 - 1. Do not install solvent curing sealants in enclosed building spaces.
 - 2. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.
 - 3. Install sealants during periods of mean temperature; avoid temperature extremes which would cause maximum or minimum joint widths.

1.08 WARRANTIES

- A. Installer:
 - 1. Two (2) years commencing on Date of Substantial Completion.
 - 2. Include coverage of installed sealants and accessories which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion, or fail to properly cure.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Vulkem 116.
- B. Pecora, Sika, Sonneborn, or approved equal.

2.02 MATERIALS

- A. Butyl Sealant: FS TT-S-001657 Single component, solvent release, non-

skinning, non-sagging, black color.

- B. Polyurethane Sealant: FS TT-S-00230, Single component, chemical curing, non staining, non-bleeding, capable of continuous water immersion, non sagging type; color as selected.

2.03 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: ANSI/ASTM D1056; round, closed cell polyethylene foam rod; oversized 30 to 50 percent larger than joint width; manufactured by sealant manufacturer.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
- B. Verify that surfaces and joint openings are ready to receive Work and field measurements are as shown, and as recommended by manufacturer.
- C. Report to the Owner's Authorized Representative any deviations between Contract Documents and site conditions.
- D. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protection:
 - 1. Provide temporary coverings and protection of adjacent work areas.
 - 2. Mask surfaces as necessary.

B. Surface Preparation:

1. Clean, prime, and back no more area than can be sealed in the same day.
2. Verify sealant and primer compatibility (non-reactive) and adhesion to all substrates. Notify Architect and Owner of any non-compatible materials.
3. Remove loose materials and foreign matter which might impair adhesion of sealant.
4. Clean joints in accordance with manufacturer's instructions.
5. Prime joint surfaces where required to achieve bond.
6. Verify that joint backing and release tapes are compatible with sealant.

3.03 APPLICATION

- A. Comply with manufacturer's product data, technical bulletins, and catalog and container application instructions.
- B. Measure joint dimensions and size materials to achieve required width/depth ratios.
- C. Install joint backing to achieve a neck dimension half the joint width.
- D. Install bond breaker where joint backing is not used.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Apply sealant free of air pockets, foreign embedded matter, ridges, and sags.
- G. Unless otherwise shown, tool joints slightly concave and free draining.

3.04 ADJUSTING

- A. Repair or replace damaged installed products.

3.05 CLEANING

- A. Remove temporary coverings and protection of adjacent work areas.
- B. Clean installed products in accordance with manufacturer's instructions prior to Final Completion.

- C. Clean adjacent soiled surfaces.
- D. Remove construction debris from project site and legally dispose thereof.

3.06 PROTECTION

- A. Protect installed product and finish surfaces from damage during subsequent construction.
- B. Protect sealants until cured.

3.07 SCHEDULE

- A. Sealant S1: Butyl (concealed locations).
- B. Sealant S2: Single-component polyurethane (exposed exterior locations).

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A Tubular daylighting devices and accessories.
- B Related Sections:
 - 1. Section 061010 - Rough Carpentry
 - 2. Section 075215 - SBS Modified Bitumen Roofing (Cold).
 - 3. Section 076200 - Flashing and Sheet Metal.
 - 4. Section 079200 - Joint Sealers.

1.02 REFERENCES

- A ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- B ASTM A 463/A 463M - Standard Specification for Steel Sheet, Aluminum Coated, by the Hot Dip Process.
- C ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized), by the Hot Dip Process.
- D ASTM A 792/A 792M – Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- E ASTM E 283 - Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- F ASTM E 308 - Standard Practice for Computing the Colors of Objects by Using the CIE System.
- G ASTM E 330 - Structural Performance of Exterior Windows, Curtain Walls and Doors.
- H ASTM E 547 - Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain walls by Cyclic Air Pressure Difference.
- I ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.

- J ASTM D 635 - Test Method for Rate of Burning and/or Extent of Time of Burning of Self-Supporting Plastics in a Horizontal Position.
- K ASTM D 1929 - Test Method for Ignition Properties of Plastics.
- L ASTM D 2843 – Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics.
- M AAMA/WDMA/CSA 101/I.S.2/A440 - Standard/Specification for Windows, Doors, and Unit Skylights.
- N FM Standard 4431 - The Approval Standard for Skylights.

1.03 PERFORMANCE REQUIREMENTS

- A Daylight Reflective Tubes: Spectralight Infinity with Cool Tube Technology combines ultra-high Visible Light reflectance with Ultra-low Infrared (IR) reflectance. Patented spectrally-selective optical surface yields an average total- and specular-reflectance greater than 99.5% percent for the Visible Light spectrum (400 nm to 700 nm) providing maximized visible light transmission and less than 25% reflectance for Infrared (IR) heat wavelengths (750 nm to 2500 nm) for minimized heat transmission, resulting in a spectrally-selective Total Solar Spectrum (250 nm to 2500 nm) reflectance less than 37 percent, as measured using a Perkin Elmer Lambda 1050 spectrophotometer with a Universal Reflectance Accessory. Color: a* and b* (defined by CIE L*a*b* color model) shall not exceed plus 2 or be less than minus 2 as determined in accordance to ASTM E 308.
- B BRIGHTEN UP 290 DS (Suspended or Open Ceilings)
 - 1. AAMA/WDMA/CSA 101/IS2/A440, Class CW-PG70 size tested 14 inch (356 mm), Type TDDCC.
 - a. Air Infiltration Test: Air infiltration will not exceed 0.30 cfm/sf aperture with a pressure delta of 1.57 psf across the tube when tested in accordance with ASTM E 283.
 - b. Water Resistance Test:
 - 1) Passes water resistance; no uncontrolled water leakage with a pressure differential of 10.7 psf (512 Pa) or 15 percent of the design load (whichever is greater) and a water spray rate of 5 gallons/hour/sf for 24 minutes when tested in accordance with ICC-ES AC-16, ASTM E 547 and ASTM E 331.

- c. Uniform Load Test: All units tested with a safety factor of (3) for positive pressure and (2) for negative pressure, acting normal to plane of roof in accordance with ASTM E 330.
 - 1) No breakage, permanent damage to fasteners, hardware parts, or damage to make system inoperable or cause excessive permanent deflection of any section when tested at a Positive Load of 150 psf (7.18 kPa) or Negative Load of 60 psf (2.87 kPa) in accordance with ICC AC-16 Section A, or Negative Load of 70 psf (3.35 kPa) if tested per ICC AC-16 Section B.
- d. Hurricane Resistance:
 - 1) Meets Florida Building Code TAS, 201, TAS, 202 and TAS 203 for Impact and non-impact components.
 - 2) Meets ASTM E 1886 and ASTM E1996 for missile and cyclic pressure differential testing.
- e. Fire Testing:
 - 1) When used with the Dome Edge Protection Band, all domes meet fire rating requirements as described in the International Building Code.
 - 2) Self-Ignition Temperature - Greater than 650 degrees F per ASTM D-1929.
 - 3) Smoke Density: Rating no greater than 450 per ASTM Standard E 84 in way intended for use. Classification C.
 - 4) Rate of Burn and/or Extent: Maximum Burning Rate: 2.5 inches/min (62 mm/min) Classification CC-2 per ASTM D 635.
 - 5) Rate of Burn and/or Extent: Maximum Burn Extent: 1 inch (25 mm) Classification CC-1 per ASTM D 635

1.04 SUBMITTALS

- A Submit in accordance with Section 013323.
- B Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Data sheets showing roof dome assembly, flashing base, reflective tubes, diffuser assembly, and accessories.
 - 4. Installation requirements.
- C Shop Drawings. Submit shop drawings showing layout, profiles and product components, including rough opening and framing dimensions, anchorage, roof flashings and accessories.

1.05 QUALITY ASSURANCE

- A Manufacturer Qualifications: Engaged in manufacture of tubular daylighting devices for minimum 20 years.

1.06 DELIVERY, STORAGE AND HANDLING

- A Delivery: Comply with manufacturer's ordering instructions and lead time requirements; deliver products in original, unopened, undamaged containers with seals and identification labels intact.
- B Storage: Store products in manufacturer's unopened packaging, protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
- C Handling: Exercise care in handling, loading, unloading and storing products to avoid damage.

1.07 PROJECT CONDITIONS

- A Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.08 WARRANTY

- A Daylighting Device: Manufacturer's standard warranty for 10 years.
- B Electrical Parts: Manufacturer's standard warranty for 5 years, unless otherwise indicated.
- C LED Emitters, Drivers and Controls: Manufacturer's standard warranty for 3 years against failure.
- D Installer: Provide two year warranty from the date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A Manufacturer: Solatube International, Inc.; 2210 Oak Ridge Way, Vista, CA

92081. Tel. Toll Free: 888-765-2882. Tel: (760) 477-1120. Fax: (760) 597-4488.
Email: commsales@solatube.com. Web: www.solatube.com.

2.02 TUBULAR DAYLIGHTING DEVICES

- A Tubular Daylighting Devices General: Transparent roof-mounted skylight dome and curb, reflective tube, and ceiling level diffuser assembly, transferring sunlight to interior spaces; complying with ICC AC-16.
- B Brighten Up Series: Solatube Model 290 DS: 14 Inch (350 mm) Daylighting System:
 - 1. Model: Solatube Model 290 DS used for daylighting systems with suspended or hard ceilings. AAMA Type TDDCC.
- C Capture Zone:
 - a. Roof Dome Assembly: Transparent, UV and impact resistant dome with flashing base supporting dome and top of tube.
 - 1. Outer Dome Glazing: Type DA, 0.125 inch (3.25 mm) minimum thickness impact resistant injection molded acrylic classified as CC2 material; UV inhibiting (100 percent UV C, 100 percent UV B and 98.5 percent UV A), impact modified acrylic blend.
 - 2. Raybender 3000: Variable prism optic molded into outer dome to capture low angle sunlight and limit high angle sunlight.
 - 3. Shock Inner Dome Glazing: Type DAI, 0.115 inch (2.9 mm) minimum thickness classified as CC1 material. High impact resistant injection molded acrylic required for high velocity wind zones.
 - 4. Tube Ring: Attached to top of base section; 0.090 inch (2.3 mm) nominal thickness injection molded high impact acrylic; to prevent thermal bridging between base flashing and tubing and channel condensed moisture out of tubing.
 - 5. Dome Seal: Polyethylene foam seal, black, 0.13 inch (3.2 mm) thick by 14.62 (371 mm) diameter, 2 PCF polyethylene foam.
 - 6. LightTracker Reflector, made of aluminum sheet, thickness 0.015 inch (0.4 mm) with Spectralight Infinity. Positioned in the dome to capture low angle sunlight.
- D Dome Options: Dome Edge Protection Band: Type PB, for fire rated Class A, B or C roof applications. Aluminized steel nominal thickness of 0.028 inches (0.7 mm).
- E Flashings: Base Style: Type FC, Curb Cap, with inside dimensions of 27 inches by 27 inches to cover curb as specified in Section 076200.

1. Curb Cap Insulation: Type CCI, nominal 1 inch thick thermal isolation pad to reduce thermal conduction between curb-cap and tubing and thermal convection between room air and curb-cap.
- F Transfer Zone: Extension Tubes: Aluminum sheet, thickness 0.015 inch.
1. Reflective Tubes: Reflective Extension Tube: Type EXX field verify total length of run.
 2. Interior Finish: Spectralight Infinity with Cool Tube Technology combining ultra-high Visible Light reflectance with Ultra-low Infrared (IR) reflectance.
 3. (c) Color: a^* and b^* (defined by CIE $L^*a^*b^*$ color model) shall not exceed plus 2 or be less than minus 2 as determined in accordance to ASTM E 308.
 4. All components required for a complete installation.

2.03 ACCESSORIES

- A Anchorage Devices: Fasteners: Same material as metals being fastened, non-magnetic steel, non-corrosive metal of type recommended by manufacturer, or injection molded nylon.
- B Suspension Wire: Steel, annealed, galvanized finish, size and type for application and ceiling system requirement.
- C Sealant: Polyurethane or copolymer based elastomeric sealant as provided or recommended by manufacturer.
- D Accessories required for a complete installation.

PART 3 EXECUTION

3.01 EXAMINATION

- A Do not begin installation until substrates have been properly prepared.
- B Examine openings, substrates, structural support, anchorage, and conditions for compliance with requirements for installation tolerances and other conditions.
- C If substrate and rough opening preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A Verify roof opening locations and curbs are solidly set.
- B Verify field measurements, site conditions.
- C Do not proceed until unsatisfactory conditions have been corrected.
- D Clean surfaces thoroughly prior to installation.
- E Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A Install in accordance with manufacturer's printed instructions.
- B Coordinate installation with substrates, air and vapor retarders, roof insulation, roofing membrane, and flashing to ensure that each element of the Work performs properly and that finished installation is weather tight.
- C Provide thermal isolation when components penetrate or disrupt building insulation. Pack fibrous insulation in rough opening to maintain continuity of thermal barriers.
- D Install flashing to produce weatherproof seal with curb and overlap with roofing system termination at top of curb.
- E Coordinate with installation of roofing system and related flashings.
- F Where metal surfaces of tubular unit skylights will contact incompatible metal or corrosive substrates, including preservative-treated wood, provide permanent separation as recommended by manufacturer.
- G Apply backing paint on aluminum surfaces of units in contact with cementitious materials or dissimilar metals.
- H Provide weather-tight installation.
- I Align device free of warp or twist, maintain dimensional tolerances.
- J Inspect installation to verify secure and proper mounting. Test each fixture to verify operation, control functions, and performance. Correct deficiencies.

3.04 CLEANING

- A Remove temporary coverings and protection of adjacent work areas.
- B Clean exposed surfaces according to manufacturer's written instructions. Touch up damaged metal coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
- C Remove construction debris from project site and legally dispose thereof.

3.05 PROTECTION

- A Protect installed products and finish surfaces from damage during subsequent construction.
- B Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Exterior roof mounted equipment.
 - 2. Surfaces indicated on the drawings.
 - 3. Surface preparation.

- B. Related Sections:
 - 1. Section 076200 - Flashing and Sheet Metal.

1.02 REFERENCES

- A. ASTM D523 - Test Method for Specular Gloss.

- B. ASTM E84 - Test Method for Surface Burning Characteristics of Building Materials.

- C. SSPC (Steel Structures Painting Council) - Steel Structures Painting Manual.

- D. NACE (National Association of Corrosion Engineers International) - Industrial Maintenance Painting.

- E. PDCA (Painting and Decorating Contractors of America) - Architectural Specification Manual, published by the Washington Council.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturers without defects, damage or failure.

1.04 SUBMITTALS

- A. Submit in accordance with Section 013323.

- B. Product Data:
 - 1. Manufacturer's product sheets for each type of paint.
 - 2. Include performance data, application instructions and methods, including mixing, surface preparation, compatible primers and top coats,

recommended wet and dry film thickness.

- C. Samples:
 - 1. Selection and verification samples for finishes, colors and textures.
 - 2. Apply to 8 inch by 10 inch panels, opaque finishes on cardboard.
 - 3. Submit three displays of each color, finish, texture, and type.

- D. Closeout:
 - 1. Operation and maintenance data for installed products, including methods for maintaining, and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 2. Per Section 017700, Contract Closeout.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years commercial experience in the manufacture and supply of materials used in this work.
 - 1. Provide materials for each general purpose of same manufacturer; except for shop prime coats.

- B. Installer Qualifications: Minimum 5 years commercial experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.

- C. Standard: Comply with applicable requirements of PDCA Architectural Specification Manual.

- D. Regulatory Requirements:
 - 1. Comply with applicable Building Code requirements.
 - 2. Comply with governing agency's regulations for paint materials, including State requirements for volatile organic compounds (VOC).
 - 3. Comply with applicable requirements of USDA (U.S. Department of Agriculture).
 - 4. Comply with applicable requirements of UL (Underwriters Laboratories, Inc.).

- E. Each Product Container Bear Manufacturer's label, including:
 - 1. Type of material.
 - 2. Manufacturer's name.
 - 3. Product number.
 - 4. Batch number.
 - 5. Color.

6. Instructions for reducing.

F. Field Samples:

1. Apply where directed.
2. Use this sample to determine acceptability of workmanship, color and texture.
3. Acceptable sample will be used as standard, and may be retained as part of finished Work.
4. Remove and properly dispose of rejected samples.

G. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturers' application instructions and warranty requirements.

1.06 DELIVERY, STORAGE AND HANDLING

A. Delivery: Comply with manufacturers' ordering instructions and lead time requirements; deliver products in original, unopened, undamaged containers with identification labels intact.

B. Storage:

1. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturers.
2. Store in unopened containers, in designated storage space.
3. Keep storage space neat, clean and accessible.
4. Protect floor from spillage.

1.07 PROJECT CONDITIONS

A. Environmental Requirements:

1. Do not paint when air is dust-laden or when weather or temperature conditions are unsuitable.
2. Maintain temperatures within building at minimum 60 degrees Fahrenheit during painting and drying periods.
3. Do not paint exterior surfaces in damp or rainy weather.
4. Do no exterior Work on unprotected surfaces if moisture from any source is present, or forecast before paints can attain proper cure.
5. Provide adequate ventilation for health, safety and drying requirements. Do not apply in areas where dust is being generated. Protect against damage from other areas and/or construction operations.
6. Apply coats to surfaces under environmental conditions and within the

limitations recommended by material manufacturers. Minimum ambient air and surface temperature 40 degrees Fahrenheit for 24 hours before, during, and after application.

- B. Fire Precaution: At the end of each Work day, place solvent soaked cloths, waste, and other materials which constitute fire hazard in metal containers and remove from premises.

1.08 WARRANTIES

- A. Installer: Installer's Standard Warranty document executed by authorized company official, 2 years commencing on Date of Substantial Completion.

1.09 MAINTENANCE

- A. Extra Materials:
 - 1. Deliver to Project site the following items as directed. Store in unopened containers and in manner recommended by manufacturer.
 - 2. One gallon each type and color used.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Exterior Paint:
 - 1. Miller.
 - 2. Sherwin Williams.
 - 3. Benjamin Moore.
 - 4. or approved equal.

2.02 MATERIALS

- A. All Materials: Manufacturer's "top-of-the-line," best quality of generic type specified.
- B. Paint Types:
 - 1. Alkyd enamel (AE), oil based, exterior.
- C. Specular Gloss: Ranges determined per ASTM D523. Sheen is specified to establish required gloss range.

<u>Sheen</u>	<u>Designation</u>	<u>Geometry/Deg.</u>	<u>Gloss Range</u>
Flat	FL	85	Below 15
Eggshell	EG	60	5 to 20
Satin	SA	60	15 to 35
Semi-Gloss	SG	60	30 to 65
Gloss	GL	60	Over 65

- D. Final Coat Colors: Factory mix; no jobsite color matching permitted.
- E. Mildew Resistance: Add fungicidal agent to exterior paint at factory. Clearly indicate on labels that paint is mildew resistant.

2.03 Paint Systems

- A. Semi-gloss finish to match existing painted metal such as flashing and similar items.
 - First Coat: Rust inhibitive metal primer at bare metal.
 - Second Coat: Exterior alkyd.
 - Third Coat: Exterior alkyd.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection:
 - 1. Examine substrates, adjoining construction and conditions under which Work is to be performed.
 - 2. Verify substrate conditions are acceptable for product installation in accordance with manufacturers' instructions.
 - 3. Examine substrate surfaces to assure that they are dry, clean, of uniform texture, free of bond inhibiting foreign substances or other conditions that would adversely affect adhesion, protective properties, or coating appearance.
- B. Measure moisture of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of interior and exterior surfaces is 12% or less.
- C. Report to the Owner's Authorized Representative any deviations between

Contract Documents and site conditions.

- D. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Protection:

1. Provide temporary coverings and protection of adjacent work areas.
2. Provide drop cloths, barricades, other forms of protection necessary to safeguard adjacent Work, and to preserve painted Work free from damages of every nature. Post signs promptly following application.

- B. Fixtures: Remove and store, or protect hardware, accessories, plates, lighting fixtures and similar items installed prior to painting. Reinstall or remove protection upon completion.

C. Surface Preparation:

1. Ensure that all surfaces designated to be coated are properly prepared in accordance with Specifications, referenced standards, and manufacturers' recommendations.
2. Remove scale, dirt, dust, grit, rust, wax, grease, efflorescence, loose material, and other foreign matter detrimental to proper adhesion of paint.

- D. Shop Painted Items: Touch-up abraded surfaces prior to painting; use same type of paint as shop coat. Feather edge abraded surfaces prior to touch-up.

E. Ferrous Metal:

1. Use suitable solvents, tools, and methods to clean surfaces.
2. Un-coated Steel and Iron Surfaces: Remove grease, rust, scale, dirt and dust from steel and iron surfaces in accordance with SSPC-1. Where heavy coatings of scale are evident, remove by wire brushing (SSPC-SP2) or other SSPC-SP approved method.
3. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Sand and feather edges to smooth surface. Clean areas with solvent and spot prime bare metal areas.

F. Existing Painted Surfaces:

1. Sand, wire brush, or scrape painted surfaces to remove loose, scaling paint and to reduce gloss. Feather edge abraded surfaces. Thoroughly clean, remove rust, and prepare existing surfaces, insure proper adhesion.
2. Existing lead-based coatings: See Section 011000; 1.05 Lead Based Paint.

3.03 APPLICATION

- A. Comply with manufacturers' product data, technical bulletins, and catalog and container application instructions.
- B. Paint all surfaces exposed to view, unless otherwise indicated. Where not indicated, paint as directed.
- C. Surfaces Not to be Painted: Furred spaces; trenches, tunnels, plenums, shafts and hoistways; storage tanks; concealed pipe, ductwork and conduit; concealed rough hardware; cast-iron and galvanized steel gratings, covers and frames; stainless steel, unless otherwise specified; factory finished surfaces, and other surfaces so indicated.
- D. Apply, as a minimum, specified number of coats; apply sufficient coats to produce specified mil dry film thickness.
- E. Apply paint and coating with suitable brushes, rollers, or spraying equipment as recommended by coating manufacturer and as specified. Do not exceed coating manufacturer's recommended drying time between succeeding coats.
- F. Apply finish coats smooth, free of brush marks, runs, drips, sags, streak laps, pile-up, and skipped or missed areas.
- G. Ensure that coating is so complete that additional coating will not change color or texture of painted surface. Apply additional coats as required to achieve this condition.

3.04 FIELD QUALITY CONTROL

- A. Site Tests:
 - 1. Where materials are being applied over previously painted surfaces, apply samples and perform in-place test to check for compatibility, adhesion and film integrity of new materials to existing painted surfaces.
 - 2. Painting may be tested, at the Owner's option, to determine materials quality and compliance with Contract Documents.
 - 3. Upon completion, if requested by the Owner, manufacturer's representative shall measure paint thickness with Tooke Dry Film Thickness System. Recoat Work not conforming to specified dry mil thickness until thickness is that specified.

- B. Inspection:
 - 1. After paint and coating Work has been completed, make a detailed inspection of paint finish and touch-up or refinish non-complying Work.

3.05 ADJUSTING

- A. Repair or replace damaged installed products.
- B. Carefully remove splatters of paint materials from adjoining Work. Repair all damages that may be caused by such cleaning operations and other painting activities.

3.06 CLEANING

- A. Remove temporary coverings and protection of adjacent work areas.
 - 1. Clean installed products in accordance with manufacturers' instructions prior to Final Completion.
 - 2. Remove implements of service, and materials from premises and leave entire Project in clean condition.
 - 3. Remove construction debris from project site and legally dispose thereof.

3.07 PROTECTION

- A. Protect finished product and surfaces from damage during subsequent construction.

3.08 EXTERIOR PAINTING SCHEDULE

- A. Roof Mounted Equipment & New Entry Door:
 - Alkyd Enamel on Ferrous Metal:
 - Prime Coat: Rust inhibitive metal primer at bare metal.
 - Body Coat: Exterior alkyd.
 - Finish Coat: Exterior alkyd.
 - Thickness: 4 mils dry.
 - Sheen/Color: Semi-gloss.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Plumbing.
- B. Related Sections:
 - 1. Section 221426 - Roof Drains.
 - 2. Section 230000 - Basic Mechanical.

1.02 REFERENCES

- A. ASTM A53/A53M - Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- B. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM C547 - Mineral Fiber Pipe Insulation.
- D. ANSI/ASME B31.9 - Building Services Piping.
- E. MSS (Manufacturers Standardization Society of The Valve and Fittings Industry) SP-58 - Pipe Hangers and Supports - Materials, Design and Manufacture.
- F. MSS SP-69 - Pipe Hangers and Supports - Selection and Application.
- G. MSS SP-89 - Pipe Hangers and Supports - Fabrication and Installation Practices.
- H. MSS SP-127 - Bracing for Piping Systems Seismic-Wind-Dynamic Design, Selection, Application.

1.03 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. Incorporate in designs pipe hangers and supports to manufacturers' recommendations utilizing manufacturers' regular production components, parts and assemblies as detailed in manufacturers' pipe hanger catalog.
 - 2. Establish maximum load ratings with consideration for allowable stresses prescribed by ASME B31.1 or MSS SP-58.

- B. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturers without defects, damage or failure.

1.04 SUBMITTALS

- A. Submit in accordance with Section 013323.
- B. Product Data:
 - 1. Manufacturers' product sheets and installation instructions.
 - 2. Plumbing fixtures.
- C. Shop Drawings:
 - 1. Show layout, profiles, and product components, including anchorage, accessories.
 - 2. Plans illustrating piping, supports and related items.
- D. Closeout:
 - 1. Project Record Documents: As-Built Drawings and Specifications - maintain at site one set of documents for recording "As-Built" conditions as Work progresses. Indicate locations of concealed elements by dimension from structure or building grid.
 - 2. Operation and maintenance data for installed products, including methods for maintaining, and precautions against cleaning materials and methods detrimental to finishes and performance.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Supply materials of similar class by same manufacturer.
- B. Installer Qualifications: Minimum 5 years commercial experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.
- C. Regulatory Requirements: Comply with applicable requirements of the following:
 - 1. Building Code.
 - 2. Plumbing: Oregon Plumbing Specialty Code.
- D. Obtain applicable permits, licenses, inspections. OSU to pay Permit fees.

- E. Pre-Installation Meeting: Conduct meeting to verify project requirements, substrate conditions, manufacturers' installation instructions and warranty requirements.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Comply with manufacturers' ordering instructions and lead time requirements; deliver products in original, unopened, undamaged containers with identification labels intact.
- B. Storage:
 - 1. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - 2. Store inside, protected from dirt and construction dust.
- C. Handling: Exercise care in handling, loading, unloading and storing products to avoid damage.

1.07 PROJECT CONDITIONS

- A. Hazardous Materials: If during the course of Work, Contractor observes existence of hazardous materials, immediately terminate further Work and notify Owner of the condition. Owner will, after consultation, determine a further course of action.

1.08 WARRANTIES

- A. Installer:
 - 1. Standard Workmanship Warranty - Two (2) years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Materials: New, standard, full weight, identical to products in successful operation for a minimum of two years.
- B. Piping:
 - 1. Cast iron pipe and fittings: Service weight; ASTM A74.
 - 2. No hub piping system: Cast Iron Soil Pipe Institute Specification 301.
 - a. "Anaco", "Huskey SD 4000", or "Clamp -All" high torque heavy-duty couplings.

3. Steel pipe: Schedule 40, black and galvanized, ASTM A53.

2.02 MANUFACTURED UNITS

- A. Structural Attachments: Carbon steel per ASTM A36/ASTM A515.
- B. Brackets: Malleable iron per ASTM A47/ASTM A126.
- C. U-Bolts and Straps: Malleable iron per ASTM A47/ASTM A126.
- D. Pipe Supports: Carbon steel per ASTM A36/ASTM A53.

2.03 ACCESSORIES

- A. Insulation Accessories:
 1. Insulation Bands: $\frac{3}{4}$ -inch wide; stainless steel.
 2. Metal Jacket Bands: $\frac{3}{8}$ -inch wide; thick stainless steel.
 3. Adhesives: Compatible with insulation.

2.04 FABRICATION

- A. Provide steel fabrications for support of mechanical equipment; base plates for stands.
- B. Use components for intended design purpose.
- C. Fabricate equipment supports not provided with equipment from structural grade steel.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection: Verify substrate conditions are acceptable for product installation in accordance with manufacturers' instructions.
- B. Report to the Owner's Authorized Representative any deviations between Contract Documents and site conditions.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protection: Provide temporary coverings and protection of adjacent work areas.
- B. Disconnect rooftop equipment as required.
- C. Close pipe openings with caps or plugs.
- D. Protect existing wiring, circuits, piping, conduits, control systems, from damage during course of Work.
- E. Layout: Make determination of the existence, location and condition of related utility services.
- F. Arrange Work to minimize interruption of any services. When interruptions are unavoidable, consult Owner and utilities involved; agree in writing upon a mutually satisfactory time and duration.
- G. Coordinate Work with related systems. Should rearrangement or re-routing be necessary, submit proposed revisions to Architect and Owner and obtain approval thereof.

3.03 INSTALLATION

- A. Comply with manufacturers' product data, technical bulletins, and catalog and carton installation instructions.
- B. Comply with reviewed submittals.
- C. Reconnect rooftop equipment as required.
- D. Set equipment to provide for ready access to any parts requiring inspection and/or service.

3.04 FIELD QUALITY CONTROL

- A. Site Tests: Prior to acceptance, operate all affected mechanical systems for a period of at least five consecutive eight hour days.
- B. Inspection: Upon request, provide field service consisting of product use recommendations and site visit for inspection of product installation in accordance with manufacturer's instructions.

3.05 ADJUSTING

- A. Repair or replace damaged installed products.

3.06 CLEANING

- A. Remove temporary coverings and protection of adjacent work areas.
- B. Clean installed products in accordance with manufacturer's instructions prior to Final Completion.
- C. Clean all dirt, construction dust and debris from all mechanical systems. Touch up paint where finish has been damaged.
- D. Remove construction debris from project site and legally dispose thereof.

3.07 PROTECTION

- A. Protect installed products, systems and finish surfaces from damage during subsequent construction.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. New roof drains.
- B. Related Sections:
 - 1. Section 075215 - SBS Modified Bitumen Roofing (Cold).
 - 2. Section 220010 - Basic Plumbing.

1.02 REFERENCES

- A. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings.
- B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- C. ASHRAE Equipment Handbook for pipe hanging.
- D. CISPI for no-hub piping.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 SUBMITTALS

- A. Submit in accordance with Section 013323.
- B. Product Data: Manufacturer's product sheets and installation instructions.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 5 years commercial experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.
- B. Regulatory Requirements: Comply with applicable Plumbing and Building Code

requirements.

- C. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturer's installation instructions and warranty requirements.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Comply with manufacturer's ordering instructions and lead time requirements; deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Storage: Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
- C. Handling: Exercise care in handling, loading, unloading and storing products to avoid damage.

1.07 WARRANTIES

- A. Installer:
 - 1. Standard Workmanship Warranty - Two (2) years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURED UNITS

- A. Roof Drains:
 - 1. Roof Drain: Cast iron with cast iron strainer. Smith 1310 or approved equal.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
- B. Report to the Owner's Authorized Representative any deviations between

Contract Documents and site conditions.

- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protection: Provide temporary coverings and protection of adjacent work areas.

3.03 ADJUSTING

- A. Repair or replace damaged installed products.

3.04 CLEANING

- A. Remove temporary coverings and protection of adjacent work areas.
- B. Clean installed products in accordance with manufacturer's instructions prior to Final Completion
- C. Remove construction debris from project site and legally dispose thereof.

3.05 PROTECTION

- A. Protect installed products from damage during subsequent construction.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Disconnect, store and reconnect existing rooftop equipment as required to install new roof and insulation system.
 - 2. Provide temporary exhaust venting and filtration as required during construction.

- B. Related Sections:
 - 1. Section 076200 - Flashing and Sheet Metal.
 - 2. Section 099100 - Painting.
 - 3. Section 260000 - Basic Electrical.

1.02 REFERENCES

- A. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- B. ASTM A53/A53M - Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- C. ASTM A653/A653M - Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- D. ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) - Fundamentals Handbook.
- E. SMACNA (Sheet Metal and Air Conditioning Contractors National Association) - Manual of HVAC Duct Construction Standards - Metal & Flexible.
- F. MSS SP-69 - Pipe Hangers and Supports - Selection and Application.
- G. MSS SP-127 - Bracing for Piping Systems Seismic-Wind-Dynamic Design, Selection, Application.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturers without defects, damage or failure.

1.04 SUBMITTALS

- A. Submit in accordance with Section 013323.
- B. Closeout:
 - 1. Project Record Documents: As-Built Drawings and Specifications - maintain at site one set of documents for recording "As-Built" conditions as Work progresses. Indicate locations of concealed elements by dimension from structure or building grid.
 - 2. Copies of certificates of Code Authority acceptance.
 - 3. Per Section 017700, Contract Closeout.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years commercial experience in the manufacture and supply of materials used in this work.
- B. Installer Qualifications: Minimum 5 years commercial experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.
- C. Standards: Comply with applicable requirements of the following:
 - 1. ASHRAE Handbook.
 - 2. NFPA 13.
 - 3. NFPA 90A.
 - 4. SMACNA Manual.
 - 5. Gauges, hanging, supporting and bracing per MSS and SMACNA.
- D. Regulatory Requirements: Comply with applicable requirements of the following:
 - 1. Building Code.
 - 2. Plumbing Code.
 - 3. HVAC: Oregon Mechanical Specialty Code.
- E. Obtain applicable permits, Owner reimburses for permits and fees.
- F. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturers' installation instructions and warranty requirements.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Comply with manufacturers' ordering instructions and lead time requirements; deliver products in original, unopened, undamaged containers with identification labels intact.
- B. Storage:
 - 1. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - 2. Store inside, protected from dirt and construction dust.
- C. Handling: Exercise care in handling, loading, unloading and storing products to avoid damage.

1.07 PROJECT CONDITIONS

- A. Hazardous Materials: If during the course of Work, Contractor observes existence of hazardous materials, immediately terminate further Work and notify the Owner's Authorized Representative of the condition. The Owner will, after consultation, determine a further course of action.

1.08 WARRANTIES

- A. Installer:
 - 1. Standard Workmanship Warranty - Two (2) years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Materials: New, standard, full weight, identical to products in successful operation for a minimum of two years.
- B. Temporary Exhaust:
 - 1. North exhaust drop: 2,000 cfm minimum. 1.25" s.p., 1 ½ hp.
 - 2. East exhaust drop: 3,450 cfm minimum. 1.25" s.p., 1 ½ hp.
 - 3. South exhaust drop: 3,150 cfm minimum. 1.25" s.p., 1 hp.
- C. Provide filters on the open supply ducts.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection:
 - 1. Verify substrate conditions are acceptable for product installation in accordance with manufacturers' instructions.
 - 2. Before starting Work, carefully examine site and Contract Documents. Become thoroughly familiar with conditions governing Work.
- B. Report to the Owner's Authorized Representative any deviations between Contract Documents and site conditions.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protection: Provide temporary coverings and protection of adjacent work areas.
- B. Disconnect and store existing roof mounted equipment as necessary to complete work as specified.
- C. Notify Owner's Authorized Representative of any conditions of non-compliance with current applicable codes.
- D. Close pipe openings with caps or plugs.
- E. Protect existing wiring, circuits, piping, conduits, control systems, from damage during course of Work.
- F. Arrange Work to minimize interruption of any services. When interruptions are unavoidable, consult Owner's Authorized Representative and utilities involved; agree in writing upon a mutually satisfactory time and duration.
- G. Coordinate Work with related systems. Should rearrangement or re-routing be necessary, submit proposed revisions and obtain approval thereof.

3.03 INSTALLATION / RECONNECTION

- A. Comply with manufacturers' product data, technical bulletins, and catalog and carton installation instructions.

- B. Comply with reviewed submittals.
- C. Install equipment with minimum clearances indicated by manufacturer as required for proper maintenance, repair and service.
- D. Set equipment to provide for ready access to any parts requiring inspection and/or service.

3.04 FIELD QUALITY CONTROL

- A. Site Tests: Prior to acceptance, operate all affected mechanical systems for a period of at least five consecutive eight hour days.

3.05 ADJUSTING

- A. Repair or replace damaged installed products.

3.06 CLEANING

- A. Remove temporary coverings and protection of adjacent work areas.
- B. Clean installed products in accordance with manufacturer's instructions prior to Final Completion.
- C. Clean all dirt, construction dust and debris from all mechanical systems. Touch up paint where finish has been damaged.
- D. Remove construction debris from project site and legally dispose thereof.

3.07 PROTECTION

- A. Protect installed products from damage during subsequent construction.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Disconnect and reconnect existing roof mounted equipment as necessary to complete work specified.
 - 2. Materials and methods.

- B. Related Sections:
 - 1. Section 024110 - Selective Demolition.
 - 2. Section 230000 - Basic Mechanical.

1.02 REFERENCES

- A. NFPA (National Fire Protection Association) 70 - National Electrical Code.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide products which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

- B. Closeout:
 - 1. Project Record Documents: As-built Drawings and Specifications.
 - 2. Copies of certificates of Code Authority acceptance.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Minimum 5 years commercial experience in performing this work, having specialized in installation of work similar to that required for this project. When requested, submit certificate indicating qualification.
 - 2. Provide journeyman electricians, equipped with required tools, meters, and instruments.

- B. Regulatory Requirements:
 - 1. Comply with applicable Building Code requirements.
 - 2. Comply with Rules, Regulations and Codes of the State and local Authorities Having Jurisdiction.
 - 3. Obtain applicable permits, Owner reimburses for permits and fees.

- C. Pre-Installation Meeting: Conduct meeting with Owner's Authorized Representative to verify project requirements, substrate conditions, manufacturer's installation instructions and warranty requirements.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Delivery:
 - 1. Comply with manufacturer's ordering instructions and lead time requirements; deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.
 - 2. Transport products in manner to avoid distortion or damage.
- B. Storage:
 - 1. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturers.
 - 2. Store products off ground and under cover.
- C. Handling: Exercise care in handling, loading, unloading and storing products to avoid damage.

1.06 WARRANTIES

- 1. Installer: Standard Contractor's Warranty for Workmanship - One (1) year commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MATERIALS

- A. New, listed by the Underwriter's Laboratories, bearing their label.
- B. Conductors: Soft drawn copper, number 12 minimum size, with 600 volt type THAN insulation.
- C. Splices: Scotchlok, Ideal wire nut or similar type connector.
- D. Above Grade Conduit: Zinc coated steel EMT in dry, protected locations. Flexible steel conduit only where flexibility is necessary.

- E. Outlet Boxes: Weatherproof of code required size to accommodate wire, fittings and devices.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
- B. Report to the Owner's Authorized Representative any deviations between Contract Documents and site conditions.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protection: Provide temporary coverings and protection of adjacent work areas.
- B. Coordinate electrical wiring and equipment with conditions of construction.

3.03 INSTALLATION / RECONNECTION

- A. Comply with manufacturer's product data, technical bulletins, and catalog and carton installation instructions.
- B. Install products in conformance with applicable codes and reviewed submittals.
- C. Locate all raceways, conduit, outlet boxes and wiring concealed from view, unless otherwise shown.

3.04 FIELD QUALITY CONTROL

- A. Inspection: Ensure that Work is not covered until reviewed and accepted by Code Authority.

3.05 ADJUSTING

- A. Repair or replace damaged installed products.

3.06 CLEANING

- A. Remove temporary coverings and protection of adjacent work areas.
- B. Clean installed products in accordance with manufacturer's instructions prior to Final Completion.
- C. Remove electrical waste and debris from job site as Work progresses.
- D. Upon completion, remove all excess supplies, materials and tools.
- E. Leave the electrical Work clean, dust-free and in proper working order
- F. Remove construction debris from project site and legally dispose thereof.

3.07 PROTECTION

- A. Protect installed products from damage during subsequent construction.

END OF SECTION

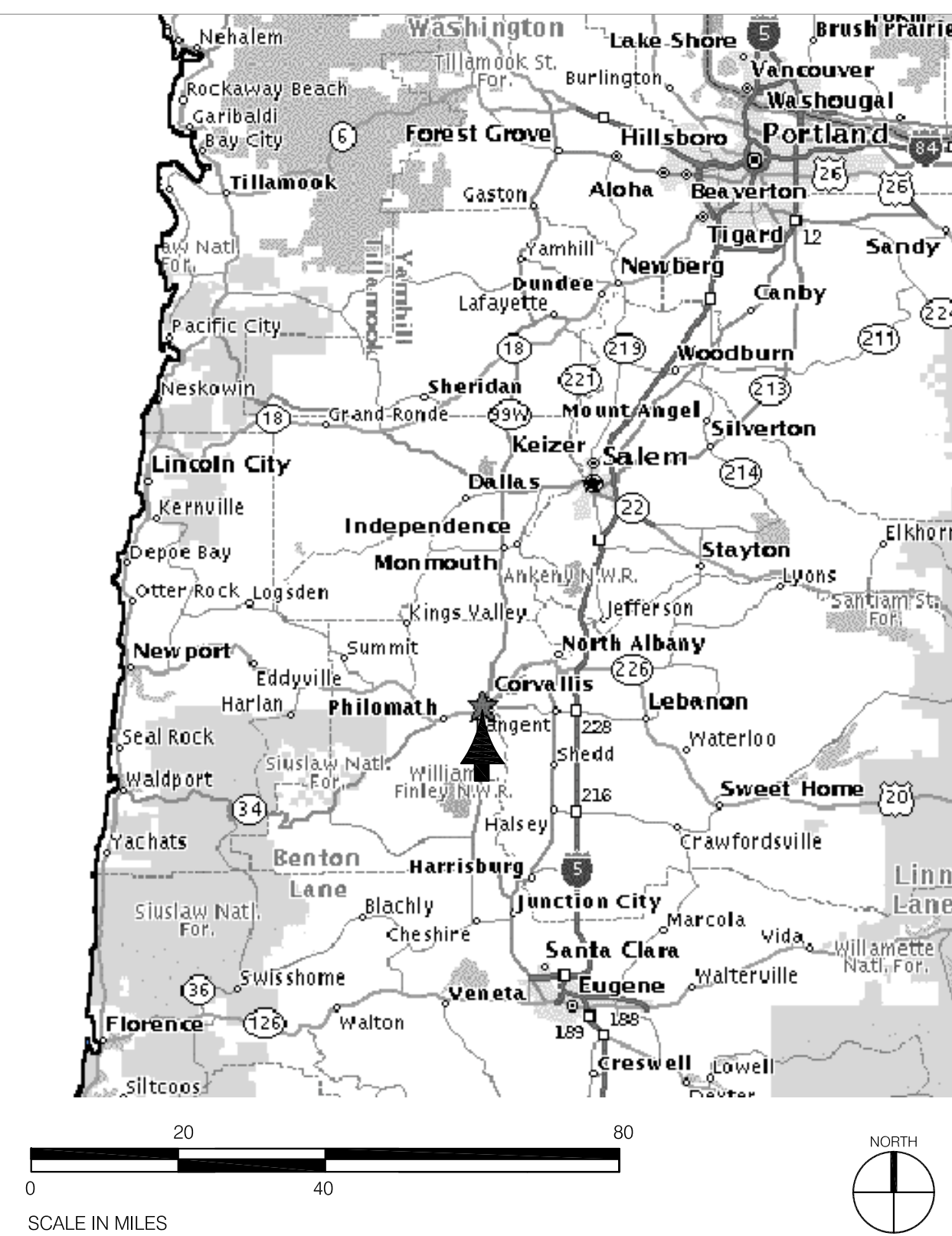
OREGON STATE UNIVERSITY FOUNDATION BUILDING REROOFING PROJECT

GENERAL NOTES

THIS FACILITY IS CURRENTLY OCCUPIED, AND IS TO REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL SEQUENCE ALL WORK TO MINIMIZE DISRUPTION OF EXISTING BUILDING AND UTILITIES, AND MAINTAIN SECURITY AND SAFE EGRESS AT ALL TIMES.

- EXISTING MATERIALS AND CONSTRUCTION ARE NOTED ON THE DRAWINGS AS EXISTING (E)(EX). ALL OTHER NOTATIONS INDICATE NEW MATERIALS, PRODUCTS, AND CONSTRUCTION. THE WORD NEW IS USED ONLY FOR CLARIFICATION.
- VERIFY ALL DIMENSIONS AND CONDITIONS OF THE PROJECT, INCLUDING EXISTING CONSTRUCTION METHODS AND MATERIALS.
- PROTECT ALL EXISTING MEMBRANES DURING CONSTRUCTION. REPAIR AREAS OF DAMAGE BY CONSTRUCTION ACTIVITIES AT NO COST TO OWNER. MAINTAIN A WATERTIGHT MEMBRANE AT ALL TIMES.
- PAINT ALL EXISTING METALS AND FLASHINGS TO MATCH NEW WORK AS SPECIFIED.
- MAINTAIN PROTECTED ACCESS TO AND EGRESS FROM BUILDING AT ALL TIMES.
- KEEP STAGING, PARKING AND STORAGE AREAS IN AN ORDERLY AND CLEAN CONDITION. RETURN AREAS BACK TO ORIGINAL OR BETTER CONDITION BEFORE FINAL COMPLETION.
- COORDINATE ALL OPERATIONS, INCLUDING ACCESS TO ROOF AREAS, PARKING, STAGING, STORAGE, ETC. WITH OWNERS AUTHORIZED REPRESENTATIVE
- UNLESS OTHERWISE INDICATED, ALL COLORS, TEXTURES AND FINISHES: MATCH EXISTING

AREA MAP



SYMBOLS

- DETAIL KEY
- KEYNOTE
- NORTH ARROW
- SPOT ELEVATION KEY
- PARAPET ELEVATION KEY
- SECTION KEY
- ELEVATION KEY

ABBREVIATIONS

- CONC. CONCRETE
- CU CUBIC
- DBL. DOUBLE
- DEMO DEMO
- DIA. DIAMETER
- EA. EACH
- EL. ELEVATION
- EX. EXISTING
- F. FAHRENHEIT
- FM. FACTORY MUTUAL
- FT. FOOT/FEET
- GA. GAUGE
- HT. HEIGHT
- KG. KILOGRAM
- LB. POUND
- MIN. MINIMUM
- NO. NUMBER
- N.I.C. NOT IN CONTRACT
- O.C. ON CENTER
- PSI. POUNDS PER SQUARE INCH
- P.T. PRESSURE TREATED
- SF. SQUARE FOOT
- SIM. SIMILAR
- T.O. TOP OF
- TYP. TYPICAL
- W/ WITH
- W/O WITHOUT
- & AND
- @ AT
- " INCH
- ' FEET
- / PER
- PL. STEEL PLATE
- # POUND, NUMBER
- Ø DIAMETER
- ⊕ CENTER LINE

MATERIALS*

- DIMENSIONAL LUMBER
 - BLOCKING
 - NON-DIMENSIONAL LUMBER
 - RIGID INSULATION
 - CANT; CRICKET
 - STEEL
 - CONCRETE
 - PLYWOOD
- * SEE INDIVIDUAL SHEETS FOR DRAWINGS SPECIFIC MATERIALS LEGENDS

PROJECT DIRECTORY

OWNER: OREGON STATE UNIVERSITY
FACILITIES SERVICES
130 OAK CREEK
CORVALLIS, OREGON 97331-2001
TEL: (541) 737-6956
ATTN: RICK FREEMAN
PROJECT MANAGER
EMAIL: Rick.Freeman@oregonstate.edu

ARCHITECT: McBRIDE ARCHITECTURE, P.C.
240 N. BROADWAY ST.
PORTLAND, OR 97227
PO BOX 12574
PORTLAND, OR 97212
TEL: (503) 916-1808
FAX: (503) 916-1816
PROJECT MANAGER: PHIL STRAND
EMAIL: phil@mcbridearchitecture.com

DRAWING FORMATTED FOR PRINTING AT 22" x 34"

PROJECT SUMMARY

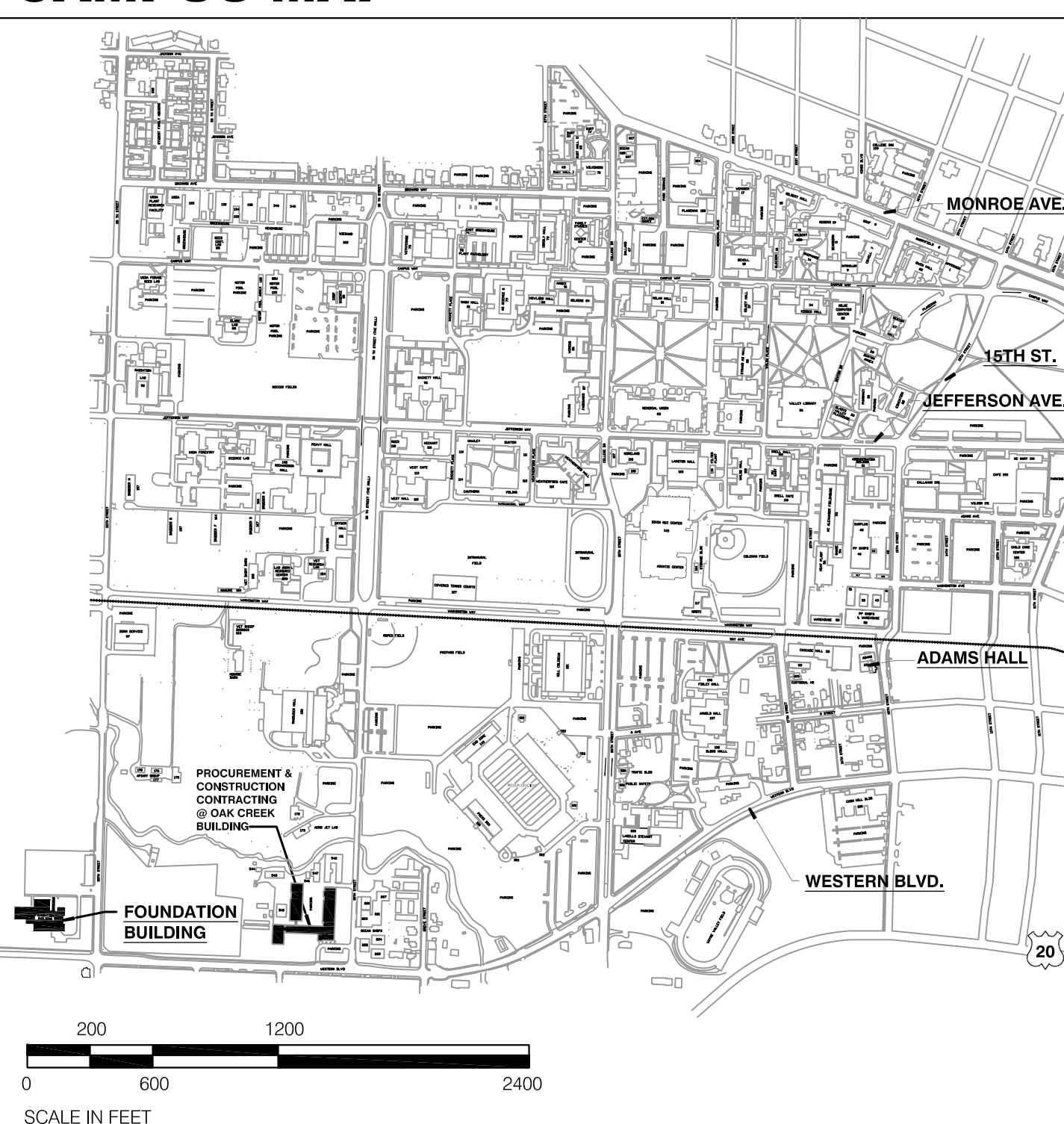
PROJECT DESCRIPTION:

- RE-ROOFING. SCOPE OF WORK INCLUDES THE FOLLOWING DIVISIONS:
- SELECTIVE DEMOLITION
 - ROOF INSULATION SYSTEM
 - ROOF CARPENTRY
 - SBS MODIFIED BITUMEN ROOFING
 - JOINT SEALERS
 - PAINTING
 - BASIC MECHANICAL
 - BASIC ELECTRICAL
 - ROOF DRAINS

UNIT PRICES:
No. 1: ADDITIONAL TUBULAR DAYLIGHTING DEVICES (SOLAR TUBES) AT LOCATIONS TO BE DETERMINED BY OWNER

ALTERNATES:
ALTERNAT No. 1: NONE

CAMPUS MAP



PROJECT DESCRIPTION:

FOUNDATION BUILDING
OREGON STATE UNIVERSITY
CORVALLIS, OREGON 97331

BUILDING CODE

PROJECT AREA DESCRIPTION	OCCUPANCY GROUP	TYPE OF CONSTRUCTION	NO. OF STORIES	HT (FT)	REMARKS
ROOF	GROUP B	TYPE I	4 STORIES	60'-0"	CLASS A ROOF TYPICAL

APPLICABLE CODES:

- 2014 - OREGON STRUCTURAL SPECIALTY CODE
- 2014 - OREGON FIRE CODE
- 2014 - OREGON MECHANICAL SPECIALTY CODE
- 2014 - OREGON ELECTRICAL SPECIALTY CODE
- 2014 - OREGON PLUMBING SPECIALTY CODE

LAST DRAWING ISSUED :

APRIL 15, 2019 - BID PERMIT SET
FEBRUARY 11, 2019 - 95% REVIEW

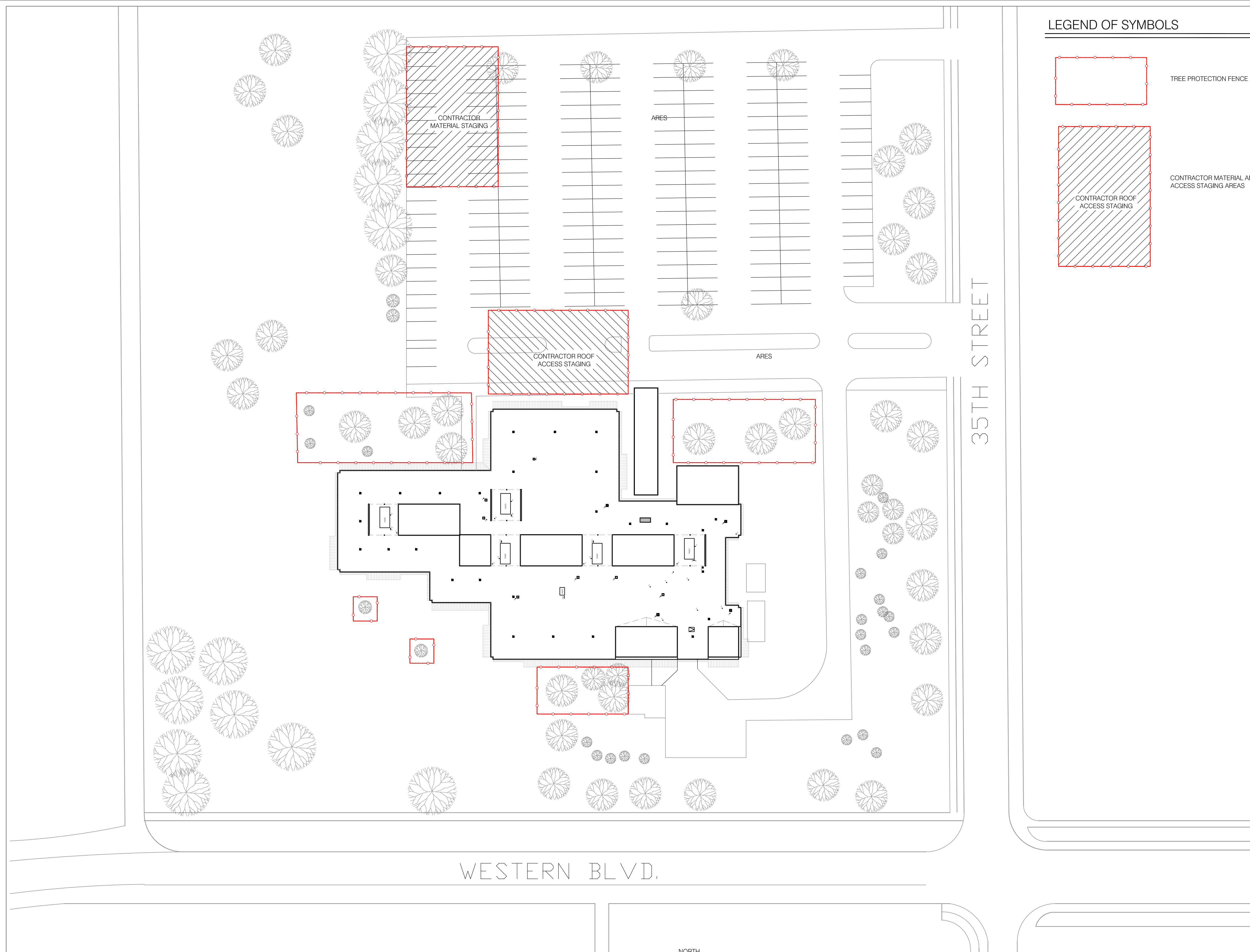
INDEX

KEY:

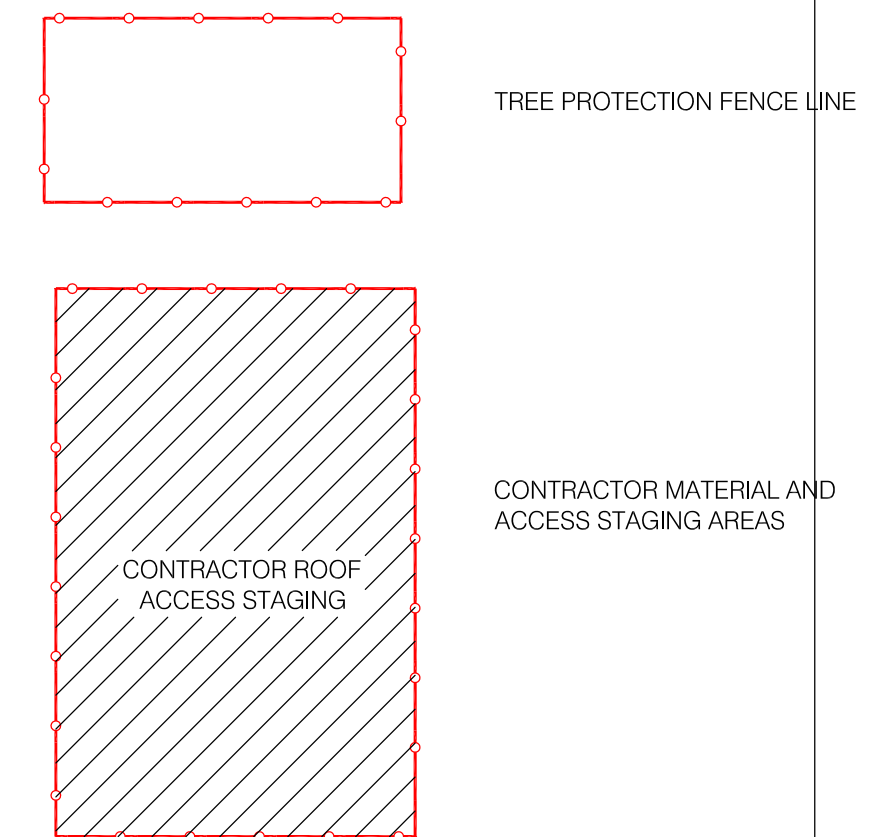
- RECORD DOCUMENTS
- DRAWING ISSUED FOR PERMIT / BID
- OWNER REVIEW
- PLAN CHECK REVISIONS
- REVISION NUMBER

NO.	REVISION	DESCRIPTION
	G0.1	COVER SHEET, PROJECT INFORMATION
	A1.1	SITE PLAN
	A2.1	DEMOLITION PLAN
	A2.2	FALL PROTECTION PLAN
	A2.3	DRAIN, CRICKET & TAPER PLAN
	A2.4	ROOF PLAN
	A2.5	WALKWAY & WARNING LINE ROOF PLAN
	A4.1	FLOOR PLAN
	A8.1	DETAILS
	A8.2	DETAILS

DRAWING FORMATTED FOR PRINTING AT 22" x 34"



LEGEND OF SYMBOLS

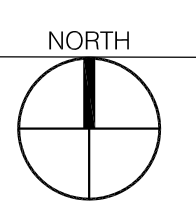


ARES

WESTERN BLVD.

35TH STREET

1 SITE PLAN
1/32" = 1' - 0"



LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2' - SCALE ACCORDINGLY)



OREGON STATE UNIVERSITY

FOUNDATION BUILDING REROOFING PROJECT

SHEET TITLE:
SITE PLAN



Date: 04/15/2019
Revisions:

Drawn: PAS
Check: RLM
File: SITE PLAN

Project: 18026.02

SHEET NUMBER:

A1.1

SHEET NOTES

- A. EXISTING MATERIALS AND CONSTRUCTION ARE NOTED ON THE DRAWINGS AS EXISTING (EXIST)(EX). ALL OTHER NOTATIONS INDICATE NEW MATERIALS, PRODUCTS, AND CONSTRUCTION. THE WORD NEW IS USED ONLY FOR CLARIFICATION.
- B. VERIFY ALL DIMENSIONS AND CONDITIONS OF THE PROJECT, INCLUDING EXISTING CONSTRUCTION METHODS AND MATERIALS.
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- D. PAINT ALL NEW AND EXISTING METALS AND FLASHINGS TO MATCH NEW WORK AS SPECIFIED.

LEGEND OF SYMBOLS

- EDS EXISTING DOWNSPOUT LOCATIONS
- P • PIPE PENETRATION
- E • ELECTRICAL CONDUIT PENETRATION
- E ◻ EXISTING CURB MOUNTED FAN 3
- HWAC EXISTING CURB MOUNTED HVAC/MECHANICAL UNIT
- ▨ EXISTING SKYLIGHT 3
- ▽ EXISTING ROOF ACCESS HATCH
- E ◻ ABANDONED CURB MOUNTED FAN 2



OREGON STATE UNIVERSITY

FOUNDATION BUILDING REROOFING PROJECT

SHEET TITLE:
DEMOLITION PLAN



Date: 04/15/2019
Revisions:

Drawn: PAS
Check: RLM
File: ROOF PLAN

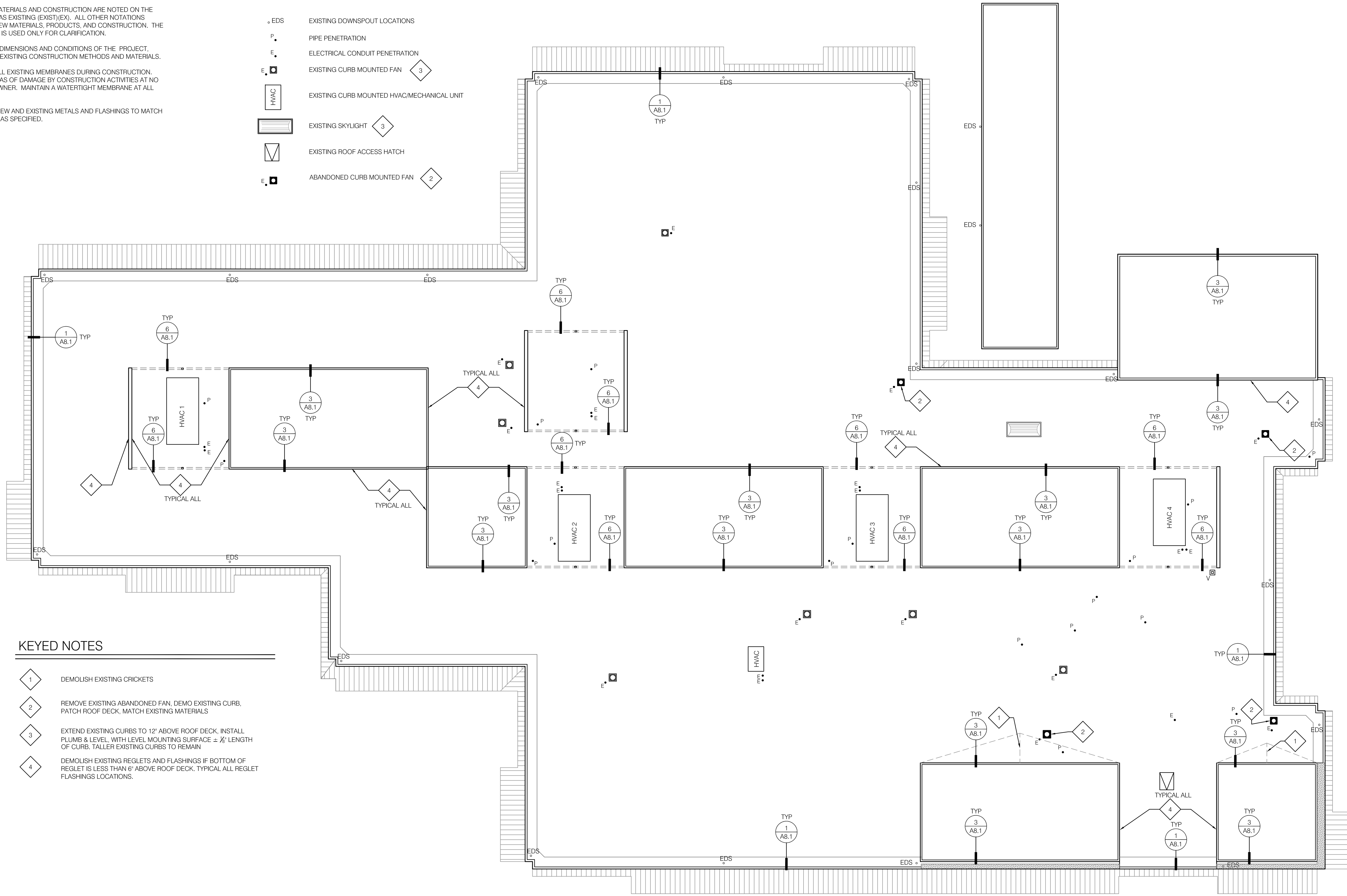
Project: 18026.02

SHEET NUMBER:

A2.1

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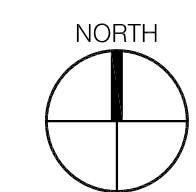
DRAWING FORMATTED FOR PRINTING AT 22" x 34"



KEYED NOTES

- 1 DEMOLISH EXISTING CRICKETS
- 2 REMOVE EXISTING ABANDONED FAN, DEMO EXISTING CURB, PATCH ROOF DECK, MATCH EXISTING MATERIALS
- 3 EXTEND EXISTING CURBS TO 12" ABOVE ROOF DECK, INSTALL PLUMB & LEVEL, WITH LEVEL MOUNTING SURFACE ± 1/8" LENGTH OF CURB. TALLER EXISTING CURBS TO REMAIN
- 4 DEMOLISH EXISTING REGLETS AND FLASHINGS IF BOTTOM OF REGLET IS LESS THAN 6" ABOVE ROOF DECK. TYPICAL ALL REGLET FLASHINGS LOCATIONS.

1 **DEMOLITION PLAN**
1" = 10' - 0"



LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2' - SCALE ACCORDINGLY)

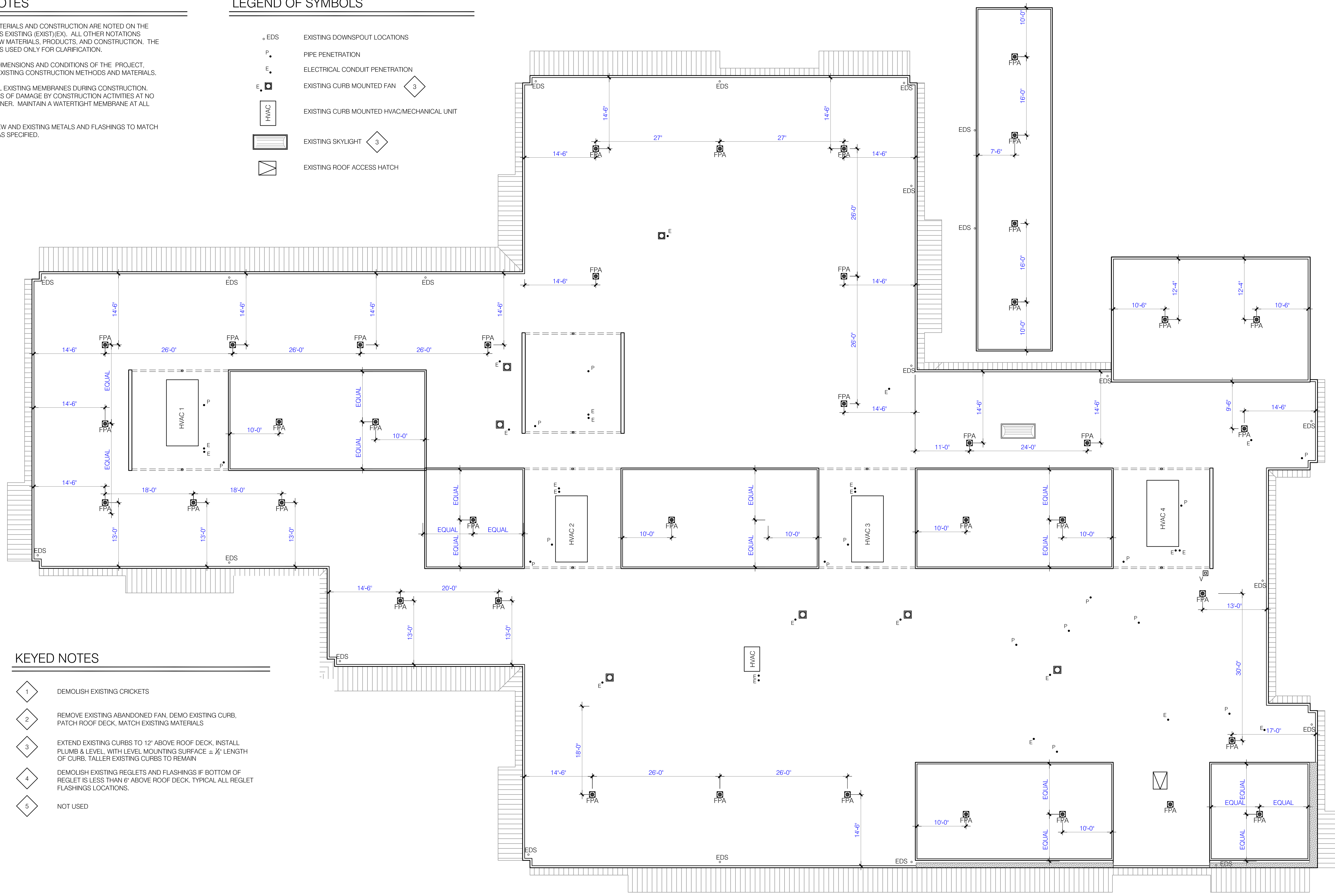
SHEET NOTES

- A. EXISTING MATERIALS AND CONSTRUCTION ARE NOTED ON THE DRAWINGS AS EXISTING (EXIST)(EX). ALL OTHER NOTATIONS INDICATE NEW MATERIALS, PRODUCTS, AND CONSTRUCTION. THE WORD NEW IS USED ONLY FOR CLARIFICATION.
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- C. PROTECT ALL EXISTING MEMBRANES DURING CONSTRUCTION. REPAIR AREAS OF DAMAGE BY CONSTRUCTION ACTIVITIES AT NO COST TO OWNER. MAINTAIN A WATERTIGHT MEMBRANE AT ALL TIMES.
- D. PAINT ALL NEW AND EXISTING METALS AND FLASHINGS TO MATCH NEW WORK AS SPECIFIED.

LEGEND OF SYMBOLS

- EDS EXISTING DOWNSPOUT LOCATIONS
- P PIPE PENETRATION
- E ELECTRICAL CONDUIT PENETRATION
- F EXISTING CURB MOUNTED FAN
- HVAC EXISTING CURB MOUNTED HVAC/MECHANICAL UNIT
- EXISTING SKYLIGHT
- EXISTING ROOF ACCESS HATCH

DRAWING FORMATTED FOR PRINTING AT 22" x 34"



KEYED NOTES

- 1 DEMOLISH EXISTING CRICKETS
- 2 REMOVE EXISTING ABANDONED FAN, DEMO EXISTING CURB, PATCH ROOF DECK, MATCH EXISTING MATERIALS
- 3 EXTEND EXISTING CURBS TO 12" ABOVE ROOF DECK, INSTALL PLUMB & LEVEL, WITH LEVEL MOUNTING SURFACE ± 1/8" LENGTH OF CURB, TALLER EXISTING CURBS TO REMAIN
- 4 DEMOLISH EXISTING REGLETS AND FLASHINGS IF BOTTOM OF REGLET IS LESS THAN 6" ABOVE ROOF DECK, TYPICAL ALL REGLET FLASHINGS LOCATIONS.
- 5 NOT USED

1 **ROOF PLAN**
1" = 10' - 0"

LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2' - SCALE ACCORDINGLY)



OREGON STATE UNIVERSITY

FOUNDATION BUILDING REROOFING PROJECT

SHEET TITLE:
FALL PROTECTION PLAN



Date: 04/15/2019
Revisions:

Drawn: PAS
Check: RLM
File: ROOF PLAN

Project: 18026.02

SHEET NUMBER:

A2.2

SHEET NOTES

- A. EXISTING MATERIALS AND CONSTRUCTION ARE NOTED ON THE DRAWINGS AS EXISTING (EXIST)(EX). ALL OTHER NOTATIONS INDICATE NEW MATERIALS, PRODUCTS, AND CONSTRUCTION. THE WORD NEW IS USED ONLY FOR CLARIFICATION.
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- D. PAINT ALL NEW AND EXISTING METALS AND FLASHINGS TO MATCH NEW WORK AS SPECIFIED.

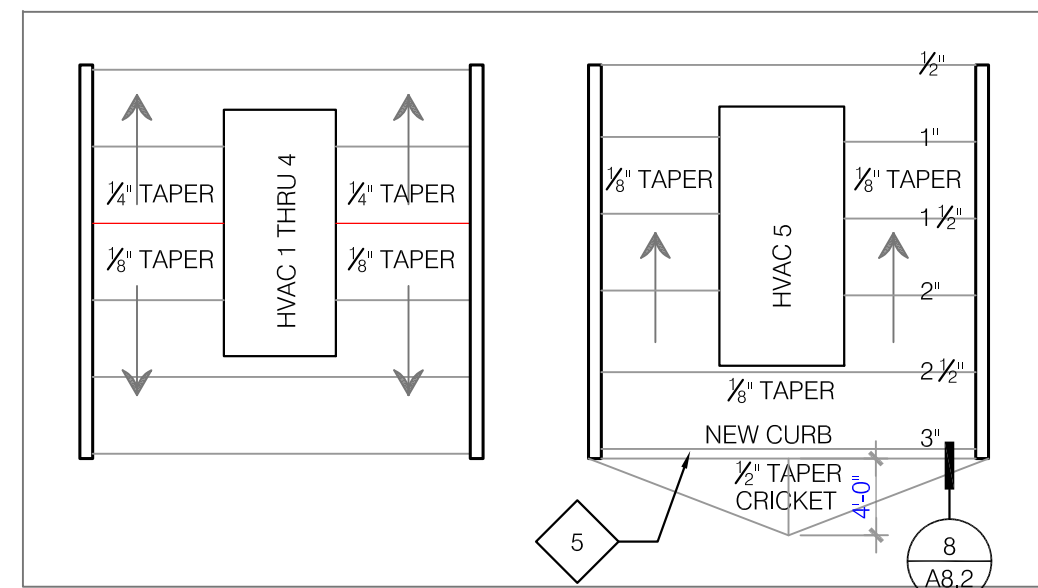
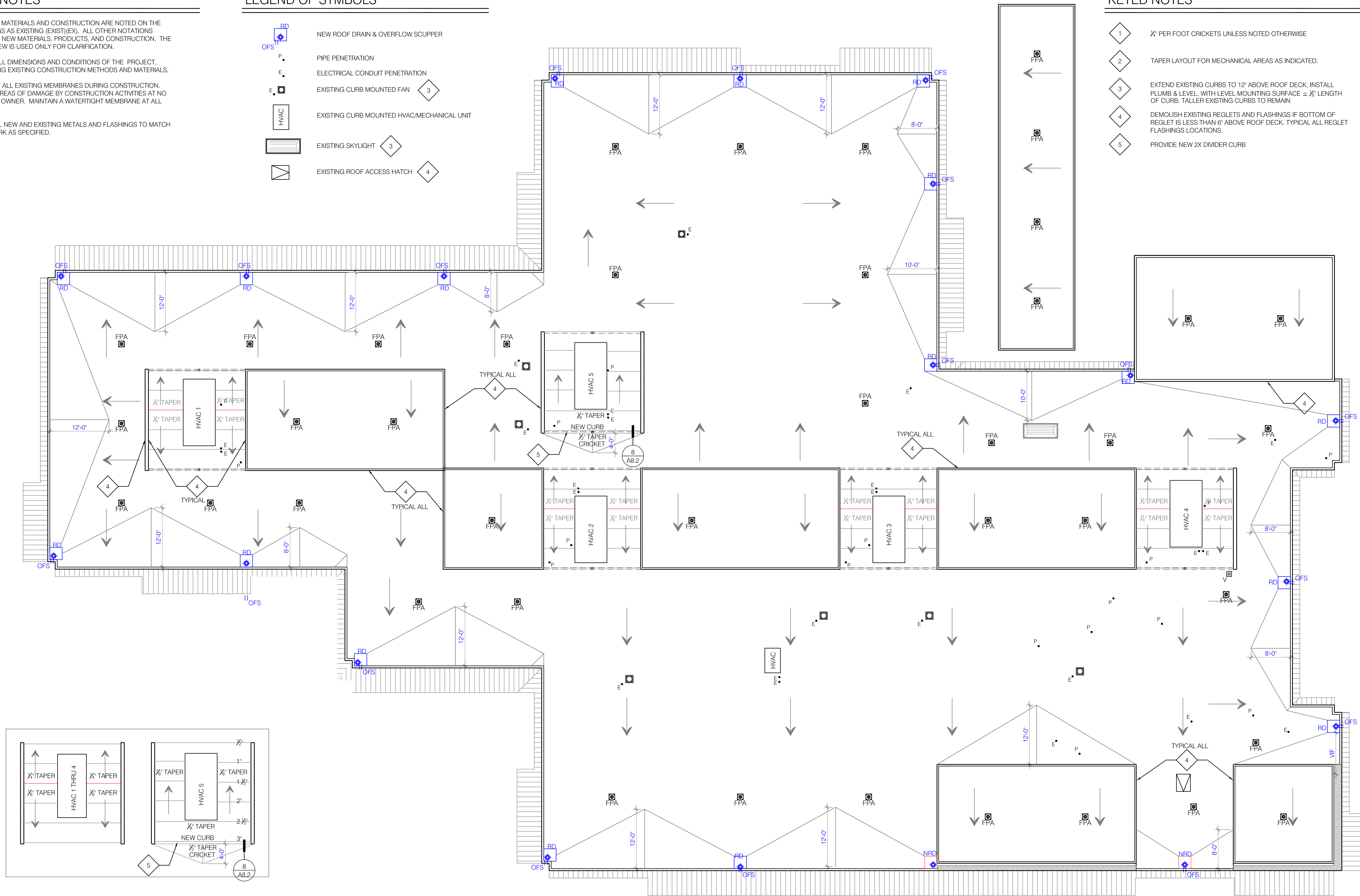
LEGEND OF SYMBOLS

- NEW ROOF DRAIN & OVERFLOW SCUPPER
- PIPE PENETRATION
- ELECTRICAL CONDUIT PENETRATION
- EXISTING CURB MOUNTED FAN
- EXISTING CURB MOUNTED HVAC/MECHANICAL UNIT
- EXISTING SKYLIGHT
- EXISTING ROOF ACCESS HATCH

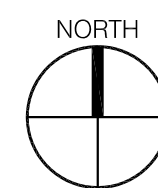
KEYED NOTES

- 1 1/2" PER FOOT CRICKETS UNLESS NOTED OTHERWISE
- 2 TAPER LAYOUT FOR MECHANICAL AREAS AS INDICATED.
- 3 EXTEND EXISTING CURBS TO 12" ABOVE ROOF DECK. INSTALL PLUMB & LEVEL, WITH LEVEL MOUNTING SURFACE ± 1/8" LENGTH OF CURB. TALLER EXISTING CURBS TO REMAIN
- 4 DEMOLISH EXISTING REGLETS AND FLASHINGS IF BOTTOM OF REGLET IS LESS THAN 6" ABOVE ROOF DECK. TYPICAL ALL REGLET FLASHINGS LOCATIONS.
- 5 PROVIDE NEW 2X DIVIDER CURB

DRAWING FORMATTED FOR PRINTING AT 22" x 34"



1 ROOF PLAN
1" = 10' - 0"



LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)



OREGON STATE UNIVERSITY

FOUNDATION BUILDING REROOFING PROJECT

SHEET TITLE:
DRAIN CRICKET & TAPER PLAN



Date: 04/15/2019
Revisions:

Drawn: PAS
Check: RLM
File: ROOF PLAN

Project: 18026.02

SHEET NUMBER:

A2.3

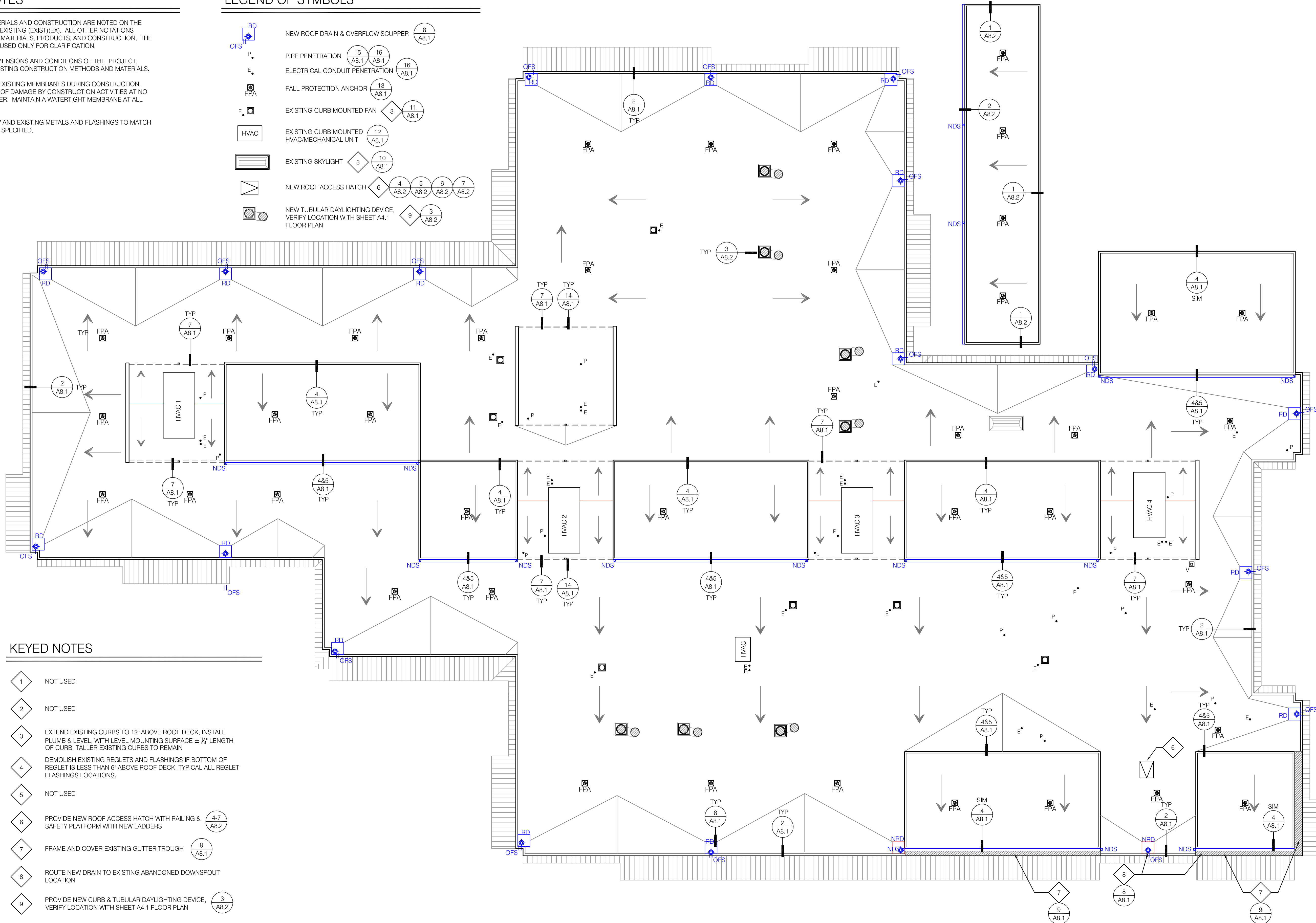
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SHEET NOTES

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- D. PAINT ALL NEW AND EXISTING METALS AND FLASHINGS TO MATCH NEW WORK AS SPECIFIED.

LEGEND OF SYMBOLS

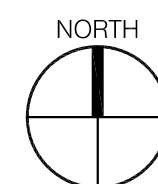
- NEW ROOF DRAIN & OVERFLOW SCUPPER (8 A8.1)
- PIPE PENETRATION (15 A8.1, 16 A8.1)
- ELECTRICAL CONDUIT PENETRATION (16 A8.1)
- FALL PROTECTION ANCHOR (13 A8.1)
- EXISTING CURB MOUNTED FAN (3, 11 A8.1)
- EXISTING CURB MOUNTED HVAC/MECHANICAL UNIT (12 A8.1)
- EXISTING SKYLIGHT (3, 10 A8.1)
- NEW ROOF ACCESS HATCH (6, 4, 5, 6, 7 A8.2)
- NEW TUBULAR DAYLIGHTING DEVICE, VERIFY LOCATION WITH SHEET A4.1 FLOOR PLAN (9 A8.2)



KEYED NOTES

- 1 NOT USED
- 2 NOT USED
- 3 EXTEND EXISTING CURBS TO 12" ABOVE ROOF DECK. INSTALL PLUMB & LEVEL, WITH LEVEL MOUNTING SURFACE ± 1/8" LENGTH OF CURB. TALLER EXISTING CURBS TO REMAIN
- 4 DEMOLISH EXISTING REGLETS AND FLASHINGS IF BOTTOM OF REGLET IS LESS THAN 6" ABOVE ROOF DECK. TYPICAL ALL REGLET FLASHINGS LOCATIONS.
- 5 NOT USED
- 6 PROVIDE NEW ROOF ACCESS HATCH WITH RAILING & SAFETY PLATFORM WITH NEW LADDERS (4-7 A8.2)
- 7 FRAME AND COVER EXISTING GUTTER TROUGH (9 A8.1)
- 8 ROUTE NEW DRAIN TO EXISTING ABANDONED DOWNSPOUT LOCATION
- 9 PROVIDE NEW CURB & TUBULAR DAYLIGHTING DEVICE, VERIFY LOCATION WITH SHEET A4.1 FLOOR PLAN (3 A8.2)

1 ROOF PLAN
1" = 10' - 0"



LINE IS 2 INCHES AT FULL SCALE (IF NOT 2" - SCALE ACCORDINGLY)

DRAWING FORMATTED FOR PRINTING AT 22" x 34"



OREGON STATE UNIVERSITY

FOUNDATION BUILDING REROOFING PROJECT

SHEET TITLE:
ROOF PLAN



Date: 04/15/2019
Revisions:

Drawn: PAS
Check: RLM
File: ROOF PLAN

Project: 18026.02

SHEET NUMBER:

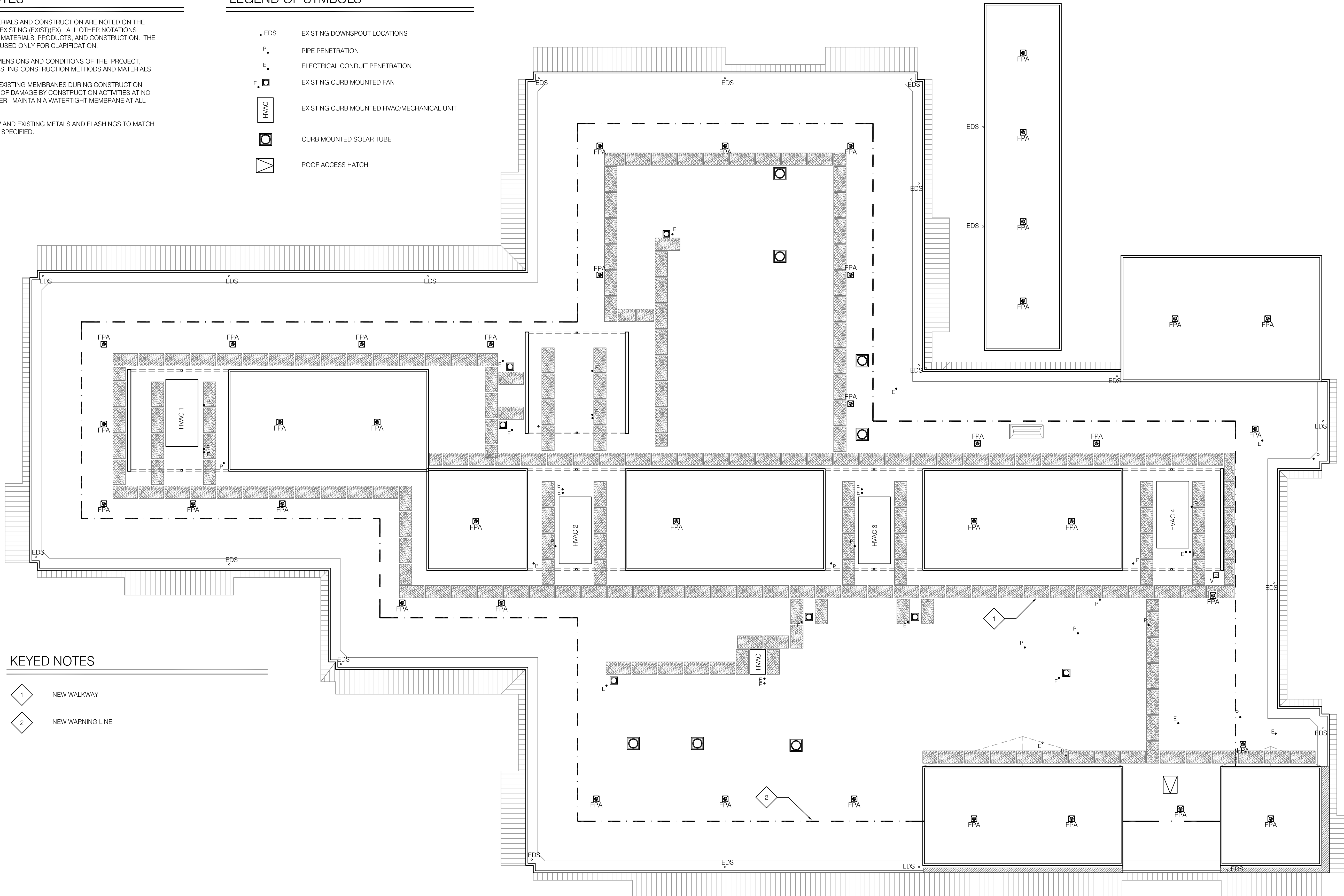
A2.4

SHEET NOTES

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- D. PAINT ALL NEW AND EXISTING METALS AND FLASHINGS TO MATCH NEW WORK AS SPECIFIED.

LEGEND OF SYMBOLS

- EDS EXISTING DOWNSPOUT LOCATIONS
- P PIPE PENETRATION
- E ELECTRICAL CONDUIT PENETRATION
- E ◻ EXISTING CURB MOUNTED FAN
- ◻ HVAC EXISTING CURB MOUNTED HVAC/MECHANICAL UNIT
- ◻ CURB MOUNTED SOLAR TUBE
- ◻ ROOF ACCESS HATCH

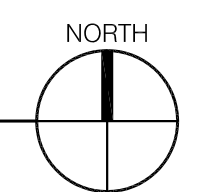


KEYED NOTES

- 1 NEW WALKWAY
- 2 NEW WARNING LINE

DRAWING FORMATTED FOR PRINTING AT 22" x 34"

1 WALKWAY & WARNING LINE ROOF PLAN
1" = 10' - 0"



LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)



OREGON STATE UNIVERSITY

FOUNDATION BUILDING REROOFING PROJECT

SHEET TITLE:
WALKWAY & WARNING LINE
ROOF PLAN



Date: 04/15/2019
Revisions:

Drawn: PAS
Check: RLM
File: ROOF PLAN

Project: 18026.02

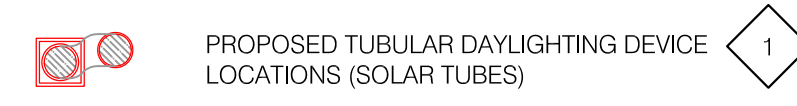
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A2.5

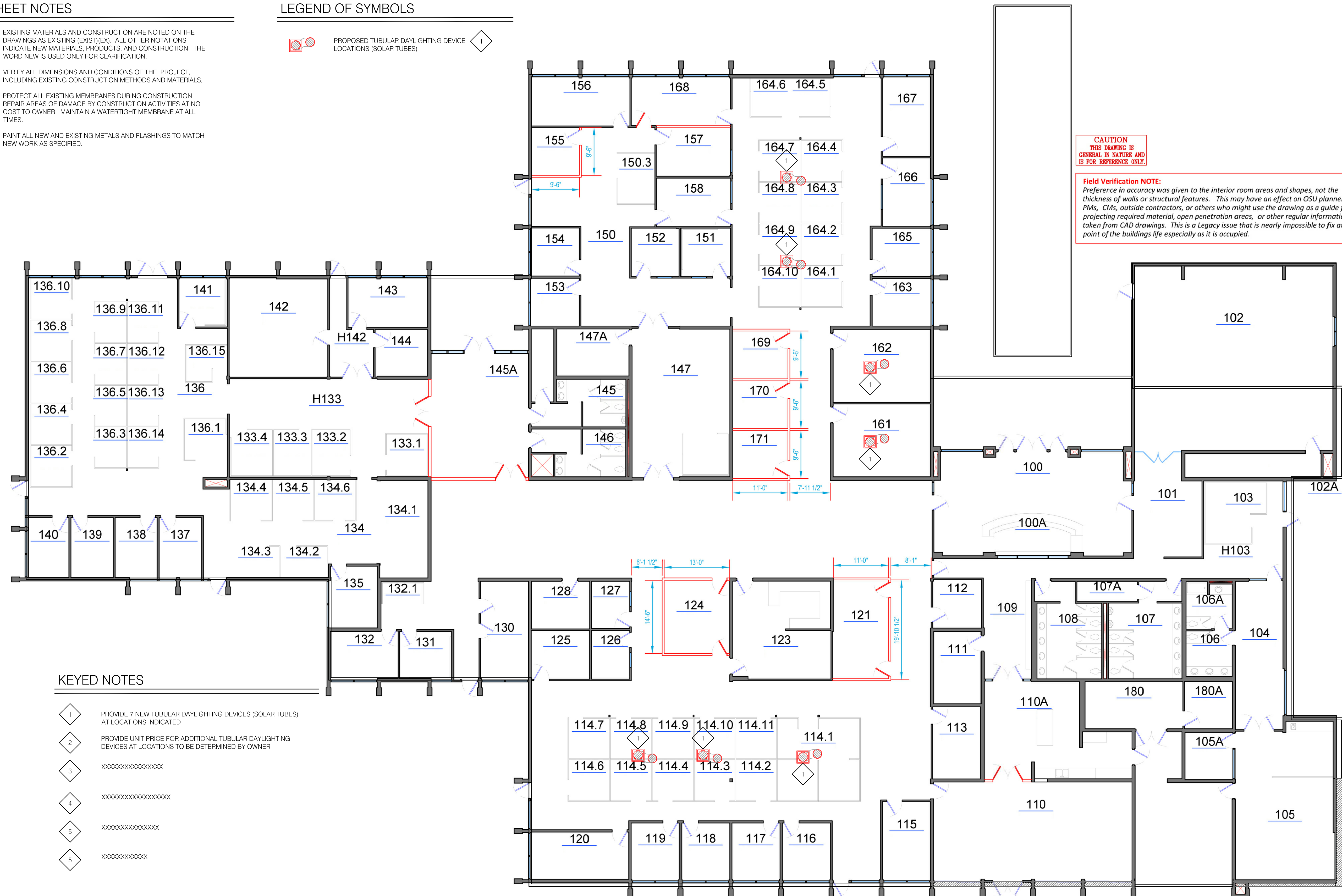
SHEET NOTES

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LEGEND OF SYMBOLS



DRAWING FORMATTED FOR PRINTING AT 22" x 34"



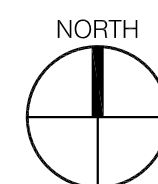
CAUTION
THIS DRAWING IS GENERAL IN NATURE AND IS FOR REFERENCE ONLY.

Field Verification NOTE:
Preference in accuracy was given to the interior room areas and shapes, not the thickness of walls or structural features. This may have an effect on OSU planners, PMs, CMs, outside contractors, or others who might use the drawing as a guide for projecting required material, open penetration areas, or other regular information taken from CAD drawings. This is a Legacy issue that is nearly impossible to fix at this point of the buildings life especially as it is occupied.

KEYED NOTES

- 1 PROVIDE 7 NEW TUBULAR DAYLIGHTING DEVICES (SOLAR TUBES) AT LOCATIONS INDICATED
- 2 PROVIDE UNIT PRICE FOR ADDITIONAL TUBULAR DAYLIGHTING DEVICES AT LOCATIONS TO BE DETERMINED BY OWNER
- 3 xxxxxxxxxxxxxxxxxxxx
- 4 xxxxxxxxxxxxxxxxxxxx
- 5 xxxxxxxxxxxxxxxxxxxx
- 5 xxxxxxxxxxxxxxxxxxxx

1 FLOOR PLAN
1" = 10' - 0"



LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)



OREGON STATE UNIVERSITY

FOUNDATION BUILDING REROOFING PROJECT

SHEET TITLE:
DEMOLITION PLAN



Date: 04/15/2019
Revisions:

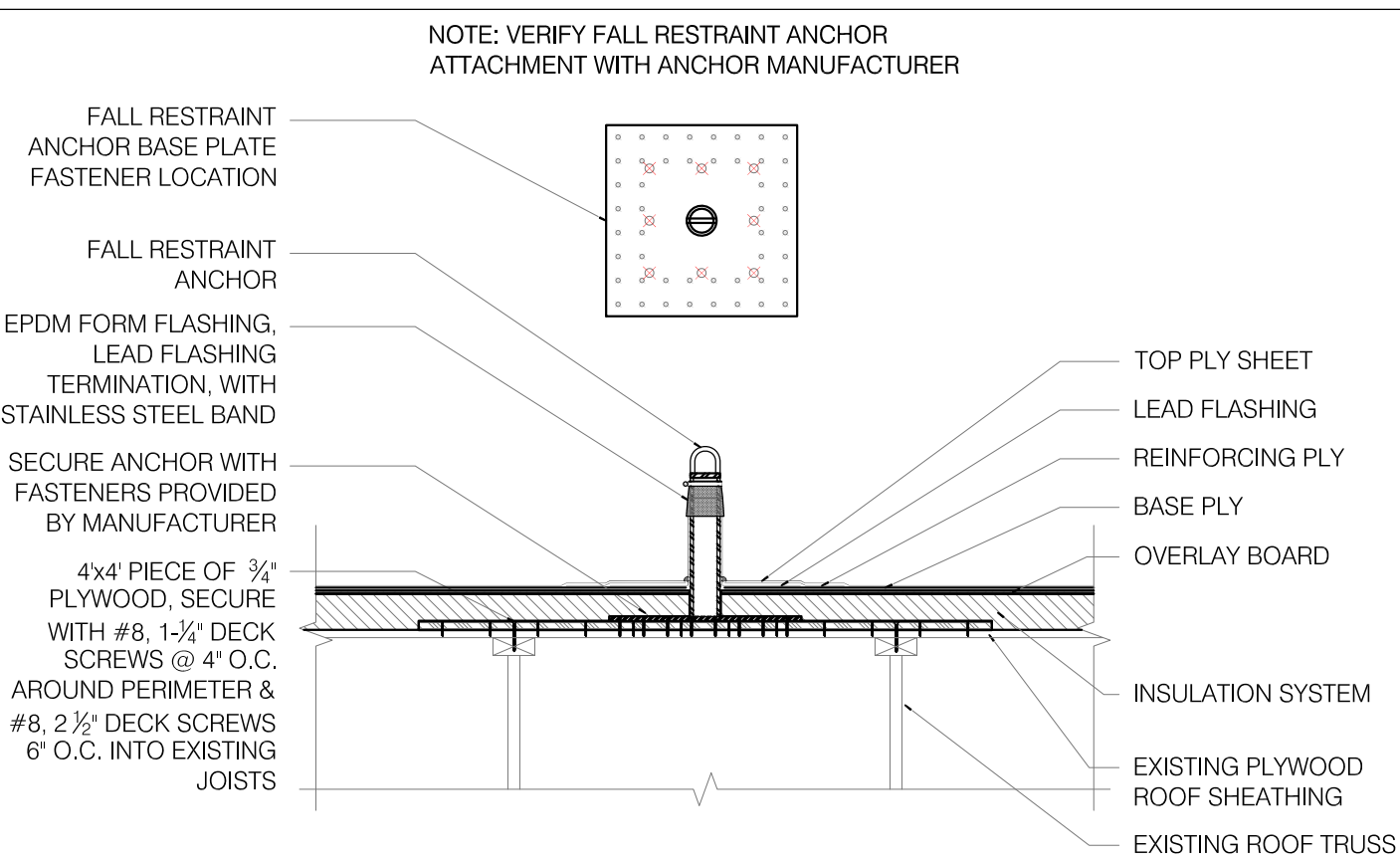
Drawn: PAS
Check: RLM
File: FLOOR PLAN

Project: 18026.02

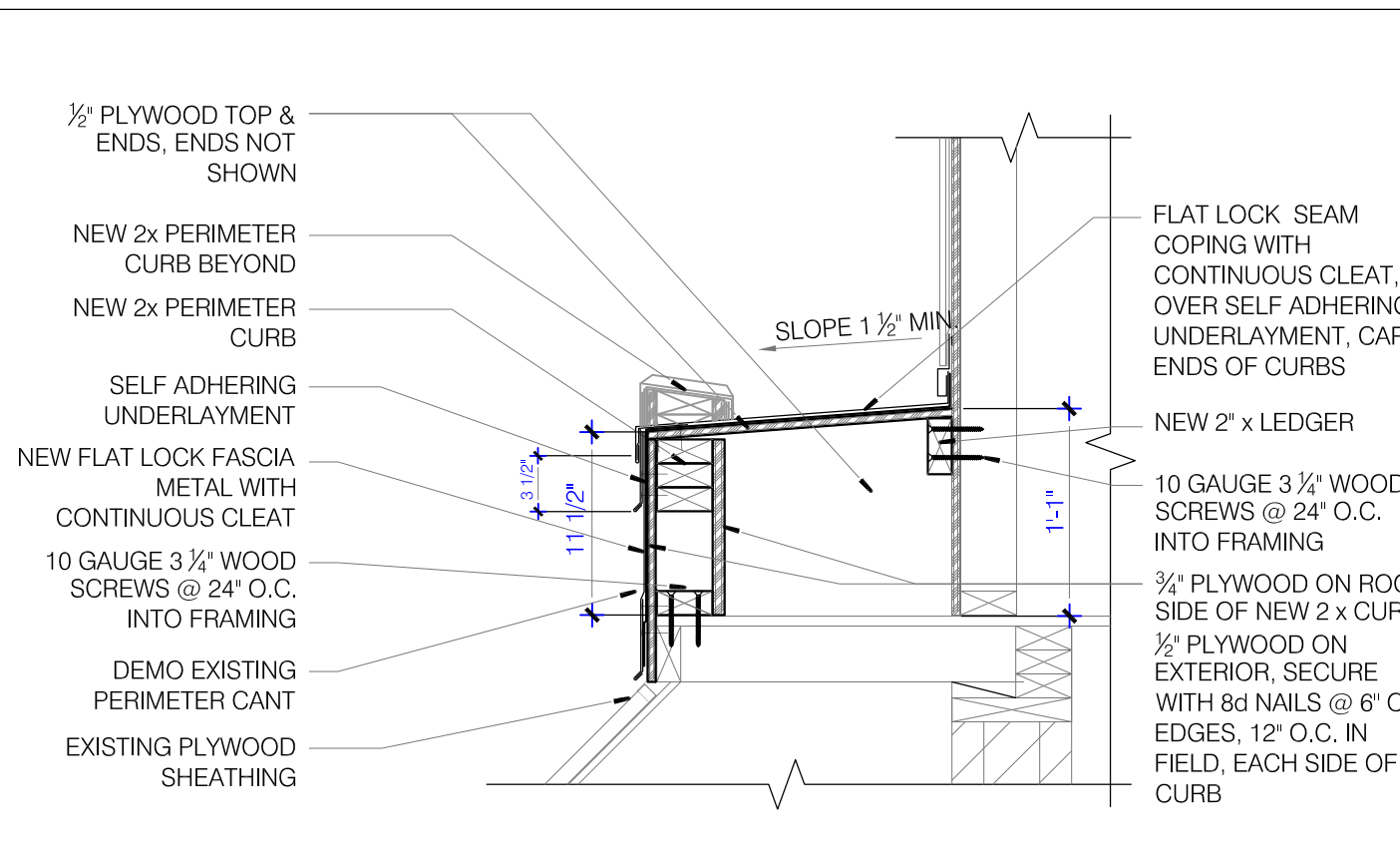
SHEET NUMBER:

A4.1

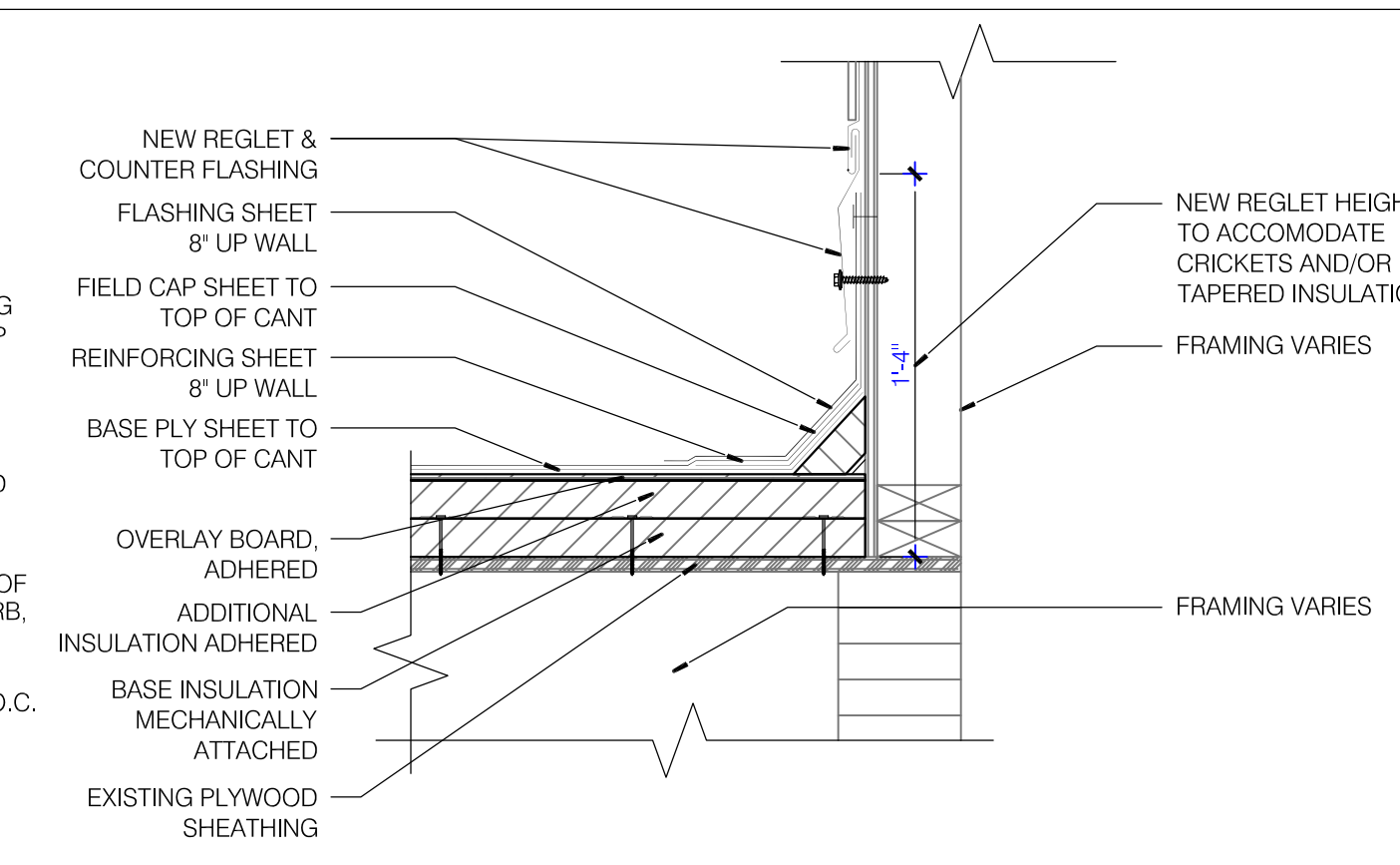
DRAWING FORMATTED FOR PRINTING AT 22" x 34"



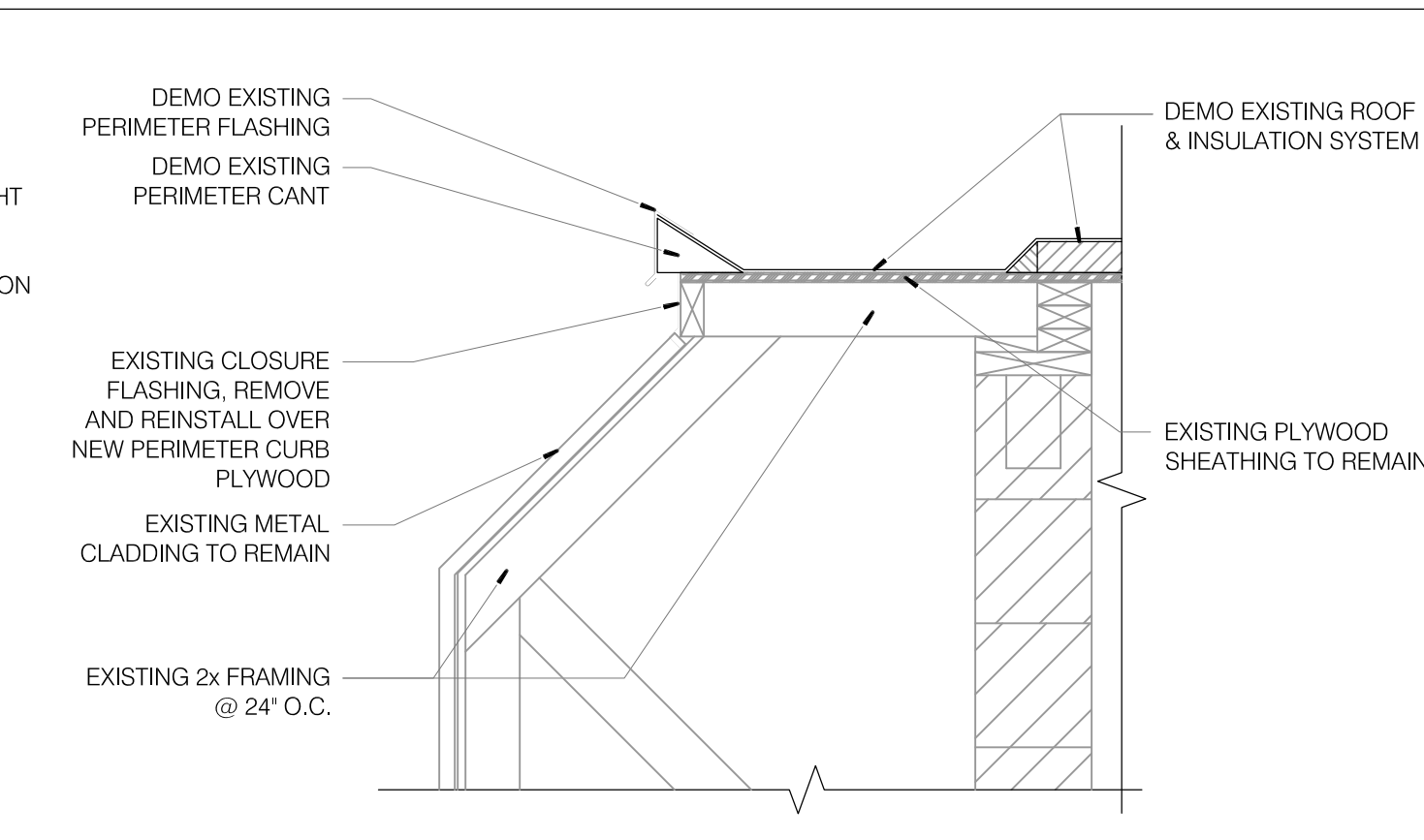
13 FALL RESTRAINT ANCHOR
A8.1 3/4" = 1' - 0"



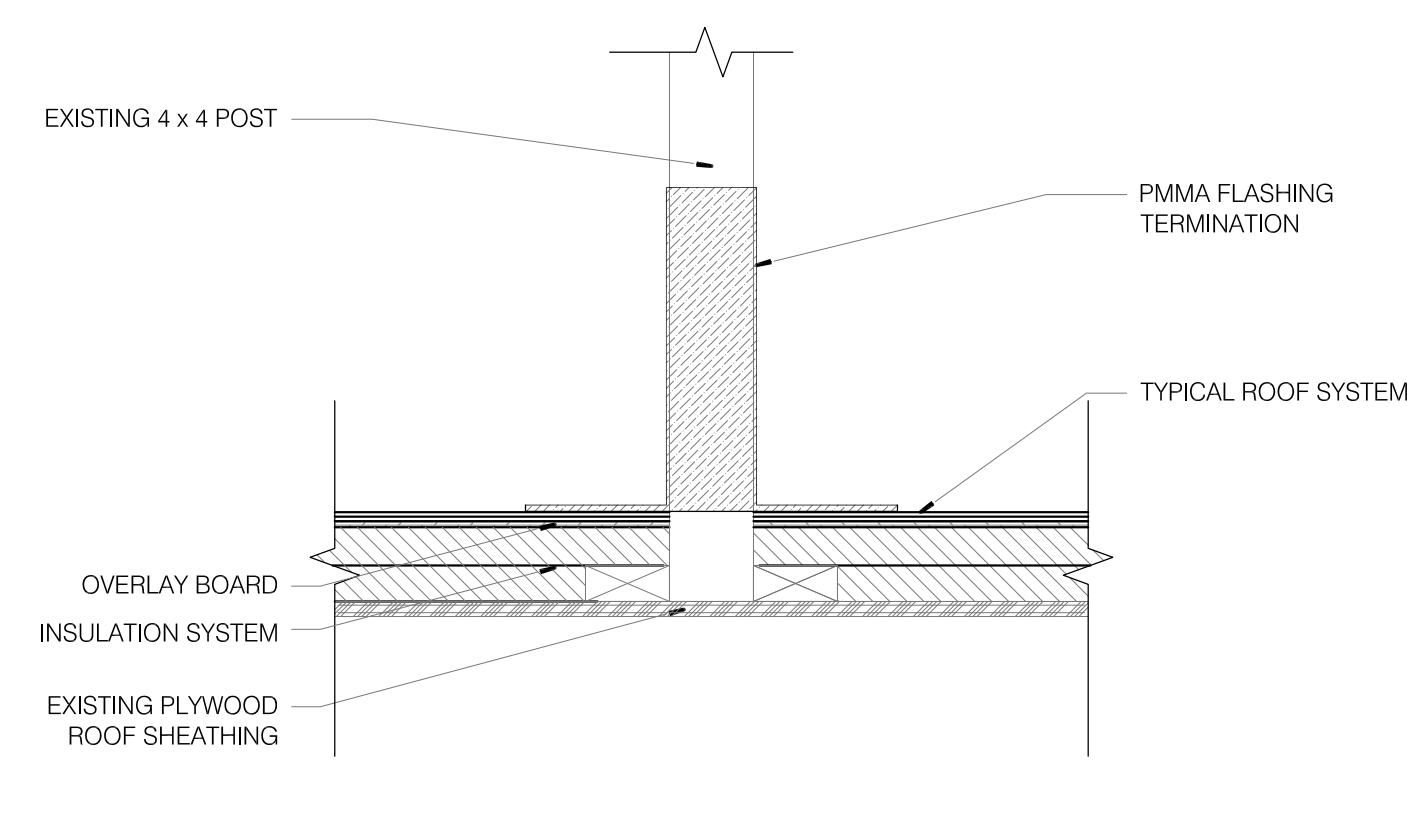
9 GUTTER TROUGH ENCLOSURE @ CLEARSTORY
A8.1 1" = 1' - 0"



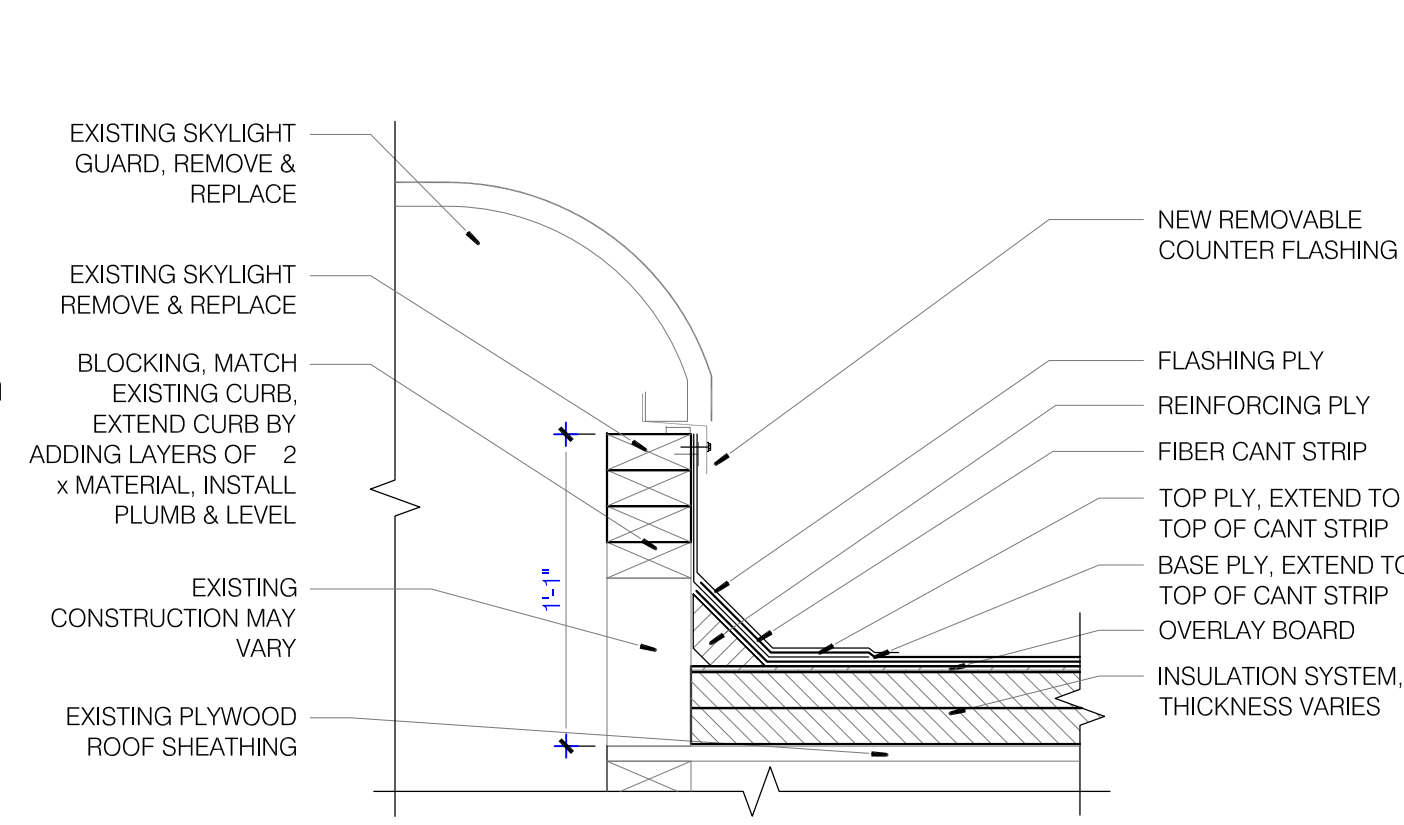
5 TYPICAL BASE FLASHING @ CLERESTORY
A8.1 1 1/2" = 1' - 0"



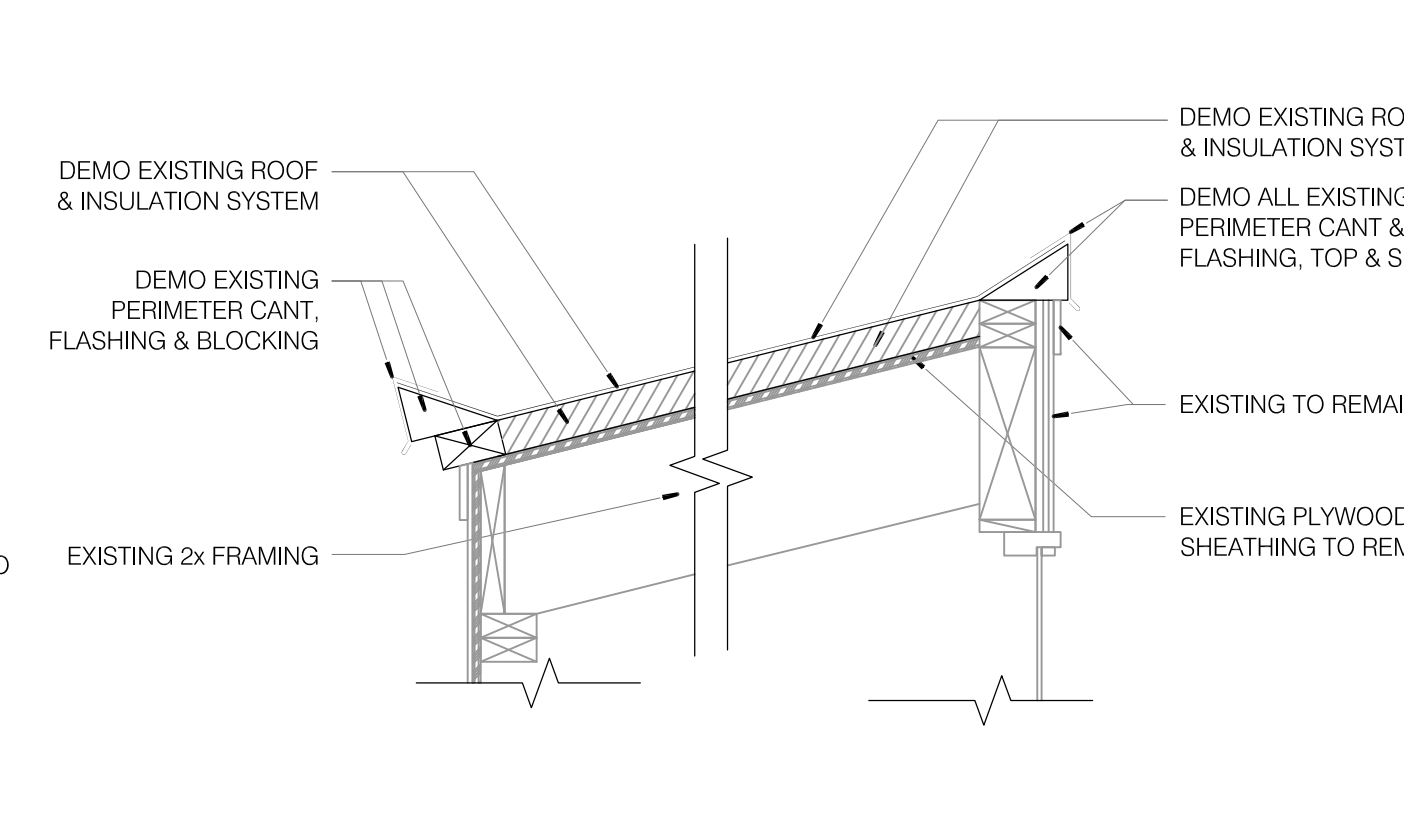
1 PERIMETER DEMO @ MANSARD
A8.1 1" = 1' - 0"



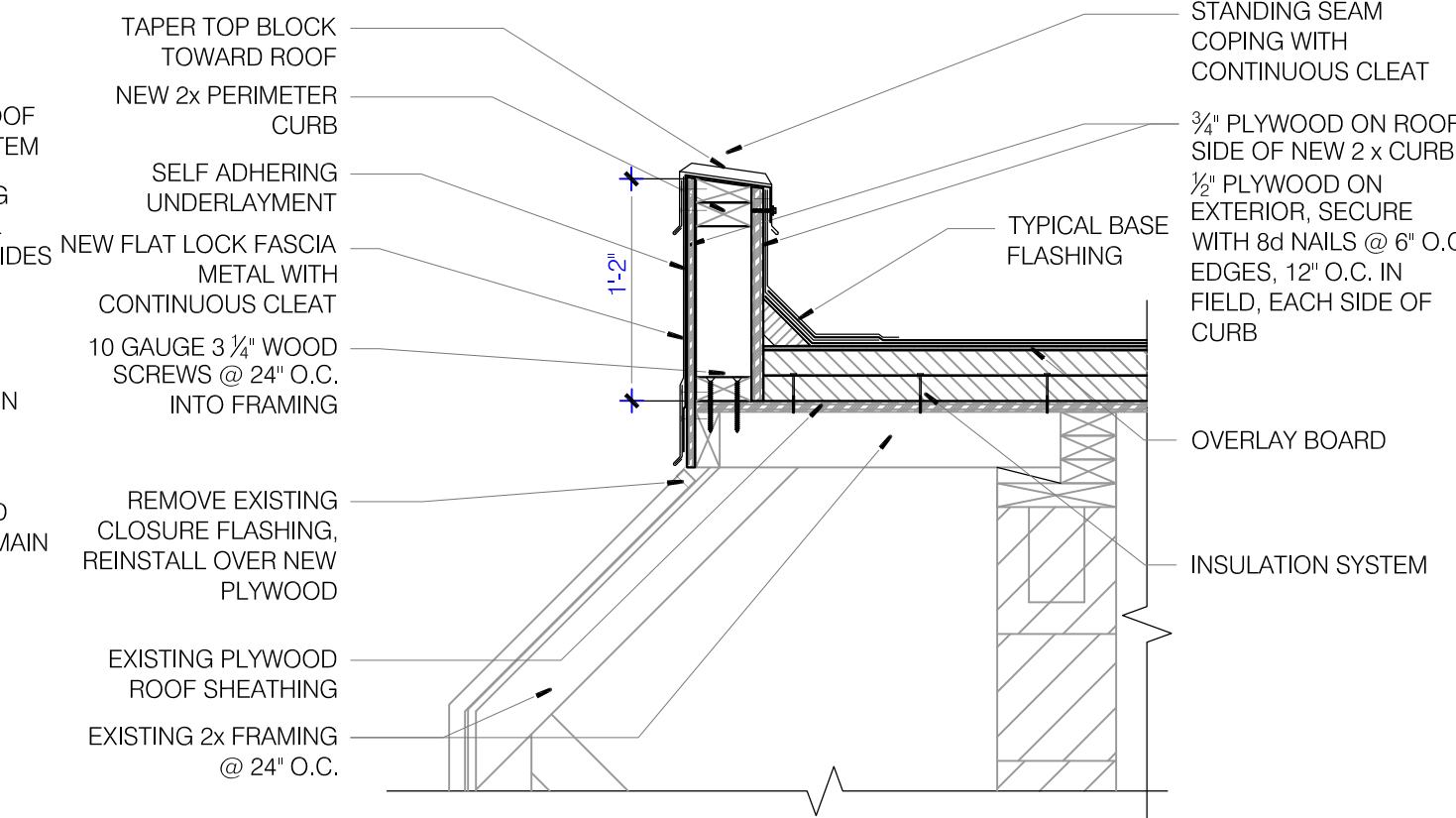
14 SUPPORT POST BRACE DETAIL
A8.1 1-1/2" = 1' - 0"



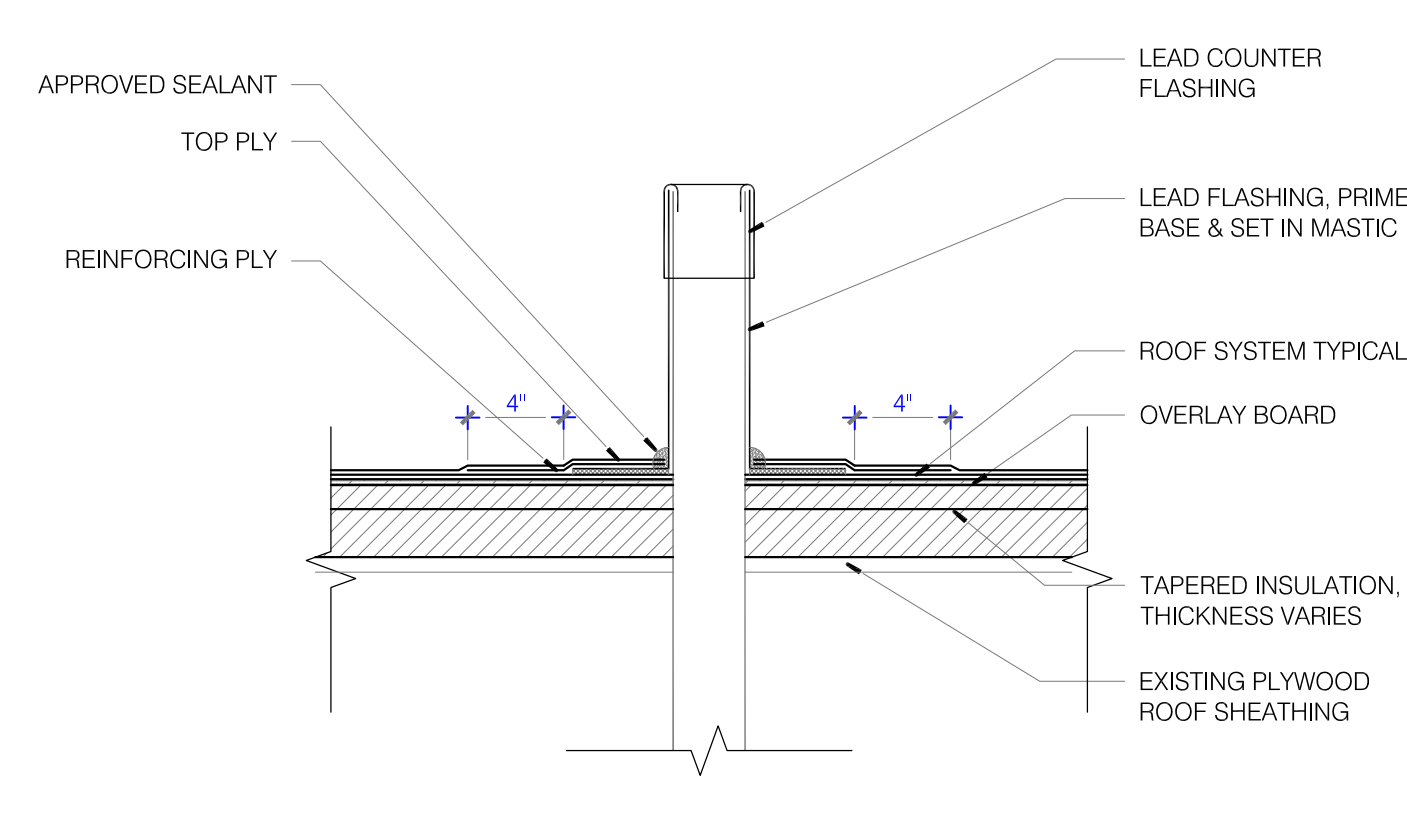
10 SKYLIGHT CURB EXTENSION & FLASHING DETAIL
A8.1 1-1/2" = 1' - 0"



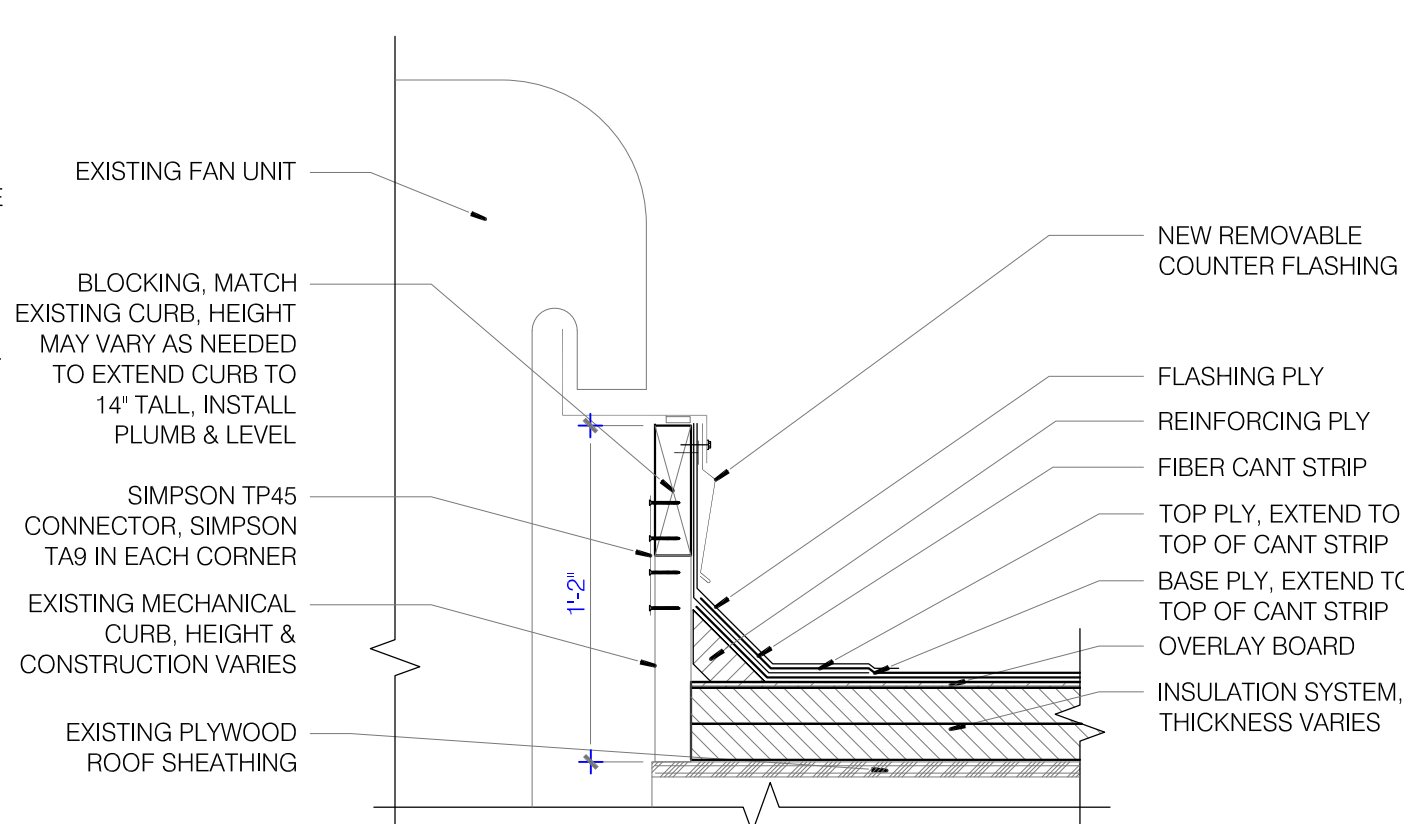
6 MECHANICAL WELL PERIMETER DEMO
A8.1 1" = 1' - 0"



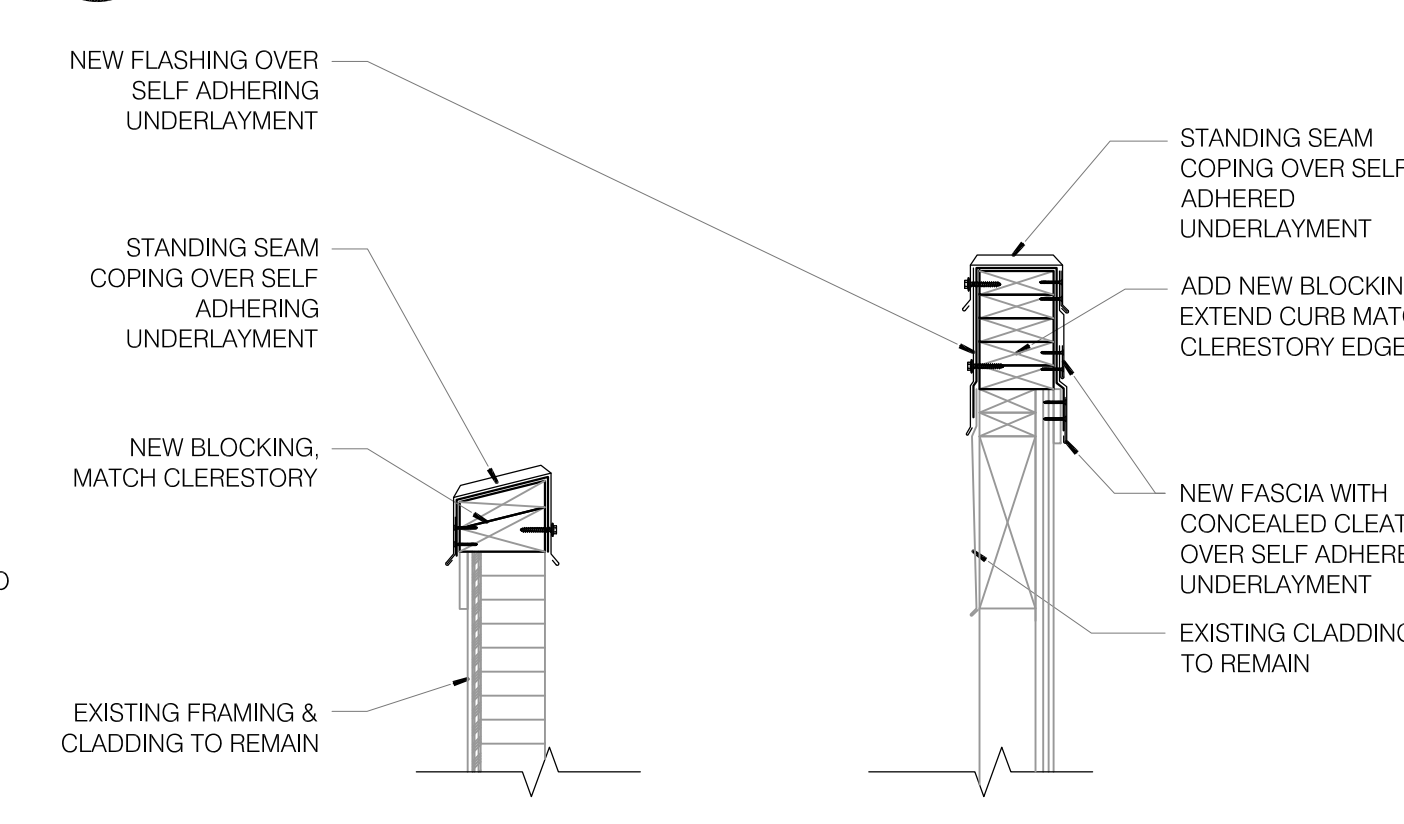
2 PERIMETER DETAIL @ MANSARD
A8.1 1" = 1' - 0"



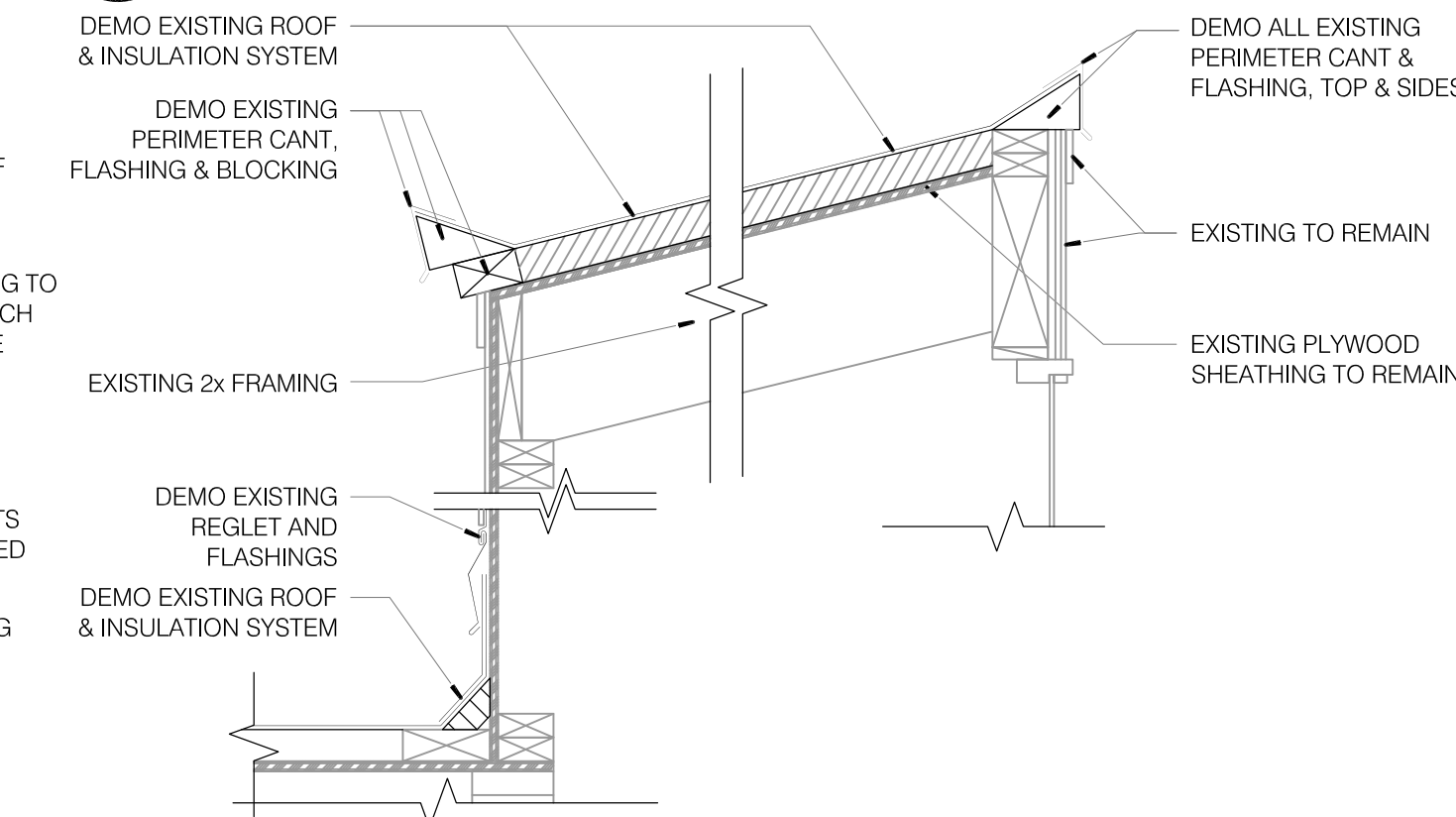
15 PIPE PERETRATION FLASHING DETAIL
A8.1 1-1/2" = 1' - 0"



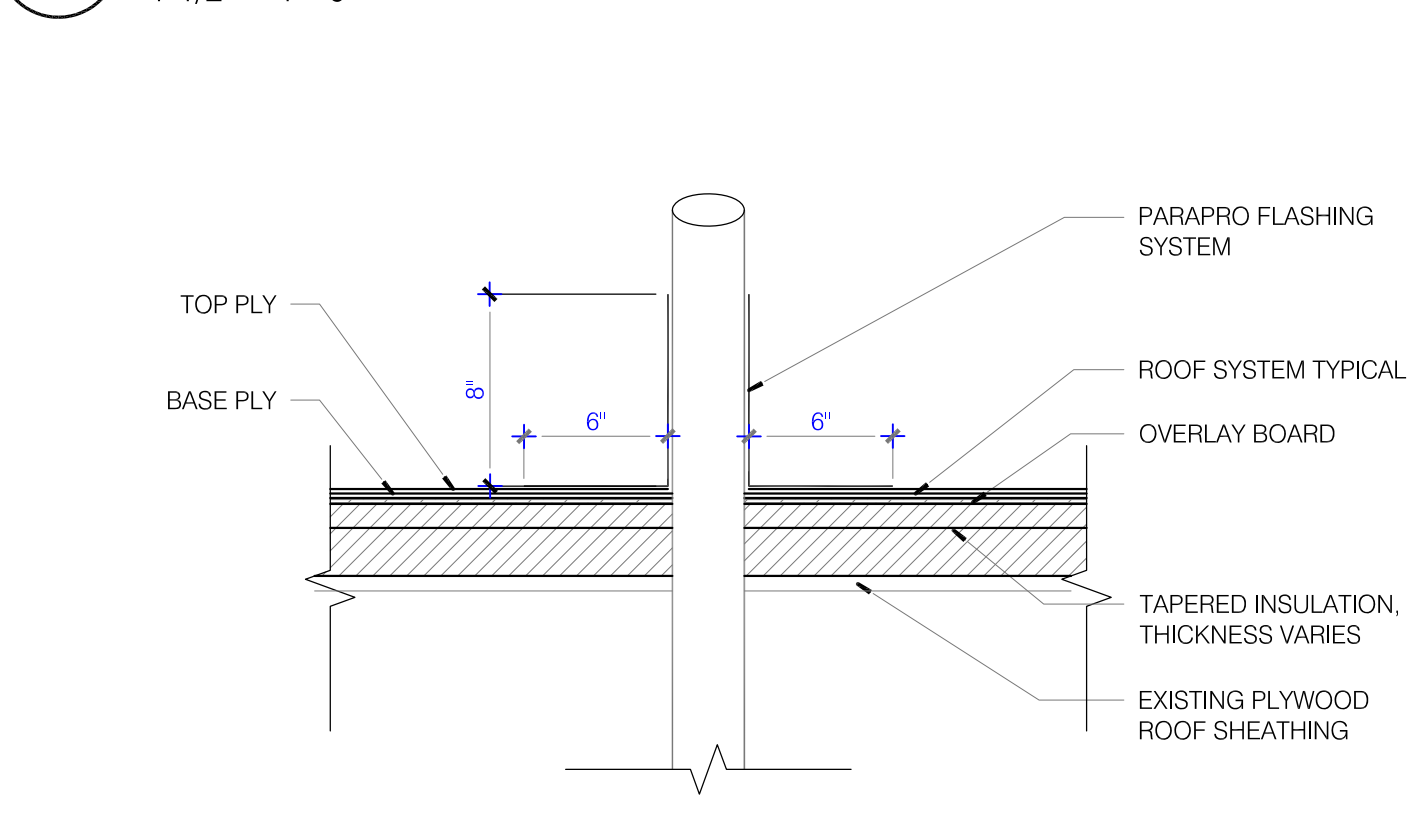
11 FAN/VENT CURB EXTENSION & FLASHING DETAIL
A8.1 1-1/2" = 1' - 0"



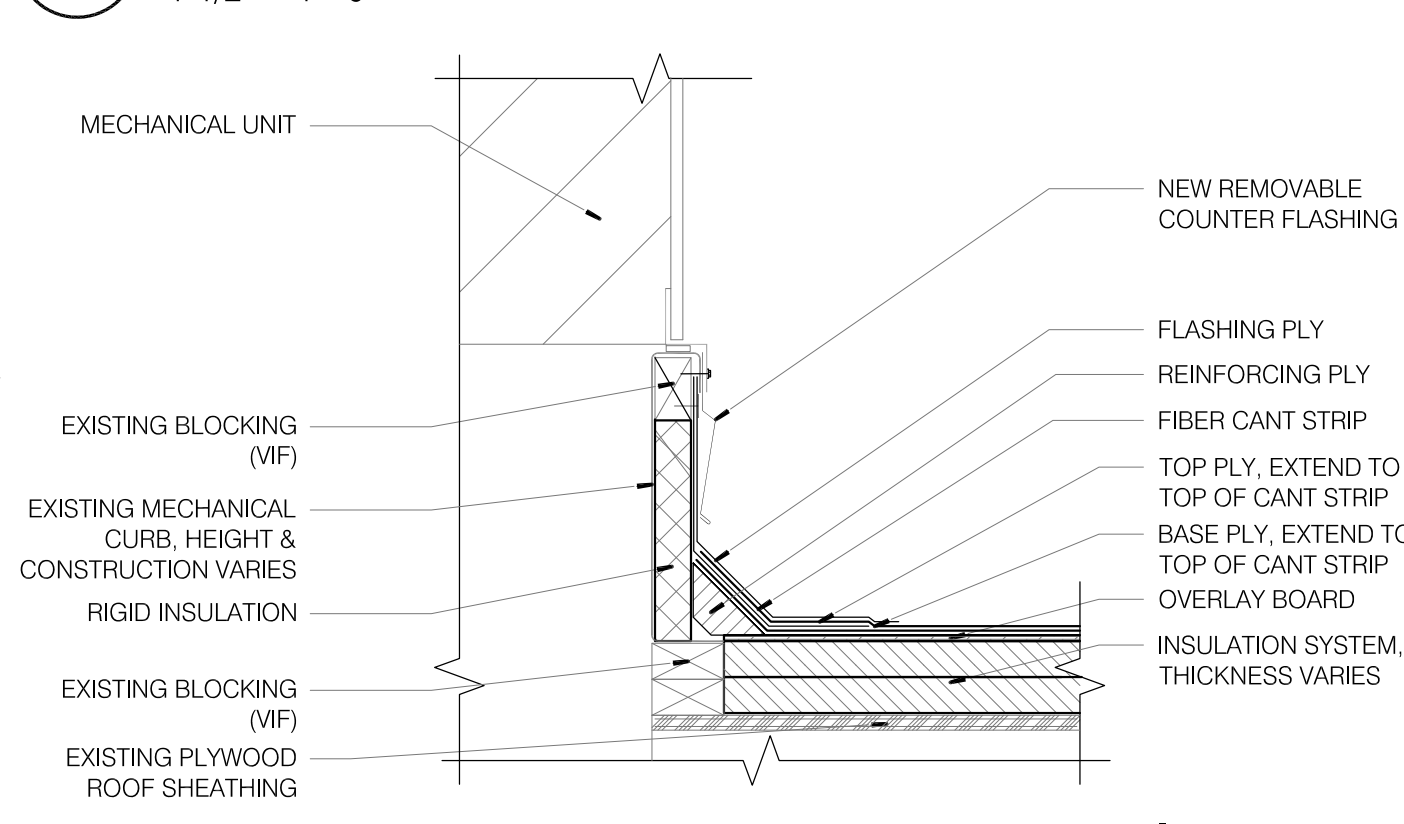
7 MECHANICAL WELL PERIMETERS
A8.1 1" = 1' - 0"



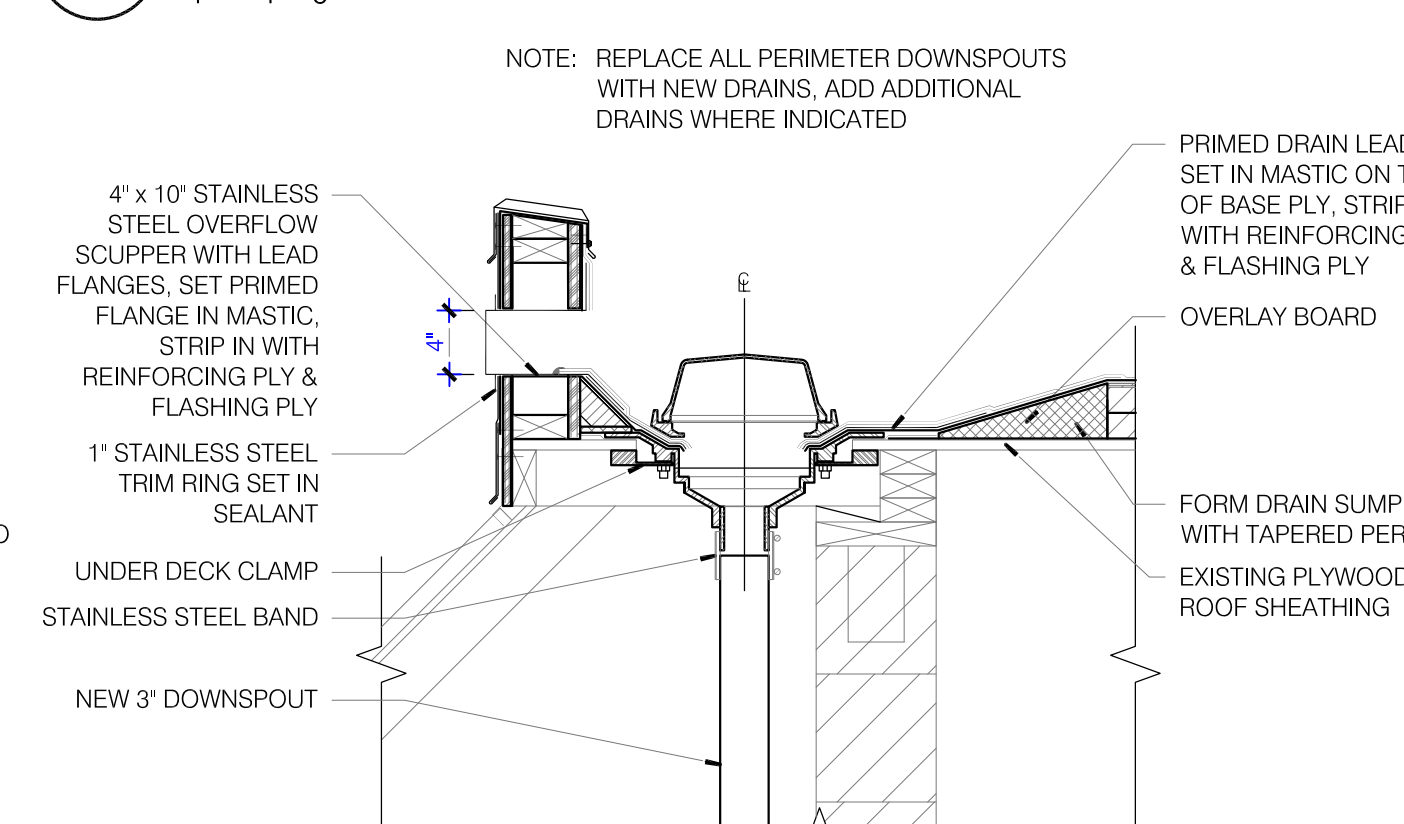
3 CLERESTORY PERIMETER DEMO
A8.1 1" = 1' - 0"



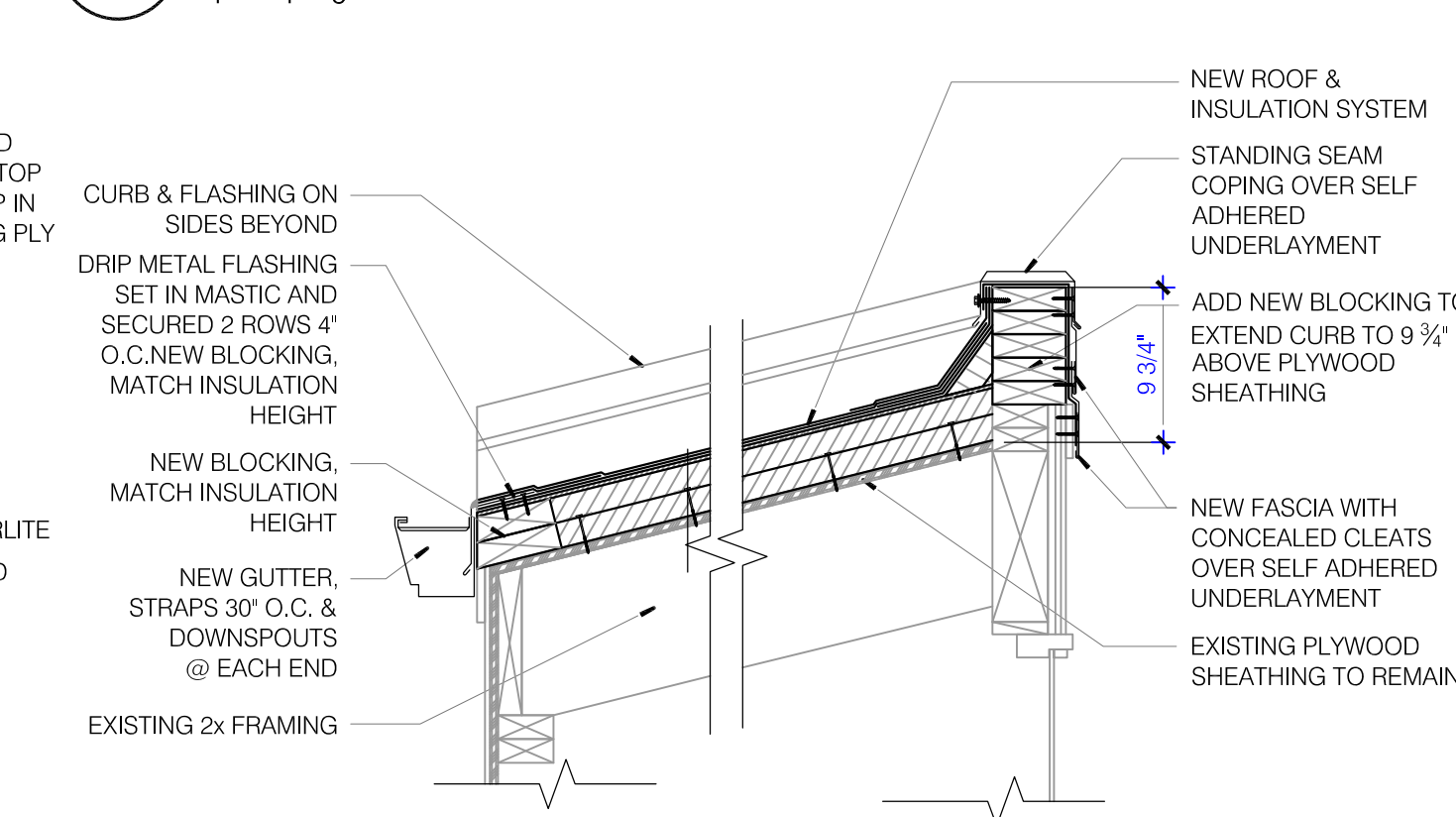
16 PIPE PERETRATION FLASHING ALTERNATE DETAIL
A8.1 1-1/2" = 1' - 0"



12 HVAC CURB BASE FLASHING DETAIL
A8.1 1-1/2" = 1' - 0"

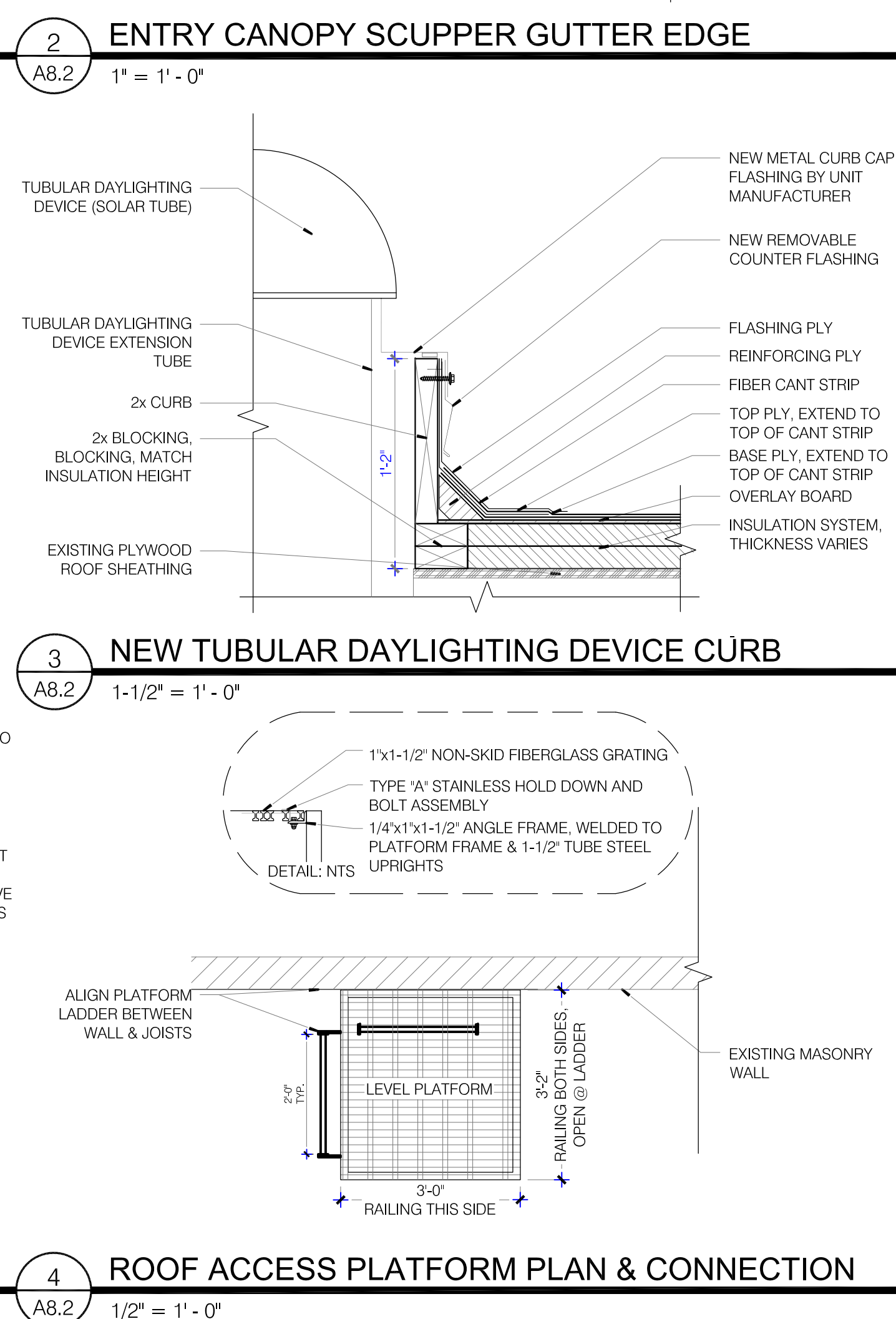
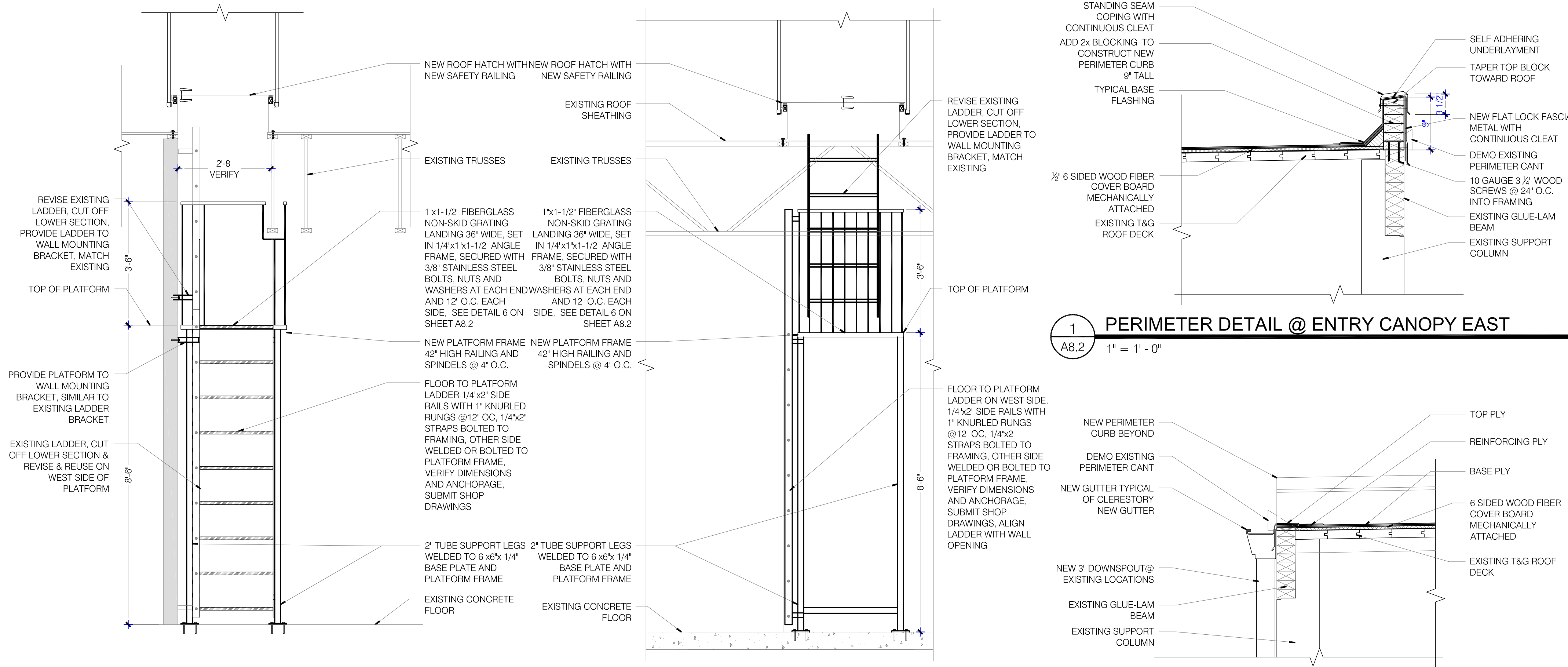


8 PERIMETER DRAIN DETAIL
A8.1 1" = 1' - 0"



4 CLERESTORY PERIMETER
A8.1 1" = 1' - 0"

DRAWING FORMATTED FOR PRINTING AT 22" x 34"



OREGON STATE UNIVERSITY

FOUNDATION BUILDING REROOFING PROJECT

SHEET TITLE: DETAILS



Date: 04/15/2019

Revisions:

Drawn: PAS
 Check: RLM
 File: SITE PLAN

Project: 18026.02

SHEET NUMBER:

A8.2

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