

PROJECT MANUAL FOR:

**Riley Residence Hall
Ceiling Replacement
650 East 11th Avenue
Eugene, Oregon**

University of Oregon

29 May 2012



Robertson|Sherwood|Architects PC

PROJECT TITLE PAGE

PROJECT TITLE:

RILEY RESIDENCE HALL CEILING REPLACEMENT
650 East 11th Avenue
Eugene, Oregon

OWNER:

OREGON STATE BOARD OF HIGHER EDUCATION
UNIVERSITY OF OREGON
Division of Facilities Services
1295 Franklin Boulevard
Eugene, Oregon 97403-1276
Owners Project Manager: Charlene Lindsay
Tel (541) 346-5503
Fax (541) 346-6927

UNIVERSITY HOUSING

1220 University of Oregon
Eugene, Oregon 97403-1220
Housing Facilities Manager: Terrie Schaefer
Tel (541) 346-2669
Fax: (541) 346-4268

ARCHITECTS:

ROBERTSON/SHERWOOD/ARCHITECTS PC
132 East Broadway - Suite 540
Eugene, Oregon 97401
Tel (541) 342-8077
Fax (541) 345-4302
Contact: Scott Stolarczyk, AIA, LEED AP

MECHANICAL / ELECTRICAL ENGINEERS:

EVERGREEN ENGINEERING
1740 Willow Creek Circle
Eugene, Oregon 97402
Tel (541) 484-4771
Fax (541) 484-6759
Mechanical Contact: Gordon Yutzy
Electrical Contact: Dale Luckman

DATE:

29 MAY 2012



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OREGON UNIVERSITY SYSTEM

NOTICE OF RETAINER CONTRACT OPPORTUNITY

The Oregon University System (OUS) is accepting sealed bids for the Riley Residence Hall Ceiling Replacement project until 2:00 PM, Pacific Time, Tuesday, June 19, 2012. The project is located on the campus of the University of Oregon, in Eugene, Oregon. The project includes removal and replacement of existing ceiling systems, lighting, and related work.

A mandatory pre-bid conference will be conducted at the project site at 11:00 AM, on Tuesday, June 5, 2012. Bidders shall meet with OUS' Representative at the main office at Riley Residence Hall, 650 East 11th Avenue, for that purpose. Attendance will be documented through a sign-in sheet prepared by the OUS representative. Prime bidders who arrive more than 5 minutes after start of time of the meeting (as stated in the solicitation and by the OUS 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 received on a lump-sum basis for all of the work. Bid packets may be obtained on the OUS Procurement Gateway website. Additional printed sets may be purchased at cost from Central Print and Reprographic Services, Eugene, Oregon, 541-342-3624.

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 and accompanied by Bid Security. OUS encourages bids from Minority, Women, and Emerging Small Businesses.

OREGON STATE BOARD OF HIGHER EDUCATION

OREGON UNIVERSITY SYSTEM
RETAINER CONTRACTS EXCEEDING \$100,000
INSTRUCTIONS TO BIDDERS

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Article 4. Execution of the Bid Form

Each bid shall be made in accordance with the sample Bid Form accompanying these instructions; In the case of a sole individual, the bid form need only be executed as principal by the sole individual. In the case of a partnership, the bid form must be executed by at least one of the partners. In the case of a corporation, the bid form 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 form.; numbers pertaining to base bids shall be stated both in writing and in figures; the bidder's address shall be typed or printed.

The Bid Form relates to bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished will be considered as the bid. Each bidder shall bid upon the work exactly as specified and provided in the Bid Form. The bidder shall include in the bid a sum to cover the cost of all items contemplated by the Contract. The bidder shall bid upon all alternates that may be indicated on the Bid Form. 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."

The Bid Form included in the Project Manual is a sample. One additional copy of the Bid Form may be furnished with the Project Manual. One additional copy of the Bid Bond form may also be provided with the Project Manual. Only one copy needs to be submitted with the bid.

Article 5. Prohibition of Alterations to Bid

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

Article 6. Submission of Bid

Each bid shall be sealed in an envelope, properly addressed to the appropriate project Owner within the Oregon University System, 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 7. Bid Closing and Opening of Bids

All bids must be received by the Owner at the place and time set for the bid closing. Any bids received after the scheduled closing time for receipt of bids will be rejected and returned to the bidder unopened.

At the time of opening and reading of bids, each bid received will be publicly opened and read aloud, irrespective of any irregularities or informalities in such bids.

Article 8. Acceptance or Rejection of Bids by Owner

Unless all bids are rejected, the Owner will award a contract based on the lowest responsive bid from a responsible bidder. If that bidder does not execute the contract, it will be awarded to the next lowest responsible bidder or bidders in succession.

The Owner reserves the right to reject all bids and to waive minor informalities. The procedures for contract awards shall be in compliance with the provisions of Oregon Administrative Rules adopted by the Owner.

The Owner reserves the right to hold the bid and bid security of the three lowest bidders for a period of 30 calendar days from and after the time of bid opening pending award of the contract.

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.

If such bid has not been accepted within 30 calendar days after the opening of the bids, each of the three lowest bidders may withdraw the bid submitted.

Article 9. Withdrawal of Bid

At any time prior to the time and place set for the bid closing, a bidder may withdraw the bid. This will not preclude the submission of another bid by such bidder

**OREGON UNIVERSITY SYSTEM
RETAINER CONTRACT
BID FORM**

OUS CAMPUS: University of Oregon
PROJECT: Riley Residence Hall Ceiling Replacement
BID CLOSING: Tuesday, June 19, 2012 at 2:00 PM

FROM: _____
Name of Contractor

TO: Oregon State Board of Higher Education
University of Oregon – Capital Construction Office
1295 Franklin Blvd.
1-541-346-8292

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 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:

- NOPI – Contract Opportunity
 - OUS Retainer Supplement Form
 - OUS General Conditions
 - Project Manual
 - Instructions to Bidders
 - Performance Bond and Payment Bond
 - Prevailing Wage Rates
 - Drawings
- ADDENDA numbered ____ through ____, inclusive (*fill in blanks*)

10. 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.

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

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

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

or 2) _____

Partner

or 3) _____

Authorized Officer of Corporation

(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 *******

**OUS RETAINER CONTRACT SUPPLEMENT
PURSUANT TO OUS RETAINER CONTRACT FOR CONSTRUCTION
RELATED SERVICES**

Supplement No.:
Project Name:

This Retainer Contract Supplement (the "Supplement") is entered into between:
the "Contractor":

Federal Tax ID No.:

and the "Owner": The State of Oregon acting by and through the State
Board of Higher Education on behalf of:
University of Oregon
Capital Construction
1295 Franklin Blvd
Eugene, OR 97403

(collectively the "Parties") pursuant to that certain Retainer Contract between the Parties dated July 1, 2010 (the "Retainer Contract"). For good and valuable consideration, the Parties agree as follows:

- 1. DESCRIPTION OF THE PROJECT.** The project to which this Supplement pertains is described as follows: _____ (the "Project").
- 2. WORK TO BE PERFORMED.** The Contractor will perform the following Work on the Project: _____ (the "Work"). The Contractor will perform the Work according to the terms and conditions of this Supplement and the Retainer Contract, including its attachments, which are incorporated into this Supplement by reference.
- 3. SCHEDULE.** The Contractor will perform the Work according to the following schedule:
use next
- 4. COMPENSATION.** The Owner will compensate the Contractor for Work in the firm, fixed-price amount of \$ _____ in accordance with the requirements of the OUS General Conditions.

The cost of the Work under this Supplement, even if this Supplement is later amended to include additional Work, must not exceed the greater of \$1,000,000 or the maximum allowable under OAR 580-063-0030.

5. TERM. This Supplement is effective on the date it has been signed by every Party hereto and all required approvals have been obtained (the "Effective Date"). No Work will be performed or payment made prior to the Effective Date. The Contractor will perform its

unreasonably withheld. If the Contractor intends to substitute personnel, a request must be given to Owner at least 30 days prior to the intended time of substitution. When replacements have been approved by Owner, the Contractor shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the Project concurrently. Once a replacement for any of these staff members is authorized, further replacement shall not occur without the written permission of Owner. The Contractor's Project Staff shall consist of the following personnel:

11. OTHER TERMS. Except as specifically modified by this Supplement, all terms of the Retainer Contract remain unchanged and apply to the Work.

12. EXECUTION AND COUNTERPARTS. This Supplement may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

Contractor hereby confirms and certifies that the representations, warranties and certifications contained in the Retainer Contract remain true and correct as of the Effective Date of this Supplement.

IN WITNESS HEREOF, the Parties have duly executed this Supplement as of the dates indicated below.

Contractor

The State of Oregon acting by and through
the State Board of Higher Education on
behalf of University of Oregon, Owner

Print Name:

Signature: _____

Title: _____

Date: _____

Print Name: _____

Signature: _____

Title: _____

Date: _____

OREGON UNIVERSITY SYSTEM

GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS

February 1, 2011

INSTRUCTIONS: The attached Oregon University System General Conditions for Public Improvement Contracts ("OUS General Conditions") apply to all designated public improvement contracts. Changes to the OUS General Conditions (including any additions, deletions or substitutions) should only be made by attaching Supplemental General Conditions. The text of these OUS General Conditions should not otherwise be altered. These OUS General Conditions have been reviewed as to form by the Oregon Department of Justice. The legal sufficiency and approval requirements of ORS 291.047 remain applicable to individual OUS procurements, unless an exemption has been granted pursuant to that statute and Department of Justice administrative rules at OAR Chapter 137, Division 45.

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**OREGON UNIVERSITY SYSTEM
GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS
("OUS General Conditions")**

**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

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

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 of the Owner's Authorized Representative 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's Authorized Representative 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, including Owner's written change directives as well as changes reflected in a writing executed by the parties to this Contract and, if applicable, establishing a Contract Price or Contract Time adjustment for the changed Work.

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 OUS General Conditions.

CONSTRUCTION CHANGE DIRECTIVE, means a written order by the Owner's Authorized Representative 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.

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 Solicitation Document and addenda thereto, Instructions to Offerors, Supplemental Instructions to Offerors, the OUS Public Improvement Agreement Form, OUS General Conditions, Supplemental General Conditions, if any, the accepted Offer, Plans, Specifications, amendments, Change Orders and Construction Change Directives .

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the issuance of the 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 and Change Orders.

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.

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, old age 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.

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 Change Orders 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 and a proposal in connection with a Request for Proposals.

OFFEROR, means a bidder in connection with Instructions to Bidders and 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 at the job site (e.g. job trailer) including expenses of personnel staffing the job site

be decided by the Owner's Authorized Representative, 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's Authorized Representative (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of the Owner's Authorized Representative (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's Authorized Representative (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's Authorized Representative, including without limitation, any nonconformity with applicable laws, statutes, ordinances, building codes, rules and regulations.
- A.4.4 If the Contractor believes that additional cost or Contract Time is involved because of clarifications or instructions issued by the Owner's Authorized Representative (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner's Authorized Representative, 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's Authorized Representative 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's Authorized Representative will provide administration of 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's Authorized Representative will act on behalf of the Owner to the extent provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner's Authorized Representative may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.
- B.1.2 The Owner's Authorized Representative 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's Authorized Representative will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner's Authorized Representative 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.
- B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall endeavor to communicate with each other through the Owner's Authorized Representative or designee 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

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's Authorized Representative shall be confirmed in writing to the Contractor.

B.7 INSPECTION

- B.7.1 Owner's Authorized Representative shall have access to the Work at all times.
- B.7.2 Inspection of the Work will be made by the Owner's Authorized Representative at its discretion. The Owner's Authorized Representative 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's Authorized Representative, 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 laws, ordinances, rules, regulations 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's Authorized Representative timely notice of when and where tests and inspections are to be made so that the Owner's Authorized Representative 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's Authorized Representative.
- B.7.4 As required by the Contract Documents, Work done or material used without inspection or testing by the Owner's Authorized Representative 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 sufficient notice to the Owner's Authorized Representative, 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's Authorized Representative, the uncovering and restoration will be paid for as a Change Order.
- 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 Authorized Representative'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 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's Authorized Representative.

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, Change Orders, 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's Authorized Representative 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 Contract is involved in litigation, Contractor shall retain all such records until all litigation is resolved. The Owner and/or its agents shall continue to be provided full access to the records during litigation.

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 OUS 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.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 By 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) a Change Order 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's Authorized Representative.

B.19 SUBSTITUTIONS

The Contractor may make Substitutions only with the consent of the Owner, after evaluation by the Owner's Authorized Representative and only in accordance with a Change Order 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 other reserved rights, in addition to copyrights, are retained by Owner.

B.21 FUNDS AVAILABLE AND AUTHORIZED

Owner reasonably believes at the time of entering into this Contract that sufficient funds are available and authorized for expenditure to finance the cost of this Contract within the Owner's appropriation or limitation. Contractor understands and agrees that, to the extent that sufficient funds are not available and authorized for expenditure to finance the cost of this Contract, Owner's payment of amounts under this Contract attributable to Services performed after the last day of the current biennium is contingent on Owner receiving from the Oregon Legislative Assembly appropriations, limitations or other expenditure authority sufficient to allow Owner, in the exercise of its reasonable administrative discretion, to continue to make payments under this Contract.

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. Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts.

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's Authorized Representative, 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

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.

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 Change Order 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 additional Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the additional 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 Change Order 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. The mark-ups set forth in D.1.3(c) shall be utilized by the parties as a guide in establishing fixed pricing, and will not be exceeded by Owner without adequate justification. Cost and price data relating to Change Orders 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 Change Order 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%

When Change Order Work under D.1.3(c) is 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 such Change Order as follows:

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

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 Change Order Work. Owner may establish a maximum cost for Change Order Work under this Section D.1.3(c), which shall not be exceeded for reimbursement without additional written authorization from Owner. Contractor shall not be required to complete such Change Order Work without additional authorization.

D.1.4 Any necessary adjustment of Contract Time that may be required as a result of a Change Order must be agreed upon by the parties before the start of the Change Order Work unless Owner's Authorized Representative authorizes Contractor to start the 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 the Change Order. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) Day time limit, Contractor's requests pertaining to that Change Order are 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's Authorized Representative denies Contractor's 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 Change Order 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, the Contractor must submit a written request to the Owner's Authorized Representative, 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 the Change Order by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by the Change Order 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 compensation and additional Contract Time requested. The Contractor will 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 additional compensation or Contract Time that Contractor submits to the Owner's Authorized Representative. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner's Authorized Representative within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner's Authorized Representative and 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 the State of Oregon, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner's Authorized Representative 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.

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's Authorized Representative for review. Contractor's Claims, including Claims for additional compensation or additional Contract Time, shall be submitted in writing by Contractor to the Owner's Authorized Representative 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 OUS General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner's Authorized Representative a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be waived.

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 extension 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's Authorized Representative. The Owner's Authorized Representative and 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's Authorized Representative 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 Authorized Representative'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 parties agree to promptly submit the appropriate motions and orders documenting the settlement to the Court for its signature and filing.

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 Owner may at any time and at its discretion issue a Construction Change Directive adding to, modifying or reducing the scope of Work. Contractor and Owner shall negotiate the need for any adjustment to compensation or additional Contract Time related to the change, subject to the procedures for submitting requests or Claims for additional compensation or additional Contract Time established in this Section D. Unless otherwise directed by Owner's Authorized Representative, Contractor shall proceed with the Work while any request or Claim for additional compensation or additional Contract Time resulting from Work under a Change Order or Construction Change Directive is pending. Regardless of the review period or the final decision of the Owner's Authorized Representative, 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 Work without a written stop work order from the Owner or Owner's Authorized Representative.

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 will provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown will demonstrate reasonable, identifiable, and measurable components of the Work.

- (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 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's Authorized Representative has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment may 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 labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner's Authorized Representative with regard to any application for payment, Contractor nevertheless shall continue to prosecute expeditiously 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's Authorized Representative shall be a condition of any progress payments or final payment otherwise due.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Payroll certification is required before payments are made on the Contract. Refer to Section C.2 for this information.

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 OAR 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 opinion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed 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 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 Owner shall, within fifteen (15) Days after receiving the written notice, 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

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 will 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 of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner's Authorized Representative, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner's Authorized Representative. 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 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 will 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 attorney 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 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 proper regulatory agencies in a manner that complies with applicable federal, state, and local laws and regulations. Cleanup shall be at no cost to the Owner and be performed by properly qualified 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 federal, state, or local statutes, rules or ordinances. 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 federal, state, or local statutes, rules, or ordinances;
- (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, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all applicable federal, state, or local statutes, rules or ordinances.

F.5.2 Contractor shall report all reportable quantity releases to applicable federal, state, and local regulatory and emergency response agencies. Reportable quantities are found in 40 CFR Part 302, Table 302.4 for hazardous substances and in OAR 340-142-0050 for all products addressed therein. 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 no., and all other documentation required by law.)
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when it was 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 Contractor has had with members of the press or State officials other than Owner.
- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personnel 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 in 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.

G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner for the insureds, as their interests may appear. 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 in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

G.3.4 Liability Insurance:

G.3.4.1 Commercial General Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Commercial General Liability Insurance covering bodily injury and property damage in a form and with coverages that are satisfactory to the State. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnity 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. Contractor shall provide proof of insurance of not less than the following amounts:

Bodily Injury/Death:

Amounts not less than the amounts listed in the following schedule:

Per occurrence limit for any single claimant:

From commencement of the Contract term to June 30, 2011: \$1,600,000
 July 1, 2011 to June 30, 2012: \$1,700,000
 July 1, 2012 to June 30, 2013: \$1,800,000
 July 1, 2013 to June 30, 2014: \$1,900,000
 July 1, 2014 to June 30, 2015: \$2,000,000
 July 1, 2015 and thereafter the adjusted limitation as determined by the State Court Administrator pursuant to Oregon Laws 2009, chapter 67, section 3 (Senate Bill 311).

Per occurrence limit for any number of claimants:

From commencement of the Contract term to June 30, 2011: \$3,200,000
 July 1, 2011 to June 30, 2012: \$3,400,000
 July 1, 2012 to June 30, 2013: \$3,600,000
 July 1, 2013 to June 30, 2014: \$3,800,000
 July 1, 2014 to June 30, 2015: \$4,000,000
 July 1, 2015 and thereafter the adjusted limitation as determined by the State Court Administrator pursuant to Oregon Laws 2009, chapter 67, section 3 (Senate Bill 311).

Property Damage:

Amounts not less than the amounts listed in the following schedule:

Per occurrence limit for any single claimant:

From commencement of the Contract term to June 30, 2011: \$100,100.
 Effective as of July 1 of each year the adjusted limitation will be as determined by the State Court Administrator pursuant to Oregon Laws 2009, chapter 67, section 5 (Senate Bill 311).

Per occurrence limit for any number of claimants:

From commencement of the Contract term to June 30, 2011: \$500,600.
 Effective as of July 1 of each year the adjusted limitation will be as determined by the State Court Administrator pursuant to Oregon Laws 2009, chapter 67, section 5 (Senate Bill 311).

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, non-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 the following amounts:

Bodily Injury/Death:

Amounts not less than the amounts listed in the following schedule:

Per occurrence limit for any single claimant:

From commencement of the Contract term to June 30, 2011: \$1,600,000.
 July 1, 2011 to June 30, 2012: \$1,700,000.
 July 1, 2012 to June 30, 2013: \$1,800,000.
 July 1, 2013 to June 30, 2014: \$1,900,000.
 July 1, 2014 to June 30, 2015: \$2,000,000.
 July 1, 2015 and thereafter the adjusted limitation as determined by the State Court Administrator pursuant to Oregon Laws 2009, chapter 67, section 3 (Senate Bill 311).

Per occurrence limit for any number of claimants:

From commencement of the Contract term to June 30, 2011: \$3,200,000.
 July 1, 2011 to June 30, 2012: \$3,400,000.
 July 1, 2012 to June 30, 2013: \$3,600,000.
 July 1, 2013 to June 30, 2014: \$3,800,000.
 July 1, 2014 to June 30, 2015: \$4,000,000.
 July 1, 2015 and thereafter the adjusted limitation as determined by the State Court Administrator pursuant to Oregon Laws 2009, chapter 67, section 3 (Senate Bill 311).

Property Damage:

Amounts not less than the amounts listed in the following schedule:

Per occurrence limit for any single claimant:

From commencement of the Contract term to June 30, 2011: \$100,100.
 Effective as of July 1 of each year the adjusted limitation will be as determined by the State Court Administrator pursuant to Oregon Laws 2009, chapter 67, section 5 (Senate Bill 311).

Per occurrence limit for any number of claimants:

From commencement of the Contract term to June 30, 2011: \$500,600.
 Effective as of July 1 of each year the adjusted limitation will be as determined by the State Court Administrator pursuant to Oregon Laws 2009, chapter 67, section 5 (Senate Bill 311).

G.3.4.3 "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 24 months or the maximum time period available in the marketplace if less than 24 months. Contractor will be responsible for furnishing certification of "tail" coverage as described or continuous "claims made" liability coverage for 24 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. This will be a condition of the final acceptance of Work or services and related warranty (if any).

G.3.5 Additional Insured: The liability insurance coverage, except Professional Liability if included, required for performance of

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's Authorized Representative, 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 reinspections 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. Contractor shall perform such warranty work within a reasonable time after Owner's demand. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time 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. 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.

I.2.2 This provision does not 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 affected Work has been accepted in writing by the Owner's Authorized Representative.

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 and/or the Owner's Authorized Representative 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's Authorized Representative, 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.3 COMPENSATION FOR SUSPENSION

and the time within which the Contractor shall finish all items on the punchlist 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.

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.

K.4.2 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's Authorized Representative. 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's Authorized Representative with submission of the request for the Substantial Completion notice.

K.5 TRAINING

As part of the Work, and prior to submission of the request for final payment, the Contractor shall schedule with the Owner's Authorized Representative training sessions for all equipment and systems as required in the individual specifications sections. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner personnel adequate notice. The O & M Manual shall be used as a basis for training. Training shall be a formal session held after the equipment and/or system is completely installed and operational in its normal operating environment.

K.6 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 specifications prior to final payment. Delivery point for extra materials shall be designated by the Owner's Authorized Representative.

K.7 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 pollution clean-up performed as a part of this Contract has been disposed of in accordance with all applicable rules, regulations, laws, and statutes of all agencies having jurisdiction over such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above.

K.8 CERTIFICATE OF OCCUPANCY

The Contractor shall not be granted Final Completion or receive final payment if the Owner has not received an unconditioned certificate of occupancy from the appropriate state and/or local building officials, unless failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

K.9 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the Owner all items issued during construction such as keys, security passes, site admittance badges, and all other pertinent items. The 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.10 SURVIVAL

OREGON UNIVERSITY SYSTEM

STANDARD PUBLIC IMPROVEMENT CONTRACT

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 the State of Oregon, Oregon State Board of Higher Education (OSBHE), 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 a contract with the State of Oregon, the plans, specifications, terms and conditions of which are contained in 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 faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and 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, and shall indemnify and save harmless the State of Oregon, OSBHE and _____ (name of institution and any other Owner agency), and members thereof, its officers, employees and agents, against any claim for direct or indirect damages of every kind and description that

OREGON UNIVERSITY SYSTEM
STANDARD PUBLIC IMPROVEMENT CONTRACT
PERFORMANCE BOND

Bond No. _____
Solicitation _____
Project Name _____

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

* If using multiple sureties

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 the State of Oregon, Oregon State Board of Higher Education (OSBHE), 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 a contract with the State of Oregon, the plans, specifications, terms and conditions of which are contained in 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

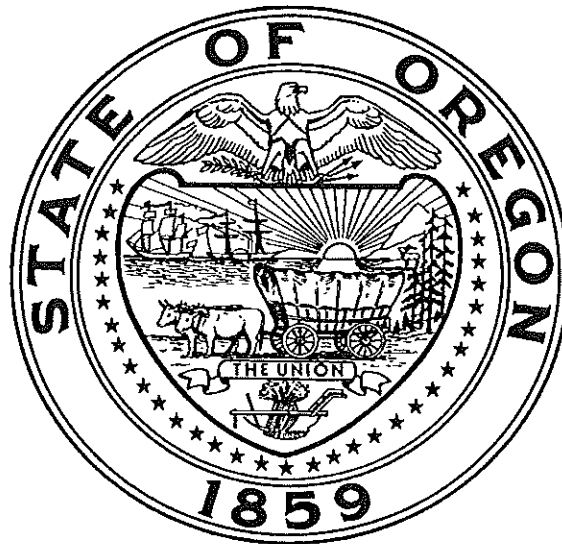
WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the 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 faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and 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

PREVAILING WAGE RATES

for

Public Works Contracts in Oregon



OREGON BUREAU OF LABOR AND INDUSTRIES

**Brad Avakian
Commissioner
Bureau of Labor and Industries**

Effective: January 1, 2012 (as amended April 1, 2012)

http://egov.oregon.gov/BOLI/WHD/PWR/PWR_Jan2012_Index.shtml

SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Riley Residence Hall Ceiling Replacement.
- B. Owner's Name: University of Oregon.
- C. The Project consists of a removal and replacement of the ceilings, light fixtures and related work in the existing first floor of Riley Residence Hall, 550 East 11th Ave, Eugene, Oregon.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Public Improvement Agreement Form.

1.03 CONTRACT TIME

- A. Do not commence Work until after execution of the Agreement, receipt of Notice to Proceed from Owner, and Owner's approval of Contractor's certificates of insurance.
- B. Perform Work to accommodate Owner's occupancy requirements:
 - 1. Estimated Date of Notice to Proceed: June 25, 2012.
 - 2. Estimated Contractor Access to Site: July 17, 2012.
 - 3. Achieve Substantial Completion by September 7, 2012.
- C. Perform Work to achieve Final Completion of entire project by October 19, 2012.

1.04 PERMITS AND INSPECTIONS

- A. Architect will make City building permit applications. Owner will pay all systems development, plan check, and permit fees directly to the City of Eugene.
- B. Contractor is responsible to pick up approved permits from authorities having jurisdiction.
- C. Contractor is responsible to arrange for and attend required permit inspections and provide evidence that all permit inspections have been made and approved in accordance with Section 01 70 00.

1.05 SOLE SOURCE SUBCONTRACTORS

- A. Testing, Adjusting and Balancing: Contractor shall contract with the following company for work associated with testing, adjusting and balancing of HVAC systems.
 - Air Incorporated
 - 90710 Huntley Court
 - Coburg, Oregon 97408
 - Tel (541) 484-1928

1.06 OWNER OCCUPANCY

- A. Owner intends to fully occupy the Project upon Substantial Completion and resume normal operations.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Coordinate Work activities with Owner's scheduled activities, quiet periods and building shut down.
- D. Schedule the Work to accommodate Owner occupancy.

1.07 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings. Coordinate use with Owner's Project Manager.
- B. Arrange use of site and premises to allow:
 - 1. Work by Owner.
- C. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Parking: Owner will provide access to parking on site as directed by Owner's Project Manager.
- E. Contractor Staging Areas: As indicated on Drawings. Contractor to limit staging to areas within project area.
- F. Work Scheduling and Noise Control (Owner Occupied Building):
 - 1. With the understanding that noise is a sensitive issue, the following activities, under approval of the Owner's Project Manager, may be permitted to begin according to City of Eugene ordinances and are exempt from the 8:00 AM start:
 - a. Survey and layout.
 - b. Inspections.
 - c. Coordination meetings.
 - d. Safety meetings.

1.08 MATERIAL SAFETY DATA

- A. Submit copies of Material Safety Data Sheets (MSDS) for materials and products used on site to Owner's Project Manager. Maintain separate copies of MSDS records at site.

1.09 ASBESTOS CONTAINING MATERIALS WARNING

- A. Asbestos containing materials are known to existing in areas of the Work. Contractor shall not, in any way, disturb materials which are known to contain asbestos, assumed to contain asbestos, or otherwise have not been tested and confirmed to be asbestos free. Where access to concealed spaces is required, or it is necessary to disturb building materials such as for drilling of holes, cutting, etc., notify Owner so that proper investigation and/or material procedures are followed.
- B. The Owner will investigate and test for asbestos containing materials and, if required, remove such materials as required for the Work.
- C. Contractor shall schedule five (5) days of slack or "down" time to allow for removal of asbestos discovered during demolition work without penalty to Owner for delay of the Contract.
- D. Coordinate work to allow asbestos contractor access to remove and replace items as required.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.

1.02 RELATED REQUIREMENTS

- A. Document B-7 - Agreement Form: Contract Sum, retainages, payment period.
- B. Document B-8 - General Conditions: Additional requirements for progress payments, final payment, changes in the Work.

1.03 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- B. Forms filled out by hand will not be accepted.
- C. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.
- D. Submit Schedule of Values in duplicate within 10 days after date of Owner-Contractor Agreement.
- E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization.
- F. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Each calendar month ending on the last day of the month or date approved by Owner.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Present required information on electronic media printout.
- E. Form: AIA G702 Application and Certificate for Payment and AIA G703 - Continuation Sheet including continuation sheets when required.
- F. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.

- G. Execute certification by signature of authorized officer.
- H. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.
- I. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.
- J. Submit four copies of each Application for Payment.
- K. Include the following with the application:
 - 1. Transmittal letter as specified for Submittals in Section 01 30 00.
 - 2. Construction progress schedule, revised and current as specified in Section 01 30 00.
 - 3. Wage Certification: Submit Payroll and Certified Statement Form complying with ORS 279.354 covering Contractor and sub-contractors.
 - 4. Daily Reports: Submit copies of daily reports for the pay period. Reports to include date, number of employees, subcontractors and number of employees, and brief description of work performed.
- L. Owner will not process incomplete payment applications or applications without attachments.
- M. Record Document Monitoring: Architect and Owner's Project Manager will review status of record document preparation under provisions of Section 01 70 00.
- N. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01 70 00.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of alternates.
- B. Procedures for pricing alternates.
- C. Documentation of changes to Contract Sum and Contract Time.

1.02 RELATED REQUIREMENTS

- A. Document B-2 - Instructions to Bidders: Instructions for preparation of pricing for alternatives.
- B. Document B-7 - Agreement Form: Incorporating monetary value of accepted alternatives.

1.03 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each alternate.

1.04 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Lighting Fixture Type
 - 1. Base Bid Item: Provide LED light fixtures as indicated on Drawings.
 - 2. Alternate Bid Item: Provide Fluorescent light fixtures as indicated on Drawings.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preconstruction meeting.
- B. Progress meetings.
- C. Submittals for review, information, and project closeout.
- D. Number of copies of submittals.
- E. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.
- B. Section 01 78 00 - Closeout Submittals: Submittal of final project record documents and operation and maintenance data.

1.03 PROJECT COORDINATION

- A. Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Coordinate completion and clean up work of separate sections in preparation for Substantial Completion.
- C. During construction, coordinate use of site and facilities through the Owner's Project Manager.
- D. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owners' activities.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Owner's Project Manager will schedule a meeting after Notice of Award.
- B. Attendance Required:
 - 1. Owner's Project Manager.
 - 2. Architect.
 - 3. Contractor's Project Manager and Superintendent.
 - 4. Owner's Asbestos Program Manager.
 - 5. Food Service Consultant.
- C. Agenda:
 - 1. Distribution of Contract Documents.
 - 2. Submission of list of Subcontractors, schedule of values, and progress schedule.
 - 3. Designation of personnel representing the parties to Contract, Owner and Architect.
 - 4. Designation of personnel representing the parties to Contract, and Architect.
 - 5. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 6. Review use of site and access issues.
 - 7. Scheduling.
 - 8. Owner's environmental health and safety procedures and documentation.
 - 9. Identification of long lead time items of Work.

- D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum weekly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner's Project Manager, Architect, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review status of outstanding items from previous meetings
 - 3. Review of Work progress.
 - 4. report.
 - 5. Review Schedule including work to be performed in next two week period.
 - 6. Identification of problems that impede, or will impede, planned progress.
 - 7. Review of submittals schedule and status of submittals.
 - 8. Architect's Report.
 - 9. Sub-Contractor Reports.
 - 10. Owner's Report.
 - 11. Change Items.
 - 12. Requests for Information.
 - 13. New Items.
 - 14. Other business relating to Work.
- E. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.03 SUBMITTAL SCHEDULE

- A. Architect will furnish Contractor a list of submittals required by individual specification sections.
- B. Coordinate schedule with Progress Schedule.
- C. Maintain Submittal Log to track progress of each submittal.
 - 1. Update log daily.
 - 2. Provide copies to Architect and Owner's Project Manager at each Progress Meeting.

3.04 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product Data: Identify applicable products, models, options and other data.
 - 2. Shop Drawings: Prepare by competent drafters.
 - 3. Samples for Selection: Provide manufacturer's complete color and finish line for selection.
 - 4. Samples for Verification: Provide specified color / finish samples.
- B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed only for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 78 00 - CLOSEOUT SUBMITTALS.

3.05 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Certificates: Certify product conforms to or exceeds specified requirements.
 - 2. Test Reports: Record of test certifying conformance with specified requirements.
 - 3. Inspection Reports.
 - 4. Manufacturer's Installation Instructions: Complete installation instructions.
 - 5. Manufacturer's Field Reports: Reports verifying conformance with specified requirements.
 - 6. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Other types as indicated.
- B. Submit for Owner's benefit during and after project completion.

3.07 NUMBER OF COPIES OF SUBMITTALS

- A. Documents for Review:
 - 1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches: Submit the number of copies which the Contractor requires, plus four which will be retained by the Architect, Owner and Consultants.
 - 2. Larger Sheets, Not Larger Than 36 x 48 inches: Submit the number of opaque reproductions which Contractor requires, plus four which will be retained by Architect, Owner, and Consultants.
- B. Documents for Information: Submit three copies.
- C. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.08 SUBMITTAL PROCEDURES

- A. Transmit each submittal with approved form.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Deliver submittals to Architect at business address.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
- H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- I. Provide space for Contractor and Architect review stamps.
- J. When revised for resubmission, identify all changes made since previous submission.

- K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

END OF SECTION

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.
- C. Electronic distribution.

1.02 RELATED SECTIONS

- A. Section 01 10 00 - Summary: Work sequence.

1.03 REFERENCES

- A. AGC (CPSM) - Construction Planning and Scheduling Manual; Associated General Contractors of America; 2004.

1.04 SUBMITTALS

- A. Within 7 days after date of Agreement, submit preliminary schedule.
- B. Submit updated schedule with each Application for Payment.
- C. Submit the number of opaque reproductions that Contractor requires, plus three copies which will be retained by Architect and Owner.
- D. Submit under transmittal letter form.

1.05 SCHEDULE FORMAT

- A. Distribution Format: PDF format
- B. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- C. Diagram Printed Sheet Size: Maximum 11 x 17 inches or width required.
- D. Scale and Spacing: To allow for notations and revisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

- A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- D. Indicate delivery dates for owner-furnished products.
- E. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.
- B. Identify the first work day of each week.

3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with Architect at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 7 days.

3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.
- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.

3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to Subcontractors, suppliers, Architect, Owner, and other concerned parties.
- B. Distribute electronically to Architect and Owner's Project Manager.
- C. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

END OF SECTION

QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. References and standards.
- B. Control of installation.
- C. Tolerances.
- D. Testing and inspection services.
- E. Manufacturers' field services.

1.02 RELATED REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.
- B. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCE STANDARDS

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008.
- B. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2011.
- C. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2010.
- D. ASTM E329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing; 2011.
- E. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2009.

1.04 SUBMITTALS

- A. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Conformance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
 - 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
- B. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

- C. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
 - 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.05 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference 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 of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.06 TESTING AND INSPECTION AGENCIES

- A. Owner will employ and pay for services of an independent testing agency to perform specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have Work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.03 TESTING AND INSPECTION

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
 - 5. Perform additional tests and inspections required by Architect.
 - 6. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 - 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 - 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect.
- F. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.

3.04 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, as applicable, and to initiate instructions when necessary.

- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.05 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not conforming to specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary telephone service.
- D. Temporary sanitary facilities.
- E. Temporary Controls: Barriers, enclosures, and fencing.
- F. Protection.
- G. Security requirements.
- H. Vehicular access and parking.
- I. Waste removal facilities and services.

1.02 RELATED REQUIREMENTS

- A. Section 01 74 19 - Construction Waste Management.

1.03 TEMPORARY UTILITIES

- A. Existing electrical, water, and heating facilities may be used. Do not waste electricity, heat, and water.

1.04 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for cellular telephone service to site. Provide at time of project mobilization.
- B. Use of Owner's phones and computers is not permitted.

1.05 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Use of existing facilities is not permitted.
- C. Maintain daily in clean and sanitary condition.

1.06 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition. Location indicated on Drawings.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.07 INTERIOR ENCLOSURES

- A. Provide temporary partitions as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and gypsum board sheet materials with closed joints and sealed edges at intersections with existing surfaces.

1.08 PROTECTIONS OF EXISTING SURFACES AND FURNISHINGS

- A. Provide protective coverings at walls, floors, and other existing construction.

1.09 PROTECTIONS OF THE WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings for walls, projections, jambs, and sills of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic from landscape areas.

1.10 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

1.11 SECURITY

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with Owner's security program.

1.12 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.

1.13 PROGRESS CLEANING AND WASTE REMOVAL

- A. See Section 01 74 19 - Waste Management, for additional requirements.
- B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- C. Provide containers with lids. Remove trash from site at least weekly.
- D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
- F. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- G. Remove debris and rubbish from pipe chases, plenums, stud cavities and other closed or remote spaces, prior to enclosing the space.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Re-use of existing products.
- C. Transportation, handling, storage and protection.
- D. Product option requirements.
- E. Substitution limitations and procedures.
- F. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: List of products to be furnished by Owner.
- B. Document 01 60 01 - Substitution Request Form.
- C. Section 01 74 19 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting packaging and substitutions.
- D. Section 02 41 00 - Demolition: Removal of existing items to be re-installed.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.
- B. Reused Products: Reused products include materials and equipment previously used in this or other construction, salvaged and refurbished as specified.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. Do not use products having any of the following characteristics:
 - 1. Made using or containing CFC's or HCFC's.

2.03 PRODUCT OPTIONS

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

2.04 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. After date of contract, the Owner may, at its option, consider formal requests from Contractor for substitution of products for those specified. One or more of the following conditions must be documented:
 - 1. Compliance with final interpretation of code requirements or insurance regulations.
 - 2. Unavailability of a specified Product through no fault of the Contractor.
 - 3. Inability of specified Product to perform or fit in designated place.
 - 4. Manufacturer's or fabricator's refusal to certify or guarantee performance of a specified product.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- D. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Will reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Requests for substitution must be submitted on approved Substitution Request Form - Section 01 60 01.
 - 2. Submit four copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 3. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.

4. Architect will review submittal and make recommendation on Owner's Project Manager who will have final approval authority.
5. The Architect will notify Contractor in writing of decision to accept or reject request.
6. Architect will document approved substitutions during bidding period by addenda.

3.02 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- H. Prevent contact with material that may cause corrosion, discoloration, or staining.
- I. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- J. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: Robertson/Sherwood/Architect pc
 132 East Broadway - Suite 540
 Eugene, Oregon 97401

PROJECT: Riley Residence Hall Ceiling Replacement
 University of Oregon
 Eugene, Oregon

SPECIFIED ITEM: _____
 Section Paragraph Description

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

Attached data includes product descriptions, specifications, drawings, photographs, performance and test data adequate for evaluation of request including identification of applicable data portions.

Attached data also includes description of changes to Contract Documents and proposed substitution requires for proper installation.

The undersigned certifies following items, unless modified by attachments, are correct:

1. Proposed substitution does not affect dimensions shown on drawings.
2. Undersigned pays for changes to building design, including engineering design, detailing, and construction costs caused by proposed substitution.
3. Proposed substitution has no adverse effect on other trades, construction schedule, or specified warranty requirements.
4. Maintenance and service parts available locally or readily obtainable for proposed substitution.

Undersigned further certifies function, appearance, and quality of proposed substitution are equivalent to or superior to specified item.

Submitted by: _____ Signature: _____ Firm: _____ Address: _____ _____ Date: _____ Tel: _____ Fax: _____ Attachments: _____ _____	For use by Architect: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as noted. <input type="checkbox"/> Not Approved <input type="checkbox"/> Received too late By: _____ Date: _____ _____ For use by University of Oregon Project Manager: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as noted. <input type="checkbox"/> Not Approved <input type="checkbox"/> Received too late By: _____ Date: _____
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EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Laying out the work.
- F. Cleaning and protection.
- G. Starting of systems and equipment.
- H. Demonstration and instruction of Owner personnel.
- I. Closeout procedures, except payment procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures.
- C. Section 01 50 00 - Temporary Facilities and Controls: Temporary interior partitions.
- D. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.
- E. Section 02 41 00 - Demolition: Demolition of portions of existing structures; site utility demolition.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.

1.04 PROJECT CONDITIONS

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
 - 1. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.
- C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

1. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time of day; excessively noisy includes jackhammers.
 2. Indoors: Limit conduct of especially noisy interior work to the hours of 6 pm to 7 am.
- D. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.05 COORDINATION

- A. See Section 01 10 00 for occupancy-related requirements.
- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of examination, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

- A. Verify layout prior to starting work.
- B. Promptly notify Architect of any discrepancies discovered.
- C. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- D. Periodically verify layouts.

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.

1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on Drawings.
- C. Remove existing work as indicated and as required to accomplish new work.
1. Remove items indicated on Drawings.
 2. Relocate items indicated on Drawings.
 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. See Section 01 10 00 for other limitations on outages and required notifications.
 - c. Provide temporary connections as required to maintain existing systems in service.
 4. Verify that abandoned services serve only abandoned facilities.
 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch as specified for patching new work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
 3. Patch as specified for patching new work.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.

L. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Prior to performing any cutting and patching on existing construction, verify presence of asbestos. If in doubt, notify Owner's Project Manager for verification.
- D. Perform whatever cutting and patching is necessary to:
 1. Complete the work.
 2. Fit products together to integrate with other work.
 3. Provide openings for penetration of mechanical, electrical, and other services.
 4. Match work that has been cut to adjacent work.
 5. Repair areas adjacent to cuts to required condition.
 6. Repair new work damaged by subsequent work.
 7. Remove samples of installed work for testing when requested.
 8. Remove and replace defective and non-conforming work.
- E. Execute cutting and patching to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.
- F. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- G. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- H. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- I. Restore work with new products in accordance with requirements of Contract Documents.
- J. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- K. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of the penetrated element.
- L. Patching:
 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 2. Match color, texture, and appearance.
 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.
- M. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- N. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.

3.08 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site daily and dispose off-site; do not burn or bury.

3.09 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.10 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect and owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- G. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.11 DEMONSTRATION AND INSTRUCTION

- A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.
- B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season

within six months.

- D. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.
- E. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

3.12 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.13 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean filters of operating equipment.
- F. Clean debris from roofs, gutters, downspouts, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.14 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
 - 1. Provide copies to Architect and Owner.
- B. Notify Architect when work is considered ready for Substantial Completion.
- C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's review.
- D. Owner will occupy all of the building as specified in Section 01 10 00.
- E. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
- F. Notify Architect when work is considered finally complete.
- G. Complete items of work determined by Architect's final inspection.

END OF SECTION

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.
- D. Spare parts and maintenance materials.
- E. Electronic data.

1.02 RELATED REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit original red-line markup drawings and specifications and electronic PDF files on CD to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
 - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 3. Submit 1 copy of completed documents at 75 percent completion. This copy will be reviewed and returned, with Architect comments. Revise content of all document sets as required prior to final submission.
 - 4. Submit two sets of revised final documents in final form within 10 days prior to submission of final application for payment.
 - 5. Submit one complete reproducible CD set of all operation and maintenance data in PDF format.
 - 6. Note: Per General Conditions, Form B-8, Owner will not make payments beyond 75 percent of the contract amount until Operation and Maintenance Manual have been submitted.
- C. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 3. Field changes of dimension and detail.
 - 4. Details not on original Contract drawings.
- G. Monitoring Compliance: Architect and Owner's Project Manager will review status of concurrent recording of information on a monthly basis, prior to reviewing and processing applications for payment. Owner reserves right to withhold payment until documents are up-to-date.
- H. Final Record Documents Submittal:
 - 1. One complete full-size reproducible set of drawings and specifications with Contractor's red-lines on bond paper.
 - 2. One complete reproducible digital CD set of Contractor's red-line drawings and specification in PDF format.
 - 3. One complete digital set of all construction photographs by Contractor.

3.02 OPERATION AND MAINTENANCE DATA

- A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- E. Final Submittal:
 - 1. Submit two sets of revised final documents in final form within 10 days prior to submission of final application for payment.
 - 2. Submit one complete reproducible CD set of all operation and maintenance data in PDF format.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 1. Product data, with catalog number, size, composition, and color and texture designations.
 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Additional information as specified in individual product specification sections.
- D. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 1. Description of unit or system, and component parts.
 2. Identify function, normal operating characteristics, and limiting conditions.
 3. Include performance curves, with engineering data and tests.
 4. Complete nomenclature and model number of replaceable parts.
- B. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- C. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- E. Provide servicing and lubrication schedule, and list of lubricants required.
- F. Include manufacturer's printed operation and maintenance instructions.
- G. Include sequence of operation by controls manufacturer.
- H. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- I. Provide control diagrams by controls manufacturer as installed.
- J. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- K. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- L. Include test and balancing reports.
- M. Additional Requirements: As specified in individual product specification sections.

3.05 OPERATION AND MAINTENANCE MANUALS

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.
- B. Prepare data in the form of an instructional manual.

- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.
- G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- H. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.
- I. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
- J. Provide a listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.
- K. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of Architect, Consultants, and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

3.06 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

3.07 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide spare parts, maintenance, and extra products in quantities specified in individual specification sections.
- B. Deliver to Project site and place in location directed by Owner's Project Manager; obtain receipt and submit to Architect prior to application for final payment.

END OF SECTION

DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.
- B. Removal and replacement of miscellaneous items and devices to facilitate Work.
- C. Salvage of specific items to Owner.
- D. Other demolition as required to complete the Work.

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 10 00 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- C. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- D. Section 01 60 00 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- E. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 PROJECT CONDITIONS

- A. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- B. Comply with other requirements specified in Section 01 70 00.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 SCOPE

- A. Remove items indicated, for salvage, relocation, and reuse.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Provide, erect, and maintain temporary barriers and security devices.
 - 2. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 3. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 4. Do not close or obstruct roadways or sidewalks without permit.
 - 5. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until built elements to be salvaged or relocated have been removed.

- D. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- E. Perform demolition in a manner that maximizes salvage and recycling of materials.
 1. Dismantle existing construction and separate materials.
 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 1. Verify that construction and utility arrangements are as shown.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on drawings.
- C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. Verify that abandoned services serve only abandoned facilities before removal.
 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- D. Protect existing work to remain.
 1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch as specified for patching new work.

3.04 DEBRIS AND WASTE REMOVAL

- A. Fluorescent Lamps: Owner will provide containers to Contractor for depositing fluorescent lamps for Owner's disposal. Coordinate with Owner's Project Manager.
- B. Remove debris, junk, and trash from site.
- C. Leave site in clean condition, ready for subsequent work.
- D. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

ACOUSTICAL CEILINGS**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Suspended metal grid ceiling system.
- B. Acoustical units.
- C. Design of seismic bracing.

1.02 RELATED REQUIREMENTS

- A. Section 02 41 00 - Demolition: Removal of existing ceiling systems.

1.03 REFERENCE STANDARDS

- A. ASCE 7 - Minimum Design Loads for Buildings and Other Structures; 2005.
- B. ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2007.
- C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 2008.
- D. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2011.
- E. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2008e1.
- F. CISCA - Ceilings and Interior Systems Construction Association, Acoustical Ceilings: Use and Practice.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate grid layout and related dimensioning, junctions with other ceiling finishes, and mechanical and electrical items installed in the ceiling.
- C. Product Data: Provide data on suspension system components and acoustical units.
- D. Samples: Submit two samples 6 x 6 inch in size illustrating material and finish of acoustical units.
- E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- F. Regulatory Submittals: Submit seismic design information and details to code agency for review and approval.

1.06 PERFORMANCE REQUIREMENTS

- A. Suspension System: Design and assemble ceiling system with maximum deflection of 1:360.
- B. Seismic Standard: Provide ceiling system assembly designed and installed to withstand effects of earthquake motions in accordance with the following:

1. Seismic Restraint: ASTM E 580.
2. CISCAs Guidelines for Seismic Restraint of Direct-Hung Suspension Ceiling Assemblies - Seismic Zones 3 & 4.
3. Oregon Structural Specialty Code.
4. Comply with ASCE 7, Seismic Design Category D.

1.07 QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.08 FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

1.09 PROJECT CONDITIONS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Install acoustical units after interior wet work is dry.

1.10 EXTRA MATERIALS

- A. See Section 01 60 00 - Product Requirements, for additional provisions.
- B. Provide 12 of each type of acoustical unit for Owner's use in maintenance of project.

PART 2 PRODUCTS

2.01 ACOUSTICAL UNITS

- A. Acoustical Panels Type ACT: Painted mineral fiber, ASTM E 1264 Type III, Form 2, Pattern CE, with the following characteristics:
 1. Size: 24 x 24 inches.
 2. Thickness: 5/8 inches.
 3. Composition: Wet felted.
 4. Light Reflectance: 0.85 percent, determined as specified in ASTM E 1264.
 5. NRC Range: 0.55, determined as specified in ASTM E 1264.
 6. Ceiling Attenuation Class (CAC): 0.33, determined as specified in ASTM E 1264.
 7. Edge: Square.
 8. Surface Color: White.
 9. Surface Pattern: Non-directional medium texture.
 10. Product:
 - a. Fine Fissured by Armstrong World Industries: www.armstrong.com.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 SUSPENSION SYSTEM(S)

- A. Suspension Systems - General: ASTM C635; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.
- B. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled; heavy-duty.
 1. Profile: Tee; 15/16 inch wide face.
 2. Construction: Double web.
 3. Finish: White painted.
 4. Product:

- a. Prelude Plus XL by Armstrong World Industries: www.armstrong.com.
- b. Substitutions: See Section 01 60 00 - Product Requirements.

2.03 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Perimeter Moldings: Same material and finish as grid.
 - 1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid.
- C. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.02 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C 636, ASTM E 580, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Layout system to align as indicated on Drawings, or as directed.
- D. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- E. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- I. Do not eccentrically load system or induce rotation of runners.
- J. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
 - 2. Overlap and rivet corners.

3.03 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install units after above-ceiling work is complete.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

F. Cutting Acoustical Units:

1. Cut to fit irregular grid and perimeter edge trim.
2. Make field cut edges of same profile as factory edges.

3.04 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

SECTION 23 05 00

MECHANICAL SCOPE OF WORK

PART 1 GENERAL

1.01 OVERVIEW

- A. The owner is modifying the first floor of Riley Hall by replacement of the existing ceiling tiles with new grid style suspended t-bar ceilings. As part of this modification, the HVAC ductwork for the entire first floor is being remodeled. Included in the work is installation of new ductwork and extension of existing ductwork, balancing dampers, and supply diffusers.
- B. The following scope of work to be performed by the Contractor is presented for the purpose of complementing or clarifying the Drawings, Specifications, and other Contract Documents; but shall not limit the definition of work as described herein nor shall it constitute a complete list of the Work of the Contract.
- C. Clarifications of the technical aspects of this specification and the drawings are available from Evergreen Engineering, Eugene, Oregon, (541) 484-4771, Mr. Max Frederick, Project Manager.
- D. Cutting and Welding – In the event that hot work is required, the Owner shall be contacted prior to performing the hot work. All Owner hot work requirements must be adhered to during the project.
- E. The Contractor shall:
 - 1. Accept the site in its existing condition at the time of commencement of the Work. A site visit by the Contractor is required to assure a firsthand understanding of this Scope of Work.
 - 2. Submit to the Owner for approval a list of temporary buildings, if any, that the Contractor intends to bring onto the site.
 - 3. Before commencing any work, submit for review and approval of the Owner a detailed schedule (simple bar graph) showing the commencement, the order, and the completion dates for the various parts of this Work. The Work shall be performed in accordance with the approved detailed schedule.
 - 4. Transport to the site Contractor's construction materials and equipment required for the performance of the Work; storing and locating such materials in areas designated by the Owner.
 - 5. Provide first aid facilities to meet the requirements of state and local regulating agencies having jurisdiction at the site.
 - 6. Provide necessary portable lighting as required by the Contractor.
- F. Before starting any work that will have an affect on existing utilities (electrical, sewer, water, etc.) and that will temporarily discontinue or disrupt service to the existing building or equipment, Contractor will notify the Owner three days in advance and obtain the Owner's approval before proceeding with this phase of the Work. Owner will shut down and/or lock out all installed equipment or systems when work is being performed in or near energized equipment.
- G. Maintain a clean work area. Containment of dust and fumes is required.
- H. All finished portions of the installation shall be submitted for inspection by the Owner or his representative.

- I. Work will conform to the conditions specified on the drawings and specifications. Adjustments or modifications of work affecting functional design of work shall be submitted to Owner for review and approval.

1.02 As-Built Drawings. The Contractor shall at all times maintain one complete set of drawings, identifying substantial changes as a result of on-site coordination. The drawings shall include vendor drawings. Before completing the project, the Contractor shall transmit one set of drawings to the Owner.

1.03 Refer to Section 01 10 00 General Requirements for additional working conditions.

PART 2 PRODUCTS

2.01 GENERAL

- A. All material furnished under this specification shall be new and first quality.
- B. Fabrication methods shall follow the best accepted practice within the industry. Fabrication shall be performed in a workmanlike manner. Poor workmanship, even though structurally sound, shall be cause for rejection where appearance is a justifiable consideration.
- C. All nuts, bolts, and caulking will be supplied by the successful bidder.
- D. At the time of final clean-up, all finish surfaces shall be free of scratches and other surface blemishes, and all repaired surfaces shall be equal to the original finish and repairs shall not be visible.

PART 3 SCOPE OF WORK

3.01 GENERAL

- A. Install new, duct, hangers, dampers, and diffusers as indicated on drawings.

END OF SECTION

SECTION 23 05 93

TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Testing, adjustment, and balancing of air systems.
- B. Final testing and balancing of new system

1.02 REFERENCES

- A. AABC MN-1 - AABC National Standards for Total System Balance; Associated Air Balance Council; 2002.
- B. ASHRAE Std 111 - Practices for Measurement, Testing, Adjusting and Balancing of Building Heating, Ventilation, Air-Conditioning, and Refrigeration Systems; American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.; 1988 (R 1997).
- C. NEBB (TAB) - Procedural Standards for Testing Adjusting Balancing of Environmental Systems; National Environmental Balancing Bureau; 2005, Seventh Edition.
- D. SMACNA (TAB) - HVAC Systems Testing, Adjusting, and Balancing; Sheet Metal and Air Conditioning Contractors' National Association; 2002.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Qualifications: Submit name of adjusting and balancing agency and TAB supervisor for approval within 30 days after award of Contract.
- C. Final Report: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.
 - 1. Submit under provisions of Section 01 40 00.
 - 2. Provide final copies for Architect and for inclusion in operating and maintenance manuals.
 - 3. Provide reports in soft cover, letter size, 3-ring binder manuals, complete with index page and indexing tabs, with cover identification at front and side. Include set of reduced drawings with air outlets and equipment identified to correspond with data sheets, and indicating thermostat locations.
 - 4. Include actual instrument list, with manufacturer name, serial number, and date of calibration.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Air Balancing is to be sole sourced
 - 1. Vendor: Air, Inc.
 - 2. U of O blanket contract for air balancing is to be used for billing.
 - 3. Contractor to coordinate with Air, Inc. as necessary for balancing and adjustment of air flows.
- B. Perform total system balance in accordance with one of the following:
 - 1. AABC MN-1, AABC National Standards for Total System Balance.

2. NEBB Procedural Standards for Testing Adjusting Balancing of Environmental Systems.
 3. SMACNA HVAC Systems Testing, Adjusting, and Balancing.
- C. Begin work after completion of systems to be tested, adjusted, or balanced and complete work prior to Substantial Completion of the project.
- D. Perform initial balance of each zone. Zone air flow quantities are from original system design. If air flow balance indicates greater than 10% difference from initial design, submit data to Engineer for evaluation.
- E. Balance each diffuser in each zone to meet air flow design requirements.

3.02 EXAMINATION

- A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:
1. Temperature control systems are installed complete and operable.
 2. Access doors are closed and duct end caps are in place.
 3. Air outlets are installed and connected.
- B. Submit field reports. Report defects and deficiencies that will or could prevent proper system balance.

3.03 INSTALLATION TOLERANCES

- A. Air Outlets and Inlets: Adjust outlets and inlets in space to within plus or minus 10 percent of design.

3.04 RECORDING AND ADJUSTING

- A. Permanently mark settings of valves, dampers, and other adjustment devices allowing settings to be restored. Set and lock memory stops.

3.05 AIR SYSTEM PROCEDURE

- A. Adjust distribution systems to provide required or design supply air quantities.

3.06 SCOPE

- A. Test, adjust, and balance the following:
1. Air Inlets and Outlets

3.07 MINIMUM DATA TO BE REPORTED

- A. Supply Air/Exhaust Air:
1. Identification/location
 2. Design air flow
 3. Actual air flow

END OF SECTION

SECTION 23 31 00

HVAC DUCTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal ductwork.
- B. Nonmetal ductwork.

1.02 REFERENCE STANDARDS

- A. University of Oregon Campus Construction Standards; third edition, May 2011
- B. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2007.
- C. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; National Fire Protection Association; 2002.
- D. SMACNA (DCS) - HVAC Duct Construction Standards - Metal and Flexible; Sheet Metal and Air Conditioning Contractors' National Association; 2005.

1.03 PERFORMANCE REQUIREMENTS

- A. Size round ducts installed in place of rectangular ducts in accordance with ASHRAE table of equivalent rectangular and round ducts.

1.04 SUBMITTALS

- A. Product Data: Provide data for duct materials.
- B. Project Record Documents: Record actual locations of ducts and duct fittings. Record changes in fitting location and type. Show additional fittings used.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing the type of work specified in this section, with minimum five years of documented experience.

1.06 REGULATORY REQUIREMENTS

- A. Construct ductwork to NFPA 90A standards.

1.07 FIELD CONDITIONS

- A. Do not install duct sealants when temperatures are less than those recommended by sealant manufacturers.
- B. Maintain temperatures within acceptable range during and after installation of duct sealants.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Galvanized Steel Ducts: Hot-dipped galvanized steel sheet, ASTM A 653/A 653M FS Type B, with G60/Z180 coating.
- B. Flexible Ducts/Hose:
 - 1. Manufacturers:
 - a. Thermaflex; www.thermaflex.net

- 1) Product: G-KM Flexible duct
 - b. Hi-Tech Duravent; www.hitechduravent.com
 - c. Hose Craft USA; www.hosecraftusa.com
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
 - 2. Materials of construction:
 - a. Coated substrate or polymer supported by outward cast helically wound spring steel wire.
- C. Joint Sealers and Sealants: Non-hardening, water resistant, mildew and mold resistant.
 - 1. Type: Heavy mastic or liquid used alone or with tape, suitable for joint configuration and compatible with substrates, and recommended by manufacturer for pressure class of ducts and formaldehyde resistivity.
 - 2. VOC Content: Not more than 250 g/L, excluding water.
 - 3. Surface Burning Characteristics: Flame spread of zero, smoke developed of zero, when tested in accordance with ASTM E 84.
 - 4. For Use With Flexible Ducts: UL labeled.
 - 5. Acceptable Products:
 - a. www.tremcosealants.com; Product: Trempro 656.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.
- D. Hanger Rod: ASTM A 36/A 36M; steel, galvanized; threaded both ends, threaded one end, or continuously threaded.

2.02 DUCTWORK FABRICATION

- A. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.
- B. Construct T's, bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline.
- C. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.
- D. Provide standard 45 degree lateral wye takeoffs unless otherwise indicated where 90 degree conical tee connections may be used.

2.03 DUCT MANUFACTURERS

- A. Metal-Fab, Inc; www.mtlfab.com.
- B. SEMCO Incorporated; www.semcoinc.com.
- C. United McGill Corporation; www.unitedmcgill.com.
- D. Substitutions: See Section 01 60 00 (01600) - Product Requirements.

2.04 MANUFACTURED METAL DUCTWORK AND FITTINGS

- A. Manufacture in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Duct sizes indicated are inside clear dimensions. For lined ducts, maintain sizes inside lining.

- C. Install and seal metal and flexible ducts in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- D. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.
- E. Use double nuts and lock washers on threaded rod supports.
- F. During construction provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.

3.02 SCHEDULES

- A. Ductwork Material:
 - 1. Low Pressure Supply: Galvanized Steel.

END OF SECTION

SECTION 23 33 00
AIR DUCT ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Volume dampers.
- B. Diffusers

1.02 REFERENCE STANDARDS

- A. University of Oregon Campus Construction Standards; third edition, May 2011
- B. SMACNA (DCS) - HVAC Duct Construction Standards - Metal and Flexible; Sheet Metal and Air Conditioning Contractors' National Association; 2005.

1.03 SUBMITTALS

- A. Product Data: Provide for shop fabricated assemblies including volume dampers.
- B. Product Data: Provide submittal data for diffusers.
- C. Project Record Drawings: Provide certified drawings for purchased items.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

PART 2 PRODUCTS

2.01 VOLUME DAMPERS

- A. Manufacturers:
 - 1. Ruskin Company.: www.ruskin.com.
 - 2. Tamco
 - 3. Greenheck
 - 4. Substitutions: See Section 01 60 00
- B. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated.
- C. Single Blade Dampers: Fabricate for duct sizes up to 6 x 30 inch (150 x 760 mm).
- D. End Bearings: Except in round ducts 12 inches (300 mm) and smaller, provide end bearings. On multiple blade dampers, provide oil-impregnated nylon or sintered bronze bearings.
- E. Quadrants:
 - 1. Provide locking, indicating quadrant regulators on single and multi-blade dampers.

2.02 DIFFUSERS

- A. Manufacturers: Titus
- B. Model TMS
- C. Square Ceiling Diffuser, Steel, High Performance design

- D. Complete with no-labor collars
- E. Border Type 3 (lay-in) panel mount
- F. Color to be white

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install accessories in accordance with drawings and specifications.
- B. Install accessories in accordance with manufacturer's instructions, and follow SMACNA HVAC Duct Construction Standards - Metal and Flexible. Refer to Section 23 31 00 for duct construction and pressure class.
- C. Provide balancing dampers at points on supply branches taken from larger ducts as required for air balancing. Install minimum 2 duct widths from duct take-off.

END OF SECTION

SECTION 26 51 00

INTERIOR LUMINAIRES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Interior luminaires and accessories.
- B. Drivers.
- C. LED dimming drivers and controls.
- D. LED lamp emergency power supply.
- E. Ballasts.
- F. Fluorescent dimming ballasts and controls.
- G. Fluorescent lamp emergency power supply.
- H. Lamps.
- I. Luminaire accessories.

1.02 RELATED SECTIONS

- A. Reference all Specification sections and related Contract Documents to establish the total general Requirements for electrical materials and methods. It is the responsibility of the Contractor and Subcontractor to use all of the Specifications for bidding and construction work. Related Specifications include but are not limited to the following:
 - 1. Basic Electrical Requirements.
 - 2. Electrical Identification.
 - 3. Section 23 36 00 - Air Terminal Units: Air distribution accessories for air handling luminaires.
- B. CAUTION: Use of this Section without including all sections and related Contract Documents may result in the omission of basic Requirements.
- C. In the event of conflict regarding Requirements between this Section and any other section, the provisions of this Section shall govern.

1.03 REFERENCES

- A. ANSI C78.379 - American National Standard for Electric Lamps -- Reflector Lamps -- Classification of Beam Patterns; 2006, or latest adopted edition.
- B. ANSI C82.4 - American National Standard for Drivers for High-Intensity-Discharge and Low Pressure Sodium Lamps (Multiple-Supply Type); 2002, or latest adopted edition.
- C. IESNA LM-63 - ANSI Approved Standard File Format for Electronic Transfer of Photometric Data and Related Information; 2002, or latest adopted edition.
- D. NECA/IESNA 500 - Standard for Installing Indoor Commercial Lighting Systems; National Electrical Contractors Association; 2006, or latest adopted edition.
- E. NECA/IESNA 502 - Standard for Installing Industrial Lighting Systems; National Electrical Contractors Association; 2006, or latest adopted edition.
- F. NEMA WD 6 - Wiring Devices - Dimensional Requirements; National Electrical Manufacturers Association; 2002, or latest adopted edition.
- G. NFPA 70 - National Electrical Code; National Fire Protection Association; 2008, or latest adopted edition.

- H. NFPA 101 - Code for Safety to Life from Fire in Buildings and Structures; National Fire Protection Association; 2006, or latest adopted edition.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate dimensions and components for each luminaire that is not a standard product of the manufacturer.
- C. Product Data: Provide dimensions, ratings, and performance data.
 - 1. Photometric Data: Submit on CD or DVD, in IESNA LM-63 standard format.
 - 2. Lamps: Submit manufacturer's catalog data, including voltages, color temperature, color rendering index number, approximate hours' life, approximate initial and mean lumens, lumen maintenance curve, lamp type, and base.
 - 3. Drivers: Submit manufacturer's catalog data, including type, wiring diagram, nominal watts, input voltage, starting current, line current, input watts, sound rating, power factor, total harmonic distortion (THD), and low temperature characteristics.
- D. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency specified under Quality Assurance. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- E. Operation and Maintenance Data: Instructions for each product.
- F. Maintenance Materials:
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Furnish two (2) of each plastic lens type.
 - 3. Furnish one (1) replacement lamps for each lamp type.
 - 4. Furnish two (2) of each driver type.

1.05 QUALITY ASSURANCE

- A. Conform to Requirements of NFPA 70 and NFPA 101.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three (3) years documented experience.
- C. Products: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 LUMINAIRES

- A. Furnish products as called out on the drawings.
- B. Substitutions: Substitutions are subject to Owner and stamping engineer's approval.

2.02 DRIVERS AND CONTROL UNITS (LED FIXTURES) – BASE BID

- A. Manufacturers
 - 1. Advance.
 - 2. Lutron.
 - 3. Osram Sylvania.
 - 4. Universal/Magnetek.
 - 5. Substitutions: Substitutions are subject to Owner and stamping engineer's

approval.

- B. LED Drivers: ANSI C82.1, high power factor type electromagnetic driver, suitable for lamps specified.
 - 1. Voltage: As indicated in the Lighting Fixture Schedule on the Drawings.
 - 2. Certify driver design and construction by Certified Driver Manufacturers, Inc.
 - 3. Product: Lithonia Lighting 2RTLED and Gotham 6" Evo A-Series LED, Open Reflector.
 - 4. Substitutions: Substitutions are subject to Owner and stamping engineer's approval.
- C. LED Dimming Control Units: Rated 800 watts at 120 volts.
 - 1. Driver: Selected by dimming system manufacturer as suitable for operations with control unit.
 - 2. Lamps: Suitable for lamp type and quantity specified for luminaire.
 - 3. Product: Sensor Switch nCMR-PDT ceiling mount and nWSD-PDT wall mount.
 - 4. Substitutions: Substitutions are subject to Owner and stamping engineer's approval.
- D. LED Lamp Emergency Power Supply: LED emergency battery power supply suitable for installation in driver compartment of LED luminaire.
 - 1. Lamp Ratings: One lamp providing 1400 lumens, minimum.
 - 2. Battery: Sealed lead calcium type, rated for ten (10) year life.
 - 3. Include TEST switch and AC ON indicator light, installed to be operable and visible from the outside of an assembled luminaire.
 - 4. Product: As indicated in The Lighting Fixture Schedule on the Drawings.
 - 5. Substitutions: Substitutions are subject to Owner and stamping engineer's approval.

2.03 BALLASTS AND CONTROL UNITS (FLOURESCENT FIXTURES) – ALTERNATE BID

- A. Manufacturers
 - 1. Advance.
 - 2. Lutron.
 - 3. Osram Sylvania.
 - 4. Universal / Magnetek
 - 5. Substitutions: Substitutions are subject to owner and stamping engineers approval
- B. Fluorescent Ballasts: ANSI C82.1, high power factor type electromagnetic ballast, suitable for lamps specified.
 - 1. Voltage: As indicated in The Lighting Fixture Schedule on the drawings
 - 2. Certify fluorescent ballast design and construction by Certified Ballast Manufacturers, Inc.
 - 3. Product:
 - 4. Substitutions: Substitutions are subject to owner and stamping engineers approval.
- C. High Intensity Discharge (HID) Ballasts: ANSI C82.4, mercury vapor lamp ballast, suitable for lamp specified.
 - 1. Voltage: As indicated in The Lighting Fixture Schedule on the drawing.
 - 2. Product:
 - 3. Substitutions: Substitutions are subject to owner and stamping engineers approval.

- D. Fluorescent Dimming Control Units: Rotary type, rated 500 watts at 120 volts.
 - 1. Ballast: Selected by dimming system manufacturer as suitable for operation with control unit.
 - 2. Lamps: Suitable for lamp type and quantity specified for luminaire.
 - 3. Product:
 - 4. Substitutions: Substitutions are subject to owner and stamping engineers approval.
- E. Fluorescent Lamp Emergency Power Supply: Emergency battery power supply suitable for installation in ballast compartment of fluorescent luminaire.
 - 1. Lamp Ratings: One F40CW lamp providing 600 lumens, minimum.
 - 2. Battery: Sealed lead calcium type, rated for 10 year life.
 - 3. Include TEST switch and AC ON indicator light, installed to be operable and visible from the outside of an assembled luminaire.
 - 4. Product: As indicated in The Lighting Fixture Schedule on the drawings.
 - 5. Substitutions: Substitutions are subject to owner and stamping engineers approval.

2.04 LAMPS

- A. Manufacturers:
 - 1. GE Lighting
 - 2. Philips Lighting Co of NA.
 - 3. Osram/Sylvania.
 - 4. Venture.
 - 5. Ruud.
 - 6. Holophane.
 - 7. Substitutions: Substitutions are subject to Owner and stamping engineer's approval.
- B. Lamp Types: As specified for each luminaire on drawing.

2.05 ACCESSORIES

- A. Product: Lithonia Lighting 2RTLED battery pack EL14L and
 - 1. Gotham 6" Evo emergency battery pack ELR⁶.
- B. Substitutions: Substitutions are subject to Owner and stamping engineer's approval.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install fixtures securely, in a neat and workmanlike manner, as specified in NECA 500 (commercial lighting).
- B. Install suspended luminaires and exit signs using pendants supported from swivel hangers. Provide pendant length required to suspend luminaire at indicated height.
- C. Support luminaires larger than 2 x 4 foot size independent of ceiling framing.
- D. Locate recessed ceiling luminaires as indicated on reflected ceiling plan.
- E. Install surface mounted luminaires and exit signs plumb and adjust to align with building lines and with each other. Secure to prevent movement.
- F. Exposed Grid Ceilings: Support surface mounted luminaires in grid ceiling directly from building structure.

- G. Exposed Grid Ceilings: Provide auxiliary members spanning ceiling grid members to support surface mounted luminaires.
- H. Exposed Grid Ceilings: Fasten surface mounted luminaires to ceiling grid members using bolts, screws, rivets, or suitable clips.
- I. Install recessed luminaires to permit removal from below.
- J. Install recessed luminaires using accessories and fire-stopping materials to meet regulatory Requirements for fire rating.
- K. Install clips to secure recessed grid-supported luminaires in place.
- L. Install wall mounted luminaires, emergency lighting units, and exit signs at height as indicated on Drawings.
- M. Install accessories furnished with each luminaire.
- N. Connect luminaires and exit signs to branch circuit outlets provided under Section 26 05 37 (16138) using flexible conduit.
- O. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within luminaire.
- P. Bond products and metal accessories to branch circuit equipment grounding conductor.
- Q. Install new breaker in panel box for all new lighting circuits.
- R. Install specified lamps in each emergency lighting unit, exit sign, and luminaire.
- S. Interface with air handling accessories furnished as indicated on the drawings and installed under Section 23 36 00.

3.02 FIELD QUALITY CONTROL

- A. Perform field inspection in accordance with Section 01 40 00.
- B. Operate each luminaire after installation and connection. Inspect for proper connection and operation.

3.03 ADJUSTING

- A. Aim and adjust luminaires as indicated.
- B. Position exit sign directional arrows as indicated.

3.04 CLEANING

- A. Clean electrical parts to remove conductive and deleterious materials.
- B. Remove dirt and debris from enclosures.
- C. Clean photometric control surfaces as recommended by manufacturer.
- D. Clean finishes and touch up damage.

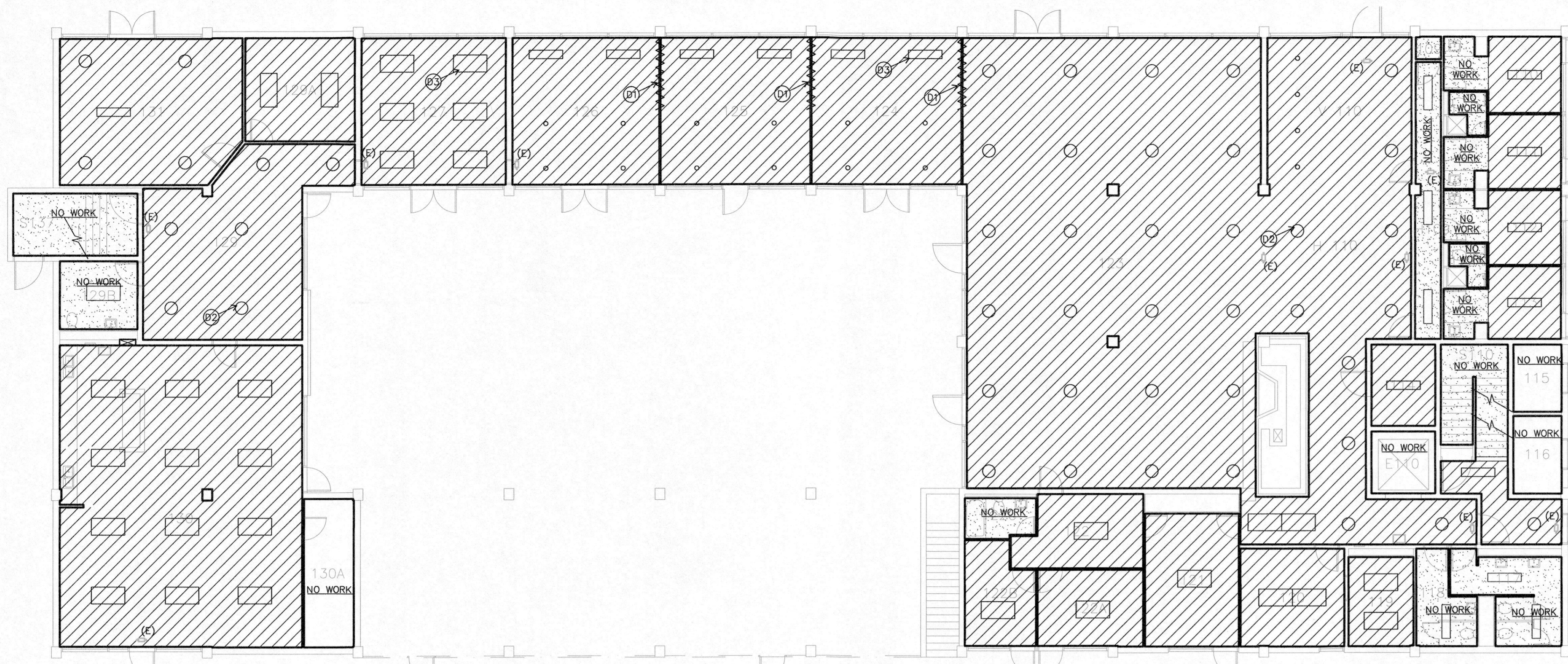
3.05 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate luminaire operation for minimum of two (2) hours.

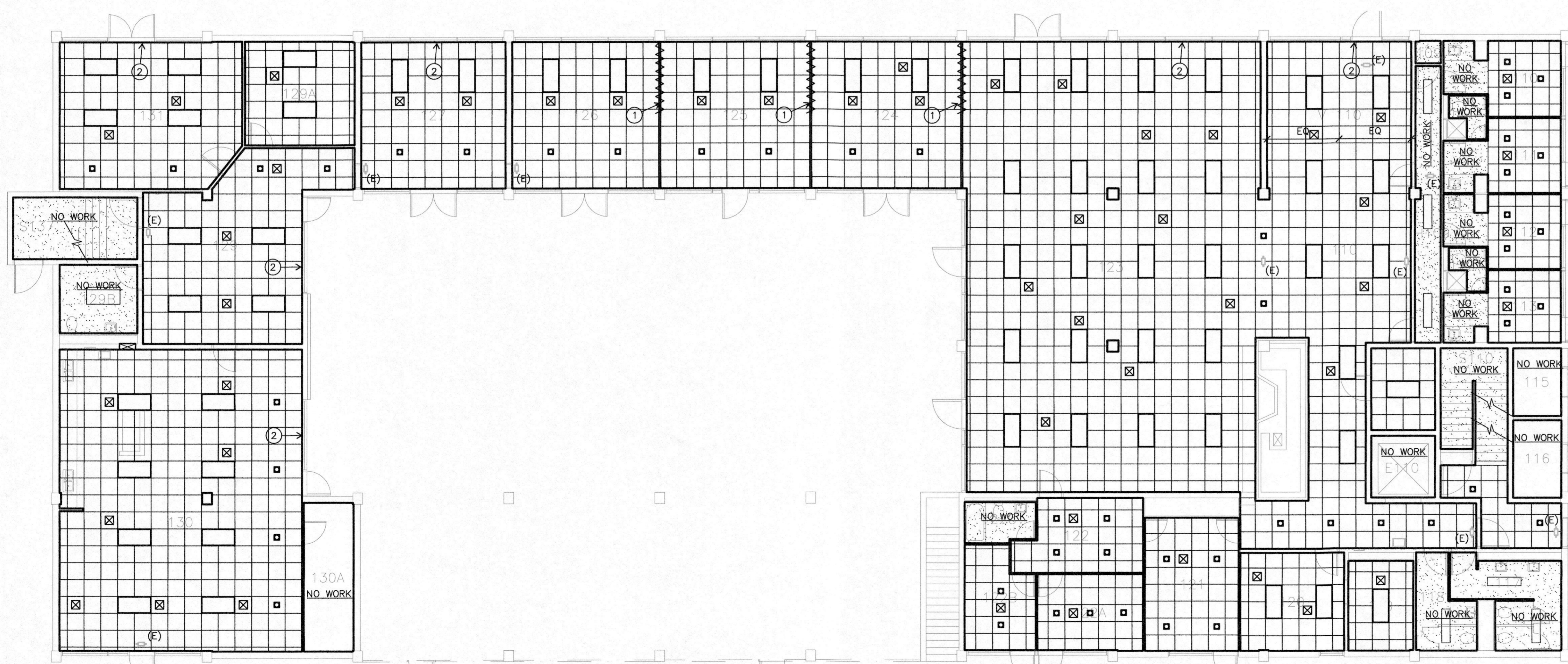
3.06 PROTECTION

- A. Re-lamp luminaires that have failed lamps at Substantial Completion.

END OF SECTION

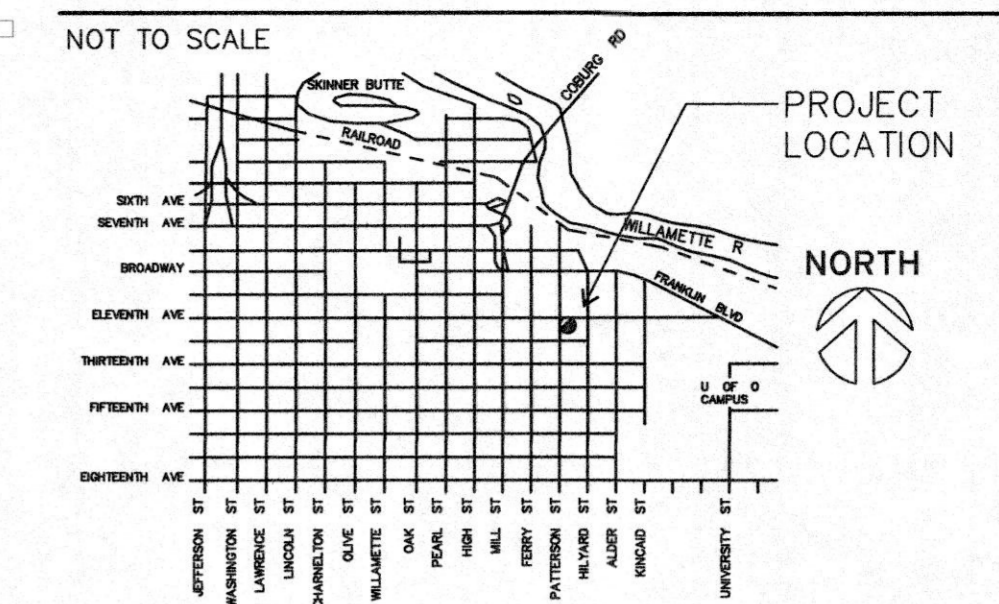


A
A1.1
FIRST FLOOR REFLECTED CEILING PLAN - DEMOLITION
1/8" = 1'-0"



B
A1.1
FIRST FLOOR REFLECTED CEILING PLAN - NEW WORK
1/8" = 1'-0"

VICINITY MAP



PROJECT TEAM

OWNER
UNIVERSITY OF OREGON
UNIVERSITY HOUSING
1220 UNIVERSITY OF OREGON
EUGENE, OR 97403
541-346-2669
541-346-4268 (FAX)
CONTACT: TERRIE SCHARFER

ARCHITECT
ROBERTSON/SHERWOOD ARCHITECTS pc
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EUGENE, OR 97401
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541-345-4302 (FAX)
CONTACT: SCOTT STOLARCZYK, AIA, LEED AP

MECHANICAL / ELECTRICAL ENGINEERS
EVERGREEN ENGINEERING, INC.
1740 WILL CREEK CIRCLE
EUGENE, OR 97402
541-484-4771
541-484-6759 (FAX)
CONTACT: GORDON YUTZY, PE (MECHANICAL)
DALE LUCKMAN (ELECTRICAL)

SHEET INDEX

- A1.1 FIRST FLOOR REFLECTED CEILING PLANS- DEMOLITION AND NEW WORK
- M1.0 MECHANICAL SCHEDULES
- M1.1 DUCT DEMOLITION PLAN - FIRST FLOOR
- M1.2 DUCT REMODEL PLAN - FIRST FLOOR, WEST SIDE
- M1.3 DUCT REMODEL PLAN - FIRST FLOOR, EAST SIDE
- E1.1 ELECTRICAL SCHEDULES
- E1.2 ELECTRICAL PLANS - FIRST FLOOR

ALTERNATES

ALTERNATE #1 BASE BID: LED LIGHT FIXTURES AS SHOWN ON DRAWINGS
ALTERNATE: CHANGE LIGHT FIXTURES TO FLUORESCENT

RCP LEGEND

- NEW 2'x2' SUSPENDED ACOUSTICAL CEILING TILE (ACT)
MATCH EXISTING CEILING HEIGHT, APPROXIMATELY 8'-11" A.F.F.
- EXISTING GYPSUM BOARD CEILING TO REMAIN
- EXISTING SUSPENDED CONCEALED SPLINE CEILING TO BE REMOVED
- NEW MECHANICAL DIFFUSER- REFER TO MECHANICAL
- NEW 2x4 RECESSED LIGHT FIXTURE- REFER TO ELECTRICAL
- NEW RECESSED DOWNLIGHT FIXTURE- REFER TO ELECTRICAL
- EXISTING ILLUMINATED EXIT SIGN TO REMAIN.

GENERAL NOTES

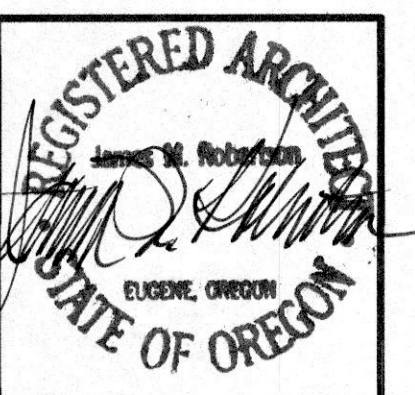
- A. FIELD VERIFY ALL CONDITIONS PRIOR TO BEGINNING WORK. IMMEDIATELY NOTIFY ARCHITECT UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS.
- B. PROTECT ALL EXISTING FINISHES, CASEWORK, AND EQUIPMENT TO REMAIN.
- C. DEMOLITION PLAN DESCRIBES IN GENERAL REQUIRED DEMOLITION WORK. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION REQUIRED TO COMPLETE NEW WORK AS SHOWN ON DRAWINGS OR AS SPECIFIED.
- D. SPECIFIC AREAS OF DEMOLITION WILL REQUIRE REFERENCE TO OTHER SHEETS OR DETAILS TO DETERMINE DIMENSIONAL EXTENT OF WORK.
- E. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION.
- F. DIMENSIONS ARE TO FACE OF EXISTING FINISH, U.O.N.
- G. PATCH EXISTING SURFACES AFFECTED BY DEMOLITION WORK TO MATCH ADJACENT, U.O.N. REFINISH AS SCHEDULED.
- H. ALIGN NEW FINISHES WITH EXISTING, U.O.N.
- J. CENTER NEW ACT GRID IN ROOM, UNLESS OTHERWISE NOTED.

KEYED RCP - DEMO NOTES

- D1 OPERABLE PARTITION, PARTITION TRACK AND RELATED COMPONENTS TO REMAIN.
- D2 REMOVE SURFACE MOUNTED LIGHT FIXTURE, TYPICAL.
- D3 REMOVE RECESSED LIGHT FIXTURE.

KEYED RCP - NEW WORK NOTES

- 1 EXISTING OPERABLE PARTITION AND TRACK TO REMAIN.
- 2 SET NEW ACT WITH FULL TILE ALONG THIS WALL.



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FIRST FLOOR REFLECTED CEILING PLANS- DEMOLITION AND NEW WORK











Drawn By SS
Checked
Date 29 MAY 2012
Project 1209

A1.1

AIR DEVICE SCHEDULE					
MARK NO.	MANUFACTURER MODEL NO.	FACE SIZE	NECK SIZE	AIR FLOW	REMARKS
SA1	TITUS TMS CEILING SUPPLY DIFFUSER	12x12x8	SEE PLAN	SEE PLAN	PANEL MOUNTED

VENTILATION SCHEDULE					
ZONE	CFM	ROOM NO.	DIFFUSER	QUANTITY	REMARKS
1	2925	129 129A 131 130	TITUS TMS 12x12x8	13	STYLE: PANEL MOUNT
2	2560	124 125 126 127	TITUS TMS 12x12x8	8	STYLE: PANEL MOUNT
3	3510	110 123	TITUS TMS 12x12x8	16	STYLE: PANEL MOUNT
4 A-D	740	121 122 122A 122B	TITUS TMS 12x12x8	4	STYLE: PANEL MOUNT
5 A-D	750	117 118 119 120	TITUS TMS 12x12x8	3	STYLE: PANEL MOUNT
6 A-D	600	110 111 112 113	TITUS TMS 12x12x8	4	STYLE: PANEL MOUNT

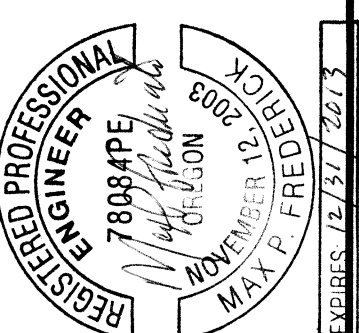
RCP LEGEND

-  DEMOLISH
-  EXISTING GYPSUM BOARD CEILING TO REMAIN
-  EXISTING FIRE DAMPER
-  NEW FLEX HOSE
-  NEW VOLUME CONTROL DAMPER
-  EXISTING ZONE SPLITTER/VOLUME DAMPER
-  SUPPLY AIR DIFFUSER CFM
-  ZONE BOUNDARY
-  EXISTING SUPPLY DUCT
-  EXISTING RETURN DUCT

GENERAL NOTES

- A. FIELD VERIFY ALL CONDITIONS PRIOR TO BEGINNING WORK. IMMEDIATELY NOTIFY ARCHITECT UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS.
- B. PROTECT ALL EXISTING FINISHES, CASEWORK, AND EQUIPMENT TO REMAIN.
- C. DEMOLITION PLAN DESCRIBES IN GENERAL REQUIRED DEMOLITION WORK. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION REQUIRED TO COMPLETE NEW WORK AS SHOWN ON DRAWINGS OR AS SPECIFIED.
- D. SPECIFIC AREAS OF DEMOLITION WILL REQUIRE REFERENCE TO OTHER SHEETS OR DETAILS TO DETERMINE DIMENSIONAL EXTENT OF WORK.
- E. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DEMOLITION.
- F. DIMENSIONS ARE TO FACE OF EXISTING FINISH, U.O.N.
- G. PATCH EXISTING SURFACES AFFECTED BY DEMOLITION WORK TO MATCH ADJACENT, U.O.N. REFINISH AS SCHEDULED.
- H. ALIGN NEW FINISHES WITH EXISTING, U.O.N.
- J. COORDINATE WITH ALL OTHER TRADES AND VERIFY CLEARANCES PRIOR TO FABRICATION.
- K. ALL NEW WORK SHALL COMPLY WITH LOCAL AND STATE BUILDING CODES INCLUDING:
2010 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
2010 OREGON MECHANICAL SPECIALTY CODE (OMSC)
2010 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC)
2010 OREGON FIRE CODE (OFC)
- L. CONTRACTOR IS TO COORDINATE THE LOCATION OF ALL EQUIPMENT, GRILLES AND DIFFUSERS WITH RESPECT TO STRUCTURAL COMPONENTS, LIGHTING, AND OTHER BUILDING FEATURES. PAINT DUCTWORK VISIBLE THROUGH GRILLES AND DIFFUSERS FLAT BLACK.
- M. DUCTS ARE TO BE CONSTRUCTED ACCORDING TO SMACNA GUIDELINES USING MINIMUM 26 GA GALVANIZED STEEL FOR RECTANGULAR AND ROUND DUCTS. DUCTING SHALL BE SUPPORTED BY APPROVED HANGERS AT INTERVALS NOT EXCEEDING 10 FEET.
- N. ALL NEW HVAC DUCTWORK SHALL BE SEALED AND FASTENED PER OMSC 603.9.
- P. PROVIDE DAMPERS AT DIFFUSERS OR AS CLOSE AS POSSIBLE IN DUCTING. BALANCE SYSTEM AND PROVIDE DATA PER PROJECT MANUAL. NO OPPOSED BLADE DAMPERS.
- Q. ALL NEW DUCTWORK AND MODIFIED EXISTING DUCTWORK IS TO BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH SECTION 603.9 OF THE MECHANICAL CODE (OMSC). ALL SYSTEMS OPERATE AT A STATIC PRESSURE LESS THAN 2.0" WG AND ARE CONSIDERED "LOW-PRESSURE" DUCT.
- R. PATCH WALL PENETRATIONS TO A LIKE NEW APPEARANCE.
- S. DUCT CALLOUTS ARE SHOWN AS HORIZONTAL DIMENSIONS BY VERTICAL DIMENSIONS.
- T. REPAIR DEMOLITION AREAS TO MATCH EXISTING CONDITIONS.
- U. ALL NEW HVAC DUCTWORK SHALL NOT REQUIRE INSULATION PER 2010 OEESC SECTION 503.2.7. THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INSIDE OF DUCTING (OR PLENUM) AND OUTSIDE IS LESS THAN 15°F.
- V. THE MECHANICAL CONTRACTOR SHALL PROVIDE EQUIPMENT OPERATION AND MAINTENANCE MANUALS TO THE OWNER PRIOR TO PROJECT CLOSE-OUT.

ISSUED FOR PERMIT



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Engineering and Construction Services
2629.0
10/10/12 JK
10/10/12 JK
10/10/12 JK

**DUCT REMODEL
GENERAL NOTES &
VENTILATION SCHEDULE**

Drawn By: ZB
Checked: JK
Date: 29 MAY 2012
Project: 1209

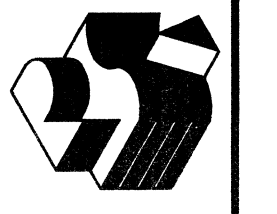
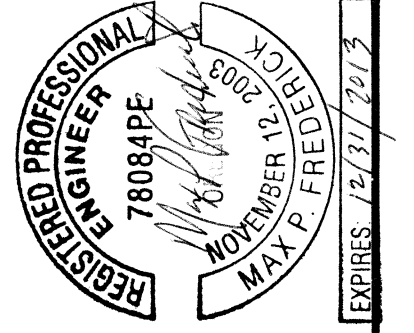
M1.0

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NOTES

A. SEE SHEET M1.0 FOR GENERAL NOTES.



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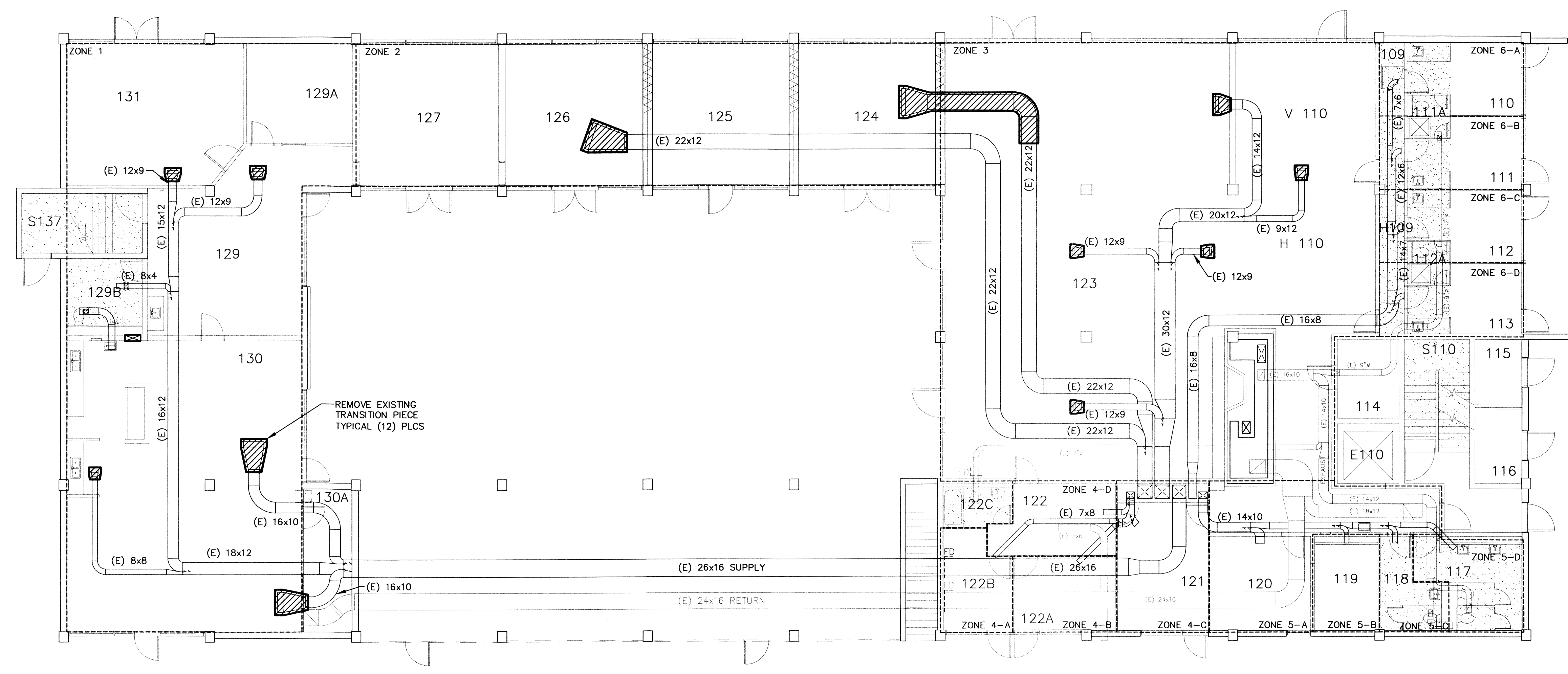
DUCT DEMOLITION PLAN
1st FLOOR

Drawn By	ZB
Checked	JK
Date	29 MAY 2012
Project	1209

M1.1

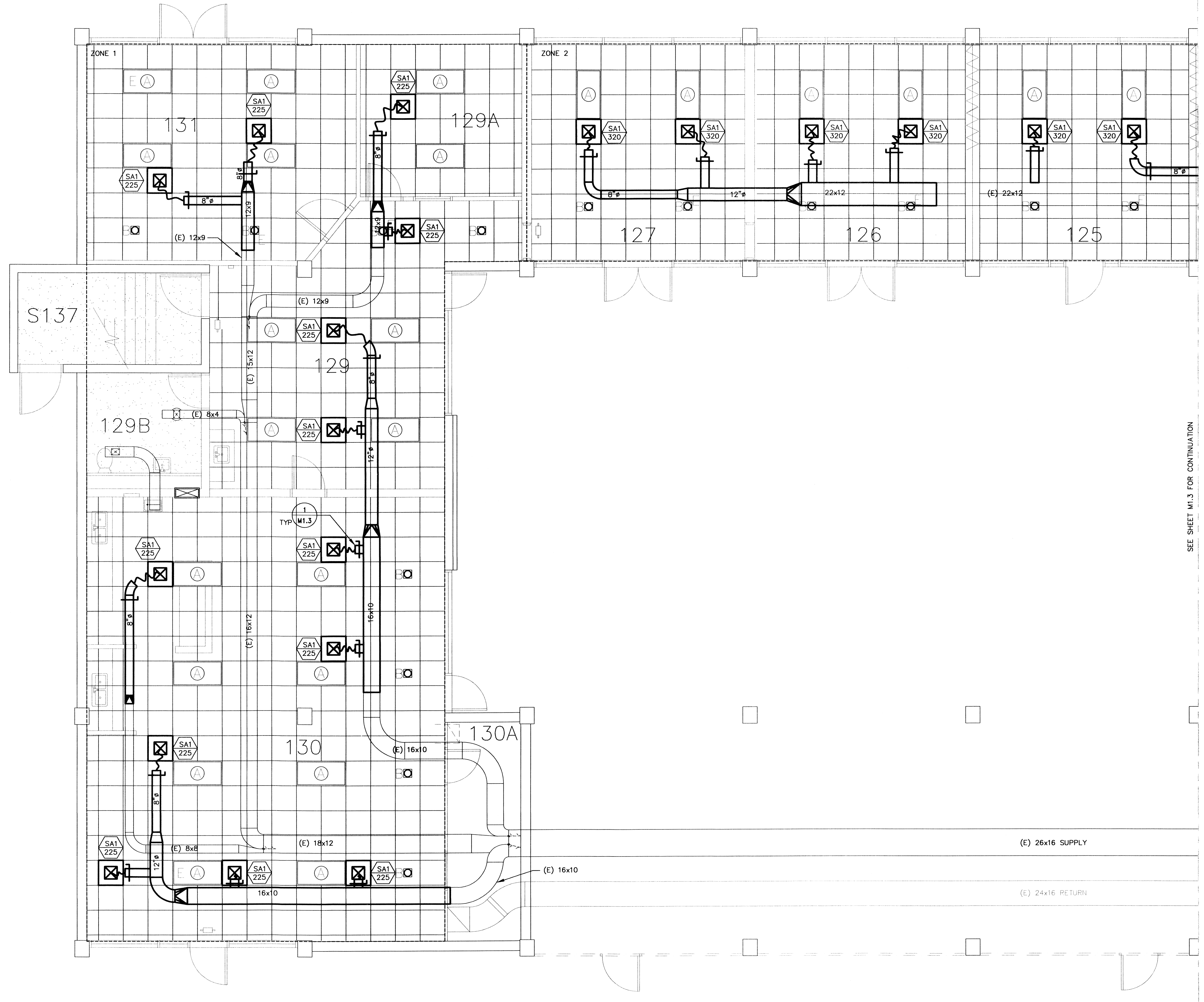
650 East 11th Avenue,
 Eugene, Oregon 97401

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M1.1
 1/8" = 1'-0"
DUCT DEMOLITION PLAN 1st FLOOR

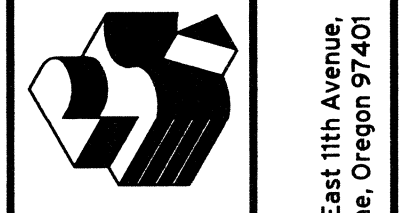
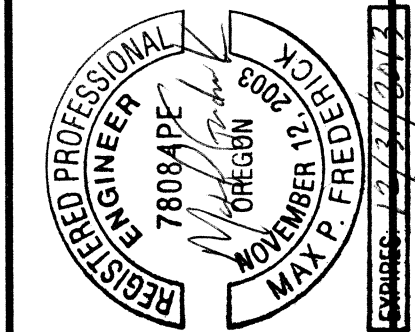
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SEE SHEET M1.3 FOR CONTINUATION

NOTES

A. SEE SHEET M1.0 FOR GENERAL NOTES.



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DUCT REMODEL PLAN
1st FLOOR

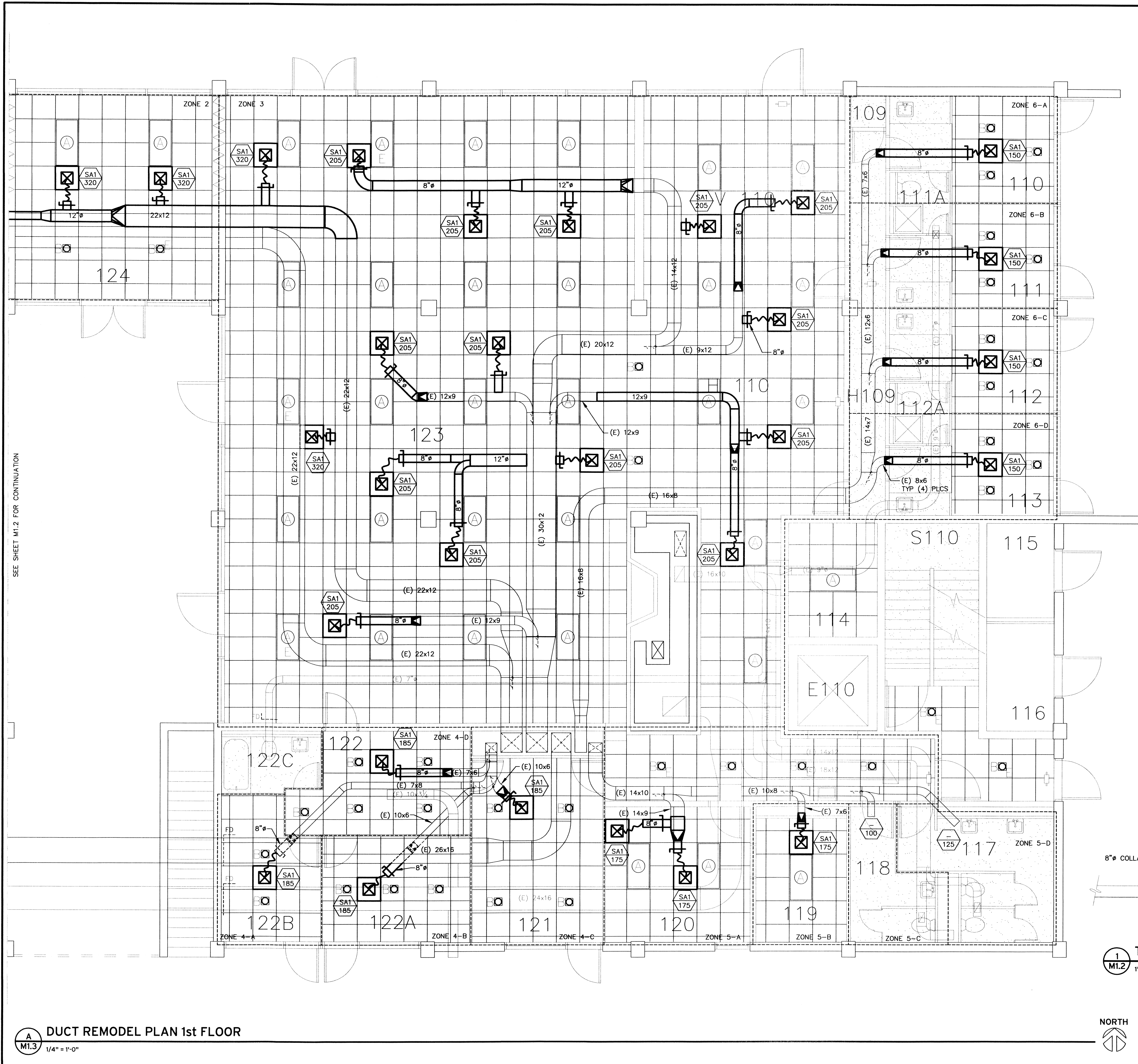
Drawn By	ZB
Checked	JK
Date	29 MAY 2012
Project	1209

M1.2

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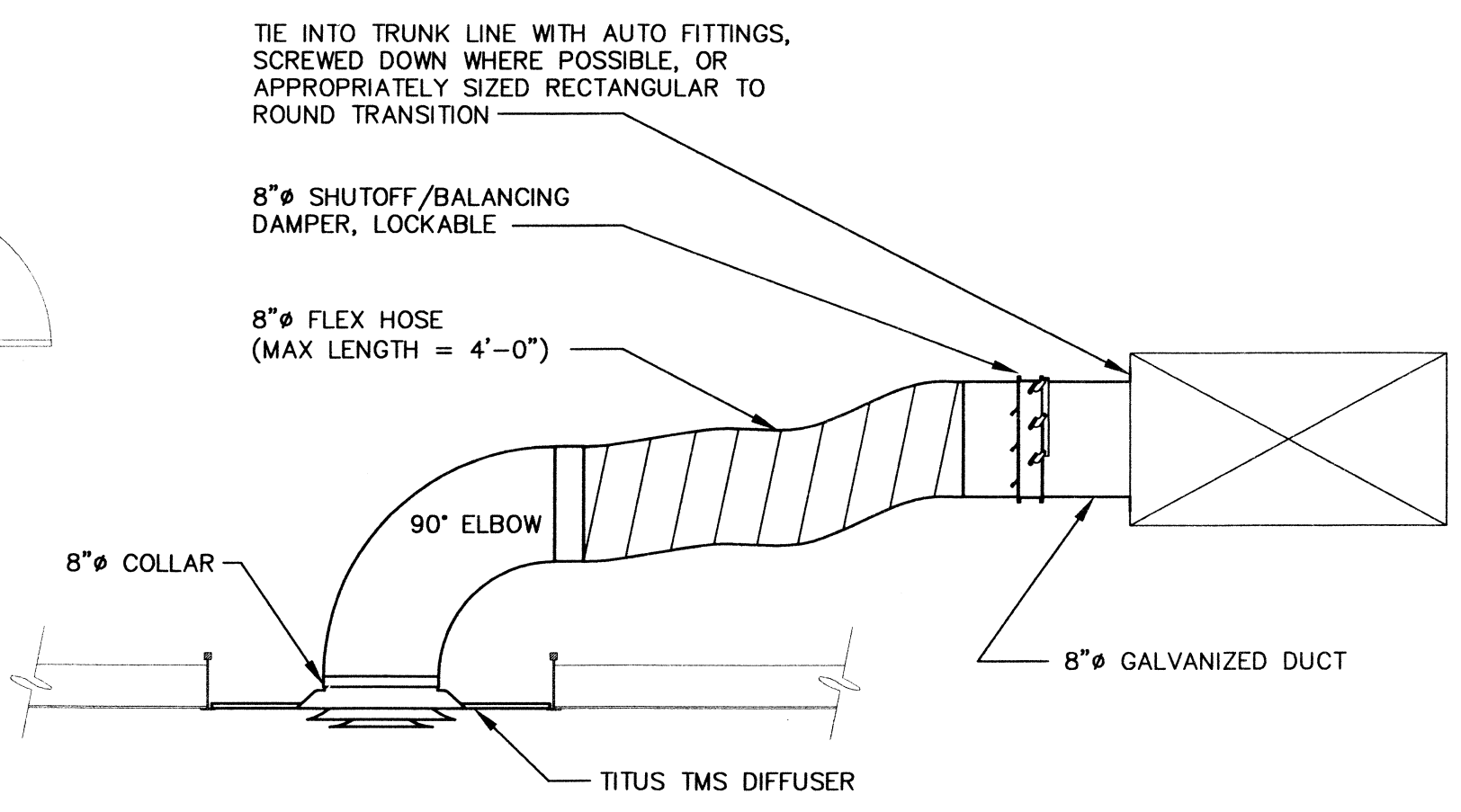
450 East 11th Avenue
Eugene, Oregon 97401

UO- Riley Residence Hall Ceiling Replacement



NOTES
 A. SEE SHEET M1.0 FOR GENERAL NOTES.

SEE SHEET M1.2 FOR CONTINUATION



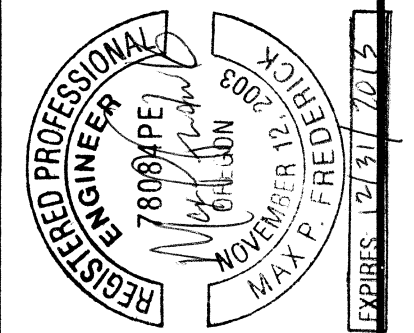
1
 M1.2
 1" = 1'-0"
 TYPICAL DIFFUSER DETAIL
 NOTE: NO OPPOSED BLADE DAMPERS.



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A
 M1.3
 1/4" = 1'-0"
 DUCT REMODEL PLAN 1st FLOOR



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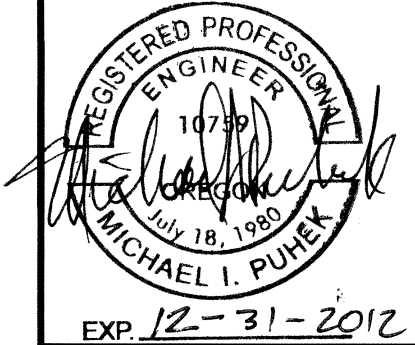
DUCT REMODEL PLAN AND DETAIL 1st FLOOR

Drawn By: ZB
 Checked: JK
 Date: 29 MAY 2012
 Project: 1209

M1.3

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GROUND FLOOR
FIXTURES AND
LIGHTING SCHEDULE

Drawn By: DGL
Checked: JK
Date: 29 MAY 2012
Project: 1209

E1.0

FIXTURE & SWITCH LEGEND

- Ⓜ LITHONIA VOLUMETRIC LIGHTING RT SERIES RECESSED TROFFER
2'x4', 50W 4573 LUMEN LED LAMP.
LITHONIA CAT #2RTLED 4600L D50 LPB35 N80.
ELECTRONIC BALLAST,
LAMPS #LPB35 CRI,3500 KELVIN
- Ⓜ E LITHONIA VOLUMETRIC LIGHTING RT SERIES RECESSED TROFFER
2'x4', 50W 4573 LUMEN LED LAMP.
LITHONIA CAT #2RTLED 4600L D50 LPB35 N80 EL14L.
ELECTRONIC BALLAST, BATTERY BACKUP EGRESS LIGHTING
LAMPS #LPB35 CRI,3500 KELVIN
- Ⓜ GOTHAM 6"EVO LIGHTING A-SERIES LED DOWNLIGHTING
6" DIA, 32W 1400 LUMEN LED LAMP.
GOATHAM CAT #ALED 35/14 6AR LD 120.
ELECTRONIC BALLAST,
LAMPS #LUMILED LXME-PW61 LED.
- Ⓜ E GOTHAM 6"EVO LIGHTING A-SERIES LED DOWNLIGHTING
6" DIA, 32W 1400 LUMEN LED LAMP.
GOATHAM CAT #ALED 35/14 6AR LD 120 ELR6.
ELECTRONIC BALLAST,
LAMPS #LUMILED LXME-PW61 LED.
- Ⓜ "nLIGHT"120V SENSOR CAT #nCMR-PDT-D-ADC
W/ OCC SENSOR & DAYLIGHT DIMMING. TO BE CONNECTED VIA
CAT 5 CABLE IN ZONES PER OWNER'S/ ARCHITECT'S INSTRUCTIONS.
- Ⓜ \$ DIMMER SWITCH & OCC SENSOR WALL MOUNT.
"nLIGHT"120V SENSOR CAT #nWSD-PDT-W
W/ OCC SENSOR & DAYLIGHT DIMMING. TO BE CONNECTED VIA
CAT 5 CABLE IN ZONES PER OWNER'S/ ARCHITECT'S INSTRUCTIONS.

PANEL SCHEDULE														
IDENTIFICATION		PANEL B					VOLTS					208Y/120V, 3 PHASE, 4 WIRE		
LOCATION		RILEY HALL 1st FLOOR, EAST END					SIZE					225 AMPS		
FED FROM		MAIN DISTRIBUTION ASSEMBLY (Basement)					MAIN BREAKER					MLO		
10,000 AIC SYM														
NO	CIRCUIT DESCRIPTION	LOAD KVA	LOAD L1 A	LOAD L2 A	LOAD L3 A	CKT #	CKT #	LOAD L1 A	LOAD L2 A	LOAD L3 A	LOAD KVA	CIRCUIT DESCRIPTION	NO	
1	LIGHTS IN ROOM 123	0.8	6.7			20/1	1	2	50/2		0.0	Unknown (in on position)	EXISTING	2
3	LIGHTS IN HALLWAY	0.6		5.0		20/1	3	4			0.0			4
5	LIGHTS IN HALLWAY & RESTROOMS 117 & 118	0.6			5.0	20/1	5	6	50/2		0.0	Unknown (in on position)	EXISTING	6
7	LIGHTS IN ROOM 119 & 120	0.2	1.7			20/1	7	8			0.0			8
9	LIGHTS IN ROOMS 121,122,122A,122B & 122C	0.7		5.8		20/1	9	10	20/1		2.5	LIGHTS IN ROOM V110	Labeled #8	10
11	SPARE	0.0			0.0	20/1	11	12	20/1	8.3		LIGHTS IN ROOMS 110, 111, 112 & 113	Labeled #10	12
13	SPARE	0.0	0.0			20/1	13	14	20/1		4.2	SPARE	Labeled #12	14
15	Lights in East Stairway	0.0		0.0		20/1	15	16	20/1		0.0	SPARE	Labeled #14	16
17	Plugs in Entry & Guest Rooms	0.0			0.0	20/1	17	18	20/1	0.0		Plugs in Entry & Guest Rooms	Labeled #16	18
19	Plugs in Stairway & Coat Room	0.0	0.0			20/1	19	20	20/1		0.0	Plugs in Living Room	Labeled #18	20
21	Plugs in Office & Washroom	0.0		0.0		20/1	21	22	20/1		0.0	Plugs in Office & Washroom	Labeled #20	22
23	Plugs in Mother's Suite (Big Room)	0.0			0.0	20/1	23	24	20/1	0.0		Plugs in Mother's Suite (Big Room)	Labeled #22	24
25	Plugs in kitchen	0.0	0.0			20/1	25	26	20/1		0.0	Plugs in kitchen	Labeled #24	26
27	Garbage Disposal	0.0		0.0		20/1	27	28	20/1		0.0	Dishwasher	Labeled #26	28
29	Inter -Com & Break Room Plugs	0.0			0.0	20/1	29	30	20/1	0.0		Hand Dryer Women's Room	Labeled #28	30
31	Spare (in on position)	0.0	0.0			30/3	31	32	20/1		0.0	Hand Dryer Men's Room	Labeled #30	32
33		0.0		0.0			33	34	50/2		0.0	Range	EXISTING Labeled #31	34
35		0.0			0.0		35	36		0.0				36
37	Space	0.0	0.0				37	38		0.0		Space		38
39	Space	0.0		0.0			39	40			0.0	Space		40
41	Space	0.0		0.0			39	40			0.0	Space		42
43	Space	0.0		0.0			39	40			0.0	Space		44
45	Space	0.0		0.0			39	40			0.0	Space		46
47	Space	0.0		0.0			39	40			0.0	Space		48
49	PIANO	0.0		0.0		20/1	39	40	20/1		0.0	SPARE	Labeled #2	50
51	CENTER WINDOW	0.0		0.0		20/1	39	40	20/1		0.0	SPARE	Labeled #4	50
53	SERVICE	0.0		0.0		20/1	41	42	20/1	0.0		SPARE	Labeled #6	52
CONNECTED LOAD		2.9	8.3	10.8	5.0					8.3	4.2	2.5	1.8	
TOTAL KVA		4.7	KVA											
TOTAL AMPS PHASE L1		16.7	A											
TOTAL AMPS PHASE L2		15.0	A											
TOTAL AMPS PHASE L3		7.5	A											
MAX AMPS		16.7	AMPS											

NOTE

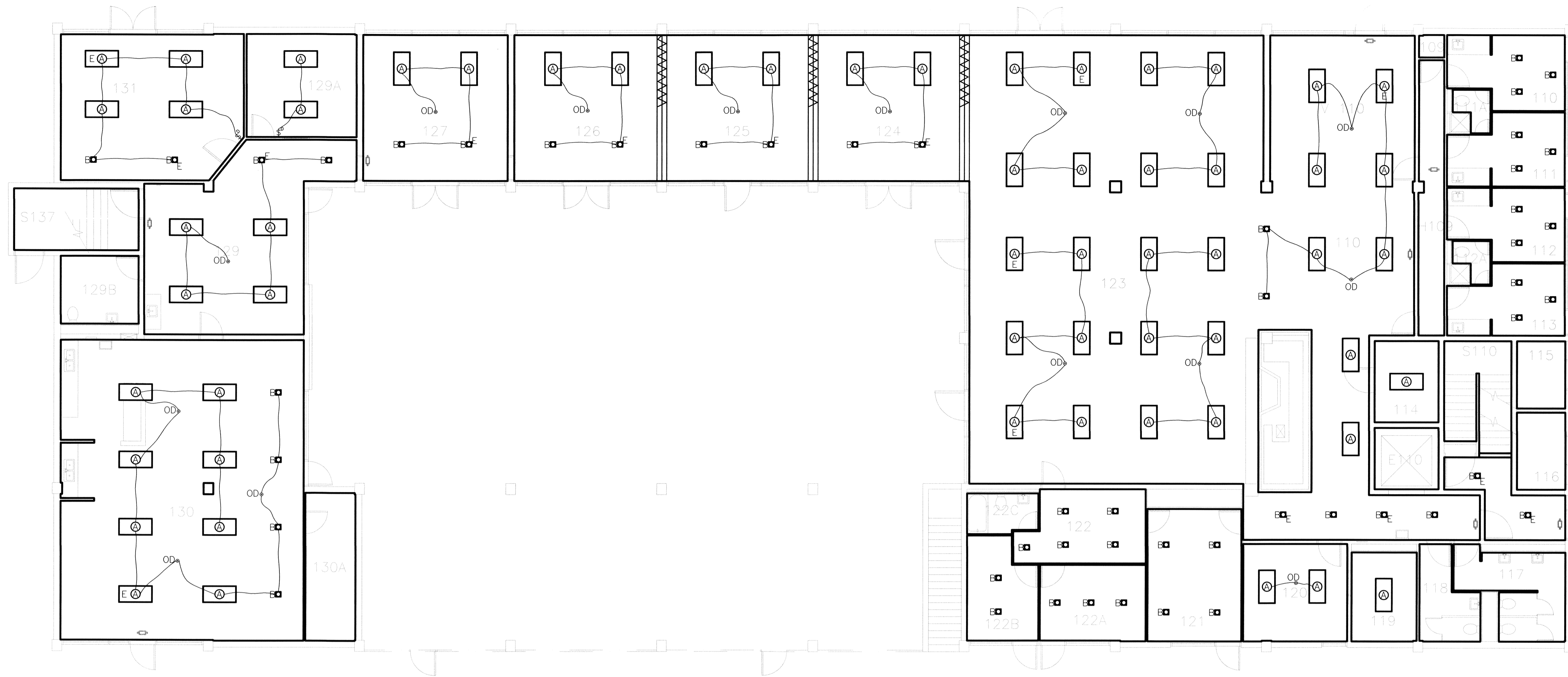
EXISTING BREAKERS IN PANELS NOT AFFECTED BY CHANGE,
SO NO CALCULATIONS DONE ON THESE LOADS.

PANEL SCHEDULE														
IDENTIFICATION		PANEL C					VOLTS					208Y/120V, 3 PHASE, 4 WIRE		
LOCATION		RILEY HALL 1st FLOOR, WEST END					SIZE					100 AMPS		
FED FROM		MAIN DISTRIBUTION ASSEMBLY (Basement)					MAIN BREAKER					MLO		
10,000 AIC SYM														
NO	CIRCUIT DESCRIPTION	LOAD KVA	LOAD L1 A	LOAD L2 A	LOAD L3 A	CKT #	CKT #	LOAD L1 A	LOAD L2 A	LOAD L3 A	LOAD KVA	CIRCUIT DESCRIPTION	NO	
1	DOWN LIGHTS IN ROOM 124,125,126,127	0.3	2.5			20/1	1	2	20/1		2.5	LIGHTS IN ROOM 129A & 131	2	
3	2X4 LIGHTS IN ROOM 124,125,126,127	0.3		2.5		20/1	3	4	20/1		1.7	LIGHTS IN ROOM 129	4	
5	LIGHTS IN ROOM 130	0.6			5.0	20/1	5	6	20/1	0.0		SPARE	6	
7	Lights in room 129B	0.0	0.0			20/1	7	8	20/1		0.0	SPARE	8	
9	SPARE	0.0		0.0		20/1	9	10	20/1		0.0	Lights on stairs	EXISTING 10	
11	Exit Signs	0.0			0.0	20/1	11	12	20/1	0.0		Plugs	EXISTING 12	
13	Hand Dryer	0.0	0.0			20/1	13	14	20/1		0.0	Plugs	EXISTING 14	
15	Plugs	0.0		0.0		20/1	15	16	20/1		0.0	24 LIGHTS EXISTING	EXISTING 16	
17	Plugs South West Kitchen	0.0			0.0	20/1	17	18	30/2	0.0		SPARE	EXISTING 18	
19	Space	0.0	0.0			20/1	19	20			0.0			20
CONNECTED LOAD		1.2	2.5	2.5	5.0					0.0	2.5	1.7	0.5	
TOTAL KVA		1.7	KVA											
TOTAL AMPS PHASE L1		2.5	A											
TOTAL AMPS PHASE L2		5.0	A											
TOTAL AMPS PHASE L3		6.7	A											
MAX AMPS		6.7	AMPS											

NOTE

EXISTING BREAKERS IN PANELS NOT AFFECTED BY CHANGE,
SO NO CALCULATIONS DONE ON THESE LOADS.

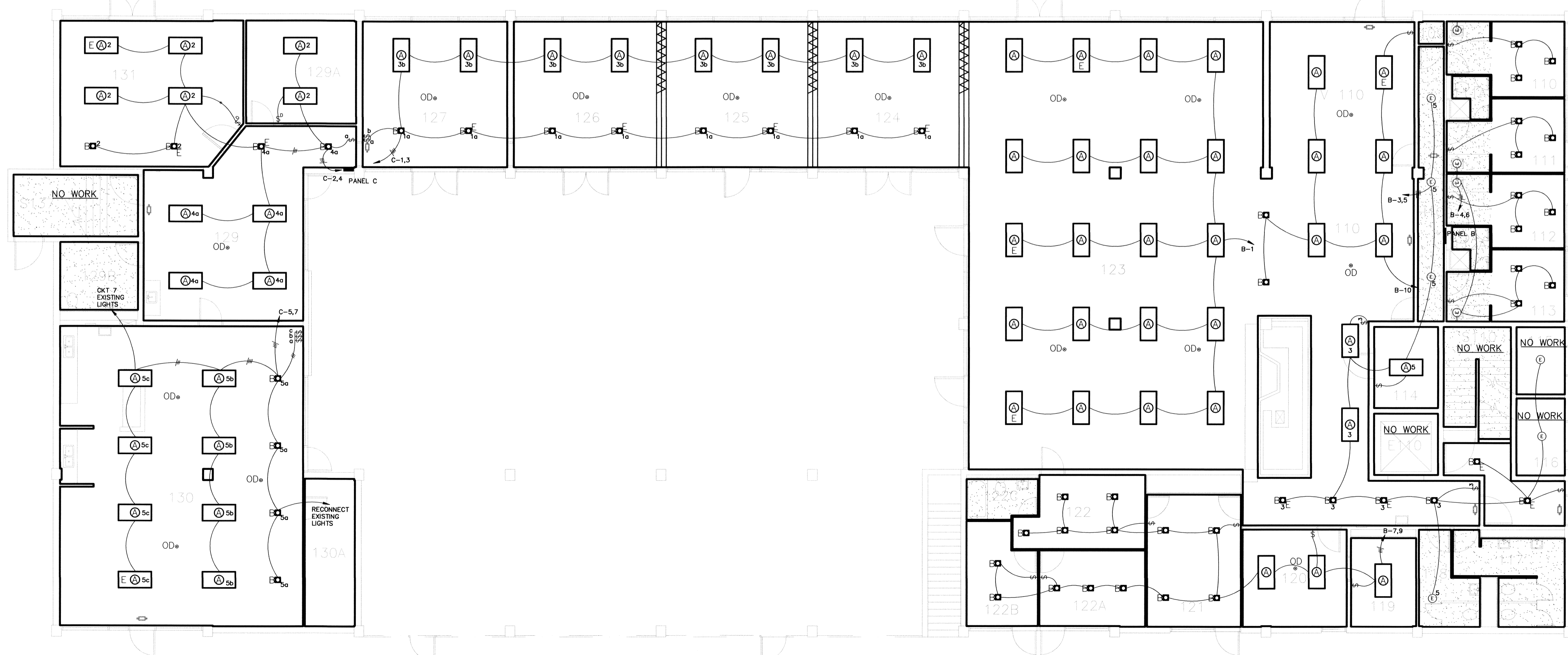
ISSUED FOR PERMIT



A
E1.1
GROUND FLOOR SENSOR CONNECTOR PLAN - NEW
1/8" = 1'-0"

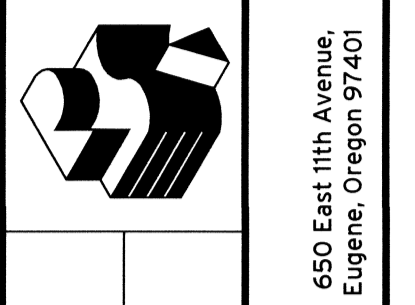
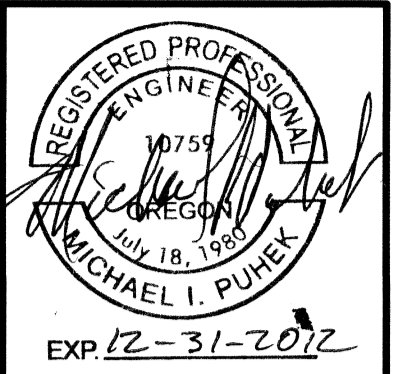
- ### RCP LEGEND
- RECESSED LIGHT FIXTURE
 - RECESSED LIGHT FIXTURE W/BATTERY FOR EGRESS LIGHTING
 - RECESSED CAN LIGHT FIXTURE
 - RECESSED CAN LIGHT FIXTURE W/BATTERY FOR EGRESS LIGHTING
 - EXIT SIGN (EXISTING)
 - OCC SENSOR & DAYLIGHT DIMMER
 - DIMMER SWITCH (NEW)
 - LIGHT SWITCH (NEW)
 - EXISTING FIXTURE

- ### GENERAL NOTES
- A. FIELD VERIFY ALL CIRCUITS BEFORE STARTING PROJECT.
 - B. ALL CONDUIT TO BE 3/4" UNLESS OTHERWISE SPECIFIED.
 - C. ALL WIRING TO BE 2 (HOT, NEUTRAL) WIRE #12 AWG THHN/THWN COPPER UNLESS OTHERWISE SPECIFIED.
 - D. ALL DIMMING ZONES TO BE DONE IN A DAISY-CHAIN WITH CAT-5 CABLING FOLLOWING MANUFACTURE'S INSTRUCTIONS.



B
E1.1
GROUND FLOOR LIGHTING CIRCUIT PLAN - NEW
1/8" = 1'-0"

ISSUED FOR PERMIT



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GROUND FLOOR REFLECTED CEILING PLAN
 Drawn By: DGL
 Checked: JK
 Date: 29 MAY 2012
 Project: 1209

E1.1