This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated **February 12, 2021** as noted below. Acknowledge receipt of this addendum in the space provided on the Official Bid Form. Failure to do so may subject the Bidder to disqualification.

REVISION TO 00 0110 – TABLE OF CONTENTS

Add 01 9113 – General Commissioning Requirements

Add 23 0800 – Commissioning of HVAC

Add 26 0800 – Commissioning of Electrical

REVISION TO 01 9113 – GENERAL COMMISSIONING REQUIREMENTS

*Add entire **NEW** Section 01 9113*

SECTION 01 9113 – GENERAL COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

A. Section describes work associated with commissioning of selected systems including commissioning meetings, construction checks, equipment start-up, and functional testing.

B. Work Provided Under Separate Contract: Owner's Commissioning Administrator (CA) will supervise commissioning activities and provide the following commissioning services:

1. Develop commissioning plan.
2. Assist Contractor to incorporate commissioning activities into Project Construction Schedule.
3. Conduct commissioning meetings.
4. Review project submittals.
5. Develop Construction Checklists and Functional Test Plans.
6. Observe Construction checks and start-up of selected equipment.
7. Supervise and document functional testing.
8. Prepare final commissioning report.

C. Contractor shall provide the following services:

1. Assign individuals representing Contractor and mechanical, electrical, controls, and low-voltage subcontractors as members of Commissioning Team.
2. Incorporate commissioning activities in Contractor's construction schedule.
3. Assist CA in development of Construction Checklists.

ADDENDUM 2

4. Execute Construction Checklists.

5. Perform Equipment Start-up.

6. Perform contractor-directed verification of automatic controls and provide required verification documentation.

7. Assist CA in development of Functional Test Plans.

8. Assist CA with Functional Testing.

9. Provide submittals, product data, shop drawings, controls sequences, points list, wiring diagrams, schematics, and design documents to assist in commissioning documentation development.

D. Contractor shall provide related services as directed, including, but not limited to:

1. Access to the Work

2. Incidental labor, facilities, and equipment to assist CA in conducting commissioning activities.

3. Completion of required submittals.

4. Coordination of Work with activities of CA.

1.02 RELATED SECTIONS

A. 23 05 93 – Testing, Adjusting, and Balancing of HVAC Systems

B. 23 08 00 – Commissioning of HVAC

C. 26 08 00 – Electrical Cx

1.03 DEFINITIONS

A. CA: Commissioning Administrator (CA) is the Individual responsible for supervising commissioning work.

B. Construction Phase Commissioning Plan: Document prepared by the CA that guides commissioning work through construction, verification, and warranty periods. The plan will include a listing of commissioning team members, systems to be commissioned, narrative description of the commissioning tasks and responsibilities, and a draft copy of the commissioning forms to be executed by the Contractor

C. Construction Phase: Phase of the project during which the facility is constructed, and equipment is installed and started. During the Construction Phase, the Contractor completes construction checklists, performs equipment start-up, performs TAB work, and performs control system verification. The Construction Phase generally ends at Substantial Completion.

D. Verification Phase: Phase of the project during which functional testing performed. The Verification Phase generally begins at Substantial Completion and ends at Final Completion.

ADDENDUM 2

E. Online Commissioning System: The CA will maintain an online commissioning system, which serves as a central location for accessing commissioning documents such as the Owner's Project Requirements, Commissioning Plan, status reports, design reviews, submittal reviews, schedules, and Issues Log. The online system provides current project information to authorized project team members through general internet access. The site URL is https://www.swecx.com. The Issues Log portion of the site allows for the Owner's Construction Manager, Architect, and General Contractor to provide comments, document actions, and indicate resolutions.

1.04 SUBMITTALS

A. Designated Commissioning Team Representatives: Submit list of names and contact information for individuals representing Contractor and Subcontractor as members of Commissioning Team.

B. Construction Schedule: Submit updated project construction schedule to CA monthly. Incorporate time and duration of Commissioning activities, as provided by CA, into the construction schedule.

C. Construction Submittals and Shop Drawings: Provide as required to perform commissioning work.

1. Contractor to provide CA a copy of the submittal log. CA will review the log and identify submittals that are associated with equipment and systems being commissioned and required to be submitted to the CA.

2. Contractor to provide an electronic copy of each submittal or shop drawing to the Owner's Representative, including all resubmissions, required by the CA at the same time submittals are provided to the Design Team. CA will review submittals concurrently with the Design Team and provide review comments to the Design Team. The Design Team will consolidate review comments into a single submittal review response to be provided to the Contractor.

3. Contractor to provide a copy of Design Team submittal review comments to the CA.

D. Engineering Data: Provide shop drawings, product data, performance data, engineering data, installation and start-up data, schematics, wiring diagrams, programming manuals, and similar information as necessary for completion of the Work of the Section in accordance with Commissioning Schedule.

E. Construction Checklists: Complete and submit to CA for certification. Attach copies of all manufacturers' field or factory performance and start-up test documentation provided for associated equipment or systems.

F. Control Verification Reports: The Contractor shall provide complete Control Verification Reports to the CA.

1. Complete reports developed by CA and submit to CA for certification.

2. Contractor to provide the CA with sample point-to-point verification forms that the Contractor will use during initial start-up and verification of systems. The CA will review the forms and provide comments as necessary to the Contractor.

ADDENDUM 2

1.05 QUALITY ASSURANCE

A. Provide qualified mechanics and technicians to provide required commissioning services. Technicians shall have knowledge of the Work and experience with installation and operation of the general systems and components involved to assist in commissioning activities. Individuals shall be adequately equipped to effectively assist the CA as necessary. Upon request, submit names and qualifications of technicians to CA for approval.

1.06 SEQUENCING

A. Schedule adequate time as determined by CA for execution of Commissioning Plan.

B. CA will conduct a Commissioning Process Meeting approximately 30 days after Contractor received Notice-to-Proceed and after all subcontractors are identified.

C. CA will prepare a Construction Phase Commissioning Plan approximately 30 days after Commissioning Process Meeting.

D. Provide construction submittals and shop drawings to CA as described above in SUBMITTALS.

E. Provide engineering data as required by CA to prepare Construction Checklists within four weeks after date of approved submittal.

F. CA will conduct an initial commissioning coordination meeting approximately 30 days before equipment begins to arrive at the project site to coordinate commissioning activities and execution of construction checklists. Additional commissioning coordination meetings will be scheduled as necessary throughout the process to discuss commissioning schedule and coordination among trades.

G. Perform Construction Checks as equipment is received, installed, and placed in operation. Construction checks shall be performed as work is completed. For example, equipment inspection shall be performed upon receipt of equipment on site, installation inspection shall be performed when equipment is set in place and anchored, and so on.

H. Submit control verification reports two weeks after Substantial Completion.

I. Functional testing will be scheduled after construction checklists; testing, adjusting, and balancing report; and control verification reports have been submitted and accepted. Contractor shall provide written notice that systems are completely operational and ready for functional testing. Functional testing may proceed prior to acceptance if the CA and Owner's Authorized Representative determines that deficiencies will not significantly affect system performance and timing is critical. The CA will provide notification to Contractor, Architect, and Owner's Authorized Representative a minimum of one week prior to performing functional testing.

J. Troubleshooting, corrections, and retesting shall be completed within three months of Substantial Completion.

1.07 SYSTEMS TO BE COMMISSIONED

A. Commissioning of a system or systems specified for this project is part of the construction process. Documentation and testing of these systems are required in cooperation with the CA.

B. The following systems will be commissioned as part of this project:

ADDENDUM 2

1. Heating, ventilation and air-conditioning systems
   a. Rooftop Units
   b. Energy recovery units
   c. Fan coil units
   d. Exhaust fans
   e. Split-system air conditioning units
   f. Ductwork
   g. Building automation control system
   h. Packaged control systems
   i. Variable frequency drives

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide specialized test equipment including manufacturer's proprietary test equipment, as necessary for commissioning of mechanical, plumbing and electrical systems and components. Comply with requirements of individual technical Section of Division 23. Common test equipment such as temperature, pressure, speed, and electrical power measuring devices shall be provided by CA.

PART 3 - EXECUTION

3.01 APPLICATION

A. Commissioning Meetings: Commissioning Team shall attend meetings as required by CA including Commissioning Process Meeting, submittal review meetings, and coordination meetings prior to construction checks; adjusting and balancing; and functional testing. Commissioning team shall attend troubleshooting meetings as required to resolve issues identified in submittal reviews and commissioning reports.

B. Construction Checklists:

1. Provide equipment installation, start-up, and operating information requested by the CA as required to develop Construction checklists.

2. Perform construction checks for all equipment being commissioned as described in Construction Checklists prior to equipment start-up. The Contractor shall designate responsibility for completing construction checks among subcontractors. The designated subcontractor shall initial and date each item on checkout sheets as completed and submit executed forms to CA for certification. All items listed in the Construction Checklists shall be complete prior to certification unless the incomplete item does not affect safe and reliable equipment operation. If such an item is identified, a description of the incomplete work must be attached to the Construction Checklists. Equipment requiring construction checkout shall not be started until the Construction Checklists are fully executed by the Contractor.

ADDENDUM 2

3. Contractor shall maintain "Cx Submittal Status Report." CA will furnish Excel status report spreadsheet that will be used to monitor completion of construction checklists.

4. Contractor shall startup equipment as described in construction checklists. Where required, provide manufacturer's agent to perform start-up as specified in Division 23.

5. Fully executed Construction Checklists shall be submitted to the CA for certification.

6. CA will document unresolved issues in a project Issues Log. The Issues Log documents status, responsibility, and required action for each unresolved issue.

7. CA shall perform a recheck of selected equipment. If minor discrepancies are identified, Contractor shall recheck all similar systems and resubmit Construction Check forms for certification. If major discrepancies are identified, CA shall perform Construction Checks, and Contractor shall compensate Owner for additional commissioning costs by Contract modification.

C. Control Verification Reports:

1. Perform control system verification and prepare verification report as specified in Division 23. Verification shall be performed by manufacturer's authorized installation contractor. Verification report shall include a description of the incomplete work.

2. Submit completed Control Verification Report to the CA for acceptance.

3. CA will document unresolved issues in a project Issues Log. The Issues Log documents status, responsibility, and required action for each unresolved issue.

D. Functional Tests:

1. Assist CA in performing Functional Tests, which shall generally include operating equipment and systems as necessary for testing. The CA will record test measurements and documentation of results.

2. CA will document all unresolved issues in a project Issues Log. The Issues Log documents status, responsibility, and required action for each unresolved issue.

3. CA shall retest selected systems once to verify that corrective work is complete. Retests will be performed after notification from the Contractor that work is complete. If corrective work is not complete and additional retesting is required, Contractor shall compensate Owner for costs of additional CA testing sessions by Contract modification.

E. Issues Resolution: Unresolved issues will be listed in the project online Issues Log. Refer to Online Commissioning System in Article 1.03, Definitions above. Each issue will be identified with an identification number. The Issues Log will include a description of the unresolved condition, identify the responsible individual(s), and describe suggested corrective action. The Contractor will periodically access the On-line Commissioning System to monitor the status of commissioning issues and shall diligently complete all tasks that are identified as the responsibility of the Contractor. The Contractor shall modify on-line issue status when each item is completed and provide a description of corrective action performed. Contractor and related subcontractors shall attend commissioning meetings to review the Issues Log and coordinate resolution of issues as required by the CA.

ADDENDUM 2

3.02 QUALITY CONTROL

A. Provide mechanics that are experienced with the Work and installed components of each system to assist in completion of the commissioning activities.

1. Work necessary to provide systems complying with performance requirements of the contracts is the Contractor's responsibility.

B. Manufacturer's Field Services: Provide manufacturer's representatives with expertise in components and systems. Where required, manufacturer's representative shall perform start-up and testing.

3.03 ACCESS TO WORK

A. Contractor shall provide facilities and access for CA to perform work including but not limited to:

1. Keys, security passes, passwords, codes, etc.

2. Ladders.

3. Lifts where work is more than 12 feet above floor level.

4. Removal of ceiling tiles, partitions, panels, or other fixed construction necessary for completion of work.

5. Proprietary programming and metering equipment.

END OF SECTION

REVISION TO 01 9113 – PHENOLIC LOCKERS

*Add to section 2.01, A indicated in **bold** as follows:*

2.01 MANUFACTURERS

A. Acceptable Manufacturer:

ASI Storage Solutions, which is located at: 900 Clary Connector; Eastanollee, GA 30538; Tel: 706-827-2720; Fax: 706-827-2710; Email:request info (info@asi-storage.com); Web:http://asi-storage.com

Foreman Lockers, located at: 41330 Date St, Murraieta, CA 92562
Email:info@foremanlockers.com); Web:www.foremanlockers.com

Scranton Products, 800-445-5148, info@scrantonproducts.com
(www.scrantonproducts.com).

REVISION TO 23 0800 – COMMISSIONING OF HVAC

*Add entire **NEW** Section 23 0800*

SECTION 23 0800 – COMMISSIONING OF HVAC

ADDENDUM 2

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes Commissioning activities required for work of Division 23 Sections including but not limited to construction checks, equipment start-up, and functional testing.

1. Comply with Section 01 91 13 – General Commissioning Requirements for Commissioning activities for Division 23 work.

1.02 SEQUENCING

A. Provide written notification to Commissioning Administrator (CA) in advance of significant project dates as directed and as listed below.

1. Two weeks prior to start-up of rooftop units, air-conditioning units, and exhaust fans.

2. Four weeks prior to installation of lay-in ceiling tiles or other partial concealment of equipment to be commissioned.

3. Four weeks prior to any system ready for balancing.

1.03 SUBMITTALS

A. Provide control system custom software, hardware, and technical manuals as necessary for development of Commissioning activities. Control system submittals include but are not limited to operating sequences, point database, workstation remote access, on-site custom programming/editing software, and programming and operations manual as necessary for development of Commissioning activities. Submit a minimum of 12 weeks prior to equipment start-up.

B. Provide sample control verification report to Commissioning Administrator 12 weeks prior to substantial completion. Submittal shall show format and content of Final Verification Report.

C. Provide submittals of systems being commissioned to Owner's Authorized Representative as required by Section 01 91 13.

D. Provide electronic copies (or hard copies where appropriate) of control system final configuration parameters, programs, databases, files, and electrical data as necessary to reconfigure and/or replace control components upon device failure.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide all necessary control hardware, software, and temporary licenses to enable Commissioning Administrator to conduct activities and to fully access any electronic control systems furnished for this project. Commissioning Authority's laptop computer may be used for access if software and hardware systems provided are compatible with existing computer configuration, otherwise furnish laptop computer where required for duration of project.

B. Provide minimum of two HVAC control operator interface sites for both on-site and remote access as described below:

ADDENDUM 2

1. Commissioning Administrator Access Functions: Review and modification of control programming, monitoring of control system operations, review and modification of software database, setup, and monitoring trend data in tabular and graphical formats.

2. Remote Access: Remote access using Internet and shall include all functions described above.

3. Provide credentials for Commissioning Administrator. Security access level shall be suitable to perform necessary commissioning functions.

4. Provide labor required to install hardware and software on personal computers at Commissioning Administrator's office. Software will be manufacturer's most recent version and will be compatible with the CA's personal computers. Provide Commissioning Administrator with two hours training after fully functional remote access is established.

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: Manufacturer's Representative to execute Construction Checklists specified in Division 23 including the following systems:

1. Packaged air handlers

2. Packaged rooftop air-conditioners

3. Variable frequency drives

4. Building Automation System

3.02 CONSTRUCTION CHECKLISTS

A. Contractor shall execute as required by Section 01 91 13. Construction Checklists for each system commissioned will be prepared by Commissioning Administrator during construction.

3.03 CONTROL VERIFICATION REPORT

A. Building Automation System: BAS control contractor shall perform verification of the function and performance of control hardware and software. Provide verification report demonstrating proper system installation and operation. Verification report shall include the following:

1. Network Communication: Verify that all network devices properly communicate on network. Verify communication speed and reliability is acceptable.

2. Input and Output Verification:

a. Verify that all input and output points are indicating properly. Verification tests shall be "end-to-end," meaning field measurement to workstation graphic display value.

b. Calibrate all analog inputs. Acceptance accuracy shall be as specified for product accuracy. Repair or replace all devices that do not conform to specified accuracy.

c. Operate all analog outputs from 0% to 100% of operating range. Verify that controlled device operates over the entire output range and that maximum and minimum

ADDENDUM 2

operating conditions are achieved.

d. Valves and dampers shall close fully and provide tight shutoff. Leakage rates shall not exceed specified values.

e. Verify that all digital outputs operate controlled devices.

3. Sequence of Operation Verification: Systematically verify automatic control sequence of operation functions in field after installation is complete. Verification shall include:

   a. Time scheduling.

   b. Operating modes.

   c. Tune and adjust control loops and control sequences to optimize efficiency and performance. Control loops shall be stable and maintain desired setpoints.

4. Trending: Confirm trending utilities storage of operating data as required to verify operation and performance of control modes, sequence, and loops. Meet with Owner and CA to review configuration, parameter interval, and duration prior to trend setup.

5. Operator Interface: Review function of operator interface. Confirm that graphic operator interface accurately depicts as-constructed system configuration and that all required content is displayed and functions as intended.

6. Alarms: Confirm alarm utilities are configured as required, alarm conditions are displaying in alarm logs and on graphic displays, and provide annunciation and reporting as required. Meet with Owner and CA to review configuration parameters prior to alarm utility setup.

7. Coordination: Assist balancing contractor with development of control setpoints and parameters as specifically indicated or otherwise required to provide Sequence of Operation. Setpoints would include but would not be limited to actuator positions required to provide minimum ventilation rates, supply air pressure setpoints for variable air volume air distribution systems, and terminal unit calibration parameters.

8. Controls Verification Report: After system operation is completely verified, provide written certification to Owner that systems have been fully tested, are operating according to specifications, and ready for functional testing. Include documentation to the Commissioning Administrator detailing verification results. Report shall include:

   a. Updated control construction drawings and equipment data that incorporates all changes made during construction.

   b. Printed as-built control code.

   c. Printed point data base.

   d. Input/Output Verification Log: Submit point verification log including point identification, control system readout value, verification measurement, and required calibration offset where applied.

   e. Sequence of Operation Verification: Submit verification test report listing complete text of control sequence and test results. Verify all specified control sequences.

ADDENDUM 2

f. Trend Logs: Submit printed trend reports for the following:

1) Time schedules. Seven-day log demonstrating that equipment operates according to programmed time schedules.

2) Automatic control sequences. Trends shall be set-up as follows:

(a) Analog Control: Points that modulate over time shall be sampled at appropriate intervals and durations to demonstrate proper operating sequences. For example, a discharge temperature control loop would require trending during the morning warm-up mode and normal daytime operation mode. Each trend shall include all measured variables, control output signal, actual output signal, and controlled variable.

(b) Digital Control: Dual-state control or monitoring points shall be recorded as COV (+) or change of value meaning that the changed parameter only needs to be recorded after the value changes from its previous state. A minimum of one week of samples shall be provided to properly demonstrate equipment cycles, modes, and schedules.

3) Include trend graphs as described below:

(a) Lines shall be labeled and shall be distinguishable from each other by using either different line types, or different line colors.

(b) Indicate engineering units of the y-axis values, e.g., degrees F., inches
w. g., Btu/lb, percent wide open, etc.

(c) The y-axis scale shall be chosen so that all trended values are in a readable range. Do not mix trended values on one graph if their unit ranges are incompatible.

(d) All points trended for one HVAC subsystem, e.g., air handling unit, chilled water system, etc. shall be trended during the same trend period.

(e) Each graph shall be clearly labeled with HVAC subsystem title, date, and times.

4) List of incomplete work.

g. Demonstration: Demonstrate operation of control system to Engineer, Commissioning Administrator, and Owner including:

1) Menu functions.

2) Point overrides.

3) Control loop response after point modification.

4) Alarm response time.

ADDENDUM 2

3.04 FUNCTIONAL TESTING

A. Contractor shall assist Commissioning Administrator with functional testing as required by Section 01 91 13. Functional Test Plans for each system being commissioned will be prepared by Commissioning Administrator during construction and will generally include a rigorous verification of instrument calibration, equipment performance, packaged equipment control system operations, automatic control sequence of operations, fire and life safety sequences, and operator interface functions. Commissioning Administrator will supervise and document functional testing. Contractor shall provide qualified technicians to assist Commissioning Administrator during on-site testing and perform the following functions.

1. Operate equipment and systems as necessary to conduct testing.

2. Manipulate control parameters to simulate test conditions as detailed in Functional Test Plans.

3. Access control programming and database as required to verify control configuration or to correct observed deficiencies.

4. Create graphic displays and/or trend report as required to document test results.

5. Provide proprietary hardware and software as needed to interface with manufacturer's packaged control systems.

B. Labor required for retesting due to failure of equipment, or systems not performing in accordance with Contract Documents shall be provided at no additional cost to Owner.

3.05 SCHEDULE OF SYSTEMS BEING COMMISSIONED

A. Commission systems and equipment listed below, including associated equipment, piping, ductwork, and control systems.

1. HVAC Systems: All HVAC systems, equipment, and controls

END OF SECTION

<u>REVISION TO 26 0800 – COMMISSIONING OF ELECTRICAL</u>

*Add entire **<u>NEW</u>** Section 26 0800*

SECTION 26 0800 – COMMISSIONING OF ELECTRICAL

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes Commissioning activities required for work of Division 26 Sections including but not limited to construction checks, equipment start-up, functional testing, and operator training.

1. Comply with Section 01 91 13 – General Commissioning Requirements for Commissioning activities for Division 26 work.

ADDENDUM 2

1.02 SUBMITTALS

A. Provide submittals of systems being commissioned to Owner's Authorized Representative as required by Section 01 91 13.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

3.01 CONSTRUCTION CHECKLISTS

A. Contractor shall perform as required by Section 01 91 13. Construction checklists for each system being commissioned will be prepared by Commissioning Administrator during construction.

1. Perform voltage and amperage measurements for mechanical equipment as required in Section 23 08 00.

END OF SECTION

<u>REVISIONS TO DRAWINGS</u>

G1.00

1. Revised Sheet Index.

A1.00

1. Added note about electrical service to Future Modular Classroom.

E1.00, E2.00, E2.01, E3.00, E4.00, E5.00

1. Added future Modular Building Feeder and Panel.

<u>SUBSTITUTION REQUESTS</u>

A. Request for Substitution: Rooftop Unit RT-1

1. The final Mechanical design to be Design/ Build by Subcontractor. The Rooftop Unit specified on Mechanical Sheet M0.02 (Lennox KHB060S4B) was given for reference only. Final Rooftop Unit specification shall be made by Design/ Build Contactor and shall satisfy the HVAC needs of the proposed renovations.

B. Request For Substitution: Phenolic Lockers.

1. FOREMAN Phenolic Lockers found to be acceptable substitution.

2. Scranton Products Tufftec Lockers found to be acceptable substitution.

<u>ATTACHMENT: WILLOW WIND AS-BUILT DRAWINGS</u>

ADDENDUM 2

ATTACHMENT: PRE-BID MEETING SIGN IN SHEET

Please review the attached sign in sheet; if corrections are required please send them to steve.simmons@hmkco.org

END OF ADDENDUM 2

ADDENDUM 2

OWNER	PROJECT MANAGER	ARCHITECT	GENERAL CONTRACTOR	STRUCTURAL ENGINEER	MEP ENGINEER
ASHLAND SCHOOL DISTRICT	HMK COMPANY	ARKITEK: DESIGN & ARCHITECTURE	TBD	CIOTA ENGINEERING	ARCSINE
CONTACT: STEVE MITZEL 885 SISKIYOU BOULEVARD, ASHLAND, OR 97520 541.482.2185 WWW.ASHLAND.K12.OR.US	CONTACT: DAVID MCKAY 695 COMMERCIAL ST. SE SUITE 116 SALEM, OR 97301 971.304.0710 DAVID@HMKCO.ORG	CONTACT: CHRISTOPHER BROWN 426 A ST. SUITE 101 ASHLAND,OR 97520 541.591.9988 ARKITEK@ARKITEK.US		CONTACT: CAMERON HARRIS, PE 156 CLEAR CREEK DR #101, ASHLAND, OR 97520 541.552.0290 CAMERON@CIOTAENGINEERING.COM	CONTACT: CHRIS HEIDL, P.E. 1236 DISK DR. MEDFORD, OR 97501 541.842.4188 CHEIDL@ARC-SINE.COM

WILLOW WIND RENOVATIONS

1497 E. MAIN ST. ASHLAND, OR 97520

VICINITY MAP - ASHLAND, OREGON

MATERIALS LEGEND

EARTH	DIMENSIONAL LUMBER
GRAVEL, ROCK	BLOCKING / SHIM
SAND, GROUT	WOOD
CONCRETE	PLYWOOD
MASONRY	CEILING / ACOUSTIC TILE / PANEL
METAL	BATT INSULATION

DRAWING INDEX

GENERAL:

G1.00 COVER SHEET 1
G2.00 CODE REVIEW/ ACCESSIBILITY STANDARDS

ARCHITECTURAL:

AD1.01 EXISTING/ DEMOLITION FLOOR PLANS
AD1.02 EXISTING/ DEMOLITION ROOF PLAN

A1.00 ARCHITECTURAL SITE PLAN 1
A1.01 PROPOSED FLOOR PLAN
A1.02 PROPOSED ROOF PLAN
A1.03 PROPOSED REFLECTED CEILING PLANS

A2.01 PROPOSED EXTERIOR ELEVATIONS

A3.01 PROPOSED SECTIONS

A4.01 ENLARGED FLOOR PLANS AND INT. ELEVS
A4.02 ENLARGED FLOOR PLANS AND INT. ELEVS

A5.01 DETAILS
A5.02 DETAILS

A6.01 FINISH/ DOOR/ WINDOWS SCHEDULES

LANDSCAPE:

L1 LANDSCAPE DEMOLITION PLAN
L2 LANDSCAPE SITE PLAN

STRUCTURAL:

S1 STRUCTURAL GENERAL NOTES
S2 FOUNDATION PLANS
S3 ROOF FRAMING PLANS
S4 STRUCTURAL DETAILS
S5 STRUCTURAL DETAILS
S6 STRUCTURAL DETAILS

ELECTRICAL: 1

E1.00 LEGEND AND GENERAL NOTES
E2.00 ONE-LINE DIAGRAM
E2.01 PANEL SCHEDULES
E3.00 SITE PLAN - DEMO/ IMPROVEMENT
E4.00 POWER PLAN - DEMO/ IMPROVEMENT
E5.00 DETAILS

MECHANICAL:

M0.01 MECHANICAL LEGEND AND NOTES
M0.02 MECHANICAL SCHEDULES
M1.01 MECHANICAL FLOOR PLANS

PLUMBING:

P1.00 LEGENDS AND GENERAL NOTES
P2.00 PLUMBING PLANS

GENERAL NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH ANY WORK.

2. DIMENSIONS TAKE PRECEDENCE OVER DRAWING. DO NOT SCALE DRAWING TO DETERMINE ANY LOCATIONS. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO CONTINUING WITH WORK. DIMENSIONS ARE TAKEN TO THE FOF, FOC, FOM, OR GRID, UNO.

3. ALL CONSTRUCTION SHALL COMPLY WITH THE 2019 O.S.S.C. BUILDING CODE AND METHODS AND SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF ANY CONSTRUCTION UNTIL ALL FINAL LATERAL AND VERTICAL CARRYING SYSTEMS ARE COMPLETED.

4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTIONS MEANS AND METHODS.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND COORDINATION OF SUBCONTRACTORS WORK TO SECURE COMPLIANCE OF DRAWINGS AND SPECIFICATIONS FOR THE ACCURATE LOCATION OF STRUCTURAL MEMBERS, AND OPENINGS FOR MECHANICAL, ELECTRICAL, AND MISCELLANEOUS EQUIPMENT. CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND OPENING SIZES, CLEARANCES REQUIRED FROM MFR PRIOR TO CONSTRUCTION AND INSTALLATION OF EQUIPMENT, FURNISHINGS, ACCESSORIES ETC.

6. TRADE PERMITS, INCLUDING BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL, ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

7. DETAILS NOTED AS "TYPICAL" OR "TYP" APPLY IN ALL CASES WHETHER OR NOT SPECIFICALLY REFERENCED. DETAILS THAT ARE SPECIFICALLY REFERENCED SHALL TAKE PRECEDENCE OVER "TYPICAL" OR "TYP." DETAILS. SPECIFIC DETAILS AND NOTES SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND DETAILS.

8. WHERE COMPONENTS, ASSEMBLIES, ITEMS, EQUIP, ETC. ARE BASED UPON A PARTICULAR SUPPLIER, FABRICATOR AND/OR MFR. THE CONTRACTOR SHALL ENSURE, PROVIDE OPTIONS, ALLOW FOR, AND SHALL MAKE ANY CHANGES REQUIRED FOR THE APPROVED ALTERNATE TO MEET THE DESIGN INTENT OF THE DOCUMENTS.

9. CONTRACTOR SHALL VERIFY ALL COMPONENTS TO BE INSTALLED W/ EXT. WALL FOR DIMENSIONAL ACCURACY PRIOR TO FABRICATION, PURCHASE, INSTALLATION, ETC.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GENERAL SECURITY OF THE SITE WHILE THE JOB IS IN PROGRESS AND UNTIL JOB COMPLETION. EACH CONTRACTOR/SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY AND PROTECTION OF ITS OWN MATERIALS, WORK PRODUCT AND EQUIPMENT.

11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PROSECUTION OF THE WORK.

12. ALL UNPAINTED FERROUS METALS EXPOSED TO THE WEATHER SHALL BE GALVANIZED, UNO.

13. SEPARATE ALL AL AND OTHER METALS FROM DIS-SIMILAR METALS WITH BITUMINOUS TAPE OR PT.

14. APPROPRIATE SEALANT SHALL BE USED TO SEAL ALL JOINTS OF MILLWORK, TRIM, EQUIPMENT WALL MOUNTING PENETRATIONS TO PRODUCE A WATERTIGHT SEAL.

15. DOORS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL OR SHALL BE LOCATED FOUR INCHES FROM FINISH WALL TO HINGE SIDE OF DOOR.

16. FASTENER SIZES AND CONNECTIONS PER STRUCTURAL ENGINEER OR AS NOTED. UNREFERENCED CONNECTIONS PER OSSC TABLE 2304.9.1.

DEFERRED SUBMITTALS

DESIGN/ BUILD PORTIONS OF THE PROJECT TO BE SUBMITTED FOR PERMIT BY GENERAL CONTRACTOR OR PERTINENT SUBCONTRACTOR AT A LATER DATE.

DEFERRED SUBMITTALS INCLUDE:

MECHANICAL DESIGN
PLUMBING DESIGN
ELECTRICAL DESIGN

LEGEND AND SYMBOLS

DETAIL
DETAIL IDENTIFICATION
DWG. NUMBER WHERE DETAIL IS DRAWN

WALL CROSS SECTION
SECTION IDENTIFICATION
DWG. NUMBER WHERE SECTION IS DRAWN

BUILDING CROSS SECTION
SECTION IDENTIFICATION
DWG. NUMBER WHERE SECTION IS DRAWN

BUILDING ELEVATION
ELEVATION IDENTIFICATION
DWG. WHERE ELEVATION IS DRAWN

GRID LINE
TOP TO BOTTOM, LETTERS
LEFT TO RIGHT, NUMBERS

INTERIOR ELEVATION
DETAIL NUMBER ON INTERIOR ELEVATION SHEET
ELEVATION DESIGNATION
DWG. NUMBER WHERE INT ELEVATION IS DRAWN

DOOR IDENTIFICATION
DOOR NUMBER

WALL TYPE IDENTIFICATION
WALL TYPE NUMBER

WINDOW IDENTIFICATION
WINDOW NUMBER

KEYNOTE
KEYNOTE NUMBER

ROOM IDENTIFICATION
ROOM NAME
ROOM NUMBER

NORTH ARROW
ARROW INDICATES PLAN NORTH

LEVEL LINE = ELEVATION
TARGET POINT, DATUM

CENTER LINE

F.O.M.	FACE OF MASONRY
F.O.C.	FACE OF CONCRETE
F.O.C.	FACE OF COLUMN
F.O.S.	FACE OF STUD / STRUC
F.O.FIN.	FACE OF FINISH

SEE INDIVIDUAL SHEETS FOR ADDITIONAL LEGENDS AND SYMBOLS

GOVERNING CODES

THE DESIGN OF THIS PROJECT IS BASED ON THE FOLLOWING CODES:

OREGON STRUCTURAL SPECIALTY CODE, 2019 ed.

OREGON MECHANICAL SPECIALTY CODE, 2019 ed.

OREGON PLUMBING SPECIALTY CODE, 2017 ed.

OREGON ELECTRICAL SPECIALTY CODE, 2017 ed.

OREGON ZERO ENERGY READY COMMERCIAL CODE, 2019 ed.

OREGON FIRE CODE, 2019 ed.

ABBREVIATIONS

ABV	ABOVE	HGT	HEIGHT
ACT	ACOUSTIC CEILING TILE	HR	HOUR
AFF	ABOVE FINISHED FLOOR	HW	HOT WATER
ALT	ALTERNATE	INSUL	INSULATION
B.O.	BOTTOM OF	IR	INSIDE RADIUS
BM	BEAM	JST	JOIST
CJ	CONTROL JOINT	M	MIRROR
CLG	CEILING	MAX	MAXIMUM
CLR	CLEAR	MB	MACHINE BOLT
CLT	CROSS LAMINATED TIMBER	MDL	MODEL
COL	COLUMN	MECH	MECHANICAL
CONC	CONCRETE	MTL	METAL
CONT	CONTINUOUS	N.I.C.	NOT IN CONTRACT
CPT	CARPET	(N)	NEW
DBL	DOUBLE	O/	OVER, ON
DIA	DIAMETER	OCC	OCCUPANCY
DIMS	DIMENSIONS	OPNG	OPENING
DW	DISHWASHER	O.C.	ON CENTER
EA	EACH	O.D.	OUTSIDE DIAMETER
ELEC	ELECTRICAL	P	PAINT
EQ	EQUAL(Y)	PWD	PLYWOOD
EX	EXISTING	P.T.	PRESSURE TREATED
FD	FLOOR DRAIN	RM	ROOM
FF	FINISHED FLOOR	R.O.	ROUGH OPENING
FIN	FINISH(ED)	SEP	SEPARATION
FRMG	FRAMING	SF	SQUARE FEET
FRZR	FREEZER	SJ	SAW JOINT
FTG	FOOTING	SQ. FT.	SQUARE FEET
F.R.	FIRE RESISTANT	SHTG	SHEATHING
GA	GAUGE	SIM	SIMILAR
GALV.	GALVANIZED	T.O.	TOP OF
GWB	GYPSUM WALL BOARD	TS	TUBE STEEL
G.B.	GRAB BAR	TYP	TYPICAL
G.I.	GALVANIZED IRON	TH	THRESHOLD
G.S.	GALVANIZED STEEL	UL	UNDERWRITERS LABORATORY
H	HIGH	UTIL	UTILITY
HDBD	HARDBOARD	U.N.O.	UNLESS NOTED OTHERWISE
HDR	HEADER	WD	WOOD
HDWD	HARDWOOD		

ENERGY ENVELOPE

NEW SLAB ON GRADE:	R-20 FOR FIRST 24"
NEW WOOD FRAMED FLOORS:	R-30
NEW EXTERIOR WALLS:	R-21
NEW ROOFS:	R-49
NEW WINDOWS:	U-0.36 MIN
NEW EXTERIOR DOORS:	U-0.36 MIN

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WILLOW WIND RENOVATIONS

1497 E. MAIN ST.
ASHLAND, OR 97520

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design and architecture, llc.

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ashland, or 97520
tel.: 541.591.9988

REGISTERED ARCHITECT
CHRISTOPHER PLUMMER BROWN
6692
ASHLAND, OREGON
STATE OF OREGON

Revision		Date
1	BID ADDENDUM 2	03/12/21

Date	03/11/21
Job	20_10
Drawn By	DW
Checked By	
Scale	AS NOTED

100% DD

Drawing Title
COVER SHEET

Drawing No.
G1.00

PROJECT INFORMATION

PROJECT NAME:	WILLOW WIND RENOVATIONS
PROJECT DESCRIPTION: TO MAIN BUILDING	RENOVATIONS AND ADDITIONS
ADDRESS:	1497 E. MAIN ST. ASHLAND, OR 97520
MAP & TAX LOT:	391E10700

CLIENT INFORMATION

NAME:	ASHLAND SCHOOL DISTRICT NO. 5
ADDRESS:	885 SISKIYOU BLVD ASHLAND OR, 97520

NARRATIVE

THIS PROJECT INCLUDES THE RENOVATION OF AND ADDITIONS TO THE MAIN CLASSROOM BUILDINGS, INCLUDING A NEW RESTROOM CORE, A NEW HEALTH ROOM, RENOVATED RESTROOMS, AND MISC. SITE IMPROVEMENTS.

ZONING INFORMATION

ZONING: EFU
SETBACKS:
FRONT: 30'
SIDE: 30'
REAR: 30'
MAX BUILDING HEIGHT: 35'

PLANNING SUMMARY

LOT AREA COVERAGE	AREA	% OF LOT
TOTAL LOT AREA	873670 SF	100.0%
EXISTING STRUCTURES (TO REMAIN)	11496 SF	1.3%
PROPOSED STRUCTURES	372 SF	<0.1%
TOTAL LOT COVERAGE	12020 SF	1.4%
TOTAL LANDSCAPE AREA	812470 SF	93.0%
TOTAL IMPERVIOUS SURFACING	61200 SF	7.0%

BUILDING AREA SUMMARY

EXISTING STRUCTURES	12161 SF
NEW ADDITIONS	372 SF
TOTAL SQUARE FEET	12533 SF

PARKING CALCULATIONS

EXISTING NUMBER OF SPACES

STANDARD	71
ACCESSIBLE	3 (1 VAN)

NO CHANGE TO NUMBER OF STUDENTS OR FACULTY

ARCHITECTURAL SITE PLAN SHEET NOTES:

1. SEE MECHANICAL, ELECTRICAL, PLUMBING DRAWINGS FOR ADDITIONAL PROJECT SCOPE.
2. LOCATION AND ELEVATION OF ALL UTILITY CONNECTIONS TO BE DESIGN/ BUILD. COORDINATE WITH PERTINENT SUBCONTRACTOR.
3. SEE LANDSCAPE DRAWINGS FOR ALL FINISHED GRADES, SITE DRAINAGE, STORM WATER PROCESSING, SITE IMPROVEMENTS, HARDSCAPE, SITE PLANTINGS, IRRIGATION, AND SITE LIGHTING.
4. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS.
5. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE OWNER PRIOR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE APPROPRIATE CITY AND STATE REGULATIONS.
6. ALL PAVING, CONCRETE CURB, GUTTER AND SIDEWALK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY. SEE ARCHITECTURAL AND LANDSCAPE DRAWINGS FOR ADDITIONAL HARDSCAPE APPLICATIONS.
7. CLEARED MATERIALS SHALL BE REMOVED FROM PROJECT SITE.
8. PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
9. THE INTENT OF THE PROPOSED CONSTRUCTION IS TO PRESERVE AS MUCH OF THE EXISTING PAVEMENT, CURB, GUTTER AND SIDEWALK AS POSSIBLE. PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION.

ARCHITECTURAL SITE PLAN

1

N

0 100' 400'

SCALE: 1"=200' ON 24 X 36 1"=400' ON 11 X 17

ENLARGED SITE PLAN

2

N

0 10' 40'

SCALE: 1"=20' ON 24 X 36 1"=40' ON 11 X 17

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REGISTERED ARCHITECT
CHRISTOPHER PLUMMER BROWN
6028
ASHLAND, OREGON
STATE OF OREGON

Revision		Date
1	BID ADDENDUM 2	03/12/21

Date	03/11/21
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Scale	AS NOTED

100% DD

Drawing Title
ARCHITECTURAL SITE PLAN

Drawing No.
A1.00

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ELECTRICAL SYMBOLS

- DUPLEX CONVENIENCE RECEPTACLE
- GFCI PROTECTED DUPLEX CONVENIENCE RECEPTACLE MOUNTED @ 42" AFF
- 240/208V
- 4-PLEX RECEPTACLE
- 240/208V CONVENIENCE RECEPTACLE
- JUNCTION BOX
- FAN
- F — DISCONNECTING MEANS. AS A MINIMUM, PROVIDE/INSTALL TYPE, RATINGS, AND FUSING AS SHOWN ON THE DRAWINGS AND IN THE SPECIFICATIONS. COORDINATE FINAL REQUIREMENTS WITH THE MANUFACTURER OF THE EQUIPMENT TO BE INSTALLED. PROVIDE ENCLOSURES RATED FOR THE ENVIRONMENT IN WHICH THEY ARE INSTALLED.
  - -F INDICATES FUSED DISCONNECT
  - -B INDICATES CIRCUIT BREAKER
  - -S INDICATES MOTOR-RATED TOGGLE SWITCH
- GROUND ROD
- GROUND

- A / 35 — SECTION OR DETAIL DESIGNATION (LETTER DESIGNATES SECTION, NUMBER DESIGNATES DETAIL); SHEET WHERE SECTION OR DETAIL IS TAKEN OR SHOWN
- OH — OVERHEAD UTILITY SERVICE
- CONDUIT EMBEDDED OR BURIED
- CONDUIT EXPOSED
- BOUNDARY LINE
- A-1 — HOMERUN - DESTINATION & CIRCUIT INDICATED
  - -LEADER SHOWS CONDUIT & CONDUCTOR SIZE
  - -2 REPRESENTS THE NUMBER OF PARALLEL FEEDERS
  - 1 1/4"C-3#2+#6G
  - 2[3"C-3#350KCMIL]
- CONDUIT, STUBBED & CAPPED
- CONDUIT, STUBBED UP & CAPPED
- CONDUIT, UP
- CONDUIT, DOWN
- WH — WATT-HOUR METER
- CURRENT TRANSFORMER
- 50/2 — CIRCUIT BREAKER & SIZE, SINGLE-POLE UNLESS NOTED OTHERWISE
  - /2 = 2 POLE
  - /3 = 3 POLE
- TRANSFORMER

SCOPE OF WORK

THIS SET OF DRAWINGS COVERS CONCEPTUAL DESIGN OF POWER DISTRIBUTION FOR HVAC UPGRADES OF AN EXISTING 7,500 SQUARE FOOT SCHOOL BUILDING LOCATED AT 1497 E. MAIN ST. IN ASHLAND, OR. THE PROJECT ALSO REQUIRES THE FOLLOWING RELATED WORK AND SYSTEMS, WHICH ARE NOT SHOWN ON THESE DRAWINGS:

- DEMOLITION OF OVERHEAD SERVICE LATERALS.
- NEW THREE PHASE UTILITY SERVICE.
- ELECTRIC SERVICE LATERALS TO SERVICE ENTRANCES SHOWN ON THESE DRAWINGS.
- POWER DISTRIBUTION TO HVAC EQUIPMENT.
- RE-FEED EXISTING PANEL DISCONNECTS.
- REPLACE LIGHT FIXTURES IN KIND WITH LED-EQUIVALENT FIXTURES WHICH COMPLY WITH ENERGY TRUST OF OREGON REBATE INCENTIVE CRITERIA.
- THESE DRAWINGS ARE CONCEPTUAL IN NATURE, AND ARE NOT SUITABLE FOR PERMITTING AND CONSTRUCTION. DETAILED DESIGN BY THE CONTRACTOR'S ORGANIZATION IS REQUIRED, WHICH BUILD ON THE CONCEPTS HEREIN.

ABBREVIATIONS

A	AMP(S)	GFCI	GROUND FAULT CIRCUIT INTERRUPTER (PERSONNEL)	NTS	NOT TO SCALE
AFCI	ARC FAULT CIRCUIT INTERRUPTER	GFP	GROUND FAULT PROTECTION (EQUIPMENT)	OL	OVERLOAD
AFF	ABOVE FINISHED FLOOR	GFR	GROUND FAULT RELAY	PB	PULLBOX
AFG	ABOVE FINISHED GRADE	GRS	GALVANIZED RIGID STEEL CONDUIT	PC	PHOTOCELL
AIC	AMPS INTERRUPTING CAPACITY	HP	HORSEPOWER	PNL	PANEL, PANELBOARD
AL	ALUMINUM	HZ	HERTZ	PVC	POLYVINYL CHLORIDE CONDUIT
ATS	AUTOMATIC TRANSFER SWITCH	IMC	INTERMEDIATE METAL CONDUIT	RECEPT	RECEPTACLE
AWG	AMERICAN WIRE GAUGE	KCMIL	THOUSAND CIRCULAR MILS	SF	SQUARE FOOTAGE
C	CONDUIT	KW	KILOWATT	SP	SPARE
CATV	CABLE TELEVISION	MAX	MAXIMUM	SS	304 STAINLESS STEEL
CEC	CALIFORNIA ELECTRICAL CODE	MIN	MINIMUM	SWGR	SWITCHGEAR
CFL	COMPACT FLUORESCENT	MLO	MAIN LUG ONLY	TSP	TWISTED SHIELDED PAIR
CU	COPPER	MPOE	MAIN POINT OF ENTRY	TST	TWISTED SHIELDED TRIAD
DC	DIRECT CURRENT	N	NEUTRAL	TYP	TYPICAL
EA	EACH	N/A	NOT APPLICABLE	V	VOLT(S)
EMT	ELECTRICAL METALLIC TUBING	NL	NIGHT LIGHT	VA	VOLT AMPS
EXST,(E)	EXISTING	NEC	NATIONAL ELECTRICAL CODE	W	WIRE
G	GROUND			WP	WEATHERPROOF
				XFMR	TRANSFORMER

GENERAL NOTES

1. DESIGN/BUILD:
   - A. THESE DRAWINGS ARE FOR THE DIVISION 26 CONTRACTOR TO ENGINEER, DESIGN, BID AND INSTALL ELECTRICAL SYSTEMS PER THE DESIGN INTENT SHOWN.
   - B. THIS PACKAGE IS NOT INTENDED TO BE USED FOR PERMITTING AND CONSTRUCTION. THE CONTRACTOR'S ORGANIZATION SHALL TAKE THE CONCEPTS HEREIN, AND DEVELOP DETAILED STAMPED, SIGNED ENGINEERED DRAWINGS SUITABLE FOR PERMITTING AND CONSTRUCTION.
   - C. ALL EQUIPMENT, CONDUIT AND CONDUCTOR SIZES, AND COMPONENTS SHOWN IN THESE DRAWINGS SHALL BE ADHERED TO, UNLESS THE ENGINEERING RESULTS IN LARGER SIZES, IN WHICH CASE, SIZES SHALL BE INCREASED.
   - D. THE CONTRACTOR SHALL DESIGN AND INSTALL FULLY OPERATIONAL SYSTEMS.
   - E. DESIGN AND AS-BUILT DRAWINGS SHOWING ALL EQUIPMENT, COMPONENTS, AND CONDUIT ROUTING SHALL BE PREPARED TO THE SAME SCALE AS THESE DRAWINGS. AS-BUILT DRAWINGS SHALL BE DRAWN IN AUTOCAD. ELECTRONIC COPIES SHALL BE PROVIDED TO THE OWNER AND ARCHITECT/ENGINEER.
2. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED ELECTRICAL CODE, BUILDING CODE AND ALL OTHER APPLICABLE CITY, COUNTY, AND STATE CODES AND REGULATIONS IN EFFECT AT THE DATE OF THE BID. CONFORM TO ANY CODES, RULES, REGULATIONS AND REQUIREMENTS THAT THE PROJECT OWNER HAS.
3. OBTAIN ALL PERMITS AND INSPECTIONS/APPROVALS ON ELECTRICAL WORK FROM REGULATING AGENCIES WHERE REQUIRED.
4. PRIOR TO PROCUREMENT AND INSTALLATION THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL ELECTRICAL CONDUIT AND EQUIPMENT WITH MECHANICAL PIPING, EQUIPMENT, DUCTWORK, AND ALL OTHER TRADES INCLUDING BUT NOT LIMITED THE MECHANICAL CONTRACTOR, PLUMBING CONTRACTOR, FIRE PROTECTION CONTRACTOR, GENERAL CONTRACTOR, AND ANY CONTRACTOR HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.
5. THE DRAWINGS SCHEMATICALLY SHOW THE GENERAL DESIGN ARRANGEMENT AND THE EXTENT OF THE SYSTEM. CONTRACTOR TO FIELD VERIFY AND MAKE ALTERATIONS AS NECESSARY TO MAKE THE SYSTEM COMPLETE AND OPERATION IN ACCORDANCE WITH THE DESIGN INTENT.
6. COORDINATE DISPOSAL OF ALL ELECTRICAL ITEMS REMOVED DURING DEMOLITION WITH THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT WILL CAUSE A MINIMUM DISRUPTION TO BUILDING TENANT USE AND SHALL COORDINATE THE WORK WITH THE BUILDING OWNER'S REPRESENTATIVE.
8. ANY SHUTDOWNS REQUIRED TO DE-ENERGIZE EQUIPMENT ARE TO BE COORDINATED WITH THE OWNER.
9. UPON COMPLETION OF WORK, REMOVE ALL SURPLUS MATERIALS AND RUBBISH. MAKE ALL REQUIRED PATCHING AND REPAIRS OF OTHER TRADES' WORK DAMAGED BY THIS CONTRACTOR, AND LEAVE THE PREMISES IN A CLEAN, ORDERLY CONDITION.
10. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDITIONS AND COORDINATE WITH THE ARCHITECT AND GENERAL CONTRACTOR AS REQUIRED TO ENSURE THAT THERE IS ADEQUATE SPACE FOR INSTALLATION AND SERVICE.
11. UNLESS NOTED OTHERWISE, MOUNT RECEPTACLES AT 18 INCHES AND SWITCHES AT 42 INCHES ABOVE THE FLOOR. COORDINATE ALL RECEPTACLE LOCATIONS WITH ASSOCIATED CABINETRY AND WORK PLANE HEIGHTS. RECEPTACLES SHALL BE SPECIFICATION GRADE.
12. RECEPTACLES AND JUNCTION BOXES FOR DEDICATED USES ARE SHOWN IN APPROXIMATE LOCATIONS. COORDINATE WITH EQUIPMENT SUPPLIERS AND ARCHITECT FOR EXACT LOCATIONS.
13. WIRING FOR ELECTRICAL DEVICES IS NOT SHOWN ON THESE PLANS. INSTEAD, ELECTRICAL DEVICES IN EACH ROOM ARE TAGGED WITH THE SOURCE PANELBOARD AND CIRCUIT NUMBER THAT FEEDS THE DEVICE IN THAT ROOM. DEVICES WITH THE SAME CIRCUIT SHALL BE DAISY-CHAINED.
14. VERIFY ALL WORK CONDITIONS PRIOR TO COMMENCING WORK, INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, EQUIPMENT, STRUCTURAL ELEMENTS & MATERIALS INDICATED AS EXISTING. COORDINATE AMONG DISCIPLINES AND EQUIPMENT SUPPLIERS FOR INSTALLATION OF ALL MATERIALS & EQUIPMENT, ETC.
15. THIS IS A STANDARD LEGEND SHEET. THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.
16. ITEMS SHOWN BOLD ON THESE DRAWINGS REPRESENT WORK THAT IS PART OF THIS CONTRACT. BOLD TEXT ASSOCIATED WITH EQUIPMENT SHOWN AS THIN DESCRIBES WORK TO BE PERFORMED ON THE EQUIPMENT AS PART OF THE CONTRACT.

DRAWING LIST

E1.00	LEGEND & GENERAL NOTES
E2.00	ONE-LINE DIAGRAM
E2.01	PANEL SCHEDULES
E3.00	SITE PLAN - DEMO/IMPROVEMENT
E4.00	POWER PLAN - DEMO/IMPROVEMENT
E5.00	DETAILS

NOT FOR CONSTRUCTION
REFERENCE GENERAL NOTE 1 ON E1.00

WILLOW WIND RENOVATIONS

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1236 Disk Drive | Medford, OR 97501 | (541)842-4188
www.arc-sine.com

REGISTERED PROFESSIONAL ENGINEER
17,004
D. McHaney
OREGON
JAN. 18, 1994
DOUGLAS C. McHANEY
EXPIRATION DATE: 12/31/22

Revision	Date

Date	02/01/2021
Job	2025
Drawn By	MAH
Checked By	
Scale	NTS

100%DD

Drawing Title
LEGEND & GENERAL NOTES
ELECTRICAL

Drawing No.
E1.00

1 ONE-LINE DIAGRAM - DEMOLITION

NTS

2 ONE-LINE DIAGRAM - IMPROVEMENT

NTS

SE-1 LOAD SUMMARY

GIVEN:					
Supply Voltage	208 /120V, 3 Phase, 4 Wire				
BUILDING AREA	7,500 SF				
Existing Loads					
1-YEAR MAXIMUM DEMAND (NEC 220.87)					36,250 VA
25% OF 1-YEAR MAXIMUM DEMAND (NEC 220.87)					9,063 VA
				Subtotal Existing Loads	45,313 VA
New Loads	Amps	Volts	Phase		
PANEL M1	SEE PANEL SCHEDULE				61,626 VA
ENERGY RECOVERY UNIT ERV-2	3.1	208	1		645 VA
ROOFTOP HEAT PUMP RT-2	121.0	208	3		43,592 VA
				Subtotal New Loads	105,845 VA
TOTAL DEMAND LOAD					151,158 VA
REQUIRED AMPACITY					420 A
EQUIPMENT BUS					600 A
FEEDER AMPACITY					600 A

LOAD SUMMARY NOTE:

THE DESIGN-BUILD CONTRACTOR SHALL DEVELOP DETAILED LOAD CALCULATIONS, PREPARED BY AN OREGON PROFESSIONAL REGISTERED ELECTRICAL ENGINEER. PACIFIC POWER, THE SERVING UTILITY, DUE TO HEAVY WORKLOAD FROM FIRES IN THE AREA, DID NOT PROVIDE PEAK HISTORIC LOAD INFORMATION. THIS CONCEPTUAL DESIGN IS BASED ON ASSUMPTIONS REGARDING EXISTING PEAK LOADS AND THESE ASSUMPTIONS ARE UNVERIFIED. THE DESIGN-BUILD ELECTRICAL ENGINEER SHALL PROCEED WITH CALCULATIONS BASED ON VERIFIED PEAK LOADS, CONNECTED LOADS, OR OTHER MEANS WHICH MEET THE STANDARD OF CARE FOR ENGINEERED ELECTRICAL LOAD CALCULATIONS.

SHEET NOTES

A. SEE LEGEND AND GENERAL NOTES ON SHEET E1.0.

KEY NOTES

1. METAL GAS PIPING SHALL BE BONDED TO THE GROUNDING ELECTRODE SYSTEM BUT IS NOT PART OF THE GROUNDING ELECTRODE SYSTEM, PER NEC 250.52 (B) AND 250.104(B).
2. SECOND SUPPLEMENTARY GROUND IS NOT REQUIRED IF A SINGLE GROUND ROD HAS A RESISTANCE OF 25 OHMS OR LESS. NEC 250.53(A)(3) EXCEPTION.
3. PROVIDE/INSTALL NOTED CT CABINET AND REMOTE METER PER PACIFIC POWER ESR MANUAL (2016) CHAPTER 9. OBTAIN WRITTEN APPROVAL OF EQUIPMENT AND LAYOUT FROM PACIFIC POWER PRIOR TO ORDERING OR INSTALLING EQUIPMENT.
4. PROVIDE HACR RATED BREAKER.
5. COORDINATE BREAKER REQUIREMENTS WITH MANUFACTURER OF NOTED EQUIPMENT PRIOR TO ORDERING POWER DISTRIBUTION EQUIPMENT.
6. COORDINATE WITH UTILITY TO DETERMINE IF A PAD-MOUNTED TRANSFORMER IS REQUIRED. SOME SCENARIOS ALLOW POLE-MOUNTED TRANSFORMERS BE INSTALLED TO PROVIDE 600-AMP SERVICE; HOWEVER, THIS INFORMATION WAS UNAVAILABLE AT THE TIME OF DESIGN.

3 GROUNDING ELECTRODE WIRING DIAGRAM

NTS

NOTES:

1. GROUND ROD MAY BE INSTALLED IN THE EQUIPMENT PAD UNDER THE SERVICE ENTRANCE SECTION OF THE ENCLOSURE (ROD SHALL EXTEND 3" ABOVE THE PAD, MINIMUM). IF SO INSTALLED, TILE, COVER & ANNULAR PAD MAY BE ELIMINATED.

4 GROUND ROD

NTS

NOT FOR CONSTRUCTION
REFERENCE GENERAL NOTE 1 ON E1.00

WILLOW WIND RENOVATIONS

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JAN. 18, 1994
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Revision		Date
1	BID ADDENDUM #2	03/12/21

Date	02/01/2021
Job	2025
Drawn By	MAH
Checked By	
Scale	NTS

100%DD

Drawing Title

ONE-LINE DIAGRAM
ELECTRICAL

Drawing No.

E2.00

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PANEL M1

STATUS:	NEW	LINE-TO-NEUTRAL VOLTAGE:	120 V	MCB	200 A	JOB NAME:	WILLOW WIND
BUS RATING (A):	200	LINE-TO-LINE VOLTAGE:	208 V	FAULT RATING:	22 kAIC	ARCSINE NUMBER:	2025
MOUNTING:	SURFACE	ENCLOSURE RATING:	NEMA 3R	LOCATION:	BLDG. EXTERIOR	DATE:	3/11/2021

	Description	Category	Line Amps	Ph-A kVA	Ph-B kVA	Ph-C kVA	Bkr. Size	Ckt. No.	Phase A B C	Ckt. No.	Bkr. Size	Ph-A kVA	Ph-B kVA	Ph-C kVA	Line Amps	Category	Description	
NOTES 1 & 2	ROOFTOP HEAT PUMP RT-1	7	68.0	8.2			70	1		2	15	0.3			2.1	7	ENERGY RECOVERY UNIT ERV-1	NOTES 1 & 2
	↓	7	68.0		8.2			3		4			0.3		2.1	7	↓	
	↓	7	68.0			8.2		5		6	20			0.6	5.0	3	EXHAUST FAN EF-1	
NOTES 1 & 2	HEAT PUMP HP-1	7	36.0	4.3			50	7		8	20	0.6			5.0	3	EXHAUST FAN EF-2	
	↓	7	36.0		4.3			9		10	15		0.4		3.5	7	ENERGY RECOVERY UNIT ERV-3	NOTES 1 & 2
NOTES 1 & 2	HEAT PUMP HP-2	7	28.0			3.4	40	11		12				0.4	3.5	7	↓	
	↓	7	28.0	3.4				13		14	15	0.7			5.6	7	FAN COIL FC-1	NOTES 1 & 2
NOTES 1 & 2	HEAT PUMP HP-3	7	28.0		3.4		40	15		16			0.7		5.6	7	↓	
	↓	7	28.0			3.4		17		18	20			0.9	7.5	2	SERVICE RECEPTS.	
NOTES 1 & 2	HEAT PUMP HP-4	7	46.5	5.6			50	19		20	20						SPARE	
	↓	7	46.5		5.6			21		22	20						SPARE	
	SPARE						20	23		24	20						SPARE	
	SPARE						20	25		26	20						SPARE	
	SPACE							27		28							SPACE	
								29		30								
								31		32								
								33		34								
								35		36								
								37		38								
								39		40								
								41		42								
	Subtotal kVA			21.4	21.4	14.9				Subtotal kVA		1.5	1.3	1.9				
	Subtotal Amps			178.5	178.5	124.0				Subtotal Amps		12.7	11.2	16.0				

Load Summary

	Connected Load			Demand Load		
Category	Description	Load		Description	Factor	Load	
1	Lighting	0	kVA	Lighting	1.25	0	kVA
2	Receptacles < 10 kVA	0.9	kVA	Receptacles < 10 kVA	1.0	0.9	kVA
2	Receptacles > 10 kVA	0	kVA	Receptacles > 10 kVA	0.5	0	kVA
3	Miscellaneous non-continuous	1.2	kVA	Misc. non-continuous	1.0	1.2	kVA
4	Miscellaneous continuous	0	kVA	Misc. continuous	1.25	0	kVA
5	Largest motor	0	kVA	Largest Motor	1.25	0	kVA
6	Sub panel feeder	0	kVA	Sub Panel Feeder	1.0	0	kVA
7	HVAC Equipment	60.41	kVA	HVAC Equipment	1.0	60.41	kVA
	Total connected kVA	62.51	kVA	Total demand kVA		62.51	kVA
	Average connected Amps	173.5	A	Average demand Amps		173.5	A
	Total Demand without lights or receptacles					61.61	kVA
	Total Demand without lights, receptacles, or sub-panels					61.61	kVA

Notes:
1. PROVIDE HACR RATED BREAKER.
2. COORDINATE BREAKER REQUIREMENTS WITH MANUFACTURER OF NOTED EQUIPMENT PRIOR TO ORDERING POWER DISTRIBUTION EQUIPMENT.

SHEET NOTES

A. SEE LEGEND AND GENERAL NOTES ON SHEET E1.0.

B. SEE NOTES ON INDIVIDUAL PANEL SCHEDULES.

C. EXCEPT WHERE OTHERWISE NOTED, CONDUCTORS SHALL BE STRANDED WITH THWN INSULATION AND SHALL BE INSTALLED IN CONDUIT EXCEPT SOLID CONDUCTORS MAY BE USED FOR 15, 20, 25, AND 30 AMP BRANCH CIRCUITS. USE COPPER EXCEPT WHERE ALUMINUM (AL) IS INDICATED. FOR COPPER BRANCH WIRING USE THE FOLLOWING WIRE SIZES EXCEPT WHERE OTHERWISE INDICATED:

CIRCUIT PROTECTION (AMPS)	15	20	25	30	35	40	45	50	60	70
COPPER WIRE SIZE (AWG)	12	12	10	10	8	8	6	6	4	4
GROUNDING WIRE SIZE (AWG)	12	12	10	10	10	10	10	10	10	8
CONDUIT SIZE (EMT)	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	1"	1"	1 1/4"	1 1/4"

CIRCUIT PROTECTION (AMPS)	80	90	100	110	125	150	175	200	225	250
COPPER WIRE SIZE (AWG)	3	2	1	1	1/0	1/0	2/0	3/0	4/0	250
GROUNDING WIRE SIZE (AWG)	8	8	8	6	6	6	6	6	4	4
CONDUIT SIZE (EMT)	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2 1/2"	2 1/2"

DO NOT SHARE NEUTRALS IN BRANCH CIRCUIT WIRING.

KEY NOTES

NOT FOR CONSTRUCTION
REFERENCE GENERAL NOTE 1 ON E1.00

WILLOW WIND RENOVATIONS

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www.arc-sine.com

REGISTERED PROFESSIONAL ENGINEER
17.004
OREGON
JAN. 18, 1994
DOUGLAS C. McHANEY
EXPIRATION DATE: 12/31/22

Revision		Date
1	BID ADDENDUM #2	03/12/21

Date	02/01/2021
Job	2025
Drawn By	MAH
Checked By	
Scale	NTS

100%DD

Drawing Title
PANEL SCHEDULES
ELECTRICAL

Drawing No.
E2.01

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SHEET NOTES

A. SEE LEGEND AND GENERAL NOTES ON SHEET E1.0.

KEY NOTES

1. EXISTING NON-POWER UTILITIES (PHONE, CATV, INTERNET, ETC.) ROUTED OVERHEAD WITH NOTED SERVICE LATERAL SHALL REMAIN.

UTILITY COORDINATION AND DEMOLITION/CONNECTION REQUIREMENTS

UTILITY	UTILITY SPECIFIC COORDINATION AND DEMOLITION/CONNECTION REQUIREMENTS	COORDINATION REQUIREMENTS
PACIFIC POWER	PACIFIC POWER RESPONSIBILITIES: -DEMOLISH EXISTING SINGLE-PHASE OVERHEAD UTILITY SERVICE FROM PACIFICORP POLE #104602 TO POLE #104801. -DEMOLISH EXISTING SINGLE-PHASE OVERHEAD SERVICE LATERAL. -REMOVE EXISTING METER. -FURNISH/INSTALL NEW THREE-PHASE OVERHEAD UTILITY SERVICE FROM PACIFICORP POLE #104602 TO POLE #104801. -FURNISH/INSTALL NEW THREE-PHASE UNDERGROUND SERVICE LATERAL. -FURNISH/INSTALL NEW METER. -FURNISH/INSTALL NEW TRANSFORMER. CONTRACTOR RESPONSIBILITIES: -ELECTRICAL • DESIGN -DEMOLISH SERVICE CONDUITS/BOXES. -DEMOLISH METER BASE. -DEMOLISH EXISTING SERVICE ENTRANCE. -FURNISH/INSTALL NEW SERVICE CONDUITS/BOXES. -FURNISH/INSTALL NEW METER BASE. -FURNISH/INSTALL NEW SERVICE ENTRANCE. -FURNISH/INSTALL NEW TRANSFORMER VAULT.	IN ADDITION TO REQUIREMENTS SHOWN ON THESE DRAWINGS FOR ELECTRIC UTILITY SERVICES, ALSO PERFORM THE FOLLOWING COORDINATION DURING CONSTRUCTION FOR THESE UTILITIES: -CONTACT UTILITY. -CONFIRM LOCATIONS OF SERVICES. -CONFIRM SCOPE OF "OWNER" - PROVIDED ASPECTS (WHICH ARE TO BE CONTRACTOR PROVIDED). -COMPLETE ALL REQUIRED FORMS ON THE OWNER'S BEHALF. -COORDINATE FEES AND OBTAIN OWNER FUNDING (PAYING THE FEES IS NOT IN THE CONTRACTOR'S SCOPE). -COORDINATE WITH UTILITIES FOR FINAL INSPECTION AND APPROVAL OF CONDUIT AND EQUIPMENT INSTALLATIONS. VERIFY LOCATIONS OF EXISTING UTILITIES FOR FINAL CONDUIT TERMINATION. -COORDINATE DEMOLITION ACTIVITIES WITH THE UTILITIES.

1 OVERALL SITE PLAN - DEMOLITION & IMPROVEMENT
SCALE: 1"=100'-0"

2 ENLARGED SITE PLAN - DEMOLITION & IMPROVEMENT
SCALE: 1"=20'-0"

NOT FOR CONSTRUCTION
REFERENCE GENERAL NOTE 1 ON E1.00

1 INCH

BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

WILLOW WIND RENOVATIONS

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2236 Diak Drive | Medford, OR 97501 | (541)642-4188
www.arc-sine.com

REGISTERED PROFESSIONAL ENGINEER
17,004
D. McHaney
OREGON
JAN. 18, 1994
DOUGLAS C. McHANEY
EXPIRATION DATE: 12/31/22

Revision		Date
1	BID ADDENDUM #2	03/12/21

Date	02/01/2021
Job	2025
Drawn By	MAH
Checked By	
Scale	NTS

100%DD

Drawing Title
SITE PLAN - DEMO/IMPROVEMENT
ELECTRICAL

Drawing No.
E3.00

1 FIRST FLOOR POWER PLAN - DEMO/IMPROVEMENT

SCALE: 1/8'=1'-0"

3 ENLARGED ELECTRICAL CLOSET POWER PLAN-DEMO/IMPROVEMENT

SCALE: 3/16'=1'-0"

KEY EQUIPMENT 1

1	ERV-1
2	ERV-2
3	ERV-3
4	HP-1
5	HP-2
6	HP-3
7	HP-4
8	RT-1
9	RT-2
10	EF-1
11	EF-2
12	FC-1
13	FC-2
14	FC-3
15	FC-41
16	FC-42
17	FC-43

SHEET NOTES

A. SEE LEGEND & GENERAL NOTES ON SHEET E1.0.

B. SEE MECHANICAL DRAWINGS FOR HVAC THERMOSTAT CONTROL WIRING.

C. ALL POWER WIRES SHALL BE #12 UNLESS OTHERWISE NOTED. SEE TABLE ON SHEET E2.0.

D. FOR HVAC ITEMS, FEED THE LOADS FROM CIRCUITS INDICATED. CONDUCTOR SIZES SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER, BUT IN NO CASE SHALL CONDUCTORS BE SMALLER THAN WHAT IS CALLED FOR ON THE PANEL SCHEDULES.

KEY NOTES

1. NOTED KEY EQUIPMENT POWER LOCATIONS ARE APPROXIMATE. DURING CONSTRUCTION, COORDINATE WITH THE EQUIPMENT SUPPLIER, OWNER, AND ARCHITECT FOR FINAL LOCATIONS AND MOUNTING HEIGHTS OF ALL LISTED EQUIPMENT.

2. DEMOLITION OF EXISTING UTILITIES, SEE SHEET E2.00, E3.00, AND E5.00 FOR ADDITIONAL REQUIREMENTS.

3. NEW UTILITY EQUIPMENT, SEE SHEET E2.00, E3.00, AND E5.00 FOR ADDITIONAL REQUIREMENTS.

2 SECOND FLOOR POWER PLAN - DEMO/IMPROVEMENT

SCALE: 1/8'=1'-0"

NOT FOR CONSTRUCTION
REFERENCE GENERAL NOTE 1 ON E1.00

1 INCH

BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

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1236 Disk Drive | Medford, OR 97501 | (541)842-4188
www.arc-sine.com

REGISTERED PROFESSIONAL ENGINEER 17,004 OREGON JAN. 18, 1994 DOUGLAS C. McHANEY

EXPIRATION DATE: 12/31/22

Revision		Date
1	BID ADDENDUM #2	03/12/21

Date	02/01/2021
Job	2025
Drawn By	MAH
Checked By	
Scale	AS NOTED

100%DD

Drawing Title

POWER PLAN - DEMO/IMPROVEMENT
ELECTRICAL

Drawing No.

E4.00

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1 ELECTRICAL SERVICE ELEVATION-DEMOLITION
NTS

2 ELECTRICAL CLOSET ELEVATION-DEMOLITION
NTS

3 SE-1 ELEVATION - IMPROVEMENT
NTS

NOTES:

1. COORDINATE WITH UTILITY FOR SERVICE LATERAL CONDUIT SIZES/QUANTITIES.

NOT FOR CONSTRUCTION
REFERENCE GENERAL NOTE 1 ON E1.00

WILLOW WIND RENOVATIONS

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REGISTERED PROFESSIONAL ENGINEER
17.004
D. McHaney
OREGON
JAN. 18, 1994
DOUGLAS C. McHANEY
EXPIRATION DATE: 12/31/22

Revision		Date
1	BID ADDENDUM #2	03/12/21

Date	02/01/2021
Job	2025
Drawn By	MAH
Checked By	
Scale	NTS

100%DD

Drawing Title
DETAILS
ELECTRICAL

Drawing No.
E5.00

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SUBSTITUTION REQUEST: DATE SUBMITTED 3-5-21

1.01 SUBMIT TO: Chris Brown at arkitek@arkitek.us

1.02 PROJECT: Willow Wind Renovation

1.03 SPECIFIED ITEM:

A. SECTION NAME AND NUMBER: Mechanical Drawings - M0.02

B. PRODUCT TYPE AND NAME AND MODEL: Rooftop Unit - Lennox KHB060S4B

C. PARAGRAPH AND PRODUCT DESCRIPTION: RT1 - Plan spec unit for remodel

1.04 PROPOSED SUBSTITUTION:

A. MANUFACTURER AND MODEL NUMBER(S): Trane- WSC060H3R

B. PRODUCT DESCRIPTION: Like unit to plan spec

C. Attached data includes product description, specifications, drawings, photographs, performance, test data and **point by point comparative matrix** adequate for evaluation of request including identification of applicable data portions. Attached data also includes description of changes to Contract Documents the proposed substitution requires for proper installation.

D. It is the responsibility of the requestee to assemble a comparative matrix outlining key elements of proposed substitution.

1.05 UNDERSIGNED CERTIFIES FOLLOWING ITEMS, UNLESS MODIFIED BY ATTACHMENTS, ARE CORRECT:

A. Proposed substitution does not affect dimensions shown on the drawings.

B. Undersigned pays for changes to building design, including engineering design, detailing, and construction costs caused by proposed substitution.

C. Proposed substitution has no adverse effect on other trades, construction schedule, or specified warranty requirements.

D. Maintenance and service parts are available locally or readily obtainable for proposed substitution.

1.06 UNDERSIGNED FURTHER CERTIFIES FUNCTION, APPEARANCE, AND QUALITY OF PROPOSED SUBSTITUTION ARE EQUIVALENT OR SUPERIOR TO SPECIFIED ITEM.

1.07 UNDERSIGNED FURTHER CERTIFIES THAT THE MANUFACTURER OF THE PROPOSED SUBSTITUTION IS AWARE OF THIS SUBSTITUTION REQUEST AND AGREES TO THE STATEMENTS NOTED ABOVE.

1.08 UNDERSIGNED AGREES THAT THE TERMS AND CONDITIONS FOR SUBSTITUTIONS FOUND IN BIDDING DOCUMENTS APPLY TO THIS PROPOSED SUBSTITUTION.

1.09 SUBMITTED BY:

A. PRINT NAME: Tyler Hall

SIGNATURE: _____

B. FIRM NAME: The Heat-n-Air Man

C. FULL MAILING ADDRESS: 1081 Joe Wright Rd

City: Klamath Falls State: OR Zip: 97603

D. PHONE: 541-880-8388 E-MAIL: Tyler@theheatnairman.com

1.10 FOR USE BY ARCHITECT OR ENGINEER

A. APPROVED OR APPROVED AS NOTED BY: _____

B. NOT APPROVED BY: _____

C. RECEIVED TOO LATE: _____

D. REMARKS: _____

E. DATE OF RESPONSE: _____

END OF SECTION

SUBSTITUTION REQUEST: DATE SUBMITTED 3-5-21

1.01 SUBMIT TO: Chris Brown at arkitek@arkitek.us

1.02 PROJECT: Willow Wind Renovation

1.03 SPECIFIED ITEM:

A. SECTION NAME AND NUMBER: Mechanical Drawings - M0.02

B. PRODUCT TYPE AND NAME AND MODEL: Rooftop Unit - Lennox KHB092H4B

C. PARAGRAPH AND PRODUCT DESCRIPTION: RT2 - Plan spec unit for remodel

1.04 PROPOSED SUBSTITUTION:

A. MANUFACTURER AND MODEL NUMBER(S): Trane- WSC092H3R

B. PRODUCT DESCRIPTION: Like unit to plan spec

C. Attached data includes product description, specifications, drawings, photographs, performance, test data and **point by point comparative matrix** adequate for evaluation of request including identification of applicable data portions. Attached data also includes description of changes to Contract Documents the proposed substitution requires for proper installation.

D. It is the responsibility of the requestee to assemble a comparative matrix outlining key elements of proposed substitution.

1.05 UNDERSIGNED CERTIFIES FOLLOWING ITEMS, UNLESS MODIFIED BY ATTACHMENTS, ARE CORRECT:

A. Proposed substitution does not affect dimensions shown on the drawings.

B. Undersigned pays for changes to building design, including engineering design, detailing, and construction costs caused by proposed substitution.

C. Proposed substitution has no adverse effect on other trades, construction schedule, or specified warranty requirements.

D. Maintenance and service parts are available locally or readily obtainable for proposed substitution.

1.06 UNDERSIGNED FURTHER CERTIFIES FUNCTION, APPEARANCE, AND QUALITY OF PROPOSED SUBSTITUTION ARE EQUIVALENT OR SUPERIOR TO SPECIFIED ITEM.

1.07 UNDERSIGNED FURTHER CERTIFIES THAT THE MANUFACTURER OF THE PROPOSED SUBSTITUTION IS AWARE OF THIS SUBSTITUTION REQUEST AND AGREES TO THE STATEMENTS NOTED ABOVE.

1.08 UNDERSIGNED AGREES THAT THE TERMS AND CONDITIONS FOR SUBSTITUTIONS FOUND IN BIDDING DOCUMENTS APPLY TO THIS PROPOSED SUBSTITUTION.

SUBSTITUTION REQUEST: DATE SUBMITTED February 23, 2021

1.01 SUBMIT TO: Chris Brown at arkitek@arkitek.us

1.02 PROJECT: Willow Wind Renovation

1.03 SPECIFIED ITEM:

A. SECTION NAME AND NUMBER: **10 5129 PHENOLIC LOCKERS**

B. PRODUCT TYPE AND NAME AND MODEL: ASI Standard Duty Laminate-Faced Solid Phenolic Lockers.

C. PARAGRAPH AND PRODUCT DESCRIPTION: **2.03 PHENOLIC LOCKERS**

1.04 PROPOSED SUBSTITUTION:

A. MANUFACTURER AND MODEL NUMBER(S): **FOREMAN Solid Traditional Phenolic Lockers.**

B. PRODUCT DESCRIPTION:

- **Components: Solid phenolic core decorative plastic laminate with multiple resin impregnated kraft and surface sheets fused at high temperature and pressure.**
- **Units fabricated using stainless steel fasteners. Exposed edges shall be smooth and chamfered.**
- **End Cover Panels shall be constructed of 1/2 inch (13 mm) solid phenolic core with plastic laminate. Color as scheduled.**
- **Side Panels shall be constructed of 3/8 inch (9.5 mm) solid phenolic core plastic laminate.**
- **Tops, Bottoms and Shelves shall be constructed of 1/2 inch (13 mm) solid phenolic core with Wilsonart Plastic Laminate Commercial Collection Color TBD.**

C. Attached data includes product description, specifications, drawings, photographs, performance, test data and **point by point comparative matrix** adequate for evaluation of request including identification of applicable data portions. Attached data also includes description of changes to Contract Documents the proposed substitution requires for proper installation.

D. It is the responsibility of the requestee to assemble a comparative matrix outlining key elements of proposed substitution.

1.05 UNDERSIGNED CERTIFIES FOLLOWING ITEMS, UNLESS MODIFIED BY ATTACHMENTS, ARE CORRECT:

A. Proposed substitution does not affect dimensions shown on the drawings.

B. Undersigned pays for changes to building design, including engineering design, detailing, and construction costs caused by proposed substitution.

C. Proposed substitution has no adverse effect on other trades, construction schedule, or specified warranty requirements.

D. Maintenance and service parts are available locally or readily obtainable for proposed substitution.

1.06 UNDERSIGNED FURTHER CERTIFIES FUNCTION, APPEARANCE, AND QUALITY OF PROPOSED SUBSTITUTION ARE EQUIVALENT OR SUPERIOR TO SPECIFIED ITEM.

1.07 UNDERSIGNED FURTHER CERTIFIES THAT THE MANUFACTURER OF THE PROPOSED SUBSTITUTION IS AWARE OF THIS SUBSTITUTION REQUEST AND AGREES TO THE STATEMENTS NOTED ABOVE.

1.08 UNDERSIGNED AGREES THAT THE TERMS AND CONDITIONS FOR SUBSTITUTIONS FOUND IN BIDDING DOCUMENTS APPLY TO THIS PROPOSED SUBSTITUTION.

1.09 SUBMITTED BY:

A. PRINT NAME: **Charles Hebert**

SIGNATURE: _____

B. FIRM NAME: **FORMAN Locker Systems**

C. FULL MAILING ADDRESS: **41330 Date St.**

City: **Murrieta** State: **CA** Zip: **92562**

D. PHONE: **951-677-1955** E-MAIL: **lockers@foremanusa.com**

1.10 FOR USE BY ARCHITECT OR ENGINEER

A. APPROVED OR APPROVED AS NOTED BY:

B. NOT APPROVED BY: _____

C. RECEIVED TOO LATE: _____

D. REMARKS: _____

E. DATE OF RESPONSE: _____

END OF SECTION

PRIOR APPROVAL / SUBSTITUTION REQUEST FORM

Date: 2/19/2021

Company Submitting Request: Summit Lockers, Inc.
(Name and Address)
138 McLeod Road, Columbia, SC 29203

Contact Name: Taylor Finkernagel **Phone:** 803-403-8816 **Fax:** N/A

E-Mail: estimating@summitlockers.com

PROJECT NAME: Willow Wind Renovation

SPECIFIED ITEM: 10 51 20 (Section) 2 (Page) Manufacturer (Description)

The undersigned requests consideration of the following product substitution:

PROPOSED SUBSTITUTION: Summit Lockers- Phenolic Lockers

1. Attached data includes:_____Product Description _____Performance and Test Data _____ Drawings _____Specifications _____Photographs

2. No Yes / No changes will be required to the Contract Documents for the proper installation of proposed product substitution. If yes, then attach data that includes description of changes.

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

1. The proposed substitution does not affect dimensions shown on the drawings.
2. No changes to the building design, engineering design, or detailing are required by the proposed substitution.
3. The proposed substitution will have no adverse effect on other trades, the construction schedule, or **specified warranty requirements.**
4. No maintenance is required by the proposed substitution other than that required for originally specified product.
5. Other Information

The undersigned further states that they have read the corresponding specification section in the project manual and confirms that the function, appearance and quality of the proposed substitution are equivalent or superior to the originally specified product. TF initial.

Signature: Taylor Finkernagel Printed Name: Taylor Finkernagel

Fax Number: N/A

For Architect's Use:

____ Accepted ____Accepted As Noted ____Incomplete Information

____ Not Accepted ____Received Too Late ____No Substitutions Accepted For This Product

Reviewed By / Date: _____

Processed by Addendum No. _____

Comments: _____

Ashland School District
Willow Wind Barn Renovation

ARCHITECT

ORW ARCHITECTURE, AIA

CONTACT PERSON: DAVID WILKERSON, AIA
2950 EAST BARNETT ROAD
MEDFORD, OREGON 97504
(541) 779-5237 EXT. 20
(541) 772-8472 FAX

CIVIL ENGINEER

CONSTRUCTION ENGINEERING CONSULTANTS, INC.

CONTACT PERSON: MARK KAMRATH
132 WEST MAIN STREET
MEDFORD, OR 97501
(541) 779-5268
(541) 779-3139 FAX

MECHANICAL ENGINEER

WEHAGE ENGINEERING, INC.

CONTACT PERSON: DAN WEHAGE
1174 PROGRESS DRIVE, SUITE 201
MEDFORD, OR 97504
(541) 842-4188
(541) 842-4189 FAX

GENERAL CONTRACTOR

ADROIT CONSTRUCTION

CONTACT PERSON: CRAIG FUNSTEN
185 MISTLETOE ROAD
ASHLAND, OREGON, 97520
(541) 482-4098
(541) 482-4218 FAX

ELECTRICAL DESIGNER

PRECISION ELECTRIC

CONTACT PERSON: TRAVIS SNYDER
P.O. BOX 816
MEDFORD, OREGON, 97501
(541) 773-6279
(541) 773-5376 FAX

OWNER

ASHLAND SCHOOL DISTRICT #5

CONTACT PERSON: JULI DICHIRO
885 SISKIYOU BLVD
ASHLAND, OR 97520
(541) 482-2811 EXT. 119
(541) 482-2185 FAX

GENERAL NOTES

1. DO NOT SCALE DRAWINGS, CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING SITE DIMENSIONS. IF DISCREPANCIES ARE FOUND, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
2. UNLESS SHOWN OTHERWISE, ALL DAMAGE CAUSED BY NEW WORK TO EXISTING AREAS OF THE SITE, CONSTRUCTION, FINISH CONSTRUCTION, ELECTRICAL OR MECHANICAL SYSTEMS SHALL BE REPAIRED TO MATCH EXISTING CONDITIONS OR AS FOUND PRIOR TO ANY DAMAGE
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE FIRE AND LIFE SAFETY CODES.
4. THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE SCOPE OF THE WORK AND SITE ACCESSIBILITY. THE CONTRACTOR IS REMINDED THAT THE PROJECT DRAWINGS INDICATE THE CONDITIONS AT THE SITE AS IT EXISTED. DEVIATIONS ENCOUNTERED DURING THE WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING STRUCTURES AT THE WORK AREA FROM WEATHER AND OTHER INCLEMENT CONDITIONS. ANY DAMAGE INCURRED DUE TO THE FAILURE BY THE CONTRACTOR TO PROPERLY PROTECT SUCH WORK SHALL BE REPAIRED AT CONTRACTOR EXPENSE.
6. THE CONTRACTOR SHALL DISPOSE OF ALL REMOVED AND /OR DEMOLISHED MATERIAL. WASTE & DEBRIS CAUSED BY THE NEW WORK. THIS MATERIAL SHALL BE REMOVED FROM THE PROPERTY AND TAKEN TO A LEGALLY-OPERATED DISPOSAL SITE.
7. ALL CONSTRUCTION TECHNIQUES, MATERIALS, AND FINISHES SHALL BE AS REQUIRED BY THE APPROPRIATE CODE AUTHORITIES. INSTALLATION SHALL FOLLOW THE MANUFACTURERS PUBLISHED SPECIFICATIONS AND/OR TRADE STANDARDS IN ADDITION TO MEETING OR EXCEEDING THE DESIGN STANDARDS.
8. ALL WEATHER EXPOSED SURFACES SHALL HAVE A WEATHER RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING AND THE EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER AS TO MAKE THEM WATERPROOF.

LEGEND AND SYMBOLS

- MATCH LINE CUT — BUILDING OR SEGMENT IDENTIFICATION; DWG. NUMBER WHERE SEGMENT IS DRAWN
- DETAIL — DETAIL IDENTIFICATION; DWG. NUMBER WHERE DETAIL IS DRAWN
- WALL CROSS SECTION — SECTION IDENTIFICATION; DWG. NUMBER WHERE SECTION IS DRAWN
- BUILDING CROSS SECTION — SECTION IDENTIFICATION; DWG. NUMBER WHERE SECTION IS DRAWN
- GRID LINE — TOP TO BOTTOM, LETTERS; LEFT TO RIGHT, NUMBERS
- ROOM IDENTIFICATION — ROOM NAME; ROOM NUMBER; DETAIL NUMBER ON INTERIOR ELEVATION SHEET; DWG. NUMBER WHERE INT ELEVATION IS DRAWN
- BUILDING ELEVATION — ELEVATION IDENTIFICATION; DWG. NUMBER WHERE ELEVATION IS DRAWN
- NORTH ARROW — ARROW INDICATES PLAN NORTH
- DOOR IDENTIFICATION — ROOM NUMBER OF DOOR
- WINDOW IDENTIFICATION — WINDOW NUMBER; GLAZING TYPE MODIFIER
- RELITE IDENTIFICATION — RELITE TYPE
- EQUIPMENT IDENTIFICATION — EQUIPMENT NUMBER
- O.F.C.I. ITEM — ITEM NUMBER (SEE O.F.C.I. LIST)
- WALL TYPE IDENTIFICATION — WALL TYPE; MODIFIERS; WALL TYPE
- LOUVER IDENTIFICATION — LOUVER NUMBER
- HVAC EXHAUST
- HVAC RETURN
- HVAC SUPPLY
- LIGHTING SYMBOL
- LIGHTING SYMBOL
- LIGHTING SYMBOL
- CENTER LINE
- F.O.M. FACE OF MASONRY
- F.O.C. FACE OF CONCRETE
- F.O.S. FACE OF STUD / STRUC
- F.O.FIN. FACE OF FINISH
- TARGET POINT OR = LEVEL LINE = ELEVATION

SEE INDIVIDUAL SHEETS FOR ADDITIONAL LEGENDS AND SYMBOLS

ABBREVIATIONS

NOTE: ABBREVIATIONS BELOW MAY NOT INCLUDE ALL FOUND WITH DRAWINGS

ABV	ABOVE
AC	ASPHALTIC CONCRETE
ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ASW	AREA SEPARATION WALL
BD	BOARD
BLDG	BUILDING
B.O.	BOTTOM OF
BM	BEAM
CBC	CALIFORNIA BUILDING CODE
C.F.C.I.	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONT	CONTINUOUS
CORR	CORRIDOR
CPT	CARPET
CR	CLASSROOM
CTB	COMPUTER TERMINAL BOARD
CTBK	COUNTERSUNK
DBL	DOUBLE
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIMS	DIMENSIONS
DW	DISHWASHER
DP.	DISABLED PERSON
EA.	EACH
ELE	ELECTRICAL
ELECT	ELECTRICAL
EM	ENTRANCE MATTING
EMT	ELECTRICAL METALLIC TUBING
EQ	EQUAL(Y)
EX	EXISTING
EXT	EXTERIOR
E.J.	EXPANSION JOINT
FD	FLOOR DRAIN
FF	FINISHED FLOOR
FHSMS	FLAT HEAD SHEET METAL SCREWS
FIN	FINISH(ED)
FRMG	FRAMING
FRZR	FREEZER
FTG	FOOTING
F.E.C.	FIRE EXTINGUISHER CABINET
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD/ STRUCTURE
F.R.	FIRE RESISTANT
GA	GAUGE
GA	GYPSUM ASSOCIATION
GALV.	GALVANIZED
GYPBD	GYPSUM BOARD
G.B.	GRAB BAR
G.I.	GALVANIZED IRON
G.S.	GALVANIZED STEEL
H	HIGH
HDBD	HARDBOARD
HDR	HEADER
HDWD	HARDWOOD
HGT	HEIGHT
HR	HOUR
HVAC	HEATING/VENTILATING/AIR CONDITIONING
HW	HOT WATER
H.C.	HANDICAP
INSUL	INSULATION
IR	INSIDE RADIUS
JST	JOIST
KS	KNEE SPACE
LPG	LIQUID PROPANE GAS
M	MIRROR
MAX	MAXIMUM
MB	MACHINE BOLT
MB	MARKER BOARD
MDL	MODEL
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MTL	METAL
MW	MICROWAVE
N.I.C.	NOT IN CONTRACT
OCC	OCCUPANCY
OPNG	OPENING
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OF.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED
OF.O.I.	OWNER FURNISHED OWNER INSTALLED
P	PAINT
P. LAM	PLASTIC LAMINATED
PSF	POUNDS PER SQUARE FOOT
PVC	PLASTIC WALL COVERING
PWD	PLYWOOD
PWP	PLASTIC WALL PANEL
P.T.	PRESSURE TREATED
REF	REFRIGERATOR
RM	ROOM
R.O.	ROUGH OPENING
SEP	SEPARATION
SF	SQUARE FEET
SQ. FT.	SQUARE FEET
SHTG	SHEATHING
STM	STEAM
SM	SHEET METAL
SMS	SHEET METAL SCREWS
SPECS	SPECIFICATIONS
STB	SIGNAL TERMINAL BACKBOARD
STL	STEEL
STRUCT	STRUCTURAL/STRUCTURE
S.S.	STAINLESS STEEL
TRSFR	TRANSFORMER/ TRANSFER
TS	TUBE STEEL
TTB	TELEPHONE TERMINAL BACKBOARD
TVB	CATV TERMINAL BACKBOARD
TYP	TYPICAL
T.H.	THRESHOLD
T.O.	TOP OF
UL	UNDERWRITERS LABORATORY
UTIL	UTILITY
U.O.N.	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
V-NR	TYPE B, NON-RATED
V-1HR	TYPE B, 1 HOUR
VWC	VINYL WALL COVERING
WBG	WALL BUMPER GUARD
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
W.C.	WATER CLOSET
W.S.	WOOD SCREW
W/	WITH

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CIVIL

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GOVERNING CODES

THE DESIGN OF THIS PROJECT IS BASED ON THE FOLLOWING CODES:

2007 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
2007 OREGON FIRE CODE (OFC)
2008 OREGON ELECTRICAL SPECIALTY CODE (OESC)
2007 OREGON MECHANICAL SPECIALTY CODE (OMSC)
2008 OREGON PLUMBING SPECIALTY CODE (OPSC)
NFPA 13
NFPA 72

VICINITY MAP

PROJECT DATA

MAP & TAX LOT: 391E10 700

BUILDING AREA: 2,865 S.F.

DEFERRED APPROVALS

FIRE SPRINKLER DESIGN

ENLARGED SITE PLAN
SCALE: 1"=20'-0"

BUILDING MAP

MATERIALS LEGEND

LARGE SCALE DETAIL MATERIALS

- EARTH
- GRAVEL,ROCK
- SAND GROUT
- CONCRETE
- METAL
- DIMENSIONAL LUMBER
- BLOCKING SHIM
- FINISH WOOD
- PLYWOOD
- CEILING/ ACOUSTIC TILE/ PANEL
- BATT INSULATION
- CONCRETE BLOCK

NOTE: ALL MATERIAL SYMBOLS ABOVE MAY NOT NECESSARILY BE USED IN THIS PROJECT

SEE INDIVIDUAL SHEETS FOR ADDITIONAL LEGENDS AND SYMBOLS

REGISTERED ARCHITECT — A. DAVID WILKERSON, II — MEDFORD, OR 5068 — STATE OF OREGON

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Ashland School District
Willow Wind Barn Renovation
Ashland, Oregon

COVER DRAWING & SITE PLAN

SCALE: NOTED
12.08.09

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Total Required	1	1	2	2	2	
Total Provided	1	1	2	2	2	

TOILET FIXTURE ANALYSIS WORKSHEET

Allowable Area Calculations (Table 503 and Section 506)					
Fire Area or Building:		Floor:	1 floor		
	All Floors				
	Occupancy Type	A-1(V-B)		Total	
A_t	Tabular Area	5,500			
I_f	Increase due to Frontage (%)	51.17			
Is	Increase due to Sprinklers (%)	200			
Aa	Allowable Area	19314			
	Proposed Area	2,865			
	Ratio	0.148		0.148	<2 = OK per 506.4.1
I_f	Increase due to Frontage (%)	51.17			
P	Perimeter	214			
F	Frontage	163			
W	Width	30			

ALLOWABLE AREA CALCULATIONS

Code: 2007 Oregon Structural Specialty Code

Occupancy Clasification (Chapter 3)
A-1 Assembly

Occupancy Separations (Table 508.3.3)
None

Construction Type: (Section 602)
VB

Building Height: (Table 503)
For Type VB: Maximum of 1 Stories plus 1 Story increase per 504.2 = 2 Stories
1 Story provided = OK

For Type VB: Maximum Height of 40 feet plus 20 feet; increase per 504.2
60 feet > 32 feet provided = OK

Corridor Fire Resistance Rating (Table 1017.1)
With Sprinkler System: No rating required

Sprinkler System Requirements per Section 903
None Required - Sprinkler System Provided in lieu of Corridor Rating

Incidental Use Areas - Separations per Table 508.3.3
Storage Areas over 100 s.f.: No Rating required with Sprinkler System Provided
Mechanical Room: No Rating required with Sprinkler System Provided

Fire-Resistance Construction Requirements (Table 601)

Type VB	Rating
Structural Frame	0
Exterior Bearing Walls	0
Interior Bearing Walls	0
Exterior Non Bearing Walls per Table 602	0
Interior Non Bearing Walls	0
Floor Construction	0
Roof Construction	0

Occupant Load Calculations - Factors as indicated on plans per table 1004.1.1

Commom Path of Egress Travel
Per 1014.3, Group A Occupancy = max 75 feet
Maximum common path of egress travel provided= 31' < 75' feet = OK

Maximum Path of Egress Travel (Table 1016.1)
Group A Occupancy with Sprinklers = max 250 feet
Maximum path of egress travel provided = 71 feet < 250 feet = OK

Dead End Corridors
Per 1017.3 = 20 feet
Max Dead End provided = 0 feet < 20 feet = OK

Vertical Exit Enclosure (Section 1020)
No Enclosure Required.

Shaft Enclosures (Section 707)
No Rating requried per Section 707.2 Exception 11.

CODE ANALYSIS WORKSHEET

PROJECT DATA

PROJECT ADDRESS: 1497 EAST MAIN STREET
ASHLAND, OREGON, 97520

ASSESSOR'S MAP #: 39IE10
TAXLOT #:100
ZONE: ERI
OCCUPANCY: A-1

PROJECT AREA (EXISTING):

TOTAL FLOOR AREA: 2,865 sf

LEGEND

- EXIT SIGN
- EXIT SIGN w/ DIRECTION
- FIRE EXTINGUISHER
- INDICATES AVAILABILITY OF TWO DIRECTIONS OF EGRESS TRAVEL
- 75-FOOT MAX. CPET — COMMON PATH OF EXIT TRAVEL
- 250-FOOT MAX. MPET — MAXIMUM PATH OF EXIT TRAVEL
- ACCESSIBLE PATH OF TRAVEL TO AREA OF REMODEL
- X/X — COMBINED OCCUPANT LOAD AT A GIVEN EXIT ACCESS DOOR OR STAIR; PROVIDED/REQUIRED EXIT WIDTH (INCHES)
- XX / XX/XX — COMBINED OCCUPANT LOAD AT A GIVEN EXIT. SUM OF THESE EQUALS TOTAL OCCUPANT LOAD; PROVIDED/REQUIRED EXIT WIDTH (INCHES)
- XXXXXXX — SPACE NAME; XX — OCCUPANT LOAD; XXX SF/ XX SF — LOAD FACTOR; SPACE SQUARE FOOTAGE

SEE PLANS FOR SPECIFIC ACCESSIBLE ELEMENTS OF PROJECT

1. ALL OCCUPANCY CALCULATIONS ARE BASED ON THE 2007 OREGON STRUCTURAL SPECIALTY CODE AND 2007 OREGON FIRE CODE.
2. THE REQUIRED EXIT WIDTH IS DETERMINED AS FOLLOWS: SUM OF TOTAL OCCUPANT LOAD MULTIPLIED BY 0.15" FOR DOORS, 0.20" FOR STAIRS (TABLE 1005.1 FOR SPRINKLERED BUILDINGS)

1 CODE ANALYSIS PLAN

SCALE: 1/4" = 1'-0"

0 1' 3' 7' 13'
SCALE: 1/4"=1'-0"
SCALE: 1/8"=1'-0" (11"x17" SHEETS)

NORTH

REGISTERED ARCHITECT
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adroit CONSTRUCTION COMPANY, INC.

Ashland School District
Willow Wind Barn Renovation
Ashland, Oregon

CODE ANALYSIS PLAN

SCALE: 1/4"=1'-0"
12.08.09

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00 BIDDING INFORMATION

INVITATION TO SUB-BIDDERS:
ADROIT CONSTRUCTION INCORPORATED IS THE GENERAL CONTRACTOR FOR THE REMODELED BARN BUILDING FOR THE ASHLAND SCHOOL DISTRICT @ WILLOW WIND SCHOOL IN ASHLAND, OREGON. YOU ARE INVITED, AS A SELECTED SUB-BIDDER, TO SUBMIT A SUB-BID PROPOSAL FOR WORK IN YOUR AREAS OF EXPERTISE FOR THE REFERENCED PROJECT.

BID PROPOSALS MUST BE SUBMITTED IN WRITING AND MUST BE CLEARLY LABELED "REMODELED BARN BUILDING FOR THE ASHLAND SCHOOL DISTRICT @ WILLOW WIND SCHOOL IN ASHLAND, OREGON." BID PROPOSALS MUST BE DELIVERED, MAILED OR FAXED TO P.O. BOX 6@9, ASHLAND, OREGON 97520 FAX: (541) 482-4218. AFTER BIDS ARE RECEIVED AND CONSOLIDATED, THEY WILL BE OPENED AND EVALUATED. THERE WILL NOT BE A PUBLIC OPENING OF BIDS. THE GENERAL CONTRACTOR RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS AND TO WAIVE INFORMALITIES IN A BID AND IS NOT BOUND TO AWARD A PORTION OF THE WORK TO THE LOWEST BIDDERS IF, IN THE OPINION OF THE GENERAL CONTRACTOR OR THE OWNER, IT IS NOT IN THE BEST INTEREST OF THE PROJECT TO DO SO.

INFORMATION FOR BIDDERS:

CONTRACT DOCUMENTS: THE CONTRACT DOCUMENTS FOR THIS PROJECT HAVE BEEN PREPARED BY ORW ARCHITECTURE, MEDFORD, OREGON. THE CONTRACT DOCUMENTS ARE LISTED ON THE COVER DRAWING OF THIS SET OF DRAWINGS AND SPECIFICATIONS.

INSURANCE REQUIREMENTS: OBTAIN INSURANCE COVERAGES REQUIRED BY THE OWNER AND GENERAL CONTRACTOR.

INTERPRETATIONS OF THE CONTRACT DOCUMENTS: ADDRESS ALL QUESTIONS REGARDING INTERPRETATIONS AND CLARIFICATIONS OF THE CONTRACT DOCUMENTS TO THE ARCHITECT.

APPLICABLE CODES: WORK PERFORMED UNDER THESE CONTRACT DOCUMENTS SHALL BE IN FULL COMPLIANCE WITH ALL CODES, LAWS AND ORDINANCES HAVING JURISDICTION IN THE AREA OF THE PROPOSED PROJECT AND IN EFFECT AT THE DATE OF BID SUBMISSION, INCLUDING BUT NOT LIMITED TO THE UNIFORM BUILDING CODE (OREGON REVISED LATEST EDITION), ADA REQUIREMENTS, CITY OF ASHLAND & JACKSON COUNTY ORDINANCES. SUBCONTRACTORS ARE RESPONSIBLE TO OBTAIN PROPER APPROVALS FROM THE REQUIRED JURISDICTION.

CONFLICTS: IF A SUB-BIDDER ENCOUNTERS WHAT APPEARS TO HIM TO BE A CONFLICT OR AMBIGUITY IN OR BETWEEN CONTRACT DOCUMENTS, OBTAIN CLARIFICATION FROM THE GENERAL CONTRACTOR IMMEDIATELY AND BEFORE SUBMITTING A BID OR CONTINUING WITH THE WORK.

00 GENERAL

ARCHITECT AND GENERAL CONTRACTOR RESERVE THE RIGHT TO MAKE MODIFICATIONS TO THE TECHNICAL SPECIFICATIONS AS THEY DETERMINE ARE DESIRABLE REVISIONS FOR THIS PROJECT.

SITE CONSTRUCTION FACILITIES PROVIDED BY GENERAL CONTRACTOR:
- TEMPORARY POWER - 110 V CONVENIENCE POWER
- WATER
- TEMPORARY HEAT
- SANITARY FACILITIES

00 TOXIC MATERIALS

ATTENTION IS CALLED TO THE EXISTENCE OF THE FOLLOWING TOXIC MATERIALS:
- ANIMAL CONTAMINATED SOIL WITHIN THE EXISTING STRUCTURE.
- LEAD BASED PAINT USED ON MATERIALS ON THE EXISTING STRUCTURE.

TOXIC MATERIAL REMOVAL TO BE COORDINATED BY THE GENERAL CONTRACTOR AND SHALL BE COMPLIANT WITH STATE REGULATIONS.

02 DEMOLITION

ALSO SEE DRAWING 3.1 FOR OTHER DEMOLITION NOTES.
REMOVE ALL EXISTING BUILDING ELEMENTS, EXCEPT AS BULLETED BELOW:
- HEAVY TIMBER FRAMING
- FOOTINGS AND FOUNDATIONS ARE TO BE COORDINATED WITH ALL CAUTION WITH THE GENERAL CONTRACTOR. ALSO SEE SALVAGE
- TEMPORARY STRUCTURAL WIRE BRACING.

AND OTHER ITEMS NOT SHOWN TO REMAIN IN THE FINISHED WORK FROM WITHIN A PERIMETER OUTLINED ON THE DRAWINGS.
A NON-COMPREHENSIVE DEMOLITION LIST WOULD INCLUDE:
- SIDING, ROOFING, WINDOWS, SCREENS, DOORS, OUTRIGGERS, SUPPORTING POSTS, SHED ROOFS, MASONRY, STAIRS, JOISTS, PURLINS AND SKIP SHEATHING.

UNDERGROUND AND ABOVE-GROUND UTILITIES EXIST ON THE SITE. DO NOT DISTURB OR DESTROY EXISTING UTILITIES. WHERE UNKNOWN EXISTING UTILITIES ARE ENCOUNTERED, CONTRACTOR SHALL ADVICE GENERAL CONTRACTOR IMMEDIATELY AND ASSISTS IN REPAIRS AS NEEDED. MAINTAIN IRRIGATION AND DRAINAGE INSTALLATIONS AND FLOWS DURING CONSTRUCTION. PROVIDE TEMPORARY ROUTES FOR SUCH INSTALLATIONS AS NEEDED TO MAINTAIN FLOWS. MAINTAIN EXISTING PARKING, SIGNAGE, LANDSCAPE AND CURBS UNLESS SHOWS SPECIFICALLY TO BE REMOVED. REMOVE ALL DEMOLISHED ELEMENTS FROM THE SITE AND DISPOSE IN A LEGAL FASHION. ITEMS WITH TOXIC MATERIALS ASSOCIATED WITH THEM SHALL NOT BE RECYCLED EXCEPT AS PERMITTED BY LAW.

02 SALVAGE

ALL QUARRIED STONE REMOVED FROM THE FOUNDATION DURING DEMOLITIONS IS TO BE SALVAGED TO THE OWNER FOR USE IN ON SITE PROJECTS. STONE SHALL BE CLEAN AND FREE OF TOXIC MATERIALS IDENTIFIED IN THAT SECTION.

03 CONCRETE

WORK INCLUDED: FORM WORK, SHORING, BRACING, REINFORCING, EMBEDDED ITEMS AND CAST-IN-PLACE CONCRETE. COOPERATE WITH OWNER'S MATERIALS TESTING ACTIVITIES.
CONCRETE AND REINFORCING: SEE STRUCTURAL SPECIFICATIONS
FINISHES:
- EXPOSED PORTIONS OF FOUNDATIONS: SACKED FORM FINISH.
- SIDEWALKS AND OTHER EXTERIOR CONCRETE PAVING: LIGHT BROOM FINISH.
- STAIR TREADS: HEAVY BROOM FINISH FOR NON-SLIP SURFACE.
- INTERIOR SLABS SCHEDULED FOR APPLIED FINISHES: IN ACCORDANCE WITH FINISH MANUFACTURER REQUIREMENTS.

DEFECTIVE CONCRETE: REMOVE AND REPLACE DEFECTIVE CONCRETE WORK, TO INCLUDE THAT WITH EXCESSIVE CRACKS, WIDE CRACKS, SLABS WHICH DO NOT DRAIN PROPERLY, SPALLING OR OTHER DEFECTIVE CONCRETE.
CONCRETE FLOOR FLATNESS: LEVEL WITHIN 1/4 INCH PLUS OR MINUS TOLERANCE IN 10-FOOT RADIUS AT ANY POINT ON FLOOR.
FINISH SLAB ELEVATION TO BE AS SHOWN ON DRAWINGS.
MINIMUM CEMENT:

CLASS**	STRENGTH	SLUMP(MAX)*
BUILDING FOUNDATIONS	3000 PSI	4 IN.
SLABS ON GRADE (EXTERIOR WALKWAYS)	3500 PSI	4 IN.
ITEMS NOT OTHERWISE INDICATED	3000 PSI	4 IN.

* NOMINAL MAXIMUM AGGREGATE SIZE SHALL BE 3/4 INCH.
** AIR DRY WEIGHT SHALL NOT EXCEED 150 LBS/CU. FT. FOR NORMAL WEIGHT CONC.

04 UNIT MASONRY

WORK INCLUDED: CONCRETE UNIT MASONRY, GROUT, MORTAR.
PERFORM WORK OF THIS SECTION IN ACCORDANCE WITH THE MASONRY SOCIETY CODE AND SPECIFICATION DOCUMENTS ACI 530/ASCE 5/TMS 402, AND ACI 530.1/ASCE 6/TMS 602.
CONCRETE MASONRY UNITS ("CMU"): ASTM C90, GRADE N, TYPE I, MEDIUM WEIGHT, 1900 PSI COMPRESSIVE STRENGTH ON NET AREA, LINEAR SHRINKAGE LESS THAN .065 PERCENT, SPLIT FACE NATURAL UNIFORM GREY COLOR.
MORTAR: PORTLAND CEMENT ASTM C270 NORMAL, TYPE "S" ABOVE GRADE, TYPE "M" BELOW GRADE, 2500 PSI COMPRESSIVE STRENGTH AT 28 DAYS CURE TIME, UNIFORM GREY COLOR.
GROUT: PROPORTIONED IN ACCORDANCE WITH IBC TABLE 21-B, MIXED IN ACCORDANCE WITH ASTM C-476 AND C-94, 2000 PSI COMPRESSIVE STRENGTH AT 28 DAYS CURE TIME WHEN TESTED TO IBC STANDARD 21-18.
CONTROL JOINTS: "DUR-O-WALL" WIDE-FLANGE RAPID CONTROL JOINT.
COURSING: RUNNING.

06 ROUGH CARPENTRY

WORK INCLUDED: ROUGH CARPENTRY, LUMBER, FRAMING, ROUGH HARDWARE.
REFERENCES: PERFORM ALL WORK IN ACCORDANCE WITH STRUCTURAL DRAWINGS AND AS NOTED HEREIN.
PLYWOOD AND STRUCTURAL PANELS: SHALL COMPLY WITH AMERICAN PLYWOOD ASSOCIATION (APA) STANDARDS.
LUMBER: SHALL COMPLY WITH GRADING RULES OF WESTERN WOOD PRODUCTS ASSOCIATION (WWPA).
MATERIALS: LUMBER: COAST REGION DOUGLAS FIR:
NOT EXPOSED IN THE FINISH WORK:
- 4-INCHES AND SMALLER: NUMBER 2 OR BETTER.
- GREATER THAN 4-INCHES: NUMBER 1.

EXPOSED IN THE FINISHED WORK: NUMBER 2 OR BETTER DOUGLAS FIR, SPECIES SELECTED FOR STRAIGHTNESS, WITHOUT CHECKS, CRACKS, SPLITS, KNOTS OVER 1/2 INCH IN LARGEST DIMENSION, AND CLEANED OF ALL NON-WOOD DISCOLORATION AND GRADE MARKS.
ENGINEERED WOOD: CONFORM TO STANDARDS OF NATIONAL EVALUATION SERVICES REPORT NUMBER NER - 148.
SHEET MATERIALS: APA SPAN-RATED, EXPOSURE 1, GRADE C-D, EXTERIOR GLUE
ROOF SHEATHING: 5/8-INCH THICK, 24/48 SPAN RATED.
WALL SHEATHING: 1/6-INCH THICK OSB 24/48 SPAN RATED.
FLOOR SHEATHING: 1 1/8" STRUCT 2 T&G, GRADE C-D, EXT GLUE PWD, 24/48 SPAN
INFILTRATION BARRIER: DUPONT "TYVEK". PROVIDE CONTINUOUS MEMBRANE AT EXTERIOR WALL SHEATHING. TAPE SEAMS AND JOINTS WITH TAPE RECOMMENDED BY SHEET MANUFACTURER.
ROUGH HARDWARE:
NAILS AND BOLTS: SIZE AND SPACING IN ACCORDANCE WITH IBC REQUIREMENTS. GALVANIZED FOR EXTERIOR LOCATIONS.
STEEL HARDWARE: DESIGN BASIS IS "SIMPSON". OBTAIN APPROVAL FOR OTHER HARDWARE.
SILL GASKET: 1/4 INCH THICK PLATE WIDTH POLYETHYLENE FOAM STRIP. PROVIDE AS A CONTINUOUS STRIP BETWEEN SILL PLATE AND FOUNDATION.
WOOD TREATMENT: PROVIDE PRESERVATIVE TREATED WOOD FOR ALL MEMBERS IN CONTACT WITH CONCRETE, MASONRY AND WHERE NOTED.

06 GLU-LAMINATED TIMBER

GLUE LAMINATED MEMBERS
VERSALAM BEAM ("VLB"): SHOWN ON DRAWINGS. "VERSALAM BEAM" (VLB) BY BOISE CASCADE. EQUAL PRODUCTS OF TRUS JOIST MCMILLAN ARE APPROVED.
GLUE-LAMINATED BEAMS ("GLB"):
- AITC ARCHITECTURAL FINISH GRADE WHERE EXPOSED IN THE FINISHED WORK.
- AITC INDUSTRIAL GRADE WHERE CONCEALED. SEE STRUCTURAL SPECIFICATION FOR BEAM TYPE.

LAMINATED VENEER LUMBER (LVL): MEETING STANDARDS OF NATIONAL EVALUATION SERVICE (NES) REPORT NO. NER-481. WATERPROOF ADHESIVES.
PARALLEL STRAND LUMBER (PSL) AND VERSA LAM LUMBER (VL) WITH WATERPROOF ADHESIVE. SEE STRUCTURAL FOR BEAM TYPE.

06 FINISH CARPENTRY

WORK INCLUDED: EXTERIOR SIDING, SOFFIT, TRIM AND FASCIAE. INTERIOR WOOD TRIM.
SUBMITTALS: SUBMIT TRIM AND STAGE FLOORING SAMPLES SHOWING COLOR AND TEXTURE, 3X12 INCHES LONG.
EXTERIOR SIDING: CELLULOSE FIBER-REINFORCED CEMENT BOARDS 5/16-INCH THICK, 7-1/4 INCHES WIDE FOR 6-INCH INSTALLED EXPOSURE. JAMES HARDIE "HARDIEPANEL" VERTICAL SIDING. SELECT CEDARMILL, OR SIMILAR.
EXTERIOR TRIM: CEMENT COMPOSITION BOARD 1-INCH ACTUAL THICKNESS. DESIGN BASIS: JAMES HARDIE "HARDIETRIM". DIMENSIONS AS NOTED ON THE DRAWINGS
INTERIOR MATERIALS: CLEAR VERTICAL GRAIN DOUGLAS FIR S4S.

06 CUSTOM CASEWORK

WORK INCLUDED: FABRICATED CASEWORK: PLASTIC LAMINATE FACED 3/4 INCH THICK MEDIUM DENSITY PARTICLE BOARD MATERIALS, FLUSH OVERLAY DESIGN.
PERFORM WORK OF THIS SECTION IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORK STANDARDS, LATEST EDITION, CUSTOM GRADE SPECIFICATIONS.
SUBMITTALS: SHOP DRAWINGS OF ALL FABRICATIONS. SUBMIT PLASTIC LAMINATE AND TEXTURE SAMPLES.
PARTICLE BOARD: ANSI 208.1 TYPE 1, 45 POUND DENSITY, WATERPROOF ADHESIVE
MELAMINE-COATED PARTICLE BOARD: GEORGIA PACIFIC, ROSEBURG, PICKERING: PROVIDE MELAMINE-COATED PARTICLE BOARD ON ALL "SEMI-EXPOSED" CASE SURFACES AND SHELVES.
PLASTIC LAMINATE: NEMA LD-3: PROVIDE PLASTIC LAMINATE FACING WITH MATCHING 2 MILLIMETER THICK PLASTIC EDGING ON ALL "EXPOSED" CASE SURFACES.
HORIZONTAL: GP50
VERTICAL: GP28
CABINET LINER: GP20
BACKING: BK20
POST-FORMING: PF42
HARDWARE: USD 626 DULL CHROME FINISH:
SHELF SUPPORTS: KNAPE AND VOGT 346NP, FOUR PER SHELF
DOOR AND DRAWER PULLS: BALDWIN 4676 ONE PER DOOR AND DRAWER.
DRAWER SLIDES:
- DRAWERS 10 INCHES HIGH AND LESS - ACCURIDE MEDIUM DUTY SLIDE 3832, FULL EXTENSION, UP TO 100 LB. RATED. CLEAR FINISH
- DRAWERS OVER 10 INCHES HIGH - ACCURIDE HEAVY DUTY SLIDE 4034, FULL EXTENSION, 150 LB. RATED, CLEAR FINISH.

HINGES: ROCKFORD PROCESS HINGE FOR FLUSH OVERLAY DESIGN.
BUMPERS: ONE PER DOOR, TWO PER DRAWER.
COUNTERTOP SUPPORT BRACE: "SPEED BRACE" BY FASTCAP 15X18 INCHES BLACK. DISTRIBUTOR: LOUIS AND COMPANY, 516 SOUTH FIR, MEDFORD. 772-5320.
COUNTERTOP DESIGN: COVED SPLASH TOP, RADIUS COVE TOP TO SPLASH, WATERFALL FRONT EDGE. LAMINATE TOP AND SPLASH AT COUNTER TOPS WITH SINKS. PROVIDE ADJUSTABLE SHELF HOLES 1-1/4 INCHES APART AT ALL SHELF BRACKET LOCATIONS.

07 SEALANTS

WORK INCLUDED: SEALANTS FOR EXTERIOR BUILDING SHELL AND INTERIOR FINISH WORK.
EXTERIOR EXPOSURE: 1-PART POLYURETHANE. DESIGN BASIS: SONNEBORNE "NP-1".
INTERIOR EXPOSURE:
GENERAL: ACRYLIC LATEX-DESIGN BASIS: SONNEBORNE "SONNOLAC".
WET AREAS: SILICONE. DESIGN BASIS: GE "SILPRUF".

07 SHEET METAL

WORK INCLUDED: GENERAL SHEET METAL WORK, FLASHINGS, COUNTER-FLASHINGS AND ALL OTHER SHEET METAL MATERIALS NOT PROVIDED AS PART OF THE ROOFING SYSTEM), GUTTERS, SHEET METAL DOWNSPOUTS AND VENT LOUVERS.
REFERENCES: SMACNA ARCHITECTURAL SHEET METAL MANUAL.
MATERIALS: ASTM A653/A653M, G90, MINIMUM 24 GAGE CORE SHEET STEEL.
FINISH: KYNAR FINISH, COLOR TO MATCH METAL ROOF.
WARRANTY: FIVE (5) YEAR WARRANTY, MATERIALS AND INSTALLATION. WARRANT THAT THE INSTALLATION WILL REMAIN INTACT AND PROTECT BUILDING INTERIOR FROM LEAKS FOR WARRANTY PERIOD.

07 BUILDING INSULATION

WORK INCLUDED: THERMAL AND ACOUSTICAL INSULATION, BATT AND AND 6-MIL THICK CLEAR POLYETHYLENE VAPOR RETARDER.
SCHEDULE OF MATERIAL LOCATIONS:
- FLOORS OVER UNCONDITIONED SPACES: FIBER UNFACED BATTS, THICKNESS TO ACHIEVE RESISTANCE OF R-25.
- ROUGH LUMBER FRAMED ROOF/CEILINGS: FIBER BATT, THICKNESS TO ACHIEVE RESISTANCE OF R-30.
- EXTERIOR WALLS: FIBER BATTS BETWEEN WALL FRAMING MEMBERS, THICKNESS TO ACHIEVE RESISTANCE OF R-21
- INTERIOR WALLS: ACOUSTICAL BATT WHERE INDICATED ON DRAWINGS.

VAPOR RETARDER: PROVIDE AT INTERIOR FACE OF EXTERNAL WALL AND ROOF/CEILING ROUGH LUMBER FRAMING, FACING NON-AIR CONDITIONED SPACES AND BUILDING EXTERIOR. TAPE ALL ENDS AND EDGES FOR A COMPLETE VAPOR RETARDER MEMBRANE. VAPOR RETARDER MAY BE SUBSTITUTED BY KRAFT FACED PAPER INSULATED PRODUCTS.

07 METAL ROOFING

WORK INCLUDED: FACTORY-FINISHED METAL ROOFING WITH ALL SHEET METAL RIDGE, RAKE, WALL-TO-ROOF AND OTHER SUNDRY FLASHINGS INSTALLED ON PREPARED STRUCTURAL SUPPORTS. PROVIDE SHEET METAL SHEET GOODS FINISHED IDENTICALLY TO ROOFING MATERIAL FOR FABRICATION OF SHEET METAL SHAPES ASSOCIATED WITH METAL ROOFING.
WARRANTY: PROVIDE MATERIAL MANUFACTURER'S 35 YEAR WARRANTY AGAINST FAILURE OF FINISH TO ADHERE TO METAL AND PROTECT FROM DETERIORATION. PROVIDE INSTALLERS 5-YEAR WARRANTY AGAINST PENETRATION OF WATER INTO BUILDING INTERIOR THRU INSTALLATION PROVIDED BY THIS SECTION.
MATERIALS: BRUCE AND DANA 'SNAPLOCK' 26 GAGE, 1-INCH HIGH, 12 INCH WIDE STANDING SEAM METAL ROOFING PANELS.
ROOF UNDERLAYMENT WEATHER BARRIER: GRACE CONSTRUCTION PRODUCTS 'ICE & WATER SHIELD', RUBBERIZED ASPHALT ADHESIVE BACKED HIGH DENSITY CROSS LAMINATED POLYETHYLENE SHEET.
PRODUCT FINISH: GALVANIZED WITH PVDF PAINT SYSTEM.
COLOR: SELECTED BY ARCHITECT.

08 EXTERIOR STEEL DOORS

WORK INCLUDED: EXTERIOR FORMED STEEL DOORS .
SUBMITTALS: SHOP DRAWINGS FOR WORK OF THIS SECTION. SHOW DOOR DIMENSIONS, SURFACE DESIGN, SHAPES AND DESCRIBE CONSTRUCTION.
WARRANTY: PROVIDE MANUFACTURER'S 5-YEAR WARRANTY AGAINST WARPAGE OF STEEL DOORS.
DOORS: CONFORM TO STEEL DOOR INSTITUTE TYPE III, STYLE 3 FOR FLUSH PANEL DOORS.
- EXTERIOR DOORS: 16 GAGE GALVANIZED SHEET METAL WITH POLYURETHANE FOAM CORE.

08 DOOR HARDWARE

WORK INCLUDED: HARDWARE FOR DOORS, EXCLUDING CABINET HARDWARE.
FINISH: US 626 DULL CHROME.
MANUFACTURERS:
BUTT HINGES: (TO BE DETERMINED)
LOCKSETS: (TO BE DETERMINED)
CLOSERS: (TO BE DETERMINED)
BOLTS: (TO BE DETERMINED)
STOPS: (TO BE DETERMINED)
GASKETS: (TO BE DETERMINED)
PREPARE HARDWARE AND KEYING SCHEDULES. OBTAIN APPROVAL FROM OWNER PRIOR TO ORDERING ANY HARDWARE. PROVIDE COMPLETE HARDWARE FOR ALL DOORS AND GATES OF THIS WORK BASED ON APPROVED MANUFACTURERS AND HARDWARE SERIES, AND REQUIREMENTS FOR EXITING AND FIRE PROTECTION.

08 WOOD WINDOWS

WORK INCLUDED: FURNISH AND INSTALL WOOD WINDOWS AND WINDOW FLASHING.
SUBMITTALS: SHOP DRAWINGS SHOWING IN DETAIL ALL SYSTEM COMPONENTS, CONNECTIONS TO THE BUILDING, FLASHING, INTERFACE WITH OTHER MATERIALS AND METHODS OF CONSTRUCTION. SUBMIT WINDOW MANUFACTURER'S CURRENT PRODUCT LITERATURE AND INSTALLATION INSTRUCTIONS. PROVIDE FINISH SAMPLES FOR ALL PRODUCTS.
WARRANTY: MANUFACTURER AND INSTALLER'S WRITTEN WARRANTY AGREEING TO REPAIR OR REPLACE THE INSULATING GLASS UNIT OR COMPONENT THAT FAILS IN MATERIALS OR WORKMANSHIP WITHIN TWO YEARS OF THE DATE OF INSTALLATION. 10 YEAR WARRANTY FOR POLYESTER FINISH IT WILL NOT PEEL, CHECK, CHALK OR CHANGE COLOR.
MANUFACTURER: JELD-WEN PREMIUM METAL-CLAD WOOD SITELINE EX WINDOWS, STYLE AS INDICATED ON DRAWINGS, CONSTRUCTED FROM AURALAST, IN ACCORDANCE WITH WDMA I.S.4.
EXTERIOR FINISH: SHALL BE ALUMINUM CLAD WITH A THERMOSET POLYESTER FINISH. COLOR TO BE SELECTED BY ARCHITECT.
INTERIOR FINISH: SHALL BE UNFINISHED CLEAR PINE READY FOR ON SITE FINISHING
GLAZING AND OPTIONS: INSULATED GLASS OF TWO PANES NOMINAL THICKNESS OF ¾ INCH, LOW-E 270, CLEAR. TEMPERED GLASS AS REQUIRED.
EXTERIOR INSECT SCREENS: CHARCOAL FIBERGLASS SCREEN CLOTH SET IN PAINTED ROLL FORMED ALUMINUM FRAME. COLOR AS SELECTED BY ARCHITECT.
CLEANING: REMOVE PRESERVE FILM FROM GLASS. CLEAN THE EXTERIOR SURFACE AND GLASS WITH MILD SOAP AND WATER.

08 GLASS AND GLAZING

GLASS TYPES:
GENERAL: CLEAR FLOAT GLASS Q3 QUALITY, TYPE 1, CLASS 1, THICKNESS TO WITHSTAND DESIGN PRESSURE OF 20 POUNDS PER SQUARE FOOT, EXCEPT 1/4-INCH THICK WHEN USED AS SINGLE PANE.
TEMPERED: CLEAR FLOAT GLASS, Q3 QUALITY, TYPE 1, CLASS 1, FT, CONDITION A, STANDARD 16CFR1201 CI AND CII, THICKNESS TO WITHSTAND DESIGN PRESSURE OF 20 POUNDS PER SQUARE FOOT, EXCEPT 1/4-INCH THICK WHEN USED AS SINGLE PANE.
INSULATING: TWO PANES FLOAT OR TEMPERED GLASS, FACTORY FABRICATED AND HERMETICALLY SEALED WITH INTERIOR PERIMETER DESICCANT, INTERIOR PANE TEMPERED CLEAR, EXTERIOR PANE CLEAR WITH NEUTRAL COATING ON NUMBER 2 SURFACE, SPACE BETWEEN PANES FILLED WITH AIR FOR MINIMUM WINTER NIGHTTIME "U" VALUE OF .37, AND MINIMUM SHADING COEFFICIENT OF .24 IN AN UNSHADED EXPOSURE CONDITION.
LOCATIONS:
- GENERAL: ALL GLASS EXCEPT AT LOCATIONS BELOW.
- INSULATING: ALL GLASS EXPOSED TO EXTERIOR.
- TEMPERED: ALL GLASS PANES LOCATED IN "HAZARDOUS LOCATIONS" AS DEFINED BY IBC SECTION 2406.3.

09 RESILIENT FLOORING

WORK INCLUDED: LINOLEUM SHEET FLOOR COVERING, RESILIENT FLOOR BASE, FLOORING TERMINATION STRIPS AND FLOORING JOINING STRIPS.
RESILIENT FLOORING: A 1/8 INCH THICK, 79 INCH WIDE SHEET LINOLEUM FLOORING PRODUCT. PROVIDE ADHESIVE RECOMMENDED BY MANUFACTURE AND MATCHING COLOR WELDING ROD.
COLORS: TO BE SELECTED.
FLOOR BASE: CONTINUOUS ROLL 20 INCH THICK RUBBER TOPSET BASE:
- 6 INCH HIGH COVED BASE WITH CONTINUOUS SILICONE BEAD BETWEEN COVE BACKSIDE AND FLOOR-WALL JUNCTURE AT ROOMS WITH PLUMBING FIXTURES.
- 4 INCH HIGH COVED BASE AT ALL LOCATIONS EXCEPT THOSE ABOVE.

EDGE AND JUNCTURE STRIPS: JOHNSONITE OR MERCER VINYL, SHAPES AS NEEDED FOR MATERIALS AND CONDITIONS.

09 GYPSUM BOARD SYSTEMS

WORK INCLUDED: NON FIRE-RATED GYPSUM BOARD ASSEMBLIES, TO INCLUDED TAPING AND FINISHING. INTERIOR WOOD STUD PARTITION, FURRED WALL AND CEILING JOIST FRAMING FOR WALLS AND CEILINGS CLAD WITH GYPSUM BOARD.
REFERENCES: GA-216 RECOMMENDED SPECIFICATIONS FOR THE APPLICATION AND FINISHING OF GYPSUM BOARD. ASTM C840 - STANDARD SPECIFICATION FOR APPLICATION AND FINISHING OF GYPSUM BOARD.
MATERIALS:
GYPSUM BOARD MANUFACTURES: G-P GYPSUM CORP, NATIONAL GYPSUM CO, USG, GOLDBOND, DOMTAR.
GYPSUM BOARD: ANSI/ASTM C36 FIRE RESISTIVE, TYPE X, 5/8 INCH THICK.
MOISTURE-RESISTANT GYPSUM BOARD: ASTM 630, 5/8 INCH THICK.
ACCESSORIES: DRYWALL SCREWS, METAL TRIM.
STUDS, JOISTS, PURLINS: WOOD STUDS, SIZES AS NOTED ON DRAWINGS.
GYPSUM BOARD INSTALLATION: INSTALL IN ACCORDANCE WITH GA-216.
SCHEDULE OF LOCATIONS:
GYPSUM BOARD: ALL LOCATIONS EXCEPT AS NOTED BELOW.
MOISTURE-RESISTANT GYPSUM BOARD: WHERE WALL CLADDING FACES ROOM CONTAINING PLUMBING FIXTURES.
FINISH: AS RECOMMENDED BY GA-214-96.
ALL JOINTS SHALL BE TAPED AND SANDED SMOOTH READY TO RECEIVE FINISH.

09 FIBERGLASS REINFORCED PLASTIC PANELS

WORK INCLUDED: FIBERGLASS REINFORCED PLASTIC PANELS AND TRIM.
PRODUCT: DESIGN BASIS: KEMLITE, WITH EDGE TRIM TOP AND SIDES.
LOCATIONS (48 INCH HIGH WAINSCOT):
- ON WALLS IN BACK OF URINALS AND WALLS ADJACENT TO URINALS TO 30" FROM URINAL MOUNTING WALL.

09 PAINTING

PAINTING AND FINISHING:
FOR THE FOLLOWING SURFACE FINISH COAT SYSTEMS DESCRIBED, PROVIDE MILLER PAINT FINISH COATINGS AND LONGEST-LASTING, BEST-ADHERING PRIMER RECOMMENDED FOR SUBSTRATE AND FINISH COATS BETWEEN FINISH COATS.

EXTERIOR SURFACES AND MATERIALS - PROVIDE THESE COATINGS:
FERROUS METAL AND ALL SURFACES OF STEEL DOORS: TWO COATS MILLER "5000 ACRIMETAL D.T.M", SATIN.
WOOD AND WOOD PANELS: TWO COATS "6300 ACRILITE" 100% ACRYLIC LATEX, FLAT.
MECHANICAL - EXPOSED PORTIONS OF MECHANICAL DUCTS, PIPES, INSULATIONS COVERS, HANGERS, SUPPORTS, TIES, FASTENERS, AND EXPOSED ELECTRICAL ELEMENTS TO INCLUDE CONDUIT, RACEWAYS, BOXES, BENDS, FASTENERS, SUPPORTS AND ALL OTHER ASSOCIATED ITEMS:
TWO COATS :6300 ACRILITE" 100% ACRYLIC LATEX, FLAT

GALVANIZED METAL:
- FIRST COAT: MILLER "5500 ACRIMETAL D.T.M"
- SECOND COAT: MILLER "1400 ACRILITE 100% ACRYLIC SATIN"
- THIRD COAT : MILLER "1400 ACRILITE 100% ACRYLIC SATIN"

INTERIOR SURFACES AND MATERIALS - PROVIDE THESE COATINGS:
METAL: TWO COATS MILLER 6750 "PREMIUM OIL" ALKYD, SEMI-GLOSS.
WOOD AND WOOD TRIM (SEMI-TRANSPARENT FINISH): TWO COATS MILLER "100 STAIN".
WOOD DOORS AND FRAMES (SEMI-TRANSPARENT FINISH):
- ONE COAT: MILLER "100 STAIN"
- ONE COAT: MILLER "1209 SEALER"
- TWO COATS: MILLER "1281 POLYURETHANE VARNISH", CLEAR, SATIN.

HEAVY TIMBER FRAMES (TRANSPARENT FINISH): 2 COATS: ZINSER 'BULLS EYE' CLEAR SHELLAC.

10 TOILET PARTITIONS

METAL PARTITIONS

WORK INCLUDED: SOLID PHENOLIC CORE TOILET PARTITIONS AND HARDWARE.
SUBMITTALS: SUBMIT SHOP DRAWINGS FOR THE WORK OF THIS SECTION. SHOW PRODUCT DIMENSIONS, SHAPES AND DESCRIBE CONSTRUCTION AND INSTALLATION.
TOILET PARTITIONS: DESIGN BASIS: GLOBAL STEEL PRODUCTS CORP
FLOOR-MOUNTED, OVERHEAD BRACED, 3/4" INCH THICK CORE DOORS, 3/4" INCH THICK CORE PILASTERS AND 1/ 2" INCH THICK CORE PANELS.
PROVIDE 3/4" CORE PILASTER SHOES, CAST STAINLESS STEEL PANEL BRACKETS, EXTRUDED ANODIZED ALUMINUM HEAD RAILS AND STAINLESS STEEL MOUNTING BRACKETS, DIE CAST ALUMINUM ALLOY 'BANK VAULT' DOOR HINGES WITH GRAVITY ACTIVATING DOOR HINGES.
LATCHSETS, BUMPERS AND ONE COAT HOOK EACH DOOR. ACCESSIBLE STALL DOOR HARDWARE MUST BE ADA COMPLIANT.

REGISTERED ARCHITECT
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Ashland School District
Willow Wind Barn Renovation
Ashland, Oregon

SPECIFICATIONS

SCALE: NONE
12.08.09

X0967CD3

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DEMOLITION NOTES

(DEMOLITION NOTES/ KEY NOTES APPLY TO LIGHT PHANTOM LINES SHOWN ON PLANS)
ALSO REFER TO DRAWING 0.3

THE CONTRACTOR SHALL:

A. COORDINATE ALL DEMOLITION/PHASING EFFORTS WITH THE ARCHITECT-ENGINEER AND OWNER'S REPRESENTATIVES. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS AND TO PROVIDE BUILDING USER'S SAFETY. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE.

B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.

C. VERIFY ALL EXISTING CONSTRUCTION, DIMENSIONS, AND ELEVATIONS AND NOTIFY THE ARCHITECT-ENGINEER OF ANY DISCREPANCIES.

D. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKER BOARDS, ETC. AS REQUIRED TO EXECUTE THE DEMOLITION/ CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.

E. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS

F. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.

G. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.

H. EXISTING MATERIALS SHALL NOT BE RE-USED UNLESS NOTED OTHERWISE, OR AS AUTHORIZED BY ARCHITECT-ENGINEER.

I. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.

J. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.

DEMOLITION KEY NOTES

1. REMOVE & DISPOSE OF WALL.
2. REMOVE & DISPOSE OF STAIR.
3. REMOVE & DISPOSE OF COLUMNS & ROOFING STRUCTURE (SHOWN HATCHED).
4. REMOVE & DISPOSE OF FLOOR JOISTS & SUBFLOOR (SHOWN HATCHED).
5. REMOVE & DISPOSE OF EXTERIOR SIDING.

NORTH

FLOOR PLAN

SCALE: 1/4"=1'-0"
SCALE: 1/8"=1'-0" (11"x17" SHEETS)

LIMIT OF MECH. LOFT ABOVE

FLOOR JOISTS & SUBFLOOR TO BE REMOVED

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Ashland School District
Willow Wind Barn Renovation
Ashland, Oregon

FLOOR PLAN

SCALE: 1/4"=1'-0"
12.08.09

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LEGEND

NEW GYPSUM BOARD CEILING or SOFFIT OVER NEW WOOD JOISTS.

NEW HVAC DIFFUSERS & EXHAUST FAN. SEE MECH

NEW LIGHT FIXTURE TYPES SEE ELECT

NORTH

ROOF PLAN

0 2' 6' 14' 26'

SCALE: 1/8"=1'-0"
SCALE: 1/16"=1'-0" (11"x17" SHEETS)

NORTH

REFLECTED CEILING PLAN

0 1' 3' 7' 13'

SCALE: 1/4"=1'-0"
SCALE: 1/8"=1'-0" (11"x17" SHEETS)

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REFLECTED CEILING PLAN

SCALE: 1/4"=1'-0"
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FINISH SCHEDULE

MARK	ROOM NAME	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING		NOTES	REMARKS
		MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.		
101	LOBBY	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
102	MEN	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
103	CHAIR STORAGE	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
104	PLATFORM			RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
105	ASSEMBLY AREA	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
106	CHAIR STORAGE	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
107	JANITOR	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
108	WOMEN	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
109	RISER RM	CONC	-	-	-	GB	P	GB	P	GB	P	GB	P	GB	P		
201	MECH	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		
202	MECH	LINO	FF	RB	FF	GB	P	GB	P	GB	P	GB	P	GB	P		

ABBREVIATIONS	
CONC	CONCRETE
CT	CERAMIC TILE
FF	FACTORY FINISH
FRP	FIBERGLASS REINF. PLASTIC PANEL
GB	GYPSUM WALLBOARD
LINO	LINOLEUM
P	PAINT
POLY	POLYEURETHANE
RB	RUBBER BASE
S	STAIN
SCTB	SELF COVED TILE BASE
WD	WOOD

DOOR SCHEDULE

SYM	DOOR SIZE	DOOR				FRAME		FIRE RATING	HDWR GROUP	DETAILS			REMARKS
		MAT.	TYPE	FIN.	GLASS	MAT.	FIN.			JAMB	HEAD	THSHLD	
101 A	PR 3'-0" x 6'-8" x 1 3/4"	IS	A	P		HM	P	NR					
101 B	PR 3'-0" x 6'-8" x 1 3/4"	IS	A	P		HM	P	NR					
102 A	3'-0" x 7'-0" x 1 3/4"	WD	B	P		HM	P	NR					
103 A	PR 2'-6" x 7'-0" x 1 3/4"	WD	B	P		HM	P	NR					
105 A	3'-0" x 7'-0" x 1 3/4"	IS	A	P		HM	P	NR					
106 A	PR 2'-6" x 7'-0" x 1 3/4"	WD	B	P		HM	P	NR					
107 A	3'-0" x 7'-0" x 1 3/4"	WD	B	P		HM	P	NR					
108 A	3'-0" x 7'-0" x 1 3/4"	WD	B	P		HM	P	NR					
109 A	3'-0" x 7'-0" x 1 3/4"	WD	B	P		HM	P	NR					

ABBREVIATIONS	
AL	ALUMINUM
FF	FACTORY FINISH
IS	INSULATED STEEL
HM	HOLLOW METAL
ITG	INSULATED TEMPERED GLASS
NR	NON RATED
P	PAINT
PLAM	PLASTIC LAMINATE
SC	SOLID CORE WOOD
STL	STEEL
STN	STAIN

DOOR TYPES

WINDOW TYPES

REGISTERED ARCHITECT
J. DAVID WILKERSON, II
MEDFORD, OR
5068
STATE OF OREGON

OgdenRoemer-Wilkerson Architecture AIA
COLLABORATIVE APPROACH - HONEST DESIGN
2950 east barnett road
medford oregon 97504
541 779 5237:
541 772 8472
WWW.ORWarchitecture.com

adroit CONSTRUCTION COMPANY, INC.

Ashland School District
Willow Wind Barn Renovation
Ashland, Oregon

WINDOW TYPES
DOOR SCHEDULE
FINISH SCHEDULE

SCALE: 1/4"=1'-0"
12.08.09

X0967DS

6.1

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1 SOUTH ELEVATION
SCALE: 1/8"=1'-0"

2 WEST ELEVATION
SCALE: 1/8"=1'-0"

5 EXT. RAMP @ EAST ELEVATION
SCALE: 1/4"=1'-0"

3 NORTH ELEVATION
SCALE: 1/8"=1'-0"

4 EAST ELEVATION
SCALE: 1/8"=1'-0"

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adroit CONSTRUCTION COMPANY, INC.

Ashland School District
Willow Wind Barn Renovation
Ashland, Oregon

EXTERIOR ELEVATIONS

SCALE: NOTED
12.08.09

X0967EE

7.1

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SECTION "A-A"

SECTION "B-B"

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Willow Wind Barn Renovation
Ashland, Oregon

BUILDING SECTIONS

SCALE: 1/4"=1'-0"
12.08.09

X0967BS

8.1

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1. LOBBY 101

2. MEN 102

(WOMEN 108 OPP. HAND. SIM)

NOTE: SEE DRAWING 12.1 FOR FIXTURE & ACCESSORY MOUNTING DETAILS.

3. PLATFORM 104

4. ASSEMBLY AREA 105/ PLATFORM 104

0 1' 3' 7' 13'

SCALE: 1/4"=1'-0"
SCALE: 1/8"=1'-0" (11"x17" SHEETS)

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INTERIOR ELEVATIONS

SCALE: 1/4"=1'-0"
12.08.09

X0967IE

11.1

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1 PAPER TOWEL DISPENSER

2 TOILET PAPER DISPENSER

3 TOILET SEAT COVER DISPENSER

4 WATER CLOSET 36" GRAB BAR

5 WATER CLOSET 42" GRAB BAR

6 SANITARY NAPKIN DISPENSER

7 URINALS

8 LAVATORY AND ACCESSORIES

9 WASTE RECEPTACLE

1 ACCESSIBLE PLUMBING FIXTURES & ACCESSORIES
SCALE: 1/2"=1'-0"

FAUCET CONTROLS & OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO MORE THAN 5 LBS. LEVER OPERATED, PUSH TYPE & ELECTRONICALLY CONTROLLED MECHANISMS ARE ACCEPTABLE. SELF CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

2 LAV CLEARANCES & NOTES
SCALE: 1/2"=1'-0"

3 BACKING FOR ITEMS< 100lbs/STUD
SCALE: NTS

SECTION

ATTACH FIXTURES or EQUIPMENT TO WD BACKING PER ADDITIONAL DETAILING

4 GRAB BARS & ITEMS> 100lbs /STUD
SCALE: 3"=1'-0"

5 RIDGE VENT
SCALE: 1"=1'-0"

6 RAKE (BEAK) @ OUTLOOKER
SCALE: 1 1/2"=1'-0"

7 EAVE VENTILATION
SCALE: 1 1/2"=1'-0"

8 EAVE FLASHING
SCALE: 3"=1'-0"

10 RAMP
SCALE: 1"=1'-0"

9 RAKE DETAIL
SCALE: 1 1/2"=1'-0"

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Ashland School District
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Ashland, Oregon

DETAILS

SCALE: 1/4"=1'-0"
12.08.03

X0967DT1

12.1

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J0967_WWBOVDSN0DT01.dwg 12/20/2003 11:45:28 AM, jsob

CIVIL IMPROVEMENT PLANS
FOR

WILLOW WIND BARN PROJECT

FIRE SERVICE LINE & DOMESTIC WATER SERVICE

LOCATED IN
SECTION 10, T. 39 S, R. 1 E, W.M.
(TAX LOT 200)
CITY OF ASHLAND
JACKSON COUNTY, OREGON

SITE INDEX MAP

NORTH

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

VICINITY MAP

NORTH
NOT TO SCALE

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE "OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2008" ODOT / APWA OREGON CHAPTER AND AS AMENDED BY THE CITY OF ASHLAND ENGINEERING DEPARTMENT.

2. CLASS "B" BACKFILL SHALL BE USED IN ALL TRENCHES WITHIN THE RIGHT OF WAY AND SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (PER CITY OF ASHLAND).

3. ALL PUBLIC WATER PIPE SHALL BE PER CURRENT CITY OF ASHLAND STANDARDS, BE FULLY RESTRAINED AND VISIBLY RECOGNIZABLE AS SUCH (EBAA MEGALUG OR APPROVED EQUAL).
   a. PIPE: AWWA 21.51 DUCTILE IRON, CLASS 50, FULLY RESTRAINED JOINT UNLESS NOTED OTHERWISE.
   b. FITTINGS: AWWA C116 OR C153 WITH "EBAA MEGALUGS" OR APPROVED EQUAL. RESTRAIN ALL JOINTS UNLESS OTHERWISE NOTED ON PLANS.
   c. THRUST BLOCKS: AT TAPPING TEES ONLY.
   d. THE CITY SHALL INSTALL ALL WATER SERVICES INCLUDING THE TAP, SERVICE LINE & METER. THE CONTRACTOR SHALL INSTALL THE METER BOX, LID & ACCESSORIES.
   e. THE OWNER SHALL ENTER INTO AN AGREEMENT WITH THE CITY TO STERILIZE ALL WATER SERVICES. COSTS FOR THIS WORK WILL BE BILLED BY THE CITY TO THE OWNER ON AN ACTUAL COST BASIS FOR LABOR, MATERIALS, EQUIPMENT RENTAL AND OVERHEAD.
   f. CONTRACTOR SHALL FURNISH ENGINEER OF RECORD AND CITY WITH DATA ON ALL VALVES AND PIPE APPURTENANCES WITH THE AS-BUILTS.

4. SEPARATION OF SANITARY SEWER AND WATER MAINS SHALL BE IN ACCORDANCE WITH OREGON STATE HEALTH DIVISION RULES AND/OR AS MODIFIED BY THE CITY OF ASHLAND.

5. ALL GIVEN PIPE LENGTHS AND SLOPES ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

6. THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND STRUCTURES ARE APPROXIMATE. THERE MAY EXIST UTILITIES THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION.

7. CONTRACTORS AND SUBCONTRACTORS SHALL BE PREQUALIFIED WITH THE CITY OF ASHLAND ENGINEERING DEPARTMENT PRIOR TO STARTING WORK. CONTRACTOR SHALL NOTIFY OREGON UTILITY NOTIFICATION CENTER (1-800-332-2344) AND THE CITY OF ASHLAND ENGINEERING (488-5347) 48 HOURS PRIOR TO STARTING WORK.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE VARIOUS UTILITY COMPANIES REGARDING INSTALLATION AND/OR RELOCATION REQUIREMENTS FOR THEIR FACILITIES.

9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.

10. STABILIZATION FABRIC SHALL BE WOVEN AND CONFORM TO 1991 OSHD PLACEMENT SECTION 02320 AND CONFORM TO 1991 OSHD SECTION 350.

EMBANKMENT CONSTRUCTION NOTES

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES, AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING, THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENT MATERIAL IS PLACED. THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIAL TO BE PLACED, AND TO THE DEPTH OF THE GRUBBING OR A MINIMUM OF 6 INCHES.

2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIAL AND FILLING OF HOLES, PITS, AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.

3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN HORIZONTAL LAYERS OF 8 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.

4. EMBANKMENTS SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.

5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.

6. THE MAXIMUM DENSITY OF COMPACTED MATERIALS WILL BE DETERMINED BY AASHTO T 99.

7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS, AND BACKFILLS TO A MINIMUM INPLACE DENSITY OF 95 PERCENT.

8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENTS AND BACKFILLS. EM-BANKMENT OR BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.

9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTIVE EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTIVE EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THAT ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.

OREGON UTILITY NOTIFICATION CENTER
1-800-332-2344
STOP CALL BEFORE YOU DIG!

CALL 48 HOURS BEFORE YOU DIG

CONSTRUCTION ENGINEERING CONSULTANTS INC.
P.O. BOX 1724 • MEDFORD, OREGON 97501
PH. (541) 779-5268 • FAX (541) 779-3139

DRAWN BY: MWK DATE: 3/09
CHECKED BY: MWK, PWH DATE: 3/09
AGENCY REVIEW: DATE:
AGENCY REVIEW: DATE:
APPROVED: DATE:
APPROVED: DATE:

REGISTERED PROFESSIONAL ENGINEER
15,993PE
OREGON
JULY 21, 1992
PATRICK W. HAVIRD
EXPIRES 6/30/11

CONTACT INFORMATION

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FX: (541) 779-3139

FIRE DISTRICT
DAN MARSHALL
JACKSON COUNTY FIRE DIST. 5
TALENT, OR 97540
PH: (541) 535-4222

DEVELOPER/OWNER:
WILLOW WIND COMMUNITY LEARNING CENTER
DEBBIE PEW
1497 EAST MAIN STREET
ASHLAND, OR 97520

CITY/ASHLAND PUBLIC WORKS:
KARL JOHNSON
ENGINEERING DIVISION
51 WINBURN WAY
ASHLAND, OR 97520
PH: (541) 488-5347
FX: (541) 488-6006

ELECTRIC/AFN:
DAVE TYGERSON
CITY OF ASHLAND
90 NORTH MOUNTAIN
ASHLAND, OR 97520
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FX: (541) 552-2436

JACKSON COUNTY
RUSS LOGUE
ROADS & PARKS
200 ANTELOPE ROAD
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CHARTER COMMUNICATIONS
BRAD DILL
926 S GRAPE STREET
MEDFORD, OR 97501
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GAS COMPANY:
DENNIS OTT
AVISTA UTILITIES
580 BUSINESS PARK DR
MEDFORD, OR 97504
PH: (541) 858-4740
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JIM MARTIN
QWEST
132 W. 4th STREET
MEDFORD, OR 97501
PH: (541) 776-8268
FX: (541) 776-8026

LEGEND

LINES

PROPOSED PVMNT	EXISTING STORM (EX SD)
PROPOSED SIDEWALK	EXISTING SEWER (EX SS)
PROPOSED STORM (xx" SD)	EXISTING WATER (EX W)
PROPOSED SEWER (xx" SS)	EXISTING GAS (EX G)
PROPOSED WATER (xx" W)	EXISTING POWER (EX P)
R/W	EXISTING PHONE (EX T)
PROPERTY LINE	EXISTING TV (EX TV)
CENTER LINE	EXISTING PVMNT
PUE	EXISTING C & G
PROPOSED C & G	EXISTING SIDEWALK
PROPOSED DITCH	EXISTING DITCH
	EXISTING FENCE

SYMBOLS

MANHOLE	AREA DRAIN
CLEAN-OUT	PIPE PLUG
SERVICE WYE	CATCH/LYNCH BASIN
WATER SERVICE	UTILITY POLE
FIRE HYDRANT	STREET LIGHT
WATER VALVE	TELEPHONE PEDESTAL (T)
FITTING &, T.B.	POWER TRANSFORMER (P)
CUT-IN SLEEVE	POWER SWITCHGEAR (S)
AIR VALVE	GAS VALVE
CURB INLET	

SHEET INDEX

TITLE	SHT #
COVER SHEET	C.1
WATER IMPROVEMENTS-PLAN & PROFILE	C.2
DETAILS	C.3

NO.	REVISION	DATE	BY

CITY OF ASHLAND

WILLOW WIND BARN PROJECT
FIRE & DOMESTIC SERVICE LINES
CIVIL IMPROVEMENTS

COVER SHEET

PROJECT NO. –

DRAWING NO. C.1

REVIEWED BY: Peter Shark 12/8/09
REVIEWED PUBLIC WORKS DIRECTOR: Michael Dawson DATE: 12/08/09

NAME: WIL-COVER.DWG PROJ.: PLOT DATE: 12/07/09

CONSTRUCTION NOTES

1. INSTALL 20 LF OF 12" HDPE STORM PIPE IN EXISTING DITCH FLOWLINE.
2. PROVIDE FILL AROUND PROPOSED FIRE VAULT AS SHOWN IN PROFILE, SEE EMBANKMENT NOTES, SHEET C.1
3. REMOVE & REPLACE EXISTING FENCE, IRRIGATION, AND LANDSCAPING TO PRECONSTRUCTION CONDITIONS.
4. SAWCUT EXISTING AC ROADWAY AS REQUIRED FOR WATER MAIN CONSTRUCTION, SLURRY BACKFILL IN R/W PER CITY STDS. SEE DETAILS, SHT. C.3
5. SAWCUT, REMOVE & REPLACE EXISTING CURB & GUTTER AND SIDEWALK PER CITY OF ASHLAND STDS.
6. INSTALL TWO 1 1/4" ELECTRICAL CONDUITS (24" MIN. COVER) FROM VAULT TO BUILDING PER N.E.C. INSTALL PULL BOXES AS REQUIRED. (VERIFY WITH PROJECT ELECTRICAL CONSULTANT AND FIRE SPRINKLER CONTRACTOR PRIOR TO CONSTRUCTION)
7. INSTALL ELECTRICAL JUNCTION-PULL BOX PER N.E.C. (VERIFY WITH PROJECT ELECTRICAL CONSULTANT AND FIRE SPRINKLER CONTRACTOR)
8. INSTALL 1" SCH. 40 PVC WATER TO EXISTING SCHOOL BUILDINGS, MAINTAIN 24" MIN. COVER. VERIFY SIZING AND TERMINATION POINT WITH ARCHITECT

NOTES

1. ALL LANDSCAPING, IRRIGATION, FENCING, AND MISC. IMPROVEMENTS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS FOLLOWING INSTALLATION OF PROPOSED FIRE LINE.
2. CONTRACTOR SHALL VERIFY ALL PROPOSED IMPROVEMENTS (FIRE LINE SIZE, DOMESTIC WATER SERVICE SIZE, CONDUITS, ETC) WITH ARCHITECT & FIRE SPRINKLER CONTRACTOR PRIOR TO ANY CONSTRUCTION.

FIRE SERVICE-WATER METER LAYOUT DETAIL

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

OREGON UTILITY NOTIFICATION CENTER 1-800-332-2344 NOT CALL BEFORE YOU DIG

CALL 48 HOURS BEFORE YOU DIG

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PH. (541) 779-5268 • FAX (541) 779-3139

DRAWN BY: XXX	DATE: 03/09
CHECKED BY: PWH	DATE: 12/09
APPROVED RVS:	DATE:
APPROVED:	DATE:
APPROVED:	DATE:
APPROVED:	DATE:

VERIFY SCALES!!!
BAR IS ONE INCH ON ORIGINAL DWG. IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
0 — 1"

NO.	REVISION	DATE	BY

REGISTERED PROFESSIONAL ENGINEER 15,099PE OREGON JULY 21, 1992 PATRICK W. HAYES EXPIRES 6/30/11

CITY OF ASHLAND

WILLOW WIND BARN PROJECT
FIRE & DOMESTIC SERVICE LINES
PLAN & PROFILE

PROJECT NO.

DRAWING NO. C.2

NAME: WIL-FIRE-PLAN.DWG PROJ.: PLOT DATE: 12/8/09

BACKFLOW & FIRE DEPARTMENT CONNECTION VAULT

(NTS)

1 / C.3

NOTE:

1. LARGE ASSEMBLIES ARE THOSE 2½" AND LARGER.
2. ASSEMBLY SHALL NOT BE SUBJECT TO FLOODING.
3. DCDAs ARE TYPICALLY INSTALLED BELOW-GRADE.
4. DCDAs SHALL BE INSTALLED ABOVE THE 100 YEAR FLOOD LEVEL, UNLESS OTHERWISE APPROVED BY MWC.
5. BRASS OR PLASTIC PLUGS ARE REQUIRED FOR ALL TESTING PORTS.
6. IF DOMESTIC SERVICE IS INSTALLED OFF THE FIRE SERVICE, A SECOND GATE VALVE SHALL BE INSTALLED OUTSIDE THE VAULT. RESTRAINED JOINTS MUST BE PROVIDED BETWEEN THE VALVE AND THE MAIN.
7. APPROVED DEVICE ASSEMBLIES: ALLIANCE CONCRETE ENCLOSURES, INC. ACE-468 FIRE SERVICE BACKFLOW ASSEMBLY.

MEDFORD WATER COMMISSION	REV	DOUBLE_CHECK_DETECTOR_ASSEMBLY_(LARGE)
	4/00	STANDARD DETAIL NO. 807

GENERAL NOTES:

1. COLD MIX AC MAY BE USED AS TEMPORARY PATCH ONLY.
2. ALL STEEL TRAFFIC PLATES IN TRAVELED AREAS MUST BE "RAMPED" WITH COLD MIX AC TO ALLOW SMOOTHER TRANSITION.
   a) MINIMUM 12" LAP OF STEEL PLATES ONTO EXISTING PAVEMENT.
   b) MINIMUM 3/4" STEEL PLATE THICKNESS.
3. ALL GASKETED JOINTS SHALL BE PRESSURE TESTABLE. (CONCRETE PIPE – ASTM C443; PVC & HDPE PIPE – ASTM D3212)
   a) SMALL PIPES (24" DIA. OR LESS) – MINIMUM TRENCH WIDTH SHALL BE I.D. PLUS 18".
   b) LARGE PIPES (30" DIA. OR GREATER) – MINIMUM TRENCH WIDTH SHALL BE O.D. PLUS 24", AT THE BELL END THE TRENCH WIDTH SHALL INCREASE TO ACHIEVE THE 24".
4. CONTROLLED LOW-STRENGTH MATERIAL (CLSM) IS HIGHLY FLOWABLE LEAN CONCRETE MIX; A MIXTURE OF FLY ASH, CEMENT, FINE AGGREGATES, WATER AND ADMIXTURES, IF NECESSARY. CLSM SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 150 TO 250 psi AND SHALL COMPLY WITH 2002 OREGON APWA/ODOT SECTION 00442.

STANDARD PIPE TRENCH

ISSUED: LB CRZ	DATE: 9/27/05 7/26/05	PUBLIC WORKS ENGINEERING	DRAWING NO.
REVISED:	DATE:	Ashland - Medford - Rogue Valley Sewer Services	CD302

2/28/00 804.DWG

NOTES

1. RPPA MUST BE INSTALLED ABOVE NATURAL GROUND, BUT MAY HAVE A BERM AROUND ENCLOSURE. ELEVATION VIEW DEPICTS AN ABOVE NATURAL GROUND INSTALLATION WITH A BERM.
2. BOTTOM AND SIDE CLEARANCES APPLY WHEN ASSEMBLIES ARE INSTALLED INSIDE BUILDING. ACCESS DOORS MAY BE PROVIDED ON SIDE OF ABOVE-GROUND VAULT.
3. RPPAs SHALL ALWAYS BE INSTALLED IN HORIZONTAL ORIENTATION.
4. RPPAs SHALL ALWAYS BE INSTALLED ABOVE THE 100 YEAR FLOOD LEVEL UNLESS OTHERWISE APPROVED BY MWC.
5. RELIEF VALVES SHALL NOT BE PLUGGED OR EXTENDED.
6. PROVIDE PROTECTION FROM FREEZING.
7. RPPAs SHALL NOT BE INSTALLED IN AN ENCLOSURE UNLESS A DRAIN TO DAYLIGHT IS PROVIDED AND BRASS OR PLASTIC PLUGS ARE PROVIDED IN ALL TEST PORTS.
8. MINIMUM CLEARANCES FOR ASSEMBLIES 2 INCHES AND SMALLER MAY BE REDUCED PROVIDED IT IS ACCESSIBLE FOR TESTING AND REPAIR AND APPROVED BY MWC. A MINIMUM CLEARANCE OF 12 INCHES UNDER THE RPPA MUST BE MAINTAINED.
9. MAXIMUM HEIGHT OF INSTALLATION SHALL NOT EXCEED 5 FEET FOR ASSEMBLY UNLESS THERE IS A PERMANANT PLATFORM INSTALLED IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH (OSHA) STANDARDS TO FACILITATE SERVICING THE ASSEMBLY.

MEDFORD WATER COMMISSION	REV	REDUCED PRESSURE PRINCIPLE ASSEMBLY
	4/00	STANDARD DETAIL NO. 804

THRUST BLOCKING

CONCRETE THRUST BLOCKING (HORIZONTAL)

PIPE DIA.	Table Pressure PSI	Thrust (T) at Fittings in Pounds A Tee & Dead Ends	B 90 deg Bend	C 45 deg Bend	D 22.5 deg Bend	E 11.25 deg Bend
4"	250	3140	4440	2405	1225	615
6"	250	7070	9995	5410	2760	1383
8"	250	12565	17770	9620	4905	2456
10"	250	19635	27770	15030	7660	3850
12"	250	28274	39985	21640	11030	5545
14"	250	38485	54435	29465	15018	7549
16"	250	50265	71085	38470	19615	9855

Soil Type	Soil Bearing Capacity (B) in PSF
Muck, peat, etc.	0
Soft Clay	1000
Sand	2000
Sand and gravel	3000
Sand and gravel cemented with clay	4000
Hard shale	10,000

CONCRETE BLOCKING FOR CONVEX VERTICAL BENDS

DIMENSION TABLE

PIPE DIA. in.	Table Pressure PSI	Bend Angle (deg)	Concrete Volume (cy)	Cube Size (ft)	Stirrup Dia. (in)	Stirrup Embmt. (in)
4"	250	11.25	0.21	1.5	5/8	17
		22.5	0.43	2.3		
		45	0.77	2.8		
6"	250	11.25	0.48	2.4	5/8	17
		22.5	0.93	3.0		
		45	1.78	3.9		
8"	250	11.25	0.89	2.9	5/8	17
		22.5	1.65	3.5		
		45	3.22	4.4		
10"	250	11.25	1.39	3.3	5/8	17
		22.5	2.62	4.1		
		45	4.97	4.1		
12"	250	11.25	1.94	3.7	5/8	17
		22.5	3.91	4.7		
		45	6.89	5.7	7/8	24
14"	250	11.25	2.62	4.1	5/8	17
		22.5	5.26	5.2	3/4	20
		45	9.70	6.4	1	27
16"	250	11.25	3.44	4.5	5/8	17
		22.5	6.88	5.7	7/8	24
		45	12.63	7.0	1-1/8	30

DETERMINATION OF THRUST BLOCK BEARING AREA

NOTE: WHEN THRUST BLOCK BEARING AREA IS NOT SPECIFIED ON THE PLANS OR DETERMINED BY THE ENGINEER, USE THE FOLLOWING PROCEDURE TO DETERMINE REQUIRED BEARING AREA.

1. Determine thrust (T) for type of fitting or joint and size of pipe from Table.
2. Determine Design (Test) Pressure from Standard Specifications or Special Provisions.
3. Determine Table Pressure from Table.
4. Determine Soil Bearing Capacity (B) of soil from Table.
5. Determine required bearing area (A) in sq. ft. as follows:

$$A = \left(\frac{T}{B}\right)\left(\frac{\text{Design (Test) Pressure}}{\text{Table Pressure}}\right)$$

Example: Design (Test) Pressure = 150 PSI; Pipe = 14"; Fitting = Tee; Soil = Sand

From Table, T = 273.3 PSI; From Table, B = 14 PSI

$$A = \left(\frac{273.3}{2000}\right)\left(\frac{150}{250}\right) = 11.85 \text{ sq ft}$$

NOTES:

1. Contractor to provide blocking adequate to withstand full test pressure.
2. Divide thrust by safe bearing load to determine required bearing area (A in sq ft) of concrete to distribute load.
3. Adjust bearing area (A) for other pressure conditions. (Use "Determination of Thrust Block Bearing Area" equation.
4. Pour concrete blocking against undisturbed earth.
5. All concrete to be 2000 PSI minimum.
6. Wrap pipe and/or fittings with 2 layers of polyethylene film where in contact with concrete
7. Keep concrete clear of all joints and accessories.
8. Stirrups shall be deformed galvanized cold rolled steel AASHTO M31 (ASTM A615), Grade 420. Coat with coal tar epoxy after installation.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

THRUST BLOCKING

2002 REVISED

DATE | DESCRIPTION

RD250

HYDRANT ASSEMBLY

NOTES:

1. When pipe is shorter than 18', no joints allowed. Use mechanical joint restainer glands. Two 3/4" galvanized tie rods may be used in lieu of thrust blocks for installations less than 18' long. Coat tie rods with two coats of coal tar epoxy.
2. When pipe is longer that 18' retainer glands not required.
3. There shall be a minimum of 18" horizontal clearance around hydrant.
4. When placed adjacent to curb, hydrant port shall be 24" from face of curb.
5. Concrete thrust blocks shall be constricted as per thrust block standard drawing. Do not block drain holes.
6. Extensions required for hydrant systems shall be installed to the manufacturer's specifications.
7. Hydrants shall be placed to provide a minimum of 2' clearance from driveways, poles, and other obstructions.
8. Hydrant pumper port shall face direction of access
9. Set hydrant plumb in all directions.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

HYDRANT INSTALLATION

2002 REVISED

DATE | DESCRIPTION

RD254

Notes:

1. Meter to be centered and set plumb inside meter box.
2. Manufactured meter setter may be used for 3/4" to 2" services.
3. Set meter box 4" minimum behind curb or sidewalk.
4. Meter boxes set in driveways shall have traffic lids.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

3/4"-2" WATER SERVICE CONNECTION

2002 REVISED

DATE | DESCRIPTION

RD274

OREGON UTILITY NOTIFICATION CENTER 1-800-332-2344 STOP-CALL BEFORE YOU DIG

CALL 48 HOURS BEFORE YOU DIG

CONSTRUCTION ENGINEERING CONSULTANTS INC.

P.O. BOX 1724 • MEDFORD, OREGON 97501
PH. (541) 779-5268 • FAX (541) 779-3139

DRAWN BY: MWK	DATE: 3/09
CHECKED BY: PWH	DATE: 3/09
APPROVED RVS:	DATE:
APPROVED:	DATE:
APPROVED:	DATE:
APPROVED:	DATE:

VERIFY SCALES!!!

BAR IS ONE INCH ON ORIGINAL DWG. IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

0 — 1"

NO.	REVISION	DATE	BY

REGISTERED PROFESSIONAL ENGINEER 15,993PE OREGON JULY 21, 1989 PATRICK W. HAYDEN EXPIRES 6/30/11

CITY OF ASHLAND

WILLOW WIND BARN PROJECT
FIRE & DOMESTIC SERVICE LINES
DETAIL SHEET

PROJECT NO.

DRAWING NO. C.3

NAME: WIL-DTL.DWG PROJ.: PLOT DATE: 12/08/09

GENERAL NOTES

General requirements

1. Verification: verify all dimensions, elevations and site conditions before starting work. Notify the [engineer] immediately of any discrepancies.
2. Conflicts: notes and details on the drawings take precedence over the general notes and typical details in case of conflict.
3. Codes: all materials and work shall conform to the requirements of the 2006 International Building Code (IBC)
4. Substitutions: provide manufacturer's approved product evaluation reports ICBO reports and a list of all proposed substitutions to the Engineer for review and written approval before fabrication.
5. Similar work: where construction details are not shown or noted for any part of the work, such details shall be the same as for similar work shown on the drawings.
6. Pipes, ducts, sleeves, chases, etc.: Shall not be placed in slabs, beams, or walls unless specifically shown or noted nor shall any structural member be cut for pipes, ducts, etc., Unless specifically shown. Obtain prior written approval for installation of any additional pipes, ducts, etc.
7. Excavations: locate and protect underground or concealed conduit, plumbing or other utilities where new work is being performed.
8. Construction loads: materials shall be evenly distributed if placed on framed floors or roofs. Loads shall not exceed the allowable loading for the supporting members and their connections.

Design criteria

1. Dead loads:
   Roof 15 psf
   Floor – 15 psf
   Platform – 15 psf
2. Live loads:
   Roof – (basic snow load) 25 psf
   Floor – Assembly (moveable seats) occupancy 100 psf
   Platform (assembly) – 100 psf
3. Lateral loads:
   Seismic: Design Category D
   Wind : 100 mph , Exposure C

Foundation: Geotechnical Engineer provided by owner for approved subgrade under footings.

1. Minimum founded depth & width of continuous footings:
   Depth.... 18"
   Width.. 12"
2. Founding of footings on Native granular or stuctural fill material by geotechnical engineer. Remove all clays.
3. Soil pressures:
   Soil bearing on native granular or Structural Fill = 1,500 psf
   Coefficient of friction.....0.40
   Passive pressure 350 pcf
   Active pressure non-restrained 35 pcf
4. Compaction reports shall be sent to the engineer and building official.
5. Roof and area drainage: shall be directed away from the foundations.
6. Backfill: Backfill for walls shall be pervious (granular) material. Do not place backfill behind walls before they have attained their design strength. Shore and protect walls from lateral loads until the supporting members are in place and have developed specified strengths.
7. Center footings on walls or columns unless otherwise shown on drawings
8. Foundation drains adjacent to retaining wall shall be installed to drain to daylight or tie into storm drain.

Reinforced concrete

1. Materials:
   Cement ASTM C-150 type [II]
   Aggregate ASTM C-33 [standard weight]
   Reinforcement ASTM A-615 grade [60] typical
   Anchor bolts ASTM A-36 hooked anchor bolts
   Anchor bolts ASTM A-307 headed machine bolts
2. Concrete strengths: the concrete strengths shown in the following table are the minimum compressive strengths at 28 days; and the aggregate (agg) shown is the maximum size. Concrete shall be standard weight concrete (145 pcf). Design strength shall be 3,000 psi for foundations.

   Submit design mix to Engineer of record

Item	Strength	Aggregate	Slump (w/o water reducing agent)
Foundations	3,000 psi	3/4"	4"
Slabs-on-grade.	3,500 psi	3/4"	4"

   Slump with super plasticizer 8" max.

3. Reinforcement:
   A) Detailing, fabrication and placing: shall conform to ACI 315 and ACI 316.
   B) Minimum concrete cover:
      Cast against & exposed to earth 3"
      Exposed to earth or weather 2"
      Not exposed to weather or in contact with ground:
      Slabs, walls, joists 3/4"
      Beams, columns (ties, stirrups, spirals) 1-1/2"
   C) Chairs, spacers and sand plates: as required to maintain concrete cover.
   D) All welded wire mesh shall be furnished in flat sheets supported on bolsters and conform to Astm A-185
   E) Provide corner bars same size and spacing as horizontal bars and project one lap splice each way.
   F) Provide (2) #5 bars around all openings and recesses. Extend these bars 24 inches beyond the corner of the openings.
   G) Vertical reinforcement: shall be doweled to supporting members with the same size and spacing of reinforcement as shown in the drawings and general notes.
   H) Spacing: clear distance between parallel reinforcement in a layer shall not be less than 1-1/2 times the nominal diameter of the reinforcement, or 1-1/3 times maximum size aggregate, nor less than 1-1/2".
   I) Tack welding, welding, heating or cutting of bars: not permitted uon.
   J) Slab corners: provide 2-#4 x 4'-0" at re-entrant corners and each corner of rectangular holes in slabs. Place bars diagonally.
   K) Splices (standard laps): See schedule 1/S1.1.
      Stagger bottom splices at least 5'-0" from splices in other bottom reinforcement.
      Stagger splices for top reinforcement similarly.
   L) Anchor bolts, dowels and hold down anchors: securely held in place prior to rebar inspection by the building official and observation by the [engineer].
   M) Pipes, sleeves and ducts: not to be placed in walls, beams, slabs, footings or columns unless specifically detailed.
   N) Chamfer: [3/4] inch on exposed corners.
   O) Concrete design mix shall be reviewed by the engineer. Calcium chloride or added chlorides are not permitted.
   P) Construction joints: ACI 117.9 & 6.4, 1/4 inch amplitude minimum or keyed joints per plan.) Location of joints to be reviewed by the engineer. Wait 48 hours between pours.
   Q) Slab-on-grade joints: location of all construction, control and weakened plane joints not specifically indicated on the drawings shall be reviewed by the [engineer] prior to the placing of reinforcement. Maximum spacing [15] feet on center.
   R) Actual dimensions: slab, wall, beam and column dimensions shown are actual dimensions not nominal dimensions (i.e. A 4 inch slab is 4 inches thick, not 3-1/2 inches.)
   S) Concrete curing: ACI 318-02
   T) Vibration: all concrete shall be consolidated with mechanical vibrators.
   U) The contractor shall provide and install all cast-in inserts as required for a complete job.
   V) Non shrink grout shall be non-metallic, non-shrink grout conforming to requirements of ASTM C1107, type B or C, with an ASTM C109 compressive strength of 5000 psi at 7 days. Acceptable products are Masterflow 928 and Five Star Grout or approved equal.

Prefabricated wood i-joists

1. Codes and fabrication: manufacturer's approved ICBO product evaluation reports.
2. Deflection: floor live load deflection shall not exceed l/480 and total load deflection shall not exceed l/360. Roof total load deflection shall not exceed l/240.
3. Nailing: use a staggered nailing pattern, when possible, based on the manufacturer's minimum nail spacings. Submit for review the recommended nailing patterns for all i-joist products.
4. Blocking, web stiffeners and bridging: as required by the manufacturer's approved product evaluation reports, the IBC, ICBO approvals, the calculations and the drawings.
5. Joist changes: obtain written consent from the [engineer] to change the joist type, depth or spacing.

Wood

1. Grade stamped Douglas fir/larch No. 2 unless otherwise noted (see lumber grades).
2. Nails: common wire unless otherwise noted. Edge or end distances in the direction of stress shall not be less than one half of the required penetration (table 23-i-g). The spacing center to center of nails in the direction of stress shall not be less than the required penetration. Holes for nails, where necessary to prevent splitting, shall be bored to a diameter smaller than that of the nail.
3. All wood posts shall be D.F. No. 1

Laminated Veneer Lumber

1. Beams to be built in accordance with "Standard Specifications for members of the American institute of " Timber Construction"

Drilled Anchors

1. Install in strict accordance with ICBO report and manufacturer's instructions, including hole clean out procedures, embedment, minimum spacing, and edge distance to obtain maximum capacity.
2. Contact engineer to relocate if existing cracks or reinforcing is encountered where anchor is to be placed.
3. Epoxy adhesive anchors: Rawl or Simpson or equal

Equipment and Non-structural Components

1. Verify weights, locations, and sizes of equipment and components with the installation subcontractor.
2. Submit seismic anchorage calculations stamped by an Oregon Professional Engineer for all equipment and components weighing more than 400 lbs.
3. Coordinate between subcontractors to insure that:
   a) Additional secondary framing is provided. Design is per UBC Chapter 16 by the secondary framing supplier's engineer (minimum 2 additional members per concentrated load).
   b) Edges of decking are supported at all openings per drawings.
   c) Openings and accessories are located to avoid interference with structural elements.
   d) Pre-engineered elements are designed to support all weights and forces and allow for all openings.
   e) Equipment and accessories are braced per SMACNA Seismic Restraint Manual. Unusual ductwork, piping, or conduit configurations that fall outside of SMACNA minimum limits should be securely restrained to prevent movement.
   f) Suspended ceilings are braced per UBC Standard 25-2 or ICBO Report #4071.

Reinforced hollow unit masonry

1. Materials:
   Concrete block....See Architect for specification (105-125 pcf), open end, deep cut bond beams at Horizontal reinforcing, dry Units, yard cured 28 days. [f'm = 1,900 psi]

   Mortar.....ASTM C-270

   Grout.....Minimum strength at the end of 28 days shall be 2,000 psi.

   Reinforcement...ASTM A-615 grade [60] typical
   Anchor bolts....ASTM A-36 hooked anchor bolts
   Anchor bolts....ASTM A-307 headed machine bolts
2. Specified compressive strength:
   f'm = 1500 psi unless noted otherwise. All constituents , including mortar grout and units shall possess requirements to achieve f'm = 1500 psi
3. Block layup: running bond, concave compressed joints, inverted bond beam units for starting courses.
4. Reinforcement:
   A) Vertical: center reinforcement in the wall unless specifically detailed otherwise. Vertical support spacers 200 reinforcement diameters maximum. Dowel reinforcement to supporting members with same size and spacing of reinforcement as shown on the drawings.
   B) Splices laps: see schedule 1/S1.0 greater.
5. Grouting:
   A) All cells and spaces filled with grout solid grouted.
   B) Consolidated: at time of placement by mechanical vibration.
   C) Pours over 5 feet: provide cleanouts in bottom course at reinforcement 32 inches max.
   D) Horizontal construction joints: formed by stopping the grout pour 1-1/2 inches below the top of a mortar joint and a minimum of 1/2 inch below the top of bond beams.
   E) Lifts less than 6 feet: placed in a continuous pour.
6. Reinforcement congestion: double open end blocks or u blocks to be used to facilitate construction. (Contractors option)
7. Wood to masonry attachment: where wood abuts masonry, anchor with [5/8] inch anchor bolts [12] inches from each end and [48] inches on center.
8. Reinforcing steel shall be rail steel deformed bars conforming to ASTM A615, Grade 60.
9. Provide knockout bond beam block for all horizontal bond beams and at the tops of each wall, at all ledger bolt lines, and below all joist seats. Reinforce with 2 #4 horizontal unless noted otherwise.
10. Provide corner bars same size and spacing as horizontal bars and project 40 diameters each way.
11. Provide (2) - #5 bars around all openings and recesses. Extend these bars 24" horizontally beyond the corner of openings, and vertically to top of wall.
12. Masonry columns and pilasters shall be reinforced with #6 vertical at each corner and #3 horizontal ties at 8" o.c. unless shown otherwise on plans.(not using)
13. Provide vertical bar positioners (Durowall D/A 811 or 816 or similar) at first course, 8" below top course of each grout lift. Do not substitute centered positioners where reinforcement is to be located offset from center of wall. Rebar shall be secured against displacement prior to grouting at intervals not to exceed 200 bar diameters.

Quality control:

A) Compression tests: Contractor shall, at the owners expense, have test cylinders made in accordance with ASTM C31, latest edition. Four test cylinders shall be made for each strength of concrete placed on any one day and at least four test cylinders for each 100 cubic yards. All test cylinders shall be laboratory cured. Of each group of four cylinders, two shall be broken at 7 days and two at 28 days, except that the Contractor may at his option break one of the two test cylinders at 42 days instead.

B) Slump tests: The Contractor shall at the owners expense have 1 slump test taken per each four cylinders. Measure slump in accordance with ASTM C143 latest edition. If a super plasticizer water reducing agent is used, no slump tests are required.

C) A copy of the compression and slump test results shall be sent to the Engineer of record.

Inspections & Observations

1. Responsibility: it is the responsibility of the General Contractor to inform the special inspector or inspection agency at least [24] hours prior to performing any work that requires special inspection.
2. Observations by the Engineer:
   A) review concrete reinforcement report by testing agency
   B) shear walls & holdowns.
   C) Periodic and completion of rough framing.
3. All items noted as requiring special inspection per the 2006 International Building Code in accordance with Chapter 17, shall be performed by a qualified person who can demonstrate competence for the particular type of construction being inspected.
4. Structural welding – during the welding of any member or connection which is designed to resist loads and forces required by this Code.
   (1) Exceptions:
   (2) Welding done in an approved fabricator's shop in accordance with Section 1701.7.
   (3) The special inspector need not be continuously present during welding of the following items, provided the materials, qualifications of welding procedures and welders are verified prior to the start of work; periodic inspections are made of work in progress; and a visual inspection of all welds is made prior to completion or prior to shipment of shop welding:
      (a) Single-pass fillet welds not exceeding 5/16".
      (b) Floor and roof deck welding
      (c) Welded Studs when used for composite systems
      (d) Sheet steel for cold formed steel framing
      (e) Welding of stairs and railing systems.

SPECIAL INSPECTION AND TESTING SCHEDULE

1. Concrete – By Testing Agency
   [ ] Cont placement inspect
   [X] Exceptions fully supported on earth
   [x] 4 Cylinders per 100 CY
   Test: 1 @ 7, 2 @ 28, 1 Hold
   [x] Slump: 1 per 100 CY without plasticizer
2. Bolts installed in concrete– By Testing Agency
   [ ] All bolts
   [ ] Location: _____
   [x] Exceptions no stress increase used in design
3. Reinforcing steel –By Testing Agency
   [X] Placement inspection prior to concrete delivery
4. Structural Welding – By Testing Agency
   Periodic Visual Inspection:
   [x] Single pass fillets <5/16"
   [ ] Steel deck
   [x] Welded studs
   [ ] Cold formed studs & joists
   [x] Stair & railing systems
   [ ] Reinforcing steel
5. Grading, excavation, filling by GEOTECHNICAL ENGINEER
   [X] Periodic inspection
   [x] Subgrade tests Per Geotechnical Engineer
   [x] Compaction tests Per Geotechnical Engineer
   [X] Verify bearing strata by Geotechnical Engineer
6. Epoxy Anchors – Continuous inspection
7. Masonry f'm =1500PSI Stresses FULL STRENGTH FOR ALL WALLS special inspection required for:
   Verification of f'm:
   Level 1 inspection per IBC table 1704.5.1

Structural Steel PROVIDE SHOP DWGS TO EOR PRIOR TO FABRICATION

1. Fabricate, detail, and erect in accordance with the following:
   A. Current AISC "Specifications for Structural Steel Buildings".
   B. Current AISC "Code of Standard Practice for Steel Buildings and Bridges".
   C. AWS D1.1 Structural Welding Code-Steel.
2. Materials Properties: Unless otherwise noted on plans
   A. Structural steel shapes: ASTM A572 Grade 50.
   B. Structural steel tubing: ASTM A500, Grade B
   C. Structural steel pipe: ASTM A501 or A53, Grade B
   D. Plate and bar stock: ASTM A36.
   E. Welding electrodes:
      SMAW: E70XX low hydrogen.
      FCAW: E7XT-X with Charpy V-Notch impact 20 ft-lbs @ 0 deg. F or better.
3. Bolts
   A. High strength bolts shall be ASTM A325N bearing-type connection with threads not excluded from the shear plane unless noted otherwise. High strength bolts not specified as "slip critical", should be at least "snug tight".
   B. All other bolts not designated as high strength or specified to be machine bolts (MB) shall be ASTM A307, Grade A. Galvanize all exterior bolts in accordance with ASTM A53.
   C. Locknuts shall be 1F1 100, Grade B prevailing-torque type and installed with all machine bolts.
   D. Plain hardened washers shall be ASTM F436.
   E. Beveled washers shall be ANSI B18.23.1.
4. Welds
   A. Minimum fillet weld size : See plans
   B. End return fillet welds 2x nominal weld size wherever practical, unless noted otherwise.
5. Headed studs shall be TRW Nelson Type S3L or H4L with fluxed ends or approved equal. Specified length is the nominal after welded length (AWL). Studs shall be welded with automatically timed stud welding equipment per AWS 7.5.1. Or fully developed fillet weld.
6. Coating
   A. Mask 3/4 inch clear of field welds where shop coating is required. Do not paint or coat welds until quality control inspections are performed.
   B. After fabrication, but before installation, remove rust scale, grease and oil by wire brushing and chemical treatment.
   C. Shop prime steel with rust inhibiting primer except as follows:
      1) Steel work encased in concrete or grouted masonry.
      2) Contact surfaces beneath steel connected with high strength bolts.
      3) Within 3/4" of field weldments. Coat after quality control inspections are completed.
      4) Concealed interior steel not subject to moisture or high humidity.
      5 Exposed exterior steel subject to moisture or high humidity, which shall be galvanized per ASTM A123 with 1.25 oz. of zinc spelter per square feet of surface area.

BENDS SHOWN FOR GRADE 60 ONLY.
GRADE 60 BEND RADIUS :
6D FOR #3 THRU #6 BARS
8D FOR #9 THRU #11 BARS

HOOKS & BENDS

CORNER LAP

ALL BARS SHALL BE TIED TOGETHER

SPLICE/LAP

SPLICES FOR SUCCESSIVE TIES TO BE PLACED AT ALTERNATE CORNERS OF COLUMNS

COLUMN TIES

LAP SPLICE SCHED	3,000 PSI CONC	CONC MASONRY UNITS
Bars	LAP (UON)	LAP (UON)
#3	24	19"
#4	24	25"
#5	27	31"
#6	33	57"
#7	57	79"
#8	66	112"

1 REBAR SCHEDULE

Scale: NTS

OPTIONAL SAWN JOINTS:
JOINT DEPTH AT 1/5 OF SLAB DEPTH. SAWING TO OCCUR AS SOON AS CONCRETE CAN BE SAWN WITHOUT SPALLING

WET CONTROL JOINT (C.J.)

COLD (DOWELED) CONTROL JOINT

NOTES: – ALL CONSTRUCTION (POUR) JOINTS TO BE COLD CONTROL JOINTS
– SEE PLANS FOR LOCATIONS OF JOINTS
– CONTRACTOR POURING SCHEME WILL DETERMINE WHICH JOINTS ARE COLD C.J.'S AND WHICH ARE WET C.J.'S.
– CONTRACTOR HAS THE OPTION OF USING EITHER ZIP STRIP OR SAWCUT FOR WET JOINTS AND EITHER DOWELS OR KEY AT COLD JOINTS.

3 CONCRETE SLAB

Scale: NTS

4 PIPE SLEEVE (TYP)

Scale: NTS

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 19152PE OREGON JULY 15, 1987 BARBARA L. CIOTA
EXPIRES 12/31/09

CIOTA ENGINEERING
274 FOURTH ST.
ASHLAND, OR 97520
TELEPHONE: (541) 552-0290
FAX: (541) 552-0292

Ashland School District
Willow Wind Barn Renovation
ASHLAND, OREGON

STRUCTURAL DETAILS & NOTES

SCALE: NTS
12/8/09
09-045/S-GEN

S1

SHT. 1 OF 7

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Ciota Engineering, and is not to be used, in whole or in part, for any other project without the written authorization of Ciota Engineering.

LEGEND

BOF -#'-#"	- INDICATES BOTTOM OF FOOTING ELEVATION FROM 0'-0" DATUM.
TOW -#'-#"	- INDICATES TOP OF WALL ELEVATION FROM 0'-0" DATUM.
COLUMN	- INDICATES COLUMN CALLOUT
*	* - HOLDOWN AS SHOWN, DTL 5/S7
	- INDICATES 8" CMU REINFORCED & SOLID GROUTED.
	- INDICATES 2x6 CRIPPLE WALL. STUDS @ 16" OC. SEE DTL 1/S6
F2	- INDICATES FOOTING CALLOUT SEE SCHEDULE FOR REINF'T.
	- INDICATES INTERIOR PARTITIONS PER ARCHITECT

CONTRACTOR NOTE:

VERIFY ALL DIMENSIONS WITH ARCHITECT

COORDINATE WITH ENGINEER PRIOR TO REMOVING CABLE SUPPORT SYSTEM. CONTACT JAY TREIGER FOR ASSISTANCE

ALL SHORING BY CONTRACTOR

FLOOR SHEATHING NOTE:

1 1/8" STRUCT 2 T&G C-D EXT. GLUE PND. PANEL I.D. 48/24. ATTACH W/ PNL ADHESIVE AND NAIL WITH 8d COMMON @ 6" OC AT ALL EDGES (UON) & AT 12" OC @ INTERMED SUPPORTS. STAGGER PANELS SEE DTL 11/S7

PLAN NOTES:

1. CONTRACTOR RESPONSIBLE FOR VERIFYING NEW CONSTRUCTION WORKS WITH EXISTING STRUCTURE. NOTIFY ENGINEER OF CONCERNS.
2. GEOTECHNICAL ENGINEER SHALL BE ON SITE FOR OBSERVATION DURING EXCAVATION, BACKFILLING & COMPACTION OF SUBGRADE.
3. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONCERNS DURING EXCAVATION, BACKFILLING AND SHORING OF EXISTING STRUCTURE.
4. ALL ELEVATION CALLOUTS (BOF, TOW, TOP OF SHT'G) ARE REFERENCED FROM THE DATUM OF: 0'-0" = TOP OF FLOOR SHT'G
5. ALL EXTERIOR WOOD TREATMENT BY CONTRACTOR.
6. SEE ARCHITECT FOR ADD'L DIMENSIONS & INTERIOR PARTITIONS.
7. ALL MOISTURE PROTECTION, SEALANTS AND FLASHING BY OTHERS.
8. SEE DETAIL 6/S5 FOR STEPPED FOOTING INFORMATION.
9. COORDINATE REMOVAL OF CABLE SUPPORTS WITH JAY TREIGER.

HEADER SCHEDULE DTL 8/S7

MK	SIZE	SUPPORT STUDS UON
HDR1	(2) 2x6 D.F. NO.2 OR BETTER	(1) JAMB , (2) KING
HDR2	3 1/2 x 7" VL 1.7 2650 DF	(1) JAMB , (2) KING
HDR3	7" x 9 1/2" VL 2.0 3100 DF	PER PLAN
HDR4		

FOOTING SCHEDULE

MK	SIZE	REINFORCEMENT
F1	1'-4" W x 10" D CONTINUOUS	(2) #4 CONT., DTL 1/S6
F2	2'-0" W x 10" D CONTINUOUS	(3) #4 CONT., DTL 1/S5
F3	3'-2 1/4"x3'-0"x10"D SPREAD FTG	(4) #5 EA WAY, DTL 3/S5 & 4/S5
F4	4'-0" SQ x 10" D SPREAD FTG	(5) #5 EA WAY, DTL 5/S5
F5		

FOUNDATION PLAN

SCALE: 1/4"=1'-0"

N

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 19152PE OREGON JULY 15, 1997 BARBARA L. CIOTA

EXPIRES 12/31/09

CIOTA ENGINEERING

274 FOURTH ST.
ASHLAND, OR 97520

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Ashland School District
Willow Wind Barn Renovation
ASHLAND, OREGON

Foundation Floor Framing Plan

SCALE: 1/4"=1'-0"
12/8/09

09-045/S-FndnPlan

S2

PLATFORM FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0"

MECHANICAL LOFT FRAMING PLAN

SCALE: 1/4"=1'-0"

FLOOR SHEATHING NOTE:
1 1/8" STRUCT 2 T&G C-D EXT. GLUE PWD. PANEL I.D. 48/24. ATTACH W/ PNL ADHESIVE AND NAIL WITH 8d COMMON @ 6" OC AT ALL EDGES (UON) & AT 12" OC @ INTERMED SUPPORTS. STAGGER PANELS SEE DTL 11/S7

PLAN NOTES:

1. CONTRACTOR RESPONSIBLE FOR VERIFYING NEW CONSTRUCTION WORKS WITH EXISTING STRUCTURE. NOTIFY ENGINEER OF CONCERNS.
2. COORDINATE REMOVAL OF CABLE SUPPORTS WITH JAY TREIGER.
3. ALL ELEVATION CALLOUTS (BOF, TOW, TOP OF SHT'G) ARE REFERENCED FROM THE DATUM OF: 0'-0" = TOP OF FLOOR SHT'G
4. ALL EXTERIOR WOOD TREATMENT BY CONTRACTOR.
5. SEE ARCHITECT FOR ADD'L DIMENSIONS & INTERIOR PARTITIONS.
6. ALL MOISTURE PROTECTION, SEALANTS AND FLASHING BY OTHERS.

HEADER SCHEDULE DTL 8/S7

MK	SIZE	SUPPORT STUDS UON
HDR1	(2) 2x6 D.F. NO.2 OR BETTER	(1) JAMB , (2) KING
HDR2	3 1/2 x 7" VL 1.7 2650 DF	(1) JAMB , (2) KING
HDR3	7" x 9 1/2" VL 2.0 3100 DF	PER PLAN
HDR4		

* - INDICATES HOLDOWN AS SHOWN, DTL 5/S7

CONTRACTOR NOTE:

VERIFY ALL DIMENSIONS WITH ARCHITECT

ALL SHORING BY CONTRACTOR

FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0"

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Ashland School District
Willow Wind Barn Renovation
ASHLAND, OREGON

Floor Framing Plan

SCALE: 1/4"=1'-0"
12/8/09

09-045/S-flrfrmg

S3

SHT. 3 OF 7

CONTRACTOR NOTE:

VERIFY ALL DIMENSIONS WITH ARCHITECT

ALL SHORING BY CONTRACTOR

LEGEND

TOW -#'-#"	- INDICATES TOP OF WALL ELEVATION FROM 0'-0" DATUM.
SW2	- INDICATES SHEARWALL. STUDS @ 16" OC. SEE DTL 9/S7 & 10/S7

ROOF SHEATHING NOTE:

5/8" GRADE C-D, EXPOSURE 1, EXTERIOR GLUE, PWD SHT'G, 24/48 SPAN RATED. ATTACH WITH 8d COMMON @ 6" OC AT ALL EDGES (UON) & AT 12" OC @ INTERMED SUPPORTS. STAGGER PANELS, SEE DTL 11/S7

PLAN NOTES:

1. CONTRACTOR RESPONSIBLE FOR VERIFYING NEW CONSTRUCTION WORKS WITH EXISTING STRUCTURE. NOTIFY ENGINEER OF CONCERNS.
2. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONCERNS DURING CONSTRUCTION OF NEW TO EXISTING CONSTRUCTION.
3. ALL ELEVATION CALLOUTS (BOF, TOW, TOP OF SHT'G) ARE REFERENCED FROM THE DATUM OF: 0'-0" = TOP OF FLOOR SHT'G
4. ALL EXTERIOR WOOD TREATMENT BY CONTRACTOR.
5. SEE ARCHITECT FOR ADD'L DIMENSIONS & INTERIOR PARTITIONS.
6. ALL MOISTURE PROTECTION, SEALANTS AND FLASHING BY OTHERS.
7. COORDINATE REMOVAL OF CABLE SUPPORTS WITH JAY TREIGER.

HEADER SCHEDULE

DTL 9/S9

MK	SIZE	SUPPORT STUDS UON
HDR1	(2) 2x6 D.F. NO.2 OR BETTER	(1) JAMB , (2) KING
HDR2	3 1/2 x 7" VL 1.7 2650 DF	(1) JAMB , (2) KING
HDR3	7" x 9 1/2" VL 2.0 3100 DF	PER PLAN
HDR4		

ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"

N

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 19132PE OREGON JULY 15, 1997 BARBARA J. CIOTA

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Ashland School District
Willow Wind Barn Renovation
ASHLAND, OREGON

Roof Framing Plan

SCALE: 1/4"=1'-0"
12/8/09

09-045/S-RF frmg

S4

SHT. 4 OF 7

CONTRACTOR NOTE:

VERIFY ALL DIMENSIONS WITH ARCHITECT

ALL SHORING BY CONTRACTOR

LEGEND

TOW -#'-#"	- INDICATES TOP OF WALL ELEVATION FROM 0'-0" DATUM.
SW2	- INDICATES SHEARWALL. STUDS @ 16" OC. SEE DTL 9/S7 & 10/S7

ROOF SHEATHING NOTE:
5/8" GRADE C-D, EXPOSURE 1, EXTERIOR GLUE, PND SHT'G, 24/48 SPAN RATED. ATTACH WITH 8d COMMON @ 6" OC AT ALL EDGES (UON) & AT 12" OC @ INTERMED SUPPORTS. STAGGER PANELS, SEE DTL 11/S7

PLAN NOTES:

1. CONTRACTOR RESPONSIBLE FOR VERIFYING NEW CONSTRUCTION WORKS WITH EXISTING STRUCTURE. NOTIFY ENGINEER OF CONCERNS.
2. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONCERNS DURING CONSTRUCTION OF NEW TO EXISTING CONSTRUCTION.
3. ALL ELEVATION CALLOUTS (BOF, TOW, TOP OF SHT'G) ARE REFERENCED FROM THE DATUM OF: 0'-0" = TOP OF FLOOR SHT'G
4. ALL EXTERIOR WOOD TREATMENT BY CONTRACTOR.
5. SEE ARCHITECT FOR ADD'L DIMENSIONS & INTERIOR PARTITIONS.
6. ALL MOISTURE PROTECTION, SEALANTS AND FLASHING BY OTHERS.
7. COORDINATE REMOVAL OF CABLE SUPPORTS WITH JAY TREIGER.

HEADER SCHEDULE DTL #/S#

MK	SIZE	SUPPORT STUDS UON
HDR1	(2) 2x6 D.F. NO.2 OR BETTER	(1) JAMB , (2) KING
HDR2	3 1/2 x 7" VL 1.7 2650 DF	(1) JAMB , (2) KING
HDR3	7" x 9 1/2" VL 2.0 3100 DF	PER PLAN
HDR4		

ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"

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STEVEN C. TURRANT REGISTERED PROFESSIONAL ENGINEER 19-13-98 OREGON JULY 15, 1997 BARBARA L. CIOTA

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Ashland School District
Willow Wind Barn Renovation
ASHLAND, OREGON

Roof Framing Plan

SCALE: 1/4"=1'-0"
12/8/09

09-045/S-RF frmg

S4

SHT. 4 OF 7

1 FOUNDATION DETAIL

Scale: 1"=1'-0"

2 FOUNDATION DETAIL

Scale: 1"=1'-0"

3 FOUNDATION DETAIL

Scale: 1"=1'-0"

COLUMN BASE PLATE

4 FOUNDATION DETAIL

Scale: 1"=1'-0"

5 FOUNDATION DETAIL

Scale: 1"=1'-0"

6 STEPPED FOOTING DETAIL

Scale: 1"=1'-0"

A WALL SECTION @ GABLE ENDS

B WALL SECTION @ SIDE WALLS

7 FOUNDATION DETAIL

Scale: 1"=1'-0"

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 19152PE OREGON JULY 15, 1981 BARBARA L. CIOTA

EXPIRES 12/31/09

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Ashland School District
Willow Wind Barn Renovation
ASHLAND, OREGON

STRUCTURAL DETAILS

SCALE: 1"=1'-0"
12/8/09

09-045/S-DTLS1

S5

SHT. 5 OF 7

1 CRIPPLE WALL DETAIL

Scale: 1"=1'-0"

2 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

3 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

4 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

5 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

10 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

6 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

WELDED STEEL SADDLE
3/8" SIDE PLATES
3/4" BOTTOM PLATE
7/8" THRU BOLTS
1/4" FILLET WELDS

7 STEEL BUCKET DETAIL

Scale: 1"=1'-0"

8 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

9 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

STRUCTURAL PROFESSIONAL ENGINEER 19152PE OREGON JULY 15, 1981 BARBARA L. CIOTA
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Ashland School District
Willow Wind Barn Renovation
ASHLAND, OREGON

STRUCTURAL DETAILS

SCALE: 1"=1'-0"
12/8/09
09-045/S-DTLS2

S6

SHT. 6 OF 7

1 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

2 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

3 SHEAR TRANSFER DETAIL

Scale: 1"=1'-0"

4 DETAIL

Scale: 1"=1'-0"

5 HOLDOWN ANCHOR DETAIL

Scale: 1"=1'-0"

6 STEPPED TOP PLATE DETAIL

Scale: NTS

7 TOP PLATE SPLICE DETAIL

Scale: NTS

8 HEADER DETAIL TYPICAL

Scale: NTS

9 SHEARWALL NAILING DETAIL

Scale: NTS

ABBREVIATIONS

BN*	BOUNDARY NAILING - SEE FLR. SHT'G & ROOF SHT'G NOTE
SN*	SHEAR NAILING - SEE SHEARWALL SCHEDULE
EN*	EDGE NAILING - SEE SHEARWALL SCHEDULE
FA*	FRAMING ANCHOR - SEE SHEARWALL SCHEDULE

SHEARWALL SCHEDULE

BLOCK ALL EDGES

MK ON PLAN	APA RATED SHEATHING (NO OF SIDES)	"EN" EDGE NAILING (IN OC)	"AB" ANCHOR BOLT SP. (IN OC)	"SN" SHEAR NAILING (IN. O.C.)	"FA" SIMPSON "A35" (IN. OC)	FOOT-NOTES BELOW
SW1	7/16" OSB (1)	8d @ 6	5/8" @ 48	16d @ 6	24" OC	
SW2	7/16" OSB (1)	8d @ 4	5/8" @ 24	16d @ 3	24" OC	
SW3	7/16" OSB (1)	8d @ 3	5/8" @ 24	16d @ 3	24" OC	

1) USE HOT DIPPED GALV BOX NAILS. EMBED 8d MIN 1 1/2", 16d MIN 2". PLACE ADDITIONAL ANCHOR BOLTS @ 6" FROM EACH END OF EACH BOTTOM PLATE. ALL OTHER LOAD BEARING WALLS SHALL BE ANCHORED PER SW1 ANCHORAGE SPACING U.N.O.
2) ATTACH @ INTERMEDIATE SUPPORTS W/ 8d @ 12" OC.

10 SHEARWALL SCHEDULE

Scale: NTS

11 UNBLOCKED DIAPHRAGM

Scale: NTS

12 NOT USING

Scale: NTS

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 15, 1997
BARBARA L. CIOTA
EXPIRES 12/31/09

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Ashland School District
Willow Wind Barn Renovation
ASHLAND, OREGON

STRUCTURAL DETAILS

SCALE: 1"=1'-0"
12/8/09

09-045/S-DTLS3

S7

SHT. 7 OF 7

DUCT & FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	DESCRIPTION
SA		SUPPLY AIR
RA		RETURN AIR
OSA		OUTSIDE AIR
EA		EXHAUST AIR
ERA		ECONOMIZER RELIEF AIR
12x12 SA / RA	12x12	RECTANGULAR DUCT SIZE FIRST NUMBER INDICATES VISIBLE DIMENSION AND SECOND NUMBER INDICATES HIDDEN DIMENSION. ALL DIMENSIONS ARE INCHES. SA IS SUPPLY AIR DUCT. RA IS RETURN AIR DUCT.
12"ø	12"ø	ROUND DUCT DIAMETER
48x18ø	48x18ø	FLAT OVAL DUCT
		SUPPLY DUCT UP OR SECTION
		SUPPLY DUCT DOWN OR SECTION AWAY
		RETURN OR OSA DUCT UP OR SECTION
		RETURN OR OSA DUCT DOWN OR SECTION
		EXHAUST DUCT UP OR SECTION
		EXHAUST DUCT DOWN OR SECTION
		TRANSITION
SQR RND		SQUARE TO ROUND TRANSITION
		FLANGED TAKEOFF (RECTANGULAR DUCT)
		LATERAL HIGH EFFICIENCY TAKE-OFF FITTING W / VD (SQR TO RND TAKEOFF FROM RECTANGULAR MAIN)
		CONICAL SPIN-IN FITTING WITH VOLUME DAMPER (ROUND BRANCH TAKEOFF FROM RECTANGULAR MAIN)
		STRAIGHT SPIN-IN FITTING WITH VOLUME DAMPER (ROUND BRANCH TAKEOFF FROM RECTANGULAR MAIN)
		CONICAL 90° TAKE-OFF (ROUND / OVAL DUCT)
		45° LATERAL TAKE-OFF (ROUND / OVAL DUCT)
R		DUCT SLOPE UP (RISE)
D		DUCT SLOPE DOWN (DROP)
		END CAP
		RECTANGULAR MITERED ELBOW W/ TURNING VANES
		RECTANGULAR TEE – 90° MITERED ELBOWS W/ TURNING VANES
R D or W	R	90° OR 45° LONG RADIUS ELBOW, R=1.5 DIA OR WIDTH (ROUND OR RECTANGULAR DUCT)

HVAC SYMBOLS & ABBREVIATIONS

	DUCT WITH INTERNAL ACOUSTICAL INSULATION
AD	ACCESS DOOR
	VOLUME DAMPER
FSD	COMBINATION FIRE / SMOKE DAMPER
FD	VERTICAL FIRE DAMPER
FD	VERTICAL FIRE DAMPER
M	MOTORIZED DAMPER
BD	BACKDRAFT DAMPER
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	FLEXIBLE DUCT CONNECTION
	FLEXIBLE DUCT
	DIRECTION OF AIRFLOW
XXX	SUPPLY DIFFUSER (XXX = SUPPLY AIR CFM)
	RETURN GRILLE
	EXHAUST GRILLE
	PRESSURE RELIEF GRILLE
	WALL OR DUCT REGISTER OR GRILLE
or	LINEAR DIFFUSER
	ZONE CONTROL DAMPER
	FILTER
AD	CEILING ACCESS DOOR
T	TEMPERATURE GAUGE
P	PRESSURE GAUGE
XX	OUTLET / INLET TAG
(F) XXX	AIRFLOW, CFM
	PREFIX (F) INDICATES A FIRE RATED GRILLE, REGISTER, OR DIFFUSER
H	HUMIDISTAT OR HUMIDITY SENSOR
T	THERMOSTAT OR TEMP SENSOR
D	DUCT SMOKE DETECTOR
SD	SMOKE DETECTOR
SP	STATIC PRESSURE SENSOR
CO2	CARBON DIOXIDE SENSOR
FS	EMERGENCY SWITCH

NOTE: ABBREVIATIONS AND SYMBOLS ARE WEHAGE ENGINEERING STANDARDIZED SYMBOL LEGENDS. AS SUCH, ALL SYMBOLS SHOWN MAY NOT APPEAR ON OR WITHIN THIS SET OF CONTRACT DOCUMENTS.

GENERAL SYMBOLS

C	CAP FOR FUTURE
	POINT OF NEW CONNECTION
X	REVISION NUMBER
XX	POINT OF CONTINUATION
XX XX	EQUIPMENT TAG EQUIPMENT NUMBER
XX XX	SECTION (LETTER) OR DETAIL (NUMERICAL) DESIGNATION SHEET NUMBER
X XX	SECTION DESIGNATION SHEET NUMBER
GPM X"	PIPE SIZE AND FLOW TAG
	GENERAL BREAK
	LINE BREAK
	ON DEMOLITION PLANS, INDICATES ITEMS TO BE REMOVED
A	DUCTWORK FITTING TYPE SEE HIGH PRESSURE FABRICATED FITTING CONSTRUCTION DETAILS
X	KEYED NOTES
E	EXISTING
F	FUTURE

HVAC ABBREVIATIONS

ACFM	ACTUAL AIR – CUBIC FEET PER MINUTE
ACH	AIR CHANGES PER HOUR
AD	ACCESS DOOR
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AP	ACCESS PANEL
ARCH	ARCHITECT OR ARCHITECTURAL
ATD	AIR TRANSFER DUCT
BD	BACKDRAFT DAMPER
BLDG	BUILDING
BM	BEAM
BTU	BRITISH THERMAL UNIT
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CONSTR	CONSTRUCTION
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
DX	DIRECT EXPANSION (REFRIGERATION)
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION
ERA	ECONOMIZER RELIEF AIR
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	FAHRENHEIT
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FSD	COMBINATION FIRE / SMOKE DAMPER
GALV	GALVANIZED STEEL
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GRD	GRILLES, REGISTERS, DIFFUSERS
H	HUMIDISTAT
HP	MOTOR HORSEPOWER
HVAC	HEATING, VENTING, AND CONDITIONING
LB(S)	POUND, POUNDS
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT CAPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OA or OSA	OUTSIDE AIR
OMSC	2007 OREGON MECHANICAL SPECIALTY CODE
OSSC	2007 OREGON STRUCTURAL SPECIALTY CODE
PBD	PARALLEL BLADE DAMPER
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE / TEMPERATURE PLUG
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RECT	RECTANGULAR
RPM	REVOLUTIONS PER MINUTE
REQ'D	REQUIRED
SA	SUPPLY AIR
SCFM	STANDARD AIR – CUBIC FEET PER MINUTE
SEC	SECTION
SF or SQ FT	SQUARE FEET
SIM	SIMILAR
SM	SHEET METAL
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SP	STATIC PRESSURE
SPEC	SPECIFICATION OR SPECIFIED
SS	STAINLESS STEEL
STD	STANDARD
T	THERMOSTAT
TC	TEMPERATURE CONTROLS
TEMP	TEMPERATURE
TOS	TOP OF STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB
W/	WITH
WG	WATER GAUGE

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CONSULTING MECHANICAL ENGINEERS
1236 DISK DRIVE, SUITE I - MEDFORD, OREGON 97501
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GENERAL NOTES

1. PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO CONSTRUCT A COMPLETE, OPERATIONAL HVAC SYSTEM FOR THE ENTIRE PROJECT AS SHOWN ON THESE DRAWINGS, INCLUDING ALL NECESSARY FEES AND PERMITS.
2. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODE, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, AND ALL OTHER APPLICABLE CITY, COUNTY, SCHOOL DISTRICT, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT AT THE DATE OF THE BID.
3. PRIOR TO FABRICATION AND INSTALLATION, COORDINATE THE INSTALLATION OF ALL HVAC PIPING, DUCTWORK, AND EQUIPMENT WITH PLUMBING PIPING, PLUMBING EQUIPMENT, REFRIGERATION PIPING, FIRE PROTECTION PIPING AND ALL OTHER TRADES INCLUDING BUT NOT LIMITED TO: THE PLUMBING CONTRACTOR, ELECTRICAL CONTRACTOR, FIRE PROTECTION CONTRACTOR, GENERAL CONTRACTOR, AND ANY CONTRACTOR HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.
4. THE DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENTS AND THE EXTENT OF THE SYSTEM. IT SHALL BE THE WORK OF THE CONTRACTOR TO MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES, OR MATERIAL REQUIRE PRIOR APPROVAL BY THE CONSULTING ENGINEER.
5. DETAILS: THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND USE WHERE APPROPRIATE ALL OF THE MECHANICAL DETAILS SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON THE DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE MECHANICAL SYSTEM WITHOUT USING THE INCLUDED DETAILS IS THE RESPONSIBILITY OF THE CONTRACTOR.
6. ALL DUCTWORK SHALL BE GALVANIZED STEEL, ROUND OR RECTANGULAR. GAUGE, REINFORCEMENT, AND SUPPORT SHALL BE PER SMACNA DUCT CONSTRUCTION STANDARDS. INSTALL IN CONFORMANCE TO MECHANICAL CODES. FLEXIBLE DUCTS SHALL BE INSULATED NONMETALLIC, FORM "NM-II," MAXIMUM LENGTH OF 5'-0" AT DIFFUSER OR GRILLE CONNECTION. BUTTERFLY BALANCING DAMPERS WHERE SHOWN OR REQUIRED, ROUND OR RECTANGULAR, GALVANIZED SHEET METAL, WITH EXTERNAL INDICATING QUADRANT AND SETSCREW. PROVIDE TURNING VANES FOR ALL RECTANGULAR ELBOWS.
7. SHEET METAL DUCT SIZES SHOWN ARE NET CLEAR INSIDE DIMENSIONS. WHEN INTERNAL INSULATION IS REQUIRED, DUCT SIZE SHALL BE INCREASED TO PROVIDE NET CLEAR DIMENSIONS INDICATED.
8. CONTRACTOR SHALL INSTALL EXPOSED DUCTWORK IN A NEAT AND CLEAN MANNER AND UTILIZE SPIRAL DUCTWORK WHERE POSSIBLE.
9. DUCTWORK INSULATION:
   - A. ALL SUPPLY AIR DUCTS IN UNCONDITIONED SPACES AND PLENUMS (ABOVE CEILINGS, WITHIN CHASES, SHAFTS, OR MECHANICAL ROOMS) AND WITHIN THE BUILDING ENVELOPE SHALL BE INSULATED WITH 1-1/2" THICK, 3/4 LB. DENSITY, FIBERGLASS DUCT WRAP FACED WITH OUTER FOIL BLANKET, OR LINED WITH 1" THICK, COATED FIBERGLASS INSULATION, MINIMUM INSTALLED R-VALUE OF 3.5.
   - B. ALL OUTSIDE AIR DUCTS IN UNCONDITIONED SPACES AND PLENUMS (ABOVE CEILINGS, WITHIN CHASES, SHAFTS, OR MECHANICAL ROOMS) AND WITHIN THE BUILDING ENVELOPE SHALL BE INSULATED WITH 1-1/2" THICK, 3/4 LB. DENSITY, FIBERGLASS DUCT WRAP FACED WITH OUTER FOIL BLANKET, OR LINED WITH 1/2" THICK, COATED FIBERGLASS INSULATION, MINIMUM INSTALLED R-VALUE OF 1.9.
   - C. ALL EXHAUST AIR DUCTWORK SHALL BE INSULATED BETWEEN THE FAN OUTLET AND WALL/ROOF OUTLET WITH 1-1/2" THICK, 3/4 LB. DENSITY, FIBERGLASS DUCT WRAP FACED WITH OUTER FOIL BLANKET, MIN. INSTALLED R-VALUE OF 3.5.
   - D. EXPOSED SUPPLY AND RETURN AIR DUCTWORK WITHIN CONDITIONED SPACES NEED NOT BE INSULATED UNLESS NOTED OTHERWISE. SEE 9.E BELOW.
   - E. PROVIDE 1" THICK INTERNAL SOUND ATTENUATING INSULATION MINIMUM 15'-0" UPSTREAM AND DOWNSTREAM OF AIR HANDLING EQUIPMENT. JOHNS MANVILLE LINACOUSTIC RC, OR EQUAL. PROVIDE FLEXIBLE DUCT CONNECTORS WHERE DUCTS CONNECT TO AIR HANDLING EQUIPMENT.
10. CONTROLS: A THERMOSTAT RESPONDING TO TEMPERATURE IN THE ZONE SHALL CONTROL EACH HVAC ZONE. PROVIDE ELECTRONIC, PROGRAMMABLE THERMOSTATS WITH COOLING, 1 OR 2 STAGE HEATING, AUTOMATIC CHANGEOVER, NIGHT SETBACK, A 7-DAY, 24-HOUR CLOCK, L.E.D. INDICATOR, AND SET POINT ADJUSTMENT, AND A FAN ON/AUTO SWITCH. THERMOSTAT MUST BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS.
    - A. CONTROL CAPABILITIES: THERMOSTATS SHALL BE CAPABLE OF BEING SET FROM 55 F TO 85 F AND SHALL BE CAPABLE OF PROVIDING A 5 F DEADBAND.
    - B. THERMOSTAT SHALL BE CAPABLE OF PROGRAMMED FAN OPERATION, I.E. FAN OPERATES CONTINUOUSLY DURING OCCUPIED MODE AND CYCLES WITH DEMAND DURING UNOCCUPIED MODE.
    - C. HEAT PUMP CONTROLS: HEAT PUMPS EQUIPPED WITH SUPPLEMENTARY HEATERS SHALL BE INSTALLED WITH CONTROLS TO PREVENT HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE. A TWO-STAGE THERMOSTAT WITH THE SUPPLEMENTARY HEAT AS ITS SECOND STAGE IS ACCEPTABLE.
    - D. HIGH OCCUPANCY VENTILATION: PROVIDE A CO_2 SENSOR AND CONTROLS CAPABLE OF REDUCING OUTSIDE AIR INTAKE BELOW DESIGN RATES DURING PARTIAL OCCUPANCY. AS CO_2 LEVELS FALL BELOW SETPOINT, THE OUTSIDE AIR DAMPER SHALL MODULATE CLOSED. EXCEPT DURING ECONOMIZER OPERATION, OUTSIDE AIR DAMPER SHALL NOT OPEN MORE THAN DESIGN RATE REGARDLESS OF CO_2 LEVEL.
    - E. SHUT-OFF DAMPERS: OUTDOOR AIR SUPPLY AND EXHAUST SYSTEMS SHALL BE PROVIDED DAMPERS THAT AUTOMATICALLY SHUT WHEN SYSTEMS OR SPACES SERVED ARE NOT IN USE OR DURING BUILDING WARM-UP, COOLDOWN, OR SETBACK.
    - F. MOTORIZED DAMPERS SHALL HAVE A MAXIMUM LEAKAGE RATE OF 4 CFM/SF AT 1.0" W.G. DAMPERS ON PACKAGED HVAC EQUIPMENT SHALL HAVE A MAXIMUM LEAKAGE RATE OF 20 CFM/SF AT 1.0" W.G.
    - G. PROVIDE A RELAY FROM THE ZONE HVAC SYSTEM TO CONTROL TOILET ROOM EXHAUST FAN(S). EXHAUST FAN(S) TO RUN DURING THE OCCUPIED PERIOD ONLY.
11. THE STRUCTURE SHOWN ON ALL DETAILS MAY OR MAY NOT PERTAIN TO A PORTION OR ANY PORTION OF THE BUILDING. COORDINATE MOUNTING REQUIREMENTS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
12. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, DAMPERS, AND OTHER DEVICES AND ACCESSORIES REQUIRED FOR A COMPLETE, WORKABLE INSTALLATION.
13. ALL MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING MUST BE SEISMICALLY BRACED FOR THE SITE SPECIFIC SEISMIC DESIGN CATEGORY AND SEISMIC USE GROUP, IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE OSSC, OMSC, ASHRAE, AND SMACNA. COORDINATE SITE SPECIFIC SEISMIC REQUIREMENTS WITH STRUCTURAL ENGINEER AND/OR ARCHITECT. PROVIDE SEISMIC PRODUCTS BY AMBER-BOOTH OR MASON INDUSTRIES.
14. THE DIVISION 15 CONTRACTOR SHALL FURNISH ALL REQUIRED MOTORS AND STARTERS. DISCONNECTS, WHEN NOT A PART OF THE EQUIPMENT, WILL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.
15. THE CONTRACTOR IS RESPONSIBLE FOR HVAC EQUIPMENT CHECK-IN, SAFEKEEPING, AND DAMAGE.
16. DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'-0" DEEP AND 6'-6" HIGH. DO NOT ROUTE DUCT AND PIPES IN ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM.
17. COORDINATE EXACT LOCATIONS OF CEILING DIFFUSERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
18. PROPERLY LUBRICATE ALL PIECES OF EQUIPMENT BEFORE TURNING THE SYSTEM OVER TO THE OWNER.

SHEET LEGEND

M.0 MECHANICAL NOTES AND LEGEND
M.1 MECHANICAL PLAN
M.2 MECHANICAL SCHEDULES AND DETAILS

REGISTERED PROFESSIONAL ENGINEER 75556 OREGON JAN. 11, 2005 JOHN M. KELLER
EXPIRES: 06/30/11

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Ashland School District
Willow Wind Barn Remodel
ASHLAND, OREGON

MECHANICAL NOTES AND LEGEND

SCALE: NONE
12.8.09

09-52 HVAC

M.0

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NORTH
MECHANICAL PLAN
1/4" = 1'-0"

GENERAL NOTES

A. COORDINATE EXACT LOCATION AND HEIGHT OF DUCTWORK WITH EXISTING EXPOSED STRUCTURE.

B. COORDINATE LOCATION OF HEAT PUMPS AND EVAPORATIVE COOLER WITH ARCHITECT.

C. INSTALL SOUND LINING IN ALL RETURN DUCT AND AT LEAST THE FIRST 15 FEET OF SUPPLY DUCT.

KEYED NOTES

1. SIDE DISCHARGE EVAPORATIVE COOLER. COORDINATE INSTALLATION HEIGHT WITH ARCHITECT AND SITE CONDITIONS. PROVIDE WALL BRACKET OR STAND AS NECESSARY. COORDINATE MAKE-UP WATER CONNECTION WITH PLUMBING CONTRACTOR.
2. RISE EXPOSED DUCT UP WALL AND THEN FOLLOW ROOF LINE.
3. INSTALL HEAT PUMP ON CONCRETE PAD. MAINTAIN MINIMUM CLEARANCES PER MANUFACTURER'S INSTRUCTIONS.
4. SEALED COMBUSTION FURNACE ON PLATFORM ABOVE TOILET ROOM. EXTEND COMBUSTION AIR AND FLUE PIPING THROUGH ROOF. EXTEND REFRIGERANT LINES TO HEAT PUMP ON PAD OUTSIDE. VERIFY LINE LENGTH AND FIELD FABRICATE REFRIGERANT LINES IF NECESSARY. COORDINATE CONDENSATE DRAIN PIPING WITH PLUMBING CONTRACTOR.
5. MOTORIZED OUTSIDE AIR DAMPER. DAMPER TO BE OPEN DURING OCCUPIED PERIOD ONLY.
6. MOTORIZED RELIEF DAMPER. INTERLOCK DAMPER WITH EVAPORATIVE COOLER EC-1. DAMPER TO BE OPEN WHEN EC-1 FAN RUNS.
7. DIFFUSER ON SIDE OF EXPOSED DUCT, TYPICAL. MOUNT DIFFUSER WITH 45° ANGLE DOWN.
8. OFFSET DUCT AS NECESSARY TO CLEAR ACCESS DOOR.
9. CO_2 SENSOR AND THERMOSTAT ON WALL.
10. ELECTRIC WALL HEATER FOR RISER ROOM. COORDINATE LOCATION WITH FIRE SPRINKLER CONTRACTOR.

REGISTERED PROFESSIONAL ENGINEER 75561 OREGON JAN. 11, 2002 JOHN M. KELLER
EXPIRES: 06/30/11

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Ashland School District
Willow Wind Barn Remodel
ASHLAND, OREGON

MECHANICAL PLAN

SCALE: 1/4"
12.8.09

09-52 HVAC

M.1

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EXPIRES: 06/30/11

SPLIT SYSTEM SCHEDULE: DX COOLING WITH FURNACE

FURNACE/ COIL TAG	COND UNIT TAG	TYPE	AIR FLOW CFM	MIN. OUTSIDE AIR CFM	ESP (IN.)	FURNACE							AIR CONDITIONING						MANUFACTURER	FURNACE MODEL	COIL MODEL	WEIGHT (FURN. + COIL)
						HEATING FUEL	HEATING CAPACITY		% AFUE	ELECTRICAL			REFRIG-ERANT	NOMINAL CAPACITY TONS CLG	COOLING CAPACITY		ENTERING AIR TEMP DB/WB	MIN. SEER				
							INPUT MBH	OUTPUT MBH		VOLTS	PHASE	MCA			TOTAL BTUH	SENS. BTUH						
F-1	HP-1	HORIZONTAL	1,600	240	0.5	N.G.	88	82	92.0	120	1	12	R410A	4.0	43,700	42,300	78.8/60.6	13	LENNOX	G51MP-48C-090	CH33-50/60C-2F	254
F-2	HP-2	HORIZONTAL	1,600	240	0.5	N.G.	88	82	92.0	120	1	12	R410A	4.0	43,700	42,300	78.8/60.6	13	LENNOX	G51MP-48C-090	CH33-50/60C-2F	254

OUTSIDE AIR SCHEDULE

SYSTEM	ROOM NAME / TYPE	GROSS AREA, S.F.	NET OCCUPIED AREA, S.F. (1)	PEOPLE PER 1,000 S.F. (2)	MAXIMUM NUMBER OCCUPANTS	EXPECTED AVG NUMBER OCCUPANTS (3)	REQUIRED OUTDOOR AIR, CFM PER OCCUPANT (2)	CFM PER S.F. (2)	EXHAUST AIR, CFM	CALCULATED OUTDOOR AIR, CFM	DESIGN SUPPLY AIR, CFM
FC-1&2 EC-1	STAGE	630	381	70	27	14	15	-	-	210	800
	AUDITORIUM	1,631	1,277	150	192	96	15	-	-	1440	2,200
	RESTROOMS	264	264	-	-	-	-	-	300	-	200
		2,525	1,922					ROOM TOTALS:	300	1650	3,200

SYSTEM MINIMUM OUTSIDE AIR (4): 1,916

NOTES: (1) OMSC SECTION 403.3
(2) OMSC TABLE 403.3
(3) IN ACCORDANCE WITH OMSC 403.3
(4) PER EQUATION 4-1, OMSC 403.3.2, OR THE MINIMUM AIR NECESSARY TO MAKE-UP FOR SYSTEM EXHAUST.

HEAT PUMP SCHEDULE – OUTDOOR SECTION

TAG	FAN SYSTEM TAG	HEATING CAPACITY @ 47 F, BTUH	REFRIG-ERANT	SEER/ HSPF	ELECTRICAL				MANUFACTURER	MODEL	NOTES
					VOLTS	PHASE	MCA	MOCP			
HP-1	FC-1	47,000	R-410A	13 / 7.7	240	1	29.0	50	LENNOX	14HPX-048	1,2
HP-2	FC-2	47,000	R-410A	13 / 7.7	240	1	29.0	50	LENNOX	14HPX-049	1,2

NOTES:
1. PROVIDE WITH REFRIGERANT LINE SET SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. SECURE TO CONCRETE PAD.

EVAPORATIVE COOLER SCHEDULE

TAG	CFM	ESP	SIZE, IN. W X D X H	DISCHARGE OPENING	ELECTRICAL			MANUFACTURER	MODEL	WEIGHT	NOTES
					VOLTS	PHASE	HP				
EC-1	2,000	0.35	34x34x34	18x18	115	1	1/3	CHAMPION	4001SD	233	1

NOTES:
1. PROVIDE WITH TWO-SPEED MOTOR

DIFFUSER AND GRILLE SCHEDULE

TAG	TYPE	INLET SIZE	FACE SIZE	THROW PATTERN	MFGR	MODEL	NOTES
SG-1	SUPPLY AIR	6" RND	6x6	2-WAY	PRICE	SMD / 3G	2
SG-2	SUPPLY AIR	--	10x6	2-WAY	PRICE	SDG	1,3
SG-3	SUPPLY AIR	--	12x8	2-WAY	PRICE	SDG	1,3
RG-1	RETURN AIR	--	32x22	--	PRICE	530 / F / L	2
RG-2	RETURN AIR	--	32x18	--	PRICE	530 / F / L	2

NOTES:
1. DUCT MOUNT. COORDINATE FINISH (BARE METAL VS. WHITE) WITH ARCHITECT.
2. SURFACE MOUNT
3. PROVIDE WITH AIR SCOOP

ELECTRIC HEATER SCHEDULE

TAG	SERVICE	TYPE	SIZE KW	ELECTRICAL			MANUFACTURER	MODEL	NOTES
				VOLTS	PHASE	AMPS			
EH-1	RISER ROOM	WALL	1	120	1	8.3	CADET	CSC101TW	1

NOTES:
1. PROVIDE WITH UNIT MOUNTED THERMOSTAT.

LOUVER SCHEDULE

TAG	AIR DIRECTION	CFM	MAX PRESSURE DROP, "W.G.	SIZE	MANUFACTURER	MODEL	NOTES
L-1	INTAKE	240	0.05	12 x 18	GREENHECK	EDJ-601	1
L-2	EXHAUST	1000	0.05	32 x 18	GREENHECK	EDJ-601	1

NOTES:
1) BAKED ENAMEL FINISH. COLOR SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

1 LOW PRESSURE DUCT CONSTRUCTION DETAILS
SCALE: NONE

NOTE: SEE PLANS FOR ACTUAL DUCT LAYOUT AND SIZES

2 FURNACE & COOLING COIL DETAIL – HORIZONTAL
SCALE: NONE

3 SPIRAL DUCT DIFFUSER
SCALE: NONE

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MECHANICAL SCHEDULES AND DETAILS

SCALE: NONE
12.8.09

09-52 HVAC

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PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MINIMUM CONNECTION SIZE				REMARKS
		WASTE	VENT	CW	HW	
DF-1	DRINKING FOUNTAIN	2"	2"	1/2"	--	ELKAY MODEL EZSTL8C, TWO LEVEL ADA WATER COOLER. 8.0 GPH CAPACITY, ELECTRICAL 115-60-1 3.7 FLA, USE BACKING IN WALL FOR EXTRA SUPPORT.
ET-1	EXPANSION TANK	--	--	1/2"	--	AMTROL MODEL ST-12-C THERM-X-TROL EXPANSION TANK, 5.4 GALLON
FD-1	FLOOR DRAIN	3"	--	--	--	MIFAB F1000-S, 5x5 STAINLESS STRAINER. PRIMED P-TRAP
HB-1	HOSE BIBB	--	--	3/4"	--	WOODFORD B65 AUTOMATIC DRAINING, FREEZLESS WALL HYDRANT W/ ANTI-SIPHON VACUUM BREAKER.
L-1	LAVATORY	2"	2"	1/2"	1/2"	KOHLER K-2195 COUNTERTOP LAVATORY 20-¾"x17-½" SELF RIMMING, 4" CENTERS, ½" HOT AND COLD WATER SUPPLIES AND STOPS. KOHLER K-15597 FAUCET, 0.5 GPM, GRID DRAIN WITH TRAP AND TAIL PIECE PLUMBEREX HANDY SHIELD SAFETY COVER ON HOT SUPPLY.
MS-1	MOP SINK	3"	2"	1/2"	1/2"	FIAT MODEL MSB 24x24 MOP SINK WITH #830 AA WALL MOUNTED SERVICE FAUCET WITH A VACUUM BREAKER, #889 CC MOP BRACKET, #1453 BB FLAT STAINLESS STEEL STRAINER, AND #832 AA HOSE AND BRACKET.
P-1	HOT WATER CIRCULATION PUMP	--	--	--	1/2"	GRUNDFOS UP-15-10B7, 115V, 0.22 AMP, DOMESTIC HOT WATER CIRCULATOR PUMP. 24 HOUR TIME CLOCK CONTROL.
S-1	KITCHEN SINK	2"	2"	1/2"	1/2"	ELKAY LRAD2522 SELF RIMMING SINK, ELKAY FAUCET MODELLKD24398H, BLADE HANDLE, 6 ½" SPOUT, BASKET STRAINES, TRAP, TAILPIECE, ½" HOT AND COLD SUPPLIES AND STOPS.
U-1	URINAL	2"	2"	3/4"	--	KOHLER K-5016-ET WALL MOUNT URINAL, SIPHON JET, ¾" TOP SPUD, 1.0 GALLON PER FLUSH ROYAL MODEL 186-1 FLUSHOMETER. MOUNT RIM AT 17" FROM FINISHED FLOOR FOR ADA COMPLIANCE.
WC-1	WATER CLOSET	3"	2"	1/2"	--	KOHLER K3493-0, 2-PIECE ELONGATED K4304-0, 1.6 GALLONS PER FLUSH PRESSURE ASSISTED TANK K4645-0, BEMIS 1955C SEAT.
WH-1	WATER HEATER	--	--	1"	1"	AMERICAN WATER HEATER PROLINE MODEL E61-20U-015SV 19 GALLON ELECTRIC WATER HEATER, 1500 WATT, 120 VOLT. 8.8 GPH RECOVERY AT 70° RISE

1

1 VENT THROUGH ROOF
SCALE: NONE

2 FLOOR CLEANOUT
SCALE: NONE

PIPING SYMBOLS

- CD — CONDENSATE DRAIN ABOVE FLOOR OR GRADE
- CD — CONDENSATE DRAIN BELOW FLOOR OR GRADE
- SOIL PIPE ABOVE FLOOR OR GRADE
- BUILDING SANITARY BELOW FLOOR OR GRADE
- VENT
- RD — RAIN DRAIN ABOVE FLOOR OR GRADE
- RD — RAIN DRAIN BELOW FLOOR OR GRADE
- RDO — RAIN DRAIN OVERFLOW ABOVE FLOOR OR GRADE
- RDO — RAIN DRAIN OVERFLOW BELOW FLOOR OR GRADE
- COLD WATER
- HOT WATER
- HOT WATER RETURN
- TP — TRAP PRIMER
- PIPE DOWN
- PIPE UP
- TEE DOWN
- TEE UP
- ELBOW
- TEE
- CAP
- CONCENTRIC REDUCER / INCREASER
- UNION
- DIRECTION OF FLOW
- PUMP
- FLOOR CLEAN-OUT
- CLEAN-OUT TO GRADE
- WALL CLEAN-OUT
- SHUT-OFF VALVE ON RISER TO DROP
- WATER HAMMER ARRESTER
- HOSE BIBB
- SHUT-OFF VALVE (BALL VALVE)
- SHUT-OFF VALVE (GATE VALVE)
- GLOBE VALVE
- CHECK VALVE
- RP BACK FLOW DEVICE
- PRESSURE REDUCING VALVE
- PRESSURE GAUGE
- SAFETY RELIEF VALVE
- THERMOMETER
- TEMPCONTROL MIXING VALVE

PLUMBING ABBREVIATIONS

AD	ACCESS DOOR
AFF	ABOVE FINISH FLOOR
ARCH	ARCHITECT OR ARCHITECTURAL
BLDG	BUILDING
BM	BEAM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BTU	BRITISH THERMAL UNIT
CA	COMPRESSED AIR
CLG	CEILING
CO	CLEAN OUT
CTG	CLEAN OUT TO GRADE
CONSTR	CONSTRUCTION
CW	COLD WATER (POTABLE)
DCW	DOMESTIC CLOTHES WASHER
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DN	DOWN
DW	DISHWASHER
DWG	DRAWING
ELEV	ELEVATION
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
EWF	EYE WASH FOUNTAIN
EWH	ELECTRIC WATER HEATER
FC	FLEXIBLE CONNECTION
FLA	FULL LOAD AMPS
FLR	FLOOR
FUT	FUTURE WORK TO BE DONE
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HP	MOTOR HORSEPOWER
HR	HOUR
HW	HOT WATER (POTABLE)
HWR	HOT WATER RETURN
INT	INITIAL WOKR TO BE DONE
L	LAVATORY
LB(S)	POUND, POUNDS
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT CAPACITY
MECH	MECHANICAL
MFGR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OA or OSA	OUTSIDE AIR
OMSC	OREGON MECHANICAL SPECIALTY CODE
OPSC	OREGON PLUMBING SPECIALTY CODE
OSCC	OREGON STRUCTURAL SPECIALTY CODE.
PRV	PRESSURE RELIEF VALVE
PT	PRESSURE TANK
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE / TEMPERATURE PLUG
PVC	POLYVINYL CHLORIDE
RD	RAIN DRAIN
RDO	RAIN DRAIN OVERFLOW
RECT	RECTANGULAR
REQ'D	REQUIRED
RPM	REVOLUTIONS PER MINUTE
SAN	SANITARY DRAIN LINE
SF or SQ FT	SQUARE FEET
SH	SHOWER
SIM	SIMILAR
SPEC	SPECIFICATION OR SPECIFIED
SRV	SAFETY RELIEF VALVE
SS	STAINLESS STEEL
STD	STANDARD
TOS	TOP OF STEEL
TYP	TYPICAL
U	URINAL
UNO	UNLESS NOTED OTHERWISE
V	VENT
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTER

NOTE: ABBREVIATIONS AND SYMBOLS ARE WEHAGE ENGINEERING STANDARDIZED SYMBOL LEGENDS. AS SUCH, ALL SYMBOLS SHOWN MAY NOT APPEAR ON OR WITHIN THIS SET OF CONTRACT DOCUMENTS.

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GENERAL NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES.
2. VERIFY SIZES AND LOCATIONS OF UTILITIES IN THE FIELD INCLUDING POINTS OF CONNECTION BEFORE STARTING WORK.
3. ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE STATE OF OREGON PLUMBING SPECIALTY CODE, ORDINANCES, AND REGULATIONS, STATE HEALTH AND SAFETY ORDERS, STATE FIRE MARSHAL, LOCAL FIRE DEPARTMENT AND HEALTH DEPARTMENT, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
4. COORDINATE INSTALLATION OF PLUMBING WORK SO AS TO AVOID UNNECESSARY JOB DELAYS OR INTERFERENCE WITH ALL OTHER TRADES.
5. OBTAIN ALL INSPECTION APPROVALS ON PLUMBING WORK FROM REGULATING AGENCIES WHERE REQUIRED.
6. ALL OPENINGS FOR PIPING THROUGH FIRE-RATED ENCLOSURES SHALL BE CAULKED AS REQUIRED BY CODE TO MAINTAIN FIRE RATING.
7. HOT WATER PIPE INSULATION SHOULD BE A MINIMUM OF 1" (PIPING LESS THAN 1" IN DIAMETER AND LESS THAN 12 FEET IN LENGTH SHALL BE INSULATED WITH ½" INSULATION WITH A MINIMUM OF CONDUCTIVITY OF 0.24 BTU-IN/HR-FT²-°F) TO COMPLY WITH THE STATE OF OREGON ENERGY STANDARDS. PROVIDE 1/2" FIBERGLASS INSULATION ON COLD WATER PIPE INSTALLED ABOVE GRADE WITHIN THE BUILDING FOR CONDENSATION CONTROL.
8. FAUCETS AND PLUMBING FIXTURES SHALL BE OF THE WATER CONSERVATION TYPE AND COMPLY WITH THE STATE APPLIANCE ENERGY STANDARDS.
9. CONTRACTOR SHALL RECORD ON AS-BUILT DRAWINGS, ALL SIZES, MATERIAL, ELEVATIONS, AND LOCATIONS OF ALL THE PIPES THAT DEVIATE FROM THE DESIGN CONTRACT DRAWINGS. INVERT ELEVATIONS AND SLOPE DIRECTION SHALL BE NOTED.
10. LAVATORY AND SINK FAUCETS SHALL HAVE A FLOW RATE OF 0.5 GPM.
11. ANY SHUT DOWNS REQUIRED TO CONNECT TO ALL ACTIVE PIPING ARE TO BE COORDINATED WITH OWNER.
12. ALL VALVES CONCEALED IN CEILING OR WALLS SHALL BE PROVIDED WITH ACCESS PANELS. LOCATE ON "AS BUILT" DRAWINGS.
13. PLUMBER SHALL PROVIDE FULL SIZE CONDENSATE DRAIN FROM AIR CONDITIONING EQUIPMENT (WITH DEEP SEAL TRAP AND UNION) AND DISCHARGE TO THE NEAREST APPROVED RECEPTOR.
14. ALL UNDERGROUND SOIL AND WASTE PIPING TO A POINT 5'-0" OUT FROM BUILDING SHALL BE RUN AT A MINIMUM SLOPE OF 1/4" PER FT.
15. BELOW GRADE CW PIPING SHALL BE TYPE K COPPER OR PEX TUIBING (TYPE "A"). ABOVE GRADE PIPING SHALL BE TYPE L COPPER OR PEX TUBING (TYPE "A"). SANITARY DRAIN AND VENT PIPING SHALL BE ABS-DWV FOR BELOW AND ABOVE GRADE PIPING.
16. NATURAL GAS PIPING:
    - 16.1. ABOVE GROUND PIPE SHALL BE SCHEDULE 40 ASTM A53 GRADE B BLACK STEEL PIPE WITH SCREWED OR WELDED FITTINGS.
    - 16.2. DIRECT BURIED PIPE SHALL BE SCHEDULE 40 ASTM A53 GRADE B BLACK STEEL PIPE WITH ASTM A234 BLACK STEEL WELDED FITTINGS. PIPING SHALL BE WRAPPED AND BITUMEN COATED. PROVIDE ANODE BAGS FOR CATHODIC PROTECTION OF BURIED STEEL PIPE. CONTRACTOR MAY USE CSST FOR BELOW GRADE PIPE WITHIN A CONTINUOUS SLEEVE.
17. ALL SERVICE WATER HEATERS, HOT WATER STORAGE TANKS OR SERVICE HOT WATER DISTRIBUTION SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF OSSC SECTION 1315.

3 ANTI-FROST WALL HYDRANT
SCALE: NONE

4 TRAP PRIMER - MULTIPLE FEEDS
SCALE: NONE

NOTE: ADJUST ROUGH-IN HEIGHT AS REQUIRED.

5 CONDENSATE DRAIN CONNECTION
SCALE: NONE

SHEET LEGEND

P.0	PLUMBING – SYMBOLS, ABBREVIATIONS, DETAILS, AND FIXTURE SCHEDULE
P.1	PLUMBING – UNDER FLOOR PLAN AND DETAILS
P.2	PLUMBING – FLOOR PLAN AND DETAILS
P.4	PLUMBING – SANITARY WASTE AND DOMESTIC WATER FLOW DIAGRAMS

GENERAL SYMBOLS

C	CAP FOR FUTURE
E	EXISTING TO REMAIN
R	RELOCATE EXISTING
	POINT OF NEW CONNECTION
X	REVISION NUMBER
XX / XX	EQUIPMENT TAG / EQUIPMENT NUMBER
XX / XX	SECTION (LETTER) OR DETAIL (NUMERICAL) DESIGNATION / SHEET NUMBER
X	SECTION (LETTER) OR DETAIL (NUMERICAL) DESIGNATION
	GENERAL BREAK
	LINE BREAK
	ON DEMOLITION PLANS, INDICATES ITEMS TO BE REMOVED
XX X	PLUMBING FIXTURE UNITS W/ PIPE SIZE
XX-X	PLUMBING FIXTURE DESIGNATION

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Ashland School District
Willow Wind Barn Remodel
ASHLAND, OREGON

SYMBOLS, ABBREVIATIONS, DETAILS, AND FIXTURE SCHEDULE
1 1/13/10
SCALE: NONE
12.8.09
09-52 PLBG

P.0

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REFERENCE SHEET

PLUMBING UNDER FLOOR PLAN

1/4" = 1'-0"

WE WEHAGE ENGINEERING, INC.
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1236 DISK DRIVE, SUITE 1 - MEDFORD, OREGON 97501
PHONE: 541-842-4188 FAX: 541-842-4189 WEB SITE: wehage.org

GENERAL NOTES

1. SEE PLUMBING RISER DIAGRAMS (1/P.3) & (2/P.3) FOR WATER, SANITARY DRAIN, AND VENT LINE SIZES AND VENT LINE ROUTING.
2. CONTRACTOR TO USE PIPE GUARD PIPE WRAP, PVC SLEEVE (ONE SIZE LARGER THAN PIPE) OR FLEX-WRAP (A MINIMUM OF TWO WRAPS) FOR ALL PIPE GOING THROUGH CONCRETE.
3. WHERE VENTS CONNECT TO A HORIZONTAL DRAINAGE PIPE, EACH VENT PIPE SHALL HAVE ITS INVERT TAKEN OFF ABOVE THE DRAINAGE CENTERLINE OF SUCH PIPE DOWNSTREAM OF THE TRAP BEING SERVED.
4. CONTRACTOR TO SLOPE REST ROOM FLOORS TOWARD FLOOR DRAINS, AS REQUIRED BY PLUMBING CODE (411.4).
5. ROUTE ALL WATER LINES IN CRAWL SPACE, IN THE FLOOR JOIST ABOVE THE FLOOR INSULATION.
6. ROUTE CONDENSATE DRAIN LINES FROM FURNACES AND COOLING COILS (SEE SHEET M.1 FOR LOCATIONS) TO NEAREST DRAIN OR SINK (SEE DETAIL 5/P.0).

(X) KEYED NOTES

1. CONNECT TO SANITARY SEWER. SEE CIVIL ENGINEERING DRAWINGS.
2. CONNECT TO BUILDING WATER SUPPLY SEE CIVIL ENGINEERING DRAWINGS.
3. 2" SANITARY UP TO U-1
4. 3" SANITARY UP TO WATER CLOSET FLANGE
5. 2" SANITARY UP TO LAVS
6. 3" SANITARY UP TO MS-1
7. 2" SANITARY UP TO S-1 (1)
8. 3" SANITARY UP TO FD-1. PRIME P-TRAP.
9. 2" SANITARY UP TO DF-1
10. 2" VENT UP
11. COLD WATER UP TO WATER CLOSET
12. COLD WATER UP TO U-1 AND DF-1
13. COLD WATER AND HOT WATER UP TO LAVS
14. COLD WATER AND HOT WATER UP TO S-1
15. COLD WATER AND HOT WATER UP TO WATER HEATER (WH-1)
16. HOT WATER RETURN UP TO WATER HEATER (WH-1)
17. COLD WATER UP TO HOSE BIBB (HB-1)
18. ROUTE COLD WATER LINE TO EVAP COOLER, COORDINATE LOCATION WITH MECHANICAL CONTRACTOR.
19. GAS PIPING UP TO FURNACE ON PLATFORM ABOVE RESTROOM CEILING.
20. GAS METER. COORDINATE LOCATION WITH AVISTA. SEE PIPING SCHEMATIC FOR GAS PIPE SIZES.

1 BELOW GRADE PIPE INSTALLATION

SCALE: NONE

2 TYPICAL EXTERIOR CLEANOUT

SCALE: NONE

3 NATURAL GAS PIPING SCHEMATIC

SCALE: NONE

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FLUMBING UNDER FLOOR PLAN AND DETAILS

(1) 1/13/10

SCALE: 1/4"
12.8.09

09-52 PLBG

P.1

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REFERENCE NORTH

PLUMBING FLOOR PLAN

1/4" = 1'-0"

1 NATURAL GAS HOOK-UP TO EQUIPMENT

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GENERAL NOTES

1. SEE PLUMBING RISER DIAGRAMS (1/P.3) & (2/P.3) FOR WATER, SANITARY DRAIN, AND VENT LINE SIZES AND VENT LINE ROUTING.
2. CONTRACTOR TO USE PIPE GUARD PIPE WRAP, PVC SLEEVE (ONE SIZE LARGER THAN PIPE) OR FLEX-WRAP (A MINIMUM OF TWO WRAPS) FOR ALL PIPE GOING THROUGH CONCRETE.
3. WHERE VENTS CONNECT TO A HORIZONTAL DRAINAGE PIPE, EACH VENT PIPE SHALL HAVE ITS INVERT TAKEN OFF ABOVE THE DRAINAGE CENTERLINE OF SUCH PIPE DOWNSTREAM OF THE TRAP BEING SERVED.
4. CONTRACTOR TO SLOPE REST ROOM FLOORS TOWARD FLOOR DRAINS, AS REQUIRED BY PLUMBING CODE (411.4).
5. ROUTE ALL WATER LINES IN CRAWL SPACE, IN THE FLOOR JOIST ABOVE THE FLOOR INSULATION.
6. ROUTE CONDENSATE DRAIN LINES FROM FURNACES AND COOLING COILS (SEE SHEET M.1 FOR LOCATIONS) TO NEAREST DRAIN OR SINK (SEE DETAIL 5/P.0).

(X) KEYED NOTES

1. COLD WATER DOWN TO CRAWL SPACE.
2. HOT WATER DOWN TO CRAWL SPACE.
3. HOT WATER RETURN DOWN TO CRAWL SPACE.
4. 2" VENT UP
5. COLD WATER AND HOT WATER DOWN TO MS-1.
6. LOCATE WATER HEATER ON A PLATFORM ABOVE MOP SINK.
7. CONNECT GAS TO FURNACE ON PLATFORM ABOVE RESTROOM CEILING. SEE MECHANICAL PLAN FOR FURNACE LOCATION. SEE UNDERFLOOR PLAN FOR CONTINUATION, GAS CONECTION DETAIL AND GAS PIPING SCHEMATIC.

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PLUMBING FLOOR PLAN
1 1/13/10

SCALE: 1/4"
12.8.09

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P.2

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NOTE: FIXTURE UNITS ARE BASED ON PLUMBING SPECIALTY CODE, TABLE 7-3 "ASSEMBLY" RATING. SANITARY BUILDING DRAIN AND VENT SIZES ARE BASED ON PLUMBING SPECIALTY CODE, TABLE 7-5.

1 SANITARY DRAINAGE RISER DIAGRAM
SCALE: NONE

3 ELECTRIC WATER HEATER
SCALE: NONE

NOTE: FIXTURE UNITS ARE BASED ON PLUMBING SPECIALTY CODE TABLE 6-5 "ASSEMBLY" RATING. BUILDING SUPPLY AND BRANCH LINE SIZING ARE BASED ON PLUMBING SPECIALTY CODE TABLE 6-6. (282 FIXTURE UNITS AT 300 FT AT OVER 60 psi)

2 DOMESTIC WATER FLOW DIAGRAM
SCALE: NONE

4 WALL MOUNTED WATER HEATER DETAIL
SCALE: NONE

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FLUMBING SANITARY WASTE AND DOMESTIC WATER FLOW DIAGRAMS
1 1/13/10

SCALE: NONE
12.8.09

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ELECTRICAL ONE LINE DIAGRAM

1 ELECTRICAL PLAN
SCALE: 1/4"=1'-0"

NORTH

PANEL A 120/240V,SINGLE PHASE 200A MB 10KAIC

1	PLATFORM RECEPTACLES	20/1	20/1	2	ASSEMBLY RECEPTACLES
3	PLATFORM RECEPTACLES	20/1	20/1	4	ASSEMBLY RECEPTACLES
5	PLATFORM RECEPTACLES	20/1	20/1	6	WOMENS RESTROOM RECEPTACLE
7	PLATFORM RECEPTACLES	20/1	20/1	8	MENS RESTROOM RECPTACLE
9	PLATFORM RECEPTACLES	20/1	20/1	10	ASSEMBLY RECEPTACLES
11	DRINKING FOUNTAIN RECEPTACLE	20/1	20/1	12	LOBBY RECEPTACLES
13	EVAPORATIVE COOLER	20/1	50/2	14	HP-1
15	WATER HEATER	20/1	50/2	16	HP-1
17	FC-1	60/2	50/2	18	HP-2
19	FC-1	60/2	50/2	20	HP-2
21	FC-2	60/2		22	
23	FC-2	60/2		24	
25				26	
27				28	
29				30	
31				32	
33				34	
35				36	
37				38	
39				40	

PANEL B 120/240V,SINGLE PHASE 200A MB 10KAIC

1	RESERVED FOR FUTURE PLATFORM NEEDS			2	RESERVED FOR FUTURE PLATFORM NEEDS
3				4	
5				6	
7				8	
9	RESERVED FOR FUTURE PLATFORM NEEDS			10	RESERVED FOR FUTURE PLATFORM NEEDS
11				12	
13				14	
15				16	
17	RESERVED FOR FUTURE PLATFORM NEEDS			18	RESERVED FOR FUTURE PLATFORM NEEDS
19				20	
21				22	
23				24	
25	RESERVED FOR FUTURE PLATFORM NEEDS			26	RESERVED FOR FUTURE PLATFORM NEEDS
27				28	
29				30	

LOAD CALCULATIONS

LIGHTING		
2840 x 3.5 VA	X 125%	12,425 VA
RECEPTICLES x 180 VA EACH	X 100%	5,400 VA
OUTDOOR LIGHTING	X 125%	2,800 VA
HOTWATER 120 VOLT 16 AMP	X 100%	1,920 VA
HVAC	X 100%	28,800 VA
FUTURE STAGE LIGHTING	X 100%	12,000 VA
EVAPORATOR COOLER	X 100%	1,800 VA
LARGEST MOTOR	X 125%	2,440 VA
120/240 VOLT	TOTAL VA	67,585 VA
1 PHASE	TOTAL AMPS	282 AMPS

ELECTRICAL SYMBOLS

$ $3 $4	SINGLE POLE, THREE AND FOUR WAY WALL SWITCHES.
	OCCUPANCY SENSOR
	TWO DUPLEX RECEPTACLES IN TWO GANG BOX
	DUPLEX RECEPTACLES.
	FLOOR BOX
+XX	DUPLEX RECEPTACLES – HEIGHT AS SPECIFIED
GFCI	GROUND FAULT CIRCUIT INTERRUPTING DUPLEX RECEPTACLE
WP GFCI	WEATHERPROOF DUPLEX GFI RECEPTACLE
TV	TV LOCATION
	PHONE/DATA LOCATION
	ELECTRICAL PANEL, FLUSH OR SURFACE
	TELEPHONE PANEL OR BACKBOARD
	HOME RUN TO PANEL
B-22	PANEL AND CIRCUIT NUMBER
	SURFACE FLUORESCENT FIXTURE
	SURFACE FLUORESCENT FIXTURE NIGHT LIGHT AND EMERGENCY BALLAST
	EMERGENCY EXIT SIGN
(E)	EXISTING DEVICE

PRECISION ELECTRIC
Pride in Craftsmanship
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ELECTRICAL PLAN

ASHLAND SCHOOL DISTRIC
WILLOW WIND BARN RENOVATION
ASHLAND, OREGON

PLANS, DETAILS, NOTES

PROJECT NO.	
FILE NAME	REVISIONS
ISSUE DATE 12-17-2009	
SHEET 1 OF 2	
CHECKED	

E1

1 LIGHTING PLAN
SCALE: 1/4"=1'-0"

NORTH

FIXTURE SCHEDULE

TYPE	MANUFACTURER	DESCRIPTION	MFR NO.
A	PEERLESS	8' DIRECT/INDIRECT T8	10-CRM4
B	LITHONIA	4' WALL NOUNT FLUORESCENT	WB-232 M VOLT
C	LITHONIA	4' TWO LAMP FLUORESCENT WRAP	LB-232 M VOLT
D	TMS	WALL MOUNT COMPACT FLUORESCENT	TMS-M VOLT
E	LITHONIA	EXIT SIGN WITH EMERGENCY LIGHTS	LHQMS-M VOLT
F	LITHONIA	2' TWO LAMP FLUORESCENT WRAP	LB-232 2 M VOLT
G	PROGRESS	100 WATT HALF MOON WALL SCONCE	1
H	LITHONIA	SURFACE MOUNT FIXTURE	L8 232 MVOLT

ELECTRICAL SYMBOLS

$ $3 $4	SINGLE POLE, THREE AND FOUR WAY WALL SWITCHES.
	OCCUPANCY SENSOR
	TWO DUPLEX RECEPTACLES IN TWO GANG BOX
	DUPLEX RECEPTACLES.
	FLOOR BOX
+XX	DUPLEX RECEPTACLES – HEIGHT AS SPECIFIED
GFCI	GROUND FAULT CIRCUIT INTERRUPTING DUPLEX RECEPTACLE
WP GFCI	WEATHERPROOF DUPLEX GFI RECEPTACLE
TV	TV LOCATION
	PHONE/DATA LOCATION
	ELECTRICAL PANEL, FLUSH OR SURFACE
	TELEPHONE PANEL OR BACKBOARD
	HOME RUN TO PANEL
B-22	PANEL AND CIRCUIT NUMBER
	SURFACE FLUORESCENT FIXTURE
	SURFACE FLUORESCENT FIXTURE NIGHT LIGHT AND EMERGENCY BALLAST
	EMERGENCY EXIT SIGN
(E)	EXISTING DEVICE

PRECISION ELECTRIC
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LIGHTING PLAN

ASHLAND SCHOOL DISTRIC
WILLOW WIND BARN RENOVATION
ASHLAND, OREGON

PLANS, DETAILS, NOTES

PROJECT NO.	
FILE NAME	REVISIONS
ISSUE DATE 12-17-2009	
SHEET 2 OF 2	
CHECKED	

E2

WILLOW WIND COMMUNITY LEARNING CENTER RENOVATIONS

ARCHITECT	CIVIL ENGINEER	MECH./PLUMB. ENGINEER	ELECTRICAL ENGINEER	LANDSCAPE DESIGN	OWNER
ORW ARCHITECTURE, AIA	**HARDEY ENGINEERING & ASSOCIATES, INC.**	**WEHAGE ENGINEERING, INC.**	**ORPAC Engineering**		**ASHLAND PUBLIC SCHOOLS**
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GENERAL NOTES

1. DO NOT SCALE DRAWINGS, CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING SITE DIMENSIONS. IF DISCREPANCIES ARE FOUND, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
2. UNLESS SHOWN OTHERWISE, ALL DAMAGE CAUSED BY NEW WORK TO EXISTING AREAS OF THE SITE, CONSTRUCTION, FINISH CONSTRUCTION, ELECTRICAL OR MECHANICAL SYSTEMS SHALL BE REPAIRED TO MATCH EXISTING CONDITIONS OR AS FOUND PRIOR TO ANY DAMAGE
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE FIRE AND LIFE SAFETY CODES.
4. THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE SCOPE OF THE WORK AND SITE ACCESSIBILITY. THE CONTRACTOR IS REMINDED THAT THE PROJECT DRAWINGS INDICATE THE CONDITIONS AT THE SITE AS IT EXISTED. DEVIATIONS ENCOUNTERED DURING THE WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING STRUCTURES AT THE WORK AREA FROM WEATHER AND OTHER INCLEMENT CONDITIONS. ANY DAMAGE INCURRED DUE TO THE FAILURE BY THE CONTRACTOR TO PROPERLY PROTECT SUCH WORK SHALL BE REPAIRED AT CONTRACTOR EXPENSE.
6. THE CONTRACTOR SHALL DISPOSE OF ALL REMOVED AND /OR DEMOLISHED MATERIAL. WASTE & DEBRIS CAUSED BY THE NEW WORK. THIS MATERIAL SHALL BE REMOVED FROM THE PROPERTY AND TAKEN TO A LEGALLY-OPERATED DISPOSAL SITE.
7. ALL CONSTRUCTION TECHNIQUES, MATERIALS, AND FINISHES SHALL BE AS REQUIRED BY THE APPROPRIATE CODE AUTHORITIES. INSTALLATION SHALL FOLLOW THE MANUFACTURERS PUBLISHED SPECIFICATIONS AND/OR TRADE STANDARDS IN ADDITION TO MEETING OR EXCEEDING THE DESIGN STANDARDS.
8. ALL WEATHER EXPOSED SURFACES SHALL HAVE A WEATHER RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING AND THE EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER AS TO MAKE THEM WATERPROOF.

VICINITY MAP

BUILDINGS MAP

LEGEND AND SYMBOLS

- MATCH LINE CUT — BUILDING OR SEGMENT IDENTIFICATION; DWG. NUMBER WHERE SEGMENT IS DRAWN
- DETAIL — DETAIL IDENTIFICATION; DWG. NUMBER WHERE DETAIL IS DRAWN
- WALL CROSS SECTION — SECTION IDENTIFICATION; DWG. NUMBER WHERE SECTION IS DRAWN
- BUILDING CROSS SECTION — SECTION IDENTIFICATION; DWG. NUMBER WHERE SECTION IS DRAWN
- GRID LINE — TOP TO BOTTOM, LETTERS LEFT TO RIGHT, NUMBERS
- ROOM IDENTIFICATION — ROOM NAME; ROOM NUMBER; DETAIL NMBER ON INTERIOR ELEVATION SHEET; DWG. NUMBER WHERE INT ELEVATION IS DRAWN
- BUILDING ELEVATION — ELEVATION IDENTIFICATION; DWG. NUMBER WHERE ELEVATION IS DRAWN
- NORTH ARROW — ARROW INDICATES PLAN NORTH
- DOOR IDENTIFICATION — ROOM NUMBER OF DOOR
- WINDOW IDENTIFICATION — WINDOW NUMBER; GLAZING TYPE MODIFIER
- TYPICAL SUITE IDENTIFICATION — SUITE TYPE
- EQUIPMENT IDENTIFICATION — EQUIPMENT NUMBER
- O.F.C.I. ITEM — ITEM NUMBER (SEE O.F.C.I. LIST)
- WALL TYPE IDENTIFICATION — WALL TYPE MODIFIERS; WALL TYPE
- LOUVER IDENTIFICATION — LOUVER NUMBER
- HVAC EXHAUST
- HVAC RETURN
- HVAC SUPPLY
- LIGHTING SYMBOL
- LIGHTING SYMBOL
- LIGHTING SYMBOL
- CENTER LINE
- F.O.M. FACE OF MASONRY
- F.O.C. FACE OF CONCRETE
- F.O.S. FACE OF STUD / STRUC
- F.O.FIN. FACE OF FINISH
- TARGET POINT OR = LEVEL LINE = ELEVATION

SEE INDIVIDUAL SHEETS FOR ADDITIONAL LEGENDS AND SYMBOLS

MATERIALS LEGEND

LARGE SCALE DETAIL MATERIALS

- EARTH
- GRAVEL,ROCK
- SAND GROUT
- CONCRETE
- METAL
- DIMENSIONAL LUMBER
- BLOCKING SHIM
- FINISH WOOD
- PLYWOOD
- CEILING/ ACOUSTIC TILE/ PANEL
- BATT INSULATION
- CONCRETE BLOCK

NOTE: ALL MATERIAL SYMBOLS ABOVE MAY NOT NECESSARILY BE USED IN THIS PROJECT

SEE INDIVIDUAL SHEETS FOR ADDITIONAL LEGENDS AND SYMBOLS

ABBREVIATIONS

NOTE: ABBREVIATIONS BELOW MAY NOT INCLUDE ALL FOUND WITH DRAWINGS

ABV	ABOVE
AC	ASPHALTIC CONCRETE
ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ARW	AREA SEPARATION WALL
BD	BOARD
BLDG	BUILDING
B.O.	BOTTOM OF
BM	BEAM
CBC	CALIFORNIA BUILDING CODE
C.F.C.I.	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONT	CONTINUOUS
CORR	CORRIDOR
CPT	CARPET
CR	CLASSROOM
CTB	COMPUTER TERMINAL BOARD
CT&K	COUNTER&SINK
DBL	DOUBLE
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIMS	DIMENSIONS
DW	DISHWASHER
D.P.	DISABLED PERSON
EA	EACH
ELE	ELECTRICAL
ELECT	ELECTRICAL
EM	ENTRANCE MATTING
EMT	ELECTRICAL METALLIC TUBING
EQ	EQUAL(Y)
EX	EXISTING
EXT	EXTERIOR
E.J.	EXPANSION JOINT
FD	FLOOR DRAIN
FF	FINISHED FLOOR
FH&MS	FLAT HEAD SHEET METAL SCREWS
FIN	FINISH(ED)
FR/FG	FRAMING
FRZR	FREEZER
FTG	FOOTING
F.E.C.	FIRE EXTINGUISHER CABINET
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD/ STRUCTURE
F.R.	FIRE RESISTANT
GA	GAUGE
GA	GYPSUM ASSOCIATION
GALV.	GALVANIZED
GYPBD	GYPSUM BOARD
G.B.	GRAB BAR
G.I.	GALVANIZED IRON
G.S.	GALVANIZED STEEL
H	HIGH
HDBD	HARDBOARD
HDR	HEADER
HDWD	HARDWOOD
HGT	HEIGHT
HR	HOUR
HVAC	HEATING/VENTILATING/AIR CONDITIONING
HW	HOT WATER
H.C.	HANDICAP
INSUL	INSULATION
IR	INSIDE RADIUS
JST	JOIST
KS	KNEE SPACE
LPG	LIQUID PROPANE GAS
M	MIRROR
MAX	MAXIMUM
MB	MACHINE BOLT
MB	MARKER BOARD
MDL	MODEL
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MTL	METAL
MW	MICROWAVE
N.I.C.	NOT IN CONTRACT
OCC	OCCUPANCY
OPNG	OPENING
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED
O.F.O.I.	OWNER FURNISHED OWNER INSTALLED
P	PAINT
P LAM	PLASTIC LAMINATED
PSF	POUNDS PER SQUARE FOOT
PVC	PLASTIC WALL COVERING
PWD	PLYWOOD
PWP	PLASTIC WALL PANEL
P.T.	PRESSURE TREATED
REF	REFRIGERATOR
RM	ROOM
R.O.	ROUGH OPENING
SEP	SEPARATION
SF	SQUARE FEET
SQ. FT.	SQUARE FEET
SHTG	SHEATHING
SIM	SIMILAR
SM	SHEET METAL
SMS	SHEET METAL SCREWS
SPECS.	SPECIFICATIONS
STB	SIGNAL TERMINAL BACKBOARD
STL	STEEL
STRUCT	STRUCTURAL/STRUCTURE
S.S.	STAINLESS STEEL
TRSFR	TRANSFORMER/ TRANSFER
TS	TUBE STEEL
TTB	TELEPHONE TERMINAL BACKBOARD
TVB	CATV TERMINAL BACKBOARD
TYP	TYPICAL
T.H.	THRESHOLD
T.O.	TOP OF
UL	UNDERWRITERS LABORATORY
UTIL	UTILITY
U.O.N.	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
V-NR	TYPE B, NON-RATED
V-1HR	TYPE B, 1 HOUR
VWC	VINYL WALL COVERING
WBG	WALL BUMPER GUARD
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
W.C.	WATER CLOSET
W.S.	WOOD SCREW
W/	WITH

DRAWING INDEX

ARCHITECTURAL

- 0.1 COVER DRAWING
- 1.1 SITE PLAN
- 3.1 FLOOR PLANS
- 3.2 FOUNDATION PLANS & DETAILS
- 10.1 ROOF PLANS

MECHANICAL

- M-1 MECHANICAL LEGEND & NOTES
- M-2 MECHANICAL FLOOR PLANS
- M-3 MECHANICAL SCHEDULES & DETAILS

ELECTRICAL

- E1 ELECTRICAL INFORMATION
- E2 ELECTRICAL INFORMATION
- E3 ELECTRICAL PLAN

CIVIL

- C1 GRADING PLAN

PROJECT INFORMATION

ENERGY CODE COMPLIANCE

PRESCRIPTIVE PATH #1

ITEM	REQUIRED	PROVIDED
WINDOW U VALUE	N/A (LESS THAN 1% OF WALL AREA)	U=.3
EXTERIOR DOOR U VALUE	N/A (EXIT/ENTRY DOORS EXEMPT)	U=.14
WALL INSULATION	U=.13	U=.13
ROOF INSULATION	U=.025	U=.025
HEATED SLAB EDGE	R-15	R-15

PROJECT ADDRESS:

ASSESSOR'S MAP #: 39IE10B
TAXLOT #:200
ZONE: EFU
OCCUPANCY:
ALLOWABLE FLOOR AREA:
ALLOWABLE STORIES:
ALLOWABLE HEIGHT:

GOVERNING CODES

OREGON STRUCTURAL SPECIALTY CODE, 2007 EDITION (BASED ON THE IBC 2006 EDITION).
OREGON STATE FIRE CODE, 2007 EDITION (BASED ON THE IFC 2006 EDITION).
OREGON ELECTRICAL SPECIALTY CODE, 2005 EDITION (BASED ON THE NEC 2005 EDITION).
OREGON MECHANICAL SPECIALTY CODE, 2007 EDITION (BASEDN THE IMC 2006 EDITION).
OREGON PLUMBING SPECIALTY CODE, 2004 EDITION (BASED ON THE 2003 UPC).

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COVER DRAWING

1

SCALE: N/A
5/16/08

x0716CD

0.1

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SITE PLAN AT BUILDINGS
SCALE: 1" = 30'- 0"

6 H.C. SIGN MOUNTING
SCALE: 1" = 1'- 0"

7 H.C. SIGN
SCALE: 1"=1'-0"

OVERALL SITE PLAN
SCALE: 1" = 160'

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SITE PLAN

1 REV. - 07.07.08

SCALE: AS SHOWN
5/16/08

x07169P

1.1

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SITE PLAN AT BUILDINGS

SCALE: 1" = 30'- 0"

OVERALL SITE PLAN

SCALE: 1" = 160'

H.C. SIGN MOUNTING

SCALE: 1" = 1'- 0"

H.C. SIGN

SCALE: 1"=1'-0"

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SITE PLAN

SCALE: AS SHOWN
5/16/08

X07169P

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ROOF PLAN

SCALE: 1/4" = 1'- 0"

NORTH

GROUND PLAN

SCALE: 1/4" = 1'- 0"

NORTH

SECTION 'A'

SCALE: 1/4" = 1'- 0"

FRONT ELEVATION

SCALE: 1/4" = 1'- 0"

GROUND FLOOR PLAN

SCALE: 1/4" = 1'- 0"

0 2' 6' 14' 26'

SCALE: 1/4"=1'-0"
SCALE: 1/8"=1'-0" (11"x17" SHEETS)

NORTH

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FLOOR PLANS

SCALE: 1/4"=1'-0"
5/16/08

x0716FP1

3.1

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1 DECK SUPPORT SYSTEM
SCALE: 1-1/2"=1'-0"

2 BUILT-IN RAILING BENCH
SCALE: 1-1/2"=1'-0"

3 DECK RAILING
SCALE: 1-1/2"=1'-0"

4 POST FTG. FOR COVERED AREA
SCALE: 1"=1'-0"

5 EXT. BENCH
SCALE: 1½"=1'-0"

6 BENCH DETAIL
SCALE: N.T.S

7 COVERED BENCH FOUNDATION PLAN
SCALE: 1/4" = 1'- 0"

FOUNDATION DEMOLITION PLAN
SCALE: 1/4" = 1'- 0"

NEW FOUNDATION PLAN
SCALE: 1/4" = 1'- 0"

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FOUNDATION PLANS & DETAILS

SCALE: 1/4"=1'-0"
5/16/08

x0716FDN

3.2

SHADED BUILDINGS ARE TO BE RE-ROOFED

EXISTING BUILDING LAYOUT

SCALE: 1" = 30' - 0"

GROUND FLOOR ROOF PLAN -- TEMPORARY CLASSROOM

3 SCALE: 1/8"=1'-0"

SECOND FLOOR ROOF PLAN -- FARMHOUSE

2 SCALE: 1/8"=1'-0"

WITHIN HATCHED AREAS REMOVE EXISTING ROOFING AND WEATHER BARRIER. PATCH EXISTING ROOF SUBSTRATE AS NEEDED TO SUPPORT NEW ROOFING. PROVIDE NEW ASPHALT SHINGLE ROOFING SYSTEM

ROOF SLOPES SHOWN HAVE NOT BEEN MEASURED. VERIFY ACTUAL CONDITIONS

GROUND FLOOR ROOF PLAN -- FARMHOUSE AND CLASSROOMS

1 SCALE: 1/8"=1'-0"

ASPHALT SHINGLE ROOFING SYSTEM:

MATERIALS

SHINGLES: MINERAL GRANULE SURFACED SELF-SEALING ASPHALT SHINGLES WITH FIBERGLASS REINFORCED MAT CORE. GAF "GRAND SLATE" ARE APPROVED.
HIP AND RIDGE SHINGLES: HIGH PROFILE GRANULE SURFACED SELF-SEALING MOLDED ASPHALT SHINGLE HIP AND RIDGE CAP SHAPES. GAF "PACIFIC RIDGE" ARE APPROVED.
LEAK BARRIER: SELF-ADHERING, SELF-SEALING BITUMINOUS ASPHALTIC SHEET LAMINATED TO POLYETHYLENE FILM, TOTAL THICKNESS 60 MILS. GAF "STORM GUARD" IS APPROVED.
SHINGLE UNDERLAYMENT: ASPHALT IMPREGNATED FELTED NON-WOVEN CELLULOSE FIBER, 30 POUNDS PER 100 SQUARE FEET, ASTM 226 TYPE II. GAF "LEATHERBACK" IS APPROVED.
ATTIC VENTILATION: FLEXIBLE CONTINUOUS VENTILATOR MANUFACTURED FOR APPLICATION TO ROOF RIDGES. GAF "COBRA RIDGE VENT" IS APPROVED.
METAL FLASHING: 24-GAGE HOT DIP GALVANIZED STEEL SHEET, ASTM A653/A 653M, G90/Z275.

INSTALLATION

INSTALLATION: IN CONFORMANCE WITH MATERIALS MANUFACTURER'S PRINTED INSTRUCTIONS AND IN CONFORMANCE WITH REQUIREMENTS FOR WARRANTY. FASTEN EACH SHINGLE WITH SIX NAILS.

WARRANTY

MANUFACTURING DEFECTS: WARRANT THAT PRODUCTS PROVIDED FOR THIS WORK WILL MAINTAIN THEIR INTEGRITY AND FUNCTION FOR: NON-PRORATED PERIOD: 50 YEARS (FOR SINGLE FAMILY DETACHED RESIDENCES), 15 YEARS (FOR OTHER STRUCTURE TYPES). MANUFACTURER DEFECT WARRANTY LIABILITY FOR YEARS 16 THRU 50 IS PRORATED BEGINNING AT 75 PERCENT OF COST IN YEAR 16, AND DECREASING BY 5 PERCENT EACH TWO YEARS THEREAFTER.
WIND AND FAILURE-TO-SEAL: WARRANT THAT PRODUCTS AND INSTALLATION PROVIDED FOR THIS WORK WILL REMAIN INSTALLED UNDER A MAXIMUM WIND SPEED OF 110 MILES PER HOUR, AND WILL NOT PASS WATER THRU FROM THE SURFACE TOP OF THE INSTALLATION TO THE UNDERSIDE FOR A PERIOD OF TWELVE YEARS.
COSTS: WARRANTY SHALL PROVIDE THAT ALL COSTS TO REPAIR OR REPLACE MATERIALS AND INSTALLATION,--TO INCLUDE REMOVAL OF MATERIALS AND THEIR DISPOSAL--ARE BORNE BY THE WARRANTOR.

Ø 2' 6' 14' 26'
SCALE: 1/8"=1'-0"
SCALE: 1/16"=1'-0" (11"x17" SHEETS)
NORTH

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ROOF PLANS

SCALE: 1/8"=1'-0"
5/16/08

x0716RP

10.1

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SECTION A-A

NTS

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

CONSTRUCTION NOTES

1. PROTECT EXISTING ITEM IN-PLACE
2. SAWCUT AND REMOVE EXISTING ASPHALT TO CUT LINE. (REPLACE A.C. PER SECTION BELOW. SEE NOTE #38).
10. TACK COAT SAWCUT EDGE OF ASPHALT FOR ADEQUATE BOND WITH PROPOSED ASPHALT. APPLY SAND AT JOINT AFTER ASPHALT PLACEMENT.
21. CONSTRUCT STD CURB AND GUTTER, PWE STD CD700
22. CONSTRUCT SIDEWALK, PWE STD CD720
23. CONSTRUCT STD SIDEWALK WHEELCHAIR RAMP DESIGN B (PWE STD DWG CD750)
25. CONSTRUCT STANDARD CURB (16") PER OREGON STD RD700
38. CONSTRUCT AC PARKING SECTION (3" LEVEL III 1/2" DENSE HMAC , 6" OF 3/4" CRUSHED ROCK, 12" OF 4" CRUSHED ROCK OVER SUBGRADE GEOTEXTILE AND COMPACTED SUBGRADE). NOTE: ALL GRADES ARE TO FINISHED A.C. (AS INDICATED) ADJUST TO TOP OF ROCK IF PAVING IS POSTPONED TO A FUTURE PHASE. RAMP ROCK AS NEEDED TO PROVIDE SMOOTH TRANSITION AT ACCESS LOCATIONS.
39. INSTALL TWO LYNCH TYPE BASINS CONNECTED TOGETHER WITH ONE 12" OUTLET PIPE (LENGTH AS NOTED). SEE DETAIL CD302 AND HE-1 BELOW. OWNER TO MAINTAIN BASINS ANNUALLY OR AS NEEDED.
40. INSTALL DETECTABLE WARNING PER ADA STANDARDS

NOTE:

1. ADD 6" TO AC GRADES FOR TOP OF CURB GRADES UNLESS OTHERWISE NOTED.
2. ADD 1800.00 TO ALL ELEVATIONS TO OBTAIN TRUE ELEVATIONS.

TRENCH DETAIL
OUTSIDE PAVED AREAS

GENERAL NOTES:

1. COLD MIX AC MAY BE USED AS TEMPORARY PATCH ONLY.
2. ALL STEEL TRAFFIC PLATES IN TRAVELED AREAS MUST BE "RAMPED" WITH COLD MIX AC TO ALLOW SMOOTHER TRANSITION.
   a) MINIMUM 12" LAP OF STEEL PLATES ONTO EXISTING PAVEMENT.
   b) MINIMUM 3/4" STEEL PLATE THICKNESS.
3. ALL GASKETED JOINTS SHALL BE PRESSURE TESTABLE. (CONCRETE PIPE – ASTM C443; PVC & HDPE PIPE – ASTM D3212)
   a) SMALL PIPES (24" DIA. OR LESS) – MINIMUM TRENCH WIDTH SHALL BE I.D. PLUS 18".
   b) LARGE PIPES (30" DIA. OR GREATER) – MINIMUM TRENCH WIDTH SHALL BE O.D. PLUS 24", AT THE BELL END THE TRENCH WIDTH SHALL INCREASE TO ACHIEVE THE 24".
4. CONTROLLED LOW-STRENGTH MATERIAL (CLSM) IS HIGHLY FLOWABLE LEAN CONCRETE MIX; A MIXTURE OF FLY ASH, CEMENT, FINE AGGREGATES, WATER AND ADMIXTURES, IF NECESSARY. CLSM SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 150 TO 250 psi AND SHALL COMPLY WITH 2002 OREGON APWA/ODOT SECTION 00442.

STANDARD PIPE TRENCH

ISSUED: LB CRZ	DATE: 9/27/05 7/28/05	PUBLIC WORKS ENGINEERING Ashland - Medford - Rogue Valley Sewer Services	DRAWING NO. CD302
REVISED:	DATE:		

LEGEND

AC	ASPHALT FINISH GRADE
TC	TOP OF CURB
( )	EXISTING ELEVATION
TOG	TOP OF GRATE
%	SLOPE
BSW	BACK OF SIDEWALK
SW	SIDEWALK

REGISTERED PROFESSIONAL ENGINEER 5712PE OREGON JANUARY 14 2003 BRADFORD A. WRIGHT
RENEWAL DATE: 06/30/2010

STANDARD CURB
O.D.O.T. & City of Portland Standard "H"=16"

RD700

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HEA ENGINEERING INTEGRITY
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Sidewalk With Parkway Strip

Sidewalk Adjacent To Curb

SIDEWALK ISOLATION JOINT PLACE EVERY 50'
SIDEWALK CONTRACTION JOINT PLACE EVERY 5'

GENERAL NOTES:

1. SIDEWALKS SHALL HAVE A NOMINAL THICKNESS OF 4" WITH A MEDIUM BROOM FINISH.
2. SIDEWALK SECTIONS THROUGH DRIVEWAYS SHALL HAVE A NOMINAL THICKNESS OF 6".
3. WHERE SIDEWALK IS ADJACENT TO CURB, PLACE CONSTRUCTION JOINT IN LINE WITH CURB JOINT (10') AND IN BETWEEN (5').
4. GRANULAR MATERIAL UNDER SIDEWALKS & DRIVEWAY SHALL BE SAND, GRANITE, OR CRUSHED ROCK, FIRMLY TAMPED.
   a. 2" MIN. THICKNESS UNDER SIDEWALKS.
   b. 3" MIN. THICKNESS UNDER DRIVEWAYS.
5. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2002 ODOT/OREGON APWA SECTION 00440.00
6. IN EMBANKMENT AREAS, PIT RUN OR 4" SHALE BACKFILL SHALL BE USED TO BUILD TO GRADE. NATIVE BACKFILL MAY BE CONSIDERED WITH APPROVAL FROM CITY ENGINEER. CONSTRUCT BENCH ON SLOPES 5% OR GREATER.
7. ALL WORK & MATERIALS SHALL CONFORM TO 2002 ODOT/APWA STANDARD SPECS. AS AMENDED BY THE CITY OF MEDFORD.

SIDEWALK DETAIL

ISSUED: LB CRZ	DATE: 9/27/05 7/28/05	PUBLIC WORKS ENGINEERING Ashland - Medford - Rogue Valley Sewer Services	DRAWING NO. CD720
REVISED:	DATE:		

STANDARD CURB AND GUTTER

DROP CURB AND GUTTER AT DRIVEWAY APRONS

GENERAL NOTES:

1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2002 ODOT/OREGON APWA SECTION 00440.00
2. ALL WORK & MATERIALS SHALL CONFORM TO 2002 OREGON APWA STANDARD SPEC'S. AS AMENDED BY THE APPROVING AGENCY
3. INSTALL CONTRACTION JOINTS EVERY 10', AND ⅜" ISOLATION JOINTS EVERY 100', AND AT END OF CURB RETURNS. (SEE CD720 FOR JOINT DETAIL)

CONCRETE CURB AND GUTTER

ISSUED: LB CRZ	DATE: 9/27/05 7/28/05	PUBLIC WORKS ENGINEERING ASHLAND-MEDFORD-ROGUE VALLEY SEWER SERVICES	DRAWING NO. CD700
REVISED:	DATE:		

GENERAL NOTES:

1. ASPHALT COAT ALL SURFACES OF CATCH BASIN AND CLEANOUT AFTER WELDING OR HOT DIP GALVANIZE (AT MANUFACTURER'S DISCRETION)
2. BREAK SHARP CORNERS AFTER WELDING.
3. ALL WELDED STEEL CONSTRUCTION
4. 10 GAUGE STEEL MINIMUM THICKNESS
5. OPENING ON BOTTOM OF WATERSEAL TO BE GREATER, OR EQUAL TO AREA IN OUTLET PIPE.
6. STANDARD DEPTH: 48"

LYNCH TYPE CATCH BASIN N.T.S. HE-1

DRAWING FILE: GRADING.DWG
FILE No: 845-01-08

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ASHLAND, OREGON

GRADING PLAN

⚠ MODIFY ISLANDS 07-07-08 BY B.A.W.

SCALE: 1" = 20'
7.01.08

x07165P

C1

HVAC SYMBOLS & ABBREVIATIONS

- ZONE CONTROL DAMPER
- FILTER
- TEMPERATURE GAUGE
- PRESSURE GAUGE
- OUTLET / INLET TAG (XX)
- AIRFLOW, CFM (XXX)
- PREFIX (F) INDICATES A FIRE RATED GRILLE, REGISTER, OR DIFFUSER
- HUMIDISTAT OR HUMIDITY SENSOR
- THERMOSTAT OR TEMP SENSOR
- DUCT SMOKE DETECTOR
- SMOKE DETECTOR
- STATIC PRESSURE SENSOR
- CARBON DIOXIDE SENSOR
- EMERGENCY SWITCH

GENERAL SYMBOLS

- CAP FOR FUTURE
- POINT OF NEW CONNECTION
- REVISION NUMBER
- POINT OF CONTINUATION
- EQUIPMENT TAG / EQUIPMENT NUMBER
- SECTION (LETTER) OR DETAIL (NUMERICAL) DESIGNATION / SHEET NUMBER
- SECTION DESIGNATION / SHEET NUMBER
- GENERAL BREAK
- LINE BREAK
- ON DEMOLITION PLANS, INDICATES ITEMS TO BE REMOVED
- DUCTWORK FITTING TYPE SEE HIGH PRESSURE FABRICATED FITTING CONSTRUCTION DETAILS
- KEYED NOTES
- EXISTING

HVAC ABBREVIATIONS

ACFM	ACTUAL AIR – CUBIC FEET PER MINUTE
ACH	AIR CHANGES PER HOUR
AD	ACCESS DOOR
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AP	ACCESS DOOR
ARCH	ARCHITECT OR ARCHITECTURAL
ATD	AIR TRANSFER DUCT
BD	BACKDRAFT DAMPER
BLDG	BUILDING
BM	BEAM
BO	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BTU	BRITISH THERMAL UNIT
CDV	CLOTHES DRYER VENT
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CONSTR	CONSTRUCTION
CV	CONSTRAINT VOLUME
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
DX	DIRECT EXPANSION (REFRIGERATION)
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION
ERA	ECONOMIZER RELIEF AIR
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	FAHRENHEIT
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FLA	FULL LOAD AMPS
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FSD	COMBINATION FIRE / SMOKE DAMPER
GALV	GALVANIZED STEEL
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GRD	GRILLES, REGISTERS, DIFFUSERS
H	HUMIDISTAT
HEPA	HIGH EFFICIENCY PARTICULATE AIR
HP	MOTOR HORSEPOWER
HVAC	HEATING, VENTING, AND CONDITIONING
HPW	HEAT PUMP WATER
HPWR	HEAT PUMP WATER RETURN
HPWS	HEAT PUMP WATER SUPPLY
LB(S)	POUND, POUNDS
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT CAPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OA or OSA	OUTSIDE AIR
OMSC	2007 OREGON MECHANICAL SPECIALITY CODE
OSSC	2007 OREGON STRUCTURAL SPECIALITY CODE
PBD	PARALLEL BLADE DAMPER
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE / TEMPERATURE PLUG
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RECT	RECTANGULAR
RPM	REVOLUTIONS PER MINUTE
REQ'D	REQUIRED
SA	SUPPLY AIR
SCFM	STANDARD AIR – CUBIC FEET PER MINUTE
SEC	SECTION
SF or SQ FT	SQUARE FEET
SIM	SIMILAR
SM	SHEET METAL
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SP	STATIC PRESSURE
SPEC	SPECIFICATION OR SPECIFIED
SS	STAINLESS STEEL
STD	STANDARD
T	THERMOSTAT
TC	TEMPERATURE CONTROLS
TEMP	TEMPERATURE
TOS	TOP OF STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WB	WET BULB
W/	WITH
WG	WATER GAUGE

NOTE: ABBREVIATIONS AND SYMBOLS ARE WEHAGE ENGINEERING STANDARDIZED SYMBOL LEGENDS. AS SUCH, ALL SYMBOLS SHOWN MAY NOT APPEAR ON OR WITHIN THIS SET OF CONTRACT DOCUMENTS.

SHEET LEGEND

M-1 MECHANICAL LEGEND AND NOTES

M-2 MECHANICAL FLOOR PLANS

M-3 MECHANICAL SCHEDULES AND DETAILS

GENERAL NOTES

1. PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO CONSTRUCT A COMPLETE, OPERATIONAL HVAC SYSTEM FOR THE ENTIRE PROJECT AS SHOWN ON THESE DRAWINGS, INCLUDING ALL NECESSARY FEES AND PERMITS.
2. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODE, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, AND ALL OTHER APPLICABLE CITY, SCHOOL DISTRICT, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT AT THE DATE OF THE BID. CONFORM TO ANY CODES, RULES, REGULATIONS AND REQUIREMENTS THAT THE PROJECT OWNER HAS.
3. PRIOR TO FABRICATION AND INSTALLATION, COORDINATE THE INSTALLATION OF ALL HVAC EQUIPMENT AND REFRIGERATION PIPING WITH THE EXISTING BUILDING CONDITIONS. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.
4. THE DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENTS AND THE EXTENT OF THE SYSTEM. IT SHALL BE THE WORK OF THE CONTRACTOR TO MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES, OR MATERIAL REQUIRE PRIOR APPROVAL BY THE CONSULTING ENGINEER.
5. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
6. THE WORKING DRAWINGS ARE DIAGRAMMATIC. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR HVAC EQUIPMENT AND PIPING SHALL BE CHECKED AND COORDINATED WITH THE EXISTING BUILDING CONDITIONS.
7. THE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH THE ITEMS SHOWN ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH.
8. PIPING SCHEMATICS: THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE PIPING SCHEMATICS INCLUDED WITH THE DRAWINGS FOR PIPING CONNECTIONS TO ALL MECHANICAL EQUIPMENT. THE PIPING SCHEMATICS SHOW DETAILED CONNECTIONS INCLUDING NECESSARY VALVES, FITTINGS, PRESSURE AND TEMPERATURE GAUGES, ETC., THAT ARE NOT SHOWN ON THE PIPING PLANS. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE MECHANICAL SYSTEM WITHOUT USING THE INCLUDED PIPING SCHEMATICS IS THE RESPONSIBILITY OF THE CONTRACTOR.
9. CONTROLS: A THERMOSTAT RESPONDING TO TEMPERATURE IN THE ZONE SHALL CONTROL EACH HVAC ZONE. PROVIDE ELECTRONIC, PROGRAMMABLE THERMOSTATS WITH COOLING, 1 OR 2 STAGE HEATING, NIGHT SETBACK, A 7-DAY, 24-HOUR CLOCK, L.E.D. INDICATOR, SET POINT ADJUSTMENT, AND A FAN ON/AUTO SWITCH. THERMOSTAT MUST BE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS.
   A. CONTROL CAPABILITIES: THERMOSTATS SHALL BE CAPABLE OF BEING SET FROM 55 F TO 85 F AND SHALL BE CAPABLE OF PROVIDING A 5 F DEADBAND.
10. ANY PART OF THIS INSTALLATION THAT FAILS, IS UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. ALL EQUIPMENT SHALL PROVIDE THE SCHEDULED PERFORMANCE AT THE SITE ALTITUDE. ALL MANUFACTURER'S SUBMITTAL DATA SHEETS SHALL SHOW PERFORMANCE AT SITE ALTITUDE.
12. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, DAMPERS, AND OTHER DEVICES AND ACCESSORIES REQUIRED FOR A COMPLETE, WORKABLE INSTALLATION.
13. THE DIVISION 15 CONTRACTOR SHALL FURNISH ALL REQUIRED MOTORS AND STARTERS. DISCONNECTS, WHEN NOT A PART OF THE EQUIPMENT, WILL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.
14. EXISTING INTERIOR PIPING, EQUIPMENT, AND DUCTWORK HAS BEEN LOCATED IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL VERIFY LOCATIONS AND POINTS OF CONNECTION AND PIPE ROUTING THROUGH EXISTING CONDITIONS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT WILL CAUSE A MINIMUM DISRUPTION TO BUILDING TENANT USE AND SHALL COORDINATE THE WORK WITH THE BUILDING OWNER'S REPRESENTATIVE.
15. COORDINATE THE RETURN OF ALL MECHANICAL EQUIPMENT REMOVED DURING DEMOLITION WITH THE OWNER'S REPRESENTATIVE.
16. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS, IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.
17. THE CONTRACTOR IS RESPONSIBLE FOR HVAC EQUIPMENT CHECK-IN, SAFEKEEPING, AND DAMAGE.
18. DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'-0" DEEP AND 6'-6" HIGH
19. PROPERLY LUBRICATE ALL PIECES OF EQUIPMENT BEFORE TURNING THE SYSTEM OVER TO THE OWNER.
20. PREPARE 6 COPIES OF SUBMITTALS IN AN INDEXED, LABELED FOLDER CONTAINING FULL PERFORMANCE, MATERIAL AND INSTALLATION INFORMATION ABOUT ALL EQUIPMENT, PIPING, COMPONENTS AND ACCESSORIES TO BE USED. SUBMITTALS WILL BE CHECKED AT MOST TWICE. TIME SPENT ON SUBSEQUENT SUBMITTALS WILL BE BILLED TO THE CONTRACTOR BY THE ENGINEER AT THEIR CURRENT HOURLY RATE.
21. TWO OPERATING AND MAINTENANCE MANUALS SHALL BE PROVIDED IN HARD BACK LOOSE LEAF BINDERS. MANUALS SHALL CONTAIN PRODUCT CUT SHEETS AND OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL EQUIPMENT, ACCESSORIES, FIXTURES, VALVES, ETC., PROVIDED FOR THE PROJECT. PROVIDE LIST OF EQUIPMENT WITH ALL NAMEPLATE DATA INCLUDING TAG #, MODEL NUMBER, SERIAL NUMBER, AND NAME OF LOCAL REPLACEMENT PARTS SUPPLIER.
22. UPON COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS AND RUBBISH. MAKE ALL REQUIRED PATCHING AND REPAIRS OF OTHER TRADES' WORK DAMAGED BY THE DIVISION 15 CONTRACTOR, AND LEAVE THE PREMISES IN A CLEAN, ORDERLY CONDITION.
23. THE DIVISION 15 CONTRACTOR SHALL OPERATE THE SYSTEM AND DEMONSTRATE ALL ASPECTS TO THE ENGINEER AND/OR OWNER, TO PROVE ITS OPERATION. ALL FILTERS USED DURING CONSTRUCTION SHALL BE REPLACED PRIOR TO THE TEST RUN PERIOD.
24. A MINIMUM OF EIGHT (8) HOURS OF O&M INSTRUCTIONS SHALL BE PROVIDED FOR EQUIPMENT AND CONTROL SYSTEMS. A SIGNED STATEMENT FROM THE OWNER'S REPRESENTATIVE SHALL ACKNOWLEDGE SUCH TRAINING. A FOUR (4) HOUR FOLLOW-UP SESSION SHALL BE PROVIDED NOT SOONER THAN 30 DAYS NOR LATER THAN 90 DAYS FOLLOWING THE EIGHT HOUR SESSION.
25. THE DIVISION 15 CONTRACTOR SHALL GUARANTEE THE HVAC SYSTEM FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
26. THE DIVISION 15 CONTRACTOR SHALL, DURING CONSTRUCTION, MAINTAIN A SET OF AS-BUILT REDLINED RECORD DRAWINGS AT THE PROJECT SITE. ALL CHANGES IN LAYOUT, ROUTING, EQUIPMENT, COMPONENTS, AND ACCESSORIES SHALL BE RECORDED. THE CONTRACTOR IS RESPONSIBLE FOR CONVERTING THE CONSTRUCTION REDLINE DRAWINGS INTO "AS BUILT" DRAWINGS USING AUTOCAD BACKGROUNDS PROVIDED BY THE ENGINEER. IF THE CONTRACTOR DOES NOT HAVE AUTOCAD DRAFTING CAPABILITIES, THE CONTRACTOR SHALL HIRE THE ENGINEER TO PRODUCE THE "AS BUILT" DRAWINGS FROM HIS FIELD REDLINES. COMPLETED AUTOCAD "AS BUILTS" SHALL BE GIVEN TO THE ARCHITECT/ENGINEER AFTER THE FINAL INSPECTION

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WILLOW WIND COMMUNITY LEARNING CENTER RENOVATIONS
ASHLAND, OREGON

MECHANICAL LEGEND & NOTES

SCALE: NONE
05.16.08

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M-1

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NORTH

SECOND FLOOR MECHANICAL PLAN

1/4" = 1'-0"

NORTH

FIRST FLOOR MECHANICAL PLAN

1/4" = 1'-0"

GENERAL NOTES

A. INSULATE REFRIGERANT PIPING PER TABLE 13-D IN CHAPTER 13 OF THE 2007 OREGON STRUCTURAL SPECIALTY CODE.

B. COORDINATE EXACT LOCATION OF INDOOR FAN COIL UNITS AND CONTROLS WITH OWNER. FIELD VERIFY DIMENSIONS AND SPACE AVAILABLE.

PROVIDE A LOCKING BOX TO CONTAIN WIRELESS REMOTE CONTROLLER IN EACH ZONE.

C. ALL REFRIGERANT PIPING IS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY THE EXISTING CONDITIONS, DETERMINE THE BEST PIPE ROUTING, AND MAKE RECOMMENDATIONS TO THE ARCHITECT AND ENGINEER.

D. EXTEND CONDENSATE DRAIN PIPING THROUGH EXTERIOR WALL. DRAIN TO LANDSCAPING ON FIRST FLOOR AND TO ROOF GUTTERS ON SECOND FLOOR.

KEYED NOTES

1. REFRIGERANT PIPING RISES IN WALL FROM CRAWLSPACE TO ATTIC.
2. WALL MOUNTED FAN COIL UNIT, TYPICAL. DROP REFRIGERANT PIPING FROM ATTIC IN EXTERIOR WALL TO BEHIND UNIT TO MAKE CONNECTIONS. SEE ARCHITECTURAL PLANS FOR WALL PATCH/REPAIR.
3. INSTALL HEAT PUMPS ON 4" CONCRETE HOUSEKEEPING PAD WITH MANUFACTURER'S RECOMMENDED MINIMUM CLEARANCES. EXTEND REFRIGERANT PIPING INTO THE CRAWLSPACE DIRECTLY BEHIND THE UNITS.
4. HIGH SIDEWALL FAN COIL UNIT, TYPICAL. RISE REFRIGERANT PIPING FROM CRAWLSPACE IN EXTERIOR WALL. DROP CONDENSATE PIPING IN WALL TO TOP OF FOUNDATION AND DAYLIGHT TO LANDSCAPING. SEE ARCHITECTURAL PLANS FOR WALL PATCH/REPAIR.
5. FLOOR MOUNTED FAN COIL UNIT. RISE REFRIGERANT PIPING FROM CRAWLSPACE. DROP CONDENSATE PIPING TO CRAWLSPACE AND DRAIN UNDER THE DECK TO THE NORTH.
6. RISE REFRIGERANT PIPING IN WALL TO ATTIC.
7. INSTALL ELECTRIC HEATER IN WALL AT 12" AFF. COORDINATE LOCATION WITH EXISTING WALL STRUCTURE.
8. INSTALL NEW THERMOSTAT FOR HP-1/FC-1 IN SAME LOCATION AS EXISTING THERMOSTAT.
9. REMOVE EXISTING HEAT PUMP, REFRIGERANT PIPING, AND ELECTRICAL WIRING AND CONTROLS.
10. REMOVE EXISTING FAN COIL AND ASSOCIATED DUCTWORK IN THIS CLOSET. REMOVE ELECTRICAL WIRING AND CONTROLS BACK TO NEAREST JUNCTION BOX.
11. EXISTING FLOOR GRILLE TO REMAIN, TYPICAL. SEAL DUCT BEHIND GRILLE WITH SHEET METAL.
12. EXISTING SIDEWALL RETURN GRILLE TO REMAIN. SEAL DUCT BEHIND GRILLE WITH SHEET METAL PAINTED BLACK.

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MECHANICAL FLOOR PLANS

SCALE: 1/4"=1'-0"
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DUCT-LESS SPLIT SYSTEM SCHEDULE

TAG	TYPE	COOLING BTUH	HEATING BTUH	ELECTRICAL VOLTS	ELECTRICAL PHASE	ELECTRICAL MCA	ELECTRICAL MOCP	SEER	HSPF	MANUFACTURER	MODEL	NOTES
HP-1	HEAT PUMP	34200	37000	208/230	1	25	30	13.1	8.3	MITSUBISHI	PKA-A36FA	1,2,3
FC-1	WALL MOUNT									MITSUBISHI	PUZ-A36NHA	
HP-2	HEAT PUMP	48,000	54,000	208/230	1	26	40	N/A		MITSUBISHI	PUMY-P48NHMU	1,2,4
FC-2	WALL MOUNT	12,000	13,490	208/230	1	0.43	15			MITSUBISHI	PKFY-P12NGMU-E	
FC-3	WALL MOUNT	6,000	6,690	208/230	1	0.19				MITSUBISHI	PKFY-P06NAMU-E	
FC-4	WALL MOUNT	24,000	26,990	208/230	1	0.55				MITSUBISHI	PKFY-P24NFMU-E	
FC-5	EXPOSED FLOOR MOUNT	7,990	8,990	208/230	1	0.34				MITSUBISHI	PFFY-P08NEMU-E	
HP-3	HEAT PUMP	48,000	54,000	208/230	1	26	40	N/A		MITSUBISHI	PUMY-P48NHMU	1,2,4
FC-6	WALL MOUNT	12,000	13,490	208/230	1	0.43	15			MITSUBISHI	PKFY-P12NGMU-E	
FC-7	WALL MOUNT	12,000	13,490	208/230	1	0.43				MITSUBISHI	PKFY-P12NGMU-E	
FC-8	WALL MOUNT	12,000	13,490	208/230	1	0.43				MITSUBISHI	PKFY-P12NGMU-E	
FC-9	WALL MOUNT	6,000	6,690	208/230	1	0.19				MITSUBISHI	PKFY-P06NAMU-E	

NOTES:
1. PROVIDE WITH LOW AMBIENT OPTION FOR OPERATION BELOW 60 F.
2. PROVIDE WITH HARD START OPTION.
3. PROVIDE WITH 24V, WALL MOUNT THERMOSTAT.
4. PROVIDE WITH WIRELESS REMOTE CONTROL.

ELECTRIC HEATER SCHEDULE

TAG	TYPE	SIZE KW	ELECTRICAL VOLTS	ELECTRICAL PHASE	ELECTRICAL AMPS	MANUFACTURER	MODEL	NOTES
EH-1	WALL	0.75	120	1	6.25	QMARK	CWH1151DSAG	1

NOTES:
1. PROVIDE WITH UNIT MOUNTED TAMPERPROOF THERMOSTAT.

DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
—//—	POWER WIRE
———	CONTROL WIRE
———	REF. PIPE

PIPING LIST		
SYMBOL	BRANCH PIPE MODEL NAME	
J1	CMY-Y62-G-E	
SYMBOL	LIQUID PIPE/GAS PIPE SIZE	
P1	3/8	5/8
P2	1/4	1/2

SYSTEM SCHEMATIC DWG.

REMARKS
16 AWG : 16 AWG or more.
20 AWG : between 24 AWG and 20 AWG.

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ASHLAND, OREGON

MECHANICAL
SCHEDULES
& DETAILS

SCALE: NONE
05.16.08

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SYMBOL'S

- SINGLE RECEPTACLE, NEMA 5–20R UON
- RECEPTACLE MOUNTED OVER COUNTER, SEE ARCH INTERIOR ELEVATIONS
- DUPLEX RECEPTACLE, NEMA 5–20R UON
- TWO DUPLEX RECEPTACLE IN 2–GANG BOX, NEMA 5–20R, UON
- S — SWITCHED RECEPTACLE
- A–2 — "A–2" INDICATE DEVICE POWER FROM PANEL 'A' CIRCUIT 2
- CORD DROP RECEPT, MOLDED BOX, STRAINED RELIEF, SO CORD, SEE DETAILS.
- SCHEDULED EQUIPMENT RECEPTACLE SEE EQUIPMENT SCHEDULES
- JUNCTION BOX – SIZE TO NEC
- ELECTRICAL POWER PANEL BOARD –– SURFACE MOUNT
- ELECTRICAL POWER PANEL BOARD –– FLUSH MOUNT
- RECEPTACLE, FLOOR BOX – SEE ARCHITECTURAL DRAWINGS FOR FLOOR TYPE TYPE
- RECEPTACLE/DATA, FLOOR BOX – SEE ARCHITECTURAL DRAWINGS FOR FLOOR TYPE DATA IS (2) 3/4 INCH C. TO ACCESSIBLE SPACE U.O.N.
- TELEPHONE/DATA FURNITURE CONNECTION, 4X4 BOX, 2 GND RING, (2) 3/4 CONDUIT WHIPS AND FURNITURE CONNECTIONS
- TELE/DATA DROP, 4X4 BOX, 2 GANG RING, (2) 3/4 C. TO ACCESSIBLE CEILING SPACE
- TELE/DATA DROP, 4X4 BOX, 2 GANG RING, 3/4 C. TO ACCESSIBLE CEILING SPACE
- TELE PUNCH DOWN BOARD, 3/4 FINISHED PLYWOOD, PAINTED, GROUNDED.
- TV — CABLE TV DROP LOCATION, 4X4 BOX, 1 GANG RING, 3/4 CONDUIT, COVER, PULL–CORD
- 'A' — LUMINAIRE WITH TYPE TAG (SYMBOLS VARY WITH TYPE)
- 'A' — FULLY DARKENED OR HALF DARKENED INDICATES EMERGENCY BATTERY BALLAST
- $ — SINGLE POLE SWITCH
- $OC — WALL OCCUPANCY SENSOR WITH MANUAL ON/OFF, MAY BE DOUBLE SWITCH
- $2 — SINGLE POLE, DOUBLE THROW SWITCH
- $3 — THREE–WAY SWITCH
- $4 — FOUR–WAY SWITCH
- $M,d — M=MANUAL MOTOR STARTER WITH THERMAL UNITS d=WALL BOX DIMMER
- $A–2 — "A–2" INDICATE DEVICE POWER FROM PANEL 'A' CIRCUIT 2
- OC — CEILING MOUNT OCCUPANCY SENSOR WITH POWER PACK AND RELAYS
- 30 AF 20 AT — FUSED DISCONNECT SWITCH, AF= SWITCH FRAME, AT= FUSE SIZE, EQF =FUSE TO NAMEPLATE
- 30 AF — NONFUSIBLE DISCONNECT SWITCH, AF= SWITCH FRAME SIZE
- 30 AF 20 AT — ENCLOSED CIRCUIT BREAKER DISCONNECT SWITCH, AF= FRAME, AT= HACR BREAKER SIZE, EQ = HACR AT NAMEPLATE
- M Y — MOTOR CONNECTION, INCLUDES DISCONNECTS AND FUSING
- EF 21 — MECHANICAL/ELECTRICAL EQUIPMENT CONNECTION TAG INCLUDES DISCONNECTS, FUSING, WHIPS, CONNECTIONS, MOUNTING, ETC.
- XX — DRAWING REFERENCE NOTE
- EXIT DIRECTIONAL ARROWS
- EXIT SIGN SINGLE FACE
- EXIT SIGN DOUBLE FACE
- HOME RUN TO PANEL WIRING INDICATOR W/ REQUIRED POWER AND GROUND CONDUCTORS NOT SHOWN.
- 2 E9 — DETAIL NUMBER 2 LOCATED ON SHEET E9
- GROUND BUS – UON 6"X2"X1/4 CU W/ 6 1/4–20 HOLES
- SP — SPEAKER
- KP — FLUSH SECURITY KEY PAD – 4 INCH BOX, EXTENSION RING, 3/4 C TO ACCESSIBLE CEILING SPACE
- S — ADDRESSABLE SMOKE DETECTOR WITH BASE
- H — ADDRESSABLE HEAT DETECTOR WITH BASE
- F — MANUAL PULL STATION
- SD — ANALOG ADDRESSABLE DUCT SMOKE DETECTOR WITH AUX CONTACTS
- ADA ADJUSTABLE OUTPUT STROBE LIGHT, 15= SET TO 15 cd
- ADA HORN ADJUSTABLE OUTPUT STROBE LIGHT, 15= SET TO 15 cd
- FACP — FIRE ALARM CONTROL PANEL, FLUSH COVER
- FANN — FIRE ALARM REMOTE ANNUNICATOR PANEL, FLUSH COVER
- AUDIBLE ALARM
- TS — TAMPER SWITCH
- FS — FLOW SWITCH
- CABLE TRAY

ABBREVIATIONS

NEC	NATIONAL ELECTRICAL CODE	AFG	ABOVE FINISHED GRADE
AFF	ABOVE FINISHED FLOOR	BFC	BELOW FINISHED CEILING
WP	WEATHER PROOF	GFI	GROUND FAULT CIRCUIT INTERRUPTER
J	JUNCTION BOX	CU	COPPER
C	CONDUIT	TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED	EMT	ELECTRICAL METALLIC TUBING
RNC	RIGID NONMETALLIC CONDUIT	CB	CIRCUIT BREAKER
V	VOLTS	A	AMPERES
W	WATTS	VA	VOLT–AMPERES
HP	HORSEPOWER	NA	NOT APPLICABLE
PMR	PER MANUFACTURER'S REQUIREMENTS	OC	OVER COUNTER – SEE ELEVATIONS
EQF	PROVIDE FUSE TO EQUIPMENT NAMEPLATE	AHJ	AUTHORITY HAVING JURISDICTION
UDG	UNDERGROUND WIRING IN CONDUIT		

DEFINITIONS

"PROVIDE" MEANS TO SUPPLY, PURCHASE, TRANSPORT, LOAD, UNLOAD, STORE, PLACE, ERECT, CONNECT, TEST AND TURNOVER COMPLETE AND READY FOR REGULAR OPERATION, THE PARTICULAR WORK REFERRED TO. "PROVIDE" MEANS TO "FURNISH" AND "INSTALL".

"FURNISH" MEANS TO SUPPLY ALL MATERIALS, LABOR, EQUIPMENT, TESTING APPARATUS, CONTROLS, TESTS, ACCESSORIES, AND ALL OTHER ITEMS CUSTOMARILY REQUIRED FOR THE PROPER AND COMPLETE APPLICATION FOR THE PARTICULAR WORK REFERRED TO.

"INSTALL" MEANS TO JOIN, UNITE, FASTEN, LINK, ATTACH, SETUP OR OTHERWISE CONNECT TOGETHER BEFORE TESTING AND TURNING OVER TO ARCHITECT, COMPLETE AND READY FOR REGULAR OPERATION, THE PARTICULAR WORK REFERRED TO INCLUDING ALL REQUIRED LOADING, UNLOADING, AND STORAGE.

"WIRING" MEANS ALL RACEWAYS, FITTINGS, CONDUCTORS, CONNECTORS, TAPE, JUNCTION AND OUTLET BOXES, CONNECTORS, SPLICES, AND ALL OTHER ITEMS NECESSARY AND/OR REQUIRED IN CONNECTION WITH SUCH WORK.

"CONDUIT" MEANS THE INCLUSION OF ALL FITTINGS, HANGERS, SUPPORTS, SLEEVES, ETC.

"CONCEALED" MEANS EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED BEHIND WALL FURRING OR WITHIN DOUBLE PARTITIONS, OR INSTALLED WITHIN HUNG CEILINGS.

"EQUAL" MEANS A SIMILAR PRODUCT OR PRODUCT APPLICATION OR INSTALLATION METHOD AS DETERMINED AND ACCEPTED BY THE SPECIFIER.

"LISTED AND LABELED" MEANS AS DEFINED IN THE "NATIONAL ELECTRICAL CODE," ARTICLE 100 AND THE STATE AMENDMENTS.

"CONTRACTOR" MEANS THE GENERAL CONTRACTOR.

PROJECT GENERAL NOTES

A. ALL GENERAL NOTES APPLY TO ALL SHEETS.

B. REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR ELECTRICAL WORK.

C. CONTRACTOR TO PROVIDE BRANCH CIRCUIT POWER WIRING, CONTRACTOR TO PROVIDE ALL SWITCH LEG WIRING AS REQUIRED FOR PROPER OPERATION. METALLIC CABLE IS APPROVED FOR BRANCH CIRCUIT WIRING IN CONCEALED WALLS AND IN CEILINGS SPACES. ALL CIRCUITS CONTAIN GROUND CONDUCTORS. MINIMUM POWER CIRCUIT IS # 12 COPPER, MINIMUM HOME RUN CIRCUIT IS #10. ALL CONDUITS CONTAIN POWER AND GROUND CONDUCTORS AND IG CONDUCTOR WHERE INDICATED AT THE CONNECTING DEVICE. CONDUCTORS ARE SIZED AS SHOWN AND INDICATED OR SIZED TO THE N.E.C. U.O.N.

D. WHERE ISOLATED GROUND DEVICES ARE INDICATED, IG GROUND CONDUCTORS ARE GREEN INSULATED WITH COLOR TRACER, MAINTAIN SAME COLOR TRACER THROUGHOUT THE PROJECT. RACEWAYS ARE NOT CONSIDERED EQUIPMENT GROUND PATHS.

E. ALL DEVICES ARE SPEC GRADE 20 AMP MINIMUM, WHITE WITH WHITE COVERS IN FINISHED SPACES AND STEEL COVERS IN UNFINISHED SPACES. PROVIDE CIRCUIT NUMBERS ON EACH DEVICE PLATE INDICATING PANEL AND CIRCUIT.

F. ALL CONDUCTORS ARE COPPER, ALL BOXES HAVE COVERS WITH CIRCUIT ID.

G. PROVIDE ALL PERMITS. DO NOT INSTALL WORK OR MATERIALS IN ANY FASHION THAT IS NOT FULLY COMPLAINT WITH THE NATIONAL ELECTRICAL CODE, THE OREGON STRUCTURAL SPECIALTY CODE, AND ALL STATE AMENDMENTS.

H. COORDINATE WITH MECHANICAL EQUIPMENT INSTALLER. DO NOT ROUGH IN ELECTRICAL PRIOR TO REVIEWING MECHANICAL EQUIPMENT SHOP DRAWINGS WITH THE MECHANICAL CONTRACTOR. ALL REWORK ASSOCIATED WITH FAILURE TO COORDINATE WITH MECHANICAL EQUIPMENT REQUIREMENTS WILL BE REWORKED AT THE EXPENSE OF THE CONTRACTOR.

I. PROVIDE SUBMITTAL DOCUMENTS PRIOR TO ORDERING EQUIPMENT. SUBMIT LIGHT FIXTURES, BREAKER BOXES, SERVICE EQUIPMENT, EQUIPMENT, AND ITEMS AS REQUESTED. CONDUIT, CONDUCTORS, BOXES DO NOT REQUIRE SUBMITTAL.

J. ASSUME A GENERAL REARRANGEMENT OF EQUIPMENT DURING THE CONSTRUCTION PROCESS. ASSUME IN THE BASE BID ADJUSTMENT OF EQUIPMENT LOCATIONS.

K ROUTE WIRING CONCEALED IN WALLS, CRAWL SPACE, AND ATTIC AS NEEDED. NO SURFACE WIREWAYS WILL BE ALLOWED. SEE ARCHITECHTURAL PLANS FOR WALL PATCH AND REPAIR.

L. MOUNT ALL DEVICES PER ADA AND THE ARCHITECT. REVIEW ALL CASEWORK DRAWINGS PRIOR TO ROUGH IN.

M. GROUNDING AND GROUNDING DETAILS INDICATE PROJECT REQUIREMENTS THAT MAY EXCEED THE MINIMUM REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. ALL MINIMUM CODE REQUIRED GROUNDING CONNECTIONS MAY NOT BE SHOWN BUT ARE INCLUDED IN THE PROJECT SCOPE. PROVIDE ALL GROUNDING REQUIRED BY THE NEC, STATE STRUCTURAL SPECIALTY CODE, THE STATE ELECTRICAL AMENDMENTS, AND THE LOCAL AUTHORITIES. COORDINATE UFER GROUND INSPECTION PRIOR TO COVERING

N ENSURE ARCHITECT INSPECTS ELECTRICAL WORK PRIOR TO COVERAGE OR ENCASEMENT. ENSURE UTILITY REQUIRED WORK IS PERFORMED ON THE PROJECT SCHEDULE.

O TYPE NM AND/OR TYPE SE CABLE SHALL NOT BE USED. ONLY WIRING METHODS PERMITTED FOR SCHOOL BUILDINGS SHALL BE INSTALLED.

DRAWING INDEX

E1 ELECTRICAL INFORMATION
E2 ELECTRICAL SITE PLAN
E3 ELECTRICAL PLAN

1 / E1 ELECTRICAL INFORMATION
N/A

Panel A — ROOM — MOUNTING FLUSH — FED FROM UTILITY TRANS — NOTE
VOLTS 240/120V 2P 3W — BUS AMPS 200 — NEUTRAL 100%
AIC 22,000 — MAIN BKR MLO — LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	30/2	4.16	NEW FC–1, HP–1	a	2	20/1	0	EXISTING OVEN
3	|			b	4	20/1	0	EXISTING OVEN (2)
5	30/2	4.32	NEW HP–2	a	6	30/2	4.32	NEW HP–3
7	|			b	8	|		
9	20/1	0	EXISTING LIGHTING	a	10	20/1	0	EXISTING BARN
11	20/1	0	EXISTING RECEPTECLE	b	12	20/1	0	EXISTING BARN (2)
13	20/1	0	EXISTING RECEPTECLE	a	14	20/1	0	EXISTING WATER HEATER
15	20/1	0	EXISTING LIGHTING	b	16	20/1	0	EXISTING WATER HEATER (2)
17	20/1	0.18	RECEPTACLE	a	18	20/1	0	EXISTING REFRIDGERATOR
19	20/1	0	EXISTING BATH	b	20	20/1	0	EXISTING LIGHTING
21	20/1	0	EXISTING RECEPTECLE	a	22	20/1	0	SPACE
23	20/1	0	EXISTING KITCHEN RECEPTECLE	b	24	20/1	0	EXISTING DISPOSAL
25	20/1	0	EXISTING FACP	a	26	20/1	0	EXISTING E. LIGHTING
27	20/1	0	EXISTING DRYER	b	28	20/1	0	EXISTING WASHER
29	20/1	0	EXISTING DRYER (2)	a	30	20/2	0.125	EH–1
31	20/2	0.249	NEW FC–2, FC–3, FC–4, FC–5	b	32	|		
33	|			a	34	20/1	0	SPACE
35	20/2	0.244	NEW FC–6, FC–7, FC–8, FC–9	b	36	20/1	0	SPACE
37	|			a	38	20/1	0	SPACE

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0	0	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	13.4	13.4	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	0.18	0.18	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
				NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	13.6	13.6	

BALANCED PHASE AMPS 56.7

PHASE BALANCE PERCENT: PHASE A 101% PHASE B 98.9%

2 / E1 ELECTRICAL EXISTING PANEL SCHEDULE
N/A

EQUIPMENT SCHEDULE

CALLOUT	SYMBOL	NEMA	VOLTS	AMPS	KVA	HP	CIRCUIT
EH–1			208/120V 2P 3W	0.6	0.12		
FC–1			208/120V 2P 3W	0.34	0.07		A–1,3
FC–2			208/120V 2P 3W	0.34	0.07		A–31,33
FC–3			208/120V 2P 3W	0.15	0.03		A–31,33
FC–4			208/120V 2P 3W	0.44	0.09		A–31,33
FC–5			208/120V 2P 3W	0.27	0.06		A–31,33
FC–6			208/120V 2P 3W	0.34	0.07		A–35,37
FC–7			208/120V 2P 3W	0.34	0.07		A–35,37
FC–8			208/120V 2P 3W	0.34	0.07		A–35,37
FC–9			208/120V 2P 3W	0.15	0.03		A–35,37
HP–1			208/120V 2P 3W	19.66	4.09		A–1,3
HP–2			208/120V 2P 3W	20.77	4.32		A–5,7
HP–3			208/120V 2P 3W	20.77	4.32		A–6,8

3 / E1 ELECTRICAL EQUIPMENT SCHEDULE
N/A

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WILLOWIND COMMUNITY
LEARNING CENTER RENOVATIONS
ASHLAND, OREGON

REGISTERED PROFESSIONAL ENGINEER 55087 PE OREGON OCT 25, 2007 STEPHEN L. HILLS
EXPIRES 6/30/09

REVISIONS	
1	DATE
2	DATE
3	DATE
4	DATE
DATE:	05–16–08
DRAWN:	APC
REVIEWED:	SLH
JOB NO.:	E–20926

ELECTRICAL INFORMATION

SHEET NUMBER
E1
OF 3 SHEETS

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KAD 250M SR3

NOTE 1: Y2 DIMENSION IS 3' 0" IN OPEN PARKING AREAS SUBJECT TO VEHICLE TRAFFIC
Y2 DIMENSION IS 1' 0" IN LANDSCAPE AREAS PROTECTED BY PARKING CURBS
CONFIRM Y2 DIMENSION WITH THE ARCHITECT PRIOR TO EXCAVATION

NOTE 2: CONSTRAINED REFERENCE INCLUDES MINIMUM OF 4 INCH CONCRETE OR ASPHALT PARKING PAD MATERIAL ADDING TO BASE STRUCTURE CALCULATIONS

NOTE 3: FOR POLES WITH LUMINAIRE COMBINATIONS HAVING A COMBINED SAIL AREA GREATER THAN 4 SQUARE FEET CONTRACTOR TO PROVIDE POLE MANUFACTURES STRUCTURAL CALCULATIONS CONFIRMING X DIA AND Y DIM VALUES

NOTE 4: CALCULATIONS CONSIDER ONLY NATIVE STABLE SOILS, CONSULT SOILS REPORT AND PROVIDE STRUCTURAL ENGINEERED MODIFICATIONS IN UNUSUAL CONDITIONS

NOTE 5: PROVIDE POLE WALL THICKNESS MINIMUM 90 MPH STRUCTURE (1.3 GUST FACTOR) CALCULATED TO LUMINAIRE SAIL AREA BY POLE MANUFACTURE

	CONSTRAINED		NON-CONSTRAINED	
POLE HEIGHT	X DIA	Y DIM	X DIA	Y DIM
10 FEET	18 INCH	36 INCH	18 INCH	48 INCH
20 FEET	24 INCH	48 INCH	24 INCH	60 INCH
30 FEET	24 INCH	54 INCH	24 INCH	72 INCH
40 FEET	36 INCH	66 INCH	30 INCH	84 INCH

2 / E2 ELECTRICAL POLE BASE DETAIL
N/A

1 / E2 ELECTRICAL SITE PLAN
N/A

3 / E2 ELECTRICAL ONE LINE DIAGRAM
N/A

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	LAMP	DESCRIPTION	BALLAST	MOUNTING	MODEL	INPUT WATTS	VOLTS	QUANTITY
A		(1) 250W BT-28 MH	POLE LIGHT	MAGNETIC	ARM MOUNT TO 20' RSS POLE	LITHONIA KAD 250M SR3 240 SPD04 LPI DF PE1	250	240V 2P 2W	8

4 / E2 ELECTRICAL LUMINAIRE SCHEDULE
N/A

VOLTAGE DROP SCHEDULE

LOCATION	VOLTAGE DROP			
	FEEDER 1	FEEDER 2	MAX. BRANCH CIRCUIT	TOTAL
PE MAIN	0%		3.02% (CKT 1,3)	3.02%
UTILITY TRANS	0%		----	0%

5 / E2 ELECTRICAL VOLTAGE DROP SCHEDULE
N/A

	KVA	AMPS
EXISTING PEAK LOAD	39.00	162.5
PANEL A ADDITIONAL LOAD	-2.40	-10.0
NEW LIGHTING LOAD	2.50	10.4
NEW TOTAL LOAD	39.10	162.9

6 / E2 ELECTRICAL LOAD CALC.'S
N/A

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WILLOWIND COMMUNITY
LEARNING CENTER RENOVATIONS
ASHLAND, OREGON

REGISTERED PROFESSIONAL ENGINEER 25091 PE OREGON Apr 25, 2008 STEPHEN L. HILLS
EXPIRES 6/30/09

REVISIONS	
1	DATE
2	DATE
3	DATE
4	DATE
DATE:	05-16-08
DRAWN:	APC
REVIEWED:	SLH
JOB NO.:	E-20926

ELECTRICAL INFORMATION

SHEET NUMBER
E2
OF 3 SHEETS

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2 E3 ELECTRICAL PLANS SECOND FLOOR
1/4"=1'

1 E3 ELECTRICAL PLANS FIRST FLOOR
1/4"=1'

	KVA	AMPS
EXISTING PEAK LOAD	39.00	162.5
PANEL A LOAD (85%)	33.15	138.1
REMOVED PANEL A LOAD	-15.80	-65.3
NEW EQUIPMENT LOAD	13.40	55.8
NEW PANEL A TOTAL LOAD	30.75	128.1

3 E3 ELECTRICAL PANEL A LOAD CALC.'S
N/A

REFERENCE NOTES (XX)

1 REMOVE ALL EXISTING HEAT PUMP WIRING.
2 REMOVE ALL EXISTING FAN COIL WIRING.
3 ADD SERVICE RECEPTACLES AS REQUIRED BY N.E.C.

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WILLOWIND COMMUNITY
LEARNING CENTER RENOVATIONS
ASHLAND, OREGON

REGISTERED PROFESSIONAL ENGINEER 65091-PE OREGON SEPT 25 2000 STEPHEN L. HILLS
EXPIRES 6/30/09

REVISIONS	
1	DATE
2	DATE
3	DATE
4	DATE
DATE:	05-16-0
DRAWN:	APC
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JOB NO.:	E-20926

ELECTRICAL PLAN

SHEET NUMBER
E3
OF 3 SHEETS

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

CONSTRUCTION NOTES

1. PROTECT EXISTING ITEM IN-PLACE
2. SAWCUT AND REMOVE EXISTING A.C.TO CUT LINE. (REPLACE A.C. PER SECTION BELOW. SEE NOTE #38).
10. TACK COAT SAWCUT EDGE OF ASPHALT FOR ADEQUATE BOND WITH PROPOSED ASPHALT. APPLY SAND AT JOINT AFTER ASPHALT PLACEMENT.
21. CONSTRUCT STD CURB AND GUTTER, PWE STD CD700
22. CONSTRUCT SIDEWALK, PWE STD CD720
25. CONSTRUCT STANDARD CURB (16") PER OREGON STD RD700
38. CONSTRUCT AC PARKING SECTION (3" LEVEL III 1/2" DENSE HMAC , 6" OF 3/4" CRUSHED ROCK, 12" OF 4" CRUSHED ROCK OVER SUBGRADE GEOTEXTILE AND COMPACTED SUBGRADE). NOTE: ALL GRADES ARE TO FINISHED A.C. (AS INDICATED) ADJUST TO TOP OF ROCK IF PAVING IS POSTPONED TO A FUTURE PHASE. RAMP ROCK AS NEEDED TO PROVIDE SMOOTH TRANSITION AT ACCESS LOCATIONS.
39. INSTALL TWO LYNCH TYPE BASINS CONNECTED TOGETHER WITH ONE 12" OUTLET PIPE (LENGTH AS NOTED), SEE DETAIL CD302 AND HE-1 BELOW. OWNER TO MAINTAIN BASINS ANNUALLY OR AS NEEDED.

NOTE:

ADD 6" TO AC GRADES FOR TOP OF CURB GRADES UNLESS OTHERWISE NOTED.

TRENCH DETAIL
OUTSIDE PAVED AREAS

GENERAL NOTES:

1. COLD MIX AC MAY BE USED AS TEMPORARY PATCH ONLY.
2. ALL JOINTS SHALL BE SEALED WITH ASPHALT. JOINTS SHALL BE "TRAMPED" WITH COLD MIX AC TO ALLOW SMOOTHER TRANSITION.
3. a) MINIMUM 12" LAP OF STEEL PLATES OVER EXISTING PAVEMENT.
   b) MINIMUM 3/4" STEEL PLATE THICKNESS.
4. ALL GASKETED JOINTS SHALL BE PRESSURE TESTABLE. (CONCRETE PIPE – ASTM C443; PVC & HDPE PIPE – ASTM D3212)
   a) SMALL PIPES (24" DIA. OR LESS) – MINIMUM TRENCH WIDTH SHALL BE I.D. PLUS 16".
   b) LARGE PIPES (OVER 24" DIA.) – MINIMUM TRENCH WIDTH SHALL BE O.D. PLUS 24", AT THE BELL END THE TRENCH WIDTH SHALL INCREASE TO ACHIEVE THE 24".
5. CONTROLLED LOW-STRENGTH MATERIAL (CLSM) IS GENERALLY FLOWABLE LEAN CONCRETE MIX, A MIXTURE OF FLY ASH, CEMENT, FINE AGGREGATE, WATER AND ADMIXTURES, IF NECESSARY. CLSM SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 150 TO 250 psi AND SHALL COMPLY WITH 2002 OREGON APWA/ODOT SECTION 00442.

STANDARD PIPE TRENCH

ISSUED: LB CRZ	DATE: 9/27/05 7/28/05	PUBLIC WORKS ENGINEERING	DRAWING NO.
REVISED:	DATE:	Ashland – Medford – Rogue Valley Sewer Services	CD302

LEGEND

AC	ASPHALT FINISH GRADE
TC	TOP OF CURB
( )	EXISTING ELEVATION
TOG	TOP OF GRATE
%	SLOPE

RD700

REGISTERED PROFESSIONAL ENGINEER
OREGON
PRELIMINARY NOT FOR CONSTRUCTION
EXPIRES: 12-31-08
RENEWAL DATE: 06/30/2008

DRAWING FILE: GRADING.DWG
FILE No: 845-01-08

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STANDARD CURB AND GUTTER

DROP CURB AND GUTTER AT DRIVEWAY APRONS

GENERAL NOTES:

1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2002 ODOT/OREGON APWA SECTION 00440.00
2. ALL WORK & MATERIALS SHALL CONFORM TO 2002 OREGON APWA STANDARD SPEC'S. AS AMENDED BY THE APPROVING AGENCY
3. INSTALL CONTRACTION JOINTS EVERY 10', AND ⅜" ISOLATION JOINTS EVERY 100', AND AT END OF CURB RETURNS. (SEE CD720 FOR JOINT DETAIL)

CONCRETE CURB AND GUTTER

ISSUED: LB CRZ	DATE: 9/27/05 7/28/05	PUBLIC WORKS ENGINEERING	DRAWING NO.
REVISED:	DATE:	ASHLAND–MEDFORD–ROGUE VALLEY SEWER SERVICES	CD700

Sidewalk With Parkway Strip

Sidewalk Adjacent To Curb

SIDEWALK ISOLATION JOINT PLACE EVERY 50' — SIDEWALK CONTRACTION JOINT PLACE EVERY 5'

GENERAL NOTES:

1. SIDEWALKS SHALL HAVE A NOMINAL THICKNESS OF 4" WITH A MEDIUM BROOM FINISH.
2. SIDEWALK SECTIONS THROUGH DRIVEWAYS SHALL HAVE A NOMINAL THICKNESS OF 6".
3. WHERE SIDEWALK IS ADJACENT TO CURB, PLACE CONSTRUCTION JOINT IN LINE WITH CURB JOINT (10') AND IN BETWEEN (5').
4. GRANULAR MATERIAL UNDER SIDEWALKS & DRIVEWAY SHALL BE SAND, GRANITE, OR CRUSHED ROCK, FIRMLY TAMPED.
   a. 2" MIN. THICKNESS UNDER SIDEWALKS.
   b. 3" MIN. THICKNESS UNDER DRIVEWAYS.
5. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2002 ODOT/OREGON APWA SECTION 00440.00
6. IN EMBANKMENT AREAS, PIT RUN OR 4" SHALE BACKFILL SHALL BE USED TO BUILD TO GRADE. NATIVE BACKFILL MAY BE CONSIDERED WITH APPROVAL FROM CITY ENGINEER. CONSTRUCT BENCH ON SLOPES 5% OR GREATER.
7. ALL WORK & MATERIALS SHALL CONFORM TO 2002 ODOT/APWA STANDARD SPECS. AS AMENDED BY THE CITY OF MEDFORD.

SIDEWALK DETAIL

ISSUED: LB CRZ	DATE: 9/27/05 7/28/05	PUBLIC WORKS ENGINEERING	DRAWING NO.
REVISED:	DATE:	Ashland – Medford – Rogue Valley Sewer Services	CD720

GENERAL NOTES:

1. ASPHALT COAT ALL SURFACES OF CATCH BASIN AND CLEANOUT AFTER WELDING OR HOT DIP GALVANIZE (AT MANUFACTURER'S DISCRETION)
2. BREAK SHARP CORNERS AFTER WELDING.
3. ALL WELDED STEEL CONSTRUCTION
4. 10 GAUGE STEEL MINIMUM THICKNESS
5. OPENING ON BOTTOM OF WATERSEAL TO BE GREATER, OR EQUAL TO AREA IN OUTLET PIPE.
6. STANDARD DEPTH: 48"

LYNCH TYPE CATCH BASIN N.T.S. HE-1

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OPW ARCHITECTURE
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COLLABORATIVE APPROACH · HONEST DESIGN
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WILLOW WIND COMMUNITY LEARNING CENTER RENOVATIONS
ASHLAND, OREGON

GRADING PLAN

SCALE: AS SHOWN
5/16/08

x07169P

C1

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Phone: 541-880-8388 Cell: 541-291-7566

Company: The Heat-N-Air Man Contact: Tyler Hall
Address: 1081 Joe Wright Rd, Klamath Falls, OR 97603
Email: tyler@theheatnairman.com
Phone: 541-880-8388 Cell: _____

Company: Outlier Construction Contact: Ryan Buegli
Address: 841 O'Hare Pkwy, Suite 100, Medford, OR 97504
Email: ryan@outlierbuilt.com
Phone: 541-622-2040 Cell: 541-613-2135

Company: Adroit Construction Company, Inc. Contact: Tom Walker
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Email: tomw@adroitbuilt.com
Phone: 541-482-4098 Cell: 541-840-7718

Company: Dobrin Construction Contact: David Dobrin
Address: 4351 Pioneer Rd, Medford, OR 97501
Email: dcobalt@aol.com
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Company: David Scott Construction Contact: David Wisniewski
Address: 876 Clay St, Ashland, OR 97520
Email: david@davidscottconstruction.com
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Company: The Heat-N-Air Man Contact: Tyler Hall
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Company: Cortes Concrete Solutions, LLC Contact: Pablo Cortes
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Email: cortesconcretesolutions@gmail.com
Phone: 541-646-8730 Cell: _____

Company: _____ Contact: _____
Address: _____
Email: _____
Phone: _____ Cell: _____

Company: _____ Contact: _____
Address: _____
Email: _____
Phone: _____ Cell: _____

Company: _____ Contact: _____
Address: _____
Email: _____
Phone: _____ Cell: _____

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