SECTION 00 9112

ADDENDUM NUMBER 2

PARTICULARS

DATE: 03/02/2021

PROJECT: CITY OF MILLERSBURG FIRE STATION 15

ARCHITECT'S PROJECT NUMBER: 20006

OWNER: CITY OF MILLERSBURG

ARCHITECT: SODERSTROM ARCHITECTS

TO: PROSPECTIVE BIDDERS:

THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND MODIFIES THE ORIGINAL PROCUREMENT DOCUMENTS DATED 2/03/2021, WITH AMENDMENTS AND ADDITIONS NOTED BELOW.

ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED IN THE BID FORM. FAILURE TO DO SO MAY DISQUALIFY THE BIDDER.

CHANGES TO THE PROJECT MANUAL - INTRODUCTORY REQUIREMENTS, PROCUREMENT REQUIREMENTS AND CONTRACTING REQUIREMENTS:

SECTION 00 0110 – TABLE OF CONTENTS

Revise Division 27 – Communications to read as follows

DIVISION 27 – COMMUNICATIONS – ***NOT USED***.

Added Section 32 9300 - PLANTS

Section reissued in entirety

CHANGES TO THE PROJECT MANUAL - SPECIFICATIONS:

SECTION 07 2100 – THERMAL INSULATION

Added Part 2 – Products, 2.02 Foam Board Insulation Materials, Paragraph B and sub paragraphs as follows:

B. Polyisocyanurate (ISO) Board Insulation for use as coverboard: Rigid cellular foam, complying with ASTM C1289.

1. Classifications:

a. Type III: Faced with perlite insulation board on one major surface of core foam and glass fiber reinforced cellulosic felt or uncoated or coated polymer-bonded glass fiber mat facer on other major surface of core foam.

1) Compressive Strength: 16 psi, minimum.

2) Thermal Resistance, R-value: At 1-1/2 inch thick; 7.0 at 75 degrees F.

b. Type V: Faced with oriented strand board (OSB) or plywood on one major surface of core foam and glass fiber reinforced cellulosic felt or uncoated or coated polymer-bonded glass fiber mat facer on other major surface of core foam.

1) Compressive Strength: 16 psi, minimum.

2) Thermal Resistance, R-value: At 1-1/2 inch thick; 6.2 at 75 degrees F.

2. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.

3. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.

4. Board Size: 48 inch by 96 inch.

5. Board Thickness: minimum 0.5 inch.

6. Board Edges: Square.

7. Products: As compatible with roof insulation and metal roof panel assembly/underlayment.

Section reissued in entirety

SECTION 07 4113 – METAL ROOF PANELS

Added Part 1 – General, 1.04 Submittals, Paragraph C, sub-paragraph 1 as follows:

2. Include structural analysis signed and sealed by qualified structural engineer registered in the State of Oregon, indicating compliance of roofing system and attachment to specified loading conditions.

Section reissued in entirety

SECTION 07 4213 – METAL WALL PANELS

Added Part 1 – General, 1.04 Submittals, Paragraph C, sub-paragraph 2 as follows:

1. Include structural analysis signed and sealed by qualified structural engineer registered in the State of Oregon, indicating compliance of cladding system attachment to specified loading conditions.

Revise Part 2 – Products, 2.01 Manufacturers, Paragraph A as follows:

A. Basis of Design: ~~Firestone UC-6 metal roofing panel~~ ***AEP Span SpanSeam***

Revise Part 2 – Products, 2.02 Manufactured Metal Panels, Paragraph C, sub-paragraph 1 as follows:

1. 16 gauge, 0.0598 inch thick formed non-precoated steel sheet ***or pressure treated lumber, as approved by manufacturer.***

Added Part 2 – Products, 2.04 Attachment System, Paragraph A, sub-paragraph 1 as follows:

1. . Attachment Performance: Fasteners shall provide support for roof panels for all gravity, wind, and snow loading conditions.

Section reissued in entirety

SECTION 07 4646– FIBER CEMENT SIDING

Added Part 1 – General, 1.04 Submittals, Paragraph C, sub-paragraph 2 as follows:

1. Include structural analysis signed and sealed by qualified structural engineer registered in the State of Oregon, indicating compliance of cladding system attachment to specified loading conditions.

Revise Part 2 – Products, 2.02 Accessories, Paragraph A as follows:

A. Furring Strips: Galvanized metal channels ***or pressure treated lumber.***

Section reissued in entirety

SECTION 08 1113 – HOLLOW METAL DOORS AND FRAMES

Revise Part 2- Products, 2.04 Hollow Metal Frames, paragraph C to read as follows:

C. Exterior Door Frames: Face welded type. ***Provide stucco flange or shadow-line style frames as shown in drawings.***

Section reissued in entirety

SECTION 09 2116 – GYPSUM BOARD ASSEMBLIES

Added Part 2 – Products, 2.03 Gypsum Wallboard Accessories, Paragraph D, sub-paragraph 3 as follows:

3. L-Trim: Sized to fit 5/8 inch thick gypsum wallboard

Added Part 3 – Execution, 3.05 Installation of Trim and Accessories, Paragraph D as follows:

D. L-Trim: Install at all edge of board locations at sealant joints

Section reissued in entirety

SECTION 28 4600 – FIRE DETECTION AND ALARM

Revise Part 2 – Products, 2.02 Fire Alarm Control Panel (FACU), Paragraph A as follows:

A. The FACU shall be on a ***Honeywell*** ~~Guardian Security~~ or approved equal platform, no substitutions. The FACU shall include the following options:

Section reissued in entirety

SECTION 32 9300 – PLANTS

Added Section in entirety. Note: This section includes information on design-build temporary irrigation system.

CHANGES TO DRAWINGS:

Note: There may be references to Revision or Delta 1 in some drawing title borders. Revision 1 covers changes made to drawings between Permit issuance and Bid Set issuance. These clouds have been turned off on drawing sheets as they are not changes to the issued Bid Set documents. Revision/Delta 2 covers all changes made to the drawings since the Bid Set issuance on 2/3/21.

DRAWING R1/A0.01

Revise to show coverboard at rigid insulation

DRAWING 1/A1.01

Added detail reference for flag pole base

DRAWING A2.01

Added Note to sheet, as follows: Wall and building section cuts were inadvertently not shown on the previously issued version of this drawing. Cuts have been added to plan. Since the sections themselves are not new information, these cuts have not been clouded in order to maintain legibility of drawing.

Added Building and Wall Section cuts as noted above

DRAWING 1/A2.02

Revise to indicate Dorm walls are Wall Type B03.05 and B05.05 at hallway, per clouded items, Delta 2.

DRAWING A3.01

Revise Keynote 3004

DRAWING A3.02

Revise Keynote 3004

DRAWING 2/A4.05

Revise to indicate signage by owner

DRAWING A6.01

Added Note to sheet, as follows: Building section cuts were inadvertently not shown on the previously issued version of this drawing. Cuts have been added to plan. Since the sections themselves are not new information, these cuts have not been clouded in order to maintain legibility of drawing.

Added Building Section cuts as noted above

Revise to add additional instances of Keynote 6002, indicating all exterior soffits to be painted, Per Clouded Items, Delta 2

Revise to add ceiling height call-out at Hallway 102

DRAWING 8/A8.12

Added New detail 8 – Hollow Metal frame profile

Revise Details 6 and 7 to indicate revised frame configuration and sealing

Revise Details 11 and 12 to show SAM at penetrations

DRAWING A8.13

Revise Details 1, 2, 5, and 6 to add stainless steel L flashing

Revise Details 9, 10, and 11 to show MDF sill

Revise Details 9 and 10 to clarify sill tray and sealant

DRAWING A8.14

Revise Detail 9 to indicate sealant bed instead of gasket.

DRAWING A8.20

Revise Details 1, 5, 6, 7, 9, and 10 to show coverboard at insulation

Revise Details 6 and 7 to indicate underlayment lapped over Ice & Water Shield

Revise Detail 6 to remove reference to cedar fascia

DRAWING 3/A9.01

Revise to remove extra line at concrete slab. Curb sits on top of main slab.

DRAWING A9.31

Revise Detail 8 to show bracket directly supporting countertop and attachment of bracket to wall.

DRAWING EQ1.01

Revise Equipment Schedule Line 15 per clouded Items, Delta 2

DRAWING I2.01

Added Bid Alternate B2 language to sheet

Revise Roof Finish Schedule to add notes referencing Bid Alternate B2

Revise Finish Schedule with updated specification division numbers per clouded Items, Delta 2

Revise WD-3 to indicate 4'x8' sheets of plywood

Revise WP-3 to indicate preferred product

DRAWING S2.01

The previous version of this drawing showed an incorrect trench drain arrangement. Trench drains are described on S1.01 and are shown correctly on that sheet. They are shown on this sheet for informational purposes only. No other changes have been made to this sheet.

DRAWING S4.06

Added Detail 4 – Typical Flag Pole for flag pole foundation

DRAWING C2.00

Revise Details 2 and 3 to match Linn County ADA ramp requirements

DRAWING C3.00

Revise drainage at courtyard to accommodate in-slab drain

Added Gas Utility and Downspout Connection notes

DRAWING C3.50

Revise elevations at MH 3 and MH 4, as shown in Details 1 and 2

DRAWING C4.00

Revise Detail 3 to remove reference to alternate rebar

DRAWING M0.01

Revise Abbreviations per clouded Items, Delta 2

DRAWING M1.01

Added Keynote 14 for Fire Dampers at Dorms, added locations to plan per clouded Items, Delta 2

DRAWING P1.02

Revise Keynote 18

DRAWING E1.01

Revise Keynote 6 and route of power to Fire Signal

DRAWING E6.02

Added fixtures N through S to Fixture Schedule

DRAWING EL1.01

Added fixtures I at Courtyard

Delete Fixture I at NE corner of building

Revise Keynote 6

Revise Lighting at south side of building

DRAWING EL1.02

Added Fixture P at Dorms, Fixtures S & Q at Lockers, Fixture N and Q at Kitchen, Fixture L at Apparatus Bay and Exercise, Fixture D at exterior south building, per clouded Items, Delta 2

Added Keynotes 6 and 7

Revise Lighting locations and types in Kitchen, Dayroom/Dining, and Meeting, per clouded Items, Delta 2

Revise General Note C

DRAWING EV1.01

Delete speaker adjacent to Electrical 133

Revise Keynote 9 to indicate conduit is for future HAM radio.

BIDDER QUESTIONS

1. Construction Start Date is 4/6/21; When can issuance of NTP be anticipated?

A. We anticipate issuing Notice of Intent to Award on 3/16/21 and Notice of Award on 3/23/21. Following a 14-day period for the contractor to obtain insurance, bonds, and sign the contract, we anticipate a pre-construction meeting and NTP on or around 4/6/21. We will consider issuance of NTP the start of construction, but actual mobilization to site will be per contractor's approved schedule

2. Contract Documents do not provide a construction start date. Please provide a construction start date.

A. A required construction start date is not specified; only the required construction completion date is specified. See above for additional information.

3. Notice of intent to start construction is noted as seven days under Section I-8 of the contract, however section I-16 indicates three working days. Please clarify which is correct.

A. The contractor must provide the City seven days notice of intent to begin construction, per Section I-8. The contractor must provide written notice to the agencies listed in I-16 at least 3 working days in advance of construction. These notices can occur once the contract has been signed.

4. BOLI Wage Rates: On the payment bond form, it states that the BOLI wage rates in effect as of the date of the bid of advertisement by City will be utilized. Wouldn't these include the January 1, 2021 wage rates? It's noted in in Section II, II-1 Prevailing Wages, that we are to use July 1, 2020 and the October 1, 2020 amendment. Please clarify which wage rates we are required to use for this bid

A. The BOLI Wage Rates required for this project are the January 1, 2021 wage rates.

5. Please clarify if GC is required to provide Builder's Risk coverage. It is noted in section 107.05.03 of the General Requirements but not noted within the project documents.

A. Owner is providing the Builder's Risk coverage (Special Provisions, Section IV, 11.C.1.)

6. What is the deductible for the Owner provided Builders Risk coverage?

A. The deductible for the Owner provided Builders Risk coverage is $1,000.00.

7. Is the portion of the A305 regarding selected major subs (and their project experience) due with the first tier disclosure within 2 hours after the bid, or will that portion of the A305 be required to be turned in with the rest of the A305 at 2pm on the bid day?

A. Any sub information submitted prior to the virtual bid opening at 2:00 p.m. will not be disclosed during the virtual bid opening.

i) However, the portion of A305 regarding selected major subs (and their project experience) may be submitted along with the first tier disclosure form within 2 hours after the bid. If you choose to submit this information with the first tier disclosure form, you must note this in the applicable sections on the A305 form to be submitted by 2:00 p.m.

8. Addendum #1 clarified that the city will pay for water/sewer bills, but not specifically who is responsible for the reconnection to the house. Please confirm who pays to reconnect water to site office? Also, please confirm if City will pay for temp water at hydrant for construction water usage.

A. The City will provide the water service up to the meter, the contractor is responsible for the private plumbing to connect the new line in to the house's supply line.

9. Instructions to bidders for the public street improvements bid item no. A2 lists sheets C2.30 through C3.50 for inclusions in this bid breakout. Please confirm if any electrical scope from EL1.01 (KN's 6, 9 and associated J type street lights possibly?) or landscaping should be included in the public street improvements bid break down or not.

A. The street lighting on EL1.01 and landscaping within street right-of-way should be included in the public street improvements bid break down.

10. The site is over 1 Acre, so a DEQ 1200-C Permit is required for site disturbance and erosion control. Who is responsible for developing the Erosion Control Plan? Who is responsible for applying for the DEQ 1200-C Permit?

A. The contractor is responsible to develop the Erosion Control Plan, apply for, and obtain the DEQ 1200-C permit for site disturbance and erosion control.

11. Will the Division 27 specification be provided? It is listed in table of contents, but not included

A. Division 27 specifications are not provided with this project. See revised Table of Contents issued with this addendum.

12. Plan E6.01 shows a 20kVA 208V/120V 3 PH UPS off Panel LP and feeding Panel IT. There is no other information provided in the Division 26 specifications.

- **a) Is this UPS existing? Or is it part of the base bid?**
- **b) If it should be provided…**
- **c) What is the battery runtime needed?**
- **d) Do you need an external make before break MBP?**
- **e) Network Card?**
- **f) Environmental Monitoring?**

A. See answers below

- a) The UPS system is not existing and will be part of the base bid.
- b) Standard runtime will suffice 15-20 minutes at full load.
- c) Yes
- d) Yes
- e) Not Necessary

13. Could you please clarify: On 28 4600-4 it states "The FACU shall be on a Guardian Security Platform". To my knowledge, there is no such thing. Could you please provide a brand spec for the panel?

A. Honeywell would be an approved equal manufacturer for this application. See list of approved products at the end of addendum

14. We need clarification for concrete polishing. The spec is very open ended, we need the spec to define the level grit that it is being polished to?

A. Final grit level will be determined by conditions of concrete onsite and amount of polishing required to achieve specified sheen level.

15. Need more info on the Turn Out Storage Racks. Keynote 2008 on sheet A2.01 states "Turnout Racks. Relocate (12) from Owner's Existing Facility. Provide (1) New Triple Rack and (3) New Double Racks". However, Equipment Schedule on EQ1.01 states that (9) additional racks are to be ordered. Please confirm total amount and size of additional racks needed. Also, there is no spec or additional info regarding model #, etc. to determine what to purchase, please provide.

A. Specifications and product information are provided in Specification Section 10 5143 – Wire Mesh Storage Lockers. The racks listed in Keynote 2008 provide for (9) new individual locker spaces. Equipment Schedule on EQ1.01 has been updated to reflect this. See re-issued sheet EQ1.01

16. Downspout Boots and Keynote 2004/A2.01: Keynote refers to "civil" for downspout connection detail. No detail on civil drawings. 'Boot' reads like a manufactured item. Please provide downspout connection detail and product source.

A. See note on revised C3.00 reissued with this addendum.

17. "Standard" 1/2" return of frame to wall shown for interior frames. Exterior HM frames shown details 2, 3, 6, 7/A8.12 appear to have different frame return margin on exterior face. Please provide dimensioned detail for Exterior HM frame profiles. Ext. frames appear to be custom profile.

A. See added detail 8/A8.12 for profile, and updated Specification Section 08 113 re-issued with this addendum.

18. Factory Fab'd Column Covers - No manufacturer named. Please provide BOD mfr. Is wrap a continuous smooth surface full-height, no reveals or breaks?

A. This item is a performance spec only, with no preferred manufacturers. Wrap to be full height, with butt joints at side seams as noted in specification and in detail 12/A8.11.

19. Please provide more information. Sizes of vertical & horizontal (steel) tubes? Are corner and end-post vert tubes full-height to top of horizontal rail? Would top of tubes cap? Detail 5 calls-out C3 'tabs'- what is the length and frequency of these tabs? Are tabs to be spaced in a particular manner (they will be visible)? What is post/tube mounting detail? No gate hardware called-out- please specify. Gates do not show diagonal bracing- should there be (sim. to 6/A5.1)?

A. See details on A8.51 for additional information on tube sizes, caps, etc.

20. Finish Schedule lists CAB and WD elements as part of Section 06 41 00 Interior Architectural Woodwork, but they are not described in this Section. Finish Schedule lists FRP and WP elements as part of Sections 06 64 00 Plastic Paneling. Section 06 64 00 not bound in the project manual. Sections 06 83 16 FRP and 09 84 30 Sound-Absorbing Wall & Ceiling Units do exist in the manual. Please clarify correct Section references on Finish Schedule for WD-1, WD-2, WD-3, FRP-1, WP-1, WP-2, WP-3, WP-4 products (it would help if product descriptions in project manual were labeled "WD-1 or WD-2, etc).

A. See revised I2.01 issued with this addendum for update specification numbers.

21. 06 20 00 - Finish Carpentry - Where is this T&G wood ceiling system? Is this Bid Alternate B2a (described on A6.01 RCP)? Description refers to 1/2" plywood backing for T&G panels - are these to be fab'd as 2x4 'panels' to be laid into suspended grid system? Is there a suspended grid system for the B2a Alternate? Details needed for Alternates. Only Wood ceiling system shown on A6.1 is WD-1. Please clarify. Bid Alternate B2b questions similar - Is there a suspended grid system for gypsum board ceilings?

A. Tongue and Groove ceiling listed in Specification Section is Bid Alternate B2a. Alternate will not have suspended grid, and will instead be fastened to roof framing members. Only one wood ceiling system will be used in the project. Per Specification Section 09 2116 – Gypsum Board Assemblies, Section 2.02 paragraph A, either a suspension system or framing members may be used to support gypsum board ceilings.

22. I2.01 Finish Schedule - Countertops grouped with Div. 06 work- Should relate to Section 12 36 00. Please correct.

A. Schedule on I2.01 has been updated to reflect revised specification numbers. See revised I2.01 issued with this addendum.

23. In Meeting Room, RCP Keynote 6001 shows a perimeter soffit with exposed vertical face to suspended ceiling system. Bottom of gyp soffit at +9'-3-1/4". Are details on A9.22 for these soffits?

A. Detail 5/A9.22 is used for all perimeter soffits around wood ceilings

24. In wall section detail 1/A3.24. Bottom of OWJ appears to be ~+10' AFF. RCP shows south end of wood ceiling to be +11' AFF - a conflict. Please clarify. Is the WD-1 wood ceiling system suspended in this room?

A. This wall section references Lobby 101 which has a flat ceiling at 10’-0” AFF. Ceiling in Dayroom 108 to be sloped as indicated on A6.01 with a low side at 11’-0” AFF. Ceiling to be suspended as required to achieve height and slope.

25. Detail 2/A4.05 reads "confirm signage with Owner" but no Sign# is assigned to Kiosk on A1.01. Is there signage on the Kiosk to include pricing for? Please clarify.

A. Signage will be by Owner. Detail 2/A4.05 has been updated to indicate this condition and coordination required.

26. Painting of Exterior Surfaces: Legend Keynotes do not specifically call-out painting of exterior surfaces like cement board soffits. A painting contractor called to ask if these surfaces paint. In the interest of clarity, please add keynotes related to painting of exterior surfaces.

A. Keynote 6002 indicates painting of soffits. Additional keynotes have been added to clarify that all exterior soffits are to be painted. See revised A6.01

27. Head/Jamb/Sill details needed (show in detail 5/A8.12 condition). What hardware Group# Is there a 'frame' associated with bi-fold doors?

A. Details associated with Apparatus Bay doors are not expected to change if Alternate B1 is accepted. No frame or hardware is required for these doors

28. Please advise finish ceiling height of 2x4 grid system at Hallway 102.

A. Ceiling to be 10’-0” AFF. See revised A6.01 issued with addendum.

29. Detail 5/A9.22 appears to show a portion of the 2'-10-1/2"-wide gyp soffit along west edge of Room 108. Please show full width of 2'-10-1/2" wide soffit and how it relates to ACT system in Hallway 102 (same height?). Please also show location of 16" x 14" SA duct presumably located in soffit framing. Advise spacing of (4) SA diffusers if layout is critical.

A. Detail 6/A9.22 indicates soffit transitions at differing ceiling heights. Duct to be located approximately 6” above bottom of soffit. Diffuser locations to be equally spaced per mechanical drawings

30. Structural Roof Plan shows an H7 header (5.5x12 GLB) in the 2-Line shear wall opening for the Lobby entrance doors. The inner GLB on the arch detail does not show on the structural drawings. Presume the inner GLB is a non-structural wall - correct? Please indicate gyp soffit framing components at correct elevation and sloped wood ceiling in relation to gyp soffit. in detail 1/A3.24.

A. Inner GLB is non-structural, sized as required to span opening and support storefront. Ceiling in Lobby 101 is flat, as indicated on A6.01. Head of storefront/recessed entry soffit is at 9’-0” AFF as indicated in 1/A3.24 and detail 1/A8.14.

31. Detail 3/A9.01 shows Apparatus Bay curbs recessed into SOG. Please show how this recess looks at an exterior wall condition with recessed 'brick shelf' shown at SOG edge in 3/A8.11. Detail needed.

A. Detail has been corrected to show curb sitting on top of slab. Please install curb as indicated on Structural drawings.

32. Please clarify the mezzanine handrail material (wood, or tube pipe). Structural drawings call for wood, architectural drawings call for metal tube.

A. Handrail to be metal tube as shown on Architectural drawings

33. Please provide details for horizontal trim at the eave on the wood roof, as shown in 6/A8.20

A. This is to be manufacturer’s standard horizontal trim as provided for the selected cement board panel and reveal system.

34. Please indicate where Building Section details are taken.

A. Wall and building section cuts were inadvertently not shown on the previously issued version of some drawings. Cuts have been added to plans. Since the sections themselves are not new information, these cuts have not been clouded in order to maintain legibility of drawings. A note has been added to all drawings where these were added. See revised drawing list.

35. Detail call-outs at 1 and 4/A3.21 at the Curb are incorrect.

A. These details refer to exterior cladding terminations and apply regardless of the presence of a curb.

36. Partition type B05 at the Dorms is noted on Interior Assemblies A0.11 with 2x8studs and a 9" overall dimension = 5/8"gwb+7 1/4" stud+1/2" plywood + 5/8". The structural plans show these walls as S13 with a 2x6 stud on S2.01 and 1/S3.02. Please clarify stud size for shear wall type S13, and shear wall type between dorm rooms.

A. Dorm walls should be B03, which has 2x6 stud framing. See revised A2.02 included with this addendum.

37. Plywood walk path at dorms are shown on RCP, detail 3/A9.22. Please confirm 5/8" OSB is spaning between 2x6"s at 24"OC. Is a handrail required on the access pathway? If so, please provide blocking details.

A. Correct, spanning 2x6's at 24" o.c. 5/8" OSB is acceptable. No handrail is required.

38. Please clarify if Owner is providing the tapout system and contractor is only providing interconnections and rough-in, or if Contractor is responsible for providing the tapout system?

A. Contractor is responsible for providing tapout system.

39. Please confirm there is no DAS requirement on this project.

A. DAS is not required for this project

40. Given the Building is Risk Category IV, is Special Inspection required for Firestopping? Not current on special inspections list.

A. Special Inspection is not required for Firestopping. Inspection by Building Official only.

41. KN1/E6.03 references an RTU Owner Furnished System. No Owner Furnished RTU is indicated on the mechanical sheets. Please clarify intent.

A. The RTU (Remote Terminal Unit) Will be used to control the tap out system, it will not be shown on the mechanical sheets.

42. No lighting or outlet is shown at the flag poles. Please confirm which flagpole gets power rough-in per site electrical. Please confirm if intent is to bring the power to a j-box at the base of the flag pole and leave it for future use.

A. All flagpoles to receive power. The light pole circuiting information is shown on the site plan E1.01. Intent is to install complete flag pole power assembly.

43. Access control is listed as design build in the drawings. Is the security camera system also design build?

A. Locations and number of cameras have been shown on the drawings. The system itself will be design-build.

44. Please confirm required landscape maintenance and warranty duration. Contract lists 2 years for warranty and is silent on maintenance.

A. Provide maintenance for the duration of the warranty period.

45. The fence and kiosk details on drawings L0.02, A4.04, A4.05 and A8.51 appear to be missing the following information:

a) - Footing rebar requirements

b) - Steel sizes, thicknesses and weld size requirements for all members

c) - Door number should be provided for all gates that corresponds with door hardware type in the specification.

d) - Metal panel span between vertical tube steel is wider than recommended by the manufacturer. Generally panels max out at a 24" span.

A. See answers below:

a) Provide #4 rebar hoops at 12" o.c. for depth of footing

b) Steel sizes are as indicated on A8.51

c) Gates to receive either egress device or manual latches as indicated on drawings.

d) Manufacturer's product data indicates 22 GA metal panel can span the distance between posts as shown

46. Wood blocking is shown at the top and bottom of all casework. Generally blocking is only required at the top of the upper and full height cabinets.

A. Provide blocking as shown in details

47. The specification for casework mentions AWI but does not indicate whether fabricator needs to be AWI Certified? Please clarify.

A. Cabinetry should be designed to meet AWI standards as referenced in specifications. However, fabricator performing cabinetry work is not required to be AWI Certified.

48. Currently the metal roof panel spec does not require engineering. Will engineering be required? If yes, will it require a deferred submittal?

A. Yes, attachment of roof panels will require design-build engineering. See revisions to Specification Section 074113 included with this addendum. Deferred submittal is not required.

49. Please provide the wind loading map showing dimensions of corners and enhances perimeters.

A. This information will be provided post-bid once metal roof panel manufacturer has been chosen.

50. The metal roof slope is shown as 1:12, but the product data for Firestone UC-6 requires a minimum slope of 3:12. Please clarify if this is the correct product, or if the roof slope should change.

A. Basis of Design has been changed to AEP Span SpanSeam. See revised Section 07 4113 reissued with this addendum.

51. Currently the metal wall panel spec does not require engineering. Will engineering be required? If yes, will it require a deferred submittal?

A. Yes, attachment of wall panels will require design-build engineering. See revisions to Specification Section 074213 included with this addendum. Deferred submittal is not required.

52. R1 Roof Assembly on A0.01 - typically a vapor barrier is required on the warm side of the insulation to prevent condensation from penetrating the plywood sheathing. Please clarify how condensation is being dealt with on the bottom side of this assembly.

A. Current recommendations suggest providing a way to allow trapped moisture to evaporate or escape. A lower vapor barrier is typically not required in this application as the exposed plywood functions as evaporation plane for any trapped moisture.

53. Should the metal siding have a rain screen behind the siding panel? This would include furring anchored to the structure, and an air gap to allow escape of water

A. Metal siding assembly functions as a rain-screen, with an air gap between the panel and rigid insulation. Furring studs are attached vertically and anchored to structure through rigid insulation.

54. Currently the fiber-cement siding spec does not require engineering. Will engineering be required? If yes, will it require a deferred submittal?

A. Yes, attachment of fiber-cement siding will require design-build engineering. See revisions to Specification Section 074646 included with this addendum. Deferred submittal is not required.

55. The project building code 2019 OSSC requires Special Inspection of all exterior cladding attachments in Paragraph 1705.10.3. Should exterior elements be included in the Structural Special Inspection Matrix? Special Inspection of fasteners will require a final design by a Professional Engineer including Fastener size, Spacing, and Substrate considerations.

A. Special Inspection of exterior cladding attachment should be provided.

56. Has a 3rd party waterproofing consultant been contracted to review the plans / specs and/or provide onsite field inspections? If not, does this need to be carried by the GC?

A. No, this is not included in this project.

57. Please clarify if the aluminum storefront is required to be a deferred submittal? The spec requires engineering to be provided but it is not on the list for deferred submittals.

A. Engineering is required for system, but is not required to be a deferred submittal.

58. Please clarify why and/or what concrete formwork requires design by a Registered Structural Engineer. Does not appear to be applicable to this project. Please confirm.

A. While not anticipated for this project, it is possible that certain formwork conditions may require engineering due to field conditions. A determination as to the need for engineering will be made at that time.

59. What part of the concrete formwork is the Special Inspector reviewing?

A. Shape, Location and dimensions of concrete being formed per S0.02

60. Det. 3/S5.02 calls-out "1-1/2 x 16" Red-Built LSL fascia" but 1/S5.03 refers to 20" board. Architectural details reference cedar board. Please clarify fascia board material, and if 16" is tall enough to suit details on A8.20. Keynote 3004 describes out 18" fascia.

A. A 20" high LSL board will be used for fascia board at all locations. See revised details on A8.20 and revised Keynote 3004 on A3.01 and A3.02, reissued with this addendum.

61. Detail R1 / A0.01 shows roofing underlayment attached to the rigid insulation and details on A8.20 shows ice & watershield over the underlayment. Please clarify how the underlayment and ice and water shield are attached and adhered to the insulation. This assembly generally requires z-furring and plywood sheathing over the insulation or a structural insulated panel (SIP) to be installed so that the weather barrier and metal panels have something to structurally adhere to.

A. A cover board has been added to the roof assembly to allow for adherence of underlayment and ice and water shield. See revised A0.01 and A8.20 reissued with this addendum.

62. The wall assembly details on Drawing A0.01 appear to show wood furring wrapped in self-adhered membrane and installed over the continuous rigid insulation. How is the wood furring attached through the rigid insulation and will this provide adequate support for the exterior panel systems? Typically this is shown as a metal z-furring that extends through the insulation and attaches to the wall system. It appears that the specification for metal wall panels and fiber-cement siding call out for galvanized metal furring strips. Please clarify.

A. Furring strips are attached to z-furring holding insulation, as specified in Section 07 2100. Either pressure treated wood or galvanized steel furring may be used to attach cladding, per revised Section 07 4213 and 07 4646 reissued with this addendum. If PT wood is used, it should be wrapped with SAM.

63. Please provide concrete details/dimensions for flag pole bases.

A. See revised sheet S4.06 issued with this addendum.

64. The landscape drawings do not show any irrigation system and there is no irrigation spec section. However, 2/C3.00 indicates a future irrigation lateral per separate design build contract. Please confirm if an irrigation system is part of this project or not.

A. A temporary irrigation system is required to establish plantings. See information in new Section 32 9300 issued with this addendum.

65. There are no spec sections related to landscaping except seeding. Please advise and provide additional specs as applicable.

A. Specification Section 32 9300 – Plants has been issued with this addendum.

66. SF Jamb & Sill at Cement Board: Sealant joint bridges gap between HM frame and SAM flashing. Certain sealants preferred by storefront contractors will discolor/blacken from off-gassing of SAM product. Sealant adherence to metal would be best.

A. A stainless steel L flashing has been added at storefront jambs at heads. See revised details 1, 2, 5, and 6 issued with this addendum.

67. Edge of gyp board at sealant joints (wherever there is a wrapped/cut gyp board edge) should typically have "L-metal" trim for neat caulk-joint appearance. Please add note.

A. Language to this effect has been added to Specification Section 09 2116, reissued with this addendum

68. Keynote 2019 on A2.04 - Please clarify wall "cap". Is it gypsum board? Wood?

A. Provide gypsum board at top of wall.

69. Exterior sealant joint shown to bridge gap between HM frame and edge of 1" insulation board. Sealant will not adhere to exposed edge of insulation board. Detail 7 shows a SS flashing flange secured behind the insulation board creating a metal surface for the sealant to adhere to. This will work. Please clarify detail 6/A8.12.

A. Details 6 and 7 have been revised with modified HM frame profile. See revise A8.12 issued with this addendum.

70. Recommend the pipe penetrations have a self adhered flashing rather than a sealant at the sheathing. Please confirm.

A. See revised details 11 and 12 A8.12 issued with this addendum

71. In detail 9/A8.14, please clarify the product for the gasket shown under the storefront.

A. This should be a bed of sealant. See revised detail issued with this addendum.

72. The drawings say to “coordinate with security vendor” but the notes state that access control is a design build scope. I am unclear whether that scope is bidding as part of the electrical package or will be provided via a preferred city contractor.

A. Access control is a design-build scope. Albany Fire Department will provide endpoint device information, but contractor is responsible for purchasing, installing, and designing the rest of the access control system.

73. Plumbing shows natural gas scope out to the meter, meter provided by NW Natural. Site utility plan shows gas coming from street to new meter, with no KN's or details provided. Please confirm NW Natural will be providing their own underground work complete from the street tie in to the new building meter. Please clarify if any sleeving is required.

A. GC to provide conduit from meter to ROW, coordinated with NW Natural. See revised sheet C3.00 reissued with this addendum

74. 3/C4.00 references an alternate for driveway reinforcing that is not listed on the bid form alternates. Please clarify if this is required or not.

A. This alternate reinforcing has been deleted. See revised detail 3/C4.00 reissued with this addendum.

75. Please confirm counter bracket attachment method/detail.

A. Bracket to be screwed to wall and counter per manf instructions, with blocking as required.

76. The sealant behind the storefront should be continuous and water tight on the inside of the frame. Aluminum Storefront frames leak inside of the frame, and will drop water behind the front sealant. The inside sealant should be in the oposite orientation as the outside sealant. Flashing below the storefront should allow any water inside the system out of the building. A bottom back angle could act as a window anchor, and act as a sill pan to tie into the perimeter sealant. Recommend revising detail. Please clarify/confirm.

A. A sill tray is provided at the base of all storefront assemblies for drainage. Details 9 and 10/A8.13 have been updated to clarify that the vertical legs of this should be extended up jambs as well, as well as providing weep holes.

77. The concrete mix design might not be appropriate for Slab on Grade on Vapor Barrier. The current mix is 4000 PSI, Water/Cement = 0.45, and 5/8" aggregate. Suggest the mix be changed to 4000 PSI, Water/Cement = 0.40, and 1 1/2" aggregate, to reduce curling and cracking. Please review/confirm.

A. Because the slab is a seismic matt slab, it performs differently from a standard slab-on-grade. Structural will review mix design and provide confirmation or update prior to start of construction. Please use the current mix design for bidding purposes.

APPROVAL OF ADDITIONAL PRODUCTS/SYSTEMS:

ALL CONTRACT DOCUMENT SPECIFICATION REQUIREMENTS APPLY IN TOTAL TO ALL ADDITIONAL MANUFACTURERS AND PRODUCTS LISTED BELOW.

03 450 – PRECAST ARCHITECTURAL CONCRETE

MarcStone as approved manufacturer

07 2100 – THERMAL INSULATION

StronGirt by StrongWell

07 4113 – METAL ROOF PANELS

MAGNA-LOC 180 by Metal Sales

TBC-Superstream by The Bryer Company

07 4213 – METAL WALL PANELS

IC72 with factory-mitered corners by Metal Sales

7.2 Rib with factory mitered corners by The Bryer Company

07 6519 – ICE AND WATER SHIELD

Titanium PSU 30 by Owens Corning

08 9100 – LOUVERS

Greenheck as approved manufacturer

09 5426 – SUSPENDED WOOD CEILINGS

CT Wood Panel 5210 by Certainteed Architectural

DIV 23 – INFRARED HEATERS (as described on M6.01)

Detroit Radiant as approved manufacturer

DIV 23 – AUTOMATIC BALANCING DAMPERS (as described on M6.01)

Greenheck as approved manufacturer

DIV 23 – AIR FILTER/HOUSING (as described on M6.01)

Koch Filter Corp as approved manufacture, with the following notes:

- Provide with initial pressure drop per schedule or less - multi-filter wide units will be required.

DIV 23 – UV DUCT DISINFECTANT (as described on M6.02)

DLX-N Dual Lamp Duct Fixtures by UV Rescources

23 0900 – INSTRUMENTATION AND CONTROLS FOR HVAC SYSTEM

Critical Environment Technologies as approved manufacturer for CO and NO2 sensors/transmitters

23 3400 – HVAC FANS

T-Series Ceiling Mounted Centrifugal Exhaust Fans by Twin City Fans (for use at EF-2 and EF-3)

23 8100 – DECENTRALIZED UNITARY HVAC EQUIPMENT

Hitachi Variable Refrigerant Flow System, with the following notes:

- Outdoor unit and high static indoor units must be seismically certified by the factory in accordance with ASCE 7-16

DVM S VRF Heat Recovery System by Samsung, with the following notes:

- Outdoor unit and high static indoor units must be seismically certified by the factory in accordance with ASCE 7-16

28 4600 – FIRE DETECTION AND ALARM

Honeywell as an approved manufacture for the FACU system.

END OF SECTION

SECTION 00 0110

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APPENDIX

Appendix A - Geotechnical Report

Appendix B - Tap Out System Memo

END OF SECTION

SECTION 07 2100

THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Board insulation and integral vapor retarder at exterior wall behind panel wall finish and roof deck or sheathing.

B. Batt insulation and vapor retarder in wall construction.

C. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

1.02 RELATED REQUIREMENTS

A. Section 07 2500 - Weather Barriers: Separate air barrier and vapor retarder materials.

1.03 REFERENCE STANDARDS

A. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2017.

B. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2013.

C. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation; 2014.

D. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.

E. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2018a.

F. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2017.

G. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C; 2016a.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.

C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.05 FIELD CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.01 APPLICATIONS

A. Insulation Over Framed Walls, Continuous: Mineral fiber board.

B. Insulation in Wood Framed Walls: Batt insulation with separate vapor retarder.

C. Insulation Over Roof Deck: Polyisocyanurate board.

2.02 FOAM BOARD INSULATION MATERIALS

A. Polyisocyanurate (ISO) Board Insulation with Facers Both Sides: Rigid cellular foam, complying with ASTM C1289.
   1. Classifications:
      a. Type I: Faced with aluminum foil on both major surfaces of core foam.

1) Class 1 - Non-reinforced core foam.
2) Compressive Strength: 16 psi, minimum.
3) Thermal Resistance, R-value: At 1-1/2 inch thick; 9.0 at 75 degrees F.

2. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
3. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
4. Board Size: 48 inch by 96 inch.
5. Total Thermal Resistance: R-value of 21, including coverboard. Provide minimum 2 layers.
6. Board Edges: Square.
7. Products:
   a. Carlisle Coatings & Waterproofing, Inc: www.carlisleccw.com/#sle.
   b. Dow Chemical Company: www.dow.com/#sle.
   c. Johns Manville: www.jm.com/#sle.
   d. Firestone: www.firestonebpco.com.
   e. Substitutions: See Section 01 6000 - Product Requirements.

B. Polyisocyanurate (ISO) Board Insulation for use as coverboard: Rigid cellular foam, complying with ASTM C1289.
1. Classifications:
   a. Type III: Faced with perlite insulation board on one major surface of core foam and glass fiber reinforced cellulosic felt or uncoated or coated polymer-bonded glass fiber mat facer on other major surface of core foam.
      1) Compressive Strength: 16 psi, minimum.
      2) Thermal Resistance, R-value: At 1-1/2 inch thick; 7.0 at 75 degrees F.
   b. Type V: Faced with oriented strand board (OSB) or plywood on one major surface of core foam and glass fiber reinforced cellulosic felt or uncoated or coated polymer-bonded glass fiber mat facer on other major surface of core foam.
      1) Compressive Strength: 16 psi, minimum.
      2) Thermal Resistance, R-value: At 1-1/2 inch thick; 6.2 at 75 degrees F.
2. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
3. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
4. Board Size: 48 inch by 96 inch.
5. Board Thickness: minimum 0.5 inch.
6. Board Edges: Square.
7. Products: As compatible with roof insulation and metal roof panel assembly/underlayment.

2.03 FIBERBOARD INSULATION MATERIALS

A. Mineral Fiberboard Insulation: Rigid or semi-rigid mineral fiber, ASTM C612 or ASTM C553; unfaced flame spread index of 0 (zero) when tested in accordance with ASTM E84.
1. Where indicated, provide fiberglass reinforced polypropylene facing on one side; with flame spread index of 25 or less, when tested in accordance with ASTM E84.
2. Smoke Developed Index: 0 (zero), when tested in accordance with ASTM E84.
3. Board Size: 24 by 48 inches.
4. Board Thickness: 1 inch.
5. Thermal Resistance: R-value of 4.3 degrees F hr sq ft/Btu per inch at 75 degrees F, minimum, when tested according to ASTM C518.
6. Maximum Density: 4.4 pounds per cubic foot, nominal.
7. Products:
   a. Johns Manville; CladStone ___ Water & Fire Block Insulation: www.jm.com/#sle.
   b. ROCKWOOL (ROXUL, Inc); CAVITYROCK: www.rockwool.com/#sle.
   c. Substitutions: See Section 01 6000 - Product Requirements.

2.04 BATT INSULATION MATERIALS

A. Where batt insulation is indicated, either glass fiber or mineral fiber batt insulation may be used, at Contractor's option.

B. Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
   1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
   2. Smoke Developed Index: 50 or less, when tested in accordance with ASTM E84.
   3. Combustibility: Non-combustible, when tested in accordance with ASTM E136.
   4. Formaldehyde Content: Zero.
   5. Thermal Resistance: R-value of 19.
   6. Facing: Unfaced.
   7. Products:
      a. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation: www.ocbuildingspec.com/#sle.
      b. Knauf Insulation, Inc.; EcoBatt Insulation: www.knaufinsulation.us..
      c. Substitutions: See Section 01 6000 - Product Requirements.

C. Mineral Fiber Batt Insulation: Flexible or semi-rigid preformed batt or blanket, complying with ASTM C665; friction fit; unfaced flame spread index of 0 (zero) when tested in accordance with ASTM E84.
   1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
   2. Smoke Developed Index: 0 (zero), when tested in accordance with ASTM E84.
   3. Thermal Resistance: R-value of 19.
   4. Products:
      a. Johns Manville; MinWool Sound Attenuation Fire Batts: www.jm.com/#sle.
      b. ROCKWOOL (ROXUL, Inc); COMFORTBATT: www.rockwool.com/#sle.
      c. Substitutions: See Section 01 6000 - Product Requirements.

2.05 ACCESSORIES

A. Sheet Vapor Retarder: See Section 07 2500.

B. Tape joints of rigid insulation in accordance with roofing and insulation manufacturers' instructions.

C. Insulation Fasteners: Impaling clip of unfinished steel with washer retainer, to be adhered to surface to receive insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.

D. Continuous Insulation (CI) Support Systems: Composite framing support (CFS) system consisting of insulated fiberglass reinforced plastic (FRP) girts that support CI and provide cladding attachment support integrated with metal wall panels or cement fiberboard exterior wall cladding.
   1. Substrate: Attach CFS system components to exterior sheathing over wood stud framing.
   2. Depth of Girts: As required for thickness of insulation.
   3. Length: 6 inches for clips, and 96 inches for girts.
   4. Spacing of Girts: 16 inches on center, vertically.
   5. Products:
      a. Advanced Architectural Products, LLC; SMARTci Plus 3-in-1 System: www.smartcisystems.com/#sle.
      b. Armatherm; Z Girt Structural Thermal Break: www.armatherm.com/#sle.
      c. Substitutions: See Section 01 6000 - Product Requirements.

E. Nails or Staples: Steel wire; electroplated or galvanized; type and size to suit application.

F. Adhesive: Type recommended by insulation manufacturer for application.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.

B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.02 BOARD INSTALLATION AT EXTERIOR WALLS

A. Install boards horizontally on walls.
   1. Install in running bond pattern.
   2. Butt edges and ends tightly to adjacent boards and protrusions.

B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.03 BOARD INSTALLATION USING COMPOSITE FRAMING SUPPORT (CFS) SYSTEM

A. Install CFS system in accordance with manufacturer's installation instructions.

B. Install CFS system in compliance with system orientation, sizes, and locations as indicated on drawings.

C. Install CFS system to fill-in exterior wall spaces without gaps or voids, and do not compress insulation boards.

D. Trim insulation neatly to fit spaces, and insulate miscellaneous gaps and voids with approved expandable foam sealant.

3.04 BOARD INSTALLATION OVER ROOF DECK

A. Board Installation Over Roof Deck, General:
   1. See applicable roofing specification section for specific board installation requirements.
   2. Ensure vapor retarder is clean and dry, continuous, and ready for application of roofing system.
   3. Fasten insulation to deck in accordance with roofing manufacturer's written instructions and applicable Factory Mutual requirements.
   4. Do not apply more insulation than can be covered with roofing on the same day.
   5. Install minimum of two layers, with seams offset a minimum of 6 inches from preceding layer.

3.05 BATT INSTALLATION

A. Install insulation and vapor retarder in accordance with manufacturer's instructions.

B. Install in exterior wall and ceiling spaces without gaps or voids. Do not compress insulation.

C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.

D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

E. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.

F. At wood framing, place vapor retarder on warm side of insulation by stapling at 6 inches on center. Lap and seal sheet retarder joints over face of member.

G. Tape seal tears or cuts in vapor retarder.

H. Extend vapor retarder tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape seal in place.

I. Coordinate work of this section with requirements for vapor retarder, see Section 07 2500.

J. Coordinate work of this section with construction of air barrier seal, see Section 07 2500.

3.06 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements for additional requirements.

B. Per Oregon Energy Efficiency Specialty Code, provide either R-value indentification mark applied by manufacturer to every piece of insulation greater than 12 inches in width, or installers to provide a signed, dated, and posted certification listing the type, manufacturer, and R-value of insulation installed. Do not remove until notified by Building Official.

3.07 PROTECTION

A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION

SECTION 07 4113

METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Architectural roofing system of preformed steel panels.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Roof sheathing.

B. Section 07 2100 - Thermal Insulation: Rigid roof insulation.

C. Section 07 4213 - Metal Wall Panels: Preformed wall panels.

D. Section 07 6519 - Ice and Water Shield

1.03 REFERENCE STANDARDS

A. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2010 (Reapproved 2015).

B. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2015a.

C. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2016.

D. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).

E. IAS AC472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems; 2017.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Summary of test results, indicating compliance with specified requirements.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
   4. Specimen warranty.

C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
   1. Show work to be field-fabricated or field-assembled.
   2. Include structural analysis signed and sealed by qualified structural engineer registered in the State of Oregon, indicating compliance of roofing system and attachment to specified loading conditions.

D. Selection Samples: For each roofing system specified, submit color chips representing manufacturer's full range of available colors and patterns.

E. Manufacturer's qualification statement.

F. Test Reports: Indicate compliance of metal roofing system to specified requirements.

G. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

1.07 WARRANTY

A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.

B. Finish Warranty: Provide manufacturer's special warranty covering failure of factory-applied exterior finish on metal roof panels and agreeing to repair or replace panels that show evidence of finish degradation, including significant fading, chalking, cracking, or peeling within specified warranty period of five years from Date of Final Acceptance.

C. Waterproofing Warranty: Provide manufacturer's warranty for weathertightness of roofing system, including agreement to repair or replace roofing that fails to keep out water within specified warranty period of five years from Date of Final Acceptance.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design: ~~Firestone UC-6 metal roofing panel~~AEP Span SpanSeam

B. Architectural Metal Roof Panels:
1. ATAS International, Inc: www.atas.com/#sle.
2. Firestone Building Products LLC: www.firestonebpco.com.
3. Metl-Span, a Division of NCI Group, Inc: www.metlspan.com.
4. AEP Span: www.aepspan.com.
5. Taylor Metal: www.taylormetal.com
6. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.
2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
3. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.

2.03 ARCHITECTURAL METAL ROOF PANELS

A. Architectural Metal Panels: Factory-formed panels with factory-applied finish.
1. Steel Panels:
a. Aluminum-zinc alloy-coated steel complying with ASTM A792/A792M; minimum AZ50 coating.
b. Steel Thickness: Minimum 24 gauge (0.024 inch).
2. Profile: Standing seam, with minimum 2.0 inch seam height; concealed fastener system for field seaming with special tool, 180 degree bend on seam.
3. Texture: Smooth.
4. Length: Maximum possible length to minimize lapped joints. Where lapped joints are unavoidable, space laps so that each sheet spans over three or more supports.
5. Width: Maximum panel coverage of 16 inches.

2.04 ATTACHMENT SYSTEM

A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

1. . Attachment Performance: Fasteners shall provide support for roof panels for all gravity, wind, and snow loading conditions.

2.05 FABRICATION

A. Panels: Provide factory or field fabricated panels with applied finish and accessory items, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.

B. Joints: Provide captive gaskets, sealants, or separator strips at panel joints to ensure weathertight seals, eliminate metal-to-metal contact, and minimize noise from panel movements.

2.06 FINISHES

A. Fluoropolymer Coating System: Manufacturer's standard multi-coat thermocured coating system, including minimum 70 percent fluoropolymer color topcoat with minimum total dry film thickness of 0.9 mil; color and gloss as selected from manufacturer’s standards.

2.07 ACCESSORIES

A. Miscellaneous Sheet Metal Items: Provide flashings, trim, moldings, closure strips, and caps of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.

B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.

C. Sealants:
   1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
   2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
   3. Seam Sealant: Factory-applied, non-skinning, non-drying type.

D. Thermal Insulation: See section 07 2100 - Thermal Insulation

E. Underlayment: Self-adhering rubber-modified asphalt sheet complying with ASTM D1970/D1970M; 65 mil total thickness; with strippable release film and polyethylene top surface.
   1. Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.
   2. Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.
   3. Water Vapor Permeance: 0.015 perm, maximum, when tested in accordance with ASTM E96/E96M Procedure A (desiccant method).
   4. UL Classification: UL Class A
   5. Manufacturers:
      a. Firestone "CLAD-GARD SA-FR": www.firestonebpco.com.
      b. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Broom clean wood sheathing prior to installation of roofing system.

B. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to assure that the completed roof will be free of leaks.

C. Coordinate installation of waterproof membrane over roof sheathing with 06 1000.

D. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by roof panel manufacturer.

E. Where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions. Anchor all components of roofing system securely in place while allowing for thermal and structural movement.
   1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
   2. Minimize field cutting of panels. Where field cutting is absolutely required, use methods that will not distort panel profiles. Use of torches for field cutting is absolutely prohibited.

B. Accessories: Install all components required for a complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, caps, rib closures, ridge closures, and similar roof accessory items.

C. Install underlayment over insulation before installing preformed metal roof panels. Secure by methods acceptable to roof panel manufacturer, minimizing use of metal fasteners. Apply from eaves to ridge in shingle fashion, overlapping horizontal joints a minimum of 2 inches and side and end laps a minimum of 3 inches. Offset seams in building paper and seams in roofing felt.

D. Roof Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.
   1. Form weathertight standing seams incorporating concealed clips, using an automatic mechanical seaming device approved by the panel manufacturer.
   2. Incorporate concealed clips at panel joints, and apply snap-on battens to provide weathertight joints.
   3. Install sealant or sealant tape, as recommended by panel manufacturer, at end laps and side joints.

E. Insulation: Install insulation between roof covering and supporting members to present a neat appearance. Fold, staple, and tape seams unless otherwise approved by Architect.
   1. See Section 07 2100 - Thermal Insulation for additional installation requirements.

3.04 CLEANING

A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.05 PROTECTION

A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.

B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Final Acceptance.

END OF SECTION

SECTION 07 4213

METAL WALL PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Manufactured metal panels for exterior wall panels and subgirt framing assembly, with related flashings and accessory components.

1.02 RELATED REQUIREMENTS

A. Section 07 2100 - Thermal Insulation.

B. Section 07 2500 - Weather Barriers: Weather barrier under wall panels.

C. Section 07 9200 - Joint Sealants: Sealing joints between metal wall panel system and adjacent construction.

1.03 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data - Wall System: Manufacturer's data sheets on each product to be used, including:
   1. Physical characteristics of components shown on shop drawings.
   2. Storage and handling requirements and recommendations.
   3. Installation instructions and recommendations.

C. Shop Drawings: Indicate dimensions, layout, joints, construction details, support clips, factory mitered corner units, and methods of anchorage.

   1. Include structural analysis signed and sealed by qualified structural engineer, indicating compliance of cladding system attachment to specified loading conditions.

D. Samples: Submit two samples of wall panel, 12 inches by 12 inches in size illustrating finish color, sheen, and texture.

1.05 MOCK-UP

A. Construct mock-up, 10 feet long by 10 feet wide; include panel system, glazing, attachments to building frame, associated vapor retarder and air seal materials, weep drainage system, sealants and seals, related insulation in mock-up.

B. Locate where directed by Architect.

C. Mock-up may remain as part of the Work.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.

B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.

C. Prevent contact with materials that may cause discoloration or staining of products.

1.07 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Correct defective work within a five year period after Date of Final Acceptance for degradation of panel finish, including color fading caused by exposure to weather.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Metal Wall Panels - Exposed Fasteners:
   1. McElroy Metal; Mega-Rib: www.mcelroymetal.com/#sle.
   2. Petersen Aluminum Corporation; 7.2 Panel: www.pac-clad.com/#sle.
   3. Taylor Metals: www.taylormetal.com.
   4. AEP Span; Box Rib: www.aepspan.com
   5. Dimension Metals Inc; WP72: www.dmimetals.com
   6. Substitutions: See Section 01 6000 - Product Requirements.

2.02 MANUFACTURED METAL PANELS

A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.
   1. Provide exterior wall panels and factory-mitered corner panels.
   2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
   3. Design Pressure: In accordance with applicable codes.
   4. Maximum Allowable Deflection of Panel: L/180 for length(L) of span.
   5. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
   6. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
   7. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.
   8. Corners: Factory-fabricated in one continuous piece with minimum 18 inch returns.

B. Exterior Wall Panels:
   1. Profile: Horizontal; style as indicated.
   2. Side Seams: lapped, sealed with continuous bead of sealant.
   3. Material: Precoated steel sheet, 22 gauge, 0.0299 inch minimum thickness.
   4. Panel Width: 36 inches.
   5. Color: As selected by Architect from manufacturer's full line.

C. Subgirt Framing Assembly:
   1. 16 gauge, 0.0598 inch thick formed non-precoated steel sheet or pressure treated lumber, as approved by manufacturer.
   2. Profile as indicated; to attach panel system to building.

D. Internal and External Corners: Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut and factory mitered to required angles.

E. Expansion Joints: Same material, thickness and finish as exterior sheets; ___ gauge, ___ inch thick; manufacturer's standard brake formed type, of profile to suit system.

F. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

G. Anchors: Galvanized steel.

2.03 MATERIALS

A. Precoated Steel Sheet: Hot-dipped galvanized steel sheet, ASTM A653/A653M, Structural Steel (SS) or Forming Steel (FS), with G90/Z275 coating; continuous coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

B. Select materials with surface flatness, smoothness, and lack of surface blemishes where exposed to view in finished system.

2.04 FINISHES

A. Exposed Surface Finish: Panel manufacturer's standard polyvinylidene fluoride (PVDF) coating, top coat over epoxy primer.

B. Panel Backside Finish: Panel manufacturer's standard siliconized polyester wash coat.

2.05 ACCESSORIES

A. Gaskets: Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.

B. Concealed Sealants: Non-curing butyl sealant or tape sealant.

C. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.

D. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized. Fastener cap same color as exterior panel.

E. Field Touch-up Paint: As recommended by panel manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that building framing members are ready to receive panels.

B. Verify that weather barrier has been installed over substrate completely and correctly.

3.02 PREPARATION

A. Install subgirts perpendicular to panel length, securely fastened to substrates and shimmed and leveled to uniform plane. Space at intervals indicated.

3.03 INSTALLATION

A. Install panels on walls in accordance with manufacturer's instructions.

B. Fasten panels to structural supports; aligned, level, and plumb.

C. Locate joints over supports.

D. Lap panel ends minimum 2 inches.

E. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

3.04 TOLERANCES

A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch.

B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch.

3.05 CLEANING

A. Remove site cuttings from finish surfaces.

B. Remove protective material from wall panel surfaces.

C. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.

D. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.

END OF SECTION

SECTION 07 4646

FIBER-CEMENT SIDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fiber-cement siding.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Siding substrate.

B. Section 07 2100 - Thermal Insulation: Rigid insulation under siding

C. Section 07 2500 - Weather Barriers: Weather barrier under siding.

D. Section 07 9200 - Joint Sealants: Sealing joints between siding and adjacent construction and fixtures.

E. Section 09 9113 - Exterior Painting: Field painting.

1.03 REFERENCE STANDARDS

A. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.

B. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2013.

C. ASTM C1186 - Standard Specification for Flat Fiber Cement Sheets; 2008 (Reapproved 2016).

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Submit manufacturer's data sheets on each product to be used, including:
   1. Manufacturer's requirements for related materials to be installed by others.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Installation methods, including nail patterns.

C. Shop Drawings: Indicate dimensions, layout, joints, construction details, support clips, and methods of anchorage.

   1. Include structural analysis signed and sealed by qualified structural engineer registered in the State of Oregon, indicating compliance of cladding system attachment to specified loading conditions.

D. Installer's Qualification Statement.

E. Warranty: Submit copy of manufacturer’s warranty, made out in Owner’s name, showing that it has been registered with manufacturer.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of the type specified in this section with minimum three years of experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store products under waterproof cover and elevated above grade, on a flat surface.

1.07 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Correct defective work within a five year period after Date of Final Acceptance.

C. Provide multi-year manufacturer warranty as indicated under Siding article sub-heading "Warranty".

PART 2 PRODUCTS

2.01 FIBER-CEMENT SIDING

A. Panel Siding: Vertically oriented panels made of cement and cellulose fiber formed under high pressure with integral surface texture, complying with ASTM C1186, Type A, Grade II; with machined edges, for nail attachment.
   1. Texture: Smooth.
   2. Length (Height): 96 inches, nominal. Cut to size as indicated on drawings
   3. Width: 48 inches. Cut to size as indicated on drawings
   4. Thickness: 7/16 inch, nominal.
   5. Finish: Factory applied primer, field painted
   6. Warranty: 30 year limited; transferable.
   7. Manufacturers:
      a. James Hardie Building Products, Inc; Aspyre Collection - Reveal Panel: www.aspyredesign.com
      b. Substitutions: See Section 01 6000 - Product Requirements.

B. Soffit Panels: Panels made of cement and cellulose fiber formed under high pressure with integral surface texture, complying with ASTM C1186, Type A, Grade II; with machined edges, for nail attachment.
   1. Texture: Smooth.
   2. Length: 96 inches, nominal.
   3. Width: 48 inches.
   4. Thickness: 5/16 inch, nominal.
   5. Finish: Factory applied primer.
   6. Manufacturer: Same as siding.

2.02 ACCESSORIES

A. Furring Strips: Galvanized metal channels or pressure treated lumber.

B. Fiber Cement Panel Siding Metal Trim: Extruded aluminum alloy 6063-T5 temper.
   1. Dimension and Layout: As indicated on drawings.
   2. Finish: Powder coating.
      a. Color: As selected by Architect.
   3. Manufacturers:
      a. James Hardie; Aspyre Collection Reveal Panel Edgeless System: www.aspyredesign.com.
      b. Substitutions: See Section 01 6000 - Product Requirements.

C. Fasteners: Galvanized or corrosion resistant; length as required to penetrate complete wall assembly.

D. Exterior Soffit Vents: One piece, perforated, ASTM B221 (ASTM B221M), 6063 alloy, T5 temper, aluminum, with flat panel edge and manufactured especially for soffit application, and provide continuous vent.

E. Sealant: Elastomeric, polyurethane or silyl-terminated polyether/polyurethane, and capable of being painted.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrate, clean and repair as required to eliminate conditions that would be detrimental to proper installation.

B. Verify that weather barrier has been installed over substrate completely and correctly.

C. Do not begin until unacceptable conditions have been corrected.

D. If substrate preparation is responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Install Sheet Metal Flashing:
   1. Above door and window trim and casings.
   2. Above horizontal trim in field of siding.

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions and recommendations.
   1. Read warranty and comply with terms necessary to maintain warranty coverage.
   2. Use trim details indicated on drawings.
   3. Touch up field cut edges before installing.
   4. Pre-drill nail holes if necessary to prevent breakage.

B. Over Wood and Wood-Composite Sheathing: Fasten siding through sheathing into studs.

C. Over Foam Sheathing: Read and comply with sheathing manufacturer's recommendations.
   1. For sheathing of less than 1 inch thickness, nail through sheathing into studs using correspondingly longer nails.
   2. For sheathing greater than 1 inch thickness, install furring strips over studs and fasten siding through furring and into studs.

D. Allow space for thermal movement between both ends of siding panels that butt against trim; seal joint between panel and trim with specified sealant.

E. Joints: Install manufacturer trim or flashing as indicated.

F. Do not install siding less than 6 inches from surface of ground nor closer than 1 inch to roofs, patios, porches, and other surfaces where water may collect.

G. Exterior Soffit Vents: Install according to manufacturer's written instructions and in locations indicated on drawings, and provide vent area specified.

H. After installation, seal joints except lap joints of lap siding; seal around penetrations, and paint exposed cut edges.

I. Finish Painting: Refer to Section 09 9113.

3.04 PROTECTION

A. Protect installed products until Date of Final Acceptance.

B. Touch-up, repair or replace damaged products before Date of Final Acceptance.

END OF SECTION

SECTION 08 1113

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Non-fire-rated hollow metal doors and frames.
B. Hollow metal frames for wood doors.
C. Fire-rated hollow metal doors and frames.
D. Thermally insulated hollow metal doors with frames.
E. Sound-rated hollow metal doors and frames.
F. Hollow metal borrowed lites glazing frames.
G. Accessories, including glazing and louvers.

1.02 RELATED REQUIREMENTS

A. Section 08 1416 - Flush Wood Doors
B. Section 08 7100 - Door Hardware.
C. Section 08 8000 - Glazing: Glass for doors and borrowed lites.

1.03 REFERENCE STANDARDS

A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
B. ANSI/SDI A250.3 - Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames; 2007 (R2011).
C. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2011.
D. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2017.
E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2011.
F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
G. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable; 2016.
H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2017.
I. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2015a.
J. ASTM C476 - Standard Specification for Grout for Masonry; 2016.
K. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2017.
L. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).
M. ASTM E413 - Classification for Rating Sound Insulation; 2016.
N. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames; 2014.
O. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
P. ITS (DIR) - Directory of Listed Products; current edition.

Q. NAAMM HMMA 805 - Recommended Selection and Usage Guide for Hollow Metal Doors and Frames; 2012.

R. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames; 2002.

S. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames; 2011.

T. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; 2007.

U. NAAMM HMMA 850 - Fire-Protection and Smoke Control Rated Hollow Metal Door and Frame Products; 2014.

V. NAAMM HMMA 860 - Guide Specifications for Hollow Metal Doors and Frames; 2013.

W. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames; 2006.

X. NAAMM HMMA 865 - Guide Specifications for Sound Control Hollow Metal Doors and Frames; 2013.

Y. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2016.

Z. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2017.

AA. SDI 117 - Manufacturing Tolerances for Standard Steel Doors and Frames; 2013.

AB. UL (DIR) - Online Certifications Directory; current listings at database.ul.com.

AC. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.

C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

D. Samples: Submit two samples of metal, 2 by 2 inches in size, showing factory finishes, colors, and surface texture.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Hollow Metal Doors and Frames:
   1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
   2. Republic Doors, an Allegion brand: www.republicdoor.com/#sle.
   3. Steelcraft, an Allegion brand: www.allegion.com/#sle.
   4. Substitutions: See Section 01 6000 - Product Requirements.

B. Sound-Rated Hollow Metal Doors and Frames:
   1. Overly Door Company: www.overly.com/#sle.
   2. IAC Acoustics; Noise-Lock Acoustic Doors: www.iacacoustics.com.
   3. Noise Barriers, LLC; Quiet Swing Doors: www.noisebarriers.com
   4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Requirements for Hollow Metal Doors and Frames:

1. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
2. Accessibility: Comply with ICC A117.1 and ADA Standards.
3. Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned.
4. Door Edge Profile: Manufacturers standard for application indicated.
5. Typical Door Face Sheets: Flush. At STC rated doors, provide wood veneer to match wood door faces..
6. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturers standard.
7. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
8. Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvannealed) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for specific hollow metal doors and frames.
    a. Based on NAAMM HMMA Custom Guidelines: Provide at least A25/ZF75 (galvannealed) for interior applications, and at least A60/ZF180 (galvannealed) or G60/Z180 (galvanized) for corrosive locations.

B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

A. Exterior Doors: Thermally insulated.
1. Based on NAAMM HMMA Custom Guidelines:
    a. Comply with guidelines of NAAMM HMMA 860 for Hollow Metal Doors and Frames.
    b. Performance Level 3 - Heavy Duty, in accordance with NAAMM HMMA 805.
    c. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
    d. Door Face Metal Thickness: 16 gage, 0.053 inch, minimum.
2. Door Core Material: Polystyrene, 1 lbs/cu ft minimum density.
    a. Foam Plastic Insulation: Manufacturer's standard board insulation with maximum flame spread index (FSI) of 75, and maximum smoke developed index (SDI) of 450 in accordance with ASTM E84, and completely enclosed within interior of door.
3. Door Thermal Resistance: R-Value of 6.0 minimum, for installed thickness of polystyrene minimum.
4. Door Thickness: 1-3/4 inches, nominal.
5. Weatherstripping: Refer to Section 08 7100.
6. Door Finish: Factory primed and field finished.

B. Interior Doors, Non-Fire Rated:
1. Based on NAAMM HMMA Custom Guidelines:
    a. Comply with guidelines of NAAMM HMMA 860 for Hollow Metal Doors and Frames.
    b. Performance Level 2 - Moderate Duty, in accordance with NAAMM HMMA 805.
    c. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
    d. Door Face Metal Thickness: 18 gage, 0.042 inch, minimum.
2. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
3. Door Thickness: 1-3/4 inches, nominal.
4. Door Finish: Factory primed and field finished.

C. Fire-Rated Doors:

1. Based on NAAMM HMMA Custom Guidelines: Comply with NAAMM HMMA 850 requirements for fire-rated doors.
   a. Comply with guidelines of NAAMM HMMA 860 for Hollow Metal Doors and Frames.
   b. Performance Level 2 - Moderate Duty, in accordance with NAAMM HMMA 805.
   c. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
   d. Door Face Metal Thickness: 20 gauge, 0.032 inch, minimum.
2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
3. Provide units listed and labeled by UL (DIR) or ITS (DIR).
   a. Attach fire rating label to each fire rated unit.
4. Door Thickness: 1-3/4 inches, nominal.

D. Sound-Rated Interior Doors:
1. Based on NAAMM HMMA Custom Guidelines:
   a. Comply with guidelines of NAAMM HMMA 865 for Sound Control Hollow Metal Doors and Frames.
   b. Performance Level 2 - Moderate Duty, in accordance with NAAMM HMMA 805.
   c. Physical Performance Level A, 1,000,000 cycles; in accordance with ANSI/SDI A250.4.
   d. Door Face Metal Thickness: 18 gage, 0.042 inch, minimum.
2. Sound Transmission Class (STC) Rating of Door and Frame Assembly: STC of 35, minimum, calculated in accordance with ASTM E413, and tested in accordance with ASTM E90.
3. Door Core Material: Manufacturer's standard construction as required to meet acoustic requirements indicated.
4. Door Thickness: As required to meet acoustic requirements indicated.
5. Door Finish: Factory finished.
6. Sound Seals: Integral, in door and/or frame. Continous, adjustable, neoprene compression seal
7. Opening Force of Sound-Rated Doors, Non-Fire-Rated: 5 pounds, maximum, in compliance with ADA Standards.
8. Hardware:
   a. Factory Installed by door supplier
   b. Function as noted in Section 08 7100 - Door Hardware
9. Door and Frame to be assembled and adjusted in factory, and shipped as single unit. No field assembly of Sound-Rated doors and frames is allowed.

2.04 HOLLOW METAL FRAMES

A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.

B. Frame Finish: Welded frames to be factory primed and field finished. Knock-down frames to be factory finished..

C. Exterior Door Frames: Face welded type. Provide stucco flange or shadow-line style frames as shown in drawings.
1. Frame Metal Thickness: 16 gage, 0.053 inch, minimum.
2. Weatherstripping: Separate, see Section 08 7100.

D. Interior Door Frames, Non-Fire Rated: Face welded type and knock-down type. See door schedule for additional information
1. Frame Metal Thickness: 16 gage, 0.053 inch, minimum.

E. Door Frames, Fire-Rated: Knock-down type.
1. Fire Rating: Same as door, labeled.

F. Sound-Rated Door Frames: Face welded type.
1. Frame Metal Thickness: 14 gage, 0.067 inch, minimum.

G. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.

H. Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated on drawings.

I. Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.

J. Frames Wider than 48 inches: Reinforce with steel channel fitted tightly into frame head, flush with top.

2.05 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

B. Factory Finish: Complying with ANSI/SDI A250.3, manufacturer's standard coating.
   1. Color: As selected by Architect from manufacturer's full range.

2.06 ACCESSORIES

A. Louvers: Roll formed steel with overlapping frame; finish same as door components; factory-installed.
   1. Style: Sightproof inverted V blade.
   2. Fasteners: Exposed, tamper proof fasteners.

B. Glazing: As specified in Section 08 8000, factory installed.

C. Removable Stops: Formed sheet steel, shape as indicated on drawings, mitered or butted corners; prepared for countersink style tamper proof screws.

D. Astragals for Double Doors: Specified in Section 08 7100.

E. Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.

F. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

G. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 PREPARATION

A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.03 INSTALLATION

A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.

B. Install prefinished frames after painting and wall finishes are complete.

C. Install fire rated units in accordance with NFPA 80.

D. Coordinate frame anchor placement with wall construction.

E. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.

F. Install door hardware as specified in Section 08 7100.

G. Comply with glazing installation requirements of Section 08 8000.

H. Coordinate installation of electrical connections to electrical hardware items.

I. Touch up damaged factory finishes.

3.04 TOLERANCES

A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.

B. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.05 ADJUSTING

A. Adjust for smooth and balanced door movement.

B. Adjust sound control doors so that seals are fully engaged when door is closed.

C. Test sound control doors for force to close, latch, and unlatch; adjust as necessary in compliance with requirements.

3.06 SCHEDULE

A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

SECTION 09 2116

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Metal suspension systems for gypsum ceilings.
B. Gypsum sheathing.
C. Cementitious backing board.
D. Gypsum wallboard.
E. Joint treatment and accessories.
F. Acoustic (sound-dampening) wall and ceiling board.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Building framing.
B. Section 06 1000 - Rough Carpentry: Wood blocking product and execution requirements.
C. Section 07 2100 - Thermal Insulation: Acoustic insulation.
D. Section 07 8400 - Firestopping: Top-of-wall assemblies at fire-resistance-rated walls.
E. Section 07 9200 - Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.

1.03 REFERENCE STANDARDS

A. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2010 (Reaffirmed 2016).
B. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 1999 (Reaffirmed 2016).
C. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2015.
D. ASTM C514 - Standard Specification for Nails for the Application of Gypsum Board; 2004 (Reapproved 2014).
E. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2018b.
F. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2016.
G. ASTM C1047 - Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base; 2014a.
H. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel; 2013.
I. ASTM C1325 - Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units; 2017a.
J. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.
K. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2016.
L. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2017.
M. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).
N. ASTM E413 - Classification for Rating Sound Insulation; 2016.
O. GA-216 - Application and Finishing of Gypsum Panel Products; 2016.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate special details associated with fireproofing and acoustic seals.

C. Product Data: Provide data on gypsum board, accessories, joint finishing system, and suspension system..

PART 2 PRODUCTS

2.01 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:
   1. CertainTeed Corporation: www.certainteed.com.
   2. Georgia-Pacific Gypsum: www.gpgypsum.com.
   3. National Gypsum Company: www.nationalgypsum.com/#sle.
   4. USG Corporation: www.usg.com.
   5. Substitutions: See Section 01 6000 - Product Requirements.

B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
   2. Use Type X board, unless otherwise noted.
   3. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
      a. Mold-resistant board is required whenever board is being installed before the building is enclosed and conditioned.
      b. Mold resistant board is required restrooms, except in wet areas as noted below.
   4. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
   5. Thickness:
      a. Vertical Surfaces: 5/8 inch.
      b. Ceilings: 1/2 inch.
      c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.

C. Backing Board For Wet Areas:
   1. Application: Surfaces in wet areas including tub and shower surrounds and shower ceilings, and behind sinks.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   3. ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325.
      a. Thickness: 1/2 inch.
      b. Products:
         1) National Gypsum Company; PermaBase Cement Board: www.nationalgypsum.com/#sle.
         2) USG Corporation: www.usg.com/#sle.
         3) Substitutions: See Section 01 6000 - Product Requirements.
   4. Glass Mat Faced Board: Coated glass mat water-resistant gypsum backing panel as defined in ASTM C1178/C1178M.
      a. Standard Type: Thickness 5/8 inch.

D. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
   1. Application: Vertical surfaces behind thinset tile, except in wet areas and as noted.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   3. Type: Regular and Type X, in locations indicated.
   4. Type X Thickness: 5/8 inch.
   5. Regular Board Thickness: 5/8 inch.
   6. Edges: Tapered.

E. Ceiling Board: Special sag resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Ceilings, unless otherwise indicated.
   2. Thickness: 1/2 inch.
   3. Edges: Tapered.

F. Acoustical Sound Dampening Wall and Ceiling Board: Two layers of heavy paper-faced, high-density gypsum board separated by a viscoelastic polymer layer and capable of achieving STC rating of 50 or more in typical stud wall assemblies as calculated in accordance with ASTM E413 and when tested in accordance with ASTM E90.
   1. Thickness: 5/8 inch.
   2. Long Edges: Tapered.
   3. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   4. Products:
      a. National Gypsum Company; Gold Bond SoundBreak XP Gypsum Board: www.nationalgypsum.com/#sle.
      b. QuietRock 530; www.quietrock.com.
      c. Substitutions: See Section 01 6000 - Product Requirements.

G. Exterior Soffit Board: Exterior gypsum soffit board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Ceilings and soffits in protected exterior areas, unless otherwise indicated.
   2. Types: Regular, in locations indicated.
   3. Regular Type Thickness: 1/2 inch.
   4. Edges: Tapered.
   5. Products:
      a. American Gypsum Company; Exterior Soffit Gypsum Wallboard Type X: www.americangypsum.com/#sle.
      b. Continental Building Products; Soffitboard Type X.
      c. Georgia-Pacific Gypsum; ToughRock Fireguard C Soffit Board: www.gpgypsum.com/#sle.
      d. Substitutions: See Section 01 6000 - Product Requirements.

2.02 METAL SUSPENSION SYSTEMS

A. Suspension systems may be used for gypsum board ceilings in place of framing members, except at Dorms or otherwise indicated on drawings. Confirm proposed locations of suspended gypsum board ceilings with Architect.

B. Manufacturers:
   1. Armstrong World Industries, Inc: www.armstrong.com.
   2. CertainTeed Corporation: www.certainteed.com.
   3. USG Corporation: www.usg.com.
   4. Substitutions: See Section 01 6000 - Product Requirements.

C. Description: Commercial quality, cold-rolled steel suspension system designed for attachment of gypsum board, consisting of main and cross tees with suspension wire supports.

D. Materials:
   1. Main Tees: 1 1/2 inches high by maximum possible length, cold rolled steel with hot-dipped galvanized coating
   2. Cross Tees: 1 1/2 inches high by 48 inches long, cold rolled steel with hot-dipped galvanized coating
   3. Locking moldings - provided as required to meet installation requirements
   4. Wall Molding: 1 inch high channel molding, maximum possible length
   5. Accessories: Provide manufacturer's standard clips and splice plates as required for full installation
   6. Wire: Hanger wire, 12 ga galvanized
   7. Gypsum Board Screws:
      a. Self-drilling, self-tapping steel screws

1) For steel framing less than 0.03 inch thick: Comply with ASTM C1002
2) For steel framing from 0.033 inch thick to 0.112 inch thick: Comply with ASTM C954
3) Provide Type S or Type S-12 screws

E. System Structural Requirements:
1. Main Beam shall be heavy duty per ASTM C 635.
2. Classification can require wires to be closer together for additional loading when used to support double layer gypsum, verticals, slopes, circles, soffits, canopies, and step conditions which call for loading or unusual designs and shapes in drywall construction.
3. Deflection of fastening suspension system supporting light fixtures, ceiling grilles, access doors, verticals and horizontal loads shall have a maximum deflection of 1/360 of the span.

2.03 GYPSUM WALLBOARD ACCESSORIES

A. Acoustic Insulation: As specified in Section 07 2100.

B. Sound Isolation Tape: Elastomeric foam tape for sound decoupling.
1. Surface Burning Characteristics: Provide assemblies with flame spread index of 75 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
2. Tape Thickness: 1/4 inch.

C. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.

D. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.
1. Corner Beads: Low profile, for 90 degree outside corners.
2. Expansion Joints:
a. Type: V-shaped metal with factory-installed protective tape.
3. L-Trim: Sized to fit 5/8 inch thick gypsum wallboard

E. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
1. Fiberglass Tape: 2 inch wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
2. Joint Compound: Setting type, field-mixed.

F. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

G. Nails for Attachment to Wood Members: ASTM C514.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

A. Suspended Ceilings and Soffits: Space framing and furring members as permitted by standard.
1. Level ceiling system to a tolerance of 1/1200.
2. Laterally brace entire suspension system.
3. Hanger Wire Installation: Secure hanger wires to upper structural elements and space hangers so that each hanger wire supports a maximum of 16 sq. ft. or as required to support expected ceiling load requirements, following local practices, codes and regulations. Provide additional wires at light fixtures, grilles, and access doors where necessary. A pigtail knot shall be used with three tight wraps at top and bottom fastening locations.
4. Space main tee members a maximum span of 48” on center (or as specified by the UL Fire Resistance Directory)

5. Space cross tees as recommended by system manufacturer
6. Install trim, and similar accessories as necessary and as applicable to meet project requirements where indicated on drawings.
7. Install control joints at locations of properly detailed control joints, including additional cross tees as necessary, per direction of architect and/or design professional.
8. Finish boards as described to achieve 'Level of Finish' specified.

B. Studs: Space studs as indicated.
1. Extend partition framing as indicated on drawings.

C. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

D. Blocking: Install wood blocking for support of:
1. Framed openings.
2. Wall-mounted cabinets.
3. Plumbing fixtures.
4. Toilet accessories.
5. Future accessories, at locations as indicated on drawings

3.03 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Sound Isolation Tape: Apply to vertical studs and top and bottom tracks/runners in accordance with manufacturer's instructions.

C. Acoustic Sealant: Install in accordance with manufacturer's instructions.
1. Place one bead continuously on substrate before installation of perimeter framing members.
2. Place continuous bead at perimeter of each layer of gypsum board.
3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.04 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Non-Rated: Install gypsum board perpendicular to framing, with ends and edges occurring over firm bearing.
1. Exception: Tapered edges to receive joint treatment at right angles to framing.

C. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

D. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.

E. Exterior Soffits: Install exterior soffit board perpendicular to framing, with staggered end joints over framing members or other solid backing.

F. Cementitious Backing Board: Install over wood framing members and plywood substrate where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.

G. Installation on Wood Framing: For rated assemblies, comply with requirements of listing authority. For nonrated assemblies, install as follows:
1. Single-Layer Applications: Screw attachment.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
1. Not more than 30 feet apart on walls and ceilings over 50 feet long.

B. Corner Beads: Install at external corners, using longest practical lengths.

C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials and as indicated.

D. L-Trim: Install at all edge of board locations at sealant joints

3.06 JOINT TREATMENT

A. Glass Mat Faced Gypsum Board and Exterior Glass Mat Faced Sheathing: Use fiberglass joint tape, embed and finish with setting type joint compound.

B. Paper Faced Gypsum Board: Use paper joint tape, embed with drying type joint compound and finish with drying type joint compound.

C. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
   2. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
   3. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.

D. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.

E. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

3.07 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

28 4600

FIRE DETECTION AND ALARM

PART 1 GENERAL

1.01 DESCRIPTION

A Provide expansion and modifications to the existing fire alarm system. Performance of the system modifications shall meet all performance aspects of the requirements stated within these specifications or shown on the drawings.

1.02 REFERENCES

A Abbreviations and Acronyms:

1 ADA: Americans with Disabilities Act

2 AHJ: Authority Having Jurisdiction

3 EOL: End of Line

4 FAAP: Fire Alarm Annunciator Panel

5 FACU: Fire Alarm Control Panel

6 FASSP: Fire Alarm System Service Provider

7 HVAC: Heating Ventilating and Air Conditioning

8 NAC: Notification Appliance Circuit

9 NRTL: Nationally Recognized Testing Laboratory

B References:

1 ANSI: American National Standards Institute

2 FCC: Federal Communications Commission

a FCC Part 15: Radio Frequency Devices

3 ISO: International Organization for Standardization

4 NICET: National Institute for Certification in Engineering Technologies

5 NFPA: National Fire Protection Association

a NFPA 3: Standard for Commissioning of Fire Protection and Life Safety Systems

b NFPA 70: National Electrical Code

c NFPA 72: National Fire Alarm and Signaling Code

d NFPA 101: Life Safety Code

e NFPA 170: Standard for Fire Safety and Emergency Symbols

6 UL: Underwriters Laboratories

a UL 268: Smoke Detectors for Fire Alarm systems

b UL 864: Standard for Control Units and Accessories for Fire Alarm Systems

1.03 SYSTEM DESIGN REQUIREMENTS

A The contract documents indicate the general nature or requirements of the fire alarm system, but do not necessarily show all components required. The Contractor shall provide a complete fire alarm system design and installation, as required, to meet applicable codes and requirements under this section. The system shall consist of, but not be limited to the following components as required:

1 UL-listed, electrically operated and supervised, stand-alone fire alarm control panel.

2 Remote booster power supplies, as required, to minimize NAC voltage drop.

3 Voice evacuation amplifiers to interface with speakers.

4 Manual pull stations at all building exits.

5 Single-coil fire alarm speakers.

6 Audible/visual alarm devices.

7 Smoke and Heat Detectors:

a Smoke detection shall be provided in accordance with NFPA 72 requirements. In addition, smoke detection shall be provided at ducts and at the ceiling in all new spaces and rooms or where indicated on the drawings.

b Heat detectors shall be provided in areas where smoke detection is not appropriate due to ambient and environmental conditions.

8 Monitor modules, installed in a fail-safe manner, required to power and/or interconnect devices supplied under other divisions, including but not limited to:

a Elevator shunt trip power.

b Monitor end switches (if applicable) or status of HVAC dampers after activation.

c Fire suppression supervisory and flow switches.

9 Control modules required to power and/or interconnect devices supplied under other divisions, including but not limited to:

a Elevators for recall operation and power shutdown.

b HVAC system to shut down air handling units.

c HVAC system to release fire/smoke dampers.

d Interrupt power to magnetic locks at emergency exits.

10 Conduit and cabling.

1.04 SUBMITTALS

A Product Data: Provide a bill of materials for all products utilized. For each type of product, including furnished options and accessories.

1 Include construction details, material descriptions, dimensions, profiles, and finishes.

2 Include rated capacities, operating characteristics, and electrical characteristics.

B Fire Alarm Shop Drawings:

1 Prepare shop drawings of the system design utilizing AutoCAD with standard fire alarm legend and current project backgrounds.

2 Comply with recommendations and requirements in the "Documentation" section of the "Fundamentals" chapter in NFPA 72.

3 Shop drawings shall indicate, but not be limited to, the following:

a Floor plans to indicate fire alarm devices and equipment locations. Show address of all addressable devices, size and route of cable and conduits, and point-to-point wiring diagrams. Floor plans shall be legible and drawn at a scale of 1/8 inch = 1 foot – 0 inch minimum.

b Schematic and riser diagrams.

c Voice/alarm signaling-service equipment amplifier power calculation and single-line connection diagram.

d Include calculations for determining the requirements for:

1) Spacing and sensitivity of detectors.

2) Spacing and intensities for strobe signals and sound-pressure levels for audible appliances.

3) Voltage drop for NACs: Provide actual voltage measurements as a basis of calculating voltage drop on existing NACs.

4) Battery sizing.

e Sequence of operation in the form of a cross-functional matrix describing all programed functions.

4 Shop drawings shall be prepared by persons with the following qualifications:

a Trained and certified by manufacturer in fire alarm system design.

b NICET Level IV Fire Alarm certified engineering technician.

C Provide a fully populated fire alarm device schedule.

D Example test plans and forms describing all hardware and software validation test methods and procedures.

1.05 CODES AND APPROVALS

A Obtain necessary approvals from local authorities for materials to be supplied, methods of installation, and system operations as required herein and by the local authorities.

B All electronic equipment shall conform to the requirements of FCC regulation Part 15, Section 15 governing radio frequency electromagnetic interference and be so labeled.

1.06 QUALITY ASSURANCE

A All components shall be listed by a qualified testing agency both in individual components and as a system and installed in accordance with NFPA and OSSC requirements.

B Installation shall be supervised or installed by personnel with a minimum NICET Level 2 certification. Personnel shall be trained and certified by and in good standing with the manufacturer.

C NFPA Certification: Obtain certification according to NFPA 72 by an NRTL.

PART 2 PRODUCTS

2.01 GENERAL

A All fire alarm system components furnished under this contract shall be fully addressable and compatible with the existing fire alarm system.

2.02 FIRE ALARM CONTROL PANEL (FACU)

A The FACU shall be on a Honeywell~~Guardian Security~~ or approved equal platform, no substitutions. The FACU shall include the following options:

1 Central Processor.

2 Display Module.

a In addition to the standard control switches, provide Setup, Test, Manual Evacuation Alarm, and Acknowledge switches. Provide LEDs for “Power,” “Run,” “Trouble,” “Disconnect,” “Low Battery,” and “Ground Fault.”

3 Control Display Module.

4 Power Supplies.

5 Signature Driver Controllers.

6 Network communications card.

7 Maintenance-free, sealed lead acid batteries with adequate capacity to provide the indicated operation.

B Provide an alarm silence switch in the FACU to override the piezo alarm while conducting testing and inspection services. Switch in silence position shall be monitored as a trouble alarm.

C Enclosure:

1 Visual indicators of FACU status shall be visible without opening the key-locked cover.

2 Locks: BHMA A156.11, E07121. Lock cylinders and keying where noted:

3 Equip locks with cylinders with full size interchangeable core pin tumbler inserts.

2.03 FIRE ALARM ANNUNCIATOR PANEL (FAAP)

A Description: Remote annunciator functions shall match those of FACU for alarm, supervisory, and trouble indications. Manual switching functions shall match those of fire-alarm control unit, including acknowledging, silencing, resetting, and testing.

B Mounting: Flush cabinet, NEMA 250, Type 1.

C Display Type and Functional Performance: Alphanumeric display and LED indicating lights shall match those of fire-alarm control unit. Provide controls to acknowledge, silence, reset, and test functions for alarm, supervisory, and trouble signals.

D Enclosure:

1 Visual indicators of FACU status shall be visible without opening the key-locked cover.

2 Locks: BHMA A156.11, E07121. Lock cylinders and keying where noted:

3 Equip locks with cylinders with full size interchangeable core pin tumbler inserts.

2.04 INITIATING DEVICES – DETECTORS

A Multicriteria Smoke Detector:

1 Smoke Detector.

2 Duct Smoke Detector.

B Heat Detector:

1 Fixed Temperature.

2 Rate of Rise Temperature.

C Detector Bases:

1 Standard Base.

2 Detector Base with Isolator.

D Beam-Type Smoke Detectors:

1 Provide projected beam-type smoke detectors. The beam detectors shall be four-wire 24 VDC and powered from the control panel four-wire smoke power source. This unit shall consist of a separate transmitter and receiver capable of being powered separately or together. This unit shall operate in either a short range of 30 to 100 feet or a long range of 100 to 300 feet. The detector shall feature a bank of four alignment LEDs on both the receiver and transmitter that are used to ensure proper alignment without the use of special tools.

2 The beam detector shall feature automatic gain control that compensates for gradual signal deterioration from dirt accumulation on lenses. Ceiling or wall mount as shown on the drawings. Testing shall be carried out using calibrated test filters. Provide a key-activated remote test station.

3 Provide monitor modules for alarm and trouble and control relay module for reset.

2.05 MANUAL PULL STATIONS

A Intelligent, Single Action Pull Station.

B Intelligent, Double Action Pull Station.

2.06 NOTIFICATION APPLIANCES

A All notification appliances which are supplied for the requirements of this specification shall be UL-listed for fire protective service and shall be capable of providing the “Equivalent Facilitation,” which is allowed under the Americans with Disabilities Act Accessibility Guidelines (ADA[AG]) and shall be UL 1971 and ULC S526-listed.

B Remote Booster Power Supplies:

1 Inputs:

a 120VAC with built-in battery charger and sealed lead acid, gel, or AGM type backup battery.

b Capable of 2 Class A or 2 Class B NACs.

2 Outputs:

a Capable of 4 Class B or 2 Class A NACs. NAC outputs shall be 24VDC, 3 amps, power limited.

3 Supervision:

a Compatible with 12V or 24V FACU.

b Automatic switchover to standby battery when AC fails.

c Thermal and short-circuit protection with auto reset.

d AC fail, battery presence and low battery conditions.

4 Enclosure:

a Minimum 14-gauge steel.

b Locks: BHMA A156.11, E07121. Lock cylinders and keying where noted:

c Equip locks with cylinders with full size interchangeable core pin tumbler inserts.

C Self-Synchronized Strobes:

1 Characteristics: The strobe housing shall be white with red lettering. Strobes shall be synchronized to meet the requirements of ADA and NFPA standards. Strobes shall have lens markings oriented for wall mounting. Ceiling-mounted strobes shall have lens markings with correctly oriented lettering.

D Speakers:

1 Characteristics: Speaker housings shall be white.

E Speaker/ Strobes:

1 Characteristics: Speaker/strobes housing shall be white with red lettering. Strobes shall be synchronized to meet the requirements of ADA and NFPA standards. The strobe shall have lens markings oriented for wall mounting. Ceiling-mounted speaker/strobes shall have lens markings with correctly oriented lettering. Removal of an installed speaker/strobe to change the lens markings will not be acceptable.

2.07 AUDIO AMPLIFIERS

A 40 Watt Zoned Amplifier w/Class A/B

B 95 Watt Zoned Amplifier w/Class A/B

PART 3 EXECUTION

3.01 GENERAL

A Work shall be performed in accordance with the requirements of NFPA 70 and NFPA 72.

B Systems and system components listed to UL864 Control Units for Fire Protective Signaling Systems may be installed within a common conduit raceway system, in accordance with the manufacture's recommendations. System(s) or system components not listed to the UL864 standard shall utilize a separate conduit raceway system for each of the sub-systems.

C No wiring except life safety system circuits and system power supply circuits shall be permitted in the FACU enclosures.

D Devices containing end-of-line resistors shall be appropriately labeled. Devices shall be labeled such that removal of the device is not required to identify the EOL device.

3.02 INSTALLATION OF FIRE ALARM COMPONENTS

A Devices and appliances shall be mounted to or in an approved electrical box.

B FACUs, FAAPs , and Remote Booster Power Supplies:

1 Mount the FACU enclosure with the top of the cabinet 72 inches above the finished floor or center the cabinet at 63 inches, whichever is lower. The FACU shall be installed in accordance with the manufacturer's guide for seismic applications.

2 Paint the handles of the dedicated circuit breakers feeding fire alarm panels red and install handle locks.

3 Within the panel, non-power limited wiring shall be properly separated from power limited circuits.

C Manual Pull Stations:

1 Mount stations so that their operating handles are between 42 inches and 48 inches above the finished floor.

D Notification Appliances:

1 Wall-mounted audio/visual devices shall be mounted so the entire lens is between 80 inches and 96 inches above the finished floor unless otherwise indicated on drawings.

2 Each speaker/strobe's outputs shall be set to the wattage/candela value indicated for its specific location as shown on the drawings.

E Smoke Detectors:

1 Smoke and heat detector heads shall not be installed until after construction clean-up is completed. Detector heads installed prior to construction clean-up shall be cleaned by the manufacturer or replaced.

2 Detectors located on the wall shall have the top of the detector at least 4 inches and not more than 12 inches below the ceiling.

3 Install smoke detectors no closer than 3 feet from air handling supply air diffusers or return air openings.

4 Locate detectors no closer than 12 inches from any part of a lighting fixture.

F Duct Smoke Detectors:

1 Install sampling tubes so they extend the full width of ducts exceeding 36 inches.

2 Detectors shall be located to facilitate ease of maintenance.

3 All penetrations near detectors located on/in return ducts shall be sealed to prevent air entry.

G Remote Status and Alarm Indicators:

1 Install near each smoke detector and each sprinkler water-flow switch and valve-tamper switch that is not readily visible from normal viewing position.

H Beam Smoke Detectors:

1 Install beam type smoke detectors in accordance with the shop drawings and the manufacturer's recommendations.

2 Keep the centerline of the beam a minimum of 24 inches from obstructions.

3 Mount where accessible for maintenance.

I Heat Detectors:

1 Heat detectors shall be installed in strict accordance with their UL listing, the requirements of NFPA 72 and applicable manufacturer's recommendations.

J Control Modules:

1 Install the module within 3 feet from the device controlled.

2 Orient the device mounting for best maintenance access.

3 Provide a dedicated 24VDC circuit to feed all auxiliary relays required for inductive loads (auxiliary relays, door holders). Circuits shall be supervised via an end-of-line relay and addressable input module. Auxiliary relays shall not derive their power from the starter or load being controlled.

K Signaling Line Circuits:

1 FACU and FireWorks Network shall utilize NFPA 72 Class A wiring methods. Refer to Section 271000 for communication cabling requirements.

2 NACs shall be supervised and power limited. NACs shall utilize Class B wiring methods unless otherwise indicated. Initial circuit loading shall not exceed 70 percent to allow for future system expansion. An NAC expander output shall not be used to initiate another NAC expander.

3 Initiating device circuits shall utilize NFPA 72 Class B wiring methods. Initiating device circuits shall be configurable for latched or non-latched operation and configurable to initiate alarm, supervisory, or monitor events.

4 No t-taps or wire nut connections will be allowed. Terminations shall be made directly on the fire alarm device terminals. Connections shall be made directly to and from device terminal screws. Screw terminals shall have rising plates to terminate more than one wire, or each wire shall be terminated to individual screws or in a ring lug.

3.03 TRAINING

A Provide operation and maintenance training.

B Training sessions shall be given by a fully qualified, trained representative of the equipment manufacturer who is thoroughly knowledgeable of the specific installation.

3.04 TESTING AND REPORTS

A Upon completion of the system's installation, an approved representative of the system manufacturer shall be employed to conduct a thorough test of the system in accordance with NFPA 3 and NFPA 72 requirements.

B Exercise every function of the equipment during the test to ascertain the integrity of the equipment. Testing shall include verification of the following:

1 The functional operation of each resettable initiating device (manual stations, detectors, etc.) and circuit.

2 The functional operation of every alarm device and circuit.

3 The functional operation of each monitored device circuit.

4 The supervision function of each supply circuit, initiating device, notification appliance, monitoring, and control.

C Verify as-constructed drawings are accurate.

D If the tests are not successful in the first pass, correct deficiencies, and resume testing.

E Document and maintain in a problem log, all file discrepancies found during testing. Describe the subsequent correction.

END OF SECTION

SECTION 32 9300

PLANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- *A. Preparation of subsoil.*
- *B. Topsoil bedding.*
- *C. New trees, plants, and ground cover.*
- *D. Temporary Irrigation*

1.02 PRICE AND PAYMENT PROCEDURES

- *A. Allowances:*
  - *1. Allowance includes purchase and delivery of trees, plants, and ground cover. Installation is included in this section and is part of the Contract Sum.*
- *B. Unit Prices:*
  - *1. Topsoil: By the cubic yard. Includes topsoil, placing topsoil.*
  - *2. Plants: By the unit. Includes preparation of subsoil, placing topsoil, planting, watering and maintenance to specified time period.*

1.03 DEFINITIONS

- *A. Weeds: Any plant life not specified or scheduled.*
- *B. Plants: Living trees, plants, and ground cover specified in this Section, and described in ANSI Z60.1.*

1.04 REFERENCE STANDARDS

- *A. ANSI/AHIA Z60.1 - American National Standard for Nursery Stock; 2014.*

1.05 SUBMITTALS

- *A. See Section 01 3000 - Administrative Requirements, for submittal procedures.*

1.06 QUALITY ASSURANCE

- *A. Nursery Qualifications: Company specializing in growing and cultivating the plants with three years documented experience.*
- *B. Installer Qualifications: Company specializing in installing and planting the plants with three years experience.*

1.07 DELIVERY, STORAGE, AND HANDLING

- *A. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.*
- *B. Protect and maintain plant life until planted.*
- *C. Deliver plant life materials immediately prior to placement. Keep plants moist and in shade until planting.*

1.08 FIELD CONDITIONS

- *A. Do not install plant life when ambient temperatures may drop below 35 degrees F or rise above 90 degrees F.*

1.09 WARRANTY

- *A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.*
- *B. Warranty: Include coverage for one continuous growing season; replace dead or unhealthy plants.*
- *C. Replacements: Plants of same size and species as specified, planted in the next growing season, with a new warranty commencing on date of replacement.*

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

A. Comply with regulatory agencies for fertilizer and herbicide composition.

2.02 PLANTS

A. Plants: Species and size identified in plant schedule, grown in climatic conditions similar to those in locality of the work.

2.03 SOIL MATERIALS

A. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay or impurities, plants, weeds and roots; minimum pH value of 5.4 and maximum 7.0.

2.04 SOIL AMENDMENT MATERIALS

A. Fertilizer: Containing only elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, as indicated in analysis.

B. Water: Clean, fresh, and free of substances or matter that could inhibit vigorous growth of plants.

2.05 MULCH MATERIALS

A. Mulching Material: Hemlock species wood chips, free of growth or germination inhibiting ingredients.

2.06 ACCESSORIES

A. Wrapping Materials: Burlap.

B. Stakes: Softwood lumber, pointed end.

C. Cable, Wire, Eye Bolts and Turnbuckles: Non-corrosive, of sufficient strength to withstand wind pressure and resulting movement of plant life.

D. Plant Protectors: Rubber sleeves over cable to protect plant stems, trunks, and branches. Remove after first year.

2.07 TEMPORARY IRRIGATION

A. Provide temporary irrigation for the first two years of planting

B. Irrigation system to be drip system, surface installed, at all areas of plantings.

C. Irrigation system to be Design-Build

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that prepared subsoil and planters are ready to receive work.

B. Saturate soil with water to test drainage.

3.02 PREPARATION OF SUBSOIL

A. Prepare subsoil to eliminate uneven areas. Maintain profiles and contours. Make changes in grade gradual. Blend slopes into level areas.

B. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.

C. Scarify subsoil to a depth of 6 inches where plants are to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.

D. Dig pits and beds 6 inches larger than plant root system.

3.03 PLACING TOPSOIL

A. Spread topsoil to a minimum depth of 4 inches over area to be planted. Rake smooth.

B. Place topsoil during dry weather and on dry unfrozen subgrade.

C. Remove vegetable matter and foreign non-organic material from topsoil while spreading.

D. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.

E. Install topsoil into pits and beds intended for plant root balls, to a minimum thickness of 6 inches.

3.04 FERTILIZING

A. Apply fertilizer in accordance with manufacturer's instructions.

B. Apply after initial raking of topsoil.

C. Mix thoroughly into upper 2 inches of topsoil.

D. Lightly water to aid the dissipation of fertilizer.

3.05 PLANTING

A. Set plants vertical with crown of rootball greater than or equal to 1 inch above finish grade.

B. Remove non-biodegradable root containers.

C. Set plants in pits or beds, partly filled with prepared plant mix, at a minimum depth of 6 inches under each plant. Remove burlap, ropes, and wires, from the root ball.

D. Place bare root plant materials so roots lie in a natural position. Backfill soil mixture in 6 inch layers. Maintain plant life in vertical position.

E. Saturate soil with water when the pit or bed is half full of topsoil and again when full.

3.06 PLANT SUPPORT

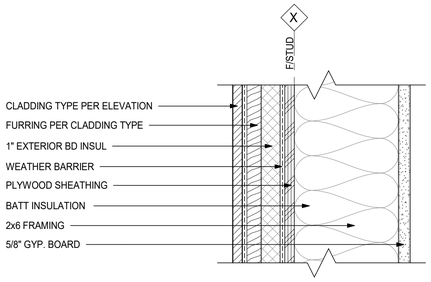
A. Brace plants vertically with plant protector wrapped guy wires and stakes to the following:

1. Tree Caliper: 1 inch; Tree Support Method: 1 stake with one tie.

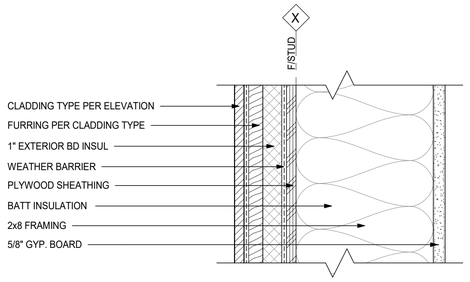
2. Tree Caliper: 1 to 2 inches; Tree Support Method: 2 stakes with two ties.

3. Tree Caliper: 2 to 4 inches; Tree Support Method: 3 guy wires with eye bolts and turn buckles.

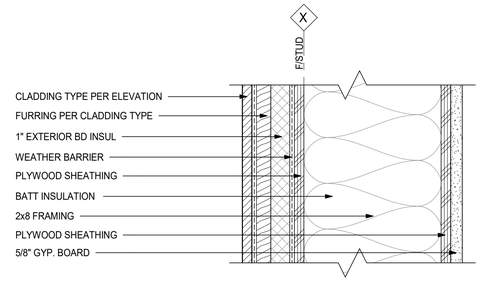
END OF SECTION



W1 TYPICAL EXTERIOR ASSEMBLY
3" = 1'-0"

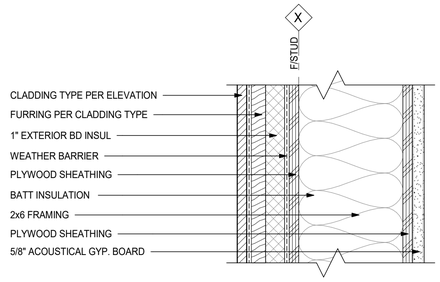


W2 EXTERIOR ASSEMBLY - 2X8 FRAMING
3" = 1'-0"

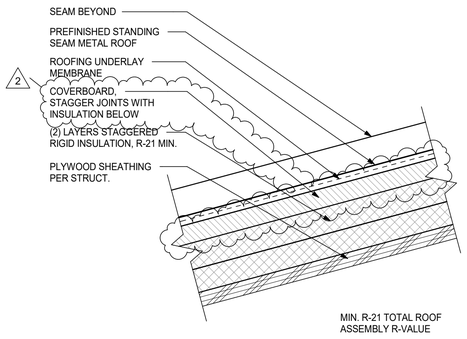


AT WALL TYPE W5, REPLACE 2x8 FRAMING WITH 2x10

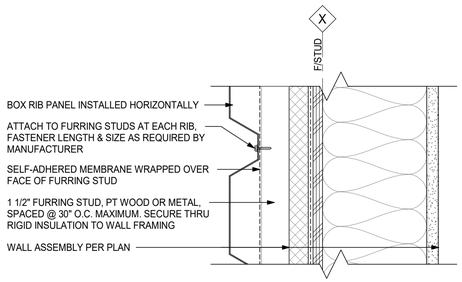
W3 EXTERIOR ASSEMBLY - SHEAR WALL
3" = 1'-0"



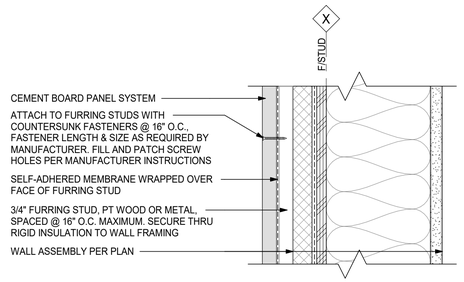
W4 EXT ASSEMBLY - SHEAR WALL @ DORMS
3" = 1'-0"



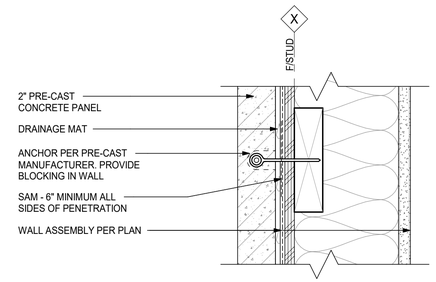
R1 ROOF ASSEMBLY
3" = 1'-0"



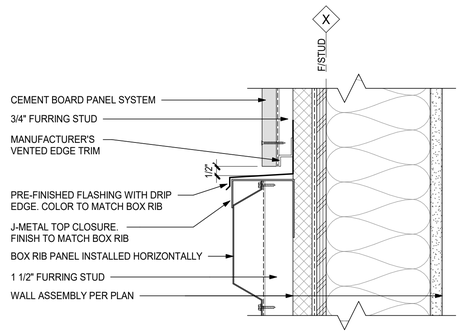
1 EXT CLADDING - BOX RIB
3" = 1'-0"



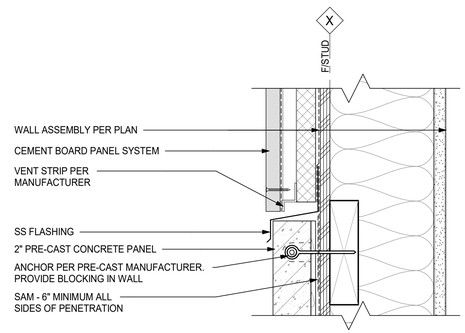
2 EXT CLAD - CEMENT BD PANEL SYSTEM
3" = 1'-0"



3 EXT CLAD - PRE-CAST CONCRETE BASE
3" = 1'-0"



4 CEMENT BOARD / BOX RIB TRANSITION
3" = 1'-0"



5 CEMENT BOARD / PRE-CAST TRANSITION
3" = 1'-0"

Soderstrom
Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
3215 Transition Parkway
NE
Albany, OR 97321

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Revisions

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2	Addendum #2	3/2/21

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EXTERIOR ASSEMBLIES

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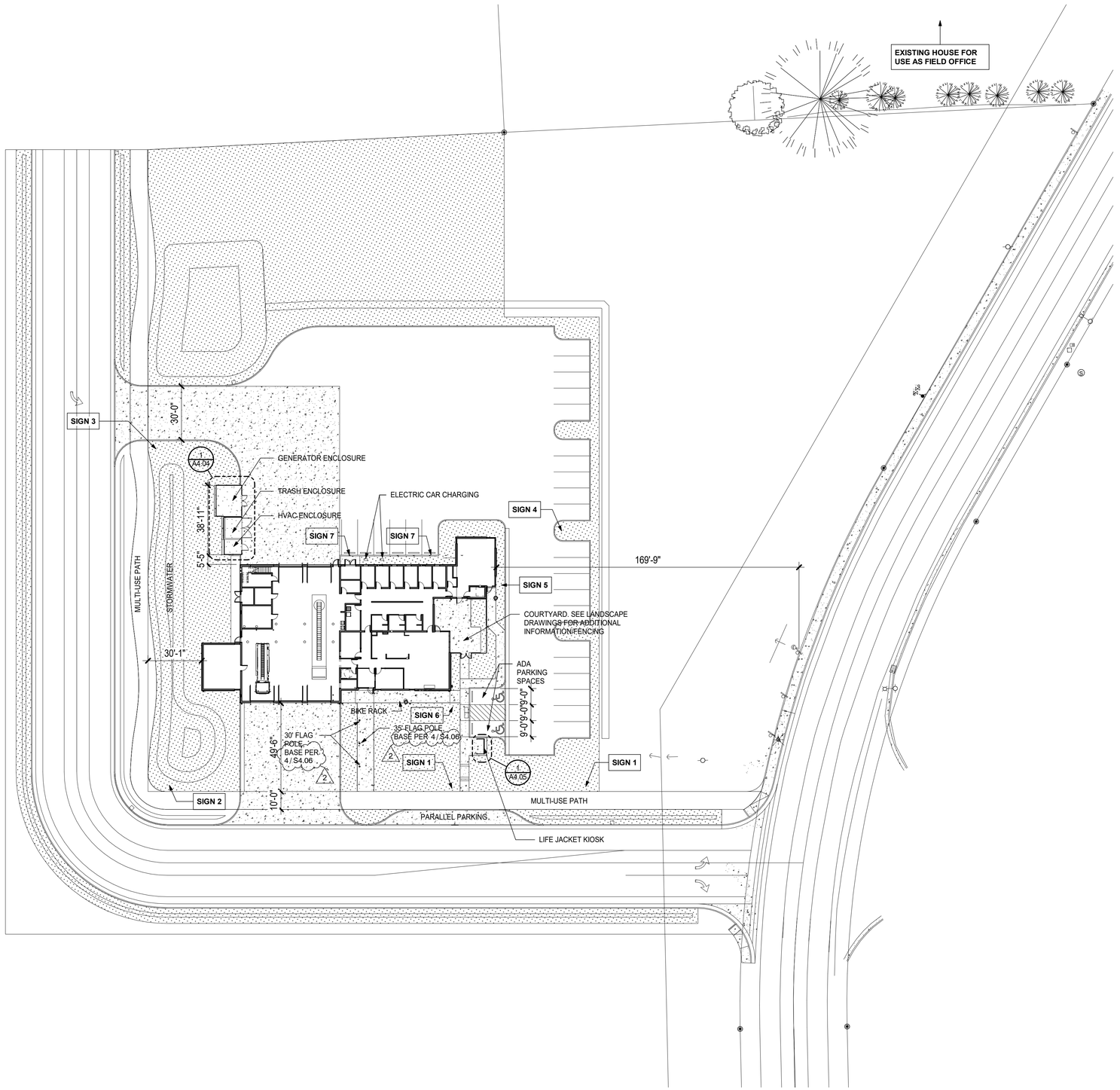

1 OVERALL SITE PLAN

1/32" = 1'-0"

NORTH

SHEET NOTES

1. ARCHITECTURAL SITE PLAN SHOWN FOR REFERENCE ONLY. REFER TO CIVIL AND LANDSCAPE DRAWINGS FOR SPECIFIC SITE INFORMATION.
2. SEE SHEET A8.50 FOR SIGNAGE DETAILS

Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

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ARCHITECTURAL SITE PLAN

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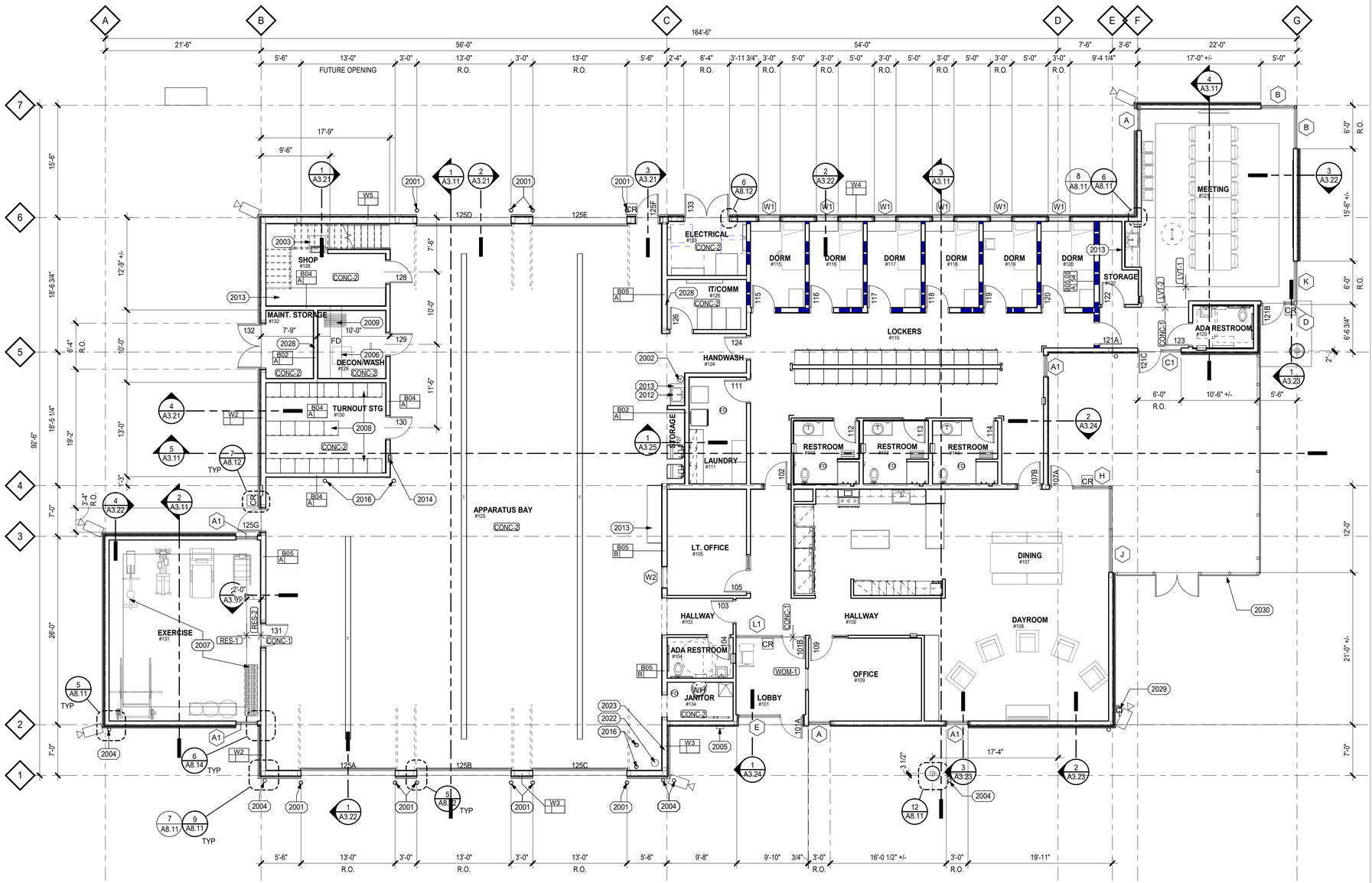


1 OVERALL FLOOR PLAN

1/8" = 1'-0"

NORTH

SHEET NOTES

1. ANY EXTERIOR WALL NOT LABELED WITH A WALL TAG SHALL BE WALL TYPE: W01.
2. ANY INTERIOR WALL NOT LABELED WITH A WALL TAG SHALL BE WALL TYPE: B01, WITH GYP TERMINATING AT 6" ABOVE CEILING.
3. REFER TO SHEET A0.11 FOR INTERIOR PARTITION TYPES AND KEY.
4. REFER TO DIMENSIONAL STANDARDS ON A0.11.
5. ALL ACOUSTIC WALL SEPARATIONS MUST BE SEALED FOR SOUND TRANSMISSION.
6. SEE FOUNDATION PLAN FOR SLAB SLOPE AT TRENCH DRAINS
7. PROVIDE UNDER-SLAB VAPOR BARRIER BENEATH ENTIRE SLAB-ON-GRADE.

LEGEND

- ENLARGED VIEW MARK (1=SECTION NO., A101= SHEET NO.)
- PARTITION MARK (REF. INTERIOR ASSEMBLIES)
- WINDOW TAG
- DOOR TAG
- FD — FLOOR DRAIN - SEE PLUMBING DRAWINGS
- FD — FLOOR TRENCH DRAIN - SEE PLUMBING DRAWINGS AND STRUCTURAL FOUNDATION PLAN
- FS — FLOOR SINK - SEE KITCHEN EQUIPMENT DRAWINGS
- LOCATION OF FLOORING TRANSITION (MATERIAL A TO B)
- ORIENTATION OF FLOORING DIRECTION
- XXX — FLOOR FINISH
- L — CORNER GUARDS

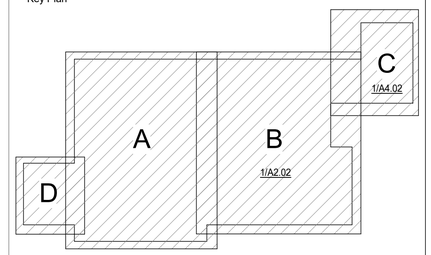
LEGEND - KEYNOTES

MARK	DESCRIPTION
2001	6" DIA. BOLLARD
2002	EYE WASH
2003	ICE MACHINE
2004	6" DIA. DOWNSPOUT, SEE CIVIL PER CONNECTION.
2005	INTERCOM/DOOR ENTRY BOX. SEE ELECTRICAL FOR ADD'L INFO.
2006	EXTRACTOR WASHER. SEE PLUMBING FOR ADD'L INFO.
2007	GYM EQUIPMENT BY OWNER. COORDINATE LOCATIONS WITH OWNER. PROVIDE BLOCKING AS REQUIRED.
2008	TURNOUT RACKS. RELOCATE (12) FROM OWNER'S EXISTING FACILITY. PROVIDE (1) NEW TRIPLE RACK AND (3) NEW DOUBLE RACKS.
2009	DRYING RACKS BY OWNER.
2012	WASH STATION. SEE PLUMBING FOR ADD'L INFO.
2013	COUNTERTOP.
2014	FIRE EXTINGUISHER CABINET.
2016	BOLT-DOWN 6" DIA. BOLLARD.
2022	FIRE SPRINKLER RISER. SEE PLUMBING FOR ADD'L INFO.
2023	FIRE SPRINKLER CONTROL PANEL LOCATION.
2028	INTERIOR FINISH WALL SURFACE TO BE PLYWOOD, THIS ROOM ONLY.
2029	GAS METER, SEE PLUMBING
2030	COURTYARD FENCE, SEE LANDSCAPE DRAWINGS

2

NOTE: WALL AND BUILDING SECTION CUTS WERE INADVERTENTLY NOT SHOWN ON THE PREVIOUSLY ISSUED VERSION OF THIS DRAWING. CUTS HAVE BEEN ADDED TO PLAN. SINCE THE SECTIONS THEMSELVES ARE NOT NEW INFORMATION, THESE CUTS HAVE NOT BEEN CLOUDED IN ORDER TO MAINTAIN LEGIBILITY OF DRAWING.

Key Plan



Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

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OVERALL FLOOR PLAN

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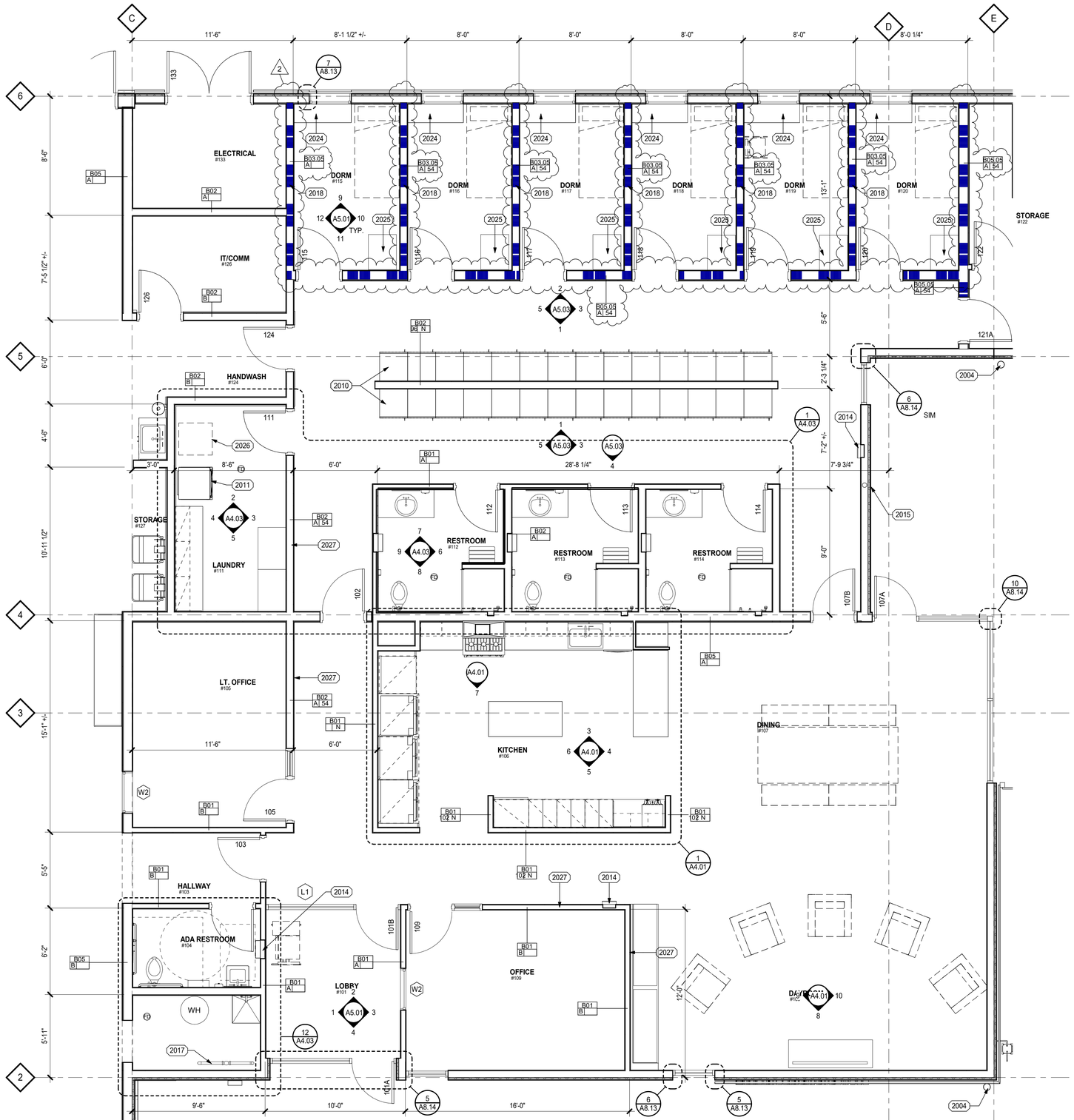

1 LIVING QUARTERS PLAN

1/4" = 1'-0"

NORTH

SHEET NOTES

1. ANY EXTERIOR WALL NOT LABELED WITH A WALL TAG SHALL BE WALL TYPE: W01.
2. ANY INTERIOR WALL NOT LABELED WITH A WALL TAG SHALL BE WALL TYPE: B01, WITH GYP TERMINATING AT 6" ABOVE CEILING.
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4. REFER TO DIMENSIONAL STANDARDS ON A0.11.
5. ALL ACOUSTIC WALL SEPARATIONS MUST BE SEALED FOR SOUND TRANSMISSION.
6. SEE FOUNDATION PLAN FOR SLAB SLOPE AT TRENCH DRAINS
7. PROVIDE UNDER-SLAB VAPOR BARRIER BENEATH ENTIRE SLAB-ON-GRADE.

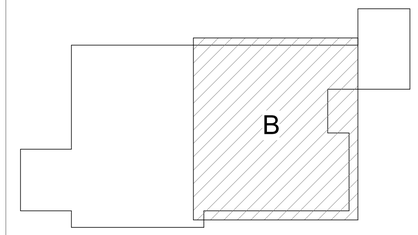
LEGEND

- 1 / A101 SIM — ENLARGED VIEW MARK (1=SECTION NO., A101= SHEET NO.)
- XXX R / XX | X — PARTITION MARK (REF. INTERIOR ASSEMBLIES)
- A — WINDOW TAG
- A 1001 — DOOR TAG
- FD — FLOOR DRAIN - SEE PLUMBING DRAWINGS
- FD — FLOOR TRENCH DRAIN - SEE PLUMBING DRAWINGS AND STRUCTURAL FOUNDATION PLAN
- FS — FLOOR SINK - SEE KITCHEN EQUIPMENT DRAWINGS

LEGEND - KEYNOTES

MARK	DESCRIPTION
2004	6" DIA. DOWNSPOUT, SEE CIVIL PER CONNECTION.
2010	LOCKERS.
2011	STACKING WASHER/DRYER. OFCI
2014	FIRE EXTINGUISHER CABINET.
2015	GAS FOR BBQ CONNECTION. SEE PLUMBING FOR ADD'L INFO.
2017	BACKFLOW DEVICE. SEE PLUMBING FOR ADD'L INFO.
2018	(3) ROBE HOOKS. PROVIDE BACKING IN WALL.
2024	SHELF. SEE DETAIL 7/A9.01
2025	LINEN CABINET.
2026	FUTURE WASHER/DRYER. PROVIDE PLUMBING AND POWER
2027	PROVIDE IN-WALL BLOCKING FOR FUTURE WHITEBOARDS OR DISPLAY ITEMS

Key Plan



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LIVING QUARTERS FLOOR PLAN

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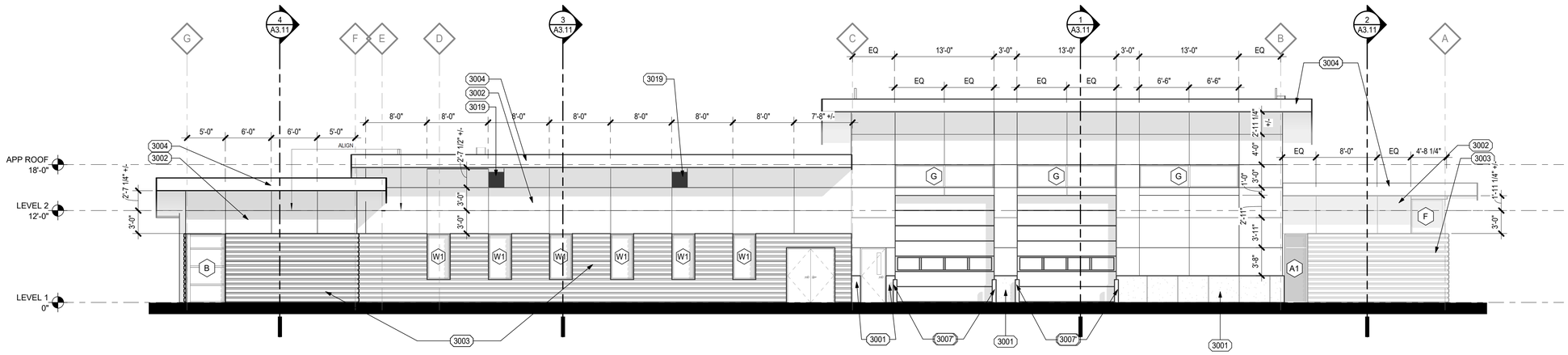
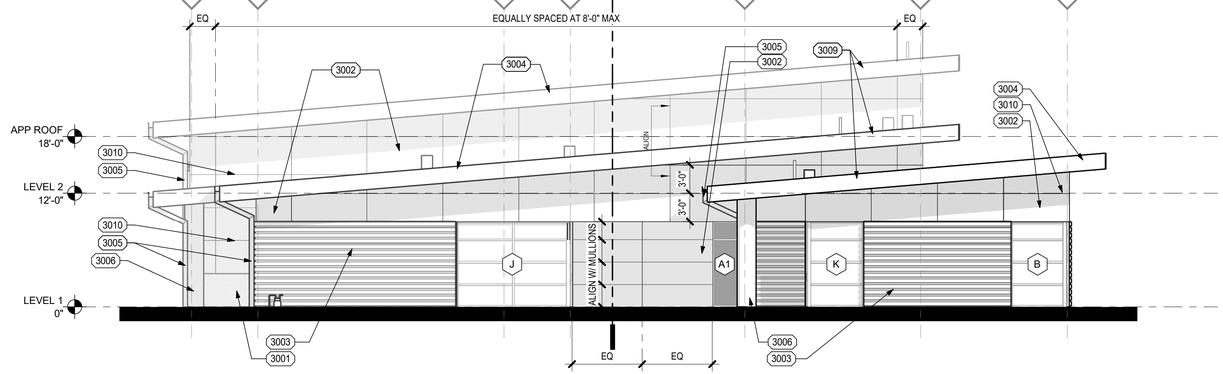


1 NORTH ELEVATION

1/8" = 1'-0"



2 EAST ELEVATION

1/8" = 1'-0"

SHEET NOTES

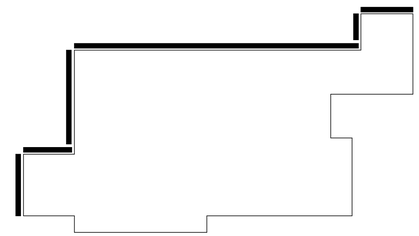
1. REFER TO EXTERIOR ASSEMBLIES TYPES ON A0.01
2. REFER TO EXTERIOR FRAME TYPES ON A8..01
3. PANELS AT APPARATUS BAY TO BE P1. PANELS, AT REMAINDER OF BUILDING TO BE P2.
4. BOX RIB TO BE P1.

LEGEND - KEYNOTES

MARK	DESCRIPTION
3001	42" HIGH PRECAST BASE
3002	FIBER CEMENT BOARD PANEL REVEAL SYSTEM.
3003	BOX RIB PANEL
3004	FASCIA PER 1/A8.20
3005	6" DIA. DOWNSPOUT, PAINT TO MATCH WALL.
3006	COLUMN WITH WRAP, PRE-FINISHED TO P3.
3007	STEEL BOLLARD, PAINT P4.
3009	STANDING SEAM METAL ROOF.
3010	ALIGN WITH JOINT ON ADJACENT ELEVATION.
3019	LOUVER. SEE MECHANICAL PLANS FOR SIZE. ALIGN TO PANEL REVEAL UNLESS OTHERWISE INDICATED.

2

Key Plan



Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

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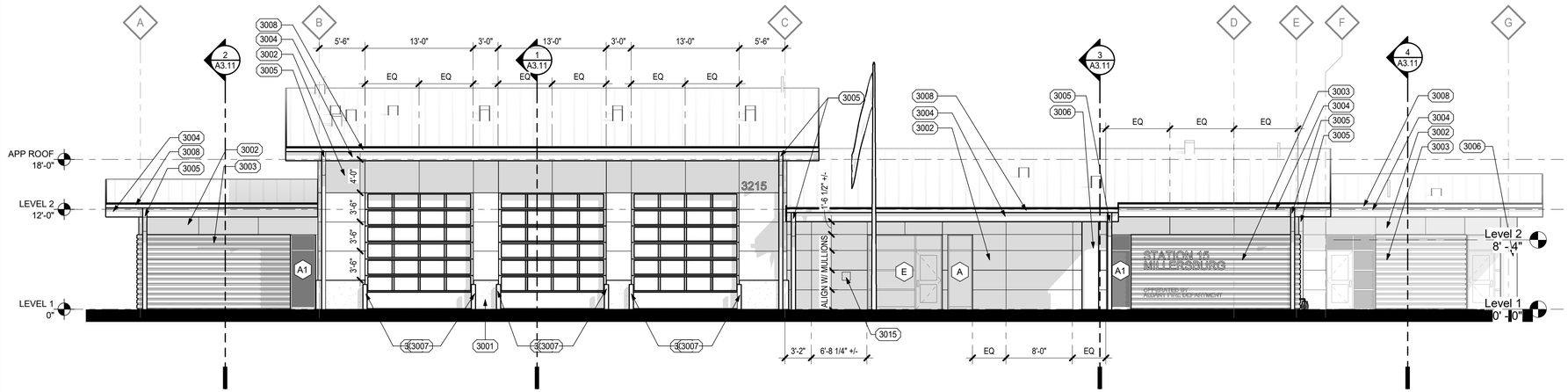


1 SOUTH ELEVATION

1/8" = 1'-0"

2 WEST ELEVATION

1/8" = 1'-0"

3 SOUTH ELEVATION - MEETING ROOM

1/8" = 1'-0"

SHEET NOTES

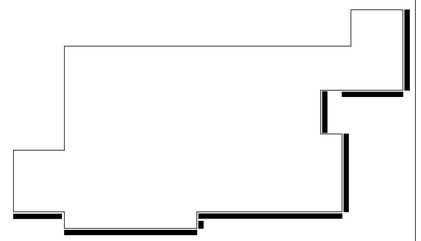
1. REFER TO EXTERIOR ASSEMBLIES TYPES ON A0.01
2. REFER TO EXTERIOR FRAME TYPES ON A8.01
3. PANELS AT APPARATUS BAY TO BE P1. PANELS, AT REMAINDER OF BUILDING TO BE P2.
4. BOX RIB TO BE P1.

LEGEND - KEYNOTES

MARK	DESCRIPTION
3001	42" HIGH PRECAST BASE
3002	FIBER CEMENT BOARD PANEL REVEAL SYSTEM.
3003	BOX RIB PANEL
3004	FASCIA PER 1/A8.20
3005	6" DIA. DOWNSPOUT, PAINT TO MATCH WALL.
3006	COLUMN WITH WRAP, PRE-FINISHED TO P3.
3007	STEEL BOLLARD, PAINT P4.
3008	6" X 6" GUTTER.
3015	CALL BOX / CARD READER.
3019	LOUVER. SEE MECHANICAL PLANS FOR SIZE. ALIGN TO PANEL REVEAL UNLESS OTHERWISE INDICATED.

2

Key Plan



Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

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Albany, OR 97321

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EXTERIOR ELEVATIONS

Sheet No
A3.02

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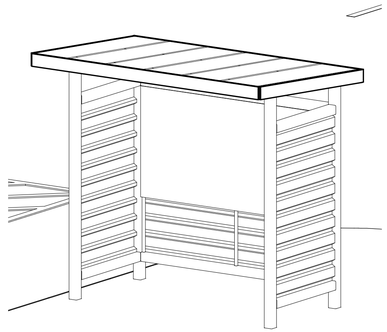
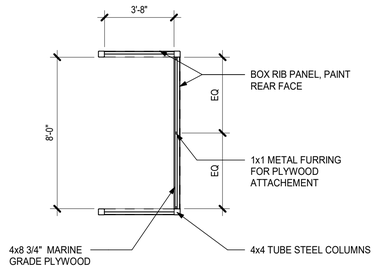
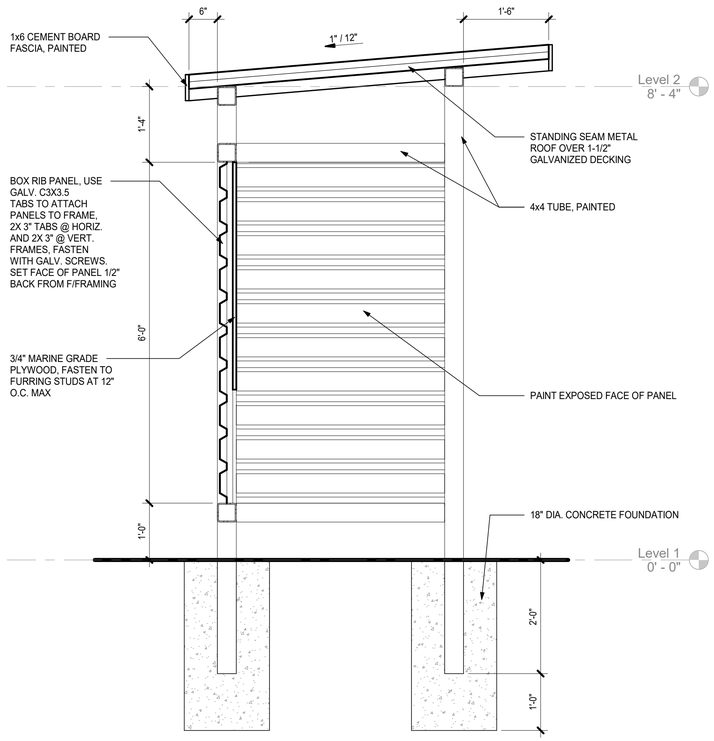


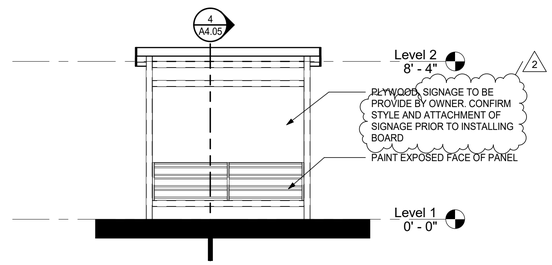
KIOSK 3D VIEW



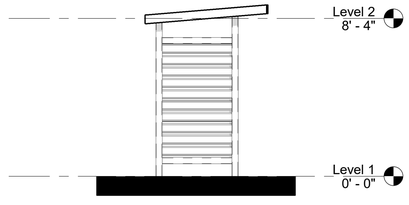
1 LIFE JACKET KIOSK PLAN
1/4" = 1'-0"



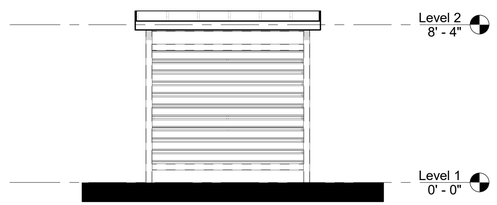
4 KIOSK SECTION
3/4" = 1'-0"



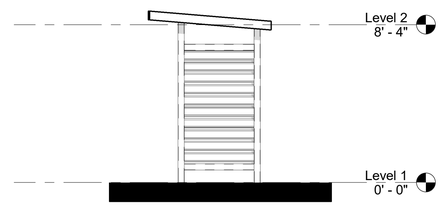
2 KIOSK - WEST ELEVATION
1/4" = 1'-0"



3 KIOSK - NORTH ELEVATION
1/4" = 1'-0"



5 KIOSK - EAST ELEVATION
1/4" = 1'-0"



6 KIOSK - SOUTH ELEVATION
1/4" = 1'-0"

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Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
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Drawing Title
LIFE JACKET KIOSK

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A4.05

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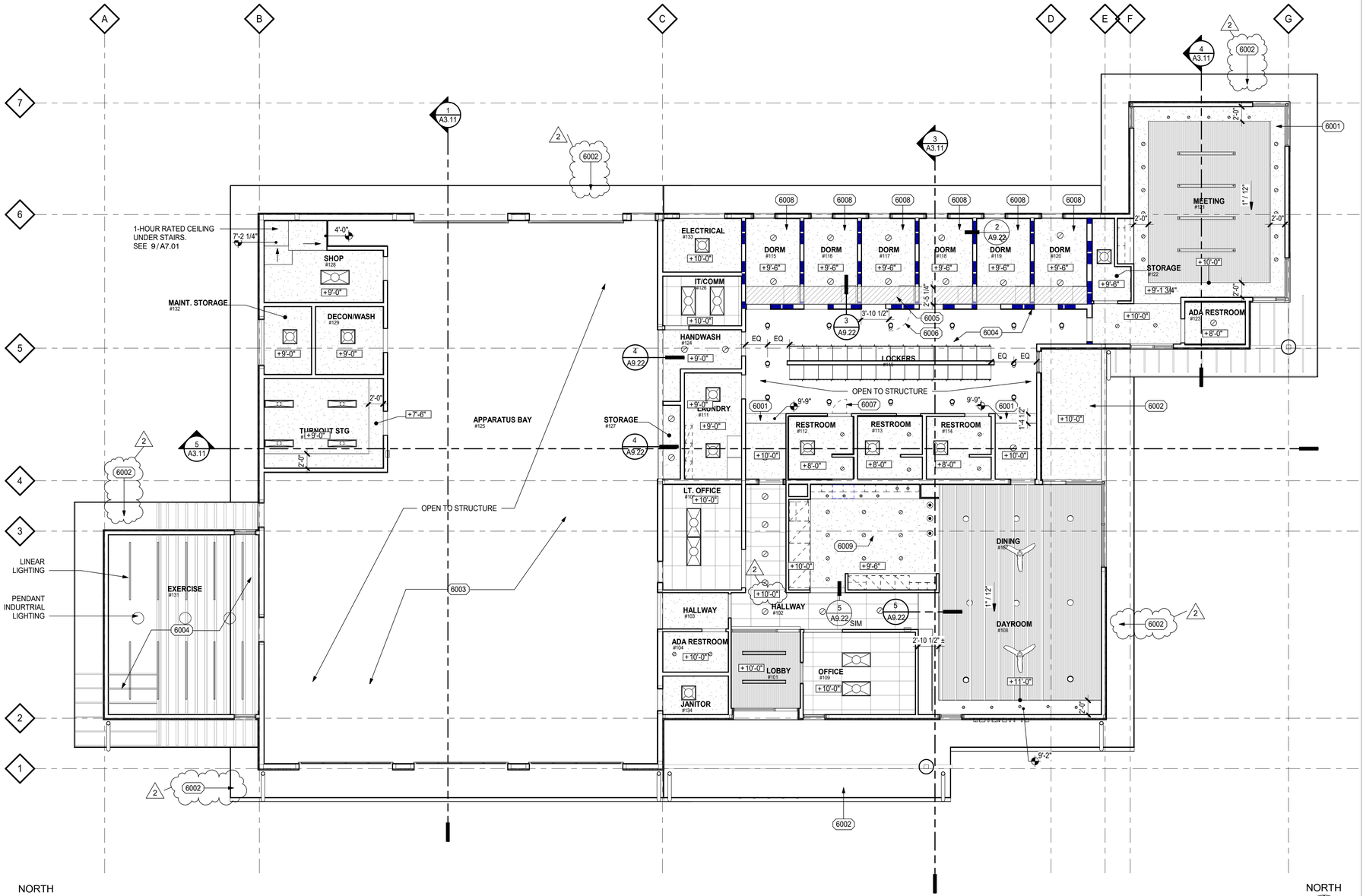


NORTH

1 OVERALL REFLECTED CEILING PLAN

1/8" = 1'-0"

NORTH

SHEET NOTES

1. REFER TO ENGINEER'S DRAWINGS FOR LIGHT SWITCHING AND SPECIFICATION, EXIT SIGN LOCATIONS, AND ELECTRICAL AND MECHANICAL SYSTEMS.
2. REPORT TO ARCHITECT ANY CONFLICTS BETWEEN ELECTRICAL, MECHANICAL, OR STRUCTURAL DRAWINGS AND THIS LAYOUT.
3. ALL VISIBLE STRUCTURE, DUCTWORK, PIPES, CONDUITS, AND OTHER ASSOCIATED COMPONENTS NOT FULLY CONCEALED BEHIND A CONTINUOUS CEILING TO BE PAINTED.
4. ALL LIGHTS AND GRIDS ARE TO BE CENTERED IN ROOM, UON.

LEGEND

X'-XX"	CEILING SPOT HEIGHT
+X'-X"	FINISH CEILING HEIGHT ABOVE FINISH FLOOR
X'-X" BI FIXT	LIGHT FIXTURE HEIGHT ABOVE FIN FLOOR TO BOTTOM OF FIXTURE, TYP FOR ROOM UON
	GYP BD CEILING / SOFFIT
	ACOUSTIC CEILING TILE (ACT)
	WOOD CEILING
	CEILING ACCESS PANEL
	AIR TERMINAL SHOWN FOR LOCATION ONLY - NOT ALL LOCATIONS MAY BE SHOWN; SEE MECHANICAL DRAWINGS FOR QTY
	LIGHT FIXTURE TYPES - SEE ELECTRICAL

LEGEND - KEYNOTES

MARK	DESCRIPTION
6001	SOFFIT.
6002	PAINT EXTERIOR SOFFIT P_, TYP.
6003	PAINT ALL EXPOSED STRUCTURE, DUCTS, PIPING, ETC. WHITE.
6004	PAINT ALL EXPOSED STRUCTURE, DUCTS, PIPING, ETC. BLACK.
6005	PLYWOOD WALK PATH ABOVE CEILING FOR MECHANICAL EQUIPMENT ACCESS.
6006	36"W X 48"H ACCESS HATCH, BASE ALIGNED WITH TOP OF PLYWOOD WALK.
6007	24"W X 30"H ACCESS HATCH TO SPACE ABOVE RESTROOM CEILING.
6008	30 MIN. RATED CEILING, SEE DETAIL 1/A9.22
6009	PROVIDE BLOCKING TO SUPPORT FUTURE CEILING-MOUNTED POT RACK

BID ALTERNATE

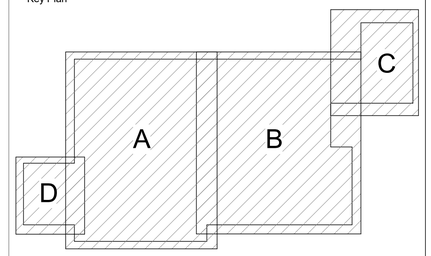
BID ALTERNATE NO. B2:

- BASE BID: PROVIDE ARMSTRONG WOODWORKS "VECTOR" WOOD CEILING SYSTEM AT AREAS INDICATED TO RECIEVE WOOD CEILING
- ALTERNATE B2A: PROVIDE 1x6 TONGUE AND GROVE BOARDS, CLEAR STAINED, ATTACHED TO 1/2" PLYWOOD SUBSTRATE AT AREAS INDICATED TO RECIEVE WOOD CEILING
- ALTERNATE B2B: PROVIDE GYPSUM BOARD CEILING AT AREAS INDICATED TO RECIEVE WOOD CEILING

2

NOTE: BUILDING SECTION CUTS WERE INADVERTENTLY NOT SHOWN ON THE PREVIOUSLY ISSUED VERSION OF THIS DRAWING. CUTS HAVE BEEN ADDED TO PLAN. SINCE THE SECTIONS THEMSELVES ARE NOT NEW INFORMATION, THESE CUTS HAVE NOT BEEN CLOUDED IN ORDER TO MAINTAIN LEGIBILITY OF DRAWING.

Key Plan



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OVERALL REFLECTED CEILING PLAN

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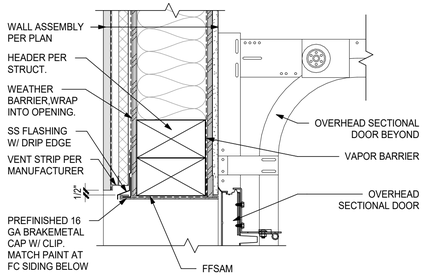
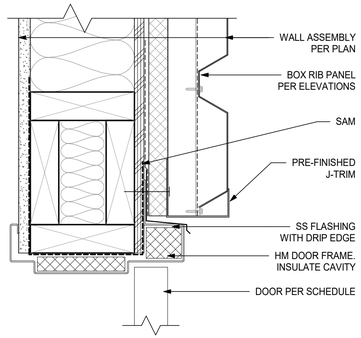
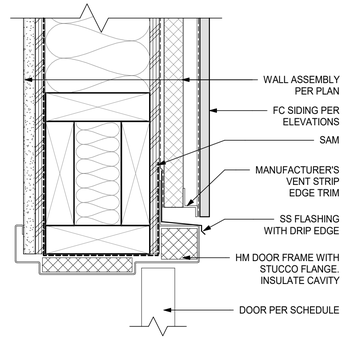


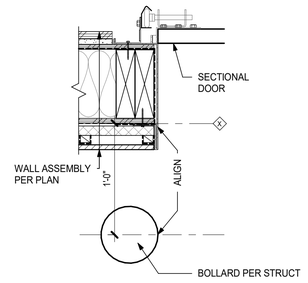
1 OH DOOR HEAD
1 1/2" = 1'-0"



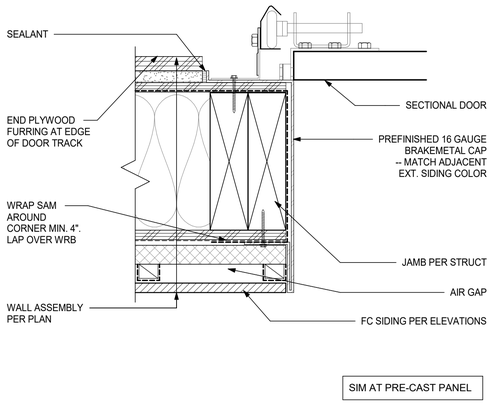
2 EXT. HM DOOR HEAD AT BOX RIB
3" = 1'-0"



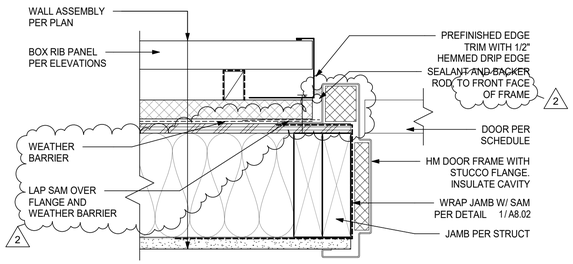
3 EXT. HM DOOR HEAD AT CEMENT BOARD
3" = 1'-0"



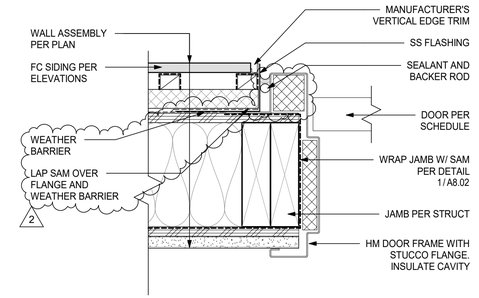
4 BOLLARD LOCATION
1 1/2" = 1'-0"



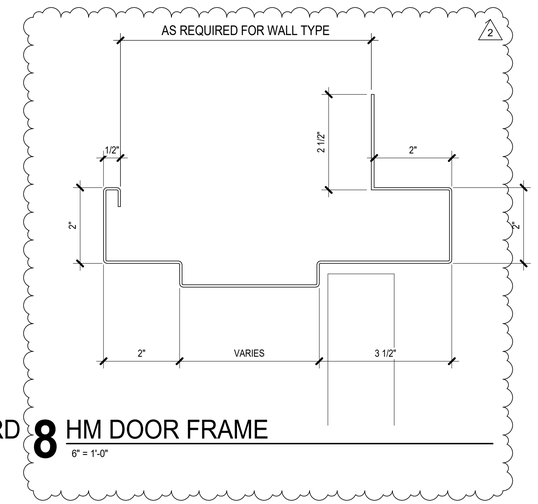
5 OH DOOR JAMB
3" = 1'-0"



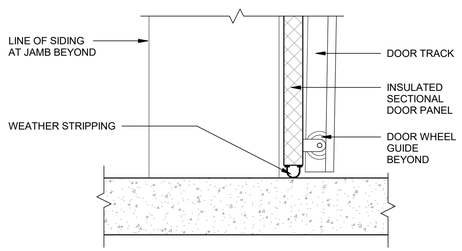
6 EXT. DOOR JAMB AT BOX RIB
3" = 1'-0"



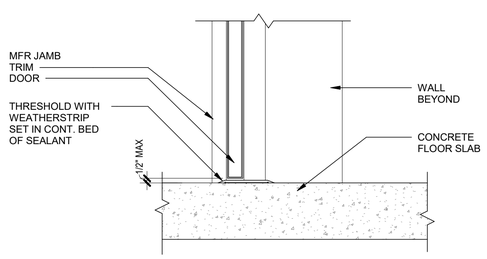
7 EXT. HM DOOR JAMB AT CEMENT BOARD
3" = 1'-0"



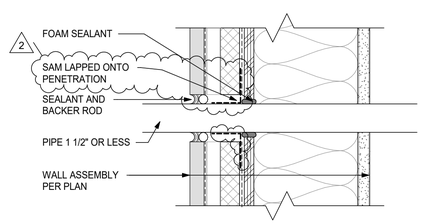
8 HM DOOR FRAME
6" = 1'-0"



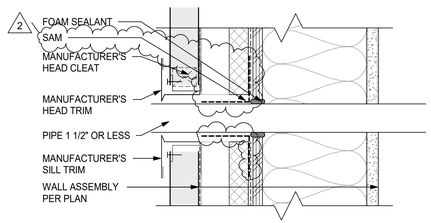
9 OH DOOR SILL
1 1/2" = 1'-0"



10 EXT. DOOR THRESHOLD
1 1/2" = 1'-0"



11 PENETRATION AT CEMENT BOARD
3" = 1'-0"



12 PENETRATION AT BOX RIB
3" = 1'-0"

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1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

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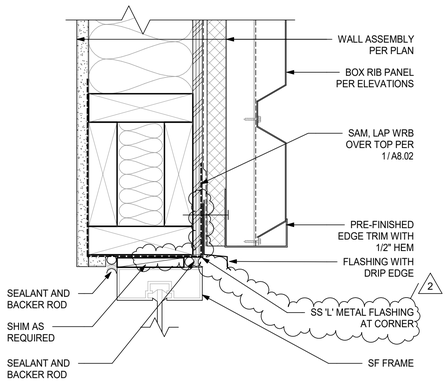
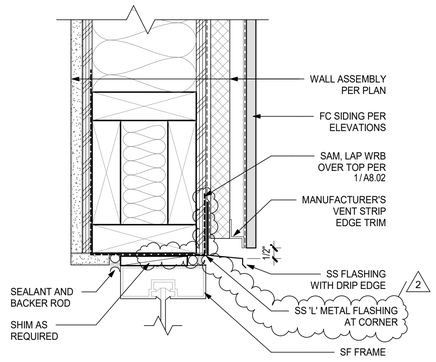


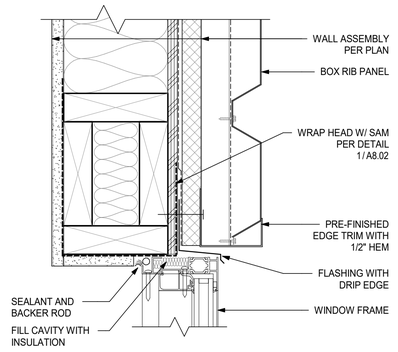
1 SF HEAD AT BOX RIB

3" = 1'-0"



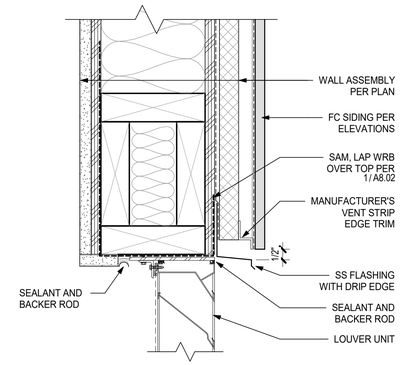
2 SF HEAD AT CEMENT BOARD

3" = 1'-0"



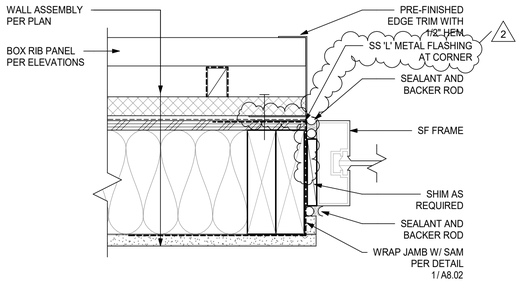
3 OPERABLE WINDOW HEAD

3" = 1'-0"



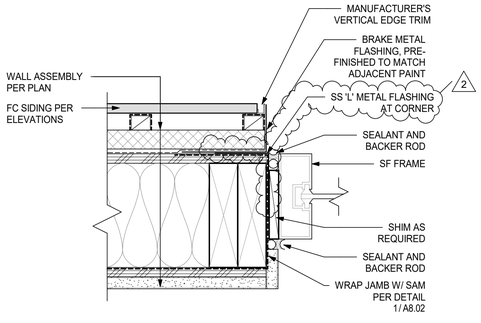
4 LOUVER HEAD

3" = 1'-0"



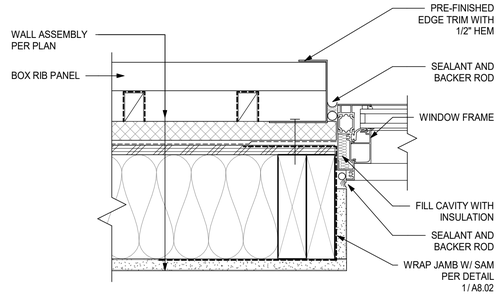
5 SF JAMB AT BOX RIB

3" = 1'-0"



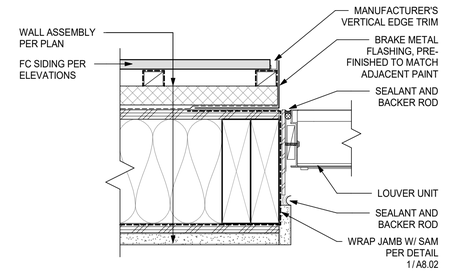
6 SF JAMB AT CEMENT BOARD

3" = 1'-0"



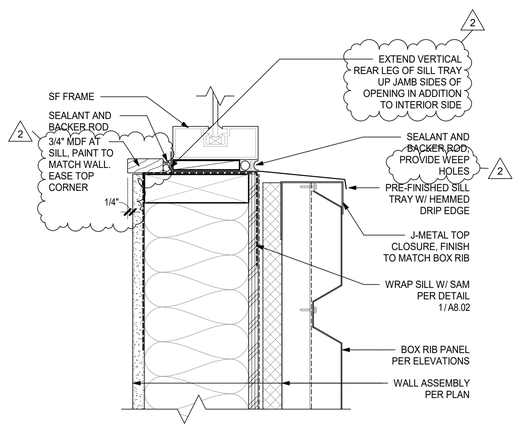
7 OPERABLE WINDOW JAMB

3" = 1'-0"



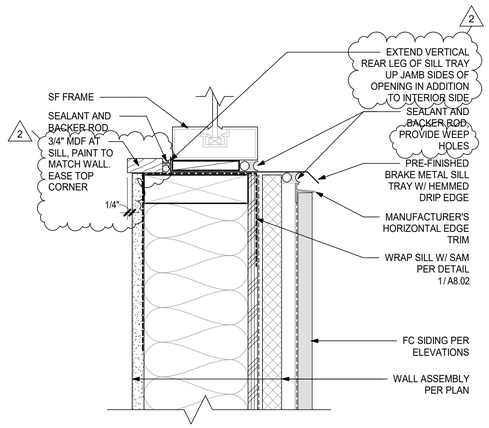
8 LOUVER JAMB

3" = 1'-0"



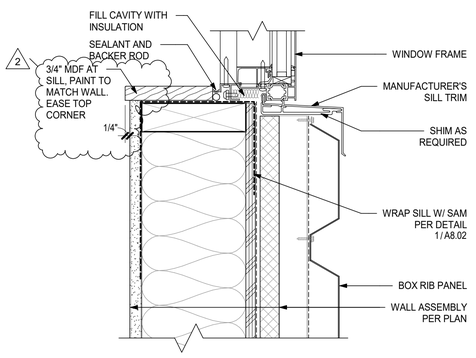
9 SF SILL AT BOX RIB

3" = 1'-0"



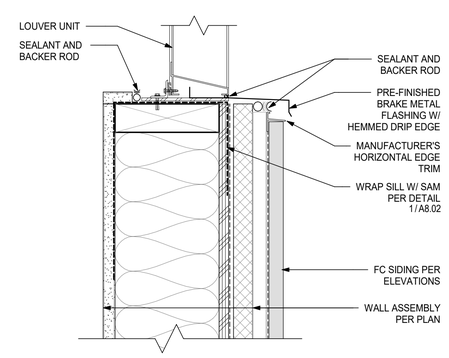
10 SF SILL AT CEMENT BOARD

3" = 1'-0"



11 OPERABLE WINDOW SILL

3" = 1'-0"



12 LOUVER SILL

3" = 1'-0"

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Portland, OR 97209

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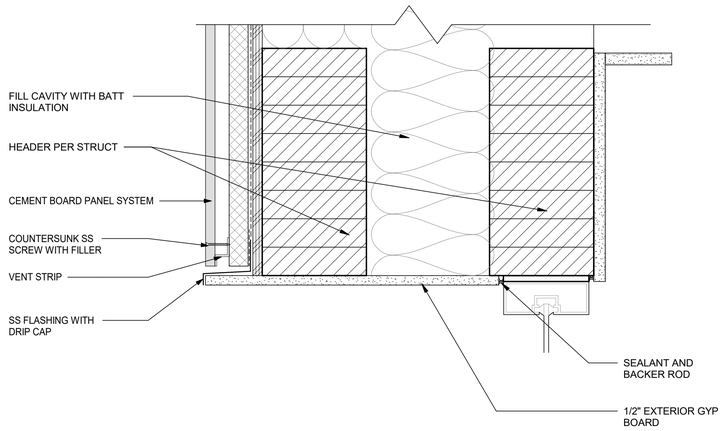
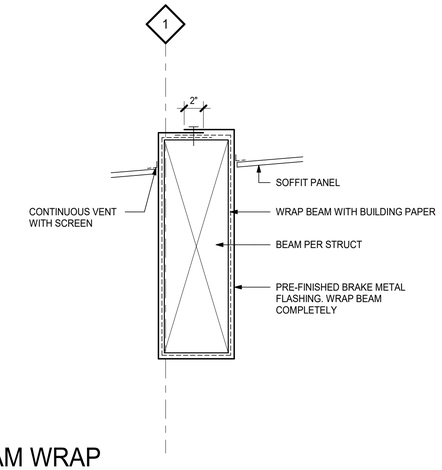
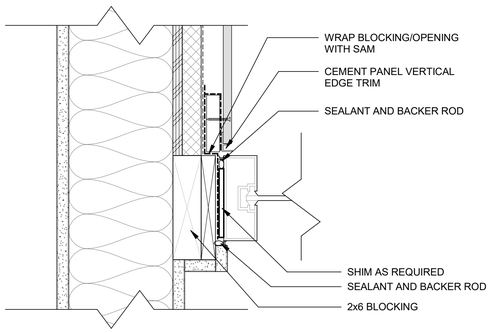


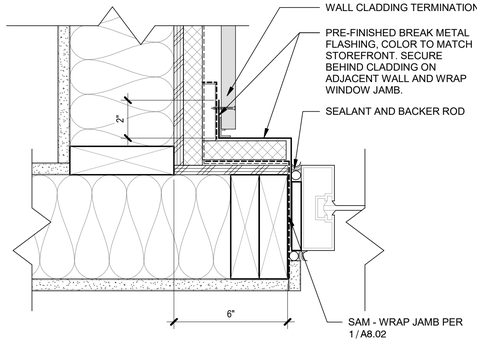
1 SF HEAD AT RECESSED ENTRY
3" = 1'-0"



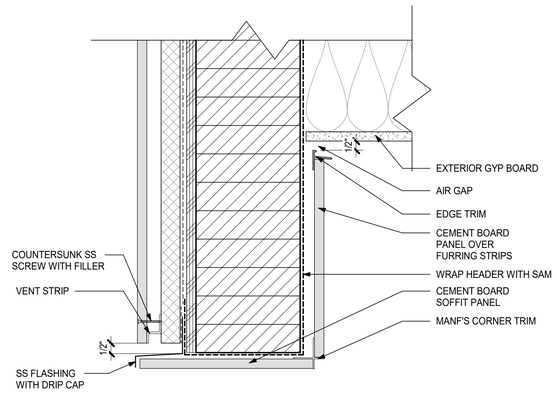
3 BEAM WRAP
1 1/2" = 1'-0"



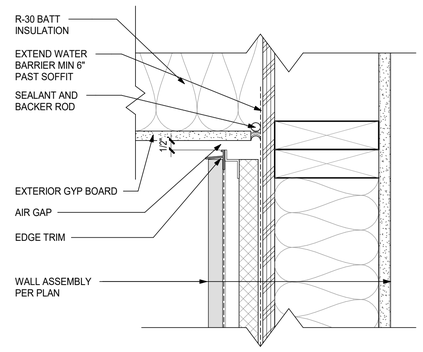
5 SF JAMB AT RECESSED ENTRY
3" = 1'-0"



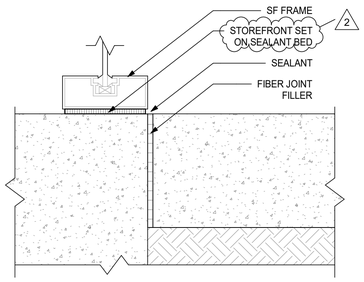
6 WINDOW AT WALL CORNER
3" = 1'-0"



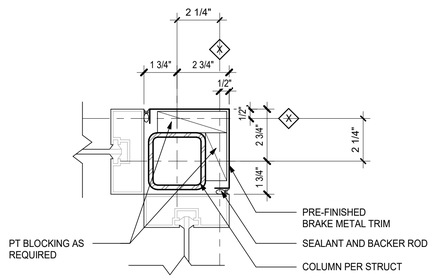
7 COVERED PATIO - OUTSIDE EDGE
3" = 1'-0"



8 COVERED PATIO - INSIDE EDGE
3" = 1'-0"



9 SF SILL
3" = 1'-0"



10 SF COLUMN COVER
3" = 1'-0"

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1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

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Station 15
3215 Transition Parkway NE
Albany, OR 97321

CITY OF Millersburg — A COMMUNITY LINKING AGRICULTURE AND INDUSTRY

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Revisions

No.	Description	Date
2	Addendum #2	3/2/21

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5209
JOHN D. VAN CALCAR
PORTLAND, OREGON
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ENTRY DETAILS

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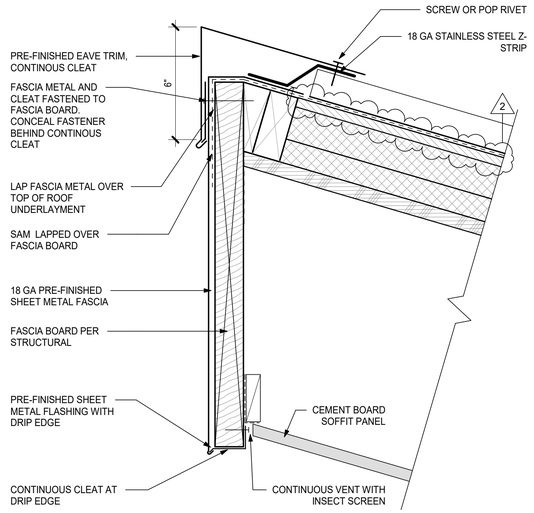
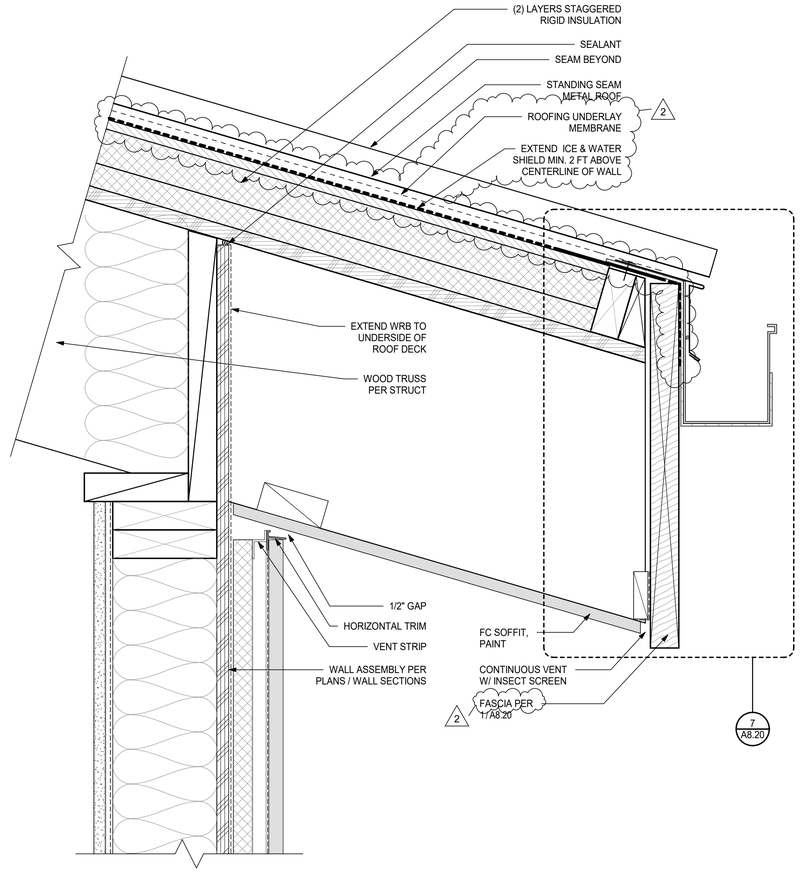
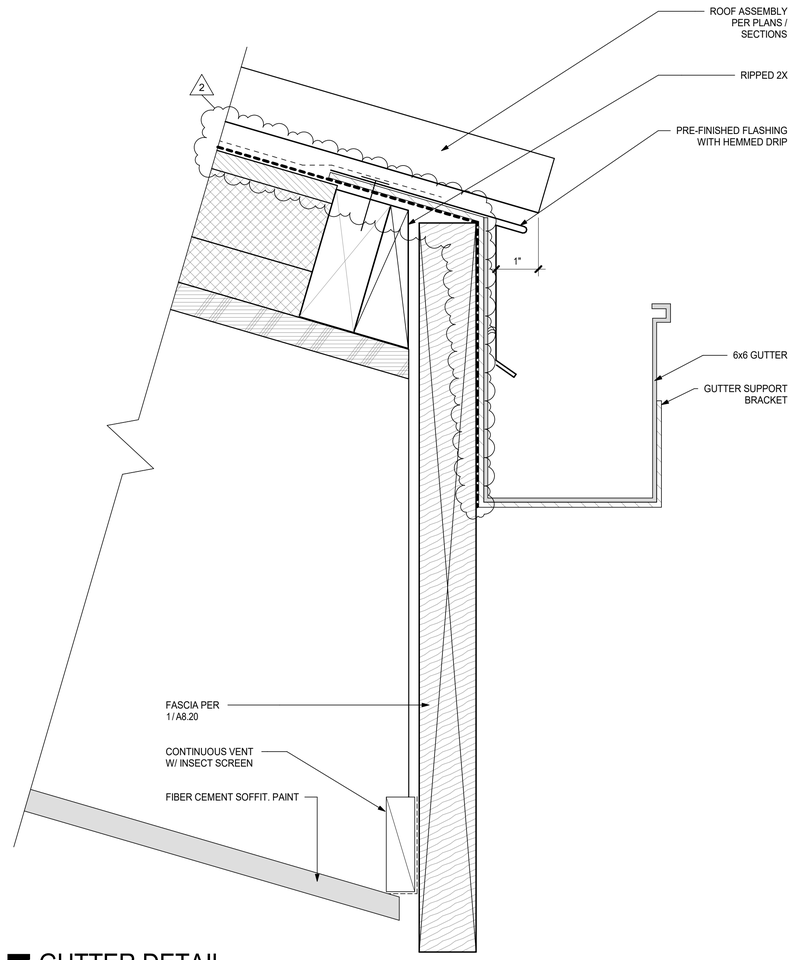


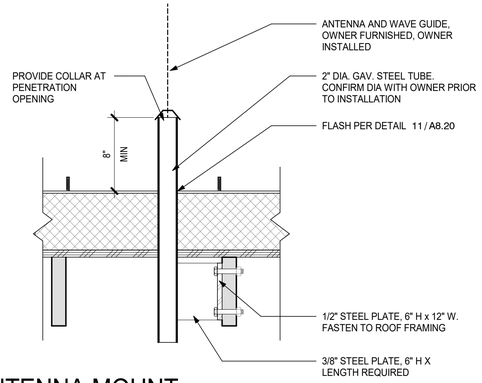
1 ROOF HIGH EDGE
3" = 1'-0"



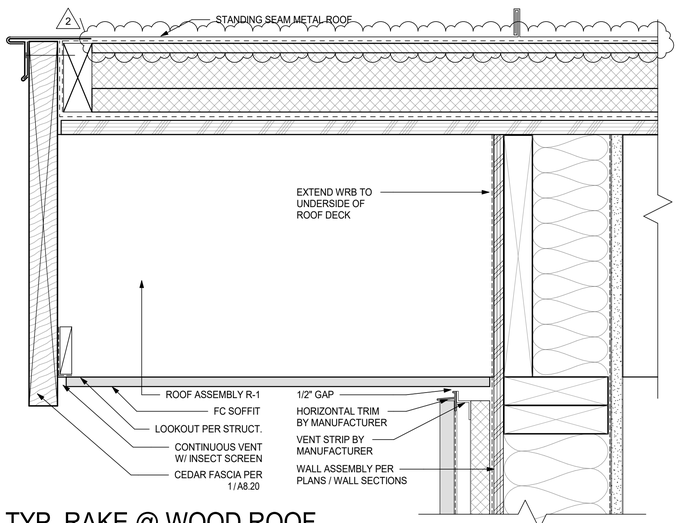
6 EAVE @ WOOD ROOF
3" = 1'-0"



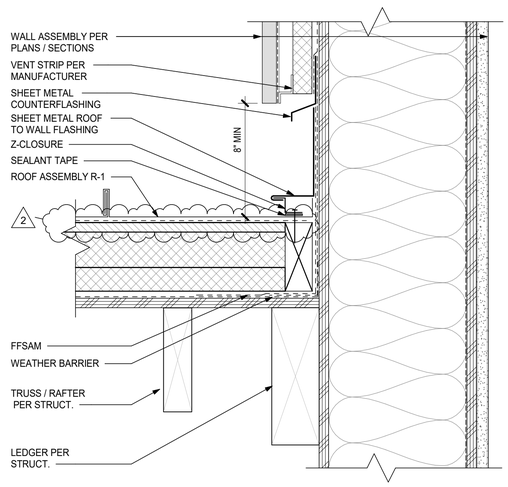
7 GUTTER DETAIL
6" = 1'-0"



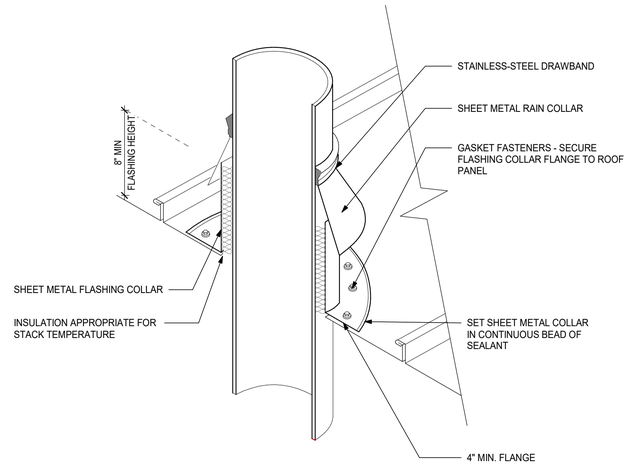
5 ANTENNA MOUNT
1 1/2" = 1'-0"



9 TYP. RAKE @ WOOD ROOF
3" = 1'-0"



10 ROOF TO SIDE-WALL TRANSITION
3" = 1'-0"



11 VERTICAL VENT PENETRATION
1/2" = 1'-0"

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1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

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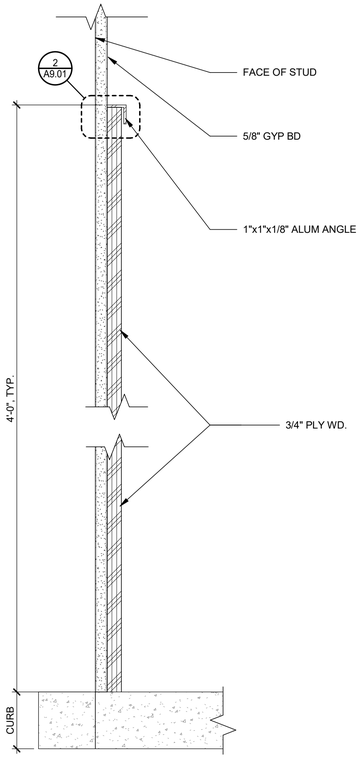
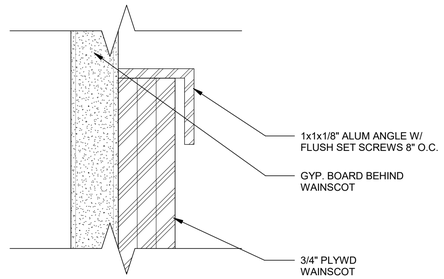
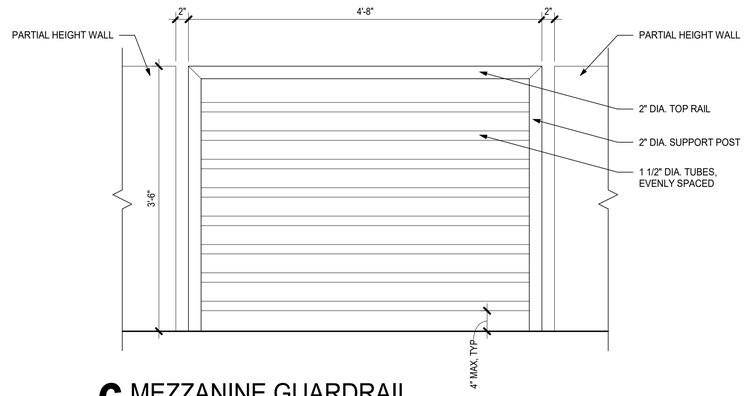


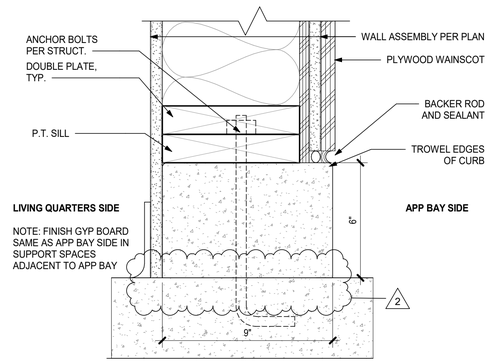
5 APP BAY WAINSCOT
3" = 1'-0"



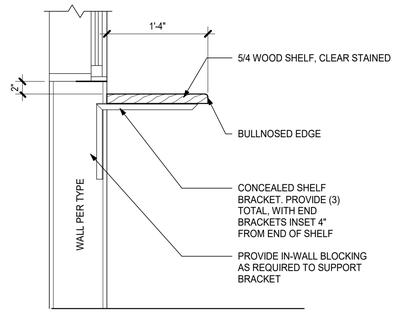
2 TRIM @ WAINSCOT - APP BAY
12" = 1'-0"



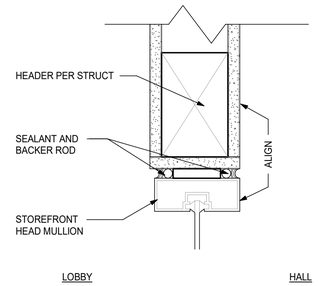
6 MEZZANINE GUARDRAIL
1" = 1'-0"



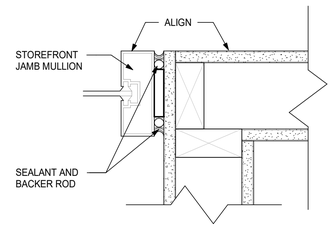
3 CURB AT APPARATUS BAY
3" = 1'-0"



7 DORM SHELF
1" = 1'-0"



4 INTERIOR SF HEAD
3" = 1'-0"



8 INTERIOR SF JAMB
3" = 1'-0"

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1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

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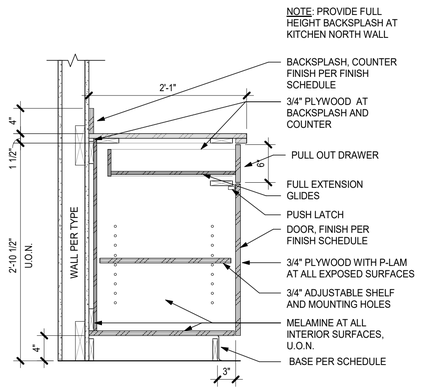
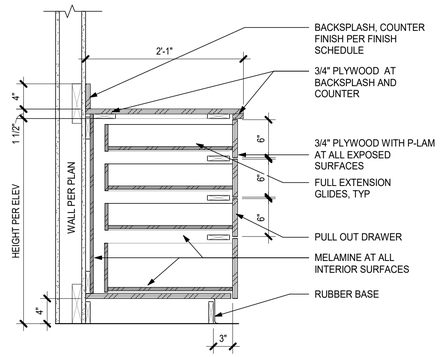


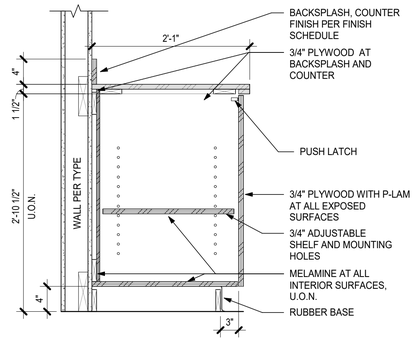
1 BASE CABINET- DOOR & DRAWER

1" = 1'-0"



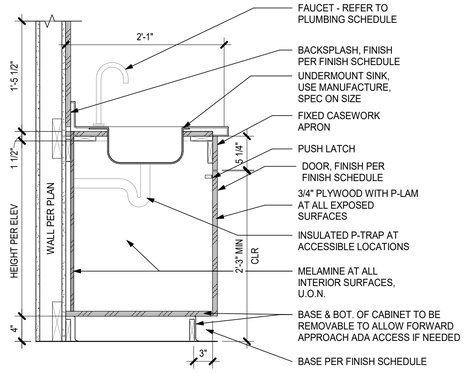
2 BASE CABINET- 4 DRAWER

1" = 1'-0"



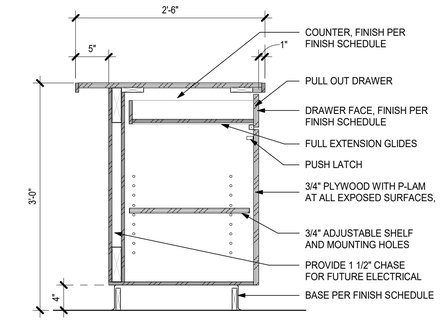
3 BASE CABINET- DOOR ONLY

1" = 1'-0"



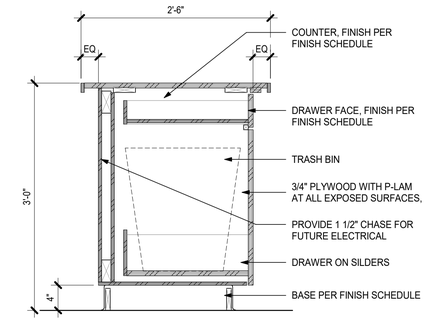
4 BASE CABINET- SINK

1" = 1'-0"



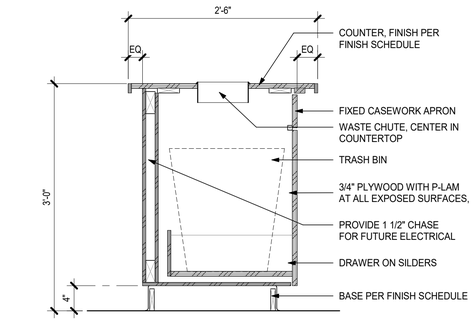
5 BASE CABINET- PENNINSULA

1" = 1'-0"



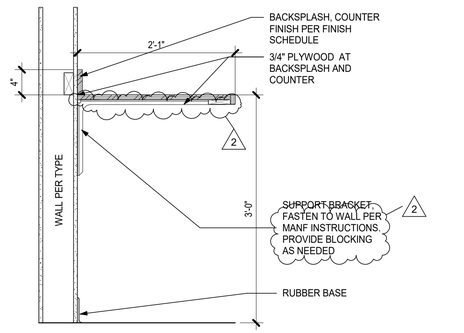
6 BASE CABINET- ISLAND

1" = 1'-0"



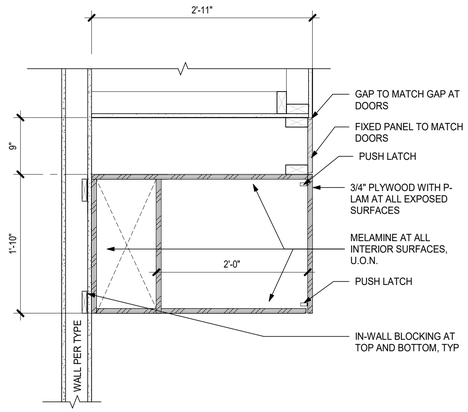
7 BASE CABINET- TRASH DRAWER

1" = 1'-0"



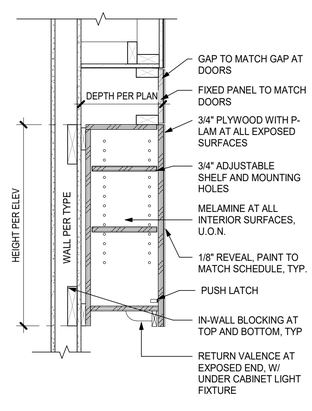
8 WORK COUNTER

1" = 1'-0"



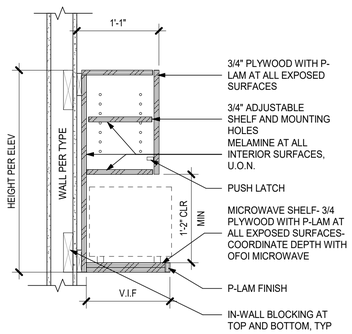
9 WALL CABINET- AT REFRIGERATOR

1" = 1'-0"



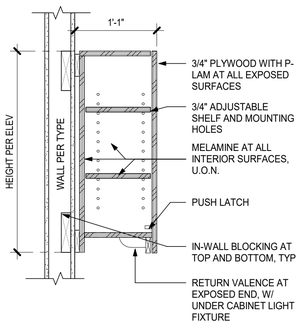
10 WALL CABINET- W/PANEL

1" = 1'-0"



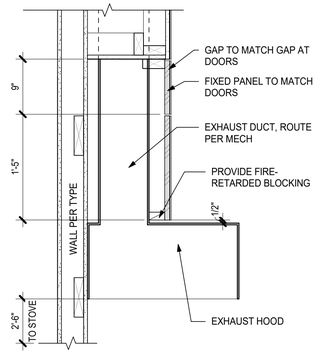
11 WALL CABINET- MICROWAVE

1" = 1'-0"



12 WALL CABINET- W/ VALENCE

1" = 1'-0"



13 STOVE EXHAUST HOOD

1" = 1'-0"

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1200 NW Naito Parkway, Suite 410
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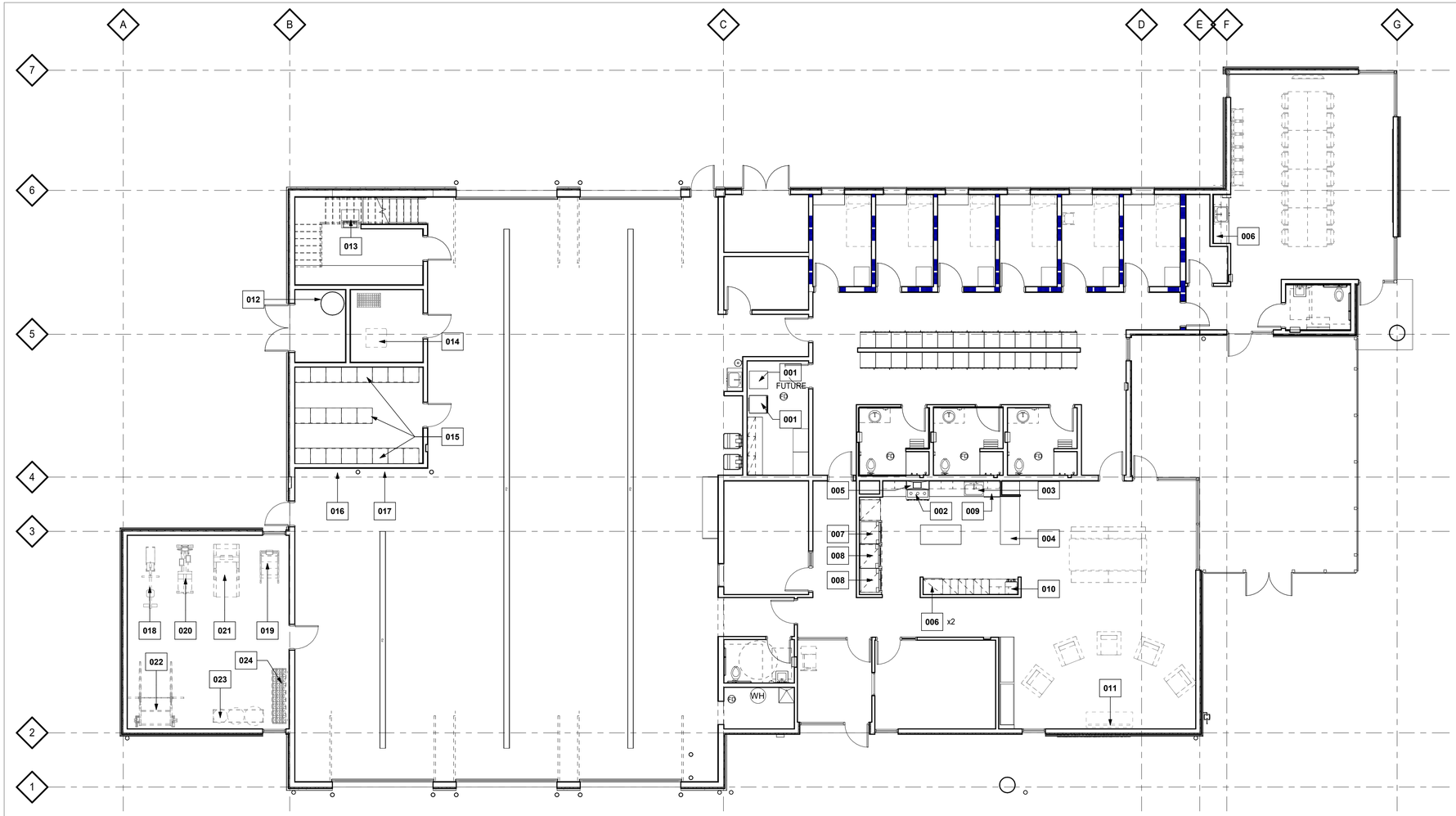


1 EQUIPMENT PLAN

1/8" = 1'-0"

Number	Type	Manufacturer	Model	Finish	Quantity	Accessories/NOTES	Responsibility	Notes
001	Combo Washer/Dryer	Speed Queen	ATEE9ASP175TW01	White	1	NOTE: Move from current Station 15. Requires water and power	OFCI	7
002	6-Burner Gas Range/Oven	Themador	PRG366WH	Stainless Steel	1		CFCI	
003	Garbage Disposer	Insinkerator	Evolution 1-HP	Stainless Steel	1		CFCI	
004	Undercounter Refrigerator	Manf. Per Specifications	Size as specified	Stainless Steel	1		CFCI	
005	Exhaust Hood	Vent-a-Hood	Premier Magic Lung Series	Stainless Steel	1		CFCI	8
006	Microwave	Manf. Per Specifications	Size as specified	Stainless Steel	3		CFCI	
007	Refrigerator	Bosch	B26FT50SNS	Stainless Steel	1		CFCI	2
008	Refrigerator	Bosch	B36CT80SNS	Stainless Steel	2		CFCI	2
009	Dish Washer	Bosch	SHXM88Z75N	Stainless Steel	2		CFCI	
010	Coffee Maker	Bunn	AXIOM-DV-APS,GF	Stainless Steel	1	NOTE: Move from current Station 15. Requires water and power.	OFOI	9
011	TV	MFG/Model per Owner			2	NOTE: Move from existing Station 15. Wall Mount Bracket. Right type for application. Stationary or swivel.	OFCI	1
012	Air Compressor	Quincy Compresor	QTV-54E, 60 Vert, AM		1	NOTE: Install to 125 psi at discharge.	CFCI	5
013	Ice Maker - Floor Mount	Maxx Ice	MIM250	Stainless Steel	1		CFCI	2
014	Turn Out Extractor	Dexter	T-600	Stainless Steel	1		CFCI	3
015	Turn Out Storage Rack	Gear Grid		Stainless Steel	21	NOTE: Move (12) from station 15. Order (1) triple, (3) double to provide (9) additional spaces total.	CFCI	4
016	Hose Rack	N/A					OFOI	4
017	Bottle Rack	N/A			1	NOTE: Move from station 15.	OFOI	
018	Rowing Machine	Concept 2	Model E	Black	1	Wall Mount Bracket	OFOI	
019	Stair Stepper	Stairmaster	8 Series Gauntlet	Black	1		OFOI	
020	Elliptical	Star Trac	Model 8RDE	Black	1		OFOI	
021	Treadmill	Star Trac	Model 10 TRX Freerunner	Black	1		OFOI	
022	Squat Rack	Rogue	Monster Lite RML-390C 3.0	Rogue Red	1		OFOI	
023	Kettlebell Rack	Rogue	Universal Storage System 2.0	Black	1	Shelf option #1 kettlebell, shelf	OFOI	
024	Dumbell Rack	Rogue	Universal Storage System 2.0	Black	1	Option #2 &3 dumbell	OFOI	

Responsibilities

OFCI Owner Furnished Equipment - Contractor Rough in and Installation
OFOI Owner Furnished Equipment - Owner Install
CFCI Contractor Furnished Equipment - Contractor Rough In and Installation
OFCR Owner Furnished and Installed Equipment, Contractor Rough In

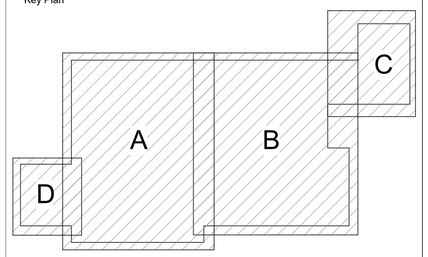
EQUIPMENT SCHEDULE NOTES

1. CONTRACTOR RESPONSIBLE FOR POWER, DATA, AND CABLE CONNECTION AT TV LOCATION. CONTRACTOR RESPONSIBLE FOR REQUIRED BACKING, AND INSTALLATION OF BRACKETS AND PATHWAYS FOR OTHER CABLING SUCH AS HDMI AND USB AS INDICATED ON DRAWINGS
2. REQUIRES STANDARD FLOOR SINK FOR CONDENSATE DRAIN
3. REQUIRES DEEP FLOOR SINK WITH SANITARY SPLASH SCREEN
4. CONTRACTOR RESPONSIBLE FOR VERIFYING AS-BUILT CLEAR DIMENSIONS TO ALLOW FOR INSTALLATION OF NUMBER OF UNITS SHOWN
5. LOCATED IN SOUND ISOLATED CLOSET (EXTERIOR MAINTENANCE) ACCESSED THROUGH VENTED EXTERIOR DOOR
6. CONTRACTOR TO VERIFY SPACE REQUIREMENTS.
7. INSTALL 1 NOW, LOCATION/PLUMBING FOR 2ND IN FUTURE
8. REMOVABLE GREASE TRAP
9. VENDOR WILL PROVIDE AND INSTALL

SHEET NOTES

1. FURNITURE SHOWN FOR REFERENCE ONLY. FURNITURE TO BE OWNER FURNISHED, OWNER INSTALLED.
2. REFER TO PLUMBING FOR SPECIFICATIONS OF PLUMBING FIXTURES AND EQUIPMENT.

Key Plan



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1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

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EQUIPMENT SCHEDULE

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ROOM FINISH SCHEDULE

Level	ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING	CASEWORK FINISH CODE* (SEE NOTES)	MISC	Area
LEVEL 1	101	LOBBY	WOM-1	RB-1	PT-1/WP-1	PT-1/WP-1	PT-1/WP-1	PT-1/WP-1	WD-1*	---	WP-1, 48" HIGH WALL PROTECTION ON ALL WALLS.	105 SF
LEVEL 1	102	HALLWAY	CONC-1	RB-1	PT-1/WP-1	PT-1/WP-1	PT-1/ WP-1	PT-1/WP-1	ACT-1	---	WP-1, 48" HIGH WALL PROTECTION ON ALL WALLS.	219 SF
LEVEL 1	103	HALLWAY	CONC-2	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2	---		40 SF
LEVEL 1	104	ADA RESTROOM	CONC-1	RB-1	T-1 / PT-4	T-1 /PT-4	T-1/PT-4	T-1 /PT-4	PT-2	PL-3 / S.S-2		51 SF
LEVEL 1	105	LT. OFFICE	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	---		160 SF
LEVEL 1	106	KITCHEN	CONC-1	RB-1	T1-2	PT-1	PT-1	PT-1	PT-1	PL-1/2 / S.S-1		293 SF
LEVEL 1	107	DINING	CONC-1	RB-1	PT-1/WP-2	PT-1	PT-1	PT-1	PT-1/WD-1*	---		338 SF
LEVEL 1	108	DAYROOM	CONC-1	RB-1	PT-1/WP-2	PT-1/WP-2	PT-1/ WP-4	PT-1/WD-2	PT-1/WD-1*	---	SEE A9.32 FOR CAB DETAIL	440 SF
LEVEL 1	109	OFFICE	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	---		179 SF
LEVEL 1	110	LOCKERS	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	OTS	PL-2	PT-3 AT EXPOSED PIPES, 48" HIGH CORNER GUARDS, ACOUSTICAL PANELS ON UPPER WALL	707 SF
LEVEL 1	111	LAUNDRY	CONC-1	RB-1	PT-2	PT-2	PT-2	PT-2	PT-1	PL-3 / S.S-3		116 SF
LEVEL 1	112	RESTROOM	CONC-1	T-1 / PT-4	T-1 / PT-4	T-1 /PT-4	T-1/PT-4	T-1 /PT-4	PT-2	PL-3 / S.S-2		77 SF
LEVEL 1	113	RESTROOM	CONC-1	T-1 / PT-4	T-1 / PT-4	T-1 /PT-4	T-1/PT-4	T-1 /PT-4	PT-2	PL-3 / S.S-2		77 SF
LEVEL 1	114	RESTROOM	CONC-1	T-1 / PT-4	T-1 / PT-4	T-1 /PT-4	T-1/PT-4	T-1 /PT-4	PT-2	PL-1/2 / S.S -2		77 SF
LEVEL 1	115	DORM	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	WD-2	32" L CHAIR RAIL	90 SF
LEVEL 1	116	DORM	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	WD-2	32" L CHAIR RAIL	88 SF
LEVEL 1	117	DORM	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	WD-2	32" L CHAIR RAIL	88 SF
LEVEL 1	118	DORM	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	WD-2	32" L CHAIR RAIL	88 SF
LEVEL 1	119	DORM	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	WD-2	32" L CHAIR RAIL	88 SF
LEVEL 1	120	DORM	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	WD-2	32" L CHAIR RAIL	87 SF
LEVEL 1	121	MEETING	LVT-1, LVT 2	RB-1	PT-1/WP-3, WP-4	PT-1	PT-1	PT-1	PT-1/WD-1*	PL-1/2 / S.S -2	CHAIR RAIL ON ALL EXPOSED WALLS	580 SF
LEVEL 1	122	STORAGE	CONC-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	---		46 SF
LEVEL 1	123	ADA RESTROOM	CONC-1	T-1 / PT-4	T-1 / PT-4	T-1 /PT-4	T-1/PT-4	T-1 /PT-4	PT-2	PL-3 / S.S-1		48 SF
LEVEL 1	124	HANDWASH	CONC-2	RB-1	PT-1	PT-2	PT-1	PT-2	PT-2	---		77 SF
LEVEL 1	125	APPARATUS BAY	CONC-2	CONC-1	PT-1	PT-1	PT-1	PT-1	OTS	---		3516 SF
LEVEL 1	126	IT/COMM	CONC-2	RB-1	PT-1/WD-3	PT-1/WD-3	PT-1/WD-3	PT-1/WD-3	PT-1	---		75 SF
LEVEL 1	127	STORAGE	CONC-2	RB-1	PT-1/WD-3	PT-1/WD-3	PT-1/WD-3	PT-1/WD-3	PT-1	---		31 SF
LEVEL 1	128	SHOP	CONC-2	T-1	PT-1	PT-1	PT-1	PT-1	PT-1	---		154 SF
LEVEL 1	129	DECON/WASH	CONC-2	RB-1	PT-1	PT-1/FRP-1	PT-1	PT-1	PT-1	---		88 SF
LEVEL 1	130	TURNOUT STG	CONC-2	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	---		205 SF
LEVEL 1	131	EXERCISE	RES-1, RES-2	WP-1	PT-1/ WP-1/MR-1	PT-1/WP-1/MR-1	PT-1/MR-1	PT-1/MR-1	OTS	---	PT-3 AT EXPOSED PIPES AND SELECTED STRUCTURE, REVIEW BY ARCHITECT	523 SF
LEVEL 1	132	MAINT. STORAGE	CONC-2	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	---		62 SF
LEVEL 1	133	ELECTRICAL	CONC-2	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	WD-2		81 SF
LEVEL 1	134	JANITOR	CONC-2	RB-1	PT-2/FRP-1	PT-2 /FRP-1	PT-2 /FRP-1	PT-2/FRP-1	PT-1	WD-2		49 SF

2 * SEE BID ALTERNATE B2 FOR ADDITIONAL INFORMATION

CONCRETE

CONC-1
Manufacture: Prososco
Style: Consoildeck Integral
Color: Nutmeg 2553
Finish: Polished
Base of Design

CONC-2
Manufacture: Prososco
Style: Consoildeck Integral
Color:Nutmeg 2553
Finish Sealed Concrete

2 SECTION 06 4100 - ARCHITECTURAL WOOD CASEWORK

CAB-1
Product: Custom
Finish: TDB (To Match Architectural Sample)
Door Profile: Flat Panel w/ push latch
Toe Kick: Finished to Match
Location:

2 SECTION 09 5426 - SUSPENDED WOOD CEILING

WD-1
Manufacturer: Armstrong
Product: WoodWorks Vector 6482
Size: 24" x 48" x ¾"
Color: Opt1: Hemlock Opt 2: Maple
Product: Woodworks Linear Veneer Plank Wall Panel
Base of Design

2 SECTION 06 2000 - FINISH CARPENTRY

WD-2
Product: Custom Casework
Species: Hemlock or Maple
Finish: Clear
Location: Dayroom

WD-3
Plywood painted
Thicknes:3/4"
Height: 48" High
Width: 96" Wide

2 SECTION 06 8316: FIBERGLASS REINFORCED PANELING 2

FRP-1
Manufacturer: Import Corporation
Type: IPC Wall Protection
Color: To Be Selected By Architect
Gauge: 0.060
Location: Decon/Wash, Equipment Storage, Handwash

WP-1
Manufacturer: Chemmetal
Type: IMetal Wall Protection
Color: #606 Blackened
Location: Fitness, Hallway

WP-2
Manufacturer: Formica
Type:Hardstop
Color: To Be Selected By Architect
Gauge: 0.075
Location: Dayroom

2 SECTION 09 8430: SOUND ABSORBING WALL AND CEILING UNITS

WP-3
Manufacturer: MDC
Type: Zintra Acoustic Panel, Tetris pattern 2
Color: Slate
Size: 9'x4"x1/8"
Location: Meeting Room

WP-4
Manufacturer: Armstrong Ceilings and Walls
Porduct: Woodworks Walls
Color: Maple
Size: 2'x4' ft
Location: Meeting Room, Day Room

2 SECTION 12 3600 - COUNTERTOPS

SOLID SURFACE

SS-1
Manufacturer: Corian
Product: Quartz
Pattern/Style/Color: Cloud White
Total Thickness: 3cm
Edge: Eased Edge
Finish: Gloss
Location: Kitchen

SS-2
Manufacturer: Corain
Product: Solid Surface
Pattern/Style/Color: Birch
Total Thickness: 3cm
Edge: Eased Edge
Finish: Honed
Location: Restrooms, Meeting Room

SS-3
Manufacturer: Corian
Product: Solid Surface
Pattern/Style/Color: Glacier White
Total Thickness: 3cm
Edge: Eased Edge
Finish: Honed
Location: Laundry

2 SECTION 06 4100 - ARCHITECTURAL WOOD CASEWORK

PLASTIC LAMINATE

PL-1
Manufacturer: Formica
Pattern: 912C-AN
Finish: Storm
Location: Kitchen,Meeting Room

PL-2
Manufacturer: Wilsonart Laminate
Pattern: Kensington Maple 10776-60
Finish: Matte
Location: Kitchen, Meeting Room, Lockers

PL-3
Manufacturer: Wilsonart
Pattern: 4879 Steel Mesh
Finish: Fine Velvet Textured
Location: Bathroom

PL-4
Manufacturer: Wilsonart Laminate
Pattern: Magnolia 5012k-19
Finish: Leno Weave
Location: Laundry, Back of House

SECTION 09 3000 - TILING

T-1
Manufacturer: Design and Direct Tile
Pattern/Style: Westminster Tile, Classic Tile Series
Color: White
Finish: Glossy
Size: 4"x12"
Grout: Laticrete
Grout Color: TBD
Grout Joint: 1/8"
Contact/Supplier:
Location: Restrooms

SECTION 09 5100 - ACOUSTICAL CEILINGS

ACOUSTICAL CEILING TILE

ACT-1
Manufacturer: Armstrong
Product: Optima Lay-In and Tegular
Style: 15/16" Tegular
Size: 48" x 54" x ¾"
Color: White
Base of Design

SECTION 09 6500 - RESILIENT FLOORING

LVT-1
Manufacturer: Mannington Commerical
Style: Quantum Guard
Collection: No Reservations Xpress
Size: Abstract
Color: Affable (NR303)
Location: Meeting Room

LVT-2
Manufacturer: Mannington Commerical
Style: Quantum Guard
Collection: No Reservations Xpress
Size: Abstract
Color: Dyamic NR305
Location: Meeting Room

RESILIENT BASE & STAIR TREADS

RB-1
Manufacturer: Johnsonite
Style: Rubber wall base – cove toe @ hard surfaces
Size: 4-inch
Color: TA6 Bedrock
Location: At Locations Except Restrooms & Apperatus Bay

SECTION 09 6566 – RUBBER ATHLETIC FLOOR

RES-1
Manufacturer: Conner Sports
Style: Power Deck HD Duty Weight Training
Color: Dark Gray TRS003-4
Thickness: 20mm
Type: Tile
Content: Durometer Construction
Location: Fitness

RES-2
Manufacturer :Conner Sports
Style: Power Deck HD Duty Weight Training
Color: Red/PF 16
Thickness: 20mm
Type: Tile
Content: Durometer Construction
Location: Fitness

2 SECTION 09 6813 - CARPETING

WOM-1
Manufacturer: Mohawk Group
Style: Step Up II GT311/QL311
Color: 989 Obsidian
Size: 24 x24
Installation: Quarturn
Location: Lobby

SECTION 09 9000 – PAINTING

PT-1
Manufacturer: Sherwin Williams
Color: SW 6378 Crisp Linen
Sheen: Stain
Location: General Paint

PT-2
Manufacturer: Sherwin Williams
Color: SW 6378 Crisp Linen
Sheen: Epoxy
Location: Accent

PT-3
Manufacturer: Sherwin Williams
Color: Color to Match Miller-Paint Big Red
Sheen: Satin
General Wall Paint
Location: Accent

PT-4
Manufacturer: Sherwin Williams
Color: TBD
Sheen: Epoxy
Location: Restrooms

PT-5
Manufacturer: Sherwin Williams
Color: TBD
Sheen: Satin
Location: Accent

PT-6
Manufacturer: TBD
Color: TBD
Sheen: Satin
Location: Accent Paint

PT-7
Manufacturer: Sherwin Williams
Color: TBD
Sheen: Semi-Gloss Enamel Low V.O.C.
Location: Trim, Doors, Handrails

SECTION 12 2400 - WINDOW SHADES

BL-21
Manufacturer: Mecho Shade Systems
Product: Mecho/5
Openness Factor: 3%
Color: To Be Selected by Architect
Location: All windows unless otherwise noted. No shades at Apparatus Bay

BL-22
Manufacturer: Mecho Shade Systems
Product: Mecho/5
Openness Factor: 0% - Block all light
Color: To Be Selected by Architect
Location: Dorms, Meeting Room (provided in addition to standard shades)

BID ALTERNATE

2

BID ALTERNATE NO. B2:
- BASE BID: PROVIDE ARMSTRONG WOODWORKS "VECTOR" WOOD CEILING SYSTEM AT AREAS INDICATED TO RECIEVE WOOD CEILING
- ALTERNATE B2A: PROVIDE 1x6 TONGUE AND GROVE BOARDS, CLEAR STAINED, ATTACHED TO 1/2" PLYWOOD SUBSTRATE AT AREAS INDICATED TO RECIEVE WOOD CEILING
- ALTERNATE B2B: PROVIDE GYPSUM BOARD CEILING AT AREAS INDICATED TO RECIEVE WOOD CEILING

1. PROVIDE FLOOR TRANSITIONS BETWEEN DISSIMILAR FLOORING MATERIALS. WHERE NOT INDICATED, TRANSITION IS TO OCCUR CENTERED UNDER DOOR.
2. TILE WALLS TO INTEGRATE ELEC OUTLETS AND SWITCH PLATES, TOILET ACCESSORIES, ETC INTO TILE PATTERN.

MELAMINE COLORS:

1. MM-1 TO MATCH PAINT COLOR PL-1

FINISH ABBREVIATIONS:

ACT	ACOUSTIC CEILING TILE
AP	ACOUSTIC PANEL
CPT	CARPET TILE
CONC	CONCRETE
CT	CERAMIC OR PORCELAIN TILE
FRP	FIBERGLASS-REINFORCED PLASTIC
G	GRAPHIC
GWB	GYPSUM WALL BOARD
LVT	LUXURY VINYL TILE
MM	MELAMINE
P	PAINT
PC	POLISHED CONCRETE
PHEN	PHENOLIC PANEL
PLAM	PLASTIC LAMINATE
PRF	POURED RESINOUS FLOORING / FLUID APPLIED FLOORING
RB	RESILIENT BASE
RES	RESILIENT FLOORING
SURF	SOLID SURFACE
ST	STAIR TREAD
SV	SHEET VINYL
TB	TACKBOARD
WD	WOOD GRILLE
WGF	WOOD GYM FLOORING
WOM	WALK-OFF MAT

Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
3215 Transition Parkway
NE
Albany, OR 97321

CITY OF Millersburg — A COMMUNITY LINKING AGRICULTURE AND INDUSTRY

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Revisions

No.	Description	Date
2	Addendum #2	3/2/21

Stamp

REGISTERED ARCHITECT · 5209 · JOHN D. VAN CALCAR · PORTLAND, OREGON · RENEWAL DATE 12-31-21 · STATE OF OREGON

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20006

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FINISH SUMMARY / SCHEDULE

Sheet No
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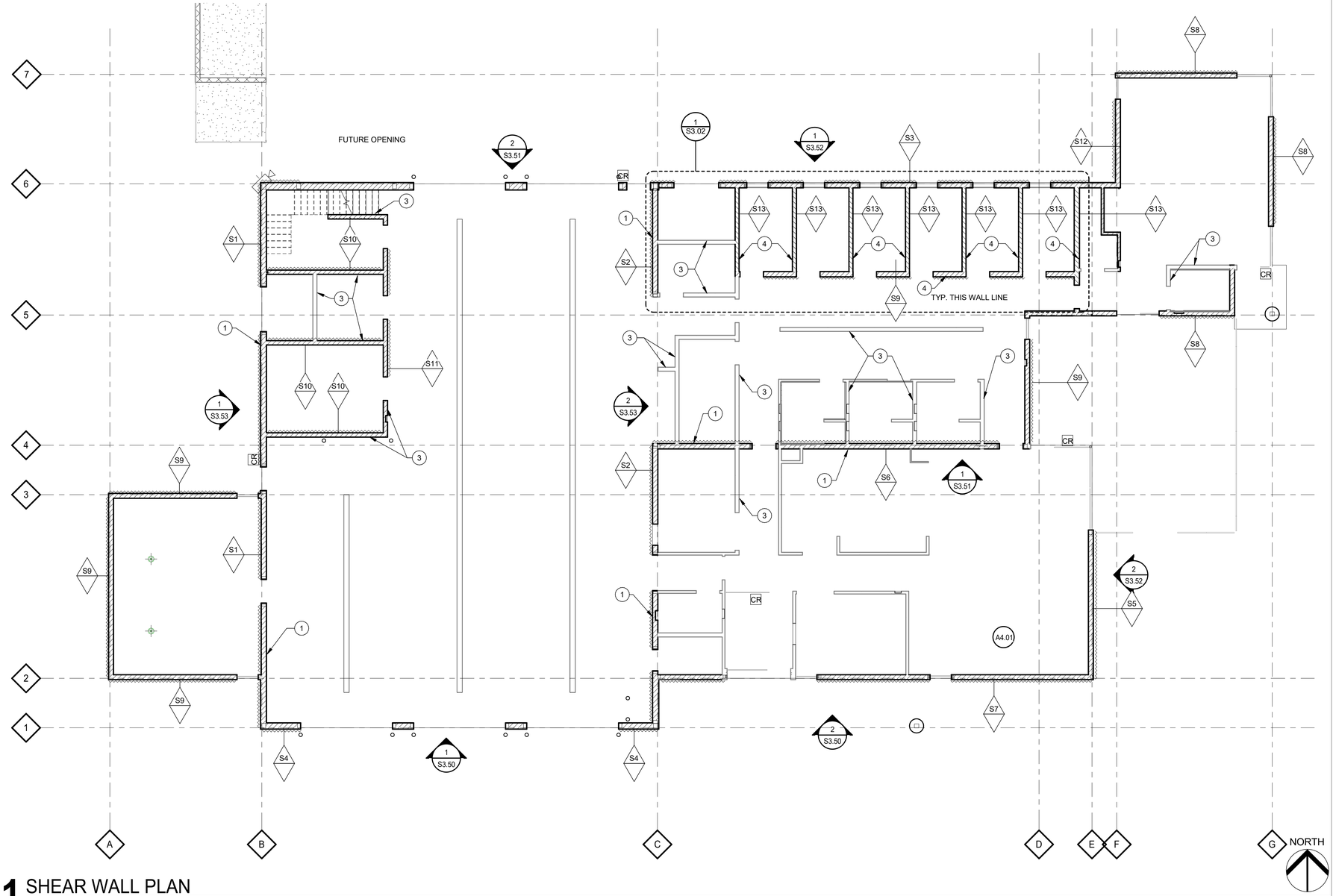


1 SHEAR WALL PLAN

1/8" = 1'-0"

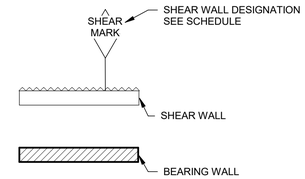
SHEAR WALL SCHEDULE

SHEAR WALL TYPE	HOLD DOWN TYPE	NOMINAL END POST	TOP PLATE	BTM PLATE	FASTENERS	FASTENING @ PANEL EDGES (in)	FASTENING @ PANEL FIELD (in)	TOP/BTM PLATE NAILING (O.C.)	BLOCKING	SILL PLATE ANCHORS	HOLD DOWN ANCHOR
S1	REF. ELEV. 1 / S3.53										REF. S1.01
S2	REF. ELEVATION 2 / S3.53										REF. S1.01
S3	REF. ELEVATIONS 2 / S3.51 AND 1/S3.52										REF. S1.01
S4	REF. ELEVATION 1 / S3.50										REF. S1.01
S5	REF. ELEVATION 2 / S3.52										REF. S1.01
S6	REF. ELEVATION 1 / S3.51										REF. S1.01
S7	REF. ELEVATION 2 / S3.50										REF. S1.01
S8	SIMPSON HDU4-SDS 2.5 W/ (10) 1/4" x 2 1/2" SDS SCREWS	4x6	DOUBLE 2x6	2x6	10d	6	12	10d @ 3"	REF. TYPICAL BLOCKING DETAIL 10/S5.01	5/8" DIAMETERx4 3/4" TITEN HD ANCHORS @ 42" O.C. TYP. MAX 1'-0" FROM PLATE END	REF. S1.01
S9		4x6	DOUBLE 2x6	2x6	10d	6	12	10d @ 3"	REF. TYPICAL BLOCKING DETAIL 10/S5.01		REF. S1.01
S10	SIMPSON DTT2Z W/ (8) 1/4" x 2 1/2" SDS SCREWS	4x6	DOUBLE 2x6	2x6	10d	6	12	10d @ 6"	REF. TYPICAL BLOCKING DETAIL 10/S5.01	5/8" DIAMETERx4 3/4" TITEN HD ANCHORS @ 48" O.C. TYP. MAX 1'-0" FROM PLATE END	REF. S1.01
S11	SIMPSON HDU2-SDS 2.5 W/ (6) 1/4" x 2 1/2" SDS SCREWS	4x6	DOUBLE 2x6	2x6	10d	6	12	10d @ 4"	REF. TYPICAL BLOCKING DETAIL 10/S5.01	5/8" DIAMETERx4 3/4" TITEN HD ANCHORS @ 48" O.C. TYP. MAX 1'-0" FROM PLATE END	REF. S1.01
S12	SIMPSON HDU4-SDS 2.5 W/ (10) 1/4" x 2 1/2" SDS SCREWS	4x6	DOUBLE 2x6	2x6	10d	6	12	16d @ 3"	REF. TYPICAL BLOCKING DETAIL 10/S5.01	5/8" DIAMETERx4 3/4" TITEN HD ANCHORS @ 42" O.C. TYP. MAX 1'-0" FROM PLATE END	REF. S1.01
S13	REF. ELEVATIONS 2 / S3.51 AND 1/S3.52	2x6	DOUBLE 2x2	2x6	6d	COOLER NAILS				5/8" DIAMETERx4 3/4" TITEN HD ANCHORS @ 48" O.C. TYP. MAX 1'-0" FROM PLATE END	REF. S1.01

SHEAR WALL NOTES

1. SEE DIAPHRAGM PLANS FOR ALL LATERAL TIES TO SHEARWALLS.
2. SEE SCHEDULE FOR SHEARWALL AND HOLD DOWN INFORMATION.
3. WHERE COLUMNS OCCUR IN SHEAR WALLS, LOCATE HOLD DOWNS AT THOSE COLUMNS AS WELL AS AT SHEAR WALL ENDS.
4. TERMINATE SHEAR WALL AT GRIDLINE EE, ALIGN END CHORDS WITH WALL BELOW.
5. REFER TO DETAIL 5/403 FOR ACHORAGE REQUIREMENTS FOR EMBEDDED ANCHORS.
6. ALL WALL SHEATHING SHALL BE 1/2" (15/32) OSB.
7. ALL EXTERIOR WALL STUDS TO BE 2x6 @ 16" O.C. UNLESS NOTED OTHERWISE.
8. ALL INTERIOR WALL STUDS TO BE 2x4 @ 16" O.C. UNLESS NOTED OTHERWISE

STRUCTURAL WALL LEGEND



SHEAR WALL PLAN KEYNOTES

1. 2x8 STUDS @ 16" O.C.
2. 2x4 STUDS @ 16" O.C.
3. 2x6 STUDS @ 16" O.C.
4. 2x6 STUDS @ 24" O.C.

Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
3215 Transition Parkway NE
Albany, OR 97321

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Consultant

CROW ENGINEERING

9925 SW Nimbus Ave
Suite 110
Beaverton, OR 97008

T 503-213-2013
F 503-213-2018

crowengineering.com

Revisions

No.	Description	Date
2	Addendum #2	3/2/21

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REGISTERED PROFESSIONAL ENGINEER
91859PE
OREGON
JOSEPH F. KURTH
EXPIRES: 6-30-21

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SHEAR WALL PLAN

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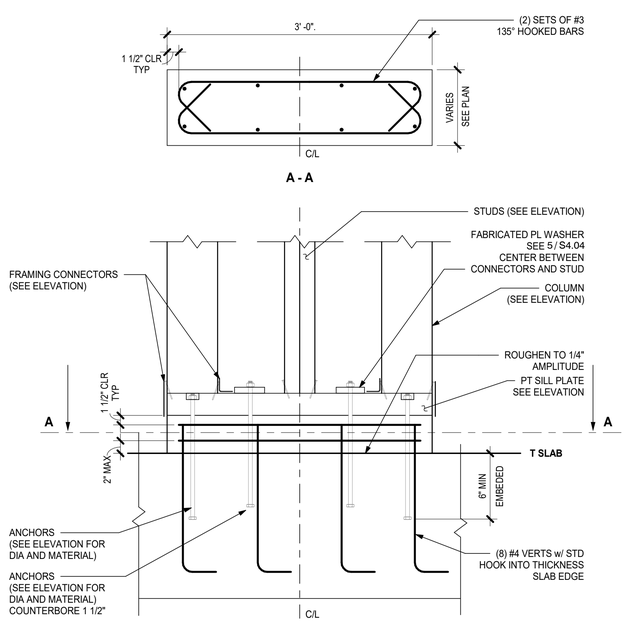
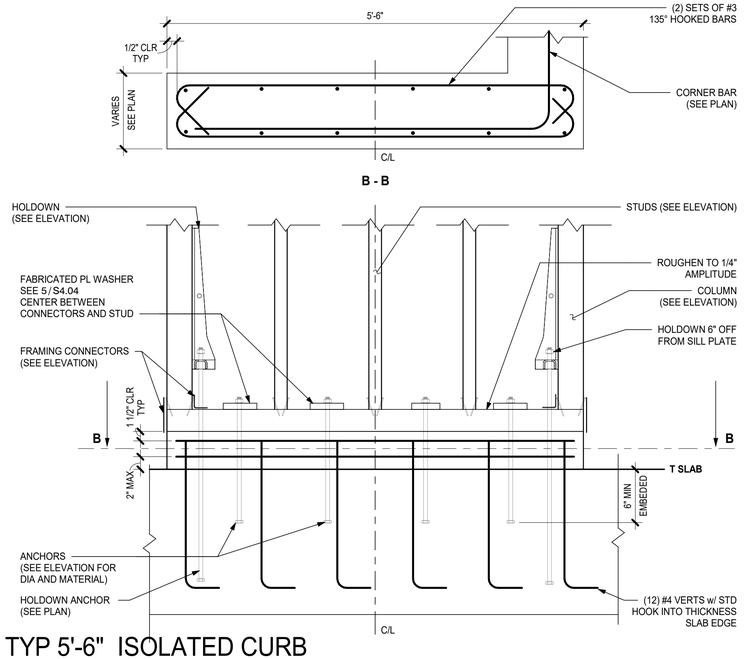


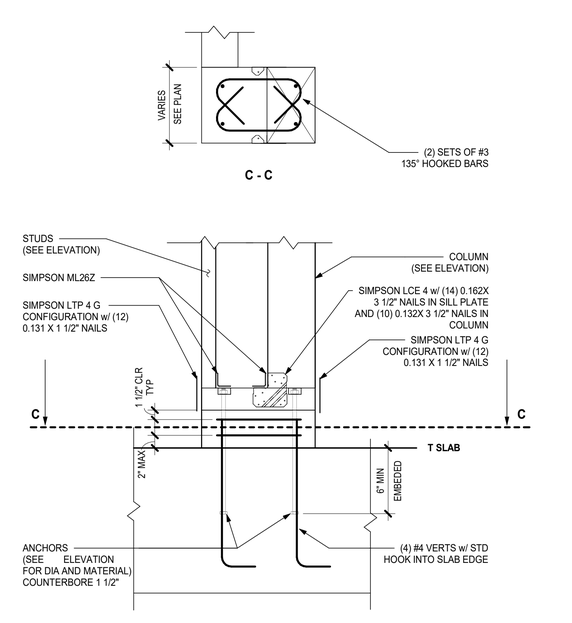
1 TYP 3' ISOLATED CURB

1" = 1'-0"



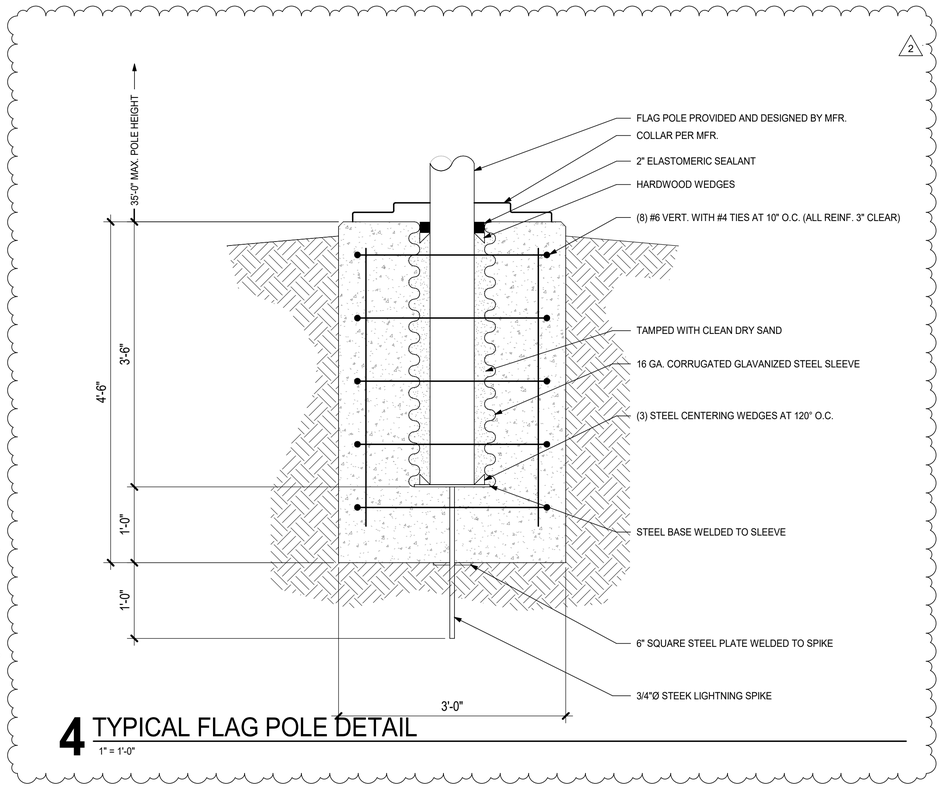
2 TYP 5'-6" ISOLATED CURB

1" = 1'-0"



3 TYP 3' ISOLATED CURB

1" = 1'-0"



4 TYPICAL FLAG POLE DETAIL

1" = 1'-0"

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Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
3215 Transition Parkway
NE
Albany, OR 97321

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Consultant

CROW ENGINEERING
9925 SW Nimbus Ave
Suite 110
Beaverton, OR 97008

T 503-213-2013
F 503-213-2018

crowengineering.com

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REGISTERED PROFESSIONAL ENGINEER
91889PE
OREGON
JULY 12, 2013
JOSEPH F. KURTH
EXPIRES: 6-30-21

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FOUNDATION DETAILS

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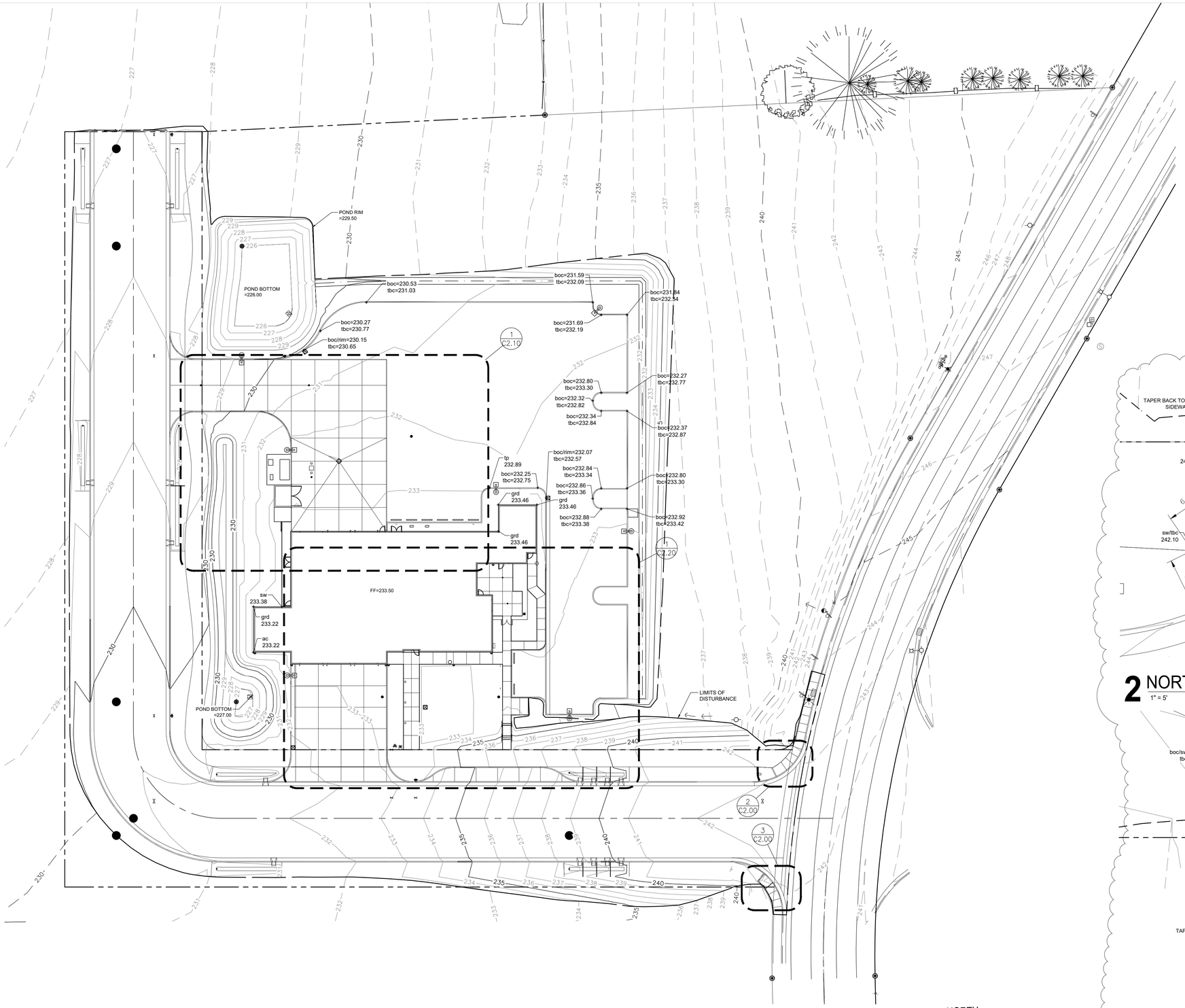


1 GRADING PLAN
1" = 30'

NORTH

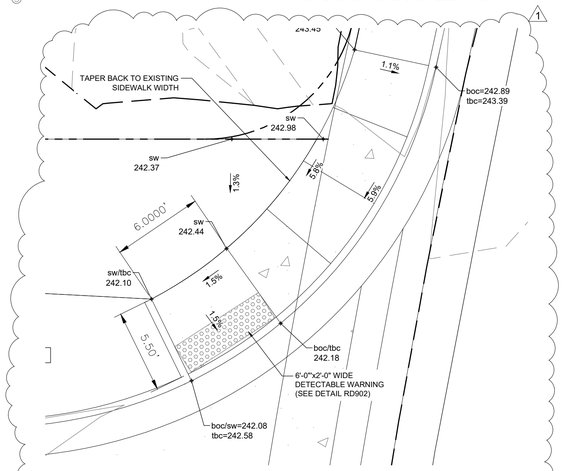
GRADING GENERAL NOTES:

1. REFER TO GEOTECHNICAL REPORT PREPARED BY PBS ENGINEERING AND ENVIRONMENTAL, INC AND DATED 8/26/2020 FOR REQUIRED SPECIFICATIONS REGARDING ALL GRADING AND SUBGRADE PREPARATION UNDER ALL ASPHALT, CONCRETE, AND BUILDING PADS
2. GROUND SURFACE WITHIN THE LIMITS OF PROPOSED IMPROVEMENTS SHOULD BE STRIPPED OF ALL ORGANIC MATERIAL AND REMOVED FROM SITE. TOP LAYER OF THIS MATERIAL SHALL BE RETAINED FOR LANDSCAPING AREAS
3. ALL CONTOURS SHOWN IN EXISTING SURVEY AND NEW DEVELOPMENT ARE AT 1 FT INTERVALS
4. EXCAVATION FOR ALL SITE UTILITIES INCLUDING STORM, SANITARY, WATER AND POWER NOT SHOWN. SEE UTILITY PLAN AND GEOTECHNICAL REPORT FOR UTILITY TRENCHING AND BEDDING REQUIREMENTS FOR ALL UTILITIES

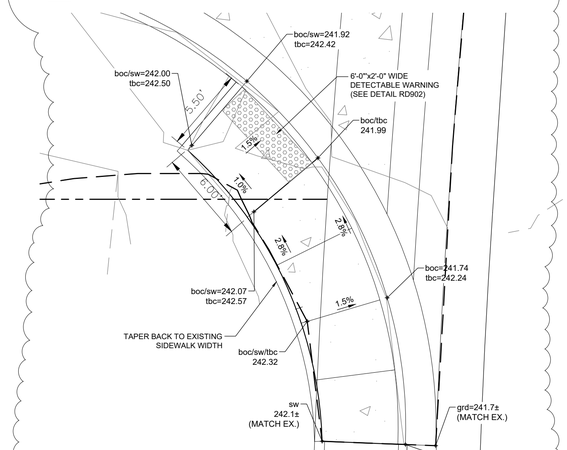
6'-0"x2'-0" WIDE DETECTABLE WARNING (SEE DETAIL RD902)

LEGEND

350	EXISTING GRADE MAJOR CONTOURS (10 FT INTERVALS)
352	EXISTING GRADE MINOR CONTOURS (2 FT INTERVALS)
350	FINISHED GRADE MAJOR CONTOURS (10 FT INTERVALS)
352	FINISHED GRADE MINOR CONTOURS (2 FT INTERVALS)
+ XX / 2XX.XX	DESCRIPTION (SEE ABBREVIATION LIST) SPOT ELEVATION
+ boc=2XX.XX / tbc=2XX.XX	BOTTOM OF CURB SPOT ELEVATION / TOP BACK OF CURB SPOT ELEVATION



2 NORTH ADA RAMP ENLARGEMENT
1" = 5'



3 SOUTH ADA RAMP ENLARGEMENT
1" = 5'

Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
Old Salem Road
Millersburg, OR 97321

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Consultant

CROW ENGINEERING

9925 SW Nimbus Ave
Suite 110
Beaverton, OR 97008

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Revisions

No.	Description	Date
1	Addendum 2	3/2/21

Stamp

REGISTERED PROFESSIONAL ENGINEER
69189PE
OREGON
SEPT. 13 20
JOSEPH F. KURTH

EXPIRES: 6-30-21

Issuance

BID SET

Date

2/3/21

Project Number

20335

Drawing Title

GRADING PLAN

Sheet No

C2.00

DATE 3/2/2021 6:54 AM
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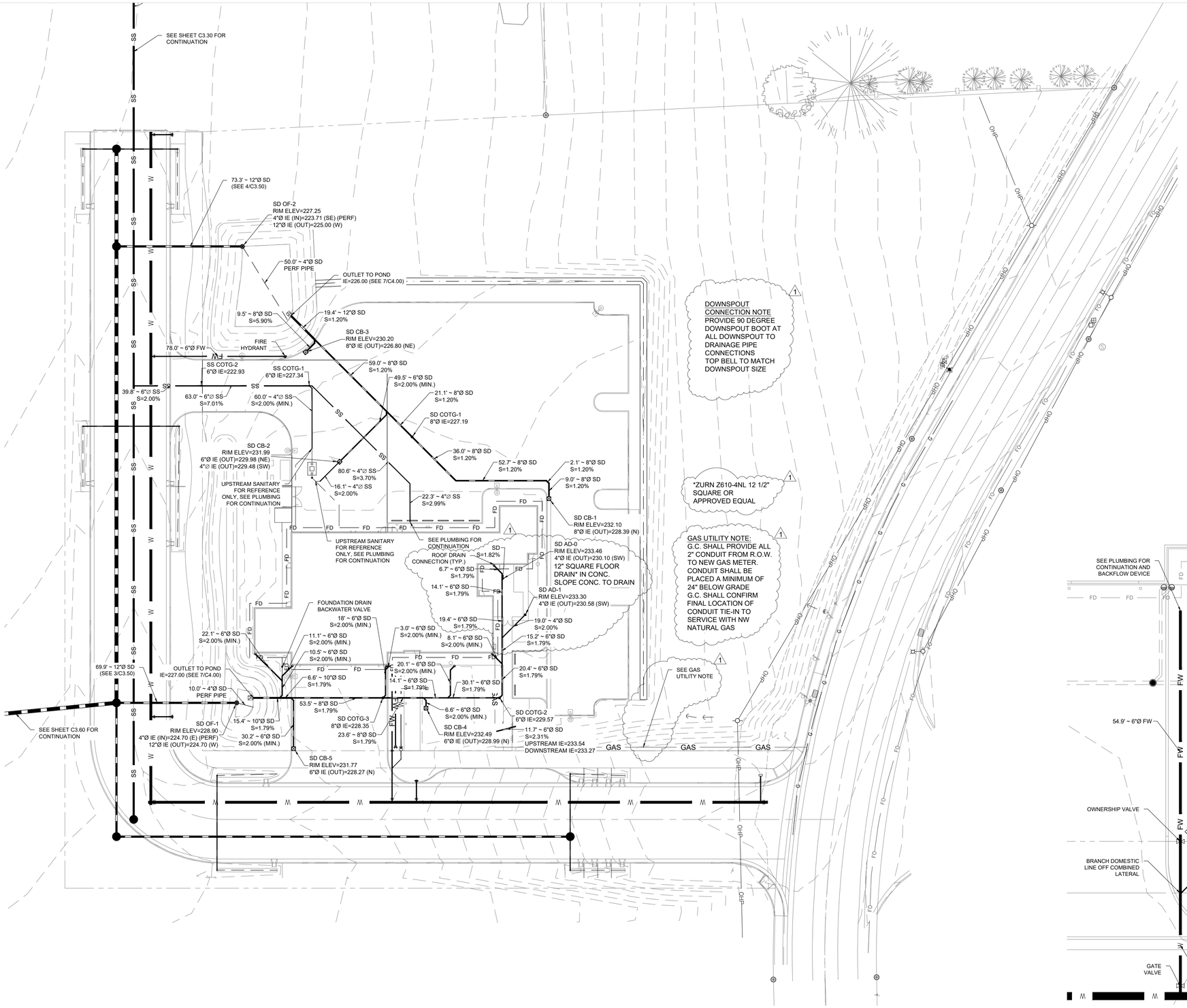


1 UTILITY PLAN

1" = 30'

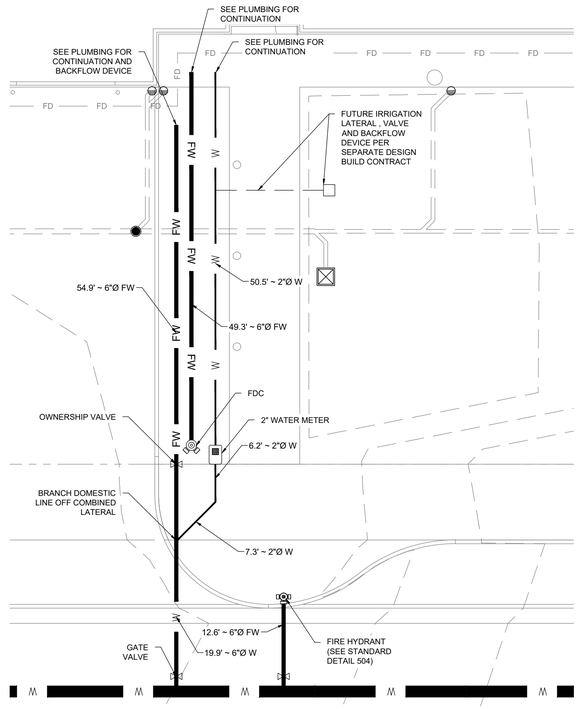
NORTH

UTILITY NOTES

1. ALL UTILITIES TO BE INSTALLED PER CITY OF MILLERSBURG STANDARDS, OREGON PLUMBING SPECIALTY CODE, OR PER DETAILS.
2. COORDINATE WITH MECHANICAL PLANS ALL SEWER AND WATER DESIGN ELEMENTS.
3. SEE GRADING PLAN FOR ALL STORM SYSTEM ELEMENTS SHOWN ON THIS PLAN BUT NOT CALLED OUT.
4. ALL WATER LINE JOINTS TO BE RESTRAINED.
5. INSTALL OMNI BALLS FOR WATER LINE LOCATION.

LEGEND

- PROPOSED STORM LINE
- FD — PROPOSED FOUNDATION DRAIN LINE
- SS — PROPOSED SANITARY LINE
- W — PROPOSED WATER LINE
- FW — PROPOSED FIRE LINE
- 350 — FINISHED GRADE MAJOR CONTOURS (5 FT INTERVALS)
- 352 — FINISHED GRADE MINOR CONTOURS (1 FT INTERVALS)
- PROPOSED CATCH BASIN
- PROPOSED AREA DRAIN
- PROPOSED BEEHIVE OVERFLOW
- PROPOSED STORM CLEANOUT
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY CLEANOUT
- PROPOSED SANITARY MANHOLE
- PROPOSED FIRE HYDRANT
- PROPOSED FDC



2 WATER AND FIRE LATERAL ENLARGEMENT

1" = 10'

Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire Station 15
Old Salem Road
Millersburg, OR 97321

CITY OF Millersburg — A COMMUNITY LINKING AGRICULTURE AND INDUSTRY

Consultant

CROW ENGINEERING
9925 SW Nimbus Ave
Suite 110
Beaverton, OR 97008

T 503-213-2013
F 503-213-2018

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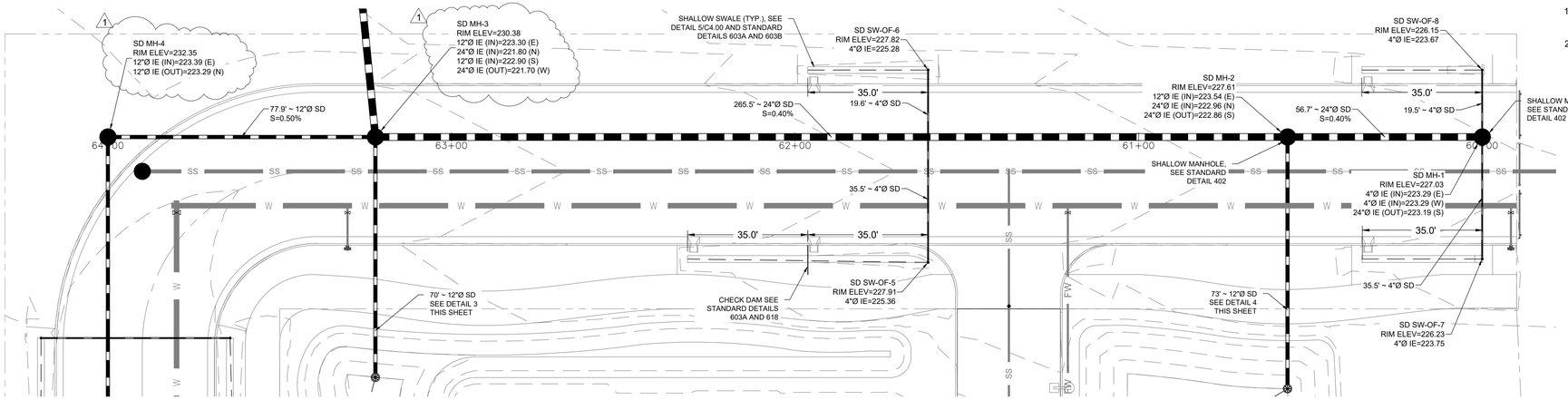
SITE UTILITY PLAN

Sheet No

C3.00

ROW STORM NOTES

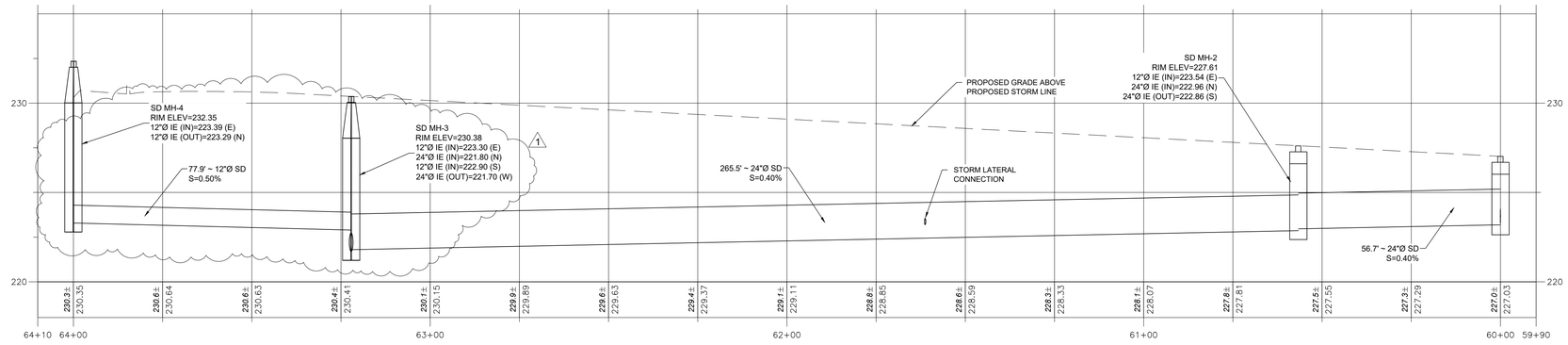
1. SLOPE ALL ROADSIDE SWALE OVERFLOW LATERALS AS NECESSARY TO AVOID CONFLICTS WITH CROSSING UTILITIES. MAINTAIN A MINIMUM 2% SLOPE.
2. FOR STORM/WATER OR STORM/SANITARY CROSSINGS WITH LESS THAN 12" OF VERTICAL SEPARATION, INSTALL CLSM SUPPORT PER DETAIL 5 THIS SHEET.



1 WEST ROW STORM PLAN

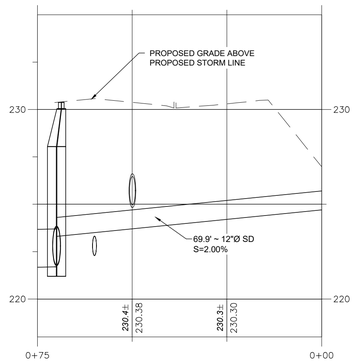
1" = 20'

NORTH



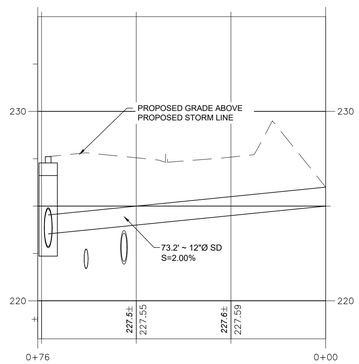
2 WEST ROW STORM PROFILE

1" = 20' H, 1" = 4' V



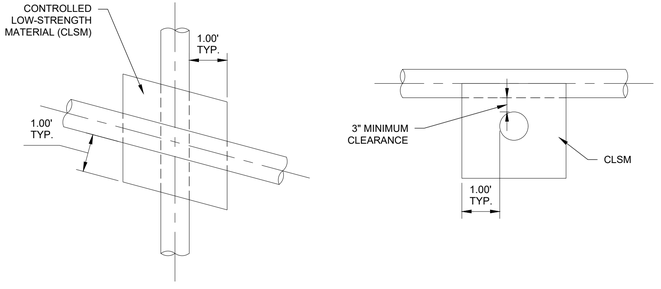
3 SOUTH OVERFLOW LATERAL PROFILE

1" = 20' H, 1" = 4' V



4 NORTH OVERFLOW LATERAL PROFILE

1" = 20' H, 1" = 4' V



NOTES

1. FOR CLSM REQUIREMENTS, REFER TO THE OREGON DOT STANDARD SPECIFICATION FOR CONSTRUCTION, SECTION 00442, 2021 EDITION.

5 CLSM SUPPORT

NTS

Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
Old Salem Road
Millersburg, OR 97321

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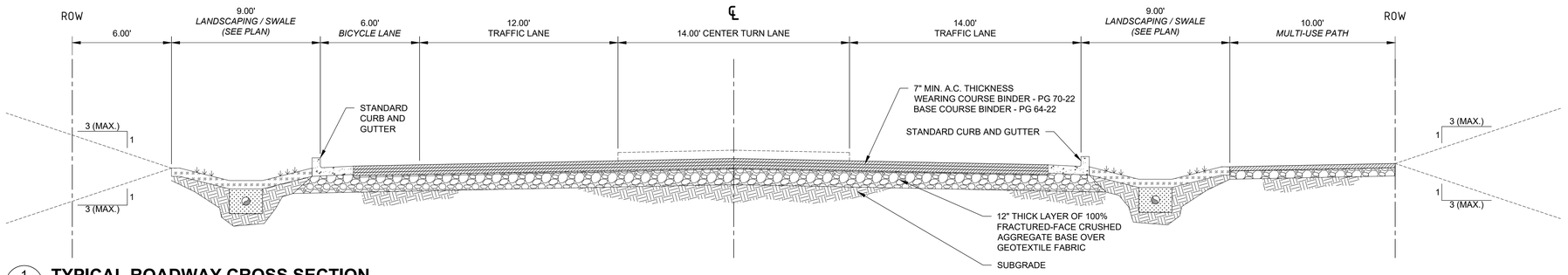
Drawing Title

WEST ROW STORM PLAN AND PROFILE

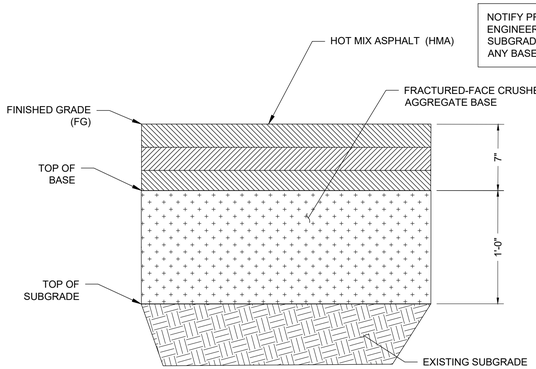
Sheet No

C3.50



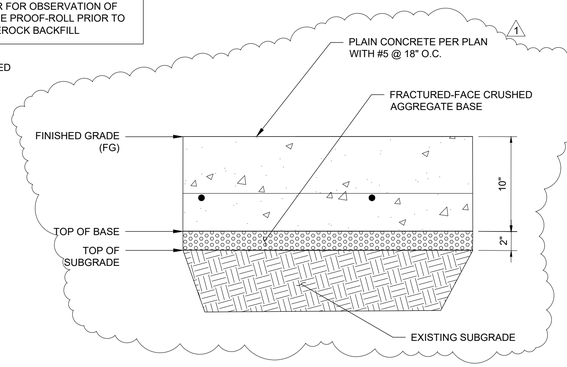
1 C4.00 TYPICAL ROADWAY CROSS SECTION

1" = 4'



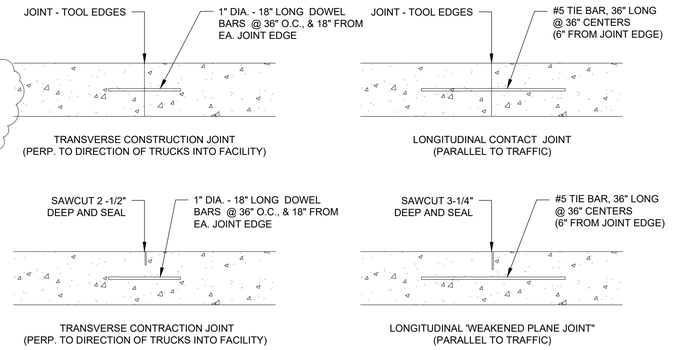
2 C4.00 TYPICAL ONSITE ASPHALT PAVEMENT SECTION

NTS

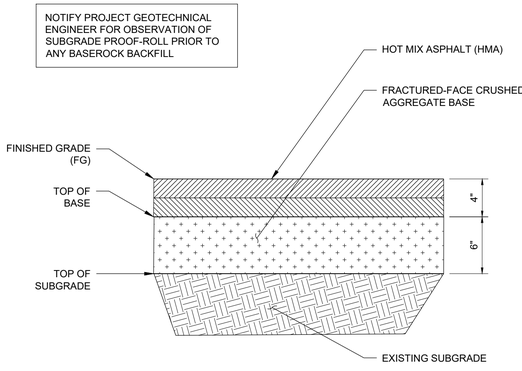


3 C4.00 CONCRETE PAVEMENT/DRIVEWAY SECTION

NTS

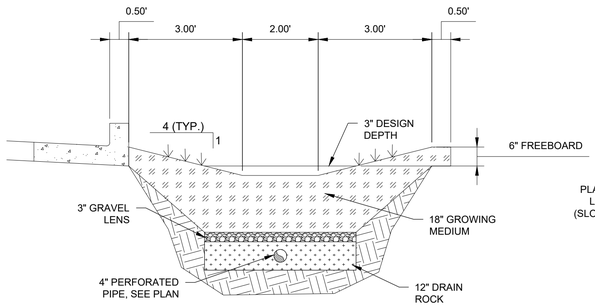


NOTIFY PROJECT GEOTECHNICAL ENGINEER FOR OBSERVATION OF SUBGRADE PROOF-ROLL PRIOR TO ANY BASEROCK BACKFILL



4 C4.00 MULTI-USE PATHWAY SECTION

NTS



5 C4.00 STREETSIDE SWALE SECTION

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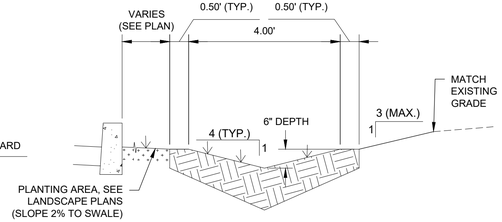
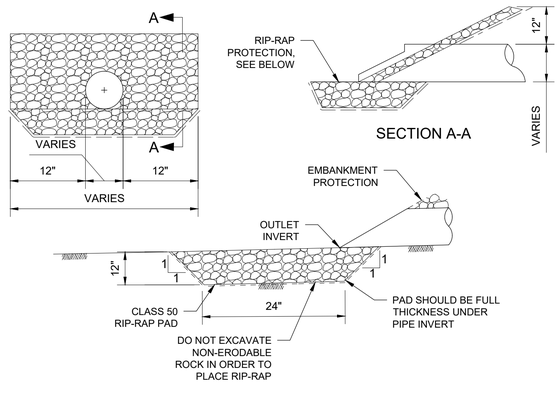


6 C4.00 CONVEYANCE SWALE

NTS



7 C4.00 EMBANKMENT PROTECTION & RIP-RAP PAD

NTS

Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

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DETAILS

Sheet No

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DATE 2/4/2021 10:19 AM
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ABBREVIATIONS

ABV	ABOVE
AC	ACTIVATED CARBON FILTER OR ALTERNATING CURRENT
ACC	AIR COOLED CHILLER
ACFM	ACTUAL CUBIC FEET/MINUTE
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AH	AIR HANDLER, GENERAL
AHU	AIR HANDLING UNIT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AMP	AMPERE (AMP,AMPS)
ARF	ABOVE RAISED FLOOR
BDD	BACK DRAFT DAMPER
BF	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BLO	BLOWER
BLR	BOILER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOT	BOTTOM OF TRAY
BOTT	BOTTOM
BOM	BILL OF MATERIAL
BTU	BRITISH THERMAL UNIT
C	CENTIGRADE OR COMPRESSOR
CA	COMPRESSED AIR
CC	COOLING COIL
2 CD	CEILING DIFFUSER
CEG	CEILING EXHAUST GRILLE
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CKT	CIRCUIT
CLP	COIL PUMP
CO	CLEANOUT
CONN	CONNECTION
CPLG	COUPLING
CRU	CONDENSATE RETURN UNIT
CSST	CORRUGATED STAINLESS STEEL TUBING
CT	COOLING TOWER
CTG	CLEANOUT TO GRADE
CU	CONDENSATE UNIT
CV	CONSTANT VOLUME TERMINAL UNIT
CVR	CONSTANT VOLUME REHEAT TERMINAL UNIT
dB	DECIBEL
(D)	DEMOLISH
DB	DRY BULB
DBT	DRY BULB TEMPERATURE
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DEH	DEHUMIDIFIER
DER	DEAERATOR
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DN	DOWN
(E)	EXISTING
EA	EACH
EA	EXHAUST AIR
EF	EXHAUST FAN
2 EFF	EFFICIENCY
EG	EXHAUST GRILLE
ELEV	ELEVATION
2 EPO	EMERGENCY POWER OFF
ER	EXHAUST REGISTER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST, GENERAL
(F)	FUTURE
F	FAHRENHEIT
FCU	FAN COIL UNIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEV
FFU	FAN FILTER UNIT
FL	CARTRIDGE OR BAG FILTER
FLT	FILTER
FN	FAN
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FP	FAN POWERED TERMINAL UNIT
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FOOT OR FEET
GA	GAGE OR GAUGE, OR GENERAL AIR
GAL	GALLONS
GCO	GRADE CLEANOUT
GEN	GENERATOR
GD	GROUND DIFFUSER
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HC	HEATING COIL
HD	HEAD
HE	HEAT EXHAUST
HG	MERCURY
HOR	HORIZONTAL
HP	HORSEPOWER
HR	HOUR(S)
HU	HUMIDIFIER
HX	HEAT EXCHANGER
HYD	HYDRAULIC
HZ	HERTZ (FREQUENCY)
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
KW	KILOWATT
KWH	KILOWATT HOUR
KVA	KILOVOLT-AMPERE
LAV	LAVATORY
LBS	POUNDS
LD	LEAK DETECTION
LPD	LOW POINT DRAIN
(M)	MECHANICAL
MAH	MAKEUP AIR HANDLER
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MULTI-MEDIA FILTER
MOT	MOTOR
MP	METERING PUMP
MUA	MAKEUP AIR

(N)	NEW
N/A	NOT APPLICABLE
NC	NOISE CRITERIA OR NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSABLE BLADE DAMPER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OL	OVERLOAD RELAY
OSA	OUTSIDE SUPPLY AIR
OZ	OUNCE
PD	PRESSURE DROP
PH	PHASE
PIV	POST INDICATOR VALVE
PL	PLUG VALVE
POC	POINT OF CONNECTION
PPM	PARTS PER MILLION
PSI	POUNDS PER SQUARE INCH
PSIA	PSI, ABSOLUTE
PSIG	PSI, GAUGE
QT	QUART
QTY	QUANTITY
(R)	RELOCATE
RA	RETURN AIR
RAH	RECIRC. AIR HANDLER
REQ	REQUIRED
REV	REVISION
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RM	ROOM
2 RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SC	SCRUBBER
SCFM	STANDARD CUBIC FEET/MINUTE
SD	SUPPLY DIFFUSER
SEC	SECOND
SG	SUPPLY GRILLE
SLM	STANDARD LITERS/MINUTE
SM	SHEET METAL
SP	STATIC PRESSURE
SPEC	SPECIFICATION
2 SR	SUPPLY REGISTER
SS	STAINLESS STEEL
STD	STANDARD
TB	THRUST BLOCK
TD	TEMPERATURE DIFFERENCE
TEMP	TEMPERATURE
TF	TRANSFER FAN
TK	TANK
T.O.	TOP OF
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TOS	TOP OF STEEL (SUPPORT)
TPU	THERMAL PROCESSING UNIT
TSTAT	THERMOSTAT
TU	TERMINAL UNIT
TYP	TYPICAL
UF	ULTRA FILTRATION UNIT
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VOLT
VAC	VACUUM
VAR	VARIABLE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VERT	VERTICAL
VP	VACUUM PUMP
VV	VARIABLE VOLUME TERMINAL UNIT
VVR	VARIABLE VOLUME REHEAT TERMINAL UNIT
W/	WITH
W	WATT
WB	WET-BULB
WBT	WET-BULB TEMPERATURE
WC	WATER CLOSET
W.C.	WATER COLUMN
WP	WEATHERPROOF
WS	WATER SOFTENER
WTR	WATER TEMPERATURE RISE
WTD	WATER TEMPERATURE DROP
WX	WET EXHAUST
XFMR	TRANSFORMER
YD	YARD
YR	YEAR
Z	ZONE

GENERAL SYMBOLS

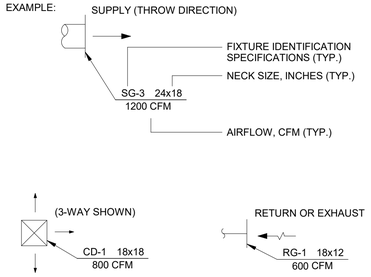
SYMBOL	DESCRIPTION
	CONNECT TO EXISTING
(E)	EXISTING TO REMAIN
(F)	FUTURE
(N)	NEW
(D)	EXISTING TO BE REMOVED
S/D	SHUT DOWN
DP	DIFFERENTIAL PRESSURE SENSOR
SP	STATIC PRESSURE SENSOR

ANNOTATION SYMBOLS

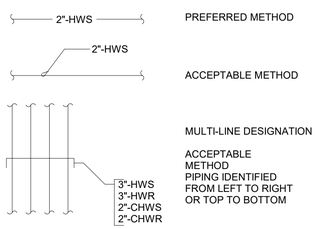
- XX — KEYED NOTE
- X — EQUIPMENT TAG
- X — REVISION TRIANGLE
- XXX / XXX — DETAIL NUMBER / DETAIL SYMBOL; DRAWING NUMBER WHERE DETAIL APPEARS
- XXX / XXX — ELEVATION LETTER / ELEVATION SYMBOL; DRAWING NUMBER WHERE ELEVATION APPEARS
- XXX / XXX — SECTION LETTER / SECTION CUT SYMBOL; DRAWING NUMBER WHERE SECTION APPEARS
- NORTH — NORTH ARROW
- FLOW ARROWS

AIR OUTLET/INLET DESIGNATION

EXAMPLE:



PIPE DESIGNATIONS



FIXTURE IDENTIFICATION

EXAMPLE:

CD-1
- NO. IN SPECIFICATIONS
- FIXTURE TYPE AS SHOWN IN ABBREVIATIONS TABLE

EQUIPMENT SYMBOLS

SYMBOL	DESCRIPTION
XX	CENTRIFUGAL PUMP
XX	SUBMERSIBLE PUMP
XX	MULTISTAGE CENTRIFUGAL PUMP
XX	VACUUM PUMP
XX	LIQUID RING PUMP
XX	SUMP PUMP
XX	EXHAUST FAN

XX EQUALS:

AFD ADJUSTABLE FREQUENCY DRIVE
CS-1 CONSTANT SPEED - SINGLE SPEED MOTOR
CS-2 CONSTANT SPEED - TWO SPEED MOTOR

DUCTWORK SYMBOLS

SINGLE LINE	DOUBLE LINE	DESCRIPTION
12x9	12x9	RECTANGULAR DUCT, WIDTH x DEPTH (INCHES) = INTERNALLY LINED
12Ø	12Ø	ROUND DUCT (INCHES) = INTERNALLY LINED
12x9Ø	12x9Ø	OVAL DUCT (INCHES)
		FLEXIBLE DUCT
		FLEXIBLE CONNECTION
		SUPPLY DUCT
		EXHAUST OR RETURN DUCT
		CROSS SECTION THRU ROUND DUCT
		STANDARD RADIUS ELBOW
		LONG RADIUS ELBOW
		SQUARE ELBOW W/TURNING VANES
		RADIUS ELBOW W/TURNING VANE
C	C	CEILING DIFFUSERS (ARROWS DENOTE THROW PATTERN) ASSUME 4-WAY THROW UNLESS OTHERWISE INDICATED
		CEILING EXHAUST REGISTER OR RETURN AIR GRILLE
		SIDEWALL SUPPLY REGISTER
		SIDEWALL EXHAUST REGISTER OR RETURN AIR GRILLE/REGISTER
T	T	ROOM THERMOSTAT, PNEUMATIC OR ELECTRONIC
(201)	(201)	(UNIT CONTROLLED)
T	T	ROOM THERMOSTAT, PENDENT MOUNT.
(201)	(201)	(UNIT CONTROLLED)
H		ROOM HUMIDISTAT
		PHOTOHELIC
M	M	ACTUATED DAMPER
		HAND/VOLUME DAMPER
		BLAST GATE DAMPER
FD	FD	FIRE DAMPER
SD	SD	SMOKE DAMPER
FSD	FSD	FIRE/SMOKE DAMPER
BDD	BDD	BACK DRAFT DAMPER
S	S	SMOKE DETECTOR

DRAWING INDEX

GENERAL NOTES

A THIS IS A GENERAL LEGEND PAGE, NOT ALL ITEMS ON THIS SHEET WILL BE USED.

B ALL WORK SHALL CONFORM TO ALL APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL CODES AND REGULATIONS AND OWNER'S STANDARDS.

C DRAWINGS ARE DIAGRAMMATIC. DRAWINGS ARE NOT INTENDED TO BE ABSOLUTELY PRECISE, AND DO NOT SPECIFY OR SHOW EVERY OFFSET, FITTING AND COMPONENT. THE PURPOSE OF THE DRAWINGS IS TO INDICATE A SYSTEM CONCEPT, THE MAIN COMPONENTS OF THE SYSTEMS, AND THE APPROXIMATE GEOMETRICAL RELATIONSHIPS. BASED ON THE SYSTEMS CONCEPT, THE MAIN COMPONENTS AND THE GEOMETRICAL RELATIONSHIPS THE CONTRACTOR SHALL PROVIDE ALL OTHER COMPONENTS AND MATERIALS NECESSARY TO MAKE THE SYSTEM FULLY COMPLETE AND OPERATIONS. CONTRACTOR SHALL ROUTE PIPING OR PROVIDE OFFSETS TO AVOID INTERFERENCE WITH STRUCTURAL ELEMENTS, ELECTRICAL PANELS AND JUNCTION BOXES ETC. VERIFY LOCATIONS, DIMENSIONS, EXISTING FLOW DIRECTIONS, ETC. BEFORE CONSTRUCTION. FIELD VERIFY ALL SIZES, DIMENSIONS AND EQUIPMENT LOCATIONS PRIOR TO CONSTRUCTION OR MATERIAL PROCUREMENT.

D REPAIR AND PATCH ALL (NEW AND EXISTING) WALL AND FLOOR PENETRATIONS TO MATCH EXISTING FINISH. PROVIDE SLEEVES AND SEAL ALL PENETRATIONS OF FIRE RATED WALLS/ FLOORS IN ACCORDANCE WITH UL SPECIFICATIONS, WITH 3M AND/ OR HILTI FIRE STOPPING MATERIALS APPROVED FOR THE PURPOSE. PROVIDE FIRE DAMPERS WHERE DUCTS PENETRATE FIRE RATED WALLS OR FLOORS.

E IN ADDITION TO FIRE-SAFING AND WEATHER SEALING REQUIREMENTS, PROVIDE CHROME ESCUTCHEON RINGS WHERE DUCTS AND PIPES PENETRATE THE FINISHED SIDE OF WALLS AND CEILINGS.

F ALL EXTERIOR WALL PENETRATIONS SHALL BE FLASHED AND SEALED WEATHER-TIGHT AND TO A STRUCTURALLY SOUND CONDITIONS.

G PROVIDE SUPPORT AND LATERAL BRACING FOR ALL DUCTWORK, PIPING AND EQUIPMENT IN ACCORDANCE WITH SMACNA AND BUILDING CODES. CONTRACTOR SHALL DESIGN AND PROVIDE CALCULATIONS AND SKETCHES AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.

H PROVIDE VOLUME DAMPERS AT NEW AND EXISTING SUPPLY AND EXHAUST DUCT BRANCHES.

J FIRE PROTECTION SCOPE IS A DESIGN-BUILD PROJECT BY THE FIRE PROTECTION CONTRACTOR. SPRINKLER DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA-13 AND THE BUILDING CODES.

FLOW STREAM DESIGNATION

CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
COND	CONDENSATE DRAIN
CW	CITY WATER
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
ICW	INDUSTRIAL COLD WATER
LPS	LOW PRESSURE STEAM
NPW	NON POTABLE WATER

Soderstrom Architects
1200 NW Naito Parkway, Suite 410
Portland, OR 97209
T 503-228-5617
F 503-227-8584
sdra.com

Project

Millersburg Fire
Station 15
3800 Old Salem Rd NE
Millersburg, OR 97321

CITY OF Millersburg — A COMMUNITY LINKING AGRICULTURE AND INDUSTRY

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CORBIN
CONSULTING ENGINEERS
Beaverton, OR (503) 645-0176

Revisions

No.	Description	Date
0	PERMIT SET	01/11/21
1	BID SET	02/03/21
2	ADDENDUM #2	03/02/21

Stamp

REGISTERED PROFESSIONAL ENGINEER
54515PE
OREGON
JUNE 15, 2005
JEFFERY LYNN STAUFFER
EXPIRES: 06/30/2022

Issuance
ADDENDUM #2

Date
03/02/21

Project Number
CC20034

Drawing Title
MECHANICAL LEGEND, ABBREVIATIONS, & GENERAL NOTES

Sheet No
M0.01

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FILE PATH:C:\Users\brysen.yoshimori\Documents\Millersburg FS-CDs - MEP_brysen.yoshimori@corbinengineering.com.rvt

GENERAL NOTES

A SEE SHEET M-0.01 FOR LEGEND, ABBREVIATIONS, & GENERAL NOTES.

B REFRIGERATION PIPING NOT SHOWN FOR CLARITY.

C MOUNT IRH-02 THROUGH IRH-08 AT 15' ABOVE FINISHED FLOOR.

D ROUTE 3/4" CONDENSATE TO NEAREST TAIL PIECE, MOP SINK, OR FLOOR SINK.

KEYED NOTES

1 INSTALL INTEC SGC6-00-CO-NO2 SENSOR OR EQUIVALENT AT 36" ABOVE FINISHED FLOOR.

2 INSTALL LIQUID AND SUCTION PIPING INSIDE AN 8" CORRUGATED PIPE UNDERGROUND FROM ODU TO UNDERSIDE OF STAIRS.

3 VENT UP AND TERMINATE 4" GAS ON ROOF WITH GAS VENT CAP.

4 TERMINATE 3" COMBUSTION AIR AND VENT ON ROOF WITH WATER HEATER MANUFACTURER'S CONCENTRIC ROOF VENT KIT.

5 TERMINATE 10" DIAMETER RANGE EXHAUST ON ROOF.

6 MOUNT HEATER ON 45 DEGREE ANGLE.

7 MOUNT DUCTWORK IN TRUSS SPACE.

8 ODU-1A/1B LOCATED ON CONCRETE PAD ADJACENT TO GENERATOR AND TRASH ENCLOSURE.

9 PROVIDE DRYERBOX 425 AT 48" ABOVE FINISHED FLOOR TO CENTER OF UNIT. TERMINATE 4" DRYER DUCT ON ROOF.

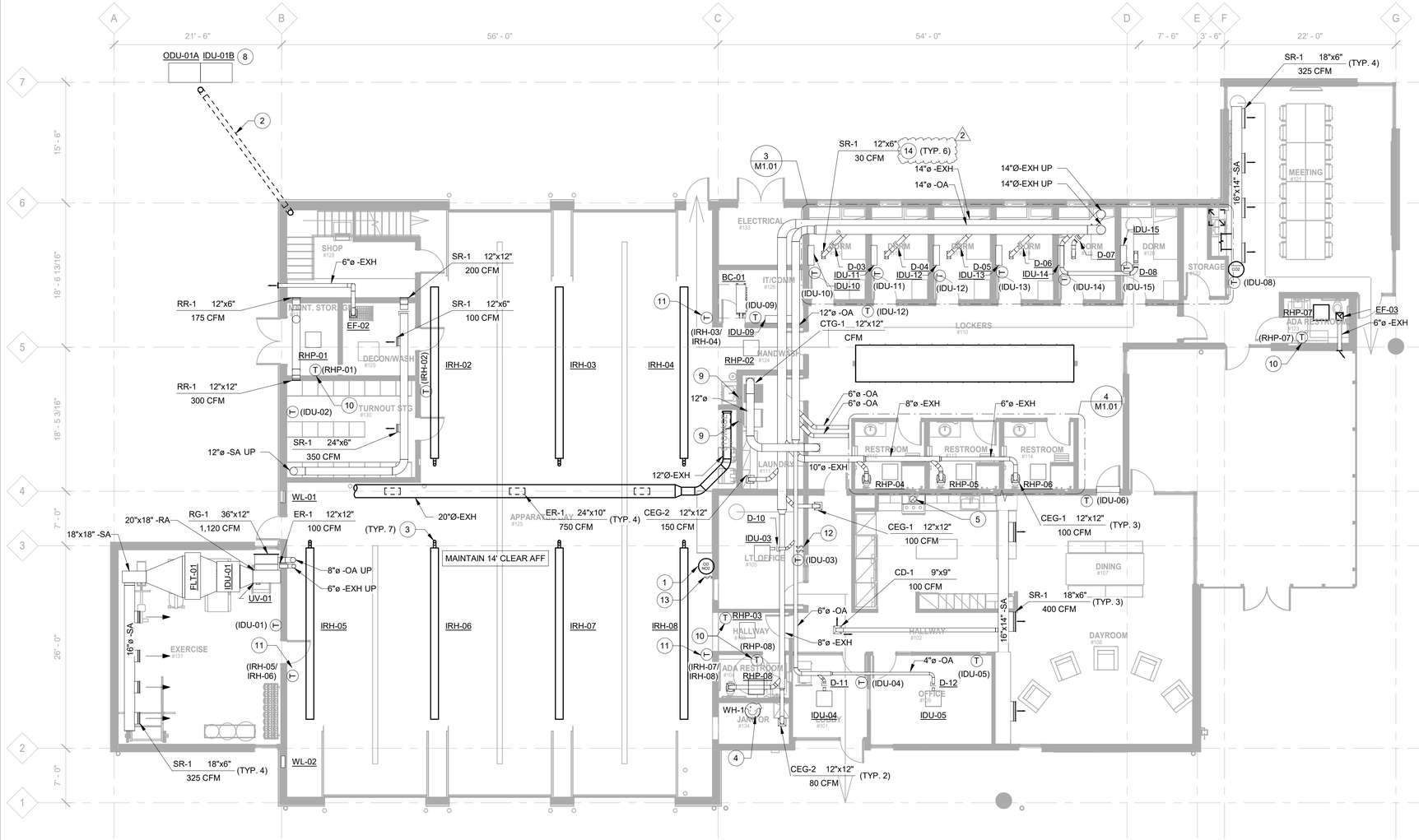
10 PROVIDE LINE VOLTAGE THERMOSTAT.

11 PROVIDE LOW VOLTAGE THERMOSTAT AND WIRE PER RADIANT HEATER'S INSTALLATION INSTRUCTIONS FOR MULTIPLE UNIT CONTROL.

12 MANUAL OVERRIDE SHUT-OFF SWITCHES FOR HRV-01 AND HRV-02 FOR MANUAL SHUT-OFF DURING ADVERSE OUTDOOR AIR CONDITIONS.

13 OVERRIDE SWITCH TO TURN EXHAUST FAN UP TO HIGH SPEED. REQUIRES 10 VOLT DC SIGNAL.

2 14 PROVIDE CEILING RADIATION FIRE DAMPER AT CEILING PENETRATION OF SUPPLY DIFFUSER.

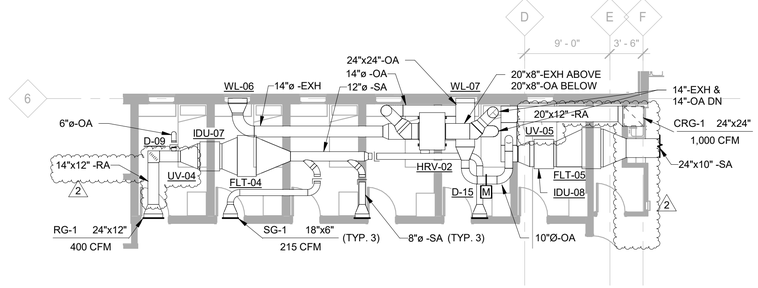


1 MECHANICAL GROUND FLOOR PLAN

1/8" = 1'-0"

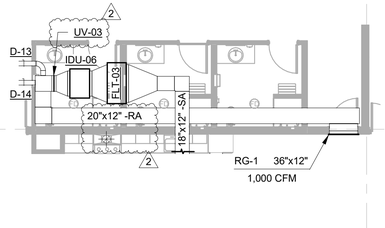
2 MECHANICAL MEZZANINE FLOOR PLAN

1/8" = 1'-0"



3 ABOVE DORM AREA PLAN

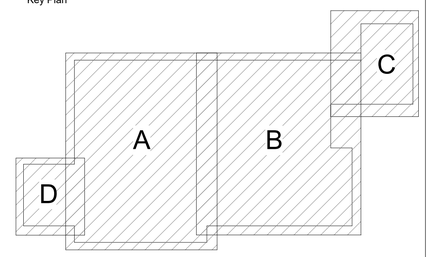
1/8" = 1'-0"



4 ABOVE RESTROOM AREA PLAN

1/8" = 1'-0"

Key Plan



Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
3800 Old Salem Rd NE
Millersburg, OR 97321

CITY OF Millersburg
A COMMUNITY LINKING AGRICULTURE AND INDUSTRY

Consultant

CORBIN
CONSULTING ENGINEERS
Beaverton, OR (503) 645-8176

Revisions

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0	PERMIT SET	01/11/21
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REGISTERED PROFESSIONAL ENGINEER
54519PE
OREGON
JUNE 15, 2013
JEFFERY LYNN STAUFFER
EXPIRES: 06/30/2022

Issuance
ADDENDUM #2

Date
03/02/21

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CC20034

Drawing Title
MECHANICAL GROUND FLOOR PLAN

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M1.01

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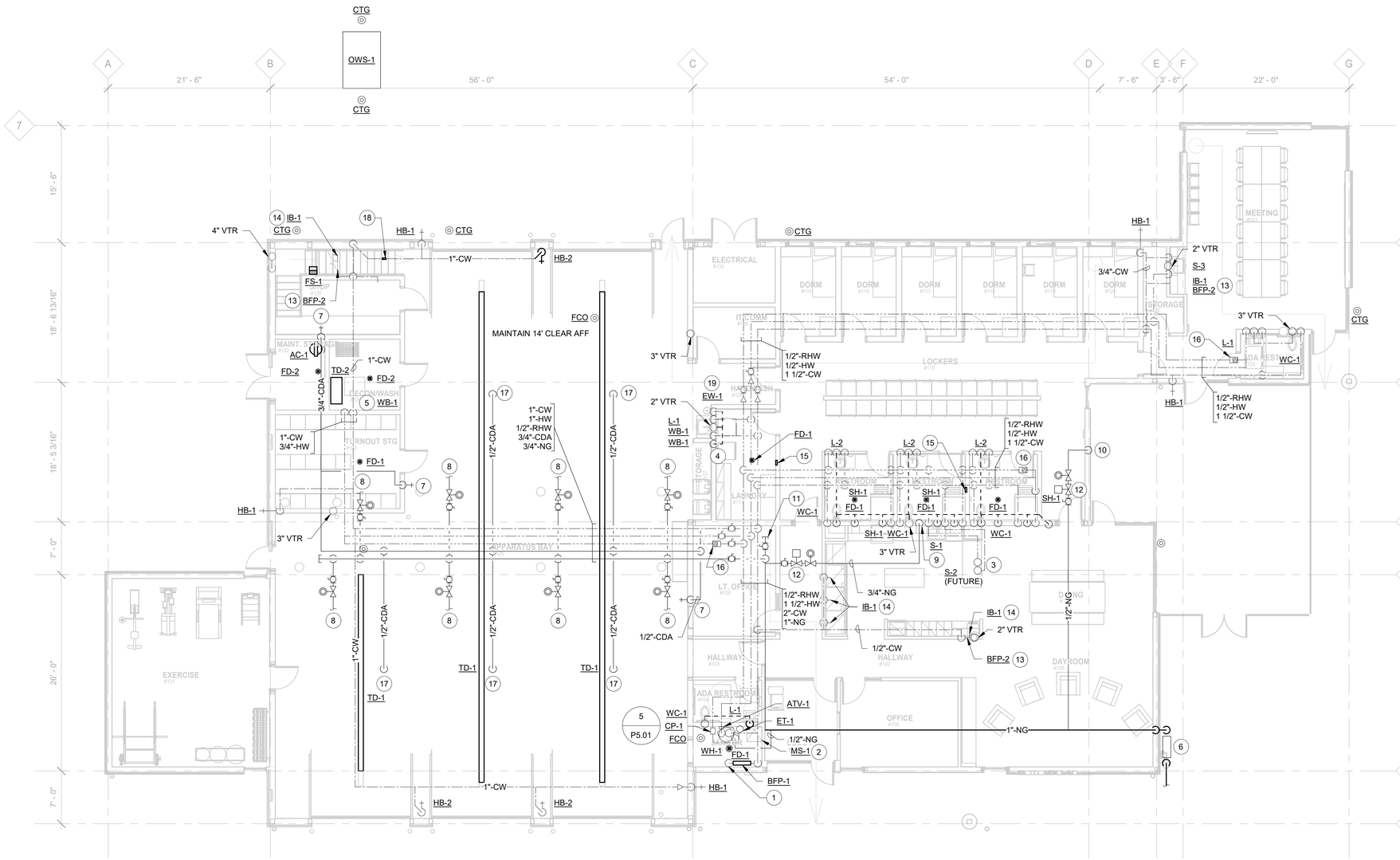


NORTH

1 PLUMBING GROUND FLOOR PLAN

1/8" = 1'-0"

GENERAL NOTES

A SEE SHEET P0.01 FOR LEGEND, ABBREVIATIONS, & GENERAL NOTES.

B REFER TO STRUCTURAL PLANS FOR FLOOR SLOPES AND TRENCH DRAIN ELEVATIONS.

C MOUNT SHOWER HEADS AT 7'-0" ABOVE FINISHED FLOOR.

KEYED NOTES

1 2" MAIN BUILDING SHUT-OFF VALVE.

2 ROUTE 3/4" CW, 3/4" HW DN IN WALL TO L-1 AND MS-1.

3 ROUTE 1/2" CW, 1/2" HW PEX TUBING IN TOE KICK SPACE OF CABINET AND CAP. TERMINATE 2"-SAN 2" ABOVE FINISHED FLOOR AND CAP.

4 ROUTE 3/4" CW, 3/4" HW DN IN WALL TO L-1 AND BOTH WB-1.

5 ROUTE 3/4" CW, 3/4" HW DN IN WALL TO WB-1. PROVIDE 3/4"x1/2" REDUCING BUSHING PRIOR TO ENTERING BOX.

6 2 LBS NATURAL GAS METER LOCATION.

7 1/2" CDA PIPING DN IN WALL, TERMINATE 48" ABOVE FINISHED FLOOR, AND PROVIDE QUICK DISCONNECT FITTING.

8 1/2" NG PIPING WITH SHUT-OFF VALVE AND REGULATOR. CONNECT TO RADIANT HEATER. REFER TO MECHANICAL PLANS.

9 3/4" NG PIPING DN IN WALL, TERMINATE 3" ABOVE FINISHED FLOOR, PROVIDE GAS SHUT-OFF VALVE, AND MAKE FINAL CONNECTION TO APPLIANCE.

10 1/2" NG PIPING DN IN WALL, TERMINATE 6" ABOVE FINISHED FLOOR, PROVIDE GAS SHUT-OFF VALVE, AND MAKE FINAL CONNECTION TO APPLIANCE.

11 PROVIDE SHUT-OFF VALVE AND CAP FOR FUTURE.

12 PROVIDE 1/2" GAS SHUT-OFF VALVE, SOLENOID VALVE, AND PRESSURE REGULATOR.

13 MOUNT BFP-2 IN WALL AT 48" ABOVE FINISHED FLOOR. PROVIDE WITH ACCESS PANEL. DISCHARGE TO HUB DRAIN LOCATED IN WALL. PROVIDE ACCESS PANEL. PROVIDE FINAL CONNECTION TO COFFEE MAKER.

14 INSTALL IB-1 AT 48" ABOVE FINISHED FLOOR.

15 TRAP PRIMER LOCATION. SEE DETAIL 4/P5.01 FOR MORE INFORMATION.

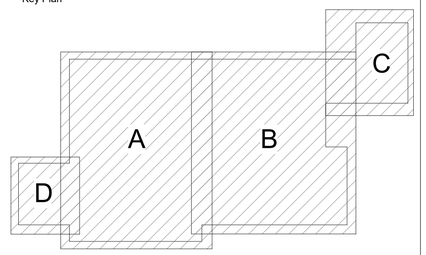
16 PROVIDE GRISWOLD F-2989 3521D FLOW LIMITING VALVE. FLOW SET AT 1.0 GPM.

17 1/2"-CDA PIPING TERMINATES WITH RETRACTABLE HOSE REEL. COORDINATE FINAL MOUNTING REQUIREMENTS WITH OWNER.

2 18 PROVIDE 1" TACO FLOW SWITCH FOR VEHICLE WASH DIVERTER VALVE. PROVIDE HAYWARD 4" 3-WAY DIVERTER VALVE WITH 120 VOLT ACTUATOR. COORDINATE WITH ELECTRICAL AND CIVIL FOR CONDUIT AND VALVE LOCATIONS.

19 CONNECT CW AND HW FOR EW-1 TO L-1 BRANCH PIPING.

Key Plan



Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

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REGISTERED PROFESSIONAL ENGINEER
OREGON
JUNE 15, 2007
JEFFERY LYNN STAUFFER
EXPIRES: 06/30/2022

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PLUMBING GROUND FLOOR PLAN

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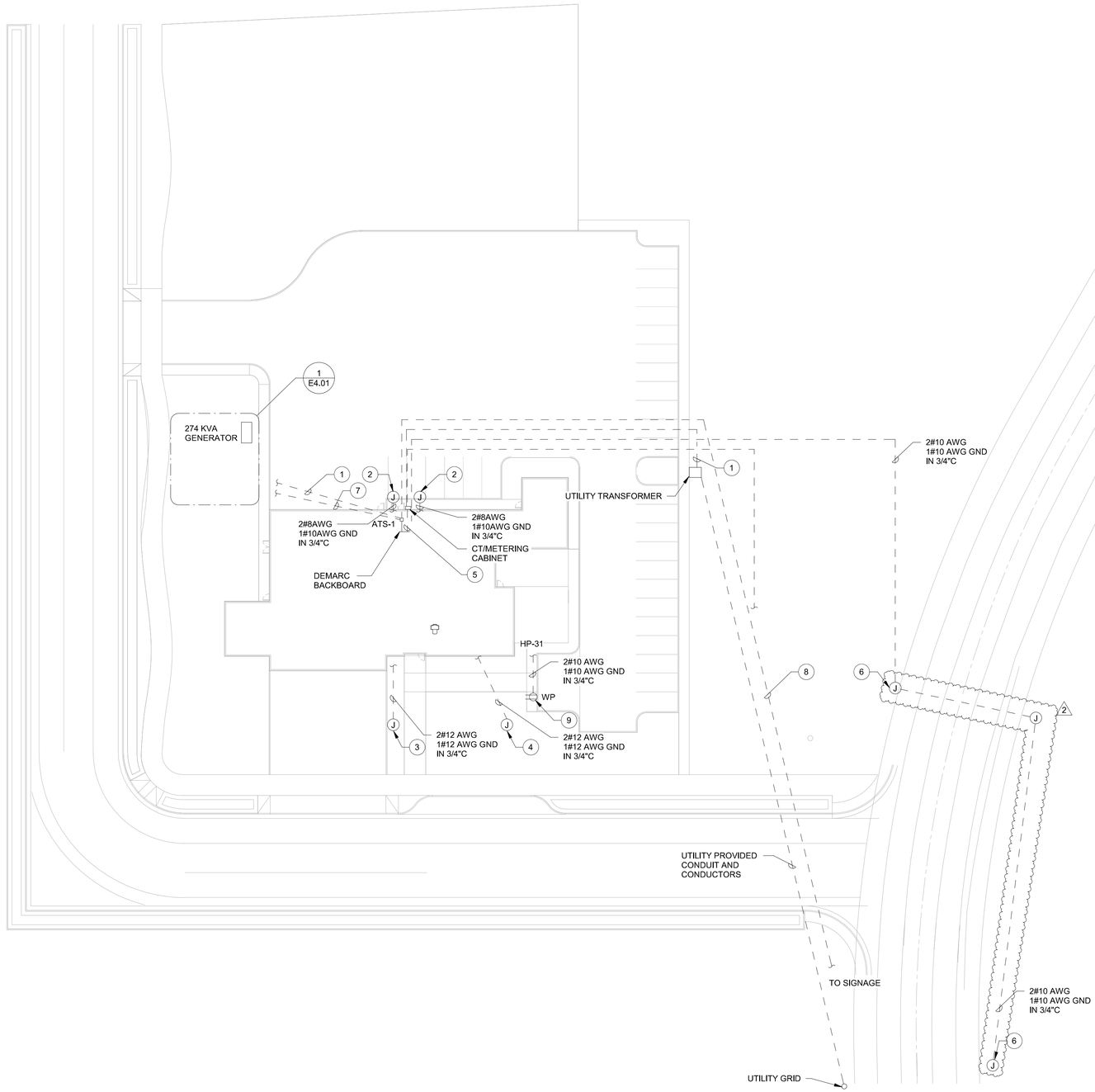


NORTH

1 ELECTRICAL SITE PLAN

1" = 30'-0"

GENERAL NOTES

A SEE SHEET E0.01 FOR LEGEND, ABBREVIATIONS, & GENERAL NOTES.

KEYED NOTES

1 FOR CONDUCTOR AND CONDUIT SIZES REFER TO DRAWING E6.01.

2 PROVIDE POWER TO CAR CHARGING OUTLETS AS SHOWN. CONNECT CHARGER CIRCUITS TO PANEL HP CIRCUIT 32,34 & 36,38.

3 PROVIDE POWER TO FLAGPOLE AS SHOWN. CONNECT FLAGPOLE CIRCUIT TO PANEL HP CIRCUIT 21.

4 PROVIDE POWER TO LIFE JACKET BOARD AS SHOWN. CONNECT LIFE JACKET BOARD CIRCUIT TO PANEL HP CIRCUIT 23.

5 PROVIDE (3) 1" CONDUITS AND TERMINATE INTO EXISTING CENTURYLINK, ALYRICA, LS NETWORKS AND XFINITY PEDESTALS. COORDINATE ALL WORK WITH CENTURYLINK, LS NETWORKS AND XFINITY.

2

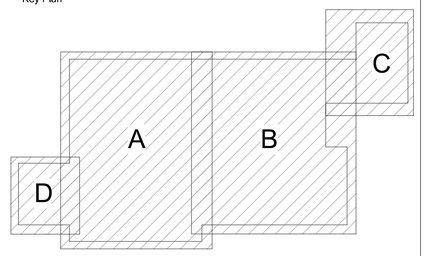
6 PROVIDE POWER TO FIRE SIGNAL AS SHOWN. CONNECT FIRE SIGNAL CIRCUIT TO PANEL HP CIRCUIT 25. PROVIDE BORING UNDER OLD SALEM ROAD AS WELL AS JUNCTION BOXES ON EITHER SIDE OF THE ROAD.

7 REFER TO 1/E4.01 FOR MORE INFORMATION.

8 PROVIDE 1" CONDUIT FOR OPTICOM EMITTER CONTROLS CABLING. CABLING TO ACTIVATE SIGNAGE, COORDINATE WITH OWNER FOR MORE INFORMATION.

9 PROVIDE WEATHERPROOF RECEPTACLE IN YARD, COORDINATE FINAL LOCATION WITH OWNER.

Key Plan



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0	PERMIT SET	01/11/21
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Stamp

REGISTERED PROFESSIONAL ENGINEER
Josh Parker
OREGON
JANUARY 19, 2010
Josh Parker
Digitally signed by Josh Parker
Date: 2021.03.02 10:01:12 -08'00'

EXPIRES: 12/31/2022

Issuance
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ELECTRICAL SITE PLAN

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E1.01

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FIXTURE SCHEDULE

LABEL	DESCRIPTION	LAMP	LAMP LUMENS	WATTS	VOLTAGE	CATALOG NUMBER	MANUFACTURER	MOUNTING	NOTES
A	RECESSED 2'X4' LED TROFFER FIXTURE, 4000K COLOR TEMPERATURE, 80CRI, 120V.	LED 4000K	3,638	29	120V	2BLT4-40LHE-ADSM-EZ1-LP840	LITHONIA OR APPROVED	RECESSED	
B	4' STRIP LED FIXTURE, 4000K COLOR TEMPERATURE, 80CRI, 120V.	LED 4000K	2,712	25	120V	ZL1N-L48-3000LM-FST-120-40K-80CRI-WH	LITHONIA OR APPROVED	SURFACE/CHAIN	
C	HIGH BAY LED FIXTURE, 4' LENGTH, CLEAR ACRYLIC LENS, 4000K COLOR TEMPERATURE, 80CRI, 120V	LED 4000K	16,567	115	120V	IBG-18000LM-SEF-ACL-WD-120-GZ10-40K-80CRI-HLN360ADC-DNA	LITHONIA OR APPROVED	CHAIN	INDIVIDUAL OCCUPANCY SENSOR CONTROLS. E FIXTURES TO BE ALWAYS ON
D	RECESSED LED DOWNLIGHT FIXTURE, 4000K COLOR TEMPERATURE, 80CRI, 120V.	LED 4000K	2,009	23	120V	LDN6-40/20-LO6AR-LSS-120-GZ10	LITHONIA OR APPROVED	RECESSED	IP55 RATED (NOTE 2)
E	RECESSED 2'X2' LED TROFFER FIXTURE, 4000K COLOR TEMPERATURE, 80CRI, 120V.	LED 4000K	2,967	26	120V	2BLT2-33L-ADSM-EZ1-LP940	LITHONIA OR APPROVED	RECESSED	IP55 RATED
F	RECESSED LED DOWNLIGHT FIXTURE. 4000K COLOR TEMPERATURE, 80CRI, 120V.	LED 4000K	759	8.9	120V	LDN6-40/07-LO6AR-LSS-120-GZ10	LITHONIA OR APPROVED	RECESSED	
G	RECESSED 8' STRIP LED FIXTURE, 4000K COLOR TEMPERATURE, 80CRI, 120V.	LED 4000K	5,610	48.2	120V	TZL1N-L96-6000LM-FST-120-40K-90CRI-WH	LITHONIA OR APPROVED	SURFACE	
H	POLE MOUNTED LED FIXTURE, T4M DISTRIBUTION TYPE, 4000K COLOR TEMPERATURE, 120V. COLOR SHALL BE BLACK. NOTE 1	LED 4000K	26,697	241	120V	DSX1-LED-P9-40K-T4M-120-SPA-PIRH1FC3V-DBLXD	LITHONIA OR APPROVED	30' POLE (SEE BELOW FOR SPEC)	ROUND POLE MOUNTING. FULL CUT OFF. INTEGRAL MOTION/AMBIENT SENSOR.
I	WALL PACK LED FIXTURE, WIDE DISTRIBUTION TYPE, 4000K COLOR TEMPERATURE, 80CRI, 120V. COLOR SHALL BE BLACK	LED 4000K	4,526	35	120V	WDGE2-LED-P4-40K-80CRI-VW-120-SRM-PIR1FC3V	LITHONIA OR APPROVED	WALL	MOUNT AT 15'. INTEGRAL MOTION/AMBIENT SENSOR. (NOTE 2)
J	POLE MOUNTED LED FIXTURE, T3 DISTRIBUTION TYPE, 4000K COLOR TEMPERATURE, 120V. COLOR SHALL BE BLACK.	LED 4000K	28,000	295	120V	125-25S-R3-DG	AMERICAN ELECTRIC LIGHTING	30' POLE (SEE BELOW FOR SPEC)	ROUND POLE MOUNTING. FULL CUT OFF. INTEGRAL MOTION/AMBIENT SENSOR.
L	WARNING LIGHT, STROBE TUBE, 120V, RED COLOR, POLYCARBONATE LENS.	STROBE TUBE	N/A	9.6	120V	2ERP4	GRAINGER OR APPROVED	WALL	FIXTURE TO BE ACTIVATED BY TAPOUT SYSTEM EMERGENCY COMMAND
M	BOLLARD LED FIXTURE, 4000K COLOR TEMPERATURE, IP65 RATED, VANDAL RESISTANT, DOME TOP, 120V.	LED 4000K	995	41	120V	UCO-10117-41W-1-W40-02-120/277V-OCC1	LIGMAN OR APPROVED	BOLLARD	INTEGRAL MOTION SENSOR
N	UNDERCABINET LED FIXTURE, 2' LENGTH, 3000K COLOR TEMPERATURE, 90CRI, 120-277V	LED 3000K	740	13	120V	UCLD 24IN 30K 90CRI SWR WH	LITHONIA OR APPROVED	UNDERCABINET	NOTE 3
O	OUTDOOR LED BULLET FLOOD LIGHT WITH FLOOD DISTRIBUTION AND 5000K LENS, 120V.	LED 5000K	839	11	120V	OLBF-8-50K-DDB	LITHONIA OR APPROVED	GROUND	MOTION SENSOR/DAYLIGHT CONTROL. 145 DEGREE AIMING ANGLE FROM SOFFIT FOR SIGNAGE. AIM TOWARDS FLAG FOR FLAG POLE
P	LED FLAT PANEL FIXTURE RED LENSE. RECESSED 2'X2', BATTERY BACKUP, 120-277V	LED 4000K	2,009	30	120V	EPANL-2X2-2000LM-80CRI-40K-MIN10-MVOLT-SLD-EMG	LITHONIA OR APPROVED	RECESSED	PROVIDE RED LENSES ON FIXTURE
Q	LINEAR LED LIGHT BAR FIXTURE, RED COLOR, 4 FOOT LENGTH, 120-277V	LED	360	8.5	120V	EGLB-R44	SUPER BRIGHT LEDS OR APPROVED	FLOOR	NOTE 4
R	NATURAL BRONZE MINI-PENDANT FIXTURE, A19 BULB MEDIUM BULB, 120V.	INCANDESCENT	N/A	60	120V	1762-220 SH1775-220-R1775-220	DESTINATION LIGHTING	STEM HUNG	
S	BLACK/WHITE FIXTURE, US MEDIUM-E26 BULB BASE,120V.	INCANDESCENT	N/A	100	120V	1762-220 SH1775-220-R1775-220	DESTINATION LIGHTING	STEM HUNG	
X	LED EXIT FIXTURE, THERMOPLASTIC HOUSING, RED COLOR, BATTERY BACKUP, 120-277V	LED	N/A	1	120V	LQM SW R 120/277 EL N	LITHONIA OR APPROVED	SURFACE	
POLE	ROUND STRAIGHT STEEL POLE, GALVANIZED FINISH, 30' HEIGHT, SINGLE LUMINAIRE MOUNT, 3"X5" HANDHOLE WITH COVER.	N/A	N/A	N/A	N/A	RSS30B4-4-GC-D190-FA	HAPCO	N/A	

NOTE 1: SENSOR TO REDUCE LIGHTING OUTPUT BY 50% WHEN AREA IS UNOCCUPIED FOR 15 MINUTES OR LONGER
NOTE 2: ALL LIGHTING ON BUILDING EXTERIOR TO BE ADDRESSABLE AND ON PHOTO SENSOR WITH MANUAL OVERRIDE.
NOTE 3: MOUNT LIGHT FIXTURE DIRECTLY UNDER CABINET AT LOCATIONS SHOWN ON PLANS
NOTE 4: LIGHTS TO BE CONNECTED IN SERIES AND PLACED ALONG BASE OF WALLS IN LOCKER ROOM. COORIDNATE EXACT LOCATIONS WITH OWNER.
NOTE 5: MOTION SENSOR/DAYLIGHT CONTROL. 145 DEGREE AIMING ANGLE FROM SOFFIT FOR SIGNAGE.

PANEL HP

PANEL: PANEL HP | SC RMS: 35 kAIC | AVAILABLE FAULT: 9.55 KA | VOLTAGE: 208Y/120V

FEEDER: SEE ONE LINE | MAIN RATING: 225 A MLO | LOCATION: ELEC. ROOM | POWER TYPE: EMERGENCY

CKT NO.	CIRCUIT DESCRIPTION	CKT BREAKER POLES/AMPS	Type	LOAD Volt-Amps	PHASE	LOAD Volt-Amps	Type	CKT BREAKER POLES/AMPS	CIRCUIT DESCRIPTION	CKT NO.
1	ODU-01A	50-3	E	3963	A	670	E	15-1	HRV-01	2
3	-	-	E	3963	B	1320	E	15-1	HRV-02	4
5	-	-	E	3963	C	460	E	20-1	EF-01	6
7	IRH-05,06,07	20-1	H	930	A	240	E	20-1	CP-01	8
9	IRH-01,08	20-1	H	620	B	600	H	20-1	WH-01	10
11	IRH-02,03,04	20-1	H	930	C	437	E	20-2	IDU-01,UV-01	12
13	RHP-03,04,05,06,07	20-2	H	878	A	437	E	-	-	14
15	-	-	H	878	B	234	E	20-2	IDU-03,04,05,09,13, RHP-08	16
17	RHP-01,02	20-2	H	350	C	234	E	-	-	18
19	-	-	H	350	A	198	E	20-2	IDU-10,11,12,13,14,15	20
21	FLAGPOLE	20-1	E	500	B	198	E	-	-	22
23	LIFE JACKET BOARD	20-1	E	500	C	1175	E	20-2	IDU-06,07,08,UV-06,07,08	24
25	FIRE SIGNAL	20-1	E	500	A	1175	E	-	-	26
27	GENERATOR BLOCK HEATER	20-1	E	1500	B	218	E	20-2	IDU-02,UV-02	28
29	GEN BATTERY CHARGER	60-1	E	5000	C	218	E	-	-	30
31	YARD RECEPTACLE	20-1	E	180	A	3600	E	40-2	CAR CHARGING OUTLET	32
33	ODU-01B	50-3	E	3963	B	3600	E	-	-	34
35	-	-	E	3963	C	3600	E	40-2	CAR CHARGING OUTLET	36
37	-	-	E	3963	A	3600	E	-	-	38
39	SPARE	20-1			B			20-1	SPARE	40
41	SPARE	20-1			C			20-1	SPARE	42

CONNECTED LOAD (VA)		CALCULATED LOAD (PER NEC 220)		PANEL LOAD	
RECEPTACLES:	0.00	10 KVA + 50% OF REMAINDER	0.00	208Y/120V	
LIGHTING:	0.00	125%	0.00		
EQUIPMENT/MOTORS:	53,572.00	100%	53,572.00		
LARGEST EQUIP MOTOR:	0.00	125% OF LARGEST EQUIP	0.00		
HEATING:	5,536.00	100%	5,536.00	PHASE A:	20,684.00
COOLING/MOTORS:	0.00	100%	0.00	PHASE B:	17,594.00
LARGEST MOTOR:	0.00	125% OF LARGEST MOTOR	0.00	PHASE C:	20,830.00
MISCELLANEOUS	0.00	100%	0.00		
TOTAL LOAD (KVA):	59.11	TOTAL LOAD:	59.11	TOTAL LOAD:	59.11
TOTAL AMPS:	164.07	TOTAL AMPS:	164.07	TOTAL AMPS:	164.07

NOTES:
1.)
2.)

PANEL IT

PANEL: PANEL IT | SC RMS: 35 kAIC | AVAILABLE FAULT: | KA VOLTAGE: 208Y/120V

FEEDER: SEE ONE LINE | MAIN RATING: 70 A MCB | LOCATION: IT ROOM | POWER TYPE: UPS

CKT NO.	CIRCUIT DESCRIPTION	CKT BREAKER POLES/AMPS	Type	LOAD Volt-Amps	PHASE	LOAD Volt-Amps	Type	CKT BREAKER POLES/AMPS	CIRCUIT DESCRIPTION	CKT NO.
1	IT ROOM RECEPTACLE	20-1	R	180	A	500	E	20-1	ALERT CONTROL PANEL	2
3	IT ROOM RECEPTACLE	20-1	R	180	B	500	E	20-1	DSP	4
5	RTU TAPOUT SYSTEM	20-1	E	500	C	500	E	20-1	RADIO	6
7	AMPLIFIER	20-1	E	500	A	500	E	20-1	GENERATOR ANNUNCIATOR PANEL	8
9	AMPLIFIER	20-1	E	500	B			20-1	SPARE	10
11	SPARE	20-1			C			20-1	SPARE	12
13	SPARE	20-1			A			20-1	SPARE	14
15	SPARE	20-1			B			20-1	SPARE	16
17	SPARE	20-1			C			20-1	SPARE	18
19	SPARE	20-1			A			20-1	SPARE	20
21	SPARE	20-1			B			20-1	SPARE	22
23	SPARE	20-1			C			20-1	SPARE	24

CONNECTED LOAD (VA)		CALCULATED LOAD (PER NEC 220)		PANEL LOAD	
RECEPTACLES:	360.00	10 KVA + 50% OF REMAINDER	360.00	208Y/120V	
LIGHTING:	0.00	125%	0.00		
EQUIPMENT/MOTORS:	3,500.00	100%	3,500.00		
LARGEST EQUIP MOTOR:	0.00	125% OF LARGEST EQUIP	0.00		
HEATING:	0.00	100%	0.00	PHASE A:	1,680.00
COOLING/MOTORS:	0.00	100%	0.00	PHASE B:	1,180.00
LARGEST MOTOR:	0.00	125% OF LARGEST MOTOR	0.00	PHASE C:	1,000.00
MISCELLANEOUS	0.00	100%	0.00		
TOTAL LOAD (KVA):	3.86	TOTAL LOAD:	3.86	TOTAL LOAD:	3.86
TOTAL AMPS:	10.71	TOTAL AMPS:	10.71	TOTAL AMPS:	10.71

NOTES:
1.)
2.)
3.) 1-Feb-21

PANEL LP

PANEL: PANEL LP | SC RMS: 35 kAIC | AVAILABLE FAULT: 9.86 KA | VOLTAGE: 208Y/120V

FEEDER: SEE ONE LINE | MAIN RATING: 225 A MLO | LOCATION: ELEC. ROOM | POWER TYPE: EMERGENCY

CKT NO.	CIRCUIT DESCRIPTION	CKT BREAKER POLES/AMPS	Type	LOAD Volt-Amps	PHASE	LOAD Volt-Amps	Type	CKT BREAKER POLES/AMPS	CIRCUIT DESCRIPTION	CKT NO.
1	RM 128-131 & MEZZ.	20-1	L	853	A	964	L	20-1	EXTERIOR LIGHTING	2
3	APPARATUS BAY	20-1	L	1495	B			20-1	SPARE	4
5	RM 101-103, 105-109 & 134	20-1	L	793	C	1205	L	20-1	EXTERIOR LIGHTING	6
7	RM 110-114, 124, 133 & 126	20-1	L	730	A	175	L	20-1	WALLPACK LIGHTING	8
9	RM 115-1232	20-1	L	664	B	175	L	20-1	WALLPACK LIGHTING	10
11	EXTERIOR BOLLARD/FLOOD LIGHTING	20-1	L	287	C	175	L	20-1	WALLPACK LIGHTING	12
13	SPARE	20-1			A			20-1	SPARE	14
15	SPARE	20-1			B			20-1	SPARE	16
17	SPARE	20-1			C			20-1	SPARE	18
19	SPARE	20-1			A			20-1	SPARE	20
21	SPARE	20-1			B			20-1	SPARE	22
23	SPARE	20-1			C			20-1	SPARE	24
25	SPARE	20-1			A			20-1	SPARE	26
27	SPARE	20-1			B			20-1	SPARE	28
29	SPARE	20-1			C			20-1	SPARE	30
31	SPARE	20-1			A			20-1	SPARE	32
33	SPARE	20-1			B			20-1	SPARE	34
35	SPARE	20-1			C			20-1	SPARE	36
37	SPARE	20-1			A	6667	E	70-3	20KVA UPS	38
39	SPARE	20-1			B	6667	E	-	-	40
41	SPARE	20-1			C	6667	E	-	-	42

CONNECTED LOAD (VA)		CALCULATED LOAD (PER NEC 220)		PANEL LOAD	
RECEPTACLES:	0.00	10 KVA + 50% OF REMAINDER	0.00	208Y/120V	
LIGHTING:	7,516.00	125%	9,395.00		
EQUIPMENT/MOTORS:	20,001.00	100%	20,001.00		
LARGEST EQUIP MOTOR:	0.00	125% OF LARGEST EQUIP	0.00		
HEATING:	0.00	100%	0.00	PHASE A:	9,389.00
COOLING/MOTORS:	0.00	100%	0.00	PHASE B:	9,001.00
LARGEST MOTOR:	0.00	125% OF LARGEST MOTOR	0.00	PHASE C:	9,127.00
MISCELLANEOUS	0.00	100%	0.00		
TOTAL LOAD (KVA):	27.52	TOTAL LOAD:	29.40	TOTAL LOAD:	27.52
TOTAL AMPS:	76.38	TOTAL AMPS:	81.60	TOTAL AMPS:	76.38

NOTES:
1.)
2.)

PANEL G

PANEL: PANEL G | SC RMS: 35 kAIC | AVAILABLE FAULT: 9.98 KA | VOLTAGE: 208Y/120V

FEEDER: SEE ONE LINE | MAIN RATING: 400 A MLO | LOCATION: ELEC. ROOM | POWER TYPE: EMERGENCY

CKT NO.	CIRCUIT DESCRIPTION	CKT BREAKER POLES/AMPS	Type	LOAD Volt-Amps	PHASE	LOAD Volt-Amps	Type	CKT BREAKER POLES/AMPS	CIRCUIT DESCRIPTION	CKT NO.
1	MEZZANINE RECEPTACLES	20-1	R	720	A	645	E	15-2	WASHING MACHINE	2
3	RM 131 RECEPTACLES	20-1	R	720	B	645	E	-	-	4
5	RM 131 BIKE/ROWER	20-1	E	1000	C	1800	E	20-1	KITCHEN MICROWAVE	6
7	RM 131 STAIRMASTER	20-1	E	1000	A	1800	E	20-1	KITCHEN REFRIGERATOR	8
9	RM 131 TREADMILL	20-1	E	1000	B	1800	E	20-1	KITCHEN MICROWAVE	10
11	RM 130 RECEPTACLES	20-1	R	540	C	1200	E	20-1	DISHWASHER	12
13	RM 132/129/125 RECEPTACLES/EF-02	20-1	R	960	A	1200	E	20-1	KITCHEN RECEPTACLES	14
15	RM 128 RECEPTACLES	20-1	R	540	B	1260	R	20-1	RM LOCKERS 110, 115-117 RECEPT	16
17	RM 128/125 RECEPTACLE	20-1	R	360	C	1080	R	20-1	RM 118-120/122 RECEPTACLES	18
19	RM 101/134 RECEPTACLES	20-1	R	900	A	1320	R	20-1	STORAGE/HALLWAY/125 RECEPT./EF-03	20
21	RM 103-105 RECEPTACLES	20-1	R	720	B	1080	R	20-1	RM 121 RECEPACLES	22
23	RM 105/LAUNDRY/HALL RECEPTACLES	20-1	R	1080	C	360	R	20-1	RM 121 PROJECTOR/FLOOR	24
25	RM 109/HALLWAY RECEPTACLES	20-1	R	900	A	540	R	20-1	OUTDOOR RECEPTACLES	26
27	RR/HALLWAY RECEPTACLE	20-1	R	720	B	1080	R	20-1	HALLWAY/DINING RECEPTACLES	28
29	KITCHEN COUNTER RECEPTACLES	20-1	R	720	C	1080	R	20-1	DAYROOM/HALLWAY RECEPTACLES	30
31	ESPRESSO MACHINE	15-1	E	1200	A	900	R	20-1	RM 133 RECEPTACLES	32
33	APP BAY RECEPTACLES	20-1	R	180	B	540	R	20-1	APP BAY RECEPTACLES	34
35	STORAGE 127	20-1	R	180	C	1500	E	20-1	BATTERY CHARGING/STORAGE	36
37	APP BAY RECEPTACLES	20-1	R	180	A	1500	E	20-1	BATTERY CHARGING/STORAGE	38
39	APP BAY RECEPTACLES	20-1	R	180	B	1500	E	20-1	BATTERY CHARGING/STORAGE	40
41	APP BAY GARAGE DOOR	20-1	M	528	C	1500	E	20-1	BATTERY CHARGING/STORAGE	42
43	APP BAY GARAGE DOOR	20-1	M	528	A	1500	E	15-1	KITCHEN STOVE/HOOD	44
45	APP BAY GARAGE DOOR	20-1	M	528	B	1800	E	20-1	KITCHEN REFRIGERATOR	46
47	APP BAY GARAGE DOOR	20-1	M	528	C	1800	E	20-1	KITCHEN REFRIGERATOR	48
49	APP BAY GARAGE DOOR	20-1	M	528	A	400	E	20-1	KITCHEN DISPOSAL	50
51	QT-54 AIR COMPRESSOR	40-2	M	1737	B	645	E	15-2	WASHING MACHINE	52
53	-	-	M	1737	C	645	E	-	-	54
55	RM 128 ICE MACHINE	20-1	E	1056	A	1500	E	20-1	DAYROOM CEILING FANS	56
57	UNDER COUNTER REFRIGERATOR	20-1	E	1000	B	900	R	20-1	RM 121 RECEPT	58
59	OUTDOOR RECEPTACLES	20-1	R	1080	C	500	E	20-1	SPRINKLER CONTROL PANEL	60
61	APP BAY VEHICLE POWER DROP	20-1	R	1300	A	4160	E	50-2	FUTURE ELECTRIC KITCHEN OVEN	62
63	APP BAY VEHICLE POWER DROP	20-1	R	1300	B	4160		-	-	64
65	APP BAY VEHICLE POWER DROP	20-1	R	1300	C			20-0	SPARE	66
67	APP BAY VEHICLE POWER DROP	20-1	R	1300	A			20-1	SPARE	68
69	APP BAY VEHICLE POWER DROP	20-1	R	1300	B			20-1	SPARE	70
71	SPARE	20-1			C			20-1	SPARE	72
73	SPARE	20-1			A			20-1	SPARE	74
75	SPARE	20-1			B			20-1	SPARE	76
77	SPARE	20-1			C			20-1	SPARE	78
79	SPARE	20-1			A			20-1	SPARE	80
81	SPARE	20-1			B			20-1	SPARE	82
83	SPARE	20-1			C			20-1	SPARE	84

CONNECTED LOAD (VA)		CALCULATED LOAD (PER NEC 220)		PANEL LOAD	
RECEPTACLES:	27,320.00	10 KVA + 50% OF REMAINDER	18,660.00	208Y/120V	
LIGHTING:	0.00	125%	0.00		
EQUIPMENT/MOTORS:	34,296.00	100%	34,296.00		
LARGEST EQUIP MOTOR:	0.00	125% OF LARGEST EQUIP	0.00		
HEATING:	0.00	100%	0.00	PHASE A:	26,037.00
COOLING/MOTORS:	6,114.00	100%	6,114.00	PHASE B:	25,335.00
LARGEST MOTOR:	0.00	125% OF LARGEST MOTOR	0.00	PHASE C:	20,518.00
MISCELLANEOUS	0.00	100%	0.00		
TOTAL LOAD (KVA):	67.73	TOTAL LOAD:	59.07	TOTAL LOAD:	71.89
TOTAL AMPS:	188.00	TOTAL AMPS:	163.96	TOTAL AMPS:	199.55

NOTES:
1.)
2.)

Soderstrom Architects
1200 NW Naito Parkway, Suite 410
Portland, OR 97209
T 503-228-5617
F 503-227-8584
sdra.com

Project
Millersburg Fire
Station 15
3800 Old Salem Rd NE
Millersburg, OR 97321

CITY OF Millersburg — A COMMUNITY LINKING AGRICULTURE AND INDUSTRY

Consultant
CORBIN
CONSULTING ENGINEERS
Beaverton, OR (503) 645-0176

Revisions

No.	Description	Date
0	PERMIT SET	01/11/21
1	BID SET	02/03/21
2	ADDENDUM #2	03/02/21

Stamp
REGISTERED PROFESSIONAL ENGINEER
Josh Parker
Digitally signed by Josh Parker
Date: 2021.03.02 09:09:04 -08'00'
MARCH 10, 2023
Josh Parker
EXPIRES: 12/31/2022

Issuance
ADDENDUM #2

Date
03/02/21

Project Number
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Drawing Title
ELECTRICAL SCHEDULES

Sheet No
E6.02

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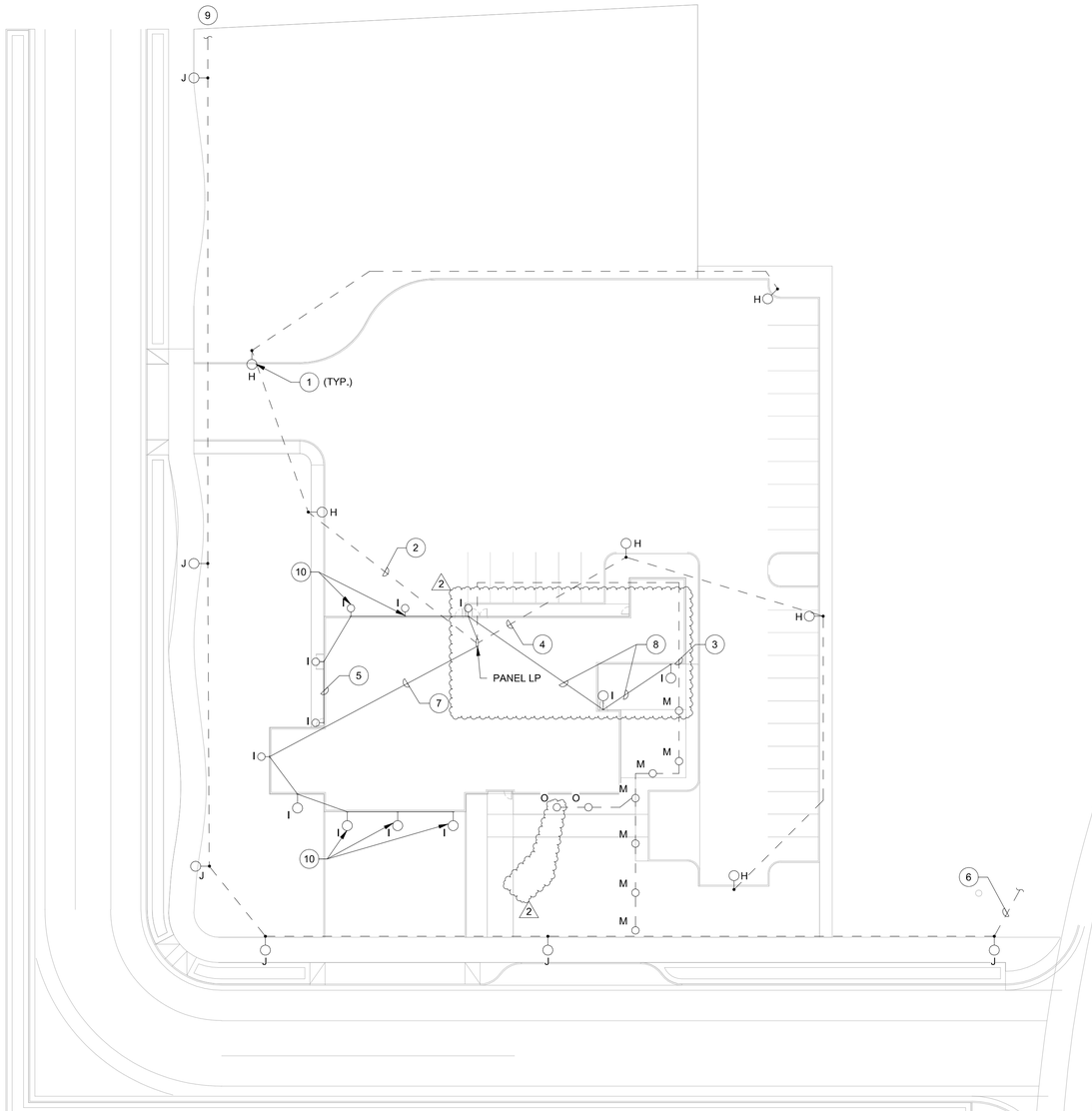
FILE PATH:C:\Users\brysen.yoshimori\Documents\Millersburg FS-CDs - MEP_brysen.yoshimori@corbinengineering.com.rvt



NORTH

1 ELECTRICAL SITE LIGHTING PLAN

1" = 30'-0"

GENERAL NOTES

A SEE SHEET E0.01 FOR LEGEND, ABBREVIATIONS, & GENERAL NOTES.

B FOR LIGHTING FIXTURE SCHEDULE, REFER TO DRAWING E6.02.

C ALL LIGHTING SHOWN IS ON SITE STANDBY GENERATOR.

KEYED NOTES

1 PROVIDE 30 FOOT ROUND LIGHTING POLE TO MOUNT FIXTURE ON. REFER TO DETAIL 2/E5.02 FOR MORE INFORMATION. OLD CASTLE PRECAST 7-LB OR EQUAL. COORDINATE FINAL POLE LOCATIONS WITH THE CITY OF MILLERSBURG.

2 CONNECT EXTERIOR SITE LIGHTING CIRCUIT TO LP CIRCUIT 2. PROVIDE (2) #10 AWG AND (1) #10 AWG GROUND CONDUCTOR IN 1" CONDUIT.

3 CONNECT EXTERIOR BOLLARD AND SIGNAGE LIGHTING CIRCUIT TO LP CIRCUIT #13. PROVIDE (2) #10 AWG AND (1) #10 AWG GROUND CONDUCTOR IN 1" CONDUIT.

4 CONNECT EXTERIOR SITE LIGHTING CIRCUIT TO LP CIRCUIT 6. PROVIDE (2) #10 AWG AND (1) #10 AWG GROUND CONDUCTOR IN 1" CONDUIT.

5 CONNECT EXTERIOR WALL PACK LIGHTING CIRCUIT TO LP CIRCUIT 8. PROVIDE (2) #10 AWG AND (1) #10 AWG GROUND CONDUCTOR IN 1" CONDUIT.

6 COORDINATE WITH PACIFIC POWER AND THE CITY OF MILLERSBURG FOR CONNECTION OF STREET LIGHTS. PROVIDE LIGHT POLE BASES AND ADDITIONAL VAULTS AS NEEDED TO SATISFY PACIFIC POWER REQUIREMENTS. PROVIDE PRICING FOR (3) VAULTS

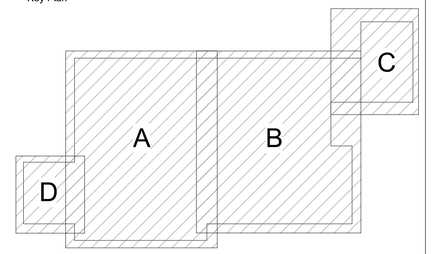
7 CONNECT EXTERIOR WALL PACK LIGHTING CIRCUIT TO LP CIRCUIT #10. PROVIDE (2) #10 AWG AND (1) #10 AWG GROUND CONDUCTOR IN 1" CONDUIT.

8 CONNECT EXTERIOR WALL PACK LIGHTING CIRCUIT TO LP CIRCUIT #12. PROVIDE (2) #10 AWG AND (1) #10 AWG GROUND CONDUCTOR IN 1" CONDUIT.

9 PROVIDE 1" CONDUIT TO SOUTH SIDE OF NEW ROAD FOR FUTURE DEVELOPMENT.

10 MOUNT FIXTURES CENTERED OVER EACH APPARATUS BAY DOOR. PROVIDE ADDITIONAL LIGHT FIXTURE IF BAY 6 IS IN USE. COORDINATE WITH OWNER.

Key Plan



Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
3800 Old Salem Rd NE
Millersburg, OR 97321

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Consultant

CORBIN
CONSULTING ENGINEERS
Beaverton, OR (503) 645-0176

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REGISTERED PROFESSIONAL ENGINEER
OREGON
Josh Parker
MARCH 10, 2015
Josh Parker

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Drawing Title

ELECTRICAL SITE LIGHTING PLAN

Sheet No

EL1.01

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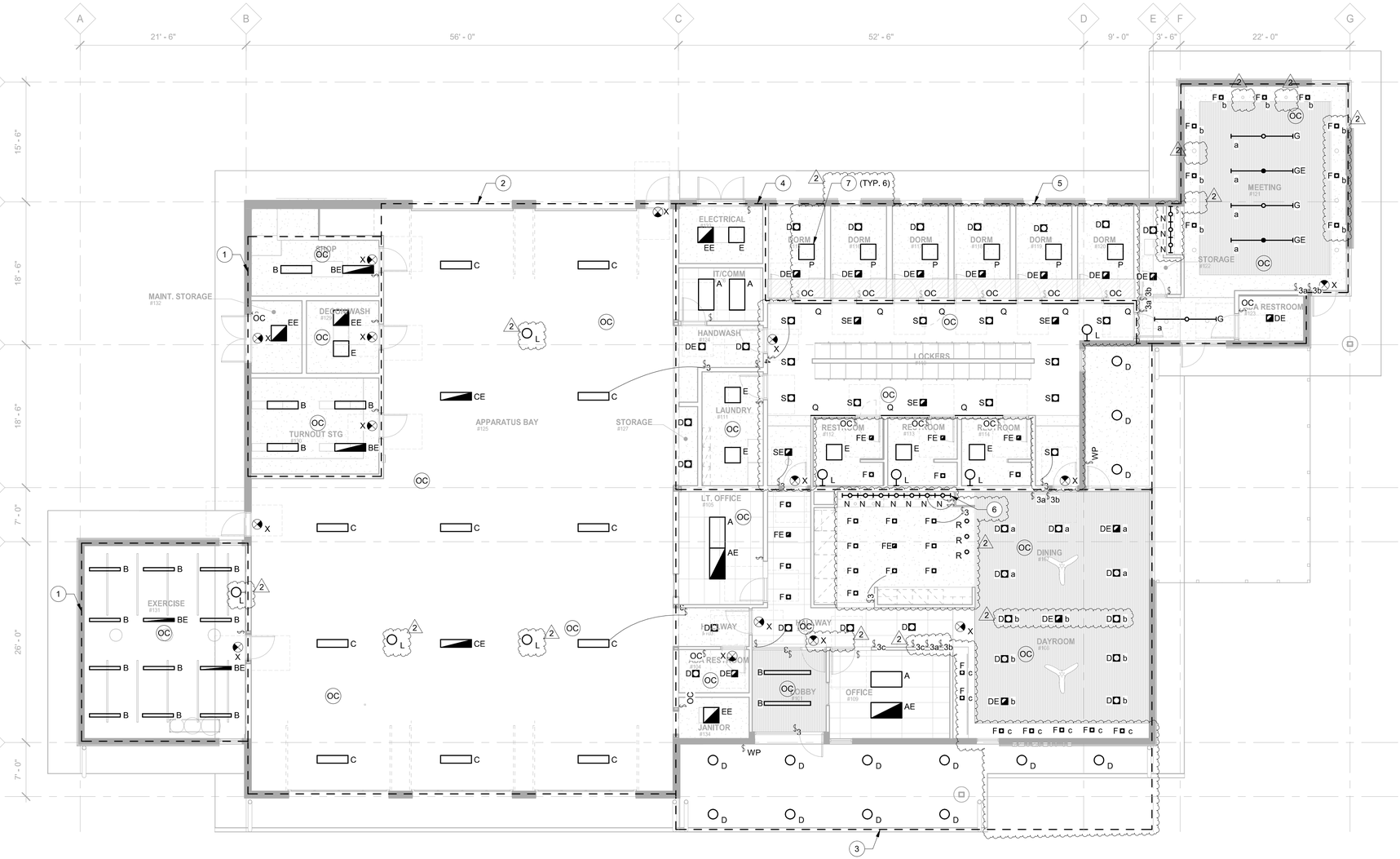
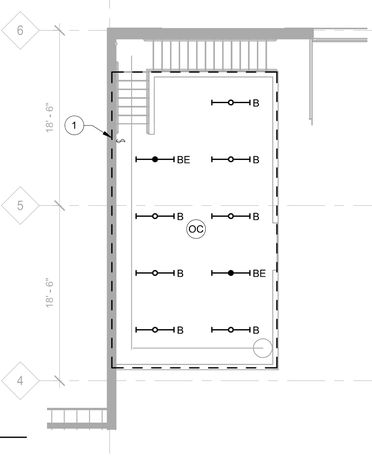


NORTH

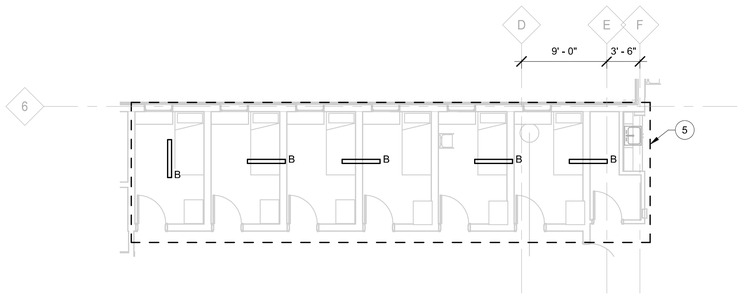
1 ELECTRICAL LIGHTING GROUND FLOOR PLAN - WEST

1/8" = 1'-0"



2 ELECTRICAL LIGHTING MEZZANINE FLOOR PLAN

1/8" = 1'-0"



3 ELECTRICAL LIGHTING ABOVE DORM AREA PLAN

1/8" = 1'-0"

GENERAL NOTES

A SEE SHEET E0.01 FOR LEGEND, ABBREVIATIONS, & GENERAL NOTES.

B SEE SHEET E6.02 FOR FIXTURE SCHEDULE.

C OCCUPANCY SENSORS IN ALL SPACES EXCEPT DORMS TO HAVE AUTOMATIC DAYLIGHT RESPONSIVE CONTROLS, RESTRICTED ON AND AUTOMATIC OFF PER ASHRAE 90.1 TABLE 9.6.1. CONFIRM ADEQUATE COVERAGE OF ALL OCCUPANCY SENSORS WITH LIGHTING VENDOR. 2

D ALL LIGHTING SHOWN IS ON SITE STANDY GENERATOR. FIXTURES WITH E TO HAVE INTERNAL BATTERY BACKUP.

E FOR ALL OUTDOOR FIXTURES REFER TO DRAWING EL1.01.

KEYED NOTES

1 CONNECT FIXTURES TO LP CIRCUIT 1. PROVIDE 2#12 AWG AND 1#12 AWG GROUND CONDUCTOR IN 3/4" CONDUIT.

2 CONNECT FIXTURES TO LP CIRCUIT 3. PROVIDE 2#12 AWG AND 1#12 AWG GROUND CONDUCTOR IN 3/4" CONDUIT.

3 CONNECT FIXTURES TO LP CIRCUIT 5. PROVIDE 2#12 AWG AND 1#12 AWG GROUND CONDUCTOR IN 3/4" CONDUIT.

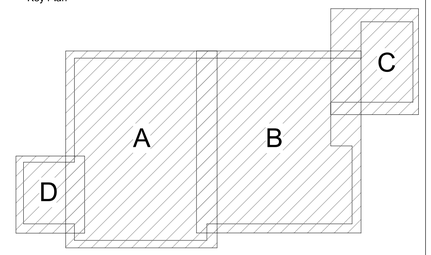
4 CONNECT FIXTURES TO LP CIRCUIT 7. PROVIDE 2#12 AWG AND 1#12 AWG GROUND CONDUCTOR IN 3/4" CONDUIT.

5 CONNECT FIXTURES TO LP CIRCUIT 9. PROVIDE 2#12 AWG AND 1#12 AWG GROUND CONDUCTOR IN 3/4" CONDUIT.

2 6 UNDERCABINET LIGHTING FIXTURES OVER THE SINK TO BE ON A SEPARATE SWITCH.

7 RED LIGHTS IN CEILING TO BE FIRST ACTIVATED BY TAP OUT SYSTEM, BEFORE OTHER LIGHTS TURN ON. RED LIGHTS TO GRADUALLY TURN ON BEFORE REACHING FULL OUTPUT LEVEL.

Key Plan



Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
3800 Old Salem Rd NE
Millersburg, OR 97321

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CONSULTING ENGINEERS
Beaverton, OR (503) 645-0176

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OREGON
Josh Parker
Digitally signed by Josh Parker
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Josh Parker
EXPIRES: 12/31/2022

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Drawing Title
ELECTRICAL LIGHTING GROUND FLOOR PLAN - WEST

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NORTH

1 ELECTRICAL LOW VOLTAGE GROUND FLOOR PLAN - WEST

1/8" = 1'-0"

GENERAL NOTES

A SEE SHEET E0.01 FOR LEGEND, ABBREVIATIONS, & GENERAL NOTES.

B ALL DATA CABLING TO BE CAT6.

C DESIGN/BUILD SYSTEM COMPONENTS ON THIS PLAN INCLUDE ACCESS CONTROL & AUDIO (ALERT PAGING). THE INTENT OF THE DRAWINGS IS TO SHOW END DEVICE LOCATIONS AND TYPICAL INTERCONNECTION REQUIREMENTS. IT IS CONTRACTOR'S RESPONSIBILITY TO PROVIDE/INSTALL COMPLETE OPERATING SYSTEMS WHICH MEET OWNER REQUIREMENTS PER DRAWINGS AND DESIGN/BUILD SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR ALL LOW VOLTAGE PATHWAY, CABLING AND TERMINATIONS.

D LED LIGHTS IN CEILING SPEAKERS ARE FED FROM THE TAP OUT UNIT, SEE SHEET E6.03.

E SEE SHEET E6.03 FOR TAP OUT SYSTEM INFORMATION

KEYED NOTES

1 PROVIDE DEMARK BACKBOARD IN IT ROOM FOR TERMINATION OF FIBER AND COPPER CABLES. COORDINATE WORK WITH CENTURYLINK, LS NETWORKS AND XFINITY.

2 PROVIDE HID SIGNO 40K PROXIMITY CARD READER OR APPROVED EQUAL AT LOCATION SHOWN. PROVIDE SINGLE GANG BACKBOX AND SPARE 3/4" CONDUIT FROM CARD READER TO SITE HEAD-END EQUIPMENT IN IT CLOSET. PROVIDE POWER SUPPLY, CONTROL PANEL AND INTERCONNECTING LOW VOLTAGE CONDUCTORS AS REQUIRED FOR A COMPLETE OPERATING SYSTEM. COORDINATE WITH SECURITY VENDOR.

3 PROVIDE OUTDOOR RATED CCTV CAMERA AS SHOWN. CAMERA TO HAVE INFRARED VISION IN DARKNESS, CONTAIN INTERNAL POWER SUPPLY, AND HAVE WIDE ANGLE VIEW. PROVIDE SPARE 3/4" CONDUIT FROM CAMERA TO SITE HEAD-END EQUIPMENT IN IT CLOSET. PROVIDE ALL INTERCONNECTING LOW VOLTAGE CONDUCTORS AS REQUIRED FOR A COMPLETE OPERATING SYSTEM. COORDINATE WITH SECURITY VENDOR. COORDINATE FINAL LOCATION WITH OWNER.

4 PROVIDE 1" CONDUIT FROM JUNCTION BOX TO EMERGENCY PHONE AND INTERCOM CONNECTION POINT. COORDINATE WITH SECURITY CONTRACTOR.

5 COORDINATE LOCATIONS OF GAS SOLENOID SHUT-OFF VALVES FOR NOTED RANGE AND BBQ WITH THE PLUMBING CONTRACTOR. VALVES TO REMAIN CLOSED UNTIL RESET BUTTON IS ENGAGED.

6 COORDINATE LOCATIONS OF NOTED GAS RANGE/OVEN AND BBQ APPLICANCE RESET BUTTONS WITH OWNER.

7 PROVIDE WALL MOUNTED CONTROL KNOB TO ALLOW CONTROL OF SPEAKER VOLUME IN THE ROOM.

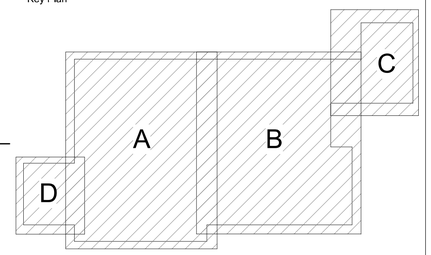
8 PROVIDE WEATHERPROOF SPEAKER, SPEAKER TO BE ON TIMER TO ALLOW FOR CONTROL DURING OWNER SPECIFIED HOURS. COORDINATE WITH TAP OUT SYSTEM INSTALLER. COORDINATE FINAL LOCATION WITH OWNER.

2 9 PROVIDE 2 1/2" RIGID STEEL CONDUIT FROM TERMINATION AT MEETING ROOM WALL TO 6" ABOVE ROOF PEAK FOR FUTURE HAM RADIO ANTENNA. CAP AND SEAL FOR FUTURE USE. CONSULT WITH OWNER FOR MORE INFORMATION.

10 PROVIDE 2 1/2" RIGID STEEL CONDUIT FROM MEETING ROOM WALL TO 6' ABOVE ROOF PEAK FOR OWNER PROVIDED ANALOG RADIO ANTENNA. CONSULT WITH OWNER FOR MORE INFORMATION.

11 PROVIDE 2 1/2" RIGID STEEL CONDUIT FROM IT ROOM RADIO BASE STATION TO 6' ABOVE ROOF PEAK FOR OWNER PROVIDED DIGITAL RADIO ANTENNA. CONSULT WITH OWNER FOR MORE INFORMATION.

Key Plan



Soderstrom Architects

1200 NW Naito Parkway, Suite 410
Portland, OR 97209

T 503-228-5617
F 503-227-8584

sdra.com

Project

Millersburg Fire
Station 15
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Millersburg, OR 97321

Consultant

CORBIN
CONSULTING ENGINEERS
Beaverton, OR (503) 645-0176

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0	PERMIT SET	01/11/21
2	ADDENDUM #2	03/02/21

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REGISTERED PROFESSIONAL ENGINEER
Josh Parker
Digitally signed by Josh Parker
Date: 2021.03.02 12:04:33 -08'00'
MARCH 19, 2020
Josh Parker
EXPIRES: 12/31/2022

Issuance
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Project Number
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Drawing Title
ELECTRICAL LOW VOLTAGE GROUND FLOOR PLAN - WEST

Sheet No
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