TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

OWNER
THE TULALIP TRIBES
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GENERAL

CIVIL

ARCHITECTURAL

STRUCTURAL

MECHANICAL

ELECTRICAL

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

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GENERAL NOTES

CONSTRUCTION

1. ALL CONSTRUCTION SHALL COMPLY WITH THE ***2018 INTERNATIONAL BUILDING CODE*** AS ADOPTED BY THE ***WASHINGTON STATE***, STATE REGULATIONS FOR BARRIER FREE DESIGN, ***WA STATE ENERGY CODE***, AND ALL APPLICABLE LOCAL CODES, ORDINANCES, AND STANDARDS. IN CASE OF ANY CONFLICT WHERE THE METHODS OR STANDARDS OF INSTALLATION OF THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE LAWS OR ORDINANCES SHALL GOVERN. NOTIFY THE ARCHITECT OF ALL CONFLICTS.

2. SECURE RELEVANT TRIBAL AND STATE APPROVALS RELATING TO FIRE, CONSTRUCTION, LABOR, HEALTH AND LICENSING. CONTRACTOR SHALL FURTHER POST ALL BONDS AND SECURE ALL INSURANCE REQUIRED BY LAW OR CONTRACT, FORWARDING PROOF OF SUCH ACTIONS TO THE OWNER PRIOR TO COMMENCEMENT OF CONSTRUCTION.

3. WORK NOT INCLUDED IN THIS CONTRACT SHALL BE MARKED "N.I.C." OR SPECIFICALLY ASSIGNED TO ANOTHER PARTY.

4. CONTRACTOR SHALL VISIT THE SITE, REVIEW THE DRAWINGS AS SUBMITTED BY THE ARCHITECT, AND BECOME THOROUGHLY FAMILIAR WITH THE SITE CONDITIONS PRIOR TO BIDDING OR CONSTRUCTION.

5. ALL WORK SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS LATEST RECOMMENDATIONS OR WRITTEN DIRECTIONS.

6. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.

7. WHERE DEVICES OR ITEMS OR PARTS THEREOF ARE REFERRED TO IN SINGULAR, IT IS INTENDED THAT SUCH SHALL APPLY TO AS MANY SUCH DEVICES, ITEMS OR PARTS AS ARE REQUIRED TO PROPERLY COMPLETE THE WORK.

8. VERIFY ALL "BUILDING STANDARDS" WITH BUILDING OWNER PRIOR TO BEGINNING ANY WORK. HOWEVER, THERE SHALL BE NO DEVIATIONS WHATSOEVER FROM THE CONTRACT DOCUMENTS WITHOUT THE ARCHITECT'S WRITTEN APPROVAL. THE CONTRACTOR AGREES TO DEFEND, INDEMNIFY, AND HOLD THE ARCHITECT HARMLESS FROM ANY CLAIMS ARISING AS A RESULT OF UNAPPROVED CHANGES.

9. LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.

10. VERIFY AND CONFORM TO ALL REQUIREMENTS OF ALL UTILITY COMPANIES UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

11. ALL DEBRIS SHALL BE REMOVED FROM PREMISES AND ALL AREAS SHALL BE LEFT IN A CLEAN (BROOM) CONDITION AT ALL TIMES.

12. PROTECT ADJACENT WORK AND REPAIR ANY DAMAGE AT CONTRACTOR'S OWN EXPENSE.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY IN THE AREA OF WORK IN ACCORDANCE WITH ALL APPLICABLE SAFETY CODES.

14. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE BUILDING OWNER/ARCHITECT/ENGINEER HARMLESS FOR INJURY OR DEATH TO PERSONS OR FOR DAMAGE TO PROPERTY CAUSED BY THE NEGLIGENCE OF THE CONTRACTOR, HIS AGENTS, EMPLOYEES, OR SUBCONTRACTORS.

15. APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY ANY WORKERS. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION AS WELL AS ALL REVISIONS, ADDENDA, AND CHANGE ORDERS. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS, ON THE PREMISES AT ALL TIMES WHICH ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT.

16. MAINTAIN ALL EXIT PATHWAYS DURING CONSTRUCTION.

17. PROVIDE COMPLETE SECURITY OF THE PREMISES WHILE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETED.

18. AT COMPLETION OF THE WORK, REMOVE ALL DEBRIS FROM THE SITE, LEAVING SPACE CLEAN, WASH ALL WINDOWS AND GLASS, POLISH ALL HARDWARE AND FIXTURES.

19. MINIMIZE DISRUPTIONS TO ADJACENT FACILITIES DUE TO NOISE, ODOR, FUMES, OR VIBRATION. AT THE END OF CONSTRUCTION THE CONTRACTOR SHALL COMPLETELY CLEAN ALL AREAS SOILED BY CONSTRUCTION ACTIVITIES INCLUDING THOSE IN WHICH NO WORK WAS DONE.

20. LATHING, PLASTER, AND GYPSUM WALL BOARD SYSTEMS SHALL CONFORM TO CHAPTER 25 OF THE ***2018 I.B.C.***

21. ALL GLASS AND GLAZING SHALL COMPLY WITH CHAPTER 24 OF THE ***2018 I.B.C.*** AND THE U.S. PRODUCT SAFETY COMMISSION: SAFETY STANDARDS FOR ARCHITECTURAL GLAZING MATERIALS (42 FR 1426: 16 CFR PART 1201).

22. VERIFY ALL DOOR AND WINDOW ROUGH OPENING DIMENSIONS WITH DOOR AND WINDOW MANUFACTURERS.

23. DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DRAWING SHOULD BE CALLED TO THE ATTENTION OF THE ARCHITECT.

24. CONSTRUCT WALLS PLUMB AND SQUARE.

25 . COORDINATION: THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION AND COORDINATION OF THE WORK OF ALL TRADES TO ASSURE COMPLIANCE WITH THE DRAWINGS.

26. ANY DEVIATIONS FROM DIMENSIONED LOCATIONS MUST BE APPROVED BY THE ARCHITECT.

DIMENSION

1. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR CONDITIONS ADVERSELY AFFECTING THE DESIGN PRIOR TO PROCEEDING WITH THE WORK.

2. DIMENSIONS OF PLANS ARE TYPICAL TO THE CENTERLINE OF COLUMNS AND FINISHED GWB FACE OF PARTITIONS, UNLESS NOTED OTHERWISE. DOOR AND CASED OPENINGS WITHOUT LOCATION DIMENSIONS ARE TO BE FOUR (4) INCHES FROM THE FACE OF THE ADJACENT PARTITION OR CENTERED BETWEEN PARTITIONS.3. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENTS. NOTIFY THE ARCHITECT IF DISCREPANCIES ARE FOUND.

CONSTRUCTION

1. INVESTIGATE AND VERIFY LOCATIONS OF EXISTING STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL ELEMENTS AND OTHER EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY AND ALL DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

2. COORDINATE CONSTRUCTION SCHEDULING WITH THE BUILDING OWNER TO ALLOW ONGOING OPERATION OF THE FACILITY DURING CONSTRUCTION.

3. PROVIDE BLOCKING AS REQUIRED FOR WALL AND CEILING MOUNTED ITEMS.

4. OFFSET STUDS WHERE REQUIRED SO THAT FINISH WALL SURFACES WILL BE FLUSH.

5. PROVIDE GALVANIC ISOLATION BETWEEN DISSIMILAR METALS.

6. ALL DEMOLISHED MATERIALS TO BE RECYCLED TO AN APPROVED RECYCLER.

PLUMBING, MECHANICAL & ELECTRICAL

1. PLUMBING, MECHANICAL, & ELECTRICAL DRAWINGS ARE TO BE SUBMITTED UNDER SEPARATE PERMIT.

2. MECHANICAL & ELECTRICAL CONTRACTORS SHALL BE RESPONSIBLE TO MAINTAIN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE REQUIRED PERMITS FOR WORK. THE PROPOSED SYSTEM DESIGN & METHOD OF OPERATION FOR ALL ROOMS SHALL BE REVIEWED AND APPROVED BY THE TENANT PRIOR TO THE START OF ANY WORK.

4. OWNER, STRUCTURAL, PLUMBING, MECHANICAL, ELECTRICAL, AND FIRE PROTECTION DRAWINGS ARE SUPPLEMENTARY TO THESE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL DISCREPANCIES BETWEEN THE CONSULTANTS' DRAWINGS WITH A WRITTEN REQUEST FOR CLARIFICATION. ANY WORK INSTALLED IN CONFLICT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL BE CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO THE BUILDING OWNER, TENANT, OR ARCHITECT.

5. ALL CABLING AND WIRING NOT IN CONDUITS OR FULL SURROUND CABLE TRAYS SHALL HAVE A FLAME SPREAD RATING OF LESS THAN 25 AND A SMOKE DEVELOPMENT RANGE OF LESS THAN 50.

6. ALL EXPOSED MATERIAL & PIPING IN RETURN AIR PLENUM MUST MEET FS 25.

7. ALL PLUMBING AND HVAC PIPE AND DUCTWORK IN PLENUM SHALL HAVE A FLAME SPREAD RATING OF LESS THAN 25 AND A SMOKE DEVELOPMENT RANGE OF LESS THAN 50

SUBMITTALS AND WARRANTY

1. SUBMIT A LIST OF PROPOSED PRODUCT SUBMITTALS AND SHOP DRAWINGS TO THE OWNER FOR APPROVAL PRIOR TO START OF CONSTRUCTION.

2. ALL PRODUCTS AND MATERIALS SPECIFIED IN THE DRAWINGS (WITH EXCEPTION TO SPECIFIC FINISH COLORS AND FLOORING) ARE INTENDED TO BE ON AN "OR EQUAL" BASIS. ANY PROPOSED SUBSTITUTIONS MUST BE SUBMITTED TO THE ARCHITECT IN WRITING FOR APPROVAL WITHOUT DELAY OF SCHEDULE.

3. ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER COMPLETION, UNLESS OTHERWISE SPECIFIED, AND SHALL BE SO STATED IN CONTRACTOR'S WRITTEN PROPOSAL AND AGREEMENT. ALL REPAIRS, CORRECTIONS, DISCREPANCIES, ETC., MUST BE MADE WITHOUT ANY ADDITIONAL COST TO THE OWNER, AND WITHIN FIVE (5) DAYS AFTER NOTICE IS GIVEN.

FIRE PROTECTION

1. FIRE PROTECTION DRAWINGS ARE TO BE SUBMITTED UNDER SEPARATE PERMIT.

2. IF NECESSARY, PROVIDE FIRE PROTECTION AT ALL PENETRATIONS OF FIRE RELATED ELEMENTS AS REQUIRED BY CODE.

3. FIRE EXTINGUISHERS: VERIFY LOCATION, TYPE, AND SIZE PER FIRE MARSHAL REQUIREMENTS. CONTRACTOR TO PROVIDE ALL TEMPORARY AND PERMANENT FIRE EXTINGUISHERS REQUIRED UNDER N.F.P.A. 10 MOST RECENT EDITION AND APPROVED BY THE FIRE MARSHAL. CONFIRM ACCEPTABILITY OF LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. PROVIDE FINISHED CABINETS TO MATCH BUILDING STANDARD FOR EXTINGUISHERS AT ALL EXPOSED LOCATIONS.

4. FIRE EXTINGUISHERS AND CABINETS SHOULD BE LOCATED SO THAT THE TOP OF THE EXTINGUISHER OR CABINET IS NO HIGHER THAN 48" AFF AND THE TOP OF THE EXTINGUISHER OR CABINET HANDLE IS AT LEAST 36" AFF.

5. PROVIDE AND INSTALL FIRE EXTINGUISHER SIGNAGE (5"X6") ABOVE EACH FIRE EXTINGUISHER OR CABINET WITHIN THE SCOPE OF THE TENANT IMPROVEMENT. MOUNT AT 84" AFF UNLESS OTHERWISE REQUIRED.

6. EXIT SIGNS AND EXIT ILLUMINATION SHALL CONFORM TO THE ***2018 IBC AND THE TULALIP TRIBES FIRE MARSHAL*** REQUIREMENTS. CONTRACTOR TO PROVIDE AND INSTALL EMERGENCY LIGHTING AND EXIT LIGHTING AS REQUIRED BY THE ***CODE BUILDING DEPARTMENTS***. CONFIRM ACCEPTABILITY OF LOCATIONS WITH THE BUILDING OWNER BEFORE INSTALLATION. CONTRACTOR SHALL PROVIDE AND INSTALL AUDIBLE ALARMS IN ACCORDANCE WITH IBC ARTICLE 9. CONTRACTOR SHALL PROVIDE AND INSTALL VISIBLE ALARM SIGNALS AS REQUIRED BY ADA GUIDELINES. CONTRACTOR SHALL PROVIDE AND INSTALL ALL SMOKE DETECTORS AND SMOKE DETECTION AS REQUIRED UNDER ARTICLE 9 OF THE IBC. THE INSTALLATION OF THE ABOVE NOTED SYSTEM SHALL INCLUDE THE CONNECTION TO AND/OR MODIFICATION OF THE EXISTING BUILDING SYSTEMS, AS NECESSARY.

7. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.

8. FLAMMABLE LIQUIDS SHALL NOT BE PLACED, STORED, OR DISPENSED IN THIS OCCUPANCY EXCEPT AS PROVIDED IN NFPA STANDARD 30 AND THE ***2018 INTERNATIONAL FIRE CODE***. PERMIT MAY BE REQUIRED.

9. ALL DRAPES, HANGINGS, CURTAINS, AND ALL OTHER DECORATIVE MATERIAL, INCLUDING CHRISTMAS TREES THAT WOULD TEND TO INCREASE THE FIRE AND PANIC HAZARD SHALL BE MADE FROM NONFLAMMABLE MATERIAL, OR SHALL BE TREATED AND MAINTAINED IN A FIRE RETARDANT CONDITION BY MEANS OF A FLAME RETARDANT SOLUTION OR PROCESS APPROVED BY THE FIRE MARSHAL. PROVIDE A CERTIFICATION TO THIS EFFECT. EXIT DOORS, EXIT LIGHTS, AND FIRE EXTINGUISHER LOCATIONS SHALL NOT BE CONCEALED OR OBSTRUCTED BY ANY DECORATIVE MATERIAL. MINIMUM FLAME SPREAD CLASSIFICATION OF INTERIOR FINISHES SHALL BE PER ***TABLE 803.9, SECTION 803.1 OF THE 2018 IBC***.

10. ALL REQUIRED FIRE DOORS SHALL BEAR A LABEL FROM A RECOGNIZED AGENCY SHOWING THE SPECIFIC RATING.

CEILING

1. REFLECTED CEILING PLAN IS FOR THE GENERAL INFORMATION OF THE CONTRACTOR. EXACT LOCATIONS SHOULD BE VERIFIED.

DOOR

1. ALL DOOR HARDWARE TO MEET REQUIREMENTS OF ***2018 IBC*** AND OWNER'S BUILDING REQUIREMENTS.

2. COORDINATE ALL KEYING REQUIREMENTS WITH OWNER. CONTRACTOR SHALL PROVIDE ALL LOCKSET CYLINDERS TO MATCH OWNER STANDARD. CONTRACTOR SHALL RE-KEY ALL DOORS TO MEET TENANT AND OWNER'S REQUIREMENTS.

FINISH AND MATERIALS

1. SUBMIT FINISH SAMPLES TO TENANT AND OWNER FOR APPROVAL PRIOR TO ORDERING MATERIALS.

2. INTERSECTION OF SCHEDULED FLOORING MATERIALS ARE TO OCCUR AT CENTERLINE OF DOOR WHEN IN A FULLY CLOSED POSITION UNLESS NOTED OTHERWISE.

3. PROVIDE APPROPRIATE TRANSITION MATERIAL AS REQUIRED WHERE DISSIMILAR FLOORING MATERIALS INTERSECT.

RESPONSIBILITY MATRIX	OFOI	OFCI	CFOI	CFCI	REMARKS
Div. 2 - Existing Conditions - Demolition					
2.191 Demo Existing Maintenance Facility and Office				x	By Allowance
2.191 Demo Existing Lab Building				x	By Allowance
2.206 Demo Existing Paving at Perimeter				x	By Allowance
2.212 Hazardous Materials Testing and Abatement				x	By Allowance
Div. 6 - Finish Carpentry					
6.208 Lobby Reception Desk				x	
6.208 Billing Office back wall casework				x	
6.208 Paneling at Entry Lobby				x	
6.208 Breakroom upper and lower cabinets				x	
6.208 Copy Room Casework				x	
6.208 Lab storage casework				x	
6.208 Copy Room Casework				x	
6.208 Open Office Meeting area video wall casework				x	
Div. 10 Specialties					
10.000 Toilet, locker Room, and Janitor Closet Accessories				x	
10.260 Shower Curtains				x	
10.400 Identification Devices				x	
10.426 Main Building Sign				x	By Allowance
10.520 Fire Extinguishers and Cabinets				x	
10.580 Knox Box				x	
10.605 Window Blinds				x	By Allowance
10.900 Lockers				x	
10.900 Toilet Partitions				x	
Div. 11 - Equipment					
11.000 Appliances (Kitchen and Janitor Closet)				x	By Allowance
11.002 Lab Equipment Casework				x	
11.002 Lab Base and Wall Cabinets				x	
11.002 Lab Island				x	
11.002 Lab Storage Shelving				x	
Div. 13 - Special Construction, FF&E, Furniture, Artwork					
13.000 Misc. Office Furniture (chair, file cabinet, etc.)	x				
13.000 Lobby Furniture other than fixed reception desk	x				
13.000 Cubicle Systems	x				
13.000 Cubicle System Desks	x				
13.000 Private office desks, cabinets, and chairs	x				
13.000 Office Accessories (whiteboards, etc.)	x				
13.000 Conference Room Desk, chairs, and credenza	x				
13.000 Storage area ("Shed") racking	x				
13.000 Billing office furniture - except fixed back wall casework	x				
13.000 Kitchen Break Room tables, chairs, supplies	x				
13.000 Waste baskets, Floor Mats, desk lamps, etc.	x				
13.000 Misc. FF&E Allowance	x				
Div. 21 - Fire Suppression					
21.000 Fire Suppression				x	
Div. 22 - Plumbing					
22.001 Relocate Power Wash System				x	
22.001 Emergency Eye Wash and deluge shower				x	
Div. 26 - Electrical					
26.004 Emergency Generator - new and/or relocated				x	
26.005 Connections to Booster Pump				x	
Div. 27 - Communications					
27.001 - Connect data to Booster Pump	x				
27.001 - PLC Systems				x	
27.001 - PLC Network Switches	x				TDS Networks
27.001 - PLC Servers	x				TDS Networks
27.001 - Government Network switches/wifi	x				TDS Networks
27.001 - Government Network UPS	x				TDS Networks
27.001 - Data Room Network Rack	x				TDS Networks
27.001 - Conference Room AV equipment	x				TDS Networks
27.001 - Desktop Workstations/UPS, Printers, TVs	x				TDS Networks
27.001 - Copper and fiber cable	x				Salish Networks
27.001 - Cable TV equipment and cabling	x				Salish Networks
27.001 - Phones, Fax lines	x				Salish Networks
27.005 - Future Data Conduit				x	Salish Networks
27.001 - Systems Integration				x	Owner Preferred Vendors: TSI, Parametrix
Div. 28 - Electronic Safety and Security					
28.000 - Security	x				TDS Security
28.000 - Keyboxes, TimeClocks, Key Authorizers	x				TDS Security
28.000 - Door Controllers and associated wiring				x	TDS Security/ Salish Network Infrastructure
28.000 - Access Point Card Readers and associated wiring	x				TDS Security/ Salish Network Services
28.000 - Exterior Cameras	x				TDS Security
Div. 32 - Exterior Improvements					
32.004 - Site Fencing and Gates and modifications to				x	

PROJECT DATA

PROJECT ADDRESS:	TULALIP TRIBES UTILITY BUILDING 3015 MISSION BEACH ROAD TULALIP, WA, 98271
JURISDICTION:	SNOHOMISH COUNTY
PARCEL NUMBER:	00616500600100 - 00616500601200
ZONING:	TRIBAL
OCCUPANCY CLASSIFICATION:	B - OFFICE
TYPE OF CONSTRUCTION:	TYPE V-B
SPRINKLERED:	NFPA 13
NUMBER OF STORIES:	2
SQ. FT. OF BUILDING:	6,992 SQ.FT.
SQ. FT. OF IMPROVEMENT:	6,992 SQ.FT.

LEGAL DESCRIPTION

NE1/4 SEC34 T30N R4E

DESCRIPTION OF WORK

DEMOLITION OF EXISTING ADMINISTRATION AND LAB BUILDINGS. REPLACE BUILDING WITH NEW COMBINED FACILITY 40'X90'.

DEFERRED SUBMITTALS

1. ENGINEERED ROOF TRUSS SHOP DRAWINGS.
2. ENGINEERED FLOOR SYSTEM SHOP DRAWINGS.
3. BUILDING SIGNAGE.
4. VENDER DESIGN EXTERIOR STEEL STAIR, LANDING, AND CANOPY.
5. STRUCTURAL DESIGN FOR WASHER SHED AND ASSOCIATED RETAINING WALLS.

APPLICABLE CODES

NATIONAL:
2018 INTERNATIONAL BUILDING CODE W/ WASHINGTON STATE AMENDMENTS (51-50 WAC)
2018 INTERNATIONAL FIRE CODE W/ WASHINGTON STATE AMENDMENTS (51-54 WAC)
2018 INTERNATIONAL MECHANICAL CODE W/ WASHINGTON STATE AMENDMENTS (51-52 WAC)
2018 ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

REGIONAL:
2018 WASHINGTON STATE ENERGY CODE (51-11 WAC)
2018 WASHINGTON STATE ADMINSTRATIVE CODE (WAC)

LOCAL:
TULALIP TRIBES COMPREHENSIVE PLAN LAND USE

WSEC EFFICIENCY PACKAGE CREDITS - FROM TABLE C406.1:

2. REDUCED LIGHTING POWER: OPTION 1 IN ACCORDANCE WITH SECTION C406.3.1
6. DEDICATED OUTDOOR AIR SYSTEM IN ACCORDANCE WITH SECTION C406.6

VICINITY MAP

NORTH

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

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GENERAL NOTES

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2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1 — Administered by: ©2023 NEEA, All rights reserved

Project & Applicant Information			For Building Department Use:
	Project Title	TULALIP TRIBES - UTILITY BUILDING - 2018 WSEC	**Date: Jul 13, 2023**
	Project Address	3015 MISSION BEACH ROAD Marysville, WA 98271	
	Applicant Name	Andy Longino	
	Applicant Phone	425-774-3829	
	Applicant Email	andy.longino@harrisgroup.com	

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

General Occupancy	All Commercial	**General Building Use Type**	Laboratory	**Building Cond. Floor Area**	7,263
General Project Types	New Building — **New Building or Addition Mechanical Scope**	Multiple Zone Systems & Equipment	**Alteration Mechanical Scope**	**Project Cond. Floor Area**	7,236
				Floors Above Grade	2
				Compliance Method	Compliance Method 1 - General
Mechanical Project Description	BUILDING IS FULLY CONDITIONED UTILIZING SPLIT SYSTEM HEAT PUMP FOR HEATING AND COOLING ALONG WITH DOAS FOR VENTILATION AND EXHAUST. DOAS INCLUDES ELECTRIC DUCT HEATERS FOR TEMPERING THE OSA. BUILDING ALSO INCLUDES (3) EXHAUST FANS CONNECTED TO FUME HOODS WITH (1) SUPPLY AIR FAN WITH A DUCT HEATER TO TEMPER MAKE UP AIR AT ROOM 105 LABORATORY. AUXILIARY SPACES INCLUDE ELECTRIC WALL HEATERS FOR FREEZE PROTECTION.				

Mechanical Compliance Scope and Method	Project Type	Mechanical Scope	Economizer Exception(s) Applied?	DOAS Ventilation Provided?	Higher Equipment Efficiency Option Applied?	Equipment Efficiency Compliance Verification
	New Building	Multiple Zone Systems & Equipment	Yes	Yes	NA	**COMPLIES**
Additional Efficiency Credits Included (AEC)			**Dedicated outside air system (DOAS) option**			
Does building include occupancy classifications requiring DOAS?		No	**Does project include DOAS equipment?**			Yes
Based on project scope do TSPR requirements apply?		No	**Do all systems comply with Appendix D standard reference design or qualify for an exception to TSPR?**			No

Scope & Space Conditioning	NEW BUILDING - MULTIPLE ZONE SYSTEMS & EQUIPMENT	Compliance Verification	COMPLIES

Multiple Zone Air Systems Category - Heat pump, unitary

Air Systems Summary Information

System ID	Supply Airflow Control	Ventilation Standard	Ventilation CFM	Ventilation Air Source	Paired with DOAS	Ventilation energy recovery	Energy Recovery Efficiency (%)
CU-1	Constant volume	IMC Multiple Zones Ventilation	680	Other System		Yes per C403.5 Energy Recovery	61

Air Systems & Equipment - Cooling

System/ Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity per item (Btu/h)	AEC Efficiency Multiplier	Econo Exception Multiplier (FL & PL)	Combined Efficiency Multiplier (AEC & Econo)	Proposed Cooling Efficiency	CE Units	Proposed Part Load Efficiency	PL Units	Efficiency Compliance Verification
CU-1	Heat pump, air cooled	Split system	168,000	1	1.0	1	10.8	EER	23.6	IEER	COMPLIES

Air Systems & Equipment - Heating

System /Equip ID	Heating System/Equip Type	Specific Type	Heat Pump Heating Capacity (Btu/h)	Cooling Capacity (Btu/h)	AEC Efficiency Multiplier	Proposed Heat Pump Heating Efficiency	HPH Units	Proposed Low OSA Temp Efficiency	LTH Units	Efficiency Compliance Verification
CU-1	Heat pump, air cooled, heating	Split system	188,000	168,000	1	3.6	COP	3.6	COP	COMPLIES

Air Systems & Equipment Details

System ID	Area(s) Served	Location In Project Documents - Plan/Detail #	
CU-1	1ST AND 2ND FLOORS	ALL	

	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Applying air-side economizer exception
	Air-side economizer exception applied: Exp 1 - DOAS paired with cooling system (Note equip location limitations)		WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) - Unitary and Applied Heat Pumps
	Proposed Low OSA Temp Efficiency: 3.6		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary and Applied Heat Pumps		

ENVELOPE COMPLIANCE SUMMARY

2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1 — Administered by: ©2023 NEEA, All rights reserved

Project & Applicant Information			For Building Department Use:
	Project Title	Tulalip New Utilities Building - 2018 WSEC	**Date: Aug 04, 2023**
	Project Address	3015 Mission Beach Road Tulalip, WA 98271	
	Applicant Name	Joel Riehl	
	Applicant Phone	425-284-5121	
	Applicant Email	jriehl@freiheitarch.com	

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

General Occupancy	All Commercial	**General Building Use Type(s)**	Office, Government/Municipal Laboratory	**Building Cond. Floor Area**	6,992
Project Scope	New Building	**Space Conditioning Categories**	Fully Conditioned	**Project Cond. Floor Area**	6,992
				Floors Above Grade	2
				Compliance Method	Compliance Method 1 - General
Envelope Project Description	A 2-story building of 6,992 sf floor area, housing a waste water testing lab and offices for the public utility. Building is wood-framed, metal clad, with aluminum storefront type windows, and a shed roof.				

Envelope Compliance Scope and Method	Scope	Space Conditioning Category	Compliance Method	WWR/SRR per Category	UA Calculation Adjustment	Fenestration Alternates	Compliance Verification
	New Building	Fully Conditioned	Prescriptive	9.19% / %	None selected	No alternates selected	**COMPLIES**

Air Barrier Testing	Air barrier testing included in project scope	Air Barrier Comments	

Project Title	Tulalip New Utilities Building - 2018 WSEC	Date	Aug 04, 2023

Scope & Space Conditioning	NEW BUILDING - FULLY CONDITIONED			Compliance Verification	COMPLIES
Window-to-wall Ratio	9.19%	**Skylight-to-roof-ratio**	%	**Vertical Fenestration Alternate**	No alternates selected

Opaque Envelope Assemblies

				Insulation R-Values				
Roof/Ceiling	**Location in Documents**	**Assembly ID**	**Assembly Location**	**Cavity**	**Continuous (% penetration)**	**2nd Layer (MB Roof)**	**U-Factor**	**Net Area (SF)**
Attic and other	A3.03 and A9.20	Roof	Exterior	R-49	R-49.0 (< 0.04%)		U-0.02	3,711
	U-Factor Source: Computed			U-Factor Source Description: Inverse of R-value of insulation only				
	Roof Framing Type (Standard, Advanced): Standard			Roof Framing Material: Wood-framed				
	Ceiling/Attic Venting: Vented			Is this assembly exterior or interior?: Exterior				
Walls	**Location in Documents**	**Assembly ID**	**Assembly Location**	**Cavity**	**Continuous (% penetration)**	**Insulated Wall Furring**	**U-Factor**	**Net Area (SF)**
Wood-framed and other - Commercial	A3.01, A3.02, and Wall Schedule, Sheet A9.10	W1 and W2	Exterior	R-21	R-21.0 (< 0.04%)		U-0.044	7,383
	Which insulation code target does wall comply with?: R-21 Cavity + Intermediate Framing			U-Factor Source: Computed				
	U-Factor Source Description: Inverse of accumulated R values of wall components - not accounting for metal siding			Wall Framing Type (Standard, Inter., Advanced): Intermediate				
	Framing Depth: 2x6			Framing Spacing: 16"				
	Is this assembly exterior or interior?: Exterior							
Slab-on-grade Floors	**Location in Documents**	**Assembly ID**	**Assembly Location**	**Slab Edge**	**Under Slab**		**F-Factor**	**Perimeter Length (SF)**
Unheated slab	A3.01, A6.01, dtl. 12, S2.01. S4.11, dtls 7 and 12	Slab on Grade - Finished	At grade level	R-10	R-10		F-0.54	260
	Slab Insulation Method: 2 ft horizontal (no slab edge insulation)			F-Factor Source: WSEC Appendix A				
	F-Factor Source Description: Table A106.1							

Fenestration & Opaque Door Assemblies

				Insulation R-Values				
Opaque Doors	**Location in Documents**	**Assembly ID**	**Assembly Location**	**Door Insulation**			**U-Factor**	**Rough Opening (SF)**
Swinging	A4.0 and A9.3	Aggregate swinging doors, Per Door Schedule, Sheet A9.30	Exterior				U-0.37	126
	What percentage of this opaque door is glazing?: 50% or less			U-Factor Source: WSEC Appendix A				
	U-Factor Source Description:			Is this assembly exterior or interior?: Exterior				
	Is this a public entrance door?: No							
Roll-up	A4.0 and A9.30	RO	Exterior	R-4.7			U-0.21	168
	U-Factor Source: WSEC Appendix A			U-Factor Source Description:				
	Is this assembly exterior or interior?: Exterior							
Vertical Fenestration	**Location in Documents**	**Assembly ID**	**Assembly Location**	**Orientation**	**Shading (PF)**	**Fenestration SHGC**	**Fenestration U-Factor**	**Rough Opening (SF)**
Fixed - Class AW or site built	A4.00 and A9.40	A1 thru A9	Exterior	South/East/West Facing	PF < 0.2	SHGC-0.35	U-0.38	523
	U-Factor & SHGC Source: Other Source			U-Factor Source Description: specified max values				
	Is this assembly exterior or interior?: Exterior							
Operable - Class AW or site built	A4.0 and A9.4	A1 - A9	Exterior	South/East/West Facing	PF < 0.2	SHGC-0.35	U-0.38	168
	U-Factor & SHGC Source: Other Source			U-Factor Source Description: specified max values				
	Is this assembly exterior or interior?: Exterior							
All other fenestration types	A4.0 and A9.4	A1 - A9	Exterior	South/East/West Facing	PF < 0.2	SHGC-0.35	U-0.30	86
	U-Factor & SHGC Source: WSEC Appendix A			U-Factor Source Description:				
	Is this assembly exterior or interior?: Exterior							

2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1 — Administered by: ©2023 NEEA, All rights reserved

Project & Applicant Information			For Building Department Use:
	Project Title	Tulalip Tribes - Utility Building - 2018 WSEC	**Date: Jul 14, 2023**
	Project Address	3015 MISSION BEACH ROAD Marysville, WA 98271	
	Applicant Name	Mohammad Qaisar Azeem	
	Applicant Phone	206-473-0603	
	Applicant Email	mohammad.azeem@harrisgroup.com	

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

General Occupancy	All Commercial	**General Building Use Type**		Utility/Equip, Other	**Building Cond. Floor Area**	7,263	
General Project Types	New Building — **New Building or Addition Lighting Scope**	Interior Lighting Exterior Lighting	**Alteration Lighting Scope**		**Project Cond. Floor Area**	7,236	
					Floors Above Grade	2	
					Compliance Method	Compliance Method 1 - General	
Lighting Project Description							

Lighting Compliance Scope and Method	Project Type	Interior / Exterior (Interior includes both interior & parking)	Luminaire Replacement Scope	Compliance Method	LPA Calculation Adjustment	Compliance Verification
	New Building	Interior Lighting		Building area	Reduced lighting power density option - 10%	**COMPLIES**
	New Building	Exterior Lighting			Not applicable to exterior	**COMPLIES**
Additional Efficiency Options Included	Reduced lighting power density credit - 10% lower than LPA					

Project Title	Tulalip Tribes - Utility Building - 2018 WSEC	Date	Jul 14, 2023
Lighting Power Calculation	**NEW BUILDING - INTERIOR LIGHTING**	**Compliance Verification**	**COMPLIES**
Compliance Method	**Building area**	**LPA Calculation Adjustment**	**LPA x 0.9**

Interior Lighting Power Allowance - Building Area

Building Areas	Gross Interior Area (SF)	LPA (Watts/SF)	Total Watts Allowed (SF x LPA x 0.9)	Total Proposed Watts By Building Area	Compliance Status by Building Area
Office	6,880	0.64	3,963	3,459	COMPLIES

Proposed Lighting Power Density

Fixture Type/Application	Fixture ID	Building Area	New or Existing-to-Remain	Quantity of Fixtures, CLDs or Luminaires (#F)	Watts per Fixture, CLD or Luminaire (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures								
Troffer	Troffer, 4Ft	Office	New	51	49			2,499
Troffer	Troffer, 2FT	Office	New	18	49			882
Wall-mounted	SCONCE, Interior/Exterior	Office	New	2	39			78

Project Title	Tulalip Tribes - Utility Building - 2018 WSEC	Date	Jul 14, 2023
Proposed Fixtures Details	**NEW BUILDING - INTERIOR LIGHTING**		

Fixture Type/Application	Fixture ID	Location in Documents	Lamp Type	Building Area	New or Existing-to-Remain
Individual Fixtures					
Troffer	Troffer, 4Ft	Plan Drawings	LED	Office	New
	Fixture Description:			Are these fixtures located within a daylight zone?:	
	Do these fixtures require specific application lighting controls?:				
Troffer	Troffer, 2FT	Plan drawings	LED	Office	New
	Fixture Description:			Are these fixtures located within a daylight zone?:	
	Do these fixtures require specific application lighting controls?:				
Wall-mounted	SCONCE, Interior/Exterior	Plan Drawings	LED	Office	New
	Fixture Description:			Are these fixtures located within a daylight zone?:	
	Do these fixtures require specific application lighting controls?:				

Project Title	Tulalip Tribes - Utility Building - 2018 WSEC	Date	Jul 14, 2023
Lighting Power Calculation	**NEW BUILDING - EXTERIOR LIGHTING**	**Compliance Verification**	**COMPLIES**
Exterior Lighting Zone	**ZONE 2**	**Base Site Allowance**	**400**

Exterior Tradable Lighting Power Allowance

Tradable Surface	Tradable Surface Sub-Type	Surface Area (SF)	LPA (Watts/SF)	Linear Feet (LF)	LPA (Watts/LF)	Total Watts Allowed (LPA x SF) or (LPA x LF)	Total Tradable Proposed Watts	Tradable Compliance Status
Building entrances and exits	Pedestrian entrances & exits			40	14	560		
					Base Site Allowance	400		
					Totals	960	282	COMPLIES

Proposed Tradable Lighting Power Density

Fixture Type	Fixture ID	Tradable Surface Type	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures							
Wall-mounted	SCONCE, EXTERIOR	Building entrances and exits - Pedestrian entrances & exits	6	47			282
						Tradable Proposed Total	**282**

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

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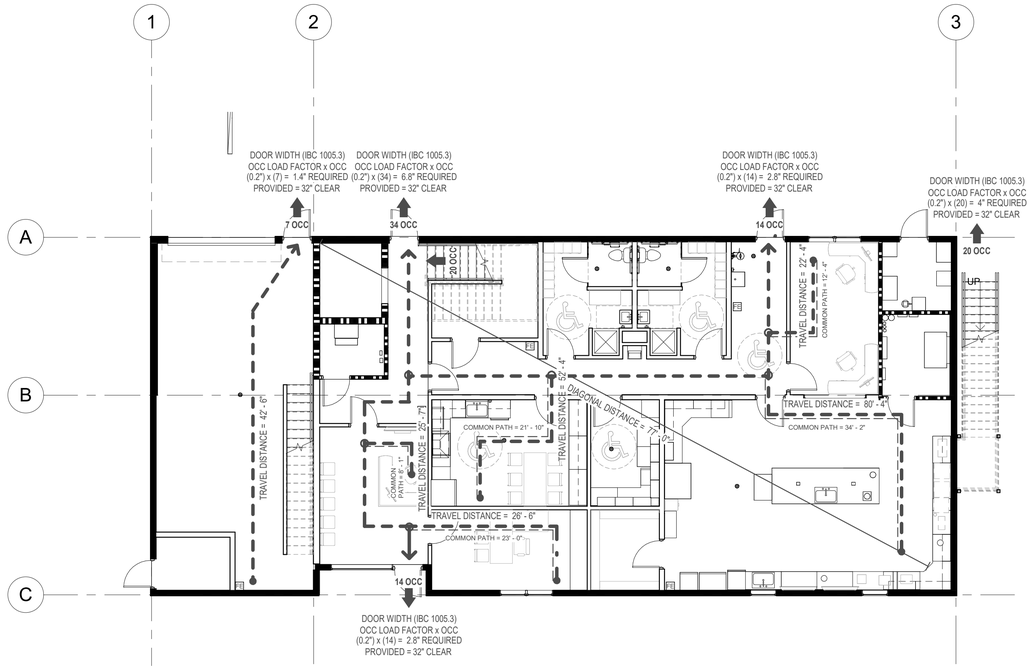
ENERGY CODE COMPLIANCE

A0.02

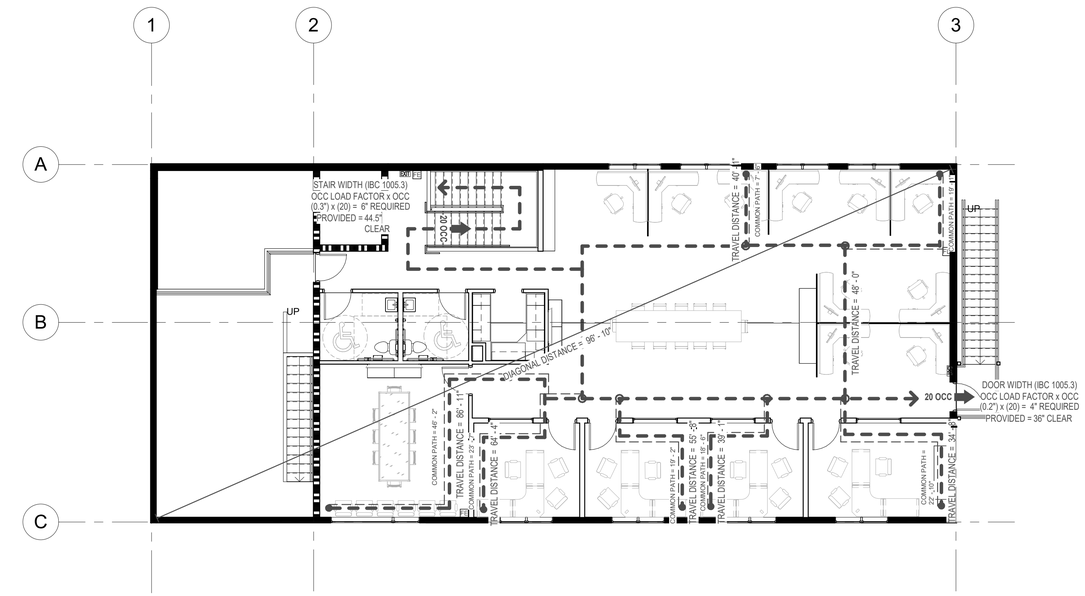


1 A1.00 **LEVEL 01**

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

0 4' 8' 16'

NORTH



2 A1.00 **LEVEL 02**

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

0 4' 8' 16'

NORTH

GENERAL NOTES - CODE PLAN

1. FIRE ALARM UNDER SEPARATE PERMIT

2. DOORS IN PATH OF EGRESS CANNOT BE LOCKED FROM SIDE OF TRAVEL OF EMERGENCY EGRESS

3. PROVIDE ONE (1) FIRE EXTINGUISHER (MINIMUM 2A10-B) EVERY 3000 SF (TYP) WITH MAXIMUM 75 LINEAR FEET TRAVEL DISTANCE TO EXTINGUISHER; VERIFY LOCATIONS ARE ACCEPTABLE WITH FIRE MARSHAL. SEE PLAN SHEETS A3.00 AND A3.01 FOR PROPOSED FE LOCAITONS.

4. PROVIDE AND INSTALL SIGNAGE ABOVE THE MAIN ENTRY DOOR ON THE EGRESS SIDE STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED"

KEYNOTES - CODE PLAN

CODE SUMMARY

OCCUPANCY:	B- OFFICE
SPRINKLERED:	NO
COMMON PATH OF EGRESS *(IBC TABLE 1006.2.1)*:	75' MAX
EXIT ACCESS TRAVEL DISTANCE *(IBC TABLE 1017.2)*:	200' MAX
DEAD END CORRIDOR *(IBC 1020.4)*:	20'
NUMBER OF EXITS *(IBC 1006)*:	2 REQUIRED

PLUMBING SUMMARY

(OPTION A - MIXED OCCUPANCIES)

NUMBER OF OCCUPANTS *(FROM PLAN)*:	34

OCCUPANCY:	Business	
NUMBER OF OCCUPANTS:	34	
	REQUIRED:	PROVIDED:
WATER CLOSETS - MALE *(PER IBC TABLE 2902.1)*:	1	2
WATER CLOSETS - FEMALE *(PER IBC TABLE 2902.1)*:	1	2
LAVATORIES - MALE *(PER IBC TABLE 2902.1)*:	1	2
LAVATORIES - FEMALE *(PER IBC TABLE 2902.1)*:	1	2
DRINKING FOUNTAINS *(PER IBC TABLE 2902.1)*:	0	1
SERVICE SINK *(PER IBC TABLE 2902.1)*:	0	1

LEGEND - CODE PLAN

- NO WORK THIS AREA
- EXISTING CONSTRUCTION TO REMAIN
- NEW WALL CONSTRUCTION
- NEW PARTIAL HEIGHT WALL CONSTRUCTION
- 1-HOUR RATED WALL
- FIRE EXTINGUISHER
- INTERNALLY ILLUMINATED EXIT SIGN
- INTERNALLY ILLUMINATED EXIT SIGN WITH HORN/STROBE
- LONGEST COMMON PATH OF EGRESS TRAVEL
- LONGEST EXIT ACCESS TRAVEL DISTANCE
- DEAD END CORRIDOR
- DIAGONAL DISTANCE
- FURTHEST POINT OF ORIGIN
- COMMON PATH JUNCTURE
- 0 OCC — OCCUPANCY COUNT AT EXIT
- ROOM NAME
- OCCUPANCY
- SQUARE FOOTAGE
- OCCUPANT COUNT
- LOAD FACTOR

ROOM NAME
A-2 100 SF
15 | 7

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

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CODE PLAN

A1.00

59TH PLACE NW

MISSION AVENUE

MISSION BEACH DRIVE

EXISTING BUILDING

EXISTING CONCRETE TANK

EXISTING CONCRETE TANK

PROPERTY LINE

5' SIDEYARD SETBACK

NEW CATCH BASIN

APPROXIMATE PARCEL BOUNDARY

R15.00'

R15.00'

R10.00'

BEGIN WALL

NEW MANHOLE

EXISTING ELECTRICAL PANEL

CONSTRUCT CONCRETE EXTERIOR STAIRCASE, SEE DETAIL, SHEET C2.01

END WALL

SAWCUT EXISTING CONCRETE & PAVEMENT 12" BEHIND BACK OF PROPOSED MODULAR BLOCK WALL

EXISTING CONCRETE SEWAGE STRUCTURE

EXISTING METAL STAIRCASE

CONSTRUCT MODULAR BLOCK WALL, SEE SHEET C2.01

8'x10' BOOSTER PUMP HOUSE

NEW 12" D.I.P. CULVERT

16.00'

PLACE NEW ASPHALT PAVEMENT PER STRUCTURAL SECTION, SHEET C2.00

NEW 6" CURB (TYP)

ACCESSIBLE PARKING SPACE, SEE DETAILS SHEET C2.00 (TYP)

NEW 6" CURB

5' SIDEYARD SETBACK

R10.00'

16.00'

21.20'

9.00'

60°

R20.00'

16.00'

9.00' (TYP)

18.00' (TYP)

NEW GENERATOR PAD, SEE ELECTRICAL PLANS

5.00'

R5.00'

R2.00'

PLACE COMPACTED AGGREGATE SURFACING, MIN. 6" DEPTH

7.10'

NEW CONCRETE SIDEWALK (TYP)

PLACE NEW ASPHALT PAVEMENT PER STRUCTURAL SECTION, SHEET C2.00

5.00'

24.00'

NEW 4" WHITE PARKING STALL STRIPING (TYP)

R3.00'

R3.00'

16.00'

NEW HVAC PAD, SEE MECHANICAL PLANS

BUILDING
FFE = 37.00'

CUT OPENING IN EXISTING 6' CYCLONE FENCE AND INSTALL NEW GATE & POSTS MATCHING EXISTING FENCE

MOUNT NEW VAN ACCESSIBLE PARKING SIGN TO EXTERIOR WALL OF BUILDING

PLACE NEW 4" WHITE PARKING STALL STRIPING (TYP)

7.90'

5.00'

7.00'

7.00'

INSTALL NEW PRECAST CONCRETE WHEELSTOP (TYP),

9.00' (TYP)

18.00' (TYP)

18.00'

R5.00'

R20.00'

PLACE PAINTED TRAFFIC DIRECTION ARROW PER DETAIL, SHEET 2.00 (TYP)

11.00'

5.00'

9.00'

NEW CATCH BASIN

55.89'

47.62'

R36.00'

INSTALL NEW STANDARD VERTICAL CURB (TYP), SEE DETAIL, SHEET C2.00

20.00'

PLACE NEW ASPHALT PAVEMENT PER STRUCTURAL SECTION, SHEET C2.00

R5.00'

24.50'

R10.00'

R10.00'

R5.00'

20' FRONT SETBACK

C1.20 SITE PLAN
SCALE: 1" = 10'-0"

10 0 10 20
(IN FEET)

FREIHEIT ARCHITECTURE

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TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
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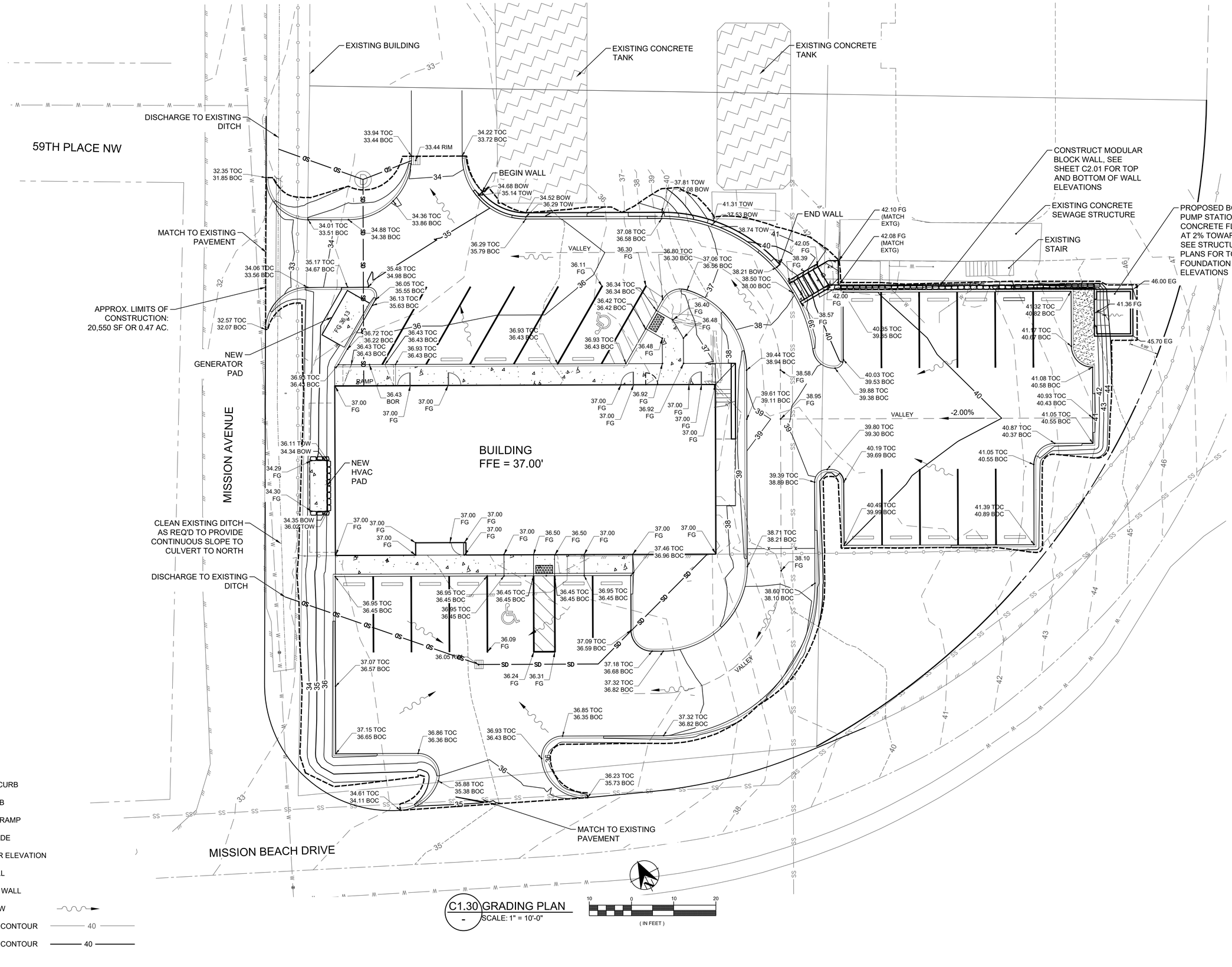
SITE PLAN

C1.20



KEY:

BOC= BOTTOM OF CURB

TOC = TOP OF CURB

BOR = BOTTOM OF RAMP

FG = FINISHED GRADE

FFE = FINISH FLOOR ELEVATION

TOW = TOP OF WALL

BOW = BOTTOM OF WALL

DIRECTION OF FLOW

EXISTING GROUND CONTOUR 40

FINISHED GROUND CONTOUR 40

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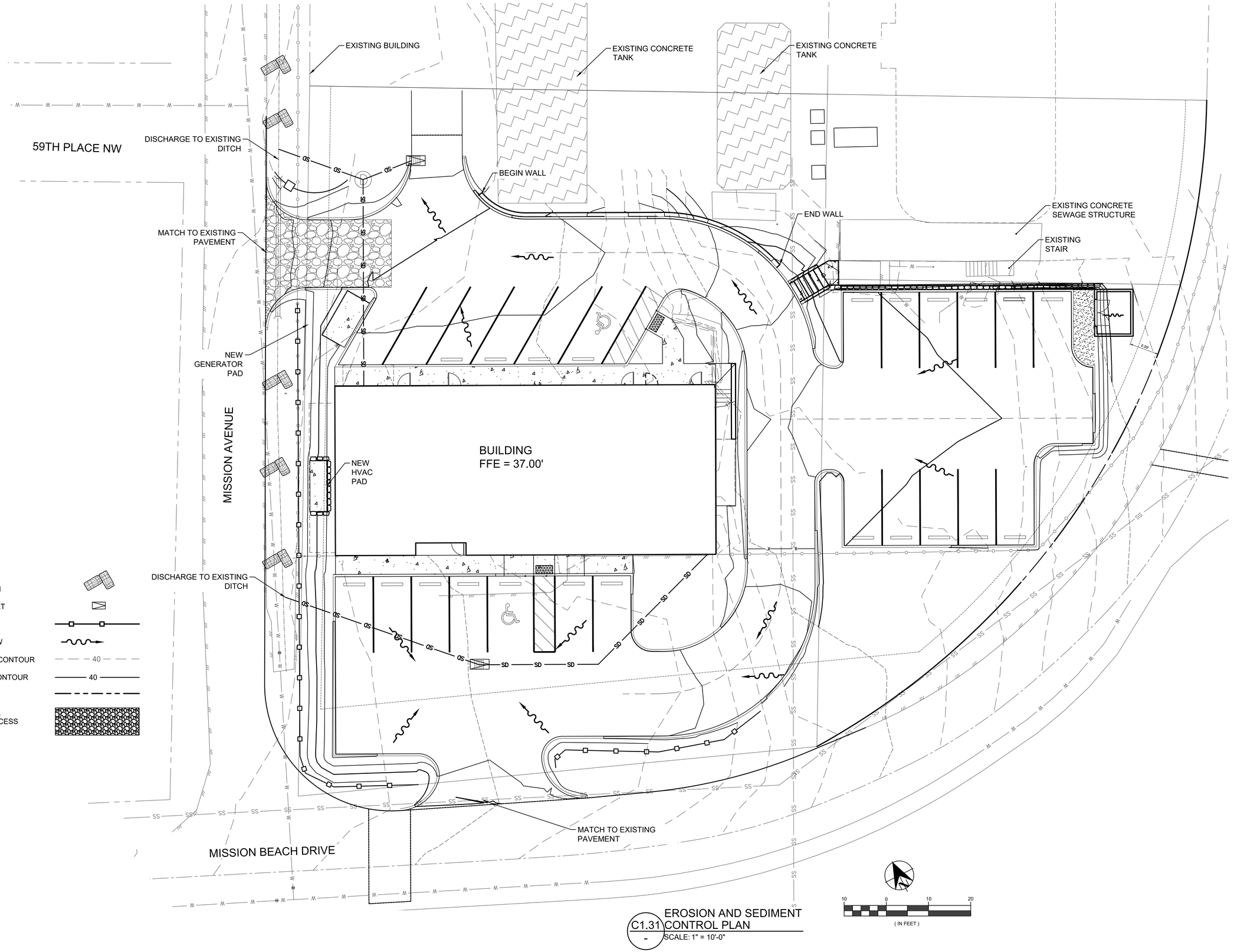
GRADING PLAN

C1.30



C1.31 - EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 10'-0"

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EROSION AND SEDIMENT CONTROL PLAN

C1.31

EROSION CONTROL GENERAL NOTES

1. APPROVAL OF THIS EROSION AND SEDIMENT CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OR ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC BEST MANAGEMENT PRACTICES (BMP) IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC BMPs SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE ESC BMPs SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE ESC BMPs AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
6. THE ESC BMPs SHALL BE INSPECTED DAILY AND AFTER EACH STORM EVENT BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. INSPECT AND MAINTAIN THE ESC BMPs ON INACTIVE SITES A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT (24-HOUR STORM EVENT WITH A 10-YEAR OR GREATER RECURRENCE INTERVAL).
8. AT NO TIME SHALL THE SEDIMENT EXCEED 60 PERCENT OF THE SUMP DEPTH OR HAVE LESS THAN 6 INCHES OF CLEARANCE FROM THE SEDIMENT SURFACE TO THE INVERT OF LOWEST PIPE. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

SILT FENCE

PURPOSE- TO REDUCE THE TRANSPORT OF COARSE SEDIMENT FROM A CONSTRUCTION SITE BY PROVIDING A TEMPORARY PHYSICAL BARRIER TO SEDIMENT AND REDUCING THE RUNOFF VELOCITIES OF OVERLAND FLOW.

CONDITIONS OF USE:

1. DOWNSLOPE OF ALL DISTURBED AREAS.
2. SILT FENCE IS NOT INTENDED TO TREAT CONCENTRATED FLOWS, NOR IS IT INTENDED TO TREAT SUBSTANTIAL AMOUNTS OF OVERLAND FLOW. ANY CONCENTRATED FLOWS MUST BE CONVEYED THROUGH THE DRAINAGE SYSTEM TO A SEDIMENT TRAP OR POND. THE ONLY CIRCUMSTANCES IN WHICH OVERLAND FLOW CAN BE TREATED SOLELY BY A SILT FENCE, RATHER THAN BY A SEDIMENT TRAP OR POND, IS WHERE THE AREA DRAINING TO THE FENCE IS SMALL (SEE INTRODUCTION TO THIS SECTION), AND THE AVERAGE SLOPE IS NOT MORE THAN 1.5H:1V.

DESIGN AND INSTALLATION SPECIFICATIONS:

1. SEE FIGURE ABOVE FOR DETAIL.
2. THE GEOTEXTILE USED MUST MEET THE STANDARDS LISTED BELOW. A COPY OF THE MANUFACTURER'S FABRIC SPECIFICATIONS MUST BE AVAILABLE ON-SITE.

   AOS (ASTM D-4751)30-100 SIEVE SIZE 90.024-0.006 IN.) FOR SILTFILM 50-100 SEIVE SIZE(0.012-0.006 IN.) FOR OTHER FABRICS.

   WATER PERMITTIVITY (ASTM D-4491)=0.02 SEC ~! MIN.

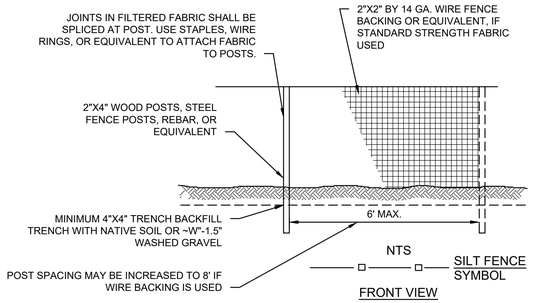
   GRAB TENSILE STRENGTH (ASTM D-4632) = 180 LBS MIN. FOR EXTRA STRENGTH FABRIC 100 LBS MIN. FOR STANDARD STRENGTH FABRIC.

   GRAB TENSILE ELONGATION (ASTM D-4632) = 30% MAX.

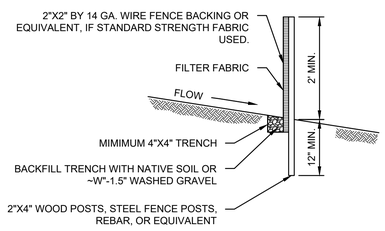
   ULTRAVIOLET RESISTANCE (ASTM D-4355) = 70%.
3. STANDARD STRENGTH FABRIC REQUIRES WIRE BACKING TO INCREASE THE STRENGTH OF THE FENCE. WIRE BACKING OR CLOSER POST SPACING MAY BE REQUIRED FOR EXTRA STRENGTH FABRIC IF FIELD PERFORMANCE WARRENTS A STRONGER FENCE.
4. WHERE THE FENCE IS INSTALLED, THE SLOPE SHALL BE NO STEEPER THAN 2H:1V.

MAINTENANCE STANDARDS:

1. ANY DANAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACER THE FENCE AND/OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6" HIGH.
5. IF THE FILTER FABRIC HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

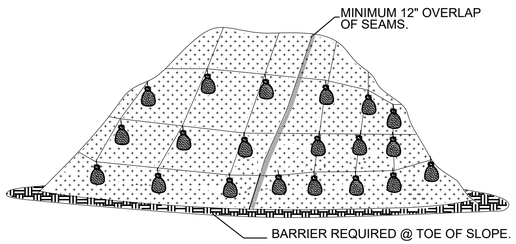


NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.



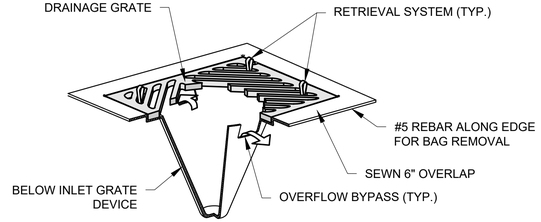
CROSS SECTION

1 - SILT FENCE DETAIL
SCALE: NTS



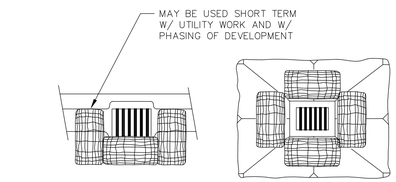
NOTES:
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. BARRIER REQUIRED @ TOE OF STOCK PILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

4 - TEMPORARY STOCKPILE SLOPE STABILIZATION
SCALE: NTS

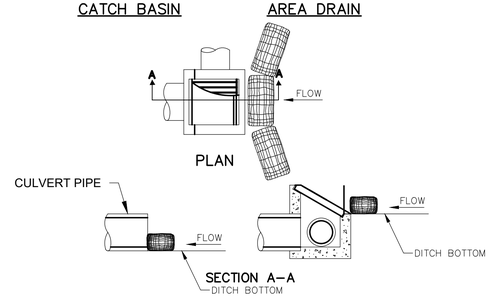


NOTES:
1. INSTALL ACCORDING TO THE PLANS, SPECIAL PROVISIONS, AND MANUFACTURER RECOMMENDATIONS.
2. INSPECT INSERTS TO ENSURE FLOW THROUGH THE FILTER MEDIA. CLEAN OR REPLACE INSERT AS NEEDED.

2 - STORM DRAIN INLET PROTECTION
SCALE: NTS



CATCH BASIN AREA DRAIN



DITCH INLET

3 - BIOBAG DETAIL
SCALE: NTS

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TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
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BID ISSUE	MARCH 21, 2024

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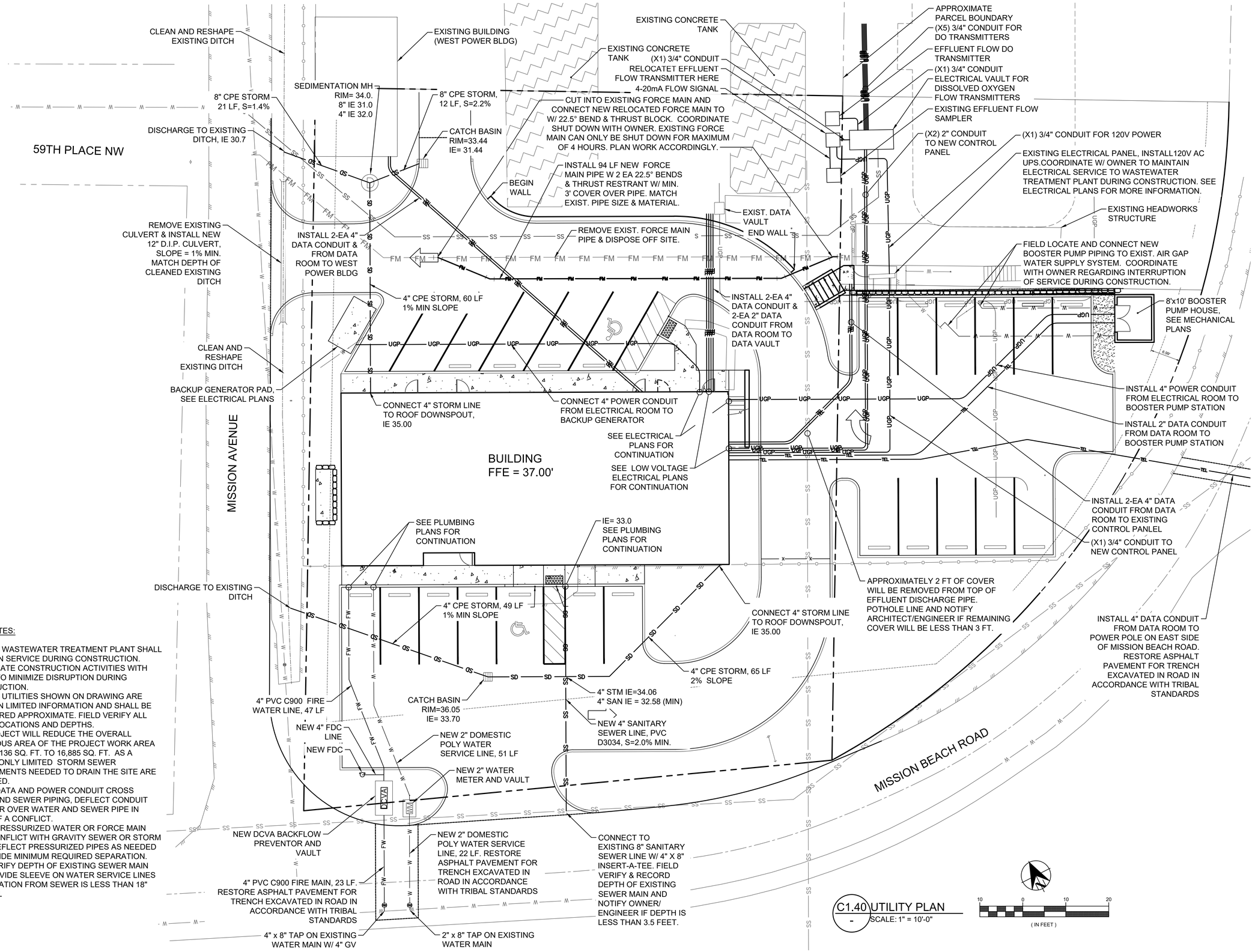
EROSION AND CONTROL NOTES AND DETAILS

C1.32



GENERAL NOTES:

1. EXISTING WASTEWATER TREATMENT PLANT SHALL REMAIN IN SERVICE DURING CONSTRUCTION. COORDINATE CONSTRUCTION ACTIVITIES WITH OWNER TO MINIMIZE DISRUPTION DURING CONSTRUCTION.
2. EXISTING UTILITIES SHOWN ON DRAWING ARE BASED ON LIMITED INFORMATION AND SHALL BE CONSIDERED APPROXIMATE. FIELD VERIFY ALL UTILITY LOCATIONS AND DEPTHS.
3. THIS PROJECT WILL REDUCE THE OVERALL IMPERVIOUS AREA OF THE PROJECT WORK AREA FROM 20,136 SQ. FT. TO 16,885 SQ. FT. AS A RESULT, ONLY LIMITED STORM SEWER IMPROVEMENTS NEEDED TO DRAIN THE SITE ARE PROPOSED.
4. WHERE DATA AND POWER CONDUIT CROSS WATER AND SEWER PIPING, DEFLECT CONDUIT UNDER OR OVER WATER AND SEWER PIPE IN EVENT OF A CONFLICT.
5. WHERE PRESSURIZED WATER OR FORCE MAIN PIPES CONFLICT WITH GRAVITY SEWER OR STORM PIPES, DEFLECT PRESSURIZED PIPES AS NEEDED TO PROVIDE MINIMUM REQUIRED SEPARATION.
6. FIELD VERIFY DEPTH OF EXISTING SEWER MAIN AND PROVIDE SLEEVE ON WATER SERVICE LINES IF SEPARATION FROM SEWER IS LESS THAN 18" VERTICAL

C1.40 - UTILITY PLAN
SCALE: 1" = 10'-0"

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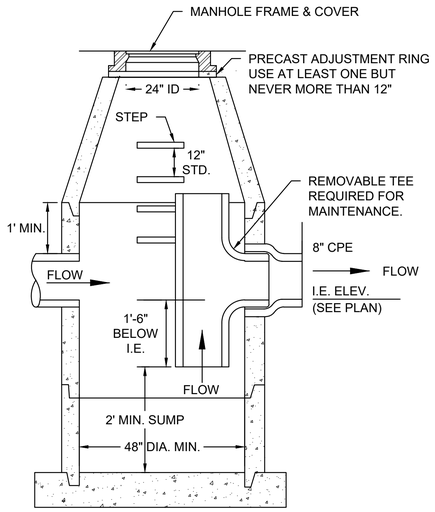
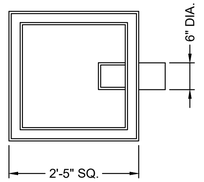
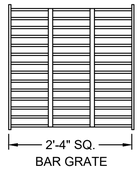
UTILITY PLAN
C1.40

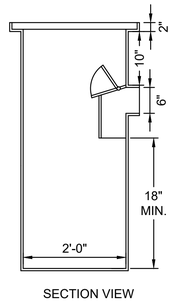


SEDIMENTATION MANHOLE DETAIL

N.T.S.







BASIN WELDED 10 GA. MILD STEEL, COATED ALL SURFACES WITH ASPHALTIC PAINT.

OUTLET STUB: FOR NO HUB CONNECTOR. SIZE AS REQUIRED FOR INDICATED PIPE. (SEE PLAN)

GRATE: WELDED STEEL DROP IN BAR GRATE (ASTM A36)
END BARS: ½" X 2"
CROSS BARS: ½" X 2" @ 2" O/C
BIKE STRAPS: ⅛" X 1"
16,000 LB UNIFORM LOAD CAPACITY

TRAPPED CATCH BASIN DETAIL

N.T.S.

(HORIZONTAL)
BEARING AREA OF THRUST BLOCKS IN SQ. FT.

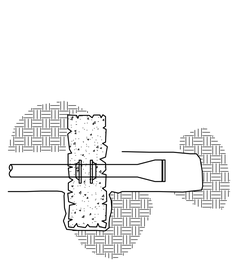
FITTING SIZE	TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	1.3	1.8	1.0	1.0	1.0
6	2.8	4.0	2.2	1.1	1.0
8	5.0	7.1	3.8	2.0	1.0
12	11.3	16.0	8.7	4.4	2.2
16	20.1	28.4	15.4	7.8	3.9
20	31.1	44.4	24.0	12.3	6.2
24	45.2	64.0	34.6	17.7	8.9

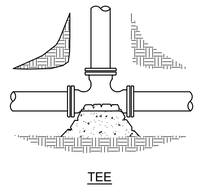
VALUES BASED ON 200 PSI WATER PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.

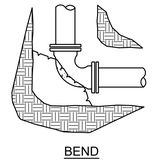
NOTES:
1) THRUST BLOCKING AT ALL TEES, BENDS AND ENDS OF PIPING.
2) CONCRETE BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
3) ALL CONCRETE TO BE CLASS 3000.
4) INSTALL 12 MIL TOTAL THICKNESS POLYETHENE SHEET AROUND FITTING. SECURE SHEET ENDS TO PREVENT INFILTRATION OF DIRT BETWEEN SHEETS AND PIPE FITTING PRIOR TO POURING THRUST BLOCKING.
5) PROTECT MECHANICAL JOINT FOLLOWERS AND BOLTS FROM CONCRETE WITH TEMPORARY FORMS AND POLYETHENE SHEETING SEE NOTE 3.

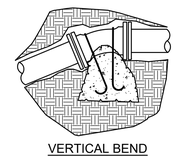
VOLUME OF THRUST BLOCK
IN CU. YDS. (VERTICAL)

FITTING SIZE	BEND ANGLE		
	45°	22.5°	11.25°
4	1.1	0.4	0.2
6	2.7	1.0	0.4
8	4.0	1.5	0.6
12	8.5	3.2	1.3
16	14.8	5.6	2.3





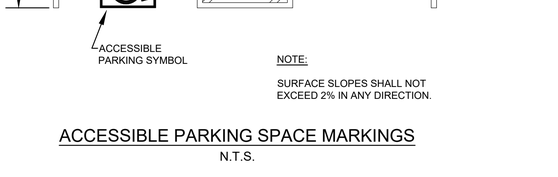




FITTING SIZE	ROD SIZE	EMBEDMENT
4"-12"	#6	30"
14"-16"	#8	36"

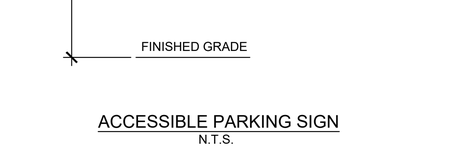
THRUST BLOCK DETAIL

N.T.S.



PAVEMENT STRUCTURAL SECTION

N.T.S.



STANDARD VERTICAL CURB

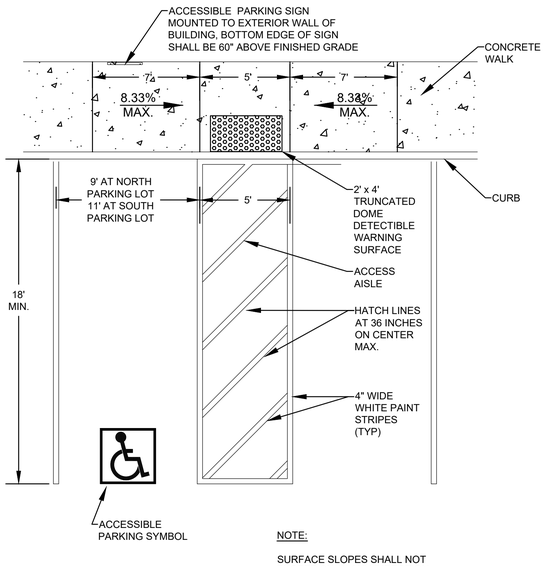
N.T.S.

TRAFFIC ARROW

N.T.S.

TRENCH BACKFILL ABOVE THE PIPE ZONE

N.T.S.



NOTE:

SURFACE SLOPES SHALL NOT EXCEED 2% IN ANY DIRECTION.

ACCESSIBLE PARKING SPACE MARKINGS

N.T.S.

WASHINGTON STATE
STANDARD ADA
12" x 24"

12" x 6"
(SOUTH SIDE ONLY)

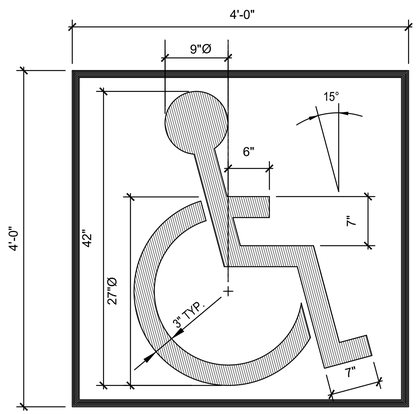
60"

HANDICAP/ VAN
ACCESSIBLE
PARKING SIGNS

FINISHED GRADE

ACCESSIBLE PARKING SIGN

N.T.S.



INTERNATIONAL SYMBOL OF ACCESSIBILITY

NOTE:

1. USE WHITE PAINT FOR SYMBOL ON BLUE PAINTED BACKGROUND

ACCESSIBLE PARKING SYMBOL

N.T.S.

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AK-22-02 PWM [10/10/2023]

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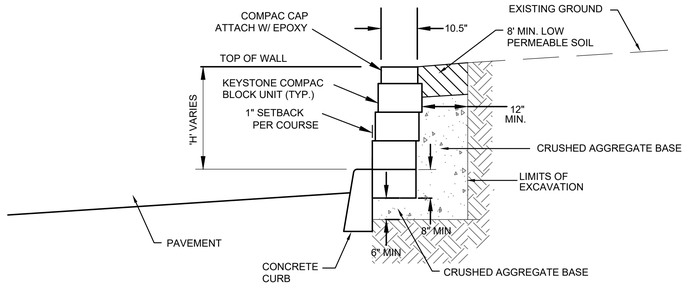
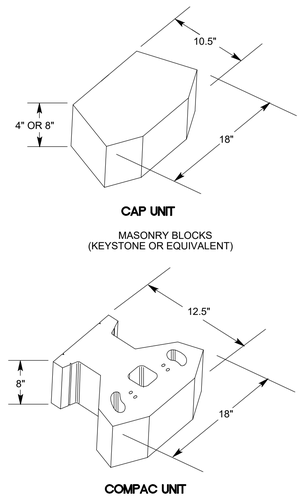
C2.00



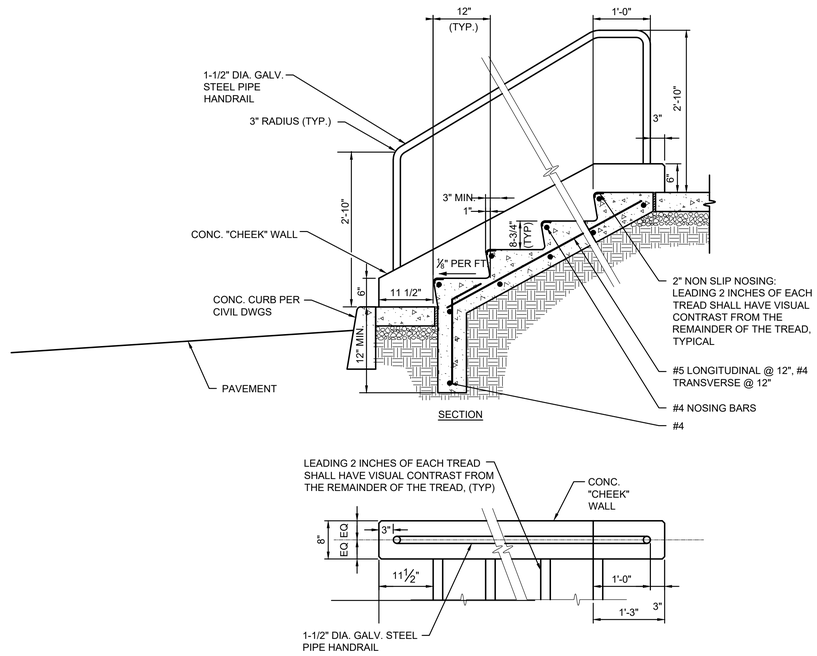
TYPICAL MODULAR BLOCK WALL

N.T.S.



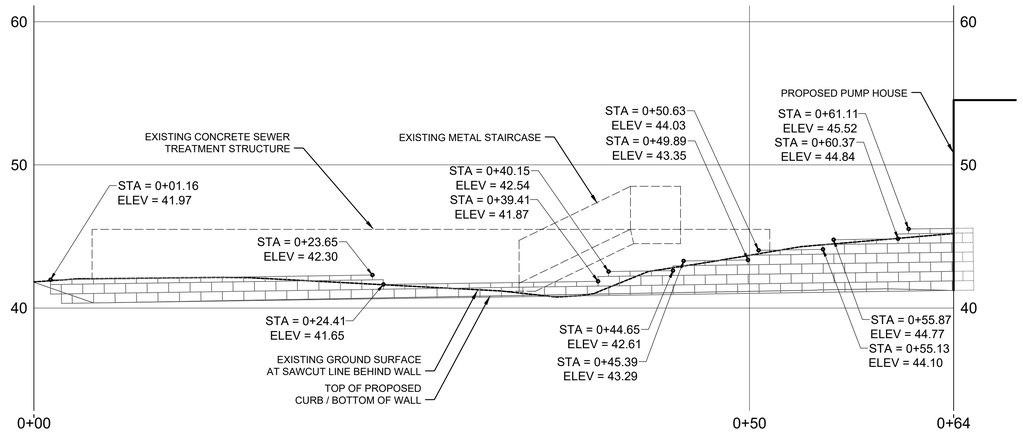
TYPICAL MODULAR BLOCK WALL UNITS

N.T.S.



EXTERIOR CONCRETE STAIRCASE DETAIL

N.T.S.



MODULAR BLOCK WALL PROFILE

SCALE: 1" = 5' (HORIZ & VERT.)

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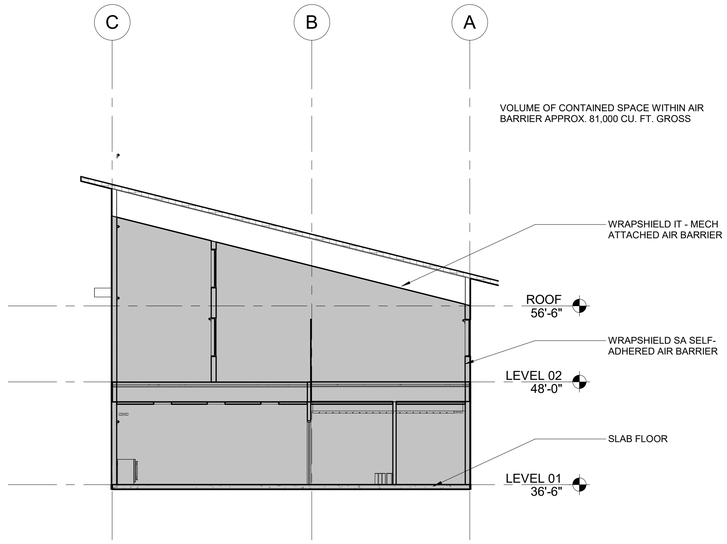
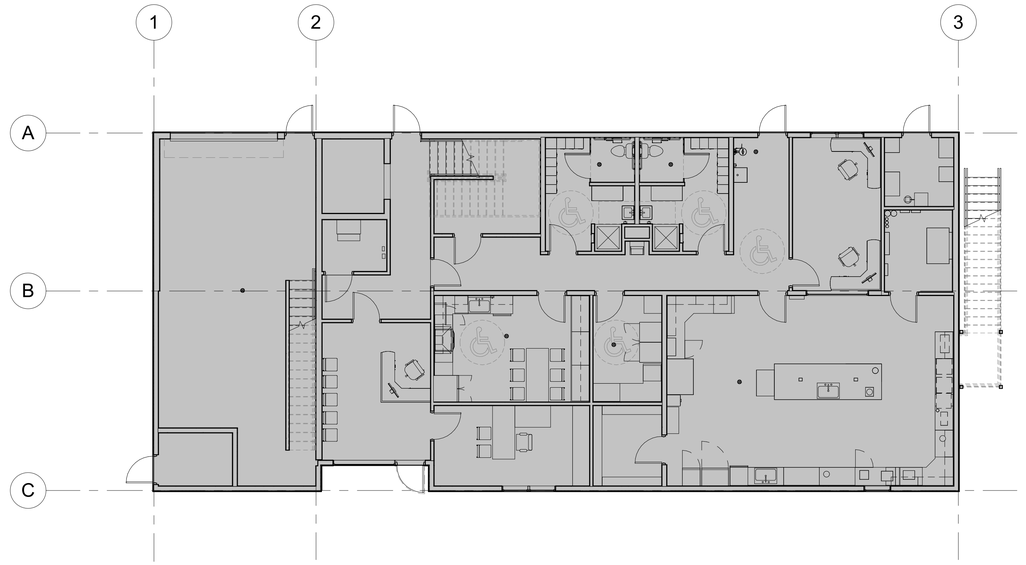
C2.01



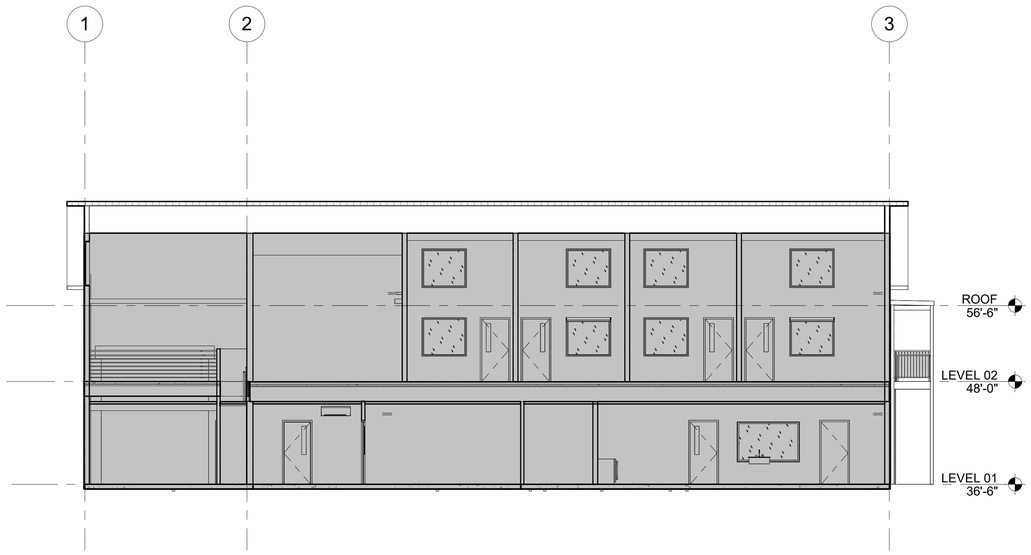
3 A1.10 **AIR BARRIER SECTION A**

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



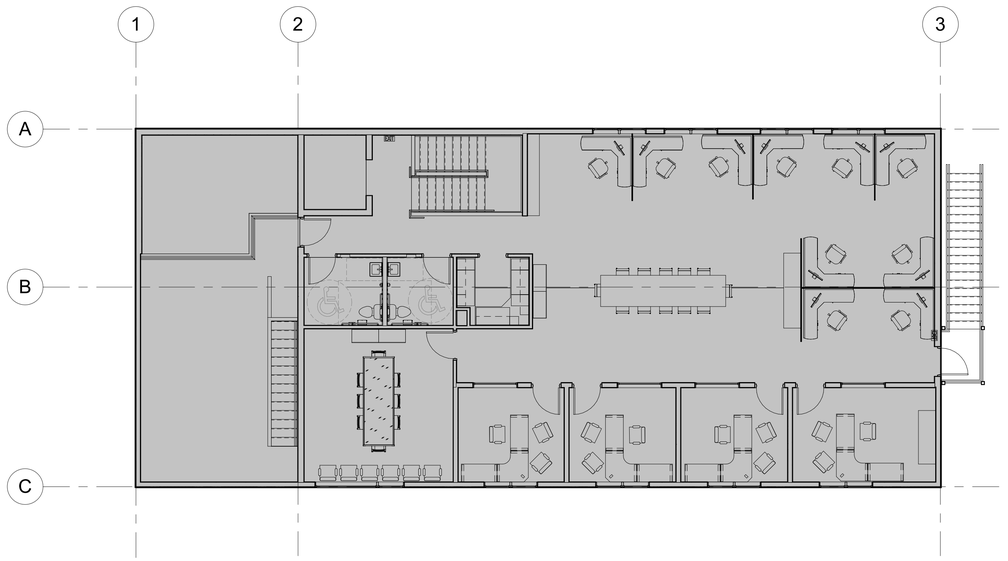
1 A1.10 **LEVEL 01 AIR BARRIER PLAN**

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



4 A1.10 **AIR BARRIER SECTION B**

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



2 A1.10 **LEVEL 02 AIR BARRIER PLAN**

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

FREIHEIT ARCHITECTURE

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AIR BARRIER PLAN & SECTION

A1.10

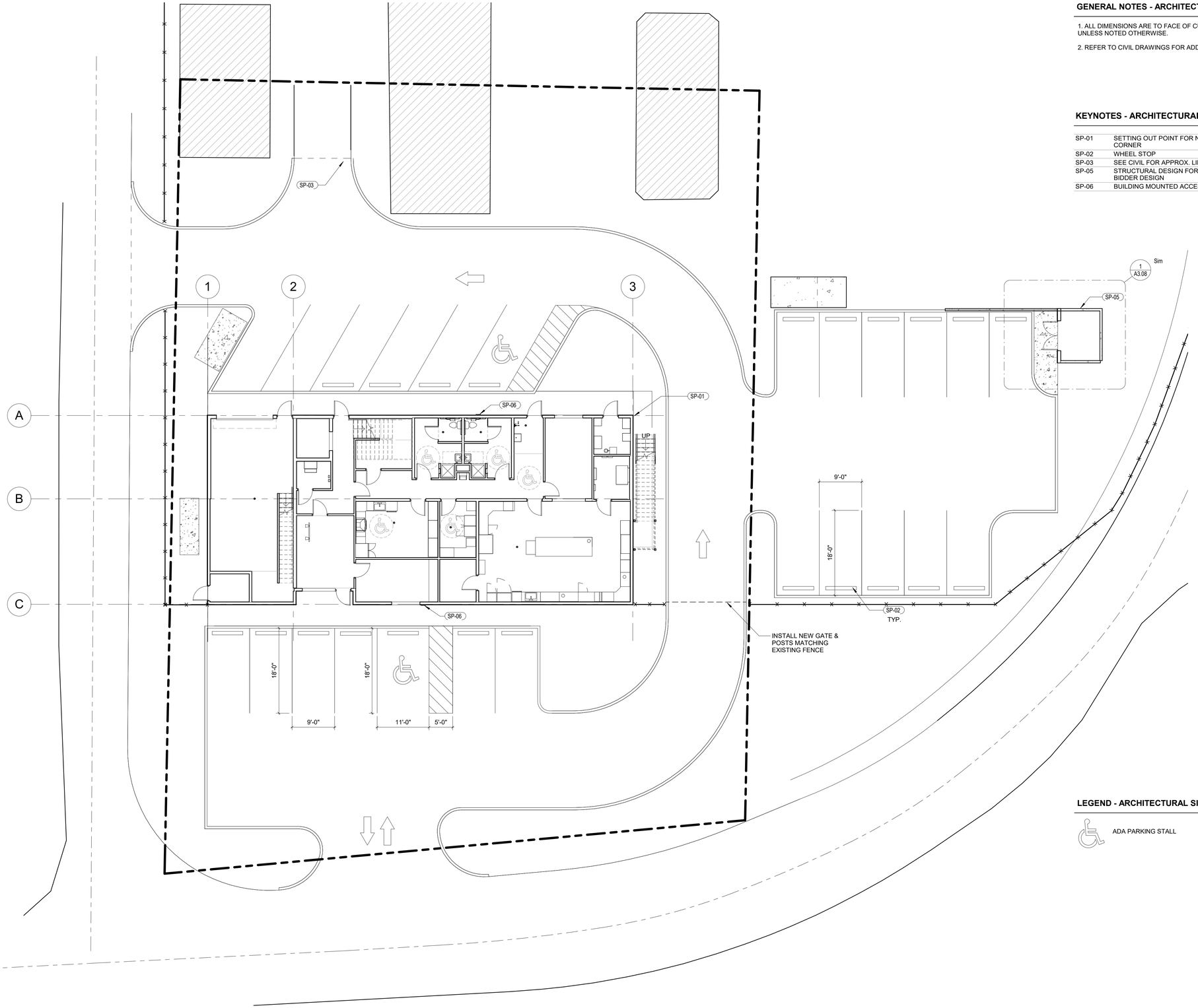
GENERAL NOTES - ARCHITECTURAL SITE PLAN

1. ALL DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING FOUNDATION WALL UNLESS NOTED OTHERWISE.

2. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

KEYNOTES - ARCHITECTURAL SITE PLAN

SP-01	SETTING OUT POINT FOR NEW CONSTRUCTION AT EXISTING BUILDING NORTHEAST CORNER
SP-02	WHEEL STOP
SP-03	SEE CIVIL FOR APPROX. LIMITS OF WORK
SP-05	STRUCTURAL DESIGN FOR WASHER SHED AND ASSOCIATED RETAINING WALLS TO BE BIDDER DESIGN
SP-06	BUILDING MOUNTED ACCESSIBLE PARKING SIGN



LEGEND - ARCHITECTURAL SITE PLAN

ADA PARKING STALL

NO WORK THIS AREA

1 A2.00 **ARCHITECTURAL SITE PLAN**

Scale: 1" = 10'-0"

NORTH

FREIHEIT ARCHITECTURE

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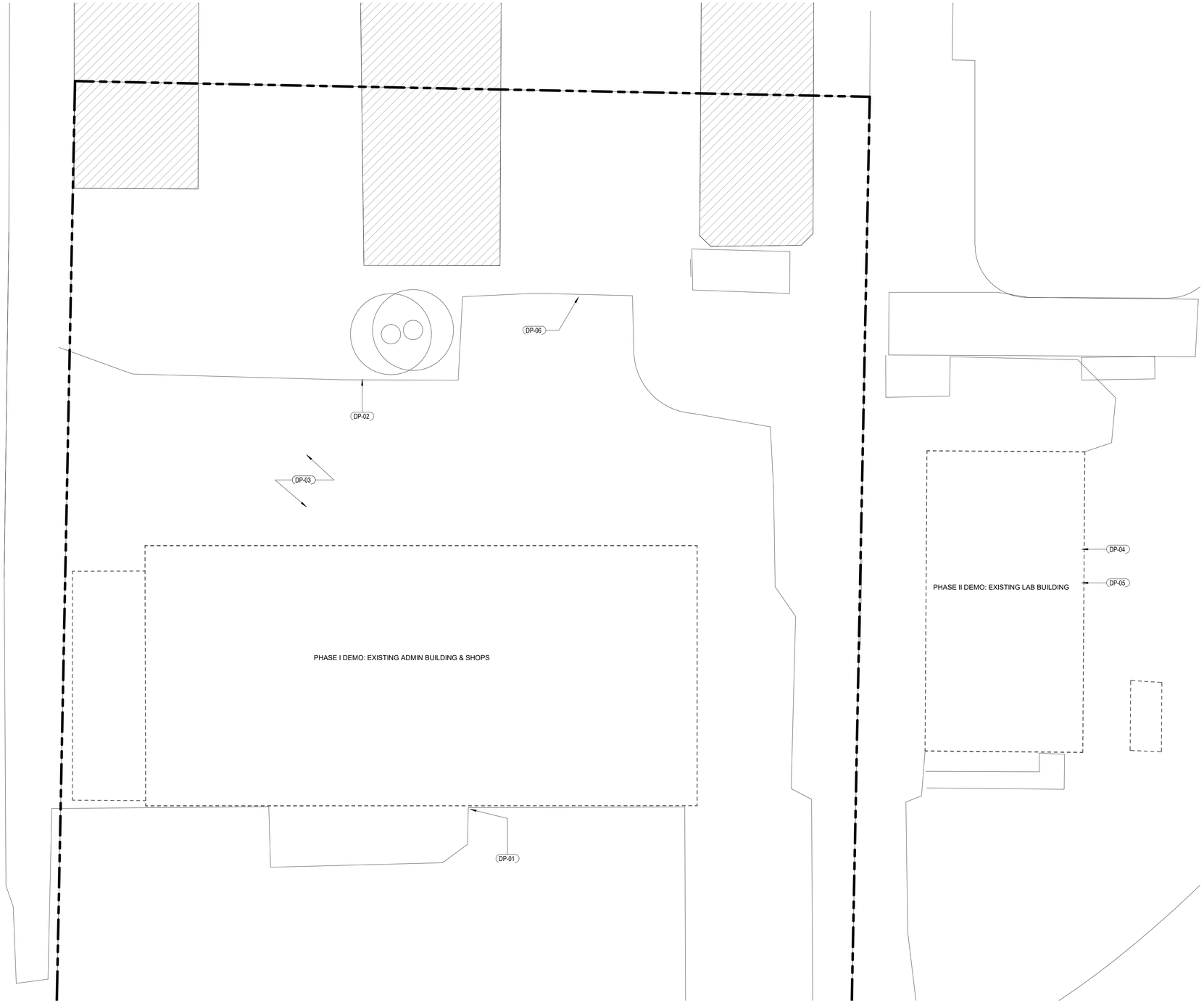
ARCHITECTURAL SITE PLAN

A2.00



1 A3.00 **DEMOLITION PLAN - LEVEL 01**

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

NORTH

GENERAL NOTES - DEMOLITION PLAN

1. PRIOR TO DEMOLITION, GENERAL CONTRACTOR TO VISIT THE SITE AND VERIFY EXTENT OF DEMOLITION ACTIVITIES REQUIRED FOR NEW CONSTRUCTION

2. REMOVE ALL DEBRIS AND GARBAGE PRIOR TO START OF CONSTRUCTION. REPAIR SUBSTRATES AS RQUIRED FOR NEW FINISHES

3. COORDINATE CONSTRUCTION SCHEDULE WITH ARCHITECT AND BUILDING OWNER TO MINIMIZE DISRUPTIONS TO BUSINESS HOUR OPERATIONS

4. THE CONTRACTOR SHALL ENSURE THAT THIS PROJECT AND ALL CONSTRUCTION ACTIVITIES RELATED THERETO CONFORM WITH ALL LOCAL, REGIONAL, STATE AND/OR FEDERAL REGULATIONS PERTAINING TO DISTURBING, DISPLACING, AND/OR REMOVAL OF ASBESTOS OR ASBESTOS CONTAINING MATERIALS. NOTE SPECIFICALLY THAT FOR PROJECTS IN WASHINGTON STATE, THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE PUGET SOUND AIR POLLUTION CONTROL AGENCY REGARDING INSPECTION, CERTIFICATION, AND NOTIFICATION

5. ALL SALVAGED ITEMS SHALL BE RETURNED TO BUILDING OWNER AT OWNER'S OPTION. ALL UNWANTED MATERIAL SHALL BE DISPOSED OF PROPERLY

6. DEMO ALL EXISTING SITE UTILITIES AS NECESSARY TO ACCOMMODATE NEW WORK

7. ALL DEMOLISHED AND UNUSED CABLE AND WIRING TO BE DEMOLISHED BACK TO SOURCE

KEYNOTES - DEMOLITION PLAN

DP-01	DEMOLISH EXISTING ADMIN & SHOP BUILDING, INCLUDING SLAB, FOOTINGS, AND UTILITIES, TO ACCOMMODATE NEW CONSTRUCTION
DP-02	CUT BACK SITE PAVING TO LIMITS ON CIVIL PLANS TO ACCOMMODATE NEW PAVING. EXCAVATE UNDERLAY AS NECESSARY TO ACCOMMODATE NEW BUILDING
DP-03	CUT BACK SITE UTILITIES TO EXTENT NECESSARY TO ACCOMMODATE NEW UTILITIES PER CIVIL PLANS
DP-04	DEMOLISH EXISTING LAB BUILDING ONCE NEW FACILITY IS OPERATIONAL. REMOVE SLAB, FOOTINGS AND UTILITIES AS NECESSARY TO ACCOMMODATE NEW PARKING LOT CONSTRUCTION.
DP-05	COORDINATE SALVAGE, RELOCATION OR CONTINUED OPERATION OF CONTROL OR OTHER SYSTEMS WITH OWNER
DP-06	SEE CIVIL FOR APPROX. LIMITS OF WORK

LEGEND - DEMOLITION PLAN

- NO WORK THIS AREA
- EXISTING CONSTRUCTION / ELEMENT TO REMAIN
- EXISTING CONSTRUCTION / ELEMENT TO BE REMOVED
- APPROX. EXTENTS OF WORK

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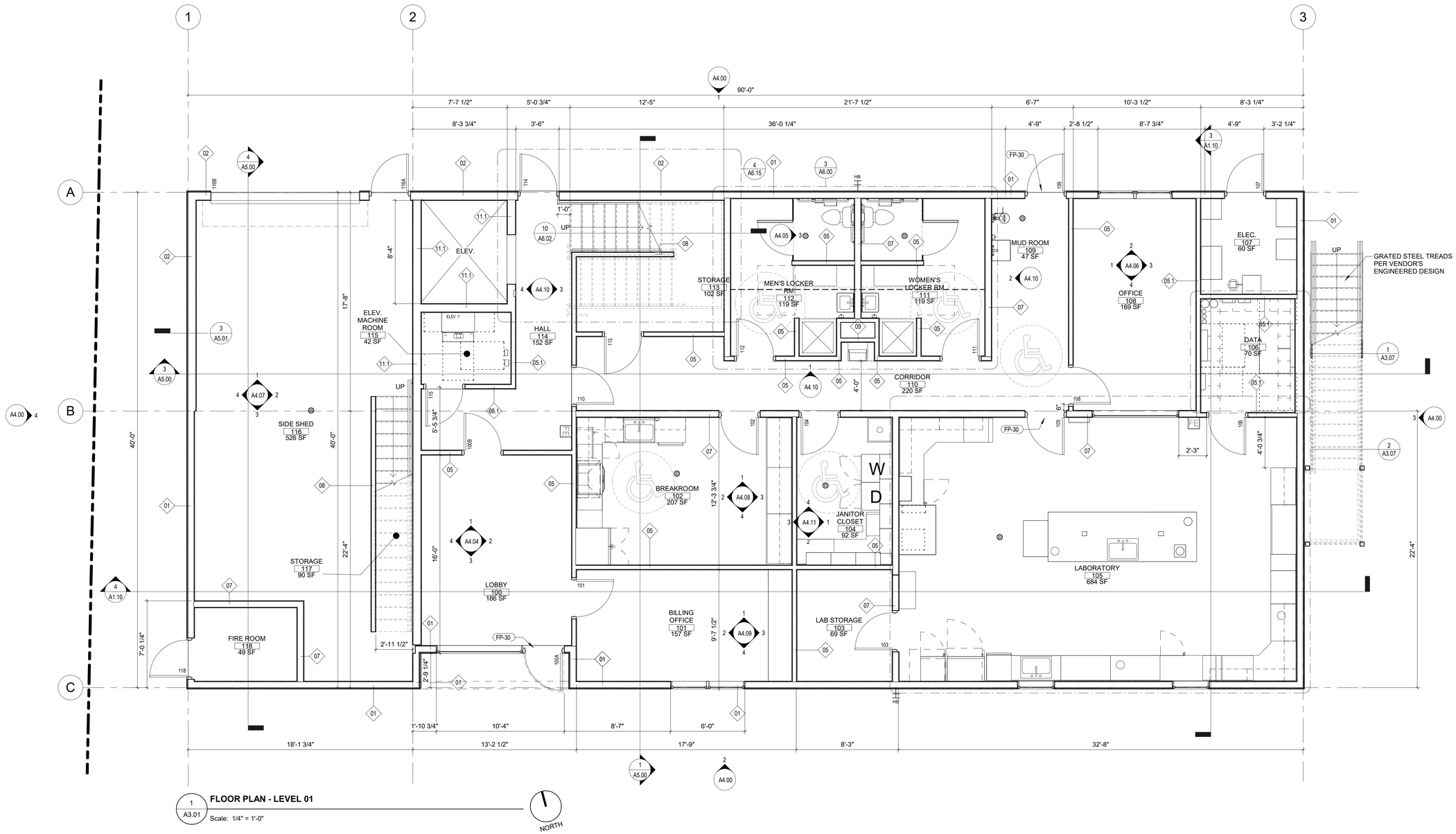
DEMOLITION PLAN

A3.00



FLOOR PLAN - LEVEL 01

1 / A3.01

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

NORTH

GENERAL NOTES - FLOOR PLAN

1. USE GREENBOARD IN ALL WET ROOMS: MUD ROM, LOCKER ROOMS, LAB, RESTROOMS, BREAK ROOM, JANITOR CLOSET, BACK CORRIDOR.

2. USE ACOUSTICAL BATT INSULATION AT ALL MECHANICAL, SHAFT, MACHINE ROOM ENCLOSURES, AND AT RESTROOMS.

3. USE THERMAL INSULATION AT ALL EXTERIOR WALLS, AND AT INTERIOR WALLS DIVIDING SHED FROM REST OF BUILDING.

4. WALL TYPES SHOWN WITH INTERIOR GWB SURFACE. FOR ADDITIONAL FINISH MATERIALS SEE INTERIOR ELEVATIONS.

5. SEE EXTERIOR ELEVATIONS FOR FINISH SIDING TYPES.

6. ELEVATOR SHAFT CONSTRUCTION PROVIDES 1 HOUR RATING.

7. DOORS TO BE INSTALLED WITH 4 INCH CLEARANCE FROM WALL. (UNO)

WALL SCHEDULE

01	MTL SD - 3/4" FURR - SHEATH - 6" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
02	MTL SD - 3/4" FURR - SHEATH - 8" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
05	5/8" GWB - 4" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	1-HR RATING PER PER SBC TABLE 720.1 ITEM NUMBER 4-1
07	5/8" GWB - 6" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
08	5/8" GWB - 4" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
09	5/8" GWB - 4" WD STUD	TO UNDERSIDE OF STRUCTURE	NON-RATED
12	5/8" GWB - 8" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
20	6" CONCRETE	FULL HEIGHT	NON-RATED

FREIHEIT ARCHITECTURE

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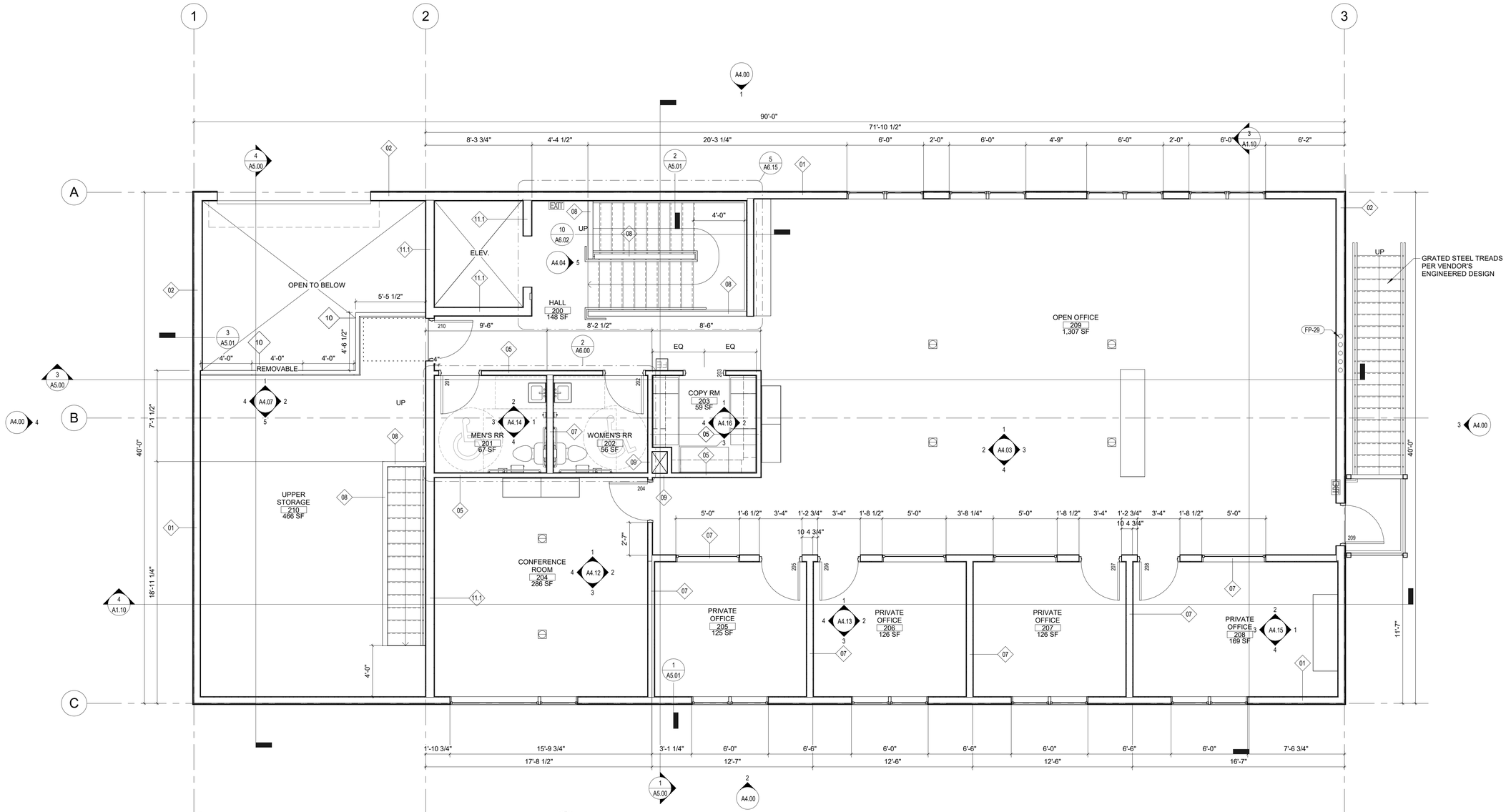
FLOOR PLAN
LEVEL 1

A3.01



FLOOR PLAN - LEVEL 02

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

NORTH

GENERAL NOTES - FLOOR PLAN

1. USE GREENBOARD IN ALL WET ROOMS: MUD ROM, LOCKER ROOMS, LAB, RESTROOMS, BREAK ROOM, JANITOR CLOSET, BACK CORRIDOR.

2. USE ACOUSTICAL BATT INSULATION AT ALL MECHANICAL, SHAFT, MACHINE ROOM ENCLOSURES, AND AT RESTROOMS.

3. USE THERMAL INSULATION AT ALL EXTERIOR WALLS, AND AT INTERIOR WALLS DIVIDING SHED FROM REST OF BUILDING.

4. WALL TYPES SHOWN WITH INTERIOR GWB SURFACE. FOR ADDITIONAL FINISH MATERIALS SEE INTERIOR ELEVATIONS.

5. SEE EXTERIOR ELEVATIONS FOR FINISH SIDING TYPES.

6. ELEVATOR SHAFT CONSTRUCTION PROVIDES 1 HOUR RATING.

7. DOORS TO BE INSTALLED WITH 4 INCH CLEARANCE FROM WALL. (UNO)

WALL SCHEDULE

01	MTL SD - 3/4" FURR - SHEATH - 6" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
02	MTL SD - 3/4" FURR - SHEATH - 8" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
05	5/8" GWB - 4" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	1-HR RATING PER PER SBC TABLE 720.1 ITEM NUMBER 4-1
07	5/8" GWB - 6" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
08	5/8" GWB - 4" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
09	5/8" GWB - 4" WD STUD	TO UNDERSIDE OF STRUCTURE	NON-RATED
12	5/8" GWB - 8" WD STUD - 5/8" GWB	TO UNDERSIDE OF STRUCTURE	NON-RATED
20	6" CONCRETE	FULL HEIGHT	NON-RATED

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

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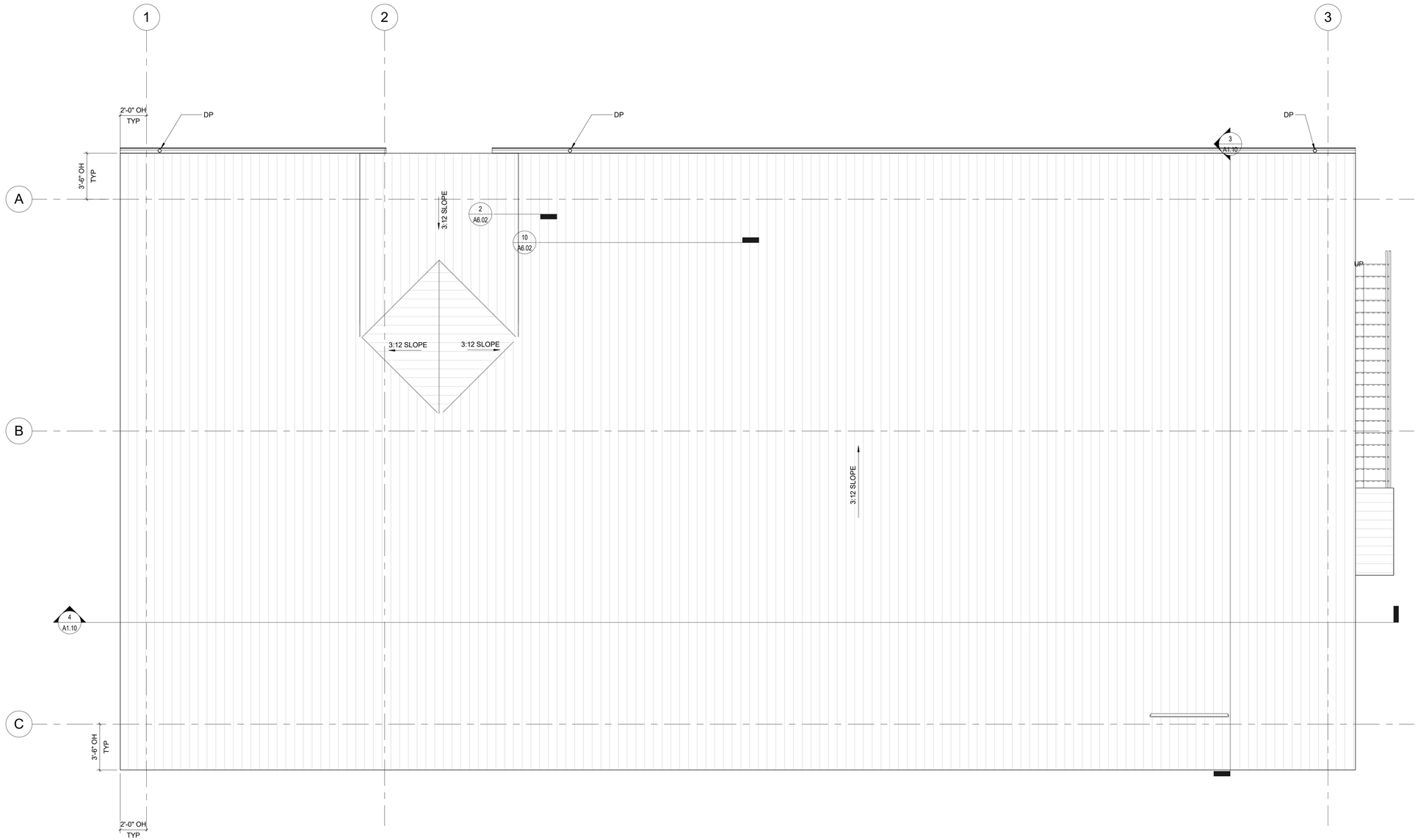
FLOOR PLAN
LEVEL 2

A3.02



1 A3.03 **ROOF PLAN**

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

NORTH

GENERAL NOTES - ROOF PLAN

1. HVAC EQUIPMENT SIZES AND LOCATIONS ARE APPROXIMATE. COORDINATE FINAL LOCATIONS AND SIZES WITH FINAL LAYOUT, ARCHITECT, AND MECHANICAL ENGINEER.
2. VERIFY SIZE, QUANTITY, AND LOCATION OF ALL TOILET EXHAUST FANS.
3. SEE DETAILS FOR TYPICAL PIPE PENETRATION DETAILS.
4. SEE DETAILS FOR TYPICAL FLASHING DETAILS.

ROOF DRAINAGE CALCULATIONS	
REF: 2018 UNIFORM PLUMBING CODE	
RAINFALL: 1-HR DURATION, 100 YEAR OCCURANCE, PER IPC APPENDIX B:	1/4" / HR.
TOTAL ROOF AREA:	4,418 SF
NUMBER OF DRAINS:	3
AREA PER DRAIN:	1,473 SF
GPM PER DRAIN:	92
DRAIN SIZE PER TABLE 1106.3	3" DIA.

FREIHEIT ARCHITECTURE

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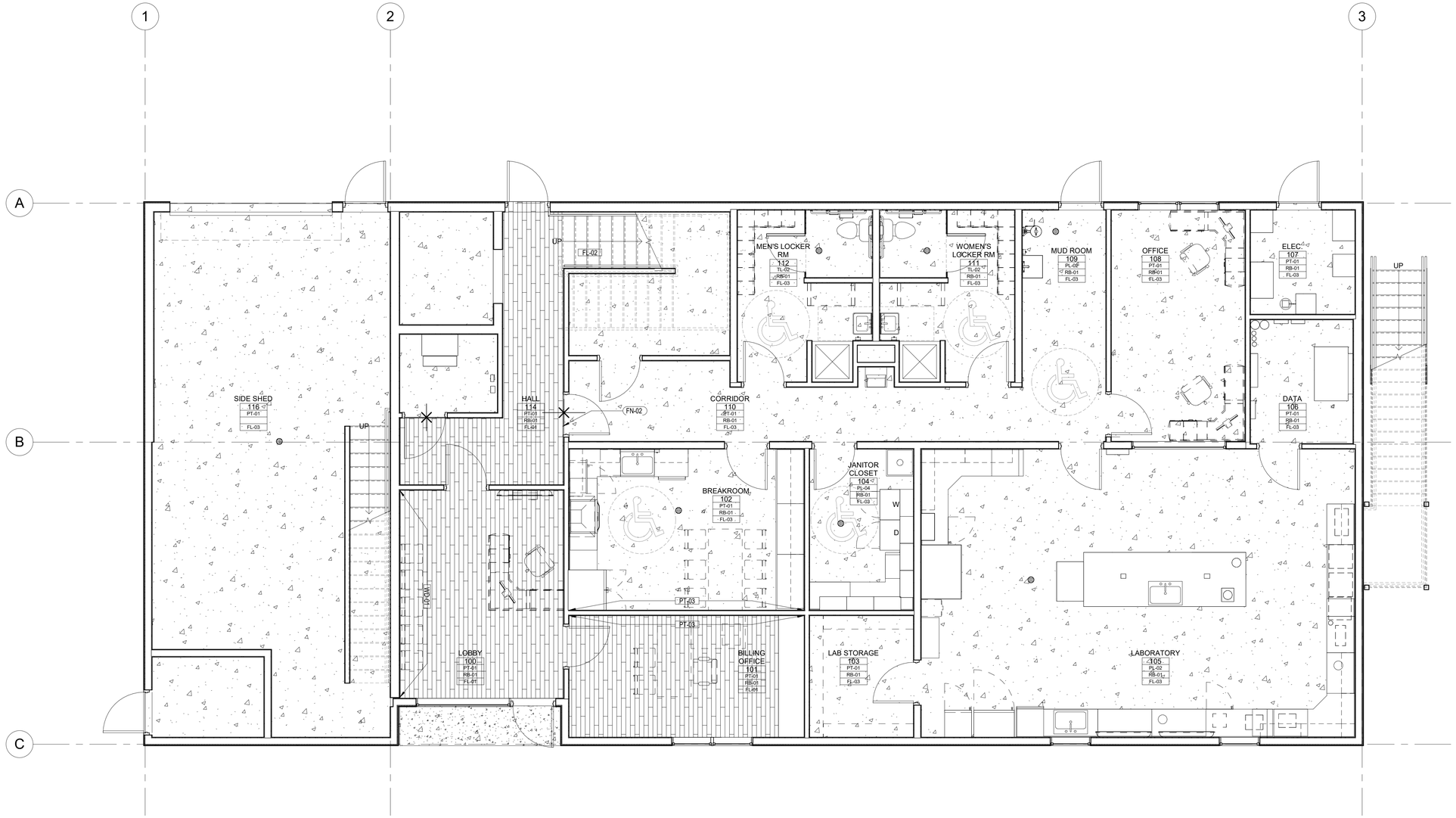
ROOF PLAN

A3.03



1 A3.04 **FINISH PLAN - LEVEL 01**

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

NORTH

GENERAL NOTES - FINISH PLAN

1. ALL SURFACES ARE TO BE UNIFORM AND IN "LIKE-NEW" CONDITION.

2. SUBMIT FINISH SAMPLES TO OWNER FOR APPROVAL PRIOR TO ORDERING MATERIAL.

3. ANY ITEMS OR SURFACES WHICH ARE UNSPECIFIED AS TO MATERIAL AND/OR COLOR ARE TO BE BROUGHT TO THE DESIGNERS ATTENTION FOR SPECIFICATION

4. HEIGHT DIFFERENCES BETWEEN FLOORING MATERIALS SHALL BEVEL AT A RATIO OF 1:2 IF GREATER THAN 1/4" PER ADA ACCESSIBILITY CODES.

5. USE RUBBER REDUCER STRIP AT ALL DISSIMILAR FLOORING TRANSITIONS TO MATCH SPECIFIED RUBBER BASE (UNO).

6. GENERAL WALL FINISH TO BE SMOOTH, LEVEL 4, PLUS FIRST COAT (PRIME COAT); AREAS WITH HIGH SUN EXPOSURE TO BE LEVEL 5.

7. ALL PAINTED AREAS TO RECEIVE ONE (1) COAT TINTED LATEX WALL PRIMER AND TWO (2) COATS PAINT WITH FINAL COAT APPLIED AFTER GENERAL TOUCHUP IS COMPLETED. USE 1/2" TO 3/8" NAP ROLLER.

8. ALL PAINT TO BE LOW VOC.

9. PAINT FINISHES:

   GENERAL CONDITIONS: EGGSHELL
   SOFFITS/CEILINGS: FLAT FINISH
   WET AREAS: SEMI-GLOSS
   PAINT GRADE DOORS & TRIM: SEMI-GLOSS LATEX ENAMEL

10. SEE ENLARGED PLAN FOR LAB LAYOUT.

KEYNOTES - FINISH PLAN

FN-02	TRANSITION - VINYL REDUCER TO BEST MATCH COLOR OF RF-01

LEGEND - FINISH PLAN

ROOM NAME
100
XXX-X
XXX-X
XXX-X
ROOM FINISH; SEE FINISH SCHEDULE

XX-XX
WALL FINISH; SEE FINISH SCHEDULE

FLOORING TRANSITION

FLOOR TILE

LVT PLANK FLOORING

RUBBER SHEET FLOORING

SEALED CONCRETE

EPOXY FLOORING

CARPET TILE FLOORING

FREIHEIT ARCHITECTURE

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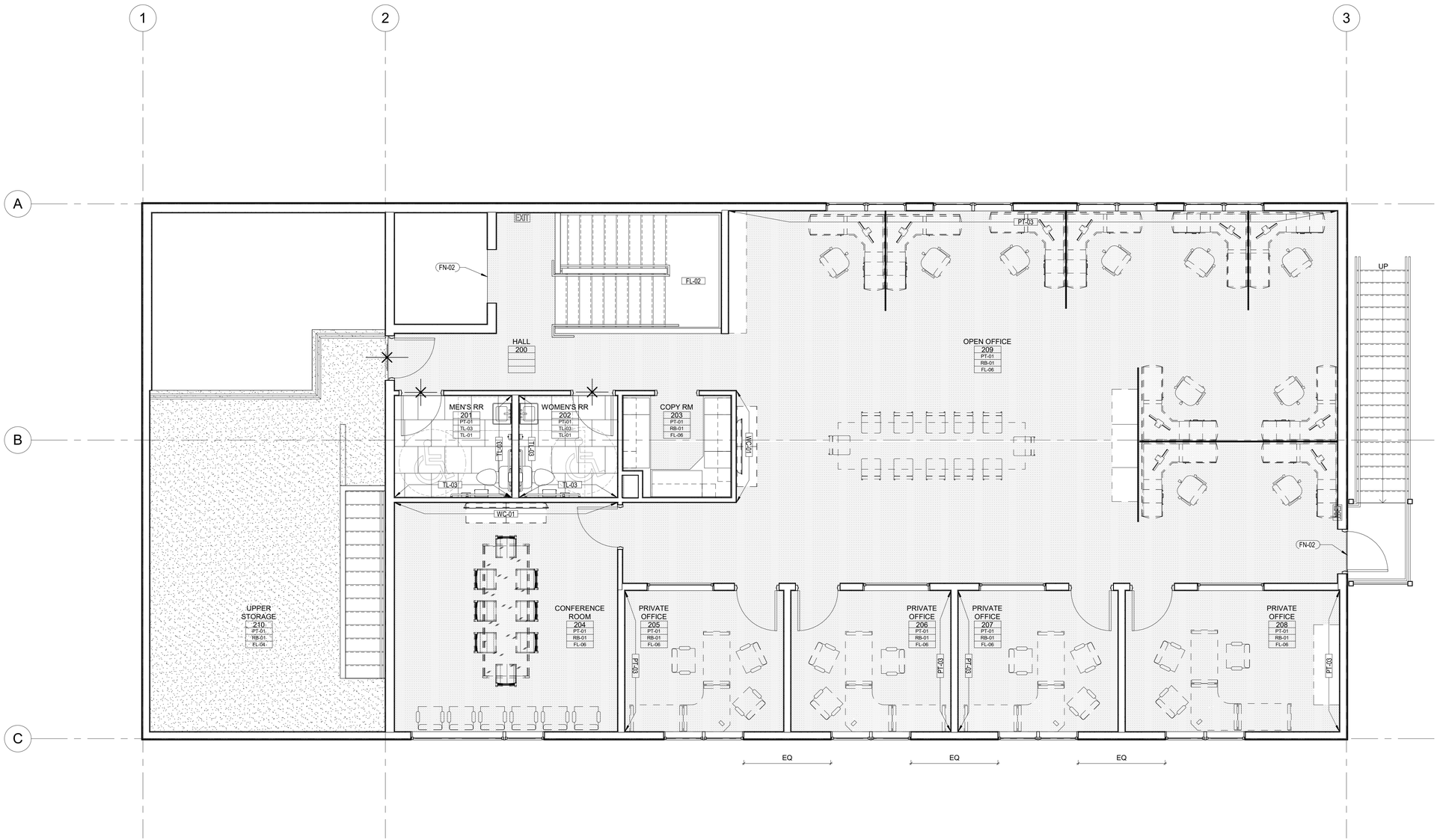
FINISH PLAN
LEVEL 1

A3.04



1 A3.05 **FINISH PLAN LEVEL 2**

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

NORTH

GENERAL NOTES - FINISH PLAN

1. ALL SURFACES ARE TO BE UNIFORM AND IN "LIKE-NEW" CONDITION.

2. SUBMIT FINISH SAMPLES TO OWNER FOR APPROVAL PRIOR TO ORDERING MATERIAL.

3. ANY ITEMS OR SURFACES WHICH ARE UNSPECIFIED AS TO MATERIAL AND/OR COLOR ARE TO BE BROUGHT TO THE DESIGNERS ATTENTION FOR SPECIFICATION

4. HEIGHT DIFFERENCES BETWEEN FLOORING MATERIALS SHALL BEVEL AT A RATIO OF 1:2 IF GREATER THAN 1/4" PER ADA ACCESSIBILITY CODES.

5. USE RUBBER REDUCER STRIP AT ALL DISSIMILAR FLOORING TRANSITIONS TO MATCH SPECIFIED RUBBER BASE (UNO).

6. GENERAL WALL FINISH TO BE SMOOTH, LEVEL 4, PLUS FIRST COAT (PRIME COAT); AREAS WITH HIGH SUN EXPOSURE TO BE LEVEL 5.

7. ALL PAINTED AREAS TO RECEIVE ONE (1) COAT TINTED LATEX WALL PRIMER AND TWO (2) COATS PAINT WITH FINAL COAT APPLIED AFTER GENERAL TOUCHUP IS COMPLETED. USE 1/2" TO 3/8" NAP ROLLER.

8. ALL PAINT TO BE LOW VOC.

9. PAINT FINISHES:

   GENERAL CONDITIONS: EGGSHELL
   SOFFITS/CEILINGS: FLAT FINISH
   WET AREAS: SEMI-GLOSS
   PAINT GRADE DOORS & TRIM: SEMI-GLOSS LATEX ENAMEL

10. SEE ENLARGED PLAN FOR LAB LAYOUT.

KEYNOTES - FINISH PLAN

FN-02	TRANSITION - VINYL REDUCER TO BEST MATCH COLOR OF RF-01

LEGEND - FINISH PLAN

ROOM NAME
100
XXX-X
XXX-X
XXX-X
ROOM FINISH; SEE FINISH SCHEDULE

XX-XX
WALL FINISH; SEE FINISH SCHEDULE

FLOORING TRANSITION

FLOOR TILE

LVT PLANK FLOORING

RUBBER SHEET FLOORING

SEALED CONCRETE

EPOXY FLOORING

CARPET TILE FLOORING

FREIHEIT ARCHITECTURE

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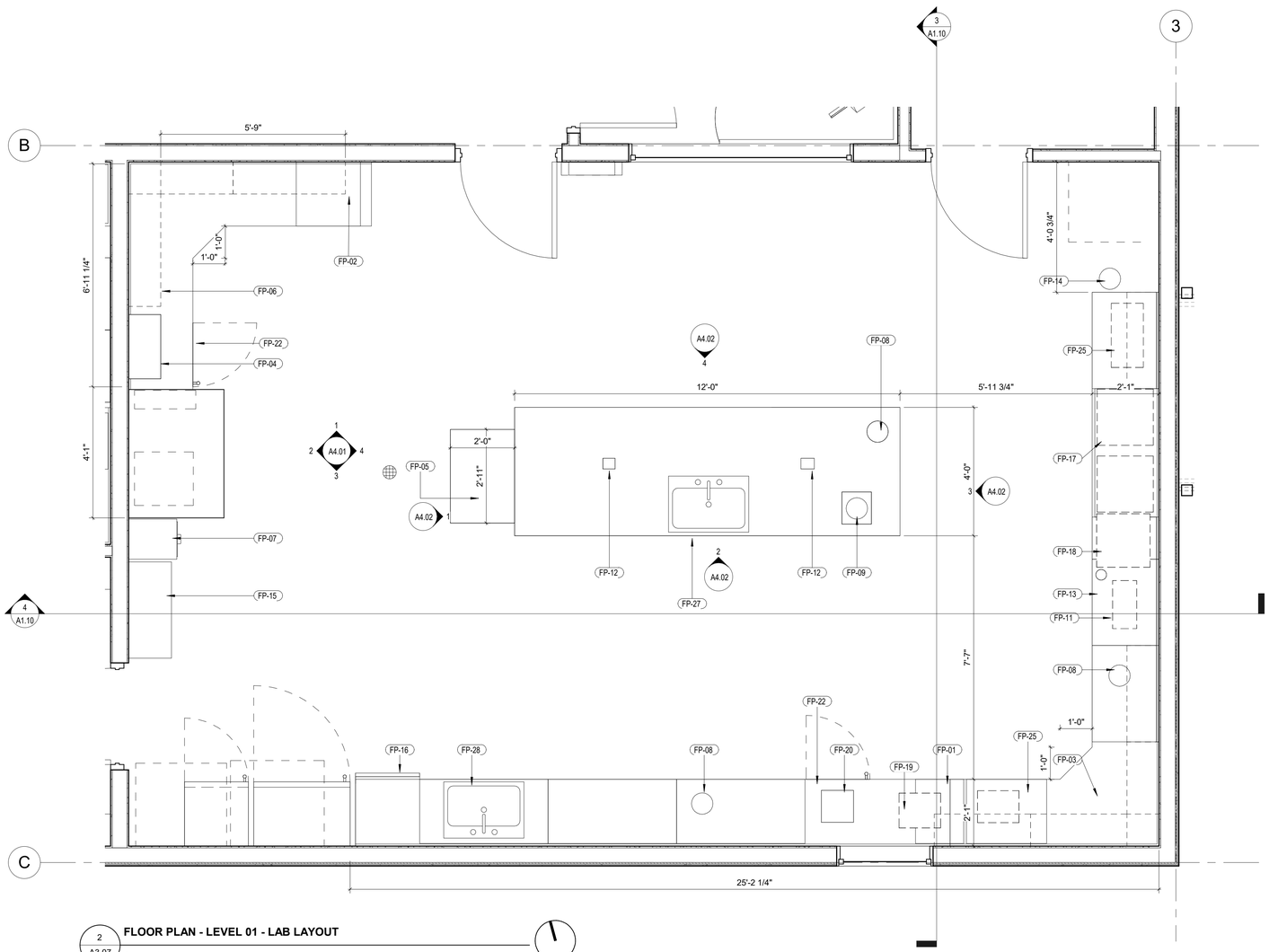
FINISH PLAN LEVEL 2

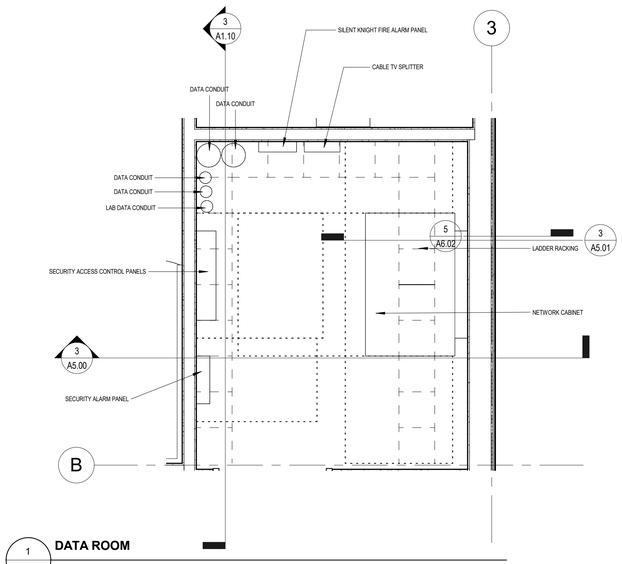
A3.05



2 A3.07 **FLOOR PLAN - LEVEL 01 - LAB LAYOUT**

Scale: 1/2" = 1'-0"

NORTH



1 A3.07 **DATA ROOM**

Scale: 1/2" = 1'-0"

LAB EQUIPMENT SCHEDULE

LAB EQUIPMENT SCHEDULE

Mark	Description	Manufacturer	Model	Depth	Width	Height	Electrical	Mechanical	Comments	Responsibility
FP-01	2 DRAWER LEGAL FILE CABINET	VERIFY	VERIFY	18"	15"	34"	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	OFOI
FP-02	LOCKABLE CABINETRY - UPPER AND LOWER	VERIFY	VERIFY	24"	24"	34 1/2"	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	OFOI
FP-03	STAINLES STEEL COUNTER W/ 6" BACKSPLASH. PROVIDED RAISED LEDGE, ALL SIDES, TYPICAL AT UPPER COUNTERS	VERIFY	VERIFY	24"	VARIES	VARIES	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	CFCI
FP-04	FILE ORGANIZER WALL MOUNTED	VERIFY	VERIFY	12"	24"	30"	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	CFCI
FP-05	SCALE STATION	VERIFY	VERIFY	12"	24"	-	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	CFCI
FP-06	UPPER CABINET WITH UNDER CABINET LIGHTING, TYPICAL	VERIFY	VERIFY	12"	42"	30"	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	CFCI
FP-07	4 DRAWER LEGAL FILE CABINET	VERIFY	VERIFY	18"	15"	52"	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	OFOI
FP-08	TRASH HOLE WITH FLUSH EPOXY CENTER	VERIFY	VERIFY	8" DIA.	8" DIA.	-	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	CFCI
FP-09	MICROSCOPE, ADJUSTABLE BASE	VERIFY	VERIFY	11"	12"	-	VERIFY	VERIFY	PROVIDED POWER AND DATA AT ISLAND. VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	OFOI
FP-10	(2) WALL MOUNTED TV MONITORS	VERIFY	VERIFY	4.5"	43.5"	24.5"	VERIFY	VERIFY	50" DIAGONAL. VERIFY PRODUCT AND REQUIREMENTS	CFCI
FP-11	STILL	THERMO SCIENTIFIC	MP-1	9 3/4"	18"	34"	120V / 9A	SEE PRODUCT REQUIREMENTS	SEE PLUMBING FOR ADJACENT WATER SUPPLY AND DRAIN LOCATIONS	OFOI
FP-12	SURFACE MOUNTED POWER OUTLETS SET ON 1/2" EPOXY BLOCKS TO MATCH OUTLET FOOTPRINT	VERIFY	VERIFY	4.5"	5"	-	VERIFY	VERIFY	TYPICAL AT ISLANDS. SEE ELECTRICAL. VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	CFCI
FP-13	CUP SINK	VERIFY	VERIFY	4"	4"	-	VERIFY	VERIFY	SEE PLUMBING. VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	CFCI
FP-14	DESSICATOR	NALGENE	38090	-	-	-	NA	NA	FITS 230 mm DESICATOR PLATE	OFOI
FP-15	FULL HEIGHT GLASSWARE STORAGE	VERIFY	VERIFY	16"	36"	84"	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	OFOI
FP-16	GLASSWARE DISHWASHER	LABCONCO	STEAMSCRUBBER 4400330	27.4"	24.1"	34.1" - 36.1" ADJUSTABLE	115VAC, 60HZ, 16A	HOT AND PURIFIED WATER	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	OFOI
FP-17	(2) TSS LAB OVEN	THERMO SCIENTIFIC	HERATHERM 51028112	22 1/4"	21"	28 1/2"	120V / 60HZ / 14.4A	NA	VERIFY PRODUCT AND REQUIREMENTS	OFOI
FP-18	AUTOCLAVE	TUTTNAUER	2340M	20"	20"	15"	120V / 60HZ	NA	5 GALLON. VERIFY REQUIREMENTS	OFOI
FP-19	FECAL COLIFORM BATH	PRECISION	TSCOL19	12"	15 1/2"	7 3/4"	15/230VAC, 50/60HZ	NA	VERIFY PRODUCT AND REQUIREMENTS	OFOI
FP-20	TURBIDIMETER	HACH	2100N (TL23)	-	-	-	VERIFY	NA	VERIFY PRODUCT	OFOI
FP-21	INCUBATOR REFRIGERATOR	PRECISION	815 BOD	31"	34"	77"	800W, 6.2A, 115VAC, 60HZ	NA	VERIFY ANY REQUIRED DATA CONNECTIONS	OFCI
FP-22	LAB REFRIGERATOR	VERIFY	VERIFY	32"	35"	70"	VERIFY	VERIFY	VERIFY SIZE AND CONNECTIONS	OFCI
FP-23	AED CABINET	VERIFY	VERIFY	5"	22 3/4"	22 3/4"	NA	NA	VERIFY PRODUCT, DIMENSIONS, AND REQUIREMENTS	OFOI
FP-24	FUME HOOD	LOC SCIENTIFIC	HP-604	35"	48"	89 1/4"	VERIFY	VERIFY	VERIFY PRODUCT AND REQUIREMENTS, SEE MECHANICAL	CFCI
FP-25	VACUUM PUMP	WELCH	92114	-	-	-	115VAC	NA	-	OFOI
FP-26	MUFFLE FURNACE	-	-	-	-	-	VERIFY	VERIFY	VERIFY PRODUCTS AND REQUIREMENTS	OFOI
FP-27	ISLAND SINK. FOOT PEDALS TO CONTROL	VERIFY	VERIFY	21"	30"	48" COUNTER HEIGHT	NA	VERIFY (HOT AND PURIFIED WATER)	-	CFCI
FP-28	SINK	VERIFY	VERIFY	21"	30"	48" COUNTER HEIGHT	NA	VERIFY (HOT AND PURIFIED WATER)	-	CFCI

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

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TULALIP, WA 98271

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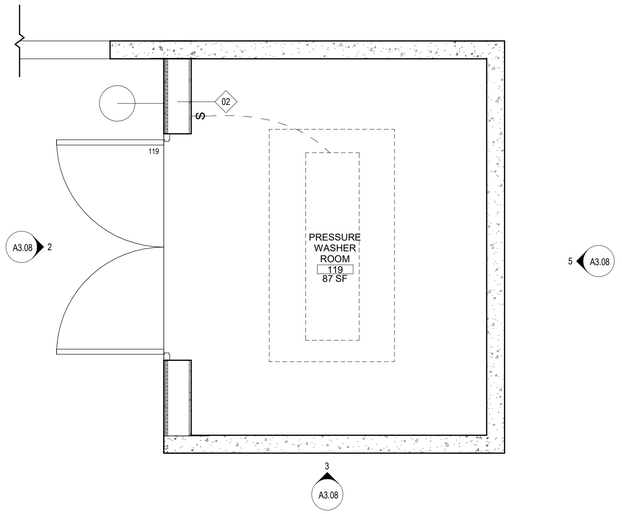
ENLARGED PLANS

A3.07

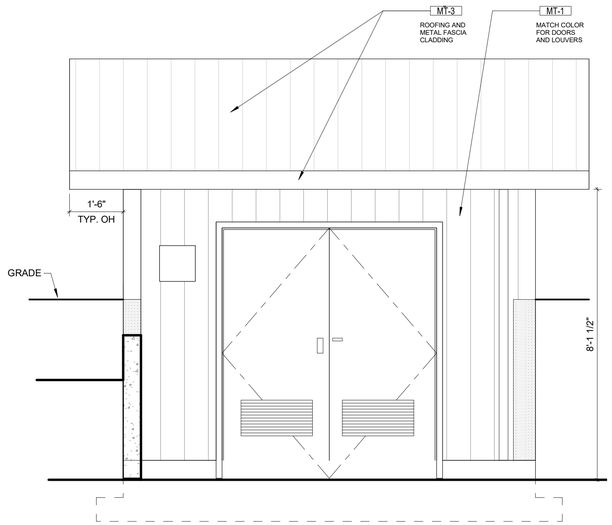


1 A3.08 **FLOOR PLAN - LEVEL 01 PRESSURE WASHER ROOM**

Scale: 1/2" = 1'-0"

0 1' 2' 4'

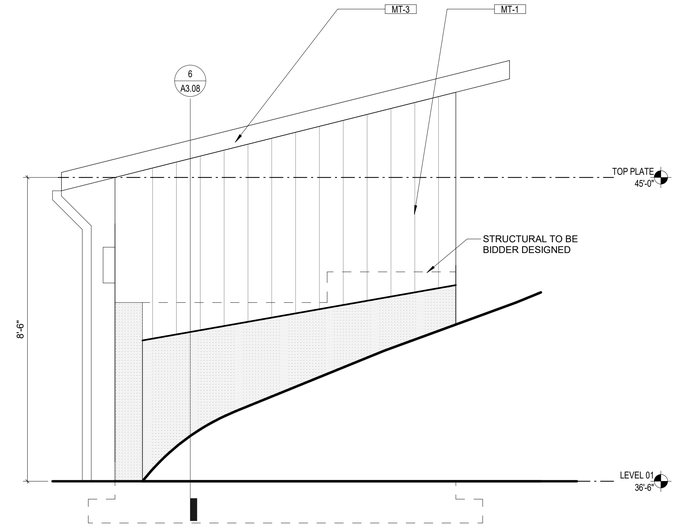
NORTH



2 A3.08 **PRESSURE WASHER ROOM - WEST ELEVATION**

Scale: 1/2" = 1'-0"

0 2' 4' 8'

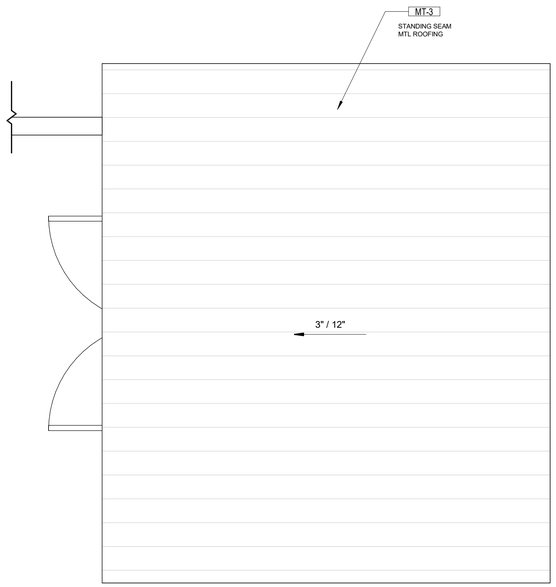


3 A3.08 **PRESSURE WASHER ROOM - SOUTH ELEVATION, NORTH SIM, OPP.**

Scale: 1/2" = 1'-0"

0 2' 4' 8'

NOTE: STRUCTURAL DESIGN OF SHED AND RETAINING WALLS TO BE BY BIDDER.

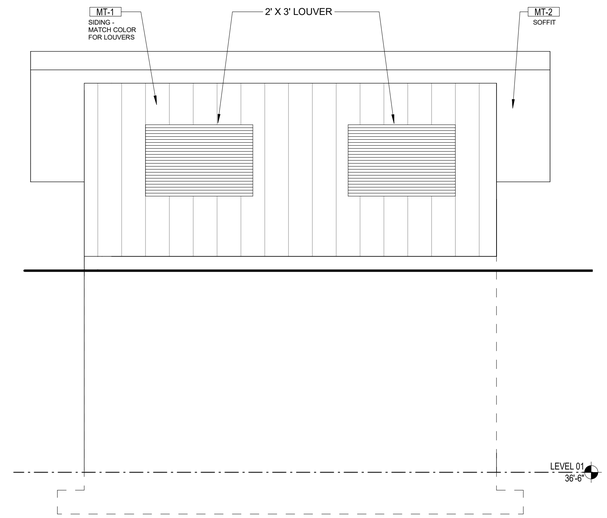


4 A3.08 **ROOF PLAN**

Scale: 1/2" = 1'-0"

0 1' 2' 4'

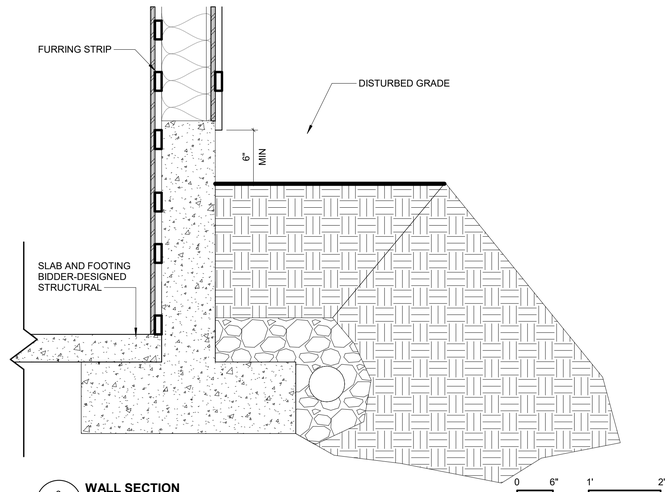
NORTH



5 A3.08 **PRESSURE WASHER ROOM - EAST ELEVATION**

Scale: 1/2" = 1'-0"

0 2' 4' 8'



6 A3.08 **WALL SECTION**

Scale: 1 1/2" = 1'-0"

0 6" 1' 2'

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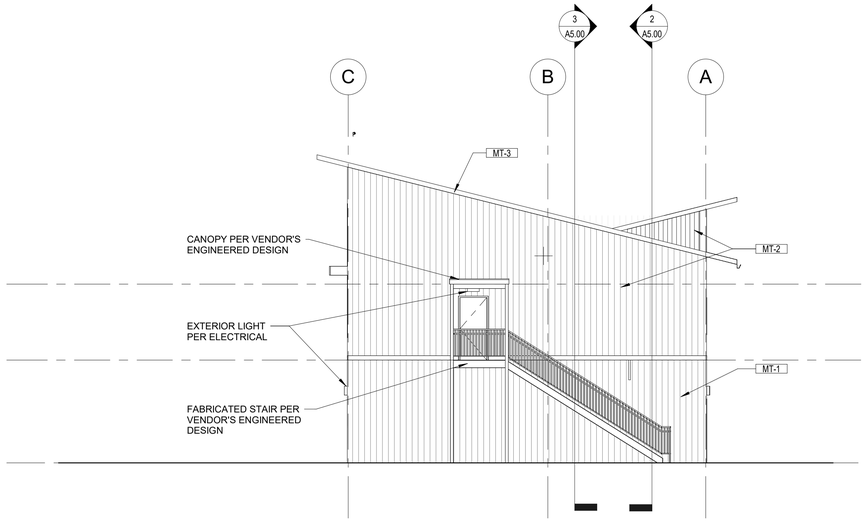
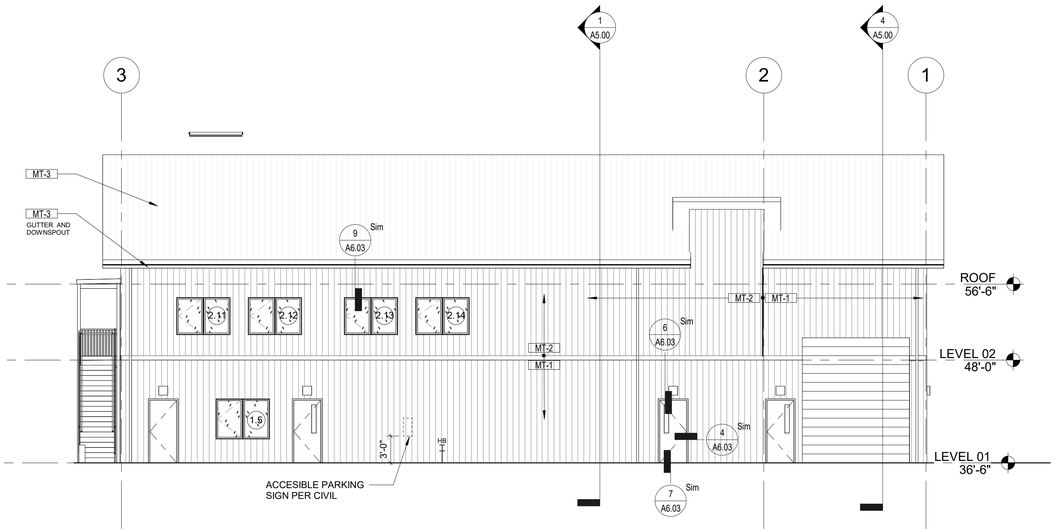
ENLARGED PRESSURE WASHER ROOM

A3.08



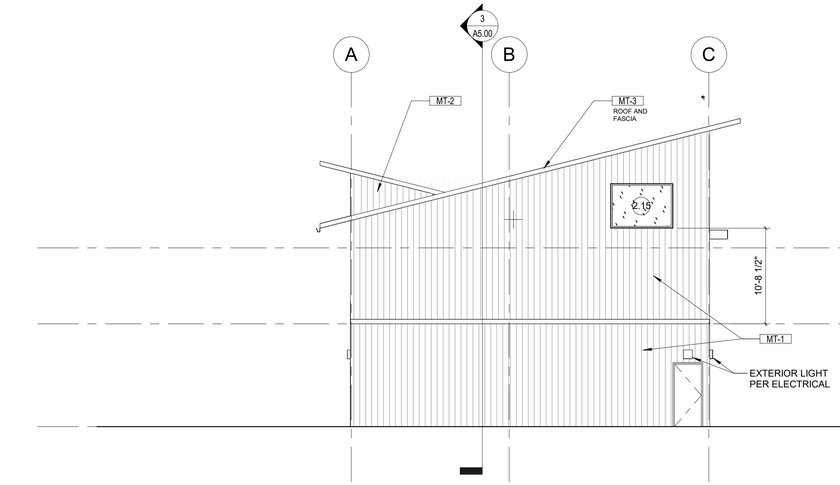
3 A4.00 **EAST ELEVATION**

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



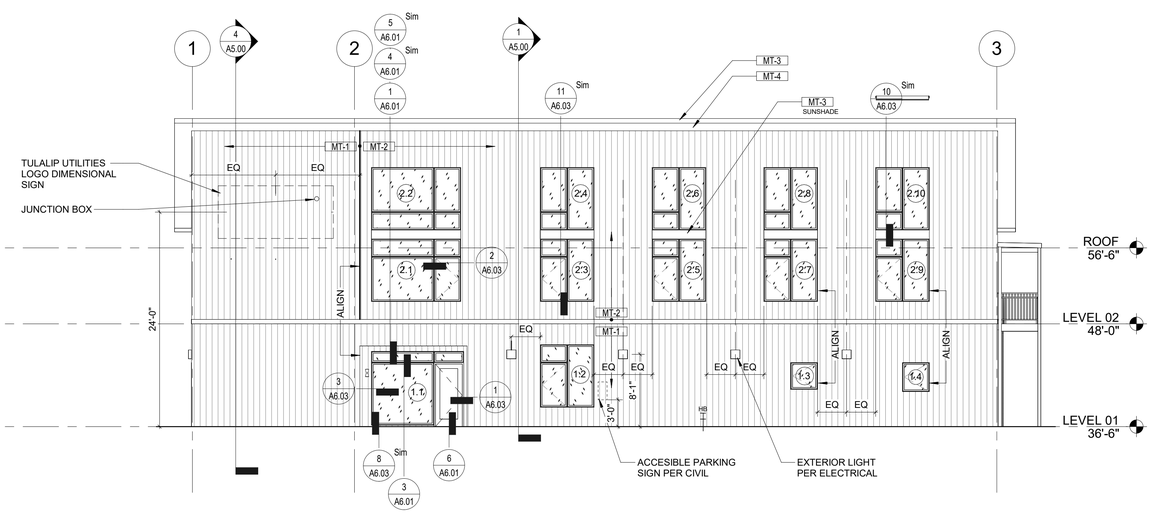
1 A4.00 **NORTH ELEVATION**

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



4 A4.00 **WEST ELEVATION**

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



2 A4.00 **SOUTH ELEVATION**

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

FREIHEIT ARCHITECTURE

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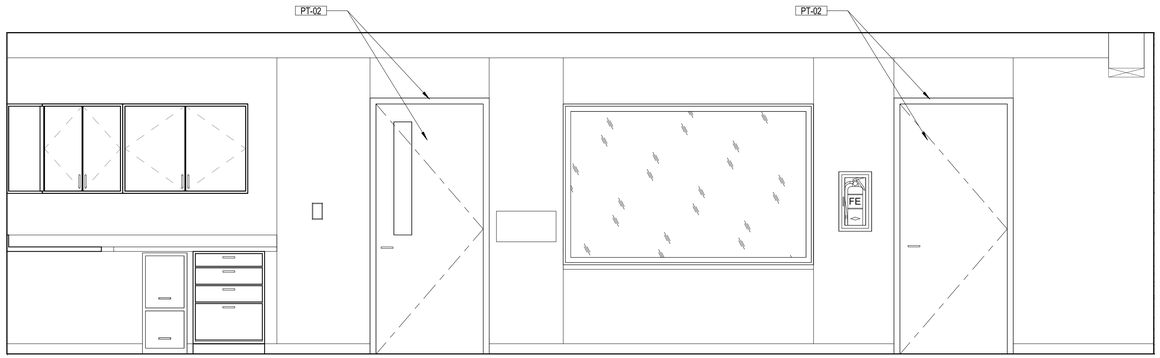
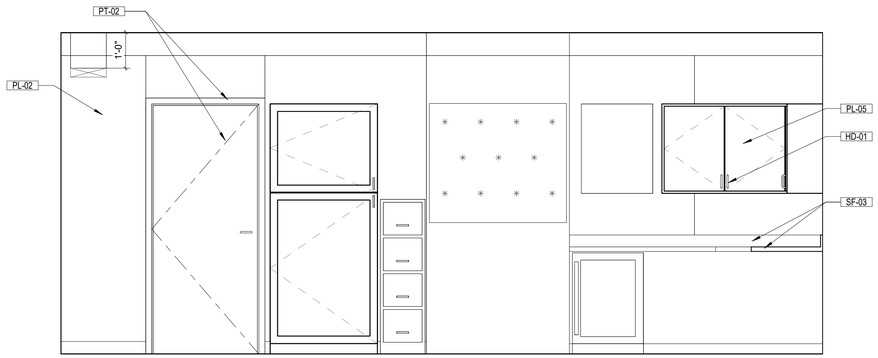
EXTERIOR ELEVATIONS

A4.00



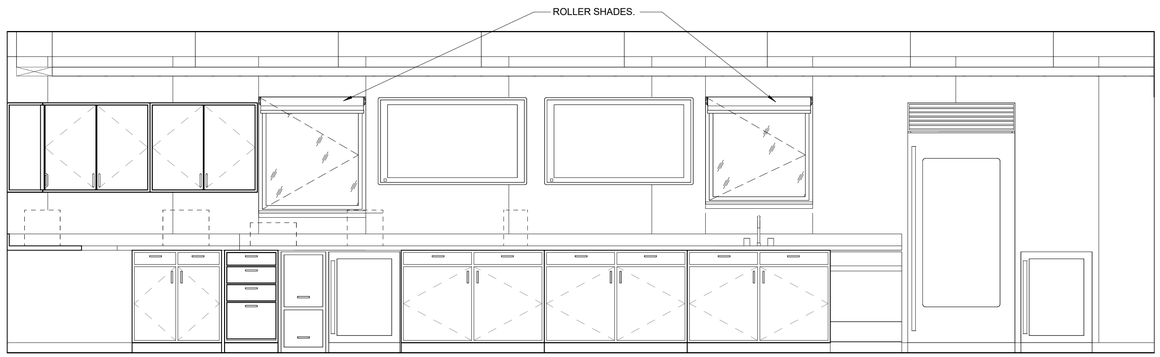
1 A4.01 **NORTH WALL**

Scale: 1/2" = 1'-0"



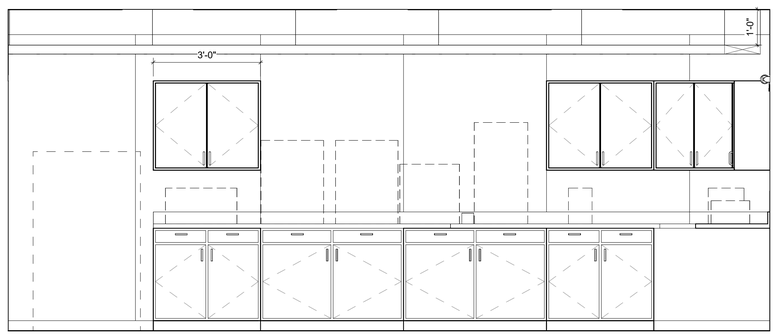
2 A4.01 **WEST WALL**

Scale: 1/2" = 1'-0"



3 A4.01 **SOUTH WALL**

Scale: 1/2" = 1'-0"



4 A4.01 **EAST WALL**

Scale: 1/2" = 1'-0"

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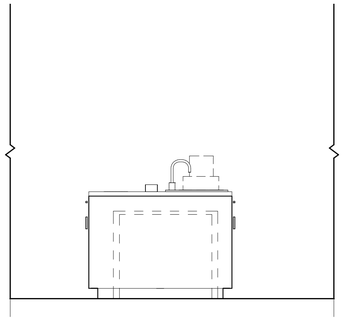
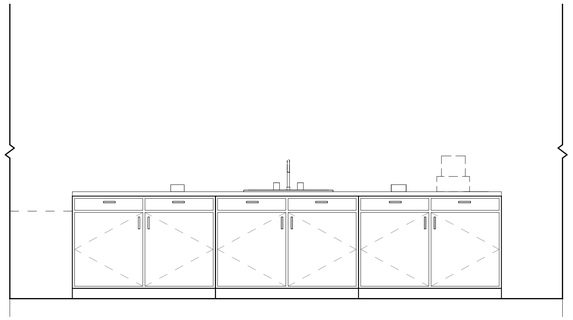
LAB ELEVATIONS

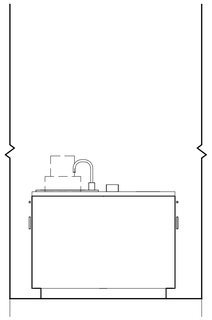
A4.01



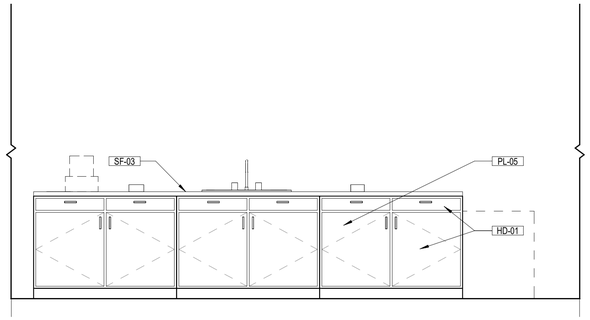
1 A4.02 **LAB ISLAND WEST**
Scale: 1/2" = 1'-0"



2 A4.02 **LAB ISLAND SOUTH**
Scale: 1/2" = 1'-0"



3 A4.02 **LAB ISLAND EAST**
Scale: 1/2" = 1'-0"



4 A4.02 **LAB ISLAND NORTH**
Scale: 1/2" = 1'-0"

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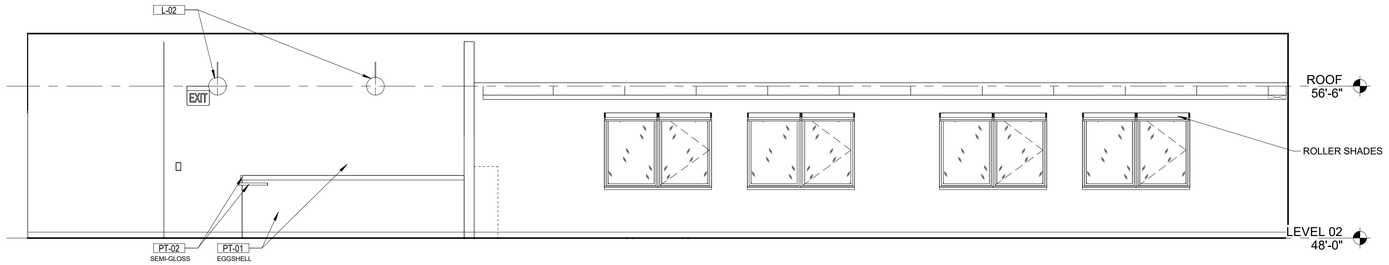
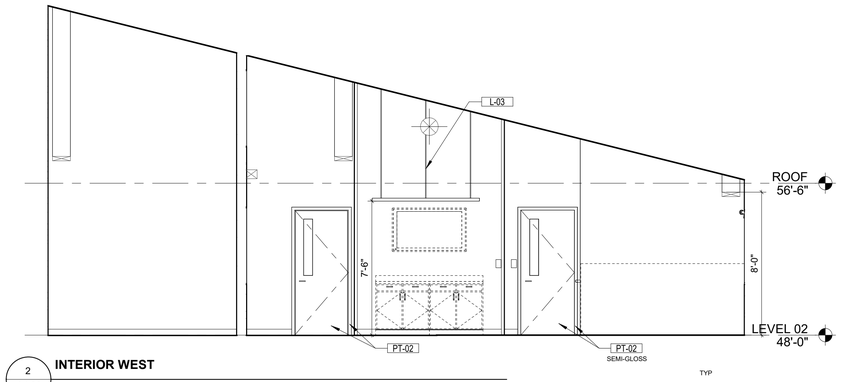
LAB ELEVATIONS - ISLAND

A4.02



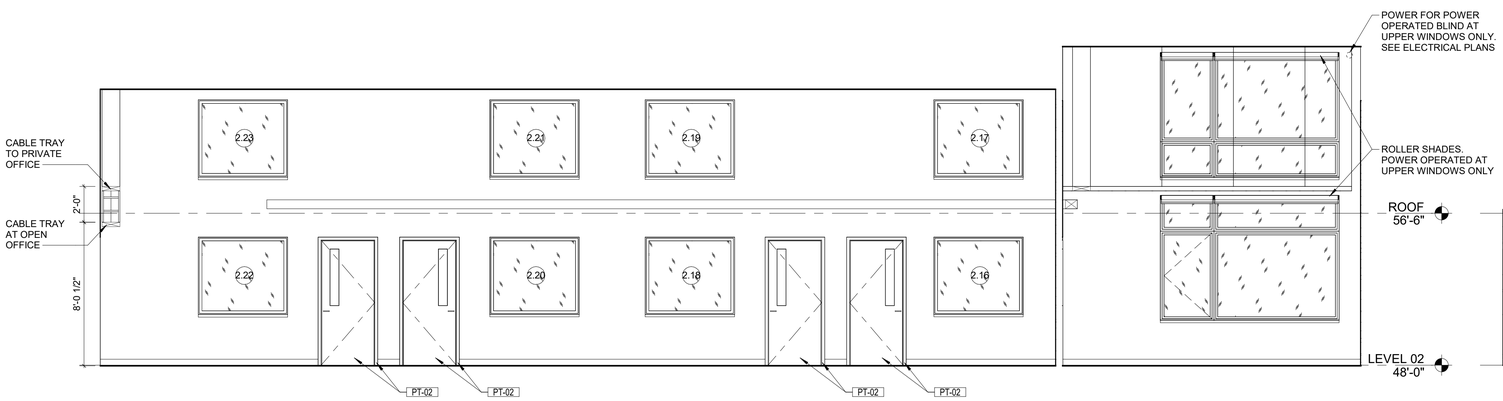
1 A4.03 **INTERIOR NORTH**

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



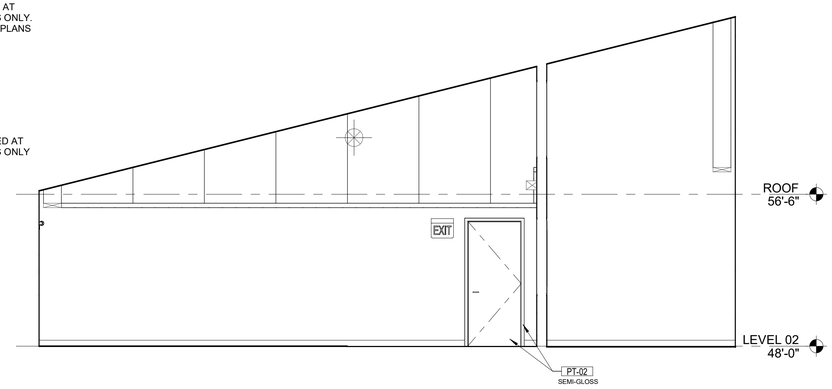
2 A4.03 **INTERIOR WEST**

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



4 A4.03 **INTERIOR SOUTH**

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



3 A4.03 **INTERIOR EAST**

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

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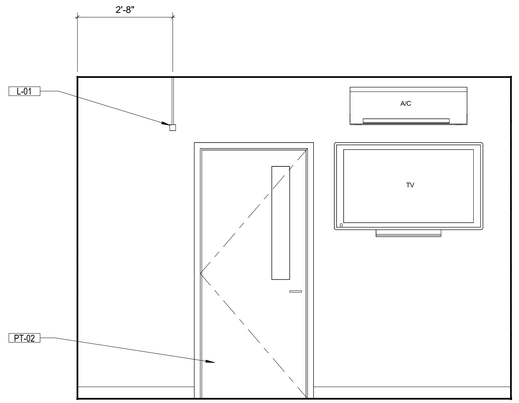
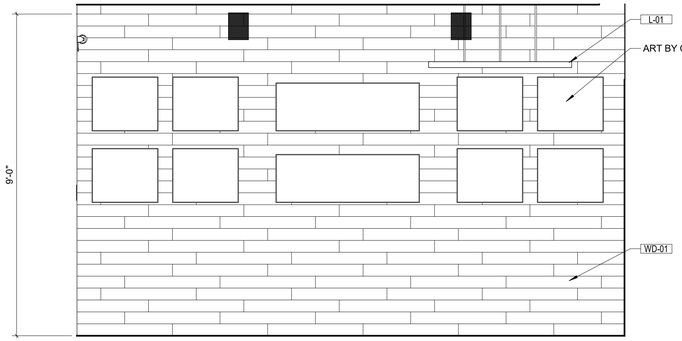
OFFICE ELEVATIONS

A4.03



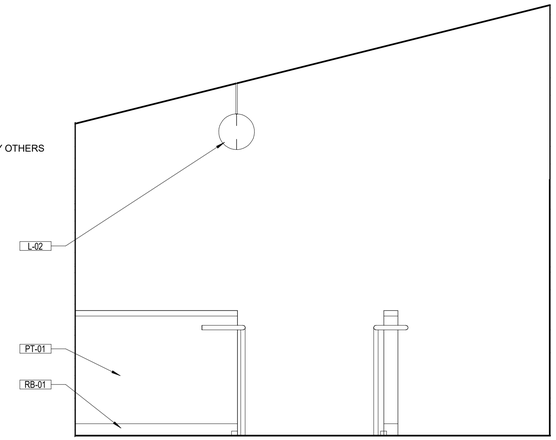
1 A4.04 **LOBBY NORTH**

Scale: 1/2" = 1'-0"



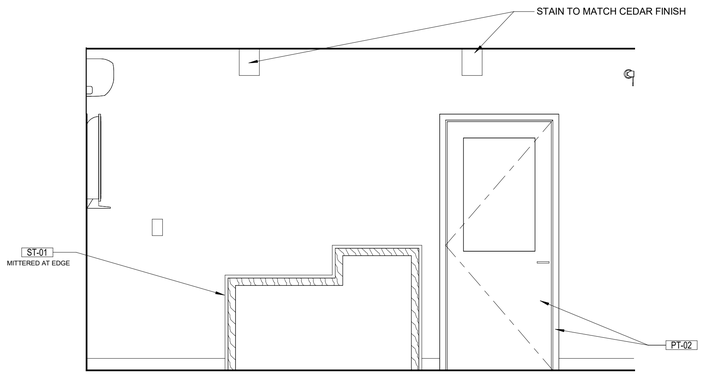
4 A4.04 **LOBBY WEST**

Scale: 1/2" = 1'-0"



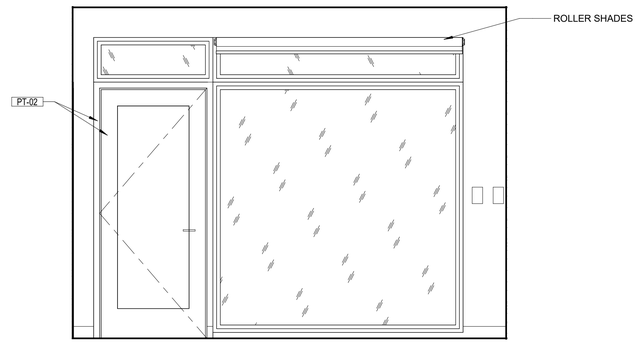
5 A4.04 **STAIRWELL ENTRANCE**

Scale: 1/2" = 1'-0"



2 A4.04 **LOBBY EAST**

Scale: 1/2" = 1'-0"



3 A4.04 **LOBBY SOUTH**

Scale: 1/2" = 1'-0"

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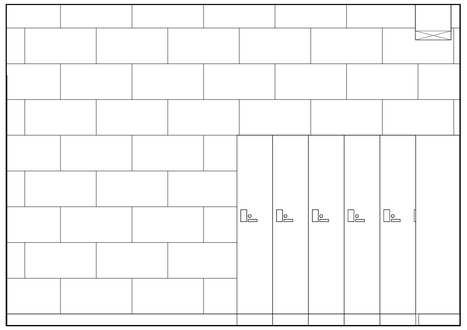
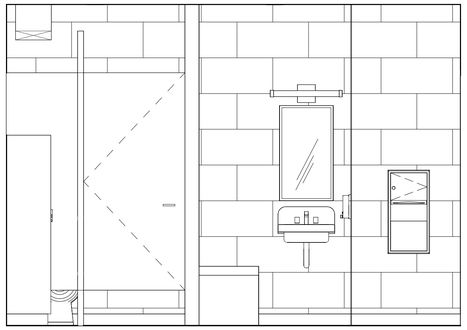
LOBBY & EXIT ELEVATIONS

A4.04



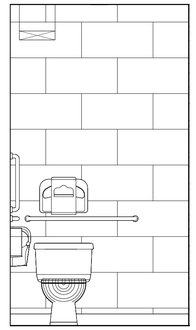
1 A4.05 **MEN'S LOCKER ROOM WEST (WOMEN'S LOCKER ROOM EAST SIM. OPP.)**

Scale: 1/2" = 1'-0"



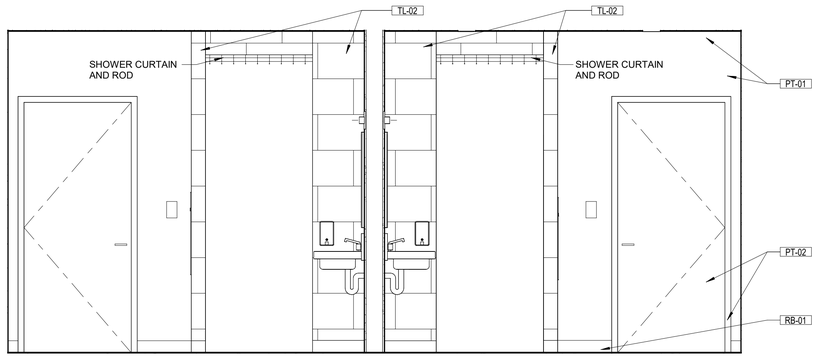
2 A4.05 **MEN'S LOCKER ROOM EAST (WOMEN'S LOCKER ROOM WEST SIM. OPP.)**

Scale: 1/2" = 1'-0"



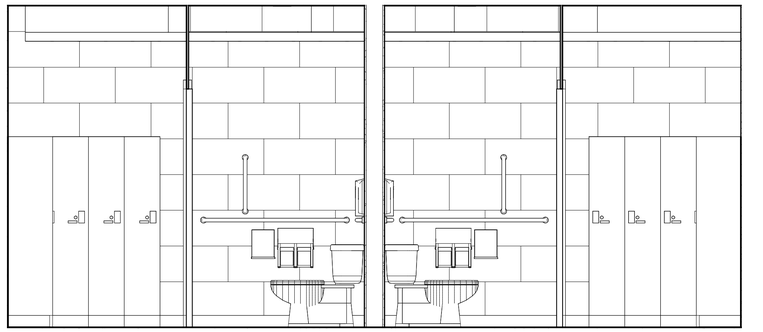
3 A4.05 **MEN'S LOCKER ROOM TOILET (WOMEN'S LOCKER ROOM TOILET SIM. OPP.)**

Scale: 1/2" = 1'-0"



4 A4.05 **MEN'S AND WOMEN'S LOCKER ROOM SOUTH**

Scale: 1/2" = 1'-0"



5 A4.05 **MEN'S AND WOMEN'S LOCKER ROOMS NORTH**

Scale: 1/2" = 1'-0"

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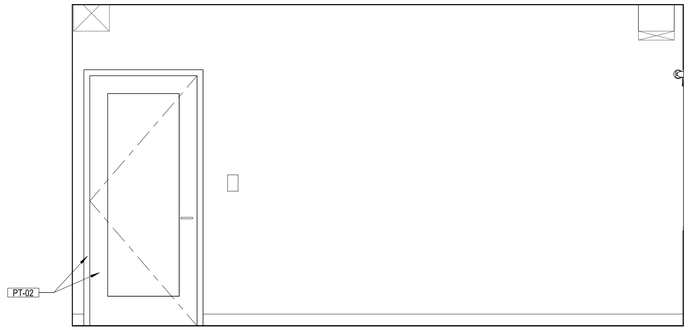
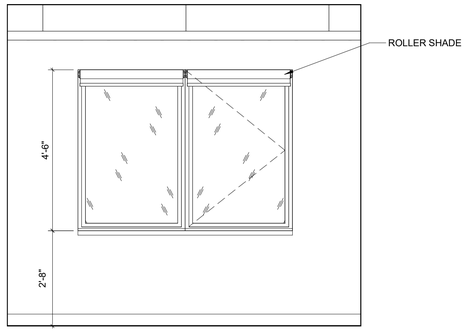
LOCKER ROOM ELEVATIONS

A4.05



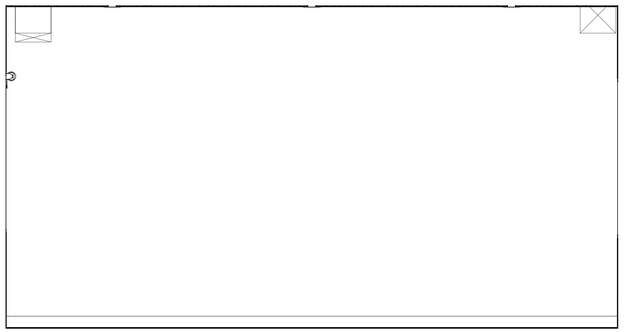
1 A4.06 **OFFICE WEST**

Scale: 1/2" = 1'-0"



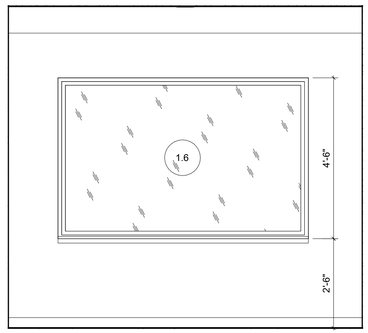
2 A4.06 **OFFICE NORTH**

Scale: 1/2" = 1'-0"



3 A4.06 **OFFICE EAST**

Scale: 1/2" = 1'-0"



4 A4.06 **OFFICE SOUTH**

Scale: 1/2" = 1'-0"

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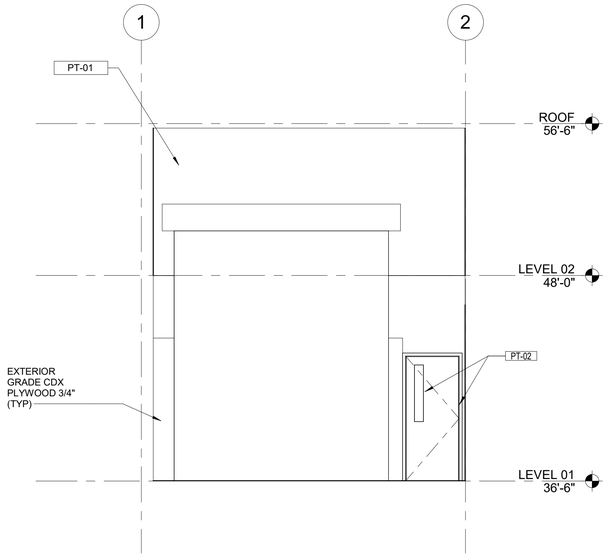
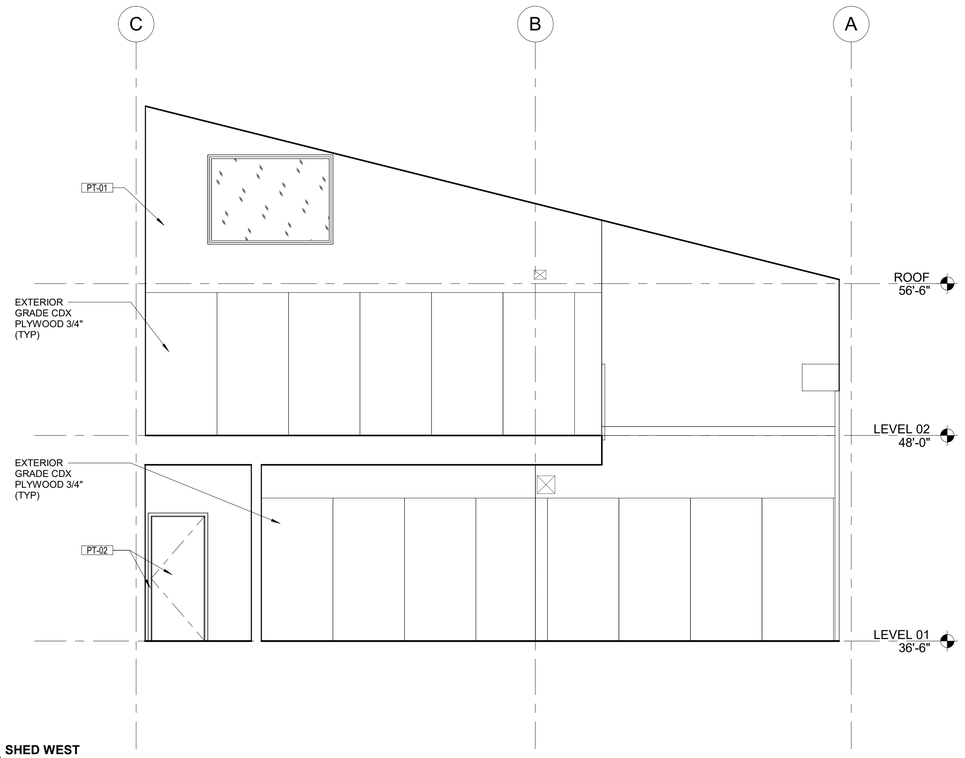
FLOOR 01 OFFICE ELEVATIONS

A4.06



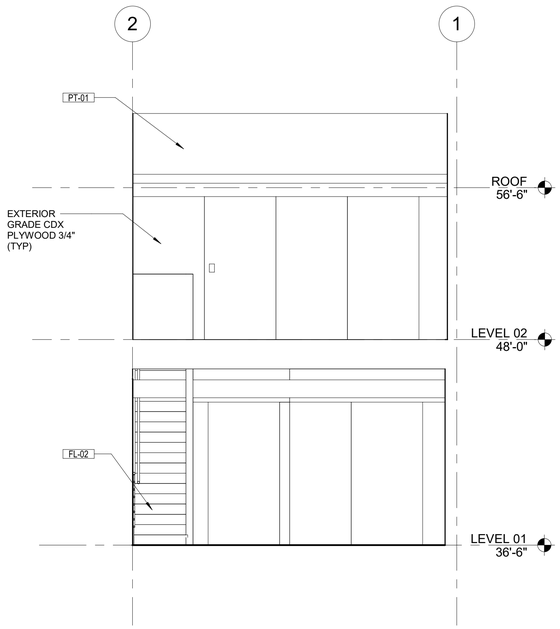
1 A4.07 **SHED NORTH**

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



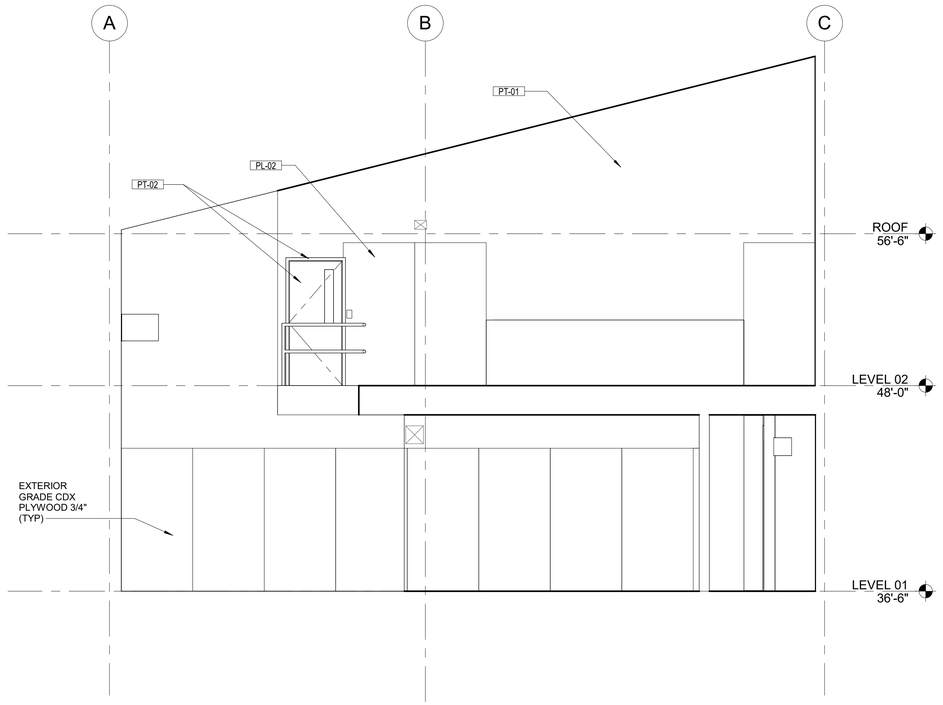
4 A4.07 **SHED WEST**

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



3 A4.07 **SHED SOUTH**

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



2 A4.07 **SHED EAST**

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

FREIHEIT ARCHITECTURE

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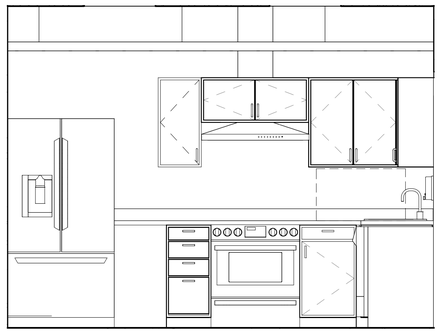
SHED ELEVATIONS

A4.07

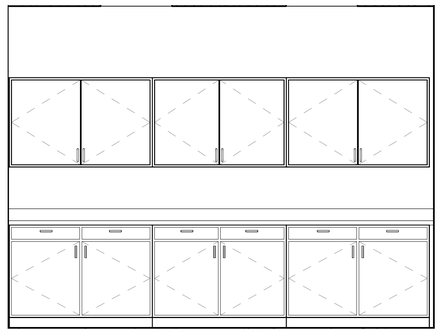
1 A4.08 **BREAK ROOM - NORTH ELEVATION**

Scale: 1/2" = 1'-0"



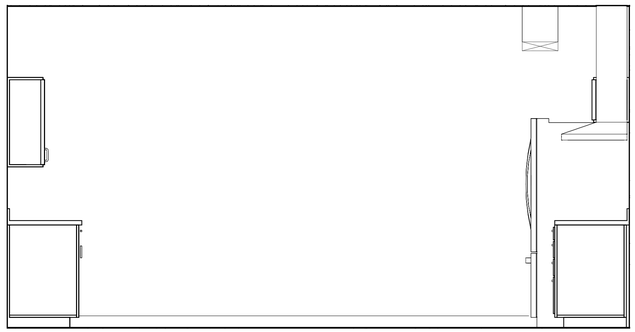
2 A4.08 **BREAK ROOM - WEST ELEVATION**

Scale: 1/2" = 1'-0"



3 A4.08 **BREAK ROOM - EAST ELEVATION**

Scale: 1/2" = 1'-0"



4 A4.08 **BREAK ROOM - SOUTH ELEVATION**

Scale: 1/2" = 1'-0"

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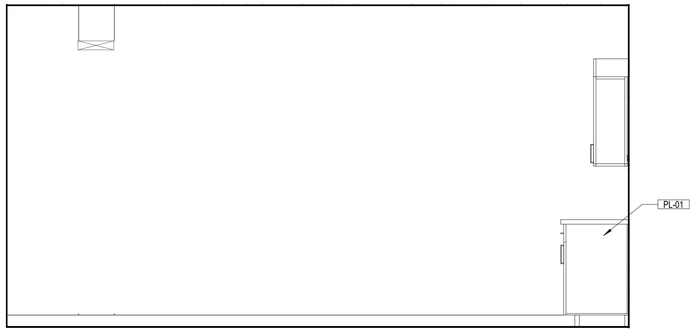
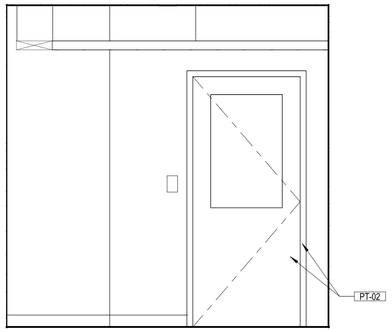
BREAKROOM ELEVATIONS

A4.08



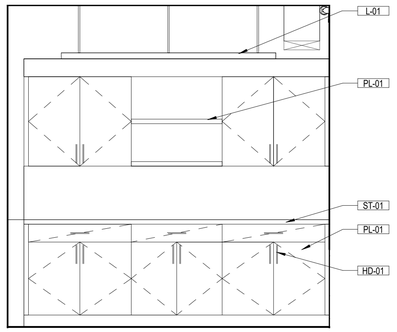
1 A4.09 **BILLING OFFICE - NORTH ELEVATION**

Scale: 1/2" = 1'-0"



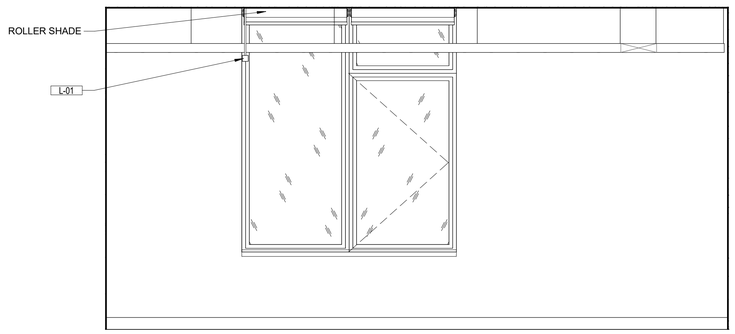
2 A4.09 **BILLING OFFICE - WEST ELEVATION**

Scale: 1/2" = 1'-0"



3 A4.09 **BILLING OFFICE - EAST ELEVATION**

Scale: 1/2" = 1'-0"



4 A4.09 **BILLING OFFICE - SOUTH ELEVATION**

Scale: 1/2" = 1'-0"

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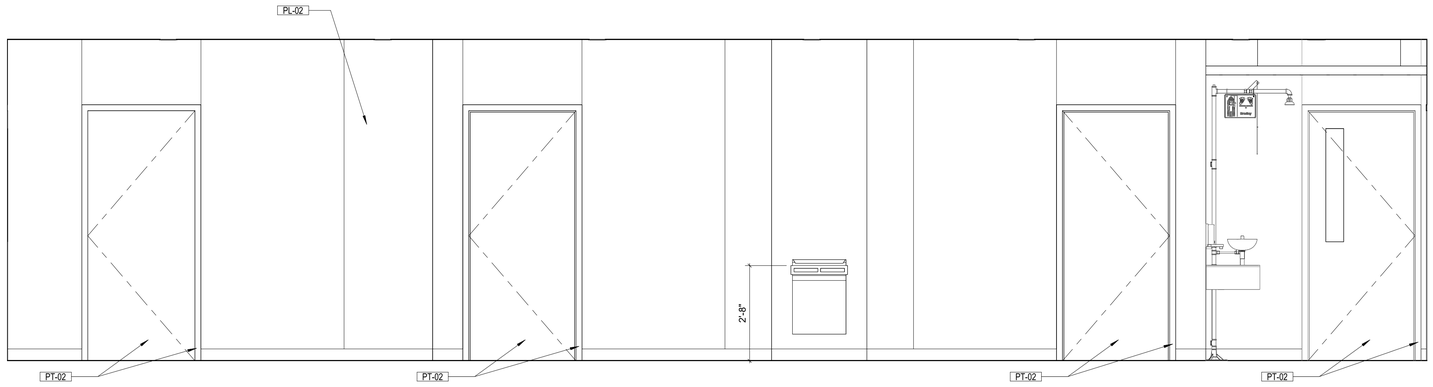
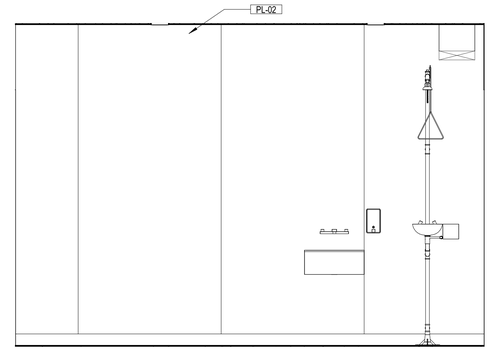
BILLING OFFICE ELEVATIONS

A4.09



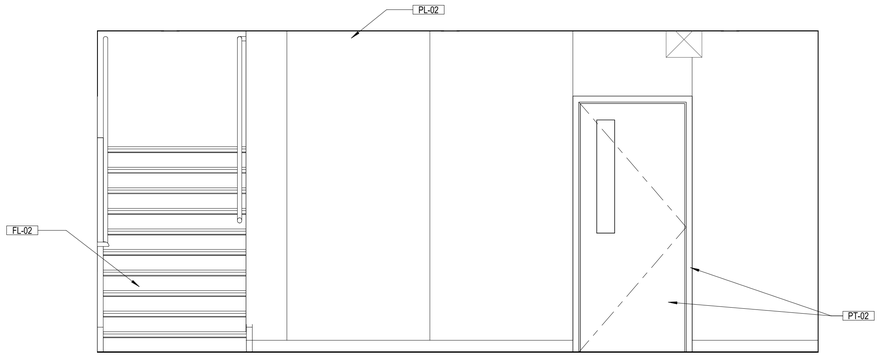
1 A4.10 **CORRIDOR - NORTH ELEVATION**

Scale: 1/2" = 1'-0"



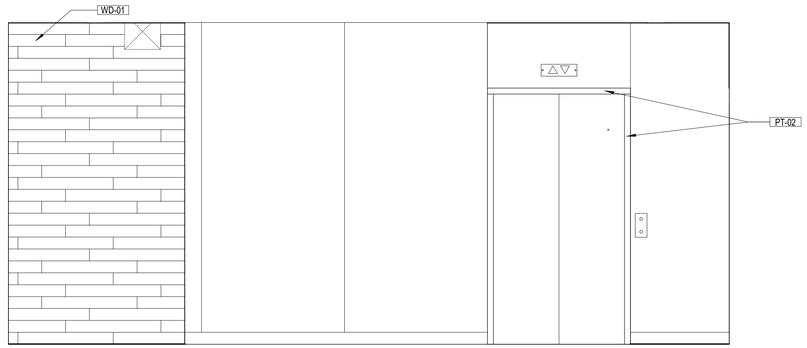
2 A4.10 **MUD ROOM - WEST ELEVATION**

Scale: 1/2" = 1'-0"



3 A4.10 **HALL - EAST ELEVATION**

Scale: 1/2" = 1'-0"



4 A4.10 **HALL - WEST ELEVATION**

Scale: 1/2" = 1'-0"

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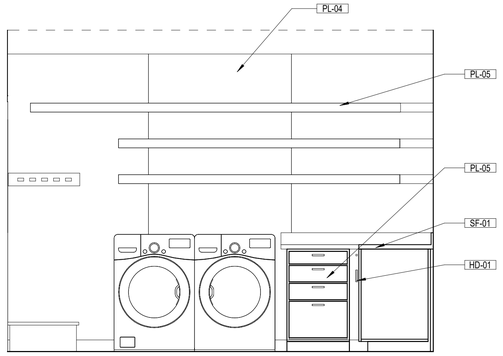
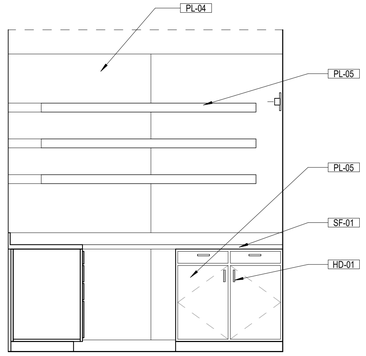
CIRCULATION
MUD ROOM
ELEVATIONS

A4.10



1 A4.11 **JANITOR CLOSET - EAST WALL**

Scale: 1/2" = 1'-0"



2 A4.11 **JANITOR CLOSET - SOUTH WALL**

Scale: 1/2" = 1'-0"

3 A4.11 **JANITOR CLOSET - WEST WALL**

Scale: 1/2" = 1'-0"

4 A4.11 **JANITOR CLOSET - NORTH WALL**

Scale: 1/2" = 1'-0"

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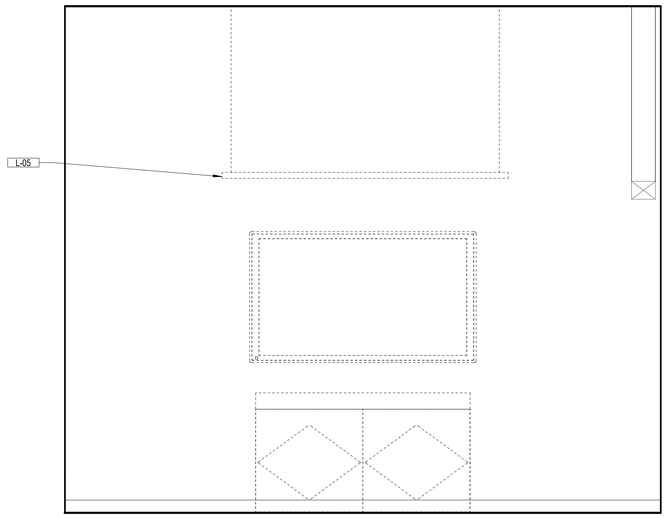
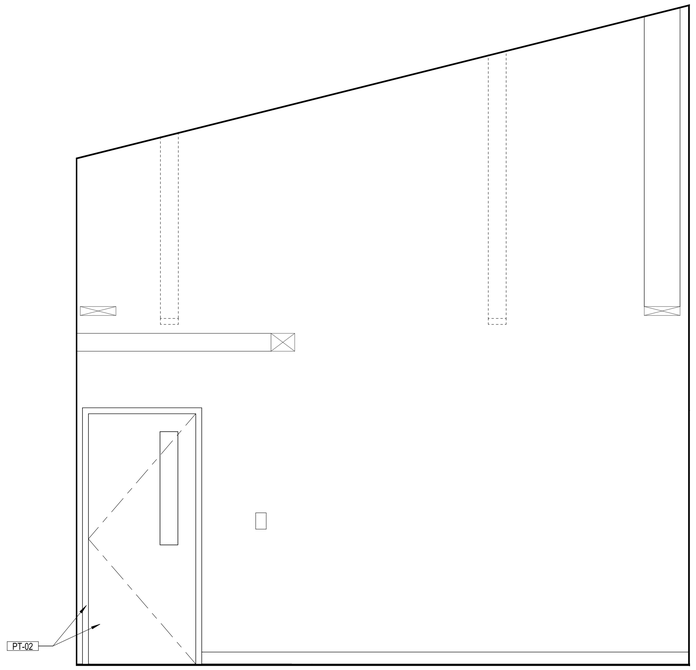
JANITOR CLOSET ELEVATIONS

A4.11



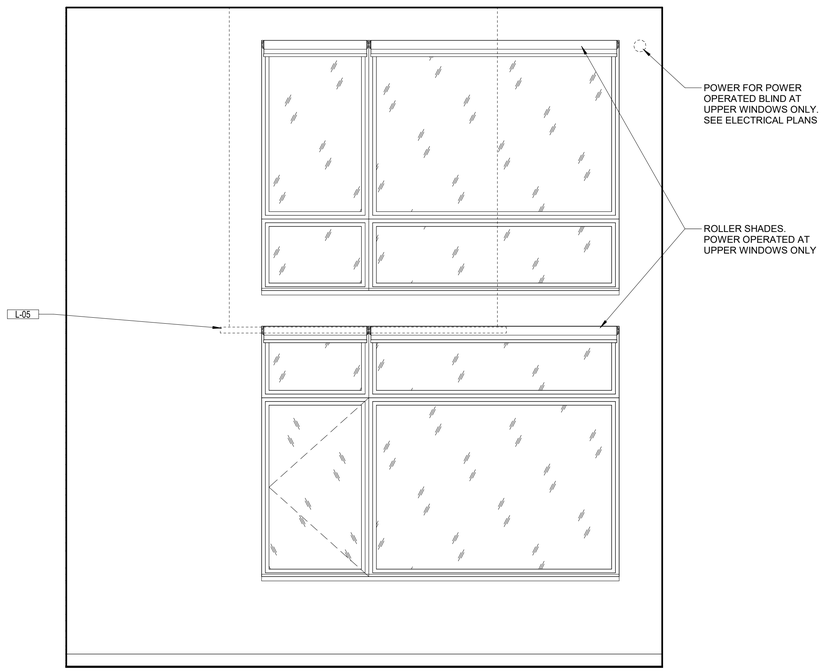
1 A4.12 **CONFERENCE ROOM - NORTH ELEVATION**

Scale: 1/2" = 1'-0"



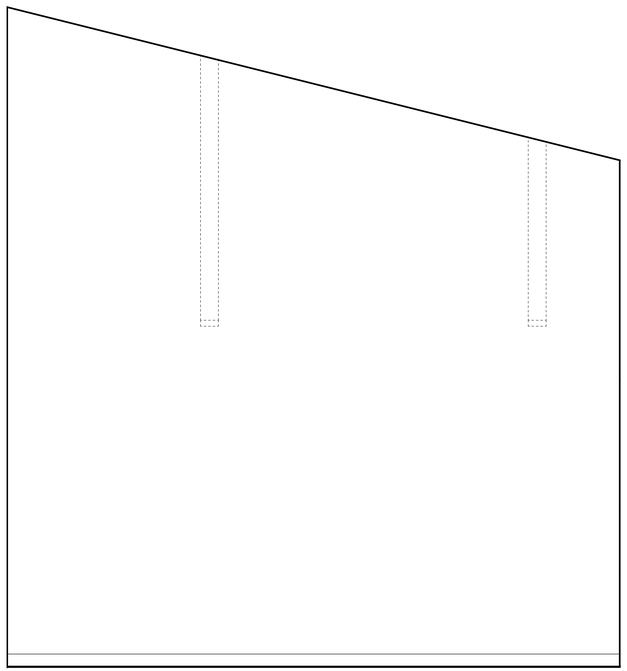
2 A4.12 **CONFERENCE ROOM - EAST ELEVATION**

Scale: 1/2" = 1'-0"



3 A4.12 **CONFERENCE ROOM - SOUTH ELEVATION**

Scale: 1/2" = 1'-0"



4 A4.12 **CONFERENCE ROOM - WEST ELEVATION**

Scale: 1/2" = 1'-0"

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CONFERENCE ROOM ELEVATIONS

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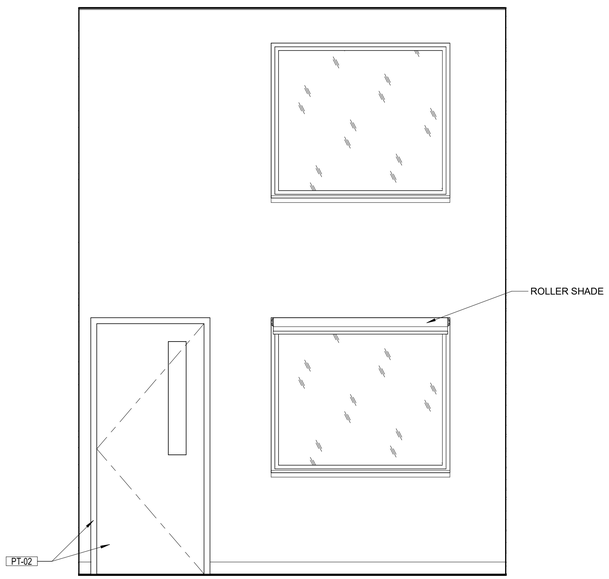
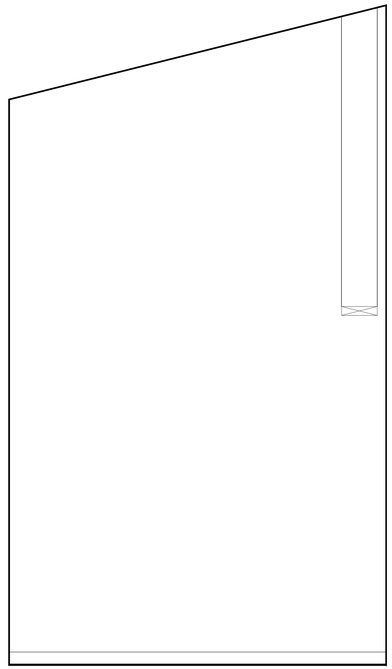


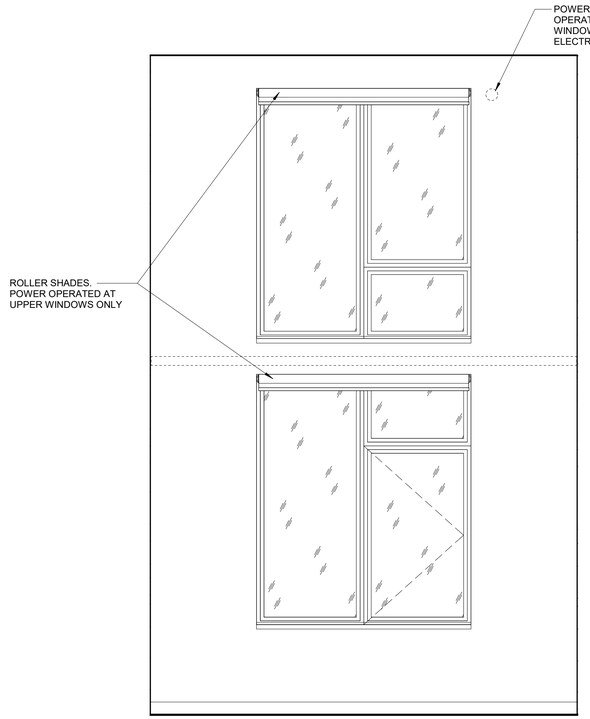
1 A4.13 **PRIVATE OFFICE 206 - NORTH ELEVATION (RM 205, RM 207 NORTH SIM. OPP.)**

Scale: 1/2" = 1'-0"



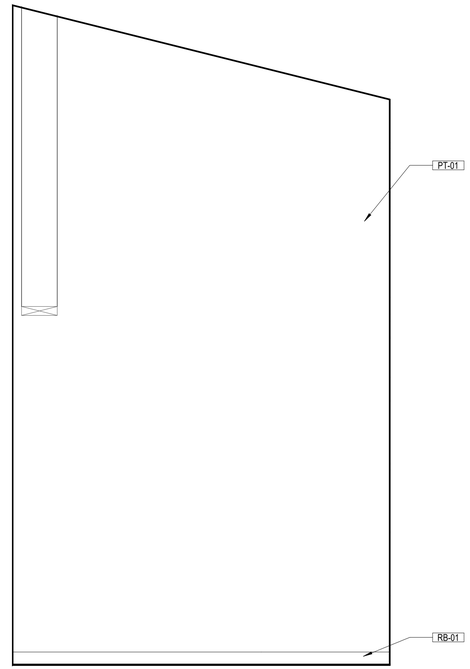
2 A4.13 **PRIVATE OFFICE 206 - EAST ELEVATION (RM 205, RM 207 WEST SIM. OPP.)**

Scale: 1/2" = 1'-0"



3 A4.13 **PRIVATE OFFICE 206 - SOUTH ELEVATION (RM 205, RM 207 SOUTH SIM. OPP.)**

Scale: 1/2" = 1'-0"



4 A4.13 **PRIVATE OFFICE 206 - WEST ELEVATION (RM 206, RM 207 EAST SIM. OPP.)**

Scale: 1/2" = 1'-0"

FREIHEIT ARCHITECTURE

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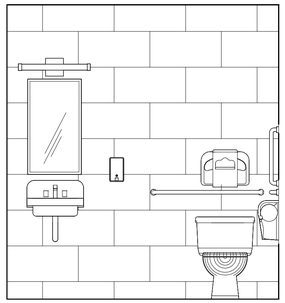
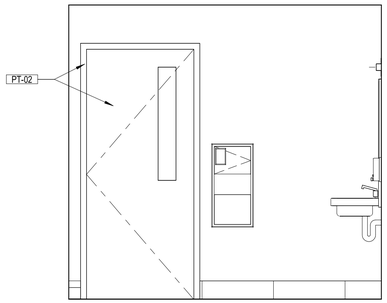
PRIVATE OFFICE 206 ELEVATIONS

A4.13



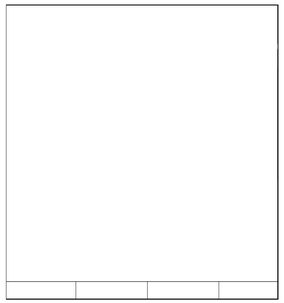
1 A4.14 **FLOOR 2 MEN'S RESTROOM EAST (WOMEN'S RESTROOM WEST SIM. OPP.)**

Scale: 1/2" = 1'-0"



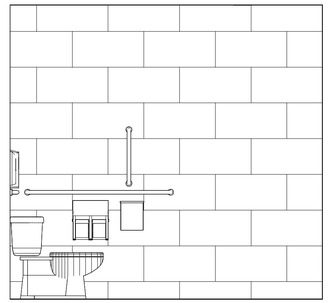
2 A4.14 **FLOOR 2 MEN'S RESTROOM NORTH (WOMEN'S RESTROOM NORTH SIM. OPP.)**

Scale: 1/2" = 1'-0"



3 A4.14 **FLOOR 2 MEN'S RESTROOM WEST (WOMEN'S RESTROOM EAST SIM. OPP.)**

Scale: 1/2" = 1'-0"



4 A4.14 **FLOOR 2 MEN'S RESTROOM SOUTH (WOMEN'S RESTROOM SOUTH SIM. OPP.)**

Scale: 1/2" = 1'-0"

FREIHEIT ARCHITECTURE

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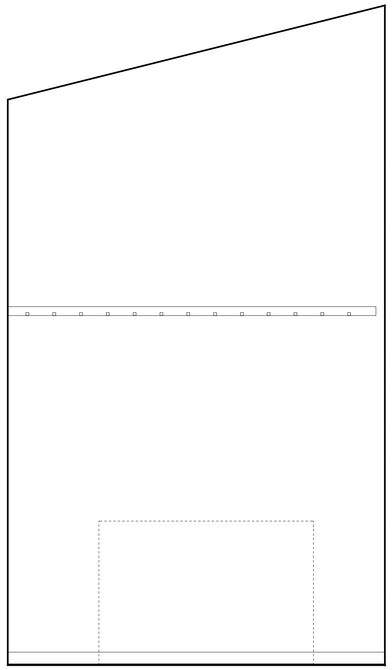
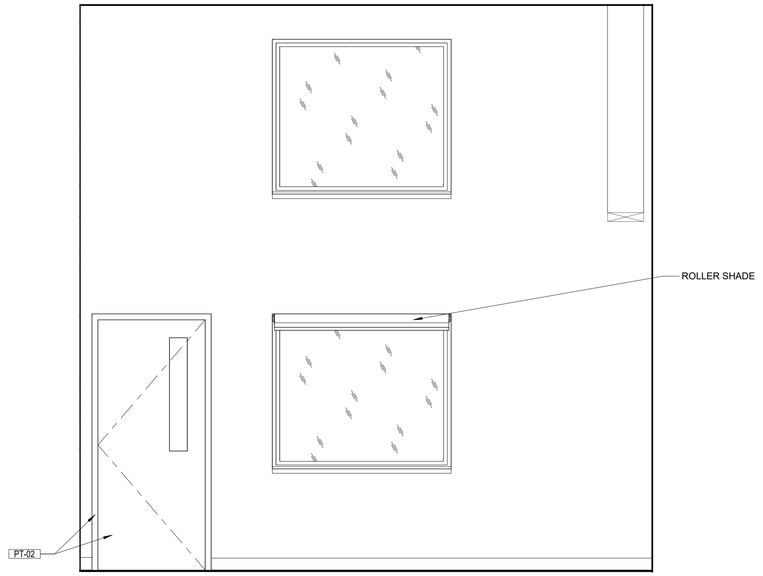
LEVEL 2
RESTROOMS

A4.14



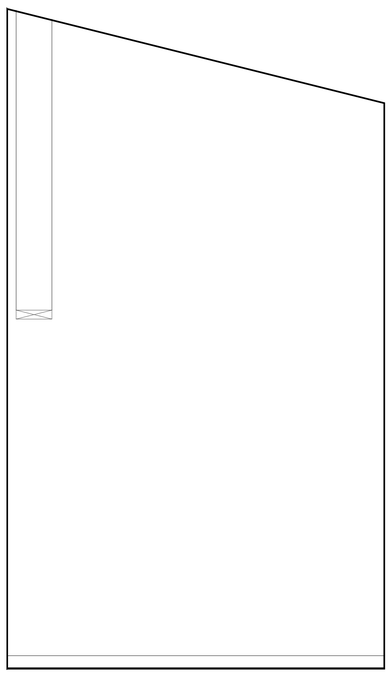
1 A4.15 **OFFICE 208 EAST ELEVATION**

Scale: 1/2" = 1'-0"



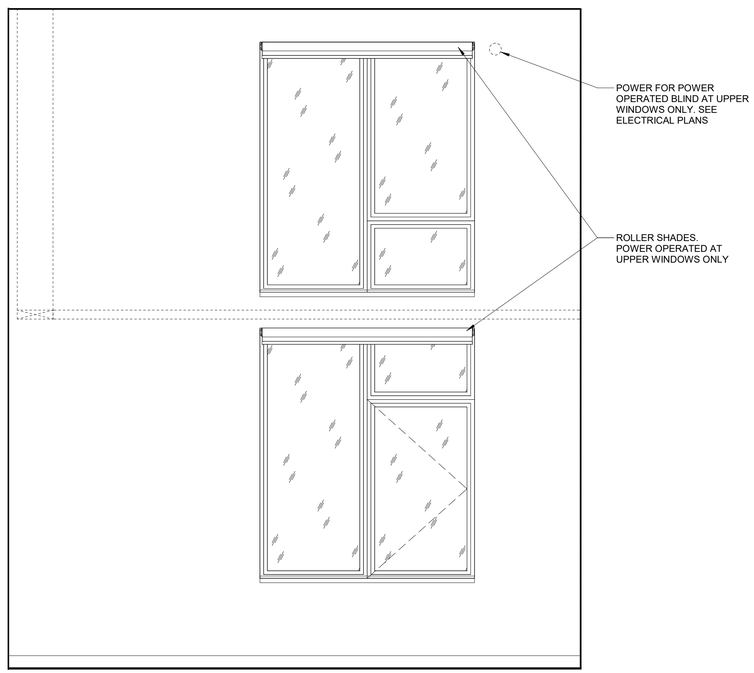
2 A4.15 **OFFICE 208 NORTH ELEVATION**

Scale: 1/2" = 1'-0"



3 A4.15 **OFFICE 208 WEST ELEVATION**

Scale: 1/2" = 1'-0"



4 A4.15 **OFFICE 208 SOUTH ELEVATION**

Scale: 1/2" = 1'-0"

FREIHEIT ARCHITECTURE

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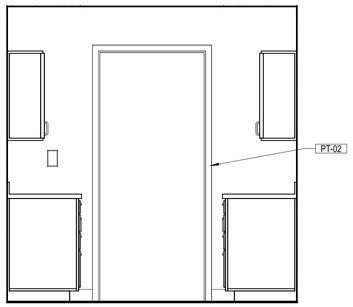
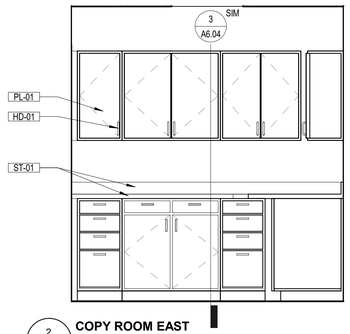
PRIVATE OFFICE ELEVATIONS - OFFICE 208

A4.15



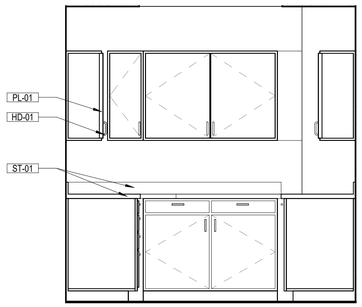
1 A4.16 **COPY ROOM NORTH**

Scale: 1/2" = 1'-0"



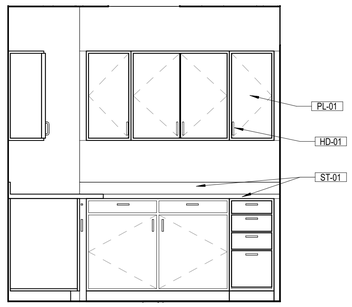
2 A4.16 **COPY ROOM EAST**

Scale: 1/2" = 1'-0"



3 A4.16 **COPY ROOM SOUTH**

Scale: 1/2" = 1'-0"



4 A4.16 **COPY ROOM WEST**

Scale: 1/2" = 1'-0"

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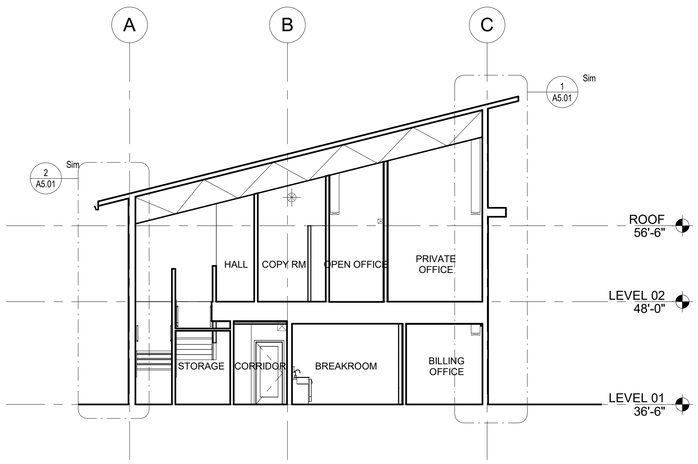
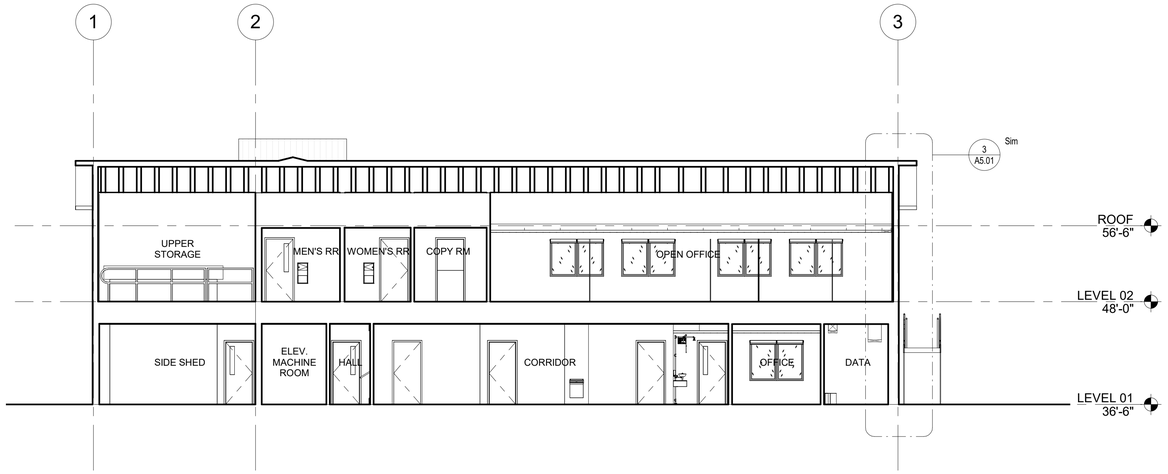
COPY ROOM ELEVATIONS

A4.16



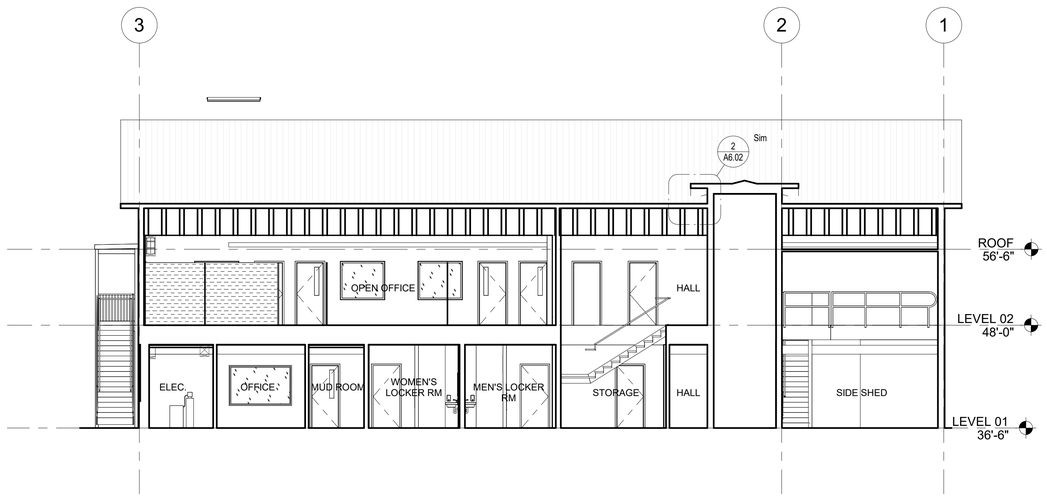
1 A5.00 **SECTION A**

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



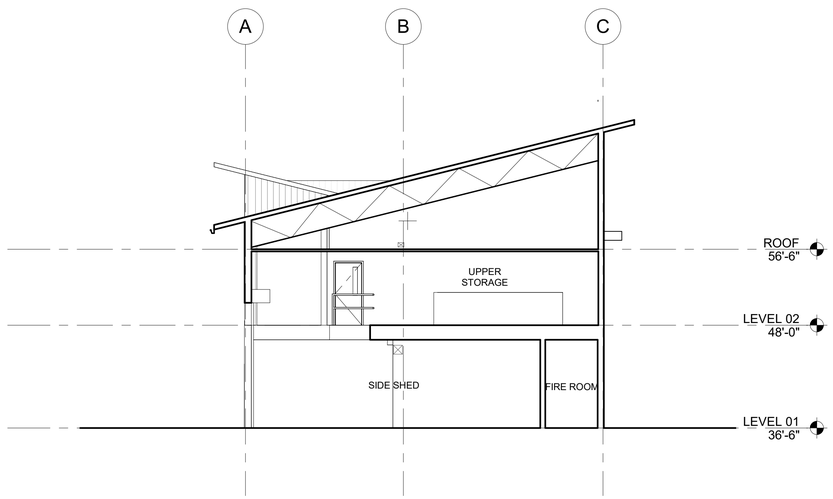
3 A5.00 **SECTION C**

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



2 A5.00 **SECTION B**

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



4 A5.00 **SECTION D**

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

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

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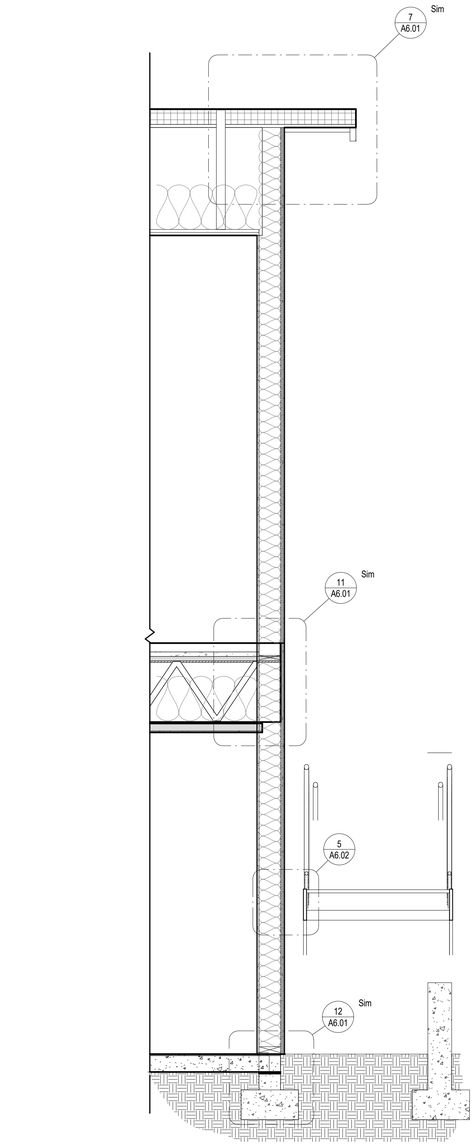
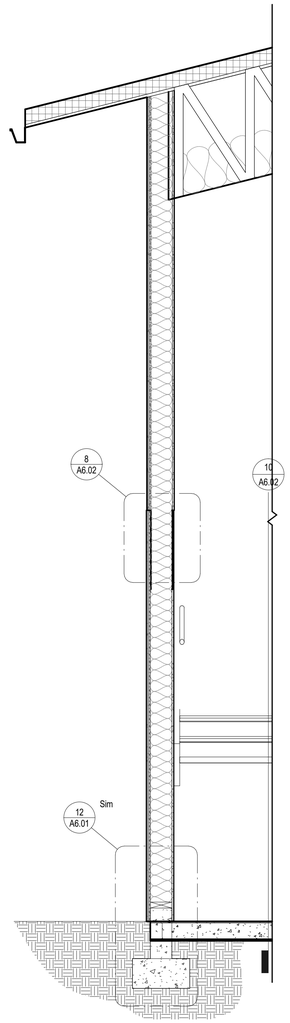
BUILDING SECTIONS

A5.00



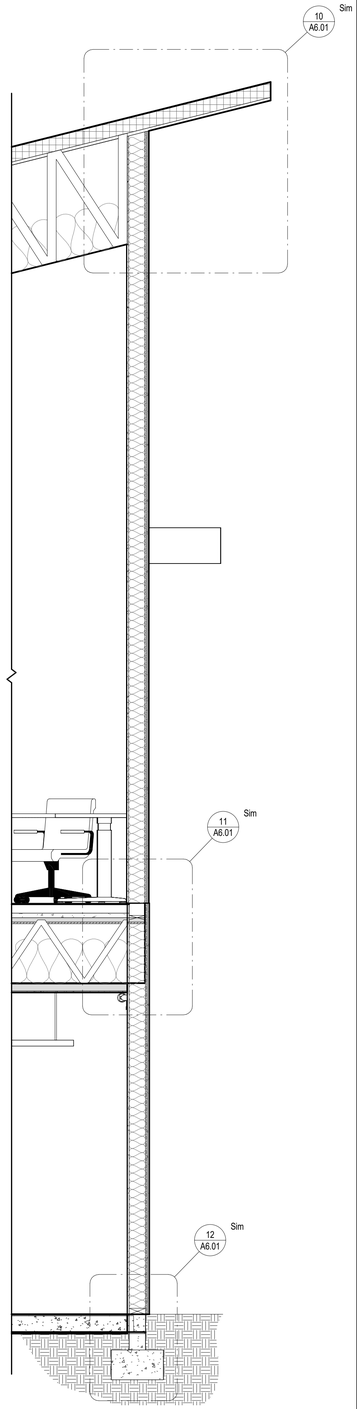
3 A5.01 **EAST WALL SECTION**

Scale: 1/2" = 1'-0"



2 A5.01 **NORTH WALL SECTION**

Scale: 1/2" = 1'-0"



1 A5.01 **SOUTH WALL SECTION**

Scale: 1/2" = 1'-0"

FREIHEIT ARCHITECTURE

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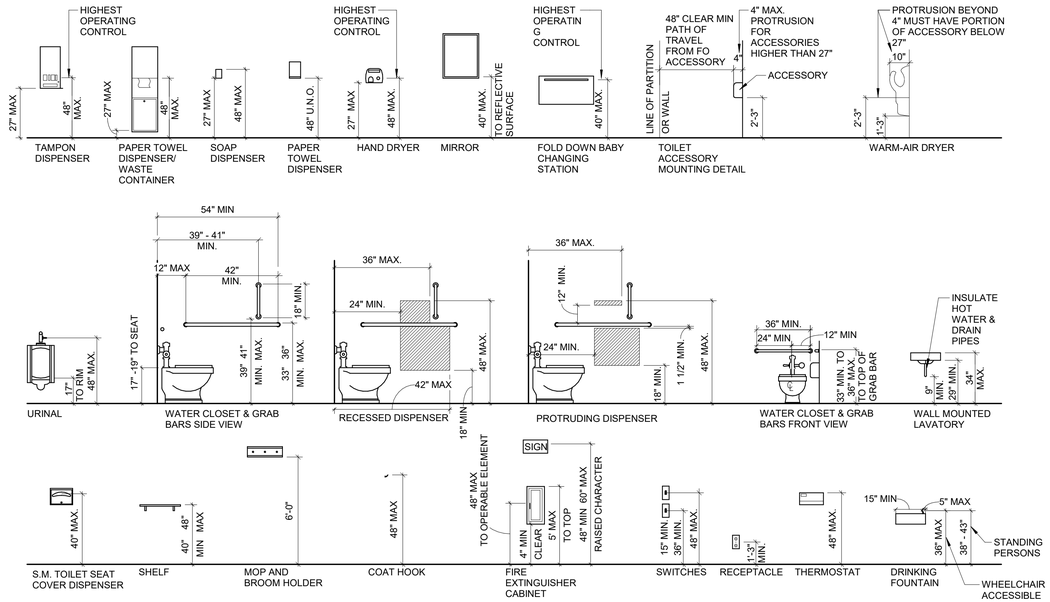
WALL SECTIONS

A5.01

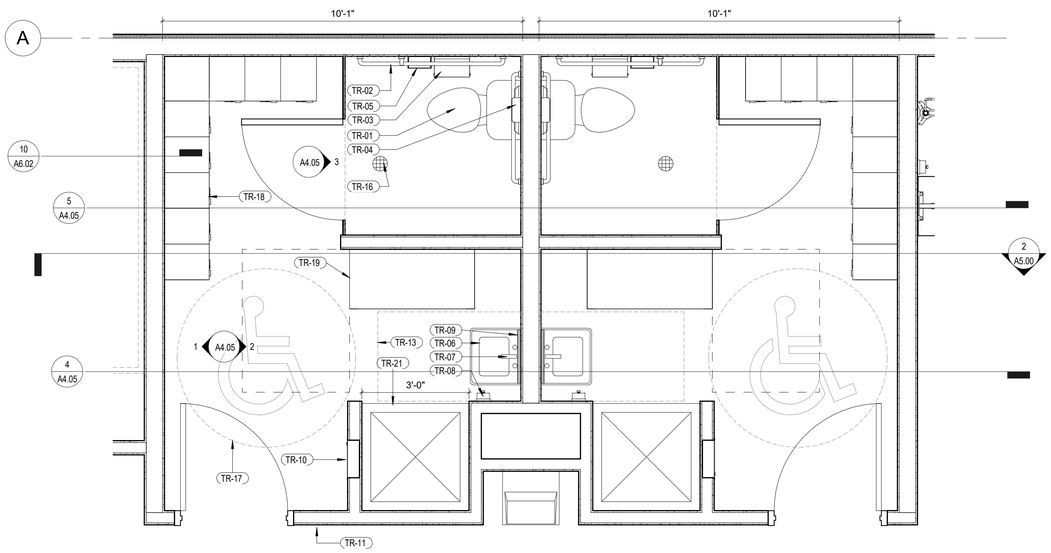


1 A6.00 **TYPICAL FIXTURE MOUNTING HEIGHTS**

Scale: 6" = 1'-0"

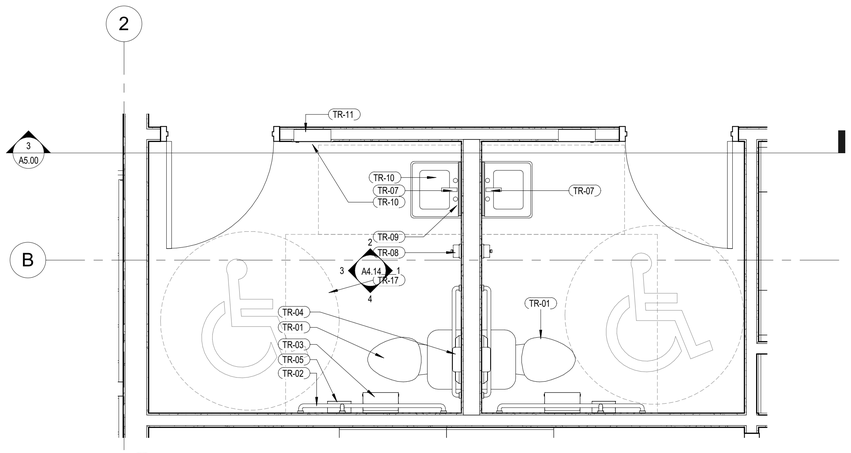
KEYNOTES - TOILET ROOM

TR-01	FLOOR MOUNTED, PRESSURE ASSISTED TANK-TYPE ACCESSIBLE TOILET PER PLUMBING DRAWINGS
TR-02	ACCESSIBLE GRAB BARS. SEE DETAIL 1/6.00 FOR MOUNTING HEIGHTS
TR-03	WALL MOUNTED TOILET PAPER DISPENSER
TR-04	SURFACE MOUNTED TOILET SEAT COVER DISPENSER
TR-05	SANITARY NAPKIN DISPOSAL
TR-06	ACCESSIBLE WALL MOUNTED SINK WITH MOLDED WHITE VINYL INSULATION ON SUPPLY PIPES & DRAIN LINES
TR-07	ACCESSIBLE FAUCET W/ REQUIRED BARRIER FREE CLEARANCE BENEATH LAVATORY
TR-08	ACCESSIBLE SOAP DISPENSER
TR-09	24"x24" BLIND HUNG ACCESSIBLE WALL MOUNTED MIRROR PER ELEVATIONS
TR-10	ACCESSIBLE WALL MOUNTED PAPER TOWEL DISPENSER
TR-11	PROVIDE AND INSTALL RESTROOM IDENTIFICATION SIGNAGE PER DETAIL TBD
TR-13	56"x60" CLEAR FLOOR SPACE FOR ACCESS TO WATER CLOSET
TR-14	30"x48" CLEAR FLOOR SPACE FOR ACCESS TO LAVATORY
TR-16	FLOOR DRAIN, SLOPE FLOOR TO DRAIN
TR-17	5'-0" DIA. TURNING CIRCLE FOR BARRIER FREE FACILITIES. DOOR SWING MAY ENCROACH INTO CLEAR TURNING CIRCLE 12" MAX
TR-18	12"W x15"D LOCKER
TR-19	3'6" X 1'8" LOCKER BENCH
TR-20	4' X 3' CLEAR FLOOR SPACE FOR ACCESS TO BENCH
TR-21	3' X 3' ADA SHOWER



3 A6.00 **FLOOR PLAN ENLARGED LOCKER ROOM**

Scale: 1/2" = 1'-0"



2 A6.00 **FLOOR PLAN - LEVEL 02 -RESTROOMS**

Scale: 1/2" = 1'-0"

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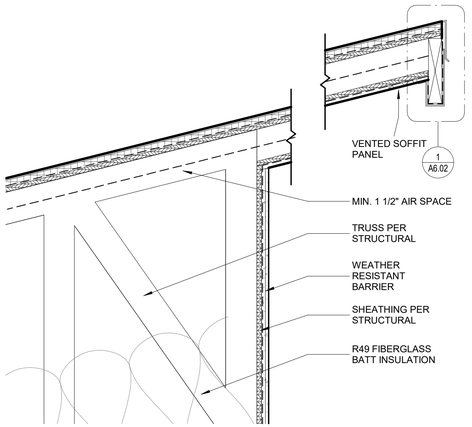
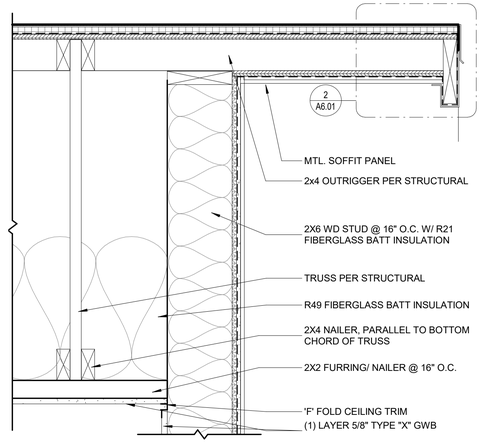
RESTROOM ENLARGED PLANS, DETAILS

A6.00



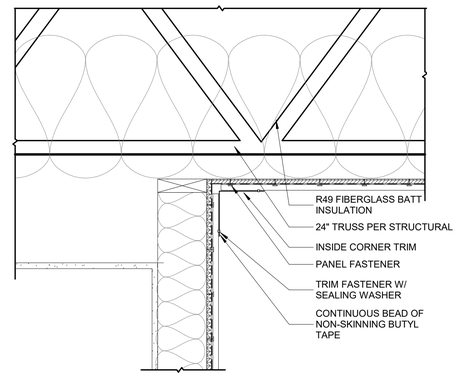
10 A6.01 **TOP EAVE**

Scale: 1 1/2" = 1'-0"



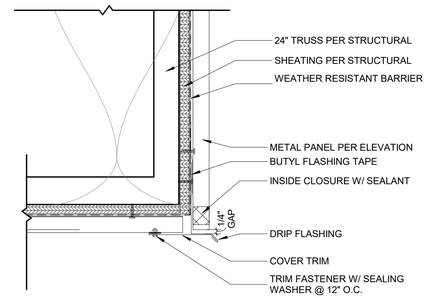
7 A6.01 **RAKE**

Scale: 1 1/2" = 1'-0"



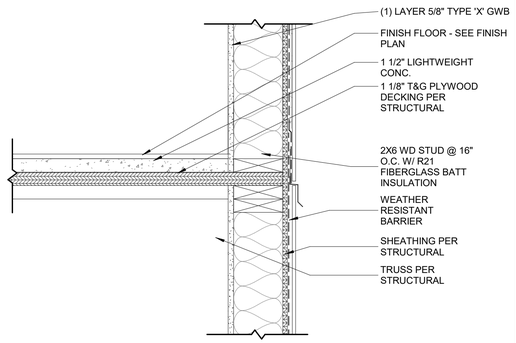
4 A6.01 **TRANSOM AT SOFFIT**

Scale: 1 1/2" = 1'-0"



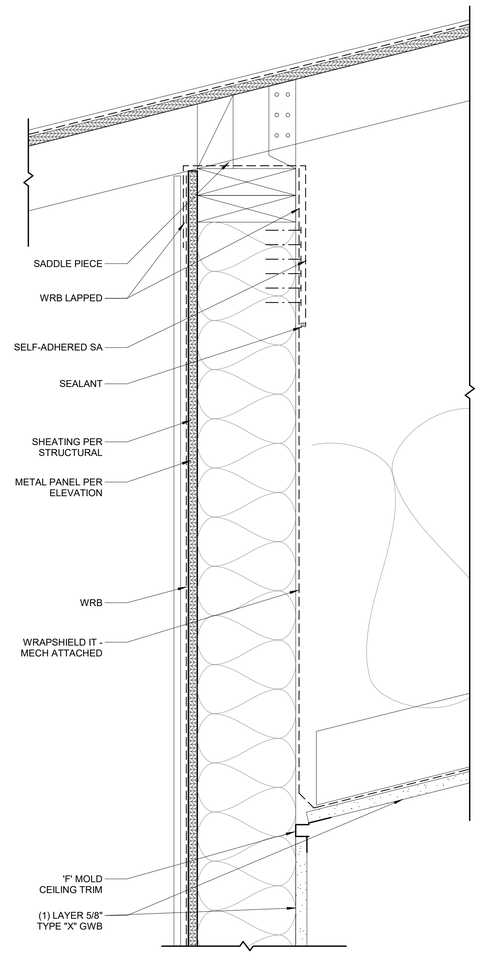
1 A6.01 **SOFFIT TO WALL**

Scale: 3" = 1'-0"



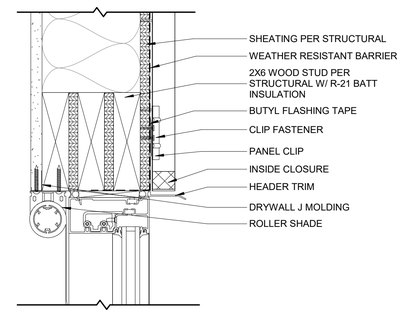
11 A6.01 **FLOOR TO WALL**

Scale: 1 1/2" = 1'-0"



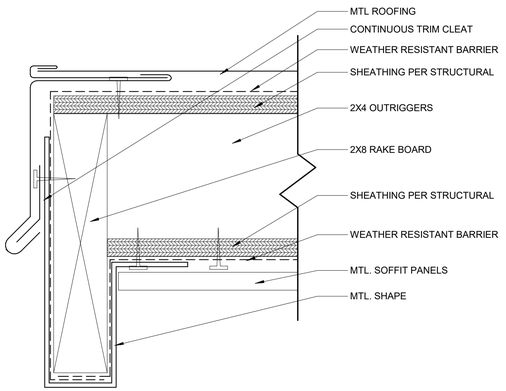
8 A6.01 **WALL TO ROOF STRUCTURE DETAIL**

Scale: 3" = 1'-0"



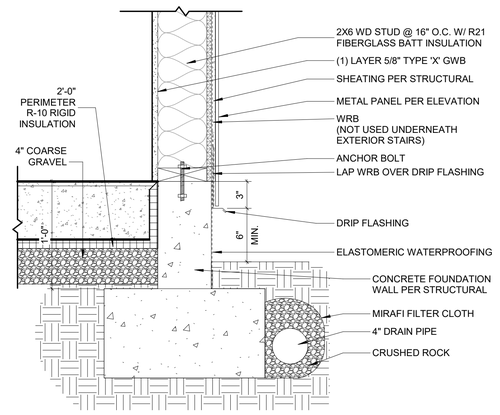
5 A6.01 **HEAD AT TRANSOM**

Scale: 3" = 1'-0"



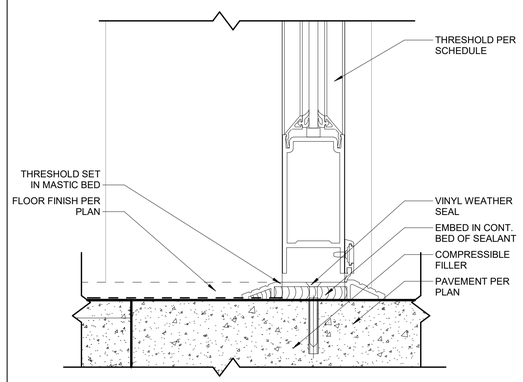
2 A6.01 **EDGE OF RAKE**

Scale: 6" = 1'-0"



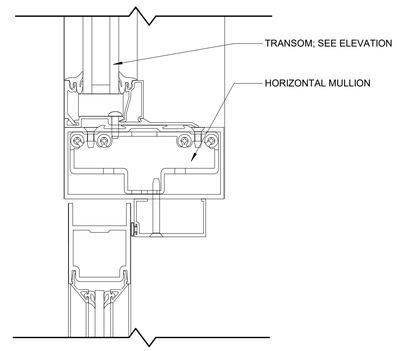
12 A6.01 **BASE/FOOTING**

Scale: 1 1/2" = 1'-0"



6 A6.01 **THRESHOLD AT ENTRANCE**

Scale: 6" = 1'-0"



3 A6.01 **HEAD AT TRANSOM**

Scale: 6" = 1'-0"

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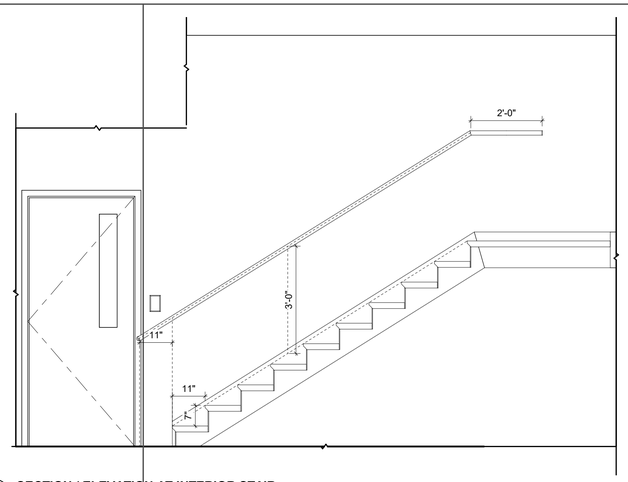
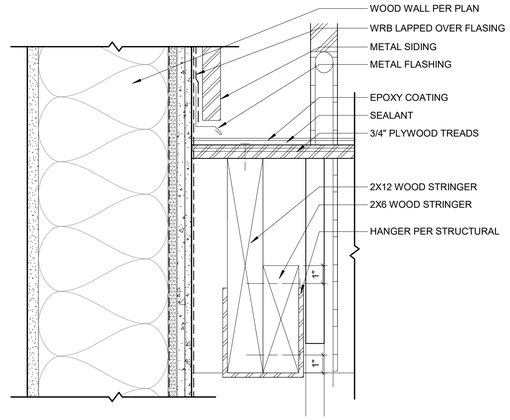
DETAILS

A6.01



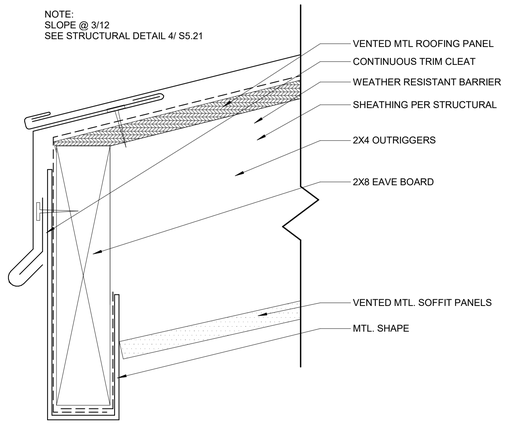
10 / A6.02 **SECTION / ELEVATION AT INTERIOR STAIR**

Scale: 1/2" = 1'-0"



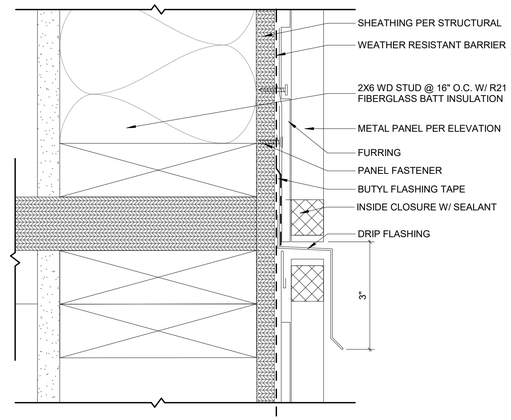
5 / A6.02 **EXTERIOR STAIR TO WALL**

Scale: 3" = 1'-0"



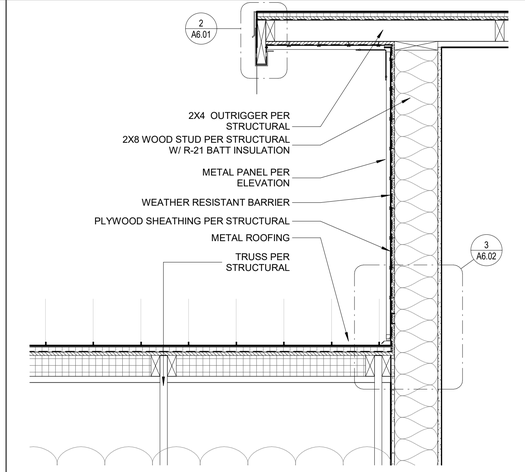
1 / A6.02 **EDGE OF EAVE**

Scale: 6" = 1'-0"



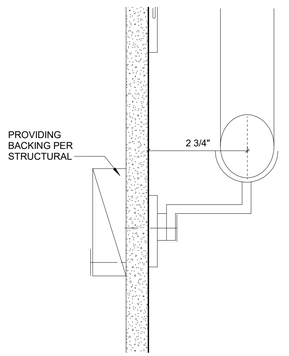
8 / A6.02 **SIDING CHANGE**

Scale: 6" = 1'-0"



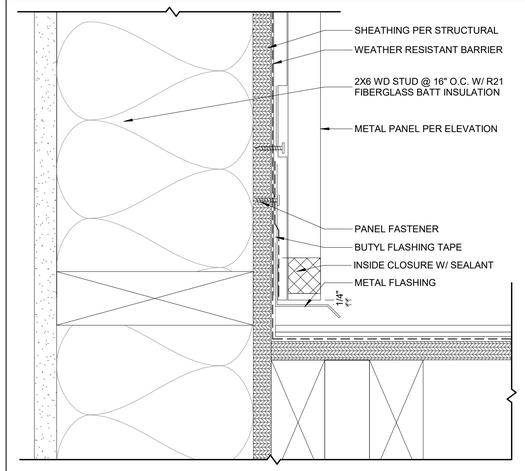
2 / A6.02 **ELEVATOR ROOF DETAIL**

Scale: 1" = 1'-0"



9 / A6.02 **INTERIOR STAIR HANDRAIL**

Scale: 6" = 1'-0"



3 / A6.02 **ROOF & ELEVATOR PENTHOUSE**

Scale: 6" = 1'-0"

FREIHEIT ARCHITECTURE

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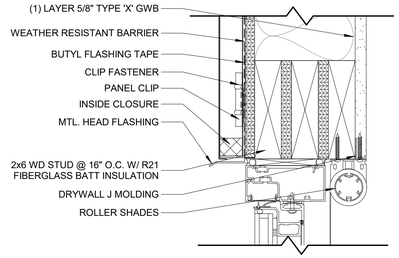
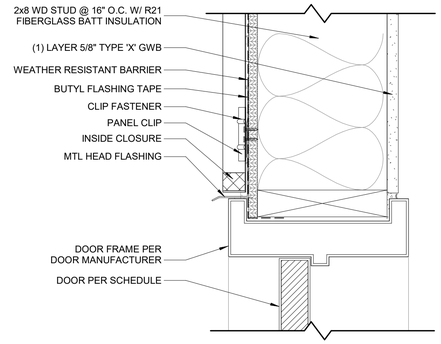
DETAILS

A6.02



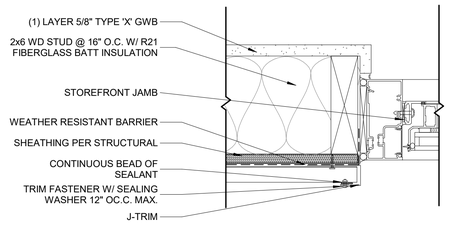
9 A6.03 **DETAIL 09 @ WINDOW HEAD**

Scale: 3" = 1'-0"



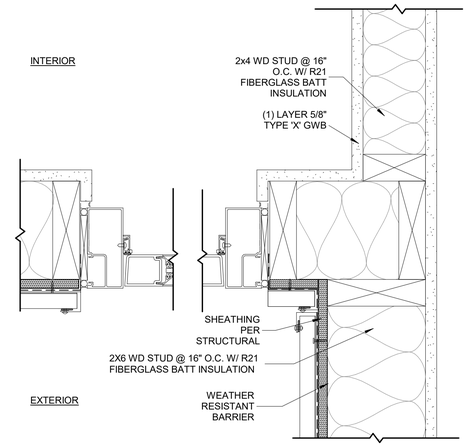
6 A6.03 **DETAIL 06 @ HM DOOR HEAD**

Scale: 3" = 1'-0"



3 A6.03 **DETAIL 03 - STOREFRONT JAMB**

Scale: 3" = 1'-0"

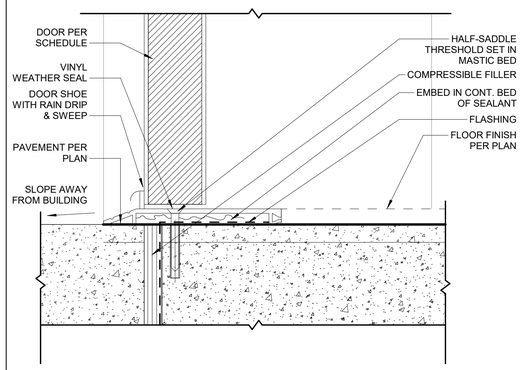


1 A6.03 **DETAIL 01 - STOREFRONT @ DOOR**

Scale: 3" = 1'-0"

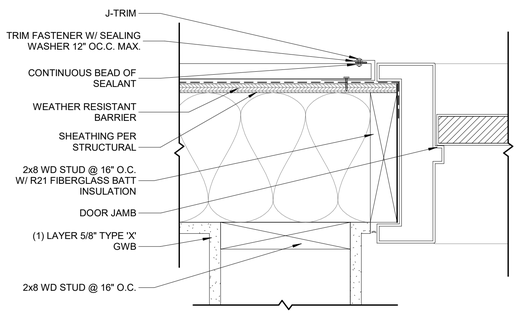
10 A6.03 **DETAIL 10 @ WINDOW TO CLERESTORY SHADING DEVICE**

Scale: 1 1/2" = 1'-0"



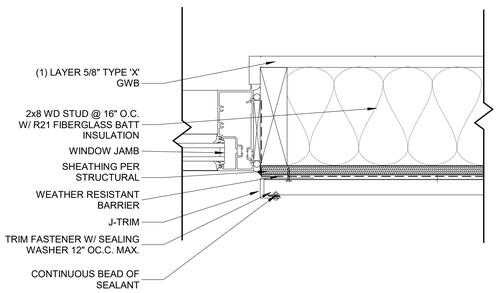
7 A6.03 **DETAIL 07 @ HM DOOR SILL**

Scale: 6" = 1'-0"



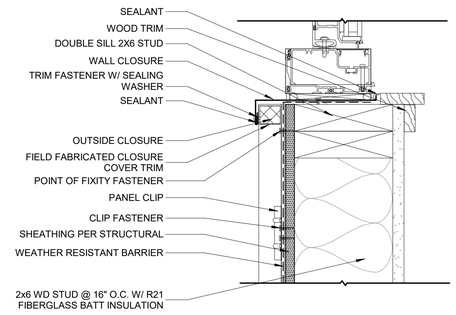
4 A6.03 **DETAIL 04 @ HM DOOR JAMB**

Scale: 3" = 1'-0"



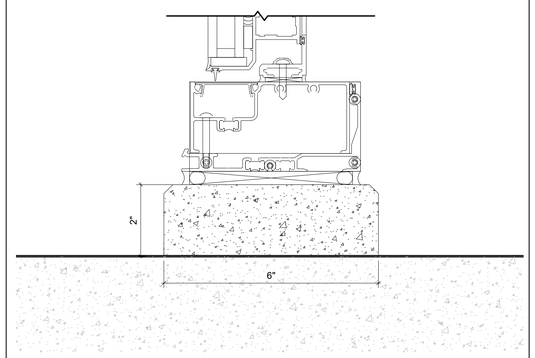
2 A6.03 **DETAIL 02 - WINDOW JAMB**

Scale: 3" = 1'-0"



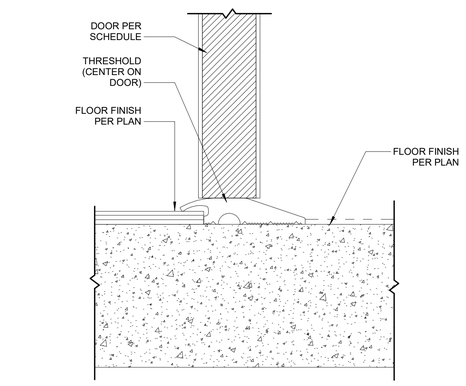
11 A6.03 **DETAIL 11 @ WINDOW SILL**

Scale: 3" = 1'-0"



8 A6.03 **DETAIL 08 @ STOREFRONT SILL**

Scale: 6" = 1'-0"



5 A6.03 **DETAIL 05 @ FLOORING CHANGE**

Scale: 6" = 1'-0"

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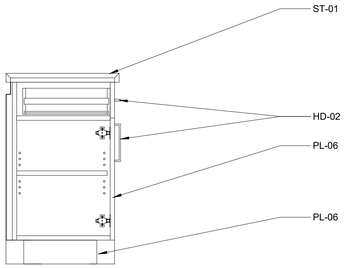
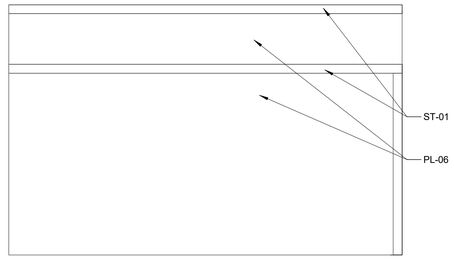
OPENING DETAILS

A6.03



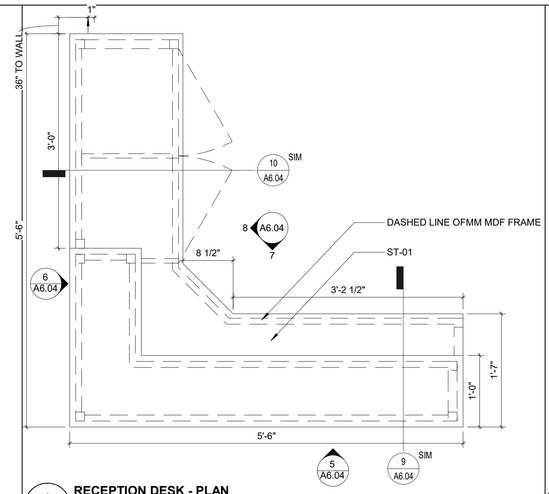
10 A6.04 **RECEPTION DESK - SECTION -1**

Scale: 1" = 1'-0"



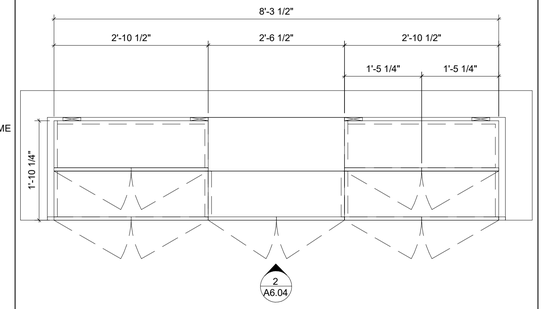
7 A6.04 **RECEPTION DESK - ELEVATION - BACK 3**

Scale: 1" = 1'-0"



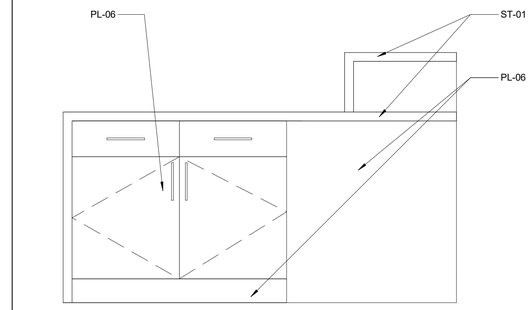
4 A6.04 **RECEPTION DESK - PLAN**

Scale: 1" = 1'-0"



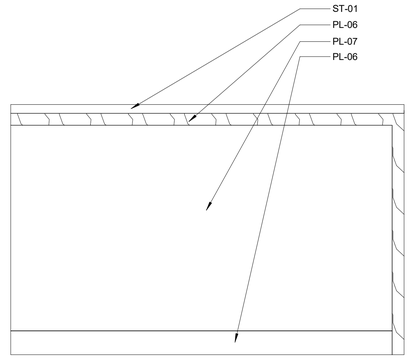
1 A6.04 **BILLING OFFICE BACK COUNTER - PLAN**

Scale: 3/4" = 1'-0"



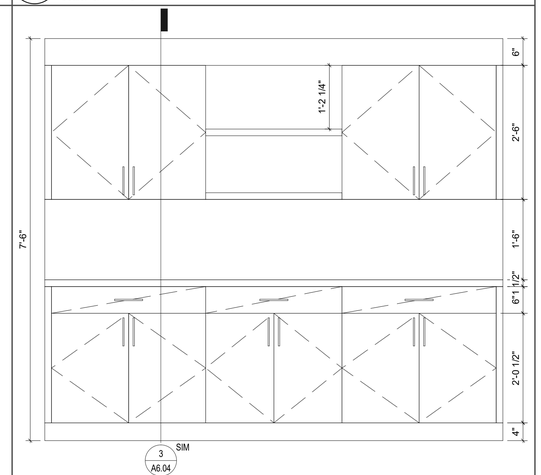
8 A6.04 **RECEPTION DESK - ELEVATION - BACK**

Scale: 1" = 1'-0"



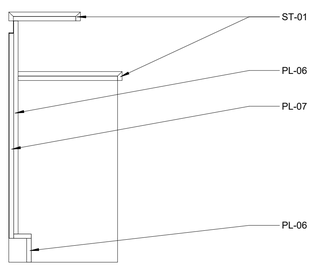
5 A6.04 **RECEPTION DESK - ELEVATION - FRONT 2**

Scale: 1" = 1'-0"



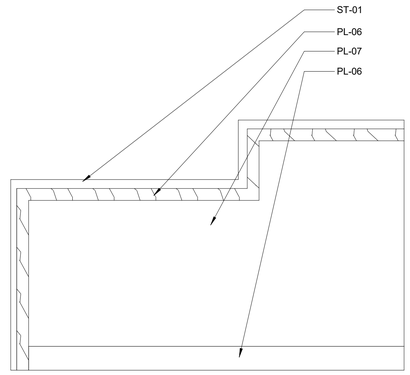
2 A6.04 **BILLING OFFICE BACK COUNTER - ELEVATION**

Scale: 3/4" = 1'-0"



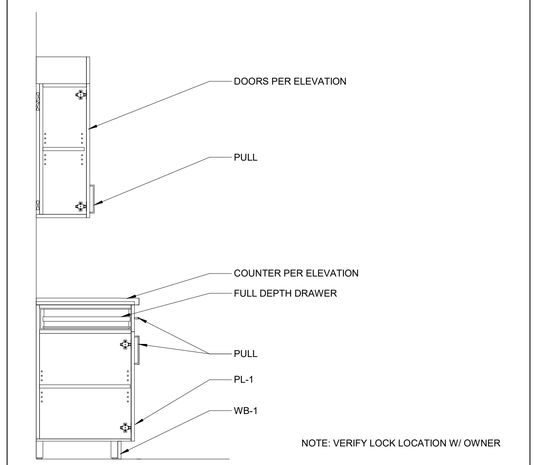
9 A6.04 **RECEPTION DESK - SECTION - 2**

Scale: 1" = 1'-0"



6 A6.04 **RECEPTION DESK - ELEVATION - FRONT 1**

Scale: 1" = 1'-0"



3 A6.04 **BILLING OFFICE BACK COUNTER - SECTION**

Scale: 3/4" = 1'-0"

FREIHEIT ARCHITECTURE

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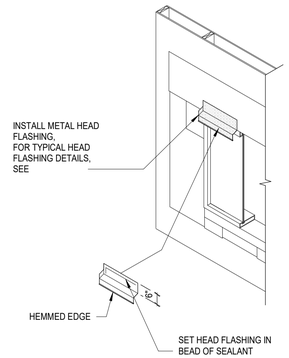
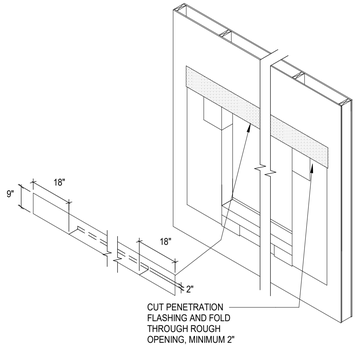
INTERIOR DETAILS - BILLING OFFICE AND LOBBY

A6.04



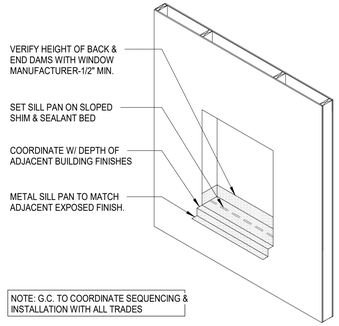
10 A6.05 **STEP J - HEAD FLASHING**

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



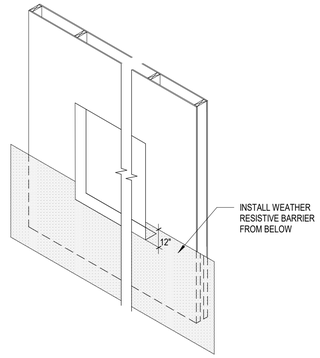
7 A6.05 **STEP G - HEAD PENETRATION FLASHING**

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



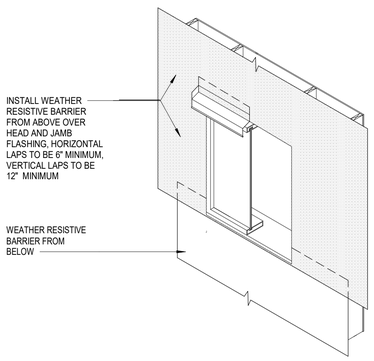
4 A6.05 **STEP D - SILL PAN @ WINDOWS**

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



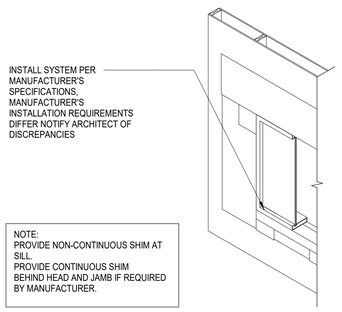
1 A6.05 **STEP A - WEATHER RESISTIVE BARRIER**

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



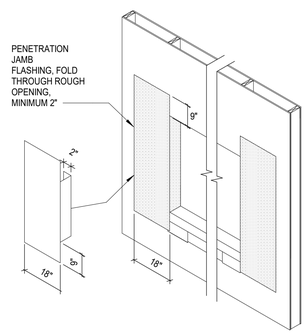
11 A6.05 **STEP K - WEATHER RESISTIVE BARRIER**

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



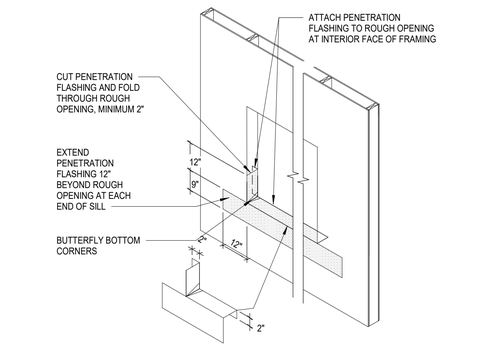
8 A6.05 **WINDOW/CURTAIN WALL INSTALLATION**

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



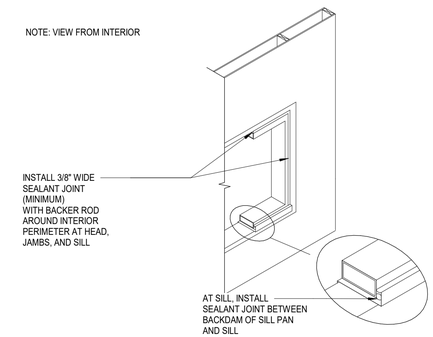
5 A6.05 **STEP E - JAMB PENETRATION FLASHING**

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



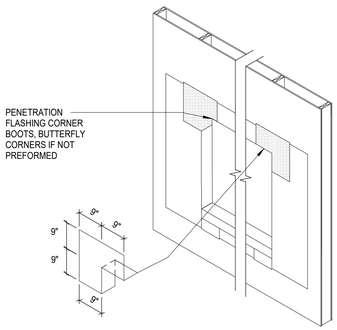
2 A6.05 **STEP B - SILL PENETRATION FLASHING**

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



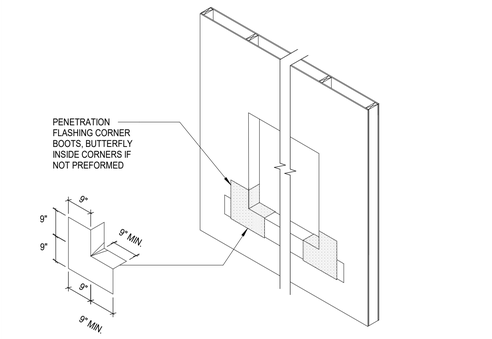
9 A6.05 **STEP I - INTERIOR SEALANT JOINT @ SILL PAN**

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



6 A6.05 **STEP F - HEAD CORNER BOOTS**

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



3 A6.05 **STEP C - SILL CORNER BOOTS**

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

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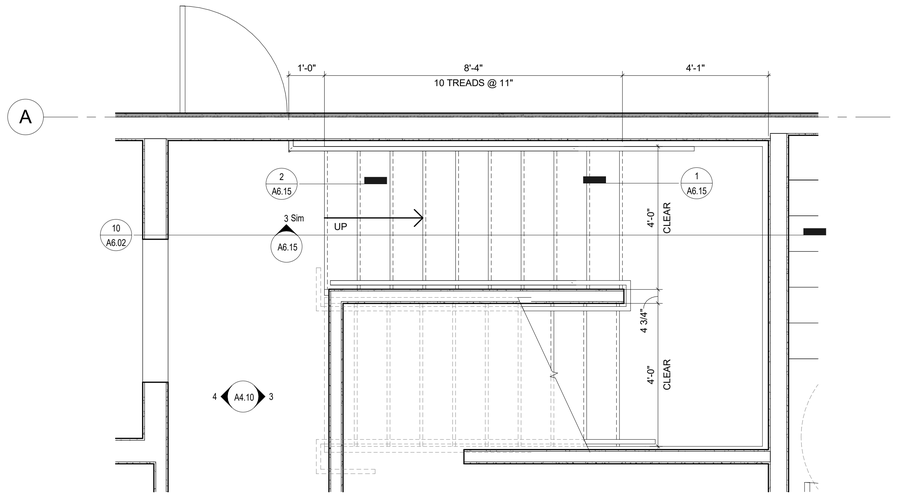
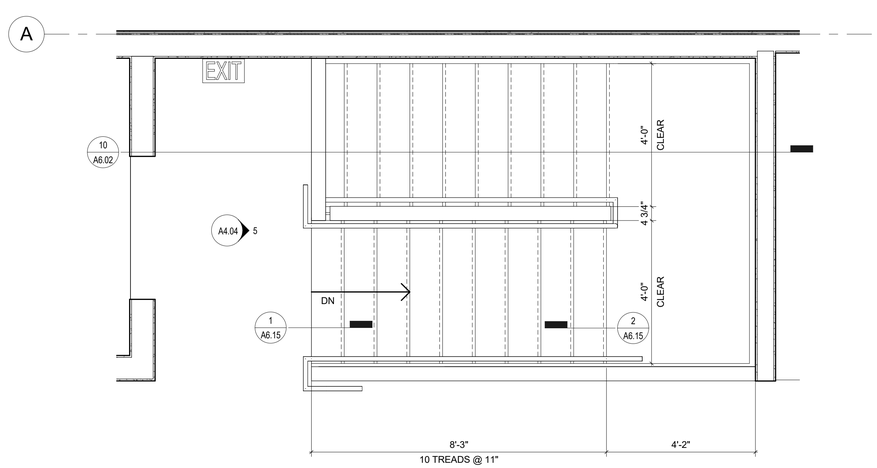
DETAIL - FLASHING

A6.05



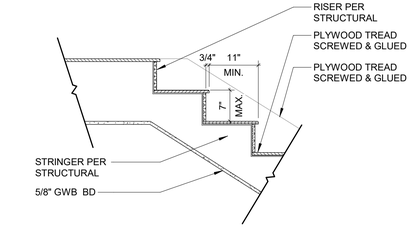
4 A6.15 **ENLARGED STAIR PLAN - LEVEL 01**

Scale: 1/2" = 1'-0"



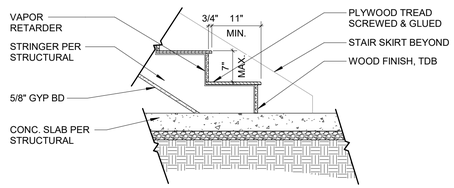
5 A6.15 **ENLARGED STAIR PLAN - LEVEL 02**

Scale: 1/2" = 1'-0"



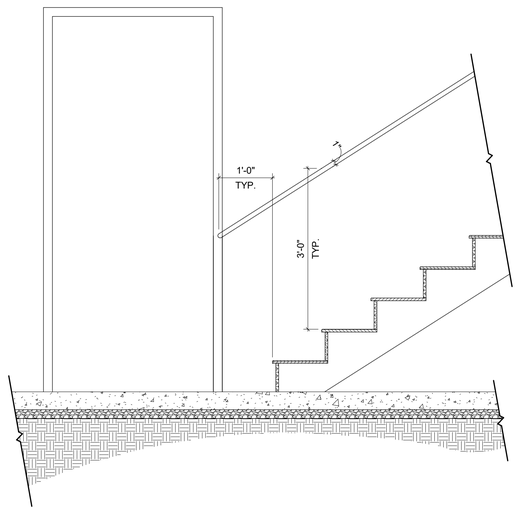
1 A6.15 **STAIR LANDING AT TOP LANDING**

Scale: 3/4" = 1'-0"



2 A6.15 **STAIR AT SLAB ON GRADE**

Scale: 3/4" = 1'-0"



3 A6.15 **HANDRAIL DETAIL**

Scale: 3/4" = 1'-0"

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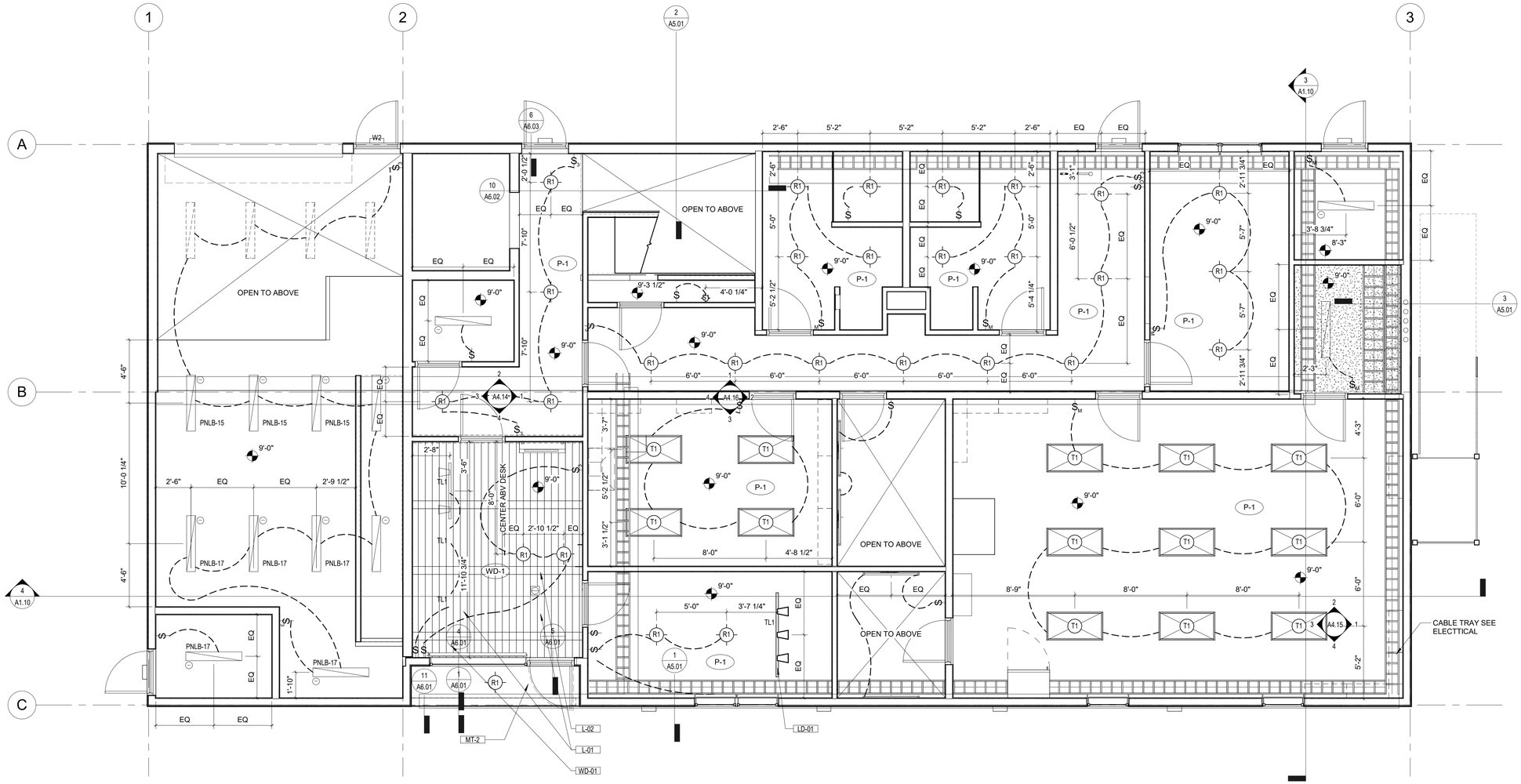
STAIR ENLARGED PLAN & DETAILS

A6.15



1 A7.00 **REFLECTED PLAN - LEVEL 01**

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

NORTH

GENERAL NOTES - REFLECTED CEILING PLAN

1. HVAC NOISE CRITERIA:
   1. DISCHARGE SOUND BASED ON FOLLOWING **ARI 885** ATTENUATION CONDITIONS:
      A. ENVIRONMENTAL EFFECT: PER **ARI 885**
      B. ROOM EFFECT: 3000CU. FT. SPACE, 10 FT. FROM SOURCE.
         1) 0.5" SP: NC 21
         2) 1.0 SP: NC 25
   2. RADIATED SOUND
      A. BASED ON THE FOLLOWING ARI 885 ATTENUATION CONDITIONS:
         1) ENVIRONMENTAL EFFECT: PER **ARI 885**
         2) DUCT LINING: 5 FT. OF ONE INCH FIBERGLASS
         3) END REFLECTION: 8 INCH TERMINATION TO DIFFUSER
         4) FLEX DUCT: 5 FT.
      B. ROOM EFFECT: 3000 CU. FT. SPACE, 10 FT. FROM SOURCE
         1) 0.5" SP: NC 21
2. PROVIDE TRAPEZE PIPE HANGERS FOR SUSPENDED PLUMBING PIPE.
3. VERIFY FIELD CONDITIONS AND LOCATIONS OF ALL PLUMBING, MECHANICAL, DUCTS, STRUCTURAL ELEMENTS AND ALL OTHER RELATED ITEMS. INSTALL NEW PLUMBING, MECHANICAL, FANS, DUCTS, CONDUITS, AND OTHER RELATED ITEMS SO AS NOT TO CONFLICT WITH ANY/ALL FIELD CONDITIONS INCLUDING LUMINARIES.
4. ALL G.W.B. CEILINGS TO BE FINISHED TO LEVEL 4 PER FA-214.
5. LIGHT FIXTURES NOT LOCATED ON PLAN ARE TO BE CENTERED IN CEILING OF ROOM.
6. ALL LAMPS TO HAVE 3500K COLOR TEMPERATURE.
7. MULTIPLE SWITCHES AT ONE LOCATION SHALL BE GANGED TOGETHER AND COVERED FINISHED WITH ONE COVER PLATE U.N.O.
8. PROVIDE ADDITIONAL SWITCHING CONTROL REQUIRED BY **NREC.**
9. LIMIT SWITCH CONTROL TO 80% LOAD OF A 20 AMP CIRCUIT. PER **NREC 1513.2**
10. WASHINGTON STATE NON-RESIDENTIAL ENERGY CODE INTERIOR LIGHTING SUMMARY ATTACHED SEPARATELY.
11. NOTIFY ARCHITECT OF ANY CONFLICTS OF LIGHT FIXTURE LOCATIONS WITH MAIN RUNNERS, DUCTS, SPRINKLERS, HVAC, AND/OR EXISTING CONDUIT, PRIOR TO FRAMING FOR LIGHTS. ANY DISCREPANCIES BETWEEN ARCHITECTS PROPOSED CEILING GRID/PANEL LOCATIONS AND ACTUAL FIELD CONDITIONS ARE TO BE CLARIFIED WITH THE ARCHITECT PRIOR TO FRAMING.
12. RIM OF CABLE TRAY TO BE PLACED AT 8'-0", ALLOWING FOR 12" CLEAR BETWEEN TOP OF TRAY AND CEILING.
13. P1 IN FLAT FOR ALL CEILINGS

GENERAL NOTES - DAYLIGHT ZONES

ALL DAYLIGHTED ZONES AND DAYLIGHT ZONE CONTROLS SHALL COMPLY WITH THE 2018 WASHINGTON STATE ENERGY CODE.

PRIMARY DAYLIGHT ZONE: EXTERIOR WINDOW HEAD HEIGHT x WINDOW WIDTH + 2' ON EITHER SIDE. SECONDARY DAYLIGHT ZONE: AREA EQUAL IN SIZE TO THE PRIMARY ZONE.

AUTOMATIC DAYLIGHT SENSING CONTROLS SHALL BE CAPABLE OF REDUCING THE LIGHT OUTPUT OF THE CONTROLLED LUMINAIRES WHILE MAINTAINING A UNIFORM LEVEL OF ILLUMINANCE BY **CONTINUOUS DIMMING** TO AT LEAST 20% LIGHT OUTPUT.

DAYLIGHT SENSING CONTROLS SHALL CONTROL ONLY LUMINAIRES WITHIN THE DAYLIGHTED AREA.

AUTOMATIC DAYLIGHT SENSING CONTROLS SHALL INCORPORATE TIME-DELAY CIRCUITS TO PREVENT CYCLING OF LIGHT LEVEL CHANGES OF LESS THAN THREE MINUTES.

DAYLIGHT RESPONSIVE CONTROLS SHALL BE CONFIGURED TO COMPLETELY SHUT OFF ALL CONTROLLED LIGHTS IN THAT ZONE.

LEGEND - REFLECTED CEILING PLAN

- NEW ACOUSTICAL CEILING TILE GRID
- $ WALL SWITCH (+48")
- $O WALL SWITCH W/ OCCUPANCY MOTION SENSOR (+48")
- $3 3-WAY WALL SWITCH (+48")
- $D WALL SWITCH W/ DIMMER (+48")
- $T WALL SWITCH W/ TIMER (+48")
- $S WALL SWITCH CONNECTED TO SWITCHED RECEPTACLE (+7" ACH)
- $GD WALL SWITCH FOR GARBAGE DISPOSAL (+7" ACH)
- $M MASTER SWITCH (LIGHTING RELAY) TO TURN ON/OFF SELECT LIGHTS
- INDICATES SWITCHING
- P1-1 CEILING PAINT FINISH (SEE SCHEDULE)
- XXX +X'-X" HEIGHT ABOVE FINISHED FLOOR
- CABLE TRAY
- 2'x4' RECESSED LIGHT FIXTURE
- SURFACE MOUNTED DOWNLIGHT / DIRECTIONAL DOWNLIGHT
- RECESSED DOWNLIGHT / DIRECTIONAL DOWNLIGHT
- PENDANT LIGHT FIXTURE
- WALL SCONCE
- TRACK LIGHTING
- UNDER CABINET LIGHTING
- MECHANICAL SUPPLY REGISTER
- MECHANICAL RETURN REGISTER
- EXHAUST FAN
- INTERNALLY ILLUMINATED EXIT SIGN
- INTERNALLY ILLUMINATED EXIT SIGN WITH HORN/STROBE
- FIRE SPRINKLER (BIDDER DESIGN)
- 30" VANITY LIGHT
- SUSPENDED LIGHT FIXTURE (PNLB 15, PNLB 17, PNLB 19, PNLB 21)

SEE LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION

A01-1B PRINTED 3/20/2024 11:48:23 AM

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

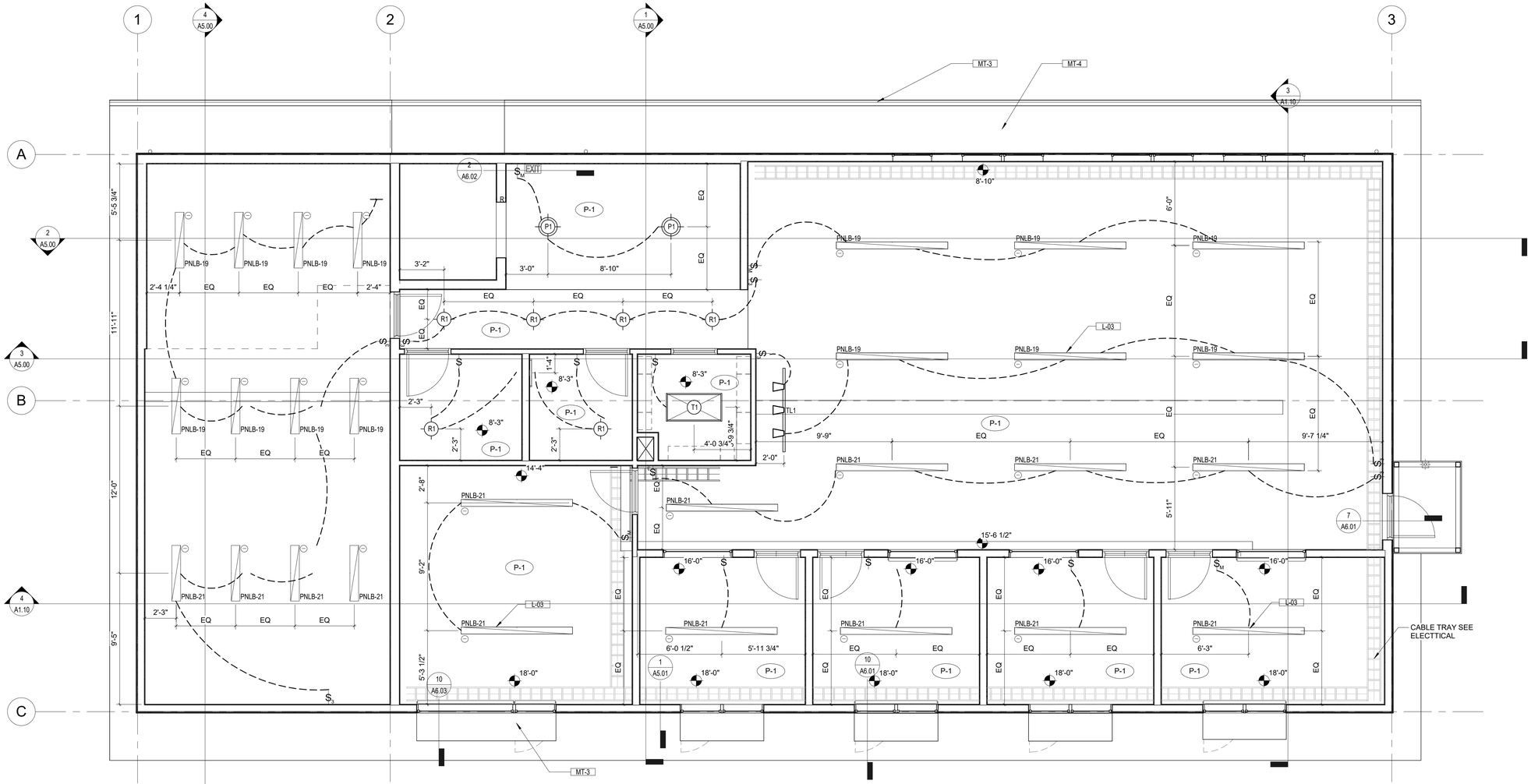
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

BID ISSUE	03/21/2024

REFLECTED CEILING PLAN LEVEL 01

A7.00



1 A7.01 **REFLECTED PLAN - LEVEL 02**

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

NORTH

LEGEND - REFLECTED CEILING PLAN

- NEW ACOUSTICAL CEILING TILE GRID
- WALL SWITCH (+48")
- WALL SWITCH W/ OCCUPANCY MOTION SENSOR (+48")
- 3-WAY WALL SWITCH (+48")
- WALL SWITCH W/ DIMMER (+48")
- WALL SWITCH W/ TIMER (+48")
- WALL SWITCH CONNECTED TO SWITCHED RECEPTACLE (+7" ACH)
- WALL SWITCH FOR GARBAGE DISPOSAL (+7" ACH)
- MASTER SWITCH (LIGHTING RELAY) TO TURN ON/OFF SELECT LIGHTS
- INDICATES SWITCHING
- CEILING PAINT FINISH (SEE SCHEDULE)
- HEIGHT ABOVE FINISHED FLOOR
- CABLE TRAY
- 2'x4' RECESSED LIGHT FIXTURE
- SURFACE MOUNTED DOWNLIGHT / DIRECTIONAL DOWNLIGHT
- RECESSED DOWNLIGHT / DIRECTIONAL DOWNLIGHT
- PENDANT LIGHT FIXTURE
- WALL SCONCE
- TRACK LIGHTING
- UNDER CABINET LIGHTING
- MECHANICAL SUPPLY REGISTER
- MECHANICAL RETURN REGISTER
- EXHAUST FAN
- INTERNALLY ILLUMINATED EXIT SIGN
- INTERNALLY ILLUMINATED EXIT SIGN WITH HORN/STROBE
- FIRE SPRINKLER (BIDDER DESIGN)
- 30" VANITY LIGHT
- SUSPENDED LIGHT FIXTURE (PNLB 15, PNLB 17, PNLB 19, PNLB 21)

SEE LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION

A7-1B PRINTED:3/20/2024 11:46:23 AM

FREIHEIT ARCHITECTURE

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TULALIP, WA 98271

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REFLECTED CEILING PLAN LEVEL 02

A7.01

MISCELLANEOUS ACCESSORIES & HARDWARE SCHEDULE

THROUGHOUT

CABINET DOOR PULLS	MFR: HAFELE STYLE: MODERN ZINC #103.84.003 (96mm CTC) FINISH: BRUSHED NICKEL	HANDLES TO BE INSTALLED PER ORIENTATION ON ELEVATIONS
CORNER GUARDS	MFR: ECKSTROM INDUSTRIES, INC STYLE: FULL HEIGHT 1" STAINLESS STEEL CONTACT: GLEN BIRKVOLD (GLEN@ECKSTROMIND.COM)	SEE FINISH PLAN FOR LOCATIONS
WIRE GROMMETS	MFR: MOCKETT STYLE: PLASTIC GROMMETS FINISH: TBD	VERIFY LOCATIONS WITH CLIENT
IN-WALL SUPPORTS	STYLE: IN-WALL STEEL SUPPORT BRACKETS FINISH: TBD	CUT BACK BRACKETS A MINIMUM OF 6" FROM FRONT FACE OF COUNTERTOPS
FIRE CABINET	MFR: LARSEN'S MFG STYLE: SEMI-RECESSED EXTINGUISHER CABINET FINISH: SATIN ANODIZED ALUMINUM	DOOR STYLE: SOLID DIECUT LETTERING COLOR: WHITE DIECUT LETTERING STYLE: VERTICAL

RESTROOMS

GRAB BARS	MFR: BOBRICK STYLE: 1 1/2" DIAMETER GRAB BARS #B-6806x36"/#B-6806x42"/#B-6806x18" FINISH: SATIN STAINLESS	
TOILET SEAT COVER DISPENSER	MFR: BOBRICK STYLE: SURFACE MOUNTED DISPENSER #B-221 FINISH: SATIN FINISH	
TOILET TISSUE DISPENSER	MFR: BOBRICK STYLE: RECESSED MULTI-ROLL DISPENSER #B-6977 FINISH: SATIN FINISH	
PAPER TOWEL DISPENSER	MFR: BOBRICK STYLE: DISPENSER #B-35903 FINISH: SATIN FINISH	
PAPER TOWEL DISPENSER	MFR: BOBRICK STYLE: SURFACE MOUNTED DISPENSER #B-2620 FINISH: SATIN FINISH	
WC COAT HOOKS	MFR: BOBRICK STYLE: B-985	MOUNT HOOKS PER ADA, UNO PROVIDE IN-WALL BACKING AS NEEDED VERIFY EXACT LOCATIONS WITH CLIENT
MIRROR	MFR: BOBRICK STYLE: B-165-1836 SIZE: SEE ELEVATIONS	INSTALL WITH THIN BRUSHED NICKEL J-CHANNEL AT BOTTOM AND METAL CLIPS AT TOP
PLAM SPLASH GUARD TRIM	MFR: EB BRADLY STYLE: FUTURA INDUSTRIES ALUMINUM TRIM (OR EQUAL): TOP & ENDS: #FU-TM81-BA / INSIDE CORNERS: #FU-TM91-BA	
WASTE RECEPTACLE	MFR: BOBRICK STYLE: B-3644	
DECK-MOUNTED SOAP DISPENSOR	MFR: BOBRICK STYLE: B-822	
WALL-MOUNTED SOAP DISPENSOR	MFR: BOBRICK	
SANITARY NAPKIN DISPOSAL UNIT	MFR: BOBRICK	
TOWEL HOOK	MFR: BOBRICK	
SHOWER CURTAIN ROD	MFR: BOBRICK	
SHOWER CURTAIN	MFR: BOBRICK	
SHOWER CURTAIN HOOKS	MFR: BOBRICK	
UNDER LAVATORY GUARD	MFR: BOBRICK	
UTILITY SHELF	MFR: BOBRICK	
MOP AND BROOM HOLDER	MFR: BOBRICK STYLE: B-223X36	
PAPER TOWEL DISPENSER	MFR: KIMBERLEY CLARK STYLE: IN-SIGHT ELECT-MATIC HRT	

PLUMBING FIXTURES

MOP BASIN	MFR: ZURN STYLE: Z1996 MOP SINK FINISH: STAINLESS STEEL	JANITOR CLOSET
WASH-UP SINK	MFR: BOBRICK STYLE: JS-122-T WITH JS-47-TGSA FAUCET AND J-35-SSF DRAIN	
WASHBASIN GROUND	MFR: DURAVIT STYLE: #2350800027 / 2350800025 / 2350800028, WALL-MOUNTED WITH FAUCET DECK	

SHED

PIT FINISH SAFETY RAIL	MFR: SAFETY RAIL COMPANY LLC STYLE: 4' PIT FINISH SAFETY RAIL FINISH: XXX	LEVEL 2 SHED NOT FIXED
PIT SAFETY RAIL	MFR: SAFETY RAIL COMPANY LLC STYLE: 4' PIT SAFETY RAIL FINISH: XXX	LEVEL 2 SHED NOT FIXED
CORNER RAIL	MFR: SAFETY RAIL COMPANY LLC STYLE: ACCU-FIT KIT 6X6' CORNER FINISH: XXX	LEVEL 2 SHED FIXED

GENERAL NOTES - ACCESSORIES & HARDWARE

1. PROVIDE FINISH HARDWARE FOR COMPLETE WORK IN COMPLIANCE WITH ADA. QUANTITIES, WHERE LISTED, ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. VERIFY ALL COUNTS.

2. HARDWARE SHALL BE SUPPLIED BY RECOGNIZED BUILDER'S HARDWARE SUPPLIER. PROVIDE SUBMITTAL FOR APPROVAL.

3. KEYS & KEYING: LOCKS TO BE KEYED ALIKE PER ROOM, UNO. PROVIDE (1) MASTER KEY FOR ALL CABINETS.

4. ALL HARDWARE AND ACCESSORIES TO BE INSTALLED PER ADA REQUIREMENTS, UNO

5. PROVIDE IN-WALL BACKING AS REQUIRED FOR ALL MISCELLANEOUS ACCESSORIES AND HARDWARE.

FINISH SCHEDULE

ACOUSTICAL CEILING TILE

ACT-1	MFR: ARMSTRONG COMMERCIAL CEILINGS STYLE: CIRRUS 580 PRECLUDE. XL 15/16" SUSPENSION SYSTEM (OR EQUAL), CLASS A COLOR: WHITE	EDGE: ANGLED TANGULAR

METAL

MT-1	MFR: AEP SPAN STYLE: FLEX SERIES COLOR: LEAF GREEN CONTACT: JEFFERY MEDEIROS	INSTALL PER MFR RECOMMENDATIONS
MT-2	MFR: AEP SPAN STYLE: FLEX SERIES COLOR: TO BE SELECTED FROM MFR STANDARD COLORS CONTACT: JEFFERY MEDEIROS	LEVEL 2 EXTERIOR
MT-3	MFR: AEP SPAN STYLE: DESIGN SPAN COLOR: MIDNIGHT BRONZE CONTACT: JEFFERY MEDEIROS	LEVEL 2 EXTERIOR
MT-4	MFR: AEP SPAN STYLE: FLUSH PANEL COLOR: TO BE SELECTED FROM MFR STANDARD COLORS CONTACT: JEFFERY MEDEIROS	LEVEL 2 EXTERIOR

PAINT

PT-01	MFR: BENJAMIN MOORE COLOR: OC-26 - SILVER SATIN FINISH: MAT @ CEILING, EGGSHELL @ WALLS	WALL AND CEILING PAINT ALL AREAS ONE COAT PRIMER, TWO COATS PAINT
PT-02	MFR: SHERWIN WILLIAMS COLOR: SW6991 - BLACK MAGIC FINISH: SEMI-GLOSS @ DOORS & TRIM & WET AREAS	DOOR PAINT ALL AREAS (UON) ONE COAT PRIMER, TWO COATS PAINT
PT-03	MFR: BENJAMIN MOORE COLOR: HC-158 NEWBURG GREEN FINISH: EGGSHELL @ WALLS	ACCENT WALL PAINT OFFICES ONE COAT PRIMER, TWO COATS PAINT

PLASTIC LAMINATE

PL-1	MFR: VENEEER ART STYLE: 974-RG BROWN ANNIGRE FINISH: RIFT GRAIN FINISH CONTACT: JOAN ASKEN - 425-283-2228	CABINET AND DOOR LAMINATE LOBBY / BILLING ROOM QUARTER CUT / SLIP MATCH, 8' X 10' SHEETS
PL-2	MFR: PIONITE COLOR: WHITE FINISH: FRL SUEDE - FS587 CONTACT: SAMANTHA MOON - 360-710-3787	FRL CORRIDOR AND ROOM WALLS 1ST LEVEL
PL-4	MFR: PER GC FINISH: WHITE SMOOTH, FRP, 4' X 8' SHEETS, CLASS A CONTACT: SAMANTHA MOON - 360-710-3787	
PL-5	MFR: WILSONART DESIGNER WHITE STYLE: #D354 FINISH: W/ ANTI-MICROBIAL FINISH	
PL-6	MFR: WILSONART PREMIUM STYLE: LAMINATE REVEAL IN WHITE FOREST, W/ MDF BACKING	
PL-7	MFR: MOZ DESIGNS STYLE: ALUMINUM FACING. BLENDS PATINA COLLECTION IN 212, W/ MDF BACKING	

STONE

ST-1	MFR: CAMBRIA COLOR: IRONSBRIDGE FINISH: POLISHED - 2CM CONTACT: ALISHA McFARLAND - 206-409-3870	QUARTZ COUNTERTOP LOBBY / BILLING ROOM

RESILIENT BASE

RB-1	MFR: JOHNSONITE MODEL: THERMOSET - TS FINISH: BLACK CONTACT: NORA VIVARELLI - 206-409-3870	ALL (UON) 4" BASE, 4" W/TOE (NOT USED ON CEDAR WALL)

TILE

TL-1	MFR: CROSSVILLE COLOR: SHADES 2.0 - SHD45 CLAY FINISH: UPS, SIZE 24" X 24" CONTACT: LISA ANDERSON - 206-730-3394	FLOOR TILE BATHROOMS 1/8" GROUT: LATICRETE SPECTRALOC - 24 NATURAL GREY
TL-2	MFR: CROSSVILLE COLOR: SHADES 2.0 - SHD45 CLAY FINISH: SPO, SIZE 12" X 24" CONTACT: LISA ANDERSON - 206-730-3394	WALL TILE BATHROOMS 1/8" GROUT: LATICRETE SPECTRALOC - 24 NATURAL GREY

WOOD / WOOD VENEER SCHEDULE

WD-1	MFR: REAL CEDAR COLOR: T&G SMOOTH V-JT FACE FINISH: CEDAR PANELING - KILN DRIED #WRCLA, CLASS A FINISH CONTACT: REAL CEDAR - 877-316-8845	WESTERN RED CEDAR LOBBY HORIZONTAL INSTALLATION
WD-2	MFR: TABU COLOR: SATIN CLEAR COAT FINISH: MN.28.021 CONTACT: MATERIALS INC. - 201-968-0101	FRP RECEPTION 2 COATS POLYURETHANE TOP COAT, SATIN FINISH

DECORATIVE HARDWARE

HD-01	MFR: AMEROCK REVOLVE 3-3/4" COLOR: CABINET PULL IN SATIN NICKEL	
HD-02	MFR: AMEROCK REVOLVE 3-3/4" COLOR: CABINET PULL IN MATTE BLACK	

FLOORING

FL-01	MFR: MOHAWK MODEL: LARGE AND LOCAL FINISH: 855 BLY	LVT PLANK FLOORING ALL AREAS
FL-02	MFR: ROPPE MODEL: RUBBER TREAD #95 HAMMERED FINISH: 193-BLACK BROWN	RUBBER SHEET FLOORING STAIRS STAIR NOSING TO MATCH
FL-03	MFR: PER GC COLOR: DCOF OF. 42 OR GREATER FINISH: ANTI-SLIP, HONED FINISH	SEALED CONCRETE LAB, CORRIDOR, LOCKERS
FL-04	MFR: PER GC COLOR: CHARCOAL GREY; OR SIMILAR FINISH: ANTI-SLIP	EPOXY FLOORING SHED LEVEL 2
FL-05	MFR: 304 S/S INTEGTRATED MODEL: 16 GA. TOP AND 4" SPLASH	EPOXY FLOORING SHED LEVEL 2
FL-06	MFR: INTERFACE MODEL: OPEN AIR 410	CARPET TILE OFFICE LEVEL 2

DECORATIVE LIGHTING

L-01	MFR: TECH LIGHTING MODEL: BURK HEAD 700MORK9303506B FINISH: BLACK/ SATIN NICKEL CONTACT: SEA-TAC LIGHTING - 206-575-6865	DECORATIVE TRACKHEAD / SYSTEM LOBBY / BILLING ROOM REQUIRED COMPONENTS: MONORAIL #700MOA / ADJ. STANDOFF #700MOSADJ / 4: CANOPY #700MOPHC02 / END CAPS 700MOCCAP/ FLEX CONNECTORS #700MOCFXH
L-02	MFR: TECH LIGHTING MODEL: WINDSOR PENDANT 700MOWDSBS-LED930 FINISH: BLACK / SATIN NICKEL CONTACT: SEA-TAC LIGHTING - 206-575-6865	DECORATIVE TRACK PENDANT LOBBY / BILLING ROOM MONOPOINT SYSTEM
L-03	MFR: ALCON MODEL: ADJUSTABLE LED TUBE PENDANT #12100-R2-PD12-I-8-35K-010-BK-AQC8-5-9 FINISH: BLACK CONTACT: CUSTOMER SERVICE - 310-733-1248	ADJUSTABLE TUBE LIGHT PENDANT 2ND FLOOR OFFICES ADD: EM10 FOR EMERGENCY BACKUP OR OS FOR OCCUPANCY SENSOR
L-04	MFR: SONNOMAN MODEL: FINO LED BATH BAR #3773.25 FINISH: SATIN BLACK CONTACT: SEA-TAC LIGHTING - 206-575-6865	BATH VANITY SCONCE ALL RESTROOMS

WALL COVERING

WC-01	MFR: LAMIN-ART STYLE: RIFT-GRAIN FINISH COLOR: 974-RG BROWN ANNIRGRE	ACCENT WALL COVERING OPEN OFFICE STRAIGHT HANG/ STRAIGHT MATCH

FREIHEIT ARCHITECTURE

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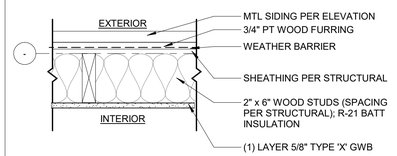
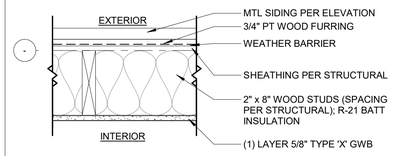
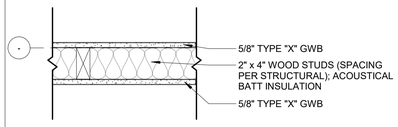
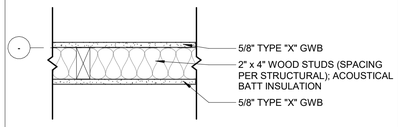
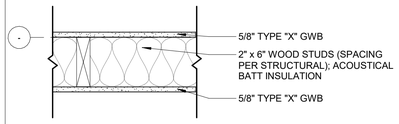
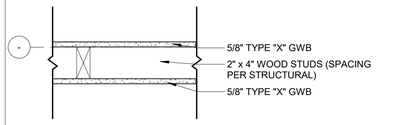
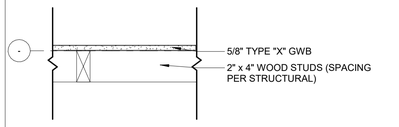
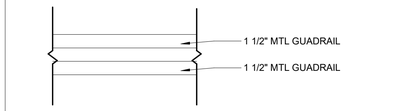
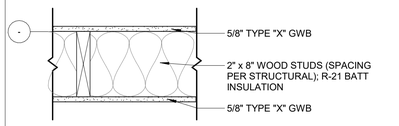
SCHEDULES

A9.00

SYMBOL	DESCRIPTION	REMARKS	RATING
01	01 - EXTERIOR 2X6 WALL; GWB/ R-21 INSUL / METAL SIDING 		NON- RATED
02	02 - EXTERIOR 2X8 WALL; GWB/ R-21 INSUL / METAL SIDING 		NON- RATED
05	05 - INTERIOR 2X4 WALL 		NON-RATED
05.1	05.1 - INTERIOR 2X4 WALL 		1-HOUR
07	07 - INTERIOR 2X6 WALL 		NON- RATED
08	08 - INTERIOR 2X4 WALL; PARTIAL HEIGHT 	PARTIAL-HEIGHT	NON- RATED
09	09 - INTERIOR FURRING 2X4 WALL 		NON- RATED
10	10 - MTL. GUARDRAIL - 42" H. 	REMOVABLE	NON- RATED
11.1	11.1 - INTERIOR 2X8 WALL; 1-HOUR RATED 		1HR- RATED

WALL SCHEDULE GENERAL NOTES

1. WALL TAGS ARE NOTED ON THE FLOOR PLANS AND SECTIONS.

2. FIRE RATED ASSEMBLIES ARE BASED ON IRC, UL, OR US GYPSUM ASSOC. (GA) TEST DATA & ARE TO BE CONSTRUCTED IN ACCORDANCE W/ THE REQUIREMENTS OF THE TESTING AGENCIES. REFER TO SPECIFIC TEST REPORTS INDICATED FOR REQ'D COMPONENTS & ASSEMBLY. EXTENTS OF ASSEMBLIES ARE SHOWN ON THE PLANS. FIRE RATED PARTITIONS FORM A SEPARATION THAT SHALL BE CONTINUOUS. FROM FLOOR TO STRUCTURE ABOVE WITH NO BREAKS AT COLUMNS, WALL TRANSITIONS, OR OTHER OBSTRUCTIONS. ALL PENETRATIONS IN FIRE RATED PARTITIONS SHALL BE FIRESTOPPED OR PROVIDED W/ APPROVED SMOKE AND/OR FIRE DAMPERS.

3. SUBSTITUTE WATER RESISTANT GWB AT BATHROOMS AND AT SIMILAR "WET" USES.

4. SUBSTITUTE CEMENT BACKER BOARD AT TILE FINISHES WHERE PERMITTED AT LISTED ASSEMBLIES.

5. BLOCKING IS REQ'D AT THE FOLLOWING LOCATIONS: CASEWORK, SHELVING, AND PANELING; ACCESSORIES AND EQUIPMENT; DOOR HARDWARE; BATHROOM ACCESSORIES; AND OTHER LOCATIONS WHERE REQ'D PER MANUFACTURER'S RECOMMENDATIONS OR INDUSTRY STANDARDS.

6. OUTLET BOXES ON OPPOSITE SIDES OF PARTITIONS TO BE SPACED APART MIN. 24".

7. FASTENERS FOR GYPSUM SHEATHING OVER WOOD SHEATHING AT SHEARWALLS NEEDS TO INCREASE BY 1/2". SEE STRUCUTRAL DRAWINGS FOR MORE DETAIL.

WALL ACOUSTICAL GENERAL NOTES

1. PARTITIONS SURROUNDING RESTROOM & LOCKER ROOMS SHALL BE SEALED AT FLOOR AND CEILING PLATES WITH A RESILIENT ACOUSTICAL SEALANT.

2. CAULK ALL PIPE, CONDUIT, DUCT OR SIMILAR PENETRATIONS THROUGH PARTITIONS WITH RESILIENT SEALANT.

3. WHERE TWO OR MORE LAYERS OR GWB ARE USED, VERTICAL, AND HORIZONTAL JOINTS SHALL BE STAGGERED.

4. ACOUSTICAL INSULATION SHALL BE UN-FACED AND SECURED TO STRUCTURE TO PREVENT SAGGING.

FREIHEIT ARCHITECTURE

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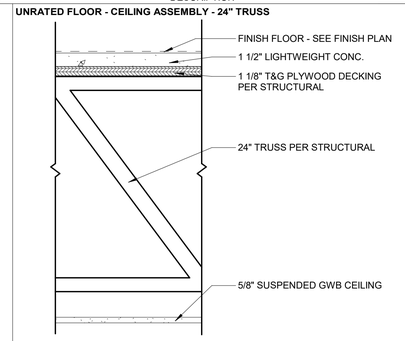
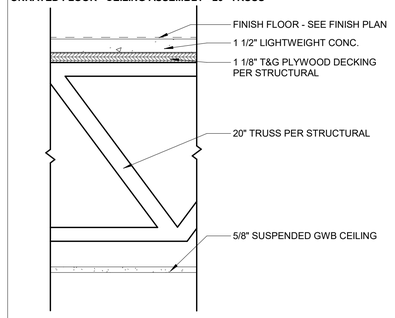
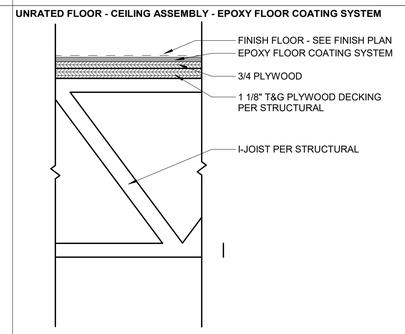
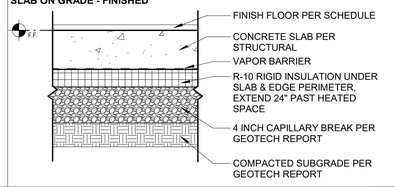
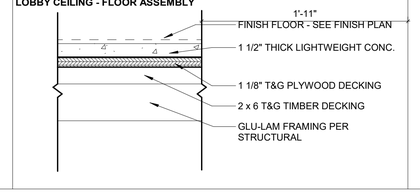
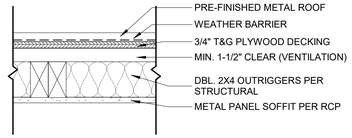
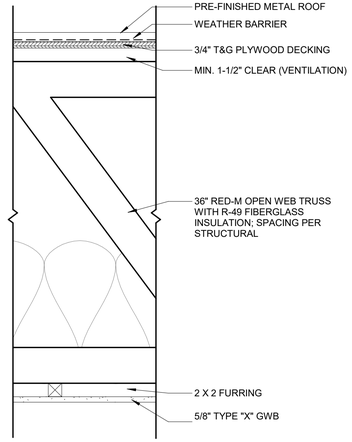
WALL SCHEDULE

A9.10

FLOOR SCHEDULE

SYMBOL	DESCRIPTION	REMARKS	RATING
	UNRATED FLOOR - CEILING ASSEMBLY - 24" TRUSS 	TO BE USED SOUTH OF GRID LINE B - SEE STRUCTURAL	NON-RATED
	UNRATED FLOOR - CEILING ASSEMBLY - 20" TRUSS 	TO BE USED NORTH OF GRID LINE B	NON-RATED
	UNRATED FLOOR - CEILING ASSEMBLY - EPOXY FLOOR COATING SYSTEM 	TO BE USED 2ND LEVEL FOR "SHED" AREA	NON-RATED
	SLAB ON GRADE - FINISHED 		
	LOBBY CEILING - FLOOR ASSEMBLY 		

ROOF SCHEDULE

SYMBOL	DESCRIPTION	REMARKS	RATING
	ROOF - AT OVERHANG 	2 X 4 DOUBLE TOP CHORD OF TRUSS CONTINUES OUT TO ROOF OVERHANG	1-HOUR
	ROOF - METAL FINISH 		1-HOUR

FREIHEIT ARCHITECTURE

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FLOOR AND ROOF SCHEDULE

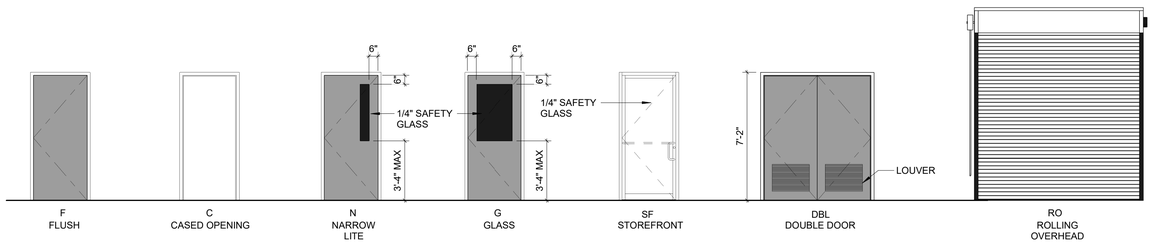
A9.20

DOOR SCHEDULE

	ROOM NAME	DOOR TYPE	LEAF QUANTITY	WIDTH	HEIGHT	THK.	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	FIRE RATING	HARDWARE GROUP	NOTES	REVISIONS
100A	LOBBY	RHR	1	3'-0"	7'-0"	1 3/4"	ALUM	KYNAR/GL	ALUM	KYNAR	--	01	STOREFRONT	
100B	LOBBY	LH	1	3'-0"	7'-0"	1 3/4"	WD	STN/LAQ	HM	PT	--	09	NARROW LITE	
101	BILLING OFFICE	LH	1	3'-0"	7'-0"	1 3/4"	WD	PT	HM	PT	--	08	GLASS	
102	BREAKROOM	LH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	13	NARROW LITE	
103	LAB STORAGE	LH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	13	FLUSH	
104	JANITOR CLOSET	RH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	15	FLUSH	
105	LABORATORY	LH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	16	NARROW LITE	
106	DATA	RHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	09	FLUSH	
107	ELEC.	LHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	06	FLUSH	
108	CORRIDOR	RH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	17	GLASS	
109	MUD ROOM	LHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	05	FLUSH	
110	CORRIDOR	RH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	11	NARROW LITE	
111	WOMEN'S LOCKER RM	RH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	14	FLUSH	
112	MEN'S LOCKER RM	LH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	14	FLUSH	
113	STORAGE	LHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	12	FLUSH	
114	HALL	RHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	04	FLUSH	
115	ELEV. MACHINE ROOM	LHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	10	FLUSH	
116A	SIDE SHED	LHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	03	NARROW LITE	
118	FIRE ROOM	LH	1	3'-0"	7'-0"	1 3/4"	HM	PT		PT	--	00		
119	PRESSURE WASHER ROOM	DBL	2	6'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	--		
201	MEN'S RR	RH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	14	FLUSH	
202	WOMEN'S RR	LH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	14	FLUSH	
203	COPY RM	CASED OPNG	1	3'-0"	7'-0"	1 3/4"	-	-	HM	PT	--		CASED OPENING	
204	CONFERENCE ROOM	RH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	20	NARROW LITE	
205	PRIVATE OFFICE	LH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	21	NARROW LITE	
206	PRIVATE OFFICE	RH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	21	NARROW LITE	
207	PRIVATE OFFICE	LH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	21	NARROW LITE	
208	PRIVATE OFFICE	RH	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	17	NARROW LITE	
209	OPEN OFFICE	LHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	07	FLUSH	
210	HALL	RHR	1	3'-0"	7'-0"	1 3/4"	HM	PT	HM	PT	--	18	NARROW LITE	

DOOR TYPES

ALL DOOR AND FRAME MATERIALS TO BE DESIGNATED WITHIN THE DOOR SCHEDULE
ALL DOOR WIDTHS AND HEIGHTS TO BE DESIGNATED WITHIN THE DOOR SCHEDULE



GENERAL NOTES - DOOR HARDWARE

1. PROVIDE STANDARD WEIGHT COMMERCIAL DOOR HINGES.

2. ALL DOORS WITH CLOSERS TO HAVE BALL BEARING HINGES.

3. PROVIDE ALL NECESSARY ITEMS FOR DOORS, INCLUDING: BUTTS, LATCH & LOCKSETS, CLOSERS, DOOR STOPS AND HOLDERS, KICK PLATES, DOOR SILENCERS, THRESHOLDS, SMOKE GASKET AND WEATHER STRIPPING. REFER TO DOOR SCHEDULE.

4. ALTERNATE MANUFACTURERS MAY BE SELECTED WITH DESIGNER'S APPROVAL.

5. VERIFY ALL HARDWARE MEETS CODE REQUIREMENTS PER JURISDICTION.

6. SEE DIVISION 087100 SPECIFICATIONS FOR DOOR HARDWARE.

GENERAL NOTES - DOORS

1. ALL DOOR HARDWARE TO MEET REQUIREMENTS OF **2018 IBC WITH WASHINGTON STATE AMENDMENTS** AND OWNER'S BUILDING REQUIREMENTS.

2. ALL FIRE-RATED DOORS AND FRAMES SHALL COMPLY WITH THE **2018 IBC WITH WASHINGTON STATE AMENDMENTS**.

3. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. ALL LOCKING DOORS TO HAVE SINGLE-ACTION LEVER RELEASE / SELF-RELEASING DEAD BOLTS.

4. HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON DOORS SHALL HAVE A LEVER OR OTHER SHAPE TO PERMIT OPERATION BY WRIST OR ARM PRESSURE AND WILL NO REQUIRE TIGHT GRASPING, PINCHING OR TWISTING TO OPERATE.

5. DOOR THRESHOLD SHALL NOT EXCEED 1/2" IN HEIGHT.

6. HARDWARE TO MATCH BUILDING STANDARD TYPE AND FINISH.

7. MAXIMUM DOOR OPENING PRESSURES ARE LIMITED TO 8.5 LBS AT EXTERIOR DOORS AND 5.0 LBS AT INTERIOR DOORS.

8. VERIFY ALL DOOR SWINGS, HARDWARE, AND KEYING REQUIREMENTS. SUBMIT KEYING SCHEDULE AND HARDWARE SPECS FOR DESIGNER APPROVAL.

9. PROVIDE ACCESSIBLE RESTROOM SIGNAGE W/ TACTILE CHARACTERS. SIGNAGE SHALL BE INSTALLED 48" - 60" ABOVE FINISHED FLOOR PER CODE. RESTROOM SIGNAGE SHALL COMPLY WITH **2018 IBC WITH WASHINGTON STATE AMENDMENTS** AND ICC/ANSI. **SEE DETAIL XX / XX.XX**

10. MAIN EXTERIOR DOOR OR DOORS TO HAVE A READILY VISIBLE URABLE SIGN POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING: THIS DOOR TO REMAIN UNLOCKED WIHEN BUILDING IS OCCUPIED. THE SIGN SHALL BE IN LETTERS 1 INCH HIGH ON A CONTRASTING BACKGROUND.

11. ALL GLAZING IN DOORS AND RELITES TO BE TEMPERED GLASS AND SHALL MEET THE SAFETY GLAZING REQUIREMENT OF THE **2018 IBC WITH WASHINGTON STATE AMENDMENTS** AND OWNER'S BUILDING REQUIREMENTS.

12. PROVIDE 1/4" MAXIMUM CLEARANCE BETWEEN DOOR AND FLOOR FINISH MATERIAL.

13. NEW WOOD DOORS AND TRIM TO BE STAINED PER FINISH SCHEDULE.

14. NEW PAINT-GRADE DOORS AND PAINT-GRADE POPLAR TRIM TO BE PAINTED WITH XX-XX LATEX ENAMEL IN A SEMI-GLOSS FINISH.

15. NEW METAL DOORS AND TRIM TO BE PAINTED WITH XX-XX LATEX ENAMEL IN A SEMI-GLOSS FINISH.

16. EXTERIOR DOORS TO COMPLY WITH PRESCRIPTIVE VALUES OF APPENDIX A, 2018 WSEC FOR COMMERCIAL BUILDINGS.

DOOR HARDWARE

HS-1 (SINGLE OCCUPANT TOILET)
1 1/2 PAIR BUTT HINGES
1 SURFACE MOUNTED CLOSER
1 LEVER LATCHSET (PRIVACY FUNCTION)
1 DOOR STOP
1 CLOSER
1 SET SEALS
1 AUTOMATIC ACOUSTICAL DOOR BOTTOM

HS-2 (MULTIPLE OCCUPANT TOILET)
1 1/2 PAIR BUTT HINGES
1 SURFACE MOUNTED OVERHEAD CLOSER
1 PUSH TRIM
1 PULL TRIM
1 SET SEALS
1 DOOR STOP
1 KICK PLATE

HS-3 (OFFICE)
1 1/2 PAIR BUTT HINGES
1 SURFACE MOUNTED CLOSER
1 LEVER LATCHSET
1 SET SEALS
1 DOOR STOP
1 KICK PLATE

HS-4 (EXTERIOR HM DOOR)
1 1/2 PAIR BUTT HINGES
1 SURFACE MOUNTED CLOSER
1 ELECTRIC LOCKSET (MORTISE)
1 SET WEATHERSTRIPPING
1 DOOR SHOE
1 THRESHOLD
1 DOOR STOP

HS-5 (PAIR STOREFRONT)
2 SETS HINGES (OFFSET TOP, (2) INTERMEDIATE MORTISE & BOTTOM PIVOT)(PTH)
1 EA CONCEALED OVERHEAD CLOSER WITH STOP
1 EA ELECTRIC EXIT DEVICE (CONCEALED VERTICAL ROD TYPE)
1 EA CYLINDER
1 EA PULL TRIM
1 LOW ENERGY DOOR OPERATOR (ONE LEAF ONLY) W/ WIRE ACTIVATOR DEVICE
1 SET WEATHERSTRIPPING INCLUDE MEETING STILE
1 THRESHOLD
1 CARD READER
1 MOUNTING POST

HS-6 (SINGLE STOREFRONT)
1 SET HINGES (OFFSET TOP, (2) INTERMEDIATE MORTISE AND BOTTOM PIVOT)(PTH)
1 OVERHEAD CLOSER WITH STOP
1 ELECTRIC EXIT DEVICE (CONCEALED VERTICAL ROD TYPE)
1 DELAYED EGRESS KIT W/ REMOTE ARMING
1 CARD READER (EA SIDE)
1 SET WEATHERSTRIPPING
1 THRESHOLD

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

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DOOR SCHEDULE
DOOR HARDWARE

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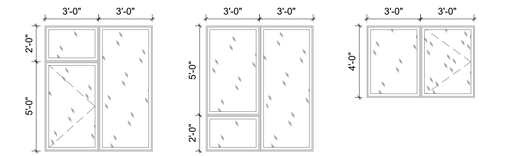
WINDOW SCHEDULE									
MARK	TYPE	CONFIG	WIDTH X HEIGHT	SILL HEIGHT	HEAD HEIGHT	SILL DETAIL	HEAD DETAIL	JAMB DETAIL	NOTES
1.1	A7	FIXED	10'-6" X 8'-5"	0'-2"	8'-5"				1, 3, 6, 8
1.2	A1	O/XO	6'-0" X 7'-0"	2'-0"	9'-0"				4, 5, 7
1.3	A8	X	3'-0" X 3'-0"	4'-0"	7'-0"				4, 5, 7, 8
1.4	A8	X	3'-0" X 3'-0"	4'-0"	7'-0"				4, 5, 7, 8
1.5	A3	XO	6'-0" X 4'-6"	2'-6"	7'-0"				4, 5, 7,
1.6	A9	FIXED	7'-0" X 4'-6"	2'-6"	7'-0"				1, 2, 4
2.1	A4	OO/OX	10'-0" X 7'-0"	2'-0"	9'-0"				3, 5, 7
2.2	A5	FIXED	10'-0" X 7'-0"	10'-6"	17'-6"				3
2.3	A1	O/XO	6'-0" X 7'-0"	2'-0"	9'-0"				3, 5, 7
2.4	A2	FIXED	6'-0" X 7'-0"	10'-6"	17'-6"				3
2.5	A1	O/XO	6'-0" X 7'-0"	2'-0"	9'-0"				3, 5, 7
2.6	A2	FIXED	6'-0" X 7'-0"	10'-6"	17'-6"				3
2.7	A1	O/XO	6'-0" X 7'-0"	2'-0"	9'-0"				3, 5, 7
2.8	A2	FIXED	6'-0" X 7'-0"	10'-6"	17'-6"				3
2.9	A1	O/XO	6'-0" X 7'-0"	2'-0"	9'-0"				3, 5, 7
2.10	A2	FIXED	6'-0" X 7'-0"	10'-6"	17'-6"				3
2.11	A3	XO	6'-0" X 4'-2"	2'-10"	7'-0"				5, 9
2.12	A3	XO	6'-0" X 4'-2"	2'-10"	7'-0"				5, 9
2.13	A3	XO	6'-0" X 4'-2"	2'-10"	7'-0"				5, 9
2.14	A3	XO	6'-0" X 4'-2"	2'-10"	7'-0"				5, 9
2.15	A9	FIXED	7'-0" X 5'-0"	10'-8"	15'-8"				
2.16	A9	FIXED	5'-0" X 4'-4"	2'-8"	7'-0"				4, 9
2.17	A9	FIXED	5'-0" X 4'-4"	10'-8"	14'-10"				
2.18	A9	FIXED	5'-0" X 4'-4"	2'-8"	7'-0"				4, 9
2.19	A9	FIXED	5'-0" X 4'-4"	10'-8"	14'-10"				
2.20	A9	FIXED	5'-0" X 4'-4"	2'-8"	7'-0"				4, 9
2.21	A9	FIXED	5'-0" X 4'-4"	10'-8"	14'-10"				
2.22	A9	FIXED	5'-0" X 4'-4"	2'-8"	7'-0"				4, 9
2.23	A9	FIXED	5'-0" X 4'-4"	10'-8"	14'-10"				

NOTES:

1. TEMPERED GLASS
2. SINGLE PANE (INTERIOR RELITE)
3. WINDOW SHADE, POWER OPERATION
4. WINDOW SHADE, MANUAL OPERATION
5. INSECT SCREEN ON OPERABLE PANEL
6. WITH STOREFRONT DOOR - SEE DOOR SCHEDULE
7. OPERABLE PANEL IS CASEMENT, OUT-SWING
8. INTERMEDIATE MULLION TO ALIGN WITH DOOR HEAD AT 7'-0" A.F.F.
9. WINDOW HEAD TO ALIGN WITH DOOR HEAD AT 7'-0" A.F.F.

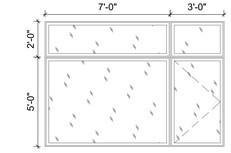
WINDOW TYPES



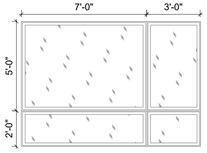
A1

A2

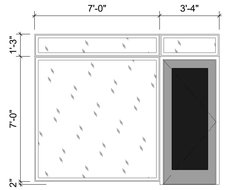
A3



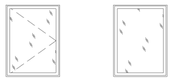
A4



A5



A7



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A9

GENERAL NOTES - WINDOWS

(STOREFRONT & ENTRANCE SYSTEMS)

1. ALUMINUM FRAME, THERMALLY BROKEN WITH HEAD RECEIVER CHANNEL, FINISH TO MATCH EXISTING STOREFRONT SYSTEM.

2. 1" INSULATED GLAZING - SEE EXT WINDOW TYPES FOR LOCATION OF SAFETY GLASS (*).

3. PROVIDE FLASHING AT HEAD & SILL - CONTINUOUS SILICONE SEALANT, INSIDE AND OUT AT PERIMETER OF WINDOW FRAME.

4. PROVIDE 2-PIECE METAL CAP @ SILL

5. VERTICAL GLAZING: ASSEMBLY MAX U-FACTOR U-0.38; ASSEMBLY MAX SHGC 0.35.

6. ENTRANCE DOORS: ASSEMBLY MAX U-FACTOR U-0.60; ASSEMBLY MAX SHGC 0.35.

FREIHEIT ARCHITECTURE

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WINDOW SCHEDULE

A9.40

STRUCTURAL NOTES

DESIGN LOADS

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION, AS AMENDED BY THE STATE OF WASHINGTON.

LIVE LOADS
IN ADDITION TO THE DEAD LOADS, THE FOLLOWING FLOOR LIVE LOADS WERE USED FOR DESIGN. LIVE LOAD REDUCTION IS PER IBC SECTION 1607.11.

		REDUCIBLE	UNREDUCIBLE
CORRIDORS, STAIRS	100 PSF	X	
CORRIDORS ABOVE FIRST FLOOR	80 PSF		X
HEAVY STORAGE	250 PSF		X
OFFICES	50 PSF	X	

REFER TO TABLE 1607.1 IN THE IBC FOR RELEVANT CONCENTRATED LIVE LOADS.

ROOF SNOW LOAD
THE ROOF SNOW LOAD IS DETERMINED USING CHAPTER 7 OF ASCE 7 IN ACCORDANCE WITH IBC SECTION 1608 AND WITH THE FOLLOWING FACTORS:

MINIMUM DESIGN LOAD 25 PSF WITHOUT DRIFT

P_g =	20 PSF	C_e =	0.9
I_s =	1.00	C_t =	1.0
P_f =	20 PSF	C_s =	1.0

SEISMIC LOADS
THE SEISMIC FORCE-RESISTING SYSTEM (SFRS) USED TO RESIST EARTHQUAKE AND WIND LOADS IS COMPRISED OF PLYWOOD SHEAR WALLS. EARTHQUAKE DESIGN IS BASED ON THE EQUIVALENT LATERAL FORCE PROCEDURE IN ASCE 7 SECTION 12.8 WITH THE FOLLOWING FACTORS:

SITE CLASS D		h_n =	30 FT
RISK CATEGORY II		T =	0.26 SECONDS
SEISMIC DESIGN CATEGORY D		R =	6.5
I_e =	1.00	Ω =	3
S_s =	1.218 g	ρ =	1.3
S_1 =	0.434 g	C_s =	0.127
S_{DS} =	0.82 g	V =	C_sW = 35 KIPS
S_{D1} =	0.54 g		
T_L =	6 SECONDS		

THE SEISMIC FORCE-RESISTING SYSTEM IS COMPRISED OF THE STRUCTURAL WOOD MEMBERS AND CONNECTIONS IDENTIFIED IN PLAN AND ON THE WALL ELEVATIONS.

WIND LOADS
WIND LOAD IS DETERMINED USING CHAPTERS 26-31 OF ASCE 7 IN ACCORDANCE WITH IBC SECTION 1609 WITH THE FOLLOWING FACTORS:

RISK CATEGORY II		K_{zt} =	1.00
EXPOSURE CATEGORY D		K_e =	1.00
V	= 98 MPH	G_{cpi} =	0.18
V_{asd}	= 76 MPH		

DESIGN WIND PRESSURES FOR DETERMINING FORCES ON COMPONENTS AND CLADDING SHALL BE DETERMINED USING CHAPTER 30 OF ASCE 7 IN ACCORDANCE WITH IBC SECTION 1609 BY THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN OF SUCH ELEMENTS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

STORY DRIFTS
THE MAXIMUM LATERAL DISPLACEMENTS WITH RESPECT TO THE LEVEL BELOW (STORY DRIFTS) ARE AS FOLLOWS:

SEISMIC:
INELASTIC STORY DRIFT = 2.5 % OF STORY HEIGHT
ELASTIC STORY DRIFT = INELASTIC STORY DRIFT DIVIDED BY C_d/I_e, WHERE C_d/I_e = 4

WIND:
STORY DRIFT = 2.5 % OF STORY HEIGHT

SOIL LOADS

ALLOWABLE SOIL-BEARING PRESSURE	2,000 PSF DL + LL 2,666 PSF DL + LL + SEISMIC/WIND
RETAINING WALLS	35 PCF (EQUIVALENT FLUID PRESSURE) UNRESTRAINED 50 PCF (EQUIVALENT FLUID PRESSURE) RESTRAINED

GENERAL NOTES

SUBMITTALS
SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING: CONCRETE REINFORCEMENT, EMBEDDED STEEL ITEMS, STRUCTURAL STEEL, GLUED-LAMINATED MEMBERS, CLADDING PANELS AND STAIRS.

IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN.

DEFERRED SUBMITTALS
PER IBC SECTION 107.3.4.1, DRAWINGS AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN AND SHALL BE SUBMITTED TO THE ARCHITECT AND THE BUILDING DEPARTMENT FOR REVIEW PRIOR TO FABRICATION. DEFERRED SUBMITTALS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

PREMANUFACTURED WOOD TRUSSES AND JOISTS
EXTERIOR CLADDING SYSTEMS
PRE-ENGINEERED STEEL STAIRS
EQUIPMENT ANCHORAGE
SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS
SUSPENDED CEILINGS
ALTERNATE ANCHORS (WHEN ALTERNATE ANCHORS ARE PROPOSED)

NONSTRUCTURAL COMPONENTS
DESIGN, DETAILING AND ANCHORAGE OF ALL NONSTRUCTURAL COMPONENTS SHALL BE IN ACCORDANCE WITH IBC SECTION 1613, ASCE 7 CHAPTER 13, AND THE PROJECT SPECIFICATIONS. NONSTRUCTURAL COMPONENTS DESIGNED BY OTHERS SHALL NOT INDUCE TORSIONAL LOADING INTO SUPPORTING STRUCTURAL MEMBERS WITHOUT ADDITIONAL BRACING OF THOSE MEMBERS TO ELIMINATE TORSIONAL FORCES. TORSIONAL BRACING SHALL BE DESIGNED BY THE NONSTRUCTURAL COMPONENT DESIGNER AND APPROVED BY THE ENGINEER.

DESIGN, DETAILING AND CONSTRUCTION OF ALL NONSTRUCTURAL COMPONENTS WHICH ATTACH TO STRUCTURE SHALL ACCOMMODATE CONSTRUCTION TOLERANCES AS ESTABLISHED BY THE STRUCTURAL SPECIFICATIONS. ANY NONSTRUCTURAL COMPONENTS WHICH ATTACH TO MORE THAN ONE LEVEL OF THE STRUCTURE SHALL ALSO ACCOMMODATE THE FOLLOWING RELATIVE MOVEMENTS BETWEEN LEVELS WITHOUT DAMAGE TO THE NONSTRUCTURAL COMPONENTS:

VERTICAL DEFLECTION OF ±1 1/4 INCH DUE TO VARIABLE LIVE LOADS
ELASTIC STORY DRIFT PER "STORY DRIFT" SECTION ABOVE

IN ADDITION, NONSTRUCTURAL COMPONENTS ATTACHED TO MORE THAN ONE LEVEL SHALL ACCOMMODATE AN INELASTIC STORY DRIFT PER "STORY DRIFT" SECTION ABOVE WITHOUT CREATING A LIFE SAFETY HAZARD.

CLADDING
CLADDING DESIGNED BY OTHERS SHALL BE SUPPORTED AT EACH STORY TO BE CONSISTENT WITH THE DESIGN OF THE BUILDING STRUCTURE. CLADDING DESIGNED BY OTHERS SHALL NOT INDUCE TORSIONAL LOADING INTO SUPPORTING STRUCTURAL MEMBERS WITHOUT ADDITIONAL BRACING OF THOSE MEMBERS TO ELIMINATE TORSIONAL FORCES, UNLESS OTHERWISE APPROVED BY THE ARCHITECT. TORSIONAL BRACING SHALL BE DESIGNED BY THE CLADDING DESIGNER AND APPROVED BY THE ENGINEER.

INSPECTION
SPECIAL INSPECTION PER IBC CHAPTER 17 SHALL BE PERFORMED BY AN APPROVED TESTING AGENCY AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS AND TESTING. ALL PREPARED SOIL-BEARING SURFACES SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF REINFORCING STEEL. SOIL COMPACTION SHALL BE SUPERVISED BY AN APPROVED TESTING AGENCY OR GEOTECHNICAL ENGINEER.

STRUCTURAL OBSERVATION
STRUCTURAL OBSERVATION OF THE SFRS WILL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD IN ACCORDANCE WITH IBC SECTION 1704.6. STRUCTURAL OBSERVATION CONSISTS OF VISUAL OBSERVATION OF THE STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO THE CONSTRUCTION DOCUMENTS AND DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED BY THE IBC AND AS SHOWN IN THE SPECIAL INSPECTIONS SCHEDULE. CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS NOTICE BEFORE CONCEALING THE FOLLOWING STRUCTURAL COMPONENTS FROM VIEW:

- REINFORCING STEEL FOR THE FIRST PLACEMENT OF THE FOLLOWING ELEMENTS: SFRS FOUNDATIONS.
- COMPLETION OF THE FIRST PLYWOOD SHEAR WALL.

STRUCTURAL OBSERVATIONS IN ADDITION TO THOSE REQUIRED BY IBC SECTION 1704.6 MAY BE PERFORMED AT THE ENGINEER'S DISCRETION.

SPECIAL CONDITIONS
CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ARCHITECT BEFORE PROCEEDING. DIMENSIONS NOTED AS PLUS OR MINUS (±) INDICATE UNVERIFIED DIMENSIONS AND ARE APPROXIMATE. NOTIFY ARCHITECT IMMEDIATELY OF CONFLICTS OR EXCESSIVE VARIATIONS FROM INDICATED DIMENSIONS. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS--DO NOT SCALE DRAWINGS. DIMENSIONS OF EXISTING CONDITIONS ARE TO BE FIELD-VERIFIED BY THE CONTRACTOR.

CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS, EXISTING CONSTRUCTION AND SOIL EXCAVATIONS, AS REQUIRED, AND IN A MANNER SUITABLE TO THE WORK SEQUENCE. TEMPORARY SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

SOILS
SEE THE GEOTECHNICAL REPORT BY MATERIALS TESTING & CONSULTING, INC, DATED JUNE 15, 2022, FOR MORE COMPLETE INFORMATION. EARTHWORK MATERIAL, BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. BACKFILL BEHIND WALLS SHALL NOT BE PLACED BEFORE THE WALLS AND SUPPORTING SLABS ACHIEVE 28 DAY CONCRETE STRENGTH OR THE WALLS ARE TEMPORARILY BRACED. ALL TOPSOIL ORGANICS AND LOOSE SURFACE SOIL SHALL BE REMOVED FROM BENEATH FILL SUPPORTING CONCRETE SLABS OR PAVING.

MEMBER SPACING
ALL FRAMING MEMBERS SHALL BE EQUALLY SPACED BETWEEN GRID LINES, COLUMNS, AND DIMENSIONED FRAMING UNLESS NOTED OTHERWISE.

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF IBC CHAPTER 19.

CONCRETE MIXTURES
CONCRETE MIXTURES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

CONCRETE MIXTURES

f'c (PSI)	TEST AGE (DAYS)	EXPOSURE CLASS F	S	W	C	USE
4,000	28	F0	S0	W0	C0	SLAB-ON-GRADE,CURBS AND PADS
4,000	28	F1	S0	W1	C1	FOUNDATIONS, CONCRETE WALLS

MIX NOTES:
1. SLAB MIXES SHALL HAVE A TARGET SLUMP OF 6".
2. ALL FLATWORK HALL HAVE THE FOLLOWING SHRINKAGE LIMIT, MEASURED 28 DAYS FROM COMPLETION OF CURING: 0.035 PERCENT OR A MAXIMUM ALLOWABLE WATER CONTENT OF 255 LBS PER CUBIC YARD.
3. EXPOSED CONCRETE SLABS AT LABORATORY AND SIDE SHED TO RECEIVE SEALER PER SPECIFICATIONS.

CONCRETE MIXTURES SHALL CONFORM TO THE MOST STRINGENT REQUIREMENTS FOR EXPOSURE CLASSES SPECIFIED IN THE TABLE ABOVE AND ACI 318 TABLE 19.3.2.1.

WATER-REDUCING ADMIXTURES MAY BE INCORPORATED IN CONCRETE MIX DESIGNS, BUT SHALL CONFORM TO ASTM C 494, AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CaCl2 OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

WATER/CEMENTITIOUS MATERIALS RATIO SHALL BE MEASURED BY WEIGHT AND SHALL BE BASED ON THE TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENTITIOUS MATERIALS RATIO AND WATER CONTENT SHALL BE DETERMINED BY THE SUPPLIER BASED ON STRENGTH REQUIREMENTS AND SHALL NOT EXCEED THE MAXIMUM WATER/CEMENTITIOUS MATERIAL RATIO AND/OR WATER CONTENT IF SHOWN ABOVE OR IN ACI 318 TABLE 19.3.2.1 FOR THE EXPOSURE CLASSES LISTED.

FIELD-MEASURED SLUMP SHALL CONFORM TO THE SUBMITTED CONCRETE MIX DESIGN. TOLERANCE OF SLUMP SHALL CONFORM TO ASTM C 94.

ALL CONCRETE SUBJECT TO EXPOSURE CLASSES F1, F2 OR F3 SHALL BE AIR ENTRAINED. AIR-ENTRAINING AGENTS SHALL CONFORM TO ASTM C 260. THE AMOUNT OF ENTRAINED AIR SHALL BE ACCORDING TO ACI 318 TABLE 19.3.3.1 WITH A FIELD TOLERANCE OF ±1.5 PERCENT BY VOLUME. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE FROM THE TRUCK.

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR APPROVAL 2 WEEKS PRIOR TO PLACING ANY CONCRETE. THE MIX DESIGN SHALL BE IN CONFORMANCE WITH ACI 318, CHAPTER 19. THE SUBMITTAL SHALL INDICATE WHERE EACH CONCRETE MIX IS TO BE USED ON THE PROJECT, AS WELL AS THE MAXIMUM AGGREGATE SIZE OF EACH MIX. MAXIMUM AGGREGATE SIZE SHALL CONFORM TO THE PROJECT SPECIFICATIONS.

CURING
IF THE AIR TEMPERATURE WILL EXCEED 75 DEGREES F WITHIN 48 HOURS OF PLACING CONCRETE, A MOIST CURE SHALL BE APPLIED TO THE CONCRETE FOR A PERIOD OF 36 HOURS AFTER FINISHING CONCRETE SURFACES. REFER TO THE PROJECT SPECIFICATIONS FOR CURING REQUIREMENTS.

REINFORCING STEEL

DEFORMED BARS	ASTM A 615, GRADE 60
HEADED DEFORMED BARS	ASTM A 970, HEAD TYPE HA

REINFORCING SHALL BE SUPPORTED AS SPECIFIED BY THE PROJECT SPECIFICATIONS AND THE CRSI MANUAL OF STANDARD PRACTICE. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI STANDARD OF PRACTICE AS OUTLINED IN ACI 315, "GUIDE TO PRESENTING REINFORCING STEEL DESIGN DETAILS".

LAP ALL REINFORCING BARS AS NOTED ON THE DRAWINGS. WHERE SPLICE LENGTH IS NOT SHOWN, USE TYPE Lb (Lbf FOR TOP BARS) SPLICE PER DEVELOPMENT AND SPLICE LENGTH SCHEDULE.

AT THE CONTRACTOR'S OPTION AND WITH THE ARCHITECT'S APPROVAL, HEADED DEFORMED BARS MAY BE USED IN LIEU OF REINFORCING BARS SHOWN WITH STANDARD 90 OR 180 DEGREE HOOKS AND MECHANICAL SPLICES MAY BE USED IN LIEU OF LAP SPLICES. USE OF HEADED DEFORMED BARS IS SUBJECT TO CONFORMANCE WITH ACI 318 SECTION 25.4.4. USE OF MECHANICAL SPLICES IS SUBJECT TO CONFORMANCE WITH ACI 318 SECTION 18.2.7 AND REQUIRES SUBMITTAL OF AN ICC-ES OR IAPMO UES REPORT VALID FOR THE 2018 IBC.

REINFORCING STEEL SHALL HAVE PROTECTION AS FOLLOWS, UNLESS NOTED OTHERWISE:

USE		COVER	
NONSTRUCTURAL SLAB-ON-GRADE		PER DETAILS	
WALL BARS:	INTERIOR FACES	3/4"	
	EXPOSED TO EARTH OR WEATHER	1 1/2"	(#5 AND SMALLER)
		2"	(#6 AND LARGER)
FOOTING, BOTTOM BARS		3"	(CAST AGAINST EARTH)
	TOP BARS	1 1/2"	
		2"	(#6 AND LARGER WHERE EXPOSED TO EARTH OR WEATHER)
	SIDE BARS	2"	

WELDING OF REINFORCING, WHERE APPROVED BY THE ARCHITECT, SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES AND PREHEATED IN ACCORDANCE WITH AWS D1.4, REINFORCING STEEL WELDING CODE. WELDERS AND WELDING PROCEDURES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS D1.4. MATERIALS SHALL CONFORM TO THE FOLLOWING:

REINFORCING BARS TO BE WELDED	ASTM A 706, GRADE 60, LOW ALLOY
WELDING ELECTRODES	E80XX

STRUCTURAL STEEL

REFERENCE SPECIFICATIONS

STRUCTURAL STEEL	AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
HIGH STRENGTH BOLTS	RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS"
WELDING	AWS D1.1, TYPICAL AWS D1.8 FOR SUPPLEMENTAL SEISMIC PROVISIONS AWS PREQUALIFIED JOINT DETAILS
WELDER CERTIFICATION	AMERICAN WELDING SOCIETY (AWS) WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO)

STEEL MATERIALS

PLATES (PL), BARS	ASTM A 36, TYPICAL, ASTM A 572 GRADE 50 WHERE NOTED
ANGLES (L), CHANNELS (C AND MC)	ASTM A 36
STRUCTURAL TUBES (HSS)	ASTM A 500, GRADE C
STRUCTURAL BOLTS	ASTM F 3125, GRADE A 325
ANCHOR RODS	ASTM F 1554, GRADE 36 UNLESS NOTED OTHERWISE
THREADED RODS	ASTM A 36, UNLESS NOTED OTHERWISE
WELDING ELECTRODES	70 KSI, LOW HYDROGEN, TYPICAL

STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE REQUIREMENTS OF IBC CHAPTER 22. ALL MEMBERS ARE TO BE ERECTED WITH NATURAL MILL CAMBER OR INDUCED CAMBER UP, UNLESS OTHERWISE NOTED ON THE PLANS. SUBSTITUTION OF MEMBER SIZES OR STEEL GRADE WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL BY THE ARCHITECT. A MINIMUM OF TWO BOLTS IS REQUIRED FOR ALL BEAM CONNECTIONS. ALTERNATIVE CONNECTIONS TO THOSE SHOWN ON THESE DRAWINGS WILL REQUIRE PRIOR APPROVAL BY THE ARCHITECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES AND OTHER AIDS, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND UNEQUAL PARTS.

PROTECTION OF STEEL
STRUCTURAL STEEL AND CONNECTION, INCLUDING PLATES AND OTHER STEEL ITEMS EMBEDDED IN CONCRETE, WHICH ARE EXPOSED TO WEATHER AND NOT TO BE PAINTED ACCORDING TO THE ARCHITECT, SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A 123, ALL FIELD WELDS ON GALVANIZED MATERIAL SHALL BE COATED WITH BRUSH APPLIED ZINC-RICH PAINT COMPLYING WITH THE SPECIFICATIONS.

STRUCTURAL STEEL AND CONNECTIONS SHALL BE FIREPROOFED WHERE REQUIRED BY THE ARCHITECT. PRIMARY AND SECONDARY STRUCTURE ARE TO BE AS DEFINED BY THE IBC. STRUCTURAL MEMBERS SHALL BE ASSUMED TO BE IN A THERMAL UNRESTRAINED CONDITION FOR THE PURPOSES OF DETERMINING FIREPROOFING THICKNESS, UL DESIGN SHALL BE IN ACCORDANCE WITH LRFD DESIGN METHODOLOGY.

WHERE SPRAY-APPLIED CEMENTITIOUS FIREPROOFING IS EXPOSED TO WEATHER, STRUCTURAL STEEL SHALL BE CONSIDERED EXPOSED TO WEATHER, AND SHALL BE PROTECTED ACCORDINGLY.

ALL COATINGS ARE TO FOLLOW THE SPECIFICATIONS AND PRODUCT MANUFACTURER'S INSTRUCTIONS.

WELDING
ALL WELDING SHALL BE IN CONFORMANCE3 WITH AISC AND AWS STANDARDS, AND SHALL BE PERFORMED BY AWS-WABO-CERTIFIED WELDERS. ONLY WELDS THAT ARE PREQUALIFIED, AS DEFINED BY AWS, OR QUALIFIED BY TESTING SHALL BE USED. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. WELDS SHOWN ON THE DRAWINGS ARE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON THICKNESS. MINIMUM WELD SIZE SHALL BE 3/16-INCH, UNLESS NOTED OTHERWISE. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD SYMBOLS ARE SHOWN WHERE FIELD WELDS ARE REQUIRED BY THE STRUCTURAL DESIGN. WHERE FIELD WELD IS NOT INDICATED, THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOW OR FIELD-WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL ERECTION.

ANCHORS

POST-INSTALLED ANCHORS
PROVIDE POST-INSTALLED ANCHORS PER THE FOLLOWING SCHEDULE UNLESS NOTED OTHERWISE:

ANCHORS IN CONCRETE

ANCHOR TYPE	APPROVED ANCHOR(S)	EVALUATION REPORT
ADHESIVE	HILTI HIT-RE 520 V3	ICC-ES ESR-3814
MECHANICAL	HILTI KWIK BOLT TZ2	ICC-ES ESR-4266

ADHESIVE REINFORCING DOWEL MATERIALS

ADHESIVE REINFORCING DOWELS (ARD)	ASTM A 615, GRADE 60
THREADED ARD	ASTM F 1554, GRADE 36 (CARBON STEEL) ASTM A193 B8M CLASS 1 (STAINLESS)

ANCHOR EMBEDMENT DEPTHS LISTED SHALL BE CONSIDERED EFFECTIVE EMBEDMENT DEPTHS AS DEFINED IN THE ICC-ES OR IAPMO UES EVALUATION REPORTS. PROVIDE ANCHOR LENGTH AND HOLE PER EVALUATION REPORT TO ACCOMMODATE THE EFFECTIVE EMBEDMENT SPECIFIED IN THESE DRAWINGS. SEE DETAIL 9/S4.01 .

MECHANICAL AND ADHESIVE ANCHORS SHALL BE ZINC PLATED CARBON STEEL UNLESS NOTED OTHERWISE. MECHANICAL AND ADHESIVE ANCHORS EXPOSED TO WEATHER SHALL BE STAINLESS STEEL.

DO NOT DAMAGE EXISTING REINFORCEMENT. IF LOCATION OF REINFORCEMENT IS UNKNOWN, SCAN FOR EXISTING REINFORCING STEEL PRIOR TO DRILLING.

USE OF ALTERNATE PRODUCTS, OR OF POST-INSTALLED ANCHORS AT LOCATIONS NOT SHOWN IN THESE DRAWINGS, IS SUBJECT TO THE APPROVAL OF THE ARCHITECT. SUBMIT PROPOSED ANCHORS TO THE ARCHITECT WITH AN ICC-ES OR IAPMO UES REPORT VALID FOR THE 2018 IBC AND DOCUMENTATION SHOWING THAT THE ALTERNATE PRODUCTS PROVIDE EQUIVALENT CAPACITY FOR ALL CONDITIONS IN THIS PROJECT. SUBMITTED ICC-ES AND IAPMO UES REPORTS SHALL DEMONSTRATE THAT THE ANCHORS ARE SUITABLE FOR USE IN CRACKED CONCRETE. WHERE ANCHORS RESIST SEISMIC LOADS, SUBMITTED ICC-ES AND IAPMO UES REPORTS SHALL DEMONSTRATE THAT THE ANCHORS ARE SUITABLE FOR THE RESISTANCE OF SEISMIC LOADS. DOCUMENTATION OF CAPACITY FOR ALTERNATE PRODUCTS MUST BE INCLUDED AS A DEFERRED SUBMITTAL.

ADHESIVES SHALL NOT BE INSTALLED PRIOR TO THE CONCRETE REACHING AN AGE OF 21 DAYS AS REQUIRED BY ACI 318.

WELDED HEADED STUD, AND DEFORMED BAR ANCHORS
ALL STUDS AND DEFORMED BAR ANCHORS (DBA) SHALL BE AUTOMATICALLY END WELDED IN SHOP OR FIELD WITH EQUIPMENT RECOMMENDED BY MANUFACTURER WITH LENGTH AFTER WELD AS SHOWN ON THE STRUCTURAL DRAWINGS.

TYPE	MATERIAL	SIZE
WELDED HEADED STUDS	AWS D1.1 TYPE B	3/4"Ø UNLESS NOTED OTHERWISE
DEFORMED BAR ANCHORS	ASTM A1064	1/2"Ø UNLESS NOTED OTHERWISE

DRAWING LIST

FREIHEIT ARCHITECTURE
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1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
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ANDREW WAYNE GRIFFIN — STATE OF WASHINGTON — 48649 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER — 3/21/24

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STRUCTURAL NOTES AND DRAWING LIST

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STRUCTURAL NOTES

WOOD

WOOD CONSTRUCTION SHALL CONFORM TO ALL REQUIREMENTS OF IBC CHAPTER 23.

SAWN LUMBER
SAWN LUMBER SHALL CONFORM TO THE LATEST EDITION OF "GRADING AND DRESSING RULES" BY WCLIB OR "WESTERN LUMBER GRADING RULES" BY WWPA. LUMBER SHALL BE SEASONED DRY WITH A MAXIMUM MOISTURE CONTENT OF 19% AND BE THE SPECIES AND GRADE SPECIFIED BELOW.

USE	GRADE	F_b (PSI) (SINGLE USE)
WALL STUDS		
2" TO 4" THICK, 2" AND WIDER	DOUGLAS FIR-LARCH NO. 2	900
PLANKING & PLATES		
2" TO 4" THICK, 2" AND WIDER	DOUGLAS FIR-LARCH NO. 2	900
JOISTS & RAFTERS		
2" TO 4" THICK, 2" AND WIDER	DOUGLAS FIR-LARCH NO. 2	900
BEAMS & STRINGERS		
5"x5" AND LARGER	DOUGLAS FIR-LARCH NO. 1	1,350
POSTS		
5"x5" AND LARGER	DOUGLAS FIR-LARCH NO. 1	1,200
4"X4"	DOUGLAS FIR-LARCH NO. 1	1,000

TONGUE AND GROOVE LUMBER DECKING
DECKING, FASTENING, AND INSTALLATION, SHALL BE PER IBC 2304.9. LAYUP SHALL BE COMBINATION SIMPLE AND TWO SPAN CONTINUOUS PATTERN. TWO-INCH DECKING SHALL NOT EXCEED 15% MOISTURE CONTENT.

TYPE	GRADE	F_b (PSI)
3X6 SOLID TIMBER	DOUGLAS FIR-LARCH COMMERCIAL	1,450

GLUED-LAMINATED TIMBER
GLUED-LAMINATED TIMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AITC A190.1 "STRUCTURAL GLUED LAMINATED TIMBER". APPLY ONE COAT OF PENETRATING END SEALER IMMEDIATELY AFTER TRIMMING IN SHOP OR FIELD. MEMBERS SHALL BE VISUALLY GRADED WESTERN SPECIES MANUFACTURED WITH ARCHITECTURAL APPEARANCE GRADE AND WITH LAYUP COMBINATION AS FOLLOWS.

TYPE	COMBINATION SYMBOL	SPECIES	USES
BEAMS	24F-V4	DF/DF	SIMPLE SPAN
	24F-V8	DF/DF	CONTINUOUS OR CANTILEVER SPAN

STRUCTURAL COMPOSITE LUMBER
STRUCTURAL COMPOSITE LUMBER PRODUCTS SHALL BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS AND MANUFACTURED BY TRUS JOIST OR APPROVED EQUAL. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM DESIGN PROPERTIES:

TYPE	MODULUS OF ELASTICITY (PSI)	ALLOWABLE FLEXURAL STRESS (PSI)
PSL (COL)	1,800,000	2,400
PSL (BEAM)	2,000,000	2,900
LVL	2,000,000	2,600
LSL	1,550,000	2,325

FLEXURAL STRESSES NOTED ABOVE ARE FOR A 12-INCH MEMBER. DEEPER MEMBERS SHALL BE DESIGNED FOR REDUCED STRESSES PER THE MANUFACTURER'S REQUIREMENTS.

PRODUCT SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC-ES OR IAPMO-UES REPORT VALID FOR THE 2018 IBC. PRODUCT SUBSTITUTIONS SHALL BE DEMONSTRATED TO HAVE EQUIVALENT STRENGTH, STIFFNESS, AND ALLOWABLE SPACING OF FASTENERS WITHOUT ALTERING THE STRUCTURAL DESIGN. WHERE SUBSTITUTION REQUESTS INVOLVE ALTERING THE STRUCTURAL DESIGN, THE SUBSTITUTION REQUEST SHALL INCLUDE THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN.

WOOD I-JOISTS
WOOD I-JOISTS SHALL BE MANUFACTURED BY RED-BUILT OR APPROVED EQUAL. JOISTS SHALL BE OF THE SIZE AND PROFILE SHOWN ON THE DRAWINGS. JOISTS SHALL BE COMPATIBLE WITH THE LOAD, DIMENSIONAL, AND FIRE RATING REQUIREMENTS OF THE PROJECT.

PRODUCT SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC-ES OR IAPMO-UES REPORT VALID FOR THE 2018 IBC. PRODUCT SUBSTITUTIONS SHALL BE DEMONSTRATED TO HAVE EQUIVALENT STRENGTH, STIFFNESS, AND ALLOWABLE SPACING OF FASTENERS WITHOUT ALTERING THE STRUCTURAL DESIGN. WHERE SUBSTITUTION REQUESTS INVOLVE ALTERING THE STRUCTURAL DESIGN, THE SUBSTITUTION REQUEST SHALL INCLUDE THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN.

JOISTS SHALL BE SUPPLIED WITH THE PROPER END CONNECTIONS, WEB STIFFENERS, BRIDGING, AND BRACING TO PROVIDE LATERAL STABILITY OF ALL JOISTS. HANGERS SHALL BE PROVIDED BY THE JOIST SUPPLIER WHERE SUPPORT CONDITIONS REQUIRE THEM. WELDABLE HANGERS SHALL BE PROVIDED WHERE HANGERS ATTACH TO STEEL MEMBERS.

OPEN-WEB PIN-CONNECTED TRUSSES
BIDDER-DESIGNED OPEN-WEB PIN-CONNECTED TRUSSES SHALL COMPLY WITH IBC 2303.4 AND BE DESIGNED AND DETAILED BY REDBUILT OR APPROVED EQUAL. TRUSSES SHALL BE OF THE PROFILE SHOWN ON THE DRAWINGS AND SHALL BE COMPATIBLE WITH THE LOAD, DIMENSIONAL, AND FIRE RATING REQUIREMENTS OF THE PROJECT. MINIMUM TRUSS DESIGN LOADS SHALL BE AS FOLLOWS:

2ND FLOOR:

DEAD LOAD: TOP CHORD = 23 PSF
BOT CHORD = 10 PSF
LIVE LOAD: TOP CHORD = 65 PSF

DEFLECTION CRITERIA: LIVE LOAD = L/400 , 1/2" MAX
DEAD + LIVE LOAD = L/480 , 5/8" MAX

ROOF:

DEAD LOAD: TOP CHORD = 12 PSF
BOT CHORD = 5 PSF
LIVE LOAD: TOP CHORD = 25 PSF (SNOW)
WIND UPLIFT: SEE 3/S1.01

DEFLECTION CRITERIA: LIVE LOAD = L/360 , 1 1/4" MAX
DEAD + LIVE LOAD = L/240 , 2" MAX

SPECIFIED LOADS ARE SERVICE LEVEL. DEAD LOAD DOES NOT INCLUDE TRUSS SELF WEIGHT. SEE PLANS AND DETAILS FOR ADDITIONAL LOADING REQUIREMENTS SUCH AS TRANSMISSION OF IN-PLANE LATERAL WIND OR SEISMIC FORCES AND MECHANICAL UNIT LOCATIONS.

TRUSSES SHALL BE SUPPLIED WITH THE PROPER END CONNECTIONS, BRIDGING, AND BRACING TO PROVIDE LATERAL STABILITY OF ALL TRUSSES AND TRUSS MEMBERS, AND TIE-DOWN CONNECTIONS FROM TRUSSES TO TOPS OF WALLS AND BEAMS. TRUSSES SHALL BE TOP CHORD BEARING AT SUPPORTS AS INDICATED. THE TRUSS MANUFACTURER IS RESPONSIBLE FOR ENSURING THE BEARING SEAT DOES NOT EXCEED THE COMPRESSION CAPACITY OF THE SUPPORTING WALL PLATE. HANGERS SHALL BE PROVIDED BY THE TRUSS SUPPLIER WHERE SUPPORT CONDITIONS REQUIRE THEM. WELDABLE HANGERS SHALL BE PROVIDED WHERE HANGERS ATTACH TO STEEL MEMBERS.

WOOD STRUCTURAL PANELS
WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF DOC PS 1 OR DOC PS 2. SHEATHING SHALL BE AS FOLLOWS:

ROOF SHEATHING (TONGUE AND GROOVE)
T&G 19/32" CATEGORY APA RATED SHEATHING, 40/20, EXPOSURE 1

SUBFLOORING SHEATHING (TONGUE AND GROOVE)
1-1/8 CATEGORY APA RATED STURD-I-FLOOR 24OC, EXPOSURE 1
23/32 CATEGORY APA RATED SHEATHING, 48/24, EXPOSURE 1

SHEAR WALL SHEATHING
15/32 CATEGORY APA RATED SHEATHING, 32/16, EXPOSURE 1

ALL ROOF SHEATHING AND SUBFLOORING SHALL BE INSTALLED WITH THE LONG DIMENSION PERPENDICULAR TO SUPPORTS, UNLESS NOTED OTHERWISE, AND WITH THE PANELS CONTINUOUS OVER TWO OR MORE SUPPORTS. INSTALL WITH 1/8" GAP BETWEEN PANELS. FLOOR DIAPHRAGM AND SHEAR WALL NAILS SHALL BE DRIVEN FLUSH, BUT SHALL NOT FRACTURE THE SURFACE OF THE SHEATHING.

TIMBER FASTENERS AND CONNECTORS
WOOD CONNECTORS SHALL BE SIMPSON STRONG-TIE AS SPECIFIED IN CATALOG NO. C-C-2021, OR APPROVED EQUAL. INSTALL CONNECTORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS WITH NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY THE MANUFACTURER. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE FASTENERS IN EACH MEMBERS. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A 307. PROVIDE STANDARD WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. ALL SHIMS SHALL BE SEASONED DRY AND BE THE SAME GRADE (MIN) AS THE MEMBERS CONNECTED. ALL JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH LU SERIES JOIST HANGERS, UNLESS NOTED OTHERWISE. ALL DOUBLE AND TRIPLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH U SERIES HANGERS, UNLESS NOTED OTHERWISE.

ALL FRAMING NAILS SHALL HAVE THE SIZE AND MINIMUM LENGTH AS SPECIFIED IN THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. NAIL TYPE SHALL BE COMMON UNLESS NOTED OTHERWISE. POWER-DRIVEN NAILS AND STAPLES SHALL BE IN ACCORDANCE ICC-ES ESR-1539. NAILING NOT SHOWN SHALL BE AS INDICATED IN IBC TABLE 2304.10.1. SEE 11/S5.04 & 11/S5.05 FOR NAIL SIZES AT SHEAR WALL AND ROOF/FLOOR DIAPHRAGM SHEATHING, RESPECTIVELY.

FRAMING NAILS

TYPE MARK	TYPE	SHANK DIAMETER	MINIMUM LENGTH
8d	COMMON	0.131"	2 1/2"
10d	COMMON	0.148"	3"
16d	COMMON	0.162"	3 1/2"
16d-SHORT	SHORT	0.131"	3 1/4"

POWER-DRIVEN NAILS MAY BE SUBSTITUTED FOR COMMON NAILS AT SPACING AS FOLLOWS. SUBSTITUTIONS FOR NAIL SIZE, SPACING, OR QUANTITY NOT SHOWN REQUIRE APPROVAL.

ALTERNATE NAILING SCHEDULE

FASTENER TYPE	SHANK DIAMETER	LENGTH	SPACING						
8d COMMON	0.131"	2 1/2"	16"	12"	8"	6"	4"	3"	2"
16d SHORT	0.131"	3 1/4"	16"	12"	8"	6"	4"	3"	2"
10d COMMON	0.148"	3"	16"	12"	8"	6"	4"	3"	2"
16d SHORT	0.131"	3 1/4"	12"	10"	6"	4"	3"	2 1/2"	1 1/2"
16d COMMON	0.162"	3 1/2"	16"	12"	8"	6"	4"	3"	-
16d SHORT	0.131"	3 1/4"	10"	8"	5"	4"	2 1/2"	2"	-

ALL FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED LUMBER SHALL BE GALVANIZED WITH A MINIMUM COATING OF 1.85 OUNCES/SQUARE FOOT.

IDENTIFICATION
ALL SAWN LUMBER AND PREFABRICATED WOOD PRODUCTS SHALL BE IDENTIFIED BY A GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY THE CERTIFYING AGENCY.

GLUED FLOOR AND ROOF SYSTEM
ALL HORIZONTAL SHEATHING SHALL BE GLUED TO FLOOR JOISTS, ROOF TRUSSES, ROOF JOISTS, RIM BOARDS, AND BLOCKING. THE FIELD-GLUED SYSTEM SHALL BE INSTALLED ACCORDING TO THE RECOMMENDATIONS OF THE APA. GLUE SHALL BE APPLIED TO THE SUPPORTING FRAMING AND TO THE GROOVE IN THE EDGE OF THE T&G PANELS. GLUE SHALL MEET THE REQUIREMENTS OF THE APA ADHESIVE SPECIFICATION AFG-01 AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

PRESERVATIVE-TREATED WOOD
WOOD SHALL BE PROTECTED FROM DECAY AND TERMITES IN ACCORDANCE WITH IBC 2304.12. PRESERVATIVE-TREATMENTS SHALL CONFORM TO THE APPROPRIATE STANDARDS OF THE AWPA FOR SAWN LUMBER, GLUED-LAMINATED TIMBER, ROUND POLES, PILES, AND MARINE PILES AND SHALL BEAR A TREATMENT IDENTIFICATION MARK BY THE CERTIFYING AGENCY. ALL LUMBER IN CONTACT WITH CMU, CONCRETE, OR GROUND SURFACES SHALL BE PRESERVATIVE-TREATED. PRESERVATIVE TREATMENT SHALL NOT REDUCE ALLOWABLE DESIGN STRESSES.

SPECIAL INSPECTIONS AND TESTING SCHEDULE

ESTABLISHED PER IBC 2018 SECTION 109 AND CHAPTER 17

ITEM	IBC CODE	COMMENTS
SOILS		-
GRADING, EXCAVATION AND FILL	1705.6	BY GEOTECHNICAL ENGINEER
FINAL FOUNDATION PREPARATION		BY GEOTECHNICAL ENGINEER
INSPECTION IN FABRICATION SHOP	1704.2.5	-
CONCRETE		-
POST-INSTALLED ADHESIVE ANCHORS	1705.3	-
POST-INSTALLED MECHANICAL ANCHORS		-
EMBEDDED PLATES		-
STRUCTURAL STEEL		-
FABRICATION AND ERECTION	1705.2	-
HIGH STRENGTH BOLTING		-
WELDING		-
WOOD	-	-
PREFABRICATED STRUCTURAL ELEMENTS	1704.2.5	-
SEISMIC RESISTANCE		
SEISMIC - WOOD	1705.12.2	-

SPECIAL INSPECTIONS AND TESTING NOTES:
1. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. INSPECTION REQUIREMENTS FOR SYSTEMS DESIGNED BY OTHERS SHALL BE DEFINED BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY TO ALL BIDDER-DESIGNED COMPONENTS.

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STRUCTURAL NOTES AND INSPECTION SCHEDULE

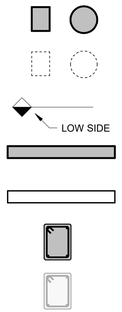
S0.02

STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT
ADD'L	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
ANCH	ANCHOR
ARCH	ARCHITECTURAL
ARD	ADHESIVE REINFORCING DOWEL
B/	BOTTOM OF
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	DIAPHRAGM BOUNDARY NAILING
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOF
C	CAMBER
CAP	CAPACITY
CC	CENTER TO CENTER
CDF	CONTROLLED DENSITY FILL
CFS	COLD-FORMED STEEL
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION OR CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CONTY	CONTINUITY
COORD	COORDINATE
CTR	CENTER
CY	CUBIC YARD
DB	DIVIDER BEAM
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DCW	DEMAND CRITICAL WELD
DEMO	DEMOLISH
DET	DETAIL
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DKG	DECKING
DN	DOWN
DO	DITTO
DWF	DEFORMED WIRE FABRIC
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELECT	ELECTRICAL
ELEV	ELEVATOR
EN	PANEL EDGE NAILING
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F	FAHRENHEIT
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISH FLOOR
FIN	FINISH
FLG	FLANGE
FLR	FLOOR
FOB	FACE OF BUILDING
FS	FAR SIDE
FT	FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GEN	GENERAL
GL	GLUED LAMINATED TIMBER
GOVT	GOVERNMENT
GR	GRADE
GWB	GYPSUM WALL BOARD
HF	HEM-FIR
HGR	HANGER
HK	HOOK
HORIZ	HORIZONTAL
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IN	INCH
INFO	INFORMATION
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP (1,000 LBS.)
KSF	KIPS PER SQUARE FOOT
LF	LINEAL FOOT
LFH	LONG FACE HORIZONTAL
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNGT	LONGITUDINAL
LP	LOW POINT
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MOM	MOMENT
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NS	NONSHRINK
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
P	POST
PAF	POWER ACTUATED FASTENER
PC	PIECE
PC	PILE CAP
PEN	PENETRATION
PJP	PARTIAL JOINT PENETRATION
PL	PROPERTY LINE
PL	PLATE
PLWD	PLYWOOD
PNL	PANEL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PT	PRESERVATIVE-TREATED
PWT	PREFABRICATED WOOD TRUSS
R	RADIUS
RD	ROOF DRAIN
REINF	REINFORCING
REM	REMAIN(DER)
REQ'D	REQUIRED
RND	ROUND
RO	ROUGH OPENING
RTN	RETURN
SC	SLIP CRITICAL
SCHED	SCHEDULE
SDCI	SEATTLE DEPARTMENT OF CONSTRUCTION AND INSPECTIONS
SDQ	SPECIAL DUCTILE QUALITY
SECT	SECTION
SFRS	SEISMIC FORCE-RESISTING SYSTEM
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SOG	SLAB-ON-GRADE
SP	SPACE
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
ST	SUSTAINED TENSION ANCHOR
STD	STANDARD
STIFF	STIFFENER
STIRR	STIRRUP
STL	STEEL
STRUCT	STRUCTURAL
SUPP	SUPPORT
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T/	TOP OF
TB	TABLE
THK	THICK(NESS)
THRU	THROUGH
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UT	ULTRASONIC TESTING
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	W-SHAPE
W/	WITH
W/O	WITHOUT
WD	WOOD
WHS	WELDED HEADED STUD
WL	WATER LINE
WP	WORK POINT

STRUCTURAL DRAWING SYMBOLS

CONCRETE SYMBOLS



CONCRETE COLUMN ABOVE OR PASSING THRU THIS LEVEL

CONCRETE COLUMN BELOW

STEPPED FOOTING

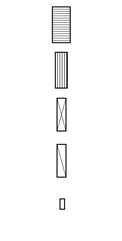
CONCRETE WALL ABOVE OR PASSING THRU LEVEL

PARTIAL HEIGHT CONCRETE WALL

CONCRETE IN CROSS SECTION

EXISTING CONCRETE IN CROSS SECTION

WOOD SYMBOLS



GLULAM SECTION

ENGINEERED LUMBER SECTION (PSL, LSL, LVL)

SOLID WOOD SECTION

SOLID WOOD BLOCKING SECTION

BUNDLED STUDS, WOOD POST

PLYWOOD SECTION

BEAM / GIRDER / JOIST

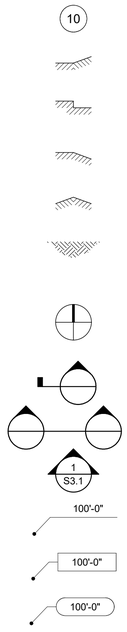
WALL ABOVE THIS LEVEL WITH HEADER BELOW

WALL BELOW THIS LEVEL WITH HEADER BELOW

WALL ABOVE THIS LEVEL

WALL BELOW THIS LEVEL

GENERAL SYMBOLS



GRID BUBBLE

SURFACE - SLOPE UP

SURFACE - STEPPED

SURFACE - SLOPE DOWN

SURFACE - SLOPE TWO WAYS

UNDISTURBED SOIL, COMPACTED SOIL, BACKFILL, OR ANY PREPARED SUBGRADE. SEE SPECIFICATIONS FOR TYPE OF MATERIAL AND PREPARATION METHOD.

NORTH ARROW

STANDARD SECTION CUTS

BUILDING SECTION CUTS

ELEVATION OF WALL OR FRAME

SPOT ELEVATION: TOP OF PLYWOOD
TOP OF CONCRETE
TOP OF STEEL

TOP OF CONCRETE ELEVATION

TOP OF STEEL ELEVATION

REFERENCE ELEVATION. REFER TO PLAN UNLESS NOTED OTHERWISE.

ELEVATION OF LEVEL

WORKPOINT

DIRECTION OF DOWNWARD SLOPE

DIRECTION OF SPAN

EXISTING FRAMING

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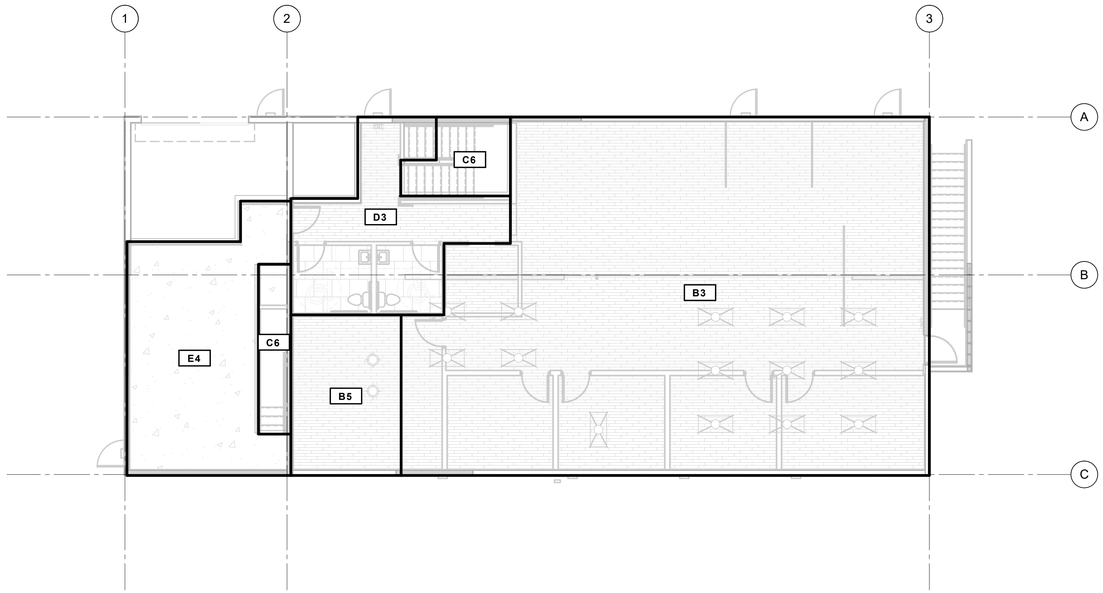
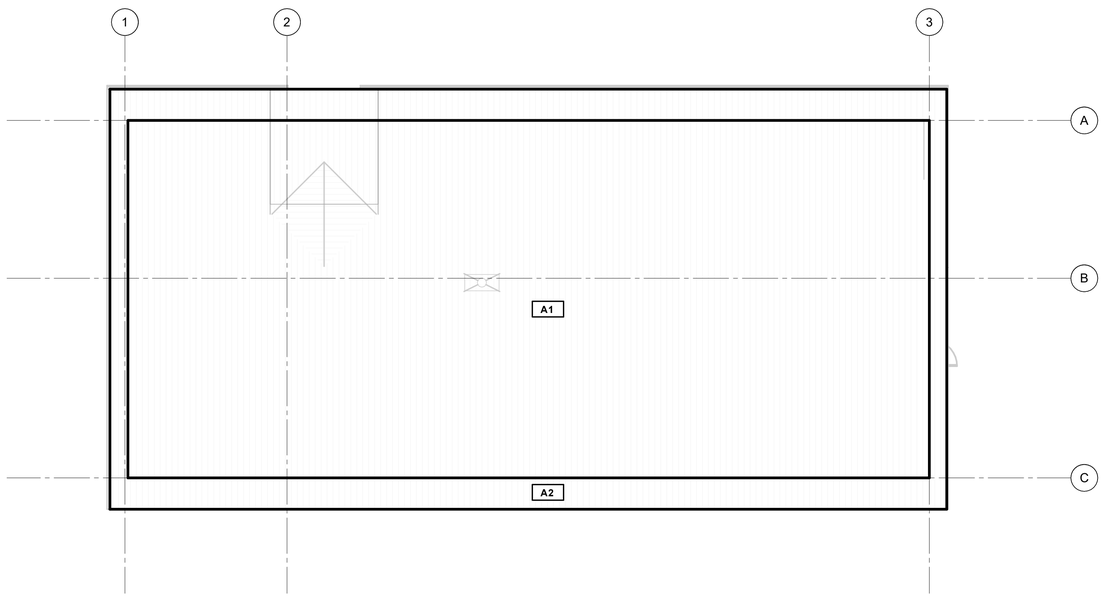
STRUCTURAL SYMBOLS AND ABBREVIATIONS

S0.11



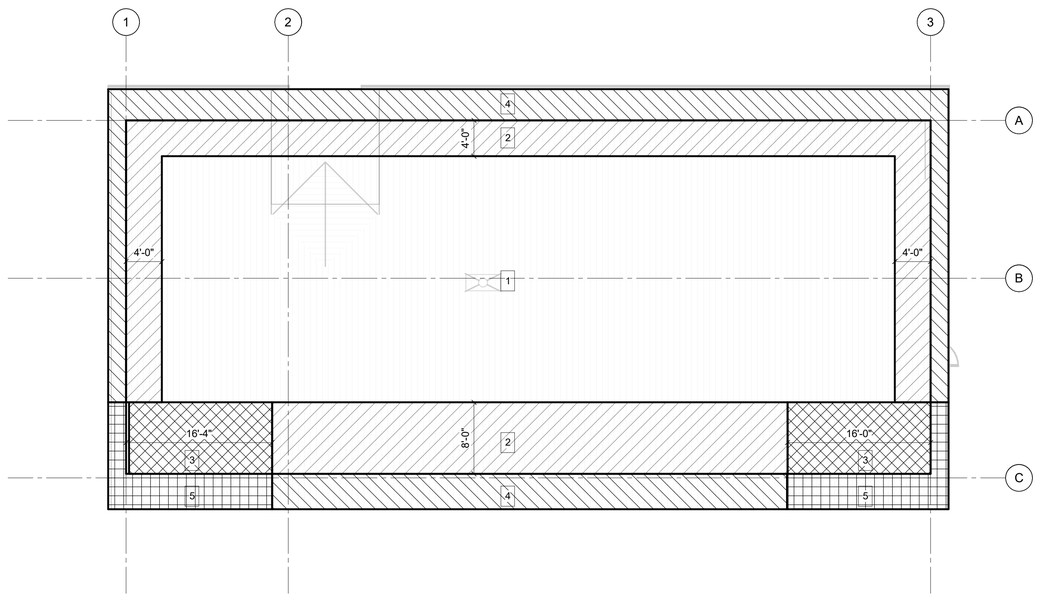
1 LOAD MAP - 2ND FLOOR

1/8" = 1'-0"



2 LOAD MAP - ROOF

1/8" = 1'-0"



3 ROOF OPEN WEB TRUSS WIND UPLIFT MAP

1/8" = 1'-0"

LIVE LOAD SCHEDULE

TYPE MARK	DESCRIPTION	LOAD, PSF (R=REDUCIBLE)	TYPE COMMENTS
A	ROOF	20 (R) LIVE 25 SNOW	-
B	ALL TYPICAL OFFICE FLOORS	50 (R) + 15	3
C	CORRIDORS AND STAIRS	100	-
D	CORRIDORS ABOVE FIRST FLOOR	80 (R)	-
E	HEAVY STORAGE	250	-

SUPERIMPOSED DEAD LOAD SCHEDULE

TYPE MARK	DESCRIPTION	LOAD, PSF	TYPE COMMENTS
1	ROOF	16	-
2	ROOF OVERHANG	11	-
3	FINISHING FLOORING ON 1 1/2" GYPCRETE	26	-
4	FINISH FLOORING ON PLYWOOD SHEETHING	11	-
5	FINISH FLOORING ON 1 1/2" GYPCERETE OVER DECKING	26	-
6	STAIR FINISH FLOORING	12	-

LOAD SCHEDULE NOTES:

1. A1 — INDICATES LIVE LOAD AND SUPERIMPOSED LOAD PER SCHEDULES. LOADING OCCURS WITHIN REGIONS BOUND BY BOLD LINES.
   - SUPERIMPOSED DEAD LOAD
   - LIVE LOAD
2. (R) INDICATES LIVE LOADS ARE REDUCED IN ACCORDANCE WITH BUILDING CODE PROVISIONS.
3. + 15 INDICATES 15 PSF NON REDUCIBLE PARTITION LOAD.
4. REFER TO TABLE 1607.1 IN THE IBC FOR RELEVANT CONCENTRATED LIVE LOADS.

OPEN WEB TRUSS UPLIFT PRESSURES

ZONE	PRESSURE
1	-31.0 PSF
2	-33.5 PSF
3	-52.8 PSF
4	-55.3 PSF
5	-84.9 PSF

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

NOTES:

1. OPEN WEB TRUSSES SHALL BE DESIGNED FOR THE WIND UPLIFT PRESSURE SHOWN.
2. WIND UPLIFT PRESSURES SHOWN ARE UNFACTORED LEVEL LOADS (1.0W) FOR TRIBUTARY AREAS GREATER THAN OR EQUAL TO 100 SQUARE FEET, UNO.
3. A TOTAL REDUCED UNFACOTRED DEAD LOAD (1.0D) OF 15 PSF SHALL BE USED WHEN DESIGNING FOR UPLIFT OF THE TRUSSES. THIS VALUES ASSUMES 8 PLF OF TRUSS SELF WEIGHT AND MAY BE ADJUSTED FOR FINAL TRUSS SELF WEIGHT.

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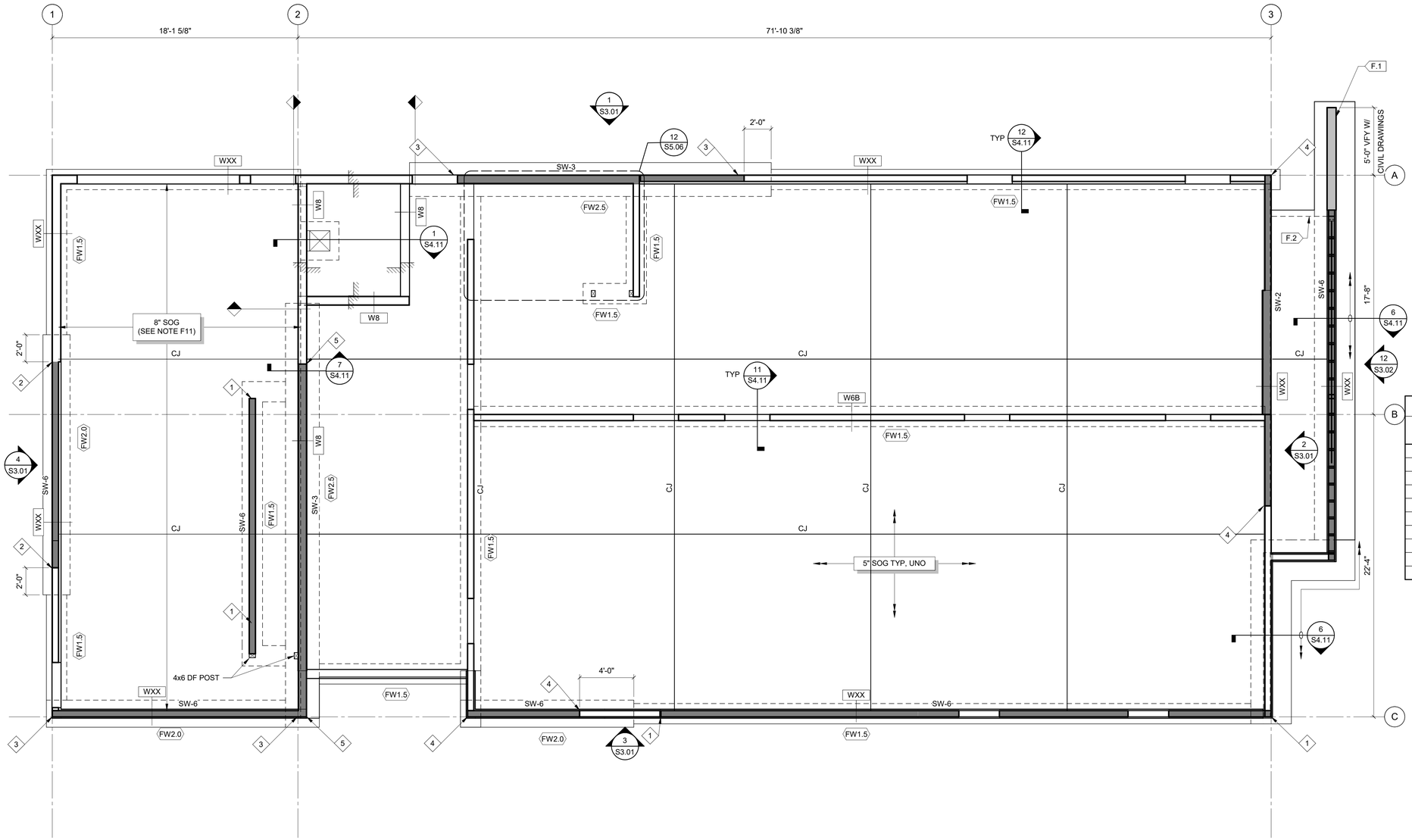
LOAD MAPS

S1.01



1 FOUNDATION PLAN

1/4" = 1'-0"

GENERAL PLAN NOTES:

G1. REFERENCE DRAWINGS:
- S0.XX - STRUCTURAL NOTES, SPECIAL INSPECTION SCHEDULE, SYMBOLS AND ABBREVIATIONS
- S1.XX - LOAD MAPS
- S3.XX - ELEVATIONS
- S4.XX - TYPICAL CONCRETE AND FOUNDATION DETAILS
- S5.XX - TYPICAL WOOD DETAILS

FOUNDATION PLAN NOTES:

F1. SEE THE ARCHITECTURAL DRAWING FOR WALL ASSEMBLY TYPES AND FOR NON-BEARING WALL LOCATIONS. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.

F2. TOP OF SLAB-ON-GRADE SHALL BE 36'-6" THIS LEVEL, UNO.

F3. SLAB-ON-GRADE SHALL BE THICKNESS AS INDICATED ON PLAN WITH #4 @ 12" OC EW, SEE TYPICAL SLAB ON GRADE DETAIL 11/S4.01. PREPARE SUBGRADE AND PROVIDE UNDERSLAB CAPILLARY BREAK PER GEOTECHNICAL REPORT. POUR ALL SLABS ON GRADE OVER VAPOR RETARDER PER SPECIFICATIONS.

CJ — INDICATES SLAB ON GRADE CONTROL / CONSTRUCTION JOINT LOCATIONS; SPACE JOINTS EQUALLY BETWEEN SLAB EDGES, UNO.

PROVIDE TRIM REINFORCING AT ALL SLAB ON GRADE PENETRATIONS AND REENTRANT CORNERS PER 5/S4.01 .

F4. F10.0 — INDICATES FOOTING TYPE. TOP OF FOOTING EL = -1'-0" BELOW TOP OF SLAB AT EXTERIOR FOOTINGS AND = -0'-8" AT INTERIOR FOOTINGS UNO. SEE 7/S4.11, 6/S4.11, 11/S4.11, AND 12/S4.11.

F5. DIMENSIONS SHOWN ARE TO CENTERLINE OF POST, UNO. GRID LINES ARE ALILGNED WITH FACE OF STUD, UNO.

F6. X — INDICATES HOLD-DOWN PER HOLD-DOWN SCHEDULE 9/S5.04.

F7. SW-X — INDICATES WOOD SHEAR WALL ABOVE AND TYPE PER 11/S5.04.

F8. INDICATES FOOTING STEP PER 3/S4.11.

F9. SEE 1/S3.01, 2/S3.01, 3/S3.01, AND 4/S3.01 FOR EXTERIOR WALL STUDS.

F10. ALL FOOTINGS AND SLABS ON GRADE TO BE PLACED ON 1'-0" MINIMUM STRUCTURAL FILL PER GEOTECHNICAL REPORT; SEE SECTION 9/S4.11.

F11. APPLY SEALER HARDENER TO 8" SLAB ON GRADE INSIDE SHED AREA; SEE SPECIFICATIONS.

FOUNDATION PLAN KEY NOTES:

F.1 CANTILEVERED RETAINING WALL AND FOOTING PER 6/S4.11.

F.2 THICKENED SLAB EDGE AT END OF STAIR PER 3/S4.01.

POST SCHEDULE

TYPE MARK	TYPE
P-1	(2) 2x6
P-2	(7) 2x6
P-3	5-1/4"x11-7/8"
P-4	(6) 2x6

BEAM SCHEDULE

TYPE MARK	TYPE
B-1	5-1/8"x12" GLULAM
B-2	5-1/8"x18" GLULAM
B-3	5-1/8"x16 1/2" GLULAM
B-4	6-3/4"x12" GLULAM
B-5	6-3/4"x9" GLULAM

HEADER SCHEDULE

WALL TYPE AND/OR TYPE MARK	HEADER SIZE	MAX ROUGH OPENING WIDTH
H-0	(1) LSL 1-3/4x7-1/4	4'-0"
H-1	(2) LSL 1-3/4x7-1/4	SEE ELEVATION
H-2	LSL 3-1/2x5-1/2	SEE ELEVATION
H-3	LSL 3-1/2x9-1/2	SEE ELEVATION
H-4	LSL 5-1/4x11-7/8	SEE ELEVATION
H-5	PSL 5-1/4x11-7/8	SEE ELEVATION
H-6	HSS5x4x3/16	SEE ELEVATION

JAMB SCHEDULE

TYPE MARK	TRIMMER STUDS	KING STUDS	COMMENTS
T-0	(2) LSL 1-1/2x5-1/2	(1) 2x6	NOTE 6
T-1	(1) 2x6	(1) 2x6	NOTE 6
T-2	(2) 2x6	(1) 2x6	NOTE 6
T-3	(1) 2x6	(2) 2x6	NOTE 6
T-4	(1) 2x8	(1) 2x8	NOTE 6
T-5	(1) LSL 1-1/2x7-1/4	LSL 1-1/2x7-1/4	NOTE 6
T-6	LSL 1-1/2x7-1/4	(2) LSL 1-1/2x7-1/4	NOTE 6
T-7	LSL 1-1/2x5-1/2	PSL 5-1/4x7 (PLANK)	NOTES 7 & 8
T-8	LSL 3-1/2x5-1/2	PSL 5-1/4x7 (PLANK)	NOTES 7 & 8
T-9	PSL 3-1/2x5-1/4	PSL 5-1/4x11-7/8 (PLANK)	NOTES 7 & 8

JOIST SCHEDULE

TYPE MARK	TYPE AND SPACING
J-1	16" RED-I65 @ 24" OC
J-2	16" RED-I65 @ 12" OC
J-3	18" RED-I65 @ 16" OC
J-4	2x12 @ 24" OC

STUD SCHEDULE

TYPE MARK	TYPE	NOTES
S-1	2x6 @ 16" OC	-
S-2	2x8 @ 16" OC	SEE NOTE 3
S-3	LSL 1-1/2x5-1/2 @ 16" OC	-
S-4	(2) LSL 1-3/4x5-1/2 @ 16" OC	-
S-5	LSL 1-1/2x7-1/4 @ 16" OC	-
S-6	(2) LSL 1-1/2x7-1/4 @ 16" OC	-

STRUCTURAL WALL STUD SCHEDULE

MARK	STUDS	NOTES
W6	2x6 @ 16" OC	TYPICAL AT INTERIOR WALLS UNO
W6A	(2) 2x6 @ 16" OC	-
W6B	2x6 @ 12" OC	-
WXX	-	SEE S3.01 FRAMING ELEVATIONS
W8	2x8 @ 16" OC	SEE NOTE 3

SCHEDULE NOTES:

1. SEE 5/S5.01 & 9/S5.01 FOR WALL TYPE AND HEADER ELEVATION.
2. HEADERS SHALL BE LOCATED AS SHOWN ON ELEVATIONS AND PLANS.
3. WHERE STUD HEIGHT EXCEEDS 12'-0", AS INDICATED BY "(LSL)", REPLACE DIMENSIONAL STUDS WITH EQUIVALENT LSL.
4. ALL INTERIOR JAMBS SHAL BE TYPE T-0 TYP, UNO.
5. ALL INTERIOR HEADERS SHALL BE TYPE H-0 TYP, UNO.
6. ATTACH 2x TRIMMER STUDS TO KING STUDS PER 1/S5.04.
7. ATTACH 3-1/2 TRIMMER STUDS TO KING STUDS PER 2/S5.03.
8. PROVIDE (2) A35 FRAMING ANCHORS TOP AND BOT FOR TYPE T-7, T-8 AND T-9 KING STUDS.
9. SUBSTITUTIONS OF STRUCTURAL COMPOSITE LUMBER MAY BE MADE PER THE STRUCTURAL NOTES

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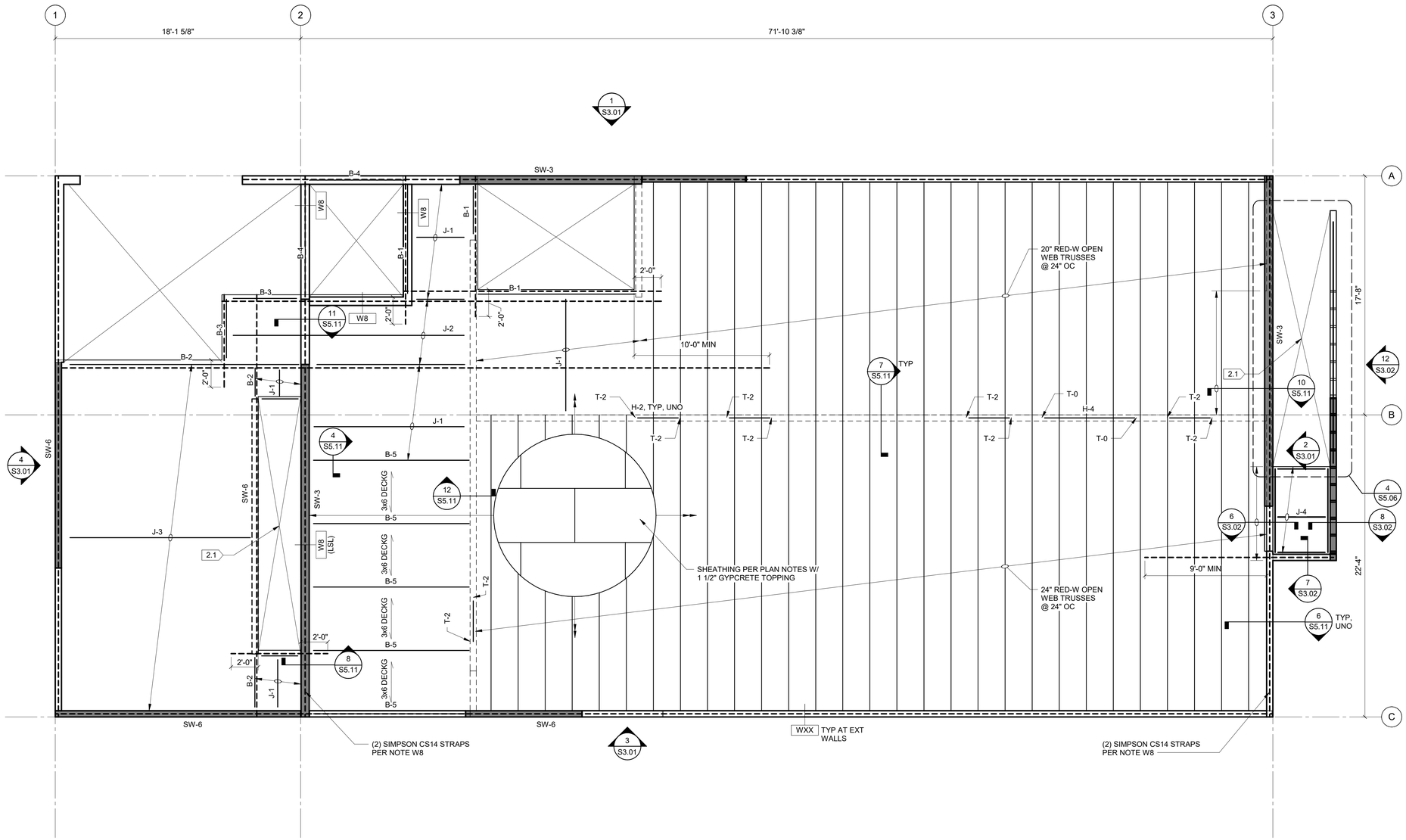
FOUNDATION PLAN

S2.01



2ND FLOOR FRAMING PLAN

1/4" = 1'-0"

GENERAL PLAN NOTES:

G1. REFERENCE DRAWINGS:
- S0.XX - STRUCTURAL NOTES, SPECIAL INSPECTION SCHEDULE, SYMBOLS AND ABBREVIATIONS
- S1.XX - LOAD MAPS
- S3.XX - ELEVATIONS
- S4.XX - TYPICAL CONCRETE AND FOUNDATION DETAILS
- S5.XX - TYPICAL WOOD DETAILS

WOOD FRAMING PLAN NOTES:

W1. SEE THE ARCHITECTURAL DRAWINGS FOR WALL TYPES AND FOR NON-BEARING WALL LOCATIONS.

W2. FLOOR SHEATHING SHALL BE 1 1/8" TONGUE AND GROOVE PER STRUCTURAL NOTES, SEE DIAPHRAGM NAILING SCHEDULE PER11/S5.05 .

W3. DIMENSIONS SHOWN ARE TO FACE OF STUD, UNO.

W4. J-X INDICATES JOIST PER SCHEDULE.

W5. B-X INDICATES FLUSH FRAMED BEAM PER SCHEDULE.

W6. (X) INDICATES HOLD-DOWN PER 9/S5.04 .

W7. SW-X INDICATES WOOD SHEAR WALL ABOVE PER 11/S5.04.

W8. DENOTES CONTINUOUS SIMPSON CS14 OVER PLYWOOD SHEATHING W/ 0.148x3" FASTENERS @ 2-1/16" OC (EVERY OTHER HOLE); PROVIDE 18" LAP SPLICES W/ (6) 0.148x3" FASTENERS.

W9. 3x6 DECKG INDICATES 3X6 T&G TIMBER DECKING UNDER 1-1/8" PLWD SHEATHING. ATTACH DECKING TO SUPPORTING FRAMING WITH (2) .22x5" SDWS TIMBER SCREWS INSTALLED FLUSH. EACH PIECE SHALL BE TOENAILED AT EACH SUPPORT WITH (1) 20d NAIL. SEE 11/S5.05 FOR PLYWOOD NAILING; NAIL PENETRATION INTO TIMBER DECKING NOT TO EXCEED 2".

SECOND FLOOR FRAMING PLAN KEY NOTES:

2.1 PROVIDE STRAIGHT RUN STAIR FRAMING PER 4/S5.06 .

POST SCHEDULE

TYPE MARK	TYPE
P-1	(2) 2x6
P-2	(7) 2x6
P-3	5-1/4"x11-7/8"
P-4	(6) 2x6

BEAM SCHEDULE

TYPE MARK	TYPE
B-1	5-1/8"x12" GLULAM
B-2	5-1/8"x18" GLULAM
B-3	5-1/8"x16 1/2" GLULAM
B-4	6-3/4"x12" GLULAM
B-5	6-3/4"x9" GLULAM

HEADER SCHEDULE

WALL TYPE AND/OR TYPE MARK	HEADER SIZE	MAX ROUGH OPENING WIDTH
H-0	(1) LSL 1-3/4x7-1/4	4'-0"
H-1	(2) LSL 1-3/4x7-1/4	SEE ELEVATION
H-2	LSL 3-1/2x5-1/2	SEE ELEVATION
H-3	LSL 3-1/2x9-1/2	SEE ELEVATION
H-4	LSL 5-1/4x11-7/8	SEE ELEVATION
H-5	PSL 5-1/4x11-7/8	SEE ELEVATION
H-6	HSS5x4x3/16	SEE ELEVATION

JAMB SCHEDULE

TYPE MARK	TRIMMER STUDS	KING STUDS	COMMENTS
T-0	(2) LSL 1-1/2x5-1/2	(1) 2x6	NOTE 6
T-1	(1) 2x6	(1) 2x6	NOTE 6
T-2	(2) 2x6	(1) 2x6	NOTE 6
T-3	(1) 2x6	(2) 2x6	NOTE 6
T-4	(1) 2x8	(1) 2x8	NOTE 6
T-5	(1) LSL 1-1/2x7-1/4	LSL 1-1/2x7-1/4	NOTE 6
T-6	LSL 1-1/2x7-1/4	(2) LSL 1-1/2x7-1/4	NOTE 6
T-7	LSL 1-1/2x5-1/2	PSL 5-1/4x7 (PLANK)	NOTES 7 & 8
T-8	LSL 3-1/2x5-1/2	PSL 5-1/4x7 (PLANK)	NOTES 7 & 8
T-9	PSL 3-1/2x5-1/4	PSL 5-1/4x11-7/8 (PLANK)	NOTES 7 & 8

JOIST SCHEDULE

TYPE MARK	TYPE AND SPACING
J-1	16" RED-I65 @ 24" OC
J-2	16" RED-I65 @ 12" OC
J-3	18" RED-I65 @ 16" OC
J-4	2x12 @ 24" OC

STUD SCHEDULE

TYPE MARK	TYPE	NOTES
S-1	2x6 @ 16" OC	-
S-2	2x8 @ 16" OC	SEE NOTE 3
S-3	LSL 1-1/2x5-1/2 @ 16" OC	-
S-4	(2) LSL 1-3/4x5-1/2 @ 16" OC	-
S-5	LSL 1-1/2x7-1/4 @ 16" OC	-
S-6	(2) LSL 1-1/2x7-1/4 @ 16" OC	-

STRUCTURAL WALL STUD SCHEDULE

MARK	STUDS	NOTES
W6	2x6 @ 16" OC	TYPICAL AT INTERIOR WALLS UNO
W6A	(2) 2x6 @ 16" OC	-
W6B	2x6 @ 12" OC	-
WXX	-	SEE S3.01 FRAMING ELEVATIONS
W8	2x8 @ 16" OC	SEE NOTE 3

SCHEDULE NOTES:

1. SEE 5/S5.01 & 9/S5.01 FOR WALL TYPE AND HEADER ELEVATION.
2. HEADERS SHALL BE LOCATED AS SHOWN ON ELEVATIONS AND PLANS.
3. WHERE STUD HEIGHT EXCEEDS 12'-0", AS INDICATED BY "(LSL)", REPLACE DIMENSIONAL STUDS WITH EQUIVALENT LSL.
4. ALL INTERIOR JAMBS SHAL BE TYPE T-0 TYP, UNO.
5. ALL INTERIOR HEADERS SHALL BE TYPE H-0 TYP, UNO.
6. ATTACH 2x TRIMMER STUDS TO KING STUDS PER 1/S5.04.
7. ATTACH 3-1/2 TRIMMER STUDS TO KING STUDS PER 2/S5.03.
8. PROVIDE (2) A35 FRAMING ANCHORS TOP AND BOT FOR TYPE T-7, T-8 AND T-9 KING STUDS.
9. SUBSTITUTIONS OF STRUCTURAL COMPOSITE LUMBER MAY BE MADE PER THE STRUCTURAL NOTES

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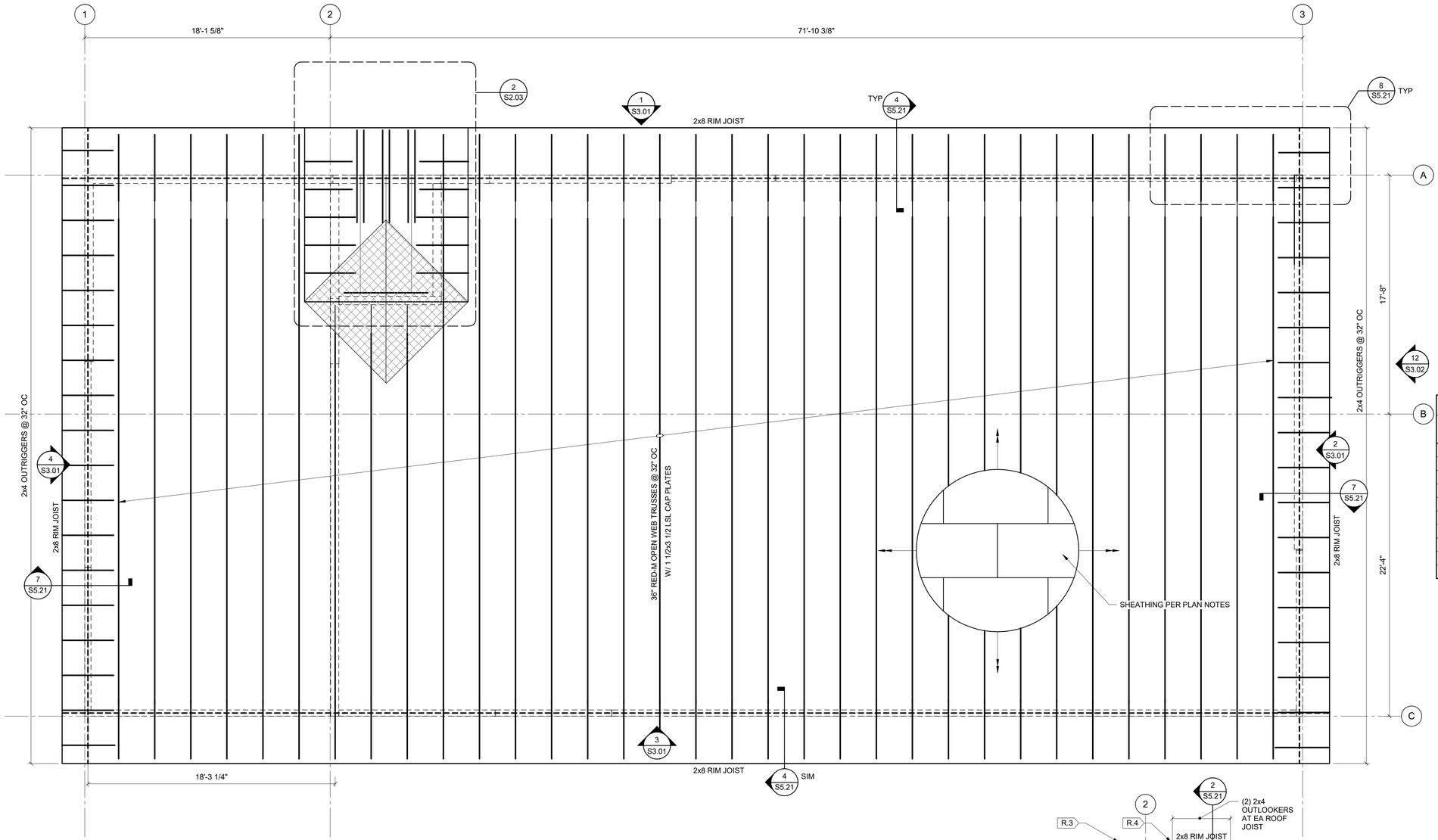
2ND FLOOR FRAMING PLAN

S2.02



1 ROOF FRAMING PLAN

1/4" = 1'-0"

GENERAL PLAN NOTES:

G1. REFERENCE DRAWINGS:
- S0.XX - STRUCTURAL NOTES, SPECIAL INSPECTION SCHEDULE, SYMBOLS AND ABBREVIATIONS
- S1.XX - LOAD MAPS
- S3.XX - ELEVATIONS
- S4.XX - TYPICAL CONCRETE AND FOUNDATION DETAILS
- S5.XX - TYPICAL WOOD DETAILS

WOOD FRAMING PLAN NOTES:

W1. SEE THE ARCHITECTURAL DRAWINGS FOR WALL TYPES AND FOR NON-BEARING WALL LOCATIONS.

W2. ROOF SHEATHING SHALL BE 19/32 TONGUE AND GROOVE PER STRUCTURAL NOTES, SEE DIAPHRAGM NAILING SCHEDULE PER 11/SS.05.

W3. DIMENSIONS SHOWN ARE TO FACE OF STUD, UNO.

W4. J-X INDICATES JOIST PER SCHEDULE.

W5. B-X INDICATES FLUSH FRAMED BEAM PER SCHEDULE.

W6. DENOTES CONTINUOUS SIMPSON CS14 OVER PLYWOOD SHEATHING W/ 0.148x2-1/2" FASTENERS @ 2-1/16" OC (EVERY OTHER HOLE); PROVIDE 18" LAP SPLICES W/ (6) 0.148x2-1/2" FASTENERS.

W7. INDICATES WOOD OVERFRAMING CONSISTING OF 2x4 @ 16" OC PONY WALLS AT 32" OC CENTERED ON ROOF TRUSSES W/ SHEATHING AND NAILING TO MATCH ROOF BELOW; SEE 10/S5.21 .

ROOF FRAMING PLAN KEY NOTES:

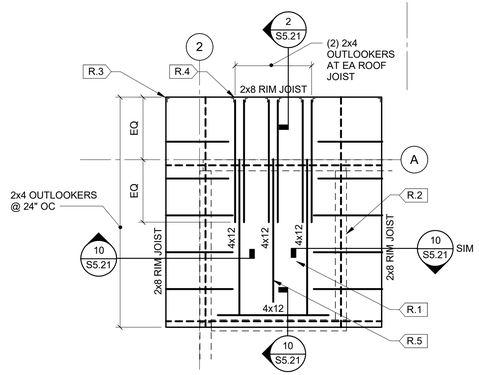
R.1 SHEATHING AND NAILING AT ELEVATOR ROOF TO MATCH ROOF BELOW.

R.2 EXTEND ELEVATOR WALL STUDS CONTINUOUS FROM BELOW. ALL WALLS TO BE TYPE SW6 SHEAR WALLS.

R.3 CONNECT RIM JOISTS W/ L50 ANGLE.

R.4 CONNECT RIM JOIST TO OUTLOOKERS W/ (2) L30 ANGLES, ONE EA SIDE.

R.5 PROVIDE W8x31 ELEVATOR HOIST BEAM BELOW CENTERED AT SHAFT; ATTACH AT SHAFT WALL EA END PER 4/S5.07.



2 ELEVATOR ROOF FRAMING PLAN

1/4" = 1'-0"

POST SCHEDULE

TYPE MARK	TYPE
P-1	(2) 2x6
P-2	(7) 2x6
P-3	5-1/4"x11-7/8"
P-4	(6) 2x6

BEAM SCHEDULE

TYPE MARK	TYPE
B-1	5-1/8"x12" GLULAM
B-2	5-1/8"x18" GLULAM
B-3	5-1/8"x16 1/2" GLULAM
B-4	6-3/4"x12" GLULAM
B-5	6-3/4"x9" GLULAM

HEADER SCHEDULE

WALL TYPE AND/OR TYPE MARK	HEADER SIZE	MAX ROUGH OPENING WIDTH
H-0	(1) LSL 1-3/4x7-1/4	4'-0"
H-1	(2) LSL 1-3/4x7-1/4	SEE ELEVATION
H-2	LSL 3-1/2x5-1/2	SEE ELEVATION
H-3	LSL 3-1/2x9-1/2	SEE ELEVATION
H-4	LSL 5-1/4x11-7/8	SEE ELEVATION
H-5	PSL 5-1/4x11-7/8	SEE ELEVATION
H-6	HSS5x4x3/16	SEE ELEVATION

JAMB SCHEDULE

TYPE MARK	TRIMMER STUDS	KING STUDS	COMMENTS
T-0	(2) LSL 1-1/2x5-1/2	(1) 2x6	NOTE 6
T-1	(1) 2x6	(1) 2x6	NOTE 6
T-2	(2) 2x6	(1) 2x6	NOTE 6
T-3	(1) 2x6	(2) 2x6	NOTE 6
T-4	(1) 2x8	(1) 2x8	NOTE 6
T-5	(1) LSL 1-1/2x7-1/4	LSL 1-1/2x7-1/4	NOTE 6
T-6	LSL 1-1/2x7-1/4	(2) LSL 1-1/2x7-1/4	NOTE 6
T-7	LSL 1-1/2x5-1/2	PSL 5-1/4x7 (PLANK)	NOTES 7 & 8
T-8	LSL 3-1/2x5-1/2	PSL 5-1/4x7 (PLANK)	NOTES 7 & 8
T-9	PSL 3-1/2x5-1/4	PSL 5-1/4x11-7/8 (PLANK)	NOTES 7 & 8

JOIST SCHEDULE

TYPE MARK	TYPE AND SPACING
J-1	16" RED-I65 @ 24" OC
J-2	16" RED-I65 @ 12" OC
J-3	18" RED-I65 @ 16" OC
J-4	2x12 @ 24" OC

STUD SCHEDULE

TYPE MARK	TYPE	NOTES
S-1	2x6 @ 16" OC	-
S-2	2x8 @ 16" OC	SEE NOTE 3
S-3	LSL 1-1/2x5-1/2 @ 16" OC	-
S-4	(2) LSL 1-3/4x5-1/2 @ 16" OC	-
S-5	LSL 1-1/2x7-1/4 @ 16" OC	-
S-6	(2) LSL 1-1/2x7-1/4 @ 16" OC	-

STRUCTURAL WALL STUD SCHEDULE

MARK	STUDS	NOTES
W6	2x6 @ 16" OC	TYPICAL AT INTERIOR WALLS UNO
W6A	(2) 2x6 @ 16" OC	-
W6B	2x6 @ 12" OC	-
WXX	-	SEE S3.01 FRAMING ELEVATIONS
W8	2x8 @ 16" OC	SEE NOTE 3

SCHEDULE NOTES:

1. SEE 5/S5.01 & 9/S5.01 FOR WALL TYPE AND HEADER ELEVATION.
2. HEADERS SHALL BE LOCATED AS SHOWN ON ELEVATIONS AND PLANS.
3. WHERE STUD HEIGHT EXCEEDS 12'-0", AS INDICATED BY "(LSL)", REPLACE DIMENSIONAL STUDS WITH EQUIVALENT LSL.
4. ALL INTERIOR JAMBS SHAL BE TYPE T-0 TYP, UNO.
5. ALL INTERIOR HEADERS SHALL BE TYPE H-0 TYP, UNO.
6. ATTACH 2x TRIMMER STUDS TO KING STUDS PER 1/SS.04.
7. ATTACH 3-1/2 TRIMMER STUDS TO KING STUDS PER 2/SS.03.
8. PROVIDE (2) A35 FRAMING ANCHORS TOP AND BOT FOR TYPE T-7, T-8 AND T-9 KING STUDS.
9. SUBSTITUTIONS OF STRUCTURAL COMPOSITE LUMBER MAY BE MADE PER THE STRUCTURAL NOTES

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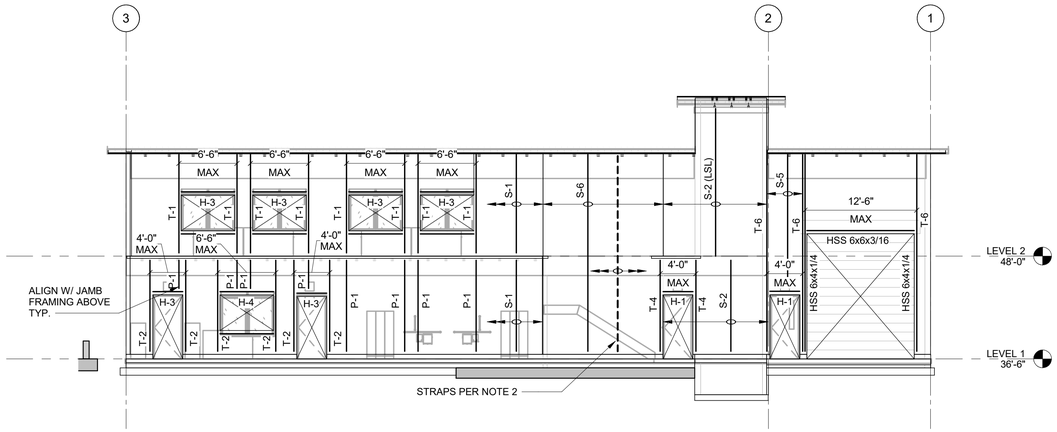
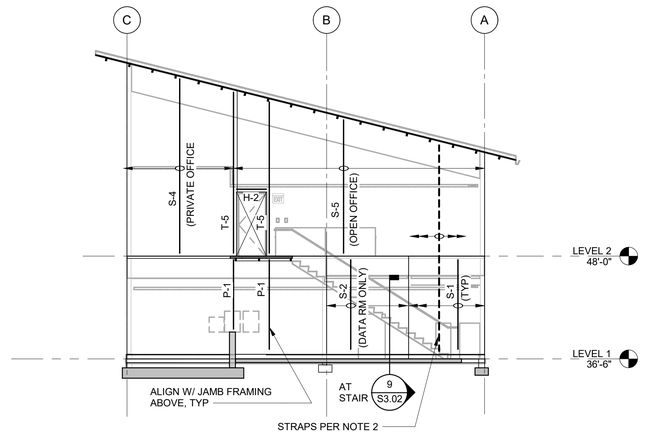
ROOF FRAMING PLAN

S2.03



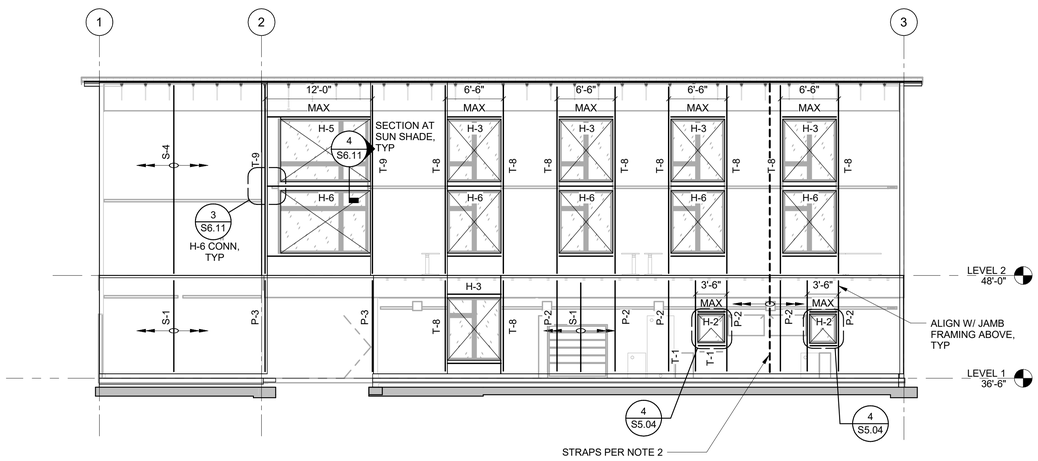
NOTES:
1. EXTERIOR STUDS AND JAMBS MAY HAVE BORED HOLES PER 12/S5.03 BUT SHALL NOT BE NOTCHED.
2. - - - - - - DENOTES SIMPSON CONTINUOUS CS14 OVER PLYWOOD SHEATHING @ 6'-0" OC (ALIGNED WITH STUDS) W/ 0.148x2-1/2" FASTENERS @ 2-1/16" OC (EVERY OTHER HOLE); PROVIDE 18" LAP SPLICES W/ (6) 0.148x2-1/2" FASTENERS.

1 NORTH ELEVATION
1/8" = 1'-0"



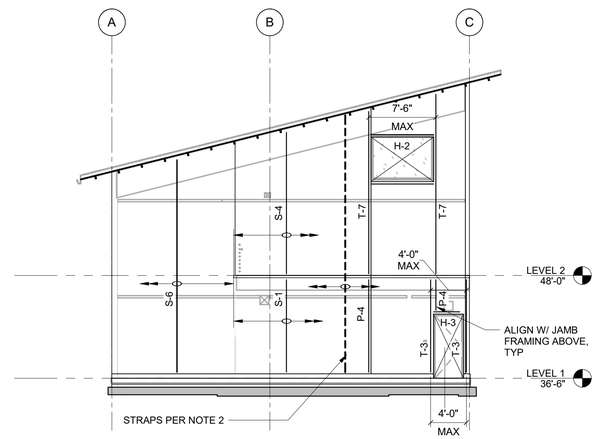
NOTES:
1. EXTERIOR STUDS AND JAMBS MAY HAVE BORED HOLES PER 12/S5.03 BUT SHALL NOT BE NOTCHED.
2. - - - - - - DENOTES SIMPSON CONTINUOUS CS14 OVER PLYWOOD SHEATHING @ 10'-0" OC (ALIGNED WITH STUDS) W/ 0.148x2-1/2" FASTENERS @ 2-1/16" OC (EVERY OTHER HOLE); PROVIDE 18" LAP SPLICES W/ (6) 0.148x2-1/2" FASTENERS.

2 EAST ELEVATION
1/8" = 1'-0"



NOTES:
1. EXTERIOR STUDS AND JAMBS MAY HAVE BORED HOLES PER 12/S5.03 BUT SHALL NOT BE NOTCHED.
2. - - - - - - DENOTES SIMPSON CONTINUOUS CS14 OVER PLYWOOD SHEATHING @ 6'-0" OC (ALIGNED WITH STUDS) W/ 0.148x2-1/2" FASTENERS @ 2-1/16" OC (EVERY OTHER HOLE); PROVIDE 18" LAP SPLICES W/ (6) 0.148x2-1/2" FASTENERS.

3 SOUTH ELEVATION
1/8" = 1'-0"



NOTES:
1. EXTERIOR STUDS AND JAMBS MAY HAVE BORED HOLES PER 12/S5.03 BUT SHALL NOT BE NOTCHED.
2. - - - - - - DENOTES SIMPSON CONTINUOUS CS14 OVER PLYWOOD SHEATHING @ 10'-0" OC (ALIGNED WITH STUDS) W/ 0.148x2-1/2" FASTENERS @ 2-1/16" OC (EVERY OTHER HOLE); PROVIDE 18" LAP SPLICES W/ (6) 0.148x2-1/2" FASTENERS.

4 WEST ELEVATION
1/8" = 1'-0"

POST SCHEDULE	
TYPE MARK	TYPE
P-1	(2) 2x6
P-2	(7) 2x6
P-3	5-1/4"x11-7/8"
P-4	(6) 2x6

BEAM SCHEDULE	
TYPE MARK	TYPE
B-1	5-1/8"x12" GLULAM
B-2	5-1/8"x18" GLULAM
B-3	5-1/8"x16 1/2" GLULAM
B-4	6-3/4"x12" GLULAM
B-5	6-3/4"x9" GLULAM

HEADER SCHEDULE		
WALL TYPE AND/OR TYPE MARK	HEADER SIZE	MAX ROUGH OPENING WIDTH
H-0	(1) LSL 1-3/4x7-1/4	4'-0"
H-1	(2) LSL 1-3/4x7-1/4	SEE ELEVATION
H-2	LSL 3-1/2x5-1/2	SEE ELEVATION
H-3	LSL 3-1/2x9-1/2	SEE ELEVATION
H-4	LSL 5-1/4x11-7/8	SEE ELEVATION
H-5	PSL 5-1/4x11-7/8	SEE ELEVATION
H-6	HSS5x4x3/16	SEE ELEVATION

JAMB SCHEDULE			
TYPE MARK	TRIMMER STUDS	KING STUDS	COMMENTS
T-0	(2) LSL 1-1/2x5-1/2	(1) 2x6	NOTE 6
T-1	(1) 2x6	(1) 2x6	NOTE 6
T-2	(2) 2x6	(1) 2x6	NOTE 6
T-3	(1) 2x6	(2) 2x6	NOTE 6
T-4	(1) 2x8	(1) 2x8	NOTE 6
T-5	(1) LSL 1-1/2x7-1/4	LSL 1-1/2x7-1/4	NOTE 6
T-6	LSL 1-1/2x7-1/4	(2) LSL 1-1/2x7-1/4	NOTE 6
T-7	LSL 1-1/2x5-1/2	PSL 5-1/4x7 (PLANK)	NOTES 7 & 8
T-8	LSL 3-1/2x5-1/2	PSL 5-1/4x7 (PLANK)	NOTES 7 & 8
T-9	PSL 3-1/2x5-1/4	PSL 5-1/4x11-7/8 (PLANK)	NOTES 7 & 8

JOIST SCHEDULE	
TYPE MARK	TYPE AND SPACING
J-1	16" RED-I65 @ 24" OC
J-2	16" RED-I65 @ 12" OC
J-3	18" RED-I65 @ 16" OC
J-4	2x12 @ 24" OC

STUD SCHEDULE		
TYPE MARK	TYPE	NOTES
S-1	2x6 @ 16" OC	-
S-2	2x8 @ 16" OC	SEE NOTE 3
S-3	LSL 1-1/2x5-1/2 @ 16" OC	-
S-4	(2) LSL 1-3/4x5-1/2 @ 16" OC	-
S-5	LSL 1-1/2x7-1/4 @ 16" OC	-
S-6	(2) LSL 1-1/2x7-1/4 @ 16" OC	-

STRUCTURAL WALL STUD SCHEDULE		
MARK	STUDS	NOTES
W6	2x6 @ 16" OC	TYPICAL AT INTERIOR WALLS UNO
W6A	(2) 2x6 @ 16" OC	-
W6B	2x6 @ 12" OC	-
WXX	-	SEE S3.01 FRAMING ELEVATIONS
W8	2x8 @ 16" OC	SEE NOTE 3

SCHEDULE NOTES:
1. SEE 5/S5.01 & 9/S5.01 FOR WALL TYPE AND HEADER ELEVATION.
2. HEADERS SHALL BE LOCATED AS SHOWN ON ELEVATIONS AND PLANS.
3. WHERE STUD HEIGHT EXCEEDS 12'-0", AS INDICATED BY "(LSL)", REPLACE DIMENSIONAL STUDS WITH EQUIVALENT LSL.
4. ALL INTERIOR JAMBS SHAL BE TYPE T-0 TYP, UNO.
5. ALL INTERIOR HEADERS SHALL BE TYPE H-0 TYP, UNO.
6. ATTACH 2x TRIMMER STUDS TO KING STUDS PER 1/S5.04.
7. ATTACH 3-1/2 TRIMMER STUDS TO KING STUDS PER 2/S5.03.
8. PROVIDE (2) A35 FRAMING ANCHORS TOP AND BOT FOR TYPE T-7, T-8 AND T-9 KING STUDS.
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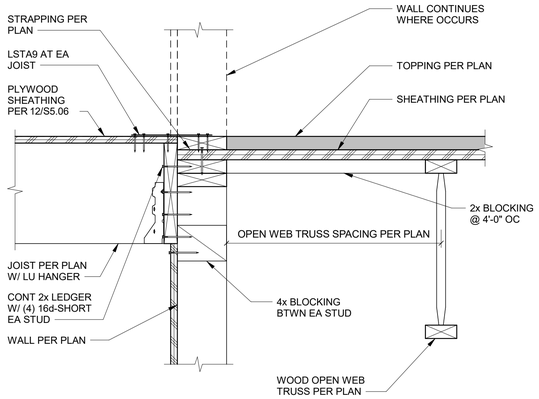
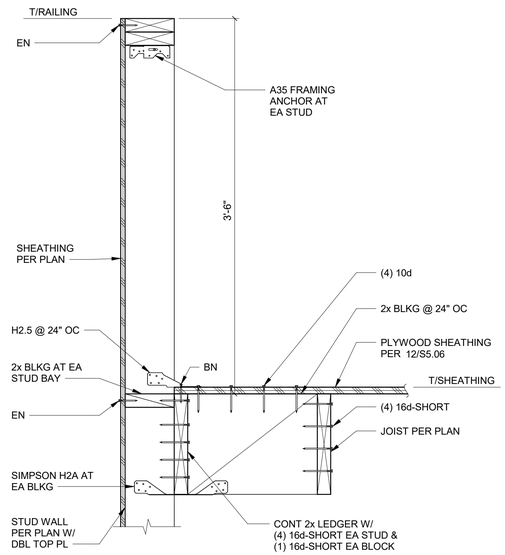
EXTERIOR WALL FRAMING ELEVATIONS
S3.01



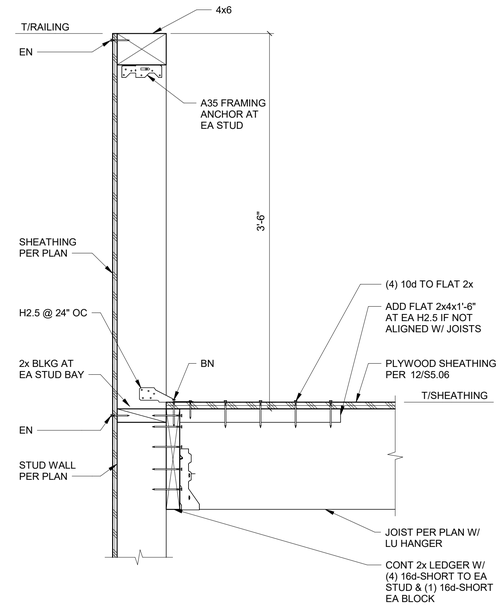
6 EAST STAIR WALL SECTION

1 1/2" = 1'-0"



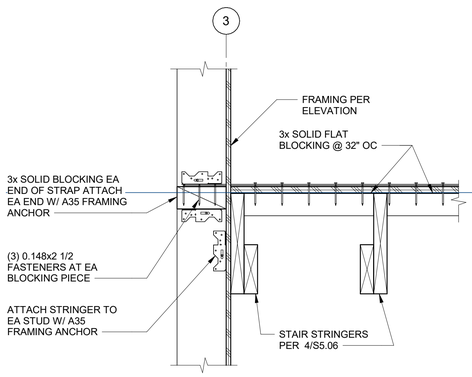
7 EAST STAIR WALL SECTION

NO SCALE



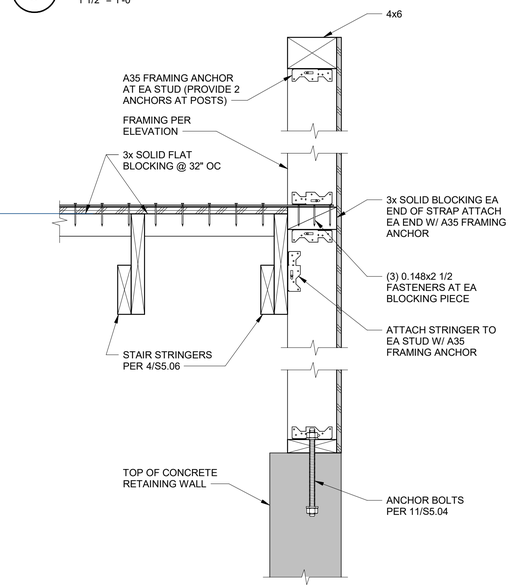
8 EAST STAIR WALL SECTION

NO SCALE



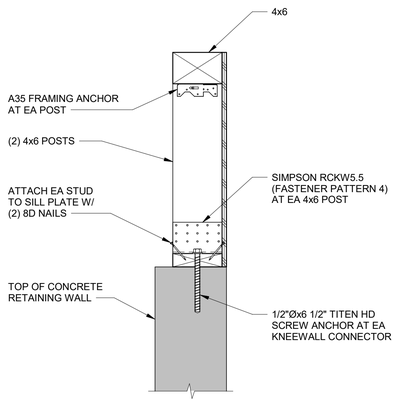
9 EAST STAIR WALL SECTION

1 1/2" = 1'-0"



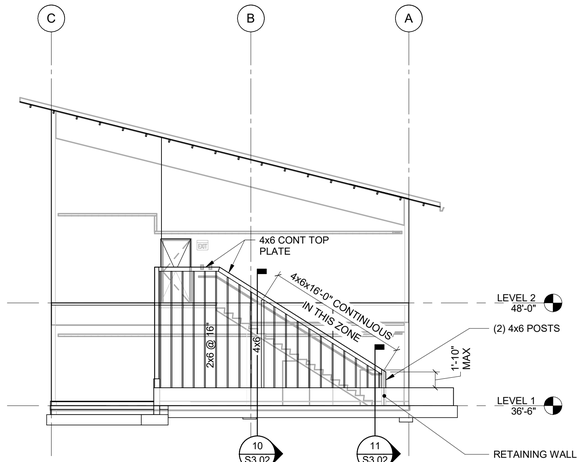
10 EAST STAIR WALL SECTION

1 1/2" = 1'-0"



11 EAST STAIR WALL SECTION

1 1/2" = 1'-0"



NOTES:
1. EXTERIOR STUDS AND JAMBS MAY HAVE BORED HOLES PER 12/S5.03 BUT SHALL NOT BE NOTCHED.

12 EAST ELEVATION - EXTERIOR STAIR

1/8" = 1'-0"

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3015 MISSION BEACH ROAD
TULALIP, WA 98271

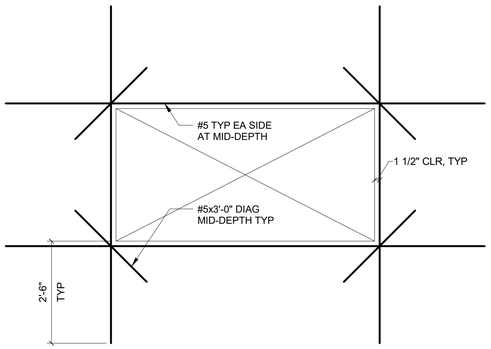
ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24

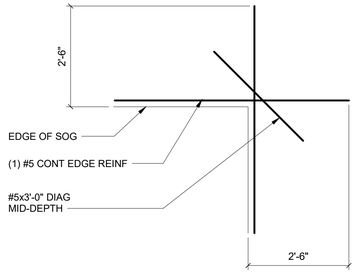
A21-136 PRINTED:3/13/2024 8:01:22 AM

EAST STAIR FRAMING ELEVATION AND DETAILS

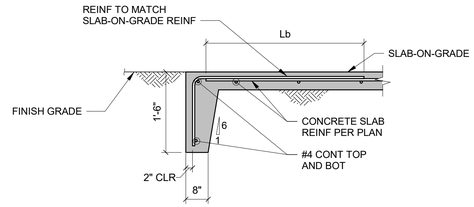
S3.02

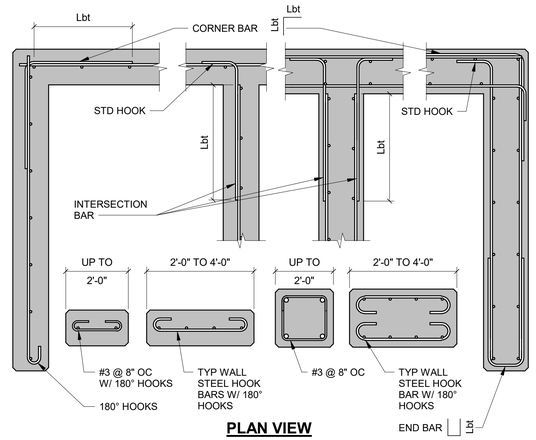


SOG-OPENINGS



SOG-REENTRANT CORNERS

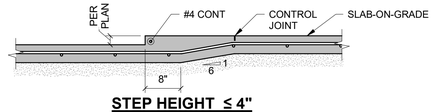




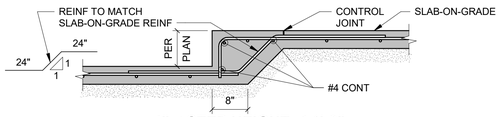
PLAN VIEW

3 TYP THICKENED SLAB EDGE

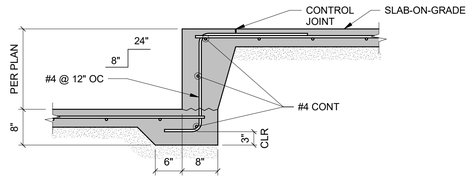
NO SCALE



STEP HEIGHT ≤ 4"



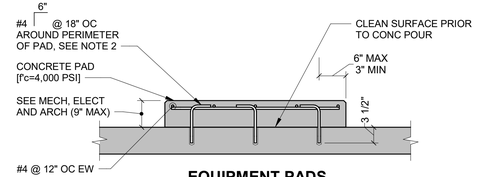
4" < STEP HEIGHT ≤ 1'-0"



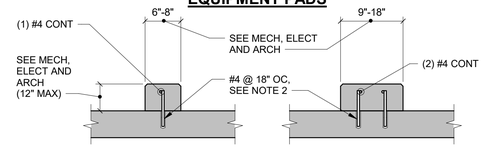
1'-0" < STEP HEIGHT ≤ 2'-0"

4 TYP CONCRETE WALL DETAILS

NO SCALE



EQUIPMENT PADS

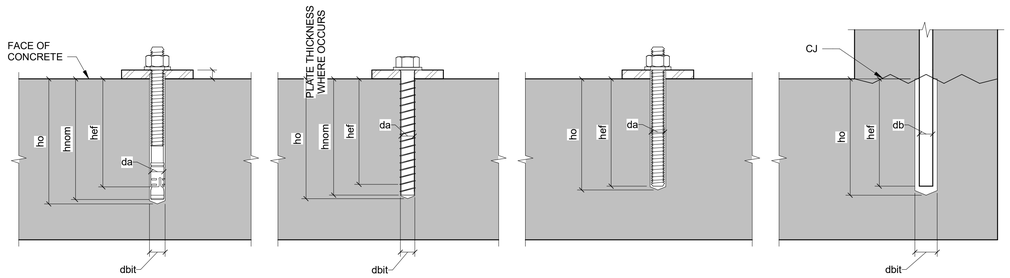


EQUIPMENT CURBS

NOTES:
1. EQUIPMENT PAD SIZE TO BE 6" LARGER THAN EQUIPMENT IN EACH DIRECTION, UNLESS NOTED OTHERWISE. COORDINATE EXACT SIZE AND LOCATION OF CURB AND PADS WITH EQUIPMENT PROVIDED.
2. ATTACH REINFORCING TO SLAB WITH ADHESIVE ANCHORING SYSTEM PER STRUCTURAL NOTES.

5 TYPICAL SLAB ON GRADE TRIM REINFORCING

3/4" = 1'-0"



EXPANSION ANCHOR | **SCREW ANCHOR** | **THREADED ADHESIVE REINFORCING DOWEL** | **ADHESIVE REINFORCING DOWEL (ARD)**

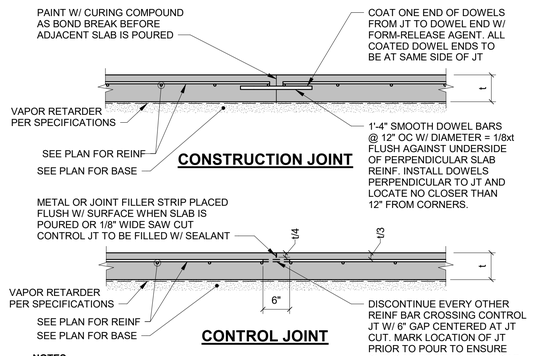
NOTES:
1. REFER TO STRUCTURAL NOTES FOR APPROVED ANCHOR(S) AND EVALUATION REPORT(S).

ABBREVIATIONS

hef	=	EFFECTIVE EMBEDMENT PER DRAWINGS
hnom	=	NOMINAL EMBEDMENT REQUIRED TO ACHIEVE EFFECTIVE EMBEDMENT PER EVALUATION REPORT. FOR EXPANSION ANCHORS, THIS APPLIES TO THE CONDITION PRIOR TO APPLICATION OF TORQUE.
ho	=	MINIMUM HOLE DEPTH PER EVALUATION REPORT
da, db	=	DIAMETER OF ANCHOR/BAR PER DRAWINGS
dbit	=	DIAMETER OF DRILL BIT PER EVALUATION REPORT

7 TYP SLAB-ON-GRADE STEP

NO SCALE



CONSTRUCTION JOINT

CONTROL JOINT

NOTES:
1. REFER TO PLAN FOR SLAB THICKNESS AND REINFORCING.
2. CONTROL JOINTS TO BE SPACED @ 36*1 OC MAX, EACH WAY. UNLESS NOTED OTHERWISE. RATIO OF DISTANCE BETWEEN CONTROL JOINTS IN EACH DIRECTION FOR A SLAB PANEL SHALL NOT EXCEED 1.5. CONSTRUCTION JOINTS PER THIS DETAIL SHALL BE CONSIDERED AS CONTROL JOINTS FOR CONTROL JOINT SPACING REQUIREMENTS.
3. WHERE CONTROL JOINTS ARE SAW CUT, TIMING OF JOINT CUTTING SHALL BE PER THE PROJECT SPECIFICATIONS.

8 TYP CURBS & PADS ON CONCRETE SLABS

NO SCALE

f'_c = 3,000 PSI
f_y = 60,000 PSI

SIZE	Ld	Ldt	Lb	Lbt	Ldh
#4	22 (33)	28 (43)	28 (43)	37 (56)	11
#5	27 (41)	36 (53)	36 (53)	46 (69)	14
#6	33 (49)	43 (64)	43 (64)	56 (83)	16
#7	48 (72)	62 (93)	62 (93)	81 (121)	19
#8	55 (82)	71 (107)	71 (107)	93 (139)	22
#9	62 (93)	80 (120)	80 (120)	104 (157)	25
#10	70 (104)	90 (136)	90 (136)	118 (176)	28
#11	77 (116)	100 (151)	100 (151)	131 (196)	31

f'_c = 4,000 PSI
f_y = 60,000 PSI

SIZE	Ld	Ldt	Lb	Lbt	Ldh
#4	19 (28)	25 (37)	25 (37)	32 (48)	9
#5	24 (36)	31 (46)	31 (46)	40 (60)	12
#6	28 (43)	37 (55)	37 (55)	48 (72)	14
#7	42 (62)	54 (81)	54 (81)	70 (105)	17
#8	47 (71)	62 (92)	62 (92)	80 (120)	19
#9	54 (80)	70 (104)	70 (104)	90 (136)	21
#10	60 (90)	78 (117)	78 (117)	102 (153)	24
#11	67 (100)	87 (130)	87 (130)	113 (170)	27

NOTES:
1. USE THE LENGTHS IN THIS SCHEDULE, UNLESS NOTED OTHERWISE.
2. USE LENGTH IN ( ) WHEN BAR COVER IS db OR LESS OR BAR CLEAR SPACING IS 2db OR LESS.
3. A TOP BAR IS A HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW IT.

ABBREVIATIONS

db	=	BAR DIAMETER
Ld	=	TENSION DEVELOPMENT LENGTH
Ldt	=	TENSION DEVELOPMENT LENGTH FOR A TOP BAR
Lb	=	CLASS B LAP SPLICE LENGTH, 1.3 Ld
Lbt	=	CLASS B LAP SPLICE LENGTH FOR A TOP BAR, 1.3 Ldt
Ldh	=	TENSION DEVELOPMENT LENGTH FOR A STANDARD HOOK

9 TYPICAL POST-INSTALLED ANCHORS

NO SCALE

11 TYP SOG CONTROL & CONSTRUCTION JOINTS

NO SCALE

12 DEVELOPMENT AND SPLICE LENGTH SCHED

12" = 1'-0"

FREIHEIT ARCHITECTURE

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3/21/24

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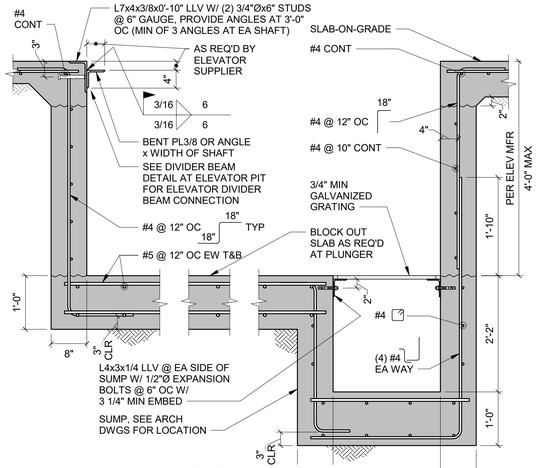
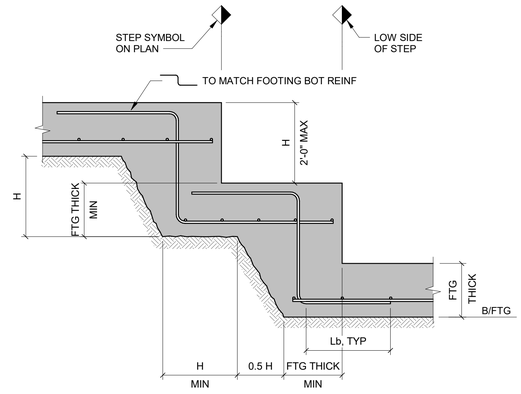
TYPICAL CONCRETE DETAILS

S4.01



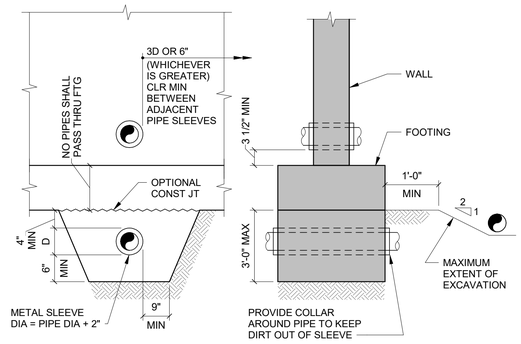
1 ELEVATOR PIT DETAIL

NO SCALE



3 TYP STEPPED FOOTING DETAIL

NO SCALE

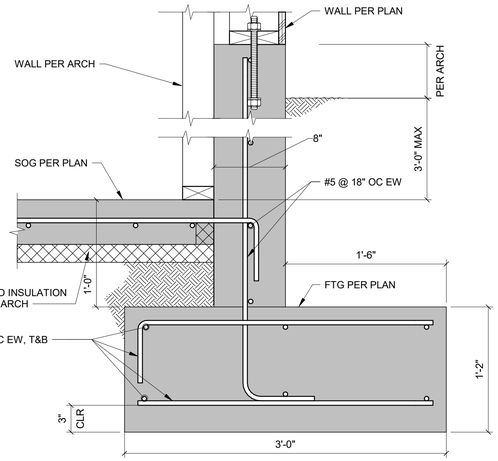


ELEVATION **SECTION**

NOTES:
1. STEP FOOTING PER TYPICAL STEPPED FOOTING DETAIL AS REQUIRED TO SATISFY THESE CONDITIONS.
2. GENERAL CONTRACTOR TO COORDINATE EXACT DEPTH AND LOCATION OF PIPE.
3. "D" SHALL NOT EXCEED 8".

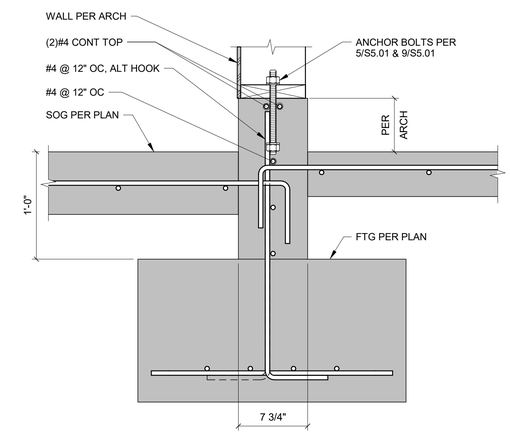
4 TYP DETAIL OF PIPE AT FOOTINGS

NO SCALE



6 RETAINING WALL & FOOTING

1 1/2" = 1'-0"



7 SECTION

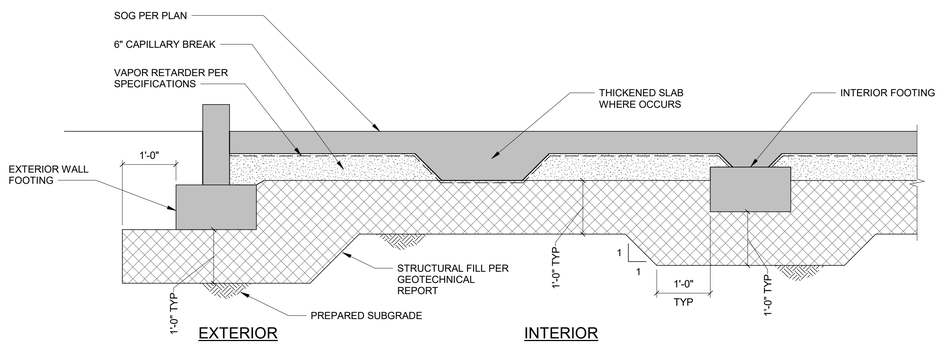
1 1/2" = 1'-0"

CONTINUOUS FOOTING SCHEDULE					
	DIMENSIONS		REINFORCING		
TYPE MARK	WIDTH	DEPTH	TRANSVERSE	LONGITUDINAL	TYPE COMMENTS
FW1.5	1'-6"	0'-10"	#4 @ 12" OC BOT	(3) #4 BOT	-
FW2.0	2'-0"	1'-0"	#5 @ 12" OC BOT	(3) #5 BOT	-
FW2.5	2'-6"	1'-2"	#5 @ 12" OC BOT	(4) #5 BOT	-
-	-	-	-	-	-
-	-	-	-	-	-

NOTES:
1. SEE 11/S4.11 AND 12/S4.11 FOR TYPICAL FOOTING DETAILS.

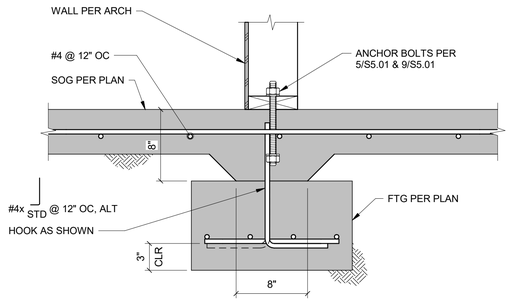
8 CONTINUOUS FOOTING SCHEDULE

NO SCALE



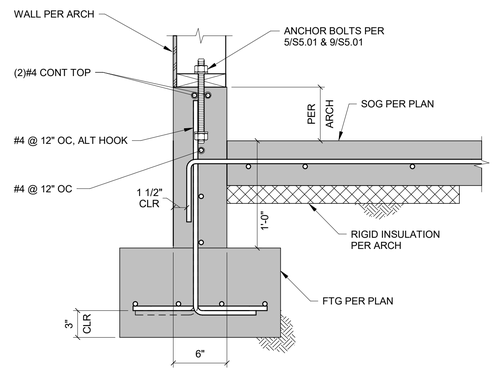
9 TYPICAL FOUNDATION BEARING ZONE PREPARATION

NO SCALE



11 TYP INTERIOR FOOTING

1 1/2" = 1'-0"



12 TYP EXTERIOR FOOTING

1 1/2" = 1'-0"

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3015 MISSION BEACH ROAD
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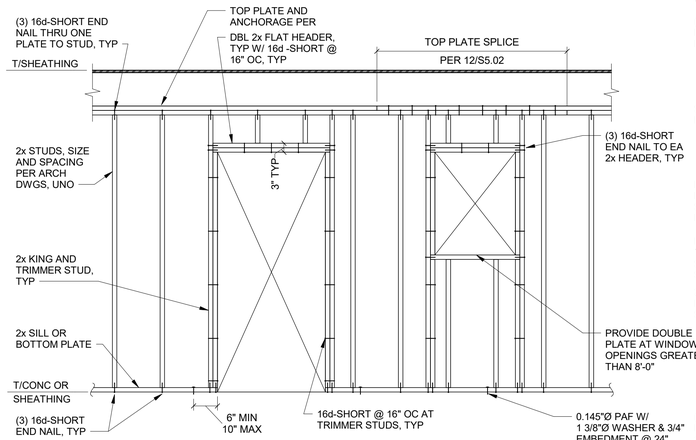
FOUNDATION SECTIONS AND DETAILS

S4.11

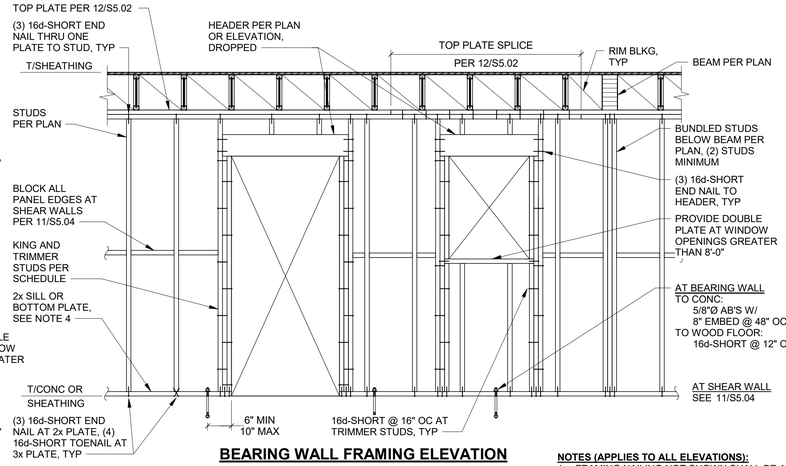
HANGER SCHEDULE			
MEMBER SIZE	**FACE MOUNT**	**TOP FLANGE**	**TOP FLANGE SKEWED**
16" RED-I65	MIU2.56/16	BA2.56/16 (MAX)	-
18" RED-I65	MIU2.56/18	BA2.56/18 (MIN)	-
2x4	LUS24	PF24	HU24TF

4 HANGER SCHEDULES

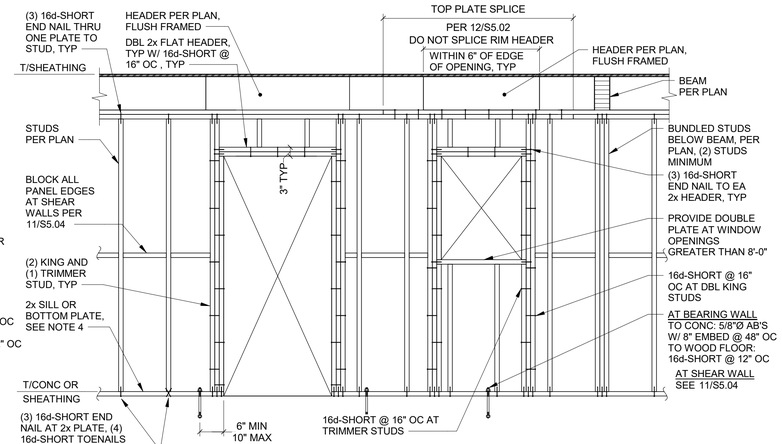
NO SCALE



INTERIOR NON-BEARING WALL FRAMING ELEVATION



BEARING WALL FRAMING ELEVATION



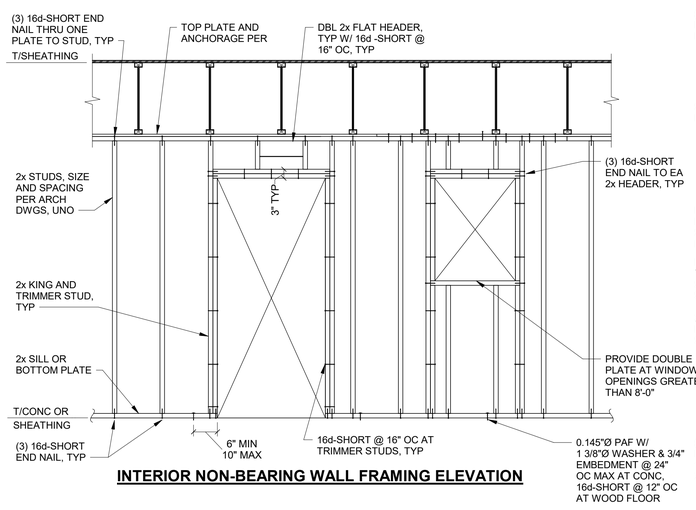
BEARING WALL FRAMING ELEVATION

NOTES (APPLIES TO ALL ELEVATIONS):

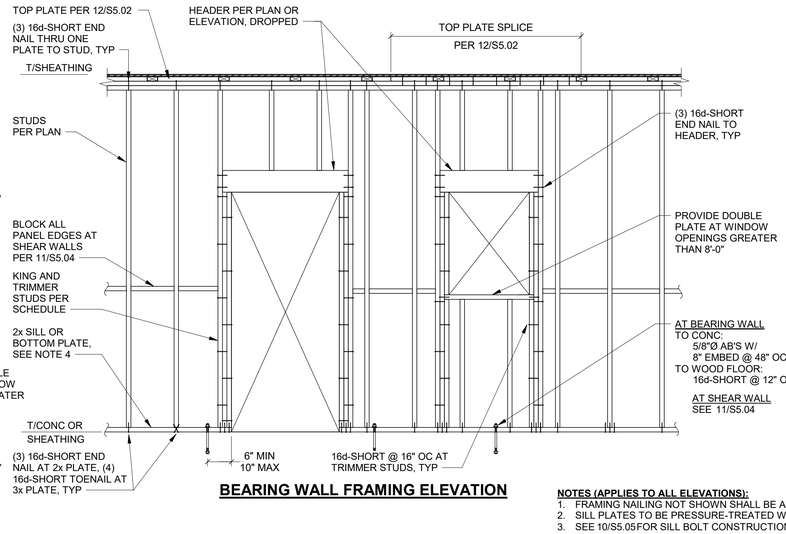
1. FRAMING NAILING NOT SHOWN SHALL BE AS INDICATED IN TABLE 2304.10.1.
2. SILL PLATES TO BE PRESSURE-TREATED WHERE IN CONTACT WITH CONCRETE.
3. SEE 10/S5.05 FOR SILL BOLT CONSTRUCTION.
4. INCREASE SILL PLATE SIZE TO 3x WHERE REQUIRED BY SHEAR WALL SCHEDULE PER 11/S5.04.

5 TYP STUD WALL FRAMING ELEVATION

NO SCALE



INTERIOR NON-BEARING WALL FRAMING ELEVATION



BEARING WALL FRAMING ELEVATION

NOTES (APPLIES TO ALL ELEVATIONS):

1. FRAMING NAILING NOT SHOWN SHALL BE AS INDICATED IN TABLE 2304.10.1.
2. SILL PLATES TO BE PRESSURE-TREATED WHERE IN CONTACT WITH CONCRETE.
3. SEE 10/S5.05FOR SILL BOLT CONSTRUCTION.
4. INCREASE SILL PLATE SIZE TO 3x WHERE REQUIRED BY SHEAR WALL SCHEDULE PER 11/S5.04.

9 TYP STUD WALL FRAMING ELEVATION AT OPEN WEB TRUSSES

NO SCALE

FREIHEIT ARCHITECTURE

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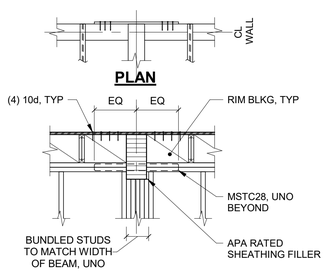
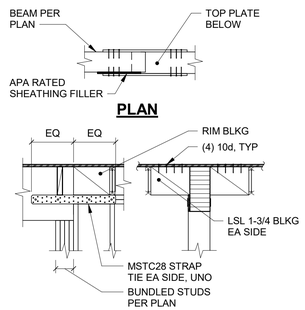
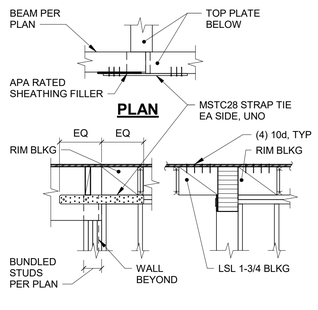
TYPICAL WOOD FRAMING DETAILS

S5.01

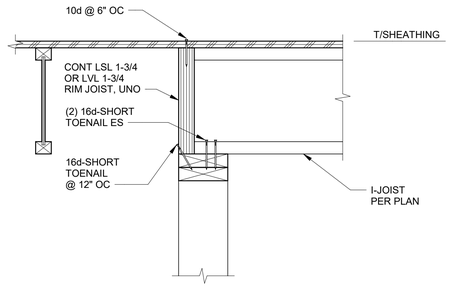






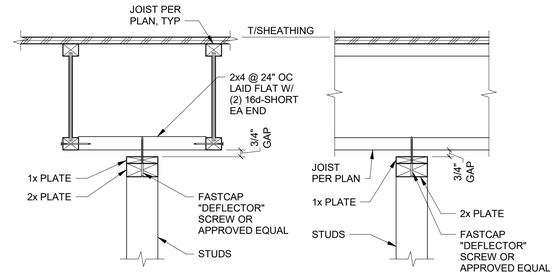
1 TYP DEEP BEAM SUPPORT DETAILS

NO SCALE



3 TYP INTERIOR BEARING WALL BELOW - FRAMING DIRECTION CHANGE

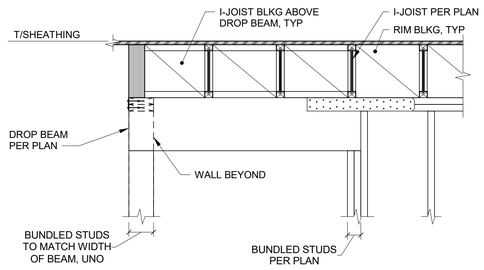
NO SCALE



NOTES:
1. DO NOT INSTALL NON-BEARING PARTITIONS UNTIL DEAD LOAD IS IN PLACE. AT ROOF CONSTRUCTION AND WHERE A DEFLECTION SPACE HAS BEEN PROVIDED FOR, THIS REQUIREMENT MAY BE WAIVED.
2. DO NOT CONNECT CEILING GYP BOARD TO FRAMING WITHIN 24" OF NON-STRUCTURAL PARTITION WALL. OPTION FOR CONTRACTOR TO USE FASTCAP "F-CORNER" TO SUPPORT CEILING SHEATHING.

4 TYP INTERIOR NON-BEARING WALL TOP PLATE ANCHORAGE

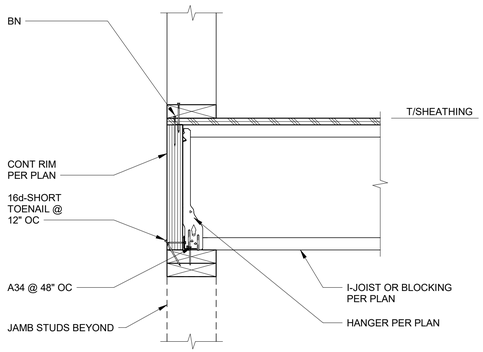
NO SCALE



NOTES:
1. ATTACH DROP BEAM TO SUPPORTING WALLS PER 1/S5.02.

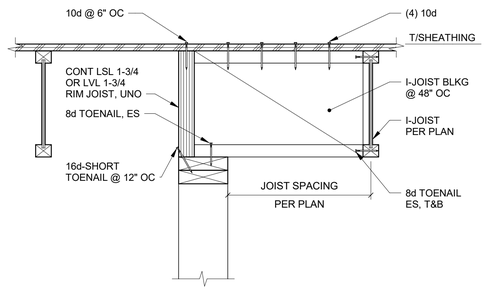
5 TYP DROP BEAM SECTION

NO SCALE



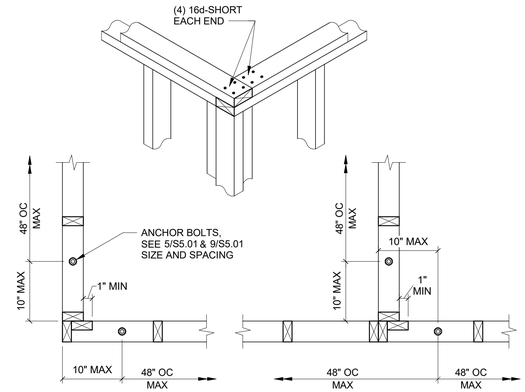
6 TYP RIM JOIST HEADER

NO SCALE



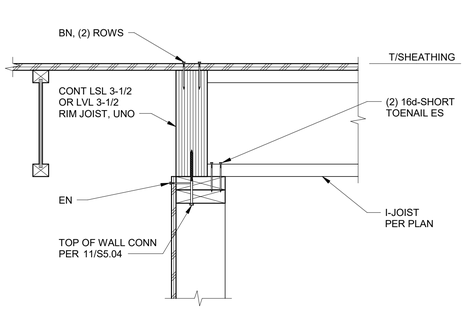
7 TYP INTERIOR BEARING WALL BELOW - FRAMING PARALLEL

NO SCALE



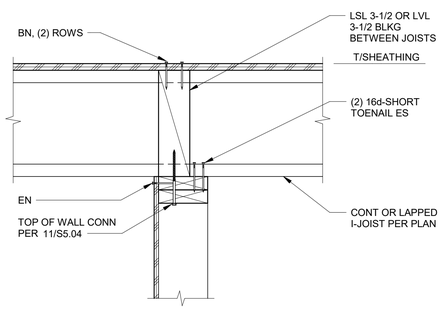
8 TYP STUD WALL CORNER

NO SCALE



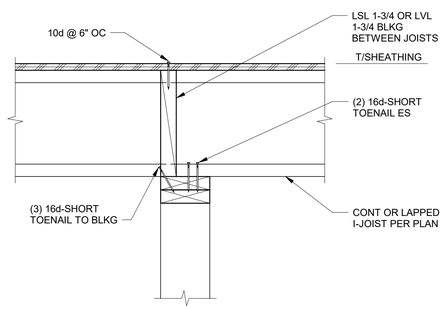
9 TYP INTERIOR SHEAR WALL BELOW - FRAMING DIRECTION CHANGE

NO SCALE



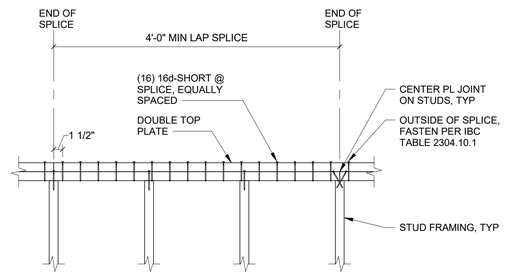
10 TYP INTERIOR SHEAR WALL BELOW - FRAMING PERPENDICULAR

NO SCALE



11 TYP INTERIOR BEARING WALL BELOW - FRAMING PERPENDICULAR

NO SCALE



NOTES:
1. PROVIDE CONTINUOUS TOP PLATES WITHOUT JOINTS WHERE WALLS ARE 12'-0" OR LESS IN LENGTH.

12 TYP TOP PLATE SPLICE

NO SCALE

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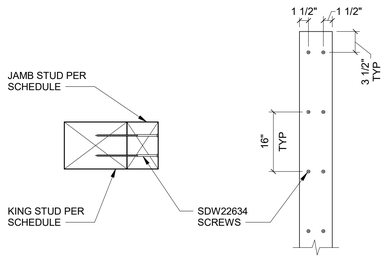
TYPICAL WOOD FRAMING DETAILS

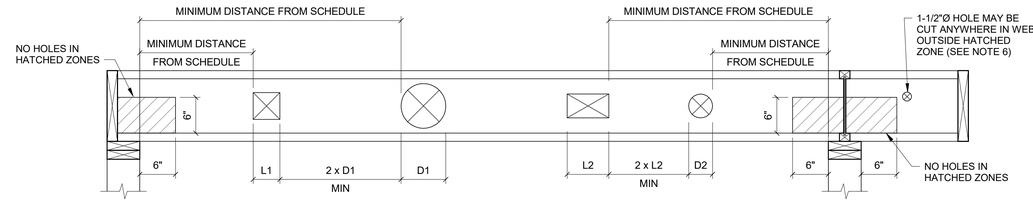
S5.02



3-1/2x5-1/4 PSL

2 TYP 3-1/2 TRIMMER STUD TO KING STUD CONNECTION

NO SCALE



END SUPPORT

INTERIOR SUPPORT OR CANTILEVER

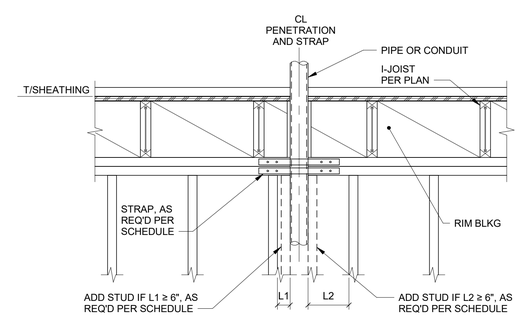
NOTES:
1. ADAPTED FROM TRUS-JOIST DOCUMENT TJ-4000, NOVEMBER 2017.
2. HOLE SIZES: THE SIZES GIVEN IN THE TABLE ARE HOLE SIZES, NOT DUCT SIZES.
3. MULTIPLE HOLES: WHERE MORE THAN ONE HOLE IS DESIRED, THE AMOUNT OF WOOD BETWEEN HOLES MUST EQUAL OR EXCEED TWICE THE DIAMETER OF THE LARGEST HOLE OR TWICE THE SIZE OF THE LARGEST SQUARE HOLE.
4. HOLES MAY BE LOCATED VERTICALLY ANYWHERE WITHIN THE WEB. LEAVE 1/8" OF WEB MINIMUM AT TOP AND BOTTOM OF HOLE.
5. ANY PENETRATIONS NOT MEETING THE REQUIREMENTS ABOVE MUST HAVE PRIOR APPROVAL BY THE STRUCTURAL ENGINEER.
6. THIS TABLE IS BASED ON UNIFORMLY LOADED JOISTS. PENETRATIONS SHALL NOT BE PERMITTED AT JOISTS RECEIVING HEADERS OR SUPPORTING BEARING WALLS ABOVE WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER.
7. DO NOT CUT HOLES LARGER THAN 1-1/2" IN CANTILEVERS.

MINIMUM DISTANCE FROM INSIDE FACE OF SUPPORT TO NEAREST EDGE OF HOLE

JOIST TYPE	HOLE SIZE / HOLE TYPE	AT END OF SUPPORT					AT INTERIOR SUPPORT OR CANTILEVER				
		2"	3"	4"	6 1/2"	8 7/8"	2"	3"	4"	6 1/2"	8 7/8"
11-7/8" TJI 230	ROUND	1'-0"	1'-6"	2'-0"	3'-0"	6'-6"	1'-0"	2'-0"	2'-6"	5'-6"	10'-0"
11-7/8" TJI 230	RECTANGULAR	1'-0"	2'-0"	2'-6"	5'-6"	7'-0"	1'-0"	2'-6"	3'-6"	8'-6"	10'-6"

3 TYP HOLE CHART FOR I-JOISTS

NO SCALE



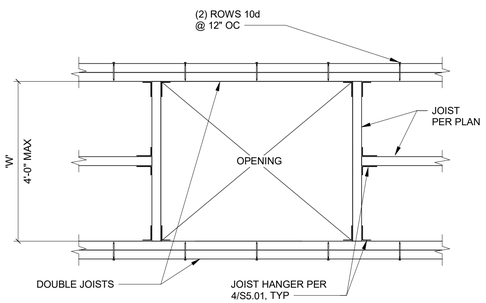
BEARING WALL PLATE PENETRATION SCHEDULE

STUD SIZE	MAX HOLE SIZE, NO STRAP OR ADDED STUDS	MAX HOLE SIZE, (1) RPS18 AND ADDED STUDS
2x4 & 3x4	1"Ø	1-1/2"Ø
2x6 & 3x6	1-3/8"Ø	3-1/2"Ø
2x8 & 3x8	1-3/4"Ø	5-1/4"Ø

SHEAR WALL PLATE PENETRATION SCHEDULE

STUD SIZE	MAX HOLE SIZE, (1) RPS18	MAX HOLE SIZE, (2) RPS18 AND ADDED STUDS
2x4 & 3x4	1"Ø	1-1/2"Ø
2x6 & 3x6	1-3/8"Ø	3-1/2"Ø
2x8 & 3x8	1-3/4"Ø	5-1/4"Ø

NOTES:
1. BORED HOLES ONLY. NOTCHES IN WALL PLATES ARE NOT PERMITTED.
2. AT SHEAR WALLS, PLACE STRAPS ON OPPOSITE SIDE OF WALL FROM SHEATHING.
3. PLATE PENETRATIONS ARE NOT PERMITTED IN DOUBLE-SIDED SHEAR WALLS.
4. PLATE PENETRATIONS SHALL BE SPACED 2x THE LARGER HOLE DIAMETER, MINIMUM.
5. ANY PLATE PENETRATION NOT MEETING THE REQUIREMENTS ABOVE REQUIRE PRIOR APPROVAL BY THE STRUCTURAL ENGINEER.



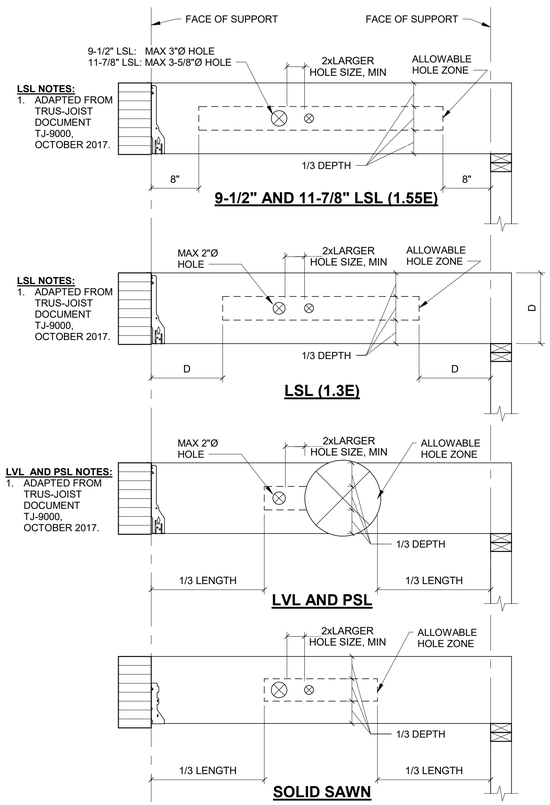
NOTES:
1. WHEN OPENING DIMENSION 'W' EXCEEDS 4'-0", REFER TO PLANS FOR FRAMING.
2. WHEN I-JOISTS ARE USED, PROVIDE WEB BLOCKING BETWEEN DOUBLE JOISTS.

9 TYP FLOOR OPENING PLAN

NO SCALE

10 TYP WALL PLATE PENETRATIONS

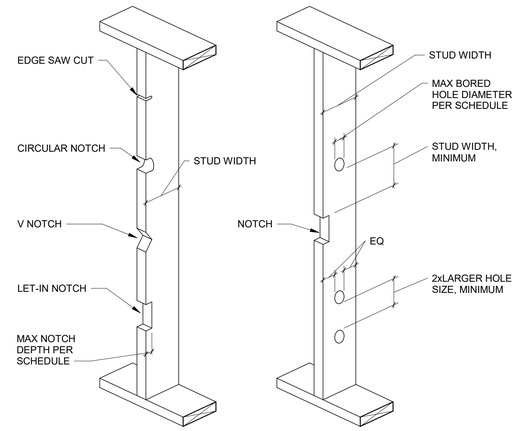
NO SCALE



NOTES (APPLIES TO ALL):
1. ROUND HOLES ONLY. RECTANGULAR HOLES ARE NOT ALLOWED.
2. NO HOLES IN CANTILEVERS.
3. NO HOLES IN HEADERS.
4. OTHER HOLES NOT DESCRIBED ABOVE SHALL BE SUBJECT TO APPROVAL OF THE STRUCTURAL ENGINEER PRIOR TO DRILLING.

11 TYP HOLES IN WOOD JOISTS AND BEAMS

NO SCALE



NOTCHES IN STUDS **BORED HOLES IN STUDS**

EXTERIOR/BEARING/SHEAR WALL STUD PENETRATION

STUD SIZE	MAX NOTCH DEPTH	MAX BORED HOLE DIAMETER
2x4 & 3x4	7/8"	1-3/8"Ø
2x6 & 3x6	1-3/8"	2-1/8"Ø
2x8 & 3x8	1-3/4"	2-7/8"Ø

NON-BEARING WALL STUD PENETRATION

STUD SIZE	MAX NOTCH DEPTH	MAX BORED HOLE DIAMETER
2x4 & 3x4	1-3/8"	2"Ø
2x6 & 3x6	2-1/8"	3-1/4"Ø
2x8 & 3x8	2-7/8"	4-1/4"Ø

NOTES:
1. DO NOT NOTCH OR BORE HOLES IN MORE THAN TWO ADJACENT STUDS WITHOUT APPROVAL BY STRUCTURAL ENGINEER.
2. NOTCHES AND BORED HOLES ARE NOT PERMITTED IN SHEAR WALL COMPRESSION STUDS.

12 TYP WALL STUD PENETRATIONS

NO SCALE

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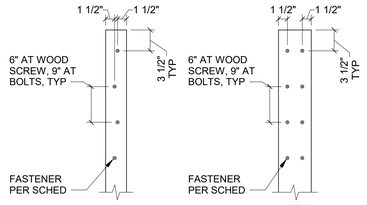
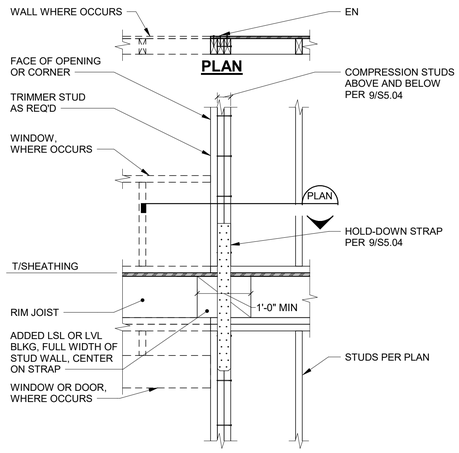
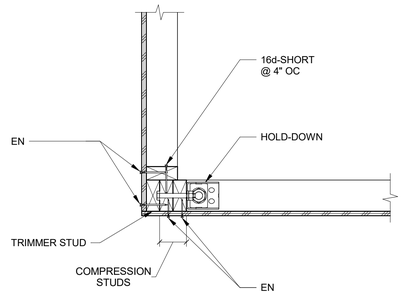
TYPICAL WOOD FRAMING DETAILS

S5.03

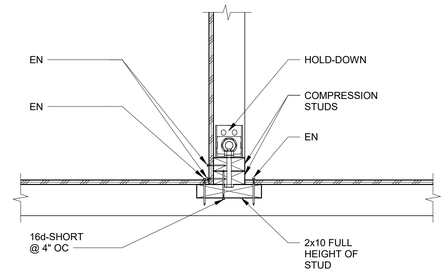
FASTENER SCHEDULE	
ASSEMBLY WIDTH	FASTENERS
2x 2 PLY	SDW22300
2x 3 PLY	SDW22438
2x 4 PLY	SDW22600
> 6"	1/2"Ø BOLT







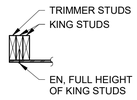
CORNER



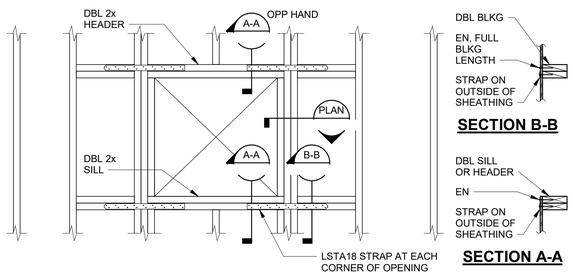
TEE INTERSECTION

1 BUILT-UP COL AND JAMB FASTENING

NO SCALE



PLAN



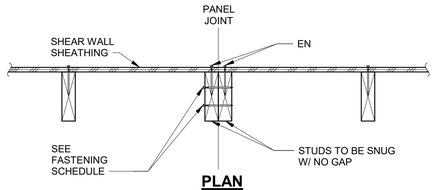
NOTES:
1. WALL SHEATHING NOT SHOWN FOR CLARITY.

4 STRAPS AROUND SHEAR WALL OPENINGS

NO SCALE

2 TYP HOLD-DOWN STRAP AT FLOOR

NO SCALE



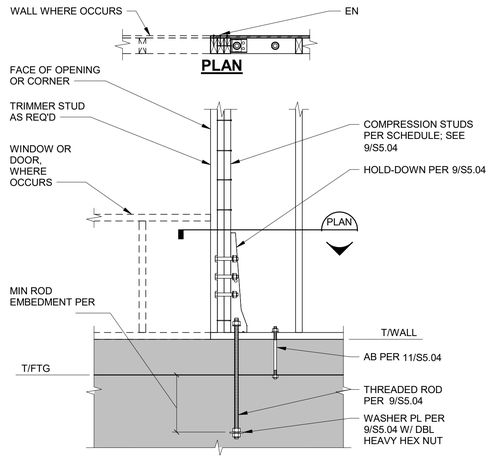
PLAN

STUD FASTENING SCHEDULE AT PANEL JOINTS	
SHEAR WALL TYPE	STUD FASTENING
SW6	(2) 16d-SHORT @ 12" OC
SW4	(2) 16d-SHORT @ 8" OC
SW3	(2) 16d-SHORT @ 6" OC
SW2	(2) 16d-SHORT @ 4" OC
2SW4	(2) 16d-SHORT @ 4" OC
2SW3	(2) 16d-SHORT @ 3" OC

NOTES:
1. THIS DETAIL APPLIES WHERE DOUBLE 2x STUDS ARE USED AT SHEAR WALL PANEL JOINTS IN LIEU OF 3x FRAMING PER NOTE 11 ON 11/S5.04.

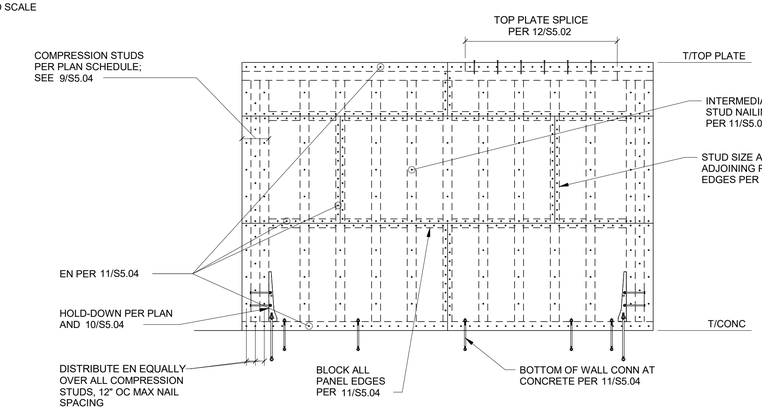
6 STUD FASTENING AT SHEAR WALL PANEL JNTS

NO SCALE



3 TYP COMPRESSION STUD INTERSECTION

NO SCALE

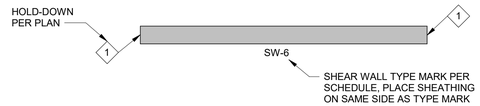


7 TYP SHEAR WALL NAILING

NO SCALE

WOOD SHEAR WALL SCHEDULE								
ALL VALUES ARE BASED ON 2018 IBC AND SDPWS-15 FOR STRUCTURAL PANEL SHEAR WALL WITH FRAMING OF DOUGLAS FIR-LARCH								
TYPE MARK	NUMBER OF SIDES OF SHEATHING	STUD OR BLOCKING SIZE AT ADJOINING PANEL EDGES, SEE NOTE 11	FASTENER SPACING		BOTTOM OF WALL CONNECTION			TOP OF WALL CONNECTION	SEISMIC ALLOWABLE SHEAR (LBS/FT)
			WALL BOUNDARIES AND PANEL EDGES, SEE NOTE 9	INTERMEDIATE STUDS, SEE NOTE 10	AT CONCRETE		AT WOOD FLOOR		
					FIELD OF SLAB, SEE NOTE 8	NEAR EDGE, SEE NOTE 8			
SW-6	1	2x	6" OC	12" OC	5/8"Ø AB @ 48" OC	5/8"Ø AB @ 24" OC	SDS25600 @ 16" OC	SDS25600 @ 16" OC	310
SW-4	1	3x	4" OC	12" OC	5/8"Ø AB @ 48" OC	5/8"Ø AB @ 16" OC	SDS25600 @ 12" OC	SDS25600 @ 12" OC	460
SW-3	1	3x	3" OC	12" OC	5/8"Ø AB @ 32" OC	5/8"Ø AB @ 12" OC	SDS25600 @ 8" OC	SDS25600 @ 8" OC	600
SW-2	1	3x	2" OC	12" OC	5/8"Ø AB @ 24" OC	5/8"Ø AB @ 8" OC	SDS25600 @ 8" OC	SDS25600 @ 8" OC	770
2SW-4	2	3x	4" OC	12" OC	5/8"Ø AB @ 24" OC	5/8"Ø AB @ 8" OC	SDS25600 @ 6" OC	SDS25600 @ 6" OC	920
2SW-3	2	3x	3" OC	12" OC	5/8"Ø AB @ 16" OC	-	SDS25600 @ 4" OC	SDS25600 @ 4" OC	1,200

NOTES:
1. SHEATHING NAIL SIZE SHALL BE 0.148"Ø WITH 1-1/2" MINIMUM PENETRATION INTO FRAMING.
2. REFERENCE STRUCTURAL NOTES FOR SHEATHING TYPE AND THICKNESS.
3. INSTALL SHEATHING PANELS EITHER HORIZONTALLY OR VERTICALLY.
4. PLATE WASHERS FOR SILL BOLTS SHALL BE PER 9/S5.04.
5. WHERE NAIL SPACING IS LESS THAN 4" OC, STAGGER EDGE NAILING 1/2".
6. REFER TO 7/S5.04 FOR SHEAR WALL NAILING DETAIL.
7. PRESSURE TREATED SILL PLATE SHALL BE 3x FRAMING.
8. USE NEAR EDGE SPACING WHEN ANCHOR BOLTS ARE WITHIN 12" OF A SLAB EDGE OR SHAFT OPENING, OR ARE PLACED IN A STEM WALL.
9. WALL BOUNDARIES INCLUDE TOP PLATE, BOTTOM PLATE, SILL PLATE, AND COMPRESSION STUDS, UNO.
10. FASTENER SPACING AT INTERMEDIATE MEMBERS SHALL BE 6" OC WHERE STUD SPACING IS 24" OC.
11. AT CONTRACTOR'S OPTION, (2) 2x STUDS MAY BE USED IN LIEU OF 3x STUD FRAMING. SEE 6/S5.04 FOR DOUBLE STUD FASTENING.
12. WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS SHALL BE STAGGERED SO THAT JOINTS ON THE OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUD.



SHEAR WALL LEGEND

HOLD-DOWN AND COMPRESSION STUD SCHEDULE					
TYPE MARK	HOLD-DOWN	THREADED ROD SIZE	WASHER PL SIZE	MIN ROD EMBEDMENT	COMPRESSION STUDS, SEE NOTE 1
1	HDU2-SDS2.5	5/8"Ø	1/2X2-1/2X0'-2 1/2"	6"	(2) 2x6
2	HDU4-SDS2.5	5/8"Ø	1/2X2-1/2X0'-2 1/2"	6"	(2) 2x6
3	HDU5-SDS2.5	5/8"Ø	1/2X2-1/2X0'-2 1/2"	6"	(2) 2x6
4	HDU11-SDS2.5	1"Ø	1/2X3-1/2X0'-3 1/2"	9"	(3) 2x6
5	HDU14-SDS2.5	1"Ø	1/2X3-1/2X0'-3 1/2"	11"	(3) 2x6

NOTES:
1. FASTEN COMPRESSION STUDS TOGETHER PER 1/S5.04.

9 HOLD-DOWN AND COMPRESSION STUD SCHEDULE

NO SCALE

10 TYP HOLD-DOWN AT FOUNDATION

NO SCALE

11 WOOD SHEAR WALL SCHEDULE

NO SCALE

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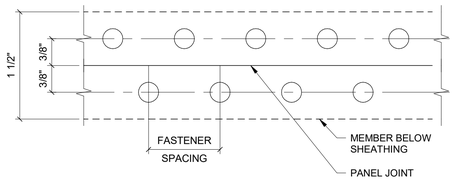
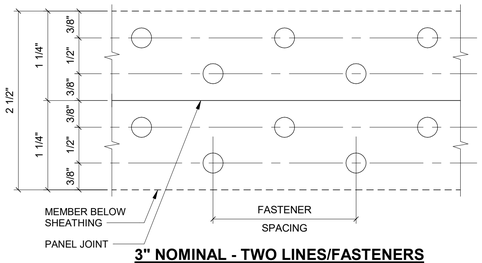
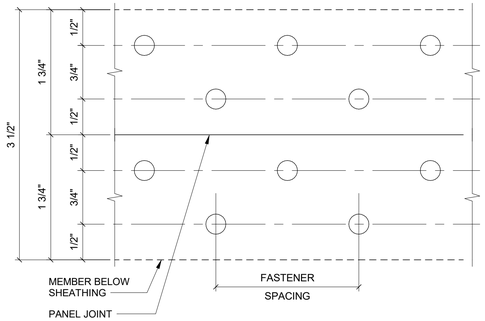


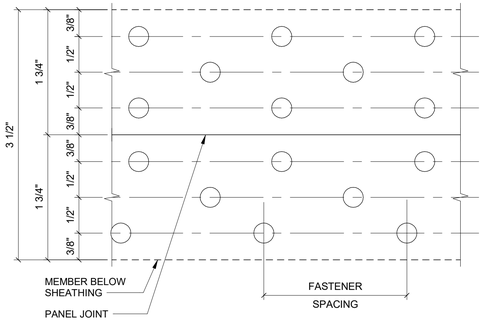
2" NOMINAL - ONE LINE/FASTENERS



3" NOMINAL - TWO LINES/FASTENERS



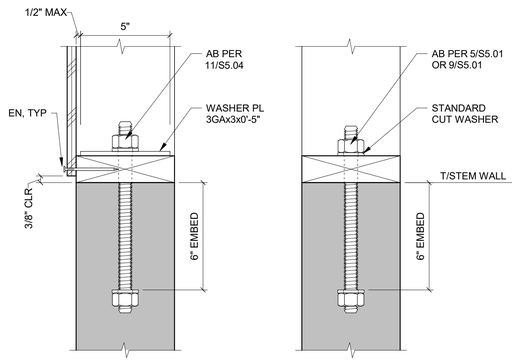
4" NOMINAL - TWO LINES/FASTENERS



4" NOMINAL - THREE LINES/FASTENERS

7 TYP PANEL EDGE FASTENER SPACING

NO SCALE



SHEAR WALL **BEARING WALL**

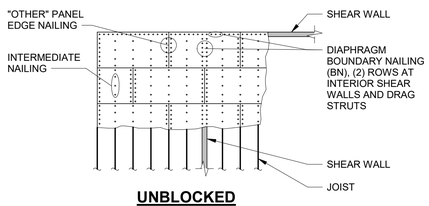
NOTES:
1. CENTER ANCHOR BOLTS ON THE SILL PLATE.

10 TYP ANCHOR BOLTS AT STEM WALL

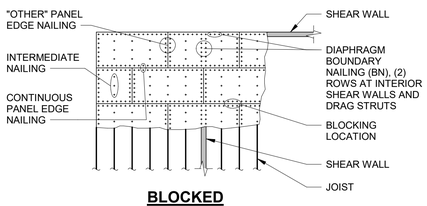
NO SCALE

ROOF/FLOOR DIAPHRAGM NAILING SCHEDULE									
ALL VALUES ARE BASED ON 2018 IBC AND SDPWS-15 FOR STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR-LARCH									
LOCATION	SHEATHING CATEGORY	BLOCKING REQUIRED	MIN FRAMING AND BLKG WIDTH	NUMBER OF LINES OF FASTENERS	FASTENER SPACING				SEISMIC ALLOWABLE SHEAR (LBS/FT)
					DIAPHRAGM BOUNDARIES, SEE NOTE 3	CONTINUOUS PANEL EDGES	OTHER PANEL EDGES	INTERMEDIATE FRAMING MEMBERS	
FLOOR	1-1/8	NO	2x	1	6" OC	-	6" OC	12" OC	215
ROOF	19/32	YES	2x	1	4" OC	4" OC	6" OC	12" OC	480

NOTES:
1. SHEATHING NAIL SIZE SHALL BE 0.148"Ø WITH 1-1/2" MINIMUM PENETRATION INTO FRAMING.
2. ORIENT SHEATHING PERPENDICULAR TO FLOOR/ROOF FRAMING. STAGGER SHEATHING.
3. DIAPHRAGM BOUNDARIES INCLUDE DIAPHRAGM PERIMETER, SHEAR WALLS, AND DRAG STRUTS INDICATED ON PLAN.



UNBLOCKED DIAPHRAGM PLAN



BLOCKED DIAPHRAGM PLAN

11 ROOF/FLOOR DIAPHRAGM NAILING SCHEDULE

NO SCALE

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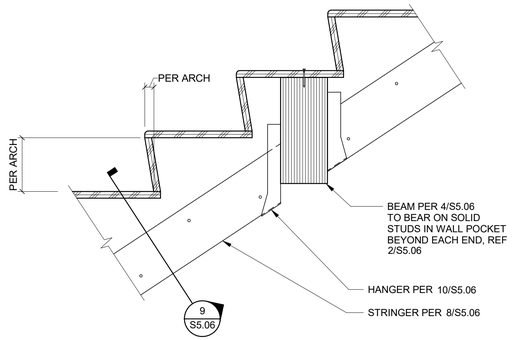
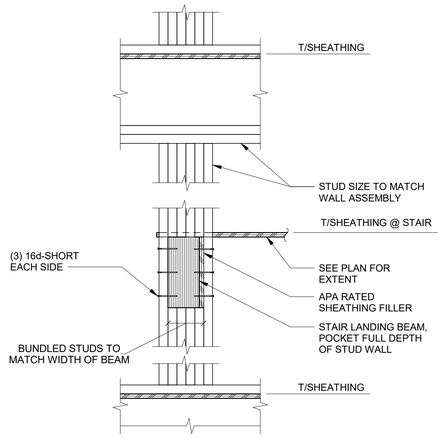
S5.05



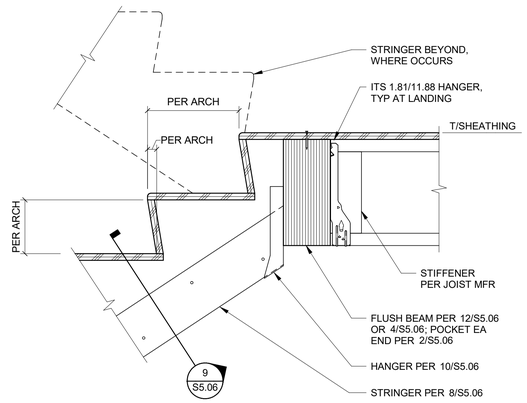
1 STRINGER CONN TO BEAM

NO SCALE



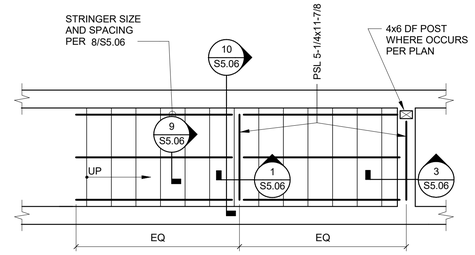
2 STAIR BEAM CONN TO WOOD WALL

NO SCALE



3 STRINGER CONN TO LANDING

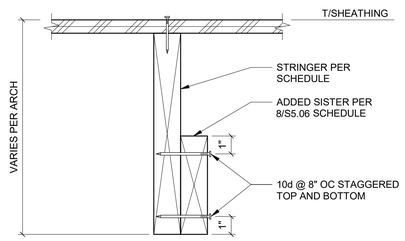
NO SCALE



NOTES:
1. PARTIAL PLAN INTENDED TO SHOW FRAMING RELATIONSHIPS AND TYPICAL DETAILS. SEE ARCHITECTURAL DRAWINGS FOR ACTUAL STAIR CIRCULATION, DIRECTION, AND LANDING ELEVATIONS.

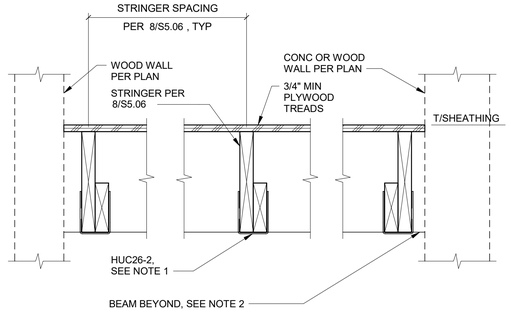
4 TYP STRAIGHT RUN STAIRS

NO SCALE



9 STRINGER SECTION

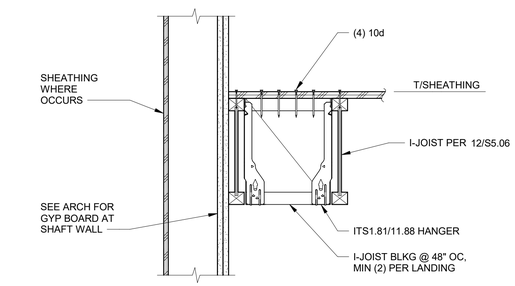
NO SCALE



NOTES:
1. PROVIDE HHUSC48 AT (2) 1-3/4" LSL STRINGERS.
2. AT WOOD WALL, POCKET INTO WALL EACH END PER 2/S5.06. AT CONCRETE WALL, ATTACH PER .

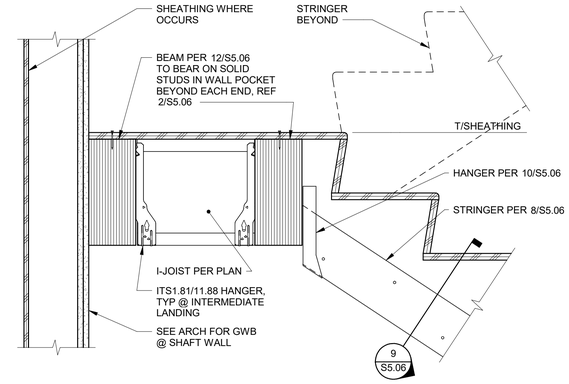
10 STRINGER SECTION

NO SCALE



6 INTERMEDIATE STAIR LANDING - JOIST PARALLEL TO SHAFT WALL

NO SCALE



7 INTERMEDIATE STAIR LANDING

NO SCALE

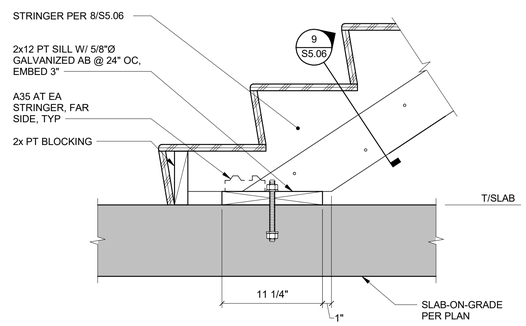
WOOD STRINGER SCHEDULE

STRINGER HORIZONTAL SPAN	MAIN STRINGER SIZE	ADDED SISTER	MAX STRINGER SPACING
UP TO 10'-6"	(2) LSL 1-3/4x14	-	1'-4" OC
UP TO 9'-0"	2x12	2x6	1'-0" OC
UP TO 8'-4"	2x12	2x6	1'-4" OC

NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR STAIR LAYOUT.
2. REFERENCE 9/S5.06 FOR TYPICAL STRINGER SECTION.
3. PROVIDE PRESSURE-TREATED STRINGER WHERE IN CONTACT WITH CONCRETE.

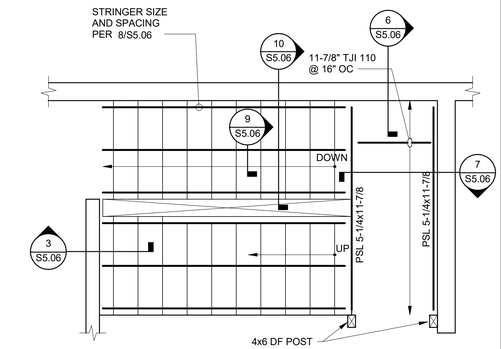
8 WOOD STRINGER SCHEDULE

NO SCALE



11 TYP BOTTOM OF STRINGER CONN TO CONCRETE SLAB

NO SCALE



NOTES:
1. PARTIAL PLAN INTENDED TO SHOW FRAMING RELATIONSHIPS AND TYPICAL DETAILS. SEE ARCHITECTURAL DRAWINGS FOR ACTUAL STAIR CIRCULATION, DIRECTION, AND LANDING ELEVATIONS.
2. STAIR LANDING SHEATHING IS 25/32" T&G PLYWOOD ATTACHED TO SUPPORTING FRAMING WITH 8d @ 6" OC AT ALL PANEL EDGES AND 12" OC AT ALL INTERMEDIATE FRAMING.

12 STAIR WITH MID-LANDING

NO SCALE

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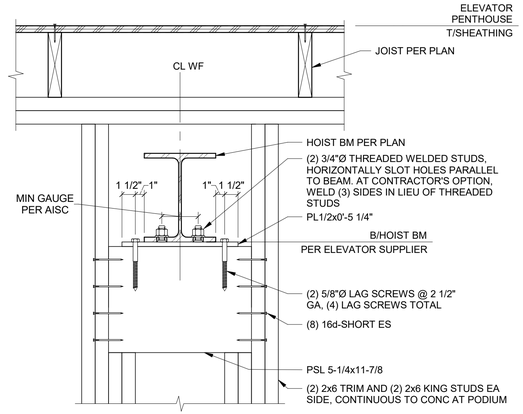
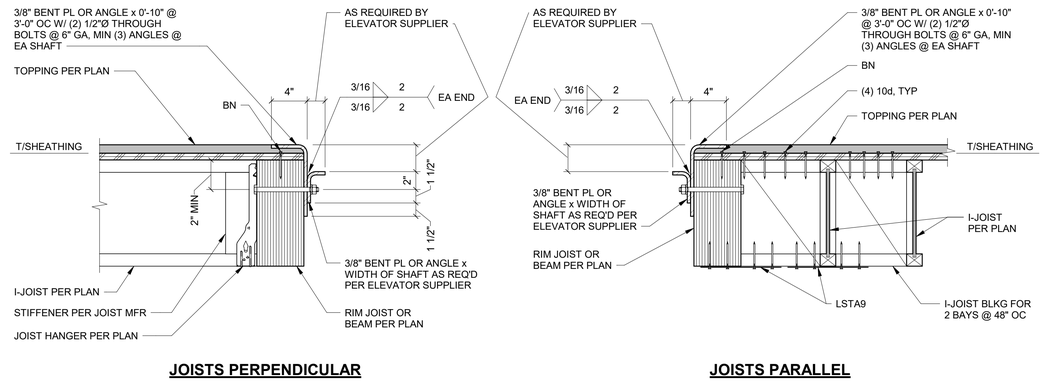
TYPICAL WOOD STAIRS DETAILS

S5.06



4 TYP ELEVATOR HOIST BEAM CONNECTION

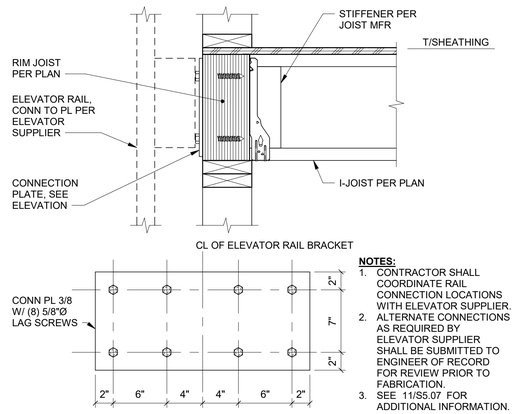
NO SCALE



JOISTS PERPENDICULAR **JOISTS PARALLEL**

7 TYP ELEVATOR DOOR SILL

NO SCALE

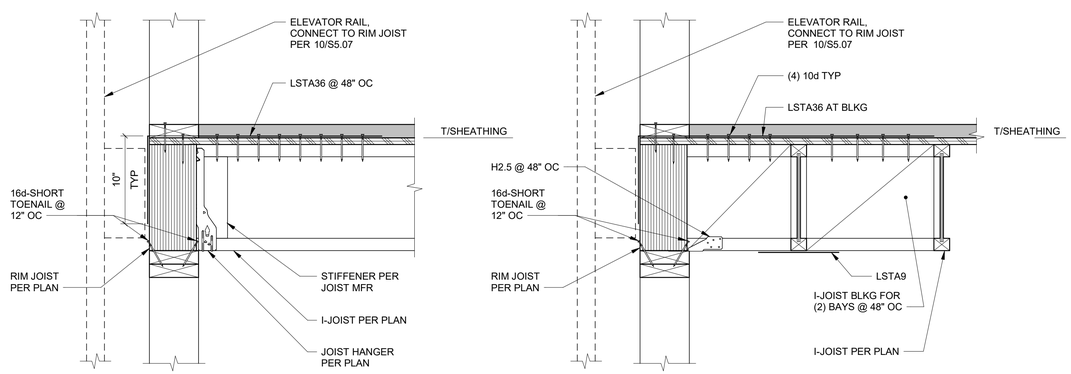


NOTES:
1. CONTRACTOR SHALL COORDINATE RAIL CONNECTION LOCATIONS WITH ELEVATOR SUPPLIER.
2. ALTERNATE CONNECTIONS AS REQUIRED BY ELEVATOR SUPPLIER SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION.
3. SEE 11/S5.07 FOR ADDITIONAL INFORMATION.

CONNECTION PLATE ELEVATION

10 TYP ELEVATOR RAIL CONNECTION PLATE

NO SCALE



PERPENDICULAR FRAMING **PARALLEL FRAMING**

NOTES:
1. NAILS TO STRAPS NOT SHOWN FOR CLARITY.

11 TYP ELEVATOR SHAFT AT GUIDE RAILS

NO SCALE

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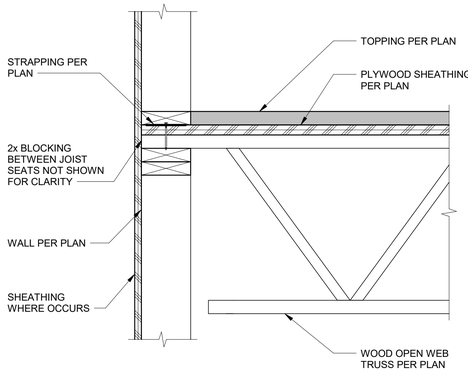
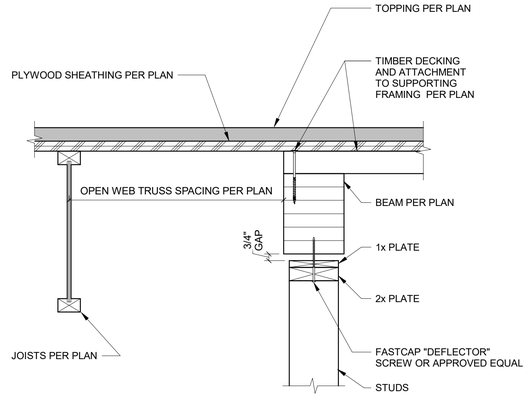
TYPICAL WOOD ELEVATOR DETAILS

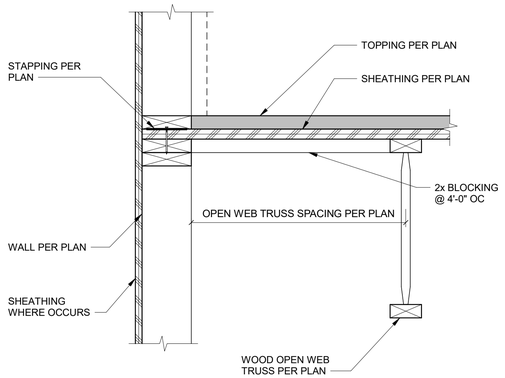
S5.07



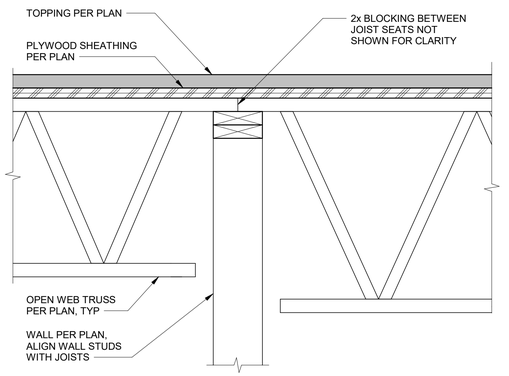
3 SECTION
NO SCALE



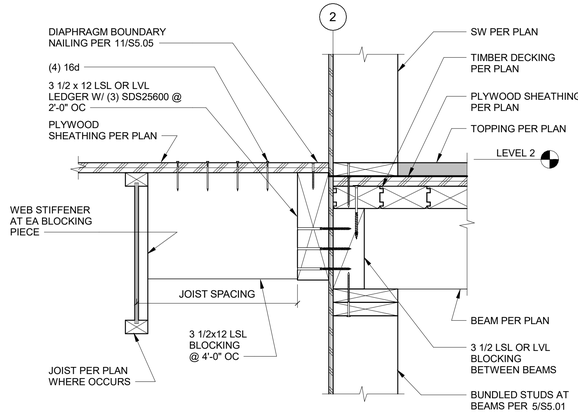
4 SECTION
1 1/2" = 1'-0"



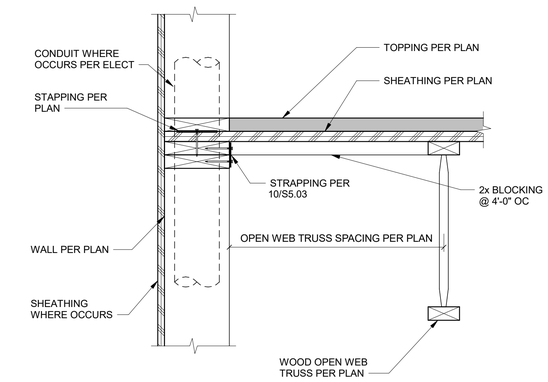
6 SECTION
NO SCALE



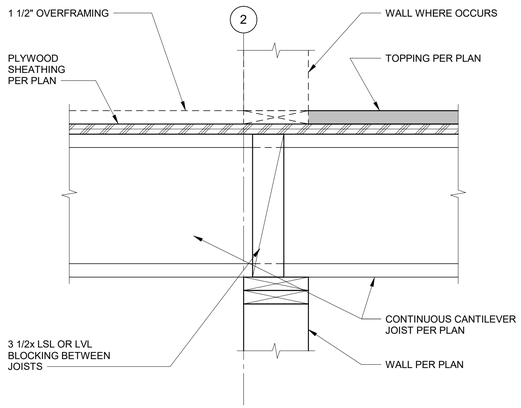
7 SECTION
NO SCALE



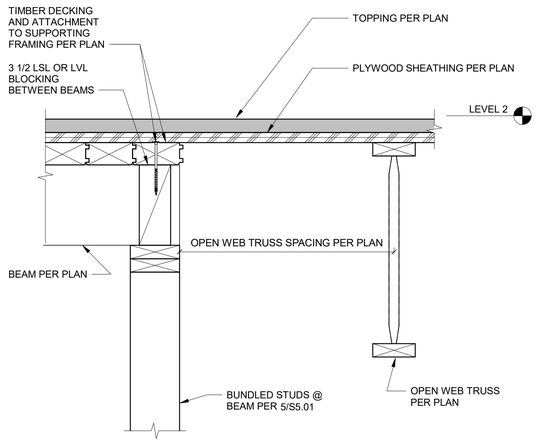
8 SECTION
1 1/2" = 1'-0"



10 SECTION AT DATA ROOM
NO SCALE



11 SECTION
1 1/2" = 1'-0"



12 SECTION
1 1/2" = 1'-0"

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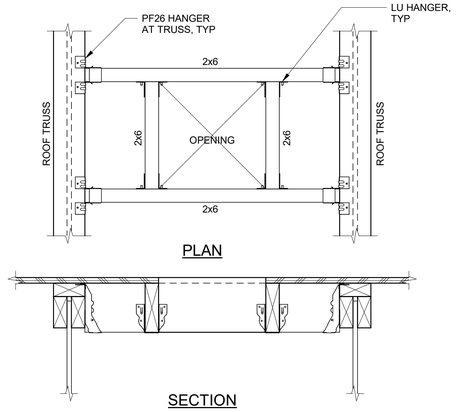
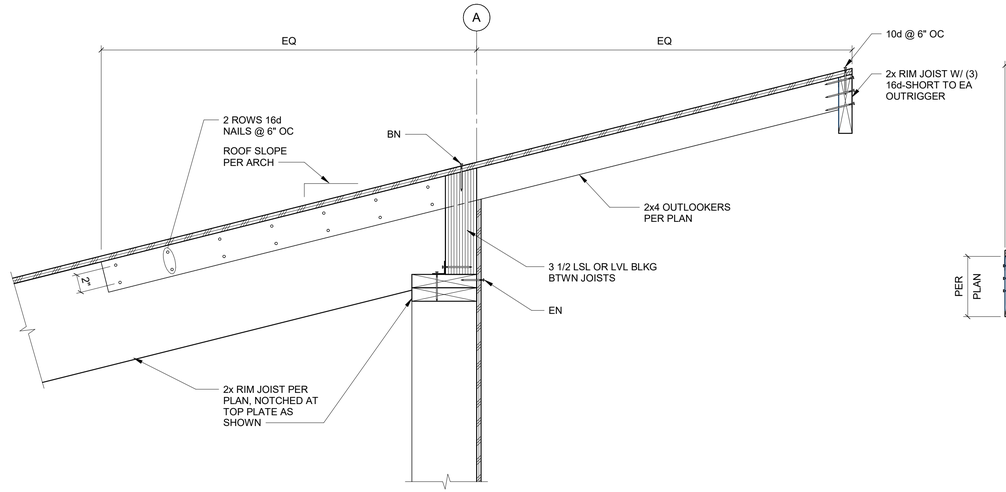
WOOD FLOOR FRAMING DETAILS
S5.11

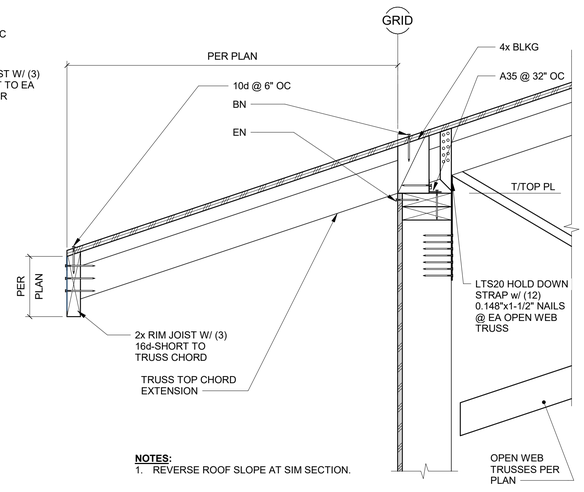


NOTES:
1. MAXIMUM OPEING SIZE TO BE 2'-0" SQUARE.

1 TYP ROOF OPENING FRAMING
1 1/2" = 1'-0"

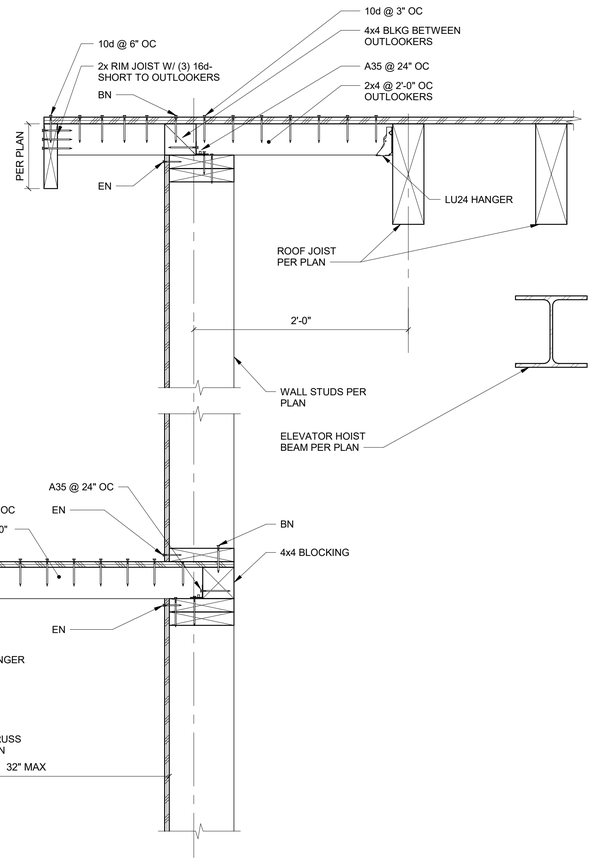


2 ELEVATOR ROOF SECTION
1 1/2" = 1'-0"

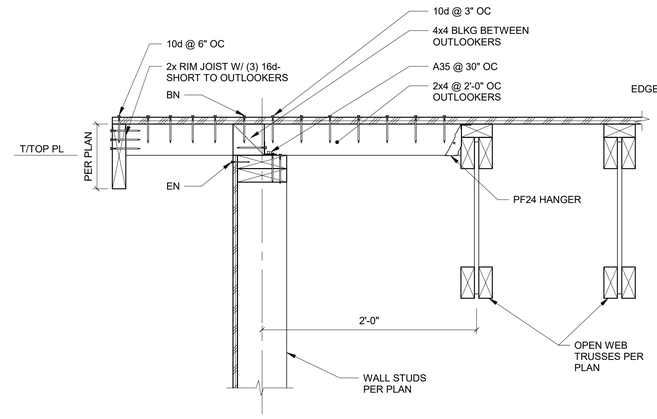


NOTES:
1. REVERSE ROOF SLOPE AT SIM SECTION.

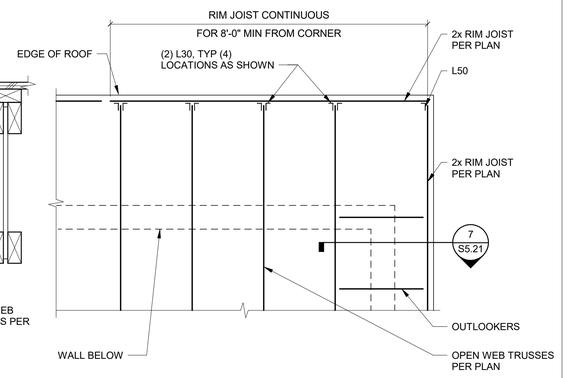
4 TYP TRUSS AT EAVE
1 1/2" = 1'-0"



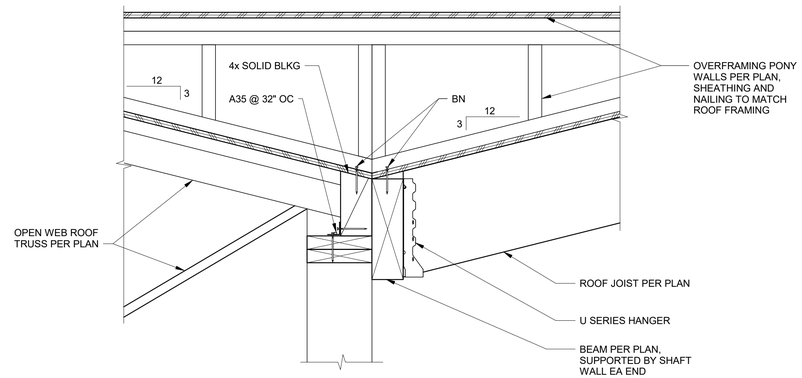
10 ELEVATOR ROOF SECTION
1 1/2" = 1'-0"



7 TYP OUTLOOKER AT END WALL
1 1/2" = 1'-0"



8 TYP ROOF FRAMING AT CORNER
NO SCALE



11 ELEVATOR ROOF SECTION
1 1/2" = 1'-0"

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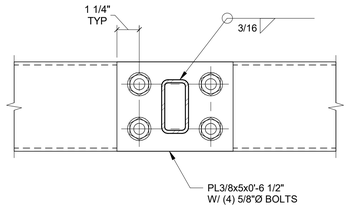
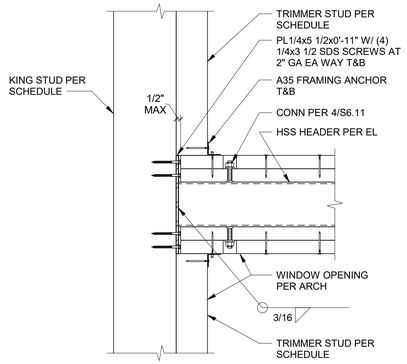
WOOD ROOF
FRAMING DETAILS
S5.21



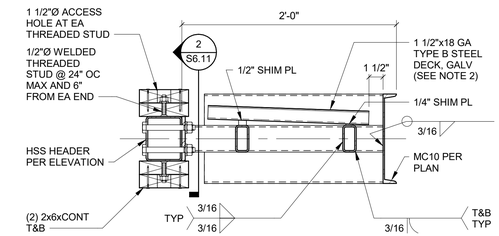
2 SECTION

3" = 1'-0"



3 SUNSHADE HEADER CONNECTION

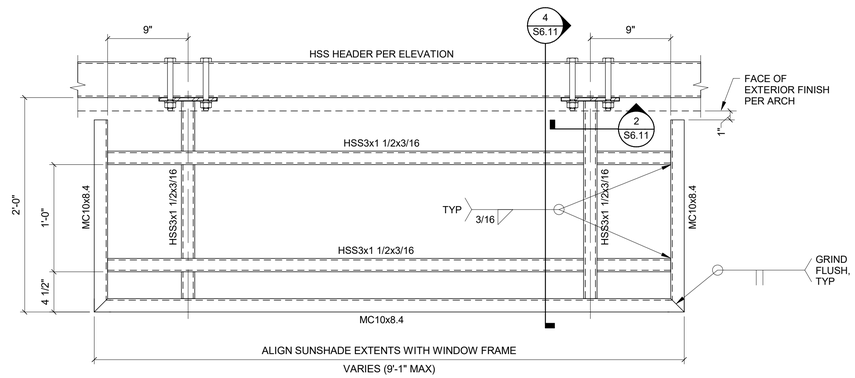
1 1/2" = 1'-0"



NOTES:
1. ATTACH SHIM PLATES TO SUPPORTING FRAMING WITH 3/16" FILLET WELDS 2-12" OC EACH SIDE.
2. ATTACH STEEL DECK TO SHIMS WITH #12-14x3/4" TEKS SCREWS @ 12" OC.

4 SECTION AT SUNSHADE

1 1/2" = 1'-0"



7 TYP SUNSHADE FRAMING PLAN

1 1/2" = 1'-0"

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STEEL DETAILS

S6.11

TULALIP UTILITY BUILDING

SYMBOL LIST

SYMBOL	ABBV.	DESCRIPTION
		BALL VALVE
		GATE VALVE
		CHECK VALVE
		GLOBE VALVE
		GAS COCK
		SOLENOID / MODULATING VALVE
		THREE-WAY VALVE
		RELIEF VALVE
		BALANCING VALVE
		FLOW CONTROL VALVE (SET FOR 1 GPM)
		AUTO-FLOW CONTROL VALVE
	PRV	PRESSURE REDUCING VALVE
		UNION
		THERMOMETER
		PRESSURE GAUGE
		VIBRATION ISOLATOR
		WATER HAMMER ARRESTOR
		STRAINER
	RPBP	BACKFLOW PREVENTION DEVICE
		END CAP
		HOSE BIBB
	VTR	VENT THROUGH ROOF
	CO	CLEANOUT
	W	WASTE
	V	VENT
	CW	COLD WATER
	HW	HOT WATER
	HWC	HOT WATER RECIRCULATION
F	F	FIRE SPRINKLER
C	C, COND	CONDENSATE
TPL	TPL	TRAP PRIMER LINE
		DUCT SECTION - SUPPLY
		DUCT SECTION - RETURN
		DUCT SECTION - EXHAUST
12x8		RECTANGULAR DUCT (INSIDE DIMENSION)
12"ø		ROUND DUCT
12x8	SL	SOUND LINED DUCT (INSIDE DIMENSION)
		FLEXIBLE DUCT
		SPIRAL DUCT
		TURNING VANE
	VD	VOLUME DAMPER
M	MD	MOTORIZED DAMPER
	BDD	BACKDRAFT DAMPER
		SUPPLY DIFFUSER
		RETURN GRILLE
		EXHAUST GRILLE

SYMBOL	ABBV.	DESCRIPTION
T HP-1	T'STAT	THERMOSTAT
	AFF	ABOVE FINISHED FLOOR
	ARCH.	ARCHITECT/ARCHITECTURAL
	BFF	BELOW FINISHED FLOOR
	CDS	CEILING DIFFUSER-SURFACE MOUNTED
	CDL	CEILING DIFFUSER-LAY IN
	CGS	CEILING GRILLE-SURFACE MOUNTED
	CGL	CEILING GRILLE-LAY IN
	COP	COEFFICIENT OF PERFORMANCE
	DWG	DRAWING
	(E), EXIST.	EXISTING ITEMS
	ELECT.	ELECTRICAL
	EC	ELECTRICAL CONTRACTOR
	EER	ENERGY EFFICIENCY RATING
	EFF	EFFICIENCY/EFFICIENT
	FR	FLOOR REGISTER
	GC	GENERAL CONTRACTOR
	GPM	GALLONS PER MINUTE
	HSPF	HEATING SEASONAL PERFORMANCE FACTOR
	HWR	HIGH WALL REGISTER
	HWG	HIGH WALL GRILLE
	I.E.	INVERT ELEVATION
	IPLV	INTEGRATED PART LOAD VALUE
	LWR	LOW WALL REGISTER
	LWG	LOW WALL GRILLE
	MC	MECHANICAL CONTRACTOR
	MECH.	MECHANICAL
	(N)	NEW
	NTS	NOT TO SCALE
	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
	POC	POINT OF CONNECTION
	TYP.	TYPICAL
	U.O.N.	UNLESS OTHERWISE NOTED
WC1		PLUMBING FIXTURE TAG
EF 1		EQUIPMENT TAG
1		FLAG NOTE
10"ø CDL 300 CFM		CONNECTION (NECK) SIZE / TYPE (CEILING DIFF. LAY-IN) / FLOW RATE (CUBIC FEET PER MINUTE)
3" (125)		FIXTURE UNITS or BTUH / PIPE SIZE
1 M1.0		DETAIL NUMBER / SHEET ON WHICH DETAIL IS DRAWN
1 M1.0		SECTION INDICATOR / SHEET ON WHICH SECTION IS DRAWN
1		REVISION TAG

GENERAL NOTES

INSTALL SEISMIC BRACING FOR ALL DUCTWORK, EQUIPMENT AND PIPING PER I.B.C. REQUIREMENTS. PROVIDE ENGINEERED AND STAMPED DESIGN DRAWINGS IF REQUIRED BY IBC. CONTRACTOR TO CONTACT OR HIRE A STRUCTURAL ENGINEER TO DETERMINE BUILDING AND SYSTEM IMPORTANCE FACTORS. UTILIZE ISAT OR OTHER SEISMIC BRACING COMPANY.

INSTALL ALL PIPING ON ROOM SIDE OF BUILDING INSULATION.

MECHANICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND DO NOT NECESSARILY REFLECT EVERY REQUIRED OFF-SET, FITTING OR ACCESSORY.

COORDINATE INSTALLATION OF MECHANICAL SYSTEMS WITH BUILDING STRUCTURE AND ALL OTHER TRADES.

THE MECHANICAL CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BEGINNING WORK IN ORDER TO OBSERVE EXISTING CONDITIONS. VERIFY EXACT SIZE, LOCATION AND CONDITION OF ALL EXISTING SYSTEMS, DUCTS, PIPES, UTILITIES AND BUILDING STRUCTURE.

LOCATE ALL PLUMBING FIXTURES PER ARCHITECTURAL DRAWINGS.

VERIFY VOLTAGES AT THE SITE PRIOR TO ORDERING ANY EQUIPMENT.

CONTRACTOR SHALL PROVIDE WASTE, VENT, WATER AND GAS PIPING, INCLUDING TRAPS, FITTINGS AND STOPS TO COMPLETE EACH EQUIPMENT HOOK-UP TO THE POINT OF FINAL CONNECTION. CONNECTION BETWEEN VARIOUS PIECES OF EQUIPMENT SHALL BE MADE BY THE PLUMBING CONTRACTOR AT THE TIME EQUIPMENT IS BEING INSTALLED.

KITCHEN: CONTRACTOR SHALL PROVIDE WASTE, VENT, WATER AND GAS PIPING, INCLUDING TRAPS, FITTINGS AND STOPS. CONNECTION BETWEEN VARIOUS PIECES OF EQUIPMENT SHALL BE MADE BY PLUMBING CONTRACTOR AT THE TIME EQUIPMENT IS BEING INSTALLED BY THE KITCHEN CONTRACTOR. MECHANICAL CONTRACTOR SHALL INSTALL ALL FITTINGS, VALVES AND CONTROLS FURNISHED WITH KITCHEN EQUIPMENT AS LOOSE ITEMS, AND SHALL PROVIDE ALL INTER-CONNECTING PIPING REQUIRED TO COMPLETE EACH EQUIPMENT HOOK-UP TO THE POINT OF FINAL CONNECTION FOR WATER, WASTE, GAS AND VENT.

WHERE DRYER VENTS EXCEED 35'-0" IN LENGTH, THE DRYER MANUFACTURER SHALL CERTIFY THAT THE EQUIPMENT WILL PERFORM SATISFACTORILY WITH DUCT LENGTHS SHOWN ON DRAWINGS.

PROVIDE WATER HAMMER ARRESTOR ON FAST ACTION VALVES.

ALL MECHANICAL EQUIPMENT LOCATED IN CEILING CAVITIES THAT REQUIRE ELECTRICAL CONNECTION SHALL HAVE AN 8-1/2"x11" LAMINATED SIGN PERMANENTLY MOUNTED ON THE ELECTRICAL ENCLOSURES THAT INDICATES: "THIS EQUIPMENT MUST HAVE A MINIMUM ACCESS OF 36" (LESS THAN 460V) AND 42" (460V AND ABOVE)". NO TRADE SHALL BLOCK THIS SPACE EVEN IF SHOWN ON THE DRAWINGS. INSTALL SIGN PRIOR TO INSTALLATION OF EQUIPMENT.

ALL MECHANICAL EQUIPMENT THAT REQUIRES ACCESS FOR COIL PULL, FILTER CHANGE, MOTOR CHANGE, COMPRESSOR CHANGE, LUBRICATION, SHEAVE AND BELT CHANGE, FAN CHANGE OUT, ETC. SHALL HAVE AN 8-1/2"x11" LAMINATED SIGN PERMANENTLY MOUNTED ON THE EQUIPMENT ACCESS PANELS THAT INDICATES "THIS EQUIPMENT MUST HAVE A MINIMUM ACCESS OF 36". NO TRADE SHALL BLOCK THIS SPACE.

BALANCING DAMPERS SHALL BE PROVIDED ON ALL DUCTS REQUIRED TO BALANCE TO SPECIFIC CFM'S SHOWN ON PLANS.

MAJOR APPLICABLE CODES:

2018 INTERNATIONAL BUILDING CODE WITH WASHINGTON STATE AMENDMENTS
2018 INTERNATIONAL MECHANICAL CODE WITH WASHINGTON STATE AMENDMENTS
2018 UNIFORM PLUMBING CODE WITH WASHINGTON STATE AMENDMENTS
2018 INTERNATIONAL FIRE CODE WITH WASHINGTON STATE AMENDMENTS
2018 WASHINGTON STATE ENERGY CODE

CROSS CONTAMINATION

CROSS CONTAMINATION CONTROL PROVIDED BY REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY (RPBP) PER THE 2018 UPC SECTION 603.

FIRE SPRINKLER NOTES

PROVIDE AND INSTALL A COMPLETE AND OPERATIONAL AUTOMATIC FIRE SPRINKLER SYSTEM PER N.F.P.A. 13. PROVIDE ALL REQUIRED PIPING, HEADS, VALVES, CONTROLS AND ACCESSORIES. PROVIDE ALL REQUIRED CALCULATIONS. OBTAIN ANY REQUIRED PERMITS, AND PAY ALL REQUIRED FEES IN ORDER TO INSTALL A COMPLETE AND OPERATIONAL SYSTEM.

SPRINKLERS SHALL BE INSTALLED IN ALL ROOMS, ALL BLIND SPACES, ALL CANOPIES, OVER-HANGS AND COVERED WALKWAYS.

PROVIDE DRY SYSTEM AS REQUIRED TO PROVIDE COVERAGE IN POTENTIAL FREEZING LOCATIONS.

ELEVATOR EQUIPMENT ROOM

DO NOT RUN ANY DUCTWORK OR PIPING THROUGH AN ELEVATOR EQUIPMENT ROOM.

ELECTRICAL ROOMS

DO NOT RUN ANY DUCTWORK OR PIPING OVER ELECTRICAL PANELS OR EQUIPMENT. COORDINATE ANY DUCTWORK OR PIPING IN ROOM WITH ELECTRICAL.

2018 WSEC TABLE C404.3.1
PIPING VOLUME AND MAXIMUM PIPING LENGTHS

NOMINAL PIPE SIZE	VOLUME (LIQUID OUNCES PER FOOT LENGTH)	MAXIMUM PIPING LENGTH (FEET)	
		PUBLIC LAVATORY FAUCETS	OTHER FIXTURES AND APPLIANCES
1/4	0.33	6	50
5/16	0.5	4	50
3/8	0.75	3	50
1/2	1.5	2	43
5/8	2	1	32
3/4	3	0.5	21
7/8	4	0.5	16
1	5	0.5	13
1-1/4	8	0.5	8
1-1/2	11	0.5	6
2 OR LARGER	18	0.5	4

C404.3.1 MAXIMUM ALLOWABLE PIPE LENGTH METHOD.
THE MAXIMUM ALLOWABLE PIPING LENGTH FROM THE NEAREST SOURCE OF HEATER WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE IN ACCORDANCE WITH THE FOLLOWING. WHERE THE PIPING CONTAINS MORE THAN ONE SIZE OF PIPE, THE LARGEST SIZE OF PIPE WITHIN THE PIPING SHALL BE USED FOR DETERMINING THE MAXIMUM ALLOWABLE LENGTH OF THE PIPING IN TABLE C404.3.1.
1. FOR A PUBLIC LAVATORY FAUCET, USE THE "PUBLIC LAVATORY FAUCETS" COLUMN IN TABLE C404.3.1.
2. FOR ALL OTHER PLUMBING FIXTURES AND PLUMBING APPLIANCES, USE THE "OTHER FIXTURES AND APPLIANCES" COLUMN IN TABLE C404.3.1.

TABLE 313.6 HANGER ROD SIZES

PIPE AND TUBE SIZE (INCHES)	ROD SIZE (INCHES)
1/2 - 4	3/8
5 - 8	1/2
10 - 23	5/8

FOR SI UNITS: 1 INCH = 25.4 MM

2018 WSEC TABLE C403.10.3
MINIMUM PIPE INSULATON THICKNESS (THICKNESS IN INCHES)[a]

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (inches)				
	Conductivity Btu · in./(h · ft2 · °F)[b]	Mean Rating Temperature, °F	<1	1 TO < 1-1/2	1-1/2" TO <4	4 TO <8	≥ 8
>350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251-350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201-250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141-200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105-140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
<40	0.20 - 0.26	75	0.5	1.0	1.0	1.0	1.5

A. FOR PIPING SMALLER THAN 1-1/2 INCH (38 MM) AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1 INCH (25 MM) SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B) BUT NOT TO A THICKNESS LESS THAN 1 INCH (25 MM).
B. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS: T = R((1 + T/R)K/K - 1) WHERE: T = MINIMUM INSULATION THICKNESS, R = ACTUAL OUTSIDE RADIUS OF PIPE, T = INSULATION THICKNESS LISTED IN THE TABLE FOR APPLICABLE FLUID TEMPERATURE AND PIPE SIZE, K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE (BTU x IN/H x FT2 x °F) AND K = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE.
C. FOR DIRECT-BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1-1/2" INCHES SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B BUT NOT TO THICKNESSES LESS THAN 1 INCH.

LAVATORY MIXING VALVE

HOT WATER DELIVERED FROM PUBLIC-USE LAVATORIES SHALL BE LIMITED TO A MAXIMUM TEMPERATURE OF 120°F BY A DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B125.3 THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A CONTROL FOR MEETING THIS PROVISION.

A LAVATORY SHALL BE DEFINED AS A SINK USED PRIMARILY FOR HAND WASHING THAT IS ADJACENT TO WATER CLOSET(S)/URINAL(S).

ALL LAVATORIES SHALL BE CONSIDERED PUBLIC USE EXCEPT FOR THE FOLLOWING:

- LAVATORIES IN RESIDENCES AND APARTMENTS
- LAVATORIES IN HOTEL ROOMS
- LAVATORIES IN PRIVATE HOSPITAL ROOMS

TABLE 313.3 HANGER AND SUPPORTS

MATERIALS	TYPES OF JOINTS	HORIZONTAL	VERTICAL
CAST-IRON HUBLESS	SHIELDED COUPLING	EVERY OTHER JOINT, UNLESS OVER 4 FEET THEN SUPPORT EACH JOINT[1,2,3,4]	BASE AND EACH FLOOR, NOT TO EXCEED 15 FEET
COPPER & COPPER ALLOYS	SOLDERED, BRAZED, THREADED, OR MECHANICAL	1-1/2" INCHES AND SMALLER, 6 FEET; 2 INCHES AND LARGER, 10 FEET	EACH FLOOR, NOT TO EXCEED 10 FEET[3]
SCHEDULE 40 PVC AND ABS DWV	SOLVENT CEMENTED	ALL SIZES, 4 FEET; ALLOW FOR EXPANSION EVERY 30 FEET[3]	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES; PROVIDE FOR EXPANSION EVERY 30 FEET
PEX	COLD EXPANSION, INSERT, AND COMPRESSION	1 INCH AND SMALLER, 32 INCHES; 1-1/4 INCHES AND LARGER, 4 FEET	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES

FOR SI UNIT: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM

NOTES:
1. SUPPORT ADJACENT TO JOINT, NOT TO EXCEED 18 INCHES (457 MM).
2. BRACE NOT TO EXCEED 40 FOOT (12 192 MM) INTERVALS TO PREVENT HORIZONTAL MOVEMENT.
3. SUPPORT AT EACH HORIZONTAL BRANCH CONNECTION.
4. HANGERS SHALL NOT BE PLACED ON THE COUPLING.
5. VERTICAL WATER LINES SHALL BE PERMITTED TO B SUPPORTED IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRINCIPLES WITH REGARD TO EXPANSION AND CONTRACTION, WHERE FIRST APPROVED BY THE AUTHORITY HAVING JURISDICTION.

LINE VOLTAGE - HVAC CONTROLS AND INTERLOCKS:
CONDUIT, CONDUCTORS AND CONNECTIONS BY ELECTRICAL CONTRACTOR.

LOW VOLTAGE HVAC CONTROLS AND INTERLOCKS:
LOW VOLTAGE CONDUIT SHALL BE BIDDER DESIGNED THAT IS INCLUDED IN THE MECHANICAL CONTRACTOR'S SCOPE

CONDENSATE PIPING: CONDENSATE PIPING SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR. PC TO COORDINATE WITH MECHANICAL CONTRACTOR TO LOCATE ALL SOURCES OF CONDENSATE. PIPING SHALL BE ROUTED TO NEAREST ACCEPTABLE TAILPIECE, MOP SINK, HUB DRAIN, ETC. MC TO PROVIDE ANY CONDENSATE PUMP NECESSARY TO FACILITATE CONDENSATE REMOVAL.

DRAWING INDEX

SHEET	DESCRIPTION
M1.0	COVER SHEET
M1.1	ENERGY CODE NOTES/SCHEDULES
M1.2	SCHEDULES
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M2.0	BELOW SLAB PLAN - PLUMBING
M2.1	FIRST FLOOR PLAN - PLUMBING
M2.2	SECOND FLOOR PLAN - PLUMBING
M3.0	FIRST FLOOR PLAN - HVAC
M3.1	SECOND FLOOR PLAN - HVAC
M3.2	ROOF PLAN - HVAC
M4.0	DETAILS
M4.1	DETAILS

FREIHEIT ARCHITECTURE

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STATE OF WASHINGTON
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REGISTERED
PROFESSIONAL ENGINEER

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NO.	DESCRIPTION	DATE
	BID ISSUE	03/21/2024

PROJECT NO.: 0070800.01
PROJECT MGR.: M. AZEEM
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PRINTED

COVER SHEET
M1.0

2018 WASHINGTON STATE ENERGY CODE NOTES

NOTE: ITEMS IN (PARENTHESIS) REFERENCE CODE SECTIONS FROM THE 2018 WASHINGTON STATE ENERGY CODE.

(C403.2 PROVISIONS APPLICABLE TO ALL MECHANICAL SYSTEMS) CONTRACTOR SHALL PROVIDE ALL MECHANICAL SYSTEMS AND EQUIPMENT, SERVING THE BUILDING HEATING, COOLING OR VENTILATING NEEDS, WHICH COMPLY WITH SECTIONS C403.2.1 AND C403.2.2. WHERE A BUILDING'S MECHANICAL SYSTEM IS ADDRESSED IN SECTIONS C403.3 THROUGH C403.13, SUCH ELEMENTS SHALL COMPLY WITH THOSE SECTIONS.

(C403.2.1 ZONE ISOLATION REQUIRED) HVAC SYSTEMS SERVING ZONES THAT ARE INTENDED TO OPERATE OR BE OCCUPIED NONSIMULTANEOUSLY SHALL BE DIVIDED INTO ISOLATION AREAS. ZONES MAY BE GROUPED INTO A SINGLE ISOLATION AREA PROVIDED IT DOES NOT EXCEED 25,000 SQUARE FEET OF CONDITIONED FLOOR AREA NOR INCLUDE MORE THAN ONE FLOOR. EACH ISOLATION AREA SHALL BE EQUIPPED WITH ISOLATION DEVICES AND CONTROLS CONFIGURED TO AUTOMATICALLY SHUT OFF THE SUPPLY OF CONDITIONED AIR AND OUTDOOR AIR TO AND EXHAUST AIR FROM THE ISOLATION AREA. EACH ISOLATION AREA SHALL BE CONTROLLED INDEPENDENTLY BY A DEVICE MEETING THE REQUIREMENTS OF SECTION C403.4.2.2. CENTRAL SYSTEMS AND PLANTS SHALL BE PROVIDED WITH CONTROLS AND DEVICES THAT WILL ALLOW SYSTEM AND EQUIPMENT OPERATION FOR ANY LENGTH OF TIME WHILE SERVING ONLY THE SMALLEST ISOLATION AREA SERVED BY THE SYSTEM OR PLANT

(C403.3.2 HVAC EQUIPMENT PERFORMANCE REQUIREMENTS) CONTRACTOR SHALL PROVIDE EQUIPMENT WHICH MEET THE MINIMUM EFFICIENCY REQUIREMENTS OF TABLES C403.2.3(1) THROUGH C403.2.3(12) WHEN TESTED AND RATED IN ACCORDANCE WITH THE APPLICABLE TEST PROCEDURE. PLATE-TYPE LIQUID-TO-LIQUID HEAT EXCHANGERS SHALL MEET THE MINIMUM REQUIREMENTS OF TABLE C403.3.2(10).

GAS-FIRED AND OIL-FIRED FORCED AIR FURNACES WITH 225,000 BTU/H OR GREATER SHALL HAVE AN INTERMITTENT IGNITION OR INTERRUPTED DEVICE (IID), AND HAVE EITHER MECHANICAL DRAFT (INCLUDING POWER VENTING) OR A FLUE DAMPER. A VENT DAMPER IS AN ACCEPTABLE ALTERNATIVE TO A FLUE DAMPER FOR FURNACES WHERE COMBUSTION AIR IS DRAWN FROM THE CONDITIONED SPACE. ALL FURNACES 225,000 BTU/H (65 KW), INCLUDING ELECTRIC FURNACES, THAT ARE NOT LOCATED WITHIN THE CONDITIONED SPACE SHALL HAVE JACKET LOSSES NOT EXCEEDING 0.75 PERCENT OF THE INPUT RATING. CHILLED WATER PLANTS AND BUILDINGS WITH MORE THAN 500 TONS TOTAL CAPACITY SHALL NOT HAVE MORE THAN 100 TONS PROVIDED BY AIR-COOLED CHILLERS.

(C403.3.3.5 DEDICATED OUTDOOR AIR SYSTEMS (DOAS) CONTRACTOR SHALL PROVIDE A DEDICATED OUTDOOR AIR SYSTEM (DOAS) WHICH DELIVERS 100 PERCENT OUTDOOR AIR WITHOUT REQUIRING OPERATION OF THE HEATING AND COOLING SYSTEM FANS FOR VENTILATION AIR DELIVERY FOR OCCUPANCIES AS SHOWN IN TABLE C403.3.5.

(C403.4 HVAC SYSTEM CONTROLS) CONTRACTOR SHALL PROVIDE EACH HEATING AND COOLING SYSTEM WITH THERMOSTATIC CONTROLS AS SPECIFIED IN SECTIONS C403.4.1 THROUGH C403.4.11 AND SHALL BE CAPABLE OF AND CONFIGURED TO IMPLEMENT ALL REQUIRED CONTROL FUNCTIONS IN THIS CODE.

(C403.4.1 THERMOSTATIC CONTROLS) CONTRACTOR SHALL PROVIDE INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN EACH ZONE. CONTROLS IN THE SAME ZONE OR IN NEIGHBORING ZONES CONNECTED BY OPENINGS LARGER THAN 10% OF THE FLOOR AREA OF EITHER ZONE SHALL NOT ALLOW FOR SIMULTANEOUS HEATING AND COOLING. AT A MINIMUM, EACH FLOOR OF A BUILDING SHALL BE CONSIDERED AS A SEPARATE ZONE. CONTROLS ON SYSTEMS REQUIRED TO HAVE ECONOMIZERS AND SERVING SINGLE ZONES SHALL HAVE MULTIPLE COOLING STAGE CAPABILITY AND ACTIVATE THE ECONOMIZER WHEN APPROPRIATE AS THE FIRST STAGE OF COOLING. SEE SECTION C403.5 FOR FURTHER ECONOMIZER REQUIREMENTS. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, AT LEAST ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

(C403.4.1.2 DEADBAND) CONTRACTOR SHALL PROVIDE A TEMPERATURE RANGE OR DEADBAND OF AT LEAST 5°F (2.8°C), WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS CAPABLE OF BEING SHUT OFF OR REDUCED TO A MINIMUM, WHERE ZONE THERMOSTATIC CONTROLS ARE USED TO CONTROL BOTH HEATING AND COOLING.

(C403.4.2 OFF-HOUR CONTROLS) CONTRACTOR SHALL PROVIDE THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM FOR ALL OCCUPANCIES OTHER THAN GROUP R.

(C403.4.2.1 THERMOSTATIC SETBACK CAPABILITIES) THERMOSTATIC SETBACK CONTROLS SHALL HAVE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

(C403.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN CAPABILITIES) AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CAPABLE OF BEING ADJUSTED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

(C403.4.2.3 AUTOMATIC START CAPABILITIES) AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CAPABLE OF AUTOMATICALLY ADJUSTING THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.

(C403.2.2 VENTILATION AND EXHAUST) CONTRACTOR SHALL PROVIDE VENTILATION, EITHER NATURAL OR MECHANICAL, IN ACCORDANCE WITH CHAPTER 4 OF THE INTERNATIONAL MECHANICAL CODE. WHERE MECHANICAL VENTILATION IS PROVIDED, THE SYSTEM SHALL BE CONFIGURED TO PROVIDE NO GREATER THAN 150 PERCENT OF THE MINIMUM OUTDOOR AIR REQUIRED BY CHAPTER 4 OF THE INTERNATIONAL MECHANICAL CODE OR OTHER APPLICABLE CODE OR STANDARD, WHICHEVER IS GREATER.

(C403.7.8.1 SHUTOFF DAMPERS FOR BUILDING ISOLATION) OUTDOOR AIR SUPPLY, EXHAUST OPENINGS AND RELIEF OUTLETS AND STAIRWAY AND ELEVATOR HOISTWAY SHAFT VENTS SHALL BE PROVIDED WITH CLASS I MOTORIZED DAMPERS. SEE SECTIONS C403.10.1 AND C403.10.2 FOR DUCTWORK INSULATION REQUIREMENTS UPSTREAM AND DOWNSTREAM OF THE SHUTOFF DAMPER.

EXCEPTIONS:
1.1 RELIEF DAMPERS SERVING SYSTEMS LESS THAN 5,000 CFM TOTAL SUPPLY SHALL BE PERMITTED IN BUILDINGS 3 STORIES OR LESS
1.2 GRAVITY (NONMOTORIZED) DAMPERS WHERE THE DESIGN OUTDOOR INTAKE OR EXHAUST DOES NOT EXCEED 400 CFM.
1.3 SYSTEMS SERVING AREAS WHICH REQUIRE CONTINUOUS OPERATION FOR 24/7 OCCUPANCY SCHEDULES.

(C403.10.1.1) CONTRACTOR SHALL PROVIDE DUCTS, SHAFTS AND PLENUMS CONVEYING OUTSIDE AIR FROM THE EXTERIOR OF THE BUILDING TO THE MECHANICAL SYSTEM WHICH MEET ALL AIR LEAKAGE AND BUILDING ENVELOPE INSULATION REQUIREMENTS OF SECTION C402, PLUS BUILDING ENVELOPE VAPOR CONTROL REQUIREMENTS FROM THE INTERNATIONAL BUILDING CODE, EXTENDING CONTINUOUSLY FROM THE BUILDING EXTERIOR TO AN AUTOMATIC SHUTOFF DAMPER OR HEATING OR COOLING EQUIPMENT. FOR THE PURPOSES OF BUILDING ENVELOPE INSULATION REQUIREMENTS, DUCT SURFACES SHALL BE INSULATED WITH THE MINIMUM INSULATION VALUES IN TABLE C403.10.1.1.

C403.10.1.2 CONTRACTOR SHALL PROVIDE ALL OTHER SUPPLY AND RETURN AIR DUCTS AND PLENUMS WITH A MINIMUM OF R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND A MINIMUM OF R-8 INSULATION WHERE LOCATED OUTSIDE THE BUILDING. WHERE LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY MINIMUM INSULATION VALUE AS REQUIRED FOR EXTERIOR WALLS BY SECTION C402.1.3.

SUPPLY DUCTS WHICH CONVEY SUPPLY AIR AT TEMPERATURES LESS THAN 55°F OR GREATER THAN 105°F SHALL BE INSULATED WITH A MINIMUM R-VALUE IN ACCORDANCE WITH TABLE C403.10.1.2. ALL DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH SECTION 603.9 OF THE INTERNATIONAL MECHANICAL CODE.

(C403.10.2.1 LOW-PRESSURE DUCT SYSTEMS) CONTRACTOR SHALL PROVIDE ALL LONGITUDINAL AND TRANSVERSE JOINTS, SEAMS AND CONNECTIONS OF SUPPLY AND RETURN DUCTS OPERATING AT A STATIC PRESSURE LESS THAN OR EQUAL TO 2 INCHES WATER GAUGE (W.G.) (500 PA) WITH SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS EMBEDDED-FABRIC SYSTEMS OR TAPES INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PRESSURE CLASSIFICATIONS SPECIFIC TO THE DUCT SYSTEM SHALL BE CLEARLY INDICATED ON THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE.

(C403.10.3 PIPING INSULATION) CONTRACTOR SHALL PROVIDE ALL PIPING SERVING AS PART OF A HEATING OR COOLING SYSTEM WITH THERMAL INSULATION IN ACCORDANCE WITH TABLE C403.10.3.

(C403.10.3.1 PROTECTION OF PIPING INSULATION) CONTRACTOR SHALL PROTECT ALL PIPING INSULATION EXPOSED TO WEATHER FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVES TAPE SHALL NOT BE PERMITTED.

(C403.13 MECHANICAL SYSTEMS COMMISSIONING AND COMPLETION REQUIREMENTS) MECHANICAL SYSTEMS SHALL BE COMMISSIONED AND COMPLETED IN ACCORDANCE WITH SECTION C408.

(C403.8.3 FAN EFFICIENCY) CONTRACTOR SHALL PROVIDE FANS WITH A FAN EFFICIENCY GRADE (FEG) OF 67 OR HIGHER PER AMCA 205. THE TOTAL EFFICIENCY AT DESIGN CONDITIONS SHALL BE WITHIN 15 PERCENT OF THE MAXIMUM TOTAL EFFICIENCY.

EXCEPTION: THE FOLLOWING FANS ARE NOT REQUIRED TO HAVE A FAN EFFICIENCY GRADE:
1. INDIVIDUAL FANS WITH A MOTOR NAMEPLATE HORSEPOWER OF 5 HP OR LESS THAT ARE NOT PART OF A GROUP OPERATED AS THE FUNCTIONAL EQUIVALENT OF A SINGLE FAN.
2. MULTIPLE FANS IN SERIES OR PARALLEL THAT HAVE A COMBINED MOTOR NAMEPLATE HORSEPOWER OF 5 HP OR LESS AND ARE OPERATED AS THE FUNCTIONAL EQUIVALENT OF A SINGLE FAN.
3. FANS THAT ARE PART OF EQUIPMENT COVERED UNDER SECTION C403.3.2.
4. FANS INCLUDED IN AN EQUIPMENT PACKAGE CERTIFIED BY AN APPROVED AGENCY FOR AIR OR ENERGY PERFORMANCE.
5. POWERED WALL/ROOF VENTILATORS.
6. FANS OUTSIDE THE SCOPE OF AMCA 205.
7. FANS THAT ARE INTENDED TO OPERATE ONLY DURING EMERGENCY CONDITIONS.

(C403.8.5.1 FAN AIRFLOW CONTROL) CONTRACTOR SHALL PROVIDE EACH COOLING SYSTEM LISTED IN TABLE C403.8.5.1 WITH CONTROL TO VARY THE INDOOR FAN AIRFLOW AS A FUNCTION OF LOAD AND ADDITIONAL REQUIREMENTS LISTED IN THIS SECTION.

(C405.8 ELECTRIC MOTOR EFFICIENCY) ALL ELECTRIC MOTORS, FRACTIONAL OR OTHERWISE, SHALL MEET THE MINIMUM EFFICIENCY REQUIREMENTS OF TABLES C405.8(1) THROUGH C405.8(4) WHEN TESTED AND RATED IN ACCORDANCE WITH DOE 10 CFR.

FRACTIONAL HP FAN MOTORS THAT ARE 1/12 HP OR GREATER AND LESS THAN 1 HP WHICH ARE NOT COVERED BY TABLES C405.8(3) AND C405.8(4) SHALL BE ELECTRONICALLY COMMUTATED MOTORS OR SHALL HAVE A MINIMUM MOTOR EFFICIENCY OF 70% WHEN RATED IN ACCORDANCE WITH DOE 10CFR431.

(C403.5 ECONOMIZERS) AIR ECONOMIZERS SHALL BE PROVIDED ON ALL NEW SYSTEMS INCLUDING THOSE SERVING COMPUTER SERVER ROOMS, ELECTRONIC EQUIPMENT, RADIO EQUIPMENT, AND TELEPHONE SWITCHGEAR. ECONOMIZERS SHALL COMPLY WITH SECTIONS C403.5.1 THROUGH C403.5.5.

EXCEPTION: ECONOMIZERS ARE NOT REQUIRED FOR THE SYSTEMS LISTED BELOW:
1. SYSTEMS COMPLYING WITH SECTION C403.6 DEDICATED OUTDOOR AIR SYSTEMS (DOAS) WITH YEAR- ROUND COOLING LOADS FROM LIGHTS AND EQUIPMENT OF LESS THAN 5 WATTS PER SQUARE FOOT.

(C406.1 ADDITIONAL ENERGY EFFICIENCY CREDIT REQUIREMENTS) NEW BUILDINGS AND CHANGES IN SPACE CONDITIONING, CHANGE OF OCCUPANCY AND BUILDING ADDITIONS IN ACCORDANCE WITH CHAPTER 5 SHALL COMPLY WITH SUFFICIENT PACKAGES FROM TABLE C406.1 SO AS TO ACHIEVE A MINIMUM NUMBER OF 6 CREDITS.

2018 WSEC TABLE C403.10.1.1
OUTDOOR AIR DUCTWORK INSULATION

DUCT SYSTEM	DUCT LOCATION AND USE	CLIMATE ZONE	AIRFLOW	MINIMUM INSTALLED DUCT INSULATON R-VALUE[a, b]	NOTES
OUTDOOR AIR	INSIDE CONDITIONED SPACE	4C AND 5B	< 2800 CFM	R-7	SEE EXCEPTION 1 TO SECTION C403.10.1.1 FOR ADDITIONAL DETAILS

a. INSULATION R-VALUES, MEASURED IN h x ft²F/BTU, ARE FOR THE INSULATION AS INSTALLED AND DO NOT INCLUDE FILM RESISTANCE. THE REQUIRED MINIMUM THICKNESSES DO NOT CONSIDER WATER VAPOR TRANSMISSION AND POSSIBLE SURFACE CONDENSATION. INSULATION RESISTANCE MEASURED ON A HORIZONTAL PLAN IN ACCORDANCE WITH ASTM C518 AT A MEAN TEMPERATURE OF 75°F AT THE INSTALLED THICKNESS.
b. SEE INTERNATIONAL MECHANICAL CODE SECTIONS 603.12 AND 604 FOR FURTHER DETAILS ON DUCT INSULATION REQUIREMENTS.

2018 WSEC TABLE C403.10.1.2
SUPPLY, RETURN, EXHAUST, AND RELIEF AIR DUCTWORK INSULATION

DUCT SYSTEM	DUCT LOCATION AND USE	CLIMATE ZONE	MINIMUM INSTALLED DUCT INSULATON R-VALUE[a, b]	NOTES
SUPPLY AIR	WITHIN CONDITIONED SPACE THAT THE DUCT DIRECTLY SERVES WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS LESS THAN 55°F OR GRATER THAN 105°F	4C AND 5B	NONE	SEE SECTION C403.10.1.2 FOR DETAILS
SUPPLY AIR	WITHIN CONDITIONED SPACE WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS 55°F OR GREATER AND 105°F OR LESS	4C AND 5B	NONE	
RETURN OR EXHAUST AIR	WITHIN CONDITIONED SPACE , DOWNSTREAM OF AN ENERGY RECOVERY MEDIA, UPSTREAM OF AN *AUTOMATIC* SHUTOFF DAMPER	4C	R-8	
RELIEF OR EXHAUST AIR	CONDITIONED SPACE AND DOWNSTREAM OF AND *AUTOMATIC* SHUTOFF DAMPER	4C AND 5B	R-16	

a. INSULATION R-VALUES, MEASURED IN h x ft²F/BTU, ARE FOR THE INSULATION AS INSTALLED AND DO NOT INCLUDE FILM RESISTANCE. THE REQUIRED MINIMUM THICKNESSES DO NOT CONSIDER WATER VAPOR TRANSMISSION AND POSSIBLE SURFACE CONDENSATION. INSULATION RESISTANCE MEASURED ON A HORIZONTAL PLAN IN ACCORDANCE WITH ASTM C518 AT A MEAN TEMPERATURE OF 75°F AT THE INSTALLED THICKNESS.
b. SEE INTERNATIONAL MECHANICAL CODE SECTIONS 603.12 AND 604 FOR FURTHER DETAILS ON DUCT INSULATION REQUIREMENTS.
c. INCLUDES ATTICS ABOVE INSULATED CEILINGS, PARKING GARAGES AND CRAWL SPACES

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	LOCAL CONNECTIONS			
		W	V	HW	CW
CW1	CLOTHES WASHING MACHINE - O.F.C.I. PROVIDE SHOCK ARRESTORS AND RECESSED WALL BOX WITH DRAIN OUTLET AND TWO WATER VALVES GUY GRAY B-200 WALL BOX.	2"	1-1/2"	3/4"	3/4"
DF1	ELECTRIC WATER COOLER WITH BOTTLE FILLER (ADA, SINGLE) - ELKAY LZS8WSVR, BARRIER FREE, SELF CONTAINED, SINGLE WALL HUNG, ELECTRIC REFRIGERATED WATER COOLER, 8.0 GPH AT 50°F WATER TEMP. WITH 80°F INLET WATER, FRONT/SIDE PUSH PADS, VANDAL RESISTANT BUBBLER, PROVIDE COLD WATER STOP VALVE AND P-TRAP, BOTTLE FILLER STATION, ELECTRONIC SENSOR WITH TOUCHLESS ACTIVATION, 20 SEC AUTO SHUT-OFF, VISUAL USER INTERFACE, 115V, 5.0 FLA, 370 W.	1-1/2" EA	1-1/2" EA	--	1/2" EA
DW1	UNDERCOUNTER DISHWASHER - OFCI, ROUGH-IN AND CONNECT DOUBLE HW STOP VALVE AT ADJACENT SINK, PROVIDE AIR GAP FITTING AT SINK.	--	--	1/2"	--
EE1	EMERGENCY EYEWASH - GUARDIAN MODEL G1806, SINKTOP MOUNTED, 1.2 GPM, FLOW CONTROLS AND DUST COVER, CHROME PLATED STAY OPEN BALL VALVE, SWING AWAY FEATURE, 1/2" INLET, G6020 THERMOSTATIC MIXING VALVE, TEMPERATURE GAUGE. FIELD COORDINATE MOUNTING LOCATION WITH SINK AND FAUCET.	--	--	1/2"	1/2"
ES1	EMERGENCY SHOWER/EYEWASH STATION - GUARDIAN MODEL G1902, COMBINATION SHOWER AND EYEWASH STATION, 10"Ø ORANGE ABS SHOWER HEAD, 20 GPM, UNIVERSAL SIGN, CHROME PLATED STAY OPEN BALL VALVE WITH STAINLESS STEEL PULL HANDLE, 1" INLET, 12" STAINLESS STEEL EYEWASH BOWL, (2) SPRAY HEADS, 1/2" STAY OPEN BALL VALVE, PROVIDE WITH GUARDIAN THERMOSTATIC MIXING VALVE MODEL G3800LF.	2"	1-1/2"	1-1/2"	1-1/2"
FD1	FLOOR DRAIN (SLAB ON GRADE) - ZURN 415B, DURA-COATED CAST IRON BODY, NICKEL BRONZE STRAINER, PROVIDE WITH TRAP PRIMER LINE.	2"	2"	--	--
HB1	HOSE BIBB - ZURN Z1320XL, NON-FREEZE, ANTI-SIPHON, SELF-DRAINING, STAINLESS STEEL HOUSING WITH LOCKING HINGED COVER.	--	--	--	3/4"
HB2	HOSE BIBB - ZURN Z1348-BFP, NON-FREEZE, ANTI-SIPHON, SELF-DRAINING, DUAL HOT/COLD EXPOSED FAUCET.	--	--	1/2"	1/2"
L1	LAVATORY (ADA) - WALL HUNG, DURAVIT VERO AIR WASHBASIN #2350800027, VITREOUS CHINA, DECK MOUNTED FAUCET, GRID DRAIN, STOPS & SUPPLIES, 1-1/4" CP, 17 GA CHROME PLATED P-TRAP, P-TRAP/ H&C COVERS, WITH ASSE 1070 THERMOSTATIC MIXING VALVE. PROVIDE WALL CARRIER.	2"	1-1/2"	1/2"	1/2"
MS1	JANITOR SINK - FLOOR MOUNTED ZURN Z1996-24 24" X 24" MOLDED STONE MOP SERVICE BASIN; 3" STAINLESS STEEL DRAIN ASSEMBLY WITH NEOPRENE PUSH-ON GASKET. REMOVE GASKET FOR 3" CAULK CONNECTION; SERVICE SINK FCT W/6" INTEGRAL VB SPOUT W/HOSE THREAD OUTLET & PAIL HOOK, ADJUSTABLE SWIVEL INLETS, 2-1/2" LEVER HANDLES; WALL GUARD; HOSE AND HOSE BRACKET; MOP HANGER	3"	2"	1/2"	1/2"
S1	SINK - SINGLE COMPARTMENT (STAINLESS STEEL, COUNTERMOUNT) JUST SL-ADA-2131-A-GR, 21"X31", 6.5" MAX DEPTH, JUST J-35 CP STRAINER, CHICAGO 2300-8ABCP SINGLE CONTROL DECK MOUNTED FAUCET, 10" SPOUT, 2.2 GPM AERATOR, GRID DRAIN, SCREWDRIVER STOPS AND SUPPLIES, 17 GA CHROME PLATED P-TRAP, PLUMBEREX HANDY-SHIELD MAXX SERIES P-TRAP/H&C WATER COVERS, PROVIDE IN-SINK-ERATOR BADGER 5XP GARBAGE DISPOSER, 3/4HP 120V 8.1A, PROVIDE IN-SINK-ERATOR H770 INSTA-HOT WATER DISPENSER, 120V, 6.5A, 60 CUPS OF 200 DEGREE F WATER/HR.	2"	1-1/2"	1/2"	1/2"
S2	SINK (SINGLE COMPARTMENT) - JUST MODEL SL-2125-A-GR, 25"X21" NOM. MAX. 8" DEEP, J-35 CENTER DRAIN, CHICAGO FAUCETS 2301-ABCP DECK-MOUNTED SINK FAUCET WITH SIDE SPRAY, CERAMIC OPERATING CARTRIDGE, SCREWDRIVER STOPS & SUPPLIES, 17 GA CHROME PLATED P-TRAP.	2"	1-1/2"	1/2"	1/2"
S3	SINK (SINGLE COMPARTMENT) - JUST MODEL SL-2125-A-GR, 25"X21" NOM. MAX. 8" DEEP, CENTER DRAIN, ZURN Z821CO-XL-FC GOOSENECK SPOUT WITH LAMINAR FLOW SPOUT END, ZURN Z85500-XL FOOT PEDALS, SCREWDRIVER STOPS & SUPPLIES, 17 GA CHROME PLATED P-TRAP.	2"	1-1/2"	1/2"	1/2"
S4	HAND SINK - JUST JS-122-T STAINLESS STEEL WASH UP SINK, FAUCET JS-47-TGSA, 2.0 GPM FLOW RATE, GRID DRAIN W/ TAILPIECE; 17 GA CHROME PLATED P-TRAP; STANDARD STOPS AND SUPPLIES, ENSURE SINK HAS AN ASSE 1070 CERTIFIED MIXING VALVE. PROVIDE ADA TRAP AND CW/HW SUPPLY WRAP.	2"	1-1/2"	1/2"	1/2"
S5	CUP SINK - ELKAY CUPR4, STAINLESS STEEL SINGLE BOWL CUP DROP-IN SINK, CHICAGO FAUCET LWS1-A11-A DECK MOUNTED CW ONLY, TAILPIECE; 17 GA CHROME PLATED P-TRAP; STANDARD STOPS AND SUPPLIES, COORDINATE LOCATION OF SINK AND FAUCET.	2"	1-1/2"	--	1/2"
WB1	REFRIGERATOR - O.F.C.I., ROUGH IN AND CONNECT CW, GUY GRAY BIM875 WALL BOX, PROVIDE SHOCK ARRESTOR AND RECESSED WALL BOX.	--	--	--	1/2"
WC1	WATER CLOSET (ADA) - ZURN Z5560 1.6 GPF ELONGATED PRESSURE ASSIST TWO PIECE TOILET, ADA HEIGHT; ELONGATED, STANDARD WHITE, OPEN FRONT TOILET SEAT, LESS COVER, WITH STAINLESS STEEL CHECK HINGE; HEAVY-DUTY LOOSE KEY STOP AND CLOSET SUPPLY KIT (CONNECTIONS 1/2" IPS X 3/8" OD); Z5970 CLOSET FLANGE BRASS BOLT KIT	3"	2"	--	1/2"

PLUMBING EQUIPMENT SCHEDULE

NO	ITEM	DESCRIPTION
WH-1	ELECTRIC WATER HEATER	ELECTRIC WATER HEATER - AO SMITH DRE-120-24, 119 GALLON STORAGE, 24KW, 240V-3PH, W/ PRESSURE & TEMPERATURE RELIEF VALVE, 1-1/4" H&C CONNECTIONS. SET @ 140°F, 98 GPH AT 100 DEGREES F RISE, PROVIDE DRAIN PAN AND SEISMIC STRAPS.
ET-1	EXPANSION TANK	AO SMITH EXPANSION TANK MODEL PMC-10, NSF LISTED, CHARGE AIR PRESSURE TO MATCH WATER HEATER WATER PRESSURE (IN NON-HEATING MODE), 9.25 GALLON TANK VOLUME, 80 LBS OPERATING WEIGHT, 16"DIA X 16"HGT.
CP-1	HOT WATER CIRCULATION PUMP	GRUNDFOS UP 15-18B5/LC, 5GPM @ 7FTHD, 1/25 HP, 120V-1PH, W/AQUASTAT & TIMER.
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR	WATTS MODEL LF919 WITH AIR GAP, SIZE 2"
TP	TRAP PRIMER VALVE	PRECISION PLUMBING PRODUCTS MODEL PR-500 OR ZURN Z1021 WATER SAVER TRAP PRIMER

FREIHEIT ARCHITECTURE

BID ISSUE

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Big Capabilities + Dedicated People
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PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

CHARLES LONG INC.
STATE OF WASHINGTON
19110510
REGISTERED
PROFESSIONAL ENGINEER

ISSUE LIST

NO.	DESCRIPTION	DATE
	BID ISSUE	03/21/2024

PROJECT NO.: 0070800.01
PROJECT MGR.: M. AZEEM
DRAWN BY:
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ENERGY CODE NOTES/SCHEDULES

M1.1

FAN SCHEDULE

EQUIP. TAG	AREA SERVED	MFG' / MODEL NUMBER	CFM	E.S.P. INCHES W.G.	FAN MOTOR HP/ WATTS	VOLTS	PH.	NOISE dBA SONES	DRIVE	CONFIGURATION	WEIGHT (LBS)	REMARKS
EF-1	038 ELECT	GREENHECK / SP-A390-VG	180	0.8	51 W	120	1	5.5 S	DIRECT	CABINET	30	2, 3, 4, 5, 6, 7
EF-2	FUME HOOD	GREENHECK / USF-10-1-B3	600	0.5	1/4HP	230	1	55 DBA	DIRECT	UTILITY SET	100	1, 5, 8, 9
SF-1	036 LAB	GREENHECK / SQ-90-VG	600	0.3	1/10HP	230	1	52 DBA	DIRECT	INLINE	45	1, 2, 5, 6, 8

NOTES:
1. FAN SHALL HAVE 120V MOTORIZED DAMPER WITH ACTUATOR. COORDINATE WITH ELECTRICAL
2. PROVIDE WITH SPEED CONTROL
3. PROVIDE BACKDRAFT DAMPER
4. FAN EXHAUST SHALL BE INSTALLED TO SIDEWALL CAP.
5. DUCT CONNECTS TO FAN WITH APPROVED FLEXIBLE CONNECTORS.
6. MOUNT FAN IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS AND CLEARANCES.
7. PROVIDE T'STAT FOR FAN CONTROL. ON AT 85 DEGREES/OFF AT 80 DEGREES.
8. FAN TO BE INTERLOCKED WITH FUME HOOD
9. PROVIDE FAN WITH FIELD ROOF CURB

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE

Tag Reference	Model Number	Modules	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Efficiency IEER/EER	Heating COP @ 47°F	Corrected Cooling Total Capacity (BTU/h)	Corrected Heating Capacity (BTU/h)	Sound Pressure (dBA)	Electrical-Per Module 208/230 Voltage / Phase	MCA 208/230	RFS	MOCP	Notes / Options
CU-1	PURY-P168TNU-A-BS	P168	168,000.0	188,000.0	23.55 / 10.8	3.55	172,017.0	128,934.4	62.5/66.5	208/230V / 3-phase 3-wire	61/57	70/70	100/90	1, 2, 3, 4, 5

Notes & Options:
1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3 Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
4 For systems with multiple modules, refrigerant pipe dimensions indicate total system combined piping downstream of module twinning.
5 Added field charge listed is in addition to factory charge, this must be updated based upon final as-built piping layout.

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE

Room Name	Tag Reference	Model	Type	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Total Capacity (BTU/h)	Cooling Sensible Capacity (BTU/h)	Heating Capacity (BTU/h)	Estimated Cooling Coil LAT (°F)	Estimated Heating Coil LAT (°F)	Refrig Pipe Dim Liquid/Suction (inch)	Fan Speed Setting	Peak Fan Airflow (cfm)	Sound Pressure Per Fan Speed 208V/230V (dBA)	Voltage / Phase	Power Cooling 208V/230V (kW)	Electrical MCA/MFS	Notes / Options
032 LOBBY	FCU-1	PKFY-P15NLMU-E.TH	Wall -Mounted	15,000.0	17,000.0	12,648.3	9,260.5	9,588.3	50.5	95.2	1/4 / 1/2	HIGH	353	29-34-37-40	208/230V/1-phase	0.04	0.24/0.24/15	1, 2, 3, 4, 5, 6
034 BILLING OFFICE	FCU-2	PLFY-P05NFMU-E	Ceiling-Cassette (Four-Way)	5,000.0	5,600.0	4,216.1	4,163.2	3,158.5	61.1	80.5	1/4 / 1/2	HIGH	280	26-28-30	208/230V/1-phase	0.02	0.24/0.24/15	1, 2, 3, 4, 5, 6
033 BREAKROOM	FCU-3	PLFY-P08NFMU-E	Ceiling-Cassette (Four-Way)	8,000.0	9,000.0	6,745.8	5,878.7	5,076.2	57.5	84.9	1/4 / 1/2	HIGH	315	26-30-33	208/230V/1-phase	0.02	0.28/0.28/15	1, 2, 3, 4, 5, 6
036 LABORATORY	FCU-4	PLFY-P15NFMU-E	Ceiling-Cassette (Four-Way)	15,000.0	17,000.0	12,648.3	9,259.1	9,588.3	52.8	92.8	1/4 / 1/2	HIGH	390	28-33-39	208/230V/1-phase	0.03	0.35/0.35/15	1, 2, 3, 4, 5, 6
036 LABORATORY	FCU-5	PLFY-P15NFMU-E	Ceiling-Cassette (Four-Way)	15,000.0	17,000.0	12,648.3	9,259.1	9,588.3	52.8	92.8	1/4 / 1/2	HIGH	390	28-33-39	208/230V/1-phase	0.03	0.35/0.35/15	1, 2, 3, 4, 5, 6
037 OFFICE	FCU-6	PKFY-P04NLMU-E.TH	Wall -Mounted	4,000.0	4,500.0	3,372.9	2,734.9	2,538.1	57.7	85.9	1/4 / 1/2	HIGH	148	22-24-26-28	208/230V/1-phase	0.02	0.24/0.24/15	1, 2, 3, 4, 5, 6
042 CORRIDOR	FCU-7	PKFY-P04NLMU-E.TH	Wall -Mounted	4,000.0	4,500.0	3,372.9	2,734.9	2,538.1	57.7	85.9	1/4 / 1/2	HIGH	148	22-24-26-28	208/230V/1-phase	0.02	0.24/0.24/15	1, 2, 3, 4, 5, 6
044 OFFICE	FCU-11	PKFY-P18NLMU-E.TH	Wall -Mounted	18,000.0	20,000.0	15,178.0	11,359.2	11,280.3	50.7	93.9	1/4 / 1/2	HIGH	438	31-36-41-46	208/230V/1-phase	0.05	0.24/0.24/15	1, 2, 3, 4, 5, 6
046 OFFICE	FCU-10	PKFY-P18NLMU-E.TH	Wall -Mounted	18,000.0	20,000.0	15,178.0	11,359.2	11,280.3	50.7	93.9	1/4 / 1/2	HIGH	438	31-36-41-46	208/230V/1-phase	0.05	0.24/0.24/15	1, 2, 3, 4, 5, 6
047 OFFICE	FCU-9	PKFY-P18NLMU-E.TH	Wall -Mounted	18,000.0	20,000.0	15,178.0	11,359.2	11,280.3	50.7	93.9	1/4 / 1/2	HIGH	438	31-36-41-46	208/230V/1-phase	0.05	0.24/0.24/15	1, 2, 3, 4, 5, 6
048 CONF	FCU-8	PKFY-P30NKMU-E2.TH	Wall -Mounted	30,000.0	34,000.0	25,296.6	20,824.8	19,176.6	53.8	89.4	3/8 / 5/8	HIGH	918	43-49	208/230V/1-phase	0.07	0.63(208V)/0.63(230V)/15	1, 2, 3, 4, 5, 6
045 OFFICE	FCU-12	PKFY-P18NLMU-E.TH	Wall -Mounted	18,000.0	20,000.0	15,178.0	11,359.2	11,280.3	50.7	93.9	1/4 / 1/2	HIGH	438	31-36-41-46	208/230V/1-phase	0.05	0.24/0.24/15	1, 2, 3, 4, 5, 6
043 OPEN OFFICE	FCU-13	PEFY-P36NMAU-E4	Ceiling-Concealed (Ducted)	36,000.0	40,000.0	30,355.9	26,858.3	22,560.7	55.2	86.5	3/8 / 5/8	HIGH	1271	35-39-43	208/230V/1-phase	0.222	4.25/15	1, 2, 3, 4, 5, 6

Notes & Options:
1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3 See outdoor unit schedule for outdoor ambient conditions, connected capacity, and other factors associated with
4 See schematic piping/control diagram for indication of required indoor unit remote controllers, system controllers, and
5 Full demand corrected capacity includes de-rate associated with indoor vs. outdoor connected capacity indicated on outdoor unit schedule for associated system.
Partial corrected capacity assumes sufficient diversity exists such that the connected capacity de-rate does not apply. It is the designer's responsibility to ensure "Diamond System Builder" is set in the appropriate output capacity setting (full demand/partial demand) prior to generating this schedule.
6 It is recommended to always base heating corrected capacity on full demand.

ELECTRIC DUCT HEATER SCHEDULE

TAG	LOCATION	MFG / MODEL	KW	SIZE	PRESSURE DROP (IN. W.C.)	ELECTRICAL V	PH	REMARKS
DH-1	DOAS-1	TUTCO EDH	3	10"x 10"	0.025	240	3	1, 2, 3
DH-2	DOAS-2	TUTCO EDH	3	10"x 10"	0.025	240	3	1, 2, 3
DH-3	SF-1	TUTCO EDH	6	12"x 10"	0.025	240	3	1, 2, 4

NOTES:
1. PROVIDE SCR CONTROL AND DUCT MOUNTED DISCHARGE AIR TEMPERATURE (DAT) SENSOR.
2. PROVIDE BUILT-IN DISCONNECT SWITCH
3. INSTALL DOWNSTREAM OF DOAS, DAT SET POINT 65°F (ADJUSTABLE).
4. INSTALL DOWNSTREAM OF FAN, DAT SET POINT 60°F (ADJUSTABLE).

ELECTRIC HEATER SCHEDULE

EQUIP. TAG	LOCATION	MFG/MODEL #	WATTS	ORIENTATION	CONTROL OPTION	ELECTRICAL V/PH	REMARKS
EH-1	041 RR	KING/PAW1215	250	WALL MOUNT	REMOTE TSTAT	120/1	1, 2
EH-2	040 RR	KING/PAW1215	250	WALL MOUNT	REMOTE TSTAT	120/1	1,2
EH-3	054 FIRE ROOM	KING/PAW1215	250	WALL MOUNT	INTEGRAL T'STAT	120/1	1
EH-4	PUMP ROOM	KING/PAW1215	500	WALL MOUNT	INTEGRAL T'STAT	120/1	1
UH-1	029 STORAGE	KING/KB2405-1-T-B1	5000	WALL MOUNT	REMOTE TSTAT	240/1	1, 2, 3

NOTES:
1. COORDINATE LOCATION OF UNIT WITH ARCHITECTURAL FEATURES AND ALL OTHER TRADES
2. PROVIDE WALL MOUNTED T'STAT.
3. LINE VOLTAGE THERMOSTAT

LOSSNAY ENERGY RECOVERY VENTILATOR SCHEDULE

Lossnay Tag	Model Number	Interlocked or Stand Alone	Core Type	Nominal Airflow (cfm)	Max ESP (INWG)	Nominal Recovery Effectiveness (Extra High Fan Speed) Temperature Recovery	Enthalpy Cooling	Enthalpy Heating	Voltage / Phase	MCA / MOCP	Notes / Options
DOAS-1	LGH-F380RVX2-E	Stand-Alone	Fixed Permeable Cross Plate	380	0.86	65.0%	49.0%	61.0%	208-230V/1-phase	/15	1, 2, 3
DOAS-2	LGH-F300RVX2-E	Stand-Alone	Fixed Permeable Cross Plate	300	1.00	65.5%	50.0%	63.0%	208-230V/1-phase	/15	1, 2, 3

Notes & Options:
1 Max external static pressure is at airflow listed with fan set on extra high speed.
2 See schematic piping/control diagram for indication of required lossnay local remote controller (stand alone operation) and M-NET connection points of associated systems.
3 Washable factory standard pre-filter on return and O/A intake side of cross plate core.

VRF HEAT RECOVERY BRANCH CIRCUIT CONTROLLER

System Tag	Tag Reference	M-NET Address	Model Number	Type (double / Main / Sub)	Number of Ports	Connected Capacity to BC	Voltage / Phase	Power Cooling 208V/230V (kW)	MCA 208/230	Notes / Options
System 1	BC-1	52	CMB-P1016NU-JA1	Main	16	204,000.0	208/230V/1-phase	0.258/0.333		1, 2

Notes & Options:
1 Include Diamondback Ball Valves BV-Series, 700PSIG working pressure, full port, 410A rated.
2 For sub BC controller CMB-P-NU-GB1 or -GB, the total connectable indoor unit capacity can be 126,000 BTUs or less. If two sub BC controllers are used, the total indoor unit capacity connected to BOTH sub BC controllers also cannot exceed 126,000 BTUs. For sub BC controller CMB-P1016NU-HB1 the total connectable indoor unit capacity can be 126,000 BTUs or less. However, if two sub controllers are used, and one of them is CMB-1016NU-HB1, the total indoor unit capacity connected to BOTH sub controllers must NOT exceed 168,000 BTUs.

DUCTLESS SPLIT SYSTEM HEAT PUMP

EQUIP. TAG	AREA SERVED	OUTDOOR CONDENSING UNIT MFG' / MODEL NUMBER	NOMINAL TON	COOL CAP. MBH TOTAL	COOL CAP. MBH RANGE	WEIGHT LBS	NOISE DBA	HEAT CAP. MBH	HSPF	SEER	ELEC. REQ. MCA	ELEC. REQ. VOLTS	ELEC. REQ. PH.	INDOOR AIR HANDLER EQUIP. TAG	MFG' / MODEL NUMBER	AIRFLOW CFM	ESP IN W.G.	ELEC. REQ. MCA	ELEC. REQ. VOLTS	ELEC. REQ. PH.	WEIGHT LBS	REMARKS
CU-2	ELEC/TELE ROOM	MITSUBISHI/PUZ-A24NHA7-BS	2.0	24.0	10.0 - 24.0	155	50	28	11	21.4	19.0	208/230	1	HP-1	MITSUBISHI/PKA-A24KA7	635 - 775	0.10	1.0	208/230	1	53	ALL
CU-3	ELEVATOR EQUIP. ROOM	MITSUBISHI/PUZ-A24NHA7-BS	2.0	24.0	10.0 - 24.0	155	50	28	11	21.4	19.0	208/230	1	HP-2	MITSUBISHI/PKA-A24KA7	635 - 775	0.10	1.0	208/230	1	53	ALL

NOTES:
1. PROVIDE WIRELESS REMOTE CONTROLLER
2. INSTALL UNIT 72" AFF
3. PROVIDE OPTIONAL AIR OUTLET GUIDES
4. INDOOR UNIT POWER WIRING FROM OUTDOOR UNIT.
5. PROVIDE GOBI UNDERMOUNT CONDENSATE PUMP. PUMP TO NEAREST SINK TAIL PIECE.
6. NO ECONOMIZER PROVIDED PER 2018 WSEC C403.3 EXCEPTION 11.
7. PROVIDE SEACOAST SPRAY ON OUTDOOR CONDENSING UNIT

FREIHEIT ARCHITECTURE

BID ISSUE

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

CHARLES S. LOVELAND — STATE OF WASHINGTON — 19110510 — REGISTERED PROFESSIONAL ENGINEER

ISSUE LIST

NO.	DESCRIPTION	DATE
	BID ISSUE	03/21/2024

PROJECT NO.: 0070800.01
PROJECT MGR.: M. AZEEM
DRAWN BY:
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SCHEDULES

M1.2

VENTILATION SCHEDULE

SYSTEM	ROOM NO./NAME	AREA SF	# PEOPLE	CFM/ PERSON	CFM/ SF	MIN. OSA CFM REQUIRED EZ=1.0	MIN. OSA CFM PROVIDED	EXHAUST CFM REQUIRED	EXHAUST CFM PROVIDED	REMARKS
DOAS-1	LOBBY 032	182	4	5	0.06	31	40			
DOAS-1	BILLING OFFICE 034	151	2	5	0.06	19	25			
DOAS-1	BREAKROOM 033	218	6	6	0.06	49	55			
DOAS-1	STORAGE 106	66	0	0	0	0	40			
DOAS-1	JANITOR CLOSET 035	95	0	0	0	0	0	95	100	
DOAS-1	LAB 036	688	4	10	0.18	164	175			
DOAS-1	CORRIDOR 042	268	0	0	0.06	16	20			
DOAS-1	MEN'S LOCKER RM 041	98	0	0	0	0	0	70	140	
DOAS-1	WOMEN'S LOCKER RM 040	98	0	0	0	0	0	70	140	
DOAS-1	OFFICE 037	161	2	5	0.06	20	25			
		2025				299	380	235	380	

SYSTEM	ROOM NO./NAME	AREA SF	# PEOPLE	CFM/ PERSON	CFM/ SF	MIN. OSA CFM REQUIRED EZ=1.0	MIN. OSA CFM PROVIDED	EXHAUST CFM REQUIRED	EXHAUST CFM PROVIDED	REMARKS
DOAS-2	OPEN OFFICE 043	1621	12	5	0.06	157	160	0	160	
DOAS-2	PRIVATE OFFICE 044	129	1	5	0.06	13	20	0	0	
DOAS-2	PRIVATE OFFICE 045	171	1	5	0.06	15	20	0	0	
DOAS-2	PRIVATE OFFICE 046	129	1	5	0.06	13	20	0	0	
DOAS-2	PRIVATE OFFICE 047	129	1	5	0.06	13	20	0	0	
DOAS-2	CONF ROOM 048	286	8	5	0.06	57	60	0	0	
DOAS-2	MEN'S RR 049	67	0	0	0	0	0	50	70	
DOAS-2	WOMEN'S RR 050	56	0	0	0	0	0	50	70	
		2588				268	300	100	300	

KITCHEN EXHAUST HOOD SCHEDULE

EQUIP. TAG	MFG' / MODEL NUMBER	SIZE L X W	MAX EXHAUST CFM	HOOD CONSTRUCTION	ELECTRICAL		WEIGHT LBS.	REMARKS
					VOLT	AMP		
H-1	GE / JVX536ODJBB	36"x 20"	310	STAINLSS STEEL	120	3	40	ALL

NOTES:
1. RESIDENTIAL TYPE HOOD AND EXHAUST DUCT
2. HOOD EXHAUST AIRFLOW IS BELOW 400 CFM AND WILL BE USED INTERMITANTLY. NO MAKE UP AIR IS REQUIRED PER IMC SECTION 505.2.
3. INSTALL DUCT UP TO ROOF CAP

AIR TERMINAL DEVICE SCHEDULE

ITEM	MARK	MANUFACTURER	MODEL	MATERIAL	MOUNTING	FINISH	REMARKS
CEILING DIFFUSER	CDS	TITUS	MCD	STEEL	SURFACE	ENAMLED	BORDER TYPE 1
CEILING GRILLE	CGS	TITUS	50F	ALUMINUM	SURFACE	ENAMLED	BORDER TYPE 1
WALL REGISTER	L or HWR	TITUS	300RLHD	STEEL	SURFACE	ENAMLED	DBL. DEFL. / VERT FRONT
WALL GRILLE	L or HWG	TITUS	355RL	STEEL	SURFACE	ENAMLED	40 DEGREE FIXED BLADES
CEILING DIFFUSER	CDL	TITUS	MCD	STEEL	LAY-IN	ENAMLED	BORDER TYPE 3
CEILING GRILLE	CGL	TITUS	50F	ALUMINUM	LAY-IN	ENAMLED	BORDER TYPE 3

NOTE: NECK CONNECTION SIZE AND TERMINAL SIZE AS NOTED ON MECHANICAL FLOOR PLAN

LOUVER SCHEDULE

EQUIP. TAG	MFG' / MODEL NUMBER	TYPE	SERVICE	TYPE	AIR FLOW CFM	FREE AREA VELOCITY FT / MIN.	DIMENSION W X H IN. X IN.	NET FREE AREA REQUIRED SQ. FT.	PRESS. DROP IN. W.G.	NOTES
L-1	GREENHECK ESD-635	STATIONARY	DOAS-1 & SF-1	INTAKE	980	800	26X18	1.20	0.10	1, 2
L-2	GREENHECK ESD-635	STATIONARY	DOAS-2	INTAKE	300	592	18X14	0.47	0.05	1, 2
L-3	GREENHECK ESD-635	STATIONARY	ELECTRICAL ROOM EF-1	INTAKE	180	747	14X12	0.24	0.08	1, 2

NOTES:
1. PROVIDE BAROMETRIC RELIEF DAMPER SAME SIZE AS LOUVER.
2. PROVIDE BIRD SCREEN

ROOF EXHAUST HOOD SCHEDULE

EQUIP. TAG	MFG' / MODEL NUMBER	TYPE	SERVICE	TYPE	AIR FLOW CFM	SP (IN. WG.)	THROAT DIMENSIONS W" x L"	WEIGHT LBS.	REMARKS
REH-1	GREENHECK / GRSR-8	ROOF	DOAS 2 EXH	RELIEF	300	0.068	8"X8"	40	1, 2, 3
REH-2	BROAN 634	ROOF	RANGE EXH	RELIEF	310	0.1	10"X10"	20	3, 4

NOTES: 1. PROVIDE WITH GREENHECK SLOPED ROOF CURB
2. PROVIDE BIRD SCREEN
3. PROVIDE WITH BAROMETRIC RELIEF DAMPER

FREIHEIT ARCHITECTURE

BID ISSUE

HARRIS GROUP
Big Capabilities + Dedicated People
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PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

CHARLES LONGMIRE
STATE OF WASHINGTON
19110510
REGISTERED
PROFESSIONAL ENGINEER

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SCHEDULES

M1.3

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

CONT.No		PAGE	

CITY MULTI

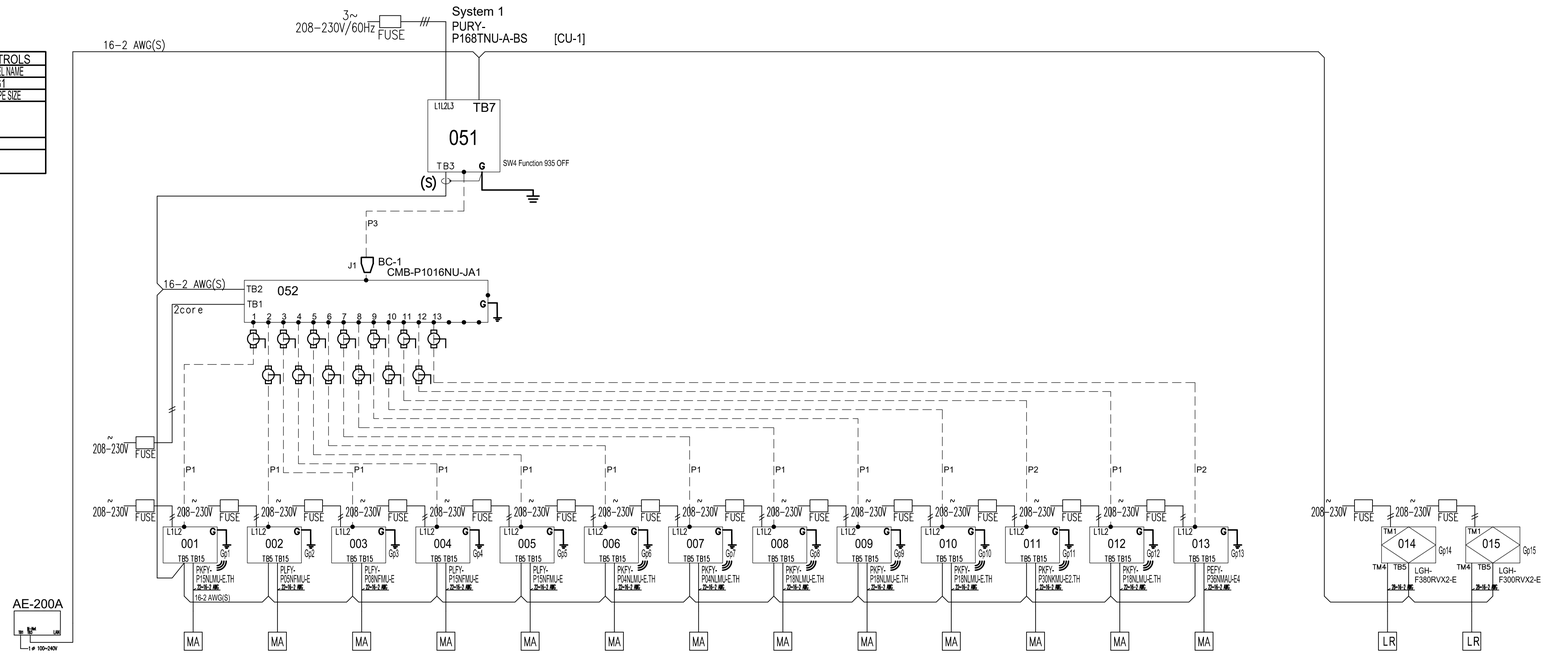
SYSTEM SCHEMATIC DWG.

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.

1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMY-R302S-G1
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	1/4 " / 1/2 "
P2	3/8 " / 5/8 "
P3	7/8 " / 1-1/8 "
SYMBOL	MODEL NUMBER
MA	PAR-40MAAU
LR	PZ-43SMF-E



032 LOBBY	034 BILLING OFFICE	033 BREAKROOM	038 LABORATORY	038 LABORATORY	037 OFFICE	042 CORRIDOR	044 OFFICE	046 OFFICE	047 OFFICE	048 CONF	045 OFFICE	043 OPEN OFFICE		
FCU-1	FCU-2	FCU-3	FCU-4	FCU-5	FCU-6	FCU-7	FCU-11	FCU-10	FCU-9	FCU-8	FCU-12	FCU-13	DOAS-1	DOAS-2

REMARKS
Comments:

Diamond System Builder
sw: 4.4.1.35
db: 4.4.1.12
6/16/2022
3:36 PM

FREIHEIT ARCHITECTURE

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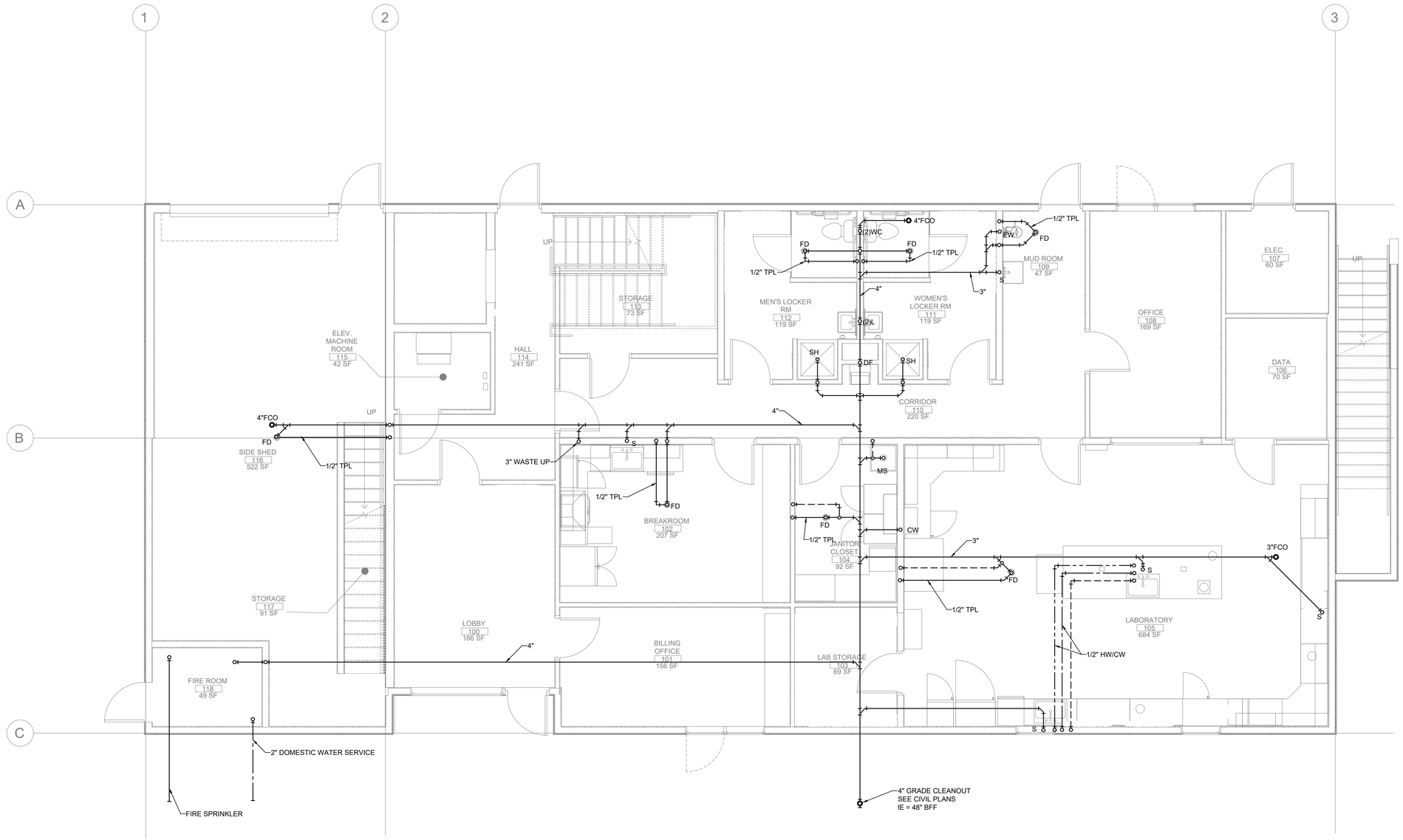
SCHEDULES

M1.4



1 BELOW SLAB PLAN - PLUMBING

0 2' 4' 8'

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

PLAN NORTH

FREIHEIT ARCHITECTURE

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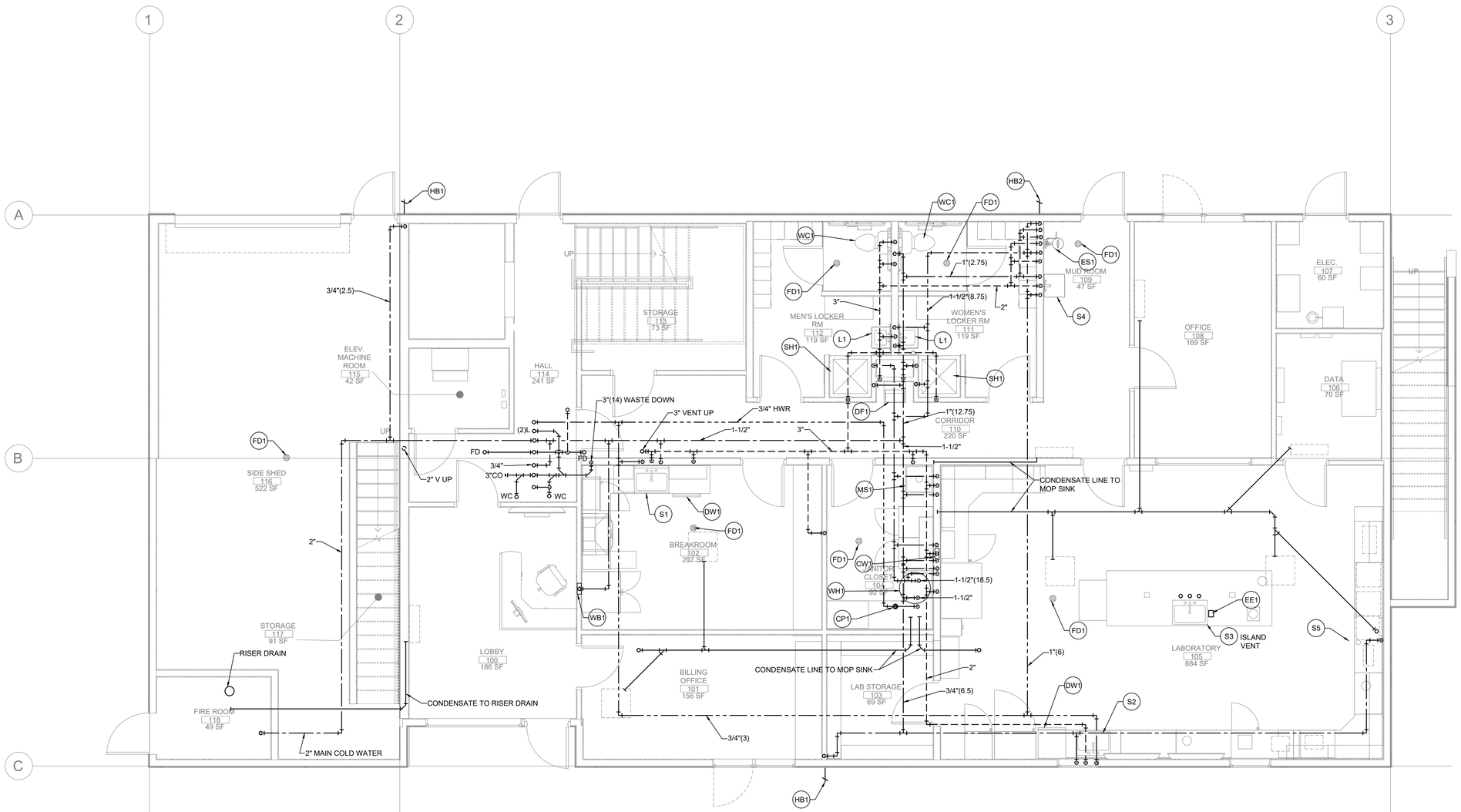
BELOW SLAB PLAN

M2.0



1 FIRST FLOOR PLAN - PLUMBING

PLAN NORTH

0 2' 4' 8'

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

FREIHEIT ARCHITECTURE

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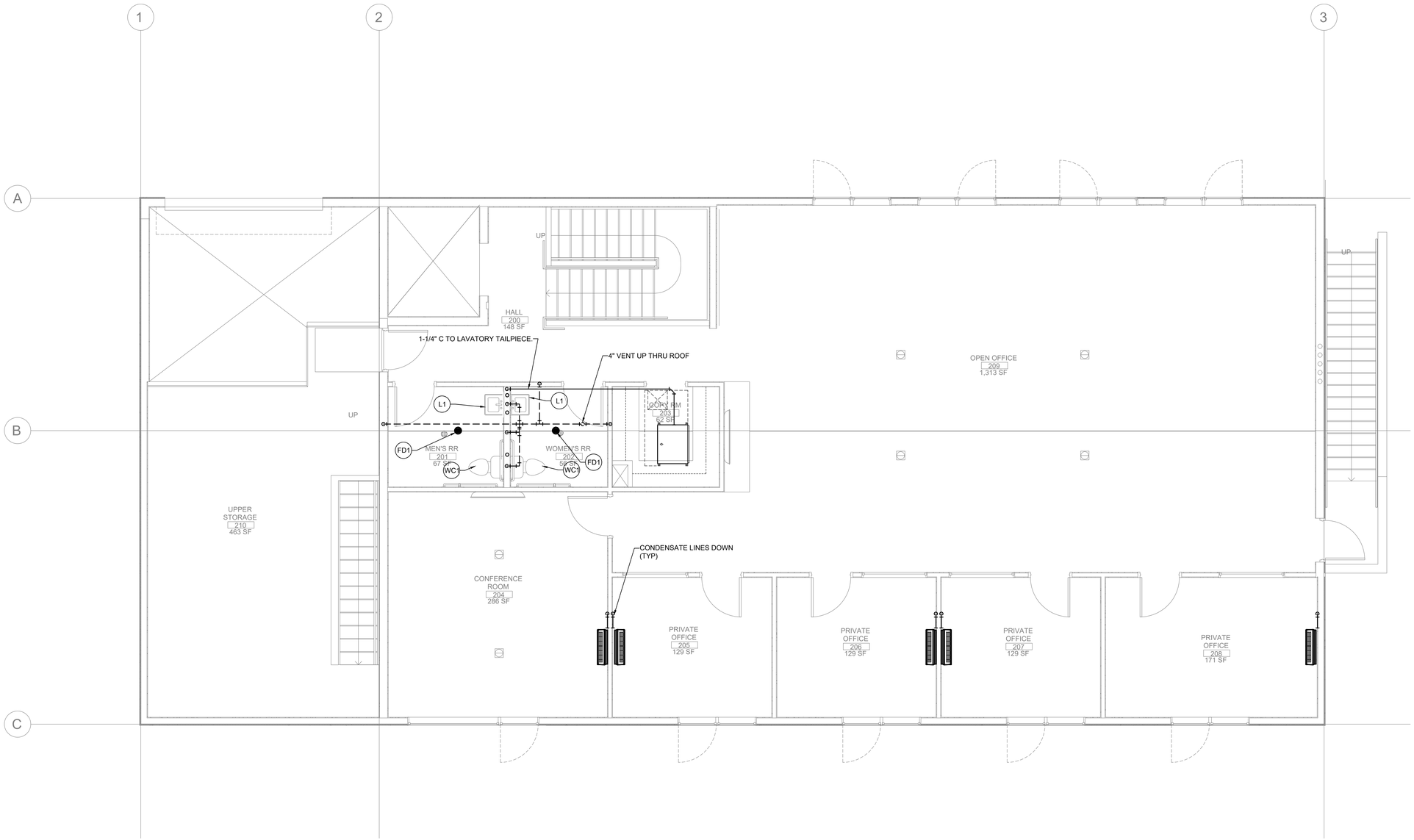
FIRST FLOOR PLAN - PLUMBING

M2.1



1 SECOND FLOOR PLAN - PLUMBING

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

PLAN NORTH

FREIHEIT ARCHITECTURE

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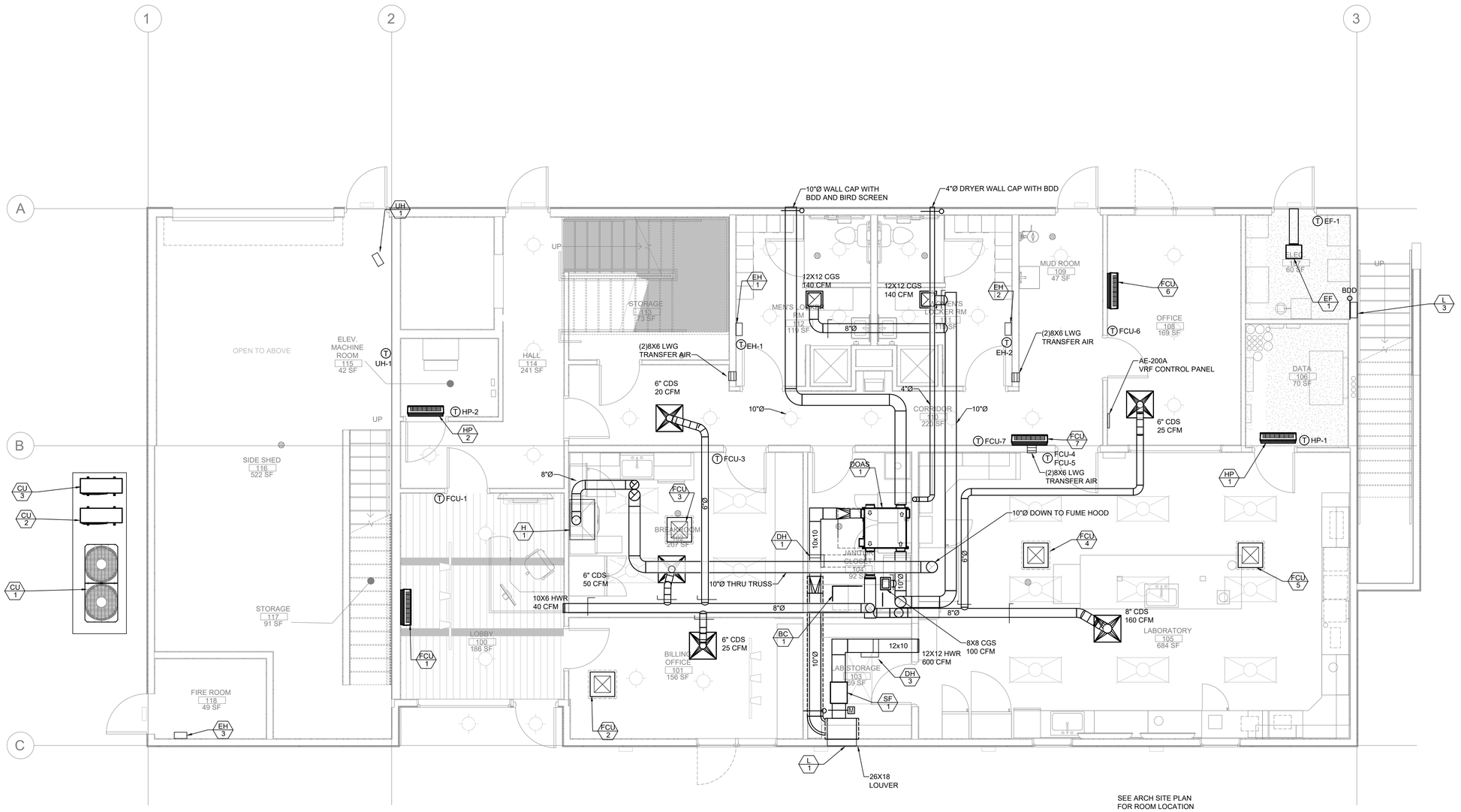
SECOND FLOOR PLAN - PLUMBING

M2.2

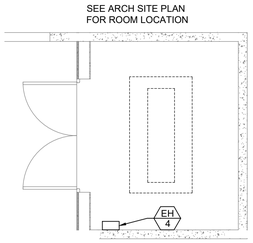


1 FIRST FLOOR PLAN - HVAC

PLAN NORTH

0 2' 4' 8'

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



2 PUMP ROOM PLAN - HVAC

PLAN NORTH

0 2' 4' 8'

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

FREIHEIT ARCHITECTURE

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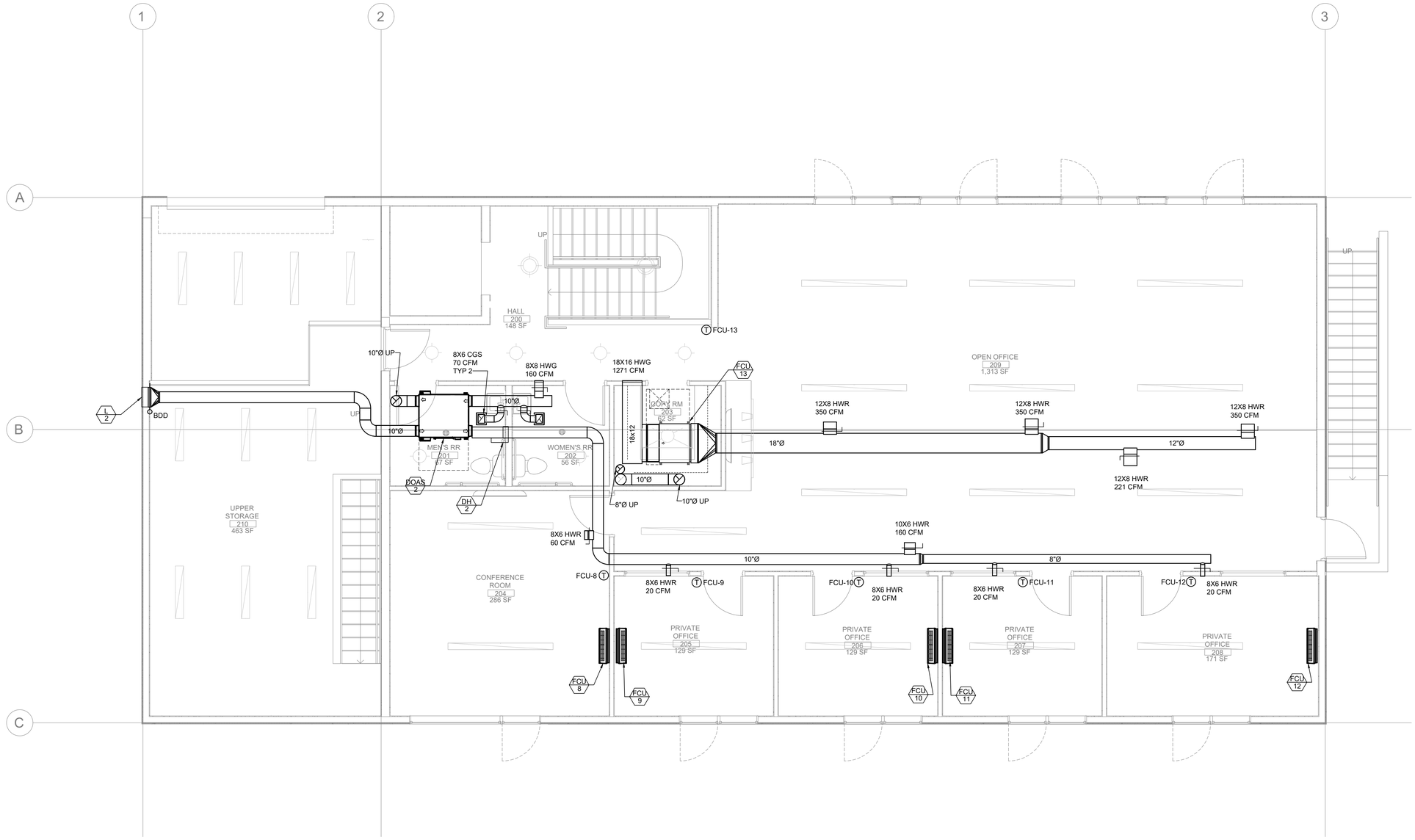
FIRST FLOOR PLAN - HVAC

M3.0



1 SECOND FLOOR PLAN - HVAC

PLAN NORTH

0 2' 4' 8'

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

FREIHEIT ARCHITECTURE

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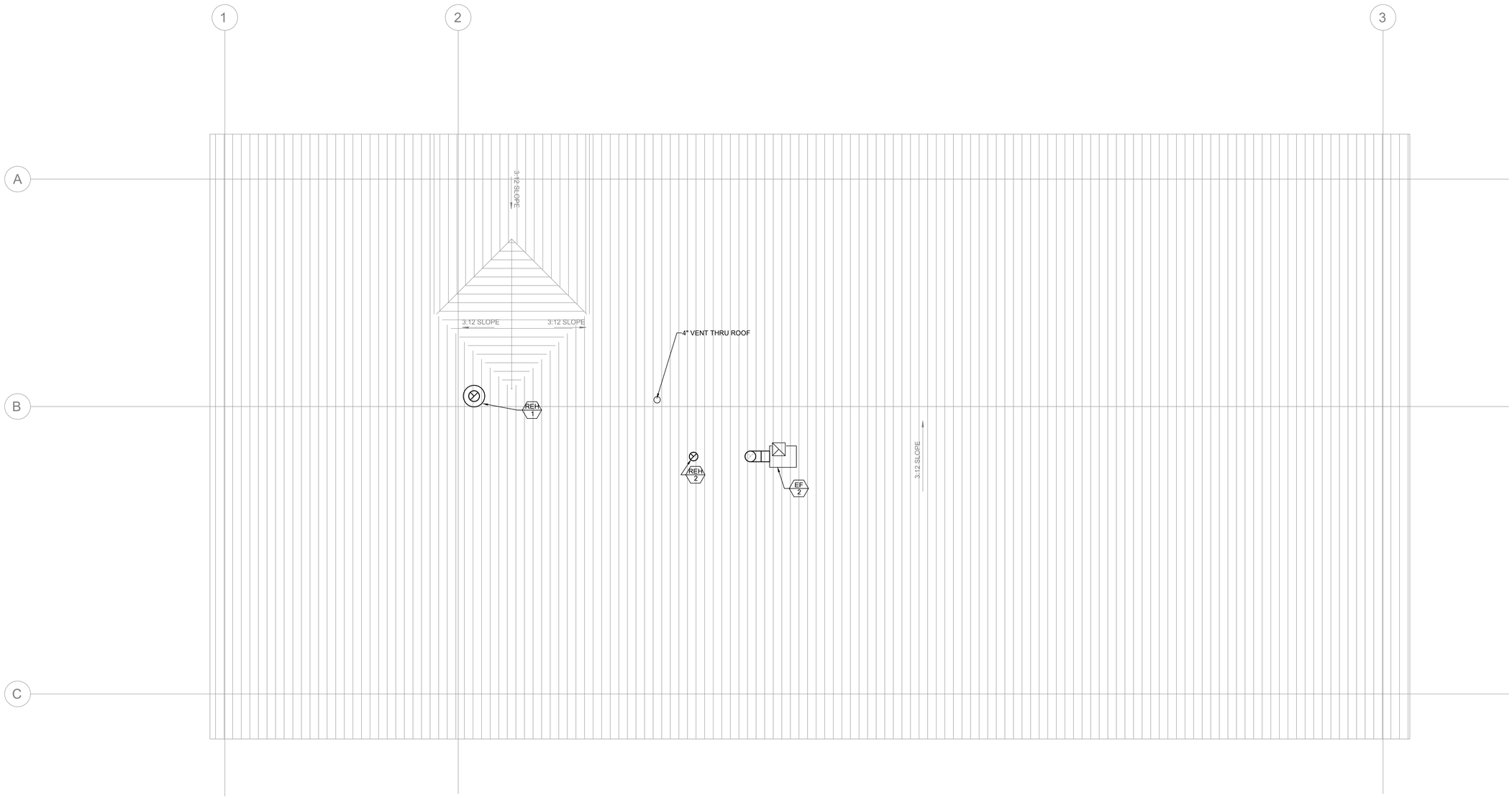
SECOND FLOOR PLAN - HVAC

M3.1



1 ROOF PLAN - HVAC

0 2' 4' 8'

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

PLAN NORTH

FREIHEIT ARCHITECTURE

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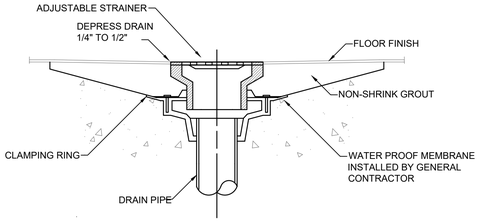
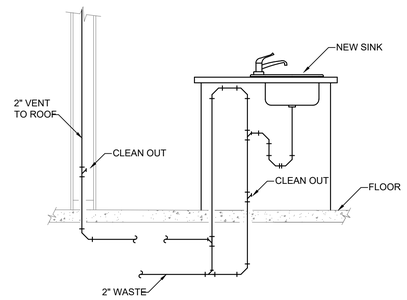
ROOF PLAN - HVAC

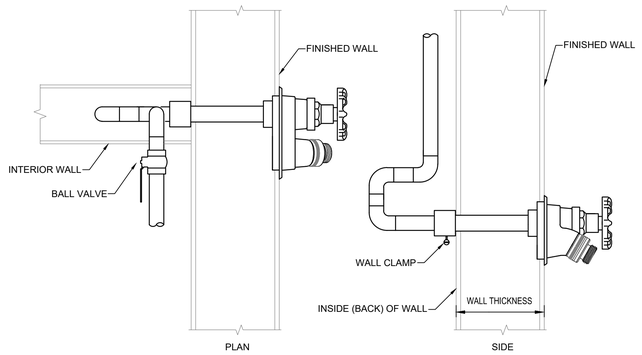
M3.2



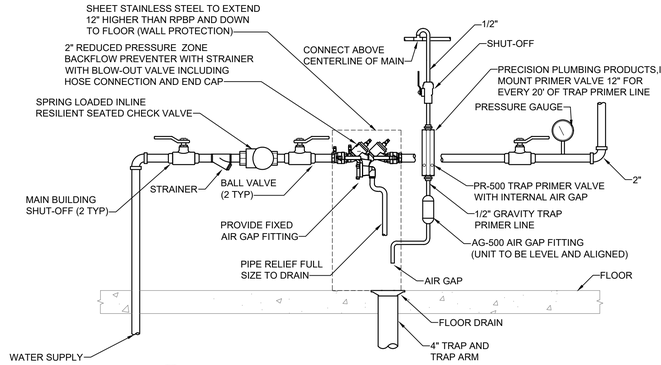
2 M4.0 FLOOR DRAIN DETAIL
SCALE: NTS



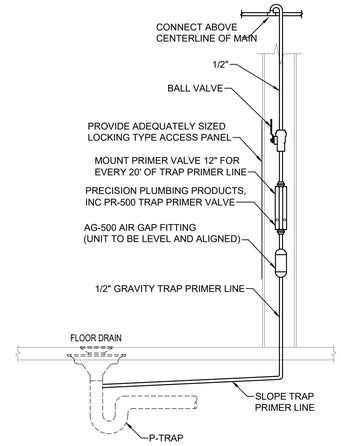
1 M4.0 ISLAND VENT DETAIL
SCALE: NTS



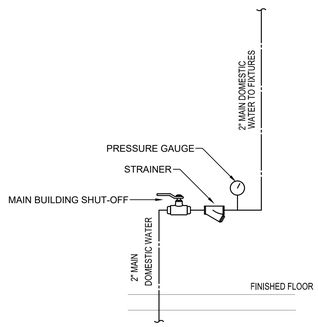
5 M4.0 FREEZEPROOF WALL HYDRANT DETAIL
SCALE: NTS



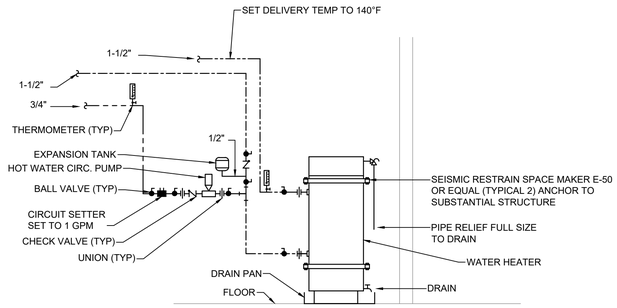
4 M4.0 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
SCALE: NTS



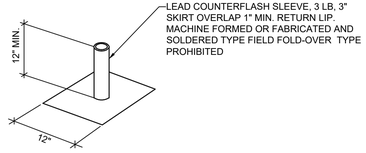
3 M4.0 TRAP PRIMER DETAIL
SCALE: NTS



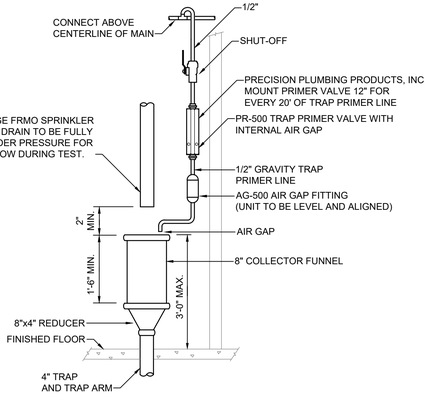
9 M4.0 MAIN BUILDING SHUT-OFF DETAIL
SCALE: NTS



8 M4.0 WATER HEATER DETAIL
SCALE: NTS



7 M4.0 PLUMBING VENT FLASHING
SCALE: NTS



6 M4.0 FIRE SPRINKLER DRAIN DETAIL
SCALE: NTS

FREIHEIT ARCHITECTURE

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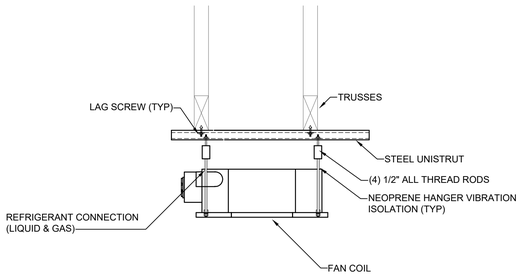
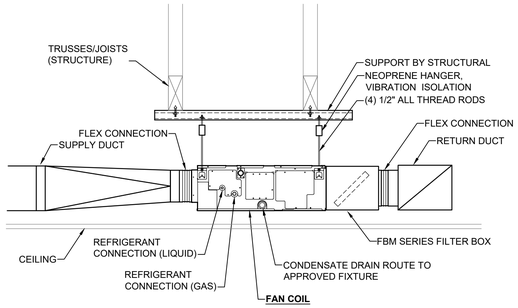
DETAILS

M4.0



4 M4.1 NON DUCTED 4-WAY FAN COIL DETAIL
SCALE: NTS



3 M4.1 DUCTED RETURN FAN COIL DETAIL
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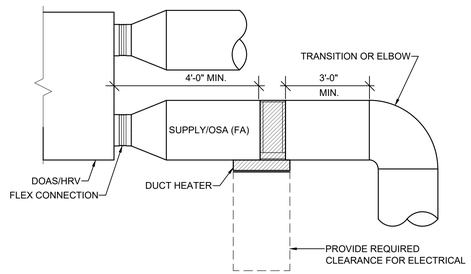

2 M4.1 ELECTRIC DUCT COIL DETAIL
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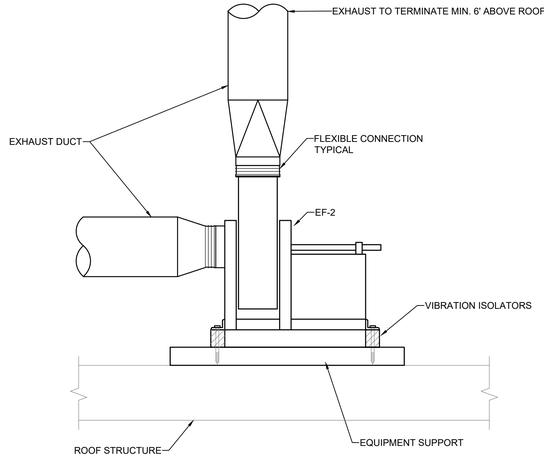
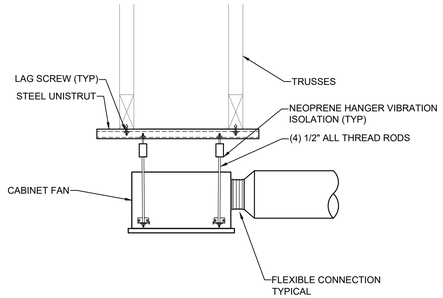


1 M4.1 LAB HOOD EXHAUST FAN DETAIL
SCALE: NTS



8 M4.1 EXHAUST FAN DETAIL
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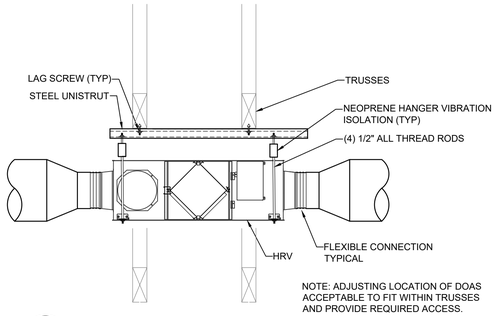
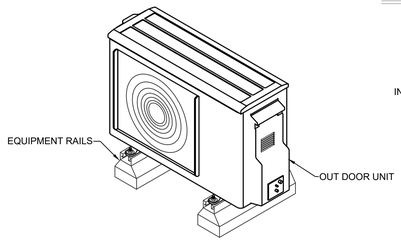
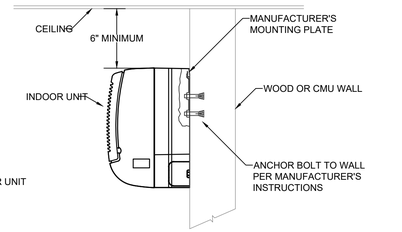


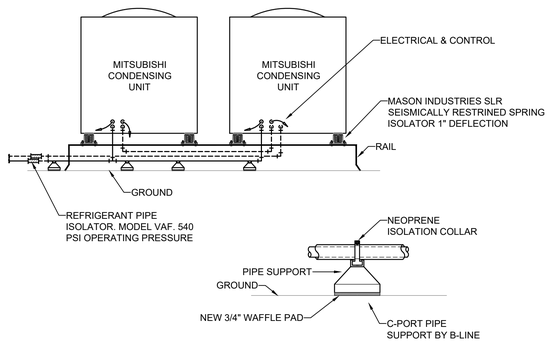
7 M4.1 DOAS - HRV DETAIL
SCALE: NTS



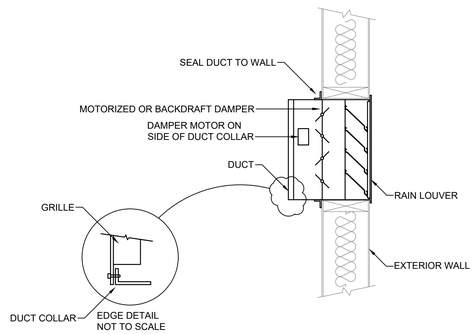
6 M4.1 CONDENSING UNIT DETAIL
Scale: NTS



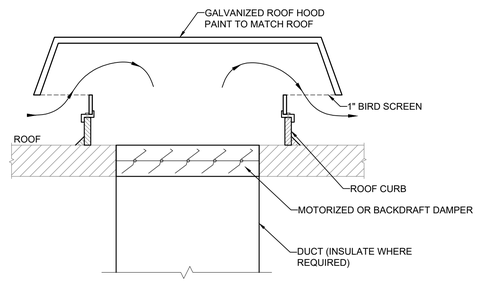
5 M4.1 FAN COIL DETAIL
SCALE: NTS



11 M4.1 PIPING / EQUIPMENT SUPPORT / VIBRATION ISOLATION DETAIL
NTS



10 M4.1 WALL AIR INTAKE GRILLE DETAIL
SCALE: NTS



9 M4.1 ROOF HOOD DETAIL (INTAKE OR EXHAUST)
SCALE: NTS

FREIHEIT ARCHITECTURE

BID ISSUE

HARRIS GROUP
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PROJECT NO: 0070800.01

SUQUALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

CHARLES LONGMAN
STATE OF WASHINGTON
21911051O
REGISTERED
PROFESSIONAL ENGINEER

ISSUE LIST

NO.	DESCRIPTION	DATE
	BID ISSUE	03/21/2024

PROJECT NO.: 0070800.01
PROJECT MGR.: M. AZEEM
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DETAILS
M4.1

TULALIP TRIBES UTILITY BUILDING

3015 MISSION BEACH RD, TULALIP, WA 98271

ELECTRICAL SCOPE OF WORK

PROJECT IS DESIGNED TO UTILIZE EXISTING UTILITY TRANSFORMERS TO PROVIDE POWER TO THE NEW MAIN UTILITY BUILDING LOADS AND TO ELECTRICAL EQUIPMENT RELOCATED FROM THE EXISTING LAB BUILDING.

GENERAL NOTES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND UNDERSTAND THE EXTENT OF THE WORK REQUIRED PRIOR TO QUOTATION.
2. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDERS AND BRANCH CIRCUITS.
3. FIRE SEAL ALL FIRE RATED WALLS AND FLOOR PENETRATIONS PER CLIENT STANDARDS.
4. ALL EQUIPMENT SHALL BE ELECTRICALLY BONDED AND GROUNDED PER NEC SECTION 250.
5. PROVIDE ARC FLASH LABELS FOR ALL ELECTRICAL EQUIPMENT.
6. PROVIDE SPD (SURGE PROTECTION DEVICE) FOR MDP (MAIN DISTRIBUTION PANEL).
7. PROVIDE MAINTENANCE DISCONNECT FOR ALL MECHANICAL EQUIPMENT WITH PROPER CLEARANCES PER NEC SECTION 110.
8. REFER TO SPECIFICATIONS SHEET OR SPECIFICATIONS BOOKLET FOR MATERIAL SPECIFICATIONS AND CONTRACTOR MEANS AND METHOD. IF A DISCREPANCY IS NOTED BETWEEN PLANS AND SPECIFICATIONS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY DURING THE BID PROCESS.
9. REFER TO ARCHITECTURAL PLANS, NOTES, AND ASSOCIATED DETAILS FOR MOUNTING HEIGHTS OF ALL DEVICES UNLESS OTHERWISE NOTED. MOUNTING HEIGHTS EITHER DEPICTED ON ARCHITECTURAL DOCUMENTS SHALL BE USED FOR INSTALLATION OF ASSOCIATED ROUGH IN COMPONENTS AND FINAL MOUNTING HEIGHT OF DEVICE TO CENTERLINE FROM ABOVE FINISHED FLOOR.
10. CONTRACTOR SHALL COORDINATE EXACT CONNECTION LOCATION OF EQUIPMENT AND DEVICES WITH OTHER DISCIPLINES AND OWNER PRIOR TO ROUGH IN AND INSTALL.
11. MOUNT EXTERIOR ELECTRICAL EQUIPMENT AS INDICATED ON ELECTRICAL.
12. PROVIDE DEVICE/SWITCH LABELING AS INDICATED ON ELECTRICAL DETAIL.
13. ALL SAFETY SWITCHES OR DISCONNECTING DEVICES SERVING MECHANICAL EQUIPMENT SHALL BE NON-FUSED TYPE UNLESS OTHERWISE REQUIRED. MANUAL MOTOR CONTROLLERS SHALL BE FURNISHED WITH THERMAL OVERLOAD PROTECTION. THE DISCONNECTING MEANS SHALL BE PROVIDED WITH LOCKING PROVISIONS IF THE SAFETY SWITCH OR DISCONNECT IS NOT WITHIN THE LINE OF SIGHT OF THE MECHANICAL EQUIPMENT. THE FUSES SHALL BE SIZED PER MANUFACTURERS RECOMMENDATION IF NOT REFER TO NEC 430 SECTION MOTORS.
14. ALL BRANCH AND FEEDER CIRCUITS TO DEVICES AND EQUIPMENT SHALL BE PROVIDED WITH A DEDICATED EQUIPMENT GROUNDING CONDUCTOR. MINIMUM SIZE SHALL BE #12 AWG. DO NOT USE RACEWAYS FOR GROUNDING.
15. CIRCUIT BREAKERS SERVING EMERGENCY LIGHTING AND LIFE SAFETY EQUIPMENT SUCH AS FIRE ALARM SYSTEMS, SHALL BE FURNISHED WITH A HANDLE LOCKING DEVICE ON THE BREAKER HANDLE.
16. COORDINATE AND CONFIRM WITH VENDOR MAXIMUM ALLOWED FEEDER LENGTH BETWEEN VFD AND MOTOR. PROVIDE OUTPUT LINE REACTORS/FILTER REQUIRED IF FEEDER LENGTHS EXCEED MANUFACTURER ALLOWED LENGTHS.
17. ALL VFDS (VARIABLE FREQUENCY DRIVES) SHALL BE PROVIDED WITH VENDOR SUPPLIED CURRENT LIMITING FUSES AT INPUT TERMINALS TO ACHIEVE SHORT CIRCUIT RATING OF MINIMUM 65KAIC.
18. POWER CONNECTION FOR MODULAR FURNITURE.
19. COORDINATE WORK OF OTHER TRADES PRIOR TO START OF WORK.

DRAWING LIST

LEGEND

- AUTOMATIC TRANSFER SWITCH
- CIRCUIT BREAKER
- GENERATOR
- COMPRESSION TYPE BOLTED MECHANICAL CONNECTION / NEMA GROUNDING PAD
- EXOTHERMIC WELD / TERMINATION POINT
- GROUND BUS BAR
- GROUNDING CONDUCTOR
- GROUND ROD
- GROUND TEST WELL
- JUNCTION/PULL BOX
- METER
- SAFETY DISCONNECT SWITCH
- SWITCH
- MOTION SENSOR SWITCH
- TRANSFORMER
- 120V DUPLEX RECEPTACLE (PANEL NO. / XXXX-YY / CKT. NO.)
- GFCI RECEPTACLE (YY-XXXX)
- 120V DOUBLE DUPLEX RECEPTACLE, FLOOR MOUNTED
- 240V RECEPTACLE
- 2'x4', 4'x4' TROFFER LIGHTING FIXTURE (PANEL NO. / XXXX-YY / CKT. NO.)
- WALL MOUNTED FLUORESCENT LIGHTING FIXTURE (X)
- WALL MOUNTED LIGHTING FIXTURE (X)
- OCCUPANCY SENSOR (OS)
- 360° CEILING MOUNTED MOTION SENSOR (MS)
- CEILING MOUNTED MOTION SENSOR (MS)
- CEILING MOUNTED LIGHTING FIXTURE
- COAXIAL CONNECTION
- AIPHONE VIDEO INTERCOM (A)
- ELECTRONIC KEYBOX (KB)
- SECURITY DATA/AIPHONE/TIMEIPS/KEYBOX
- DATA (ETHERNET) JACK + COUNT
- FLOOR MOUNTED DATA (ETHERNET) JACK + COUNT
- SECURITY CAMERA
- BADGE READER
- ALARM ARMING STATION
- DOOR CONTACT (DC)
- WIRELESS ACCESS POINT (WAP)

SITE MAP
SCALE: N.T.S.

FREIHEIT ARCHITECTURE

BID ISSUE

HARRIS GROUP
Big Capabilities + Dedicated People
PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

JOHN D. NORTON
STATE OF WASHINGTON
24587
REGISTERED
PROFESSIONAL ENGINEER
03/21/24

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CHECKED BY:	J. NORTON

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ELECTRICAL COVER SHEET

E1.0

LEGEND

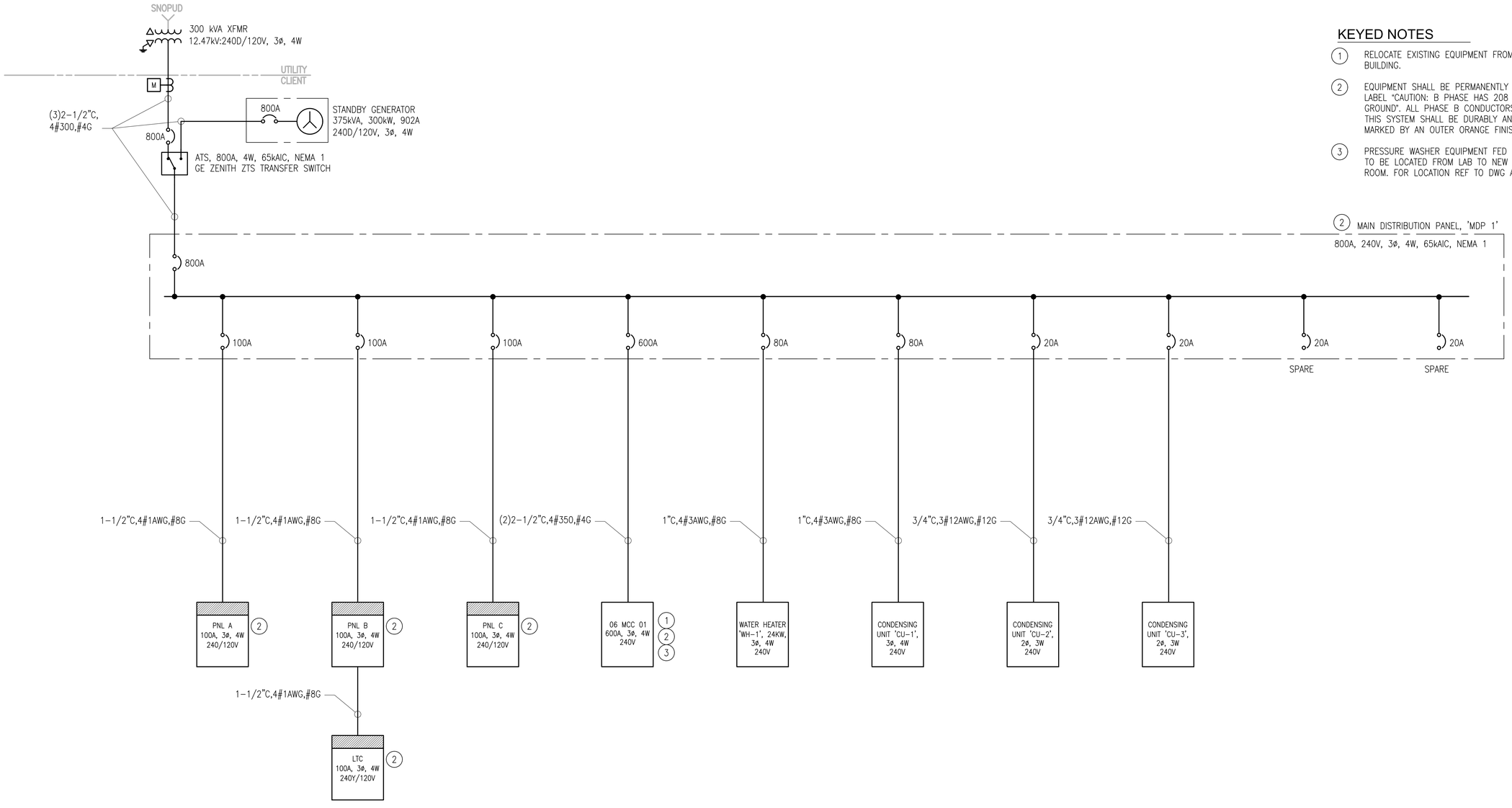
REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

GENERAL NOTES

1. ALL INSULATION TYPE THHN
2. REFER TO SHEET E3.3 FOR NEW ELECTRICAL EQUIPMENT INFORMATION.

KEYED NOTES

1. RELOCATE EXISTING EQUIPMENT FROM LAB TO MAIN UTILITY BUILDING.
2. EQUIPMENT SHALL BE PERMANENTLY MARKED WITH LABEL "CAUTION: B PHASE HAS 208 VOLTS TO GROUND". ALL PHASE B CONDUCTORS AND BUSBARS ON THIS SYSTEM SHALL BE DURABLY AND PERMANENTLY MARKED BY AN OUTER ORANGE FINISH.
3. PRESSURE WASHER EQUIPMENT FED FROM EXISTING MCC TO BE LOCATED FROM LAB TO NEW PRESSURE WASHER ROOM. FOR LOCATION REF TO DWG A2.00.



SINGLE-LINE DIAGRAM
SCALE: NO SCALE

FREIHEIT ARCHITECTURE

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ELECTRICAL
SINGLE-LINE
DIAGRAM

E2.0

LEGEND

REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

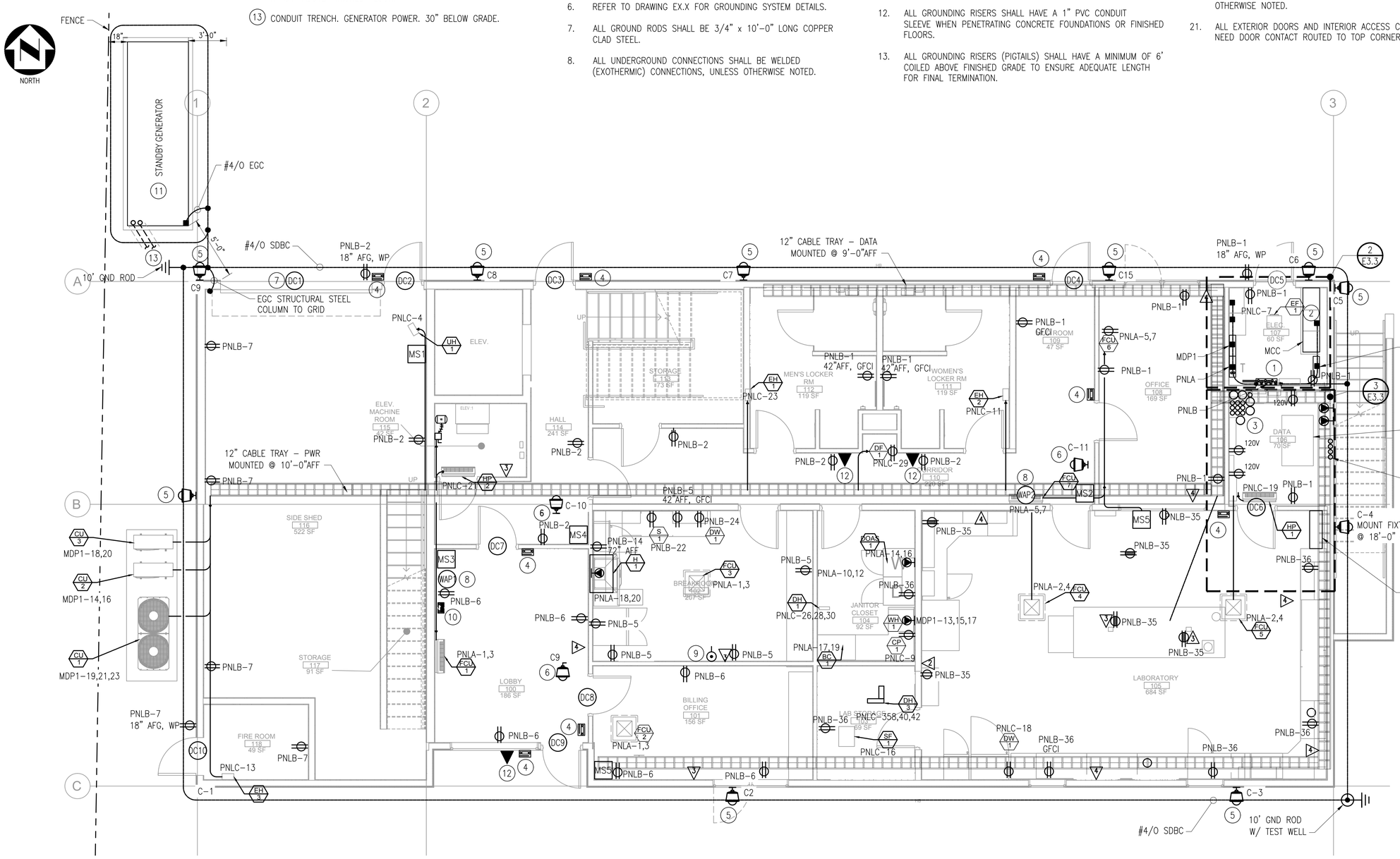
KEYED NOTES

1. PROVIDE #4/0 TAP FROM GROUND GRID TO EQUIPMENT GROUND BUS BAR.
2. PROVIDE #4/0 GROUND WITHIN HOUSEKEEPING PAD.
3. PROVIDE (7) 4" AND (2) 2" CONDUIT MARKED FOR DATA CABLING FROM THE DATA ROOM TO VARIOUS LOCATIONS.
4. PROVIDE ACCESS CONTROL BADGE READER AT 48" AFF.
5. PROVIDE EXTERIOR CAMERA AT 14' AFG ROUTED WITH 1" CONDUIT INTO RECESSED 2-GANG J-BOX.
6. PROVIDE CEILING MOUNTED INTERIOR CAMERA WITH RECESSED 1-GANG J-BOX.
7. DOOR CONTACT SHOULD BE ROUTED TO MIDDLE OF GARAGE ROLL-UP DOOR, TERMINATED IN SINGLE GANG J-BOX.
8. WIRELESS ACCESS POINT WILL NEED DATA DROP ROUTED TO J-BOX ON WALL -6" FROM FINISHED CEILING, BUT NO HIGHER THAN 12' AFF.
9. THE DATA/COAX/ELECTRICAL OUTLETS SHOULD BE INSTALLED ON WALL +72" AFF.
10. ALARM ARMING STATION CABLES SHOULD BE ROUTED TO SINGLE GANG J-BOX AT +54" AFF.
11. PROVIDE 300kW, 240D/120V, 3PH, 4W STANDBY GENERATOR, GENERAC CAT. SD300. MAINTAIN MINIMUM CLEARANCES OF 36" IN FRONT, 18" TO FENCE, AND 5" TO DOOR OR WINDOW. PROVIDE 183" X 66" HOUSEKEEPING PAD.
12. KEYBOX DATA, TIMEIPS, AIPHONE DATA DROP AND ELECTRICAL DROPS WILL NEED TO BE IN RECESSED J-BOX AT 54" ABOVE FINISHED FLOOR.
13. CONDUIT TRENCH. GENERATOR POWER. 30" BELOW GRADE.

GENERAL NOTES

1. CONDUIT ROUTING IS DIAGRAMMATIC. ELECTRICAL CONTRACTOR SHALL DETERMINE THE BEST ROUTING PATH AND CIRCUIT COMBINATIONS BASED ON FIELD CONDITIONS AND ELECTRICAL CODES.
2. CONDUIT ROUTING TO RECEPTACLES IS NOT SHOWN. CONTRACTOR SHALL USE BEST ROUTING PRACTICES TO AVOID OBSTRUCTIONS AND INTERFERENCE WITH OTHER EQUIPMENT.
3. CONDUCTOR AND CONDUIT SIZING SHALL BE AS PER NEC.
4. EQUIPMENT LOCATIONS AND ARRANGEMENT ARE SCHEMATIC. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURER FOR DETAILED CONNECTION REQUIREMENTS AND PROVIDE MATERIALS AND INSTALLATION FOR A COMPLETE AND OPERATIONAL SYSTEM.
5. GROUND GRID CONDUCTORS SHALL BE #4/0 SOFT DRAWN BARE COPPER (SDBC). BONDING JUMPERS SHALL BE #2/0 SOFT DRAWN BARE COPPER (SDBC). GROUNDING ELECTRODE CONDUCTORS (GEC) FOR C2-M4-40G TRANSFORMER, AND DRY-TYPE TRANSFORMERS SHALL BE #4/0 SDBC.
6. REFER TO DRAWING EX.X FOR GROUNDING SYSTEM DETAILS.
7. ALL GROUND RODS SHALL BE 3/4" x 10'-0" LONG COPPER CLAD STEEL.
8. ALL UNDERGROUND CONNECTIONS SHALL BE WELDED (EXOTHERMIC) CONNECTIONS, UNLESS OTHERWISE NOTED.
9. ALL STEEL COLUMN GROUNDING SHALL BE WELDED (EXOTHERMIC). AT A MINIMUM, ALTERNATING BUILDING COLUMNS SHALL BE GROUNDED TO MAIN GROUND GRID.
10. GROUND SYSTEMS SHALL NOT HAVE MORE THAN THE FOLLOWING GROUND RESISTANCE:
    EQUIPMENT RATED 500KVA AND LESS SHALL HAVE <10 OHMS.
    EQUIPMENT RATED 500 TO 1000KVA SHALL HAVE <5 OHMS.
    EQUIPMENT RATED MORE THAN 1000KVA SHALL HAVE <2 OHMS.
    POWER DISTRIBUTION UNITS OR PANELBOARDS SERVING ELECTRONIC EQUIPMENT <2 OHMS
    SUBSTATIONS, SUBSTATION MANHOLES, AND PAD-MOUNTED SWITCHING EQUIPMENT <1 OHMS.
    MANHOLE GROUNDS <10 OHMS.

    TO ACHIEVE THIS RESISTANCE, CONTRACTOR SHALL TEST AND PROVIDE TESTING REPORTS. CONTRACTOR SHALL CONTACT POS ENGINEER FOR HELP WITH RESOLUTION IF RESISTANCE DURING TESTING EXCEEDS THE SPECIFIED RESISTANCE.
11. EQUIPMENT GROUNDING SHALL BE BOLTED CONNECTION FOR EASE OF REMOVAL.
12. ALL GROUNDING RISERS SHALL HAVE A 1" PVC CONDUIT SLEEVE WHEN PENETRATING CONCRETE FOUNDATIONS OR FINISHED FLOORS.
13. ALL GROUNDING RISERS (PIGTAILS) SHALL HAVE A MINIMUM OF 6' COILED ABOVE FINISHED GRADE TO ENSURE ADEQUATE LENGTH FOR FINAL TERMINATION.
14. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), PORT OF SEATTLE, AND ANY STATE AND LOCAL CODES.
15. GROUNDING RING AND GROUND RODS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. CONTRACTOR SHALL DETERMINE EXACT LOCATIONS AT THE TIME OF INSTALLATION.
16. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS PRIOR TO ROUGH IN.
17. CONTRACTOR SHALL PRIME AND REPAINT ALL STRUCTURAL SURFACES THAT HAVE BEEN DRILLED OR WELDED.
18. INSTALLATION OF THE GROUNDING SYSTEM SHALL BE COORDINATED WITH THE INSTALLATION WORK OF ALL DISCIPLINES IN THE PROJECT. UTILIZE THE EQUIPMENT MANUFACTURER'S DRAWINGS TO DETERMINE THE GROUND CONNECTION LOCATIONS.
19. SEAL ALL FLOOR PENETRATIONS WITH GROUT AFTER INSERTING GROUND CABLE.
20. ALL RECEPTACLES WILL BE INSTALLED 18" AFF UNLESS OTHERWISE NOTED.
21. ALL EXTERIOR DOORS AND INTERIOR ACCESS CONTROLLED DOORS NEED DOOR CONTACT ROUTED TO TOP CORNER OF DOOR FRAME.



FIRST FLOOR PLAN (1 / E3.0)
SCALE: 1/4" = 1'-0"

0 2' 4' 8'
1/4"=1'-0"

FREIHEIT ARCHITECTURE

BID ISSUE

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Big Capabilities + Dedicated People
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PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

JOHN D. NORTON
STATE OF WASHINGTON
24587
REGISTERED PROFESSIONAL ENGINEER
03/21/24

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PROJECT MGR.: M. AZEEM
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CHECKED BY: J. NORTON

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ELECTRICAL FIRST FLOOR POWER PLAN

E3.0

LEGEND

REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

KEYED NOTES

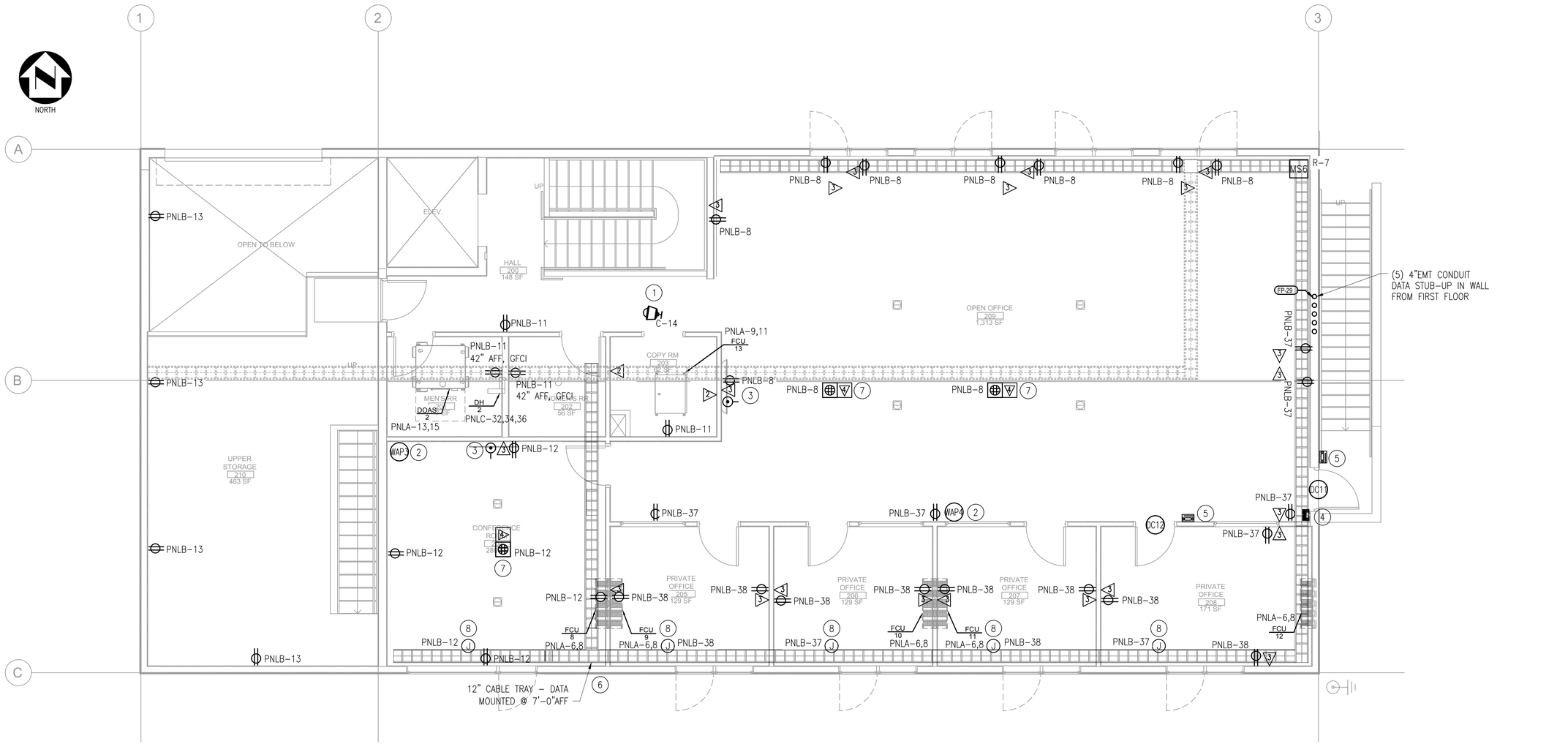
1. INTERIOR CAMERAS WILL BE CEILING MOUNTED WITH RECESSED SINGLE GANG J-BOX.
2. WIRELESS ACCESS POINTS (WAPS) WILL NEED DATA DROPS ROUTED TO J-BOX ON WALL -6" FROM FINISHED CEILING, BUT NO HIGHER THAN 12' AFF.
3. THE DATA/COAX/ELECTRICAL OUTLETS SHOULD BE INSTALLED ON WALL +72" AFF.
4. ALARM ARMING STATION CABLES SHOULD BE ROUTED TO SINGLE GANG J-BOX AT +54" AFF.
5. PROVIDE ACCESS CONTROL BADGE READER AT 48" AFF.
6. PROVIDE 6" VERTICAL CABLE TRAY FROM FIRST FLOOR.

   PROVIDE FLOOR MOUNTED BOX FOR WOOD FRAME CONSTRUCTION WITH DUPLEX RECEPTACLE AND 4-PORT DATA OUTLET.

   INSTALL JUNCTION BOX FOR POWER WINDOWS.

GENERAL NOTES

1. ALL CONDUIT ROUTING DIAGRAMMATIC. ELECTRICAL CONTRACTOR SHALL DETERMINE THE BEST ROUTING PATH AND CIRCUIT COMBINATIONS BASED ON FIELD CONDITIONS AND ELECTRICAL CODES.
2. CONDUIT ROUTING TO RECEPTACLES IS NOT SHOWN. CONTRACTOR SHALL USE BEST ROUTING PRACTICES TO AVOID OBSTRUCTIONS AND INTERFERENCE WITH OTHER EQUIPMENT.
3. CONDUCTOR AND CONDUIT SIZING SHALL BE AS PER NEC.
4. EQUIPMENT LOCATIONS AND ARRANGEMENT ARE SCHEMATIC. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURER FOR DETAILED CONNECTION REQUIREMENTS AND PROVIDE MATERIALS AND INSTALLATION FOR A COMPLETE AND OPERATIONAL SYSTEM.
5. ALL RECEPTACLES WILL BE INSTALLED 18" AFF UNLESS OTHERWISE NOTED.
6. ALL EXTERIOR DOORS AND INTERIOR ACCESS CONTROLLED DOORS NEED DOOR CONTACT ROUTED TO TOP CORNER OF DOOR FRAME.



SECOND FLOOR PLAN (1 / E3.1)
SCALE: 1/4" = 1'-0"

0 2' 4' 8'
1/4"=1'-0"

FREIHEIT ARCHITECTURE

BID ISSUE

HARRIS GROUP
Big Capabilities + Dedicated People

PROJECT NO: 0070800.01

SUQUAMISH TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

JOHN D. NORTON — STATE OF WASHINGTON — 24580 — REGISTERED PROFESSIONAL ENGINEER

03/21/24

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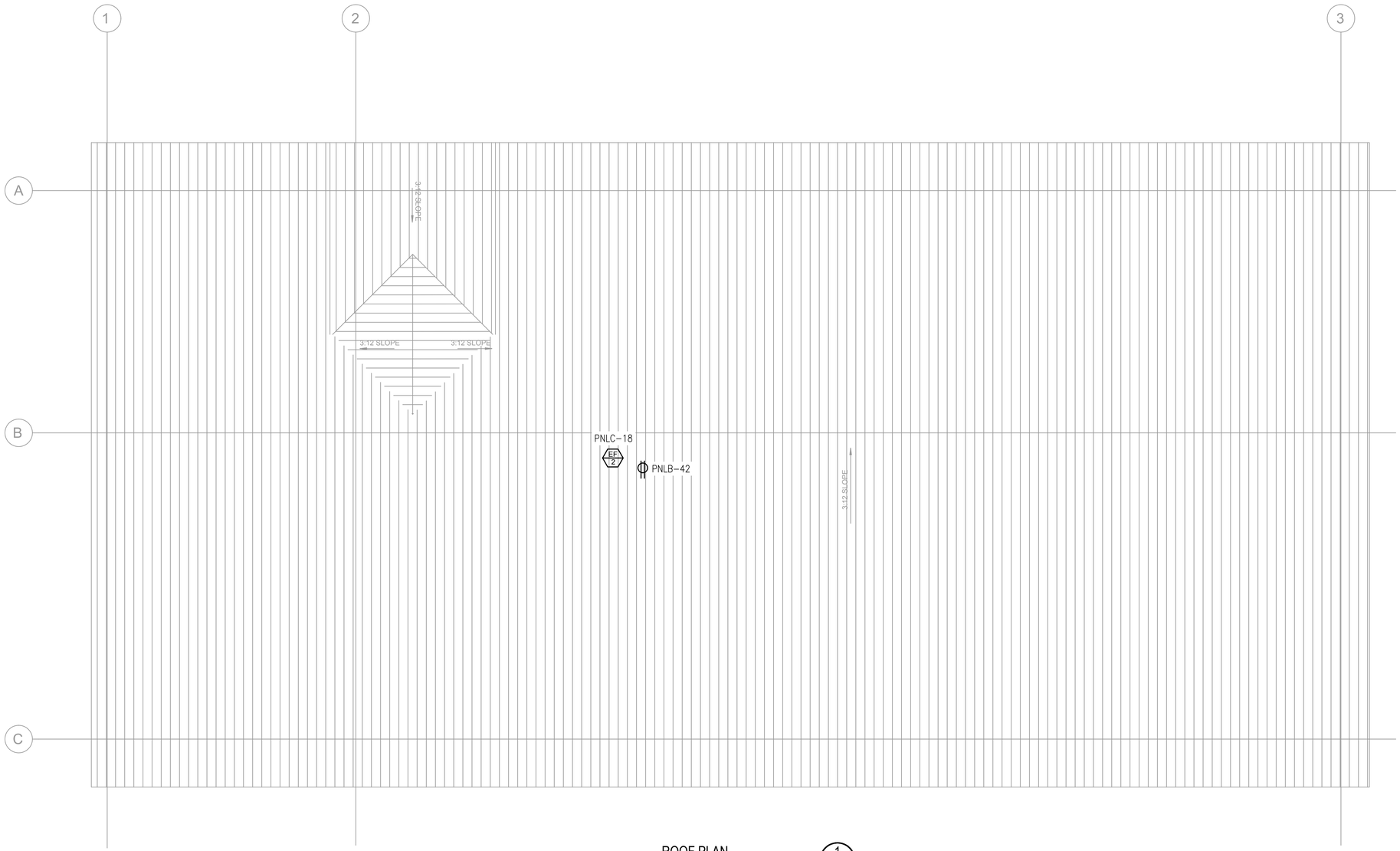
ELECTRICAL SECOND FLOOR POWER PLAN

E3.1



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

1
E3.2

LEGEND

REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

GENERAL NOTES

1. ALL CONDUIT ROUTING IS NOT SHOWN. ELECTRICAL CONTRACTOR SHALL DETERMINE THE BEST ROUTING PATH AND CIRCUIT COMBINATIONS BASED ON FIELD CONDITIONS AND ELECTRICAL CODES.
2. CONDUCTOR AND CONDUIT SIZING SHALL BE AS PER NEC.
3. EQUIPMENT LOCATIONS AND ARRANGEMENT ARE SCHEMATIC. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURER FOR DETAILED CONNECTION REQUIREMENTS AND PROVIDE MATERIALS AND INSTALLATION FOR A COMPLETE AND OPERATIONAL SYSTEM.

KEYED NOTES

(1) NOT USED.

0 2' 4' 8'
1/4"=1'-0"

FREIHEIT ARCHITECTURE

BID ISSUE

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PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING

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TULALIP, WA 98271

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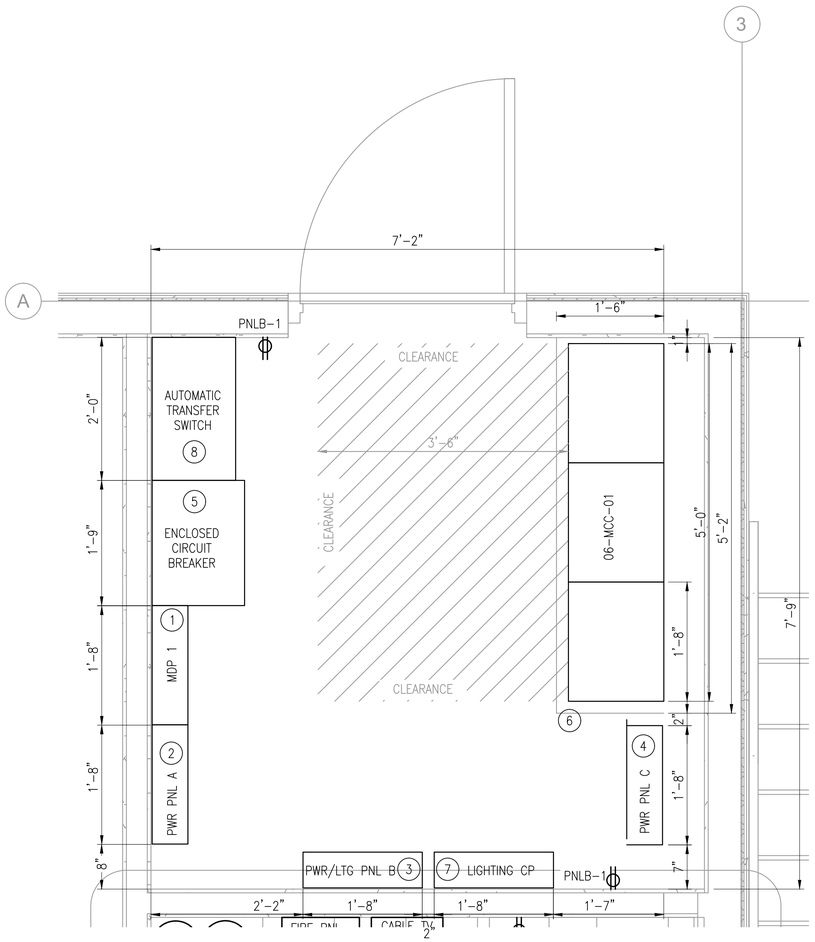
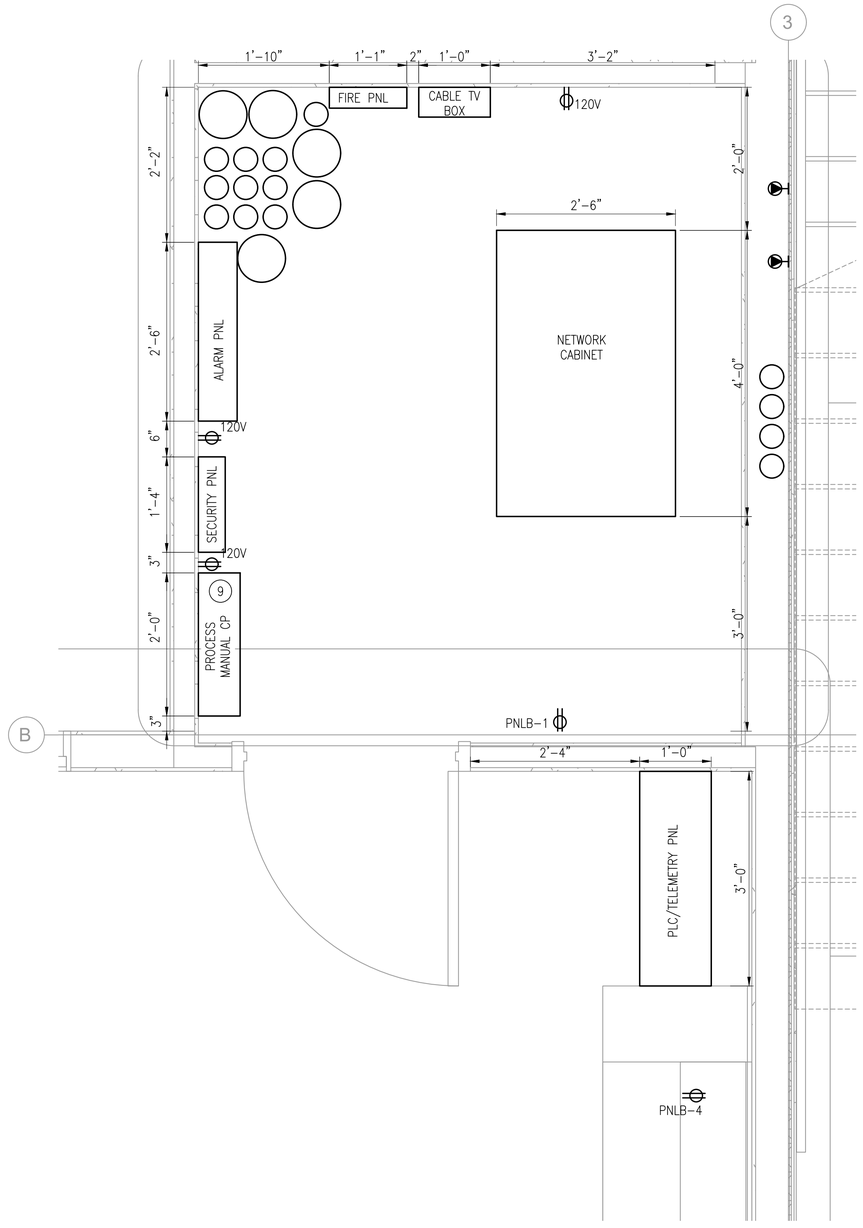
ELECTRICAL ROOF POWER PLAN

E3.2



ELECTRICAL ROOM - 038
ENLARGED PLAN
SCALE: 1" = 1'-0"
2
E3.0



DATA - 039, LABORATORY - 036
ENLARGED PLAN
SCALE: 1" = 1'-0"
3
E3.0

LEGEND

REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY DIMENSIONS OF ALL ELECTRICAL EQUIPMENT PRIOR TO INSTALLATION. REARRANGE EQUIPMENT IN SPACE AS REQUIRED.

CONSTRUCTION NOTES

1. MAIN DISTRIBUTION PANEL (MDP 1). 800A, 240D/120V, 3ø, 4W, 65kAIC, NEMA 1, EATON PART NO. PRL4X OR APPROVED EQUAL.
2. PWR PANELBOARD (PNL A). 100A, 3ø 240D/120V, 4W, 65KAIC, NEMA 1, EATON PART NO. PRL1X OR APPROVED EQUAL.
3. PWR/LTG PANELBOARD (PNL B). 100A, 3ø 240D/120V, 4W, 65KAIC, NEMA 1, EATON PART NO. PRL1X OR APPROVED EQUAL.
4. PWR PANELBOARD (PNL C). 100A, 3ø 240D/120V, 4W, 65KAIC, NEMA 1, EATON PART NO. PRL1X OR APPROVED EQUAL.
5. PROVIDE 800A MOLDED CASE CIRCUIT BREAKER ON SOURCE SIDE OF ATS. EATON NEMA 1 ENCLOSED CIRCUIT BREAKER CAT. NO. SNDN1200 OR EQUAL.
6. PROVIDE HOUSEKEEPING PAD (62"X30"X4") AND RELOCATE EXISTING 3-SECTION MCC FROM LAB TO MAIN UTILITY BUILDING.
7. LTG CTRL PANELBOARD (LCP). 100A, 3ø 208Y/120V, 3ø, 4W, 22kAIC, NEMA 1, POW-R-COMMAND, EATON PART NO. PRC750EECD-120 OR APPROVED EQUAL.
8. PROVIDE AUTOMATIC TRANSFER SWITCH, 800A, 4W, 65KAIC, NEMA 1, GE ZENITH ZTS TRANSFER SWITCH.
9. RELOCATE EXISTING PROCESS MANUAL CONTROL PANEL FROM LAB BUILDING TO DATA ROOM 039.

FREIHEIT ARCHITECTURE

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ELECTRICAL ROOM
ENLARGED PLAN

E3.3

0 6" 1' 2'
1"=1'-0"

LEGEND

REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

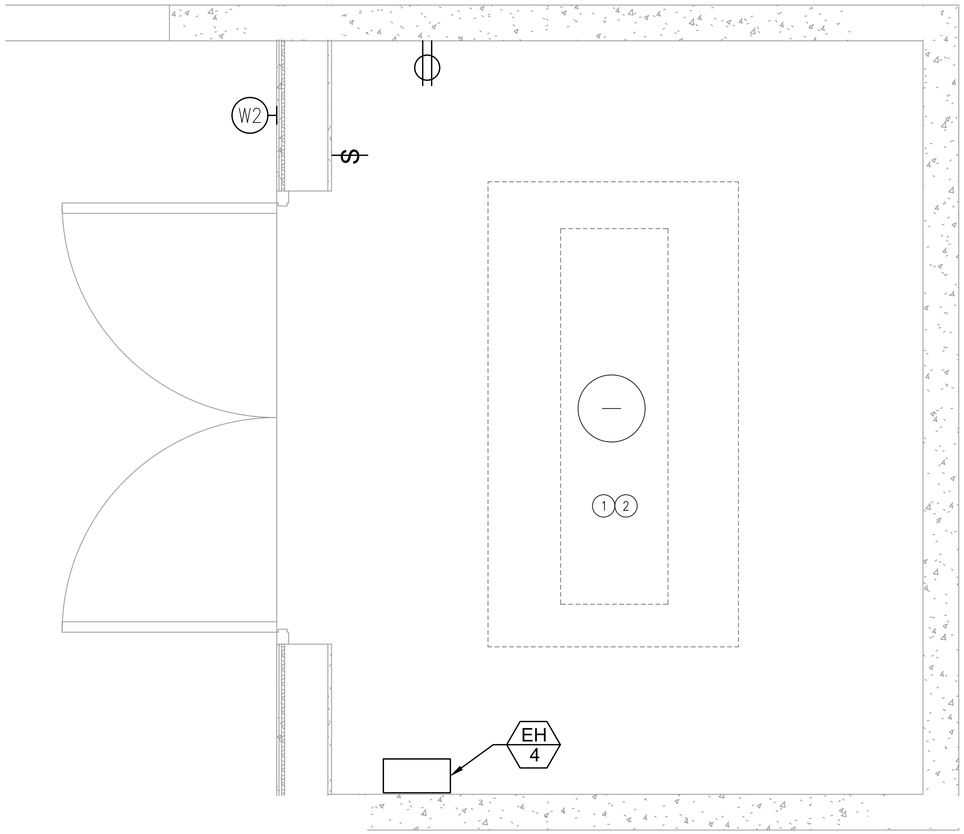
GENERAL NOTES

1. CONTRACTOR SHALL VERIFY DIMENSIONS OF ALL ELECTRICAL EQUIPMENT PRIOR TO INSTALLATION. REARRANGE EQUIPMENT IN SPACE AS REQUIRED.
2. SEE ARCHITECTURAL SITE PLAN FOR ROOM LOCATION.

CONSTRUCTION NOTES

(1) THE HEATER, RECEPTACLE AND LIGHTING CIRCUIT WILL BE FED FROM PANEL A IN NEW ELECTRICAL ROOM.

(2) THE PRESSURE WATER EQUIPMENT WILL BE FED FROM RELOCATED EXISTING MCC IN NEW ELECTRICAL ROOM.



PUMP ROOM PLAN - ELECTRICAL
SCALE: 1" = 1'-0"

1
A2.00

NORTH

0 6" 1' 2'
1"=1'-0"

FREIHEIT ARCHITECTURE

BID ISSUE

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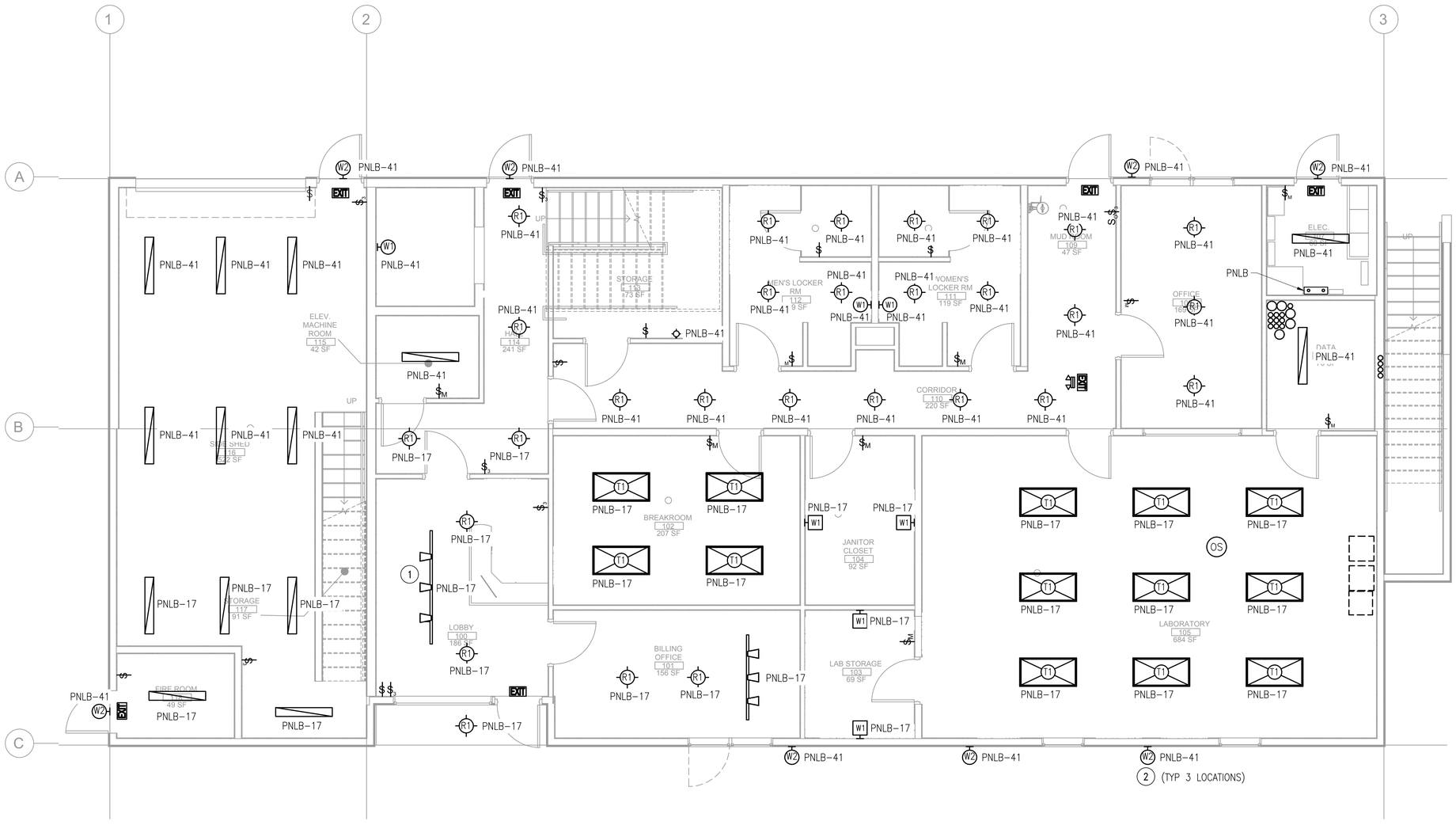
ELECTRICAL PUMP ROOM - ENLARGED PLAN

E3.4

FIRST FLOOR LIGHTING FIXTURE SCHEDULE

ID	DESCRIPTION	QTY	VOLTAGE	VA	MOUNTING	LUMENS	LED COLOR TEMP	MANUFACTURER/CAT. NO.	NOTES
W1H	WALL MOUNTED – LED VANITY FIXTURE	2	120–277 VAC	39	SURFACE/WALL	2400	3000K	LINEA LIGHTING/LL–SC1042/LL–SC1043/LL–SC1044	
W2H	WALL MOUNTED EXTERNAL LED FIXTURE	8	120–277 VAC	27	SURFACE/WALL	2400	3000K	AFX DEXTER LED OUTDOOR SCONCE/DEXW SERIES	–
–	4' LED LINEAR FIXTURE	9	120–277 VAC	49	PENDANT	4800	4000K	ECOSENSE OXYGEN 31	–
T1	2'X4' LED RECESSED DIRECT\INDIRECT	2	120–277 VAC	50	SURFACE	5705	3500K	CORONET /TDCW LED–2X4–LTGI–COLOR–90CRI	–
P1	PENDANT LIGHT	1	120–277 VAC	39	PENDANT	–	4000K	VISUAL COMFORT & CO 700TDWDS LED 90 CRI 3000K 120V	–
R1	6" LED RECESSED DOWNLIGHT	6	120–277 VAC	–	SURFACE	–	2700K	NORA / NHMIC–685–LE4* / NRM–611L–85–35–HZW	–
EXIT	LED EXIT SIGN	6	120–277 VAC	5	CEILING	–	LED	EXITRONIX S900 SERIES (PART NO. TBD)	–
EXIT	LED EXIT EGRESS SIGN	1	120–277 VAC	–	CEILING	410	4000K	DUAL LITE LED EXIT EGRESS SIGN (PART NO.)	EV EMERGENCY LIGHT, MOUNTING TYPE: WALL OR CEILING MOUNT, COLOR: WHITE, NUMBER OF LAMPS: 2, BATTERY TYPE: NICKEL METAL HYDRIDE (NIMH), BATTERY RUNTIME: 90 MIN, VOLTAGE RATING: 120/277 VAC, ENVIRONMENTAL CONDITIONS: DRY LOCATION
OS2	OCCUPANCY SENSORS	AS REQ'D	120VAC	–	SURFACE/WALL	–	–	SENSORSWITCH / AS REQ'D	LIGHTING CONTROL, SEE DRAWING NOTES
W1H	4' LED LINEAR FIXTURE	4	120–277 VAC	50	SURFACE/WALL	–	3000K	CORONET/850WM–4 3000K/90 CRI	–



FIRST FLOOR LIGHTING PLAN (1 / E4.0)
SCALE: 1/4" = 1'–0"

LEGEND

REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

GENERAL NOTES

1. ALL CONDUIT ROUTING IS DIAGRAMMATIC. ELECTRICAL CONTRACTOR SHALL DETERMINE THE BEST ROUTING PATH AND CIRCUIT COMBINATIONS BASED ON FIELD CONDITIONS AND ELECTRICAL CODES.
2. ALL NEW FEEDER AND BRANCH CIRCUIT CONDUCTORS TO BE TYPE THHN COPPER UNLESS OTHERWISE NOTED.
3. ALL BRANCH CIRCUIT CONDUCTORS TO BE SIZED #12 AWG UNLESS OTHERWISE NOTED ON THE PLANS.
4. INSTALL ALL STAIRWELL MOTION SENSORS FACING DIRECTION OF STAIRS.
5. PAINT ALL CONDUIT AND DEVICE BOXES TO MATCH WALL AND CEILING COLORS.
6. TOTAL CONNECTED LIGHTING LOADS (TOTAL FIXTURES CONNECTED TO A SINGLE CIRCUIT) SHALL NOT BE MORE THAN 16A FOR 20A CIRCUITS OR 12A FOR 15A CIRCUITS. SEE SHEET E5.0 FOR PANELBOARD SCHEDULES CIRCUIT ASSIGNMENTS.
7. ALL EXTERIOR LIGHTS ARE EQUIPPED WITH PHOTOCELL FOR COMING ON AT DUSK AND GOING OFF AT DAWN. INSTALL LIGHT SWITCH DIGITAL TIMERS CONTROLLING OUTSIDE LIGHTS TO TURN THE LIGHTS OFF AT 11:00 PM UNTIL 6:00 AM.
8. ALL LIGHTING AND CONTROLS INSTALLED SHALL BE FUNCTIONALLY TESTED AND A WRITTEN REPORT INCLUDING THE RESULTS BE PROVIDED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
9. JUNCTION BOXES ARE NOT SHOWN. CONTRACTOR SHALL USE AS NEEDED IN ACCORDANCE WITH NEC 358.26.
10. MULTIPLE SWITCHES AT ONE LOCATION SHALL BE GANGED TOGETHER AND COVERED FINISHED WITH ONE COVER PLATE U.N.O.
11. WASHINGTON STATE NON–RESIDENTIAL ENERGY CODE INTERIOR LIGHTING SUMMARY ATTACHED SEPARATELY.
11. NOTIFY ARCHITECT OF ANY CONFLICTS OF LIGHT FIXTURE LOCATIONS WITH MAIN RUNNERS, DUCTS, SPRINKLERS, HVAC, AND/OR EXISTING CONDUIT, PRIOR TO FRAMING FOR LIGHTS. ANY DISCREPANCIES BETWEEN ARCHITECTS PROPOSED CEILING GRID/PANEL LOCATIONS AND ACTUAL FIELD CONDITIONS ARE TO BE CLARIFIED WITH THE ARCHITECT PRIOR TO FRAMING.

KEYED NOTES

1. CONTRACTOR SHALL INSTALL RECESSED CAN LIGHT FIXTURES IN 1 1/2" CEMENT UNDERLAYMENT SLAB BETWEEN 1ST AND 2ND FLOOR.
2. FOR EXTERIOR LIGHTING FIXTURES ELEVATION HEIGHT REFER TO SHEET A4.00.

0 2' 4' 8'
1/4"=1'–0"

FREIHEIT ARCHITECTURE

BID ISSUE

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

JOHN D. NORTON
STATE OF WASHINGTON
54587
REGISTERED
PROFESSIONAL ENGINEER
03/21/24

ISSUE LIST

NO.	DESCRIPTION	DATE
	BID ISSUE	03/21/2024

PROJECT NO.:	0070800.01
PROJECT MGR.:	M. AZEEM
DRAWN BY:	R. PINLAC
CHECKED BY:	J. NORTON

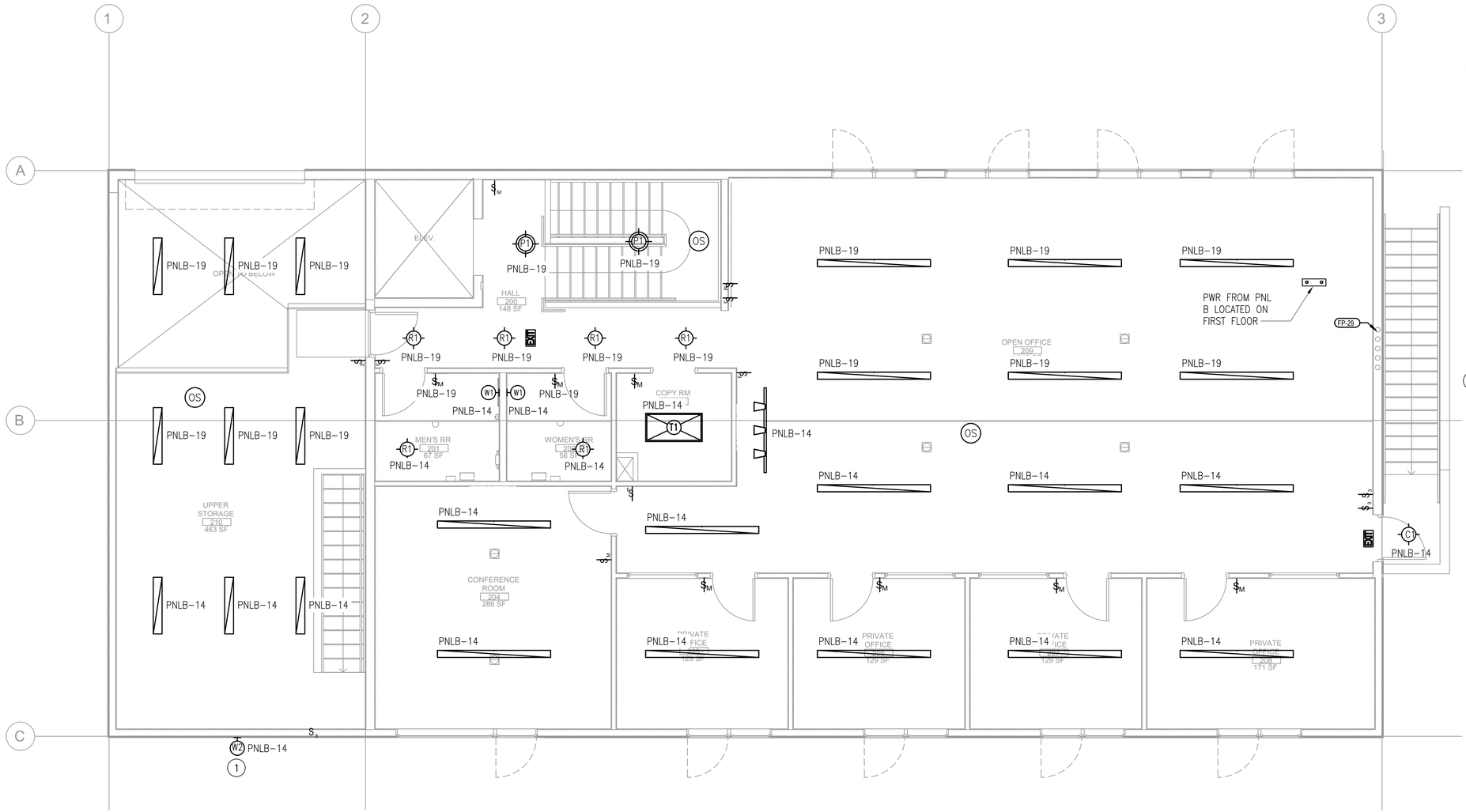
PRINTED

ELECTRICAL
FIRST FLOOR
LIGHTING PLAN

E4.0

SECOND FLOOR LIGHTING FIXTURE SCHEDULE

ID	DESCRIPTION	QTY	VOLTAGE	VA	MOUNTING	LUMENS	LED COLOR TEMP	MANUFACTURER/CAT. NO.	NOTES
	WALL MOUNTED – LED VANITY FIXTURE	2	120–277 VAC	39	SURFACE/WALL	2400	3000K	LINEA LIGHTING/LL–SC1042/LL–SC1043/LL–SC1044	
	WALL MOUNTED EXTERNAL LED FIXTURE	1	120–277 VAC	27	SURFACE/WALL	2400	3000K	AFX DEXTER LED OUTDOOR SCONCE/DEXW SERIES	–
	4' LED LINEAR FIXTURE	9	120–277 VAC	49	PENDANT	4800	4000K	ECOSENSE OXYGEN 31	–
	2'X4' LED RECESSED DIRECT\INDIRECT	2	120–277 VAC	50	SURFACE	5705	3500K	CORONET /TDCW LED–2X4–LTGI–COLOR–90CRI	–
	PENDANT LIGHT	1	120–277 VAC	39	PENDANT	550	4000K	VISUAL COMFORT & CO 700TDWDS LED 90 CRI 3000K 120V	–
	6" LED RECESSED DOWNLIGHT	6	120–277 VAC	32	SURFACE	2000	2700K	NORA / NHMIC–685–LE4* / NRM–611L–85–35–HZW	
	LED EXIT SIGN	2	120–277 VAC	5	CEILING	–	LED	EXITRONIX S900 SERIES (PART NO. TBD)	–
	LED EXIT EGRESS SIGN	–	120–277 VAC	–	CEILING	410	4000K	DUAL LITE LED EXIT EGRESS SIGN (PART NO.)	EV EMERGENCY LIGHT, MOUNTING TYPE: WALL OR CEILING MOUNT, COLOR: WHITE, NUMBER OF LAMPS: 2, BATTERY TYPE: NICKEL METAL HYDRIDE (NIMH), BATTERY RUNTIME: 90 MIN, VOLTAGE RATING: 120/277 VAC, ENVIRONMENTAL CONDITIONS: DRY LOCATION
	OCCUPANCY SENSORS	AS REQ'D	120 VAC	–	SURFACE/WALL	–	–	SENSORSWITCH / AS REQ'D	LIGHTING CONTROL, SEE DRAWING NOTES
	CANOPY LIGHT	1	120 VAC	94	SURFACE/JB	5000/7500/ 10,000	3K/4K/5K	LITHONIA LED ALO SWW2 UVOLT PE PIR DOB M2 (Dark Bronze)	3 POWER LEVELS, OCCUPANCY SENSOR, SWITCHABLE CCT



SECOND FLOOR LIGHTING PLAN (1 / E4.1)
SCALE: 1/4" = 1'–0"

LEGEND

REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

GENERAL NOTES

1. ALL CONDUIT ROUTING IS DIAGRAMMATIC. ELECTRICAL CONTRACTOR SHALL DETERMINE THE BEST ROUTING PATH AND CIRCUIT COMBINATIONS BASED ON FIELD CONDITIONS AND ELECTRICAL CODES.
2. ALL NEW FEEDER AND BRANCH CIRCUIT CONDUCTORS TO BE TYPE THHN COPPER UNLESS OTHERWISE NOTED.
3. ALL BRANCH CIRCUIT CONDUCTORS TO BE SIZED #12 AWG UNLESS OTHERWISE NOTED ON THE PLANS.
4. INSTALL ALL STAIRWELL MOTION SENSORS FACING DIRECTION OF STAIRS.
5. PAINT ALL CONDUIT AND DEVICE BOXES TO MATCH WALL AND CEILING COLORS.
6. TOTAL CONNECTED LIGHTING LOADS (TOTAL FIXTURES CONNECTED TO A SINGLE CIRCUIT) SHALL NOT BE MORE THAN 16A FOR 20A CIRCUITS OR 12A FOR 15A CIRCUITS. SEE SHEET E5.0 FOR PANELBOARD SCHEDULES CIRCUIT ASSIGNMENTS.
7. ALL EXTERIOR LIGHTS ARE EQUIPPED WITH PHOTOCELL FOR COMING ON AT DUSK AND GOING OFF AT DAWN. INSTALL LIGHT SWITCH DIGITAL TIMERS CONTROLLING OUTSIDE LIGHTS TO TURN THE LIGHTS OFF AT 11:00 PM UNTIL 6:00 AM.
8. ALL LIGHTING AND CONTROLS INSTALLED SHALL BE FUNCTIONALLY TESTED AND A WRITTEN REPORT INCLUDING THE RESULTS BE PROVIDED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
9. JUNCTION BOXES ARE NOT SHOWN. CONTRACTOR SHALL USE AS NEEDED IN ACCORDANCE WITH NEC 358.26.
10. MULTIPLE SWITCHES AT ONE LOCATION SHALL BE GANGED TOGETHER AND COVERED FINISHED WITH ONE COVER PLATE U.N.O.
11. WASHINGTON STATE NON–RESIDENTIAL ENERGY CODE INTERIOR LIGHTING SUMMARY ATTACHED SEPARATELY.
11. NOTIFY ARCHITECT OF ANY CONFLICTS OF LIGHT FIXTURE LOCATIONS WITH MAIN RUNNERS, DUCTS, SPRINKLERS, HVAC, AND/OR EXISTING CONDUIT, PRIOR TO FRAMING FOR LIGHTS. ANY DISCREPANCIES BETWEEN ARCHITECTS PROPOSED CEILING GRID/PANEL LOCATIONS AND ACTUAL FIELD CONDITIONS ARE TO BE CLARIFIED WITH THE ARCHITECT PRIOR TO FRAMING.

KEYED NOTES

1. FOR EXTERIOR LIGHTING FIXTURES ELEVATION HEIGHT REFER TO SHEET A4.00.

0 2' 4' 8'
1/4"=1'–0"

FREIHEIT ARCHITECTURE

BID ISSUE

HARRIS GROUP
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PROJECT NO: 0070800.01

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ISSUE LIST

NO.	DESCRIPTION	DATE
	BID ISSUE	03/21/2024

PROJECT NO.:	0070800.01
PROJECT MGR.:	M. AZEEM
DRAWN BY:	R. PINLAC
CHECKED BY:	J. NORTON

PRINTED

ELECTRICAL SECOND FLOOR LIGHTING PLAN

E4.1

PANEL NAME:	MDP 1													
FLOOR	1	VOLTAGE:	240	/	120			MAIN BREAKER:	800					
BUILDING:	3015	PHASE:	3					LUGS ONLY:						
ROOM:	038	WIRE:	4					SURFACE:	X					
COLUMN:		BUS AMPS:	800		800	:MAIN CB AMPS		FLUSH:						
		SUPPLY AMPS:	800					GROUND BUS:	X					
	MIN. SHORT CIRCUIT RATING:		65K					ISOLATED GROUND BUS:						
INCLUDE SPARE CAP. - Y / N:	Y							NEUTRAL BUS:	X					

SERVES	LTG	RCPT	PWR	MOT	CB *	CKT	PH	CKT	CB *	LTG	RCPT	PWR	MOT	SERVES
100A PANEL A			10.1		100	1	A	2	100			7.728		100A PANEL B
-			5.97		-	3	B	4	-			8.426		-
-			7.42		-	5	C	6	-			8.264		-
100A PANEL C			9.29		100	7	A	8	600			20.78		* EXISTING 600A MCC
-			8.85		-	9	B	10	-			20.78		-
-			10.5		-	11	C	12	-			20.78		-
WH-1 WATER HEATER (1ST)			8		80	13	A	14	20			3.95		CU-2 CONDENSING UNIT (1ST)
-			8		-	15	B	16	-			3.95		-
-			8		-	17	C	18	20			3.95		CU-3 CONDENSING UNIT (1ST)
CU-1 CONDENSING UNIT (1ST)			7.90		80	19	A	20	-			3.95		-
-			7.90		-	21	B	22	20					SPARE
-			7.90		-	23	C	24	-					SPARE
SPACE						25	A	26						SPACE
SPACE						27	B	28						SPACE
SPACE						29	C	30						SPACE
SPACE						31	A	32						SPACE
SPACE						33	B	34						SPACE
SPACE						35	C	36						SPACE
SPACE						37	A	38						SPACE
SPACE						39	B	40						SPACE
SPACE						41	C	42						SPACE
CONNECTED KVA			A:	72		B:	64	C:	67					

				AMPS	KVA	
CONNECTED KVA:		D.F.	DEMAND KVA:	800.0	332.6	DESIGN (BASED ON SUPPLY)
LIGHTING LOAD:	0.0	1.00	0.0	466.1	193.8	CONNECTED
RECEPT. LOAD - FIRST 10 KVA:	0.0	1.00	0.0	466.1	193.8	DEMAND
RECEPT. LOAD - REMAINDER:	0.0	0.50	0.0	333.9	138.8	**SPARE**
POWER LOAD:	193.8	1.00	193.8	AVG		
MOTOR LOAD EXCEPT LARGEST:	0.0	1.00	0.0	KVA	AMPS	KVA CONNECTED
LARGEST MOTOR:	0.0	1.25	0.0	0.1	1	0.1 PHASE A
20% SPARE CAPACITY:	0.0	1.00	0.0		1	0.1 PHASE B
TOTAL CONNECTED LOAD (kVA):	193.8	TOTAL DEMAND LOAD:	193.8		1	0.1 PHASE C

INSTRUCTIONS:
* - ALL BRANCH CIRCUIT BREAKERS ARE 1P20 UNLESS OTHERWISE SHOWN
[- DENOTES ADDITIONAL POLES OF MULTI-POLE CIRCUIT BREAKERS

NOTES:
* EXISTING MCC IN LAB BUILDING WAS 133 KVA CONNECTED OR 320A AT 240V.
MCC FEEDS 2 BRUSH ROTOR MOTOR STARTERS TOTALING 76A. OTHER SPECIFIC LOADS AMOUNTS UNKNOWN.

PHASE LOAD		PHASE BALANCE
0%	106%	PHASE A
0%	95%	PHASE B
0%	99%	PHASE C

MAIN DISTRIBUTION PANEL 'MDP 1' (2)

PANEL NAME:	PANEL A													
FLOOR	1	VOLTAGE:	240	/	120			MAIN BREAKER:	100					
BUILDING:	3015	PHASE:	3					LUGS ONLY:						
ROOM:	038	WIRE:	4					SURFACE:	X					
COLUMN:		BUS AMPS:	100		100	:MAIN CB AMPS		FLUSH:						
		SUPPLY AMPS:	100					GROUND BUS:	X					
	MIN. SHORT CIRCUIT RATING:		65K					ISOLATED GROUND BUS:						
INCLUDE SPARE CAP. - Y / N:	Y							NEUTRAL BUS:	X					

SERVES	LTG	RCPT	PWR	MOT	CB *	CKT	PH	CKT	CB *	LTG	RCPT	PWR	MOT	SERVES
FCU-1, FCU-2, & FCU-3 (1ST)			0.04		20	1	A	2	20			0.03		FCU-4 & FCU-5 (1ST)
			0.04		-	3	B	4	-			0.03		-
FCU-6 & FCU-7 (1ST)			0.02		20	5	C	6	20			0.14		FCU-8, 9, 10, 11, & FCU-12 (2ND)
			0.02		-	7	A	8	-			0.14		-
FCU-13 FAN COIL UNIT (2ND)			0.11		20	9	B	10	20			0.17		DOAS-1 VENTILATOR (1ST)
			0.11		-	11	C	12	-			0.17		-
DOAS-2 VENTILATOR (2ND)			0.12		20	13	A	14	20			3		DRYER (1ST)
			0.12		-	15	B	16	-			3		-
BC-1 BRANCH CKT HEAT RECOV.			0.17		20	17	C	18	45			4.2		RANGE (1ST)
-			0.17		-	19	A	20	-			4.2		-
ELEVATOR MOTOR (10HP)			2.5		30	21	B	22	20					SPARE
-			2.5		-	23	C	24	-					SPARE
RECEPT STORAGE (2ND)		0.72			20	25	A	26	20			1.56		H-1 RANGE HOOD & MICROWAVE
SPARE					20	27	B	28	20					SPARE
LIGHTING B (2ND)	0.89				20	29	C	30	20			1.75		S-1 IN-SINK ERATOR, HW DISPENS
LIGHT IN ELEVATOR PIT	0.1				20	31	A	32	20					SPARE
SPACE					-	33	B	34	-					SPACE
RECEPT IN ELEVATOR PIT		0.18			20	35	C	36	-					SPACE
SPACE					-	37	A	38	-					SPACE
SPACE					-	39	B	40	-					SPACE
SPACE					-	41	C	42	-					SPACE
CONNECTED KVA			A:	10		B:	6	C:	10					

				AMPS	KVA	
CONNECTED KVA:		D.F.	DEMAND KVA:	100.0	41.6	DESIGN (BASED ON SUPPLY)
LIGHTING LOAD:	1.0	1.00	1.0	62.4	25.9	CONNECTED
RECEPT. LOAD - FIRST 10 KVA:	0.9	1.00	0.9	62.4	25.9	DEMAND
RECEPT. LOAD - REMAINDER:	0.0	0.50	0.0	37.6	15.6	**SPARE**
POWER LOAD:	24.0	1.00	24.0	AVG		
MOTOR LOAD EXCEPT LARGEST:	0.0	1.00	0.0	KVA	AMPS	KVA CONNECTED
LARGEST MOTOR:	0.0	1.25	0.0	0.0	0	0.0 PHASE A
20% SPARE CAPACITY:	0.0	1.00	0.0		0	0.0 PHASE B
TOTAL CONNECTED LOAD (kVA):	25.9	TOTAL DEMAND LOAD:	25.9		0	0.0 PHASE C

INSTRUCTIONS:
* - ALL BRANCH CIRCUIT BREAKERS ARE 1P20 UNLESS OTHERWISE SHOWN
[- DENOTES ADDITIONAL POLES OF MULTI-POLE CIRCUIT BREAKERS

NOTES:

PHASE LOAD		PHASE BALANCE
0%	116%	PHASE A
0%	68%	PHASE B
0%	116%	PHASE C

240/120V PANEL 'A' (2)

PANEL NAME:	PANEL B													
FLOOR	1	VOLTAGE:	240	/	120			MAIN BREAKER:	100					
BUILDING:	3015	PHASE:	3					LUGS ONLY:						
ROOM:	038	WIRE:	4					SURFACE:	X					
COLUMN:		BUS AMPS:	100		100	:MAIN CB AMPS		FLUSH:						
		SUPPLY AMPS:	100					GROUND BUS:	X					
	MIN. SHORT CIRCUIT RATING:		65K					ISOLATED GROUND BUS:						
INCLUDE SPARE CAP. - Y / N:	Y							NEUTRAL BUS:	X					

SERVES	LTG	RCPT	PWR	MOT	CB *	CKT	PH	CKT	CB *	LTG	RCPT	PWR	MOT	SERVES
RECEPT OFFICE (1ST)		1.26			20	1	A	2	20		1.26			RECEPT CORRIDOR (1ST)
SPARE (208V Ckts ONLY)						3	B	4	-					-
RECEPT BREAKROOM (1ST)		0.9			20	5	C	6	20		1.08			RECEPT LOBBY/BILLING (1ST)
RECEPT STORAGE (1ST)		0.9			20	7	A	8	20		1.08			RECEPT OPEN OFFICE N. (2ND)
'SPARE (208V Ckts ONLY)						9	B	10	-					-
RECEPT BATH/COPY RM (2ND)		0.72			20	11	C	12	20		0.72			RECEPT CONFERENCE RM (2ND)
RECEPTACLE STORAGE (2ND)		0.72				13	A	14	20	0.89				LIGHTING B (2ND)
'SPARE (208V Ckts ONLY)						15	B	16	-					-
LIGHTING B (1ST)	1.05					17	C	18	0.1					LIGHT IN ELEVATOR PIT
LIGHTING A (2ND)	0.74				20	19	A	20	-			0.09		-
'SPARE (208V Ckts ONLY)						21	B	22	-					SPARE (208V Ckts ONLY)
LIGHTING EXTERIOR	0.28				20	23	C	24	20			1.92		DW-1 KITCHEN DISHWASHER
LIGHTING CONTROL PANEL					20	25	A	26	20					SPARE
SPARE						27	B	28	-					-
ELEVATOR SUMP PUMP			1.5		20	29	C	30	20					SPARE RECEP IN ELEVATOR PIT
ELEVATOR CAB/LIGHT/SIGNAL	0.12				20	31	A	32	-					SPACE S1 IN-SINK ERATOR
'SPARE (208V Ckts ONLY)						33	B	34	-					-
RECEPT LAB RM N. (1ST)		0.9			20	35	C	36	20		1.08			RECEPT LAB RM S. (1ST)
RECEPT OPEN OFFICE S. (2ND)		0.9			20	37	A	38	20		1.44			RECEPT PRIVATE OFFICE (2ND)
SPACE						39	B	40	-					SPACE
LIGHTING A (1ST)	1.00				20	41	C	42	20		0.18			RECEPT (ROOF)
CONNECTED KVA			A:	9		B:	0	C:	11					

				AMPS	KVA	
CONNECTED KVA:		D.F.	DEMAND KVA:	100.0	41.6	DESIGN (BASED ON SUPPLY)
LIGHTING LOAD:	4.1	1.00	4.1	58.17	24.18	CONNECTED
RECEPT. LOAD - FIRST 10 KVA:	10.0	1.00	10.0	59.13	22.58	DEMAND
RECEPT. LOAD - REMAINDER:	3.1	0.50	1.6	45.76	19.02	**SPARE**
POWER LOAD:	6.68	1.00	6.68	AVG		
MOTOR LOAD EXCEPT LARGEST:	0.0	1.00	0.0	KVA	AMPS	KVA CONNECTED
LARGEST MOTOR:	0.0	1.25	0.0	0.0	0	0.0 PHASE A
20% SPARE CAPACITY:	0.0	1.00	0.0		0	0.0 PHASE B
TOTAL CONNECTED LOAD (kVA):	24.18	TOTAL DEMAND LOAD:	22.58		0	0.0 PHASE C

INSTRUCTIONS:
* - ALL BRANCH CIRCUIT BREAKERS ARE 1P20 UNLESS OTHERWISE SHOWN
[- DENOTES ADDITIONAL POLES OF MULTI-POLE CIRCUIT BREAKERS

NOTES:

PHASE LOAD		PHASE BALANCE
0%	136%	PHASE A
0%	0%	PHASE B
0%	164%	PHASE C

240/120V PANEL 'B' (2)

PANEL NAME:	PANEL C													
FLOOR	1	VOLTAGE:	240	/	120			MAIN BREAKER:	100					
BUILDING:	3015	PHASE:	3					LUGS ONLY:						
ROOM:	038	WIRE:	4					SURFACE:	X					
COLUMN:		BUS AMPS:	100		100	:MAIN CB AMPS		FLUSH:						
		SUPPLY AMPS:	100					GROUND BUS:	X					
	MIN. SHORT CIRCUIT RATING:		65K					ISOLATED GROUND BUS:						
INCLUDE SPARE CAP. - Y / N:	Y							NEUTRAL BUS:	X					

SERVES	LTG	RCPT	PWR	MOT	CB *	CKT	PH	CKT	CB *	LTG	RCPT	PWR	MOT	SERVES
SECURITY EQUIPMENT					20	1	A	2	20			1.08		LAB RM STILL (9A)
CP-1 HW CIRC. PUMP (1ST)				0.29	20	3	B	4	20			2.5		UH-1 UNIT HEATER (1ST)
TELECOM PANEL					20	5	C	6	20			1.73		LAB RM TSS OVEN (14.4A)
EF-1 EXHAUST FAN (1ST)			0.05		20	7	A	8	20			0.74		LAB RM INCUBATOR FRIDGE (6.2A
LIGHTING B (1ST)	1.05				20	9	B	10	20			0.09		EF-2 EXHAUST FAN (ROOF)
EH-2 ELECTRIC HEATER (1ST)			0.25		20	11	C	12	20			1.2		LAB RM COLIFORM BATH
EH-3 ELECTRIC HEATER (1ST)			0.25		20	13	A	14	20				0.25	LAB RM VACUUM PUMP (1/3HP)
HP-2 HEAT PUMP (1ST)			0.42		20	15	B	16	20			0.50		SF-1 SUPPLY FAN (1ST)
FIRE ALARM PANEL					20	17	C	18	20			1.92		DW-1 LAB RM DISHWASHER (16A)
HP-1 HEAT PUMP (1ST)			0.42		20	19	A	20	-			2.5		-
'SPARE (208V Ckts ONLY)						21	B	22	-					-
EH-1 ELECTRIC HEATER (1ST)			0.25		20	23	C	24	20			1.4		LAB RM AUTOCLAVE (12A)
SPACE					20	25	A	26	20			2		DH-1 DUCT HEATER (1ST)
'SPARE (208V Ckts ONLY)					20	27	B	28	-			1		-
DF-1 WATER COOLER (1ST)			0.37		20	29	C	30	20					SPARE
PRESSURE WASHER ROOM	0.1		1.5		20	31	A	32	20			2		DH-2 DUCT HEATER (2ND)
SPACE						33	B	34	-			1		-
SPACE						35	C	36	-					-
SPACE						37	A	38	20			2		DH-3 DUCT HEATER (1ST)
SPACE						39	B	40	-			2		-
SPACE						41	C	42	-			2		-
CONNECTED KVA			A:	13		B:	9	C:	9					

				AMPS	KVA	
CONNECTED KVA:		D.F.	DEMAND KVA:	100.0	41.6	DESIGN (BASED ON SUPPLY)
LIGHTING LOAD:	1.2	1.00	1.2	73.0	30.6	CONNECTED
RECEPT. LOAD - FIRST 10 KVA:	0.0	1.00	0.0	73.0	30.6	DEMAND
RECEPT. LOAD - REMAINDER:	0.0	0.50	0.0	26.5	11.0	**SPARE**
POWER LOAD:	28.9	1.00	28.9	AVG		
MOTOR LOAD EXCEPT LARGEST:	0.3	1.00	0.3	KVA	AMPS	KVA CONNECTED
LARGEST MOTOR:	0.3	1.25	0.3	0.0	0	0.0 PHASE A
20% SPARE CAPACITY:	0.0	1.00	0.0		0	0.0 PHASE B
TOTAL CONNECTED LOAD (kVA):	30.6	TOTAL DEMAND LOAD:	30.6		0	0.0 PHASE C

INSTRUCTIONS:
* - ALL BRANCH CIRCUIT BREAKERS ARE 1P20 UNLESS OTHERWISE SHOWN
[- DENOTES ADDITIONAL POLES OF MULTI-POLE CIRCUIT BREAKERS

NOTES:

PHASE LOAD		PHASE BALANCE
0%	125%	PHASE A
0%	86%	PHASE B
0%	89%	PHASE C

240/120V PANEL 'C' (2)

PANEL SCHEDULES
SCALE: NO SCALE

LEGEND

NOT USED

GENERAL NOTES

1. NOT USED.

KEYED NOTES

(1) RELOCATE EXISTING EQUIPMENT FROM LAB TO MAIN UTILITY BUILDING.

(2) EQUIPMENT SHALL BE PERMANENTLY MARKED WITH LABEL "CAUTION: B PHASE HAS 208 VOLTS TO GROUND". ALL PHASE B CONDUCTORS AND BUSBARS ON THIS SYSTEM SHALL BE DURABLY AND PERMANENTLY MARKED BY AN OUTER ORANGE FINISH.

FREIHEIT ARCHITECTURE

BID ISSUE

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com

PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

JOHN D. NORTON
STATE OF WASHINGTON
24587
REGISTERED
PROFESSIONAL ENGINEER
03/21/24

ISSUE LIST

NO.	DESCRIPTION	DATE
	BID ISSUE	03/21/2024

PROJECT NO.: 0070800.01
PROJECT MGR.: M. AZEEM
DRAWN BY: R. PINLAC
CHECKED BY: J. NORTON

PRINTED

ELECTRICAL
PANEL SCHEDULES

E5.0

EXISTING MCC SCHEDULE (06 MCC 01) (1)						
Section	**Cell**	**Destination**	**Poles**	**Plug Rating**	**Cable size**	**Remarks**
1F	G	MFR Influent Fine Screen Control Panel	3	20A	(4) # 12 AWG	
1F	J	Emergency Power Panel 240/120V, 3P 06 BKR 01	3	100A	n/a	
2F	C	Brush Rotor No. 1 Motor 02 MS 01	3	70A	(4) #6 AWG	15HP (2)
2F	F	Brush Rotor No. 2 Motor 02 MS 02	3	70A	(4) #6 AWG	15HP (2)
2F	J	Clarifier No. 1 Motor 03 MS 01	3	7A	(4) #12 AWG	0.5HP (2)
2F	M	Clarifier No. 2 Motor 03 MS 02	3	7A	(4) #12 AWG	0.5HP (2)
3F	C	Lighting Panel 240/120V, 3P 06 BKR 02	3	200A	n/a	
3F	E	Air Gap Panel 06 BKR 01	3	100A	(4) # 2 AWG	
3F	K	Panel Board 240/120V, 3P, 100A, 30CKT 06 PB 03	3		n/a	Internal panel
	Add construction note on this drawing					
	Contractor to check consultant all cable sizes as per cable routing at site.					

EXISTING MCC SCHEDULE

SCALE: NO SCALE

LEGEND

NOT USED

GENERAL NOTES

1. NOT USED.

KEYED NOTES

(1) REFER TO SHEET E2.0 FOR SINGLE LINE DIAGRAM. SEE 06 MCC 01 PANEL KEYED NOTES.

(2) THE ESTIMATED LENGTHS OF CABLES IS AROUND 350 FEET. CONTRACTOR TO CONFIRM AT SITE.

FREIHEIT ARCHITECTURE

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EXISTING MCC SCHEDULE

E5.1