FREIHEIT
ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 16, 2024

Bid Addendum One

Project: **Tullip New Utilities Building**
Project No. Tulalip Tribes Project No. 2021-003

Date of Issuance: April 16, 2024

This addendum to bid materials issued to Tulalip Tribes Request for Proposal and to Builders' Exchange of Washinton on March 21, 2024, for bids due no later than 3:00PM on April 23, 2024, per instructions in the original Notice To Bidders.

The addendum includes the following materials:

1. Complied RFIs 1 through 10
2. Addendum One Architectural Drawings (revised sheets only)
3. Addendum One Structural Drawings (All Structural Sheets)
4. Addendum One Mechanical and Plumbing Drawings (revised sheets only)
5. Addendum One Electrical Drawings (Revised sheets only)
6. Spec Section 263213 for generator (not formatted yet)
7. Spec Section 055100 Design-Build Steel Stairs
8. Spec Section 123200 Manufactured Wood Casework (revised)
9. Spec Section 014550 – Air Barrier System (revised)
10. Structural Revisions Narrative
11. Manufacturer's information for prefab shower stalls and shower valves.

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 2, 2024

Bid Period RFI

Project: **Tulalip New Utilities building**
Project No. **A21-188**
Bid period RFI No.: 1

Date of RFI: March 26, 2024

RFI:

1. Can you please provide the liquidated damages amount.
2. What is the warranty term for this project as a whole?
3. Can you please direct me to the correct insurance spec to use for bonding purposes? I am unable to locate a complete insurance spec.
4. Section 083323 - Overhead Coiling Doors. There is no size shown, can you please advise.

RESPONSE:

1. **Liquidated Damages will be addressed in AIA A101 contract agreement. Language previously provided by The Tulalip Tribes of Washington is as follows: *"Upon failure by the Contractor to submit an acceptable Construction Schedule within the time required by Section 18, or achieve substantial completion of each phase of construction in accordance with the Construction Schedule, the Contractor shall pay to the Owner, as liquidated damages and not as a penalty, the sum of seven hundred and fifty dollars ($750.00) per day of delay or until such time as Substantial Completion of the Work as required by the 460 calendar days Construction Schedule is achieved. The Contractor and Owner agree that the liquidated damages amount is a reasonable forecast of just compensation for the harm caused the Owner by the Contractor's breach for failure to meet construction schedule timelines."***
2. **Warranty Term will be addressed in AIA A101 contract agreement. It will be One Year.**
3. **Monetary Values are listed in Instructions to Bidders, Paragraph 3.4.3.7.3. Insurance Requirements previously provided by The Tulalip Tribes are as follows:**
   (1) "Insurance Policy Requirements.

   Each policy of insurance required to be purchased and maintained by the Contractor shall name the Tulalip Tribes and its members as primary and non-contributory additional insured's using the ISO general liability form CG 2010 11/85 edition or equivalent to include products and completed operations for all Contractors and Subcontractors Work. Each policy and respective Certificate of Insurance shall expressly provide a provision wherein no less than 30 days or (10 days in the event of cancellation for non-payment) prior written notice shall be given to the

Tulalip Tribes in the event of cancellation, non-renewal, expiration or material alteration of the coverage contained in such policy or evidenced by such Certificate of Insurance.

1.1 At least five (5) days prior to commencement of the Work or any portion thereof, and prior to the performance of any services hereunder, Contractor shall, for the purposes of protecting Owner against any claims, damages or expenses as a consequence of any acts and omissions on the part of Contractor and any of its Subcontractors of any tier in performing the Work, procure or cause or cause to be procured the required insurance coverage with insurance carriers (with and A.M. Best rating of A-VII or better) in form acceptable to Owner and shall maintain all such coverage in full force and effect through the terms of this agreement.

1.2 The Contractor, if requested, shall furnish the Tulalip Tribes a certified copy of any insurance policy or additional insured endorsement required to be purchased or maintained by the Contract Documents. In no event shall any failure to demand a certified copy of any required insurance or insured endorsement be construed as a waiver of the obligation of the Contractor to obtain insurance required to be purchased or maintained by the Contract Documents.

1.3 The Contractor shall maintain all insurance in the required amounts, without interruption, from the date of the execution of the Contract until three (3) years after the date of approval of the certificates of Contract Completion by the Tulalip Tribes. Failure to maintain the required insurance during the time specified shall be cause for termination of the Contract.

1.4 Insurance policies required to be purchased and maintained by the Contractor may include a reasonable loss deductible, which shall be the responsibility of the Contractor to pay in the event of loss.

1.5 The prompt repair or reconstruction of the Work as a result of an insured loss or damage shall be the Contractor's responsibility and shall be accomplished at no additional cost to the Tulalip Tribes.

(2) Waivers of Subrogation. The Tulalip Tribes and the Contractor waive all rights against each other for damages caused by fire or other perils to the extent of actual recovery of any insurance proceeds under any property insurance obtained pursuant to this Article or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Tulalip Tribes as fiduciary.

(3) Other Provisions.

3.1 Neither the Tulalip Tribes nor Contractor shall be liable to the other party or to any insurance company (by way of subrogation or otherwise) insuring the other party for any loss or damage to any building, structure or tangible personal property of the other occurring in or about the Work, if such loss or damage is covered by

insurance benefiting the party suffering such loss or damage or was required to be covered by insurance under terms of the agreement. Each party shall cause each insurance policy obtained by it to contain the waiver of subrogation clause.

3.2 Contractor shall indemnify, defend and hold the Tulalip Tribes harmless from all losses, damages, liabilities, fines penalties, cost (including clean-up cost) and expenses (including attorney's fees) arising from hazardous, toxic or harmful wastes, materials or substances, as defined by applicable law, deposited on or about the Project site by Contractor, Subcontractors, suppliers or materialmen or its or their agents or employees. Should any material that exhibits hazardous or toxic characteristics as defined in applicable law be brought onto the Project site by Contractor, Subcontractors, suppliers or materialmen or its or their agents or employees, that material will be handled, stored, transported and disposed of by Contractor in accordance with respective regulations and the best available technology. Should any such material be found on the Project site that was not brought onto the Project site by Contractor, Subcontractor, suppliers or materialmen or its or their agents or employees, Contractor shall immediately notify the Tulalip Tribes through the Engineer. Contractor is not responsible for losses, damages, liabilities, fines, penalties, costs including cleanup and expenses arising from hazardous, toxic or harmful wastes, materials or substances existing at the site prior to Contractor mobilization.

3.3 In the event Contactor fails to maintain any and all insurance required by this Contract during the entire life of this Contract, the Tulalip Tribes may at its option, and without waiver of other available remedies, purchase such insurance in the name of Contractor and deduct the cost of same from payments due Contractor."

4. **The overhead coiling door at the "shed", door number 116B is 12' wide x 14' h. It will be power operated with manual backup, and locking. See project manual for additional information.**

ATTACHMENTS: None

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 4, 2024

Bid Period RFI

Project: **Tulalip New Utilities building**
Project No. **A21-188**
Bid period RFI No.: 2

Date of RFI: March 26, 2024

RFI:

I have a few questions for the ceramic tile on the Utility Building, Tulalip Tribes job.

1. Will Salish be bidding straight to the tribe, or are we bidding to contractor?

RESPONSE:

1. **Please see attached portion of responsibility matrix from Sheet A0.01. Left column check boxes indicate "OFOI" (owner-furnished, owner-installed) – TDS and Salish Networks for those items being contracted directly to the owner.**

   Right column check boxes indicate "CFCI" (contractor-furnished, contractor-installed). Note that systems integration will be amended to show TSI as sole vendor.

   Contact for Salish Networks will be Scott Normore RCDD, EL-06, PM, Infrastructure Manager snormore@salishnetworks.com 360-716-8025

   Contact for Tulalip Data Systems is Delano Cooper, IT Manager, dcooper@tulaliptribes-nsn.gov , 360-716-5122

ATTACHMENTS: Screen Cap – Responsibility Matrix, Div. 27 – Communications and Div. 28, Electronic Safety and Security

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

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	

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 4, 2024

Bid Period RFI

Project: **Tulalip New Utilities building**
Project No. **A21-188**
Bid period RFI No.: 3

Date of RFI: March 26, 2024

RFI:

I have a few questions for the ceramic tile on the Utility Building, Tulalip Tribes job.

1. Do you want rubber base (RB-1) on all walls in the 2 locker rooms (#111 Women's & #112 Men's Locker Rm), even the walls that are receiving ceramic wall tile? Sheet A3.04 called out for RB-1 at both of these rooms.
2. Are the showers in those 2 locker rooms prefabbed, or do they require ceramic floor and wall tile?
3. Does the wall, between the toilet and the sink in #111 Women's & #112 Men's Locker Rooms get ceramic wall tile? Sheet A4.05 does not show these two elevations.

RESPONSE:

1. ***Change tile walls to show tile module starting at floor, with tile extending down to floor. Use rubber base only at GWB walls – which is the wall at the door. GWB in restrooms and shower / locker rooms should be green board.***
2. ***Showers to be prefab units – color to be selected from mfr. Standard colors.***
3. ***The 3 walls surrounding the sink should all receive tile. Finish transitions should happen at inside corners.***
4. ***Men's Locker Room West (elevation to be changed), Women's Locker Room East, and short section of South Wall of Men's and Women's at door to be GWB with Rubber base. Outer face of side walls of showers adjacent to doors will be tile.***

ATTACHMENTS: None

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 4, 2024

Bid Period RFI

Project: **Tulalip New Utilities building**
Project No. **A21-188**
Bid period RFI No.: 4

Date of RFI: March 27, 2024

RFI:

1. In addition to the below questions, can you please confirm which wages will apply to this project?

RESPONSE:

1. ***Applicable wages can be found at*** Tulalip TERO || Contractors – Wage Scale

ATTACHMENTS: None

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 4, 2024

Bid Period RFI

Project: **Tulalip New Utilities building**
Project No. **A21-188**
Bid period RFI No.: 5

Date of RFI: April 3, 2024

RFI:

1. What is the construction duration?

RESPONSE:

1. ***Construction Duration can be found in the bid proposal form. It is 460 calendar days. This includes initial demolition of shop / office structure, construction of new office / lab structure, subsequent demolition of existing lab building, and sitework to convert that area to parking and washer shed.***

ATTACHMENTS: None

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 10, 2024

Bid Period RFI

Project: **Tulalip New Utilities building**
Project No. **A21-188**
Bid period RFI No.: 6

Date of RFI: April 4, 2024

RFI:

1. Please provide civil CAD file (earthwork cut/fill), if available.
2. Please provide structural CAD file (structural framing), if available
3. What is the cutoff date/time for substitution requests?
4. What is the cutoff date/time for RFI's?
5. What is estimated date for issuance of addendum?
6. Please provide geotechnical report referenced in Div 31 specs
7. Please confirm if the building is sprinklered, per project data on Sheet A0.01. If so, do you plan to issue Div 21 spec section(s)?
8. Where will the staff in current admin building be relocating during construction? Just wanted to confirm if any coordination is required, particularly if they are on or adjacent to the site. Also, please confirm that the cost for relocation (e.g. temp trailers, utility services) is by others.
9. Is there any benefit to providing a schedule that is shorter than stated schedule on the bid form?

RESPONSE:

1. ***Not Available***
2. ***Not Available***
3. ***One week prior to bid due date***
4. ***One week prior to bid due date***
5. ***One week prior to bid due date (estimated)***
6. ***Geotechnical Report has been distributed on 4/8/24***
7. ***Building will be sprinklered per NFPA 13. This is expected to be vendor-design. This will be added to Sheet A0.01 under "Deferred Submittals". See "Fire Sprinkler Notes" on Sheet M1.0. See also "Fire Room" 118 on Sheet M2.0 and M2.1.***
8. ***Lab staff members will continue in existing lab structure until demolition of existing shop and office building, and construction of new office / lab building is complete. During this time, other plant staff will be accommodated in temporary buildings at the North part of the plant site. Costs for relocation and temporary accommodation are outside the scope of this contract.***
9. ***Assume schedule as given for purposes of bid. If there are cost or schedule benefits to be gained by accelerating the schedule, that can be considered post-award.***

ATTACHMENTS: None

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 12, 2024

Bid Period RFI

Project:	**Tulalip New Utilities building**
Project No.	**A21-188**
Bid period RFI No.:	7

Date of RFI: April 10, 2024

RFI:

1. Please define scope of work regarding landscape / irrigation adjacent to building and along streets. Note that new grading / storm drainage impacts ditches.
2. Please coordinate location of the generator pad between Sheet E3.0 and Civil/Arch plans. Any differentiation in distance between pad and the building will impact the cost of feeder.
3. In the interest of competitive bidding environment, are there any approved equals to the Generac SD300 unit, per Note 11 on Sheet E3.0?
4. No generator specification has been provided in the specs. In reviewing the Generac SD300 spec sheet, there are several options that would typically be addressed via a formal spec section (e.g. fuel type, fuel capacity). Suggest providing a spec for the generator. https://www.generac.com/industrial/products/diesel-generators/cconfigured/300kw-diesel-generator
5. What is status of building permit?
6. What is anticipated start date for construction?

RESPONSE:

1. ***Landscape and irrigation work, as such, is not in the scope of this project. Civil indicates site to be graded to top of new curbs – at parking lot edges and edge of pavements. Drainage impact on ditches is noted. Drainage Report to be submitted as part of permit review.***
2. ***Electrical Sheet E3.0 will be modified to match Civil and Architectural Site Plans with Bid Addendum 1, 4/16/24.***
3. ***Bidders may submit approved equals from the vendors based on the Generac SD300 Specs.***
4. ***Additional information will be provided with Bid Addendum 1 issue on 4/16/24.***
5. ***Building Permit is not yet issued, pending completion and acceptance of drainage report.***
6. ***Q2 of 2024. As soon as possible after award of contract and securing permits. Note that execution of contract is due within 90 days of bid opening.***

ATTACHMENTS: None

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 12, 2024

Bid Period RFI

Project:	**Tulalip New Utilities building**
Project No.	**A21-188**
Bid period RFI No.:	8

Date of RFI: April 5th, 2024

RFI:

1. Is the shower pan in the locker rooms fiberglass or should it be priced with a mud base with tile?
2. The Finish Plan A3.05 show the Restrooms wall as TL-03 and there is no spec for a TL-03 on the Finish Schedule. Do you think they meant TL-02?
3. It's not clear what they want for the base in the restrooms. It shows a 6x24. Do they want that in field tile with a Schluter Edge on top? They do make a 4x12 bullnose which I could figure, or we could go the expensive route with 6x12 cove base. Please advise.
4. Specs call for 2 types of soap dispensers, 1 deck-mounted, one wall. Drawings only show wall mount, marked TR-08. Which is correct?
5. Schedule page A9.00 lists multiple paper towel dispensers with no marking that mention which model. Can you clarify?
6. Opening 118 is missing a door elevation on the door schedule (A9.30), and it is assigned hardware set #00 in 087100 which includes hardware for an OH Coiling Door. The floor plan (A3.01 shows this opening to be an exterior swinging door. Please advise correct door elevation and hardware set.
7. Specifications 081113: 2.6-A.5 indicates that exterior units are to include "shop finish primed surfaces with Sherwin Williams Acrolon 218 HS Acrylic Polyurethane." Can you confirm that exterior doors and frames are to be factory finished? Will you accept factory primed for painting in the field? Please advise.
8. Please clariy the extent of ACT-1 in the building. The RCPs only show WD-1, and even though the finish schedule calls out a ceiling tile for ACT-1 it appears that all of the ceilings are GWB with the exception of the WD-1 ceiling in Lobby 100. Please advise.
9. A0.01 General Notes – Responsibility Matrix shows allowances for
   - 2.191 Demo Maintenance Office (Question 1 below)
   - 2.191 Demo Lab Building (Question 1 below)
   - 2.206 Demo Paving (Question 1 below)
   - 2.212 Haz Mat Testing & Abatement (Note below)
   - 10.426 Main Building Sign (Note below)
   - 10.605 Window Blinds (Note below)
   - 11.00 Appliances (Question 2 below)

   Question 1. Are these to be determined by Contractor of will this be established like the other categories were? Please advise.
   Question 2. Appliances in the breakroom appear to be shown in plans and listed in specifications. Appliances in Janitor's closet are not called out or specified. Is an allowance to be provided by ownership or establish in proposal? Please advise.
10. Plan Sheet A3.07 Lab Equipment Schedule Lists FP-04 as CFCI. Please provide Specifications.

11. Plan Sheet A3.07 Lab Equipment Schedule Lists FP-05 as CFCI. Is this the equipment or just a place holder for the equipment? Please provide Specifications.
12. Plan Sheet A3.07 Lab Equipment Schedule Lists FP-10 as CFCI. Please provide Specifications.
13. Specification Section 087100, Section 3.7 HW Set: 01 for storefront door 100A calls for 612 and US10 finish, which is a Bronze finish. Please confirm that door hardware is to be bronze with a black finished storefront.
14. Specification section 084113, 2.8 states Black Anodized. Sheet A9.30 Door Section states a painted finish. Please clarify Storefront finish desired.
15. Is there a shade cloth preference for the window coverings?

RESPONSE:

1. ***Prefab shower "SH-1" is added to Plumbing Fixture Schedule on Sheet M1.1 of Bid Addendum 1 Drawing Set. Specified model is "Bestbath" model LSS4038A5T* L/R.***
2. ***Drawings are revised to show TL-1 and TL-2 only. TL-1 is floor tile, found at the Level 2 Restrooms only. TL-2 is wall tile at both the 2nd floor restrooms and 1st floor locker / shower rooms. (Restroom and Locker Room elevations (and RCPs) will be revised to indicate 8'-0" ceiling height, for (8) even tile courses.***
3. ***Tile base at GWB walls in restrooms and locker rooms can be TL-2 cut to 6" high, with Schluter Jolly tile edge. Elevations will be revised accordingly.***
4. ***Specs will be revised to show wall-mount only.***
5. ***Basis of design model number will be added to Accessories and Hardware schedule on sheet A9.00***
6. ***Door 118 is same in function as door 107 and should receive the same hardware group; 17. Door schedule will be revised accordingly.***
7. ***Factory priming as specified and field finishing with the Sherwin Williams Acrolon 218 HS Acrylic Polyurethane or similar approved is acceptable.***
8. ***ACT is not used in the building.***
9. ***It is not clear what is meant by "will these be established like the other categories were". However it is intended that the contractor will be responsible for demolition and disposal of the existing structures (phased, as indicated), and associated hazardous materials testing, rodent abatement, or any other associated requirements, and for associated permits as a project cost and obtain pricing as necessary for an accurate bid.***

   Regarding appliances, This information will be added in Bid Addendum 1 Drawings.
10. ***To be confirmed.***
11. ***Equipment. To be confirmed.***
12. ***50" diagonal high resolution monitors. No specification. Price and provide as submittal.***
13. ***Revise BHMA number 612 to read 626; 606 to read 626; US10 to read US 26D.***
14. ***Aluminum Storefront Door 100A to be revised to state "Factory Finish" – and refer to spec section 084113 for finish information.***
15. ***None selected yet. To be selected from manuf.'s standard range..***

ATTACHMENTS: None

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 15, 2024

Bid Period RFI

Project:	**Tulalip New Utilities building**
Project No.	**A21-188**
Bid period RFI No.:	9

Date of RFI: April 15th, 2024

RFI:

1. Please confirm that the pressure washer room does not require fire protection.
2. A new gate is shown near SE corner of new building. What type of gate is required (e.g. Swing, roller)? Note that there is na existing roller slide gate near this location.
3. No gate of modifications to existing fence is shown at the entrance to the site at NW driveway. Suggest confirming scope of work at this location.
4. If any work above requires power, please coordinate with electrical plans as needed.
5. A new wall is noted at drive lane adjacent to existing concrete tanks. Please define type of wall construction (e.g. modular, CIP concrete, footing, reinforcement req's)
6. The bid form has a single line item for allowances, which is tied to spec section 01 21 13. One of the specified allowances is for hazardous material testing and abatement. This allowance would correspond to Item 2.212 on Sheet A0.01. No other allowances are mentioned in this spec section to address items 2.191 and 2.206 on Sheet A0.01.
   - Question 1: Please modify spec section 01 21 13 to address matrix items 2.191 and 2.206 on Sheet A0.01 (i.e. add more allowances).
   - Question 2: What does matrix item 2.206 on Sheet A0.01 specifically mean? Note that there is no civil demo plan that defines the limit of construction, so we are interpreting the bid documents that all existing pavements (asphalt, sidewalks) get removed. Not sure what the terminology "... at perimeter" means.
7. Spec section 01 21 13 has an allowance for storage area shed racking, however the matrix on Sheet A0.01 shows this as OFOI.
   Question 1: Please revise the bid documents as needed. Note that there are no Division 13 specs provided.
   Question 2: What does racking mean (e.g. storage shelving)?
8. Please confirm that the wall noted at HVAC pad is modular block, similar to wall at NE parking lot.
9. Coordinate point of termination between civil and mechanical plans for the domestic and fire water lines.
10. Coordinate storm drain connections on Sheet C1.40 (1 EA) with downspout locations shown on Sheet A4.00 (looks like 3 EA).
11. Sheet C1.40 shows a connection to building roof downspout at SE corner of the building, however the high end of roof slope is at this side of the building. Just wanted to confirm scope at this location. Is this intended to be an area drain to address what appears to be landscaping at this corner of the building?
12. Please confirm that there are no bid alternates.
13. For bid purposes, please specify the approximate distance from property line to the power pole located across Mission Beach Road.
14. Force Main Questions:
    1. Please specify pipe size required.

2. Is this work required due to grade changes (i.e. the existing line depth is less than 6')?

15. Booster Pump/Pressure Washer Questions:
    1. Please clarify purpose for the pressure washer system, so we better understand the system (e.g. work within booster pump house, air gap water supply system).
    2. The matrix on Sheet A0.01 (item 22.001) has the GC relocating the power wash system. Please provide cut sheet info for the system so we better understand the piece of equipment (e.g. dimensions, weight, power reqs, piping connections).
    3. Does this system have a time constraint for being off-line?
    4. Sheet C.140 has note about connecting new booster pump piping to existing air gap water supply system, however the scope of work does not appear to be defined on the drawings.
16. Please confirm that underground power and data conduit is direct bury (i.e. no concrete ductbank required).
17. Please coordinate power feed run to generator between civil and electrical plans. It would appear that it makes sense to run power from electrical room through the building as much as possible in lieu of trenching through parking lot but confirm.
18. Please clarify who is responsible for the following items:
    1. Effluent flow do transmitter.
    2. Electrical vault for dissolved oxygen flow transmitters.
    3. Flow signals.
    4. Relocate effluent flow transmitter.
19. Per matrix on Sheet A0.01, systems integration is CFCI (item 27.001), however there are no apparent bid documents for this work (e.g. Div 27 spec section, drawings).
20. Per matrix on Sheet A0.01, PLC systems is CFCI (item 27.001), however there are no apparent bid documents for this work (e.g. Div 27 spec section, drawings).

RESPONSE:

1. ***Confirmed.***
2. At SE corner of new building, adapt and reinstall existing roller gate as shown on site plan.
3. Existing fence and gates to remain along NW side of site at 30th Dr. NW.
4. Gates are manually operated.
5. Will confirm and add to Addendum 1 if indicated.
6. Question 1: Bids from abatement and demolition subcontractors should be obtained for those items. Asbestos report is uploaded to bdx and Tulalip Projects sites.
   Question 2: See “Approx limits of construction: 20,550 SF or 0.47 ac.” Dashed line on Sheet C1.30. That is the limit of regrading and new paving. It can be assumed that no existing paving is left in that area.
7. Question 1: This will be CFCI. Matrix will be changed
   Question 2: Heavy Duty Steel Storage Shelving. At Perimeter Walls
8. Confirmed.
9. Use five feet outside building perimeter as dividing line between site utilities MEP scope.
10. Coordination will be picked up before Construction Issue
11. Downspout connection will be moved to North side of building – picked up before Construction Issue
12. Confirmed. No bid alternates.
13. Please approximate using Google Earth or other means.
14. Answer pending
15. Answer pending
16. Confirmed – direct bury
17. Please see revised electrical site layout E3.0 in Addendum Drawings.
18. Note that integration scope is assigned to TSI – contact Mitch Stewart. mitchs@tsicontrols.com cell 425-320-7632
19. See answer 18 above
20. See answer 18 above

ATTACHMENTS: None

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

FREIHEIT ARCHITECTURE

425.827.2100
freiheitarch.com

505 106th Avenue NE Suite 302
Bellevue, WA 98004

April 15, 2024

Bid Period RFI

Project:	**Tulalip New Utilities building**
Project No.	**A21-188**
Bid period RFI No.:	10

Date of RFI: April 15th, 2024

RFI:

1. S3.02 elevation 12 – East Elevation – Exterior Stair – This Elevation is not given on Architectural or Civil Sheets. Please Advise. (see attached)
2. Detail 6, 7, & 12 on S4.11 Refer to top of Stem wall or Retaining wall 'as per Arch' – This Elevation is not given on Architectural or Civil Sheets. Please Advise. (see attached)
3. S2.01 Foundation Plan Does not show a footing or thickened slab under the portion of Exterior wall that runs from Gridline A to approximately Gridline B.5 on Gridline 3. There is a Hold-down Number 4 that indicates a 9" embedment. Please provide a section at this exterior wall. (see attached)
4. Architectural Set Sheet A4.00 Detail 3 Shows Steel stairs with metal picket handrail. Structural sheet S3.02 Detail 12 shows the exterior wall with Framed exterior wall with 4x6 post. Please Advise If wood framed wall is needed.
5. 1 on A3.01 Floor Plan – Level 01 calls out Grated Steel Treads per vendor's engineered Design. Section 055100 – Design-Build Steel Stairs Part 1, 1.1, B indicates Concrete fill for Metal Pan treads. Please advice.
6. In regards to the " Utility Building " Project, I was able to Identify Fixtures on sheet E4.1 in the following rooms, Upper Storage , Conference Room, Private Offices. These fixtures were not identified on the legend. Please provide the ID and Manufacturer.
7. In regards to the " Utility Building " Project, I was able to Identify Fixtures on sheet E4.0 in the following rooms, Elevator Machine Room , Side Shed, Storage Room, Data Room. These fixtures were not identified on the legend. Please provide the ID and Manufacturer
8. Specification 123200.2.1.A notes that the basis of design for manufactured wood casework is Lanz Cabinets with a Natural Beech clear finish, however the Finish Schedule on A9.00 specifies different casework finishes. Miscellaneous finish plans seem to provide the following direction. Please confirm that the below assumptions are correct, clarify where there are no callouts, or provide alternate direction for desired casework finishes:
    a. Lobby 100: PL-1 = Veneer Art 974-RG Brown Annigre with Rift Grain Finish YES
    b. Billing Office 101: PL-1 = Veneer Art 974-RG Brown Annigre with Rift Grain Finish YES
    c. Breakroom 102:
        i. PL-1 Uppers = Veneer Art 974-RG Brown Annigre with Rift Grain Finish YES
        ii. No Callout for Lowers = Lanz Natural Beach with Clear Finish, or PL-1 to match Uppers? Please advise. PL-1

d. Janitor Closet 104: PL-5 = Wilsonart Designer White Style #0354 with Anti-Microbial Finish YES
e. Laboratory 105:
    i. PL-5 Uppers = Wilsonart Designer White Style #0354 with Anti-Microbial Finish YES
    ii. PL-5 Island = Wilsonart Designer White Style #0354 with Anti-Microbial Finish YES
    iii. No Callout for Lowers = Lanz Natural Beach with Clear Finish, or PL-5 to match Uppers and Island? Please advise. PL-5
f. Copy Room 203:
    i. PL-1 Uppers = Veneer Art 974-RG Brown Annigre with Rift Grain Finish YES
    ii. No Callout for Lowers = Lanz Natural Beach with Clear Finish, or PL-1 to match Uppers? Please advise. PL-1

9. The project Specifications include (1) page of the sample AIA A101 Document. Please provide the remainder of this document, if available.

RESPONSE:

1. ***Top of wall to occur 6" minimum above exterior finish grade and top of interior floor elevation, unless shown greater on architectural drawings.***
2. ***Top of wall to occur 6" minimum above exterior finish grade and top of interior floor elevation, unless shown greater on architectural drawings.***
3. ***See Bid Addendum 1 drawings dated 4/16/24 for footing under Grid 3 exterior wall. Locally increase 10" footing depth to 1'-0" at holdown to provide 3" minimum cover.***
4. ***East Stairway is changed to vendor design metal fabricated stair with canopy at top landing. Structural Drawings are revised to match Architectural with Bid Addendum 1 issue.***
5. ***Spec Section 055100 is revised to indicate Steel Grate Treads with Bid Addendum 1.***
6. ***Answer Pending***
7. ***Answer Pending***
8. ***Section 123200 to be revised for Bid Addendum 1. Finishes as follows:***
    a. ***Lobby 100: PL-1 = Veneer Art 974-RG Brown Annigre with Rift Grain Finish***
    b. ***Billing Office 101: PL-1 = Veneer Art 974-RG Brown Annigre with Rift Grain Finish***
    c. ***Breakroom 102: PL-1 Uppers = Veneer Art 974-RG Brown Annigre with Rift Grain Finish, PL-1 lowers***
    d. ***Janitor Closet 104: PL-5 = Wilsonart Designer White Style #0354 with Anti-Microbial Finish***
    e. ***Laboratory 105: PL-5 Uppers = Wilsonart Designer White Style #0354 with Anti-Microbial Finish, PL-5 Island, PL-5 Lowers.***
    f. ***Copy Room 203: PL-1 Uppers and Lowers = Veneer Art 974-RG Brown Annigre with Rift Grain Finish***

9. ***Remainder of AIA A101 contract form not available at this time.***

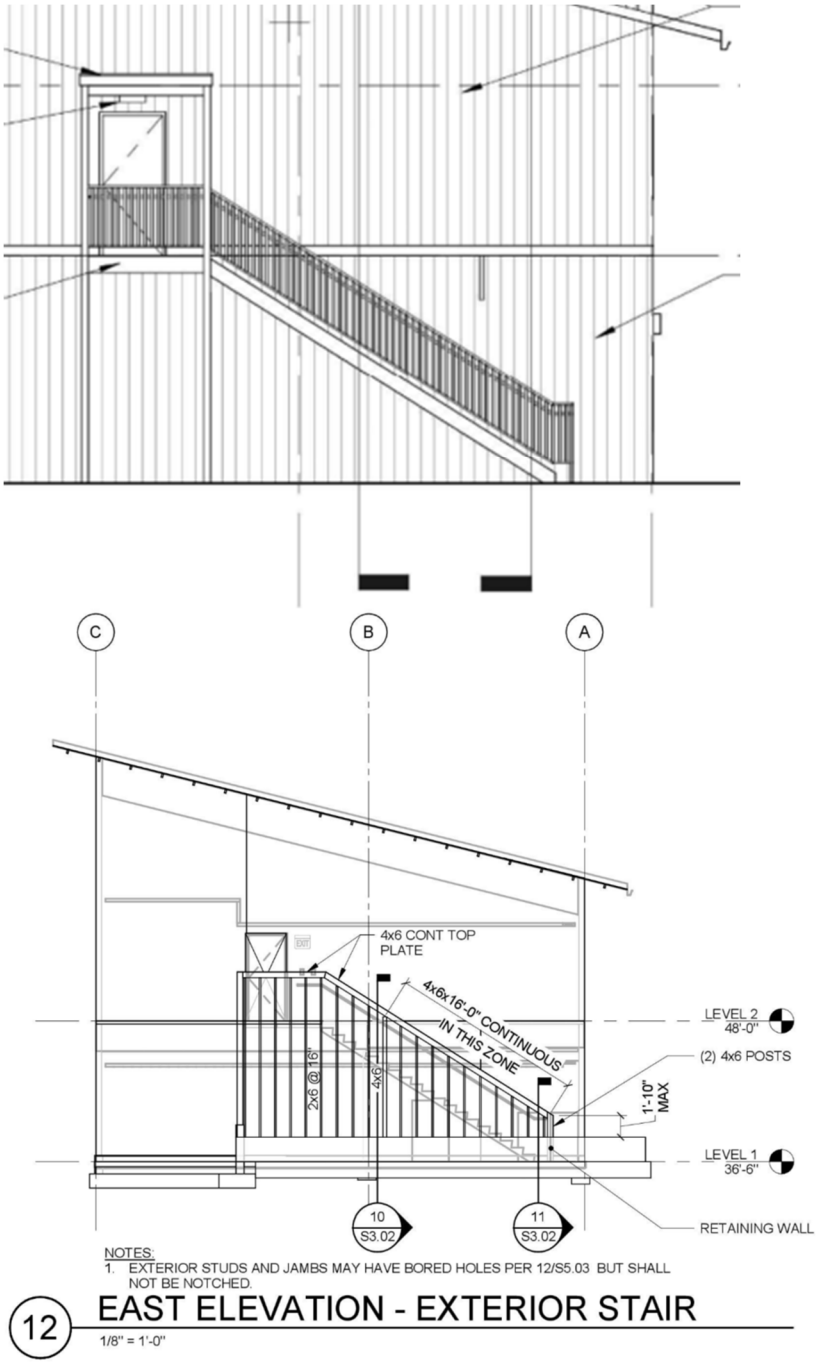
Attachments: Framing RFI #2 (Exterior Stair)

Issued By:
Freiheit Architecture

Joel Riehl AIA NCAARB
Senior Architect

Framing RFI #2

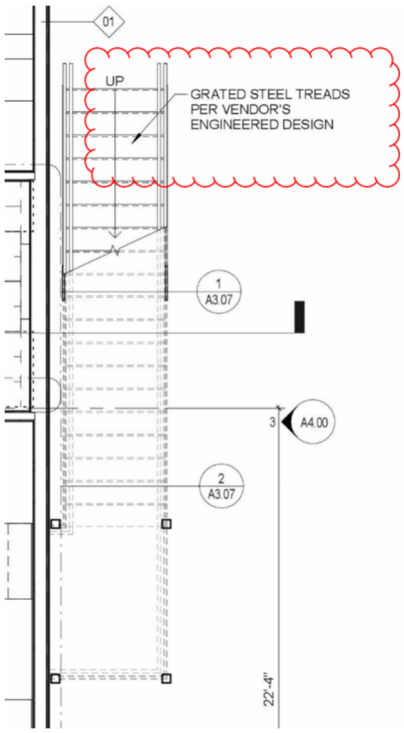
Architectural Set Sheet A4.00 Detail 3 Shows Steel stairs with metal picket handrail. Structural sheet S3.02 Detail 12 shows the exterior wall with Framed exterior wall with 4x6 post. Please Advise If wood framed wall is needed.



12 EAST ELEVATION - EXTERIOR STAIR

1/8" = 1'-0"

1 on A3.01 Floor Plan – Level 01 calls out Grated Steel Treads per vendor's engineered Design. Section 055100 – Design-Build Steel Stairs Part 1, 1.1, B indicates Concrete fill for Metal Pan treads. Please advice.



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	
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.
6. BUILDING TO BE SPRINKLERED PER NFPA 13.

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

NORTH

VICINITY MAP

FREIHEIT ARCHITECTURE

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

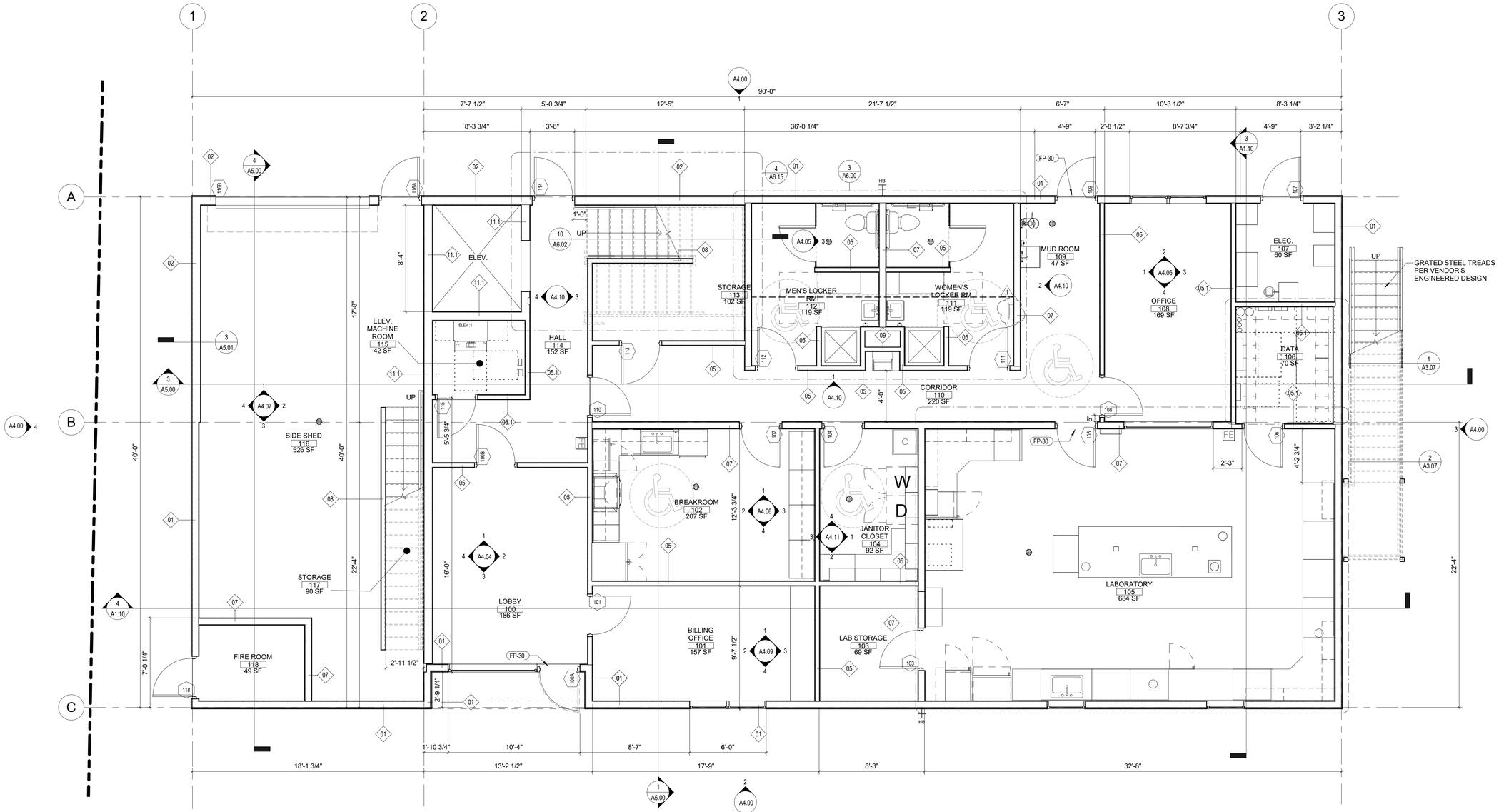
ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A2-169 PRINTED 4/16/2024 5:00:04 PM

GENERAL NOTES

A0.01



1 A3.01 **FLOOR PLAN - LEVEL 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

TULALIP TRIBES - UTILITY BUILDING

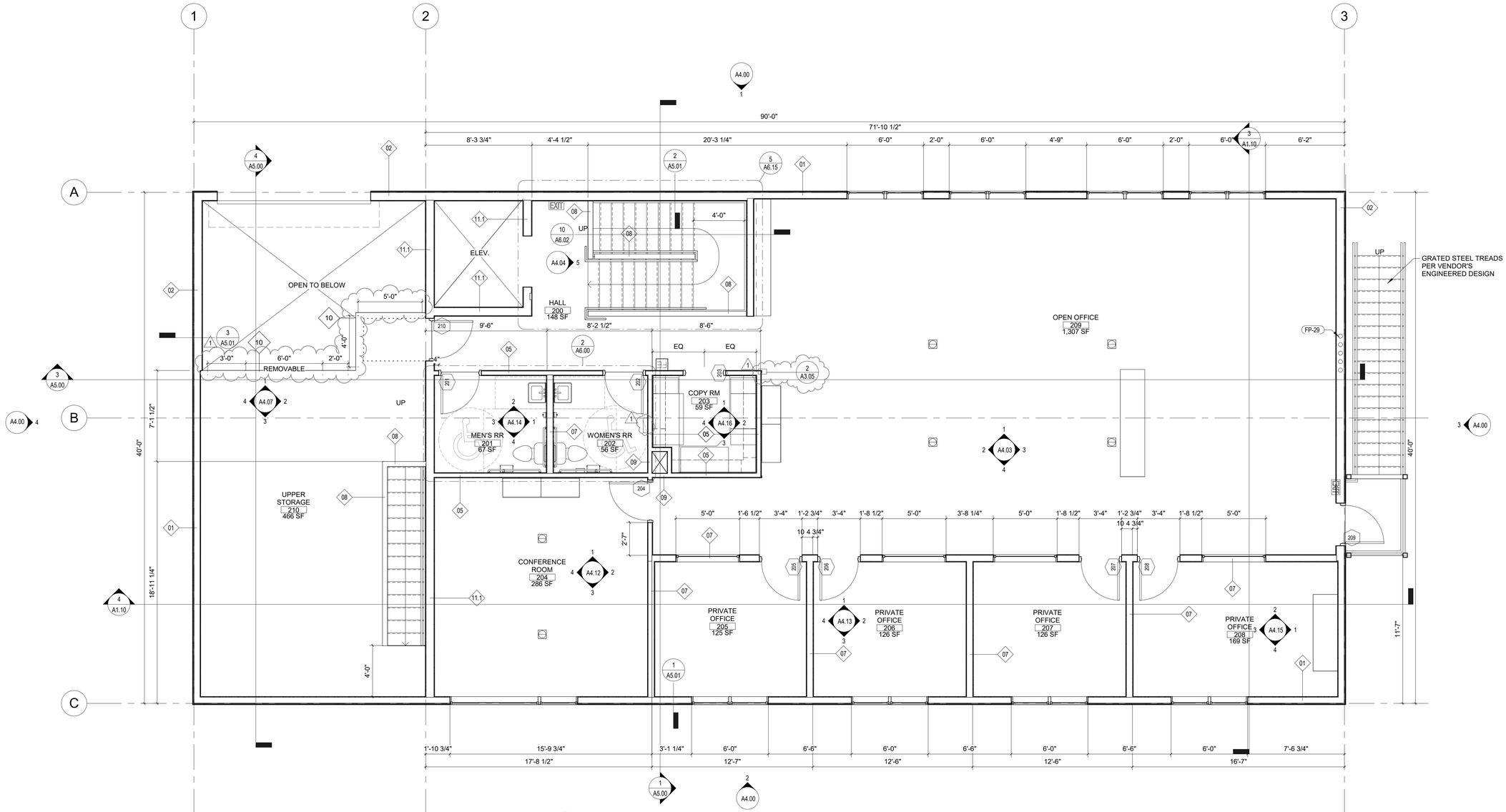
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST		
	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-18 PRINTED 4/16/2024 5:06:11 PM

FLOOR PLAN
LEVEL 1

A3.01



1 A3.02 **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

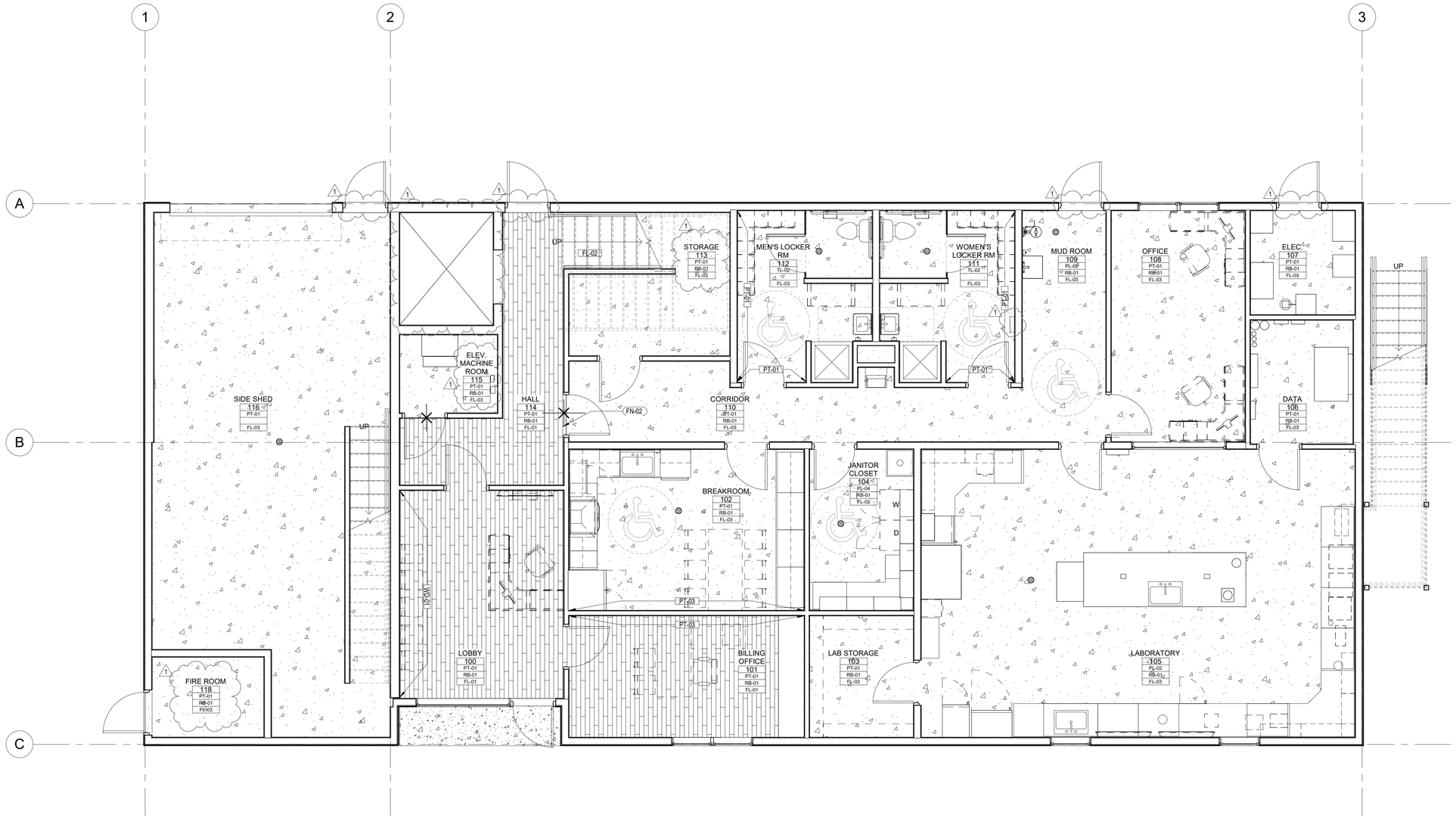
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST	
BID ISSUE	03/21/2024
1 BID ADDENDUM #1	04/16/2024

A21-18 PRINTED 4/16/2024 5:06:12 PM

FLOOR PLAN
LEVEL 2

A3.02



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

1

FN-02 FLOORING MFR TAPERED TRANSITION SLIP CENTERED ON DOOR

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

TULALIP TRIBES - UTILITY BUILDING

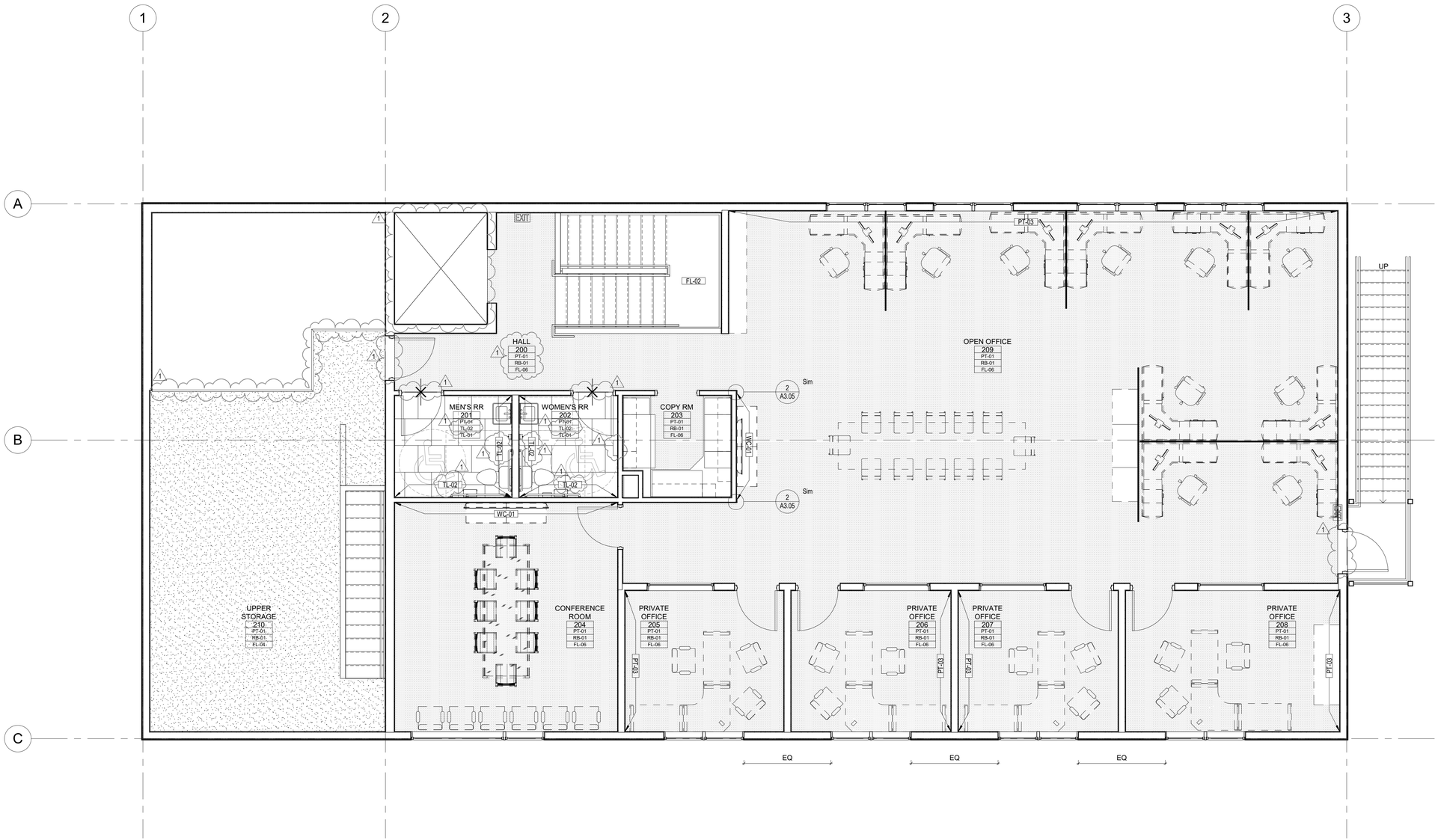
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST	
BID ISSUE	03/21/2024
1 BID ADDENDUM #1	04/16/2024

A21-168 PRINTED 4/16/2024 5:09:13 PM

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.

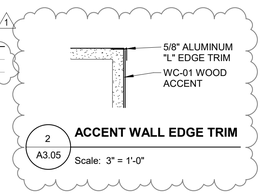
9. PAINT FINISHES:

   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

1 FN-02	FLOORING MFR TAPERED TRANSITION SLIP CENTERED ON DOOR



2 A3.05 **ACCENT WALL EDGE TRIM**

Scale: 3" = 1'-0"

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

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

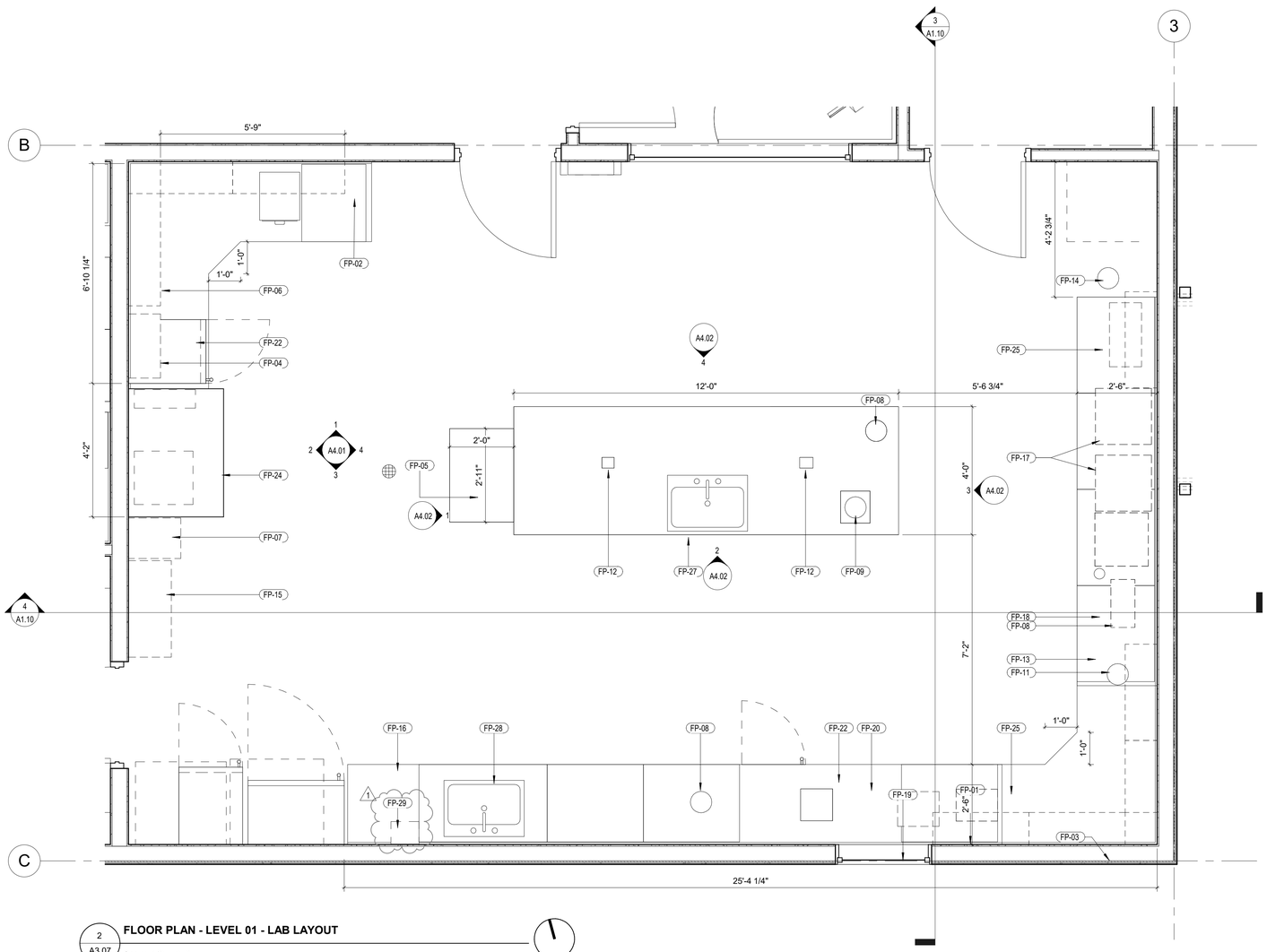
ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-138 PRINTED 4/16/2024 5:08:15 PM

FINISH PLAN
LEVEL 2

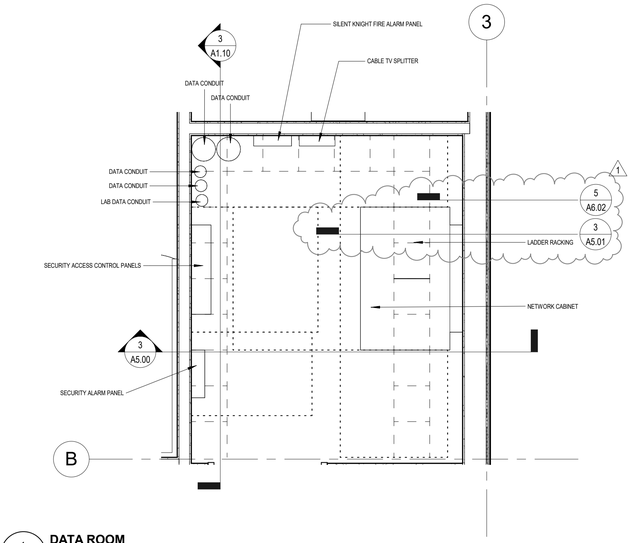
A3.05



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	OFOI
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
FP-29	KIMBERLY-CLARK IN-SIGHT ELECT-R-MATIC HRT DISPENSER	KIMBERLY-CLARK	IN-SIGHT ELECT-R-MATIC HRT	8.6"	10.5"	15.8"	NA	NA	-	CFCI

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

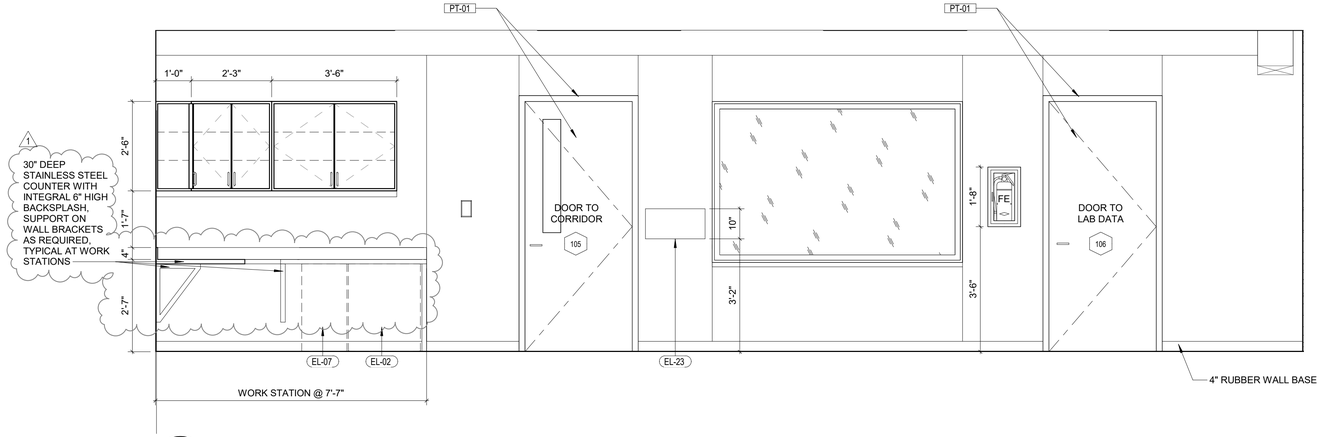
ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-108 PRINTED 4/16/2024 5:08:15 PM

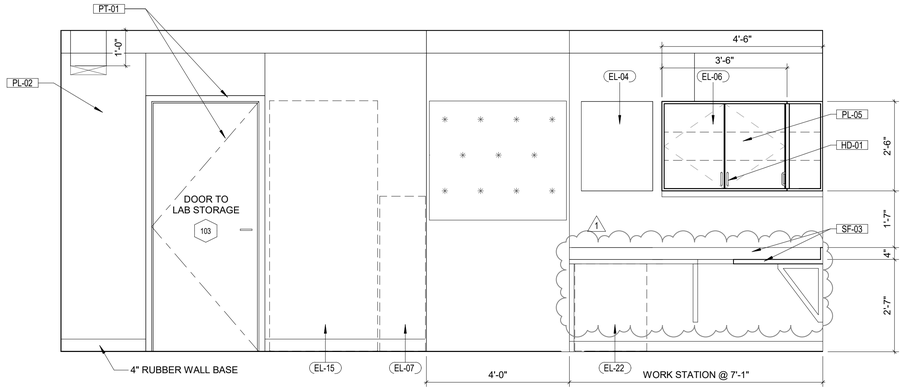
ENLARGED PLANS

A3.07



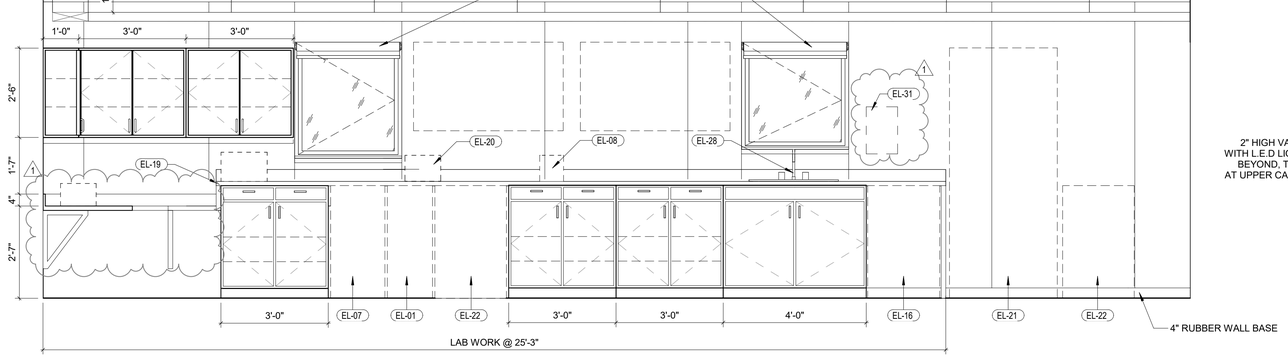
1 A4.01 **NORTH WALL**

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



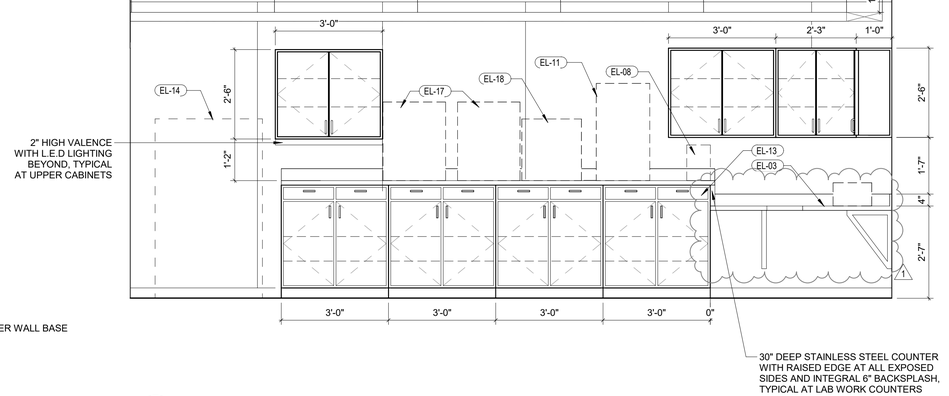
2 A4.01 **WEST WALL**

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"

KEYNOTES - LAB ELEVATION

EL-01	2 DRAWER LEGAL FILE CABINET
EL-02	LOCKABLE CABINETRY - UPPER AND LOWER
EL-03	STAINLESS STEEL COUNTER WITH 6" BACKSPLASH, PROVIDE RAISED EDGE, ALL SIDES, TYPICAL AT UPPER COUNTERS
EL-04	FILE ORGANIZER WALL MOUNTED
EL-05	SCALE STATION; 2'X2-11" EPOXY RESIN BALANCE TABLE
EL-06	UPPER CABINET WITH UNDER CABINET LIGHTING, TYPICAL
EL-07	4 DRWAER LEGAL FILE CABINET
EL-08	8" DIA. TRASH HOLE WITH FLUSH EPOXY COVER
EL-09	MICROSCOPE, PROVIDE POWER AND DATA AT ISLAND, ADJUSTABLE BASE
EL-11	STILL, SEE PLUMBING FOR ADJACENT WATER SUPPLY AND DRAIN LOCATIONS
EL-12	SURFACE MOUNTED POWER OUTLETS SET ON 1/2" EPOXY BLOCKS TO MATCH OUTLET FOOTPRINT. TYPICAL AT ISLANDS. SEE ELECTRICAL
EL-13	CUP SINK, SEE PLUMBING
EL-14	DESSICATOR
EL-15	3' WIDE, 1'4" DEEP 1'4" DEEP FULL HEIGHT GLASSWARE STORAGE
EL-16	GLASSWARE DISHWASHER
EL-17	(2) TSS LAB OVEN THERMO SCIENTIFIC 22"X 21"
EL-18	TUTTNAUER AUTOCLAVE
EL-19	PRECISION FECAL COLIFORM BATH
EL-20	TURBIDIMETER
EL-21	INCUBATOR REFRIGERATOR
EL-22	LAB REFRIDGERATOR
EL-23	AED CABINET
EL-25	VACUUM PUMP
EL-27	ISLAND SINK. FOOT PEDALS TO CONTROL
EL-28	SINK
EL-31	KIMBERLY-CLARK IN-SIGHT ELECT-R-MATIC HRT DISPENSER.

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

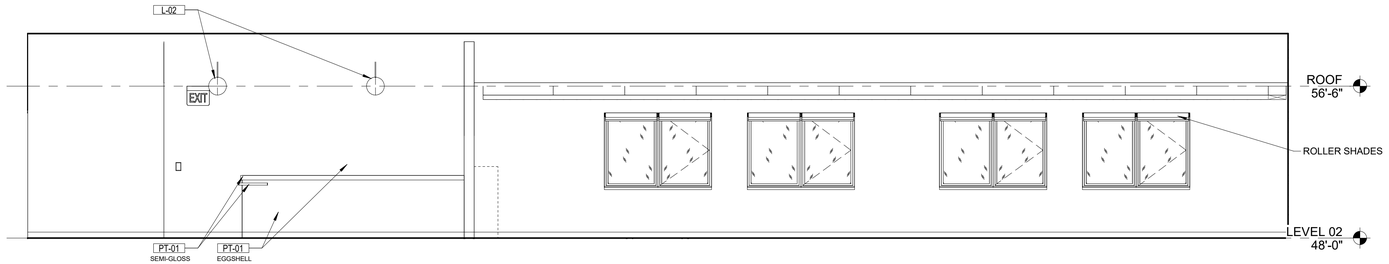
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST	
BID ISSUE	03/21/2024
1 BID ADDENDUM #1	04/16/2024

A21-38 PRINTED 4/16/2024 5:08:18 PM

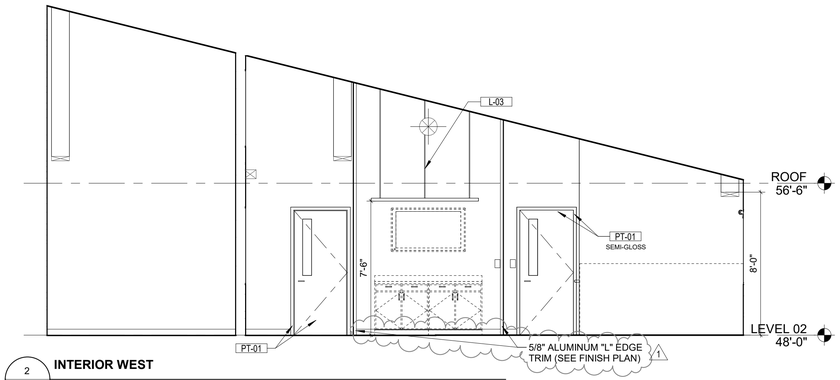
LAB ELEVATIONS

A4.01



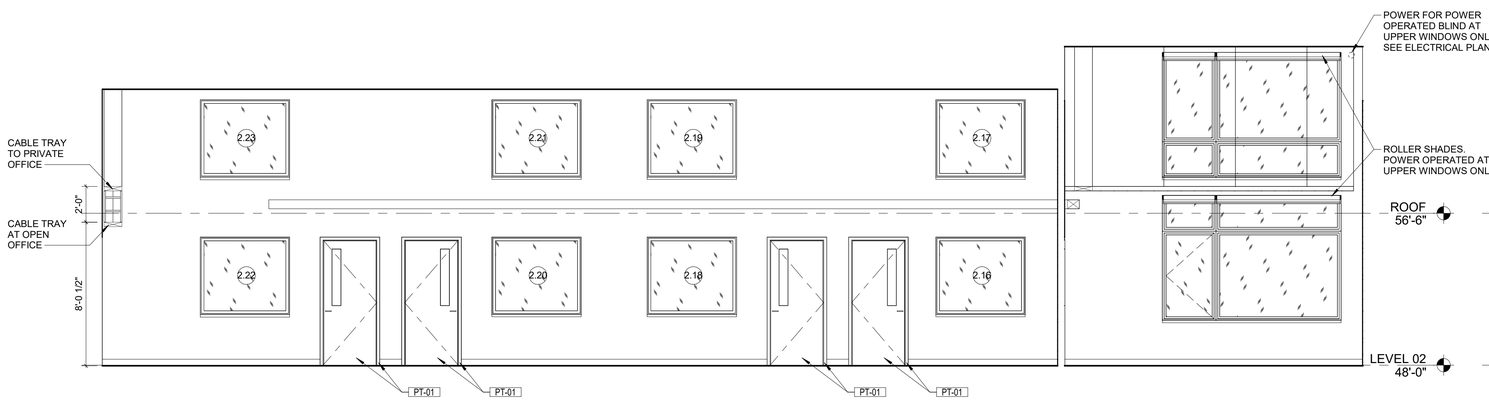
1 A4.03 **INTERIOR NORTH**

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



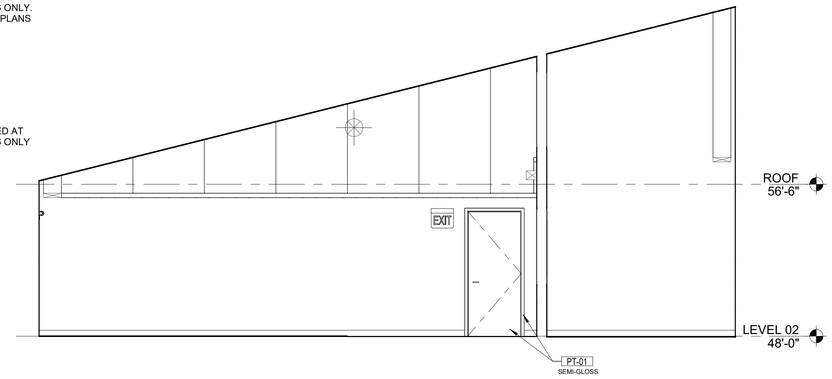
2 A4.03 **INTERIOR WEST**

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"

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

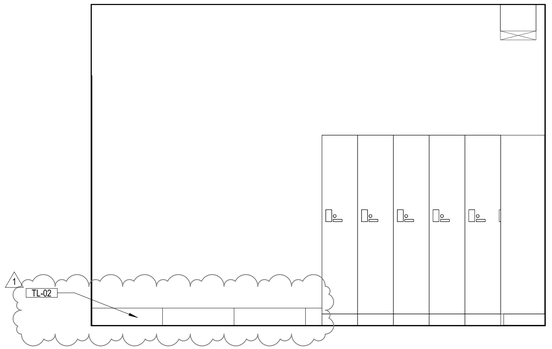
ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-108 PRINTED 4/16/2024 5:08:19 PM

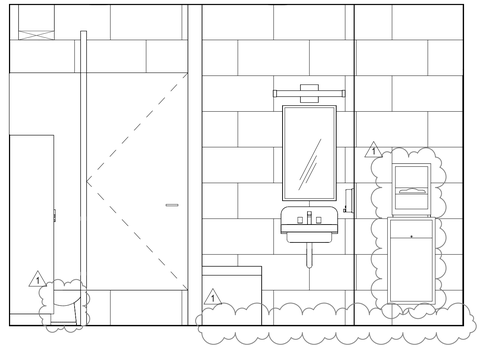
OFFICE ELEVATIONS

A4.03



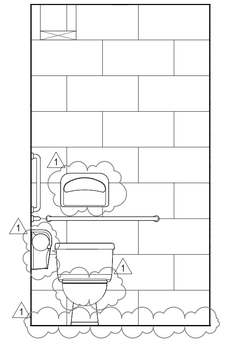
1 A4.05 **MEN'S LOCKER ROOM WEST (WOMEN'S LOCKER ROOM EAST SIM. OPP.)**

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



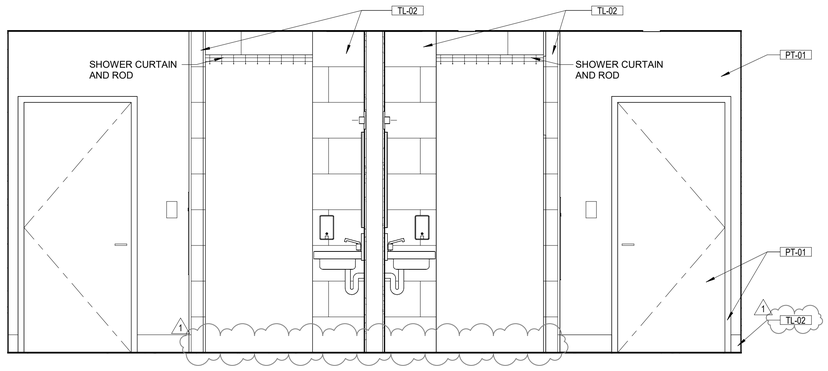
2 A4.05 **MEN'S LOCKER ROOM EAST (WOMEN'S LOCKER ROOM WEST SIM. OPP.)**

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



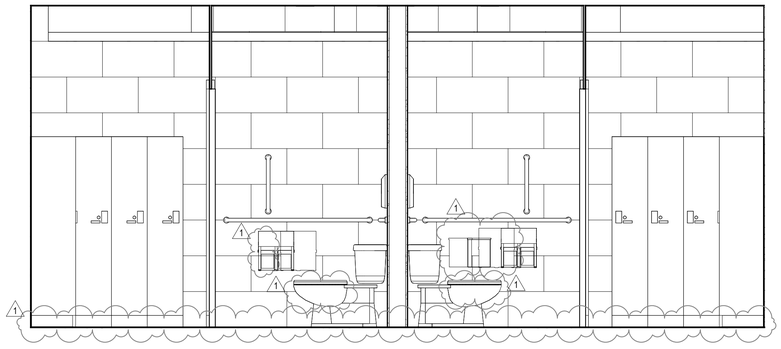
3 A4.05 **MEN'S LOCKER ROOM TOILET (WOMEN'S LOCKER ROOM TOILET SIM. OPP.)**

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"

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

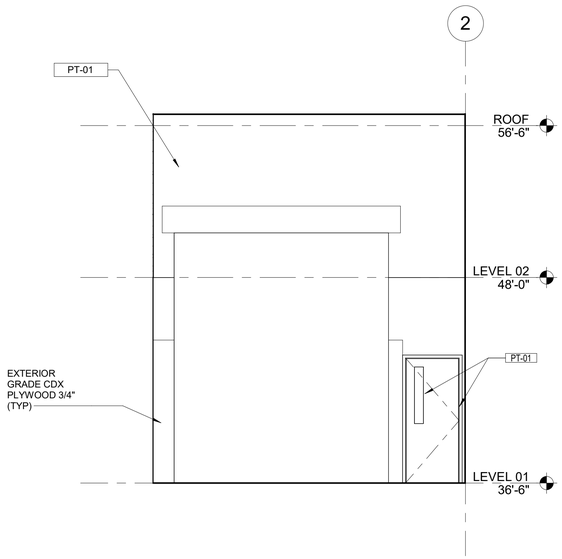
ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-168 PRINTED 4/16/2024 5:08:20 PM

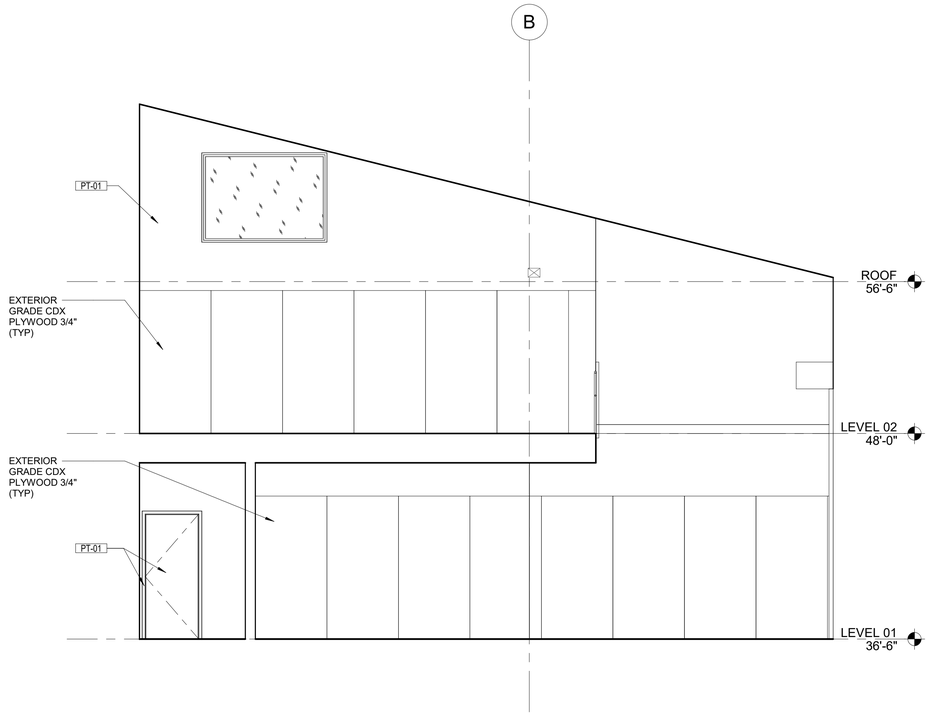
LOCKER ROOM ELEVATIONS

A4.05



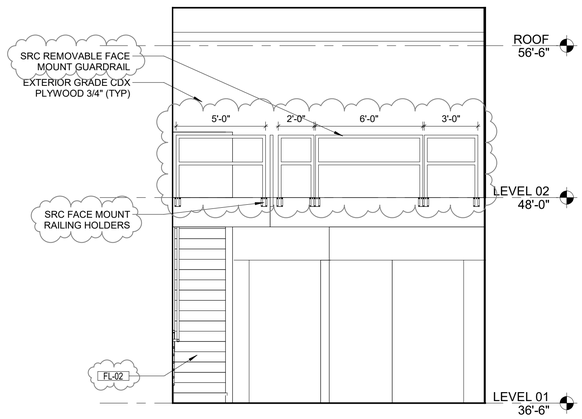
1 A4.07 **SHED NORTH**

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



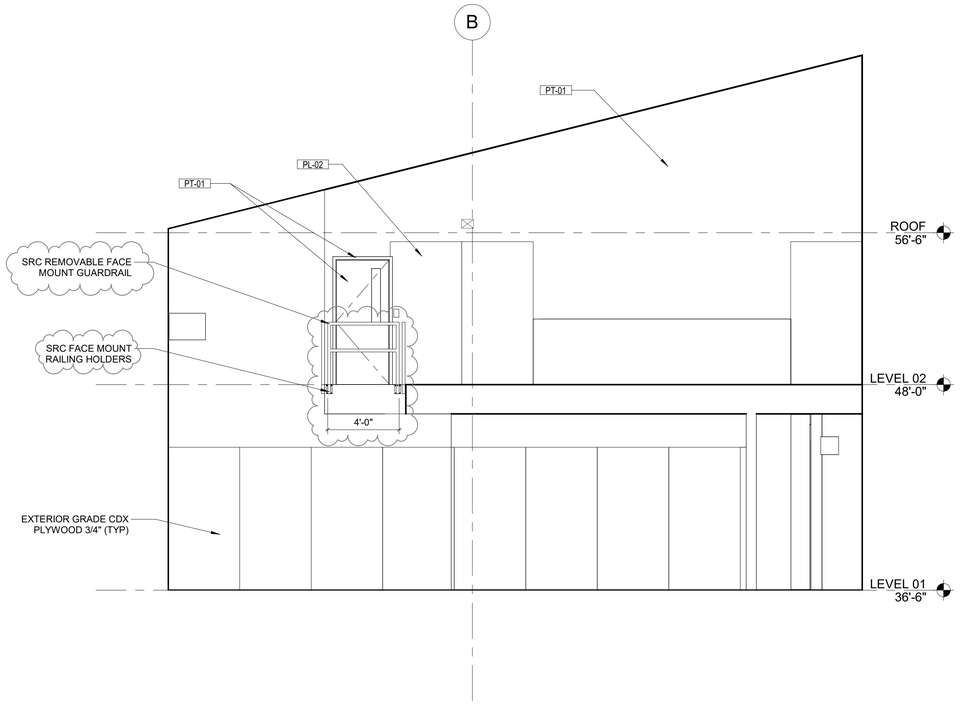
4 A4.07 **SHED WEST**

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

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

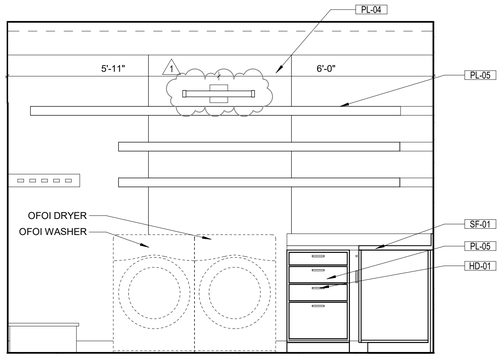
ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

AZ-168 PRINTED 4/16/2024 5:08:21 PM

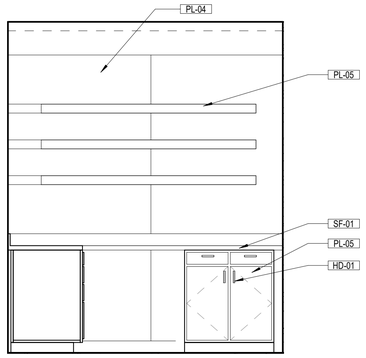
SHED ELEVATIONS

A4.07



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"

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

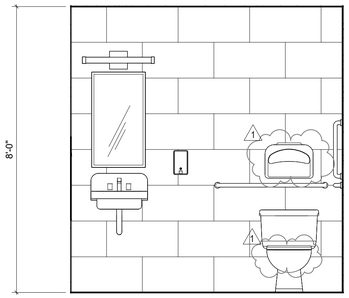
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST	
BID ISSUE	03/21/2024
1 BID ADDENDUM #1	04/16/2024

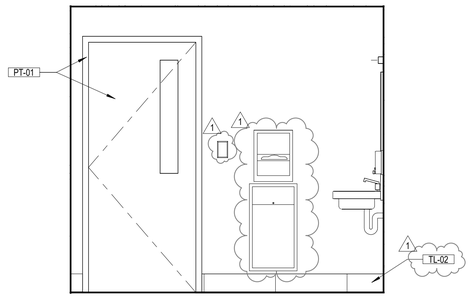
A21-138 PRINTED:4/16/2024 5:08:23 PM

JANITOR CLOSET ELEVATIONS

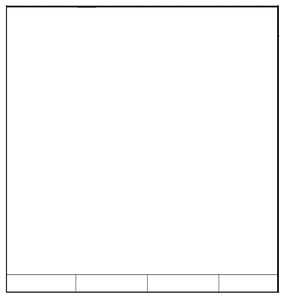
A4.11



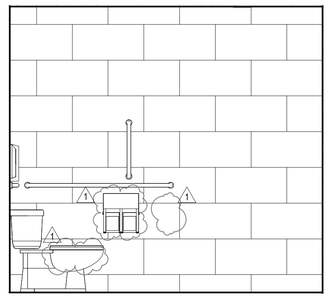
1 A4.14 **FLOOR 2 MEN'S RESTROOM EAST (WOMEN'S RESTROOM WEST SIM. OPP.)**
Scale: 1/2" = 1'-0"



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

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

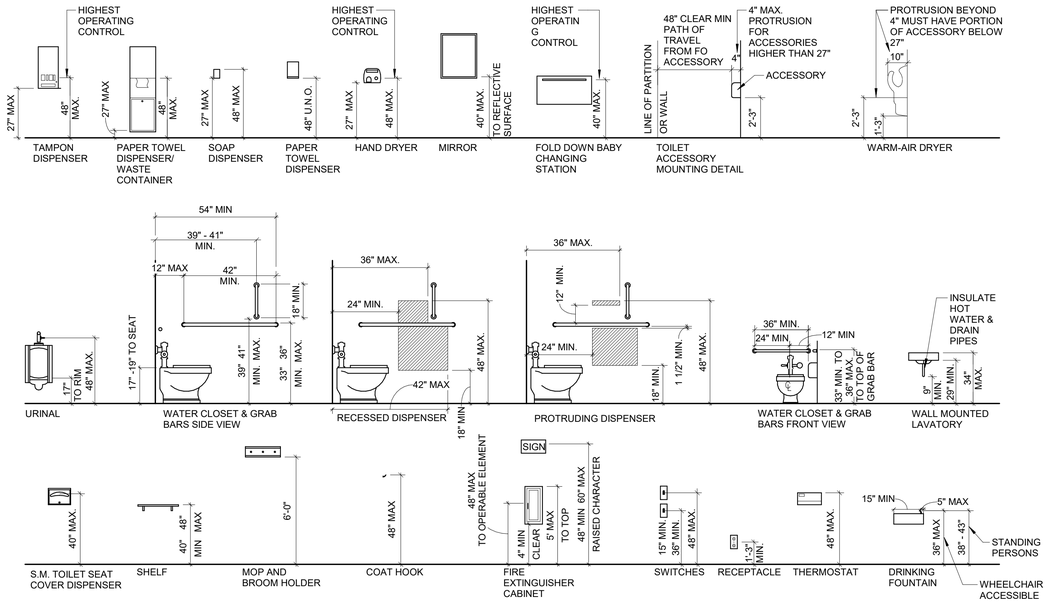
ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-108 PRINTED 4/16/2024 5:08:24 PM

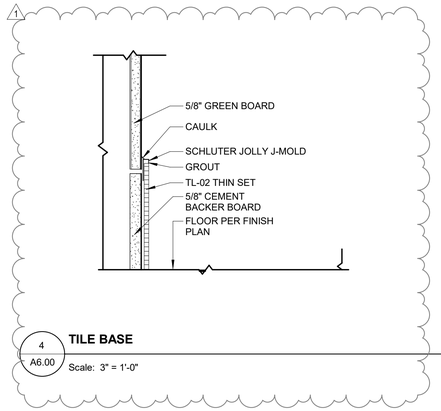
LEVEL 2
RESTROOMS

A4.14



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

Scale: 6" = 1'-0"

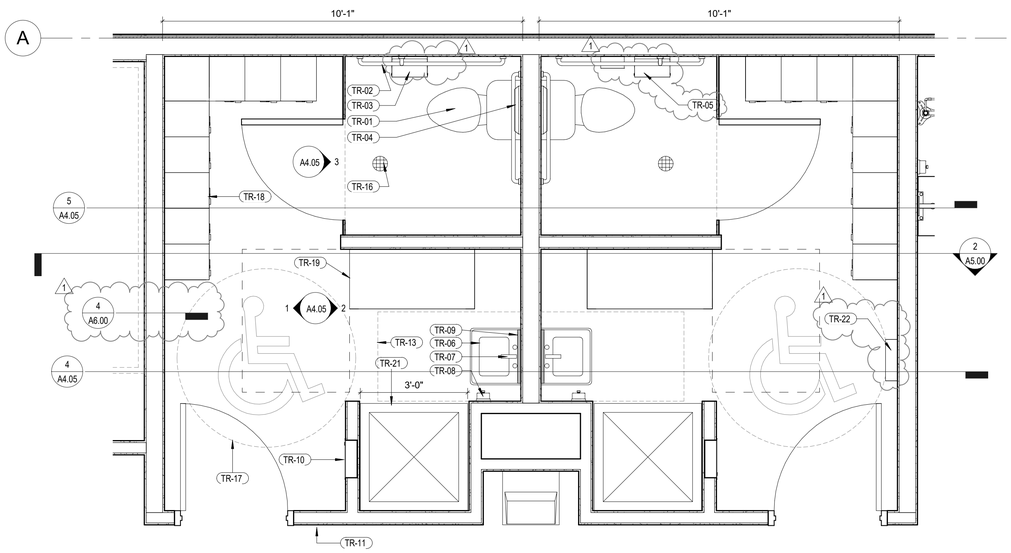


4 A6.00 **TILE BASE**

Scale: 3" = 1'-0"

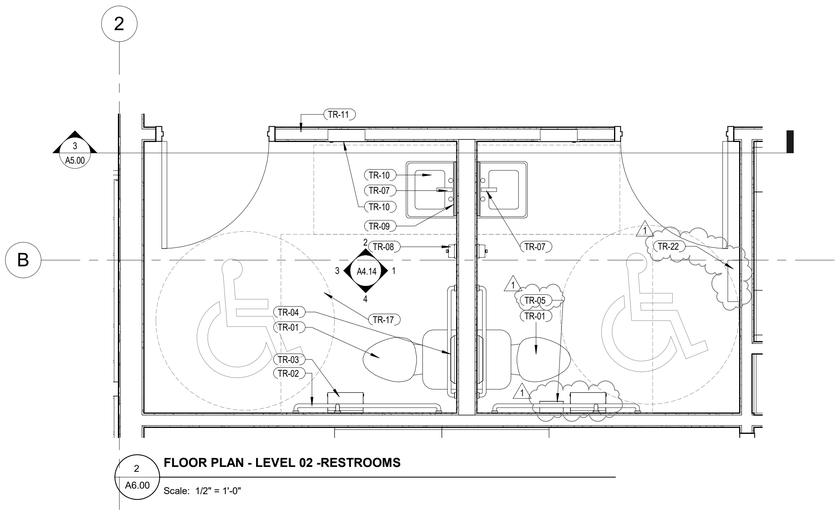
KEYNOTES - TOILET ROOM

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
1 TR-21	3' X 3' ADA SHOWER
TR-22	SANITARY NAPKIN VENDOR



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"

FREIHEIT ARCHITECTURE

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

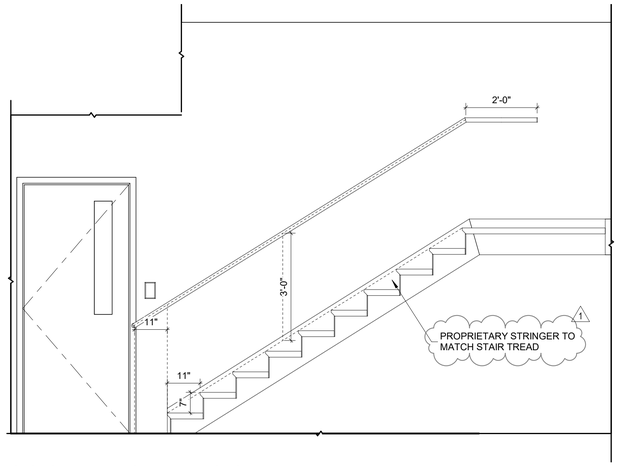
ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-108 PRINTED 4/16/2024 5:08:29 PM

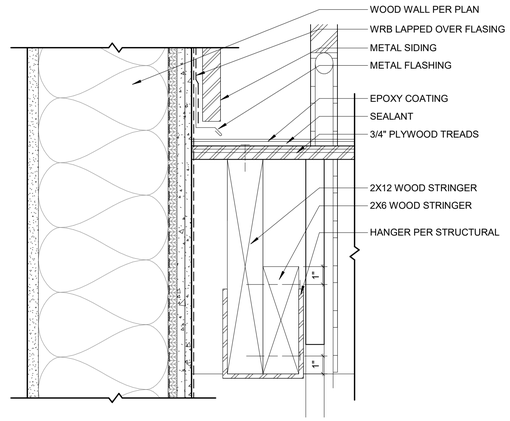
RESTROOM ENLARGED PLANS, DETAILS

A6.00



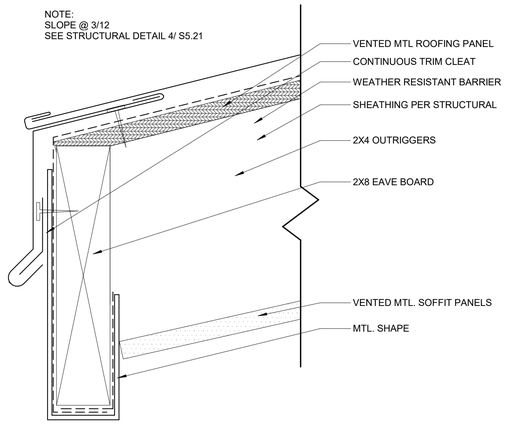
10 A6.02 **SECTION / ELEVATION AT INTERIOR STAIR**

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



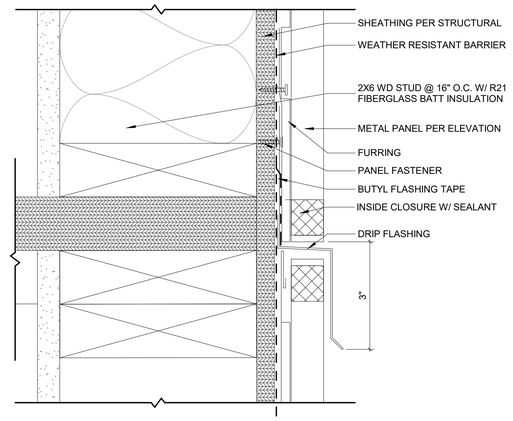
5 A6.02 **EXTERIOR STAIR TO WALL**

Scale: 3" = 1'-0"



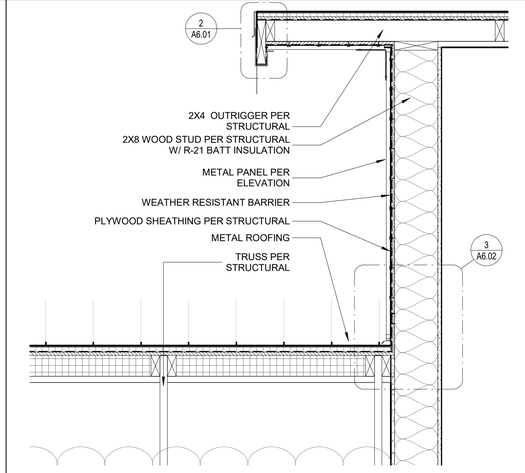
1 A6.02 **EDGE OF EAVE**

Scale: 6" = 1'-0"



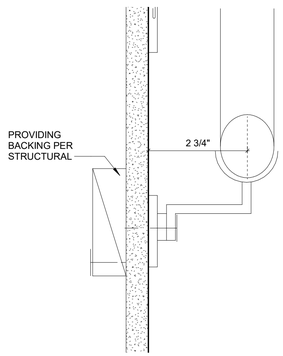
8 A6.02 **SIDING CHANGE**

Scale: 6" = 1'-0"



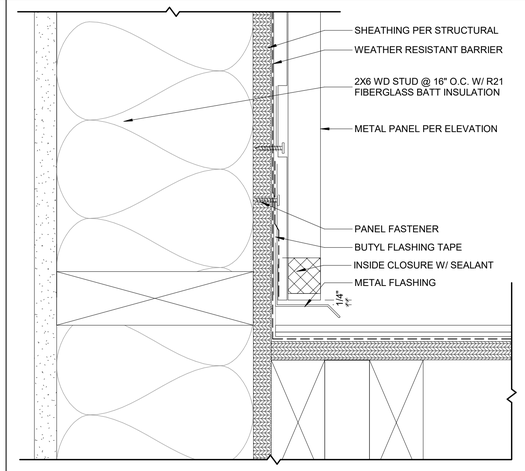
2 A6.02 **ELEVATOR ROOF DETAIL**

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

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-18 PRINTED: 4/16/2024 5:08:29 PM

DETAILS

A6.02

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	
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	
WALL-MOUNTED SOAP DISPENSOR	MFR: BOBRICK STYLE: B-2112	
SANITARY NAPKIN DISPOSAL UNIT	MFR: BOBRICK STYLE: B-254	
TOWEL HOOK	MFR: BOBRICK STYLE: B-211	
SHOWER CURTAIN ROD	MFR: BOBRICK STYLE: B-6107	
SHOWER CURTAIN	MFR: BOBRICK STYLE: 204	
SHOWER CURTAIN HOOKS	MFR: BOBRICK STYLE: 204-1	
UNDER LAVATORY GUARD	MFR: BOBRICK	
UTILITY SHELF	MFR: BOBRICK STYLE: B-298	
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

METAL		
MT-01	MFR: AEP SPAN STYLE: FLEX SERIES COLOR: LEAF GREEN CONTACT: JEFFERY MEDEIROS	INSTALL PER MFR RECOMMENDATIONS
MT-02	MFR: AEP SPAN STYLE: FLEX SERIES COLOR: TO BE SELECTED FROM MFR STANDARD COLORS CONTACT: JEFFERY MEDEIROS	LEVEL 2 EXTERIOR
MT-03	MFR: AEP SPAN STYLE: DESIGN SPAN COLOR: MIDNIGHT BRONZE CONTACT: JEFFERY MEDEIROS	LEVEL 2 EXTERIOR
MT-04	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-01	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-02	MFR: PIONITE COLOR: WHITE FINISH: FRL SUEDE - FS587 CONTACT: SAMANTHA MOON - 360-710-3787	FRL CORRIDOR AND ROOM WALLS 1ST LEVEL
PL-04	MFR: PER GC FINISH: WHITE SMOOTH, FRP, 4' X 8' SHEETS, CLASS A CONTACT: SAMANTHA MOON - 360-710-3787	
PL-05	MFR: WILSONART DESIGNER WHITE STYLE: #D354 FINISH: W/ ANTI-MICROBIAL FINISH	
PL-06	MFR: WILSONART PREMIUM STYLE: LAMINATE REVEAL IN WHITE FOREST, W/ MDF BACKING	
PL-07	MFR: MOZ DESIGNS STYLE: ALUMINUM FACING. BLENDS PATINA COLLECTION IN 212, W/ MDF BACKING	
STONE		
ST-01	MFR: CAMBRIA COLOR: IRONSBRIDGE FINISH: POLISHED - 2CM CONTACT: ALISHA McFARLAND - 206-409-3870	QUARTZ COUNTERTOP LOBBY / BILLING ROOM
RESILIENT BASE		
RB-01	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-01	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-02	MFR: CROSSVILLE COLOR: SHADES 2.0 - SHD45 CLAY FINISH: SPO, SIZE 1:2" X 24" CONTACT: LISA ANDERSON - 206-730-3394	WALL TILE BATHROOMS 1/8" GROUT: LATICRETE SPECTRALOC - 24 NATURAL GREY
WOOD / WOOD VENEER SCHEDULE		
WD-01	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-02	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

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST		
	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

A21-18 PRINTED: 4/16/2024 5:08:36 PM

SCHEDULES

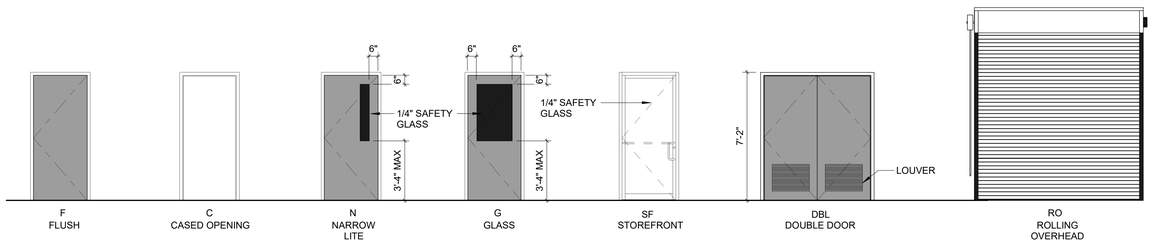
A9.00

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	HM	PT	--	06	FLUSH	
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

ISSUE LIST		
	BID ISSUE	03/21/2024
1	BID ADDENDUM #1	04/16/2024

AC-168 PRINTED 4/16/2024 5:08:39 PM

DOOR SCHEDULE
DOOR HARDWARE

A9.30

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				USE
		F	S	W	C	
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 (Lbt 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

kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

4/16/24

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

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-188 PRINTED:4/12/2024 12:35:57 PM

STRUCTURAL NOTES AND DRAWING LIST

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. NAILINGS 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.

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE NEWTON — STATE OF WASHINGTON — 48649 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER — 4/16/24

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

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-108 PRINTED:4/12/2024 12:35:58 PM

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 (LOW SIDE)
- 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

- (10) 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
- (1 / S3.1) ELEVATION OF WALL OR FRAME
- (100'-0") SPOT ELEVATION: TOP OF PLYWOOD, TOP OF CONCRETE, TOP OF STEEL
- (100'-0") TOP OF CONCRETE ELEVATION
- (100'-0") TOP OF STEEL ELEVATION
- (T/SLAB) REFERENCE ELEVATION. REFER TO PLAN UNLESS NOTED OTHERWISE.
- (LEVEL 01) ELEVATION OF LEVEL
- (WP) WORKPOINT
- DIRECTION OF DOWNWARD SLOPE
- DIRECTION OF SPAN
- EXISTING FRAMING

FREIHEIT ARCHITECTURE

kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE EWING
STATE OF WASHINGTON
48649
PROFESSIONAL ENGINEER
4/16/24

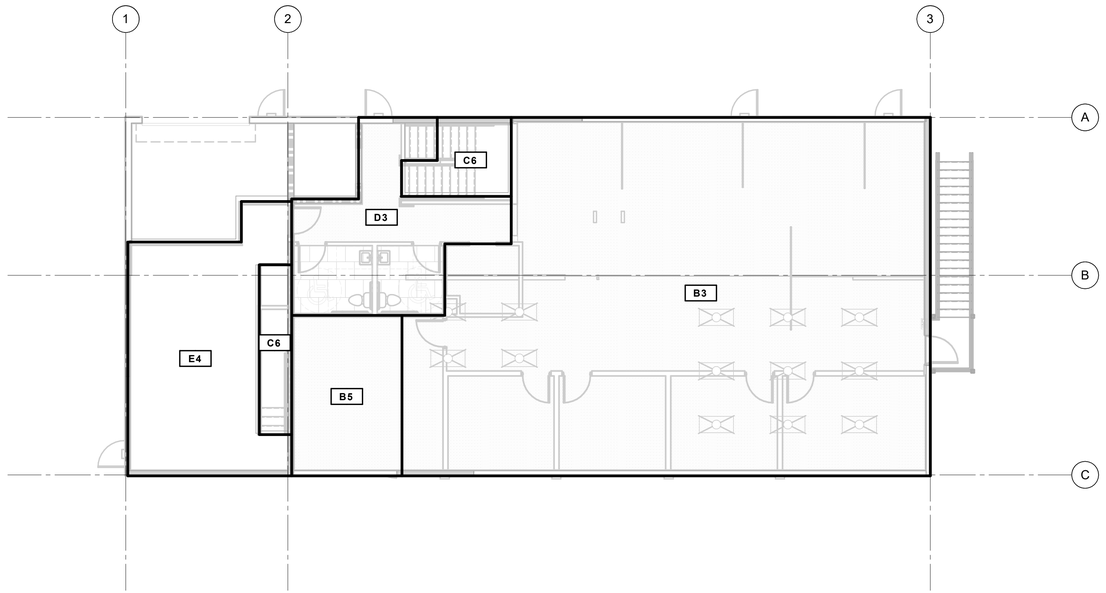
TULALIP TRIBES - UTILTIY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

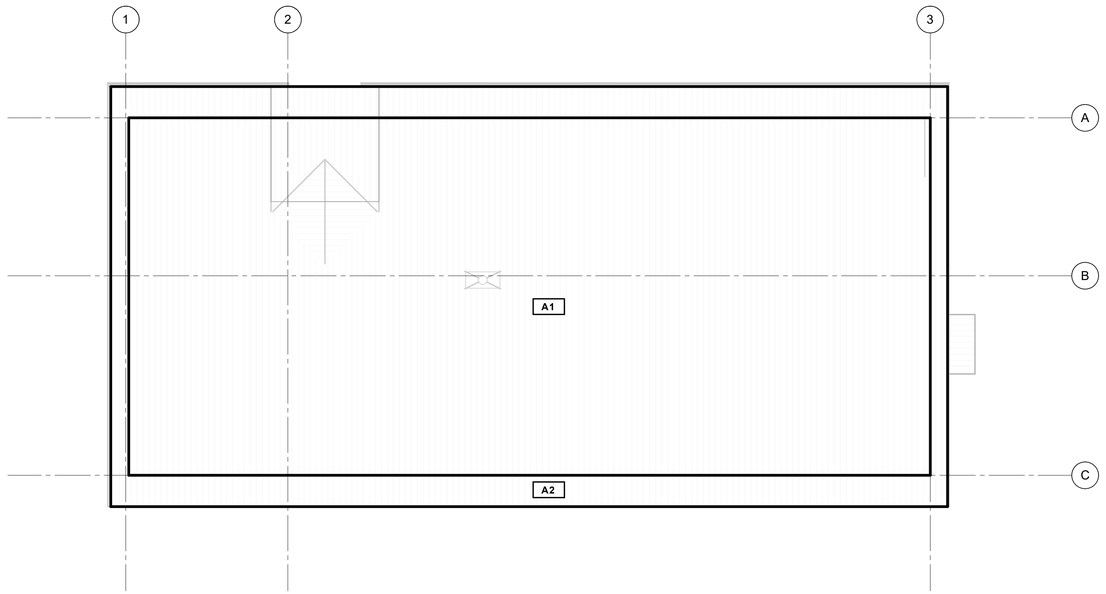
STRUCTURAL SYMBOLS AND ABBREVIATIONS

S0.11



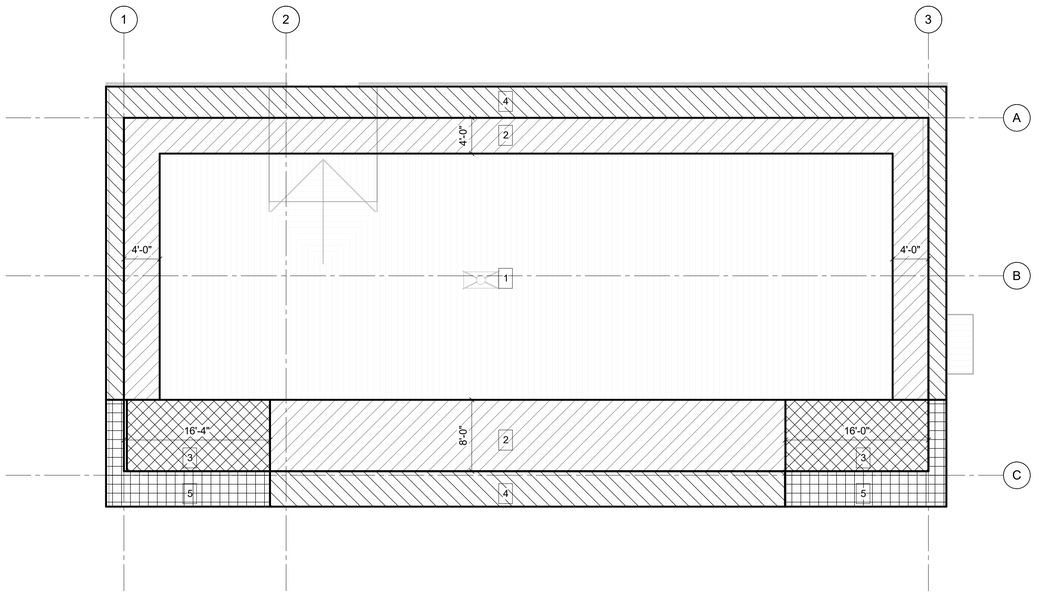
1 LOAD MAP - 2ND FLOOR

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.

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE NEWTON · STATE OF WASHINGTON · 18649 · STRUCTURAL ENGINEER · PROFESSIONAL ENGINEER · 4/16/24

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

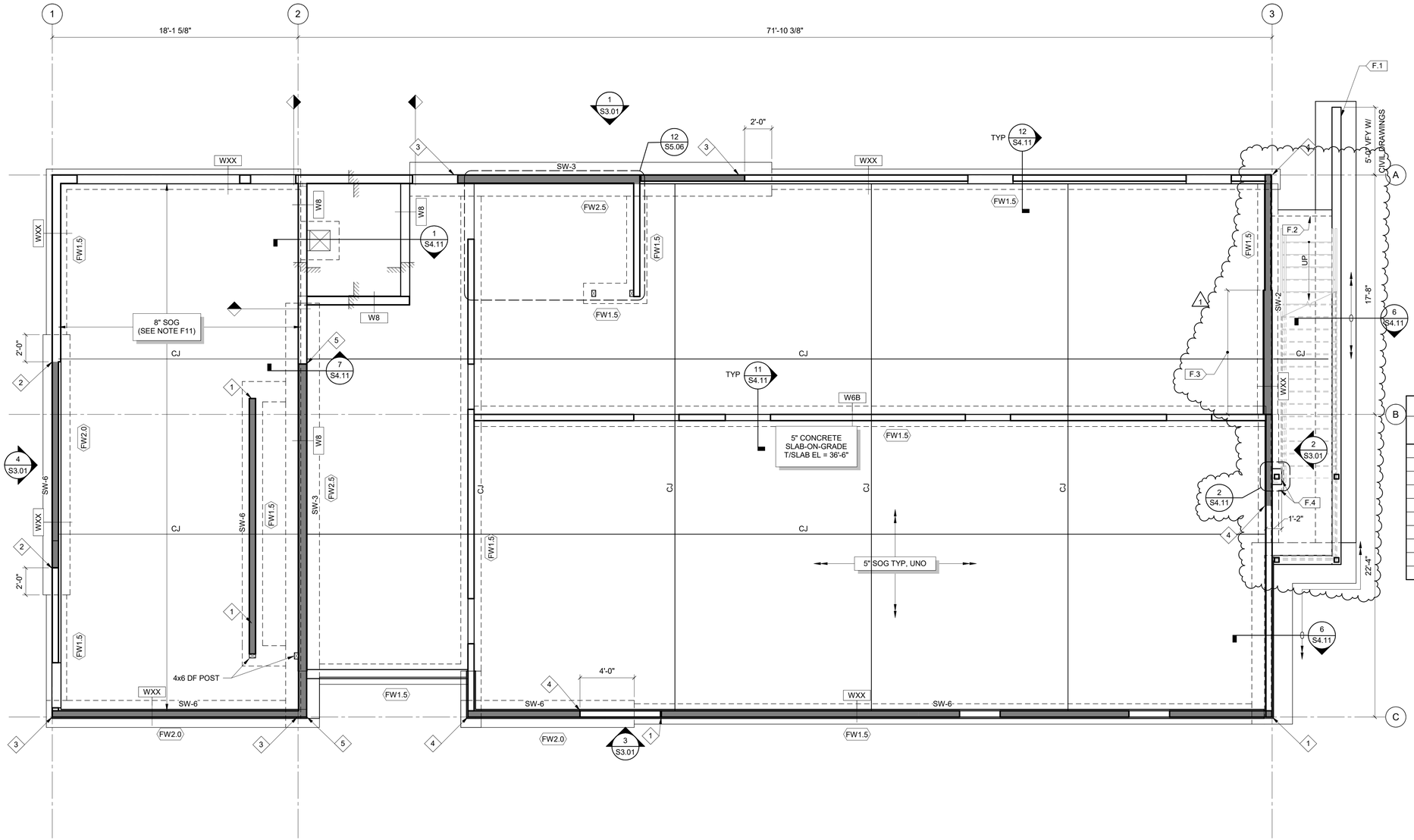
ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A2-168 PRINTED 4/22/2024 12:36:00 PM

LOAD MAPS

S1.01



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

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.

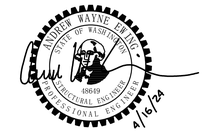
F.2 THICKENED SLAB EDGE AT END OF STAIR PER 3/S4.01.

F.3 INCREASE STEM WALL THICKNESS TO 8" AT ALL 8" STUD WALLS; SEE 12/S4.11 FOR ADDITIONAL INFORMATION.

F.4 PROVIDE 1'-6" SEGMENT OF 14" STEM WALL (REINF W/ (2) CURTAINS OF #4 @ 12" OC VERT) TO RECEIVE STAIR POST AND PROVIDE 2'-0" SEGMENT OF 2'-0" WIDE FOOTING CENTERED AT POST; SEE 2/S4.11 AND 12/S4.11 FOR ADDITIONAL INFORMATION.

1 FOUNDATION PLAN
1/4" = 1'-0"

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com



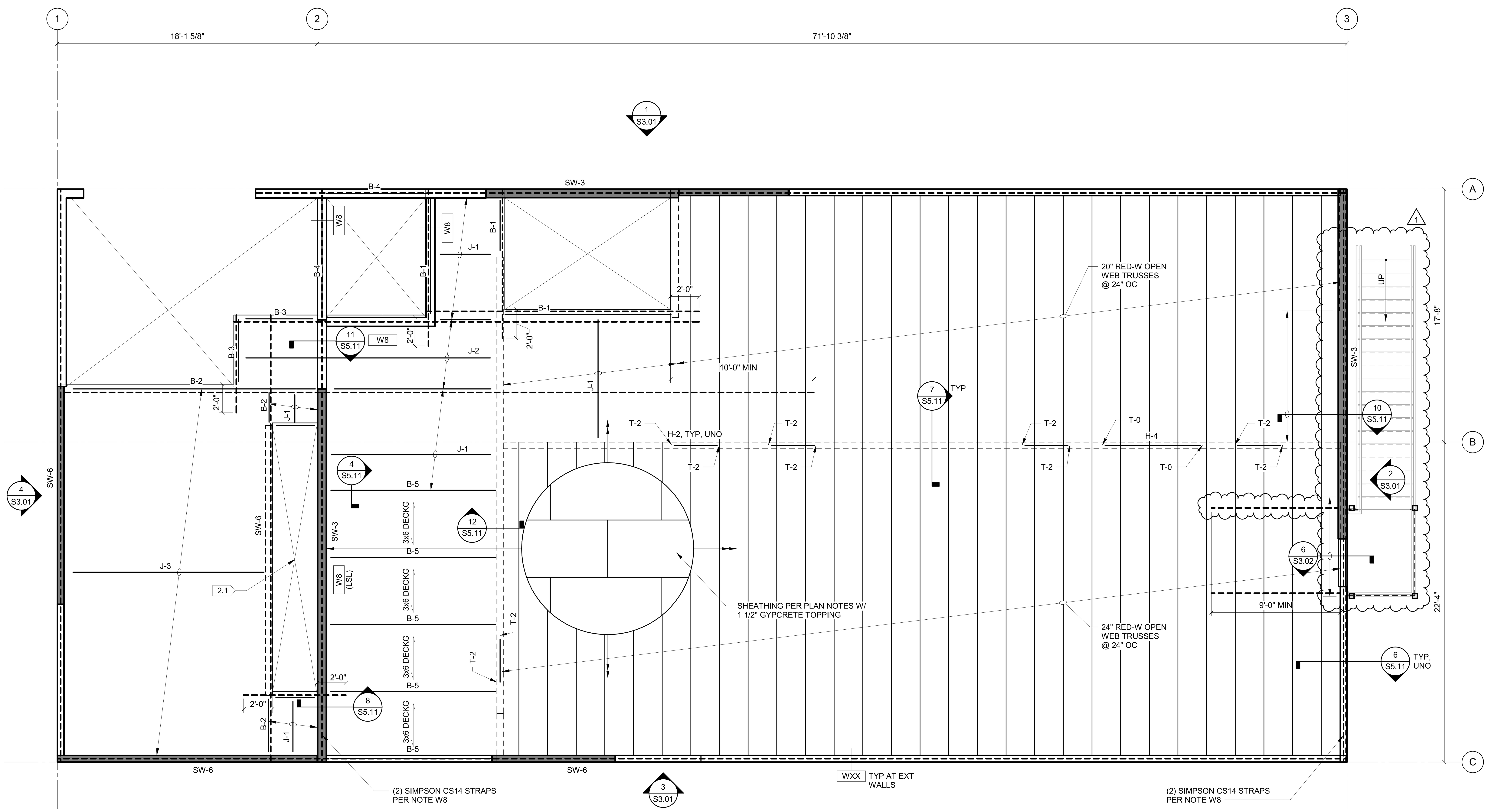
TULALIP TRIBES - UTILTIY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-138 PRINTED 4/12/2024 12:36:01 PM

FOUNDATION PLAN
S2.01



1 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 PER 11/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

FREIHEIT ARCHITECTURE

kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE EWING, STATE OF WASHINGTON, 48649, PROFESSIONAL ENGINEER 4/16/24

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

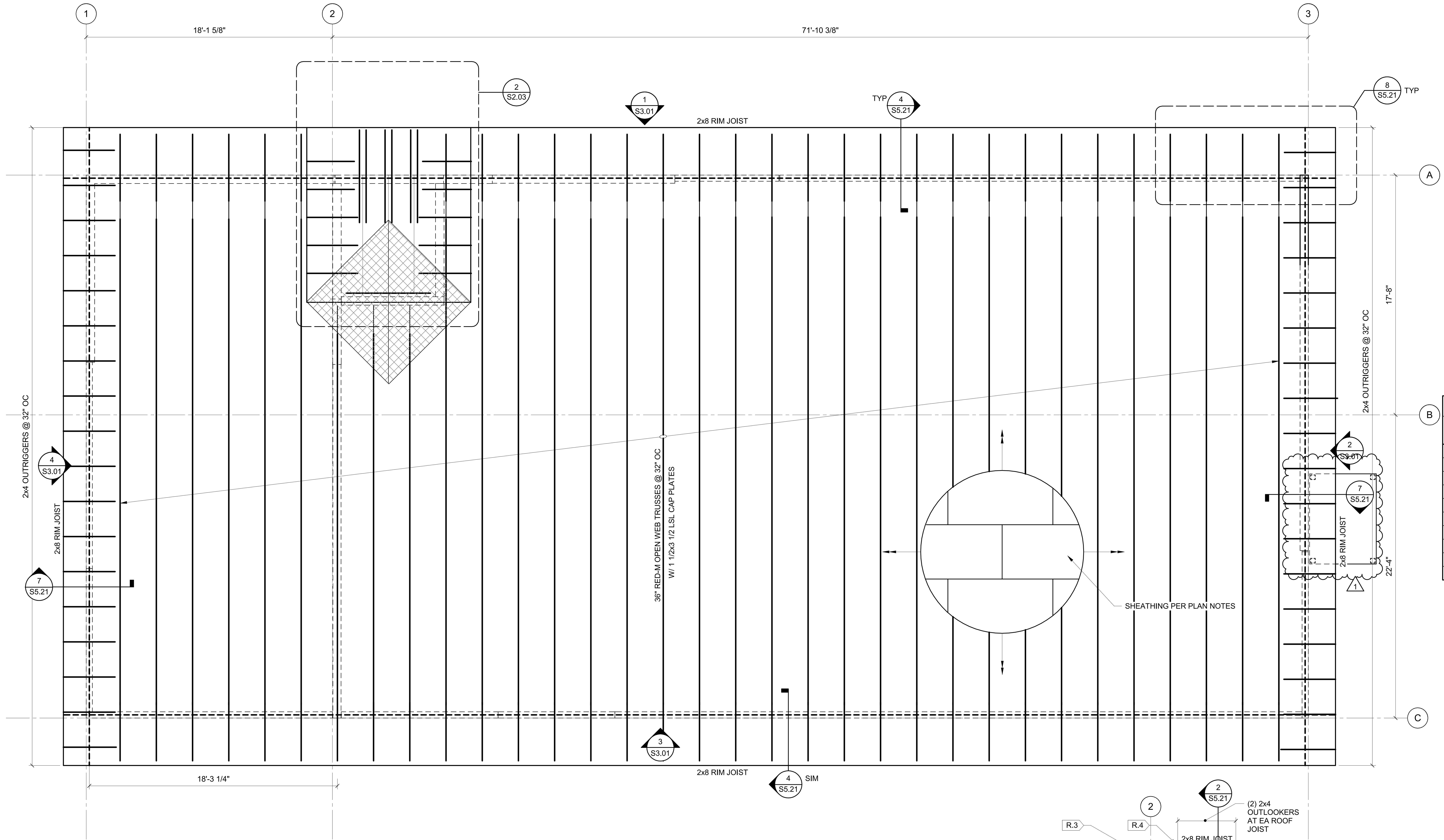
ISSUE LIST

PERMIT ISSUE	5/23/23
PERMIT RESPONSE	7/17/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-188 PRINTED:4/12/2024 12:36:01 PM

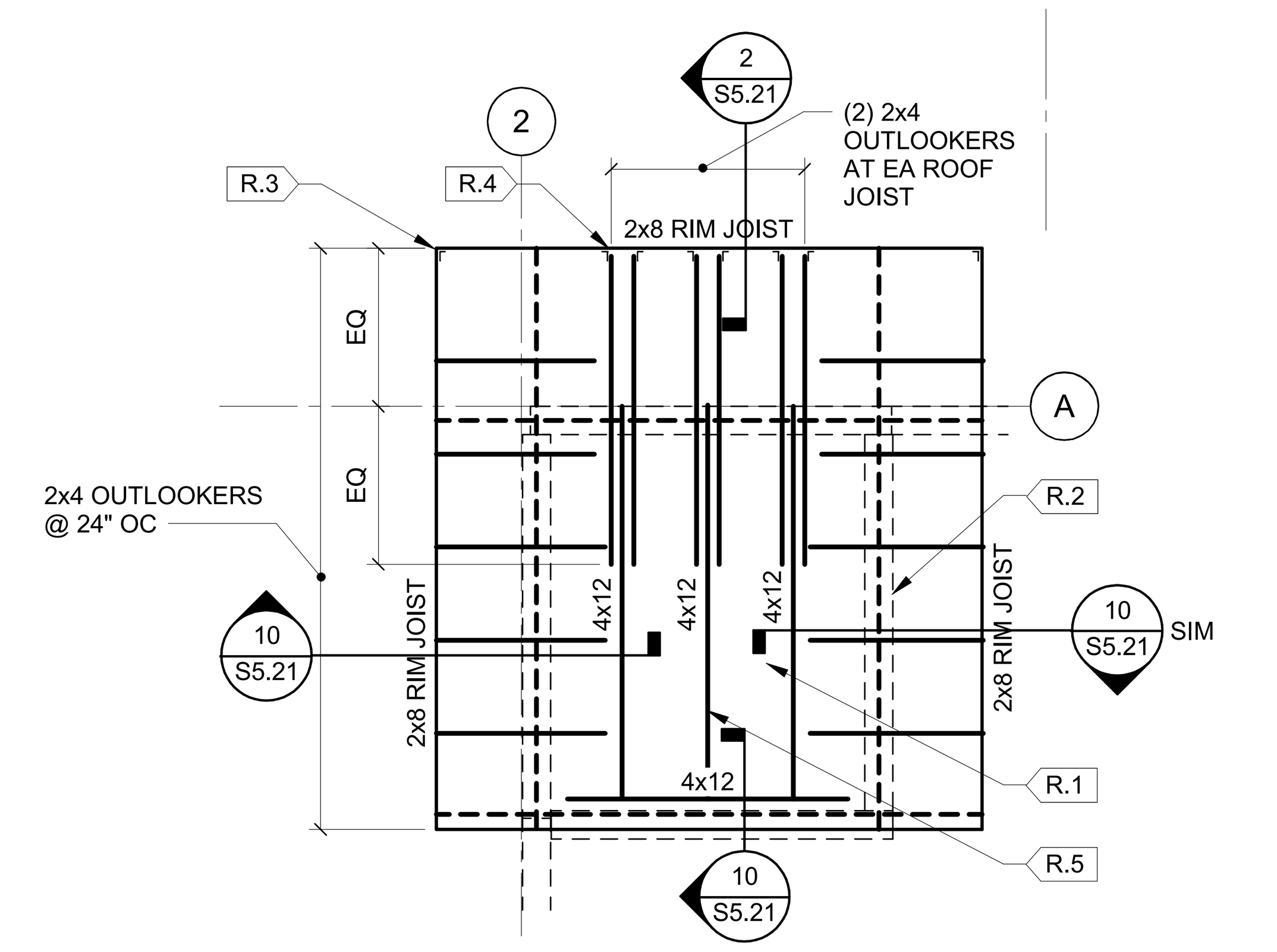
2ND FLOOR FRAMING PLAN

S2.02



1 ROOF FRAMING PLAN

1/4" = 1'-0"



2 ELEVATOR 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/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. – – – – – 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.

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

FREIHEIT ARCHITECTURE

kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE EWING, STATE OF WASHINGTON, 48649, PROFESSIONAL ENGINEER
4/16/24

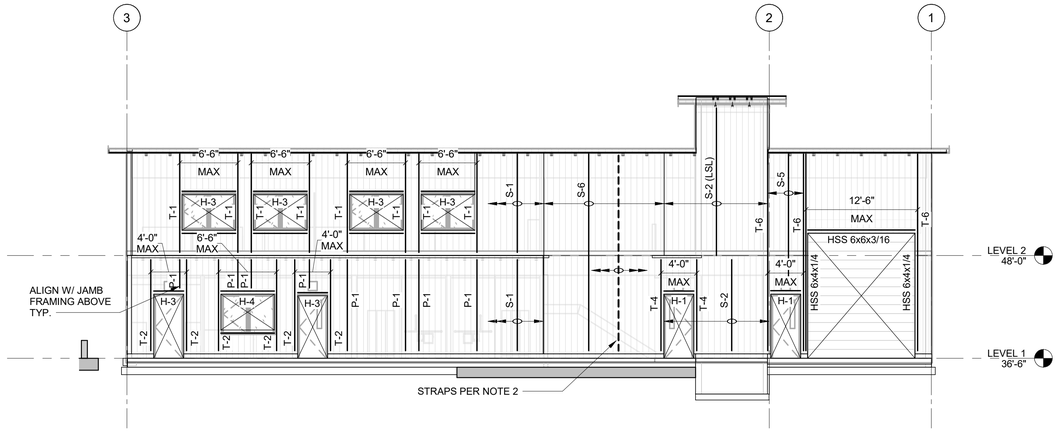
TULALIP TRIBES - UTILTIY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

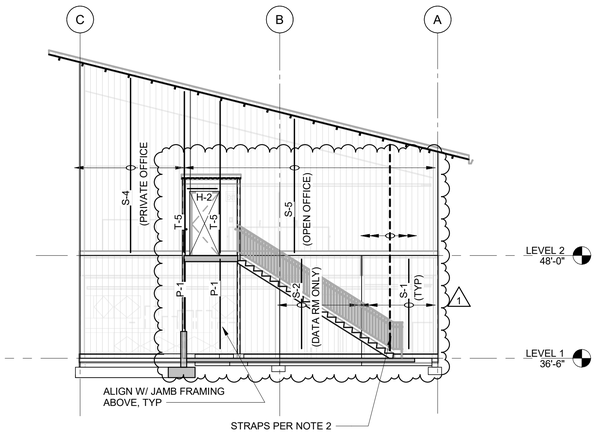
A21-188 PRINTED:4/12/2024 12:36:02 PM

ROOF FRAMING PLAN



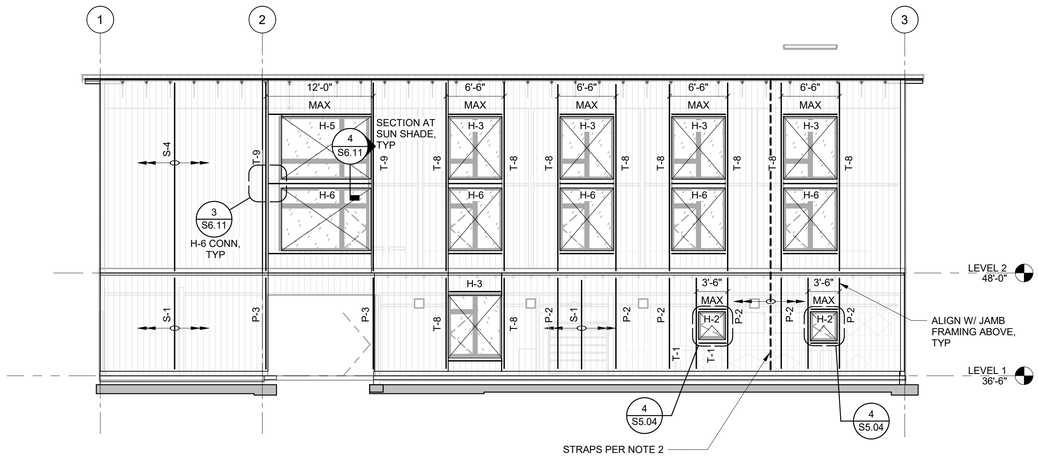
NOTES:
1. EXTERIOR STUDS AND JAMBS MAY HAVE BORED HOLES PER 12/S5.03 BUT SHALL NOT BE NOTCHED.
2. - - - - - - DENOTES SIMPSON CONTINUOUS CS14 OVER PLYWOOD SHEATHING @ 6'-0" OC (ALIGNED WITH STUDS) W/ 0.148x2-1/2" FASTENERS @ 2-1/16" OC (EVERY OTHER HOLE); PROVIDE 18" LAP SPLICES W/ (6) 0.148x2-1/2" FASTENERS.

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



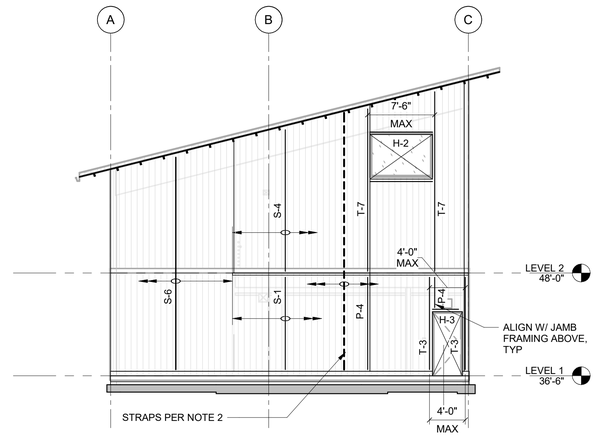
NOTES:
1. EXTERIOR STUDS AND JAMBS MAY HAVE BORED HOLES PER 12/S5.03 BUT SHALL NOT BE NOTCHED.
2. - - - - - - DENOTES SIMPSON CONTINUOUS CS14 OVER PLYWOOD SHEATHING @ 10'-0" OC (ALIGNED WITH STUDS) W/ 0.148x2-1/2" FASTENERS @ 2-1/16" OC (EVERY OTHER HOLE); PROVIDE 18" LAP SPLICES W/ (6) 0.148x2-1/2" 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 @ 4'-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.
9. SUBSTITUTIONS OF STRUCTURAL COMPOSITE LUMBER MAY BE MADE PER THE STRUCTURAL NOTES

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE NEWTON — STATE OF WASHINGTON — 48649 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER — 4/16/24

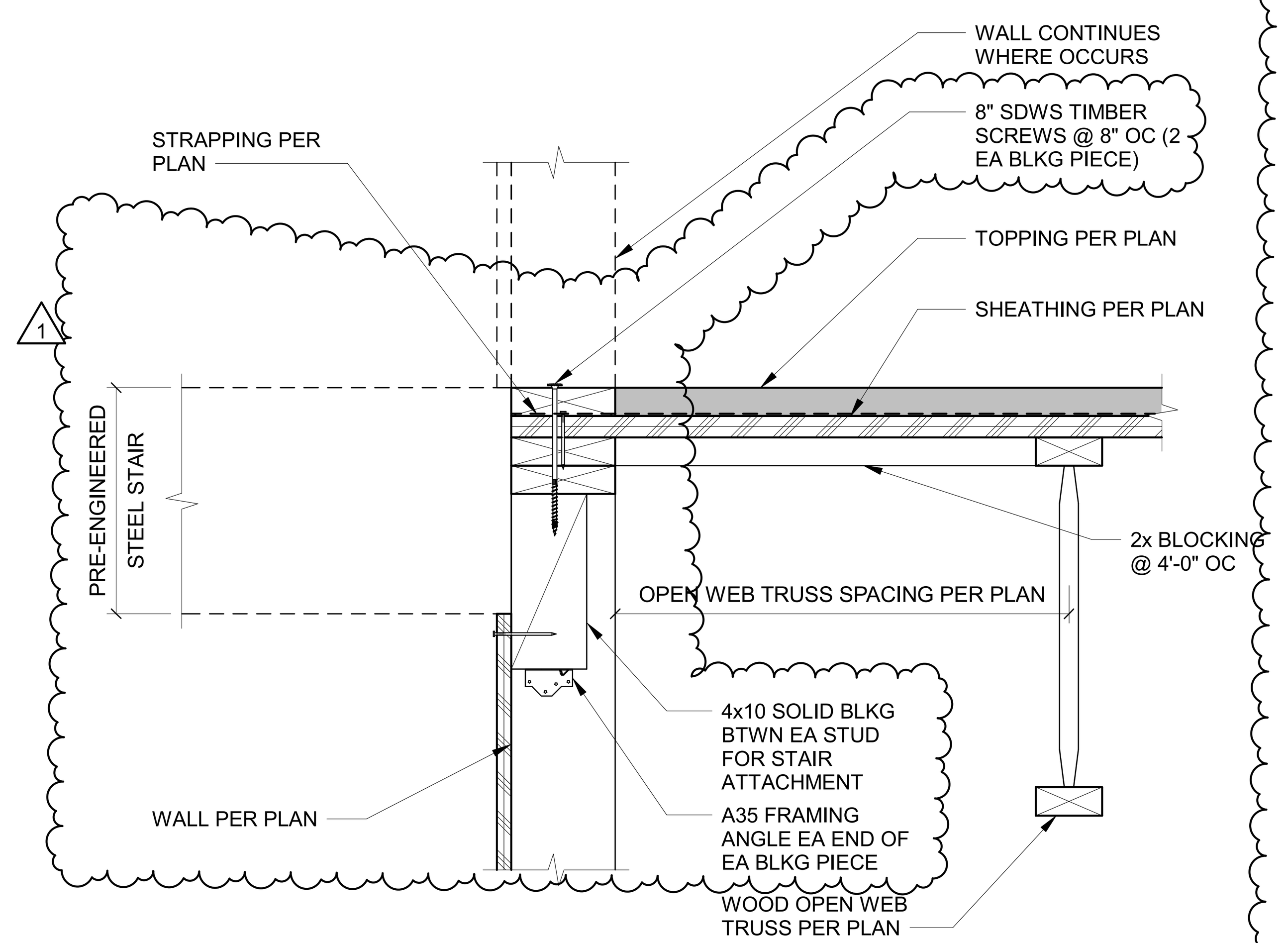
TULALIP TRIBES - UTILTIY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

PERMIT ISSUE	5/23/23
PERMIT RESPONSE	7/17/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

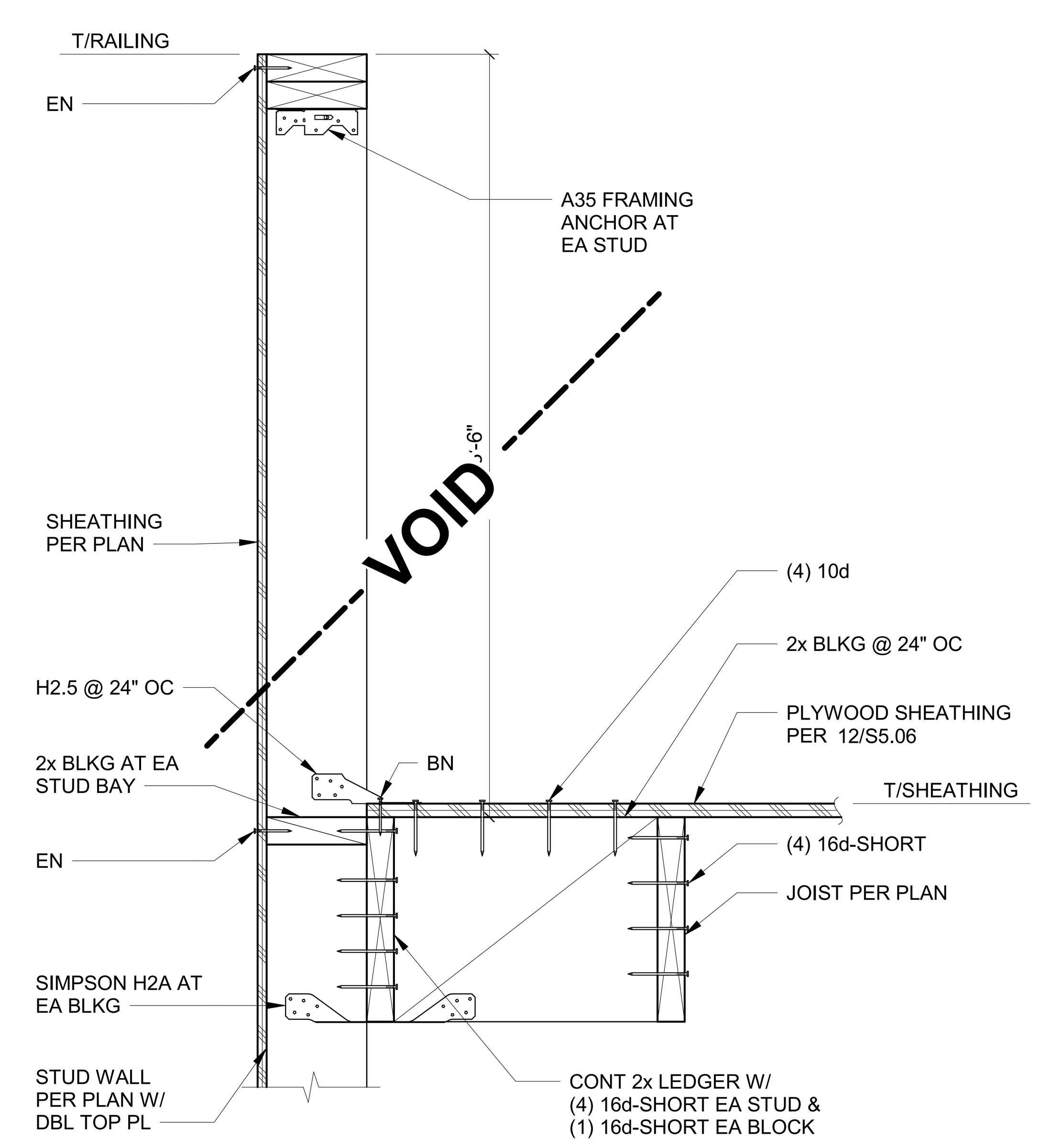
A21-188 PRINTED 4/12/2024 12:36:04 PM

EXTERIOR WALL FRAMING ELEVATIONS
S3.01



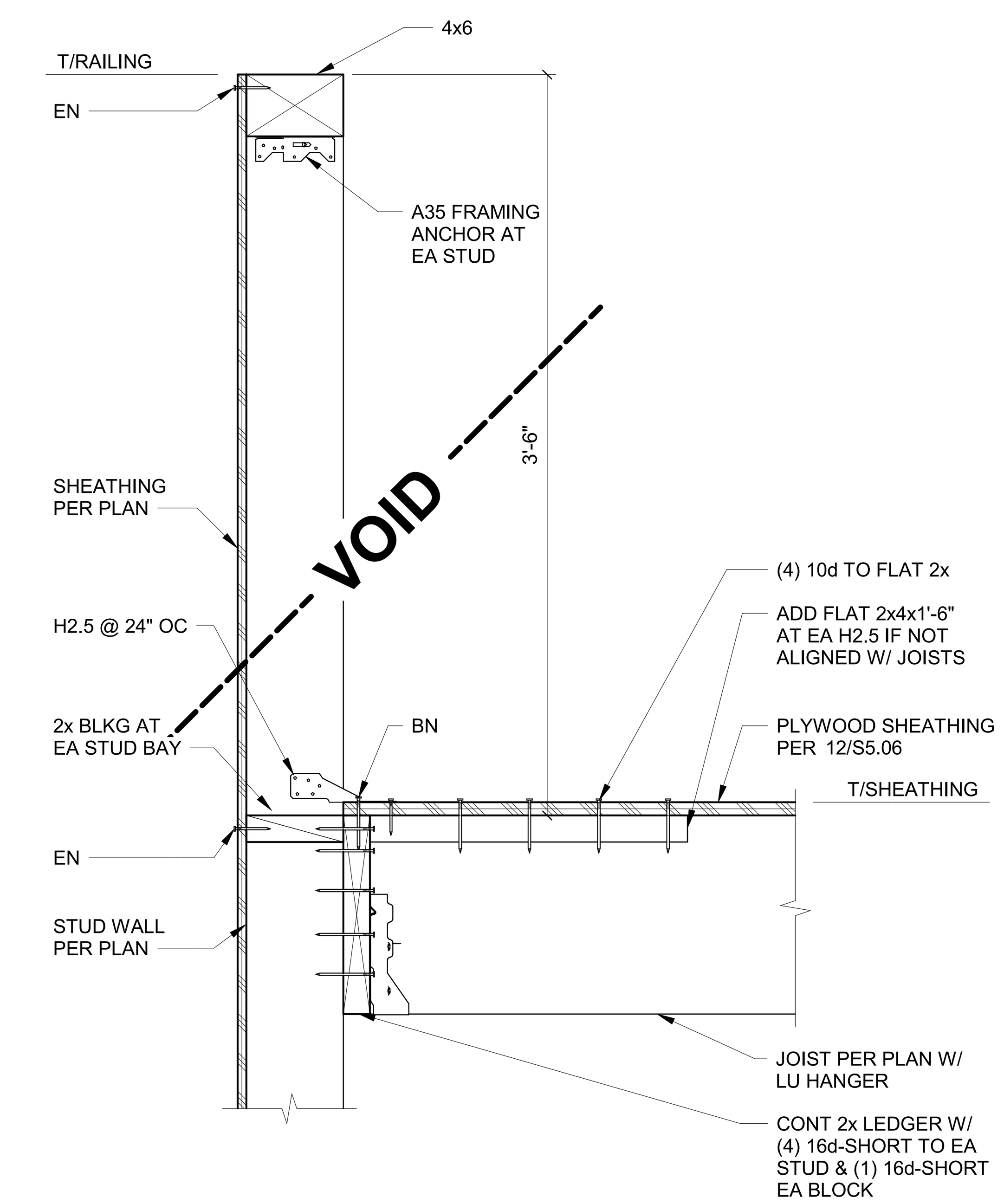
6 EAST STAIR WALL SECTION

1 1/2" = 1'-0"



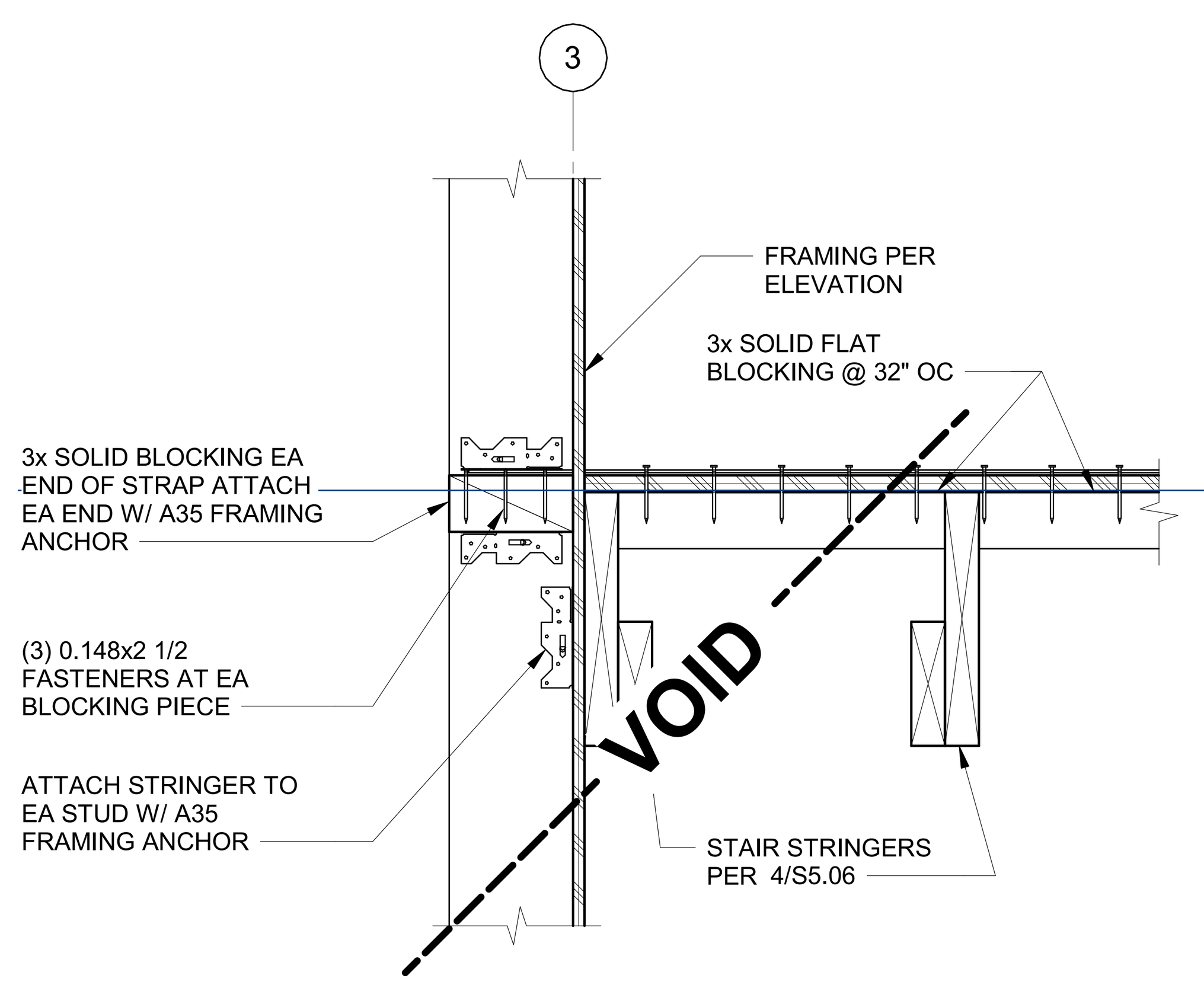
7 EAST STAIR WALL SECTION

NO SCALE



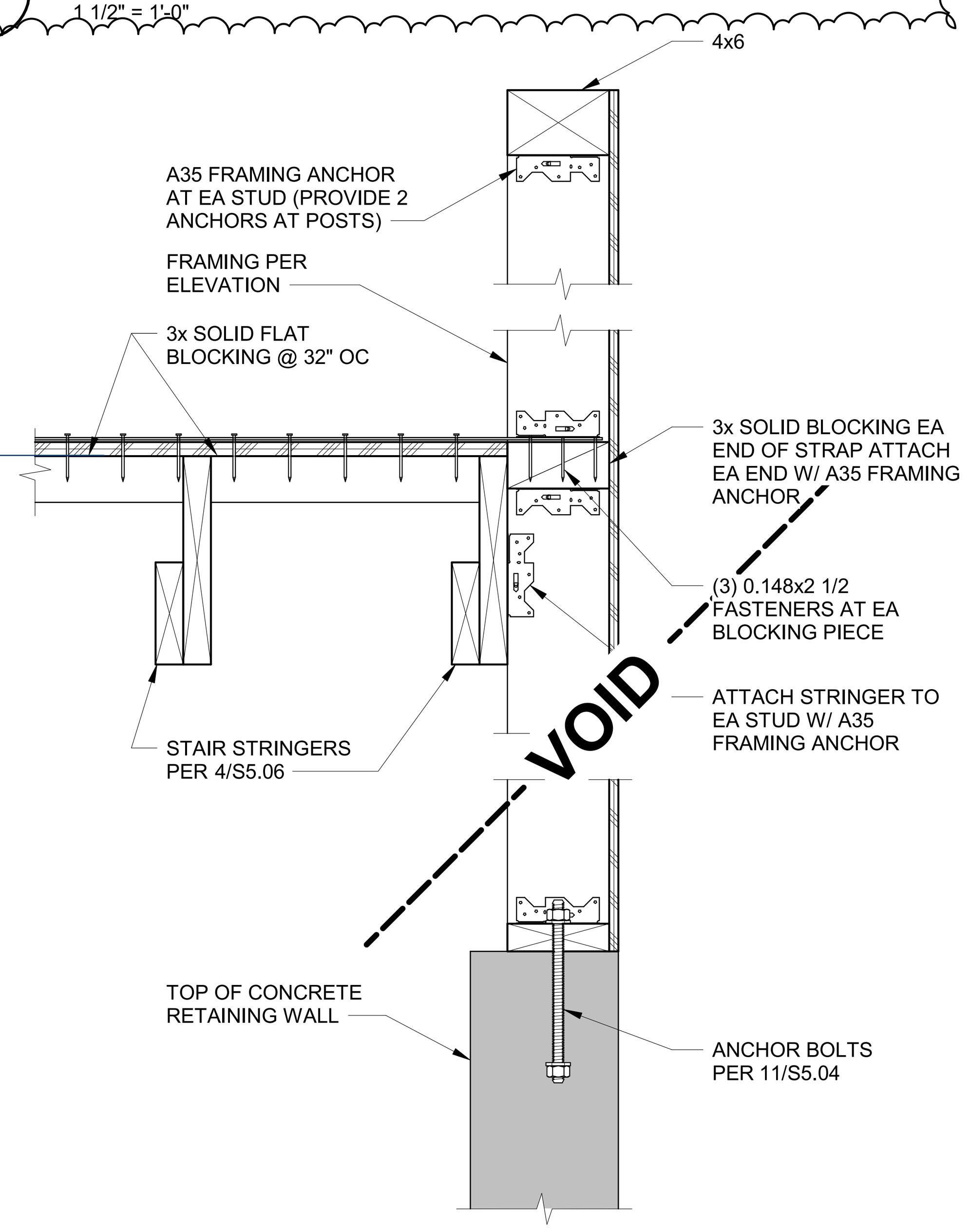
8 EAST STAIR WALL SECTION

NO SCALE



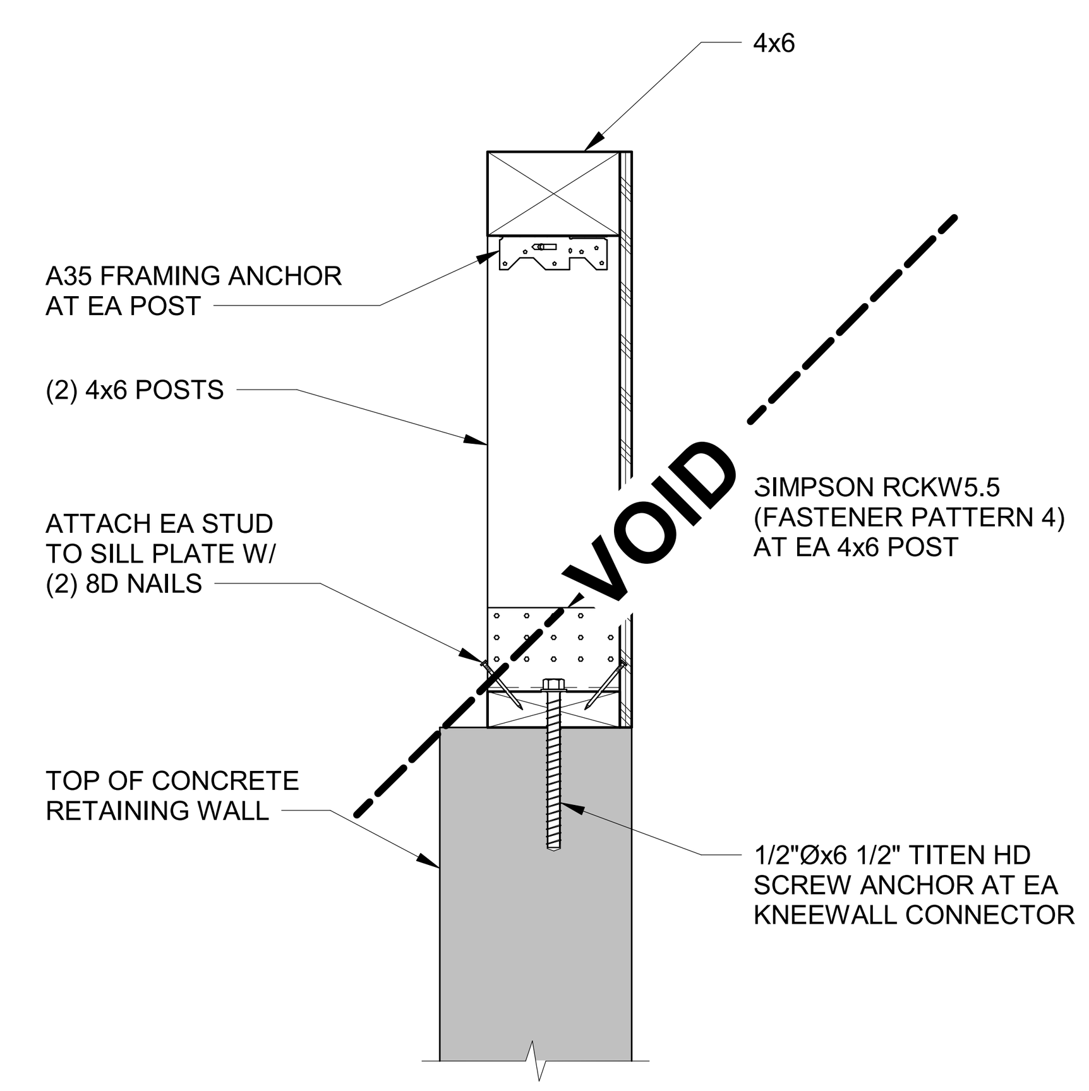
9 EAST STAIR WALL SECTION

1 1/2" = 1'-0"



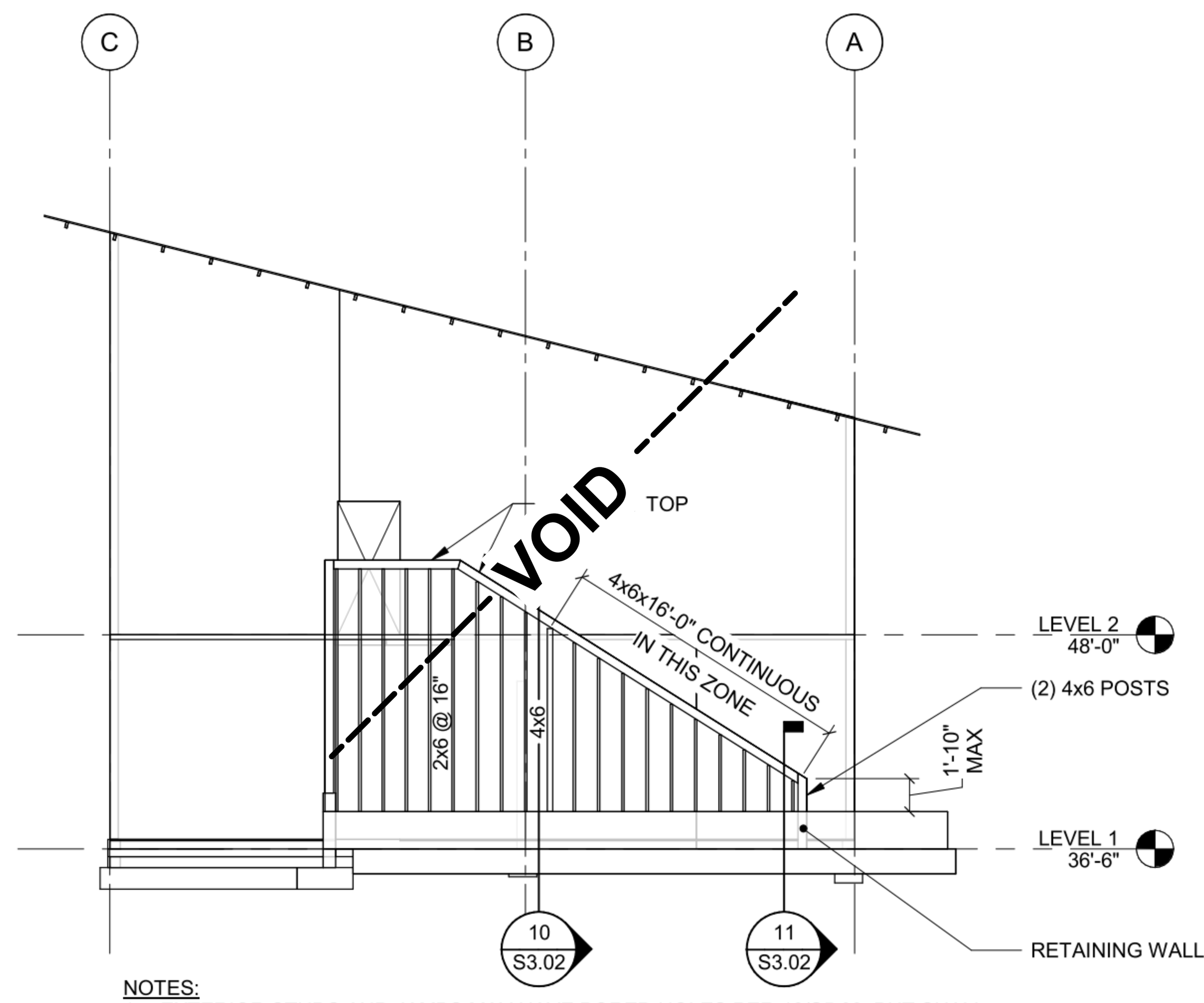
10 EAST STAIR WALL SECTION

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"

FREIHEIT ARCHITECTURE

kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE EWING, STATE OF WASHINGTON, 48649, PROFESSIONAL ENGINEER, 4/16/24

TULALIP TRIBES - UTILTIY BUILDING

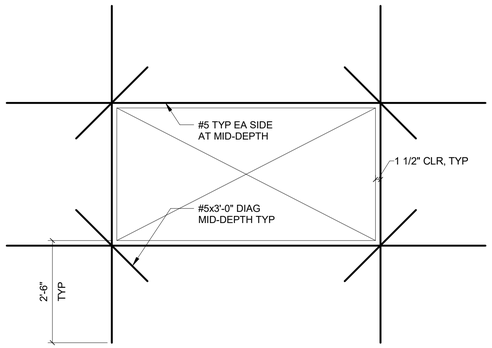
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

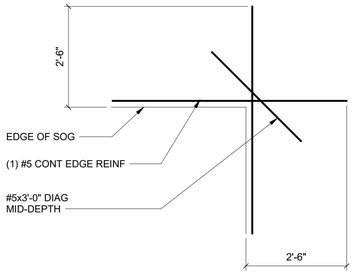
PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

EAST STAIR FRAMING ELEVATION AND DETAILS

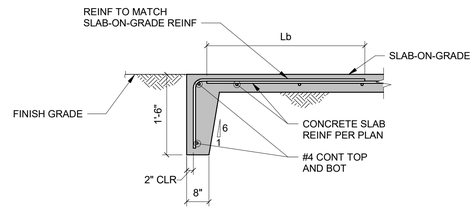
S3.02

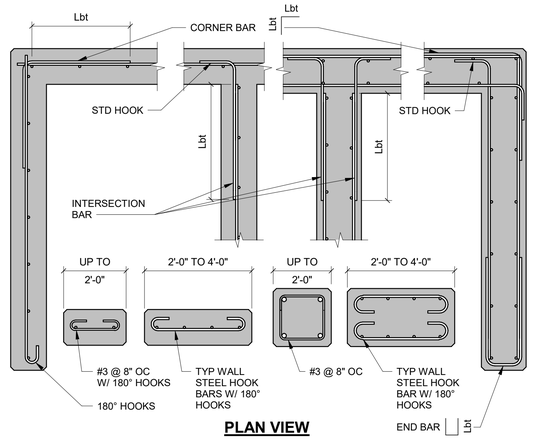


SOG-OPENINGS



SOG-REENTRANT CORNERS

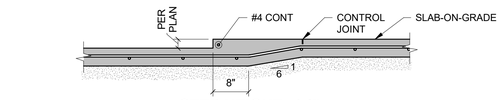




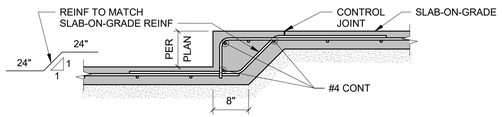
PLAN VIEW

3 TYP THICKENED SLAB EDGE

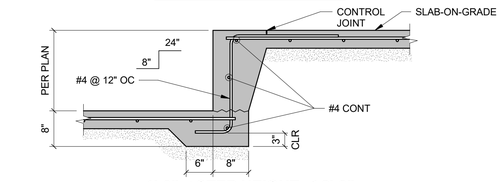
NO SCALE



STEP HEIGHT ≤ 4"



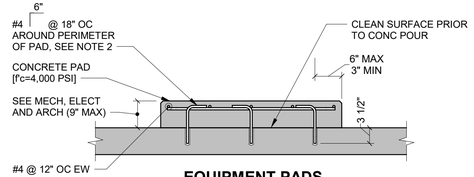
4" < STEP HEIGHT ≤ 1'-0"



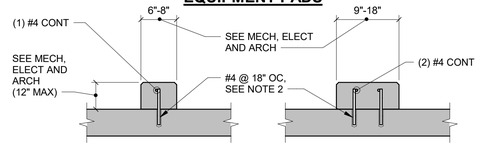
1'-0" < STEP HEIGHT ≤ 2'-0"

4 TYP CONCRETE WALL DETAILS

NO SCALE



EQUIPMENT PADS

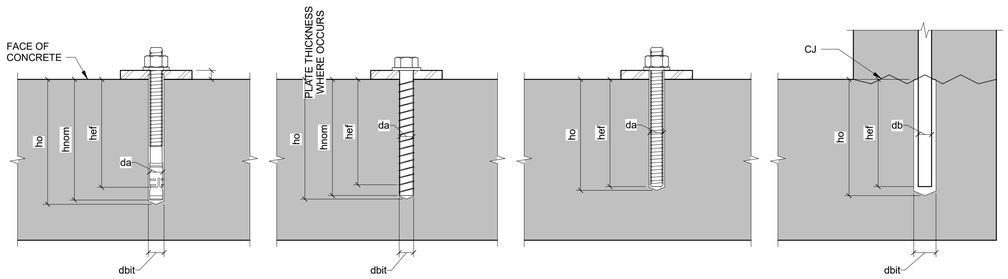


EQUIPMENT CURBS

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)**

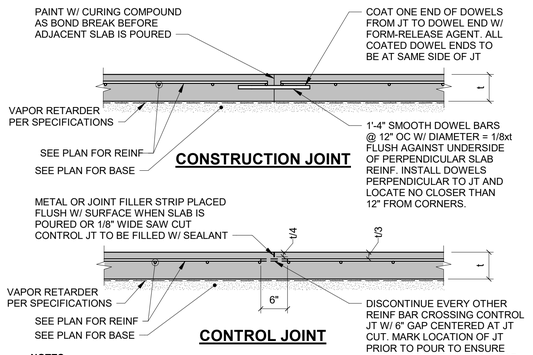
NOTES:
1. REFER TO STRUCTURAL NOTES FOR APPROVED ANCHOR(S) AND EVALUATION REPORT(S).

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*t 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
fy = 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
fy = 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

kpff

1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

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

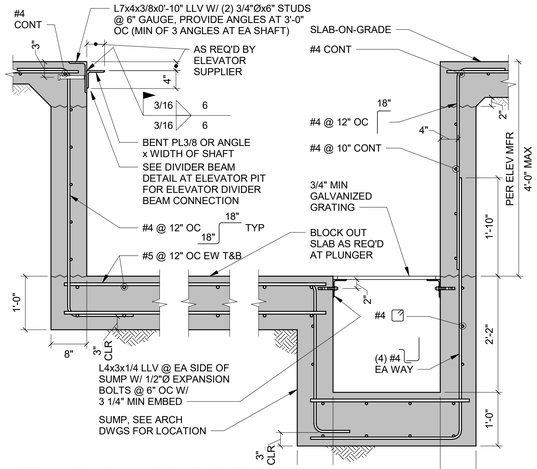
ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-188

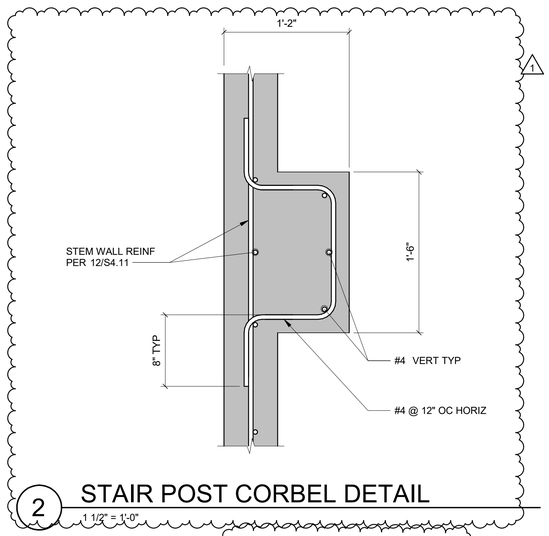
TYPICAL CONCRETE DETAILS

S4.01



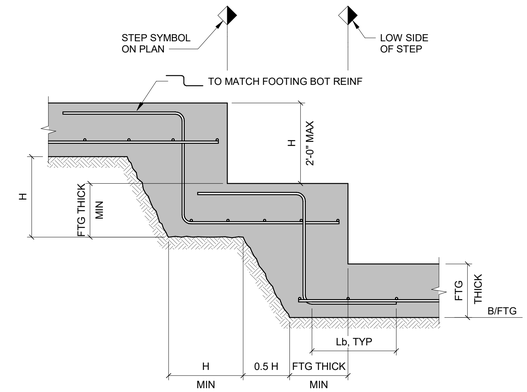
1 ELEVATOR PIT DETAIL

NO SCALE



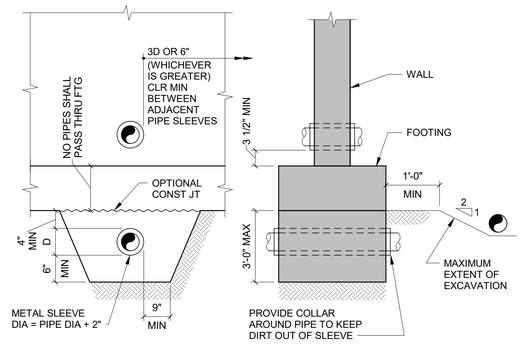
2 STAIR POST CORBEL DETAIL

1 1/2" = 1'-0"



3 TYP STEPPED FOOTING DETAIL

NO SCALE

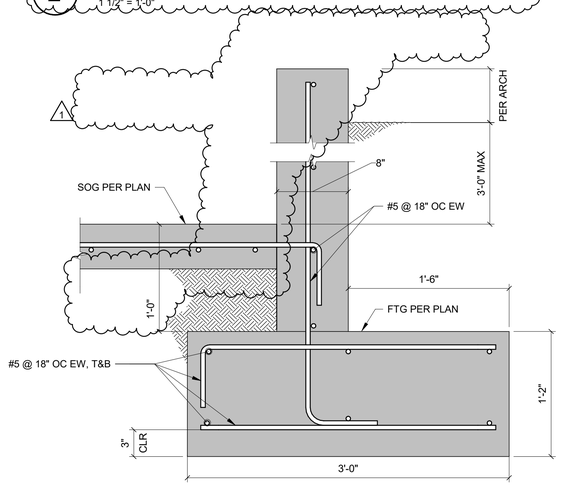


ELEVATION **SECTION**

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".

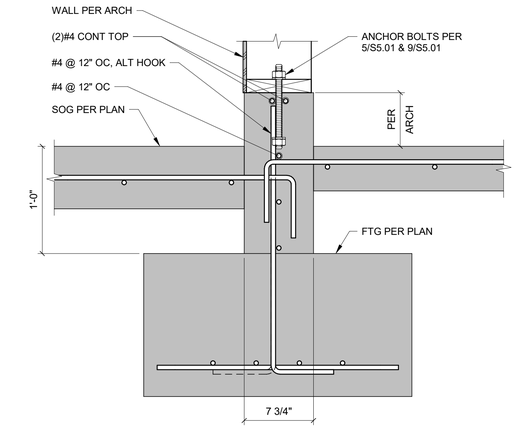
4 TYP DETAIL OF PIPE AT FOOTINGS

NO SCALE



6 RETAINING WALL & FOOTING

1 1/2" = 1'-0"



7 SECTION

1 1/2" = 1'-0"

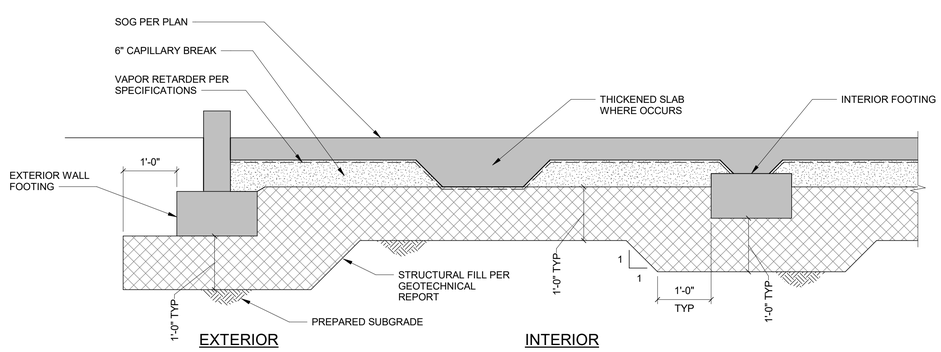
CONTINUOUS FOOTING SCHEDULE

TYPE MARK	DIMENSIONS WIDTH	DIMENSIONS DEPTH	REINFORCING TRANSVERSE	REINFORCING 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.

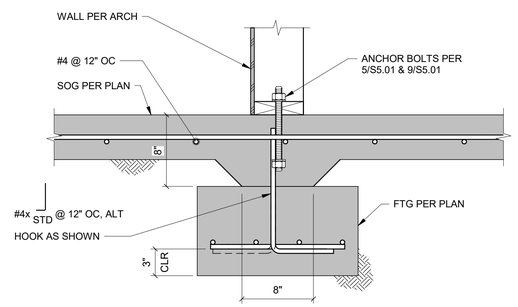
8 CONTINUOUS FOOTING SCHEDULE

NO SCALE



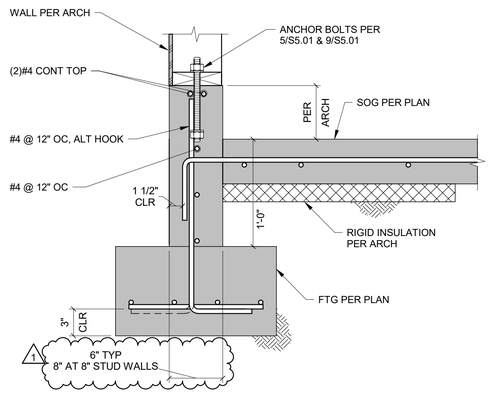
9 TYPICAL FOUNDATION BEARING ZONE PREPARATION

NO SCALE



11 TYP INTERIOR FOOTING

1 1/2" = 1'-0"



12 TYP EXTERIOR FOOTING

1 1/2" = 1'-0"

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

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

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-188 PRINTED:4/12/2024 12:36:06 PM

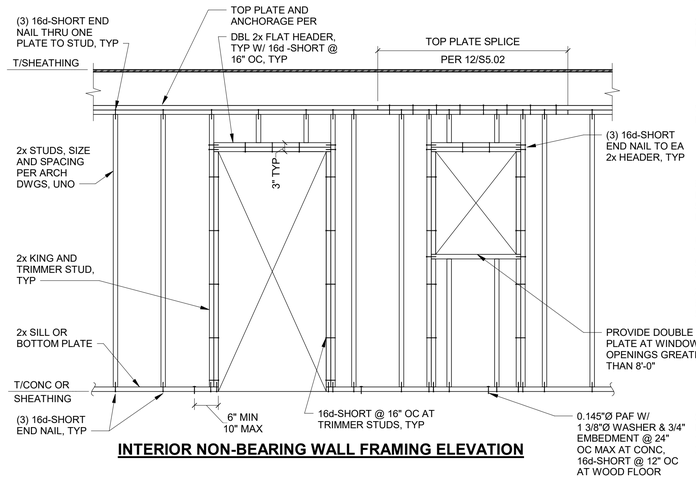
FOUNDATION SECTIONS AND DETAILS

S4.11

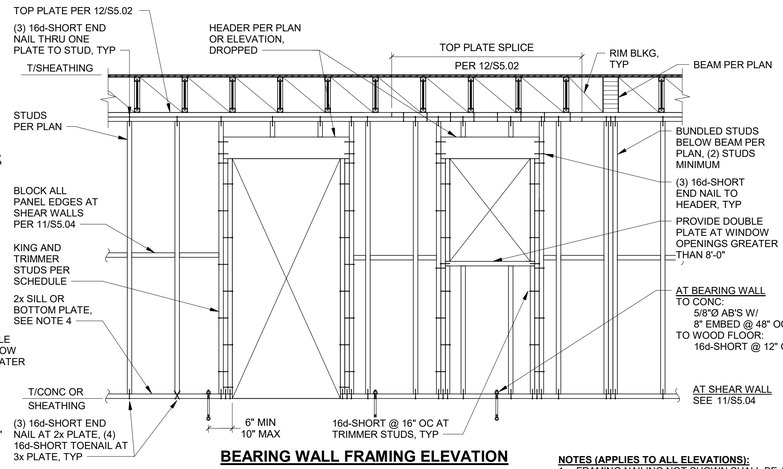
HANGER SCHEDULE			
MEMBER SIZE	**FACE MOUNT**	**TOP FLANGE**	**TOP FLANGE SKEWED**
16" RED-I65	MIU2.56/16	BA2.56/16 (MAX)	-
18" RED-I65	MIU2.56/18	BA2.56/18 (MIN)	-
2x4	LUS24	PF24	HU24TF

4 HANGER SCHEDULES

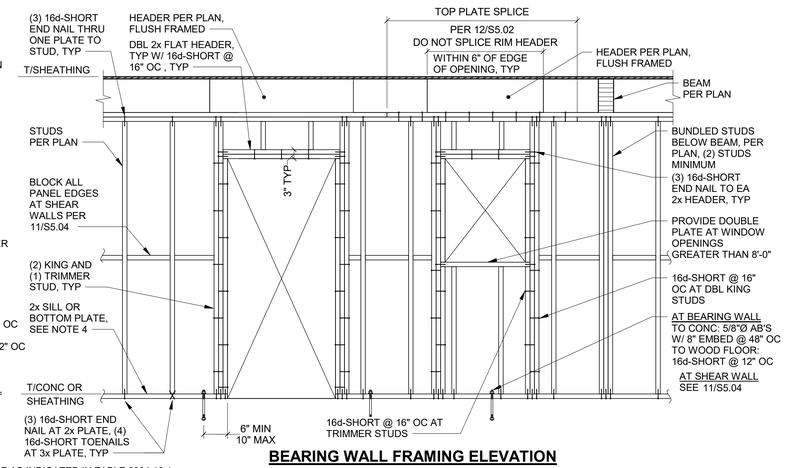
NO SCALE



INTERIOR NON-BEARING WALL FRAMING ELEVATION



BEARING WALL FRAMING ELEVATION



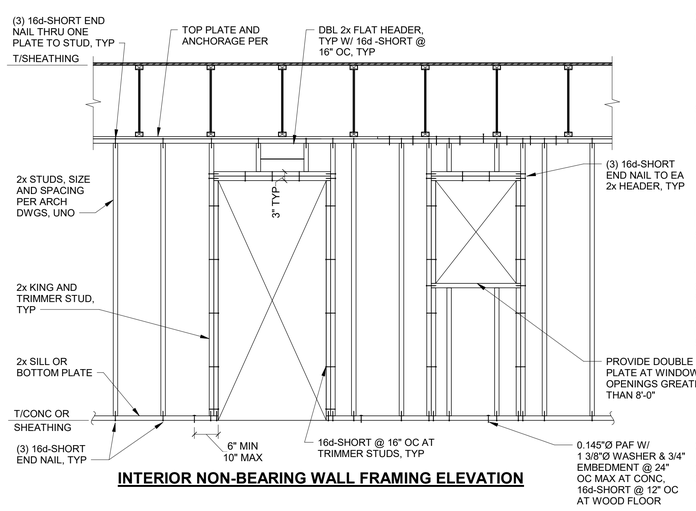
BEARING WALL FRAMING ELEVATION

NOTES (APPLIES TO ALL ELEVATIONS):

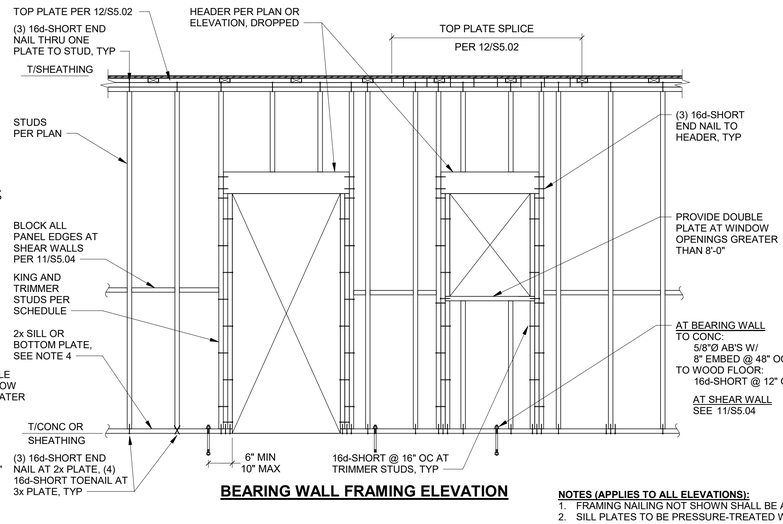
1. FRAMING NAILING NOT SHOWN SHALL BE AS INDICATED IN TABLE 2304.10.1.
2. SILL PLATES TO BE PRESSURE-TREATED WHERE IN CONTACT WITH CONCRETE.
3. SEE 10/S5.05 FOR SILL BOLT CONSTRUCTION.
4. INCREASE SILL PLATE SIZE TO 3x WHERE REQUIRED BY SHEAR WALL SCHEDULE PER 11/S5.04.

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

kpff

1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

TULALIP TRIBES - UTILTIY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

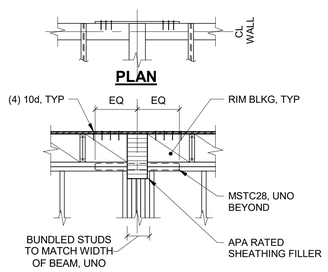
ISSUE LIST

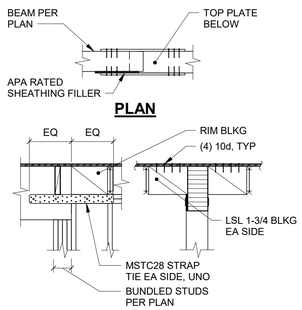
PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

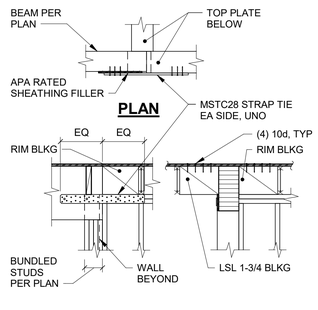
A21-188 PRINTED 4/12/2024 12:36:07 PM

TYPICAL WOOD FRAMING DETAILS

S5.01

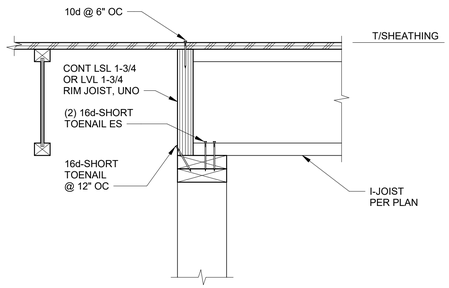






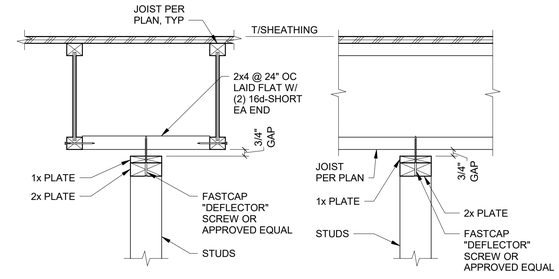
1 TYP DEEP BEAM SUPPORT DETAILS

NO SCALE



3 TYP INTERIOR BEARING WALL BELOW - FRAMING DIRECTION CHANGE

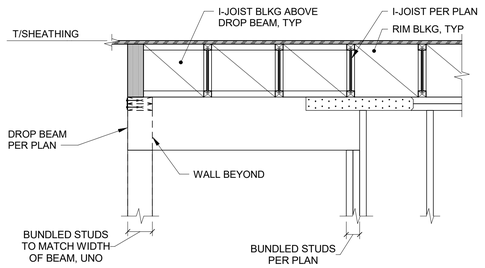
NO SCALE



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

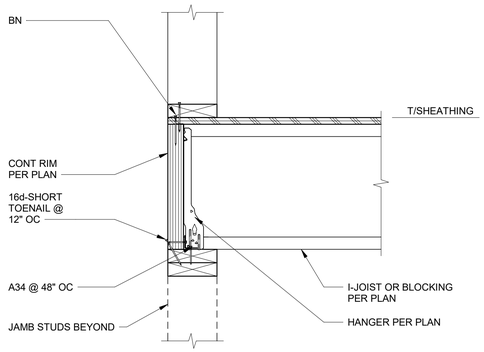
NO SCALE



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

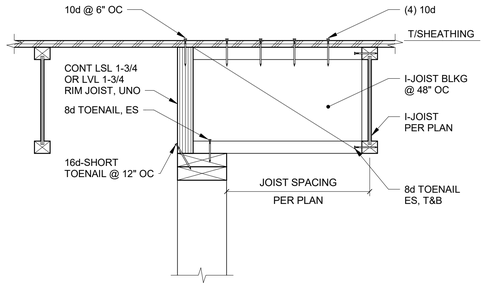
5 TYP DROP BEAM SECTION

NO SCALE



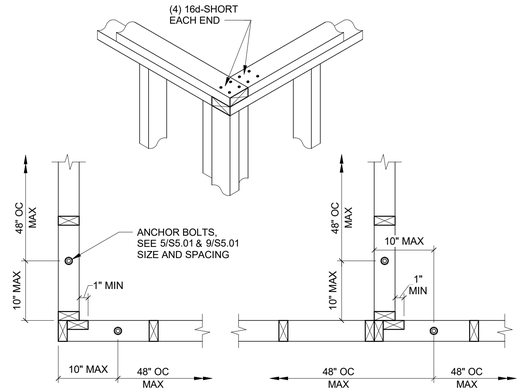
6 TYP RIM JOIST HEADER

NO SCALE



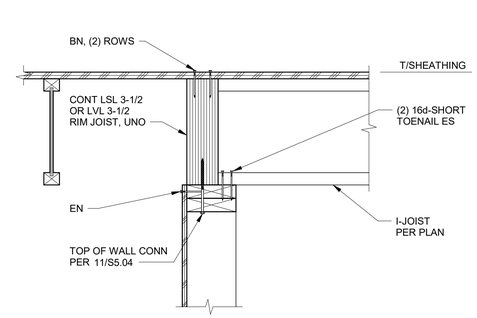
7 TYP INTERIOR BEARING WALL BELOW - FRAMING PARALLEL

NO SCALE



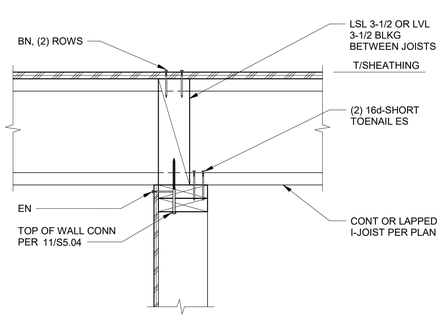
8 TYP STUD WALL CORNER

NO SCALE



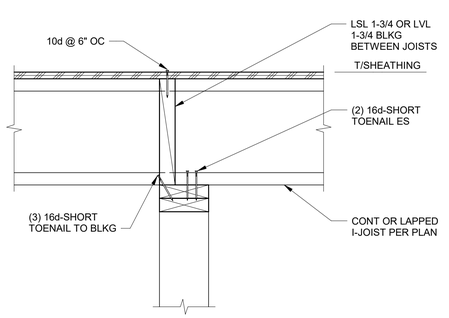
9 TYP INTERIOR SHEAR WALL BELOW - FRAMING DIRECTION CHANGE

NO SCALE



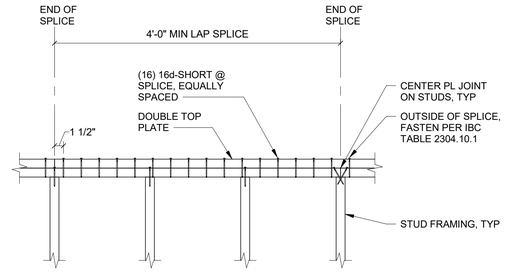
10 TYP INTERIOR SHEAR WALL BELOW - FRAMING PERPENDICULAR

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

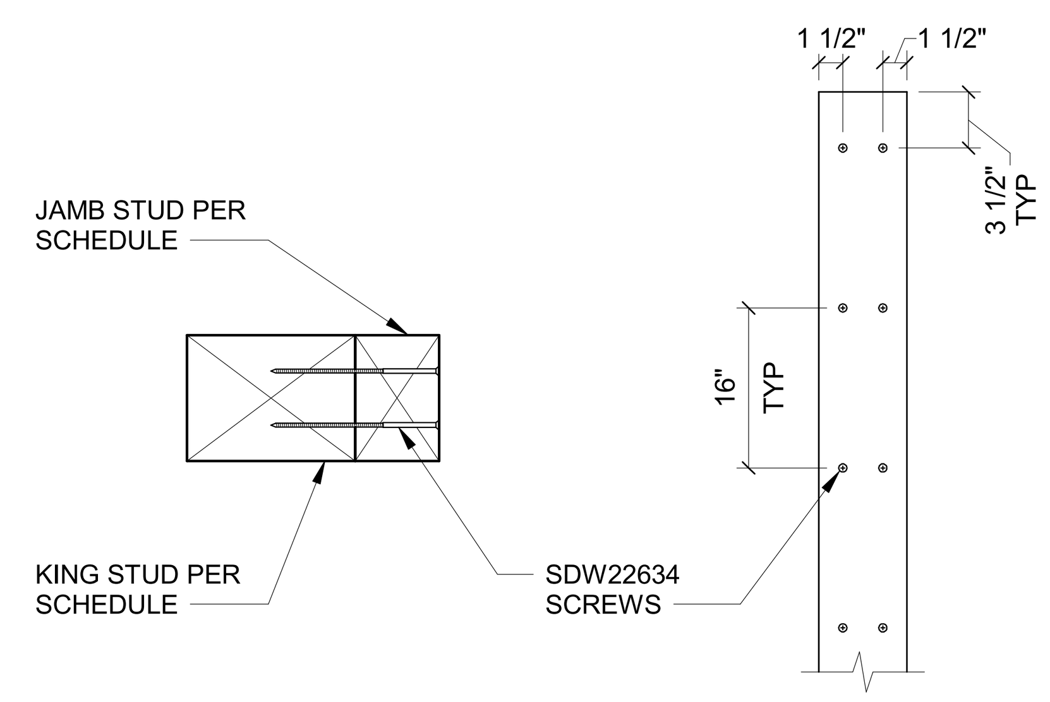
FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

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

ISSUE LIST	
PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-169 PRINTED 4/12/2024 12:36:06 PM

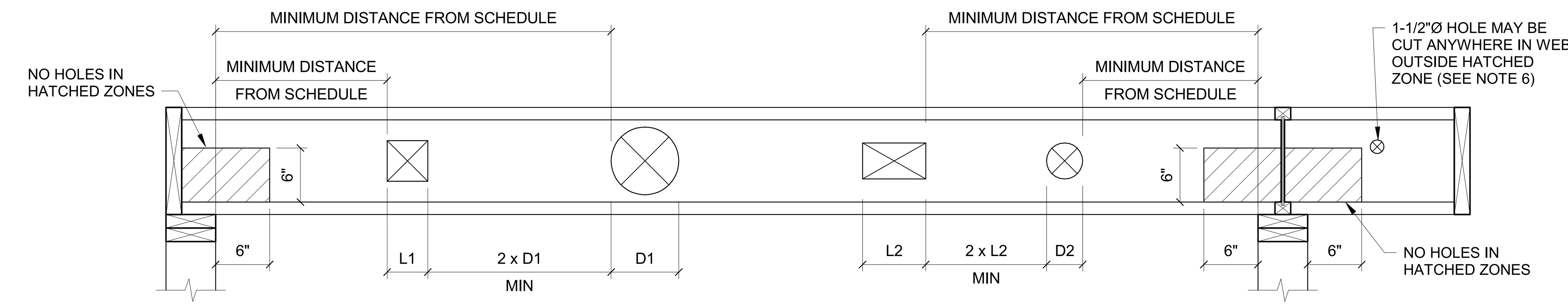
TYPICAL WOOD FRAMING DETAILS
S5.02



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

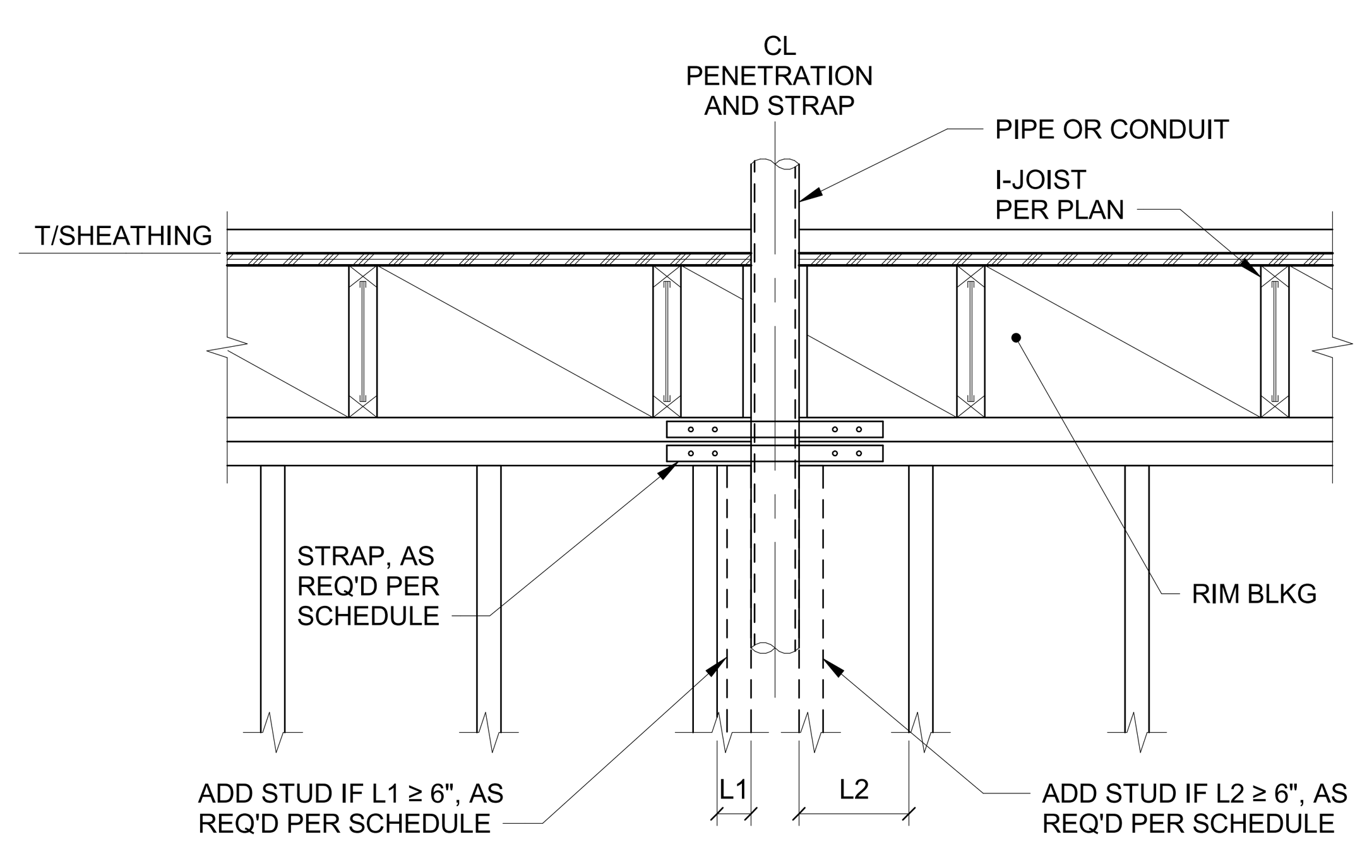
NOTES:
1. ADAPTED FROM TRUS-JOIST DOCUMENT TJ-4000, NOVEMBER 2017.
2. HOLE SIZES: THE SIZES GIVEN IN THE TABLE ARE HOLE SIZES, NOT DUCT SIZES.
3. MULTIPLE HOLES: WHERE MORE THAN ONE HOLE IS DESIRED, THE AMOUNT OF WOOD BETWEEN HOLES MUST EQUAL OR EXCEED TWICE THE DIAMETER OF THE LARGEST HOLE OR TWICE 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

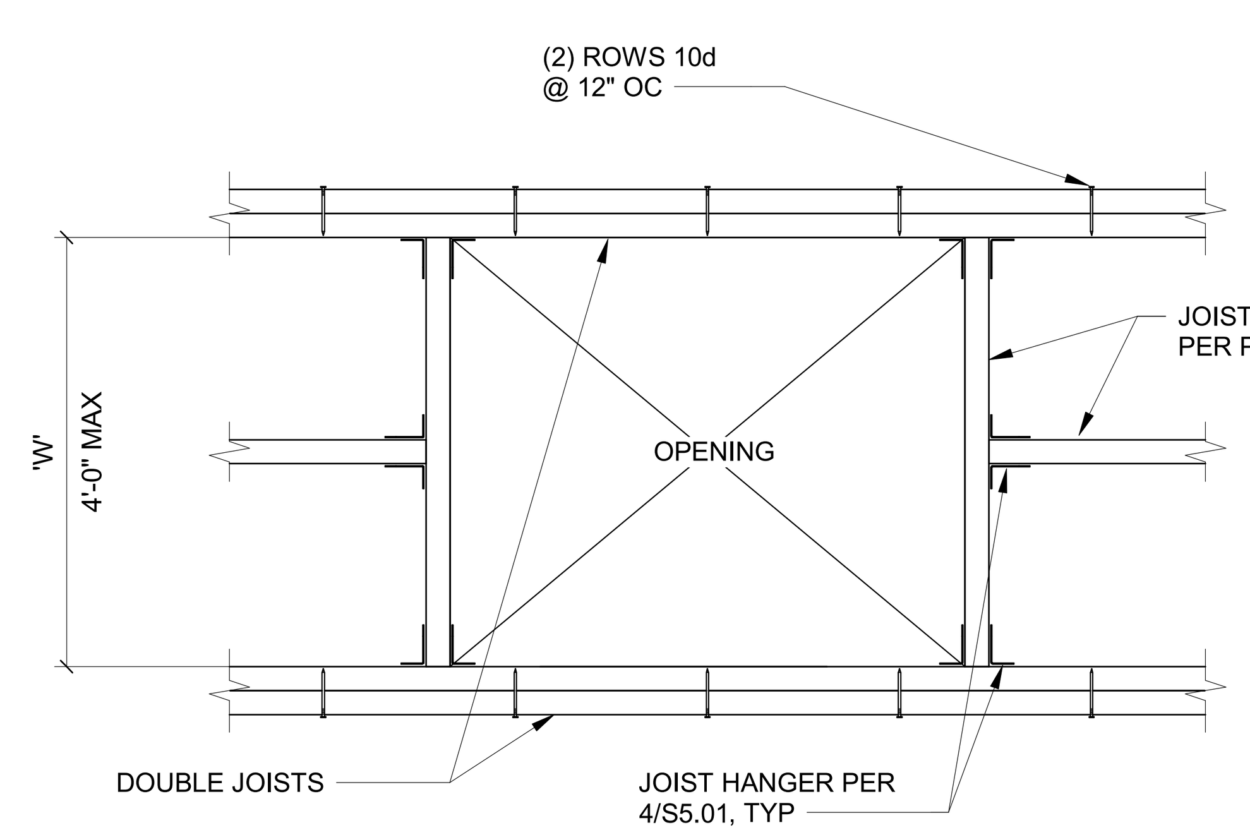
SHEAR WALL PLATE PENETRATION SCHEDULE

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.

10 TYP WALL PLATE PENETRATIONS

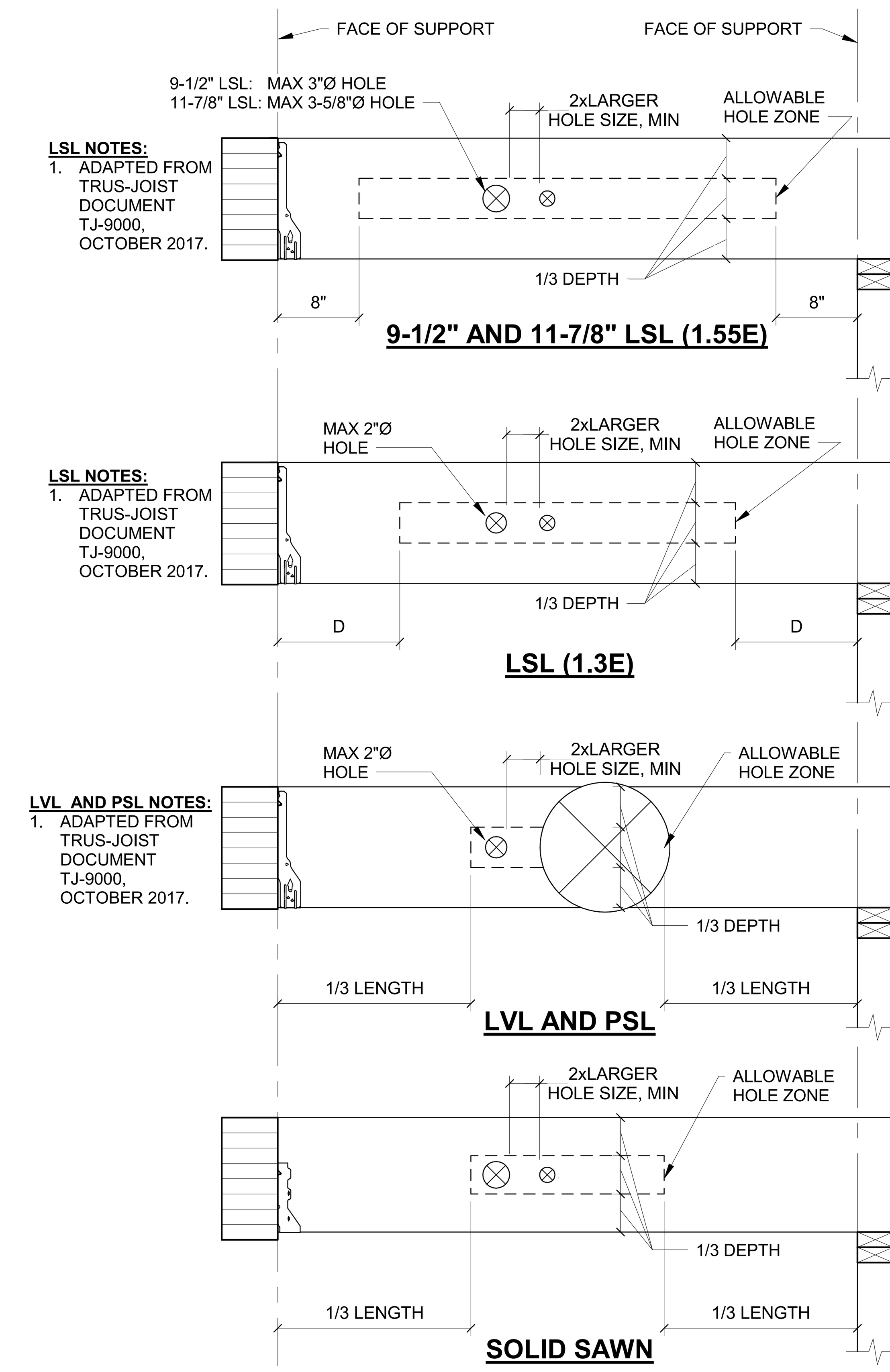
NO SCALE



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

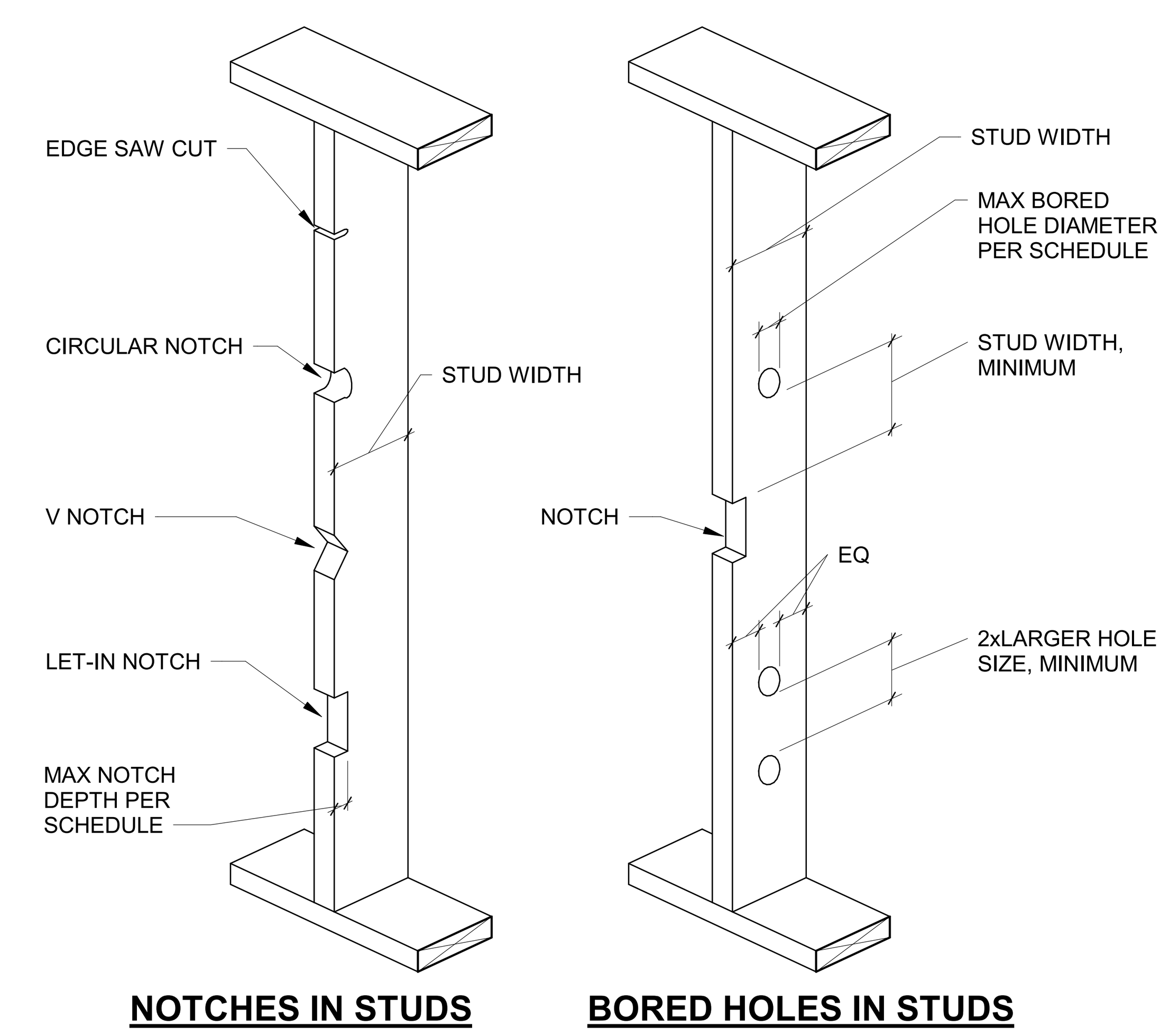
NO SCALE



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



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

FREIHEIT ARCHITECTURE

kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE EWING — STATE OF WASHINGTON — 48649 — PROFESSIONAL ENGINEER — 4/16/24

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

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

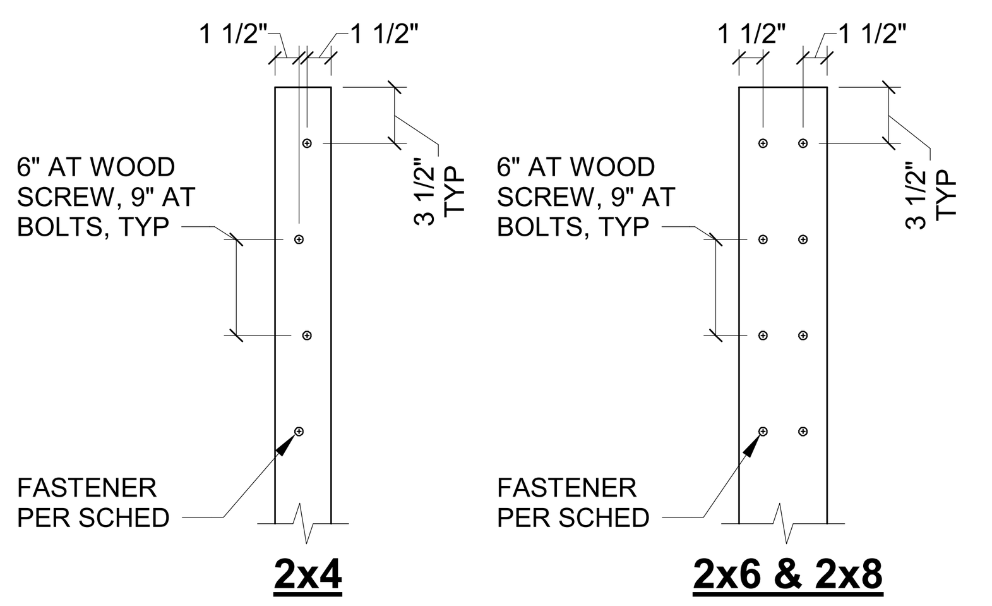
TYPICAL WOOD FRAMING DETAILS

S5.03

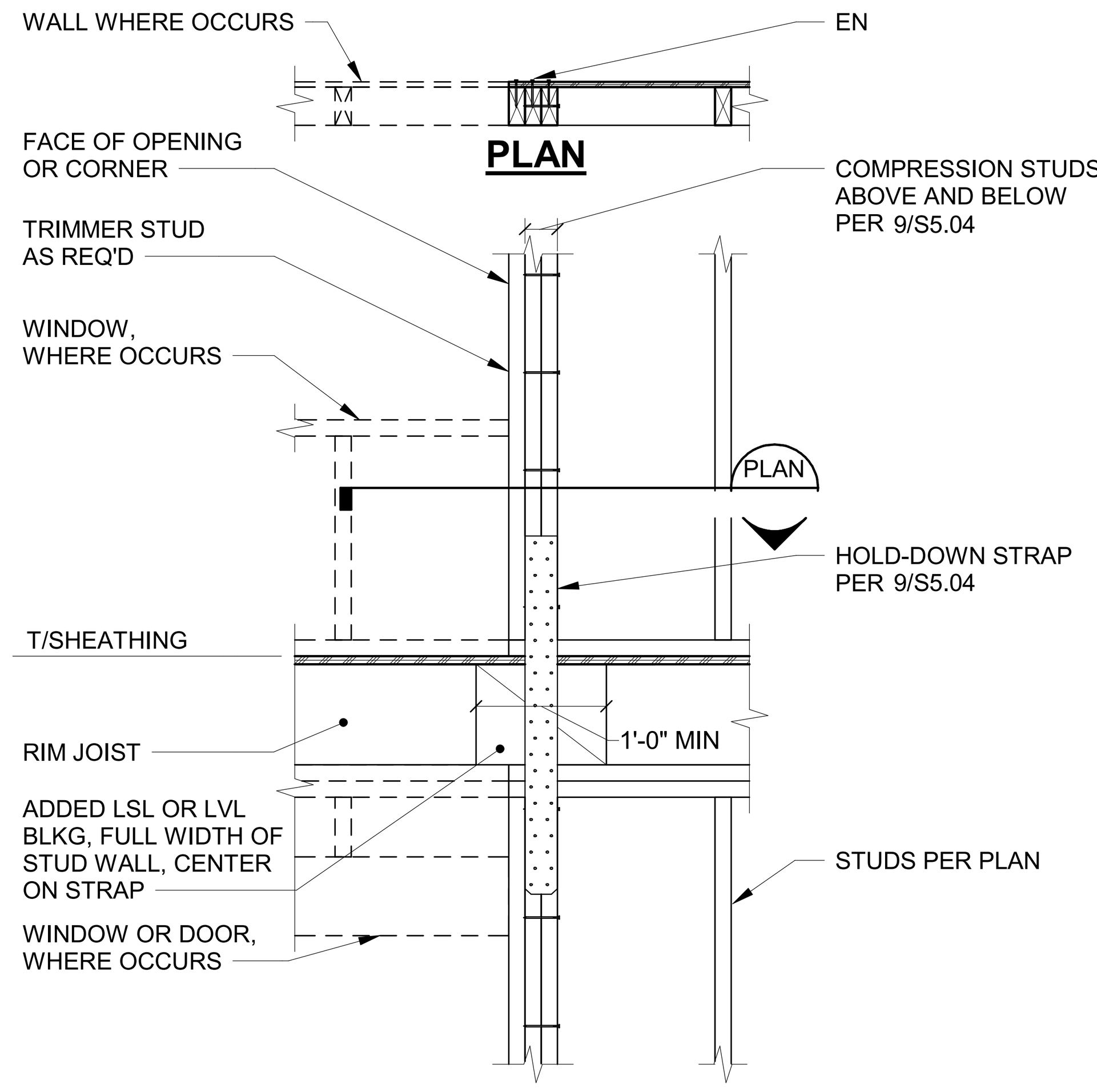
1 BUILT-UP COL AND JAMB FASTENING
NO SCALE

FASTENER SCHEDULE

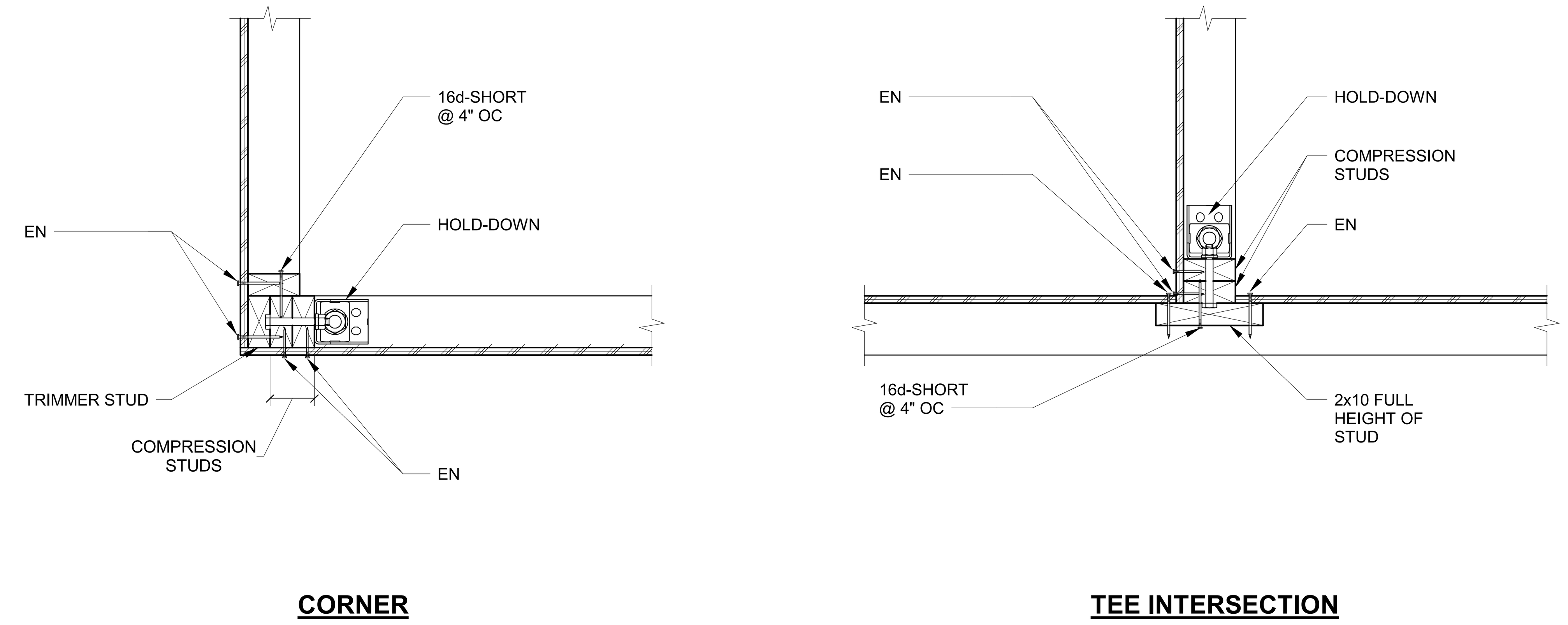
ASSEMBLY WIDTH	FASTENERS
2x 2 PLY	SDW22300
2x 3 PLY	SDW22438
2x 4 PLY	SDW22600
> 6"	1/2"Ø BOLT



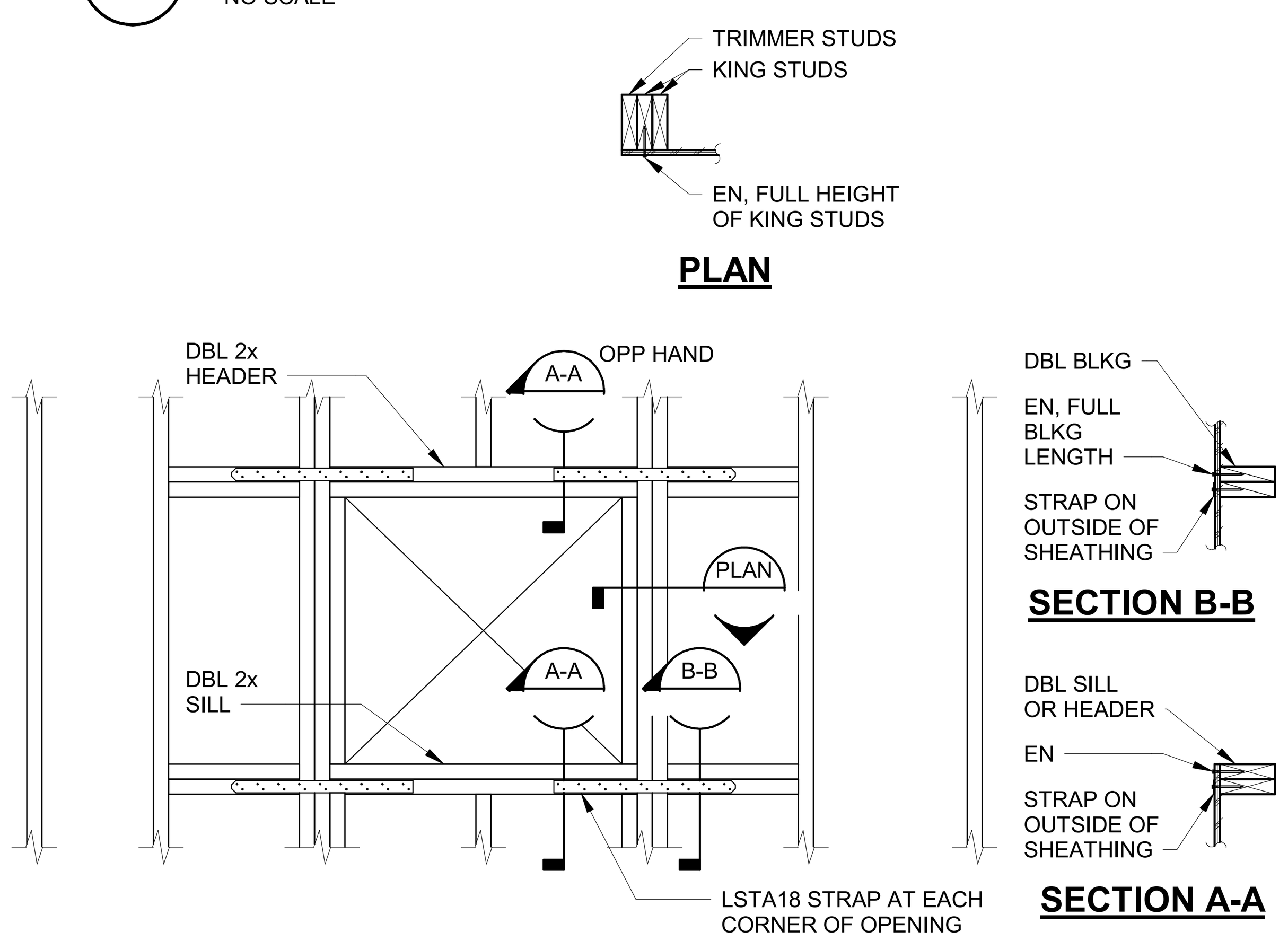
2 TYP HOLD-DOWN STRAP AT FLOOR
NO SCALE



3 TYP COMPRESSION STUD INTERSECTION
NO SCALE

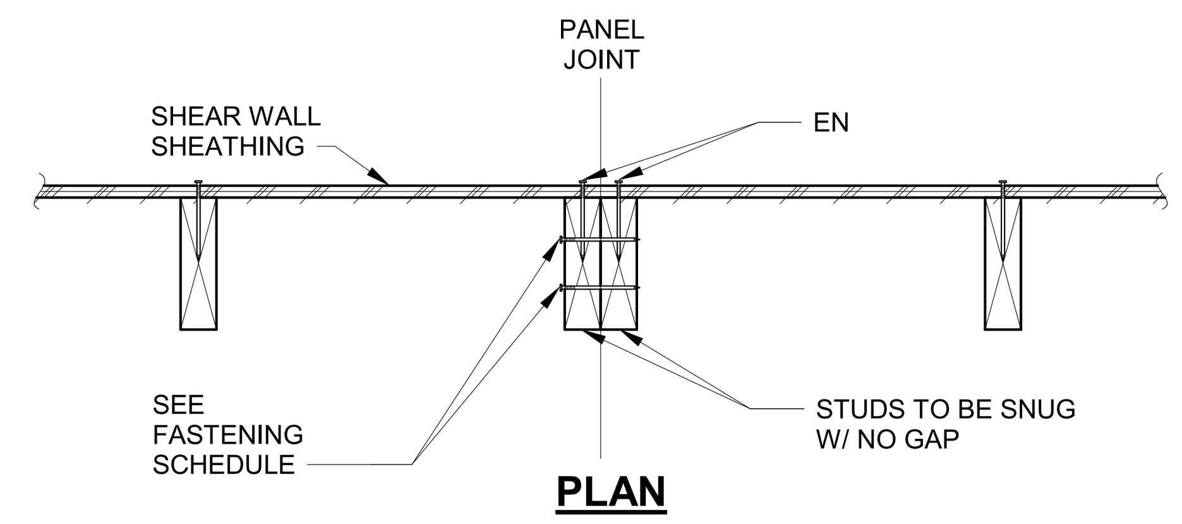


4 STRAPS AROUND SHEAR WALL OPENINGS
NO SCALE



NOTES:
1. WALL SHEATHING NOT SHOWN FOR CLARITY.

6 STUD FASTENING AT SHEAR WALL PANEL JNTS
NO SCALE

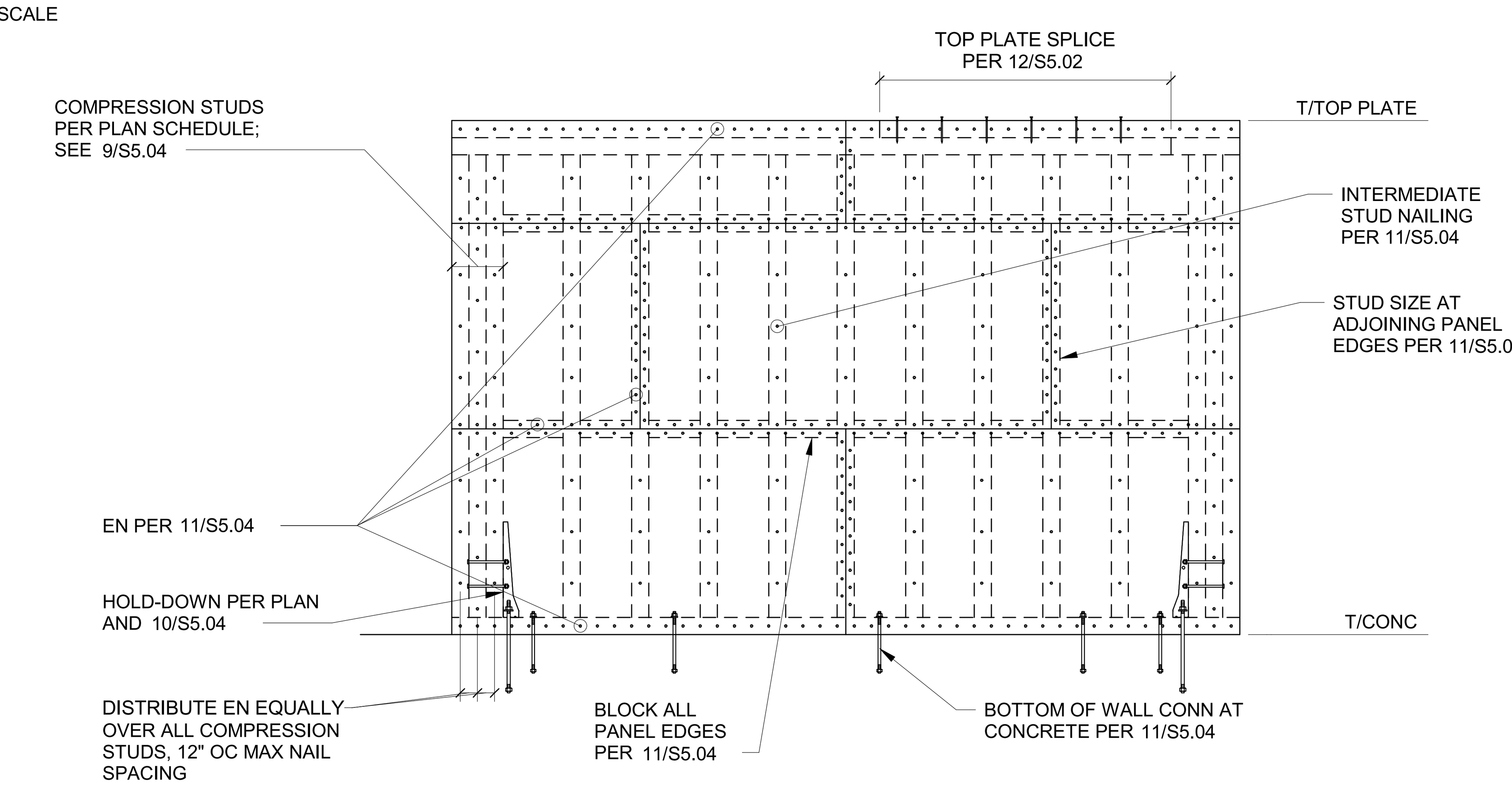


STUD FASTENING SCHEDULE AT PANEL JOINTS

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.

7 TYP SHEAR WALL NAILING
NO SCALE



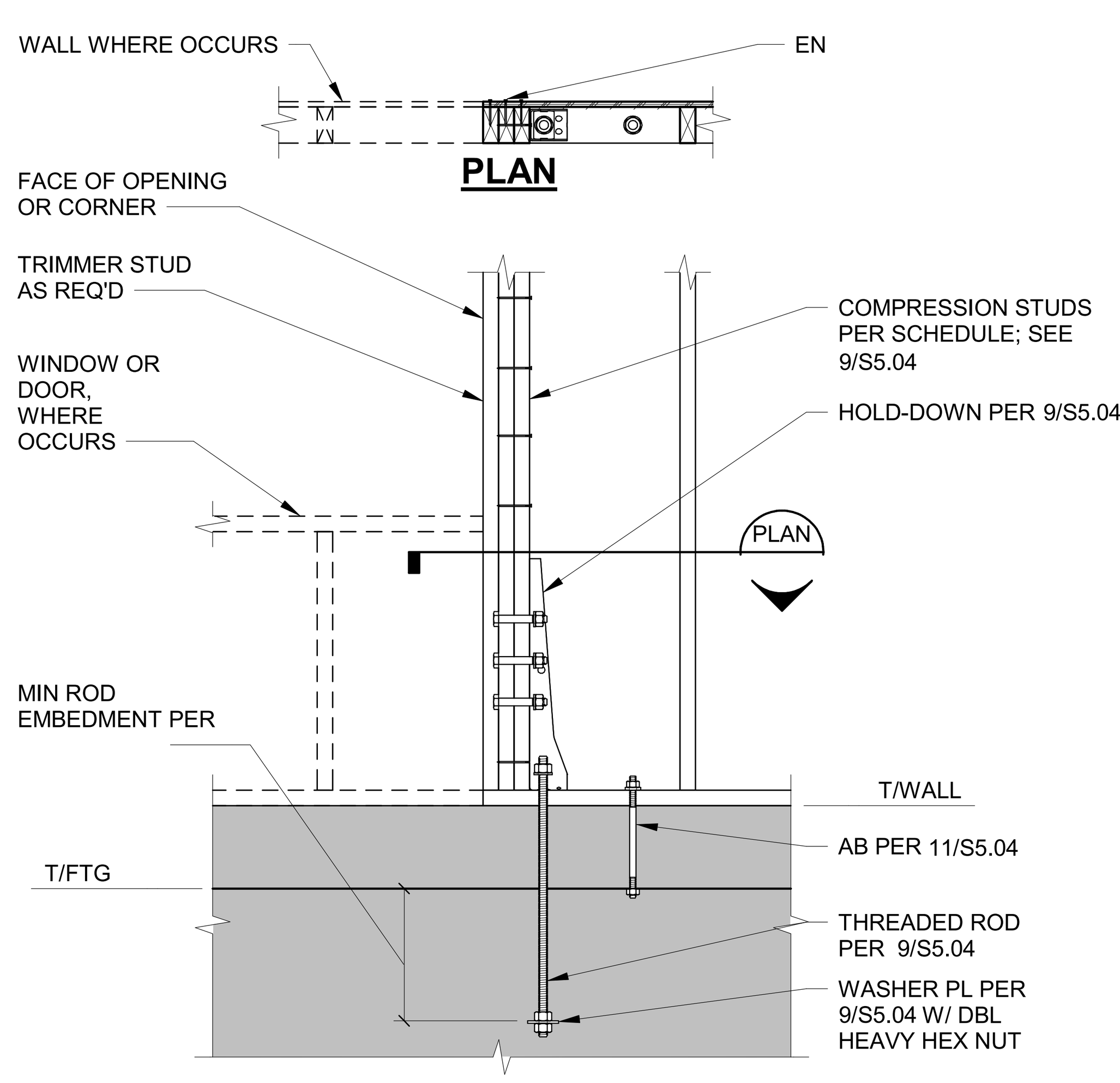
9 HOLD-DOWN AND COMPRESSION STUD SCHEDULE
NO SCALE

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.

10 TYP HOLD-DOWN AT FOUNDATION
NO SCALE



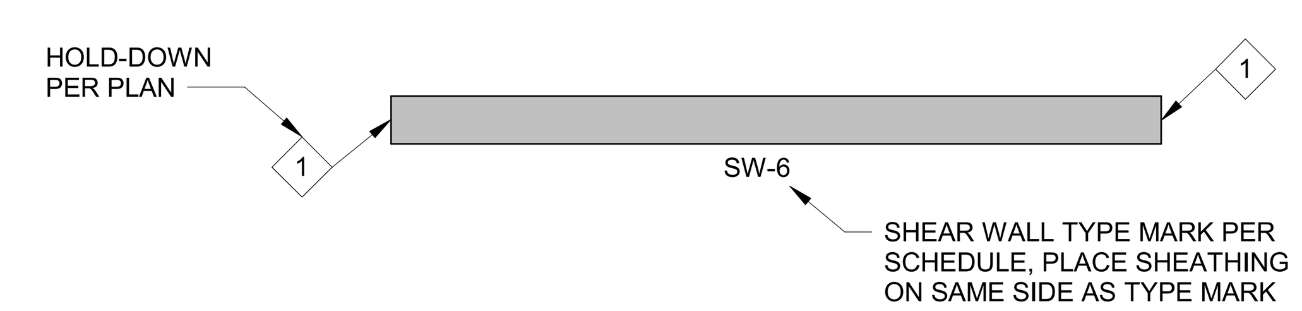
11 WOOD SHEAR WALL SCHEDULE
NO SCALE

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: WALL BOUNDARIES AND PANEL EDGES, SEE NOTE 9	FASTENER SPACING: INTERMEDIATE STUDS, SEE NOTE 10	BOTTOM OF WALL CONNECTION AT CONCRETE: FIELD OF SLAB, SEE NOTE 8	BOTTOM OF WALL CONNECTION AT CONCRETE: NEAR EDGE, SEE NOTE 8	BOTTOM OF WALL CONNECTION: AT WOOD FLOOR	TOP OF WALL CONNECTION	SEISMIC ALLOWABLE SHEAR (LBS/FT)
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

FREIHEIT ARCHITECTURE

kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE EWING, STATE OF WASHINGTON, 48649, PROFESSIONAL ENGINEER, 4/16/24

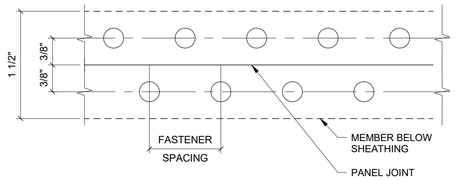
TULALIP TRIBES - UTILTIY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

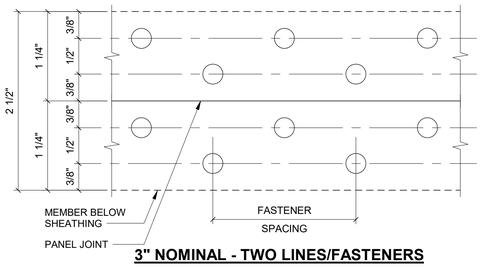
PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

TYPICAL WOOD FRAMING DETAILS

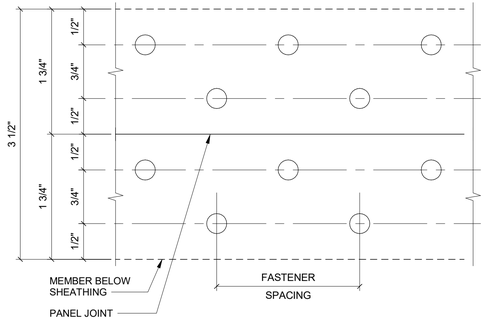
S5.04



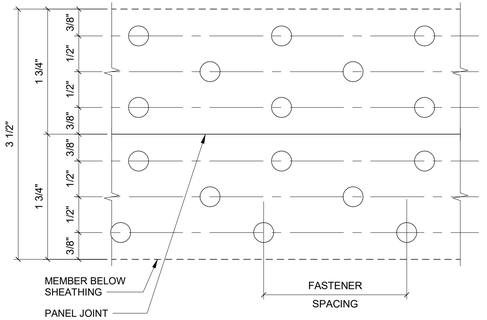
2" NOMINAL - ONE LINE/FASTENERS



3" NOMINAL - TWO LINES/FASTENERS



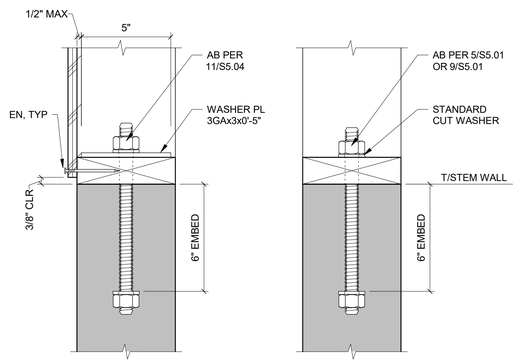
4" NOMINAL - TWO LINES/FASTENERS



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

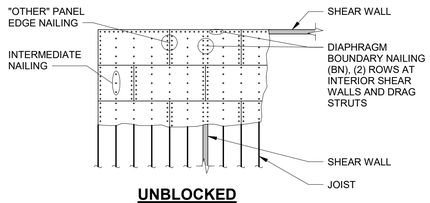
NO SCALE

ROOF/FLOOR DIAPHRAGM NAILING SCHEDULE

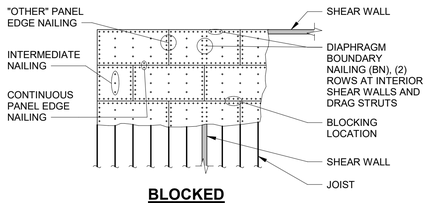
ALL VALUES ARE BASED ON 2018 IBC AND SDPWS-15 FOR STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR-LARCH

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

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE NEWTON · STATE OF WASHINGTON · 49649 · STRUCTURAL ENGINEER · PROFESSIONAL ENGINEER · 4/16/24

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

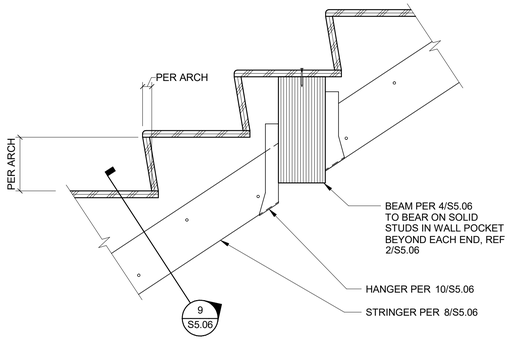
ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A2-188 PRINTED:4/12/2024 12:36:11 PM

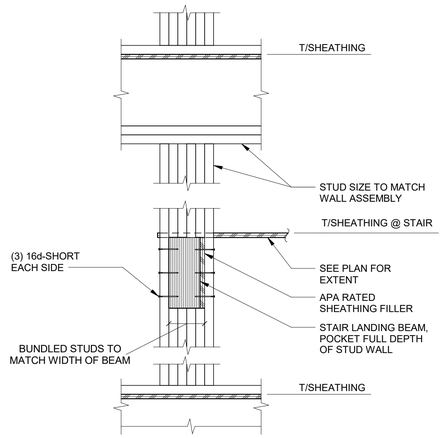
TYPICAL WOOD FRAMING DETAILS

S5.05



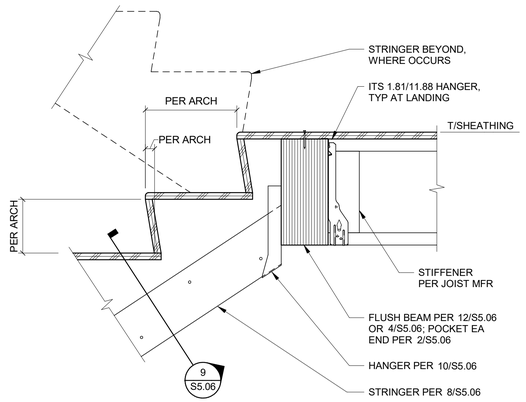
1 STRINGER CONN TO BEAM

NO SCALE



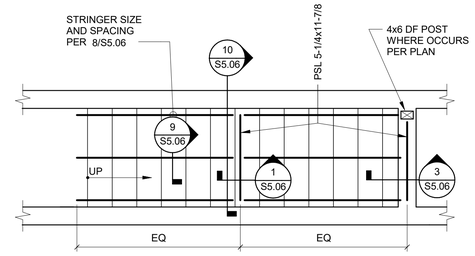
2 STAIR BEAM CONN TO WOOD WALL

NO SCALE



3 STRINGER CONN TO LANDING

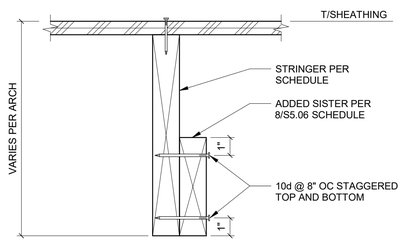
NO SCALE



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

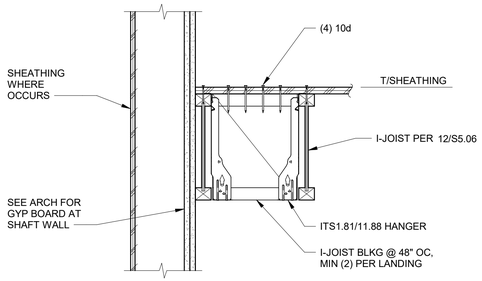
4 TYP STRAIGHT RUN STAIRS

NO SCALE



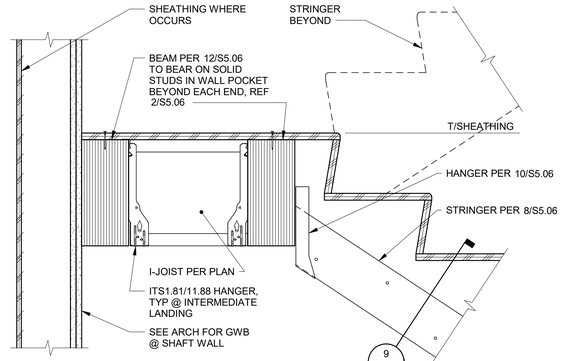
9 STRINGER SECTION

NO SCALE



6 INTERMEDIATE STAIR LANDING - JOIST PARALLEL TO SHAFT WALL

NO SCALE



7 INTERMEDIATE STAIR LANDING

NO SCALE

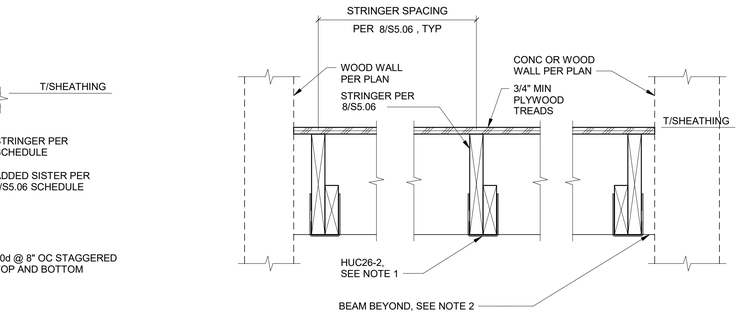
WOOD STRINGER SCHEDULE

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

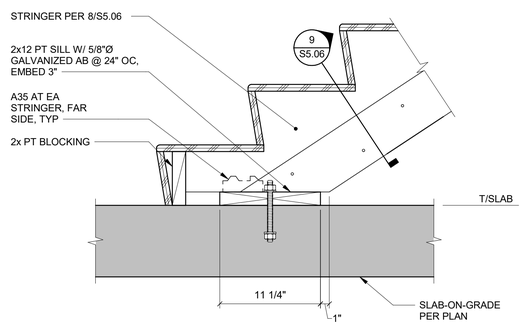
NO SCALE



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 .

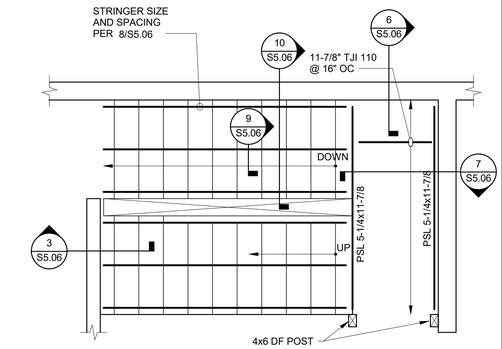
10 STRINGER SECTION

NO SCALE



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

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

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

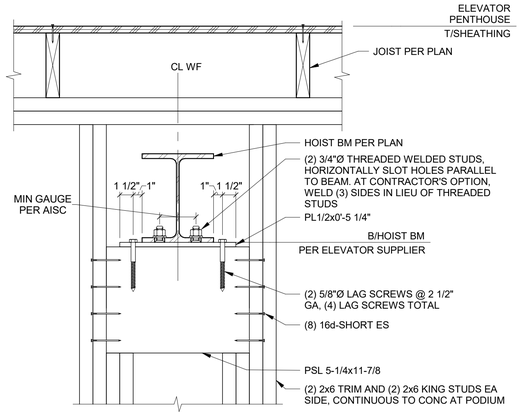
ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-169 PRINTED 4/12/2024 12:36:12 PM

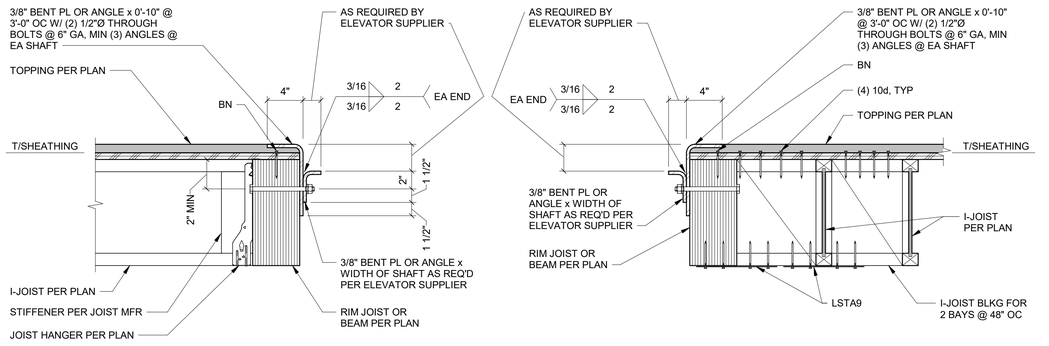
TYPICAL WOOD STAIRS DETAILS

S5.06



4 TYP ELEVATOR HOIST BEAM CONNECTION

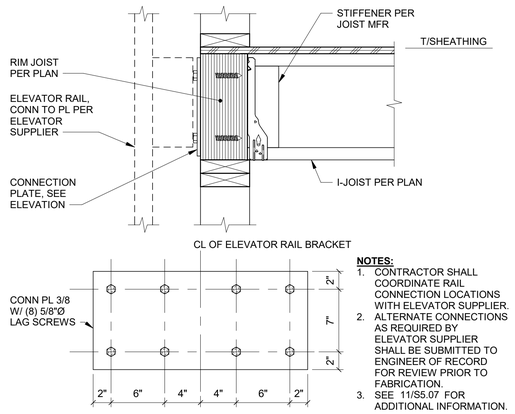
NO SCALE



JOISTS PERPENDICULAR **JOISTS PARALLEL**

7 TYP ELEVATOR DOOR SILL

NO SCALE

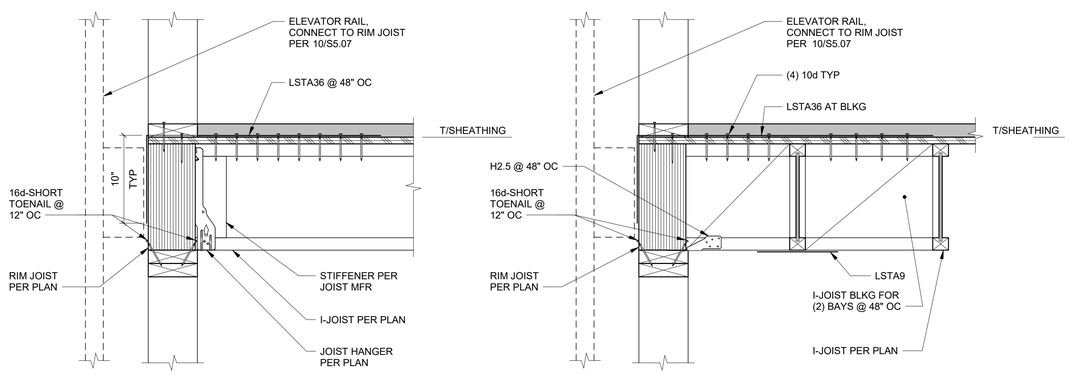


NOTES:
1. CONTRACTOR SHALL COORDINATE RAIL CONNECTION LOCATIONS WITH ELEVATOR SUPPLIER.
2. ALTERNATE CONNECTIONS AS REQUIRED BY ELEVATOR SUPPLIER SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION.
3. SEE 11/S5.07 FOR ADDITIONAL INFORMATION.

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

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

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

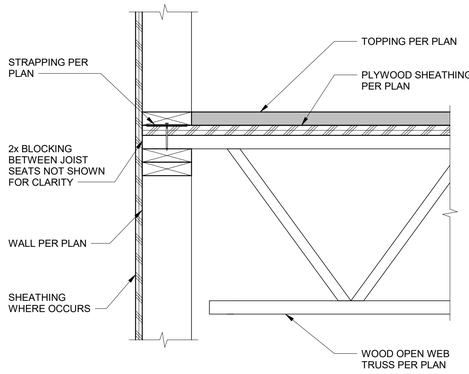
ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

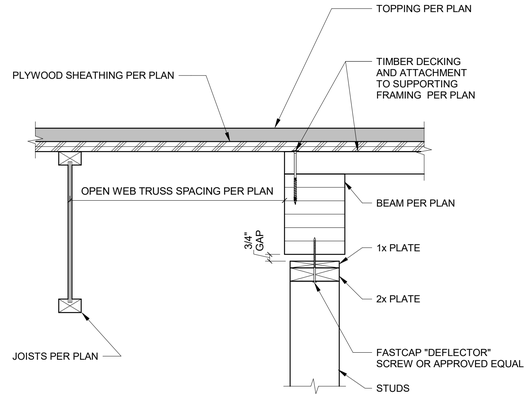
A21-168 PRINTED 4/22/2024 12:36:13 PM

TYPICAL WOOD ELEVATOR DETAILS

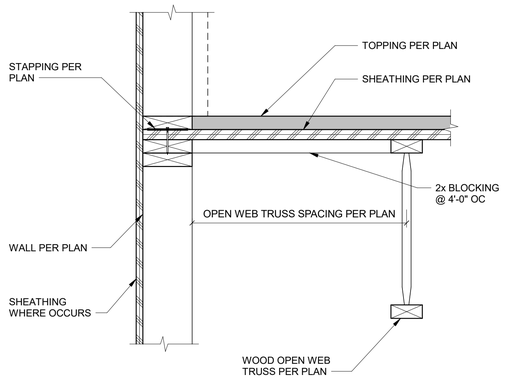
S5.07



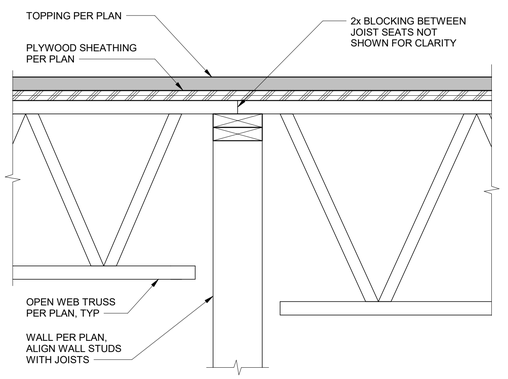
3 SECTION
NO SCALE



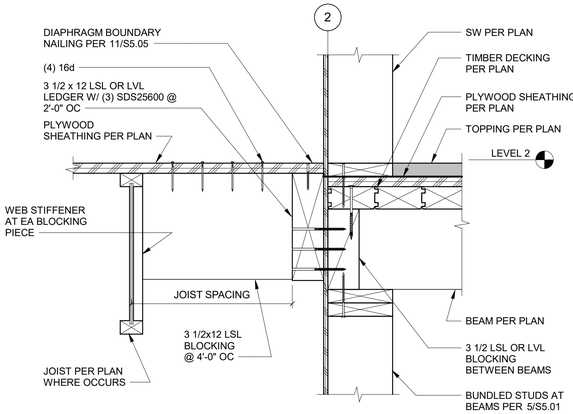
4 SECTION
1 1/2" = 1'-0"



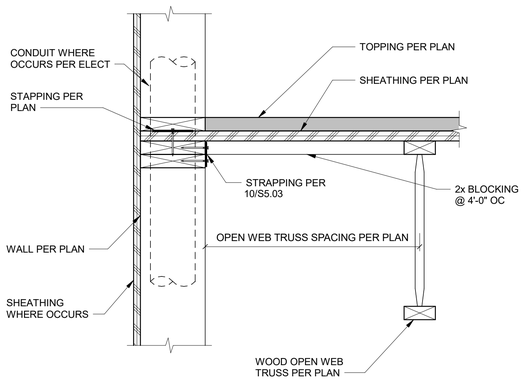
6 SECTION
NO SCALE



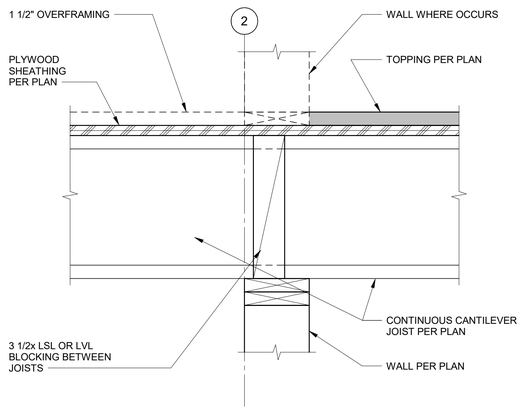
7 SECTION
NO SCALE



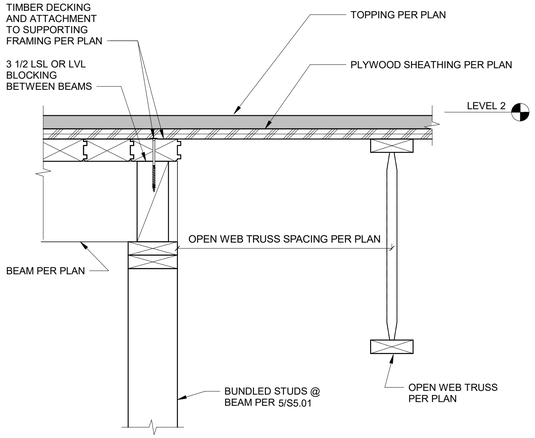
8 SECTION
1 1/2" = 1'-0"



10 SECTION AT DATA ROOM
NO SCALE



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



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

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

ANDREW WAYNE NEWELL — STATE OF WASHINGTON — 48649 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER — 4/16/24

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

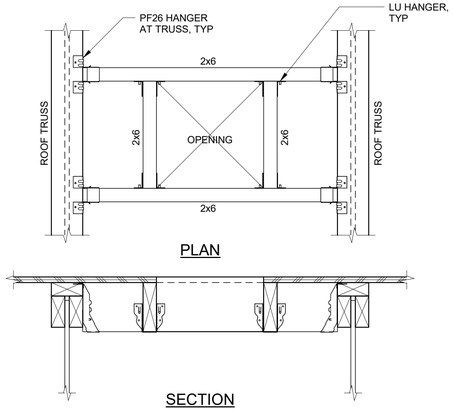
ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A21-158 PRINTED 4/12/2024 12:36:13 PM

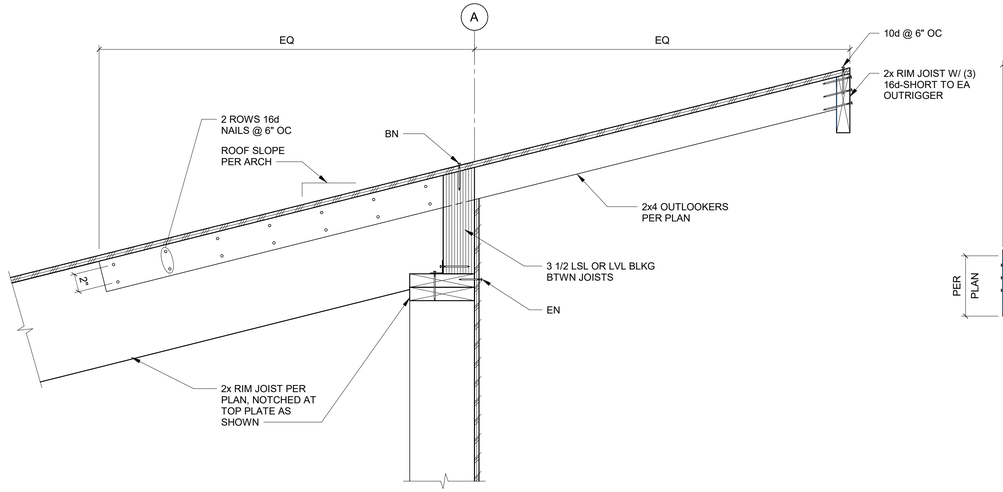
WOOD FLOOR FRAMING DETAILS

S5.11

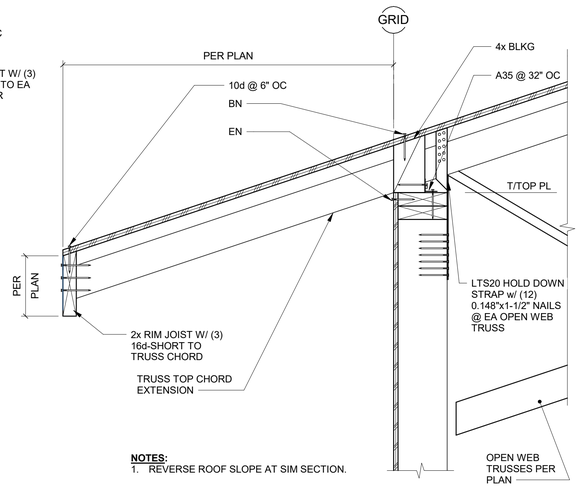


NOTES:
1. MAXIMUM OPEING SIZE TO BE 2'-0" SQUARE.

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

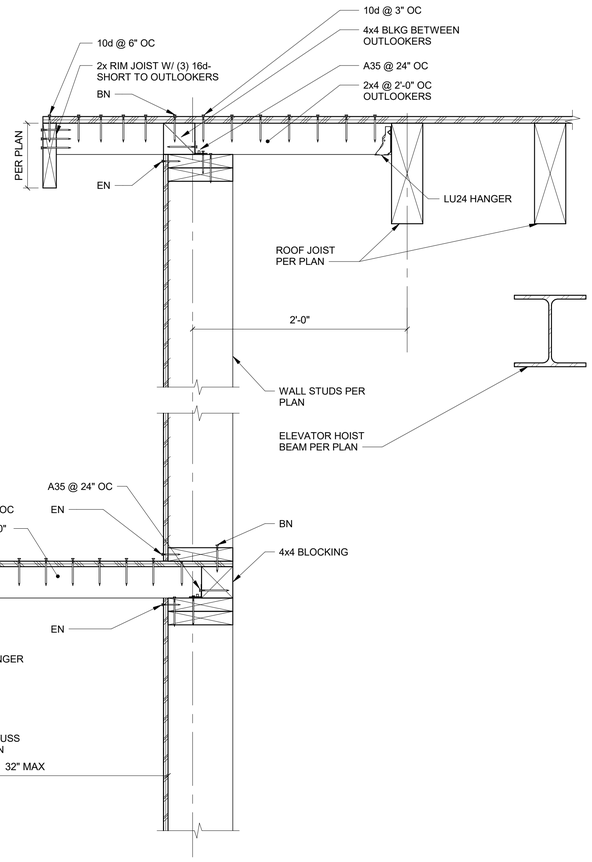


2 ELEVATOR ROOF SECTION
1 1/2" = 1'-0"

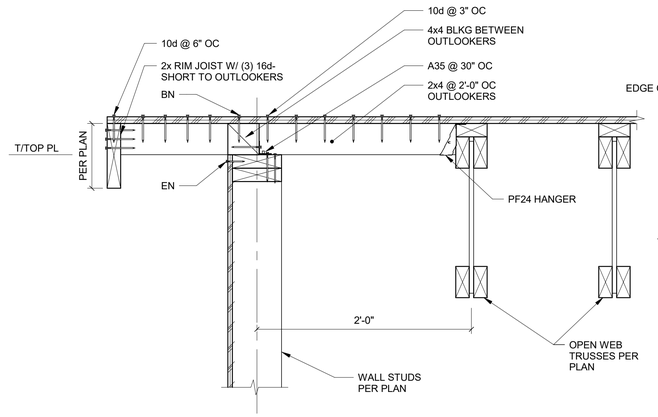


NOTES:
1. REVERSE ROOF SLOPE AT SIM SECTION.

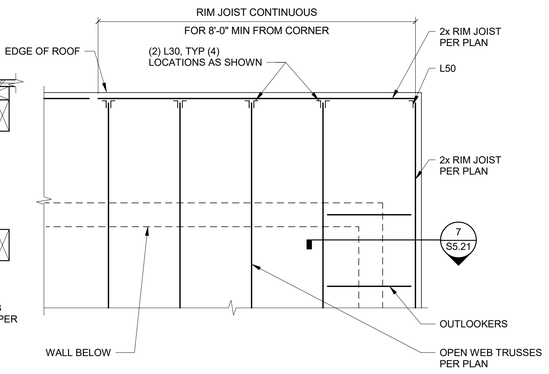
4 TYP TRUSS AT EAVE
1 1/2" = 1'-0"



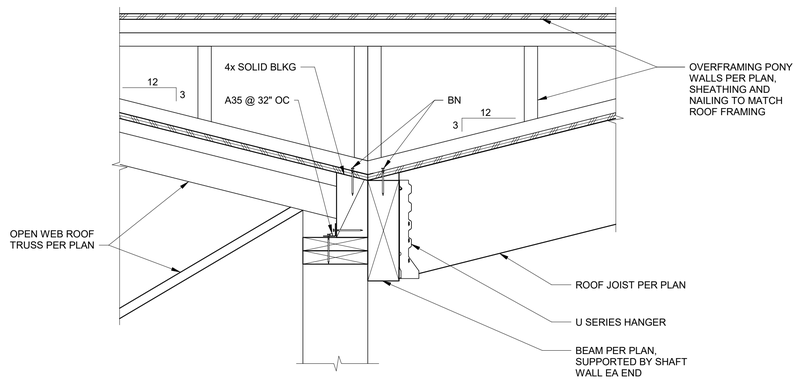
10 ELEVATOR ROOF SECTION
1 1/2" = 1'-0"



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"

FREIHEIT ARCHITECTURE
kpff
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com

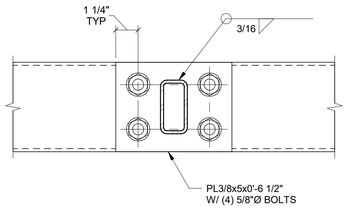
TULALIP TRIBES - UTILTIY BUILDING
3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

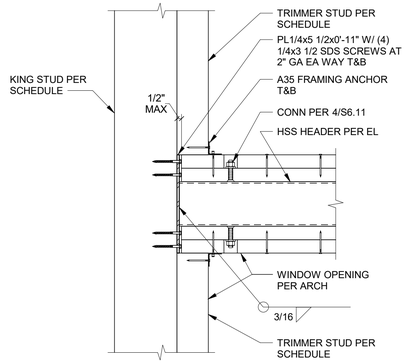
A21-108 PRINTED 4/12/2024 12:36:15 PM

WOOD ROOF FRAMING DETAILS
S5.21



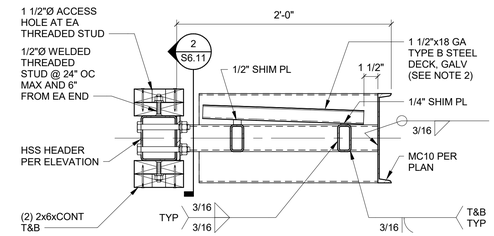
2 SECTION

3" = 1'-0"



3 SUNSHADE HEADER CONNECTION

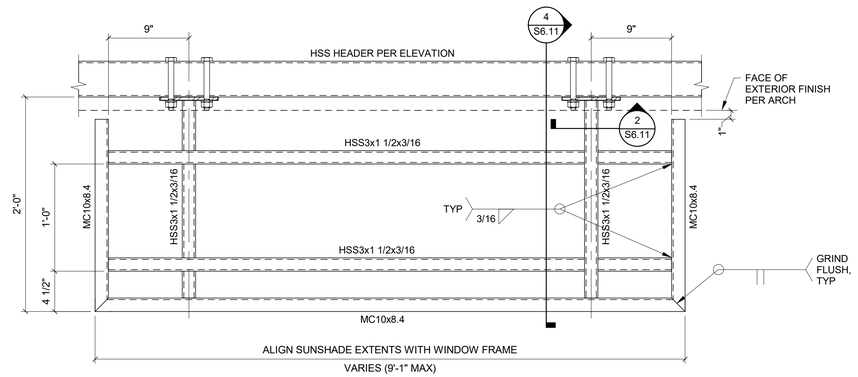
1 1/2" = 1'-0"



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"



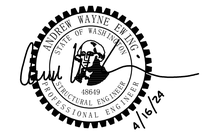
7 TYP SUNSHADE FRAMING PLAN

1 1/2" = 1'-0"

FREIHEIT ARCHITECTURE

kpff

1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
kpff.com



TULALIP TRIBES - UTILTIY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

PERMIT ISSUE	5/23/23
BID ISSUE	3/21/24
BID ADDENDUM 1	4/16/24

A2'-108 PRINTED 4/23/2024 12:36:18 PM

STEEL DETAILS

S6.11

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 2300-84BCP 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"
SH1	FIBERGLASS ONE-PIECE SHOWER STALL (ADA) - BESTBATH MODEL LSS4038AST, 36" CLEAR OPENING, GEL-COAT FINISH, INTEGRAL SOAP LEDGES AND GRAB BAR, ANTI-SLIP FLOOR, PROVIDE WITH FOLD DOWN SEAT, ZURN 7300-SS-HW-MT SHOWER UNIT, PRESSURE BALANCING MIXING VALVE, WALL/HAND SHOWER SPRAY WITH 60" FLEXIBLE HOSE AND IN-LINE VACUUM BREAKER, WITH 24" SLIDE BAR, FOLD DOWN SEAT, COMPLETE INSTALLATION SHALL MEET STATE HANDICAP REQUIREMENTS.	2"	1-1/2"	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

HARRIS GROUP
Big Capabilities + Dedicated People
harrisgroup.com
PROJECT NO: 0070800.01

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

CHARLES LONG JR. 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:
CHECKED BY:

PRINTED

ENERGY CODE NOTES/SCHEDULES

M1.1

LEGEND

REFER TO SHEET E1.0 FOR PROJECT SYMBOLS AND NOTES.

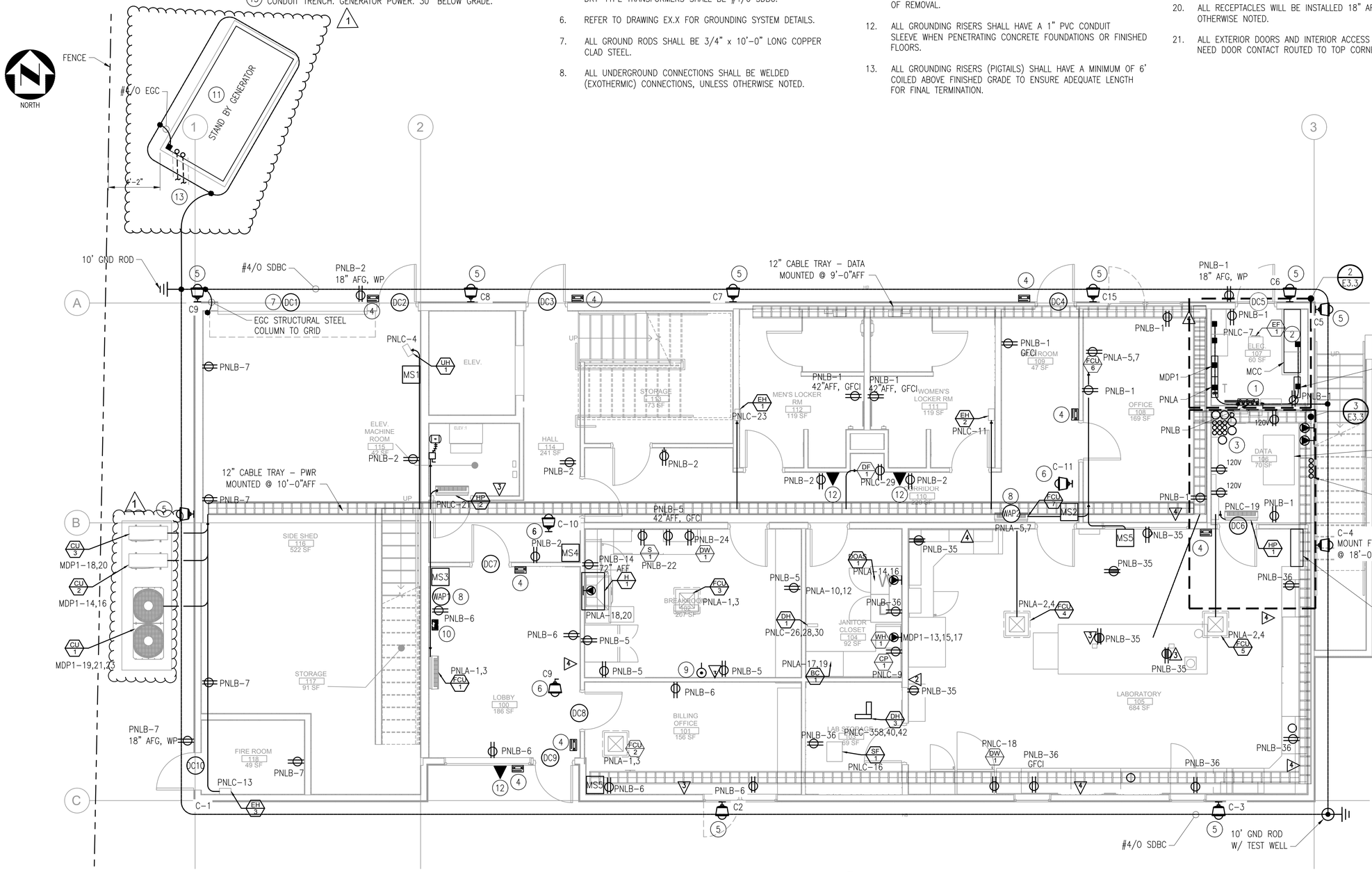
KEYED NOTES

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 ADDENDUM 1

HARRIS GROUP
Big Capabilities + Dedicated People
PROJECT NO: 0070800.01

TULALIP TRIBES - UTILITY BUILDING

3015 MISSION BEACH ROAD
TULALIP, WA 98271

ISSUE LIST

NO	DESCRIPTION	DATE
	BID ISSUE	03/21/2024
1	BID ADDENDUM 1	04/16/2024

PROJECT NO.:	0070800.01
PROJECT MGR.:	M. AZEEM
DRAWN BY:	R. PINLAC
CHECKED BY:	J. NORTON

PRINTED

ELECTRICAL FIRST FLOOR POWER PLAN

E3.0

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. This specification describes the requirements for a complete and highly reliable standby packaged engine generator system. The system furnished shall be new, delivered to the jobsite completely wired, fully and functionally tested. The system shall include the following:

1. Engine-generator set rated at 300kW, 375kVA, 240D/120 volt, 3-phase, 4-wire.
2. Engine-generator control console with complete engine start-stop control and monitoring system.
3. Generator set mounted load bank, 100% load.
4. Starting system with batteries and battery charger.
5. Remotely mounted automatic transfer switch.
6. Outdoor enclosure.

1.2 DEFINITIONS

A. Operational Bandwidth: The total variation from the lowest to highest value of a parameter over the range of conditions indicated, expressed as a percentage of the nominal value of the parameter.

1.3 SUBMITTALS

A. Product Data: For each type of packaged engine generator indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories. In addition, include the following:

1. Thermal damage curve for generator.
2. Time-current characteristic curves for generator protective device.

B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1. Dimensioned outline plan and elevation drawings of engine-generator set and other components specified.
2. Design Calculations: Signed and sealed by a qualified professional engineer. Calculate requirements for selecting vibration isolators and seismic restraints and for designing vibration isolation bases.
3. Vibration Isolation Base Details: Signed and sealed by a qualified professional engineer. Detail fabrication, including anchorages and attachments to structure and to supported equipment. Include base weights.
4. Wiring Diagrams: Power, signal, and control wiring.

C. Manufacturer Seismic Qualification Certification: Submit certification that day tank, engine-generator set, batteries, battery racks, accessories, and components will withstand seismic forces defined in 2009 IBC. Include the following:

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.

    a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

D. Qualification Data: For installer, manufacturer, and testing agency.

E. Source quality-control test reports.

1. Certified summary of prototype-unit test report.
2. Certified Test Reports: For components and accessories that are equivalent, but not identical, to those tested on prototype unit.
3. Certified Summary of Performance Tests: Certify compliance with specified requirement to meet performance criteria for sensitive loads.
4. Report of factory test on units to be shipped for this Project, showing evidence of compliance with specified requirements.
5. Report of sound generation.
6. Report of exhaust emissions showing compliance with applicable regulations, including certification of compliance with EPA’s Tier 2 or Tier 3 (as applicable) emission standards.
7. Certified Torsional Vibration Compatibility: Comply with NFPA 110.

F. Field quality-control test reports.

G. Operation and Maintenance Data: For packaged engine generators to include in emergency, operation, and maintenance manuals. "Operation and Maintenance Data," include the following:

1. List of tools and replacement items recommended to be stored at Project for ready access. Include part and drawing numbers, current unit prices, and source of supply.

H. Warranty: Special warranty specified in this Section.

I. Operation and Maintenance (O&M) Manual. The O&M manual must include, but not limited to the following:

1. A specific section addressing the engine manufacturer's emission-related specifications for installation and configuration.
2. A specific section addressing the engine manufacturers emission related operation and maintenance instructions.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

1. Maintenance Proximity: Not more than four hours' normal travel time from Installer's place of business to Project site.
2. Engineering Responsibility: Preparation of data for vibration isolators and seismic restraints of engine skid mounts, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

B. Manufacturer Qualifications: A qualified manufacturer. Maintain, within 200 miles of Project site, a service center capable of providing training, parts, and emergency maintenance repairs.

1. Only pre-approved bidders shall supply equipment provided under this contract. Equipment specifications for this project are based on microprocessor-based generator sets manufactured by approved vendors. All other vendors listed as "pre-approved" shall provide a line by line compliance statement based on this specification not less than 2-weeks prior to scheduled bid date.
2. Only (factory direct or first tier) distributors shall be acceptable, (second tier) dealers are not approved, to supply the approved manufacturers.
3. Only approved local distributors shall supply equipment provided under this contract. Equipment by non-local distributors shall not be acceptable.
4. The distributor shall be the authorized engine distributor for the prime mover.
5. The local representative shall have represented the manufacturer for a minimum of 10 years.
6. On request, they shall provide a reference list of five similar projects, no older than 2 years with site contact information.
7. They shall have a field service group dedicated to generator repair and maintenance that has no fewer than 10 technicians with dedicated service vehicles with parts and tooling needed for common repairs.
8. They shall provide service within four (4) hours of a request for service or warranty.
9. Field service technicians shall have a minimum of 2 years of generator field experience on the product being supplied and shall be factory trained and certified.
10. Field service technicians shall have an EL-O7 Maintenance Electrical License as issued by the Washington Department of Labor and Industries.

11. Shall provide formal classroom training for service and maintenance on generators and transfer switches on a regular basis. The schedule and pricing for this training shall be available on request.
12. Warranty shall be by this distributor; not off set to either an engine manufacturer, alternator manufacturer, or a first tier distributor.

C. Testing: Testing and setup of generator shall be performed by factory trained supplier personnel. Testing is to meet NFPA 110 requirements.

D. Source Limitations: Obtain packaged generator sets and auxiliary components through one source from a single manufacturer.

E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

F. Comply with ASME B15.1.

G. Comply with NFPA 37.

H. Comply with NFPA 70.

I. Comply with NFPA 99.

J. Comply with NFPA 110 requirements for Level 1 emergency power supply system.

K. Comply with UL 2200.

L. Engine Exhaust Emissions: Engine shall comply with all applicable emission standards in 40 CFR Part 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines), including EPA's Tier 2 and Tier 3 (as applicable) emission standards.

M. Noise Emission: Comply with applicable state and local government requirements for maximum noise level at adjacent property boundaries due to sound emitted by generator set including engine, engine exhaust, engine cooling-air intake and discharge, and other components of installation.

1.5 PROJECT CONDITIONS

A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electrical service according to requirements indicated:

1. Notify Owner no fewer than Seven days in advance of proposed interruption of electrical service.
2. Do not proceed with interruption of electrical service without Owner's written permission.

B. Environmental Conditions: Engine-generator system shall withstand the following environmental conditions without mechanical or electrical damage or degradation of performance capability:

1. Ambient Temperature: 5 to 40 deg C.
2. Altitude: Sea level to 1000 feet.
3. Outdoors in weatherproof, sound attenuated housing.

1.6 COORDINATION

A. Coordinate size and location of concrete bases for package engine generators. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified other sections.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of packaged engine generators and associated auxiliary components that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

1.8 MAINTENANCE SERVICE

A. Initial Maintenance Service: Beginning at Substantial Completion, provide 12 months' full maintenance by skilled employees of manufacturer's designated service organization. Include quarterly exercising to check for proper starting, load transfer, and running under load. Include routine preventive maintenance as recommended by manufacturer and adjusting as required for proper operation. Provide parts and supplies same as those used in the manufacture and installation of original equipment. Engine maintenance service must include all emission-related maintenance recommended by the manufacturer. Records of all completed maintenance must be provided to the Tulalip Utility Building staff once each calendar month for the previous calendar month. The record must include a description of the maintenance performed in the previous calendar month, the date the maintenance was performed, and the name of the person and company performing the maintenance.

1.9 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fuses: One for every 10 of each type and rating, but no fewer than one of each.
2. Indicator Lamps: Two for every six of each type used, but no fewer than two of each.
3. Filters: One set each of lubricating oil, fuel, and combustion-air filters.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

B. Basis-of-Design Product: Subject to compliance with requirements, provide from pre-approved manufacturers given below or a comparable product by one of the following;

1. Generac Industrial Power

2. Cummins Power Generation; Industrial Business Group.

3. Caterpillar, Inc.

4. Or Approved Equal

2.2 ENGINE-GENERATOR SET

A. Factory-assembled and -tested, engine-generator set.

B. Mounting Frame: Maintain alignment of mounted components without depending on concrete foundation; and have lifting attachments.

1. Rigging Diagram: Inscribed on metal plate permanently attached to mounting frame to indicate location and lifting capacity of each lifting attachment and generator-set center of gravity.

C. Capacities and Characteristics:

1. Power Output Ratings: Nominal ratings as indicated, with capacity as required to operate as a unit as evidenced by records of prototype testing.
2. Output Connections: Three-phase, four wire.
3. Nameplates: For each major system component to identify manufacturer's name and address, and model and serial number of component.
4. Start Time: Comply with NFPA 110, Type 10, system requirements.

D. Generator-Set Performance for Sensitive Loads:

1. Oversizing generator compared with the rated power output of the engine is permissible to meet specified performance.

a. Nameplate Data for Oversized Generator: Show ratings required by the Contract Documents rather than ratings that would normally be applied to generator size installed.

2. Steady-State Voltage Operational Bandwidth: 1 percent of rated output voltage from no load to full load.
3. Transient Voltage Performance: Not more than 10 percent variation for 50 percent step-load increase or decrease. Voltage shall recover and remain within the steady-state operating band within 0.5 second.
4. Steady-State Frequency Operational Bandwidth: Plus or minus 0.25 percent of rated frequency from no load to full load.
5. Steady-State Frequency Stability: When system is operating at any constant load within the rated load, there shall be no random speed variations outside the steady-state operational band and no hunting or surging of speed.
6. Transient Frequency Performance: Less than 2-Hz variation for 50 percent step-load increase or decrease. Frequency shall recover and remain within the steady-state operating band within three seconds.
7. Output Waveform: At no load, harmonic content measured line to neutral shall not exceed 2 percent total with no slot ripple. Telephone influence factor, determined according to NEMA MG 1, shall not exceed 50 percent.
8. Sustained Short-Circuit Current: For a 3-phase, bolted short circuit at system output terminals, system shall supply a minimum of 300 percent of rated full-load current for not less than 10 seconds and then clear the fault automatically, without damage to winding insulation or other generator system components.
9. Excitation System: Performance shall be unaffected by voltage distortion caused by nonlinear load.

    a. Provide permanent magnet excitation for power source to voltage regulator.

10. Start Time: Comply with NFPA 110, Type 10, system requirements.

2.3 ENGINE

A. Fuel: Fuel oil, Grade DF-2. Maximum sulfur content of fuel may not exceed 15 parts per million.

B. Rated Engine Speed: 1800 rpm.

C. Maximum Piston Speed for Four-Cycle Engines: 2010 fpm.

D. Lubrication System: The following items are mounted on engine or skid:

1. Filter and Strainer: Rated to remove 90 percent of particles 5 micrometers and smaller while passing full flow.
2. Thermostatic Control Valve: Control flow in system to maintain optimum oil temperature. Unit shall be capable of full flow and is designed to be fail-safe.
3. Crankcase Drain: Arranged for complete gravity drainage to an easily removable container with no disassembly and without use of pumps, siphons, special tools, or appliances.

E. Engine Fuel System:

1. Main Fuel Pump: Mounted on engine. Pump ensures adequate primary fuel flow under starting and load conditions.
2. Fuel polishing system: Mounted in enclosure. Must polish the generator enclosure tank.

F. Coolant Jacket Heater: Electric-immersion type, factory installed in coolant jacket system. Comply with NFPA 110 requirements for Level 1 equipment for heater capacity.

G. Governor: Adjustable isochronous, with speed sensing.

H. Cooling System: Closed loop, liquid cooled, with radiator factory mounted on engine-generator-set mounting frame and integral engine-driven coolant pump.

1. Coolant: Solution of 50 percent ethylene-glycol-based antifreeze and 50 percent water, with anticorrosion additives as recommended by engine manufacturer.
2. Size of Radiator: Adequate to contain expansion of total system coolant from cold start to 110 percent load condition.
3. Temperature Control: Self-contained, thermostatic-control valve modulates coolant flow automatically to maintain optimum constant coolant temperature as recommended by engine manufacturer.
4. Provide calculation of all air side pressure drops for system and include .25” WC for dirty filters. Calculated value must be lower that Coolant fan max pressure drop.
5. Coolant Hose: Flexible assembly with inside surface of nonporous rubber and outer covering of aging-, ultraviolet-, and abrasion-resistant fabric.

    a. Rating: 50-psig maximum working pressure with coolant at 180 deg F, and non-collapsible under vacuum.
    b. End Fittings: Flanges or steel pipe nipples with clamps to suit piping and equipment connections.

I. Muffler/Silencer: Critical type, sized as recommended by engine manufacturer and selected with exhaust piping system to not exceed engine manufacturer's engine backpressure requirements.

1. Minimum sound attenuation of 25 dB at 500 Hz.
2. Sound level measured at a distance of 23 feet after installation is complete shall average 65 dBA in a free field condition.
3. Overall sound level under section 2.8 shall supersede specific muffler minimum requirement.
4. Exhaust pipe termination to extend to 25’-0” above grade.

J. Starting System: 24-V electric, with negative ground.

1. Components: Sized so they will not be damaged during a full engine-cranking cycle with ambient temperature at maximum specified in Part 1 "Project Conditions" Article.
2. Cranking Motor: Heavy-duty unit that automatically engages and releases from engine flywheel without binding.
3. Cranking Cycle: As required by NFPA 110 for system level specified.

4. Battery: Adequate capacity within ambient temperature range specified in Part 1 "Project Conditions" Article to provide specified cranking cycle at least three times without recharging.
5. Battery Cable: Size as recommended by engine manufacturer for cable length indicated. Include required interconnecting conductors and connection accessories.
6. Battery Compartment: Factory fabricated of metal with acid-resistant finish and thermal insulation. Thermostatically controlled heater shall be arranged to maintain battery above 10 deg C regardless of external ambient temperature within range specified in Part 1 "Project Conditions" Article. Include accessories required to support and fasten batteries in place.
7. Battery-Charging Alternator: Factory mounted on engine with solid-state voltage regulation and 35-A minimum continuous rating.
8. Battery Charger: Current-limiting, automatic-equalizing and float-charging type. Unit shall comply with UL 1236 and include the following features:

    a. Operation: Equalizing-charging rate of 10 A shall be initiated automatically after battery has lost charge until an adjustable equalizing voltage is achieved at battery terminals. Unit shall then be automatically switched to a lower float-charging mode and shall continue to operate in that mode until battery is discharged again.
    b. Automatic Temperature Compensation: Adjust float and equalize voltages for variations in ambient temperature from minus 40 deg C to plus 60 deg C to prevent overcharging at high temperatures and undercharging at low temperatures.
    c. Automatic Voltage Regulation: Maintain constant output voltage regardless of input voltage variations up to plus or minus 10 percent.
    d. Ammeter and Voltmeter: Flush mounted in door. Meters shall indicate charging rates.
    e. Safety Functions: Sense abnormally low battery voltage and close contacts providing low battery voltage indication on control and monitoring panel. Sense high battery voltage and loss of ac input or dc output of battery charger. Either condition shall close contacts that provide a battery-charger malfunction indication at system control and monitoring panel.
    f. Enclosure and Mounting: NEMA 250, Type 1, wall-mounted cabinet.

2.4 FUEL OIL STORAGE

A. Comply with NFPA 30.

B. Base-Mounted Fuel Oil Tank: UL 2085; thermally insulated, fire-resistant and protected, double-wall, horizontal, steel tank; with primary- and secondary-containment walls and insulation and with interstitial space.

1. Construction: Fabricated with welded, carbon steel and insulation and encased in concrete that will protect from bullets; suitable for operation at atmospheric pressure and for storing fuel oil with specific gravity up to 1.1 and with test temperature according to UL 2085.
2. Factory installed and piped. Features include the following:

a. Capacity: Fuel for minimum 24 hours continuous operation at 100 percent rated power output.
b. Tank level indicator.
c. Vandal-resistant fill cap.
d. Containment Provisions: Comply with requirements of authorities having jurisdiction.

3. Level gauge which can be seen from the fill port, mechanical fill pipe shutoff set at 90%, a removable high level sensor set at 95% with an alarm, and a leak detector configured in piping so that it can be isolated from the tank and tested in place. Visual observation port in the secondary containment to confirm leak alarms. Ability to test the level gauges, high level alarms and leak detectors.
4. Day tank controller 5 gallon OFPV extended vents

2.5 CONTROL AND MONITORING

A. Automatic Starting System Sequence of Operation: When mode-selector switch on the control and monitoring panel is in the automatic position, remote-control contacts in one or more separate automatic transfer switches initiate starting and stopping of generator set. When mode-selector switch is switched to the on position, generator set starts. The off position of same switch initiates generator-set shutdown. When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of a remote emergency-stop switch also shuts down generator set.

B. Configuration: Operating and safety indications, protective devices, basic system controls, and engine gages shall be grouped in a common control and monitoring panel mounted on the generator set. Mounting method shall isolate the control panel from generator-set vibration.

C. Indicating and Protective Devices and Controls: As required by NFPA 110 for Level 1 system, and the following:

1. AC voltmeter.
2. AC ammeter.
3. AC frequency meter.
4. DC voltmeter (alternator battery charging).
5. Engine-coolant temperature gage.
6. Engine lubricating-oil pressure gage.
7. Non-resettable engine running-time meter.
8. Ammeter-voltmeter, phase-selector switch(es).
9. Generator-voltage adjusting rheostat.
10. Fuel tank derangement alarm.
11. Fuel tank high-level shutdown of fuel supply alarm.

D. Supporting Items: Include sensors, transducers, terminals, relays, and other devices and include wiring required to support specified items. Locate sensors and other supporting items on engine or generator, unless otherwise indicated.

E. Connection to Data Link: A separate terminal block, factory wired to Form C dry contacts, for each alarm and status indication is reserved for connections for data-link transmission of indications to remote data terminals.

F. Common Remote Audible Alarm: Comply with NFPA 110 requirements for Level 1 systems. Include necessary contacts and terminals in control and monitoring panel.

1. Over crank shutdown.
2. Coolant low-temperature alarm.
3. Control switch not in auto position.
4. Battery-charger malfunction alarm.
5. Battery low-voltage alarm.

2.6 GENERATOR OVERCURRENT AND FAULT PROTECTION

A. Generator Circuit Breaker: Insulated-case, electronic-trip type; 100 percent rated; complying with UL 489, Provide 2 circuit breakers one for building load and unit mounted load bank.

1. Tripping Characteristics: Adjustable long-time and short-time delay and instantaneous.
2. Trip Settings: Selected to coordinate with generator thermal damage curve.
3. Shunt Trip: Connected to trip breaker when generator set is shut down by other protective devices.
4. Mounting: Adjacent to or integrated with control and monitoring panel.

B. Generator Protector: Microprocessor-based unit shall continuously monitor current level in each phase of generator output, integrate generator heating effect over time, and predict when thermal damage of alternator will occur. When signaled by generator protector or other generator-set protective devices, a shunt-trip device in the generator disconnect switch shall open the switch to disconnect the generator from load circuits. Protector shall perform the following functions:

1. Initiates a generator overload alarm when generator has operated at an overload equivalent to 110 percent of full-rated load for 60 seconds. Indication for this alarm is integrated with other generator-set malfunction alarms.
2. Under single or three-phase fault conditions, regulates generator to 300 percent of rated full-load current for up to 10 seconds.
3. As overcurrent heating effect on the generator approaches the thermal damage point of the unit, protector switches the excitation system off, opens the generator disconnect device, and shuts down the generator set.
4. Senses clearing of a fault by other overcurrent devices and controls recovery of rated voltage to avoid overshoot.

2.7 GENERATOR, EXCITER, AND VOLTAGE REGULATOR

A. Comply with NEMA MG 1.

B. Drive: Generator shaft shall be directly connected to engine shaft. Exciter shall be rotated integrally with generator rotor.

C. Electrical Insulation: Class H or Class F.

D. Stator-Winding Leads: Brought out to terminal box to permit future reconnection for other voltages if required.

E. Construction shall prevent mechanical, electrical, and thermal damage due to vibration, over speed up to 125 percent of rating, and heat during operation at 110 percent of rated capacity.

F. Enclosure: Drip proof.

G. Voltage Regulator: Solid-state type, separate from exciter, providing performance as specified.

1. Adjusting rheostat on control and monitoring panel shall provide plus or minus 5 percent adjustment of output-voltage operating band.

H. Windings: Two-thirds pitch stator winding and fully linked amortisseur winding.

I. Sub transient Reactance: 14 percent, maximum.

2.8 OUTDOOR GENERATOR-SET ENCLOSURE

A. Description: Prefabricated or pre-engineered enclosure with the following features:

1. Construction: Galvanized-steel, metal-clad, integral structural-steel-framed building erected on concrete foundation.
2. Structural Design and Anchorage: Comply with ASCE 7 for wind loads.
3. Space Heater: Thermostatically controlled and sized to prevent condensation.
4. Louvers: Louvers must be Drainable extruded aluminum construction, equipped with bird screen and filter arranged to permit air circulation when engine is not running while excluding exterior dust, birds, and rodents. Include AMCA performance of Louvers.
5. Hinged Doors: With padlocking provisions and door contacts for security system monitoring.
6. Ventilation: Louvers equipped with bird screen arranged to permit air circulation while excluding, birds, and rodents.
7. Thermal Insulation: Manufacturer's standard materials and thickness selected in coordination with space heater to maintain winter interior temperature within operating limits required by engine-generator-set components.
8. Muffler Location: Within enclosure.
9. Sound to avg 74 dba @ 23’ in a free field environment.
10. Enclosure is to be designed to mount on the top of the sub-base fuel tank
11. Designed to withstand snow loads as per IBC code
12. Oil and coolant lines piped to exterior of enclosure with ball valve
13. Fuel ‘fill and return’ lines piped to exterior of enclosure for remote or bulk fuel tank.

14. Exterior strobe light. Control circuit to close relay and operate strobe when genset controls are in manual or off position.

B. Engine Cooling Airflow through Enclosure: Maintain temperature rise of system components within required limits when unit operates at 110 percent of rated load for 2 hours with ambient temperature at top of range specified in system service conditions.

1. Louvers: Fixed-engine, cooling-air inlet and discharge. Storm-proof and drainable louvers prevent entry of rain and snow.
2. Automatic Dampers: At engine cooling-air inlet and discharge. Dampers shall be closed to reduce enclosure heat loss in cold weather when unit is not operating.

C. Interior Lights with Switch: Factory-wired, vaporproof-type fixtures within housing; arranged to illuminate controls and accessible interior. Arrange for external electrical connection.

D. Convenience Outlets: Factory wired, GFCI. Arrange for external electrical connection.

E. Doors and hardware shall be provided furnished as follows:

1. Door locks shall be provided
2. Neoprene gasket single sealed around door perimeters
3. Rain drip lips over all doors
4. Bolting and mounting hardware will be stainless steel
5. Include hold open latches and door strike panel or bumper
6. Door thickness to maintain R values and acoustical noise levels

F. Paint Requirements

1. Solvent cleaned per SSPC-SP1 and painted
2. Primer - Epoxy (3 mils DFT)
3. Finish - Polysiloxane or Acrolon Acrylic Polyurethane (2 mil DFT)

G. ELECTRICAL SECTION,

1. Provide an electrical AC distribution panel to feed the generator set and enclosure accessories. All electrical is mounted & wired to the distribution panel with surface mounted EMT galvanized conduit with EMT compression connections.
2. 100 amp, 120/240 volt, single phase load center with 100 amp main breaker
3. 2 x 20 amp GFI duplex receptacles
4. 2 x 3-way light switches
5. Fluorescent light fixtures with T8 tubes, with guards
6. All installed AC powered generator features pre-wired into load center

2.9 RADIATOR MOUNT LOAD BANK

A. STANDARDS

1. The equipment covered by this specification shall be designed with the latest applicable NEMA, NEC, and ANSI standards.
2. The load bank shall be listed to UL Standard 508A or Labeled by an NRTL acceptable the AHJ per the State of Washington and local jurisdiction.

B. PRODUCTS, Pre approved vendors

1. Avtron
2. Load Tec
3. Simplex
4. Or Approved Equal

C. RATINGS

1. The total capacity of the load bank shall be rated 300 KW at 120/240D) Volts, 3-Phase, 3-Wire, 60 Hertz, at unity Power Factor.
2. The load step resolution shall be a nominal 20% of the load bank rating.
3. The load bank shall be designed for continuous duty cycle operation with no limitations. The load bank shall operate in an ambient temperature of -28°C to 49°C (-20°F to 120°F).
4. Radiator/Duct mounted load banks are designed as a supplemental load to the generator set, and shall be sized at 50% of generator nameplate KW rating.

D. MATERIAL AND CONSTRUCTION

1. The load bank shall be suitable for installation on the generator radiator core, or within the radiator exhaust ductwork.
2. The main input load bus, load step relays, fuses and blower/control relays shall be located within the load bank enclosure.
3. The load bank shall have a core size of 64.2 ”W x 60.4 H” with a self contained 2” flange on the top and bottom edges for mounting. Load banks with a depth of 13” shall have provisions for overhead lifting and duct adaptors.
4. The load bank shall be designed for installation and operation indoors. All exterior fasteners shall be stainless steel.

E. RESISTIVE LOAD ELEMENTS

1. Load elements shall be helically wound chromium alloy rated to operate at approximately ½ of maximum continuous rating of wire. Elements must be fully supported across the entire length within the air stream by segmented ceramic insulators on stainless steel rods.
2. The overall tolerance of the load bank shall be –0% to +5% KW at rated voltage.

F. COOLING

1. The engine generator shall provide air to cool the load bank. The load bank shall have a static pressure drop of approximately 0.1” H2O at design velocity (850 ft/min).

G. PROTECTIVE DEVICES

1. A differential pressure switch shall be provided to detect air loss. The switch shall be electrically interlocked with the load application controls to prevent load from being applied if cooling air is not present.
2. An over-temperature switch shall be provided to sense the load bank exhaust in the heater case assembly. The switch shall be electrically interlocked with the load application controls to remove load from being applied in the event of an over temperature condition.
3. To provide for major fault protection, branch fuses shall be provided on all three phases of switched load steps above 50KW. Branch fuses shall be current limiting type with an interrupting rating of 200K A.I.C.

H. CONTROL PANEL shall be unit mounted

1. The control panel shall contain the following manual controls:

   a. Power ON/OFF switch
   b. Master load ON/OFF switch.
   c. Load step switches for ON/OFF application of individual load steps.
   d. Control panel visual indicators shall be as follows:
   e. Power ON indication light.
   f. OVER-TEMPERATURE light.

2. A standard remote load dump circuit shall be provided as part of the load bank control circuit.
3. Provisions shall be provided to remove the load bank off-line from the operation of a remote normally closed set of auxiliary contacts from a transfer switch or other device. In the event of the remote contact opening, all load is removed.
4. An integral control power transformer shall be provided to supply 120V, 1 phase, 60 Hz to the load banks control and motor starter circuitry. Transformer primary and secondary control circuits shall be fuse protected.

2.10 VIBRATION ISOLATION DEVICES

A. Restrained Spring Isolators: Freestanding, steel, open-spring isolators with seismic restraint.

1. Housing: Steel with resilient vertical-limit stops to prevent spring extension due to wind loads or if weight is removed; factory-drilled baseplate bonded to 1/4-inch-thick, elastomeric isolator pad attached to baseplate underside; and adjustable equipment mounting and leveling bolt that acts as blocking during installation.
2. Outside Spring Diameter: Not less than 80 percent of compressed height of the spring at rated load.
3. Minimum Additional Travel: 50 percent of required deflection at rated load.
4. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
5. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.

2.11 FINISHES

A. Indoor and Outdoor Enclosures and Components: Manufacturer's standard finish over corrosion-resistant pretreatment and compatible primer.

2.12 SOURCE QUALITY CONTROL

A. Prototype Testing: Factory test engine-generator set using same engine model, constructed of identical or equivalent components and equipped with identical or equivalent accessories.

1. Tests: Comply with NFPA 110, Level 1 Energy Converters and with IEEE 115.

B. Project-Specific Equipment Tests: Before shipment, factory test engine-generator set and other system components and accessories manufactured specifically for this Project. Perform tests at rated load and power factor. Include the following tests:

1. Test components and accessories furnished with installed unit that are not identical to those on tested prototype to demonstrate compatibility and reliability.
2. Full load run.
3. Maximum power.
4. Voltage regulation.
5. Transient and steady-state governing.
6. Single-step load pickup.
7. Safety shutdown.
8. Provide 14 days' advance notice of tests and opportunity for observation of tests by Owner's representative.
9. Report factory test results within 10 days of completion of test.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, equipment bases, and conditions, with Installer present, for compliance with requirements for installation and other conditions affecting packaged engine-generator performance.

B. Examine roughing-in of piping systems and electrical connections. Verify actual locations of connections before packaged engine-generator installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with packaged engine-generator manufacturers' written installation and alignment instructions and with NFPA 110.

B. Install packaged engine generator to provide access, without removing connections or accessories, for periodic maintenance.

C. Install packaged engine generator with restrained spring isolators having a minimum deflection of 1 inch. Secure sets to anchor bolts installed in concrete bases.

D. Electrical Wiring: Install electrical devices furnished by equipment manufacturers but not specified to be factory mounted.

E. The engine shall be installed and configured according to the engine manufacturer's emission related specifications.

3.3 CONNECTIONS

A. Piping installation requirements are specified on the drawings for connection to fuel circulation/filling system. Drawings indicate general arrangement of piping and specialties.

B. Connect fuel, cooling-system, and exhaust-system piping adjacent to packaged engine generator to allow service and maintenance.

C. Connect cooling-system water piping to engine-generator set with flexible connectors.

D. Connect engine exhaust pipe to engine with flexible connector.

E. Connect fuel piping to engine with a gate valve and union and flexible connector.

F. Ground equipment according to NFPA 70

3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.

B. Tests and Inspections:

1. Test and inspection shall be performed by the generator supplier factory trained technician. NFPA 110 Level One installation requirements. NETA acceptance testing for breakers 250amps or larger.
2. NFPA 110 Acceptance Tests: Perform tests required by NFPA 110 that are additional to those specified here including, but not limited to, single-step full-load pickup test.
3. Battery Tests: Equalize charging of battery cells according to manufacturer's written instructions. Record individual cell voltages.

    a. Measure charging voltage and voltages between available battery terminals for full-charging and float-charging conditions. Check electrolyte level and specific gravity under both conditions.

b. Test for contact integrity of all connectors. Perform an integrity load test and a capacity load test for the battery.
c. Verify acceptance of charge for each element of the battery after discharge.
d. Verify that measurements are within manufacturer's specifications.

4. Battery-Charger Tests: Verify specified rates of charge for both equalizing and float-charging conditions.
5. System Integrity Tests: Methodically verify proper installation, connection, and integrity of each element of engine-generator system before and during system operation. Check for air, exhaust, and fluid leaks.
6. Voltage and Frequency Transient Stability Tests: Use recording fluke test instrument to measure voltage and frequency transients for 50 and 100 percent step-load increases and decreases, and verify that performance is as specified.
7. Harmonic-Content Tests: Measure harmonic content of output voltage under 25 percent and at 100 percent of rated linear load. Verify that harmonic content is within specified limits.
8. Noise Level Tests: Measure A-weighted level of noise emanating from generator-set installation, including engine exhaust and cooling-air intake and discharge, at four locations on the property line, and compare measured levels with required values.
9. Oil and Coolant Analysis Testing

    a. Oil and coolant will be tested for anomalies based on industry standards, and factual manufacturer’s data to include the following at a minimum:

        1) Historical laboratory analysis data for similar successful installations/applications demonstrating trends that could justify abnormal conditions on any item evaluated in the laboratory fluid analysis.
        2) White papers of manufacturer’s studies/standards/engineering reviews for related issues/applications showing similar conditions in similar installations/applications of type, size, run durations at a minimum.
        3) No opinions will be accepted in any justification of any abnormality, all abnormal issues must be validated/justified only from facts and data.
        4) Should issues arise that cannot be resolved with facts, data, historical trends, or on a similar successful statistical basis…will be grounds for rejection/replacement of the affected equipment or components.
        5) All testing will be performed in independent laboratories using only ASTM, SAE or API testing standards.

    b. Basic engine oil analysis will be performed primarily to determine if any coolant or fuel is leaking into the engine oil. An oil sample will be taken for the factory fill to determine baseline information. Additional tests will be required at the discretion of the purchaser. These tests will include at a minimum of wear metals, contaminants including fuel and coolant dilution, additives, oil properties, base number and patch test.

c. Coolant analysis will be performed primarily to determine if any oil is in the coolant.

d. It will be assumed that the additive package in the new coolant is at acceptable levels with the new coolant (SCA concentration). Ph, conductivity, % glycol, freezing point, boiling point should all be within manufactures standards of new coolant when shown in the laboratory analysis testing for presence of oil. Color, odor, foam and similar observations are not considered important during these acceptance testing evaluations.

e. The multitudes of acceptable levels of components in oil and coolant vary greatly among manufactures. Coolant standards should be within the OMM recommendations. Oil analysis must fall well within the following Normal category, with abnormal or critical levels being grounds for rejection of the equipment.

GENERIC DIESEL			
	Normal	Abnormal	Critical
Fe	<100	100	>200
Pb	<40	40	>80
Cu	<40	40	>80
Cr	<15	15	>25
Al	<20	20	>35
Ni	<5	5	>15
Ag	>3	3	>5
Sn	<20	20	>30
Na	<50	50	>150
K	<50	50	>150
Ti	<1	1	>2
Si	<20	20	>40
V	<1	1	>1
Fuel Dil.%	<3		>6
Soot %	<3	3	>7
Glycol	Neg	Pos	
TBN	>4.0		<2.5
Vis @ 100C, Low	>12.3	<12..0	<9.3
Vis @ 100C, High	<16.3	>16.5	>24.0
Water	<0.1		>1.0
Oxidation	<20	20.0	>30
Nitration	<20	20.0	>30

Note: typo on Ag normal column…that should be less than 3ppm.

f. Equipment break-in timeframes can create more wear metals in the typical “bathtub” curve, however excessive particles or wear metals will require

factual justifications as described above (which will mandate further analysis for classification of the source of the problem)

1) I.E. Sodium, and Phosphorus are not wear metals and won't be included in the break-in wear metal evaluation, this is a separate issue not related to break-in.
2) Excessive particle counts will be evaluated for type of particle and cause of the presence of the particle (i.e. wear, abrasion, fatigue).
3) Should issues with the fluids become evident, it may require manufacturers proprietary information of the oil and coolant components/additives to determine levels of leakage/contamination or related issues. Tulalip Utility Building management will agree to sign any PIA for this information and the supplier will provide this information when requested.

g. Oil dilution from fuel is a concern regarding the rate of dilution verses the engine run time. A 1% dilution for a two hour run time is not acceptable and is grounds for rejection of the equipment. Fuel dilution may be a normal and unavoidable condition, and can be acceptable in minor amounts over extended engine run times. This issue will likely require proprietary historical data of similar installations demonstrating successful extended equipment longevities (extended run time of several thousands of hours) with similar conditions.

h. The following minimum standards performed by a certified independent laboratory; will be used for oil analysis:

1) REPEATABILITY/REPRODUCEABILITY - ASTM D5185-13
2) ACID NUMBER: - ASTM D974/D664
3) BASE NUMBER: - ASTM D4739
4) BASE NUMBER: (Perchloric) - ASTM D2896
5) FUEL DELUTION By GC:- ASTM D3524
6) FUEL DELUTION VISC/SETAFLASH - ASTM445/D7279/D3828
7) FUEL SOOT ATR/IR - ASTM D7686/D7844
8) GLYCOL - ASTM D2982
9) METAL BY ROTRODE AES: - ASTM D6595
10) METALS BY ICP AES: - ASTM D5185
11) Ox, NOx, SOx, FTIR: - ASTM D7418/D7414/D7415/D7624
12) PARTICLE COUNT: - ISO11500/ISO4406.99
13) VISCOSITY - ASTM D445/D7279
14) WATER KF - ASTM E203 MOD/D6304

C. Coordinate tests with tests for transfer switches and run them concurrently.

D. Test instruments shall have been calibrated within the last 12 months, traceable to standards of NIST, and adequate for making positive observation of test results. Make calibration records available for examination on request.

E. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.

F. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.

G. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

H. Remove and replace malfunctioning units and retest as specified above.

I. Retest: Correct deficiencies identified by tests and observations and retest until specified requirements are met.

J. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation resistances, time delays, and other values and observations. Attach a label or tag to each tested component indicating satisfactory completion of tests.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain packaged engine generators.

END OF SECTION 26 32 13

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Exterior stair assembly including overhead canopy.
   2. Structural design of exit stairs.

~~B. Related Sections:~~
   ~~1. 030013 - Concrete: Surrounding construction; requirements for concrete fill for metal pan treads.~~

C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.

D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. A123 - Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
   2. A143 - Safeguarding Against Embrittlement of Hot Dipped Galvanized Structural Steel Products and Procedures for Detecting Embrittlement.
   3. A153 - Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware
   4. A384 - Safeguarding Against Warpage and Distortion During Hot Dip Galvanizing of Steel Assemblies.
   5. A385 - Providing High Quality Zinc Coatings (Hot Dip).

B. American Welding Society (AWS).

1.3 SYSTEM DESCRIPTION

A. Unless specified otherwise, stair system shall be fabricated from steel. Design details indicated may be modified by the fabricator subject to the specified requirements.

B. Stair systems shall include stairs, landings, handrails, guardrails, steel framing, overhead metal canopy, and all supports and anchors to adjacent construction. Handrails may be mounted to the stairs, or to building walls at the Contractor's option. Where handrails are attached to walls, metal backing within walls shall be included.

C. Floor construction, as indicated on the Drawings, includes bearing capacity to support steel stairs and design live loading, except for slab edge supports which are to be provided under the work of this Section. Stair system shall accommodate the surrounding construction indicated. All modifications to structure as required to support or otherwise accommodate the design/build stairs shall be the responsibility of the Contractor. Changes in dimension or location of finish surfaces indicated are subject to prior approval by the Architect. The Contractor shall reimburse the Owner for the Architect's charges for redesign necessitated by changes in building structure to accommodate stairs.

D. Tread, landing, and stringer deflections shall be limited to 1/360 span under design live loading indicated in the Structural Notes.

E. Railings:
   1. Railing assembly, wall rails, and attachments shall be capable of resisting a force of 200 lbs at any point in any direction without damage or permanent set.
   2. Railing assembly, wall rails, and attachments shall be capable of resisting a force of 50 plf in any direction without damage or permanent set.

F. Stair treads, nosings, and landing surfaces shall have non-slip finish. Risers may have open design.

G. Stair treads and landings shall be galvanized steel grating with checker plate nosings.

H. Unless indicated otherwise, size stairs for a clearance of 1 to 1-1/2 inches between the stringers and landing edges and the finish surface of the adjacent stair shaft wall.

1.4 SUBMITTALS

A. Make submittals in accordance with Section 013300.

B. Shop Drawings:
   1. Show materials, finishes, fastening systems, blocking requirements, and connections to surrounding construction.
   2. Shop drawings shall bear the stamp of the designing structural engineer.

C. Quality Control Submittals:
   1. Certification: Submit written certification that the stair system has been designed to meet the specified requirements.

D. Closeout Submittal:
   1. In accordance with Section 017700.
   2. Submit designing engineer's certification that products and installation comply with design requirements.]

1.5 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. Stair system shall meet the requirements of jurisdictional code authorities.
   2. Furnish all calculations, engineer's stamps, drawings, and other items required by the code authorities to obtain approval of the installation.

B. Fabricator Qualifications: Minimum of 5 years experience in the fabrication of exit stairs of the type specified.

C. Structural Design: Structural design of the stair system shall be by a Structural Engineer Licensed to practice in the State where the Project is located.

D. The work of this Section is subject to tests and inspections as specified in Section 006426.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

A. Pacific Stair (Spokane, WA; 888-477-8247).

B. StairCo Division of Alfab, Inc. (Enterprise, AL ;800-239-9451).

C. Panel Built Inc. (Blairsville, GA; 800-636-3873).

2.2 MATERIALS

A. Carbon Steel:
   1. Structural Shapes, Plates, and Bars: ASTM A36.
   2. Sheet: ASTM A366.
   3. Pipe: ASTM A53, seamless, Type S, plain end; schedule 40 unless indicated otherwise.
   4. Tubing: ASTM A500 or A501, seamless.

B. Steel Decking (at canopy):
   1. ASTM A653, SS Grade 33 minimum quality.
      a. Galvanized to A60 minimum.
   2. Furnish deck capable of supporting design loads indicated on the structural drawings with detailed support conditions. Maximum deflection L/360, unless otherwise indicated.

2.3 FABRICATION

A. Fabricate stairs and rails in accordance with approved shop drawings.

B. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32" unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation, or otherwise impairing the work.

C. Welding: Comply with AWS standards.

D. Provide galvanic isolation between dissimilar metals.

E. Joints at mechanical and adhesive fastenings shall be accurately fitted to present neat hairline joints; welded connections exposed to view shall be neat and uniform, free of spatter and protrusions. All welds exposed to view at stairs shall be full penetration welds and shall be ground to a tight inside radius.

F. Galvanizing:
   1. Fabricate in accordance with the applicable requirements of ASTM A143, A384, and A385.
   2. Remove welding slag and burrs prior to galvanizing.
   3. Avoid fabrication techniques which could cause distortion or embrittlement of the steel.
   4. Steel fabrications shall be galvanized in accordance with ASTM A123. Bolts, nuts, washers, and other hardware shall be galvanized in accordance with A153.
   5. Locations: Provide hot dip galvanizing at all exterior stairs and railings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.

B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of conditions as satisfactory.

3.2 PREPARATION

A. Place inserts, blocking, and related support framing in adjacent construction in accordance with construction sequence requirements.

3.3 INSTALLATION

A. Install in accordance with the approved shop drawings.

B. Perform field assembly in accordance with specified fabrication requirements.

C. Repair all damage caused by installation; retouch damaged finishes with matching material.

3.4 FIELD QUALITY CONTROL

A. The structural design engineer or an authorized representative shall visit the site to inspect the work. Verity and certify that the installation has been installed in accordance with the structural requirements.

END OF SECTION

SECTION 123200 - MANUFACTURED WOOD CASEWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. ~~Wood~~ Plastic-laminate-faced cabinets of stock design.
   2. Plastic-laminate-faced wood cabinets of stock design.
   3. Plastic-laminate countertops.

B. Related Sections:
   1. 064000 – Architectural Woodwork: Countertops; other requirements for custom casework not identified in this Section.

C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.

D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

A. Architectural Woodwork Institute (AWI): Architectural Woodwork Quality Standards, Guide Specifications, and Quality Certification Program; current edition.

B. International Building Code (IBC)

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Samples: For cabinet finishes and for each type of top material indicated.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.

B. Quality Standard: Unless otherwise indicated, comply with requirements for modular cabinets in AWI's "Architectural Woodwork Quality Standards."
   1. Provide AWI Quality Certification Program certificate indicating that manufactured wood casework complies with requirements.
   2. Cabinets shall be manufactured to “Custom” standards.

C. Mock-Ups:
   1. Provide mock-up in accordance with Section 014500.
   2. Fabricate one lower casework unit to receive transparent finish and one unit to receive opaque finish; complete with countertop, hardware and all electrical and mechanical components; and finished as specified. Select unit as approved by the Architect.
   3. Components approved by Architect may be incorporated into the Work.

1.5 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of manufactured wood casework that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Delamination of components or other failures of glue bond.
      b. Warping of components.
      c. Failure of operating hardware.

d. Deterioration of finishes.
2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CASEWORK

A. Basis of Design:
1. Manufacturer: ~~Lanz Cabinets (Eugene, OR).~~ Canyon Creek Cabinet Company (Monroe, WA; 360-348-4600) or approved.
2. Model:
a. ~~Pacific Collection;" all-plywood box,~~ "Millenia" Collection.
b. ~~"Chetco II" design; Natural Beech (clear finish);~~ High Pressure Laminate finish standard overlay construction.
c. White overlay interiors.

B. Subject to compliance with requirements, the following manufacturers may be submitted for approval by the Architect:
1. Kerf Design (Seattle, WA; 206-954-8677)
2. European Cabinets (Palo Alto, CA; 650- 843-0901).
3. Westmark Products (Tacoma, WA; 253-531-3470).
4. Trellis LLC (Issaquah, WA; 206-931-2743).

2.2 MATERIALS AND COMPONENTS

A. Low-Emitting Materials: Fabricate manufactured wood casework, including countertops, with adhesives and composite wood products containing no urea formaldehyde.

B. Low-Emitting Materials: Adhesives and composite wood products shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

C. Door And Drawer Fronts: ~~Natural Beech recessed panel Shaker~~ Flush plastic laminate-faced door and drawer fronts. Color ~~to match face~~ as selected by Architect.

D. Case And Shelves: Face frame manufactured with ¾" ~~Beech~~ plywood. Case and shelves manufactured with 5/8" ~~veneer~~ plywood with ~~natural~~ melamine interior finish. Exposed edges are capped with matching PVC edging applied through a hot melt bonding process. No urea formaldehyde.

E. Drawers: ½" ~~birch~~ plywood sides, back, bottom and sub-front, melamine faced. Use rubber or felt bumpers on drawers to minimize noise transfer.

F. Door And Drawer Fronts: 90 degree side wrap ¾" thick industrial strength, furniture grade high density wood core with high pressure plastic melamine laminate on both sides, 5mm edge tape to top and bottom.

G. Kitchen Plastic Laminate: ~~"Wilson Art" HPL 4796-60, "Brushed Chestnut"~~. Colors will be selected from standard range of any of the above manufacturers at the Architect's option. Color selected by Architect, butt all joints, no metal trim.

H. Kitchen Countertop, Back And End Splash: Plastic laminate, laminated to 45-pound industrial grade particle board ¾" thick. 1-1/2" countertop front edge with 180 degree wrap, exposed edges and exposed sides. Plastic laminate back and end splash with 90 degree wrap.

I. Hardware:
1. Hinges: ½" overlay semi-concealed self-closing hinges.
2. Pulls: Richelieu 205, satin nickel finish.
3. Drawer guides: Epoxy coated side-mount drawer guides.

J. Finish: Low VOC environmentally benevolent finish to meet or exceed Green Guard Emission Standards. Multi-step finishing process, hand-sealed, stained and top-coated with pre-catalyzed finish.

2.3 FABRICATION

A. All parts are machined for accuracy and interlocking strength. All joints are glued and stapled. All exterior parts of the cabinet shall have nails and staples set and holes filled.

B. Verify all dimension and cabinet unit sizes prior to fabrication. Use no filler panels more than 3" in width.

C. Cut to fit unless specified to be shop-fabricated or shop-cut to exact size. Where woodwork abuts other finished work, scribe and cut for accurate fit. Before making cutouts, drill pilot holes at comers.

D. Cut openings for equipment to be installed. Comply with equipment manufacturers requirements, but provide internal corners of 1/8" minimum radius. Smooth saw cut and ease edges. Provide plastic grommets at holes.

E. Seal cut edges of counter at openings for sinks and other "wet" equipment, using waterproofing compound recommended by plastic manufacturer and compatible with laminating adhesive.

F. Distribute defects allowed in the quality grade specified to the best overall advantage, when installing job assembled woodwork items.

2.4 COUNTERTOPS

A. Custom countertops are specified in Section 064000.

PART 3 - EXECUTION

3.1 CASEWORK INSTALLATION

A. Install level, plumb, and true; shim as required, using concealed shims. Where manufactured wood casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical.

B. Base Cabinets: Set cabinets straight, level, and plumb. Adjust subtops within 1/16 inch of a single plane. Fasten cabinets to masonry or framing, wood blocking, or reinforcements in walls and partitions with fasteners spaced 24 inches o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform. Align similar adjoining doors and drawers to a tolerance of 1/16 inch.

C. Wall Cabinets: Hang cabinets straight, level, and plumb. Adjust fronts and bottoms within 1/16 inch of a single plane. Fasten to hanging strips, masonry, or framing, blocking, or reinforcements in walls or partitions. Align similar adjoining doors to a tolerance of 1/16 inch.

D. Adjust casework and hardware so doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

3.2 INSTALLATION OF TOPS

A. Field Jointing: Where possible make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.
   1. Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches of front and back edges and at intervals not exceeding 24 inches. Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.

B. Secure tops to cabinets with Z- or L-type fasteners or equivalent, using two or more fasteners at each front, end, and back.

C. Provide backsplashes at backs and sides of counters that abut gypsum board surfaces. Do not provide backsplashes at sides of counters that abut casework or other woodwork panels.

D. Secure backsplashes and end splashes to walls with adhesive.

E. Seal junctures of tops, splashes, and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

3.3 CLEANING AND PROTECTING

A. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.

B. Protection: Provide 6-mil plastic or other suitable water-resistant covering over countertop surfaces. Tape to underside of countertop at a minimum of 48 inches o.c. Remove protection at Substantial Completion.

END OF SECTION 123200

SECTION 014550 AIR BARRIER SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes administrative and procedural requirements for accomplishing an airtight building enclosure that controls infiltration or exfiltration of air.

B. Related Sections:
1. ~~003152 - Testing and Inspection Services: Owner paid testing and inspections.~~
2. 014500 – Quality Control.
3. 030013 – Concrete.
4. 061643 - Gypsum Sheathing
5. 072100 – Thermal Insulation
6. 076100 - Sheet Metal Roofing
7. 076200 - Sheet Metal Flashing And Trim
8. 079200 - Joint Sealants: Expansion joint fillers.
9. 081113 – Hollow Metal Doors And Frames
10. 083323 – Overhead Coiling Doors
11. 084113 – Aluminum-Framed Storefronts, Entrances And Windows

C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.

1.2 DEFINITIONS AND REQUIREMENTS

A. Air Barrier System:
1. The airtight components of the building enclosure and the joints, junctures and transitions between materials, products, and assemblies forming the air-tightness of the building enclosure are called “the air barrier system”. Services include coordination between the trades, the proper scheduling and sequencing of the work, preconstruction meetings, inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.

B. Requirements of this section relate to the coordination between subcontractors required to provide an airtight building enclosure, customized fabrication and installation procedures, not production of standard products.
1. Continuity of the air barrier materials and products with joints to provide assemblies. Continuity of all the enclosure assemblies with joints and transition materials to provide a whole building air barrier system.
2. Specific quality-control requirements for individual construction activities are specified in the sections of the specifications. Requirements in those sections may also cover production of standard products. It is the Contractor’s responsibility to ensure that each subcontractor is adequately and satisfactorily performing the quality assurance documentation, tests and procedures required by each section.
3. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
4. Requirements for Contractor to provide an airtight building enclosure is not limited by quality-control services required by Architect, Owner, or authorities having jurisdiction and are not limited by provisions of this section.

1.3 QUALITY CONTROL

A. The Contractor shall ensure that the intent of constructing the building enclosure with a continuous air barrier system to control air leakage into, or out of the conditioned space is achieved. The air barrier system shall have the following characteristics:
1. It must be continuous, with all joints sealed.
2. It must be structurally supported to withstand positive and negative air pressures applied to the building enclosure.

3. Connection shall be made between:
   a. Foundation and walls.
   b. Walls and windows or doors.
   c. Different wall systems.
   d. Wall and roof.
   e. Wall and roof over unconditioned space.
   f. Walls, floor and roof across construction, control and expansion joints.
   g. Walls, floors and roof to utility, pipe and duct penetrations.

B. Air Barrier Penetrations: All penetrations of the air barrier and paths of air infiltration / exfiltration shall be sealed.

C. Testing and Inspection Services:
   1. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
   2. Qualifications for Air Barrier Testing and Inspection Agencies: ~~Owner will~~ Contractor shall engage an Air Barrier inspection and testing service agencies, including independent testing laboratories, that are prequalified and that specialize in the types of air barrier system inspections and tests to be performed.

D. Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide coordination of the trades, and the sequence of construction to ensure continuity of the air barrier system joints, junctures and transitions between materials and assemblies of materials and products, from substructure to walls to roof. Provide quality assurance procedures, testing and verification as specified herein. Facilitate inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction or by the Owner. Costs for services listed below are included in the Contract Sum.
   1. Organize preconstruction meetings between the trades involved in the whole building's air barrier system to discuss where each trade begins and ends and the responsibility and sequence of installation of all the air-tight joints, junctures, and transitions between materials, products and assemblies of products specified in the different sections, to be installed by the different trades.
   ~~2. Participate in exterior wall mock-up specified in Section 014500 before proceeding with the work, satisfactory to the Architect.~~

E. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
   1. Provide access to the Work.
   2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
   3. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
   4. Deliver samples to testing laboratories.
   5. Provide security and protection of samples and test equipment at the Project Site.
   6. Prepare the building for air leakage testing per ASTM E 779. Including providing temporary isolations of intentional penetrations through the building envelope.

1.4 PERFORMANCE REQUIREMENTS

A. Compliance:
   1. Performance shall comply with the Washington State Energy Code and additional requirements as indicated.
   2. If the leakage rate when tested as described below tested exceeds that defined here, the owner's testing and inspection agency will conduct a visual inspection of the air barrier. The contractor shall seal all leaks noted to the extent practicable and submit an additional report identifying the corrective actions taken to the building owner and the Code Official

1.5 SUBMITTALS

A. The independent testing agency shall submit a certified written report, in duplicate, of each inspection, test, or similar service to the Architect. If the Contractor is responsible for the service, submit a certified written report, in duplicate, of each inspection, test, or similar service through the Contractor.
   1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
   2. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:
      a. Date of issue.
      b. Project title and number.
      c. Name, address, and telephone number of testing agency.
      d. Dates and locations of samples and tests or inspections.
      e. Names of individuals making the inspection or test.
      f. Designation of the Work and test method.
      g. Identification of product and Specification Section.
      h. Complete inspection or test data.
      i. Test results and an interpretation of test results.
      j. Ambient conditions at the time of sample taking and testing.
      k. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
      l. Name and signature of laboratory inspector.
      m. Recommendations on retesting.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes.

B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.

C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

3.2 TESTING AND INSPECTION

A. The ~~Owner will~~ Contractor shall hire a testing and inspection agency to provide periodic observation during installation of the air barrier system. The testing and inspection agency will provide the following listed services:
   1. Qualitative Testing and Inspection:
      a. Reports of observations, with copies to the Owner, Contractor and Architect. The observations will include the following items as applicable to the project:
         1) Continuity of the air barrier system throughout the building enclosure with no gaps, holes.
         2) Structural support of the air barrier system to withstand design air pressures.
         3) Masonry and concrete surfaces are smooth, clean and free of cavities, protrusions and mortar droppings.
         4) Site conditions for application temperature and dryness of substrates.
         5) Maximum length of exposure time of materials to ultra-violet deterioration.
         6) Surfaces are properly primed.
         7) Measure application thickness of liquid-applied materials to manufacturer’s specifications for the specific substrate.

8) Materials used for compatibility.
9) Transitions at changes in direction, and structural support at gaps.
10) Connections between assemblies (membrane and sealants) for cleaning, preparation and priming of surfaces, structural support, integrity and continuity of seal.

END OF SECTION

Tulalip Utility Building
Bid Addendum 1
Structural Revisions Narrative

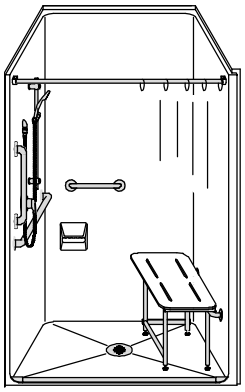
This narrative summarizes the revisions to structural drawings which are submitted as Bid Addendum 1, dated 04/16/24.

Sheet	Summary of Revisions
S2.01	• Replaced wood-framed east stair with pre-engineered steel stair. • Added corbel under stair post. • Clarified stem wall thickness at 8” studs. • Showed missing wall footing at Grid 3.
S2.02	• Replaced wood-framed east stair with pre-engineered steel stair. • Added strapping at north edge of stair landing.
S2.03	• Added new east stair landing roof below.
S3.01	• Modified Elevation 2/S3.01 to show new pre-engineered steel stair.
S3.02	• Voided wood-framed stair details. • Added blocking at Section 6/S3.02 to receive new pre-engineered steel stair.
S4.11	• Deleted wood stair framing at Section 6/S4.11. • Clarified stem wall thickness at Section 12/S4.11. • Added new stair corbel Detail 2/S4.11.

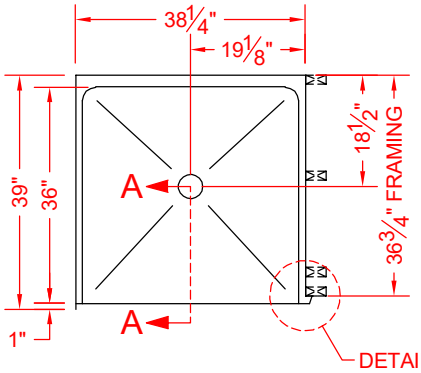
MODEL: LSS4038A5T* L/R

*ALL ACCESSORIES OPTIONAL

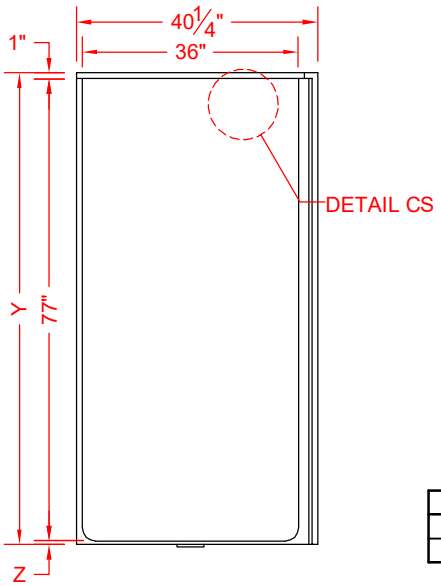
ADA COMPLIANT



PERSPECTIVE VIEW - N.T.S.
MODEL SHOWN HERE AS:
LEFT PLUMBING
RIGHT SEAT
RIGHT REVEAL



TOP VIEW - SCALE ⅜" = 1'-0"



FRONT ELEVATION - SCALE: ⅜" = 1'-0"

SEE OVER

Features:

- Molded one-piece gelcoat/fiberglass shower module
- "Smooth" wall finish, white (standard)
- Integral full wood backing for strength and unlimited accessory placement
-"Reveal 90" allows for clear floor space compliance
- Available in various threshold heights
- On all threshold heights 1-1/4" or shorter, no mud set is required, but an adhesive kit is supplied
- On all threshold heights 1-1/2" or taller, no mud set is required

*OTHER THRESHOLD HEIGHTS AVAILABLE UPON REQUEST

MODEL #	UNIT HEIGHT Y	THRESHOLD HEIGHT Z*
LSS4038A5T	78-5/8"	5/8" MIN.
LSS4038A2T	80"	2" MAX.

*** - SEE BACK FOR DETAIL SECTIONS**

PRODUCT SPECIFICATIONS:

- Single-piece module shall be constructed of gelcoat/fiberglass with full integral plywood backing in the walls.
- Rough-In: Stud opening +1/4" – 0" Nominal Dimensions

C.S.I. FORMAT SPECIFICATION TEXT AVAILABLE

PRODUCT INFORMATION:

- Accessories: Factory installed, unless prone to damage during installation/shipping. Polished chrome/satin stainless standard, others available. (not applicable to pans/bases)
- Colors: White as standard, others to match any major fixture manufacturer, also available with sprayable solid surface in many colors
-Custom curb heights, other than shown, are available (between min. and max.)

ACCESSORIES:

INSTALLED AT FACTORY:
-Seat, folding
-Grab bar
-Soap dish
-Mixing valve, pressure-balancing, lever handle, pre-plumbed tree to supply elbow
-Curtain rod brackets

INSTALLED BY OTHERS:
-Curtain and rod
-Flange-Window trim kits
-T-shaped WaterStopper kit
-Semi-permanent threshold adapter
-No-caulk brass drain

CODES:

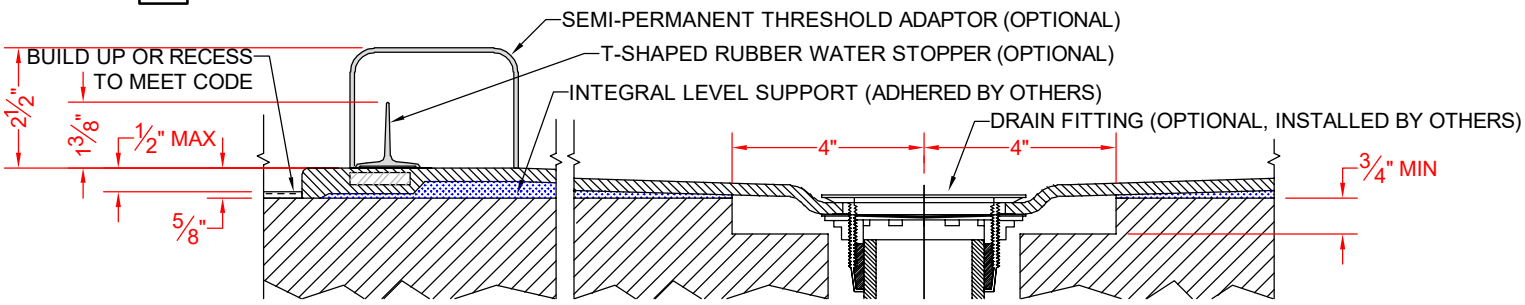
Designed and manufactured in compliance with the following standards and codes:
-ANSI Z124.2 Standards for Plastic Shower
-ADA Accessibility Guildelines for Buildings and Facilities
-ANSI A117.1 A - Accessible and Usable Buildings and Facilities
-ANSI A117.1 B - Accessible and Usable Buildings and Facilities
-IPC International Plumbing Code
-UPC Uniform Plumbing Code

NOTICE OF LIMITATION:

-Recess as needed to meet code
-Adhere to floor as required
-Reveal not recommended on common wall

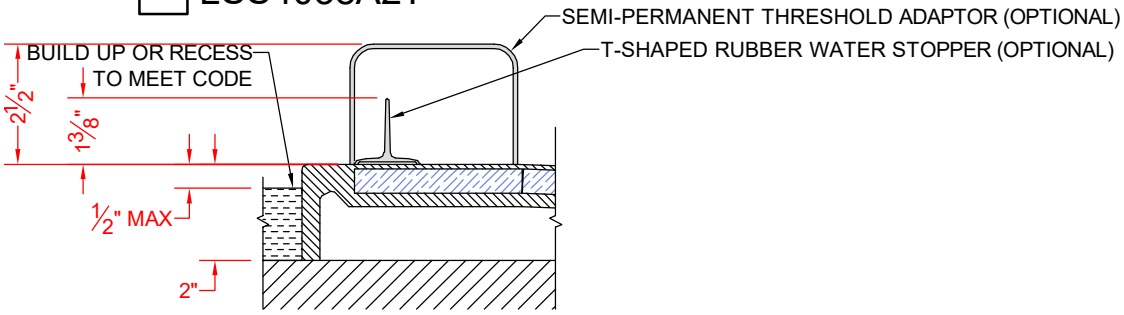
bestbath Intelligent Designs

LSS4038A5T L/R



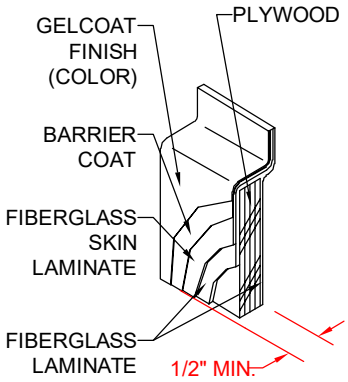
SECTION A-A - SCALE: 3" = 1'-0"

LSS4038A2T

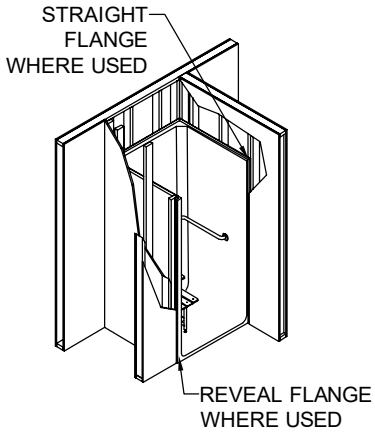


SECTION A-A - SCALE: 3" = 1'-0"

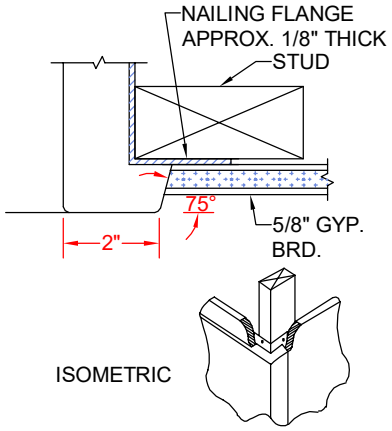
****OTHER THRESHOLD HEIGHTS AVAILABLE UPON REQUEST****



DETAIL CS - SCALE: N.T.S.
CROSS SECTION DETAIL



DETAIL FD - SCALE: N.T.S.
FRAMING DETAIL



DETAIL RD - SCALE: 3" = 1'-0"
REVEAL DETAIL

bestbath
Intelligent Designs

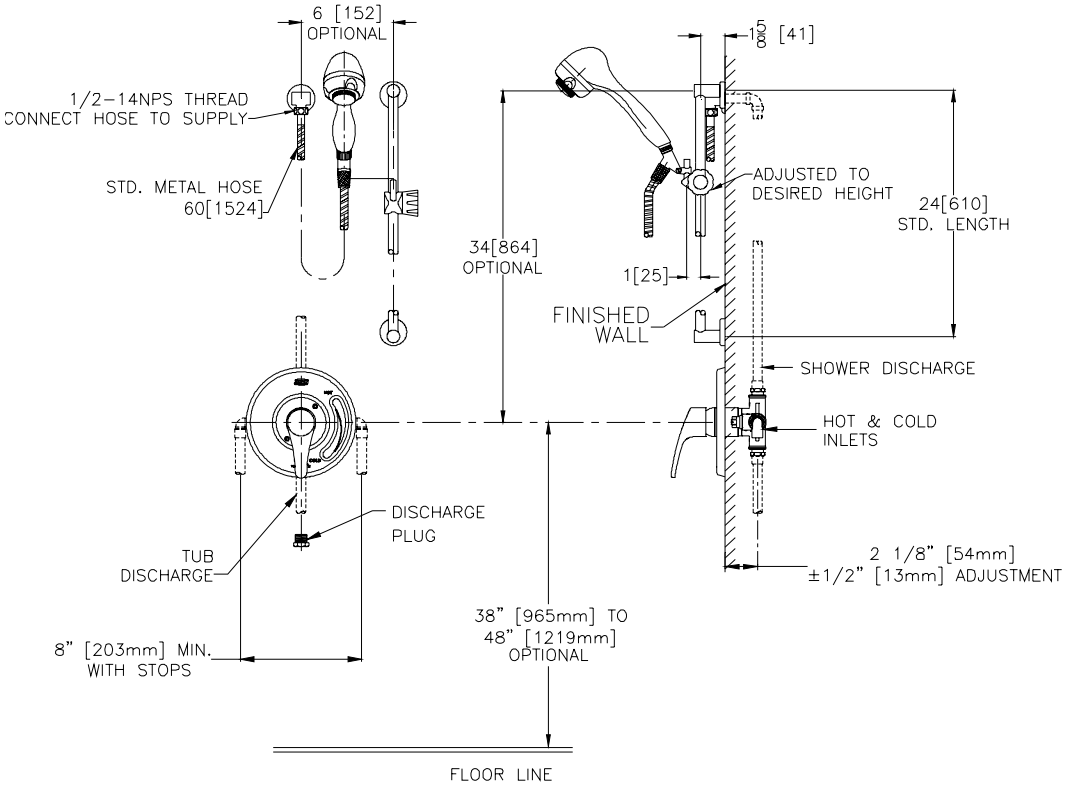
TEMP-GARD III SHOWER UNIT

Z7300-SS-HW-MT

TAG _____

ENGINEERING SPECIFICATIONS: ZURN Z7300-SS-HW-MT

Single handle pressure balancing mixing tub and shower unit, ceramic control cartridge with stainless steel balancing piston, built in reverse connection capability (To reverse the hot and cold inlets simply remove cartridge and turn 180º), two service stops / check stops, and adjustable limit stop. When valve is turned on it must rotate from cold through to the hot position. All exposed trim and handle are metal with polished nickel chrome plated surface. Valve supplied with standard hand/wall shower head, hand/wall unit, 60"[1524mm] flexible metal hose 24"[610mm] mounting bar, supply elbow and flange. The valve inlets, shower and tub outlet are all standard with 1/2" NPT female thread connections. The 1/2" copper sweat options must be specified as shown below.



Note: *All dimensions are for reference only. Do not use for pre-plumbing. Parts shown as hidden lines are supplied by others.*

OPTIONS (Check/specify appropriate options)*Use with Z7300 prefix*

	Suffix	Description
___	-CPVC	1/2" Male NPT by CPVC Female Adaptors, shipped loose to be installed in the field.
___	-EXT	Extension Kit, Extends Valve Out by 1".
___	-PEX	1/2" Male NPT by PEX Adaptors, shipped loose to be installed in the field.
___	-SSC	1/2" Female Copper Sweat Connections w/ Service Stops
___	-ST	Sierra Series Decorative Metal Trim
___	-VB	In-Line Vacuum Breaker
___	-WF	Wall Mounting Flange For Fiberglass or Panel Wall Installation
___	-	Handwall Options (see Z7000-HW)

Additional Options

___ Z7000-SC Pair of Dual Spring Check Valves

STANDARDS

Tested to meet the following standards for valves and plumbing fittings:
ASSE Standard No. 1016
ASME A112.18.1 / CSA B125.1
IAPMO® Listed
Meets or Exceeds ANSI A117.1M standard for physically handicapped

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733
Phone: 1-716-665-1132 ♦ Fax: 1-716-665-1135 ♦ World Wide Web: www.zurn.com
In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

Rev. E Date: 11/25/08 C.N. No.107936
Dwg. No. 92084 Product No. Z7300-SS-HW-MT