



CITY OF MERCER ISLAND	INSPECTION REQUES	
DEVELOPMENT SERVICES GROUP	online:	Construction of the project shall be from <i>approved plans only</i> . No deviation from the approved project plans is allowed without prior approval from the city of Mercer Island. Approved plans must be kept on site and maintained in good condition.
9611 SE 36TH STREET   MERCER ISLAND, WA 98040 PHONE: 206.275.7605   www.mercergov.org	WyBuildingPermit.co	<ul> <li>Refer to "Conditions of Permit Approval" provided at permit issuance for required construction rules and regulations, including:</li> <li>Site Considerations</li> <li>ROW restrictions</li> <li>Additional Fire Code Requirements</li> <li>In advance of desired inspection. Be specific as to type of inspection.</li> <li>In advance of desired inspection. Be specific as to type of inspection.</li> </ul>
MERCEA	voicemail: (206) 275-7730	• Hours of Work • Drainage Requirements • Planning Req
Mlepian	(200) 270 7700	Acess Road Requirements     • Water Service Requirements     • Tree Requirements     • Tree Requirements     • Tree Requirements     • Tree Requirements
NOTE: ALL RECORDS AND DRAWINGS ARE SUBJECT TO	PUBLIC DISCLOSURE AS REQUIRED BY RCW 42.56	O       Refer to "Preconstruction Meeting Checklist" provided at the preconstruction meeting for development related requirements.       O       Pre-construction Meeting to Review Conditions of Permit Approval.         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure         Image: Second structure       Image: Second structure       Image: Second structure       Image: Second structure
CONTACT INFORMATION:	TODELE DISCLOSORE AS REQUIRED BY REW 42.50	Erosion control measures must be as shown on approved project drawings. All erosion control is to be in place and inspected prior to the start of any site work.
Applicant is to complete the following information.		A City of Mercer Island Business License is required for all subcontractors. Call (206) 275-7783 for more information.
Applicant Contact information <i>prior</i> to permit issuance:	Applicant Contact information <i>post</i> permit issuance:	- Separate ROW permit required
Name:	Name:	Tree protection as shown on approved drawings shall be installed at tree dripline prior to start of any site work and Temporary power Temporary power Temporary power Pilings / Shoring / Shortrete. If applicable, provide survey letter Pilings / Shoring / Shortrete. If applicable, provide survey letter Pilings / Shortrete. P
Address:	Address:	No trees shall be cut without a City of Mercer Island tree permit.
Phone:	Phone:	Replacement trees must be a minimum of six feet tall at installation. They must be planted and approved prior to final inspection.       reports of inspections (pile and shoring installation, etc.)         For this project,       trees are authorized to be removed and replaced with       trees.
		This project appears to be within a protected eagle nest area. Contact Federal Fish and Wildlife at (360) 534-9304 or visit their (building height and setbacks); Special Inspector reports of inspections
Email:	Email:	website at http://www.fws.gov/pacific/eagle  (soil bearing capacity, compaction, earthwork, pile installation, etc.)  FIRE PROTECTION REQUIREMENTS:
<b>REQUIRED SPECIAL INSPECTIONS / STRUC</b>	CTURAL OBSERVATIONS:	Separate Permits are required for ALL fire protection systems. For more information, see http://www.mercergov.org/Page.asp?NavID=2614
It is the Engineer of Record's responsibility to specify all required The owner is responsible for hiring an approved private Special I	ed Special Inspections or Structural Observation (check items below).	Fire Sprinkler       Monitored Household       * Storm drainage, including (but not limited to):
Inspectors (except Geotechnical) must be WABO certified.		NFPA 13D       Fire Alarm per NFPA 72         Plus       Monitored Sprinkler         Monitored Sprinkler       Monitored Sprinkler
	e report shall be submitted to the City Building Inspector prior to the City addition to the Special Inspection or Structural Observation indicated	NFPA 13R       • Detention systems       • Storm drain in ROW
below. Do not cover or conceal any work prior to the City inspec	· ·	NFPA 13       • Control structures / manholes         Approved Fire Code Alternatives:       • Control structures / manholes         • Catch basins including       • Pump systems
STRUCTURAL OBSERVATION BY ENGINEER OF RECORD (EOR)	R):	FCA1
<b>0</b> • • • • • • • • • • • • • • • • • • •	Phone:Phone:	FCA2       FCA4         Water Supply
General Conformance to Construction Documents	Other:	WATER SUPPLY REQUIREMENTS:
SOILS / GEOTECHNICAL: Special Inspector: Cor	ompany:Phone:Phone:	Connections to side     Back-flow valves     Back-flow valves     Sewer main     Grinder pump systems
Erosion control measures	Subsurface drainage placement	Connections to existing     Sewer manholes
<ul> <li>Shoring installation and monitoring</li> <li>Observe and monitor excavation</li> </ul>	<ul> <li>Verify fill material and compaction</li> <li>Rockery installation</li> </ul>	City Installation.
Verification of soil bearing	Pile placement (auger cast/driven pile)	Required Service Line Size:       Required Supply Line Size:       Required Meter Size:
Other:	Other:	(water main to meter) (water main to house) Underslab insulation / vapor barrier / reinforcing Underfloor framing
REINFORCED CONCRETE: Special Inspector:Cor	pmpany:Phone:	<ul> <li>Pressure reducing valve required if pressure exceeds 80 psi.</li> <li>Reduced pressure backflow assembly (RPBA) required for all lots with waterfront or non-city water supply (private wells</li> <li>Reduced pressure backflow assembly (RPBA) required for all lots with waterfront or non-city water supply (private wells</li> </ul>
Concrete strength	Retaining wall construction	or lake irrigation).
<ul> <li>Reinforcing steel and concrete placement</li> <li>Shotcrete placement</li> </ul>	Prestressed / Precast construction Other:	Additional water supply requirements: Additional water supply requirements: Inspection letter for lateral wood inspection.
Other:	Other:	Unsite detention system required.       Direct discharge into the lake.       Image: All and the lake. <td< td=""></td<>
STRUCTURAL STEEL: (AISC 360, Chapter N)		S On site infiltration system required No Storm Water permit required No Storm Water permit required And the system required installation (DWV, water)
Special Inspector: Cor Fabrication and shop welds	ompany: Phone: Moment Frame construction	O       As-built Utility drawings required.       Connection to public storm drainage conveyance system req'd.       Rough mechanical         Image: Full Size drawings required.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to public storm drainage conveyance system req'd.       Image: Connection to publi
Structural steel erection, field welds and bolting	Other:	BIDE SEWER REOLIREMENTS:
Other:	Other:	O       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is       Image: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is
STRUCTURAL MASONRY: Special Inspector:Cor	ompany:Phone:	lower than the elevation of the upstream manhole rim or when side sewer is shared with one or more properties.
Mortar strength	Glass unit masonry installation	New connection.       Connect to existing.       Disconnect permit required.       Reconnect permit required.       Stucco (paper and lath)
<ul> <li>Masonry unit strength</li> <li>Other:</li> </ul>	<ul> <li>Wall panel and veneer installation</li> <li>Other:</li> </ul>	Other: Other
Other:	Other:	Mercer Island Maintenance Department at (206) 275-7800.
WOOD:		APPROVED CODE ALTERNATIVES: Code alternative ca2 Impact Fees Paid (If applicable)
Special Inspector / Engineer of Record: Cor	ompany:Phone:	CA1: CA2: CA2: CA2: TT
<ul> <li>Lateral resisting system construction</li> <li>Other:</li> </ul>	<ul> <li>High strength diaphragm construction</li> <li>Other:</li> </ul>	
		Access Road     Fire Extinguishing System
	ompany:Phone:	SURVEY REQUIREMENTS (The following survey information must be submitted when checked):       • Fire Code Alternatives (see below)       • Fire Alarm System         Image: I
Epoxy grout installations	Stucco installation	Surveyor shall verify points chosen for height calculations and point verification shall be submitted at the time of City foundation Inspection. A property survey may be required to verify setbacks and in some cases buildings must be surveyed onto the lot. The City Inspection: Water supply protection, including (but not limited to) TW
<ul> <li>Expansion anchor installations</li> <li>Other post installed anchors</li> </ul>	<ul> <li>Infiltration System</li> <li>Exterior Insulation Finish System (EIFS) installation</li> </ul>	reserves the right to request an impervious area survey at any time prior to issuance of Certificate of Occupancy.
<ul> <li>Alternative construction methods:</li> <li>Alternative construction materials:</li> </ul>	Other:	Surveyor:       • Waterfront property       • Well water on property         Building height survey       • Fire / lawn sprinkler       • Boiler
DEFERRED SUBMITTALS:		Building setback survey TS
	p drawings for submittal to the City for review and approval prior to iten	
fabrication / construction.	Post tension layout	A Building Inspection prior to demolition is required for all legally nonconforming single family dwelling to ensure no more than Inspectors, Geotechnical Engineer, and exterior wall cladding inspectors (EIFS).
Metal joist / metal trusses	Exterior cladding	40 percent of the dwelling's exterior walls are structurally altered. Contact the Building Inspector at (206) 275-7730.
Premanufactured structures (stairs, etc.) Precast concrete elements	Window wall / curtain wall construction           Other:	Applicant option. Additional fees will be required and must be approved prior to occupancy. TCO requires tree plantings be completed.
Other:	Other:	
ENERGY CODE COMPLIANCE INFORMATIO	ON: ing set. Alternatively, incorporate or include the Residential Energy Code	without an approved Seasonal Development Limitation Waiver.         Approved
Prescriptive Compliance (RECPC) Form into the drawing set.	ing set. Alternatively, incorporate of include the Residential Energy Code	Geotechnical Report provided. An construction must be kept on site at all times.
Sheet:		Call the appropriate contact to arrange the inspection.
Building envelope: wsec Table 402.1.1	Air Leakage Testing. IRC Section R402.4.1.2 WA Amendments	Geotechnical Engineer       Phone       Scheduling:         SEASONAL DEVELOPMENT LIMITATION RESTRICTION:       Phone       Scheduling:
(include U-factors, insulation and moisture control)	<ul> <li>Provide air leakage test report verifying air leakage rate</li> <li>does not to exceed 5 air changes per hour.</li> </ul>	Applies (Geologic Hazard area). Grading not permitted between October 1 through April 1.
(include ventilation option and duct sizing if applicable)	Duct Leakage Testing. WSEC R403.2.2	Imitation Waiver Permit.
Energy Credit Information: wSEC Table 406.2 (include specific, written requirements)	Postconstruction Test. wsec R403.2.2.1 Rough-in Test. wsec R403.2.2.3	Permit number Approved by Date PLAN REVIEW APPROVALS:
RECPC Form Information:	_ · ·	If applicable.   Not all review disciplines may be required to review the documents.
(if incorporated within drawing set) http://www.mercergov.org/files/2012ResidentialEnergyCalcForm.pdf		□ Impact fees apply and are due <i>prior</i> to Final Inspection or on
		$\begin{array}{c} \Box \\ O \\ \hline O \\ \hline \end{array}$ , whichever occurs first. $\begin{array}{c} \Box \\ \hline \\ Building \\ \hline \\ \\ Fnaineering \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $
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		20 10 0 20	40
1		SCALE IN FEET	
		KEY NOTES	
	KEY	DESCRIPTION	DETAIL/ SHEET
	1	INSTALL 78 LF SILT FENCE	A/C05
-	2	INSTALL 103 LF SILT FENCE	A/C05
	3	LIMITS OF DISTURBANCE	-
2	4	UTILIZE EX DRIVEWAY FOR STABILIZED CONSTRUCTION ENTRANCE	-
	5	STORM DRAIN INLET PROTECTION	B/C05
	6	EX FOUNDATION TO REMAIN	-
	7	EX DRIVEWAY TO BE REMOVED WITHIN LIMITS OF HATCHED AREA (TYP)	-
	8	LIMITS OF STEEP SLOPES	-
	9	SWEEP STREET DAILY OR MORE OFTEN AS NEEDED TO REMOVE TRACKED SEDIMENT	-

### PROJECT INFORMATION:

TREE HOUSE 5004 W MERCER WAY MERCER ISLAND, WA 98040

OWNER/APPLICANT: BRIAN & MINA SUNG

2441 76TH AVE SE #35 MERCER ISLAND, WA 98040

ARCHITECT:

STEPHENSON DESIGN COLLECTIVE 1725 WESTLAKE AVE N, SUITE 201 SEATTLE, WA 98109 PH: (206) 632.7703 CONTACT: RYAN STEPHENSON

<u>CIVIL ENGINEER:</u> DAVIDO CONSULTING GROUP, INC. 15029 BOTHELL WAY NE, SUITE 600 LAKE FOREST PARK, WA 98155

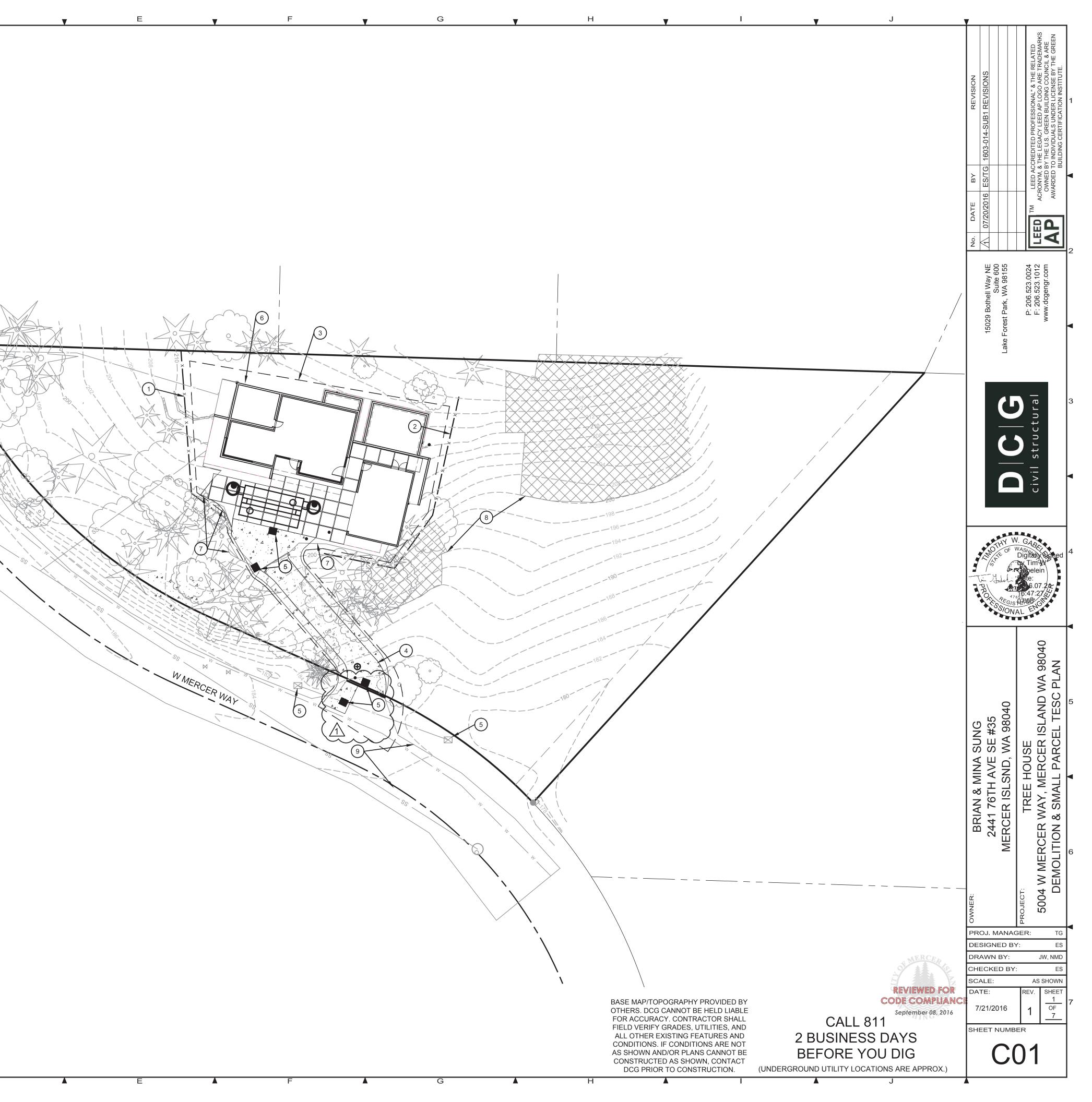
LAKE FOREST PARK, WA 98155 PH: (206) 523.0024 CONTACT: TIM GABELEIN, P.E.

GEOTECHNICAL ENGINEER: PANGEO, INC. 3213 EASTLAKE AVE E, STE #8 SEATTLE, WA 98102 PH: (206) 262-0370 CONTACT: H. MICHAEL XUE, P.E.

SURVEYOR: SITE SURVEYING, INC. 21923 NE 11TH ST SAMMAMISH, WA 98074 PH: (425) 298-4412 CONTACT: THOMAS N. WOLDENORP, P.L.S.

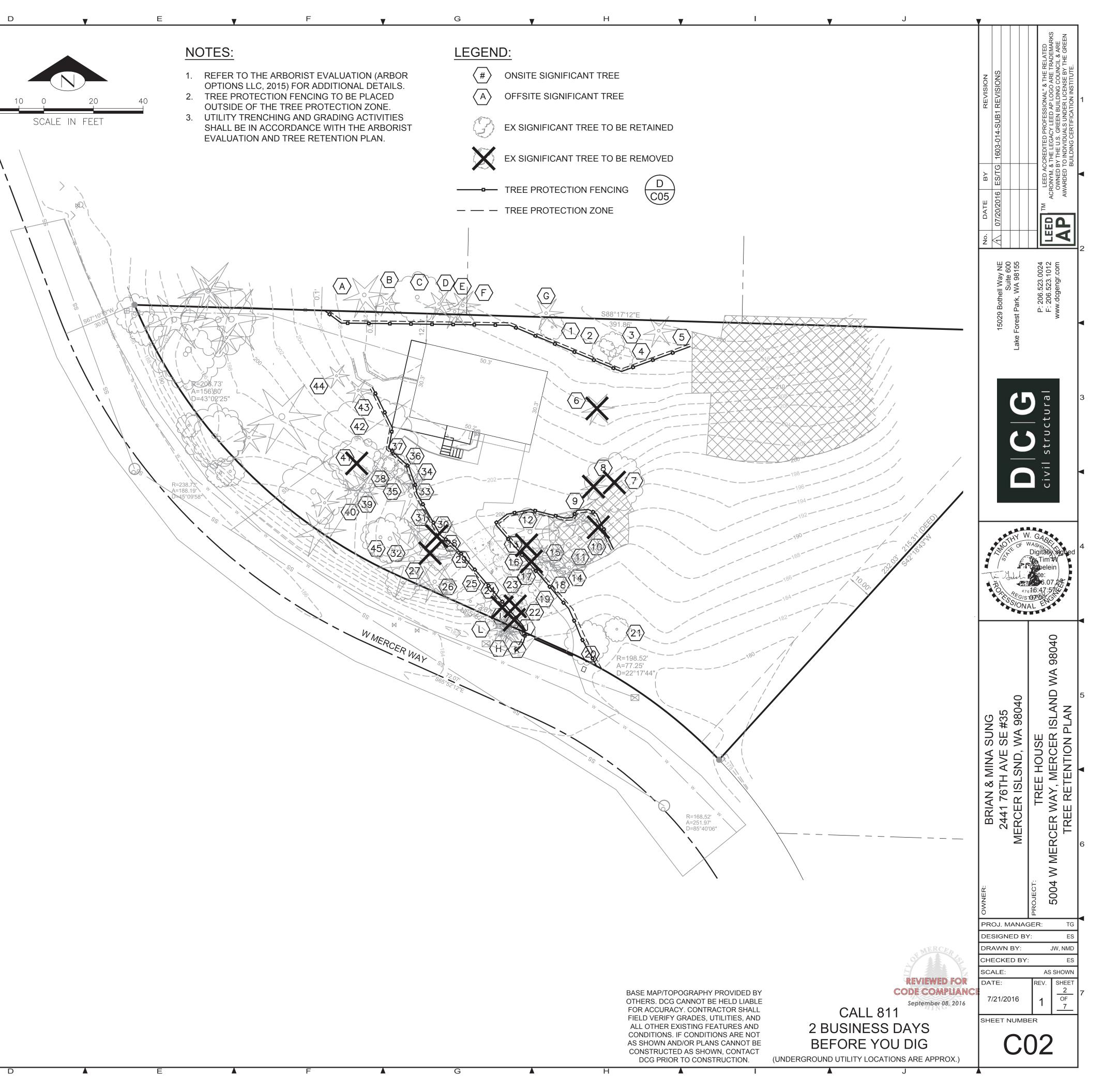
<u>ARBORIST:</u> ARBOR OPTIONS, LLC PH: (206) 755-5826 RYAN@ARBOROPTIONS.COM CONTACT: RYAN RINGE

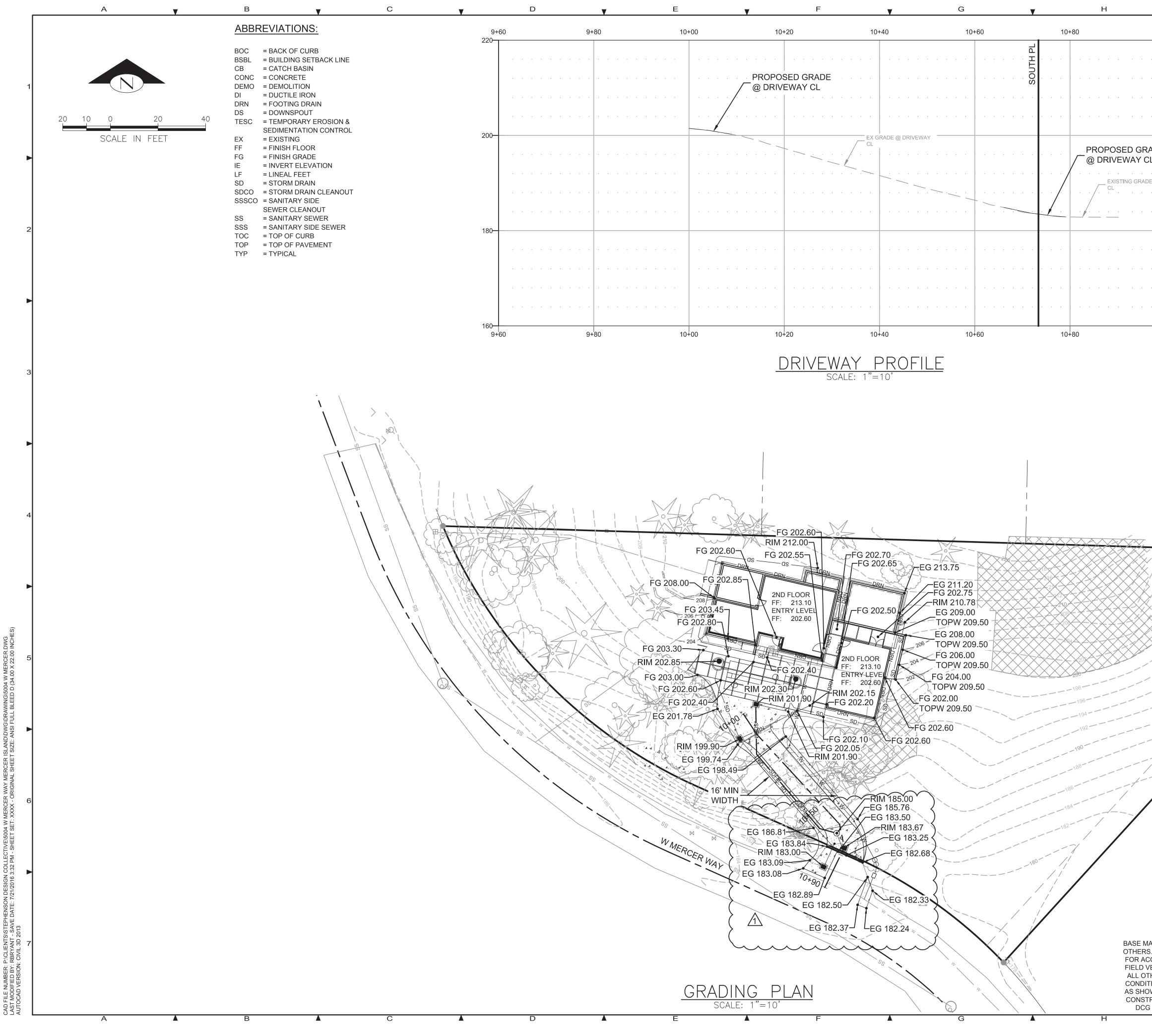
CAD FILE NUMBER: P:\CLIENTS\STEPHENSON DESIGN COLLECTIVE\5004 W MERCER WAY MERCER ISLAND\DWG\DRAWING\5004 W MERCER.DWG LAST MODIFIED BY: RBRYANT - SAVE DATE: 7/21/2016 3:32 PM - SHEET SET: XXXX - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 INCHE AUTOCAD VERSION: CIVIL 3D 2013 D



	A	Subject Prop	erty Sig	nifican	t Trees	С		
Tree #	Species	Latin Name	DBH (in.)	Ht. (ft.)	Condition	Drip line Radius (ft.)	TPZ Radius (ft.)	Retain Yes/ No
1	Western Red Cedar	Thuja plicata	13.4	55	Good	14		Yes
2	Bigleaf Maple	Acer macrophyllum	38	80	Fair	29		Yes
3	Western Hemlock	Tsuga heterophylla	15.3	65	Good/ Fair	20		Yes
4	English Holly	Ilex aquifolium	10	40	Good/ Fair	13		Yes
5	Western Red Cedar	Thuja plicata	35	100	Good	25		Yes
6	English Holly	llex aquifolium	7.8	40	Good	12		No
7	Bigleaf Maple	Acer macrophyllum	26	75	Fair/ Poor	27	N/A	No
8	Western Hemlock	Tsuga heterophylla	11.8	65	Good/ Fair	17		No
9	Western Hemlock	Tsuga heterophylla	11	65	Fair	17		Yes
10	Bigleaf Maple	Acer macrophyllum	25.1	90	Good/ Fair	26		Yes
11	Bigleaf Maple	Acer macrophyllum	24.3	90	Fair	26		Yes
12	Western Red Cedar	Thuja plicata	16.6	65	Good/ Fair	17		Yes
13	Bigleaf Maple	Acer macrophyllum	40.1	95	Fair/ Poor	31	N/A	No
14	Western Red Cedar	Thuja plicata	9.1	45	Good/ Fair	10		Yes
15	Western Red Cedar	Thuja plicata	8.8	45	Good	9		Yes
16	Western Red Cedar	Thuja plicata	5	30	Good	7		Yes
17	Bigleaf Maple	Acer macrophyllum	13.9	55	Poor	12	N/A	No
18	Bigleaf Maple	Acer macrophyllum	21.1	65	Good/ Fair	24		Yes
19	Western Red Cedar	Thuja plicata	10.6	45	Good	14		Yes
20	Bigleaf Maple	Acer macrophyllum	25.9	75	Fair/ Poor	18		Yes
20	Red Alder	Alnus rubra	12.7	75	Good	22		Yes
22	Western Red Cedar	Thuja plicata	5.1	30	Good	8		No
23	Western Red Cedar	Thuja plicata	3.2	30	Good	6		No
24	Western Red Cedar	Thuja plicata	10	45	Good	12		No
25	Pacific Yew	Taxus brevifolia	13.4	25	Fair/ Poor	16		Yes
26	Western Red Cedar	Thuja plicata	15.7	65	Good/ Fair	15		Yes
20	Douglas Fir	Pseudotsuga menziesii	29.1	110	Good/ Fair	24		Yes
28	Bigleaf Maple	Acer macrophyllum	25.1	70	Very Poor	24	N/A	No
28	Western Red Cedar	Thuja plicata	9.3	50	Good/ Fair	10		Yes
30	Bigleaf Maple	Acer macrophyllum	9.5 13.1	65	Good	10		No
31	Western Red Cedar	Thuja plicata	9.8	40				
					Good	15		Yes
32	Bigleaf Maple	Acer macrophyllum	18.3	70	Fair	28		Yes
33	Douglas Fir	Pseudotsuga menziesii	24.8	90	Good/ Fair	19		Yes
34	Douglas Fir	Pseudotsuga menziesii	10.1	60	Fair	17		Yes
35	Western Red Cedar	Thuja plicata	4.8	40	Good	7		Yes
36	Western Red Cedar	Thuja plicata	5.2	40	Good	9		Yes
37	Western Red Cedar	Thuja plicata	4.7	35	Good	8		Yes
38	Western Red Cedar	Thuja plicata	3.7	35	Good	7		Yes
39	Western Red Cedar	Thuja plicata	12.9	65	Good	17		Yes
40	Western Red Cedar	Thuja plicata	16	55	Good/ Fair	19		Yes
41	Bigleaf Maple	Acer macrophyllum	17	55	Poor	13	N/A	No
42	Bigleaf Maple	Acer macrophyllum	18.8	70	Good/ Fair	18		Yes
43	Western Red Cedar	Thuja plicata	9.5	50	Good	12		Yes
44	Bigleaf Maple	Acer macrophyllum	30.6	75	Fair	24		Yes
45	Bigleaf Maple	Acer macrophyllum	24.4	50	Dead	N/A	N/A	No
	Encro	paching Adjacer	nt Prop	erty Sig	nificant	Trees		
А	Douglas Fir	Pseudotsuga menziesii	30	100	Good	23		Yes
В	Douglas Fir	Pseudotsuga menziesii	3.8	25	Fair	7		Yes
С	Bigleaf Maple	Acer macrophyllum	38.6	80	Good/ Fair	26		Yes
D	Douglas Fir	Pseudotsuga menziesii	29.9	90	Good	19		Yes
E	Douglas Fir	Pseudotsuga menziesii	16	70	Good/ Fair	15		Yes
 F	Western Red Cedar	Thuja plicata	12.5	45	Good/ Fair	15		Yes
G	Douglas Fir	Pseudotsuga menziesii	10.5	55	Good	11		Yes
-	I <u>J</u>	R.O.W. S						
	1							
Н	Western Red Cedar	Thuja plicata	6.7	30	Good/ Fair	30		Yes
	Western Red Cedar	Thuja plicata	7.9	40	Good	40		Yes
J	Bigleaf Maple	Acer macrophyllum	12	40	Good/ Fair	40		Yes
К	Bigleaf Maple	Acer macrophyllum	10.4	45	Good	45		Yes
L	Western Red Cedar	Thuja plicata	6.4	40	Good	40		Yes







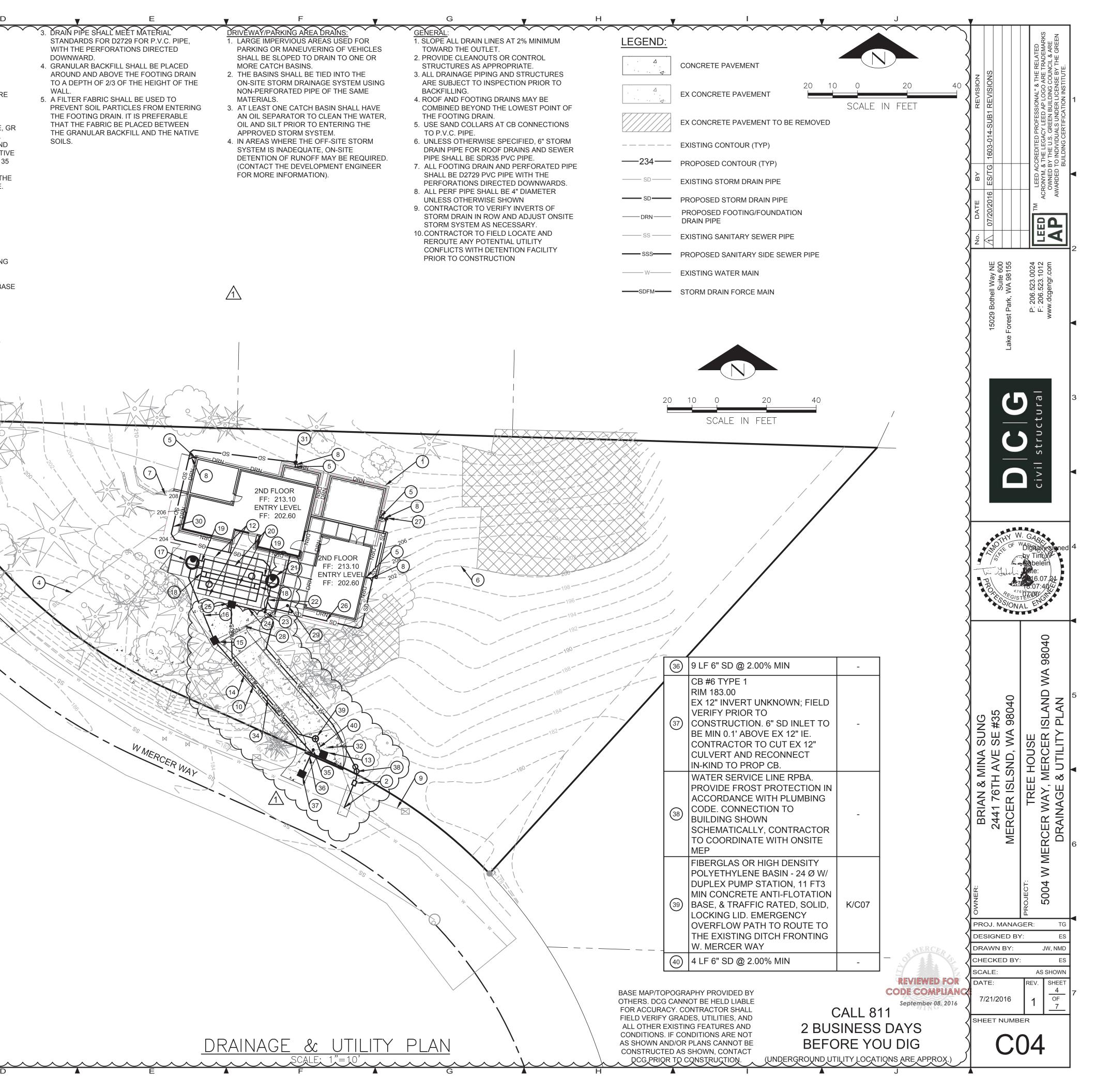
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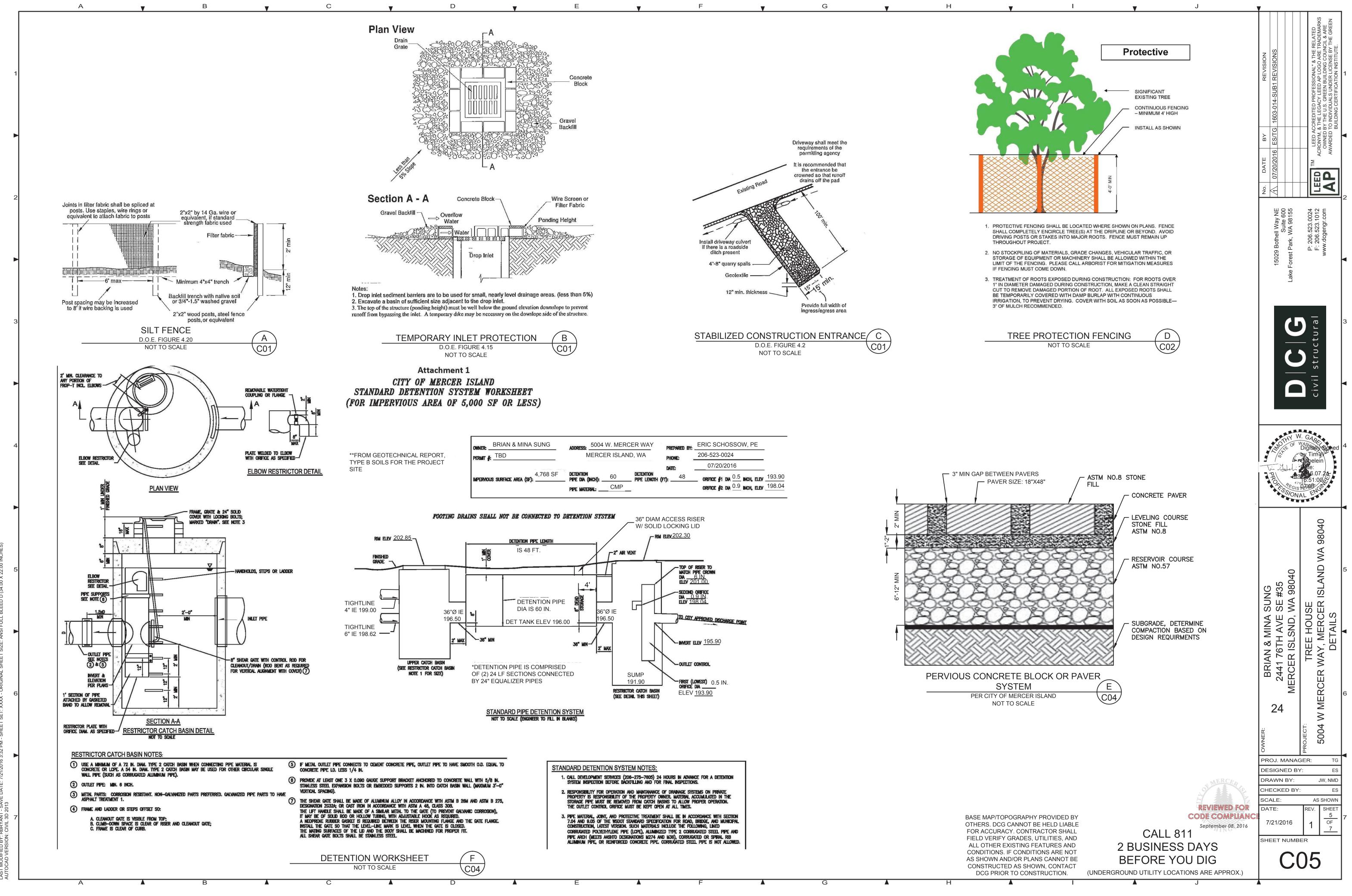
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			E CARL A CONTRACTOR	EG 185.76 EG 183.50 RIM 183.67			-/			<pre>ME</pre>
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		Υ.								
			>				BASE MAP/TOPOGRAP OTHERS. DCG CANNOT FOR ACCURACY. CON	T BE HELD LIABLE ITRACTOR SHALL	CODE COMPLIAN September 08, 2016 CALL 811	
	,						OTHERS. DCG CANNOT FOR ACCURACY. CON FIELD VERIFY GRADES ALL OTHER EXISTING CONDITIONS. IF COND	T BE HELD LIABLE ITRACTOR SHALL S, UTILITIES, AND G FEATURES AND DITIONS ARE NOT	CALL 811 2 BUSINESS DAYS	SHEET NUMBER
	_(	GRADING P Scale: 1"=10'	LAN				OTHERS. DCG CANNOT FOR ACCURACY. CON FIELD VERIFY GRADES ALL OTHER EXISTING	T BE HELD LIABLE ITRACTOR SHALL S, UTILITIES, AND FEATURES AND DITIONS ARE NOT LANS CANNOT BE HOWN, CONTACT	CALL 811 September 08, 2016	

	KEY NOTES		<u>ÅBBRÈ</u>	VIATIONS:	ĎRĂINĂ	GÉ NOTÉS	<u>S</u> . ~ ~
KEY	DESCRIPTION 4" PERFORATED PIPE FOOTING DRAIN - SURROUNDED IN 6" MIN. CLEAN WASHED GRAVEL AND WRAPPED IN NON-WOVEN	DETAIL/ SHEET	BSBL = CB = CONC = DEMO = DI =	BACK OF CURB BUILDING SETBACK LINE CATCH BASIN CONCRETE DEMOLITION DUCTILE IRON	CONFORM PLUMBING 2. DOWNSPG NON-PER PIPE, WHI	AND SIZE SHA MANCE WITH 1 G CODE. OUTS SHALL E FORATED, RIG ICH DRAINS TO	THE UNIFOR BE TIED INTO GID, SMOOT
2	FILTER FABRIC INSTALL NEW DOMESTIC WATER METER, SERVICE LINE, AND CONNECTION TO MAIN. METER/SUPPLY SIZE TO BE DETERMINED BY ONSITE MEP AND MIN FIRE FLOW REQ. REFER TO APPLICABLE DETAIL FOR SPECIFICATIONS BASED ON SIZE.	COMI W-12/W- 13/W-14 & W-16	DS = TESC = EX = FF = FG = IE = LF = SD = SDCO =	FOOTING DRAIN DOWNSPOUT TEMPORARY EROSION & EDIMENTATION CONTROL EXISTING FINISH FLOOR FINISH GRADE INVERT ELEVATION LINEAL FEET STORM DRAIN STORM DRAIN CLEANOUT STORM DRAIN FORCE MAIN	STANDAR F-405 FOF 4. PROVIDE OF THE S CHANGE DEGREES 5. ALL PIPE SAME MA GLUED JC	E SHALL MEE DS FOR D2729 SMOOTH-BO CLEANOUTS A YSTEM AND A OF DIRECTION FITTINGS SHA TERIAL AS TH DINTS SHALL U ECOMMENDEI	9 FOR P.V.C IRE H.D.P.E. AT THE UPP T EACH CUI N IN EXCESS ALL BE MADE E STRAIGHT JSE A BOND
3	APPROX LOCATION OF EX SIDE SEWER PER SIDE SEWER PLAT RECORD #5114 AND CITY INSPECTION RECORDS	-	SS = SSS =	SANITARY SIDE EWER CLEANOUT SANITARY SEWER SANITARY SIDE SEWER TOP OF CURB	AROUND ENCLOSE	AINS: DRAINS SHAL ALL FOUNDAT A CRAWL SP/ IT, GARAGE O	TIONS WHIC ACE, CELLA
4	EX SANITARY SIDE SEWER TO BE REUSED. CONTRACTOR TO VERIFY SIZE AND LOCATION OF EX SIDE SEWER AND REPORT TO ENGINEER. VIDEO INSPECTION OF EX SIDE SEWER REQUIRED FOR REUSE	-	TOP =	TOP OF PAVEMENT TYPICAL	SPACE. 2. DRAINS S	HALL BE CON	STRUCTED
5	4" ROOF DOWNSPOUT (TYP)	-	—		<u> </u>		
6	EX CONTOUR (TYP)	-		$\setminus \mathbf{I} \setminus$		1	
	PROPOSED CONTOUR (TYP)	-					
8	4" DOWNSPOUT TIGHTLINE @ 2.00% MIN.	-				33	
)9	EX STORM DRAIN PIPE	-			SS F		
	PROPOSED STORM DRAIN PIPE	-				EN BE	XAS
	NOT USED	-					18
	INSTALL PERMEABLE PAVERS IN ACCORDANCE WITH MICC 19.16.010 (P) AND "PERMEABLE PAVER BLOCK DESIGN GUIDELINES" FOR SFR PROJECTS,	E/C05					
	CB #1 - TYPE 1 W/ OIL/WATER SEPARATOR RIM 183.67 6" IE (NW) 181.17	G&J/C06					
14	58 LF 6" SD @ 23.28% AVG SLOPE. INSTALL VERTICAL BENDS AS NECESSARY CB #2 - TYPE 1	-					
	RIM 199.90 4" IE (NE) 197.00 (FTG DRN) 6" IE (NW) 195.40 (TANK OUTLET) 6" IE (SE) 195.30	J/C06	25			J/C06	
(16)	30 LF 6" SD @ 2.00%	-	(26)	2" IE (S) 199.20 (SDFM) 84 LF 6" SD @ 2.00%	)		
$\underbrace{\checkmark}$	CB #3 - TYPE 2 - 54"Ø			6" SDCO			
	W/ SOLID LOCKING LID W/ RESTRICTOR TEE RIM 202.85 6" OVERFLOW 201.00	F/C05 &	27	) RIM 210.78 6" IE 200.78 4" FOOTING DRAIN. TI	GHTLINE	I/C06	
	W/ SOLID LOCKING LID W/ RESTRICTOR TEE RIM 202.85 6" OVERFLOW 201.00 2" IE (E) 200.83 (TANK VENT) 36" IE (E) 196.50 (TANK INLET) 6" IE (S) 195.90 (OUTLET)			6" IE 200.78 4" FOOTING DRAIN. TI TO CB AT 2.00% MIN S 2.00 FT MIN COVER 4" SDCO		-	
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	<ul> <li>W/ SOLID LOCKING LID</li> <li>W/ RESTRICTOR TEE</li> <li>RIM 202.85</li> <li>6" OVERFLOW 201.00</li> <li>2" IE (E) 200.83 (TANK VENT)</li> <li>36" IE (E) 196.50 (TANK INLET)</li> <li>6" IE (S) 195.90 (OUTLET)</li> <li>SUMP 191.90</li> <li>2 LF 24"Ø DETENTION TANK</li> <li>TRANSITION PIPE @ ELEV 196.00</li> <li>2 LF 36"Ø DETENTION TANK</li> <li>TRANSITION PIPE @ ELEV 196.50</li> </ul>	& H/C06		6" IE 200.78 4" FOOTING DRAIN. TI TO CB AT 2.00% MIN S 2.00 FT MIN COVER 4" SDCO RIM 202.15 4" IE 197.64 123 LF 4" SD @ 8.13% SLOPE, CONTRACTOR	AVE R SHALL ENDS AS	-	
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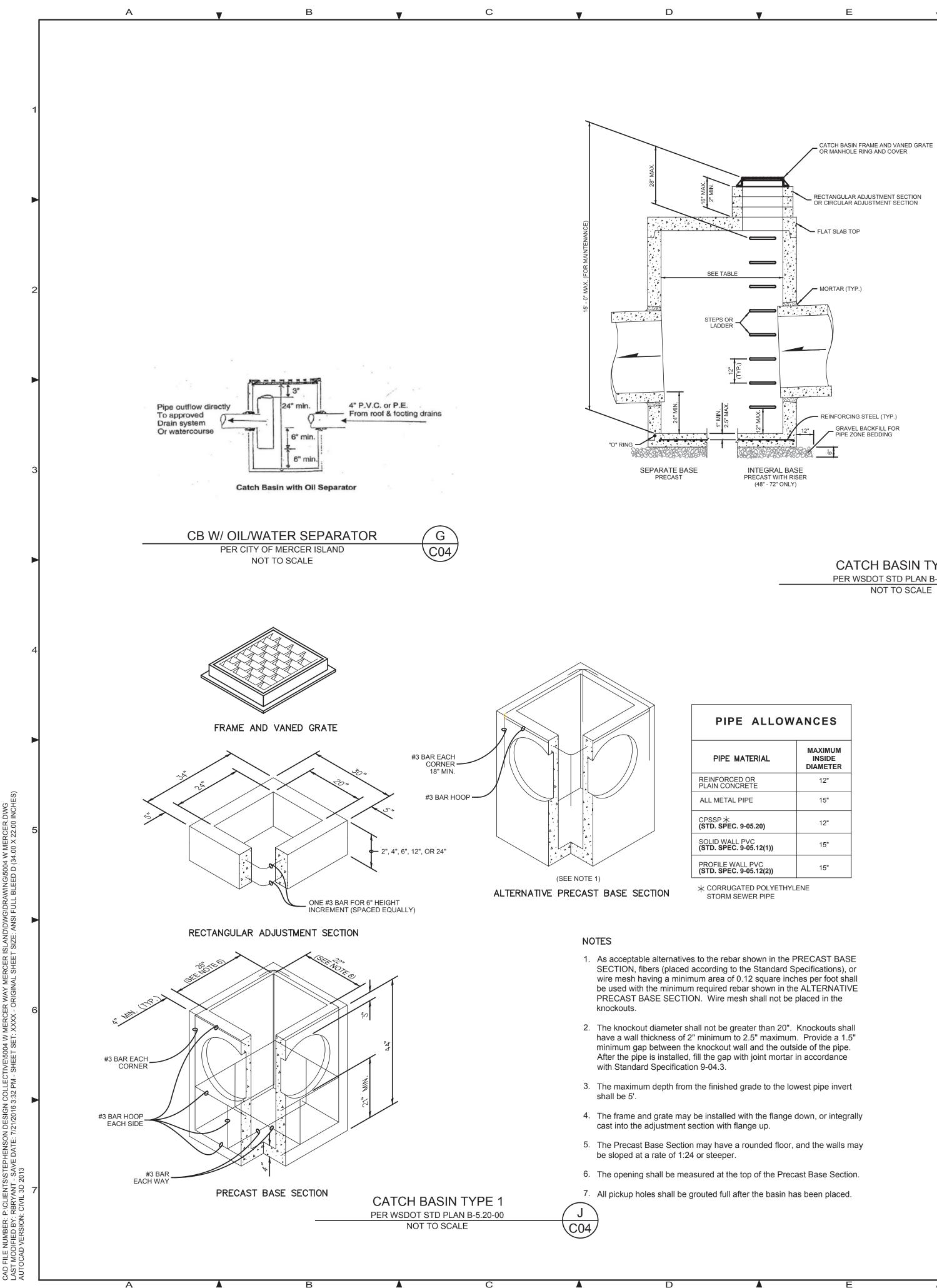
CAD FILE NUMBER: P:/CLIENTS/STEPHENSON DESIGN COLLECTIVE/5004 W MERCER WAY MERCER ISLAND/DWG/DRAWING/5004 W MERCER.DV LAST MODIFIED BY: KROGERS - SAVE DATE: 7/21/2016 6:02 PM - SHEET SET: XXXX - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 IN ALITOCAD VERSION: CIVIL 3D 2013

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CAD FILE NUMBER: P:\CLIENTS\STEPHENSON DESIGN COLLECTIVE\5004 W MERCER WAY MERCER ISLAND\DWG\DRAWING\5004 W MERCER. LAST MODIFIED BY: RBRYANT - SAVE DATE: 7/21/2016 3:32 PM - SHEET SET: XXXX - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 A UTOCAD VERSION: CIVIL 3D 2013



5/DR/ FULL RCER ISLAND SHEET SIZE: ₽₹ TIVE\5004 W N SHEET SET: ESIGN COLLEC7 /2016 3:32 PM -HENSON DE EDATE: 7/21/

### NOTES

- 1. No steps are required when height is 4' or less.
- 2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
- The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.

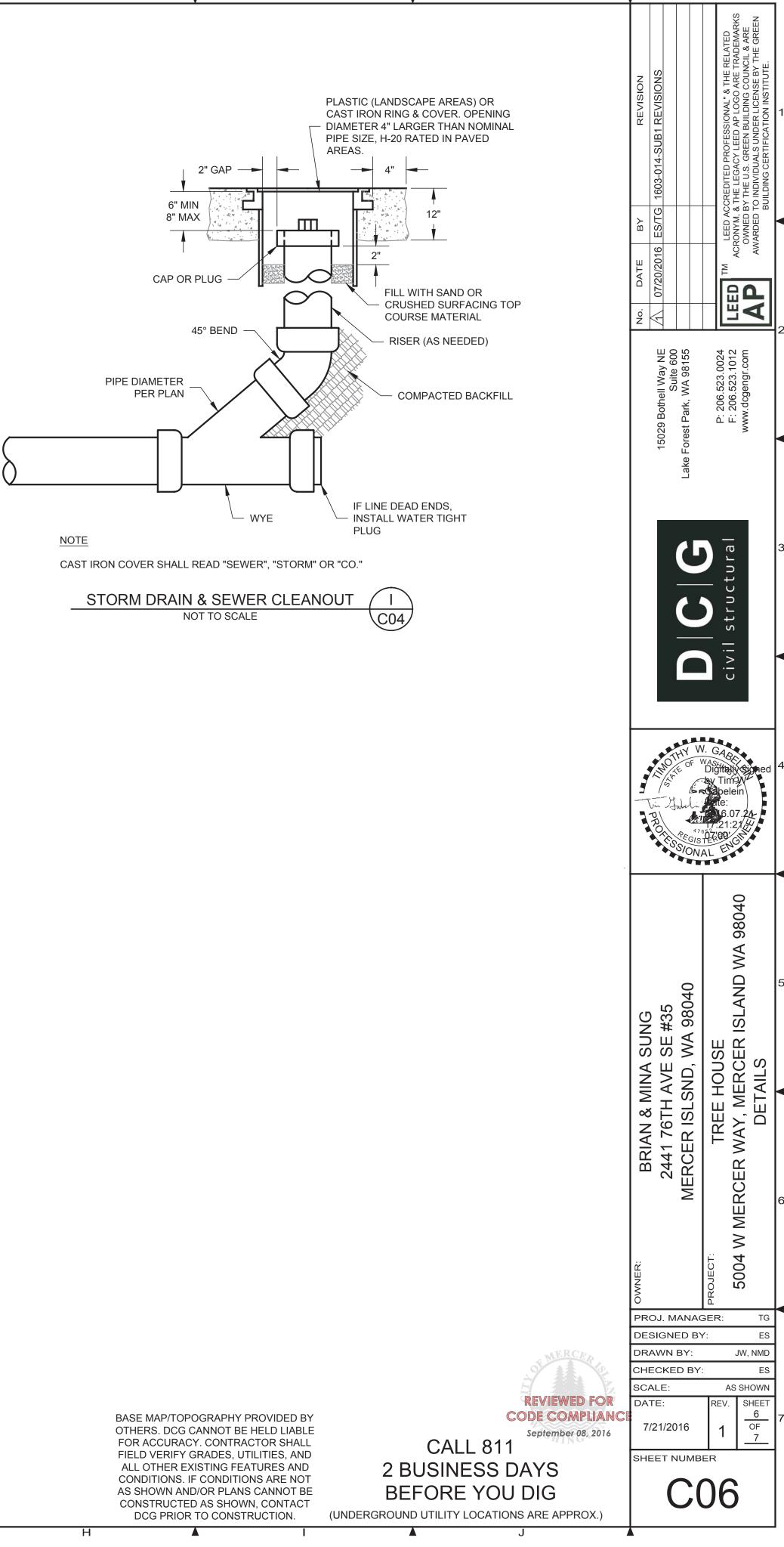
4. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.

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	CATCH	BASIN DI	MENSION	S
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES								
САТСН	PIPE MATE	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER						
BASIN DIAMETER	CONCRETE	ALL METAL	CPSSP ①	SOLID WALL PVC ②	PROFILE WALL PVC <sup>③</sup>			
48"	24"	30"	24"	30"	30"			
54"	30"	36"	30"	36"	36"			
60"	36"	42"	36"	42"	42"			
72"	42"	54"	42"	48"	48"			
84"	54"	60"	54"	48"	48"			
96"	60"	72"	60"	48"	48"			
120"	66"	84"	60"	48"	48"			
144"	78"	96"	60"	48"	48"			

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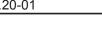


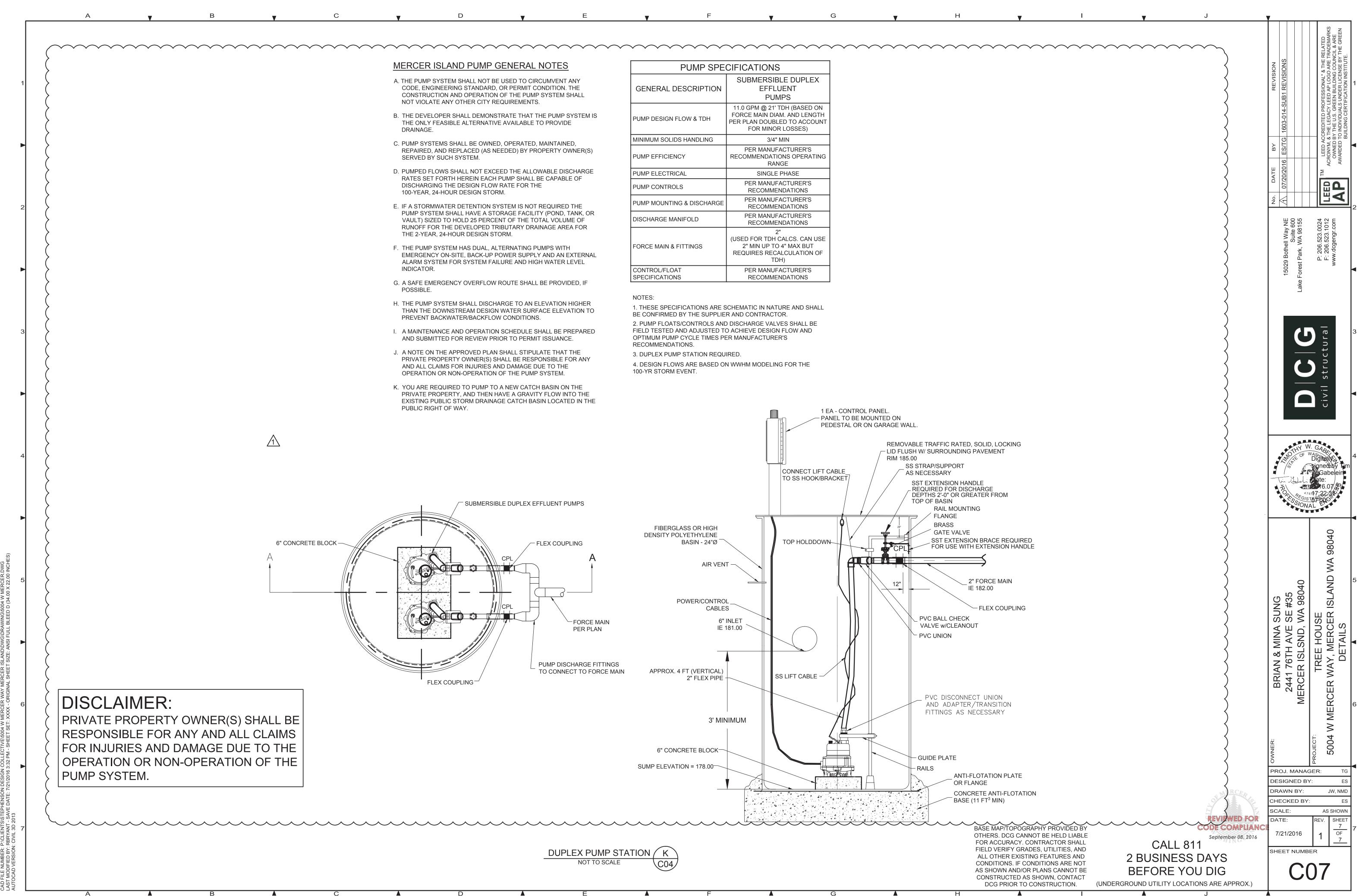
① Corrugated Polyethylene Storm Sewer Pipe (Standard Specification 9-05.20) (Standard Specification 9-05.12(1)) 3 (Standard Specification 9-05.12(2))

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C04

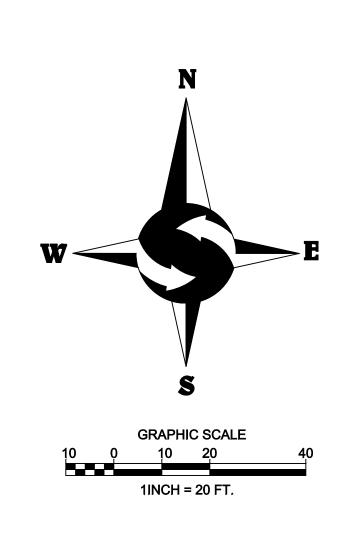
CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-01





SET: COLLEC 3:32 PM -

PUMP SPECIFICATIONS					
GENERAL DESCRIPTION	SUBMERSIBLE DUPLEX EFFLUENT PUMPS				
PUMP DESIGN FLOW & TDH	11.0 GPM @ 21' TDH (BASED ON FORCE MAIN DIAM. AND LENGTH PER PLAN DOUBLED TO ACCOUNT FOR MINOR LOSSES)				
MINIMUM SOLIDS HANDLING	3/4" MIN				
PUMP EFFICIENCY	PER MANUFACTURER'S RECOMMENDATIONS OPERATING RANGE				
PUMP ELECTRICAL	SINGLE PHASE				
PUMP CONTROLS	PER MANUFACTURER'S RECOMMENDATIONS				
PUMP MOUNTING & DISCHARGE	PER MANUFACTURER'S RECOMMENDATIONS				
DISCHARGE MANIFOLD	PER MANUFACTURER'S RECOMMENDATIONS				
FORCE MAIN & FITTINGS	2" (USED FOR TDH CALCS. CAN USE 2" MIN UP TO 4" MAX BUT REQUIRES RECALCULATION OF TDH)				
CONTROL/FLOAT SPECIFICATIONS	PER MANUFACTURER'S RECOMMENDATIONS				



### LEGEND

Ð	FOUND MONUMENT AS DESCRIBED
0	FOUND REBAR AS DESCRIBED
X	TACK IN LEAD FOUND
•	SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP
P	POWER METER
Ø	UTILITY POLE
0	GAS METER
	SANITARY SEWER CLEANOUT
$\bigcirc$	SANITARY SEWER MANHOLE
$\bowtie$	WATER VALVE
Q	FIRE HYDRANT
$\blacksquare$	WATER METER
	SIGN
—SS—	APPROXIMATE LOCATION SANITARY SEWER LINE
—sd—	APPROXIMATE LOCATION STORM DRAIN LINE
- OHP	OVERHEAD POWER
-OHU-	OVERHEAD UTILITIES
— <b>x</b> —	CHAINLINK FENCE
	WOOD FENCE
	CONCRETE WALL
	ROCKERY
	ASPHALT SURFACE
	CONCRETE SURFACE
	GRAVEL SURFACE
CE	CEDAR
DS	DECIDUOUS
DF	DOUGLAS FIR
MP	MAPLE
	BINE

\* INDICATES MULTI-TRUNK

PI PINE

### **GENERAL NOTES**

- 1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
- 2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND NIKON NIVO 5.C TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
- 3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN MAY 2015 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- 4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
- NOTED.

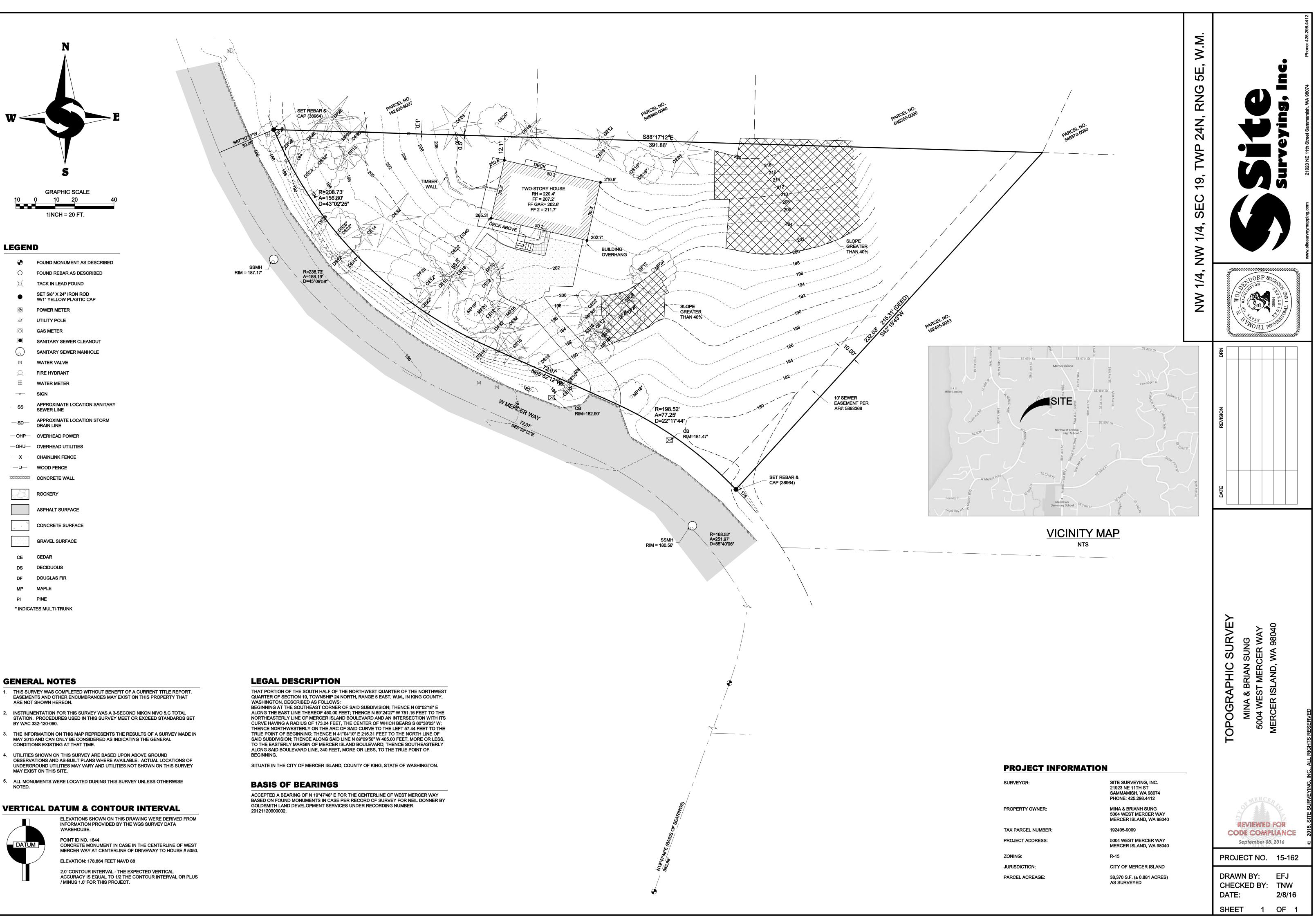
### VERTICAL DATUM & CONTOUR INTERVAL



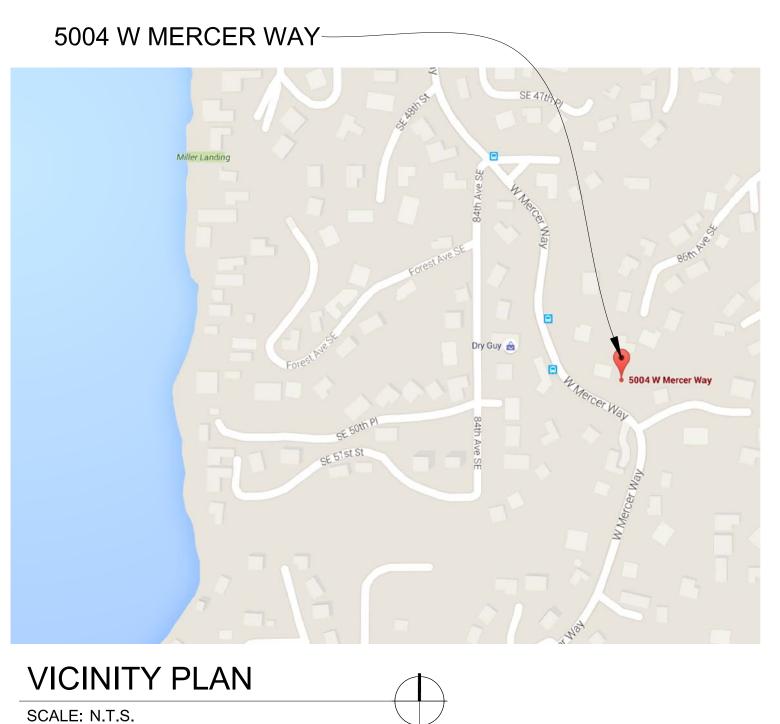
ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY THE WGS SURVEY DATA WAREHOUSE.

POINT ID NO. 1844 CONCRETE MONUMENT IN CASE IN THE CENTERLINE OF WEST MERCER WAY AT CENTERLINE OF DRIVEWAY TO HOUSE # 5050. ELEVATION: 178.864 FEET NAVD 88

2.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 1.0' FOR THIS PROJECT.







LIST OF		
	LIST	OF

	PROJECT D TOPOGRAP CIVIL DRAIN
A1.0 A1.1 A1.2 A1.3 A2.0 A2.1 A2.2 A2.3 A3.0 A3.1 A3.2 A3.3 A4.0 A4.1 A4.2 A6.0 A6.1 A6.2 A7.0	PLOT PLAN VENT NOTE HEIGHT CAI PLAN NOTE GROUND LE LIVING LEVI LOFT LEVEI ROOF PLAN ELEVATION ELEVATION ELEVATION BUILDING S BUILDING S BUILDING S DETAILS DETAILS DETAILS WINDOW SO GLAZING SO
S -	STRUCTUR
	V1 C A1.0 A1.1 A1.2 A1.3 A2.0 A2.1 A2.2 A2.3 A3.0 A3.1 A3.2 A3.3 A4.0 A4.1 A4.2 A6.0 A4.1 A4.2 A6.0 A6.1 A6.2 A7.0 A7.1



5004 W MERCER WAY MERCER ISLAND, WA

**LEGAL DESCRIPTION:** THAT PORTION OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION; THENCE N 00°02'18" E ALONG THE EAST LINE THEREOF 450.00 FEET; THENCE N 89°24'27" W 751.16 FEET TO THE NORTHEASTERLY LINE OF MERCER ISLAND BOULEVARD AND AN INTERSECTION WITH ITS CURVE HAVING A RADIUS OF 173.24 FEET, THE CENTER OF WHICH BEARS S 60°38'03" W; THENCE NORTHWESTERLY ON THE ARC OF SAID CURVE TO THE LEFT 57.44 FEET TO THE TRUE POINT OF BEGINNING; THENCE N 41°04'10" E 215.31 FEET TO THE NORTH LINE OF SAID SUBDIVISION; THENCE ALONG SAID LINE N 89°09'50" W 405.00 FEET, MORE OR LESS, TO THE EASTERLY MARGIN OF MERCER ISLAND BOULEVARD; THENCE SOUTHEASTERLY ALONG SAID BOULEVARD LINE, 340 FEET, MORE

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

**PARCEL:** 1924059009

# **PROJECT DATA:**

**ZONE:** RS-15 LOT SIZE: 38,370 SF LOT COVERAGE: ALLOWABLE: 30% = 11,511 MAX

MAX GROSS FLOOR AREA: 45% ALLOWED = 17,266.5 SF

**IMPERVIOUS AR** BUILDIN SITE IMF DRIVEW TOTAL I

### YARDS:

FRONT SIDE N SIDE E REAR

**HEIGHT:** ALLOWABLE - AVERAGE NATURAL GRADE\* + 30' ACTUAL - 26'-2" ABOVE AVERAGE AVG GRADE \*SEE A1.2 FOR AVERAGE GRADE + HEIGHT CALCS. SEE ALSO A3.0 - A3.4

# **PROJECT TEAM:**

**OWNER**: MINA AND BRIAN SUNG 2441 76TH AVE SE APT 535 MERCER ISLAND WA 98040

DESIGNER / APPLICANT: 1725 WESTLAKE AVE, SUITE 201 SEATTLE, WA 98109 p 206.632.7703

STRUCTURAL ENGINEERING: MALSAM TANG 122 S JACKSON STREET STE 210 SEATTLE, WA 98104 p 206.498.2674

# DRAWINGS

DATA / VICINITY MAP PHIC SURVEY NAGE N / GEN NOTES ES/ PLOT PLAN 4LC ES AND DEMO PLAN EVEL PLAN VEL PLAN EL PLAN SECTIONS SECTIONS SECTIONS

CHEDULE SCHEDULE RALS

# TREE HOUSE

**PROJECT DESCRIPTION:** EXTENSIVE REMODEL OF THE LIVING LEVEL OF THE HOUSE WITH THE EXISTING BASEMENT TO REMAIN. ADDITION OF NEW ATTACHED NEW GARAGE WITH LIVING ABOVE.

OR LESS, TO THE TRUE POINT OF BEGINNING.

ACTUAL: **5,548 SF** < 11,511 SF TOTAL COVERAGE

REA:	45% ALLC	WED
IGS		3399 SF
PER\	/IOUS	502 SF
/AY		2440 SF
IMPE	RVIOUS	6,341 SF

REQUIRED ACTUAL 20'-0" 47'-3" 5'-0" (15' TOTAL) 12'-1" 5'-0" (15' TOTAL) 108'-8" 25'-0"

SURVEYOR: SITE SURVEYING INC 21923 NE 11TH ST SAMMAMISH, WA 98074

STEPHENSON DESIGN COLLECTIVE

**GEOTECHNICAL ENGINEER:** PAN GEO INC 3213 EASTLAKE AVE E #B SEATTLE, WA 98102 p 206.262.0370

**CONTRACTOR:** TBD



1725 Westlake Ave. N Suite 201 Seattle, WA 98109 p 206.632.7703

StephensonCollective.com

© Stephenson Design Collective, LLC 2016. These drawings were prepared for **"Tree House"** project in King County, WA. They are not intended for use on any other project. Stated drawing scale is based on 34x22

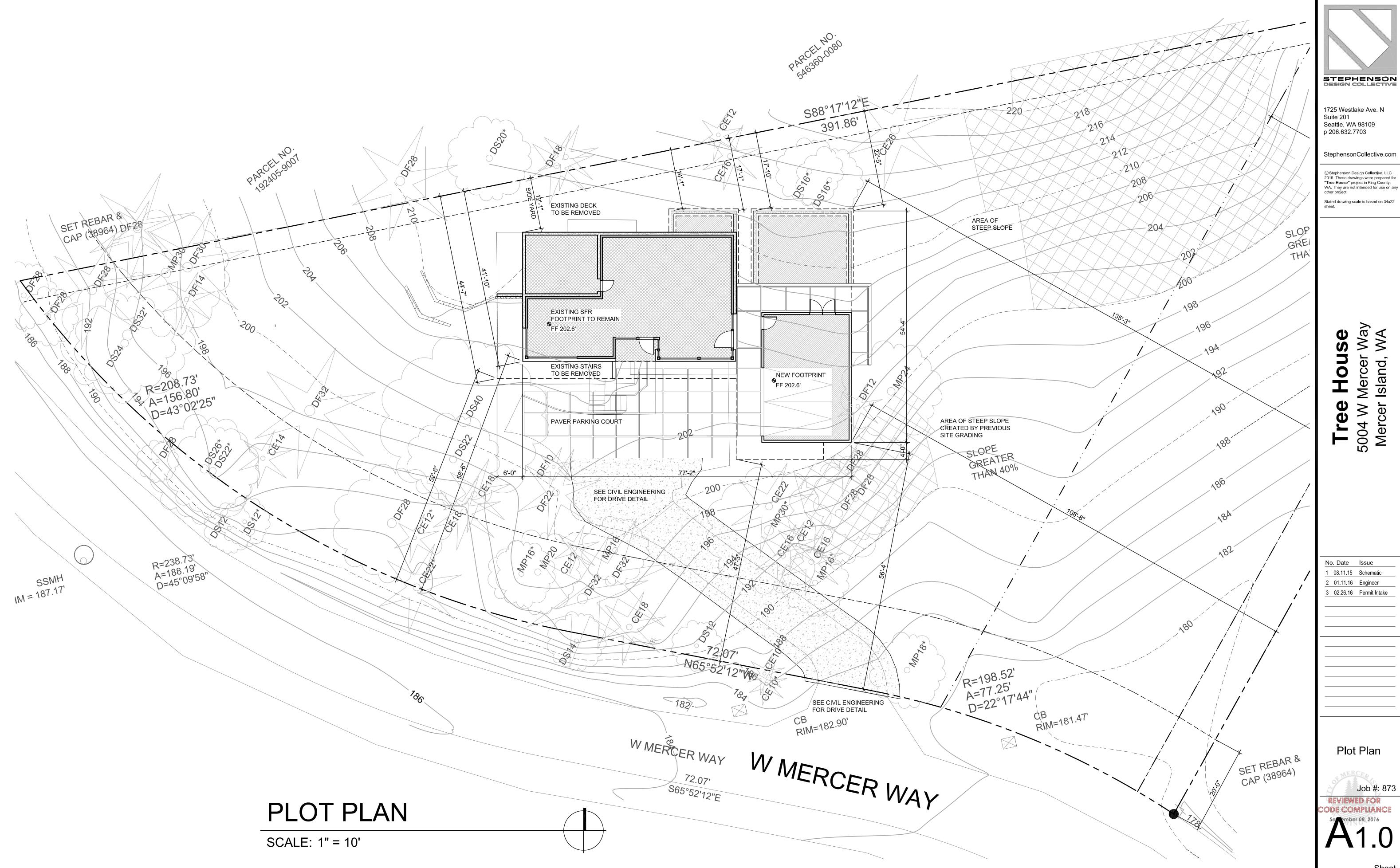
> Way ouse  $\geq$ Island, Mercer Tree Mercer  $\geq$ 5004

No	o. Date	Issue
1	08.11.15	Schematic
2	01.11.16	Engineer
3	02.26.16	Permit Intake
4	07.20.16	Correction Rd 1

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# **ARCHITECTURAL NOTES:**

(THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE PLANS)

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE FOLLOWING APPLICABLE CODES USED IN THE DESIGN:

2012 INTERNATIONAL BUILDING CODE 2012 WASHINGTON STATE ENERGY CODE 2012 VENTILATION AND INDOOR QUALITY CODE

2. CONTRACTOR: SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.

3. CONTRACTOR: SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

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

5. DRAWINGS: INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT/DESIGNER.

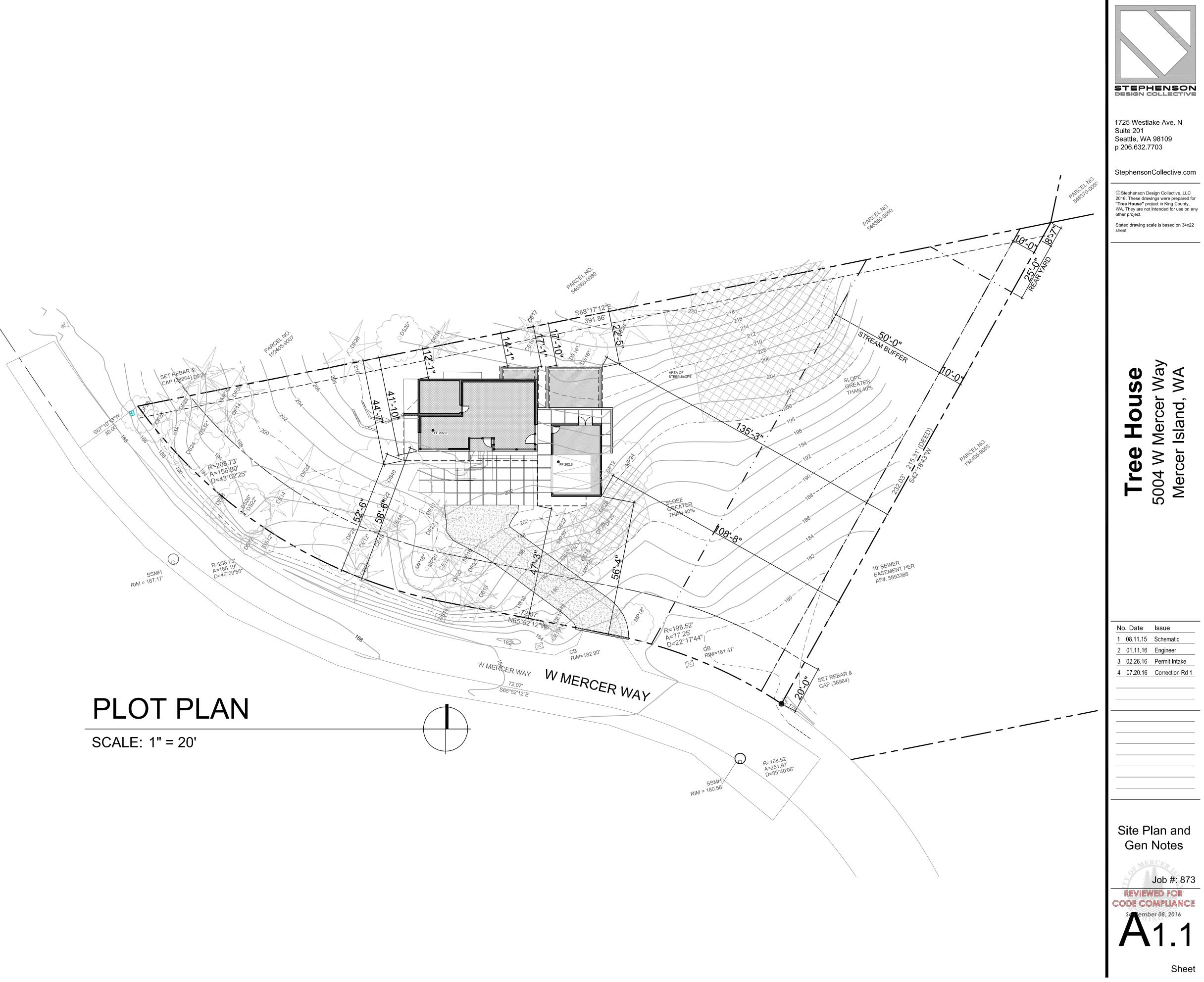
6. ALL WOOD PLATES: IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE. PROVIDE 2 LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC., AND CONCRETE OR MASONRY.

7. PRESSURE TREATED LUMBER: ALL FASTENERS AND CONNECTORS THAT ARE IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED WITH A MINIMUM COATING OF G90 (.90oz/sf) PER ASTM A123 AND/OR ASTM A153. 304 OR 316 STAINLESS STEEL MAY BE SUBSTITUTED IN LIEU OF GALVANIZED PRODUCTS. NO STAINLESS STEEL PRODUCTS SHALL COME IN CONTACT WITH GALVANIZED PRODUCTS.

8. SECURITY FROM CRIMINAL ACTIVITY: DEAD BOLT (MIN. 1/2" THROW) AND VIEWPOINT REQUIRED @ EXTERIOR DOORS. WINDOWS AND SLIDING DOORS WITHIN 10' OF GRADE SHALL BE PROVIDED WITH LATCHING DEVICES, ALL LOCKS SHALL BE OPEN ABLE WITHOUT SPECIAL KNOWLEDGE OR EFFORT.

9. CONSTRUCTION EROSION CONTROL MEASURES: MUST BE IN PLACE AND APPROVED PRIOR TO ANY EARTH DISTURBANCE.

10. NO SEDIMENT SHALL BE TRACKED INTO THE STREET OR ONTO PAVED SURFACES. SEDIMENT SHALL BE REMOVED FROM TRUCKS AND EQUIPMENT PRIOR TO LEAVING THE SITE. IN THE EVENT OF FAILURE OF EROSION CONTROL SYSTEM RESULTING IN SEDIMENT BEING TRACKED ONTO PAVED SURFACES, THE CONTRACTOR SHALL IMMEDIATELY IMPLEMENT MEASURES TO CORRECT THE SITUATION, AND STREET SWEEPING SHALL BE EMPLOYED ON AN EMERGENCY BASIS. IF STREET SWEEPING VEHICLES ARE UTILIZED, THEY SHALL BE OF THE TYPE THAT ACTUALLY REMOVES SEDIMENT FROM THE PAVEMENT.





# **INTEGRATED WHOLE-HOUSE VENTILATION NOTES:**

### 2012 IRC M1507 - MECHANICAL VENTILATION

M1507.1 General. Local exhaust and whole-house mechanical ventilation systems and equipment shall be designed in accordance with this section.

M1507.2 Recirculation of Air. Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another dwelling unit and shall be exhausted directly to the outdoors. Exhaust air from bathrooms and toilet rooms shall not discharge into an attic, crawl space or other areas of the building.

M1507.3 Whole-House Mechanical Ventilation System. Whole-house mechanical ventilation systems shall be designed in accordance with Sections M1507.3.1 through M1507.3.3.

M1507.3.1 System Design. Each dwelling unit or guestroom shall be equipped with a ventilation system complying with Section M1507.3.4, M1507.3.5, M1507.3.6 or M1507.3.7. Compliance is also permitted to be demonstrated through compliance with the International Mechanical Code.

## M1507.3.2 Control and Operation. THIS PROJECT WILL UTILIZE INTERMITTENT WHOLE HOUSE SYSTEM WITH 50% RUN TIME

- 1. Location of Controls. Controls for all ventilation systems shall be readily accessible by the occupant.
- 2. Instructions. Operating instructions for whole-house ventilation systems shall be provided to the occupant by the installer of the system
- 3. Local Exhaust Systems. Local exhaust systems shall be controlled by manual switches, dehumidistats, timers, or other approved means.
- 4. Continuous Whole-House Ventilation Systems. Continuous whole-house ventilation systems shall operate continuously. Exhaust fans, forced-air system fans, or supply fans shall be equipped with "fan on" as override controls. Controls shall be capable of operating the ventilation system without energizing other energy-consuming appliances. A label shall be affixed to the controls that reads "Whole-House Ventilation (see operating instructions)."
- 5. Intermittent Whole-House Ventilation Systems. Intermittent whole-house ventilation systems shall comply with the following: 5.1. They shall be capable of operating intermittently and continuously.
- other energy-consuming appliances.

- used to calculate the whole-house fan sizing.

CL4 5.2. They shall have controls capable of operating the exhaust fans, forced-air system fans, or supply fans without energizing 5.3. The ventilation rate shall be adjusted according to the exception in Section 403.8.5.1. 20 5.4. The system shall be designed so that it can operate automatically based on the type of control timer installed. O V 5.5. The intermittent mechanical ventilation system shall operate at least one hour out of every four. 5.6. The system shall have a manual control and automatic control, such as a 24-hour clock timer. 4 5.7. At the time of final inspection, the automatic control shall be set to operate the whole-house fan according to the schedule 42'-4' 34'-10" 5.8. A label shall be affixed to the control that reads "Whole House Ventilation (see operating instructions)." M1507.3.2.1 Operating Instructions. Installers shall provide the manufacturer's installation, operating instructions, and a 210 whole-house ventilation system operation description. → B b 210.0' a 210.0' M1507.3.4.1 Whole-House Ventilation Fans. Exhaust fans providing whole-house ventilation shall have a flow rating at 0.25 inches water gauge as specified in Table M1507.3.3(1). Manufacturers' fan flow ratings shall be determined according to HVI 916 or AMCA 210. 0 4 4 h 208.0 M1507.3.4.2 Fan Noise. Whole-house fans located 4 feet or less from the interior grille shall have a sone rating of 1.0 or less measured at 0.1 inches water gauge. Manufacturer's noise ratings shall be determined as per HVI 915 (March 2009). Remotely mounted fans shall be acoustically isolated from the structural elements of the building and from attached duct work using insulated flexible duct or other approved material. M1507.3.4.3 Fan Controls. The whole-house ventilation fan shall meet the requirements of Section M1507.3.2 and M1507.3.2.1. M1507.3.4.4 Outdoor Air Inlets. Outdoor air shall be distributed to each habitable space by individual outdoor air inlets. Where outdoor air supplies are separated from exhaust points by doors, provisions shall be made to ensure air flow by installation of \_\_\_\_\_g 205.5' distribution ducts, undercutting doors, installation of grilles, transoms, or similar means. Doors shall be undercut to a minimum of 1/2 inch above the surface of the finish floor covering. Individual room outdoor air inlets shall: OS40 50'-0" 1. Have controllable and secure openings; Ġ 2. Be sleeved or otherwise designed so as not to compromise the thermal properties of the wall or window in which they are placed; 3. Provide not less than 4 square inches of net free area of opening for each habitable space. Any inlet or combination of inlets which provide 10 cfm at 10 Pascals are deemed equivalent to 4 square inches net free area. Inlets shall be screened or otherwise protected from entry by leaves or other material. Outdoor air inlets shall be located so as not to take air from the following areas: So 1. Closer than 10 feet from an appliance vent outlet, unless such vent outlet is 3 feet above the outdoor air inlet. DETO 2. Where it will pick up objectionable odors, fumes or flammable vapors. 3. A hazardous or unsanitary location. 80 4. A room or space having any fuel-burning appliances therein. 200 81 5. Closer than 10 feet from a vent opening of a plumbing drainage system unless the vent opening is at least 3 feet above the air inlet. S.S. Orgo 6. Attic, crawl spaces, or garages. Cr72\* CK10 198 200 MP SO 11070\* N 194  $,95^{\circ}$ 4

M1507.3.3 Mechanical Ventilation Rate. The whole-house mechanical ventilation system shall provide outdoor air to each habitable space at a continuous rate of not less than that determined in accordance with Table M1507.3.3(1) M1507.3.4 Whole-House Ventilation Using Exhaust Fans. This section establishes minimum prescriptive requirements for whole-house ventilation systems using exhaust fans. A system which meets all the requirements of this section shall be deemed to satisfy the requirements for a whole-house ventilation system.

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

(30') = HEIGHT ABOVE AVERAGE GRADE

\*ALL GRADES BELOW EXISTING STRUCTURES HAVE BEEN INTERPOLATED \*\*ALL BUILDING HEIGHT CALCULATIONS ARE BASED OFF OF EITHER EXISTING OR FINISHED GRADE, WHICH EVER IS LOWEST

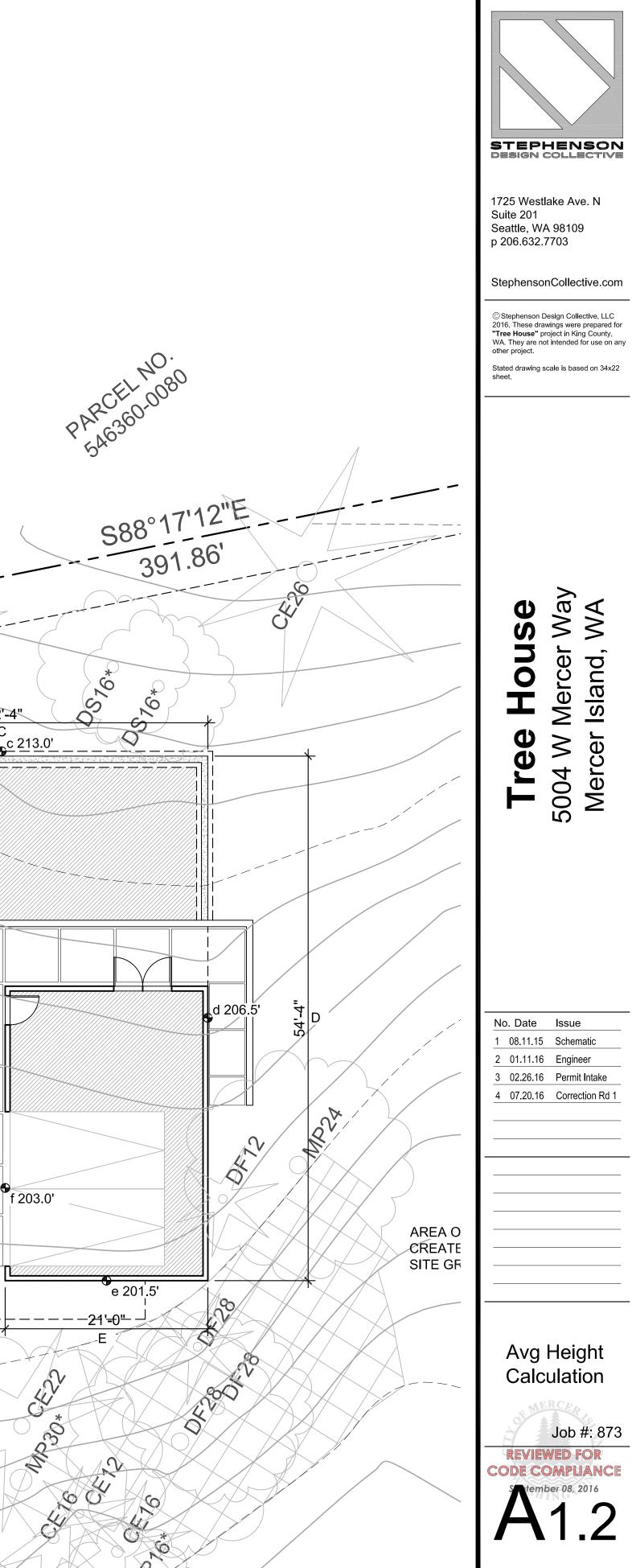
HEIGHT CALC. PLAN

### AVERAGE GRADE CALC

(A x a) + (B x b) + (C x c) + (D x d) + (E x e) + (F x f) + (G x g) + (H x h)a+b+c+d+e+f+g+h

 $(210.0 \times 34.88) + (210.0 \times 4.0) + (213.0 \times 42.33) + (206.5 \times 54.33) + (201.5 \times 21.0) + (203.0 \times 19.0) + (205.5 \times 50.0) + (208.0 \times 30.33)$ 34.88 + 4.0 + 42.33 + 54.33 + 21.0 + 19.0 + 50.0 + 30.33

### $\frac{53072.38}{255.87}$ = 207.4 AVERAGE GRADE 237.4 MAX HEIGHT



## **TYPICAL FLOOR NOTES:**

### LOWER, MAIN & UPPER LEVEL NOTES:

\* ALL INTERIOR WALLS TO BE 2x4 @ 16" O.C. (U.N.O.) \* ALL EXTERIOR WALLS TO BE 2x6 @16" O.C. (U.N.O.)

\* HEADERS PER STRUCTURAL (HEIGHT VARIES)

\* WINDOW SIZES ARE NOMINAL ROUGH OPENING, WIDTH AND HEIGHT.

\* DOOR SIZES NOTED ARE SLABS NOT ROUGH OPENINGS

\* PROVIDE FIREBLOCKING AT ALL PLUMBING OPENINGS. \* PROVIDE SOLID BLOCKING OVER SUPPORTS.

\* WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR-CEILING

ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF CONCEALED SPACE DOES NOT EXCEED 1000 SF. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS AND SHALL BE OF ½" GYP BOARD OR OTHER APPROVED MATERIALS INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS PER IRC 502.12.

\* PROVIDE FIREBLOCKING TO CUT OFF ALL CONCEALED HORIZONTAL AND VERTICAL DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STOIRES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL CONSIST OF NOT LESS THAN 2" NOMINAL LUMBER OR OTHER APPROVED MATERIAL. IRC 602.8

\* ASPHALT-SATURATED FELT FREE FROM HOLES OR BREAKS, WEIGHING NOT LESS THAN 14 POUNDS PER 100 SQUARE FEET AND COMPLYING WITH ASTM D 226 OR OTHER APPROVED WEATHER RESISTANT MATERIAL SHALL BE APPLIED OVER SHEATHING OF ALL EXTERIOR WALLS. APPROVED ALTERNATIVE WEATHERPROOF MEMBRANES SHALL BE USED FOR OPEN JOINT RAIN SCREEN SIDING. WEATHER RESISTANT MATERIALS SHALL BE APPLIED HORIZONTALLY PER MANUFACTURERS RECOMMENDATIONS, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES AND NOT LESS THAN 6 INCHES WHERE JOINTS OCCUR. IRC 703.2

\* APPROVED CORROSION-RESISTIVE FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDINGS STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL SURFACE AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE. FLASHING SHALL BE INSTALLED AT, BUT NOT LIMITED TO THE FOLLOWING LOCATIONS:

- -THE TOP OF ALL EXTERIOR WINDOW & DOOR OPENINGS -INTERSECTIONS OF FRAME WALLS AND MASONRY OR STUCCO
- -UNDER MASONRY, WOOD OR METAL COPINGS AND SILLS
- -CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM

-WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL -AT WALL AND ROOF OR SOFFIT INTERSECTIONS -AT BUILT-IN GUTTERS

### GARAGE NOTES:

\* GARAGES SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 5/8" TYPE X GWB APPLIED TO THE GARAGE SIDE. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 5/8" TYPE X GYPSUM BOARD OR EQUIVALENT. IRC R309.2

\* DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIALS AND SHALL HAVE NO OPENINGS INTO THE GARAGE. IRC R309.1.1

\* IN SIESMIC ZONES 3 & 4, WATER HEATERS SHALL BE ANCHORED TO RESIST HORZ. DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE @ POINTS WITHIN THE UPPER ONE THIRD AND LOWER ONE THIRD PER UPC SEC. 510.5

\* PROVIDE OUTDOOR COMBUSTION AIR FOR WATER HEATER

\* GARAGE FLOOR SURFACES SHALL BE OF APPROVED NONCOMBUSTIBLE MATERIAL AND THE AREA USED FOR THE PARKING OF AUTOMOBILES OR OTHER VEHICLES SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRY DOORWAY PER IRC 309.3.

\* R302.5 DWELLING/GARAGE OPENING/PENETRATION PROTECTION. OPENINGS AND PENETRATIONS THROUGH THE WALLS OR CEILINGS SEPERATING THE DWELLING FROM THE GARAGE SHALL BE IN ACCORDANCE WITH SECTIONS R302.5.1 THROUGH R302.5.3

\* R302.5.1 OPENING PROTECTION. OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1 3/8 INCHES (35mm) IN THICKNESS, SOLID OR HONEYCOMB CORE STEEL DOORS NOT LESS THAN 1 3/8 INCHES (35mm) THICK, OR 20-MINUTE FIRE-RATED DOORS. \* R302.5.2 DUCT PENETRATION. DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPERATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO.26 GAGE (0.48mm) SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE. \* R302.5.3 OTHER PENETRATIONS. PENETRATIONS THROUGH THE SEPARATION REQUIRED IN SECTION R302.6

### **ROOF NOTES:**

\* SOFFIT. VENT. AND INSULATE ALL CANTILEVERED AREAS.

SHALL BE PROTECTED BY SECTION R302.11, ITEM 4

\* PROVIDE SOLID BLOCKING OVER SUPPORTS.

\* DS = DOWNSPOUT (4" SOLID PIPE TIGHTLINED INDEPENDENT OF FOOTING DRAIN)

\* ALL MANUFACTURED TRUSSES:

SHALL HAVE DESIGN DETAILS AND DRAWINGS ON SITE FOR FRAMING INSPECTION. SHALL BE INSTALLED AND BRACED TO MANUFACTURER'S SPECIFICATIONS. SHALL CARRY MANUFACTURER'S STAMP ON EACH TRUSS.

\* FLASHINGS SHALL BE INSTALLED IN SUCH A MANNER AS TO PREVENT MOISTURE ENTERING THE WALL AND ROOF THROUGH JOINTS IN COPINGS, THROUGH MOISTURE PERMEABLE MATERIALS AND AT INTERSECTIONS WITH PARAPET WALLS AND OTHER PENETRATIONS THROUGH THE ROOF PLANE. METAL FLASHING SHALL BE CORROSION RESISTANT WITH A THICKNESS OF NOT LESS THAN .0019 INCH. IRC 903.2

\* PARAPET WALLS SHALL BE PROPERLY COPED WITH NONCOMBUSTIBLE, WEATHERPROOF MATERIALS OF A WIDTH NO LESS THAN THE THICKNESS OF THE PARAPET WALL.

\* WHERE ROOF DRAINS ARE REQUIRED. OVERFLOW DRAINS HAVING THE SAME SIZE AS THE ROOF DRAINS SHALL BE INSTALLED PER IRC 903.4.1 & THE INTERNATIONAL PLUMBING CODE.

### SPRAY FOAM INSULATION NOTES:

\* SPRAY FOAM INSULATION TO BE INSTALLED ACCORDING TO THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICE REPORT FOR THE PARTICULAR PRODUCT.

### BUILDING AREA SUMMARY

GARAGE LEVEL	1,038 S.F.
LIVING LEVEL	2,417 S.F.
LOFT LEVEL	235 S.F.
TOTAL	3,690 S.F. 641 S.F.
	233 S.F.
	743 S F

SMOKE DETECTORS
A SMOKE DETECTOR SHALL BE INSTALLED IN EACH HA
A SMOKE DETECTOR SHALL BE CENTRALLY LOCATED
AN ADDITIONAL SMOKE DETECTOR SHALL BE INSTALL
HEIGHT CHANGE GREATER THAN 24".

### **VENTILATION SCHEDULE:**

<b>@</b> <sub>1</sub>	100 CFM ON SWITCH	LOCAL EXHAUST SHA CLOSET, LAUNDRY R WHERE WATER VAPC RATE SHALL BE DETE
<b>@</b> _2	50 CFM ON SWITCH	MECHANICAL VENTIL SIMILAR ROOMS SHO OF DISCHARGE OF E OPENING INTO THE E
<b>Ø</b> <sub>3</sub>	90 CFM WHOLE-HOUSE VENT. FAN	CONTINUOUSLY OPE SIZED PER <i>TABLE M<sup>1</sup></i> PER <i>M1507.3.4.4</i> . SEE

### **TABLE 6-1** PRESCRIPTIVE REQUIREMENTS<sup>0,1</sup> FOR SINGLE FAMILY\* RESIDENTIAL **CLIMATE ZONE 1**

I	-											
l	OPTION	GLAZING	GLAZING	U-FACTOR	DOOR <sup>9</sup>	CEILING <sup>2</sup>	VAULTED		WALL INT <sup>4</sup> BELOW	WALL EXT <sup>4</sup> BELOW	FLOOR <sup>5</sup>	SLAB <sup>6</sup> ON GRAI
		AREA <sup>10</sup> : % OF FLOOR	VERTICAL	OVERHEAD <sup>11</sup>	U-FACTOR		CEILING <sup>3</sup>			GRADE		UN GRAL
	Ι	13%	0.34	0.50	0.20	R-49 OR R-38 ADV	R-38	R-21 INT <sup>7</sup>	R-21 TB	R-10	R-30	R-10 2'
	II	25%	0.32	0.50	0.20	R-49 OR R-38 ADV	R-38	R-21 INT <sup>7</sup>	R-21 TB	R-10	R-30	R-10 2'
	III	UNLIMITED	0.30	0.50	0.20	R-49 OR R-38 ADV	R-38	R-21 INT <sup>7</sup>	R-21 TB	R-10	R-30 / U=0.029	R-10 2'
l	* REFERENCE CASE											

. NOMINAL R-VALUES ARE FOR WOOD FRAME ASSEMBLIES ONLY OR ASSEMBLIES BUILT IN ACCORDANCE WITH SECTION 601.1

1. MINIMUM REQUIREMENTS FOR EACH OPTION LISTED. FOR EXAMPLE, IF A PROPOSED DEIGN HAS A GLAZING RATIO TO THE CONDITIONED FLOOR AREA OF 15%, IT SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF THE 25% GLAZING OPTION (OR HIGHER). PROPOSED DESIGNS WHICH CANNOT MEET THE SPECIFIC REQUIREMENTS OF A LISTED OPTION ABOVE MAY CALCULATE COMPLIANCE BY CHAPTERS 4 OR 5 OF THIS CODE 2. REQUIREMENT APPLIES TO ALL CEILINGS EXCEPT SINGLE RAFTER OR JOIST VAULTED

CEILINGS COMPLYING WITH NOTE 3. 'ADV' DENOTES ADVANCED FRAMING CEILING. 3 REQUIREMENT APPLICABLE ONLY TO SINGLE RAFTER OR JOIST VAULTED CEILINGS.

4. BELOW GRADE WALLS SHALL BE INSULATED EITHER ON THE EXTERIOR TO A MINIMUM LEVEL OF R-10 CONTINUOUS, OR ON THE INTERIOR AS A FRAMED WALL. EXTERIOR ATERIAL, MANUFACTERED FOR ITS INTENDED USE, AND INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. SEE SECTION 602.2.

5. FLOOR OVER CRAWL SPACES OR EXPOSED TO AMBIENT AIR CONDITIONS

6. REQUIRED SLAB PERIMETER INSULATION SHALL BE A WATER RESISTANT MATERIAL MANUFACTURED FOR ITS INTENDED USE. AND INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. SEE SECTION 602.4. FOR SLABS INSIDE A FOUNDATION WALL NSULATION SHALL BE INSTALLED TO PROVIDE A THERMAL BREAK (TB) BETWEEN THE SLAB INSULATION SHALL BE INSTALLED TO PROVIDE A THERMAL BREAK (TB) BETWEEN THE SLAB EDGE AND THE FOUNDATION. MONOLITHIC SLABS SHALL INCLUDE INSULATION, INSTALLED OUTSIDE THE FOUNDATION WALL, AND SHALL EXTEND DOWNWARD FROM THE TOP OF THE SLAB FOR A MINIMUM DISTANCE OF 24 INCHES OR DOWNWARD AND THEN HORIZONTALLY FOR A MINIMUM COMBINED DISTANCE OF 24 INCHES. MONOLITHIC SLABS SHALL ALSO INCLUDE R-10 INSULATION UNDER THE NON-LOAD-BEARING PORTIONS OF THE SLAB. MONOLITHIC SLABS SHALL ALSO INCLUDE R-10 INSULATION UNDER THE NON-LOAD-BEARING PORTIONS OF THE SLAB.

7. INT. DENOTES STANDARD FRAMING 16 INCHES ON CENTER WITH HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION. 8. RESERVED.

9. DOORS, INCLUDING ALL FIRE DOORS, SHALL BE ASSIGNED DEFAULT U-FACTORS FROM TABLE 10-6C.

10. WHERE A MAXIMUM GLAZING AREA IS LISTED, THE TOTAL GLAZING AREA (COMBINED VERTICAL PLUS OVERHEAD) AS A PERCENT OF GROSS CONDITIONED FLOOR AREA SHALL BE LESS THAN OR EQUAL TO THAT VALUE. OVERHEAD GLAZING WITH U-FACTOR OF U=0.35 OR LESS IS NOT INCLUDED IN GLAZING ARE LIMITATIONS. 11. OVERHEAD GLAZING SHALL HAVE U-FACTORS DETERMINED IN ACCORDANCE WITH NFRC 100 OR AS SPECIFIED IN SECTION 502.1.5.

12. LOG AND SOLID TIMBER WALLS WITH A MINIMUM AVERAGE THICKNESS OF 3.5" ARE EXEMPT FROM THIS INSULATION REQUIREMEN

\* SEE DEFINITION OF RESIDENTIAL, SINGLE FAMILY, IN CHAPTER 2

### **WSEC Additional Energy Efficiency Requirements** | Table 406.2

HIGH EFFICIENCY WATER HEATING 5b: 1.5 WATER HEATING SYSTEM SHALL INCLUDE ONE OF THE FOLLOWING: GAS, PROPANE OR OIL WATER HEATER WITH A MINIMUM EF OF 0.82

SOLAR WATER HEATING SUPPLEMENTING A MINIMUM STANDARD WATER HEATER. SOLAR WATER HEATING WILL PROVIDE A RATED MINIMUM SAVINGS OF 85 THERMS OR 2000 KWH BASED ON THE SOLAR RATING AND CERTIFICATION CORPORATION (SRCC) ANNUAL PERFORMANCE OF OG-300 CERTIFIED SOLAR WATER HEATING SYSTEMS

ELECTRIC HEAT PUMP WATER HEATER WITH A MINIMUM EF OF 2.0 AND MEETING THE STANDARDS OF NEEA'S NORTHERN CLIMATE SPECIFICATIONS FOR HEAT PUMP WATER HEATERS

WATER HEATER HEATED BY GROUND SOURCE HEAT PUMP MEETING THE REQUIREMENTS OF OPTION 3C. NOTE: TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFIY THE WATER EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY AND, FOR SOLAR WATER HEATING SYSTEMS, THE CALCULATION OF THE MINIMUM ENERGY SAVINGS.

**OPTION SELECTED:** 

HIGH EFFICIENCY WATER HEATING 5b: 1.5 GAS WATER HEATER WITH A MINIMUM EF OF 0.82

outside wall 1,120 S.F.

outside wall 2,651 S.F. incld. stairs etc.

outside wall 267 S.F. incld. stairs etc.

GROSS FLOOR AREA: 4.038 SQ FT . UNCONDITIONED GARAGE . UNCONDITIONED STORAGE 743 S.F. COVERED DECK

HABITABLE ROOM ON EACH FLOOR LED IN EACH LOCATION WHERE THERE IS A CEILING

SMOKE DETECTORS TO BE 110v HARDWIRED, INTERCONNECTED, WITH BATTERY BACKUP PER IRC R313

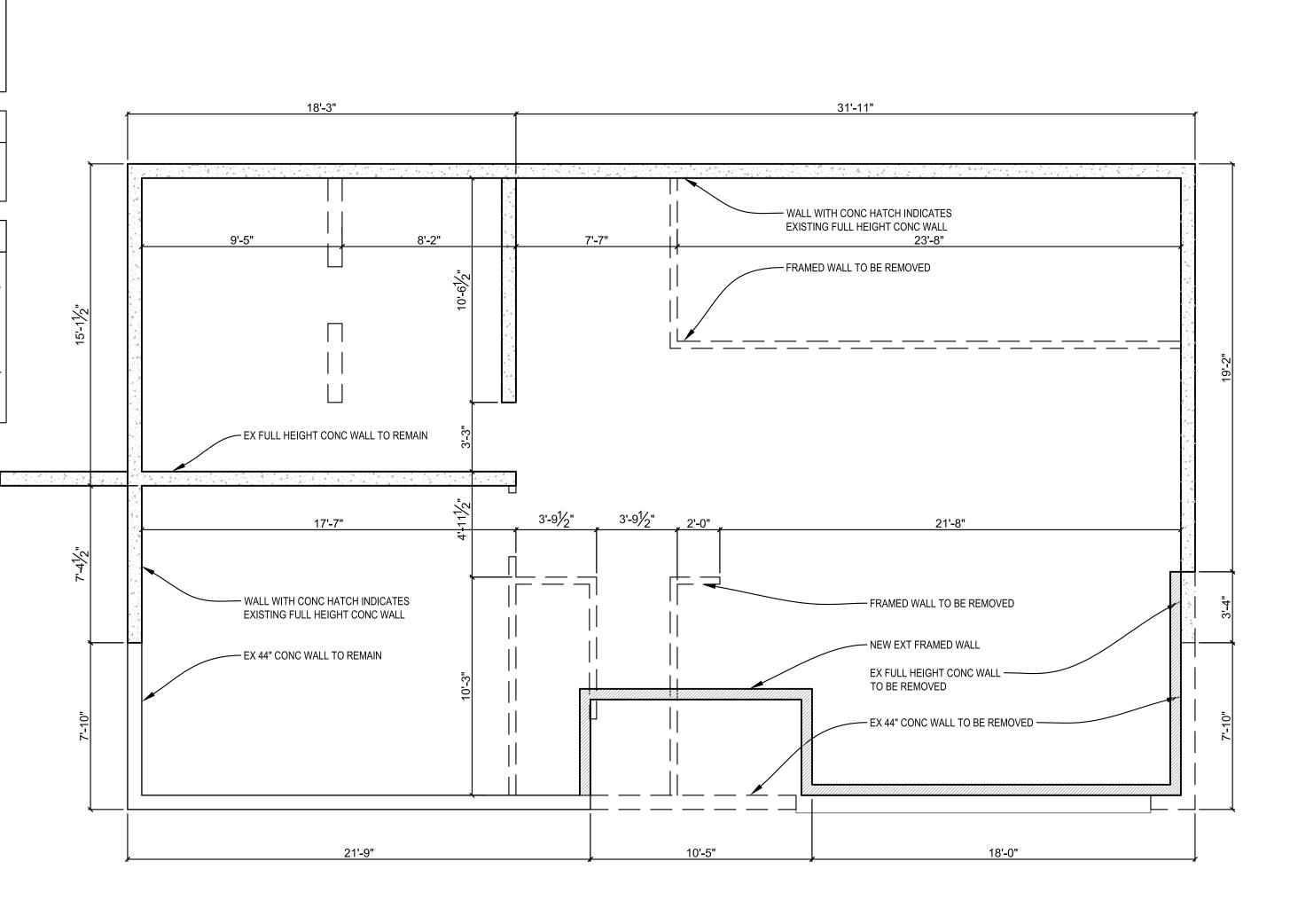
ALL BE PROVED IN EACH KTICHEN, BATHROOM, WATER ROOM, INDOOR SWIMMING POOL, SPA OR OTHER ROOMS POR OR COOKING ODOR IS PRODUCED. THE MIN.AIR FLOW FERMINED IN ACCORDANCE WITH TABLE M1507.4. LATING SYSTEMS IN BATHROOMS, LAUNDRY ROOMS AND HOULD EXHAUST DIRECTLY TO THE OUTSIDE. THE POINT EXHAUST AIR SHALL BE AT LEAST 3 FEET FROM ANY

BUILDING. PER 2012 IRC 1506.2. PERATING MECHANICAL VENTILATION PER 2012 IRC M1507. /1507.3.3(1). PROVIDE OUTDOOR AIR INLETS E NOTES ON A1.2.

INSULATE HEATED BUILDING PERIMETER PER WSEC

PRESCRIPTIVE OPTION III, SEE INCLUDED TABLE 6-1

EXCERT FROM 2009 WASHINGTON STATE ENERGY CODE EFFECTIVE DATE JANUARY 1, 2011, PAGE 35



Ground Level DEMO Plan

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

**SPRAY-APPLIED FOAM INSULATION NOTES:** 

- IN ORDER TO VALIDATE INSTALLATION, THE PRODUCT INSTALLER IS REQUIRED TO PROVIDE THE DPD FIELD INSPECTOR WITH A LETTER FROM THE INSTALLER CERTIFYING THAT THE INSTALLATION WAS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE ICC EVALUATION REPORT. THE LETTER SHALL ALSO INCLUDE THE DATE, THE PRODUCT NAME, THE INSTALLER'S NAME AND ADDRESS, AND THE COMPANY NAME.
- THE PRODUCT SHALL HAVE A MAXIMUM FL AME-SPREAD INDEX OF 75 AND A MAXIMUM SMOKE-DEVELOPED INDEX OF 450 (IRC R316.3).
- A THERMAL BARRIER, EQUIVALENT TO A MINIMUM ½ INCH GYPSUM BOARD SHALL SEPARATE THE INSULATION FROM THE INTERIOR OF THE BUILDING (IRC R316.4). • SPRAY-APPLIED FOAM INSULATION SHALL NOT BE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF SHEATHING, UNLESS THE INSTALLATION COMPLIES WITH IRC 806.4.
- A MINIMUM 1-INCH AIRSPACE IS REQUIRED FOR VENTILATION BETWEEN THE SHEATHING AND THE INSULATION (IRC R806.3), UNLESS THE INSTALLATION COMPLIES WITH IRC 806.4. IF COMPLYING WITH IRC 806.3, A BAFFL E IS REQUIRED TO MAINTAIN THE FREE FLOW OF AIR. THE BAFFLE MUST BE CAPABLE OF WITHSTANDING THE WEIGHT OF FOAM DURING INSTALLATION. • BUILDINGS SUBJECT TO THE IRC ARE CONSIDERED TYPE V-B CONSTRUCTION AND SPRAY-APPLIED FOAM INSULATION MAY BE INSTALLED WITHIN FI RE-RESISTIVE CONSTRUCTION REQUIRED FOR EXTERIOR WALLS NEAR THE PROPERTY LINE, DWELLING
- UNIT SEPARATION AND GARAGE-DWELLING SEPARATIONS. • THE ICC EVAL. REPORT MAY ALSO SPECIFY LIMITATIONS ON THE THICKNESS OF INSTALLATION, EXPOSURE TO THE WEATHER, AND USE AS A STRUCTURAL MATERIAL.

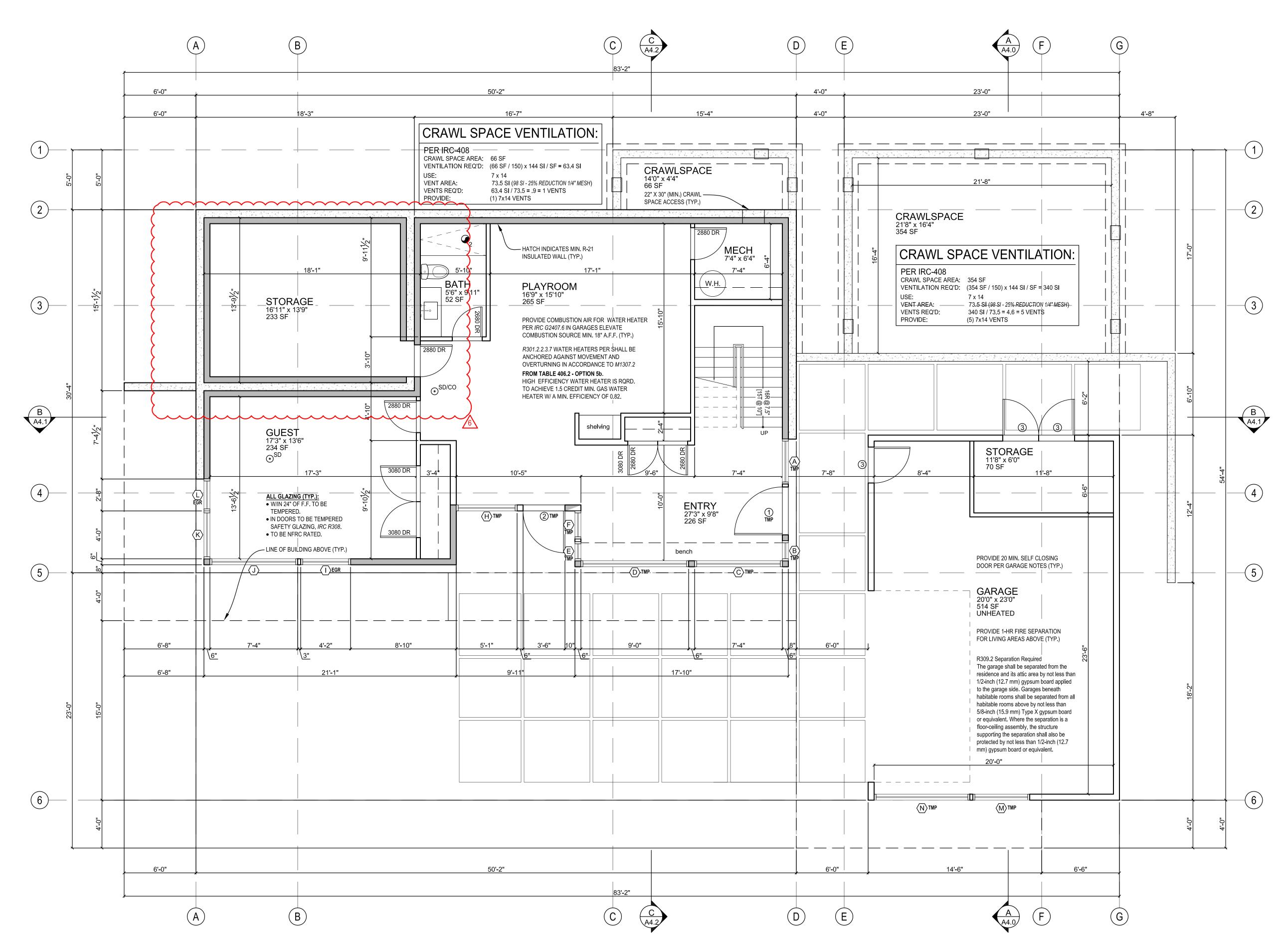
# **CRITERIA FOR UNVENTED ATTIC SPACES:**

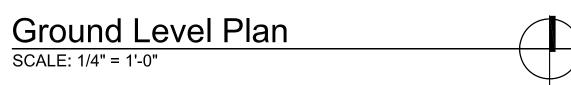
AS NOTED ABOVE, THE 2012 CODES CONTAIN AN OPTION FOR UNVENTED ATTIC ASSEMBLIES, PROVIDED THAT CONSTRUCTION COMPLIES W/ THE FOLLOWING 5 CRITERIA 1. THE UNVENTED ATTIC SPACE IS COMPLETELY CONTAINED WITHIN THE BUILDING THERMAL ENVELOPE.

- 2. NO INTERIOR VAPOR RETARDERS ARE INSTALLED ON THE CEILING SIDE (ATTIC FL OOR) OF THE UNVENTED ATTIC ASSEMBLY.
- 3. WHERE WOOD SHINGLES OR SHAKES ARE USED, A MINIMUM 1/4 INCH (6 MM) VENTED AIR SPACE SEPARATES THE SHINGLES OR SHAKES AND THE ROOFI NG UNDERLAYMENT ABOVE THE STRUCTURAL SHEATHING. 4. ANY AIR-IMPERMEABLE INSULATION SHALL BE A VAPOR RETARDER, OR SHALL HAVE A VAPOR RETARDER COATING OR COVERING IN DIRECT CONTACT WITH THE UNDERSIDE OF THE INSULATION.
- 5. EITHER ITEMS A, B OR C SHALL BE MET, DEPENDING ON THE AIR PERMEABILITY OF THE INSULATION DIRECTLY UNDER THE STRUCTURAL ROOF SHEATHING. A. AIR-IMPERMEABLE INSULATION ONLY. INSULATION SHALL BE APPLIED IN DIRECT CONTACT TO THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING.
  - B. AIR-PERMEABLE INSULATION ONLY. IN ADDITION TO THE AIR-PERMEABLE INSULATION INSTALLED DIRECTLY BELOW THE STRUCTURAL SHEATHING, RIGID BOARD OR SHEET INSULATION SHALL BE INSTALLED DIRECTLY ABOVE THE STRUCTURAL ROOF SHEATHING AS SPECIFIED PER WA CLIMATE ZONE FOR CONDENSATION CONTROL:
    - I. CLIMATE ZONE 1: R-10 MINIMUM RIGID BOARD OR AIR-IMPERMEABLE INSULATION R-VALUE.
  - II. CLIMATE ZONE 2: R-25 MINIMUM RIGID BOARD OR AIR-IMPERMEABLE INSULATION R-VALUE. C. AIR-IMPERMEABLE AND AIR-PERMEABLE INSULATION. THE AIR-IMPERMEABLE INSULATION SHALL BE APPLIED IN DIRECT CONTACT TO
  - THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING AS SPECIFIED PER WA CLIMATE ZONE FOR CONDENSATION CONTROL. THE AIR-PERMEABLE INSULATION SHALL BE INSTALLED DIRECTLY UNDER THE AIR IMPERMEABLE INSULATION. I. CLIMATE ZONE 1: R-10 MINIMUM RIGID BOARD OR AIR-IMPERMEABLE INSULATION R-VALUE.
  - II. CLIMATE ZONE 2: R-25 MINIMUM RIGID BOARD OR AIR-IMPERMEABLE INSULATION R-VALUE.

TO COMPLY WITH CRITERION 5 ("A" OR "B" OR "C"), IT IS NECESSARY TO KNOW WHETHER THE SPRAY-APPLIED FOAM INSULATION IS AIR-IMPERMEABLE OR NOT. AIR-IMPERMEABLE INSULATION IS DEFINED IN CHAPTER 2 OF THE ENERGY CODE AS "AN INSULATION HAVING AN AIR PERMEANCE EQUAL TO OR LESS THAN 0.02 L/S-M2 AT 75 PA PRESSURE DIFFERENTIAL TESTED IN ACCORDANCE WITH ASTM E2178 OR ASTME283." LOOK TO THE ICC-ES REPORT TO SPECIFICALLY MENTION IF AN INSULATION IS AIR-IMPERMEABLE, FOR CRITERION 5A, ALL OF THE INSULATION MUST BE AIR-IMPERMEABLE, AND MUST BE APPLIED IN DIRECT CONTACT TO THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING, CONVERSELY, FOR CRITERION 5B, ALL OF THE INSULATION INSTALLED BELOW THE ROOF SHEATHING MUST BE AIR-PERMEABLE. IN ADDITION, THERE MUST BE A MINIMUM OF R-10 RIGID BOARD OR AIR-IMPERMEABLE INSULATION INSTALLED DIRECTLY ABOVE THE STRUCTURAL ROOF SHEATHING. FOR CRITERION 5C, THE AIR-IMPERMEABLE INSULATION IS APPLIED IN DIRECT CONTACT TO THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING (AS IN CRITERION 5A); HOWEVER, AIR-PERMEABLE INSULATION IS ALLOWED TO BE INSTALLED BELOW THAT. PROVIDED THAT THE AIR-IMPERMEABLE INSULATION LAYER IS A MIN. OF R-10.

STEPHER STEPHER Suite 201 Seattle, WA 9810 p 206.632.7703 Stephenson Design Co 2015. These drawings we "Tree House" project in I WA. They are not intended other project. Stated drawing scale is b sheet.	Ave. N 09 ective.com
<b>Tree House</b> 5004 W Mercer Way	Mercer Island, WA
2 01.11.16 Eng	Ie ematic ineer nit Intake
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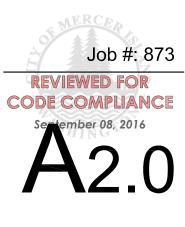


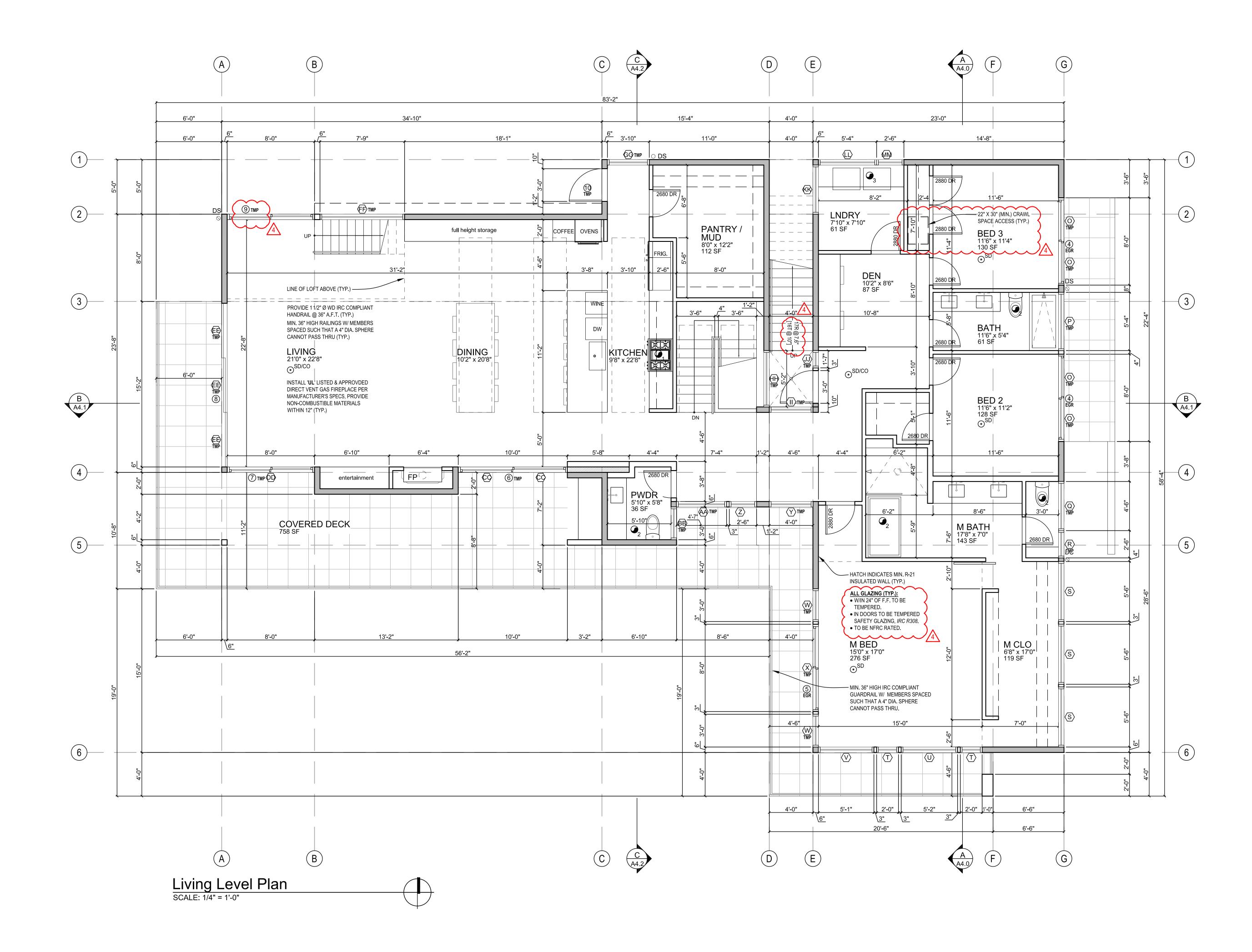


Plans

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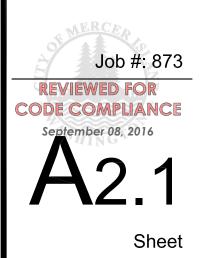
3 02.26.16 Permit Intake

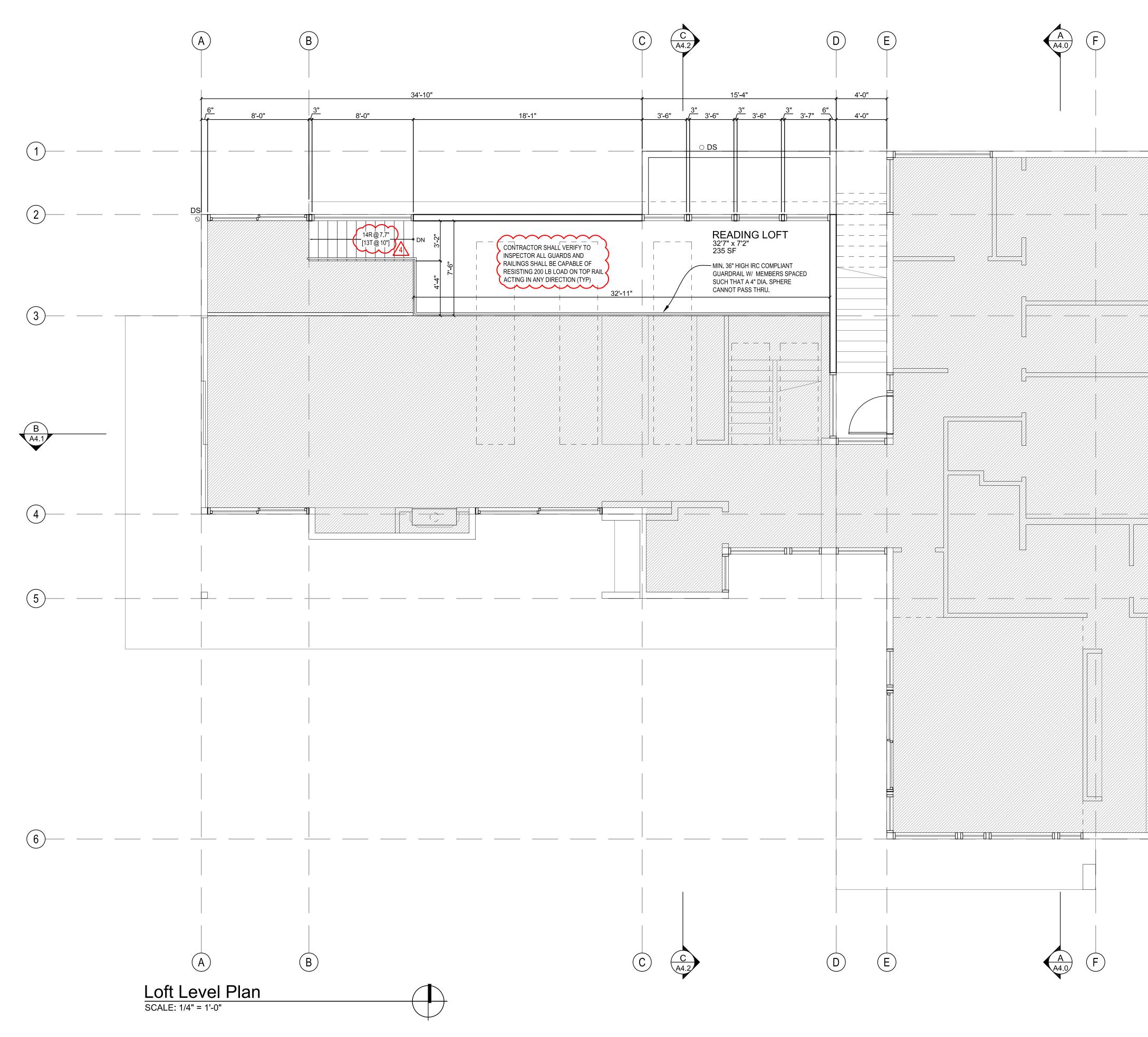


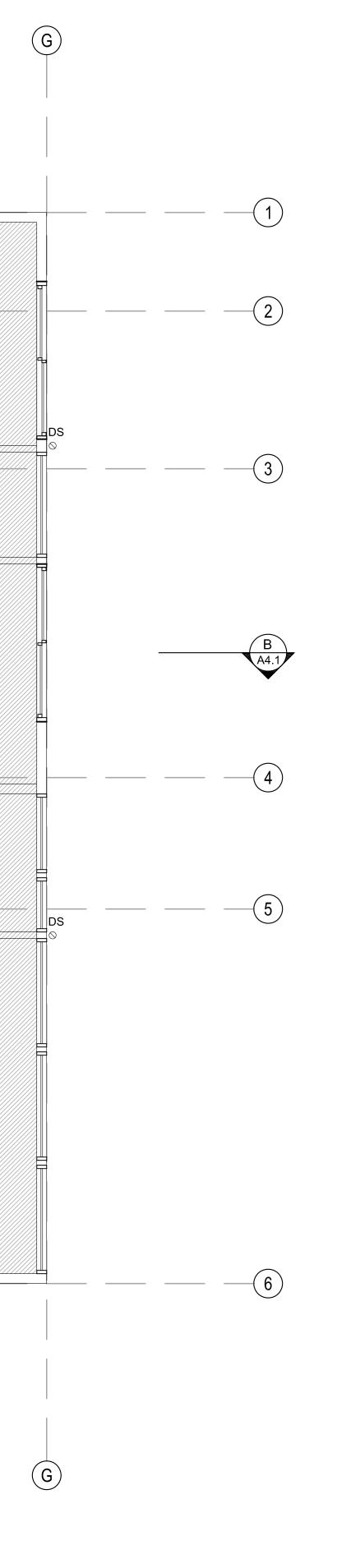




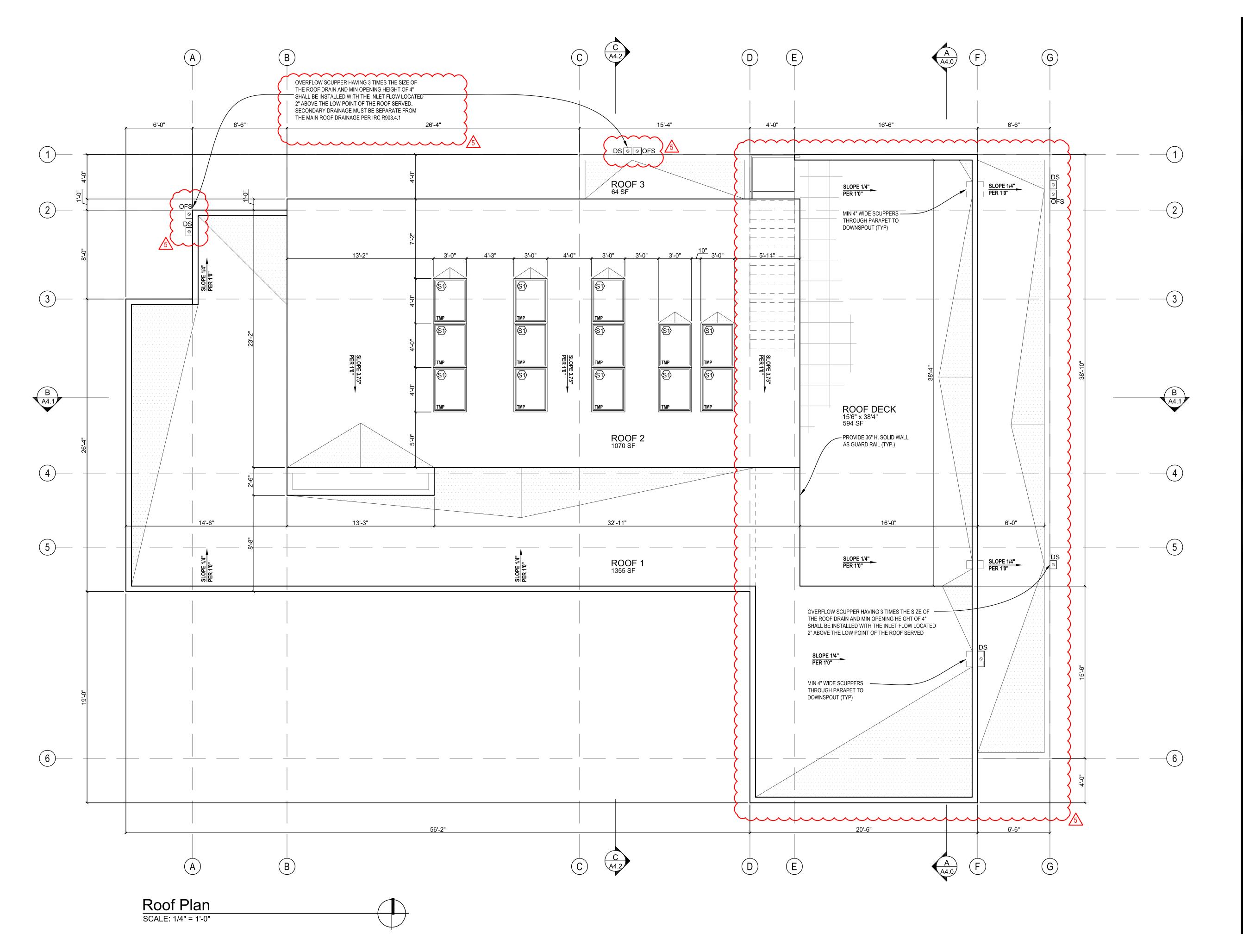
Plans



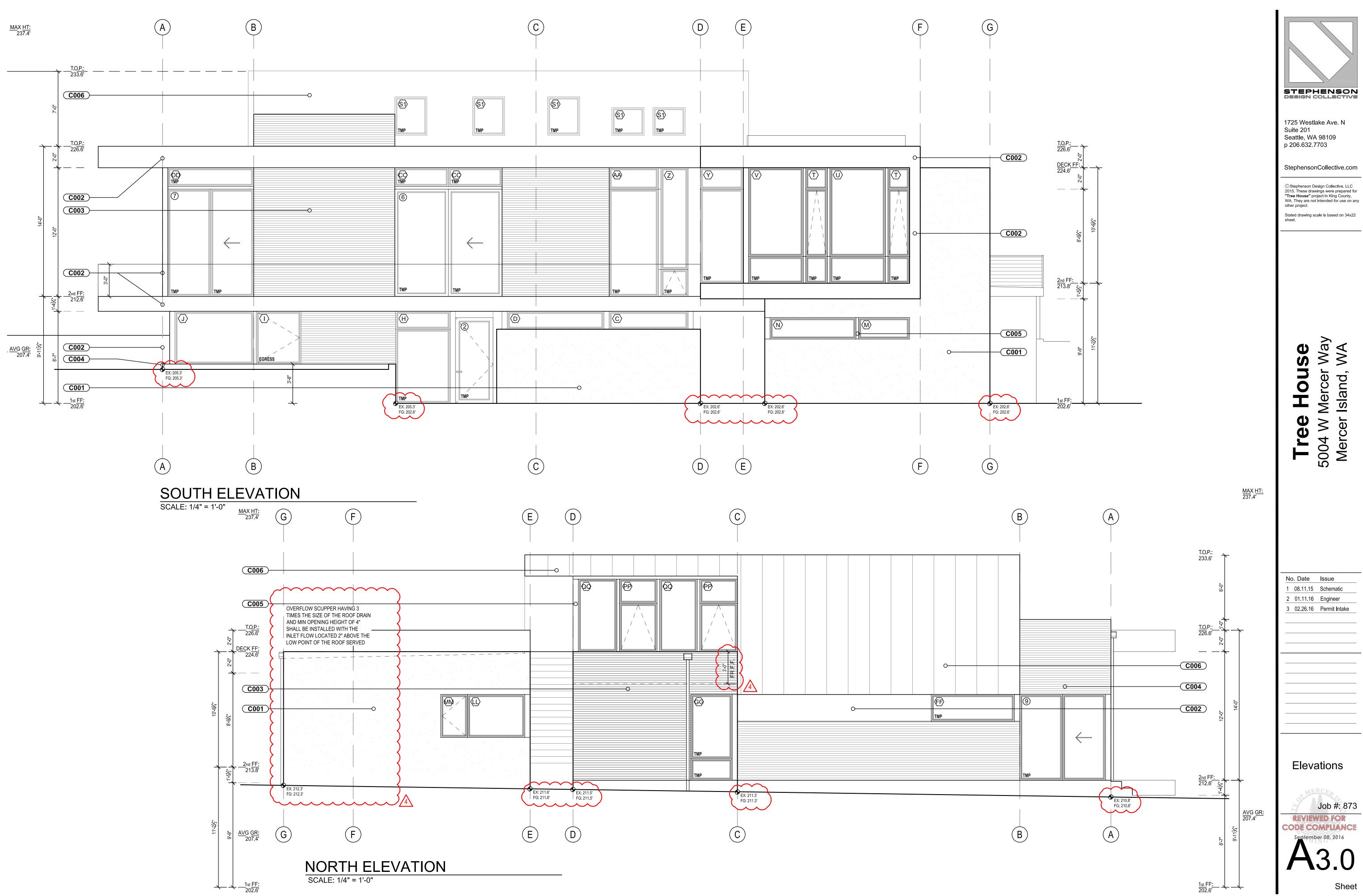


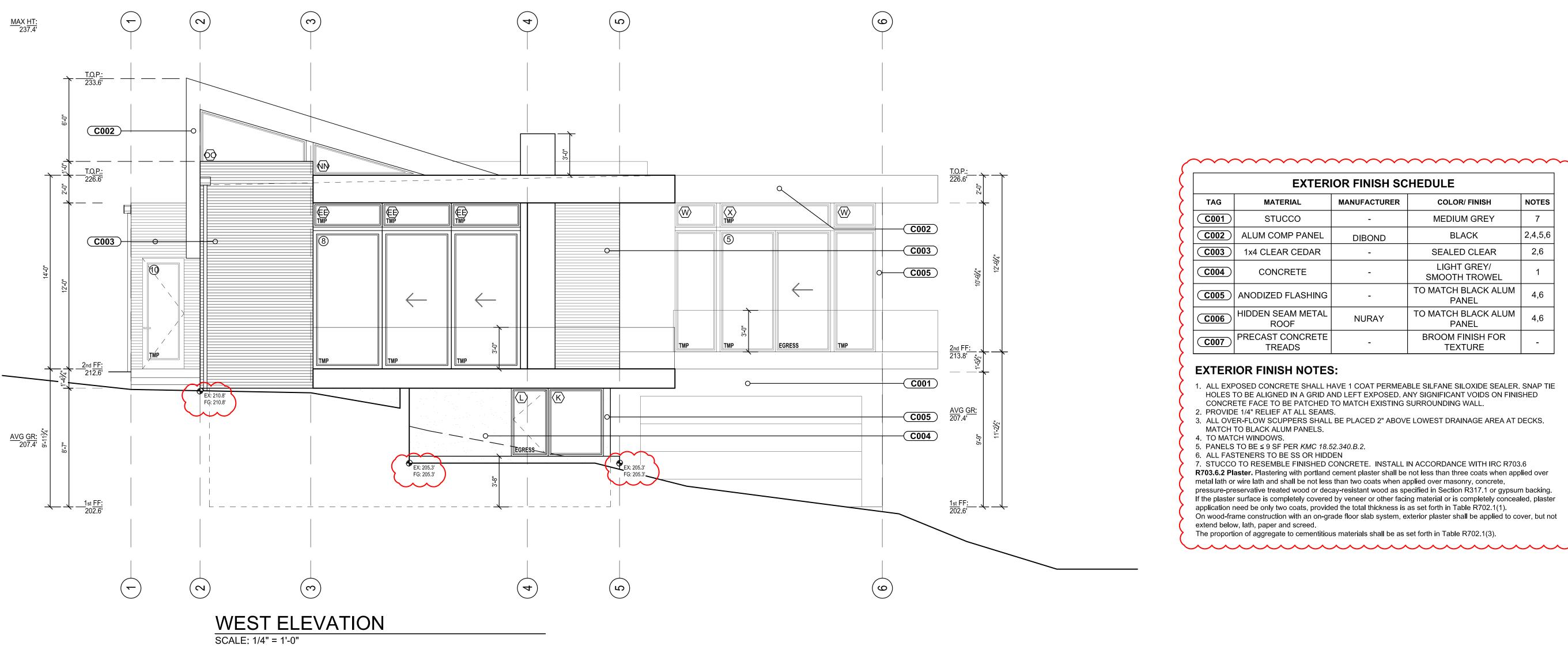


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Stated drawing scale is based on 34x22 sheet.
<b>Tree House</b> 5004 W Mercer Way Mercer Island, WA
No. DateIssue108.11.15Schematic201.11.16Engineer302.26.16Permit Intake
Plans
Job #: 873 REVIEWED FOR CODE COMPLIANCE September 08, 2016



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<b>Tree House</b> 5004 W Mercer Way Mercer Island, WA		
No. Date         Issue           1         08.11.15         Schematic           2         01.11.16         Engineer           3         02.26.16         Permit Intake		
Plans Job #: 873 REVIEWED FOR CODE COMPLIANCE September 08, 2016		





ER	ERIOR FINISH SCHEDULE				
	MANUFACTURER	COLOR/ FINISH	NOTES		
	-	MEDIUM GREY	7		
IEL	DIBOND	BLACK	2,4,5,6		
٩R	-	SEALED CLEAR	2,6		
	-	LIGHT GREY/ SMOOTH TROWEL	1		
ING	-	TO MATCH BLACK ALUM PANEL	4,6		
TAL	NURAY	TO MATCH BLACK ALUM PANEL	4,6		
ETE	-	BROOM FINISH FOR TEXTURE	-		

1. ALL EXPOSED CONCRETE SHALL HAVE 1 COAT PERMEABLE SILFANE SILOXIDE SEALER. SNAP TIE HOLES TO BE ALIGNED IN A GRID AND LEFT EXPOSED. ANY SIGNIFICANT VOIDS ON FINISHED CONCRETE FACE TO BE PATCHED TO MATCH EXISTING SURROUNDING WALL.

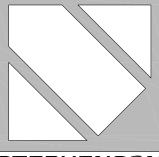
3. ALL OVER-FLOW SCUPPERS SHALL BE PLACED 2" ABOVE LOWEST DRAINAGE AREA AT DECKS.

7. STUCCO TO RESEMBLE FINISHED CONCRETE. INSTALL IN ACCORDANCE WITH IRC R703.6 R703.6.2 Plaster. Plastering with portland cement plaster shall be not less than three coats when applied over

metal lath or wire lath and shall be not less than two coats when applied over masonry, concrete,

pressure-preservative treated wood or decay-resistant wood as specified in Section R317.1 or gypsum backing. If the plaster surface is completely covered by veneer or other facing material or is completely concealed, plaster

On wood-frame construction with an on-grade floor slab system, exterior plaster shall be applied to cover, but not



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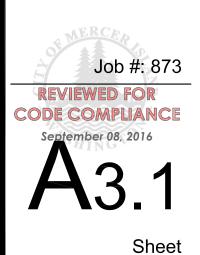
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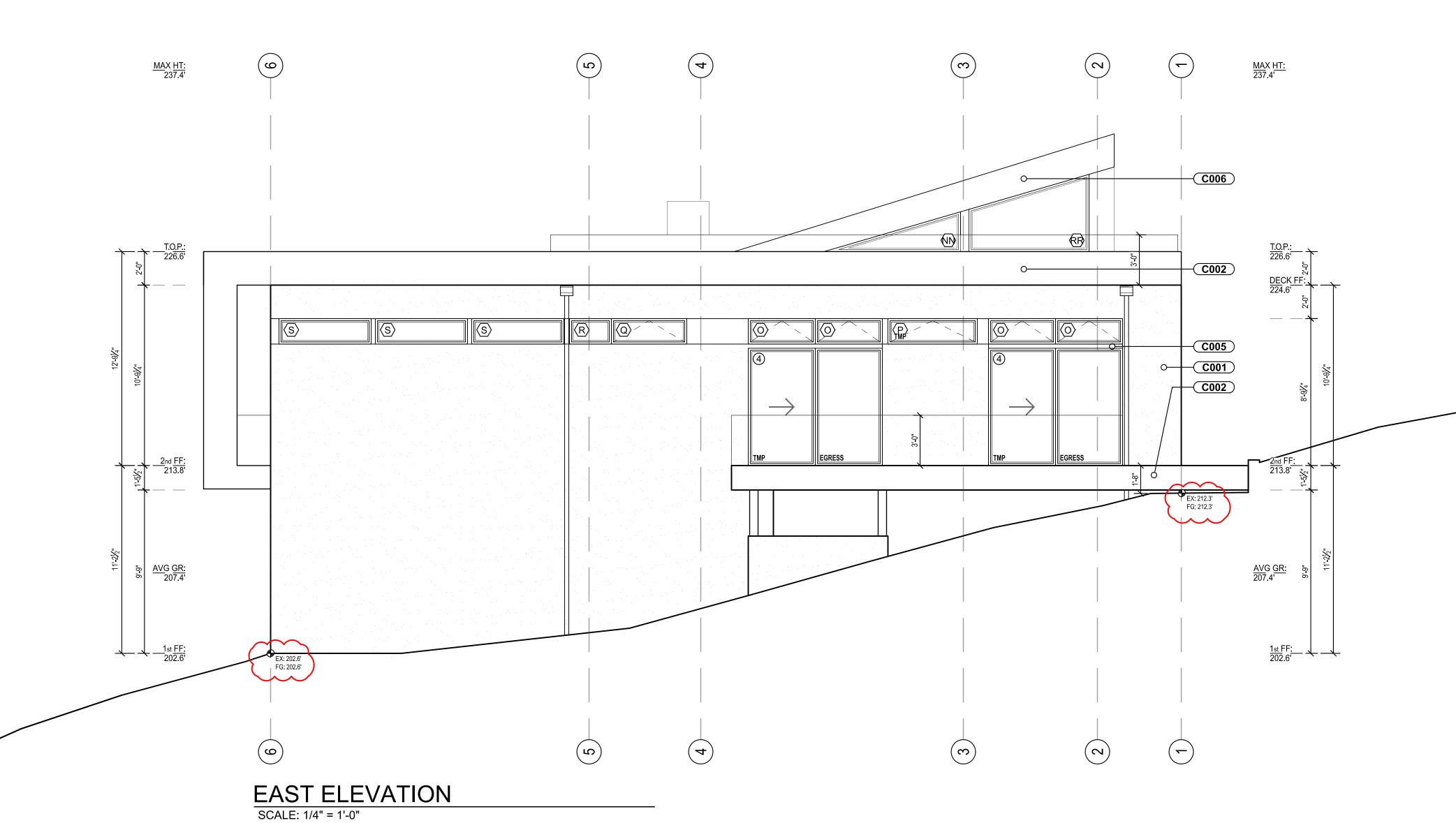
Stated drawing scale is based on 34x22 sheet.

# Mercer Way Island, WA House 5004 W I Mercer Tree

No	o. Date	lssue
1	08.11.15	Schematic
2	01.11.16	Engineer
3	02.26.16	Permit Intake

### Elevations







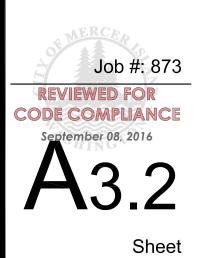
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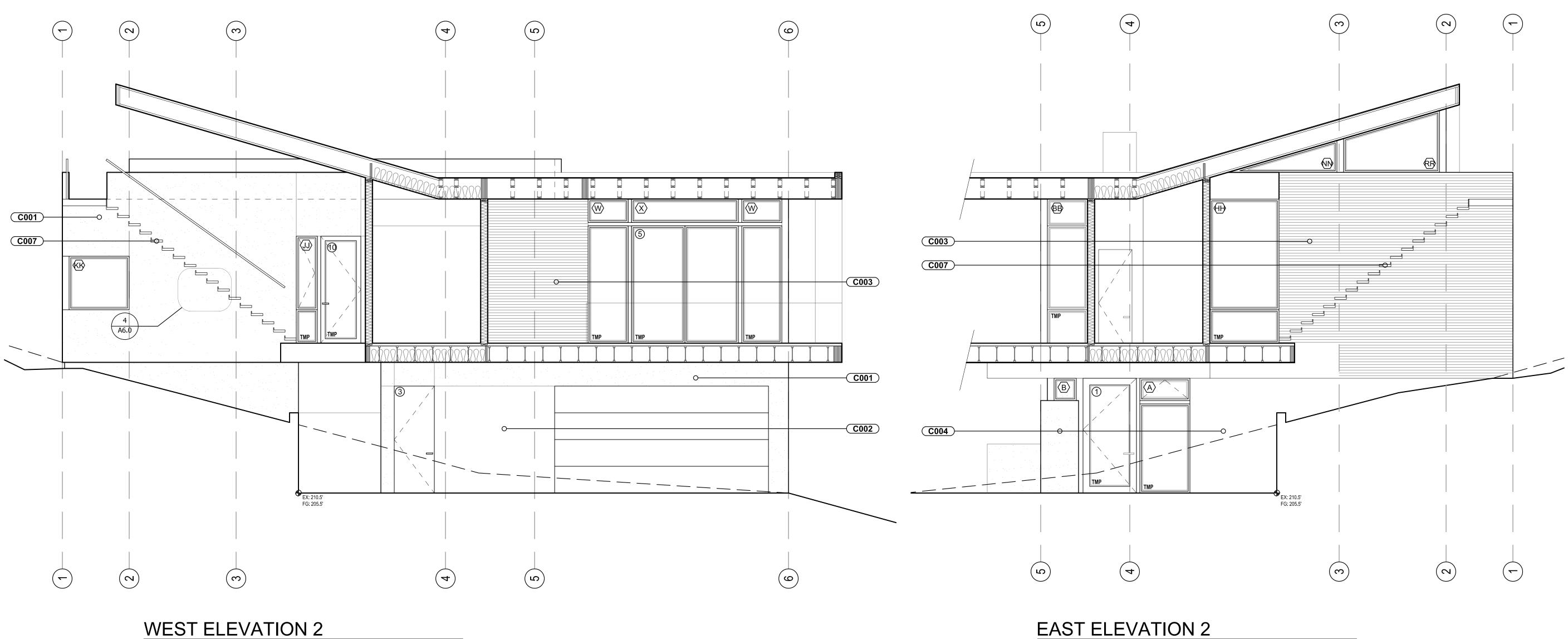
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**Tree House** 5004 W Mercer Way Mercer Island, WA

No. Date		Issue
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3	02.26.16	Permit Intake

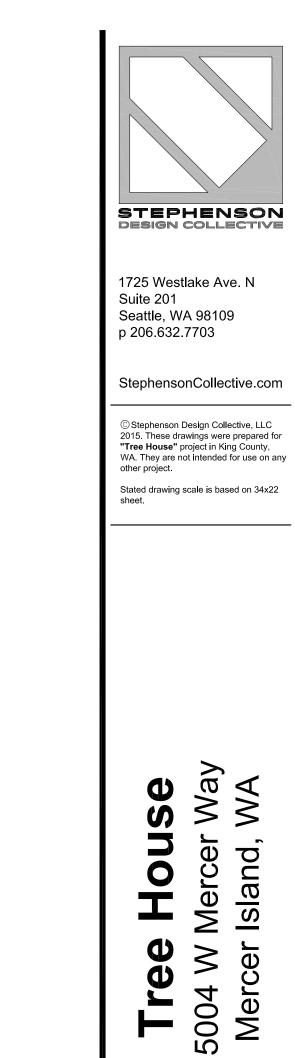
### Elevations





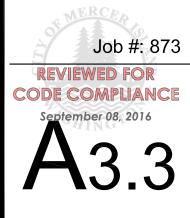
SCALE: 1/4" = 1'-0"

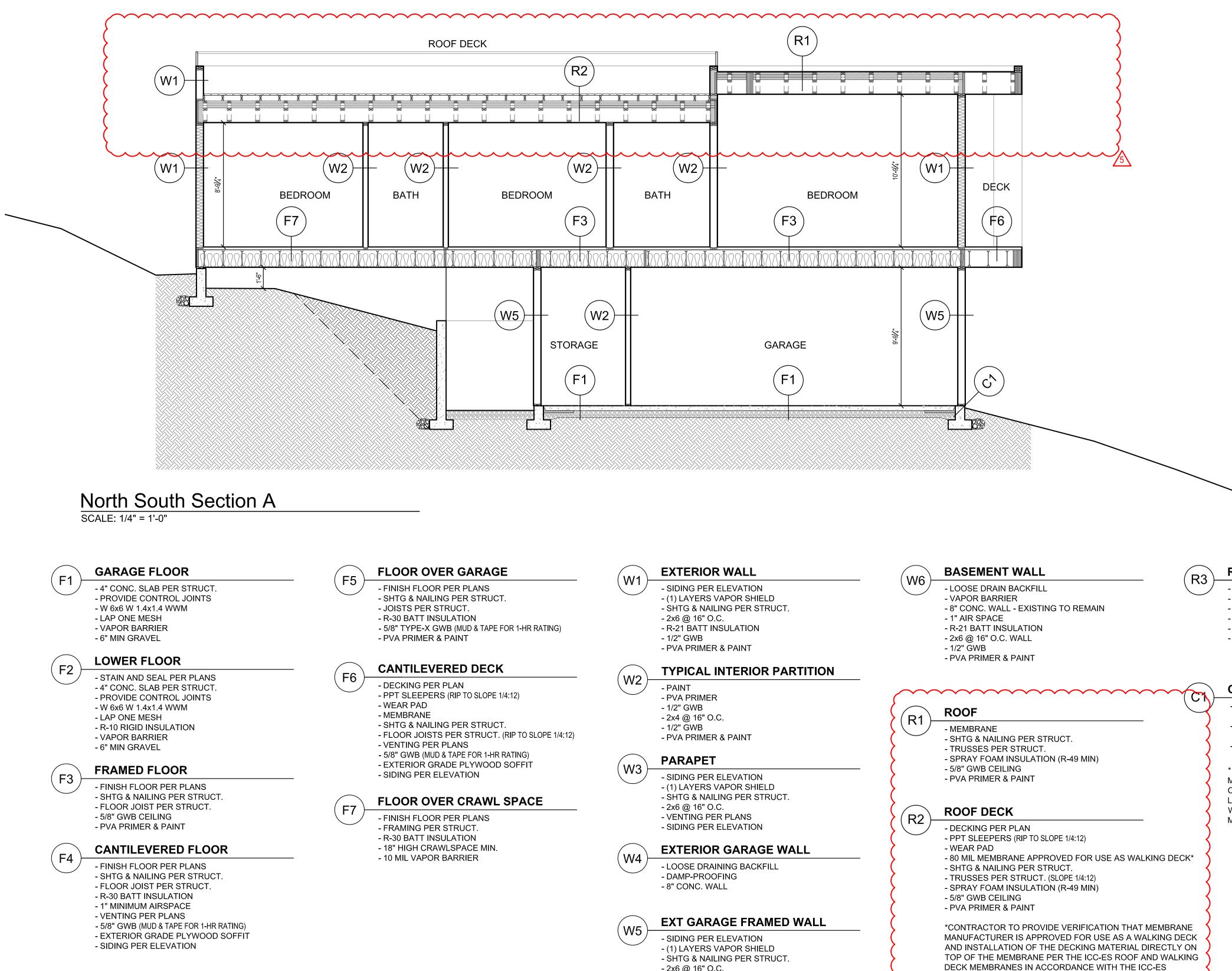
SCALE: 1/4" = 1'-0"



### Elevations

No. Date Issue 1 08.11.15 Schematic 2 01.11.16 Engineer 3 02.26.16 Permit Intake





		EXTERIOR WALL		BASEMENT WALL	(R3)-	ROC
ATING)	(W1)-	<ul> <li>SIDING PER ELEVATION</li> <li>(1) LAYERS VAPOR SHIELD</li> <li>SHTG &amp; NAILING PER STRUCT.</li> <li>2x6 @ 16" O.C.</li> <li>R-21 BATT INSULATION</li> <li>1/2" GWB</li> <li>PVA PRIMER &amp; PAINT</li> </ul>	(W6)-	- LOOSE DRAIN BACKFILL - VAPOR BARRIER - 8" CONC. WALL - EXISTING TO REMAIN - 1" AIR SPACE - R-21 BATT INSULATION - 2x6 @ 16" O.C. WALL - 1/2" GWB - PVA PRIMER & PAINT		- MET - SHT( - TJI'S - SPR, - 5/8" - PVA
	(W2)-	TYPICAL INTERIOR PARTITION			_	
)PE 1/4:12)		- PAINT - PVA PRIMER - 1/2" GWB - 2x4 @ 16" O.C. - 1/2" GWB - PVA PRIMER & PAINT	R1-	ROOF - MEMBRANE - SHTG & NAILING PER STRUCT. - TRUSSES PER STRUCT.	(C7)-	- REII STF - PRC PER - 4" Ø
		PARAPET	<u>}</u>	- SPRAY FOAM INSULATION (R-49 MIN)	5	FILT
<u> </u>	(W3)-	- SIDING PER ELEVATION - (1) LAYERS VAPOR SHIELD - SHTG & NAILING PER STRUCT. - 2x6 @ 16" O.C. - VENTING PER PLANS - SIDING PER ELEVATION	R2-	- 5/8" GWB CEILING - PVA PRIMER & PAINT ROOF DECK - DECKING PER PLAN - PPT SLEEPERS (RIP TO SLOPE 1/4:12)		* PER MIN. C CRUS LARG WITH MATE
	(W4)-	EXTERIOR GARAGE WALL	5	- WEAR PAD - 80 MIL MEMBRANE APPROVED FOR USE AS WALKING DEC	~ <b>∀</b> *	
	VV4	- LOOSE DRAINING BACKFILL - DAMP-PROOFING - 8" CONC. WALL		<ul> <li>SO MIL MEMBRANE APPROVED FOR USE AS WALKING DEC</li> <li>SHTG &amp; NAILING PER STRUCT.</li> <li>TRUSSES PER STRUCT. (SLOPE 1/4:12)</li> <li>SPRAY FOAM INSULATION (R-49 MIN)</li> <li>5/8" GWB CEILING</li> <li>PVA PRIMER &amp; PAINT</li> </ul>		
	(W5)-	EXT GARAGE FRAMED WALL	ζ	*CONTRACTOR TO PROVIDE VERIFICATION THAT MEMBRA	NE	
	VVJ	- SIDING PER ELEVATION - (1) LAYERS VAPOR SHIELD - SHTG & NAILING PER STRUCT. - 2x6 @ 16" O.C. - 1/2" GWB - PVA PRIMER & PAINT		MANUFACTURER IS APPROVED FOR USE AS A WALKING DI AND INSTALLATION OF THE DECKING MATERIAL DIRECTLY TOP OF THE MEMBRANE PER THE ICC-ES ROOF AND WALK DECK MEMBRANES IN ACCORDANCE WITH THE ICC-ES CRITERIA FOR WALKING DECKS (AC39)	ON	4
					4	

### DOF - VAULTED CEILING

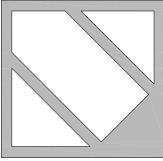
ETAL ROOF PER PLAN HTG & NAILING PER STRUCT. JI'S PER STRUCT. PRAY FOAM INSULATION (R-38 MIN.) 8" GWB CEILING VA PRIMER & PAINT

### **ONCRETE FOOTING**

REINFORCE CONCRETE FOOTING PER STRUCT. PROVIDE 24" HORIZONTAL R-10 RIGID

PERIMETER INSULATION AROUND SLAB. " Ø PERFORATED FOOTING DRAIN W/ ILTER FABRIC SLEEVE IN GRANULAR FILL\*

ERFORATED PIPE SHALL BE PLACES ON A I. OF 2 INCHES OF WASHED GRAVEL OR USHED ROCK AT LEAST ONE SIEVE SIZE RGER THAN PERFORATION AND COVERED TH NOT LESS THAN 6 INCHES OF SAME TERIAL.



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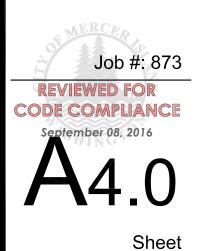
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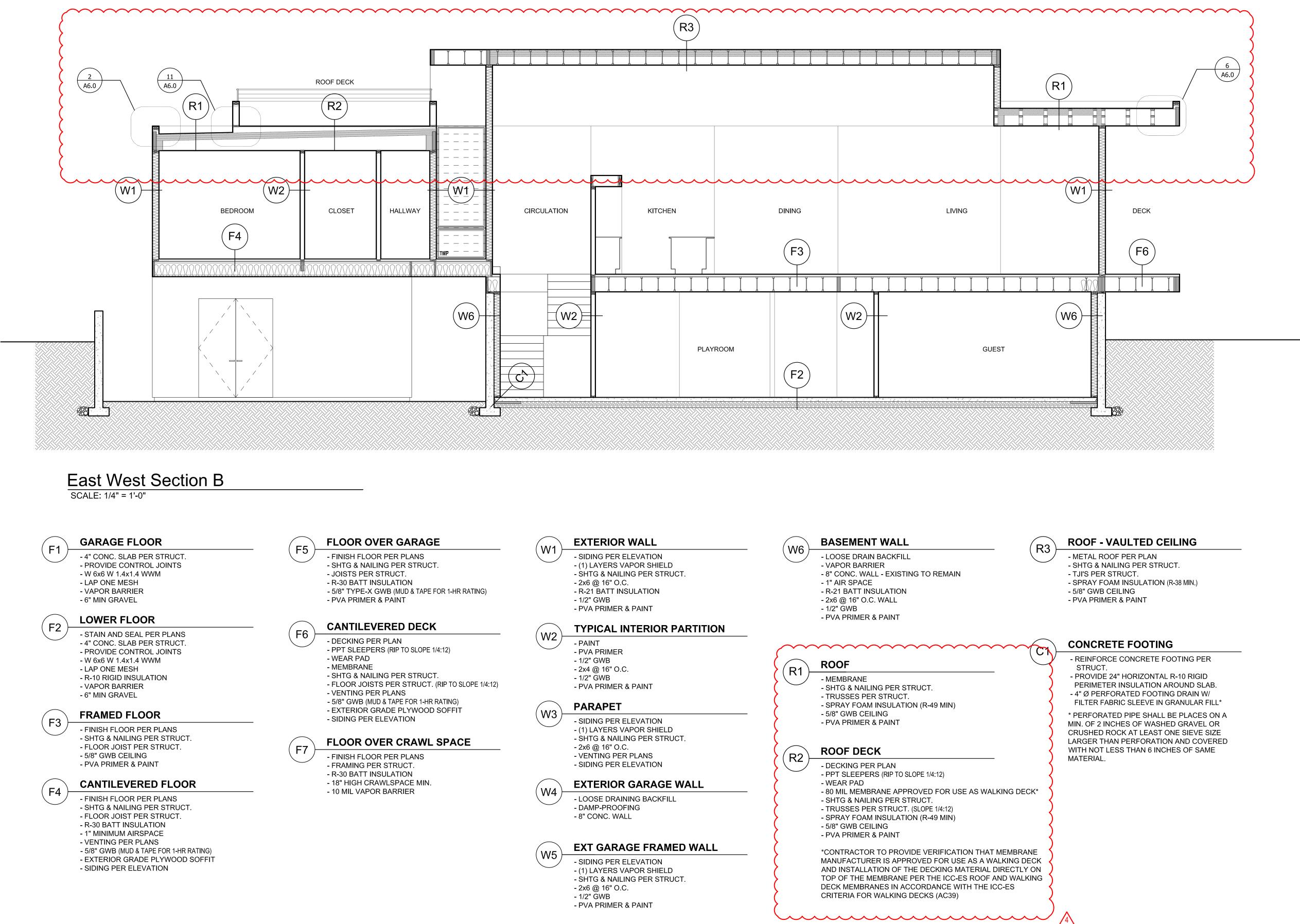
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> Mercer Way Island, WA House Mercer Island, Tree 5004 W

No	o. Date	Issue
1	08.11.15	Schematic
2	01.11.16	Engineer
3	02.26.16	Permit Intake









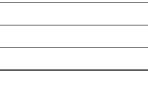
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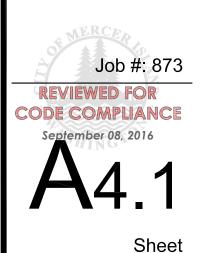
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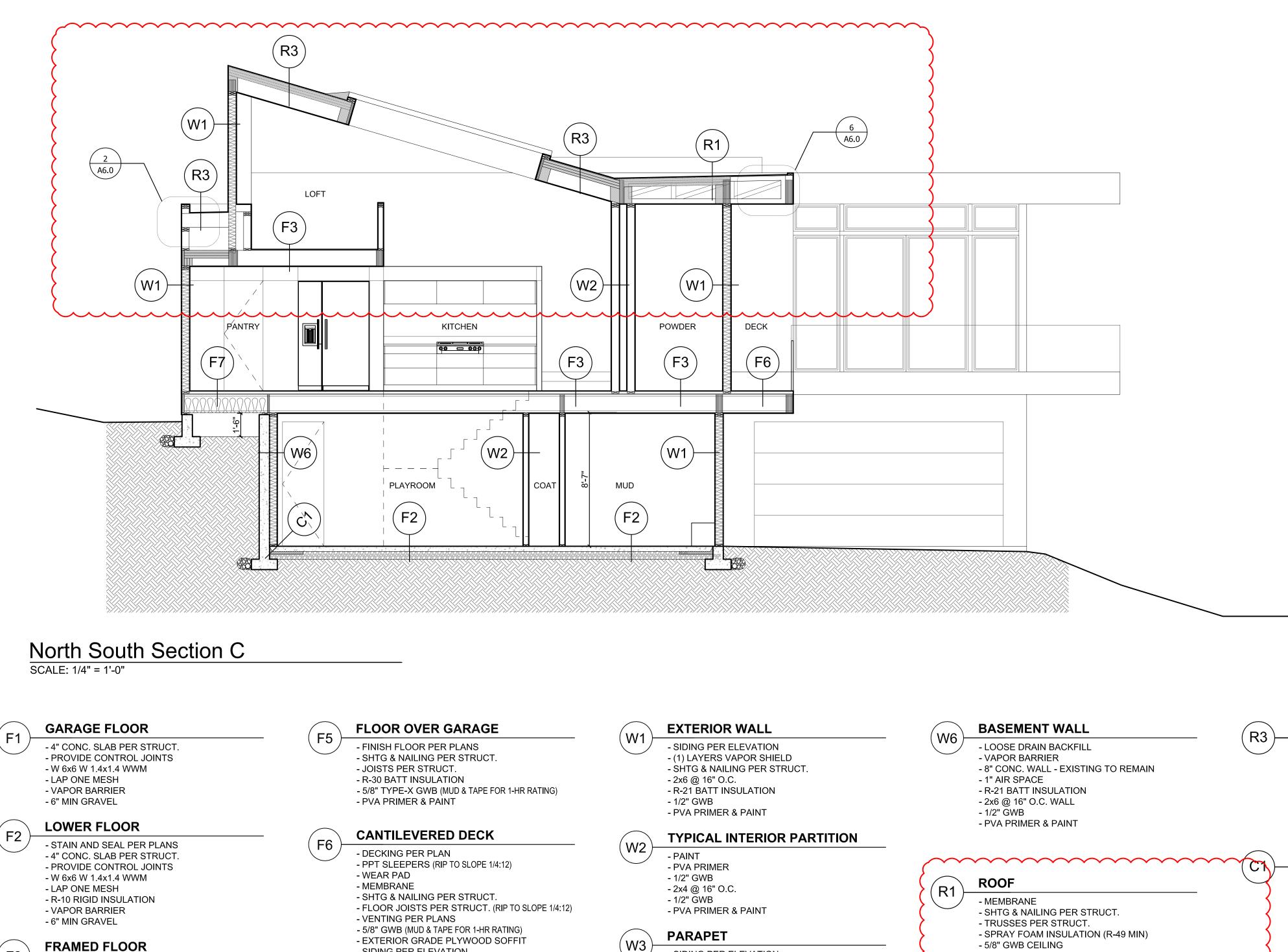
> Way House MA Mercer Island, Tree Mercer  $\geq$ 5004

No. Date		Issue
1 08.11.15		Schematic
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3	02.26.16	Permit Intake



### Sections





### FRAMED FLOOR F3

- FINISH FLOOR PER PLANS
- SHTG & NAILING PER STRUCT.
- FLOOR JOIST PER STRUCT. - 5/8" GWB CEILING
- PVA PRIMER & PAINT

### CANTILEVERED FLOOR F4

- FINISH FLOOR PER PLANS
- SHTG & NAILING PER STRUCT.
- FLOOR JOIST PER STRUCT.
- R-30 BATT INSULATION - 1" MINIMUM AIRSPACE
- VENTING PER PLANS
- 5/8" GWB (MUD & TAPE FOR 1-HR RATING)
- EXTERIOR GRADE PLYWOOD SOFFIT
- SIDING PER ELEVATION

- FLOOR OVER CRAWL SPACE
- FINISH FLOOR PER PLANS

์ F7

- SIDING PER ELEVATION

- FRAMING PER STRUCT.
- R-30 BATT INSULATION
- 18" HIGH CRAWLSPACE MIN.
- 10 MIL VAPOR BARRIER

### PARAPET

( W4

( W5

- SIDING PER ELEVATION
- (1) LAYERS VAPOR SHIELD - SHTG & NAILING PER STRUCT.
- 2x6 @ 16" O.C.
- VENTING PER PLANS
- SIDING PER ELEVATION

### EXTERIOR GARAGE WALL

- LOOSE DRAINING BACKFILL - DAMP-PROOFING
- 8" CONC. WALL

### EXT GARAGE FRAMED WALL

- SIDING PER ELEVATION - (1) LAYERS VAPOR SHIELD
- SHTG & NAILING PER STRUCT.
- 2x6 @ 16" O.C.
- 1/2" GWB - PVA PRIMER & PAINT

( R2

- 5/8" GWB CEILING - PVA PRIMER & PAINT

### **ROOF DECK**

- DECKING PER PLAN - PPT SLEEPERS (RIP TO SLOPE 1/4:12)
- WEAR PAD
- 80 MIL MEMBRANE APPROVED FOR USE AS WALKING DECK\* - SHTG & NAILING PER STRUCT.
- TRUSSES PER STRUCT. (SLOPE 1/4:12)
- SPRAY FOAM INSULATION (R-49 MIN)
- 5/8" GWB CEILING - PVA PRIMER & PAINT

\*CONTRACTOR TO PROVIDE VERIFICATION THAT MEMBRANE MANUFACTURER IS APPROVED FOR USE AS A WALKING DECK AND INSTALLATION OF THE DECKING MATERIAL DIRECTLY ON TOP OF THE MEMBRANE PER THE ICC-ES ROOF AND WALKING DECK MEMBRANES IN ACCORDANCE WITH THE ICC-ES CRITERIA FOR WALKING DECKS (AC39)

### **ROOF - VAULTED CEILING**

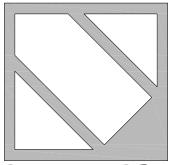
- METAL ROOF PER PLAN
- SHTG & NAILING PER STRUCT.
- TJI'S PER STRUCT. - SPRAY FOAM INSULATION (R-38 MIN.)
- 5/8" GWB CEILING
- PVA PRIMER & PAINT

### **CONCRETE FOOTING**

- REINFORCE CONCRETE FOOTING PER
- STRUCT.
- PROVIDE 24" HORIZONTAL R-10 RIGID
- PERIMETER INSULATION AROUND SLAB.
- 4" Ø PERFORATED FOOTING DRAIN W/ FILTER FABRIC SLEEVE IN GRANULAR FILL\*

\* PERFORATED PIPE SHALL BE PLACES ON A MIN. OF 2 INCHES OF WASHED GRAVEL OR CRUSHED ROCK AT LEAST ONE SIEVE SIZE LARGER THAN PERFORATION AND COVERED

WITH NOT LESS THAN 6 INCHES OF SAME MATERIAL.



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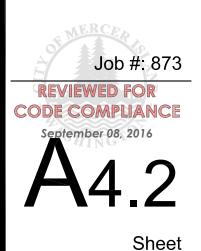
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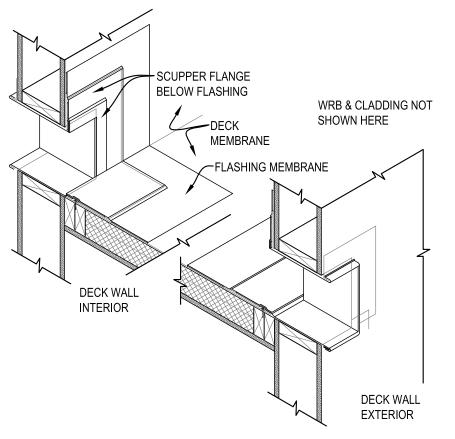
> Mercer Way Island, WA House Mercer Tree 5004 W

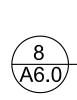
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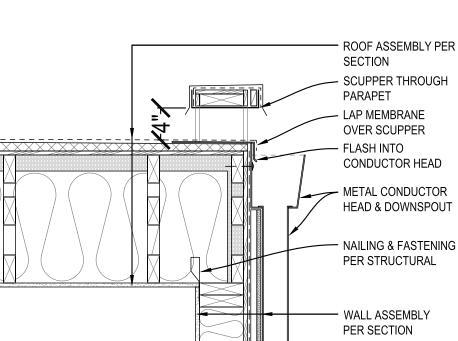


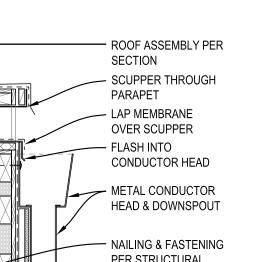


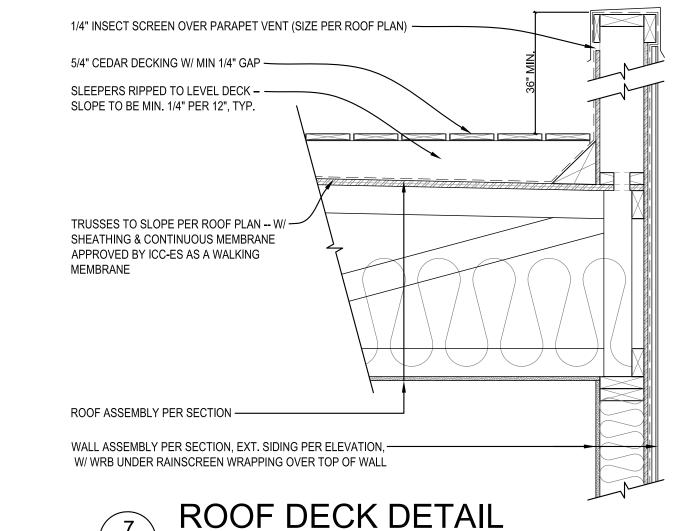






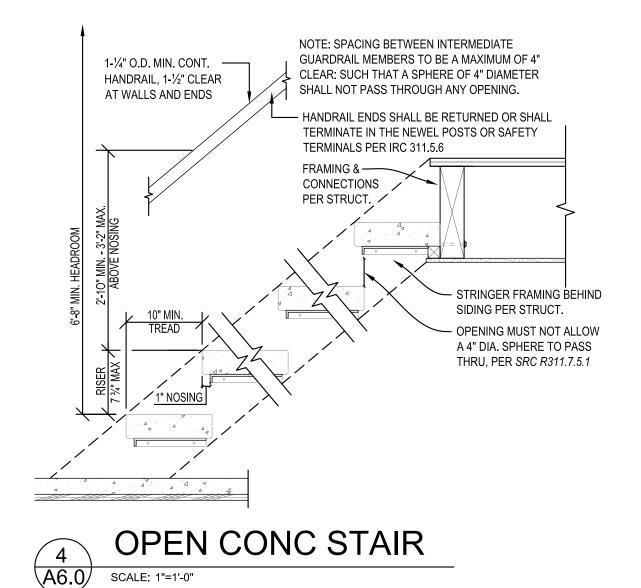


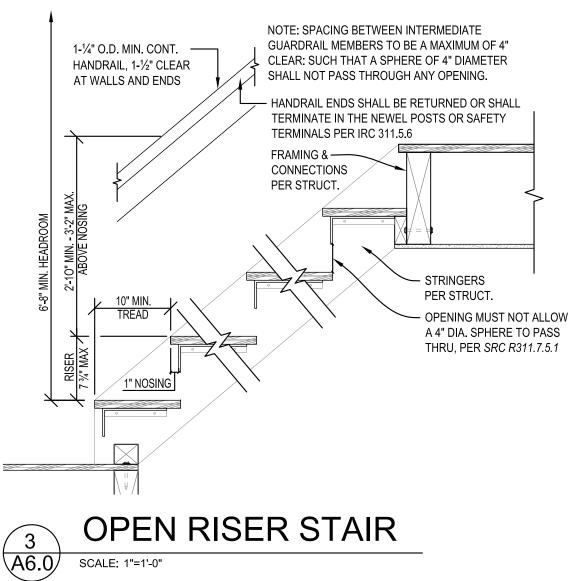


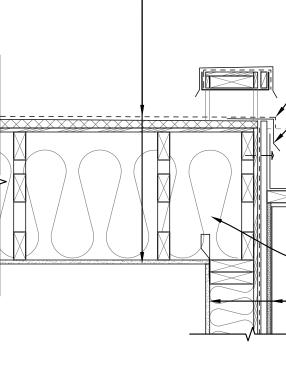


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SCALE: 1"=1'-0"









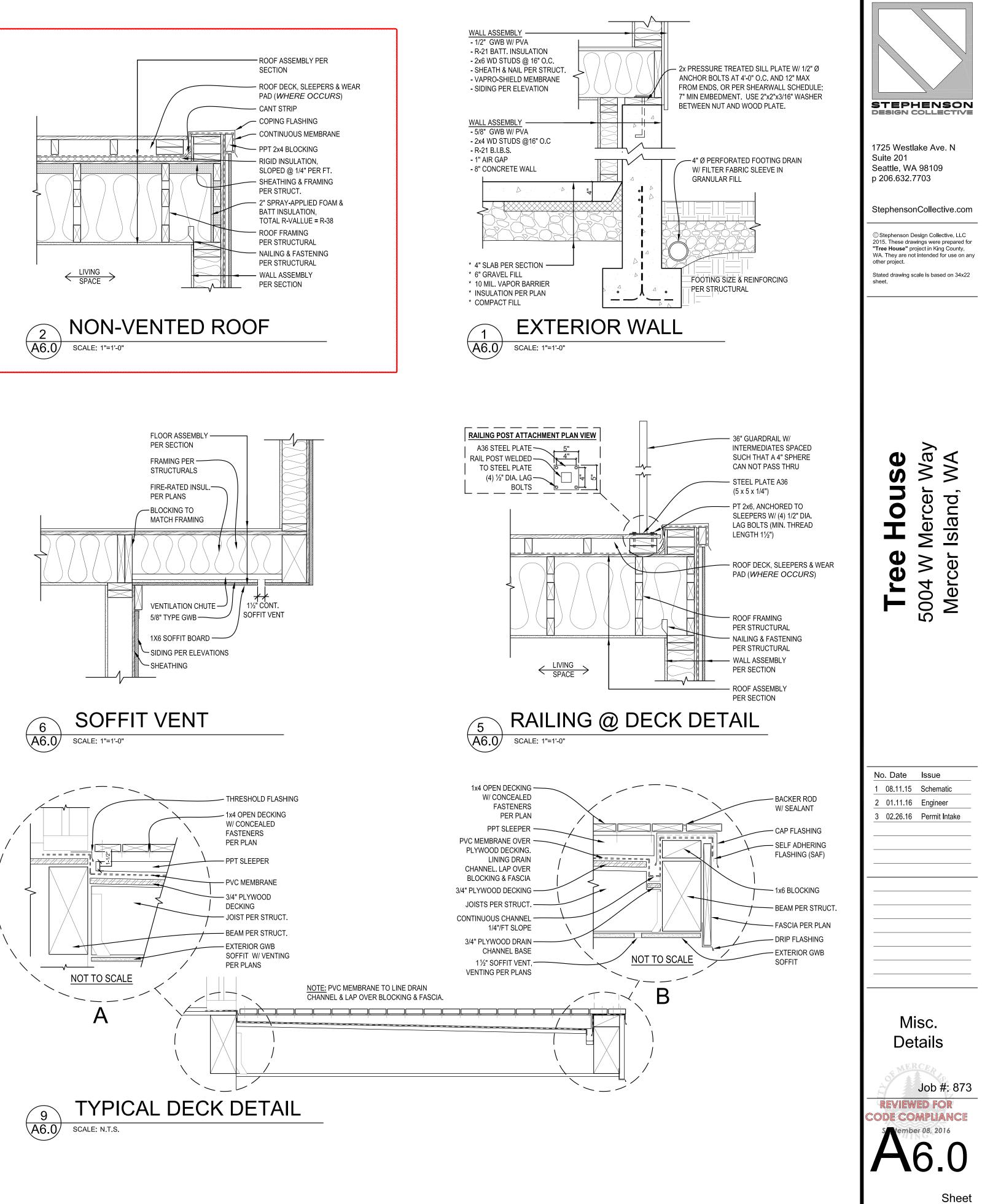


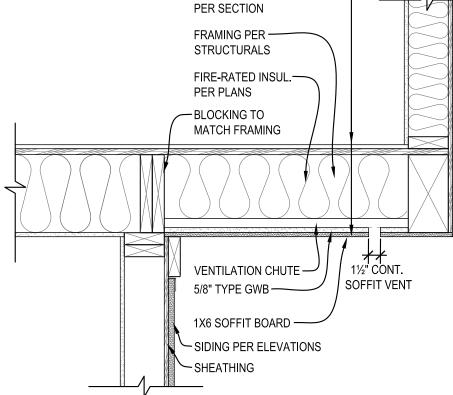
 – 3" ROUND DOWNSPOUT, BEYOND - NAILING & FASTENING PER STRUCTURAL - WALL ASSEMBLY PER SECTION

ONTO FLASHING - FLASH INTO GUTTER - 2x6 PPT END BLOCK BEYOND - FLASH OVER FASCIA & INTO GUTTER - CONTINUOUS ALUMINUM GUTTER 2x6 PPT BLOCKING

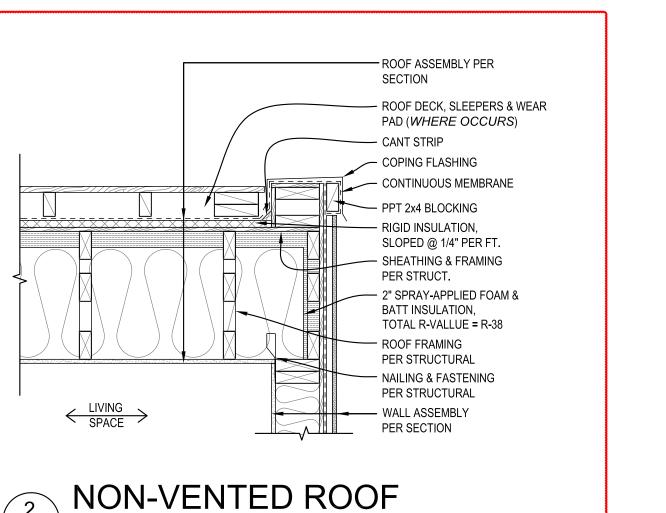
ROOF ASSEMBLY PER SECTION

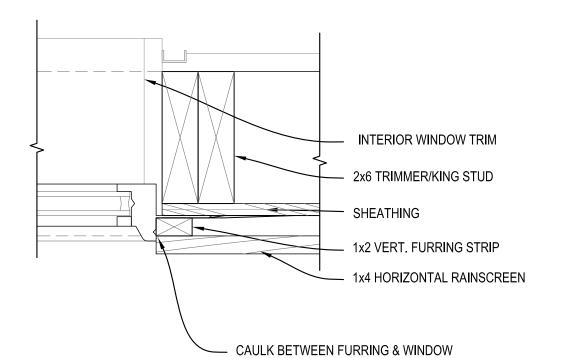
- LAP MEMBRANE

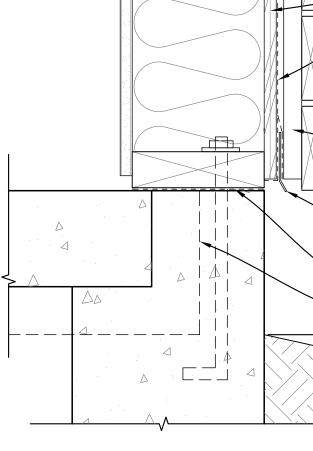




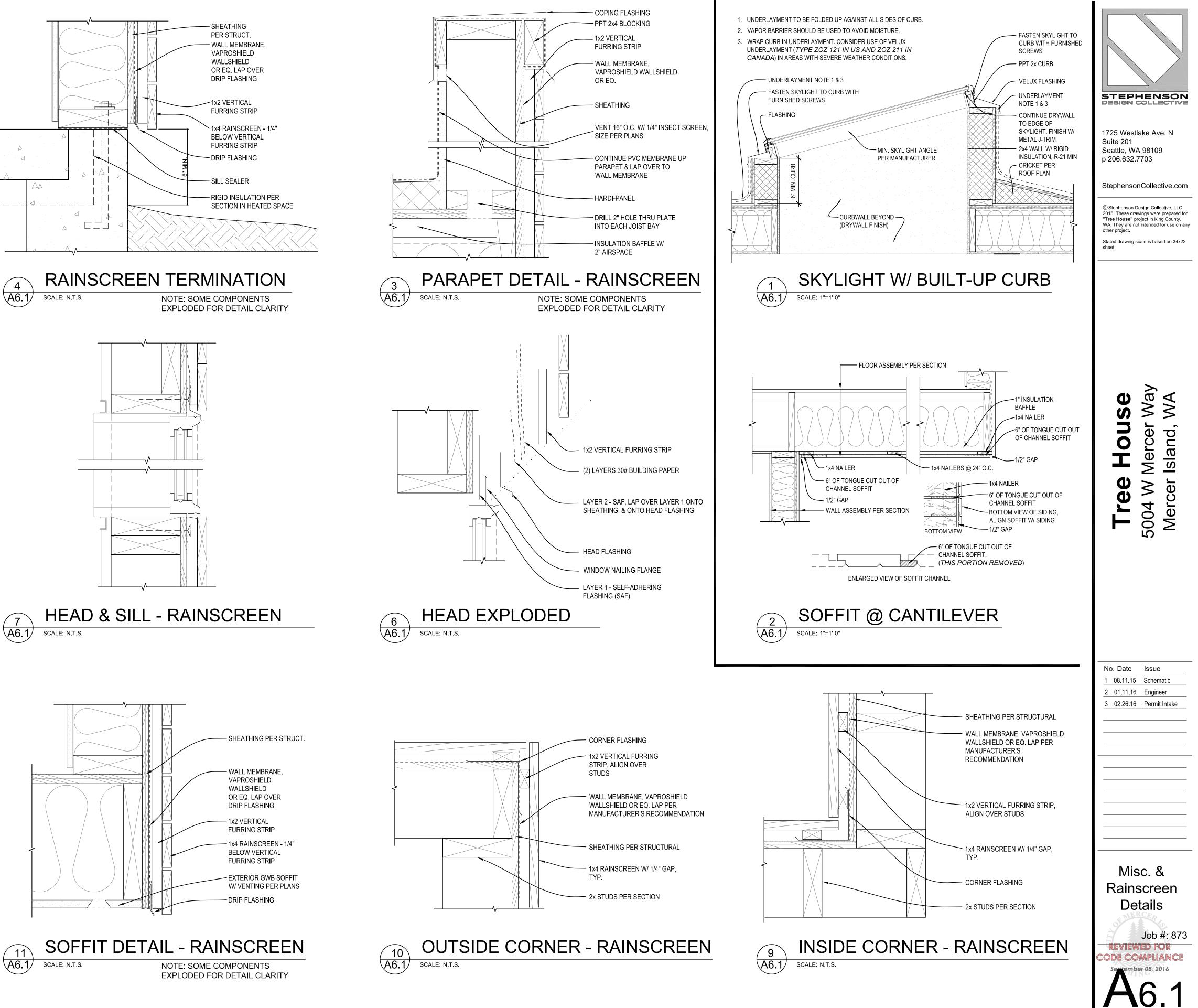
Γ	RAILING	P
	A36 S <sup>-</sup> RAIL PO TO S <sup>-</sup> (4)	TE ST TE

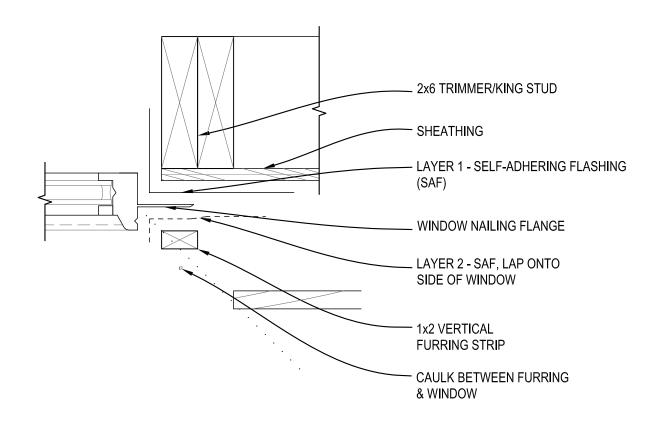




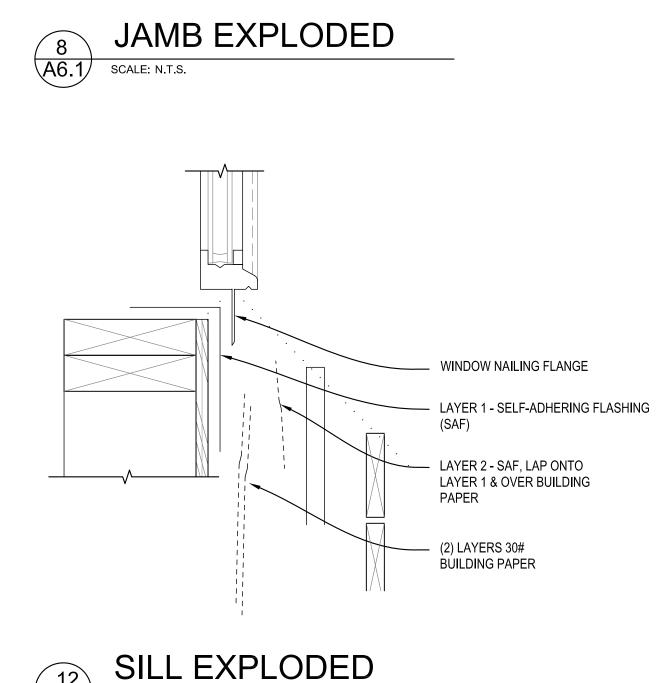






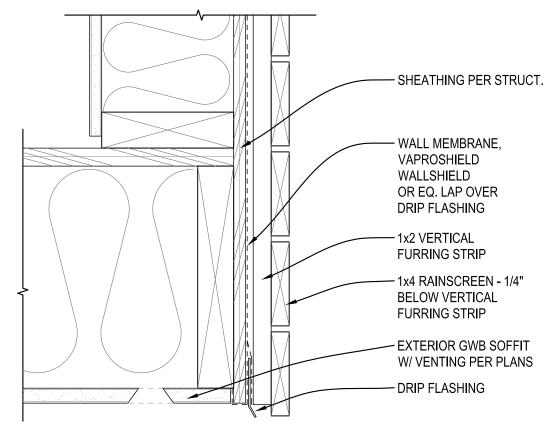




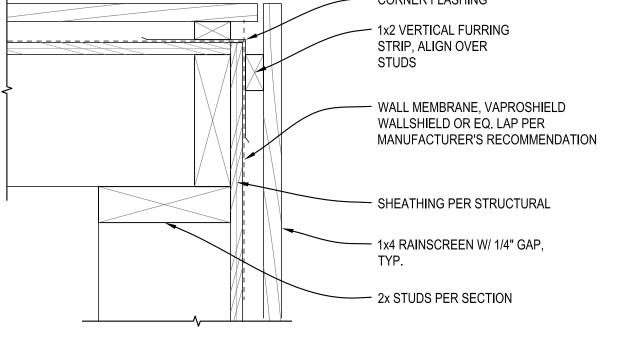


(12) (A6.1)

SCALE: N.T.S.

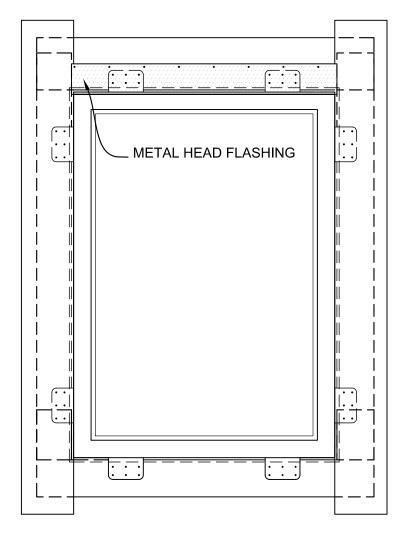


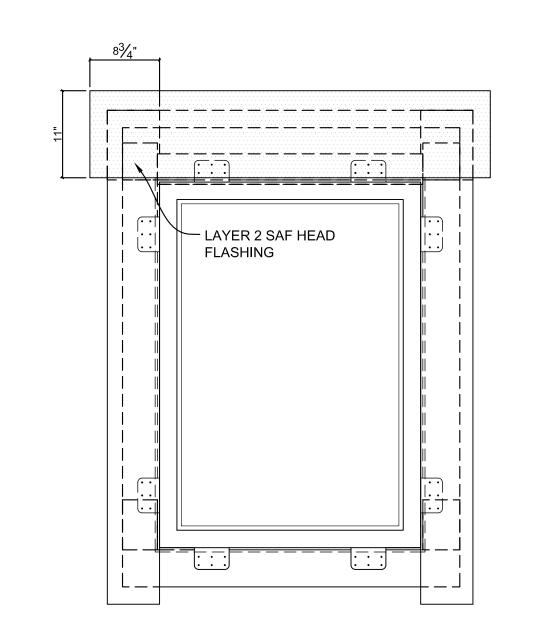


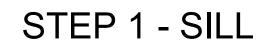


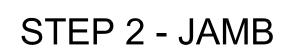


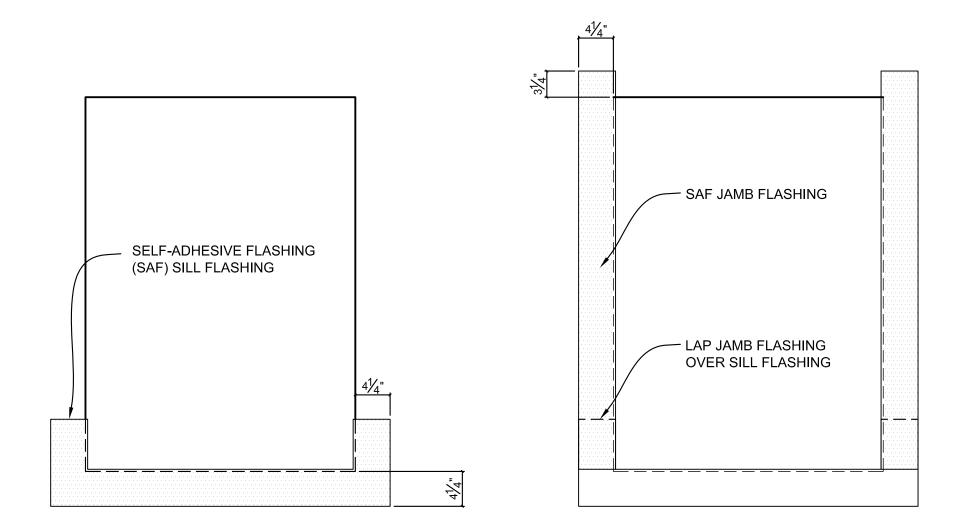






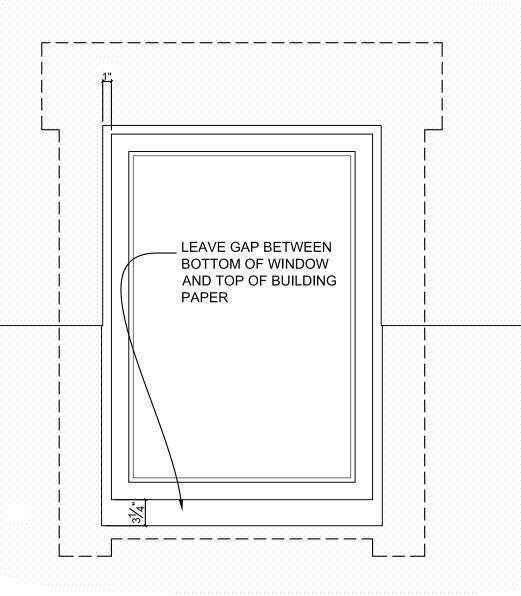


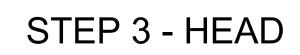


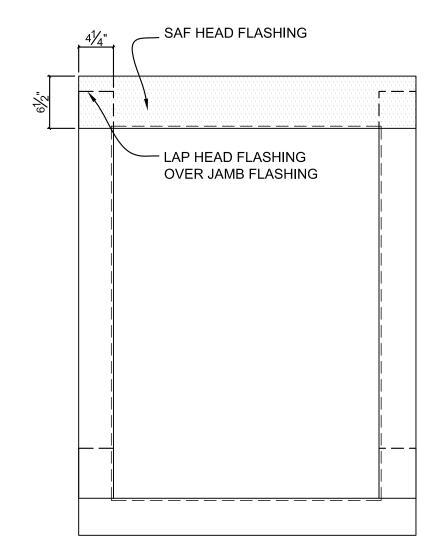




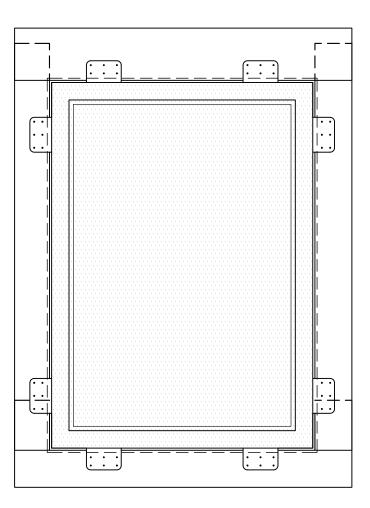


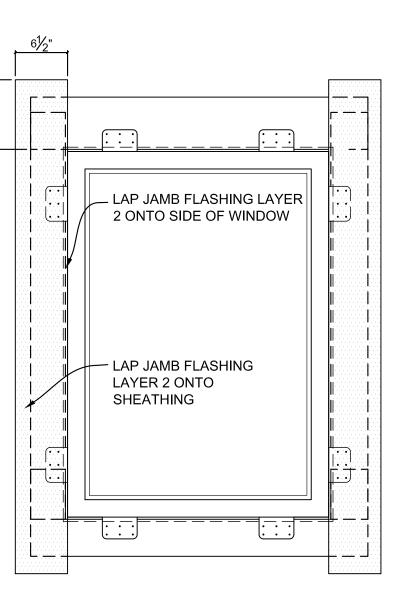






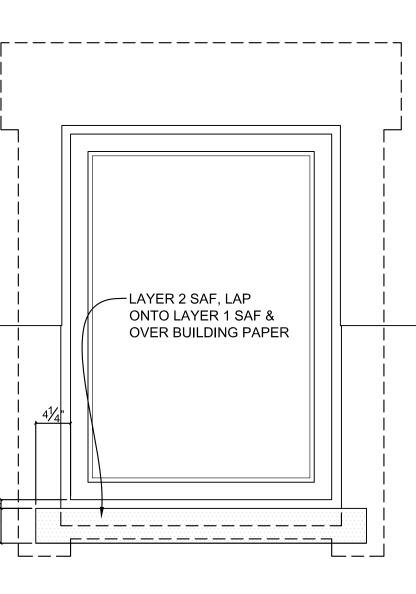






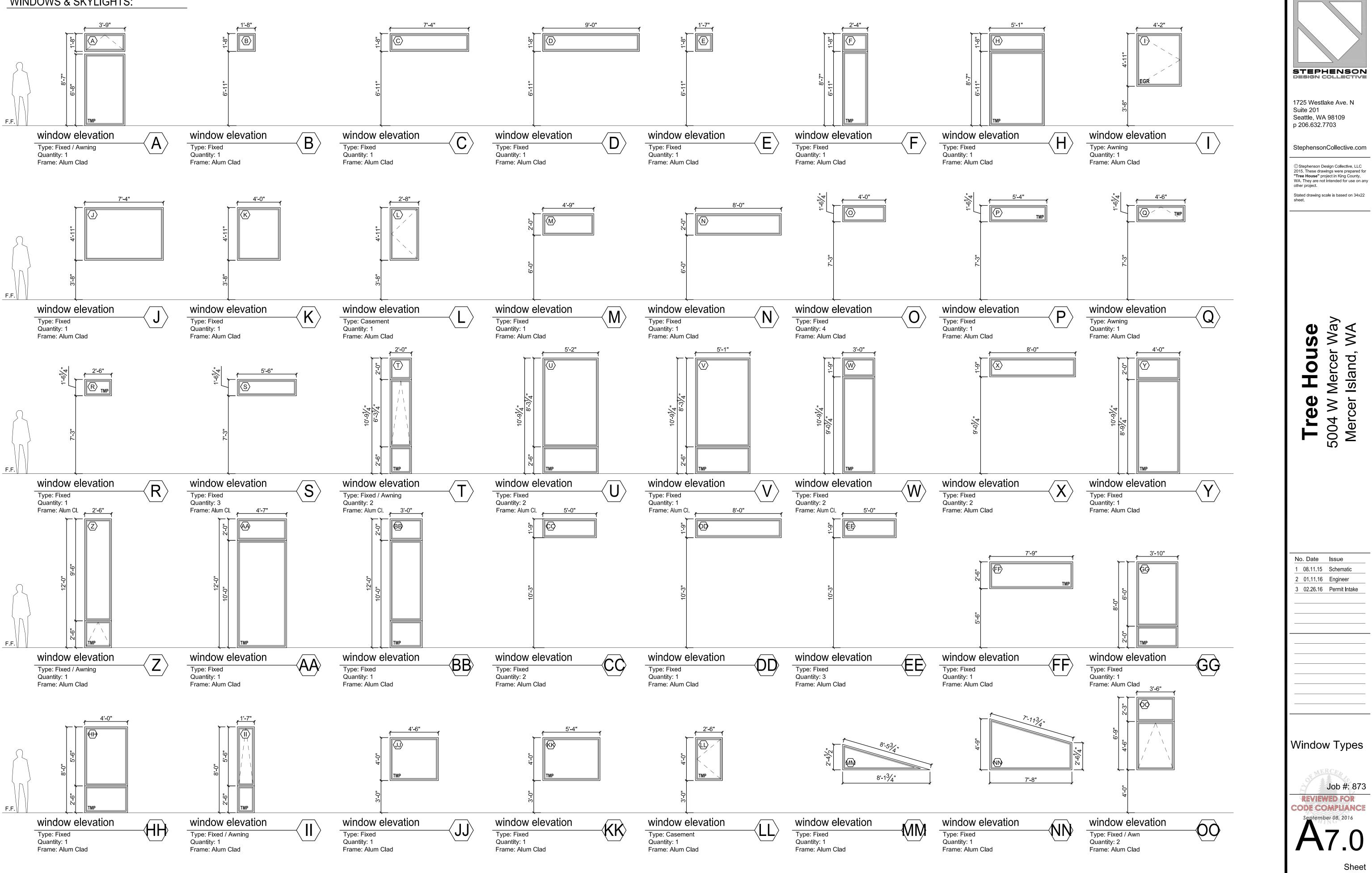
83⁄4"

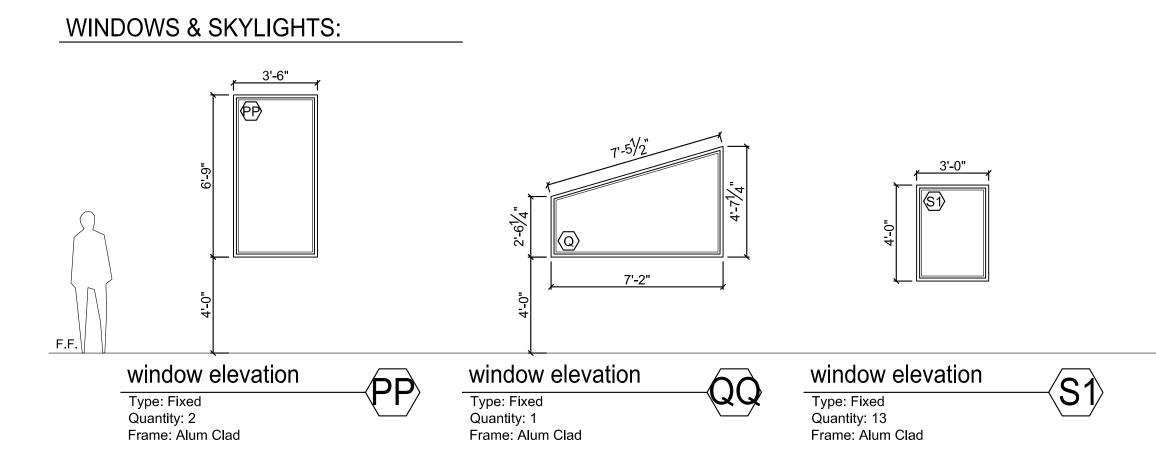
# STEP 5 - JAMB LAYER 2



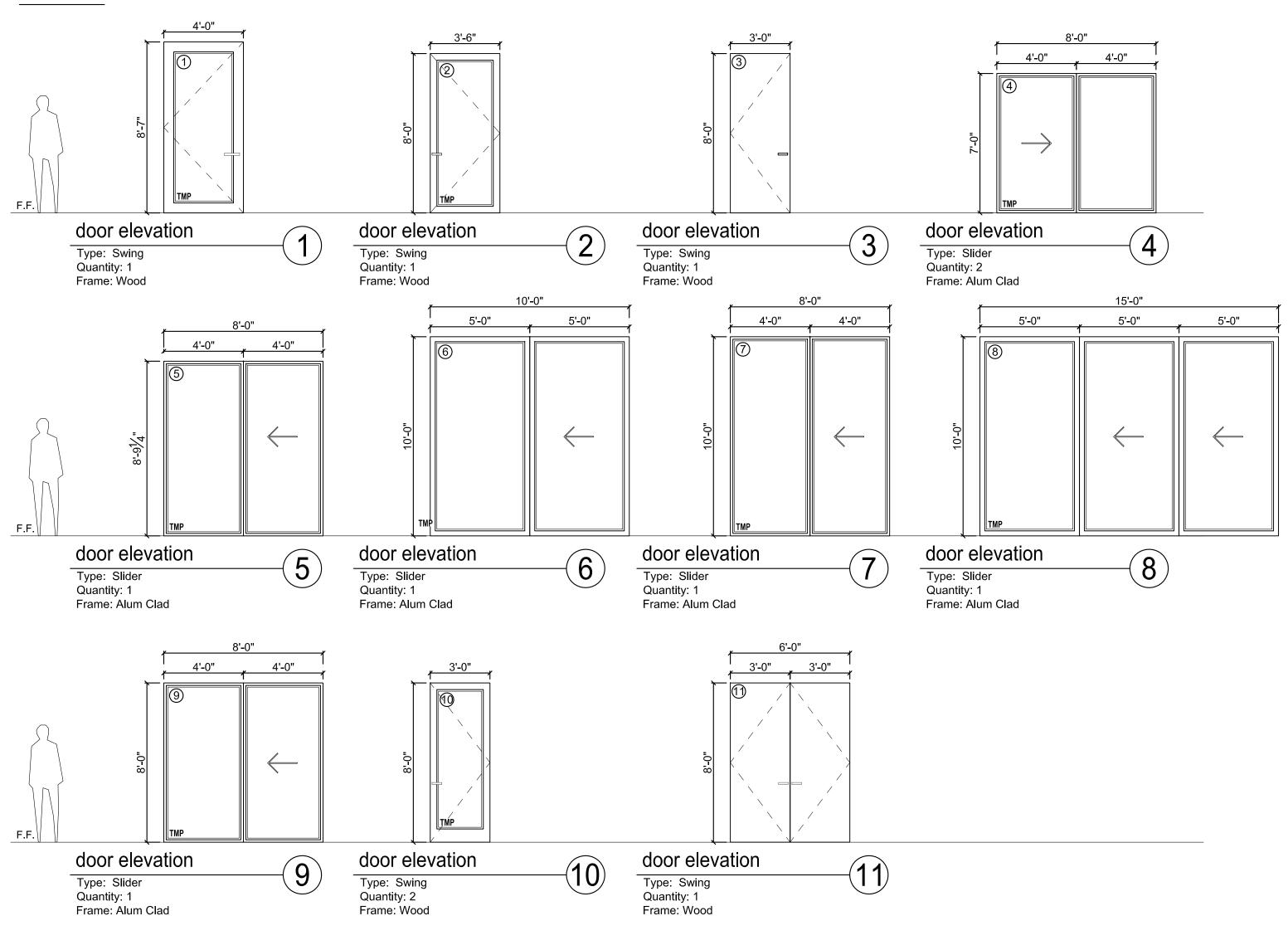
STEP 9 - SILL FLASHING 2

1725 Westlake Ave. N Suite 201 Seattle, WA 98109 p 206.632.7703
© Stephenson Design Collective, LLC 2015. These drawings were prepared for "Tree House" project in King County,
WA. They are not intended for use on any other project. Stated drawing scale is based on 34x22 sheet.
<b>Tree House</b> 5004 W Mercer Way Mercer Island, WA
No. Date         Issue           1         08.11.15         Schematic           2         01.11.16         Engineer           3         02.26.16         Permit Intake
Flashing         Details         Job #: 873         REVIEWED FOR         CODE COMPLIANCE         Detember 08, 2016





DOORS:



Glazing Schedule   TREE HOUSE   5004 W Mercer Way   Mercer Island, Wa											
ROOM	ELEV. TAG	# OF WINDOW	REQUIRED EGRESS*	WINDOW WIDTH	WINDOW HEIGHT	FRAME TYPE	WINDOW TYPE	TEMP. GLASS	AREA S.F.	U-VAL.	UxA
LOWER LEVEL											
ENTRY	A	1	N	3.75	8.58	TBD	FIXED/AWN	Y	32.18		9.65
LIVING ROOM	B	1	N	1.67	1.67	TBD	FIXED	N	2.79	0.30	0.84
LIVING ROOM DINING	C D	1	N	7.33 9.00	1.67 1.67	TBD TBD	FIXED	N N	12.24 15.03	0.30	3.67 4.51
DINING	E	1	N	1.58	1.67	TBD	FIXED	N	2.64	0.30	0.79
FAMILY	F	1	N	2.33	8.58	TBD	FIXED	Y	19.99	0.30	6.00
ENTRY	Н	1	N	5.08	8.58	TBD	FIXED	Y	43.61	0.30	13.08
LIVING ROOM		1	N	4.16	4.92	TBD	AWNING	N	20.47	0.30	6.14
LIVING ROOM DINING	J K	1	N N	7.33	4.92 4.92	TBD TBD	FIXED FIXED	N	36.06 19.68	0.30	10.82 5.90
DINING	L	1	N	2.67	4.92	TBD	CASEMENT	N N	13.14	0.30	3.94
FAMILY	M	1	N	4.75	2.00	TBD	FIXED	N	9.50	0.30	2.85
KITCHEN	N	1	N	8.00	2.00	TBD	FIXED	N	16.00	0.30	4.80
UPPER LEVEL											
STAIR	0	4	N	4.00	1.52	TBD	FIXED	N	24.32	0.30	7.30
M. BATH	Р	1	N	5.33	1.52	TBD	FIXED	Y	8.10		2.43
M. BEDROOM	Q	1	N	4.50	1.52	TBD	AWN	Y	6.84	0.30	2.05
M. BEDROOM BEDROOM 1	R	1	N N	2.50 5.50	1.52 1.52	TBD TBD	FIXED	Y N	3.80 25.08	0.30	1.14
BEDROOM 1	T	2	N	2.00	10.77	TBD	FIXED / AWN	Y	43.08	0.30	12.92
BATH 1	U	2	N	5.16	10.77	TBD	FIXED	Y	111.15	0.30	33.34
STAIR	٧	1	N	5.08	10.77	TBD	FIXED	Y	54.71	0.30	16.41
OFFICE	W	2	N	3.00	10.77	TBD	FIXED	Y	64.62	0.30	19.39
OFFICE	X Y	2	N	8.00	1.75	TBD	FIXED	N Y	28.00	0.30	8.40
BEDROOM 2 BEDROOM 2	Z	1	N N	4.00 2.50	10.77 12.00	TBD TBD	FIXED FIXED / AWN	Y	43.08 30.00	0.30	12.92 9.00
BATH 2	AA	1	N	4.58	12.00	TBD	FIXED	Ŷ	54.96	0.30	16.49
HALL	BB	1	N	3.00	12.00	TBD	FIXED	Y	36.00	0.30	10.80
STAIR	CC	2	N	5.00	1.75	TBD	FIXED	N	17.50	0.30	5.25
M. BATH	DD	1	N	8.00	1.75	TBD	FIXED	N	14.00	0.30	4.20
M. BEDROOM	EE FF	3	N N	5.00 7.75	1.75 2.50	TBD TBD	FIXED	N Y	26.25 19.38	0.30	7.88
BEDROOM 1	GG	1	N	3.83	8.00	TBD	FIXED	Y	30.64	0.30	9.19
BEDROOM 1	НН	1	N	4.00	8.00	TBD	FIXED	Ŷ	32.00	0.30	9.60
BATH 1		1	N	1.58	8.00	TBD	FIXED / AWN	Y	12.64	0.30	3.79
STAIR	IJ	1	N	4.50	4.00	TBD	FIXED	Y	18.00	0.30	5.40
OFFICE	КК	1	N	5.33	4.00	TBD	FIXED	Y	21.32	0.30	6.40
OFFICE BEDROOM 2	LL MM	1	N N	2.50	4.00 8.16	TBD TBD	CSMT FIXED	Y Y	10.00 9.51	0.30	3.00
BEDROOM 2	NN	1	N	7.67	3.63	TBD	FIXED	N	27.80	0.30	8.34
BATH 2	00	2	N	3.50	6.75	TBD	FIXED / AWN	N	47.25	0.30	14.18
HALL	PP	2	N	3.50	6.75	TBD	FIXED	N	47.25	0.30	14.18
BATH 2	QQ	1	N	3.50	7.16	TBD	FIXED WINDOW SU	N DTOTAL -	25.06	0.30	7.52
DOORS WITH M	ORE THA	N 50% GLA	SS				WINDOW SU	BIUIAL.	1130.00	0.30	340.70
ENTRY	1	1	N	4.00	8.58	TBD	SWING	Y	34.32	0.20	6.86
LIVING ROOM	2	1	N	3.50	8.00	TBD	SWING	Y Y	28.00	0.20	5.60
ENTRY LIVING ROOM	4 5	2	N N	8.00 8.00	7.00 9.00	TBD TBD	SLIDER SLIDER	Y	112.00 72.00	0.20	22.40
ENTRY	6	1	N	10.00	10.00	TBD	SLIDER	Ŷ	100.00	0.20	20.00
LIVING ROOM	7	1	N	8.00	10.00	TBD	SLIDER	Y	80.00	0.20	16.00
ENTRY	8	1	N	15.00	10.00	TBD	SLIDER	Y	150.00	0.20	30.00
LIVING ROOM	9 10	1 2	N N	8.00 3.00	8.00 8.00	TBD TBD	SLIDER SWING	Y Y	64.00 48.00	0.20	12.80 9.60
SKYLIGHTS + S	KVIALA	6					DOOR SU	BTOTAL:			137.66
	S1	. <b>s</b> 13	N	3.00	4.00	TBD	FIXED	Y	156.00	0.20	31.20
N.I.C NOT IN C		L					SKYLIGHT SU	1	156.00		31.20
							QUARE FEET G	LAZING	1979 98		509.56
							· · · · · · · · · · · · · · · · · · ·	TAL SF:	3664		500.00
							GLA	ZING % :	0.5404		

### **GENERAL NOTES:**

- 1. ALL SIZES NOTED IN WINDOW SCHEDULE DESIGNATE ROUGH OPENINGS. ADJUST UNIT SIZE TO SUIT MANUFACTURERS INSTALLATION REQUIREMENTS.
- 2. ALL WINDOWS AND DOORS SHALL BE NFRC CERTIFIED AND SHALL BE LABELED WITH NFRC CERTIFIED U-FACTOR.
- 3. CONTRACTOR SHALL VERIFY WINDOW AND DOOR ROUGH OPENINGS ARE SQUARE, LEVEL AND PLUM BEFORE INSTALLING WINDOW/ DOOR UNITS.
- 4. FLASH WINDOW PER AAMA STANDARDS AND MANUFACTURER REQUIREMENTS.

# WINDOW AND DOOR TYPES

MILGARD STYLE LINE WINDOWS PELLA STEEL ENTRY DOORS MILGARD TUSCANY SERIES SLIDING GLASS DOORS WASCO VINYL GS SERIES SKYLIGHT

### CPD#

FIXED WINDOWS: MIL-A-152-01137-00001 CASEMENT WINDOWS: MIL-A-261-00119-00001 SLIDER WINDOWS: MIL-A-153-01744-00001 **AWNING WINDOWS:** MIL-A-262-00119-00001 SLIDING DOORS: MIL-A-137-00964-00001 STEEL DOORS W/ GLASS: PEL-M-175-00996-00001 **SKYLIGHTS:** WPC-A-5-00027-00001

### **REQUIRED EGRESS WINDOWS:**

NET CLEAR OPEN AREA = 5.7 SQFT MIN. MINIMUM CLEAR OPEN WIDTH = 20" MINIMUM CLEAR OPEN HEIGHT = 24" MAXIMUM SILL HEIGHT = 44" 2012 WSU ENERGY CODE - CHAPTER 4,

SECTION R402 QUALIFICATION: PRESCRIPTIVE - CLIMATE ZONE 4C ALL WINDOWS AND DOORS SHALL BE NFRC

CERTIFIED & SHALL BE LABELED WITH NFRC CERTIFIED U-FACTOR

<b>R-VALUE REQUIRE</b>	MENTS
GLAZING MAX %	UNLIMITED
VERT. GLAZING U-FACTOR	0.3 (R-3.3)
OVR-HD GLAZING U-FACTOR	0.5 (R-2)
DOOR U-FACTOR	0.20 (R-5)
CEILINGS W/ ATTICS	R-49
CEILINGS, VAULTED	R-38
ABOVE GRADE WALLS	R-21
BELOW GRADE WALLS, INT.	R-21
BELOW GRADE WALLS, EXT.	R-10
FLOOR	R-30
SLAB ON GRADE	R-10
EXT. HEADERS	R-10

# STEPHENSON DESIGN COLLECTIVE 1725 Westlake Ave. N Suite 201 Seattle, WA 98109 p 206.632.7703 StephensonCollective.com © Stephenson Design Collective, LLC

2015. These drawings were prepared for "Tree House" project in King County, WA. They are not intended for use on any other project. Stated drawing scale is based on 34x22 sheet

# 5004 W Mercer Way Mercer Island, WA House Tree 5004 W

N	o. Date	Issue				
1	08.11.15	Schematic				
2	01.11.16	Engineer				
3	02.26.16	Permit Intake				
V	Vindow	& Door				
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		e, Notes				
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	OF ME	ER Lo				
		Job #: 873				
(		ED FOR				
C	CODE COMPLIANCE					
	September 08, 2016					

A7.

# GENERAL STRUCTURAL NOTES

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

### CRITERIA

- 1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC) 2012 EDITION
- 2. DESIGN LOADING CRITERIA FLOOR LIVE LOAD (RESIDENTIAL) 40 PSF SNOW 25 PSF WIND METHOD - DIRECTIONAL PROCEDURE Kzt=1.45, GCpi=0.18, 110 MPH (RISK CATEGORY II), EXPOSURE "C" ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE EARTHQUAKE LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS SDC D, le=1.0, Ss=1.447, S1=0.556, Sds=0.965, Sd1=0.556, Cs=0.148, R=6.5, SEISMIC DESIGN BASE SHEAR Vsx=35.9 KIPS
- 3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTIONS, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-02 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION."
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTOR'S WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- 7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- 8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
- 9. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
- 10.SHOP DRAWINGS OF DESIGN BUILD STAIR SYSTEMS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON AND SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO REVIEW OF THE ARCHITECT OR ENGINEER OF RECORD FOR GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE MADE AVAILABLE UPON WRITTEN REQUEST. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

### GEOTECHNICAL

11.SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

ALLOWABLE SOIL PRESSURE	2500 PSF
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)	45 PCF/35 PCF
	70 PSF
SEISMIC SURCHARGE	7H
PASSIVE PRESSURE	300 PCF (ALLOWABLE)
COEFFICIENT OF FRICTION	0.4 (ALLOWABLE)

SOILS REPORT REFERENCE: GEOTECHNICAL ENGINEERING STUDY PROPOSED ADDITION, 5004 WEST MERCER WAY, MERCER ISLAND, WA, PREPARED BY PANGEO INCORPORATED ON DECEMBER 23, 2015 FILE No 15-293.

### CONCRETE

- 12.CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 318 AND ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'C = 3000 PSI. SLUMP OF CONCRETE SHALL NOT EXCEED 6". STRUCTURAL DESIGN IS BASED ON A CONCRETE STRENGTH OF f'c = 2500 PSI, THEREFORE NO CONCRETE STRENGTH TESTING REQUIRED.
- ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-11, TABLE 4.4.1.
- 13. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, fy = 60 KSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy = 40 KSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, fy = 60 KSI.
- 14. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-05 AND 318-11. LAP ALL CONTINUOUS REINFORCEMENT #6 AND SMALLER 48 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 48 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-11, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
- NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

- 15. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
- FOOTINGS AND OTHER UNFORMED SURFACES to earth
- FORMED SURFACES EXPOSED TO EARTH OR W FORMED SURFACES EXPOSED TO EARTH OR W COLUMN TIES OR SPIRALS AND BEAM STIRRUP SLABS AND WALLS (INT FACE)

### ANCHORAGE

- REQUIRED. RODS SHALL BE ASTM A36, UNO.
- 18. EXPANSION BOLTS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "STRONG-BOLT" SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.
- TO NEAREST CONCRETE EDGE.

### WOOD

TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS	(2x AND 3x MEMBE
	(4x MEMBERS)
BEAMS	(6x AND LARGER)
POSTS	(4x MEMBERS)
	(6x AND LARGER)

### STUDS, PLATES AND MISC FRAMING

- COMBINATION 3, L2D GRADE, Fc = 2300 PSI, Fb = 2000 PSI, E = 1900 KSI.
- 22. MANUFACTURED LUMBER, PSL, LVL, AND LSL, SHALL BE MANUFACTURED UNDER A PROCESS MINIMUM PROPERTIES:

PSL (2.2E)	Fb = 2900 PSI
LVL (2.0E)	Fb = 2600 PSI
LSL (1.55E)	Fb = 2325 PSI
PSL COLUMN (1.8E)	Fc = 2400 PSI

- SIZE WITH MEMBERS PROVIDED.
- OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.
- 23. PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE PLYWOOD WEB JOIST PLYWOOD WEB JOIST PROVIDED.

es cast against and permanently exposed	
	3'
WEATHER (#6 BARS OR LARGER)	2'
WEATHER (#5 BARS OR SMALLER)	1-1/2
PS	1-1/2'

GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

16. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" EPOXY ADHESIVE AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2508. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS

17. HEAVY DUTY THREADED CONCRETE ANCHORS SPECIFIED ON THE DRAWINGS SHALL BE "TITEN HD SCREW ANCHOR" AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2713, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES.

ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT CONFORMANCE TO ICC-ES REPORT ESR-1771, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS.

19. DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE (PDPWL-300MG, 0.145" DIAMETER, UNO) AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2138. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1", UNO. MAINTAIN AT LEAST 3"

20.ALL 2x LUMBER SHALL BE KILN DRIED OR MC-19, AND ALL LUMBER SHALL BE GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD GRADING RULES FOR WEST COAST LUMBER NO 17. FURNISH

> ERS) HEM-FIR NO 2 OR SPRUCE-PINE-FIR NO 2 MINIMUM BASE VALUE, Fb = 850 PSI

> > DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fb = 900 PSI

> > DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fb = 875 PSI

DOUGLAS FIR-LARCH NO 2

MINIMUM BASE VALUE, FC = 1350 PSI

DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, FC = 600 PSI

HEM-FIR NO 2 OR SPRUCE-PINE-FIR NO 2

21.GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA-EWS CERTIFICATE OF CONFORMANCE. ALL GLULAM BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI, UNO. ALL 24F-V8 GLULAM BEAMS WILL BE SPECIFIED ON PLAN AND SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI. GLUED LAMINATED COLUMNS SHALL BE DOUGLAS FIR

APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. ALL PSL, LVL, AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ES REPORT ESR-1387 USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. THE MEMBERS SHALL HAVE THE FOLLOWING

E = 2200 KSI	Fv = 290 PSI
E = 2000 KSI	Fv = 285 PS
E = 1550 KSI	Fv = 310 PS
E = 1800 KSI	Fv = 190 PSI

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN

MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY

MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH

- 24.PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS-1 OR PS-2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.
- WALL SHEATHING SHALL BE 7/16" or 1/2" (NOMINAL) WITH SPAN RATING 24/0
- FLOOR SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24

WATERPROOF DECK SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24

FLAT ROOF SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24

ROOF SHEATHING SHALL BE 1/2" or 7/16" (NOMINAL) WITH SPAN RATING 32/16 FOR ROOFS WITH A PITCH GREATER THAN 2:12

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

- 25.ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.
- 26.PRESSURE TREATED WOOD (INCLUDES PRESERVATIVE AND FIRE TREATED) SHALL BE TREATED PER AWPA STANDARDS. PRESSURE TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO RETENTION OF 0.25 PCF. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO A RETENTION OF 0.40 PCF. SODIUM BORATE (SBX) TREATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER. FASTENERS AND TIMBER CONNECTORS WITHOUT AMMONIA IN DIRECT CONTACT WITH ACQ-A TO A RETENTION LEVEL OF 0.40 PCF), CBA-A (UP TO A RETENTION LEVEL OF 0.41 PCF), CA-B (UP TO A RETENTION LEVEL OF 0.21 PCF), SHALL BE G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653. FASTENERS AND TIMBER CONNECTORS WITH AMMONIA IN DIRECT CONTACT WITH ACQ-A (OVER A RETENTION LEVEL OF 0.40 PCF), CBA-A (OVER A RETENTION LEVEL OF 0.41 PCF), CA-B (OVER A RETENTION LEVEL OF 0.21 PCF), OR WITH ACZA TREATED WOOD SHALL BE TYPE 304 OR 316 STAINLESS STEEL.
- 27.TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2015. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ALL 2x JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "IUS" SERIES JOIST HANGERS. ALL DOUBLE-JOISTS BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIU" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT (2) MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

28.WOOD FASTENERS

A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	TYPE	LENGTH	DIAMETER
8d	COMMON	2-1/2"	0.131"
10d	GUN	3''	0.131"
12d	GUN	3-1/4"	0.131"
16d	GUN	3-1/2"	0.131"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

- B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2012 EDITION) WITH A LEAD BORE HOLE OF 60-70% OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS. BOLT HOLES SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER. HOLES SHALL BE ACCURATELY ALIGNED IN MAIN MEMBERS AND SIDE PLATES/MEMBERS. BOLTS SHALL NOT BE FORCIBLY DRIVEN.
- C. SDS SERIES WOOD SCREWS CALLED OUT ON PLAN SHALL BE "SIMPSON STRONG-DRIVE" WOOD SCREWS BY SIMPSON COMPANY, AND INSTALLED IN STRICT ACCORDANCE TO ICC-ES REPORT ESR-2236. EQUIVALENT SCREWS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. LAG SCREWS ARE NOT AN EQUIVALENT SUBSTITUTION.

29. WOOD FRAMING NOTES - THE FOLLOWING APPLY UNLESS NOTED OTHERWISE ON THE PLANS:

- A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC, THE AITC "TIMBER CONSTRUCTION MANUAL", AND THE AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, SHALL CONFORM TO TABLE 2304.9.1. OF THE IBC, UNO. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
- B. WALL FRAMING: REFER TO ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16"oc, UNO. (2)STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. (2)2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS IN STRUCTURAL WALLS, UNO. NAIL MULTI-MEMBER HEADERS WITH (2) ROWS 10d AT 12" oc. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE AND BOTTOM PLATE TO EACH STUD WITH (3)10d NAILS. FACE NAIL DOUBLE TOP PLATES WITH 10d AT 12" OC AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE (12)10d NAILS AT 4" OC EACH SIDE OF JOINT. AT TOP PLATE INTERSECTIONS PROVIDE (3)10d FACE NAILS.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH (2) ROWS OF 12d NAILS AT 16" oc, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS AT 4'-0"oc EMBEDDED 7" MINIMUM, UNO. THERE SHALL BE A MINIMUM OF (2)BOLTS PER PLATE SECTION WITH (1)BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4-1/2" FROM EACH END OF THE PLATE SECTION. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH (2) ROWS OF 10d AT 16" oc. UNLESS NOTED OTHERWISE, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH #6 x 1-1/4" TYPE S OR W SCREWS AT 8"oc. UNLESS NOTED OTHERWISE, 7/16" OR 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS AT 6"OC AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS AT 12"oc. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS, UNO. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL TIMBER JOISTS TO SUPPORTS WITH (3) 10d NAILS AND NAIL TJI JOISTS TO SUPPORTS WITH (2) 10d NAILS. ATTACH JOISTS TO BEAMS WITH SIMPSON JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH (2) ROWS 10d AT 12" oc. TOENAIL RIM JOIST TO TOP PLATE WITH 10d AT 6"oc. TOENAIL BLOCKING BETWEEN JOISTS TO TOP PLATE WITH (3)10d NAILS.

UNLESS NOTED OTHERWISE ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6"oc WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND AT 12" oc TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 10d AT 12"oc, UNO.

30.NOTCHES AND HOLES IN WOOD FRAMING:

- A. SAWN LUMBER JOISTS AND RAFTERS: NOTCHES AT THE ENDS OF JOISTS SHALL NOT EXCEED 1/4 THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED 1/6 THE JOIST DEPTH, BE LONGER THAN 1/3 THE JOIST DEPTH, OR BE LOCATED IN THE MIDDLE 1/3 OF THE SPAN. HOLES SHALL NOT BE WITHIN 2" OF THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER SHALL NOT EXCEED 1/3 THE JOIST DEPTH. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2) TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL BE LOCATED A MINIMUM OF 2" FROM ANY NOTCH.
- B. EXTERIOR AND BEARING WALLS: WOOD STUDS ARE PERMITTED TO BE NOTCHED TO A DEPTH NOT EXCEEDING 1/4 OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40% OF THE STUD WIDTH IS PERMITTED IN WOOD STUDS. HOLES SHALL NOT BE WITHIN 5/8" TO THE EDGE OF THE STUD. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2)TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL NOT BE LOCATED AT THE SAME SECTION AS A NOTCH.
- C. CUTS, NOTCHES, AND HOLES IN MANUFACTURED LUMBER, PREFABRICATED PLYWOOD WEB JOISTS, AND PREFABRICATED TRUSSES ARE PROHIBITED EXCEPT WHERE NOTED ON STRUCTURAL PLANS OR PERMITTED BY MANUFACTURER'S RECOMMENDATIONS.
- 31. ELECTRICAL, MECHANICAL, PLUMBING, AND DRAINAGE SYSTEMS SHALL BE DESIGNED TO ACCOMMODATE THE DIFFERENTIAL SHRINKAGE OR MOVEMENT OF THE WOOD STRUCTURE (3/8" PER FLOOR).
- 32. PREFABRICATED CONNECTOR PLATE WOOD ROOF DECK TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION", ANSI/TPI 1-07 BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	50 PSF
TOP CHORD DEAD LOAD	35 PSF
BOTTOM CHORD DEAD LOAD TOTAL LOAD	5 PSF 90 PSF
WIND UPLIFT (TOP CHORD)	10 PSF

REFER TO PLAN FOR ADDITIONAL LOADING

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, ETC, SHOWN ON THE DRAWINGS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

33.PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION", ANSI/TPI 1-07 BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	25 PSF
TOP CHORD DEAD LOAD	10 PSF
BOTTOM CHORD DEAD LOAD	5 PSF
TOTAL LOAD	40 PSF
WIND UPLIFT (TOP CHORD) BOTTOM CHORD LIVE LOAD (BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOAD)	10 PSF 10 PSF

REFER TO PLAN FOR ADDITIONAL LOADING

TRUSSES SHALL BE DESIGNED TO NOT ALLOW LIMITED STORAGE PER IBC TABLE 1607.1. WEBS SHALL BE CONFIGURED SO THAT ALL OPENINGS ARE SMALLER THAN 24" WIDE x 42" HIGH.

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC, SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS, USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ROOF OVER-FRAMING, ETC SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

### STEEL

- 34. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI. HP SHAPES SHALL CONFORM TO ASTM A572 GRADE 50, Fy = 50 KSI. OTHER ROLLED SHAPES INCLUDING PLATES, SHALL CONFORM TO ASTM A36, Fy = 36 KSI. STRUCTURAL PIPE SHALL CONFORM TO ASTM A53 GRADE B, Fy = 35 KSI. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE B, Fy = 46 KSI (SQUARE AND RECTANGULAR), Fy = 42 KSI (ROUND). CONNECTION BOLTS SHALL CONFORM TO ASTM A307, UNO.
- 35. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
- 36.ALL A325 CONNECTION BOLTS NEED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A PERSON USING AN ORDINARY SPUD WRENCH.

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PRINCIPAL ENGINEER ASM DRAWN CDS, TTH PROJECT NO 0262.2015.01.01

PERMIT SET 2.23.16

REV	DESCRIPTION	DATE
$\Delta$	PERMIT CORRECTIONS	7.22.16
2	PERMIT CORRECTIONS	8.24.16

### GENERAL STRUCTURAL NOTES

SCALE - NTS

GENERAL STRUCTURAL NOTES AND ABBREVIATIONS CONTINUED ON SHEET \$1.1

# GENERAL STRUCTURAL NOTES CONTINUED

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

### STEEL

37. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES(F) AND 40 FT-LBS AT 70 DEGREES (F), AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

### RENOVATION

- 38. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
- 39. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION AND/OR DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 20 PSF.
- 40. CONTRACTOR SHALL CHECK FOR DRYROT AT ALL AREAS OF NEW WORK. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.
- 41. EXISTING REINFORCING SHALL BE SAVED WHERE AND AS NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED.
  - A. ALL NEW OPENINGS THROUGH EXISTING WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE.
  - B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
  - C. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING, IF POSSIBLE.
  - D. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE, DOWELS EPOXY GROUTED INTO EXISTING CONCRETE SHALL BE PROVIDED TO MATCH HORIZONTAL REINFORCING, UNO.

### ABBREVIATIONS

ADDKLV	IATIONS				
±	PLUS OR MINUS	ES	EACH SIDE	OD	OUTSIDE DIAMETER
Ø	DIAMETER	EW	EACH WAY	OF	OUTSIDE FACE
AB	ANCHOR BOLT	EXP	EXPANSION	OPNG	OPENING
ABV	ABOVE	EXT	EXTERIOR	OPP	OPPOSITE
ADDL	ADDITIONAL	FDN	FOUNDATION	OSB	ORIENTED STRAND
AFF	ABOVE FINISHED	FF	FINISHED FLOOR		BOARD
	FLOOR	FIN	FINISH	PAF	POWDER ACTUATED
ALT		FLR	FLOOR		FASTENER
APPROX		FRMG FRP		PEN PERP	PENETRATION PERPENDICULAR
ARCH	ARCHITECT, ARCHITECTURAL	ГКГ	FIBER REINFORCED PLASTIC	PL	PLATE
BLDG	BUILDING	FS	FAR SIDE	PL	PROPERTY LINE
BLKG	BLOCKING	FT	FEET	PLF	POUNDS PER LINEAR
BLW	BELOW	FTG	FOOTING		FOOT
BM	BEAM	GA	GAGE, GAUGE	PLY	PLYWOOD
BMU	BRICK MASONRY	GALV	GALVANIZED	PREFAB	PREFABRICATED
	UNIT	GL	GLUE LAMINATED	PRELIM	PRELIMINARY
BOE	BOTTOM OF		TIMBER	PSF	POUNDS PER
	EXCAVATION	GR	GRADE		SQUARE FOOT
BOT	BOTTOM	GT	GIRDER TRUSS	PSI	POUNDS PER SQUARE
BRG	BEARING	GWB	GYPSUM WALLBOARD	DOL	
BSMT	BASEMENT	HD		PSL	PARALLEL STRAND
btwn C	BETWEEN CAMBER	HDR HF	HEADER HEM FIR	PT	LUMBER PRESSURE TREATED
CBF		HGR	HANGER	ГІ	LUMBER
СЫ	BRACED FRAME	HM	HIP MASTER	P-T	POST-TENSIONED
CGS	CENTER GRAVITY	HORIZ	HORIZONTAL	R	RADIUS
000	OF STEEL	HSS	HOLLOW STRUCTURAL	REF	REFERENCE
CIP	CAST IN PLACE		SECTION	REINF	REINFORCING
CJ	CONTROL JOINT	HT	HEIGHT	REQD	REQUIRED
CJP	COMPLETE JOINT	IBC	INTERNATIONAL	RET	RETAINING
	PENETRATION		BUILDING CODE	RO	ROUGH OPENING
Q.	CENTERLINE	ID	INSIDE DIAMETER	SCHED	SCHEDULE
CLG	CEILING	IE	INVERT ELEVATION	SECT	SECTION
CLR	CLEAR	IF	INSIDE FACE	SF	SQUARE FOOT
CMU	CONCRETE MASONRY UNIT	in Insul	INCH INSULATION	shtg Sim	Sheathing Similar
COL	COLUMN	INSUL	INTERNATIONAL	SOG	SIMILAR SLAB ON GRADE
CONC	CONCRETE	INC	RESIDENTIAL CODE	SPEC	SPECIFICATIONS
CONN	CONNECTION	INT	INTERIOR	SQ	SQUARE
CONST	CONSTRUCTION	JST	JOIST	SR	STUD RAIL
CONT	CONTINUOUS	K	KIPS (1000 POUNDS)	SS	STAINLESS STEEL
COORD	COORDINATE	KP	KING POST	stagg	STAGGER/STAGGERED
CP	COMPLETE	KSF	KIPS PER SQ FT	STD	standard
	PENETRATION	L	ANGLE	STIFF	STIFFENER
CTR	CENTER	L	LENGTH	STL	STEEL
CTRD	CENTERED	LBS	POUNDS	STRUCT	
CY		LF		SW	SHEARWALL
DBL DEMO	double Demolish	LL LLH	LIVE LOAD LONG LEG	SYM T&G	SYMMETRICAL TONGUE AND GROOVE
DEMO	DETAIL	LLN	HORIZONTAL	TDS	TIE DOWN SYSTEM
DEV	DEVELOPMENT	LLV	LONG LEG VERTICAL	TEMP	TEMPORARY
DF	DOUGLAS FIR	LOC	LOCATE, LOCATION	THK	THICKNESS
DIA	DIAMETER	LONG	LONGITUDINAL	THKD	THICKENED
DIAG	DIAGONAL	LSH	long slotted hole	THRD	THREADED
DIM	DIMENSION	LSL	LAMINATED	THRU	THROUGH
DIST	DISTRIBUTED		STRUCTURAL LUMBER	TOW	TOP OF WALL
DL	DEAD LOAD	LVL	LAMINATED VENEER	TPL	TRIPLE
DN	DOWN		LUMBER	TRANSV	
DO		MAT	MATERIAL	TYP	
DP DS	DEEP/DEPTH DRAG STRUT	MAX MB	MAXIMUM MACHINE BOLT	UNO	UNLESS NOTED
ds DWGS	DRAWINGS	MECH	MACHINEBOLI	VERT	otherwise Vertical
(E)	EXISTING	MECH	MANUFACTURE	VIF	
EA	EACH	MIN	MINIMUM	W	WIDE OR WIDTH
EE	EACHEND	MISC	MISCELLANEOUS	w/	WITH
EF	EACH FACE	MRF	MOMENT RESISTANT	w/o	WITHOUT
EL	ELEVATION		FRAME	WD	WOOD
ELEV	ELEVATOR	MTL	METAL	WHS	WELDED HEADED STUD
EMBED	EMBEDMENT	NO	NUMBER	WP	WORKING POINT
ENGR	ENGINEER	NOM	NOMINAL	WTS	WELDED THREADED
EQ	EQUAL	NS			STUD
EQUIP		NTS	NOT TO SCALE	WWM	WELDED WIRE MESH
EQUIV	EQUIVALENT	OC	ON CENTER		



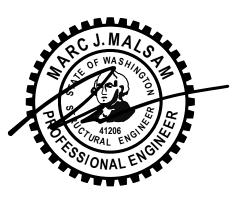
MALSAM TSANG STRUCTURAL ENGINEERING 122 S JACKSON ST SUITE 210 SEATTLE, WA 98104 206.789.6038 T

206.789.6042 F





ARCHITECT STEPHENSON DESIGN COLLECTIVE 1725 WESTLAKE AVE N SUITE 201- SEATTLE, WA 98109 206.632.7703 T



PRINCIPAL WIW ENGINEER ASM DRAWN CDS, TTH PROJECT NO 0262.2015.01.01

PERMIT SET

RE∨	DESCRIPTION	DATE
$\sqrt{1}$	PERMIT CORRECTIONS	7.22.16
2	PERMIT CORRECTIONS	8.24.16

### GENERAL STRUCTURAL NOTES

SCALE - NTS

2.23.16

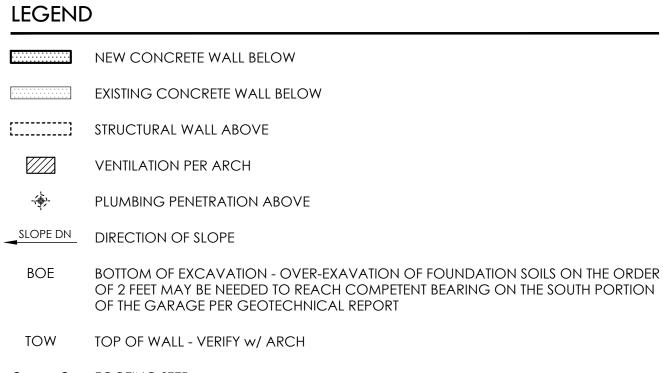
**S1**.

- 1. BOTTOM OF ALL FOOTINGS SHALL BE 18" MINIMUM BELOW LOWEST ADJACENT GRADE, UNO.
- 2. SLAB ON GRADE SHALL BE 4" MINIMUM THICKNESS. REINFORCE WITH 6x6 W1.4 x W1.4 WWM CENTERED IN SLAB. PROVIDE VAPOR BARRIER BELOW SLAB OVER 4" MIN FREE DRAINING
- GRAVEL OVER FIRM NATIVE SOILS OR STRUCTURAL FILL PER SOILS ENGINEER.
- 3. REFER TO SHEET \$3.0 FOR TYPICAL FOUNDATION AND CONCRETE DETAILS.
- 4. REFER TO GENERAL STRUCTURAL NOTES SHEET \$1.0 FOR ADDITIONAL REQUIREMENTS.
- 5. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.

6. FOOTINGS SHALL BE AT SAME ELEVATION WHERE THEY INTERSECT.

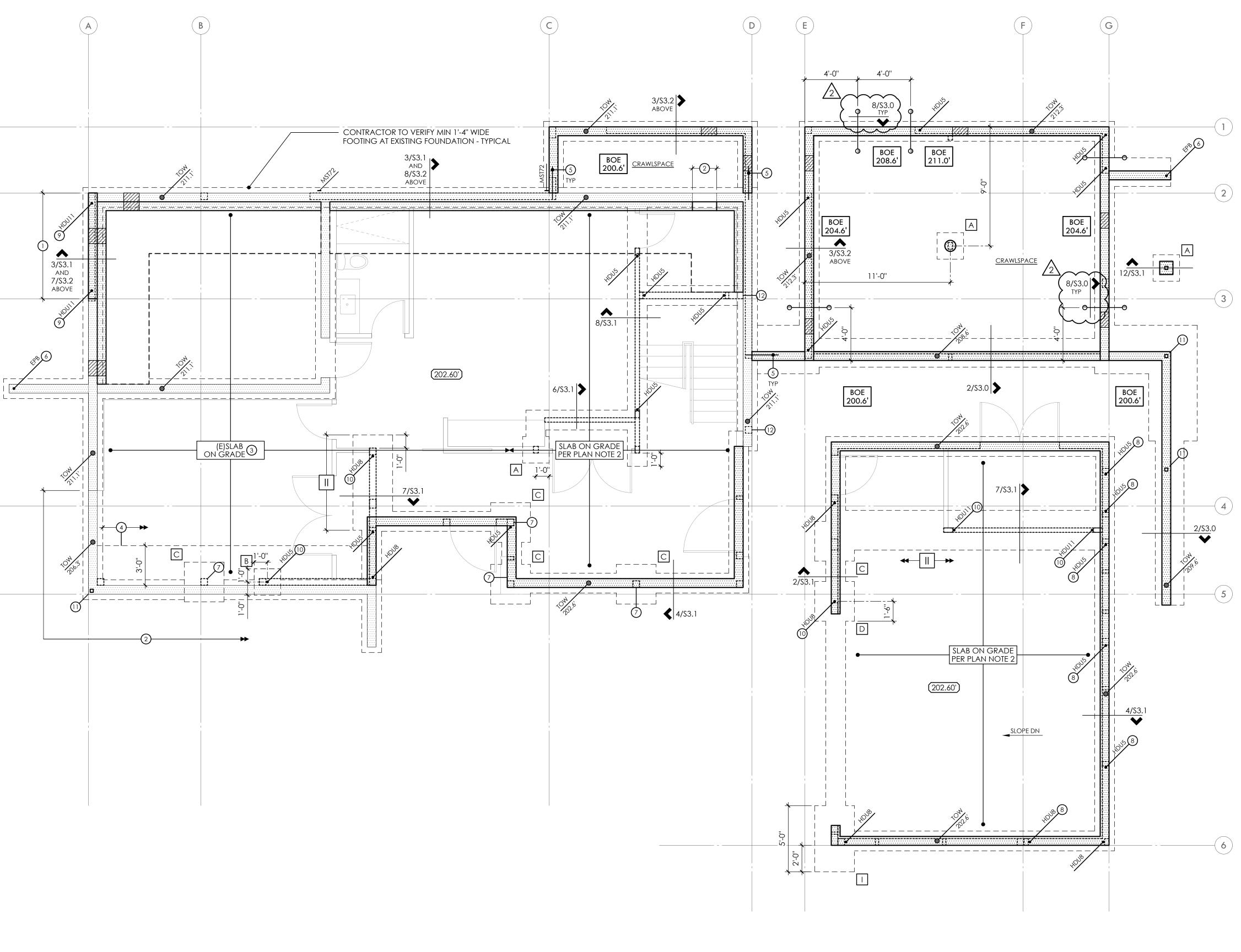
### FOOTNOTES

- SAW CUT EXISTING CONCRETE WALL DOWN 30" CHIP AROUND EXISTING REINFORCEMENT -EXISTING REINFORCEMENT SHALL REMAIN
- 2 SAW CUT TOP OF EXISTING FOUNDATION DOWN TO ACCOMODATE OPENINGS PER ARCH
- SAW CUT EXISTING SLAB AS REQUIRED TO INSTALL NEW FOOTINGS DOWEL CONSTRUCTION JOINTS w/ #4 x 2'-6" AT 18"oc SET-XP EPOXY GROUT EMBED DOWELS 6"
- A SAW CUT EXISTING SLAB AND THICKEN SLAB AT SOUTH END TO BEAR ON TOP OF EXISTING FOOTING 6" MIN - DOWEL CONSTRUCTION JOINTS w/ #4 x 2'-6" AT 18"oc - SET-XP EPOXY GROUT EMBED DOWELS 6"
- 5 DOWEL CONSTRUCTION JOINT w/ #4 x 2'-6" TO MATCH NEW WALL AND FOOTING HORIZ REINFORCE - SET-XP EPOXY GROUT EMBED DOWELS 6"
- 6 SET-XP EPOXY GROUT EMBED THREADED ROD ANCHOR 6" MIN INTO TOP OF FOUNDATION WALL
- POST ABOVE TO BEAR DIRECTLY ON FOUNDATION w/ (2)LAYERS OF BUILDING PAPER AND (2)A35 TO BOTTOM PLATE
- OFFSET ANCHOR WITH HOLDOWN POST ABOVE PER MANUFACTURER
- PROVIDE SIMPSON SB1x30 HOLDOWN ANCHOR PER DETAIL 11/S3.0 AND 7/S3.2
   EMBED HOLDOWN ANCHOR BOLT INTO FOOTING PER 11/S3.0 AND 2/S3.1 AND 7/S3.1
- (1) INSTALL POST BASE PER DETAIL 12/S5.0
- (12) INSTALL POST BASE PER DETAIL 11/S5.0



• FOOTING STEP

(XX.XX') TOP OF SLAB ELEVATION - VERIFY w/ ARCH



### FOOTING SCHEDULE REINFORCING MARK SIZE Α 2'-0" SQ x 8" DP (2)#4 EW BOT В 2'-0" SQ x 16" DP #4 AT 12"oc EW top and bot С 3'-0" SQ x 12" DP (4)#4 EW BOT D 3'-0" SQ x 16" DP #4 AT 12"oc EW top and bot (4)#4 BOT LONG 3'-0" W x 12" DP #4 AT 9"oc BOT TRANS 3'-0" W x 16" DP #4 AT 12"oc EW top and bot FOUNDATION PLAN



GROUND LEVEL WALLS SHOWN DASHED

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- 1. TYPICAL FLOOR FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 14" TJI 210'S AT 16" OC, UNO. PROVIDE DBL JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH.
- 2. TYPICAL WATER PROOF DECK FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 2x12's AT 16"oc, UNO. JOISTS CAN BE TAPERED TO A MIN DEPTH OF 8-1/4".
- 3. TYPICAL CRICKET FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 2x SLEEPERS AT 24"0C. TOENAIL SLEEPERS w/ (2)10d AT 24"0C OVER TYPICAL ROOF FRAMING. PROVIDE VENTING HOLES BELOW CRICKET ROOF FRAMING AS REQUIRED.
- 4. NAIL SHEATHING w/ 8d AT 6" oc AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12"oc IN FIELD, UNO.
- 6. "SW\_" INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/S4.0 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6, UNO.
- 7. ALL REQUIRED HEADERS ARE SHOWN ON PLAN. REFER TO DETAIL 8/S4.0 FOR ADDITIONAL REQUIREMENTS.
- 8. PROVIDE (2)BEARING (TRIMMER) STUDS AT EACH END OF ALL HEADERS AND BEAMS 6'-0" IN LENGTH AND OVER, UNO.
- 9. WHERE POSTS OCCUR, PROVIDE SOLID VERTICAL GRAIN BLOCKING THRU FLOOR TO MATCHING SUPPORTS BELOW, UNO.
- 10. TYPICAL WALL FRAMING CONSISTS OF 2x6's AT 16"oc AT EXTERIOR WALLS AND 2x4's or 2x6's AT 16"oc AT INTERIOR WALLS PER ARCH DRAWINGS, UNO.
- 11. REFER TO SHEET \$4.0 FOR TYPICAL WOOD FRAMING DETAILS.
- 12. REFER TO GENERAL STRUCTURAL NOTES SHEET \$1.0 FOR ADDITIONAL REQUIREMENTS. 13. DO NOT SCALE DRAWINGS. REFER TO ARCH DRAWINGS FOR ALL DIMENSIONS.

### COLUMN SCHEDULE®

MARK	SIZE	TOP	BOT	MARK	SIZE	TOP	BOT
Cl	(2)2x6	(2)A35	(2)A35	C4.7	6x6	ECCQ	(2)A35
C2	4x6	(2)A35	(2)A35	C5	6x8	(2)A35	(2)A35
C2.1	4x6	CCQ	B	C5.1	6x8	CCQ	-
C3	HSS 3x3x3/8	8/\$5.0	7/\$5.0	C5.2	6x8	ECCQ	-
C3.1	HSS 3x3x3/8	8/\$5.0	12/\$5.0	<u>C6</u>	6x10	ECCQ	-
C3.2	HSS 3x3x3/8	8/\$5.0	12/\$3.1	<u>(6.1</u> )	6x10 🕑	-	-
<u>C4</u>	6x6	CCQ	(2)A35	C7	PSL 5-1/4 x 5-1/4	(2)A35	(2)A35
C4.1)	6x6	(2)A35	(2)A35	C7.1	PSL 5-1/4 x 5-1/4	(2)A35	D
C4.2	6x6 KP	(2)A35	(2)A35	C7.2	PSL 5-1/4 x 5-1/4	ECCQ	D
(C4.3)	6x6	CCTQ	(2)A35	(C8)	PSL 5-1/4 x 7	(2)A35	(2)A35
(C4.4)	6x6	CCCQ	(2)A35	(C9)	PSL 5-1/4 x 9-1/4Ē	-	(2)A35
(C4.5)	6x6	(2)A35	D	C10	HSS 5x5x3/8	©	11/\$5.0
(24.6)	6x6Ē	-	-				

(A) ALL POSTS/COLUMNS NOTED ON PLAN REQUIRE NO HARDWARE

B POST TO BEAR DIRECTLY ON TOP OF GLULAM 5-1/2 x 9 BEAM - BREAK BOTTOM PLATE AND SHEATHING - ATTACH w/ (2)A35 POST TO BOTTOM PLATE

CCOQ PER 8/S5.0 - MITRE TOP OF POST TO MATCH SLOPE OF ROOF

D POST TO BEAR DIRECTLY ON FOUNDATION WALL w/ (2) LAYERS OF BUILDING PAPER

E STRAP HEADER TO POST w/ STEEL PLATE PER 4/S5.0 AND PROVIDE PROVIDE 1/4" WEB STIFFENER EACH SIDE OF WEB AT BEARING w/ 3/16" FILLET WELD

(F) POST CONTINUOUS FROM FLOOR TO TOP OF UPPER ROOF ±13'-0" PROVIDE (2)A35 BOTTOM OF POST

### LEGEND

	NEW CONCRETE WALL BELOW
	EXISTING CONCRETE WALL BELOW
	STRUCTURAL WALL BELOW
[]	STRUCTURAL WALL ABOVE
	HEADER/BEAM BELOW FRAMING - TYP
	WIDE FLANGE STEEL HEADER PER PLAN
(×)	NUMBER OF BUILT UP STUDS
-(+)-	PLUMBING PENETRATION ABOVE
<b>•</b>	SPAN AND EXTENTS
<u>H</u>	HTS30C - BEAM TO TOP PLATE OR BEAM TO BEAM
<u>x</u>	(2)HORIZ CS16 x X'-0" OVER FLOOR SHEATHING LAP RIM/ BEAM 1'-6" AND NAIL TO FULL DEPTH 3-1/2" WIDE LSL BLOCKING BETWEEN JOISTS
<u>*</u>	HORIZ CS16 x 3'-0" - BEAM TO BEAM
<u>**</u>	(2)HORIZ CS16 x 3'-0'' - BEAM TO BEAM
***	(3)HORIZ CS16 x 3'-0'' - BEAM TO BEAM
	STEP PER ARCH
DS	DRAG STRUT - NAIL THRU SHEATHING w/ 8d AT 4"oc INTO ENTIRE LENGTH OF MEMBER
BW1	BEARING WALL CONSISTS OF (2)2x6 AT 16"oc

### FOOTNOTES

- (1) INSTALL HGUS HANGER UPSIDE DOWN
- (2) INSTALL HGU HANGER UPSIDE DOWN
- (3) INSTALL HHGU HANGER UPSIDE DOWN
- (4)INSTALL MIU SERIES HANGERS UPSIDE DOWN - PROVIDE WEB STIFFENER PER MANUFACTURER -USE UPSIDE DOWN HANGERS ENTIRE ELEVATION

A

7/\$3.2

18

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(C4.])

20

8

10

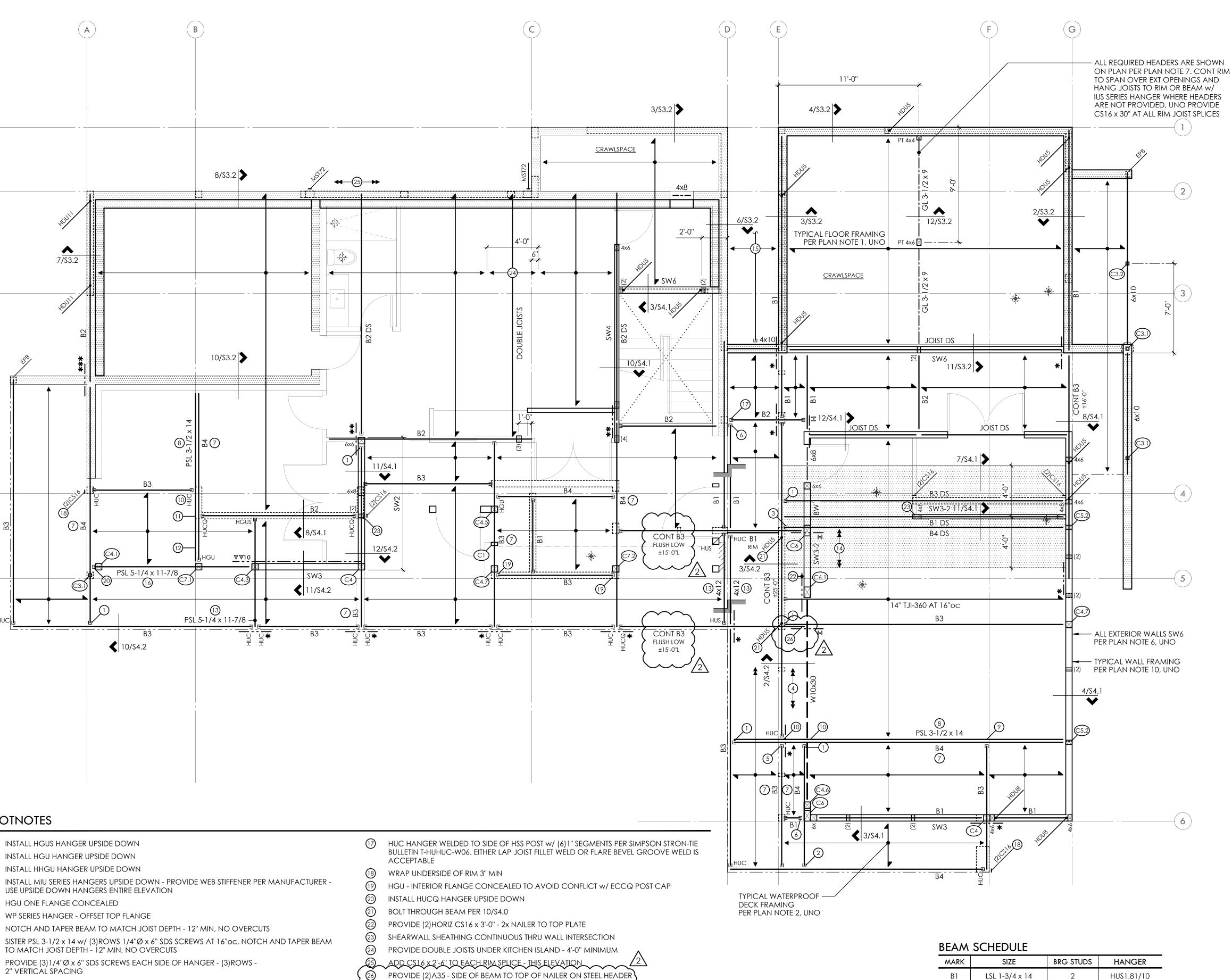
B3

(16)

**1**0/S4.2

- (5)HGU ONE FLANGE CONCEALED
- (6) WP SERIES HANGER - OFFSET TOP FLANGE
- $\overline{7}$ NOTCH AND TAPER BEAM TO MATCH JOIST DEPTH - 12" MIN, NO OVERCUTS 8
- TO MATCH JOIST DEPTH 12" MIN, NO OVERCUTS
- $\bigcirc$ PROVIDE (3)1/4"Ø x 6" SDS SCREWS EACH SIDE OF HANGER - (3)ROWS -2" VERTICAL SPACING 10
- 2" VERTICAL SPACING, 4" HORIZ SPACING
- (1)PROVIDE (12)1/4"Ø x 6" SDS SCREWS EACH SIDE OF HANGER - (3)ROWS OF (4) SDS SCREWS -2" VERTICAL SPACING, 4" HORIZ SPACING
- (12) SCREWS - 2" VERTICAL SPACING, 4" HORIZONTAL SPACING 1-1/2" EDGE DISTANCE, 4" END DISTANCE
- (13) NOTCH AND TAPER BEAM TO MATCH JOIST DEPTH - 8-1/4" MIN, NO OVERCUTS
- (14)PROVIDE WEB STIFFENER PER MANUFACTURE AT JOIST BEARING ENTIRE ELEVATION
- (15) PRE-MANUFACTURED STAIR BY OTHERS - REFER TO GENERAL NOTE 10 ON \$1.0
- (16)NOTCH AND TAPER BEAM TO MATCH JOIST DEPTH - 11" MIN, NO OVERCUTS

2



PROVIDE (6)1/4"Ø x 6" SDS SCREWS EACH SIDE OF HANGER - (3)ROWS OF (2) SDS SCREWS -

PROVIDE (24)1/4"Ø x 6" SDS SCREWS SIDE OF BEAM TO SIDE OF BEAM - (4)ROWS OF (6) SDS

MARK	SIZE	BRG STUDS	HANGER
B1	LSL 1-3/4 x 14	2	HUS1.81/10
B2	LSL 3-1/2 x 14	2	HHUS410
B3	PSL 5-1/4 x 14	3	HGU\$5.50/12
B4	PSL 7 x 14	4	HGU\$7.25/12
B5	Ø GL 3-1/2 x 18	2	HHUS410
B6	Ø GL 5-1/2 x 18	3	HGU\$5.50/14
B7	Ø GL 6-3/4 x 18	4	HGUS6.88/14

GROUND LEVEL WALLS SHOWN SOLID

BOTTOM FLUSH, UNO





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

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TYPICAL FLOOR FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 11-7/8" TJI 210'S AT 16"0C, UNO. PROVIDE DBL JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH.

 $(\mathbf{A})$ 

- 2. GLUE AND NAIL FLOOR SHEATHING w/ 8d AT 6"oc AT FRAMED PANEL EDGES AND OVER SHEAR-WALLS AND AT 12"oc IN FIELD, UNO.
- "SW\_" INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/S4.0 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6, UNO.
- 4. ALL REQUIRED HEADERS ARE SHOWN ON PLAN. REFER TO DETAIL 8/S4.0 FOR ADDITIONAL REQUIREMENTS.
- 5. PROVIDE (2)BEARING (TRIMMER) STUDS AT EACH END OF ALL HEADERS AND BEAMS 6'-0" IN LENGTH AND OVER, UNO.
- 6. WHERE POSTS OCCUR, PROVIDE SOLID VERTICAL GRAIN BLOCKING THRU FLOOR TO MATCHING SUPPORTS BELOW, UNO.
- 7. TYPICAL WALL FRAMING CONSISTS OF 2x6's AT 16"oc AT EXTERIOR WALLS AND 2x4's or 2x6's AT 16"oc AT INTERIOR WALLS PER ARCH DRAWINGS, UNO.
- 8. REFER TO SHEET \$4.0 FOR TYPICAL WOOD FRAMING DETAILS.
- 9. REFER TO GENERAL STRUCTURAL NOTES SHEET \$1.0 FOR ADDITIONAL REQUIREMENTS.
- 10. DO NOT SCALE DRAWINGS. REFER TO ARCH DRAWINGS FOR ALL DIMENSIONS.

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MARK	SIZE	TOP	BOT	MARK	SIZE	TOP	BOT
Cl	(2)2x6	(2)A35	(2)A35	C4.7	6x6	ECCQ	(2)A35
C2	4x6	(2)A35	(2)A35	C5	6x8	(2)A35	(2)A35
C2.1)	4x6	CCQ	B	C5.1	6x8	CCQ	-
C3	HSS 3x3x3/8	8/\$5.0	7/\$5.0	C5.2	6x8	ECCQ	-
C3.1)	HSS 3x3x3/8	8/\$5.0	12/\$5.0	<u>C6</u>	6x10	ECCQ	-
C3.2	HSS 3x3x3/8	8/\$5.0	12/\$3.1	<u>C6.</u> ]	6x10 🕒	-	-
<u>C4</u>	6x6	CCQ	(2)A35	C7	PSL 5-1/4 x 5-1/4	(2)A35	(2)A35
C4.1)	6x6	(2)A35	(2)A35	C7.1	PSL 5-1/4 x 5-1/4	(2)A35	D
C4.2	6x6 KP	(2)A35	(2)A35	C7.2	PSL 5-1/4 x 5-1/4	ECCQ	D
C4.3	6x6	CCTQ	(2)A35	<u>(C8)</u>	PSL 5-1/4 x 7	(2)A35	(2)A35
C4.4)	6x6	CCCQ	(2)A35	(C9)	PSL 5-1/4 x 9-1/4 🕞	-	(2)A35
C4.5	6x6	(2)A35	D	C10	HSS 5x5x3/8	Ô	11/\$5.0
C4.6	6x6®	-	-				

ALL POSTS/COLUMNS NOTED ON PLAN REQUIRE NO HARDWARE

B POST TO BEAR DIRECTLY ON TOP OF GLULAM 5-1/2 x 9 BEAM - BREAK BOTTOM PLATE AND SHEATHING - ATTACH w/ (2)A35 POST TO BOTTOM PLATE

CCOQ PER 8/S5.0 - MITRE TOP OF POST TO MATCH SLOPE OF ROOF

D POST TO BEAR DIRECTLY ON FOUNDATION WALL w/ (2) LAYERS OF BUILDING PAPER

E STRAP HEADER TO POST W/ STEEL PLATE PER 4/S5.0 AND PROVIDE PROVIDE 1/4" WEB STIFFENER EACH SIDE OF WEB AT BEARING W/ 3/16" FILLET WELD

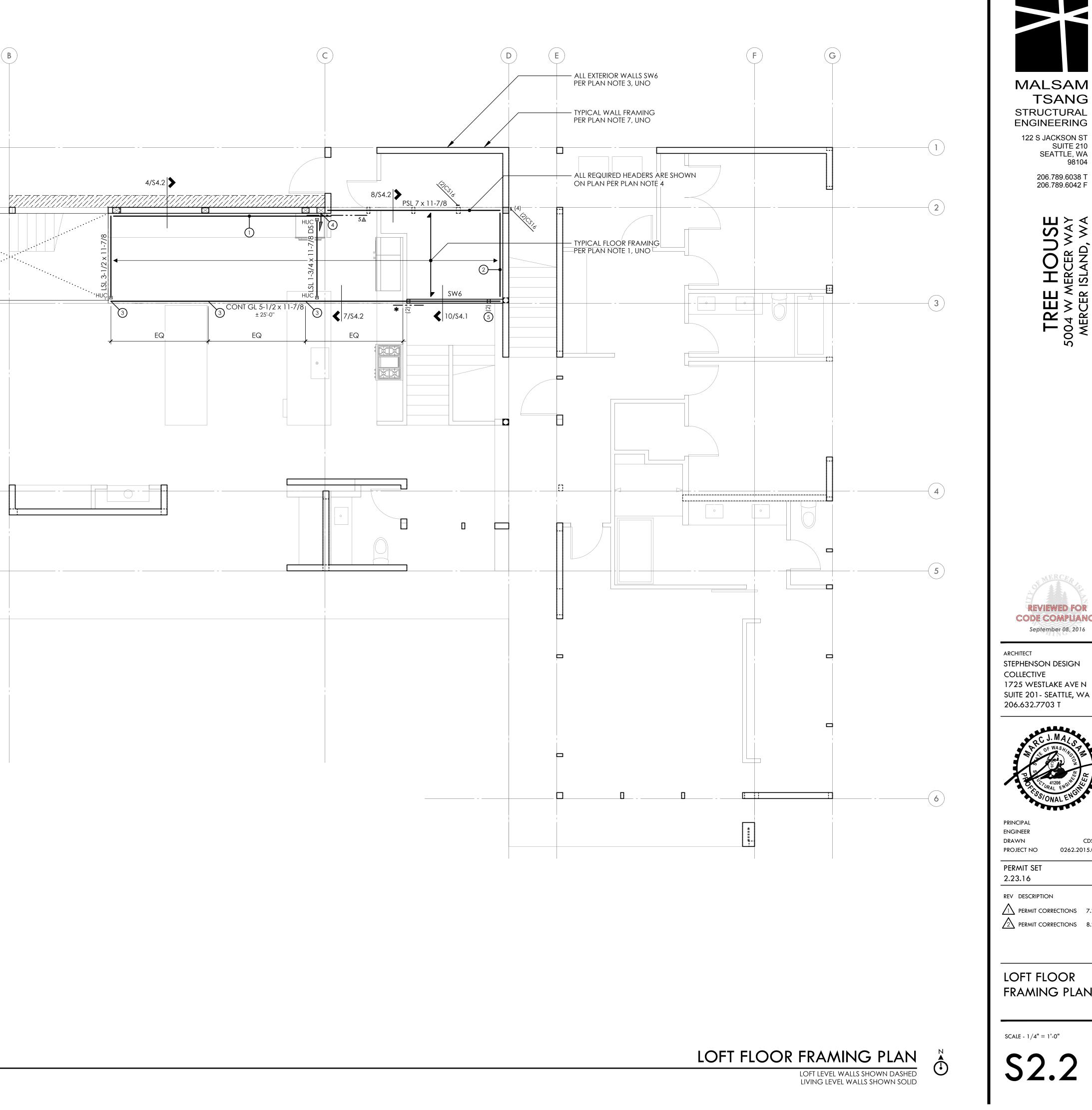
 $\bigcirc$  POST CONTINUOUS FROM FLOOR TO TOP OF UPPER ROOF ±13'-0" PROVIDE (2)A35 BOTTOM OF POST

### FOOTNOTES

- () PROVIDE 1-3/4 x 11-7/8 LSL LEDGER w/ (3)1/4"Ø x 4-1/2" SDS SCREWS AT 16"oc
- PROVIDE 1-3/4 x 11-7/8 LSL LEDGER w/ (2)1/4"Ø x 4-1/2" SDS SCREWS AT 16"oc PROVIDE FULL DEPTH BLOCKING BETWEEN STUDS AND ATTACH PER 4/S4.2
- 3 PROVIDE 1''Ø ALL-THREAD CONTINUOUS FROM LOFT TO ROOF PER 3/S5.0
- (4)PROVIDE HORIZ DTT1Z ANCHOR SIDE OF DS TO POST
- 5 ALIGN POST OVER POST BELOW

### LEGEND

	STRUCTURAL WALL BELOW
Z <i>Z/</i> Z/?	EXTERIOR FURR WALLS w/ PRESSURE TREATED FRAMING OR VENTING PER ARCH
[]	STRUCTURAL WALL ABOVE
	HEADER/BEAM BELOW FRAMING - TYP
(×)	NUMBER OF BUILT UP STUDS
<b>•••</b>	SPAN AND EXTENTS
DS	DRAG STRUT - NAIL THRU SHEATHING w/ 8d AT 4"0c INTO ENTIRE LENGTH OF MEMBER



STRUCTURAL ENGINEERING 122 S JACKSON ST SUITE 210 SEATTLE, WA 98104 206.789.6038 T 206.789.6042 F SE ××× ۲ ۲ ۲ л С Д 0 ΤÅ ぼ S **TREE** 5004 W M MERCER I **REVIEWED FOR CODE COMPLIANCE** September 08, 2016 STEPHENSON DESIGN COLLECTIVE 1725 WESTLAKE AVE N SUITE 201- SEATTLE, WA 98109 206.632.7703 T WIW ASM CDS, TTH PROJECT NO 0262.2015.01.01 PERMIT SET REV DESCRIPTION DATE PERMIT CORRECTIONS 7.22.16 PERMIT CORRECTIONS 8.24.16 LOFT FLOOR FRAMING PLAN SCALE - 1/4" = 1'-0"

- 1. TYPICAL ROOF FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER PRE-MANUFACTURED TRUSSES AT 24"oc, UNO. TOP CHORD OF TRUSS TO SLOPE A MIN OF 1/4" PER 1'-0". TRUSSES TO BE A MIN DEPTH OF 18". PROVIDE H2.5A AT EACH END OF ALL TRUSSES, AND H2.5A EACH SIDE OF ALL MULTIPLE TRUSSES, UNO. REFER TO ARCH DRAWINGS FOR TRUSS PROFILE.
- 2. TYPICAL ROOF DECK FRAMING CONSISTS OF PEDESTAL PAVERS PER ARCH (25 PSF MAX) OVER 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER PRE-MANUFACTURED TRUSSES AT 24"oc. TOP CHORD OF TRUSS TO SLOPE A MIN OF 1/4" PER 1'-0". PROVIDE H2.5A CLIPS EACH END OF ALL TRUSSES, AND H2.5A EACH SIDE OF ALL MULTIPLE TRUSSES, UNO. REFER TO ARCH DRAWINGS FOR TRUSS PROFILE.
- 3. TYPICAL CRICKET ROOF FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 2x SLEEPERS AT 24" oc. TOENAIL SLEEPERS w/ (2)10d AT 24" oc OVER TYPICAL ROOF FRAMING. PROVIDE VENTING HOLES BELOW CRICKET ROOF FRAMING AS REQUIRED.
- 4. NAIL ROOF SHEATHING W/ 8d AT 6" OC AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12"oc IN FIELD, UNO.
- 5. GLUE AND NAIL FLOOR AND ROOF DECK SHEATHING w/ 8d AT 6"oc AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12"oc IN FIELD, UNO.
- 6. "SW\_" INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/S4.0 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6, UNO.
- 7. ALL REQUIRED HEADERS ARE SHOWN ON PLAN. REFER TO DETAIL 8/S4.0 FOR ADDITIONAL REQUIREMENTS.
- 8. PROVIDE (2)BEARING (TRIMMER) STUDS AT EACH END OF ALL HEADERS, BEAMS, AND GIRDER TRUSSES 6'-0" IN LENGTH AND OVER, UNO.
- 9. WHERE POSTS OCCUR, PROVIDE SOLID VERTICAL GRAIN BLOCKING THRU FLOOR TO MATCHING SUPPORTS BELOW, UNO.
- 10. TYPICAL WALL FRAMING CONSISTS OF 2x6's AT 16"oc AT EXTERIOR WALLS AND 2x4's or 2x6's AT 16"oc AT INTERIOR WALLS PER ARCH DRAWINGS, UNO. 11. REFER TO SHEET \$4.0 FOR TYPICAL WOOD FRAMING DETAILS.
- 12. REFER TO GENERAL STRUCTURAL NOTES SHEET \$1.0 FOR ADDITIONAL REQUIREMENTS.
- 13. DO NOT SCALE DRAWINGS. REFER TO ARCH DRAWINGS FOR ALL DIMENSIONS.

### COLUMN SCHEDULE

MARK	SIZE	TOP	BOT	1	MARK	SIZE	TOP	BOT
Cl	(2)2x6	(2)A35	(2)A35		C4.7	6x6	ECCQ	(2)A35
C2	4x6	(2)A35	(2)A35		C5	6x8	(2)A35	(2)A35
C2.1	4x6	CCQ	B		C5.1	6x8	CCQ	-
C3	HSS 3x3x3/8	8/\$5.0	7/\$5.0		C5.2	6x8	ECCQ	-
C3.1	HSS 3x3x3/8	8/\$5.0	12/\$5.0		<u>C6</u>	6x10	ECCQ	-
C3.2	HSS 3x3x3/8	8/\$5.0	12/\$3.1		<u>(6.1</u> )	6x10 🕑	-	-
C4	6x6	CCQ	(2)A35		C7	PSL 5-1/4 x 5-1/4	(2)A35	(2)A35
C4.1)	6x6	(2)A35	(2)A35		C7.1	PSL 5-1/4 x 5-1/4	(2)A35	D
C4.2	6x6 KP	(2)A35	(2)A35		C7.2	PSL 5-1/4 x 5-1/4	ECCQ	D
C4.3	6x6	CCTQ	(2)A35		<u>C8</u>	PSL 5-1/4 x 7	(2)A35	(2)A35
C4.4	6x6	CCCQ	(2)A35		<u>(</u> 29)	PSL 5-1/4 x 9-1/4Ē	-	(2)A35
C4.5	6x6	(2)A35	D		C10	HSS 5x5x3/8	Ô	11/\$5.0
C4.6	6x6Ē	-	-					

ALL POSTS/COLUMNS NOTED ON PLAN REQUIRE NO HARDWARE

B POST TO BEAR DIRECTLY ON TOP OF GLULAM 5-1/2 x 9 BEAM - BREAK BOTTOM PLATE AND SHEATHING - ATTACH w/ (2)A35 POST TO BOTTOM PLATE

CCOQ PER 8/S5.0 - MITRE TOP OF POST TO MATCH SLOPE OF ROOF

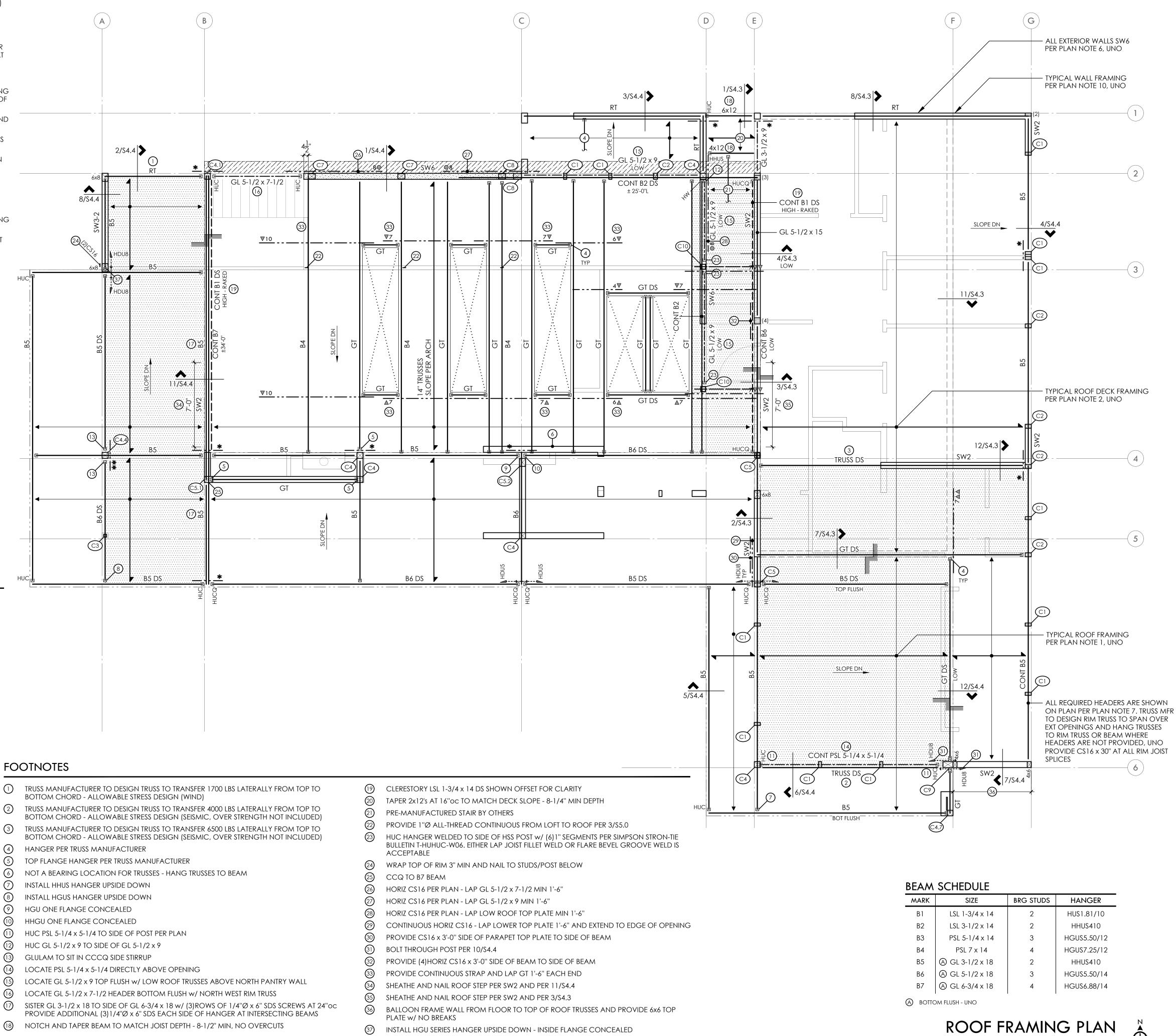
- D POST TO BEAR DIRECTLY ON FOUNDATION WALL w/ (2) LAYERS OF BUILDING PAPER
- E STRAP HEADER TO POST w/ STEEL PLATE PER 4/S5.0 AND PROVIDE PROVIDE 1/4" WEB STIFFENER EACH SIDE OF WEB AT BEARING w/ 3/16" FILLET WELD

(F) POST CONTINUOUS FROM FLOOR TO TOP OF UPPER ROOF ±13'-0" PROVIDE (2)A35 BOTTOM OF POST

### LEGEND

	STRUCTURAL WALL BELOW		
	BALLOON FRAME WALL w/ (2)LSL 1-3/4 x 5-1/2 STUDS AT 16"oc		
Z727272	EXTERIOR FURR WALLS w/ PRESSURE TREATED FRAMING OR VENTING PER ARCH		
<u> </u>	HEADER/BEAM BELOW FRAMING - TYP		
(×)	NUMBER OF BUILT UP STUDS		
KP	KING POST		
<b>-</b>	SPAN AND EXTENTS		
SLOPE DN	DIRECTION OF SLOPE		
<u>▼x</u>	HORIZ CS16 x X'-0" OVER ROOF SHEATHING LAP RIM/ BEAM 1'-6" AND NAIL TO SNUG FIT FLAT 2x6 BLOCKING BETWEEN RAFTERS	FOC	21
<u>X</u>	(2)HORIZ CS16 x X'-0'' OVER ROOF SHEATHING NAIL TO SNUG FIT FULL DEPTH 3-1/2 x 14 LSL BLOCKING BETWEEN RAFTERS	0	TR BC TR
<u> </u>	HORIZ CS16 x X'-0" OVER WALL SHEATHING LAP RIM/ BEAM 1'-6" AND NAIL TO SNUG FIT FLAT 2x6 BLOCKING BETWEEN STUDS	-	BC TR BC
<u>* .                                    </u>	HORIZ CS16 x 3'-0" - BEAM TO BEAM. INSTALL INTERIOR STRAPS OVER SHEATHING	5	HA TC NO
**	(2)HORIZ CS16 x 3'-0'' - BEAM TO BEAM. INSTALL INTERIOR STRAPS OVER SHEATHING	$\overline{\mathcal{O}}$	IN IN
	STEP PER ARCH	9	НС
DS	DRAG STRUT - NAIL THRU SHEATHING w/ 8d AT 4"oc INTO ENTIRE LENGTH OF MEMBER	(1)	HH HL
GT	GIRDER TRUSS	(12) (13)	HU GI
RT	RIM TRUSS	$\left(14\right)$	LC
	BLOCK DIAPHRAGM - PROVIDE FLAT 2x4 BLKG w/ 8d AT 4"oc AT ALL PANEL EDGES AND 8d AT 12"oc IN THE FIELD		LC LC SIS PF
⊿+►	HORIZ HDU - BEAM TO BEAM - PROVIDE ALL-THREAD	(18)	N

TO MATCH ANCHOR BOLT SIZE IN HOLDOWN SCHEDULE

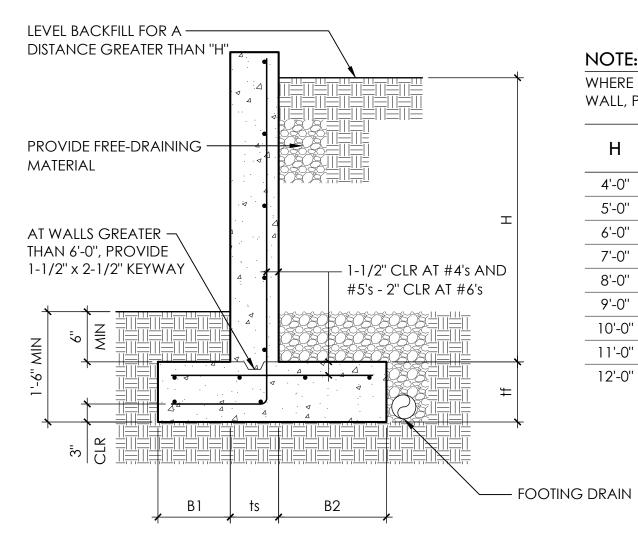




SCALE - 1/4'' = 1'-0''

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LIVING LEVEL WALLS SHOWN SOLID

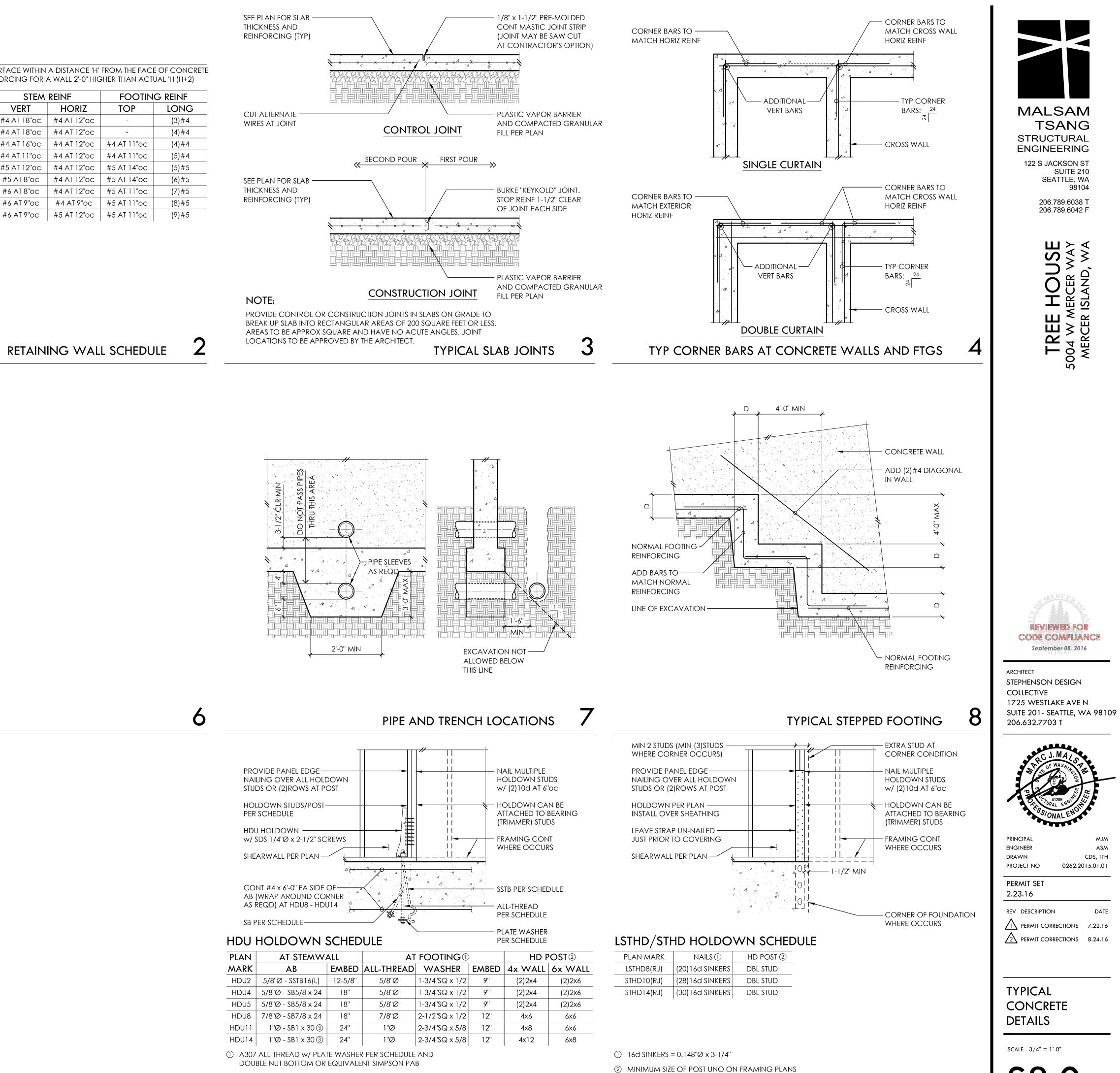


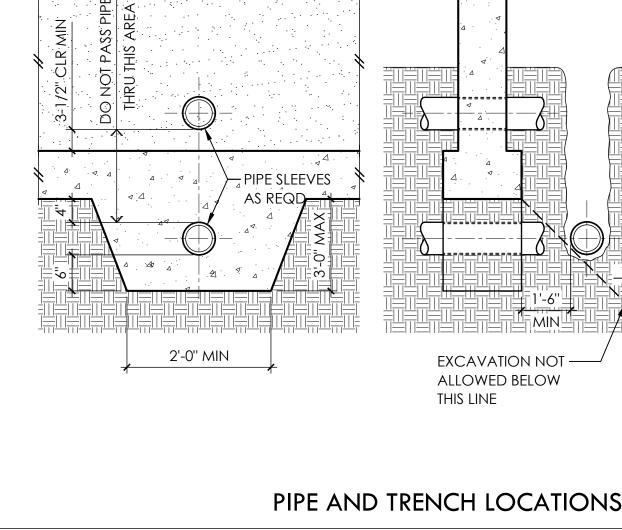
### NOTE: WHERE RETAINED SOIL SUPPORTS A DRIVE SURFACE WITHIN A DISTANCE 'H' FROM THE FACE OF CONCRETE WALL, PROVIDE FOOTING, WALL, AND REINFORCING FOR A WALL 2'-0" HIGHER THAN ACTUAL 'H'(H+2)

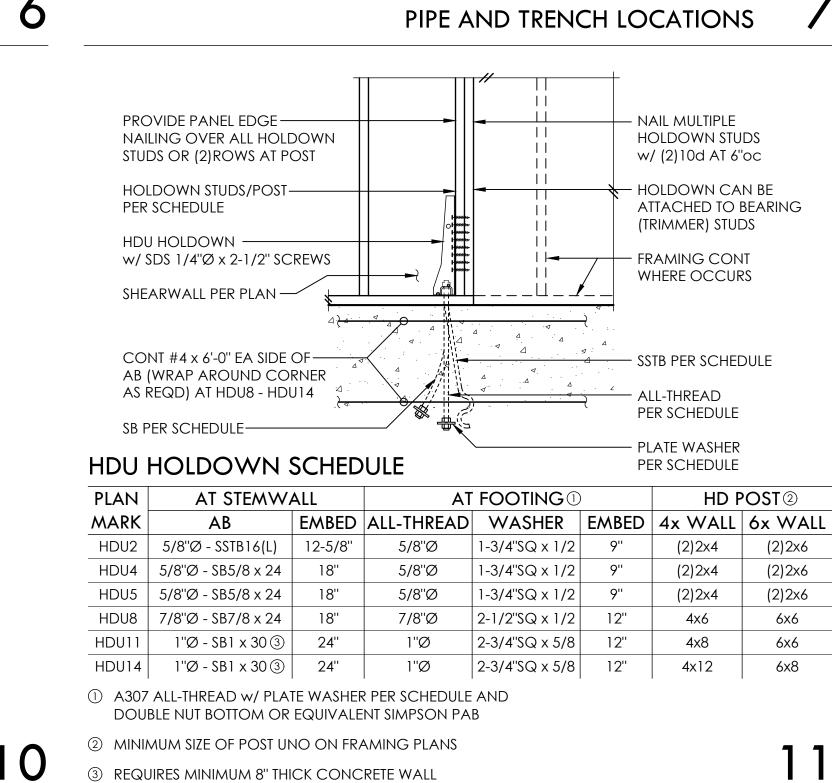
Н	B1	ts	B2	tf	
	DI	15	DZ	11	VEF
4'-0''	5"	8"	1'-0''	9"	#4 AT 1
5'-0''	5"	8"	2'-0''	10''	#4 AT 1
6'-0''	9"	8"	2'-3''	10''	#4 AT 1
7'-0''	9"	8"	2'-9''	10''	#4 AT 1
8'-0''	1'-0''	8"	3'-3''	12"	#5 AT 1
9'-0''	1'-3"	8"	3'-9''	12"	#5 AT
10'-0''	1'-6''	8"	4'-3''	15"	#6 AT
11'-0''	2'-0''	10''	4'-6''	15"	#6 AT
12'-0"	2'-3''	12"	4'-9''	15"	#6 AT
	•				

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9







# CONCRETE DETAILS SCALE - 3/4'' = 1'-0''

12

TSANG

SUITE 210

98104

SEATTLE, WA

206.789.6038 T

206.789.6042 F

TREE HOUSE 5004 W MERCER WAY MERCER ISLAND, WA

September 08, 2016

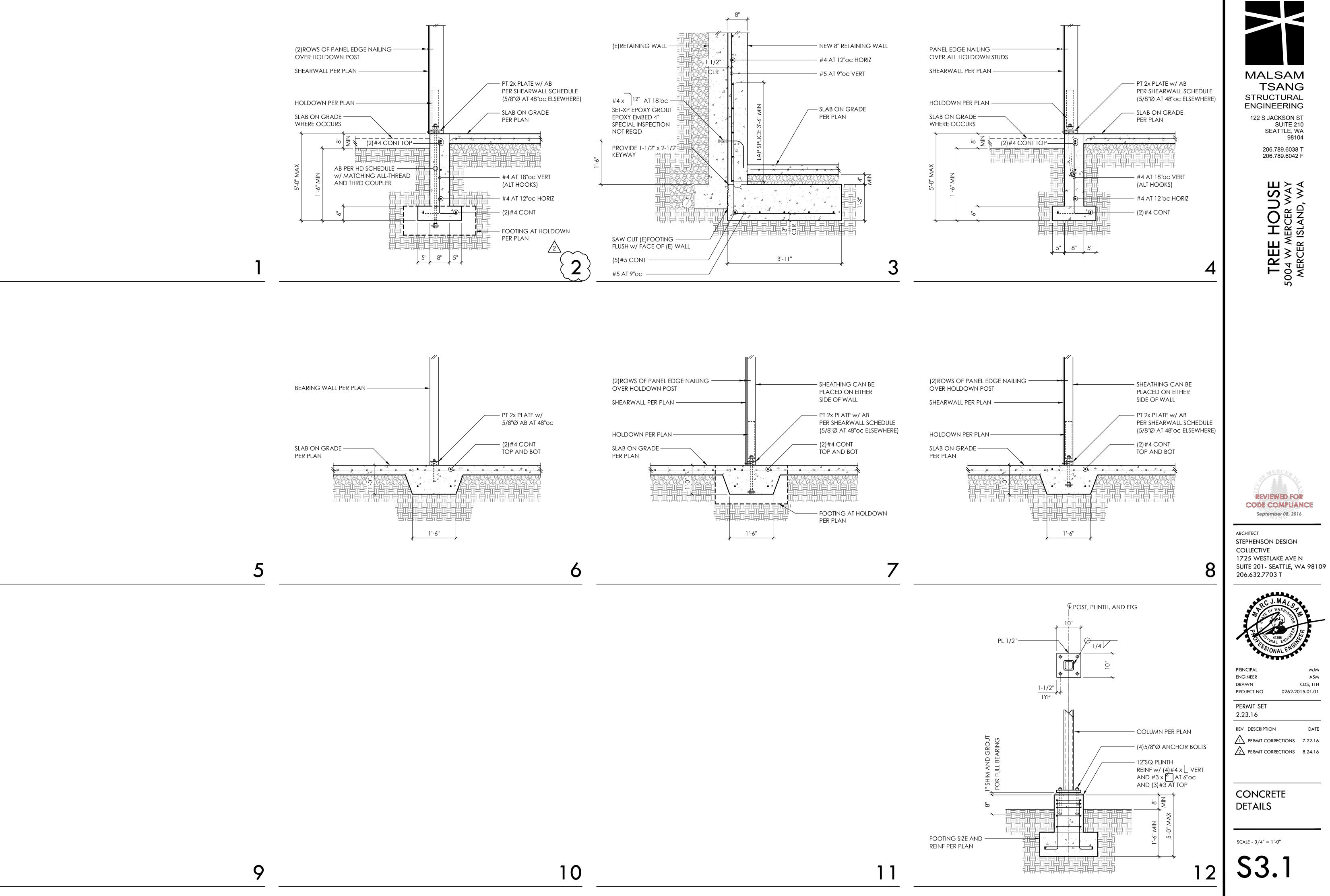
WIW

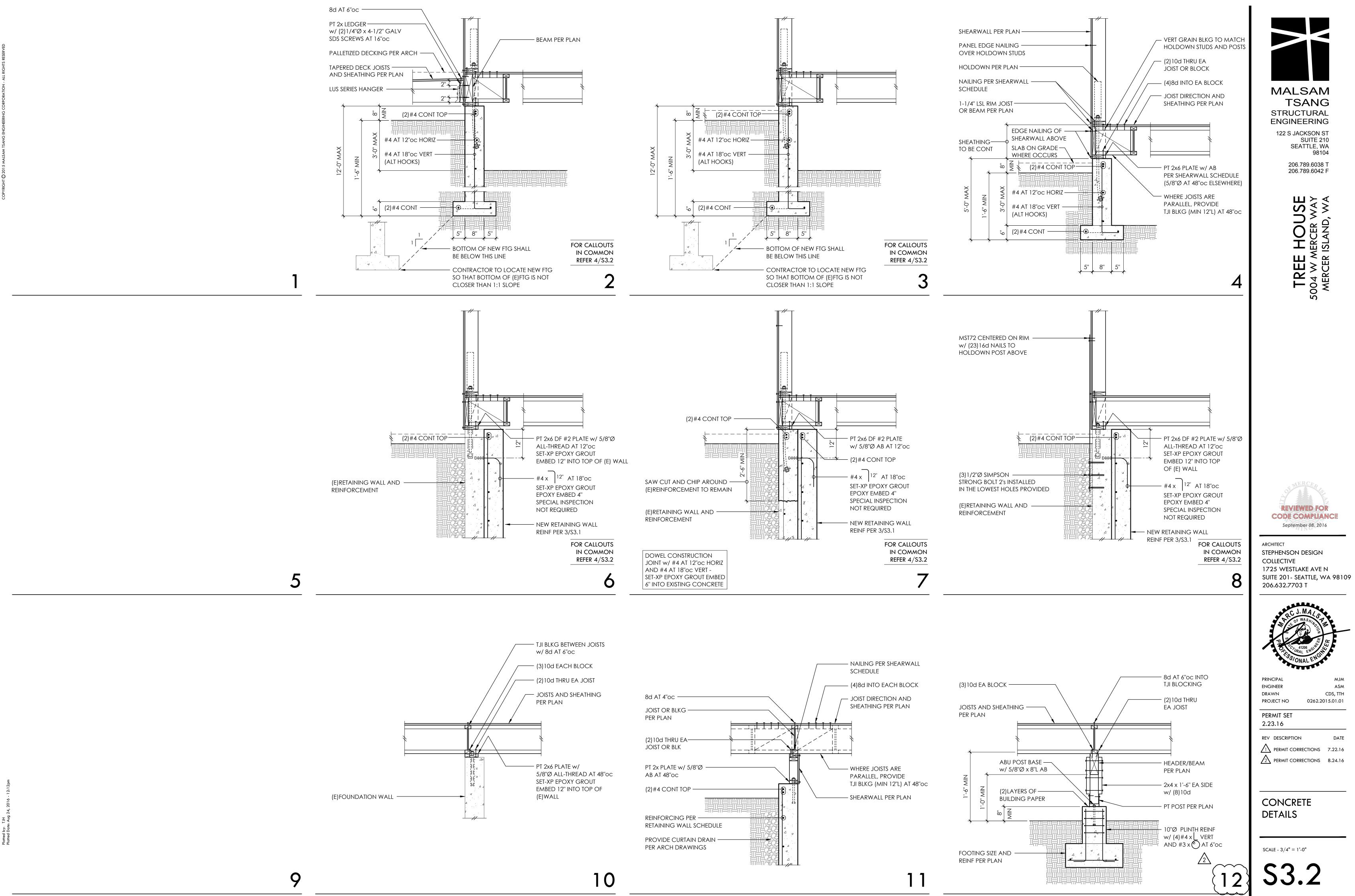
ASM

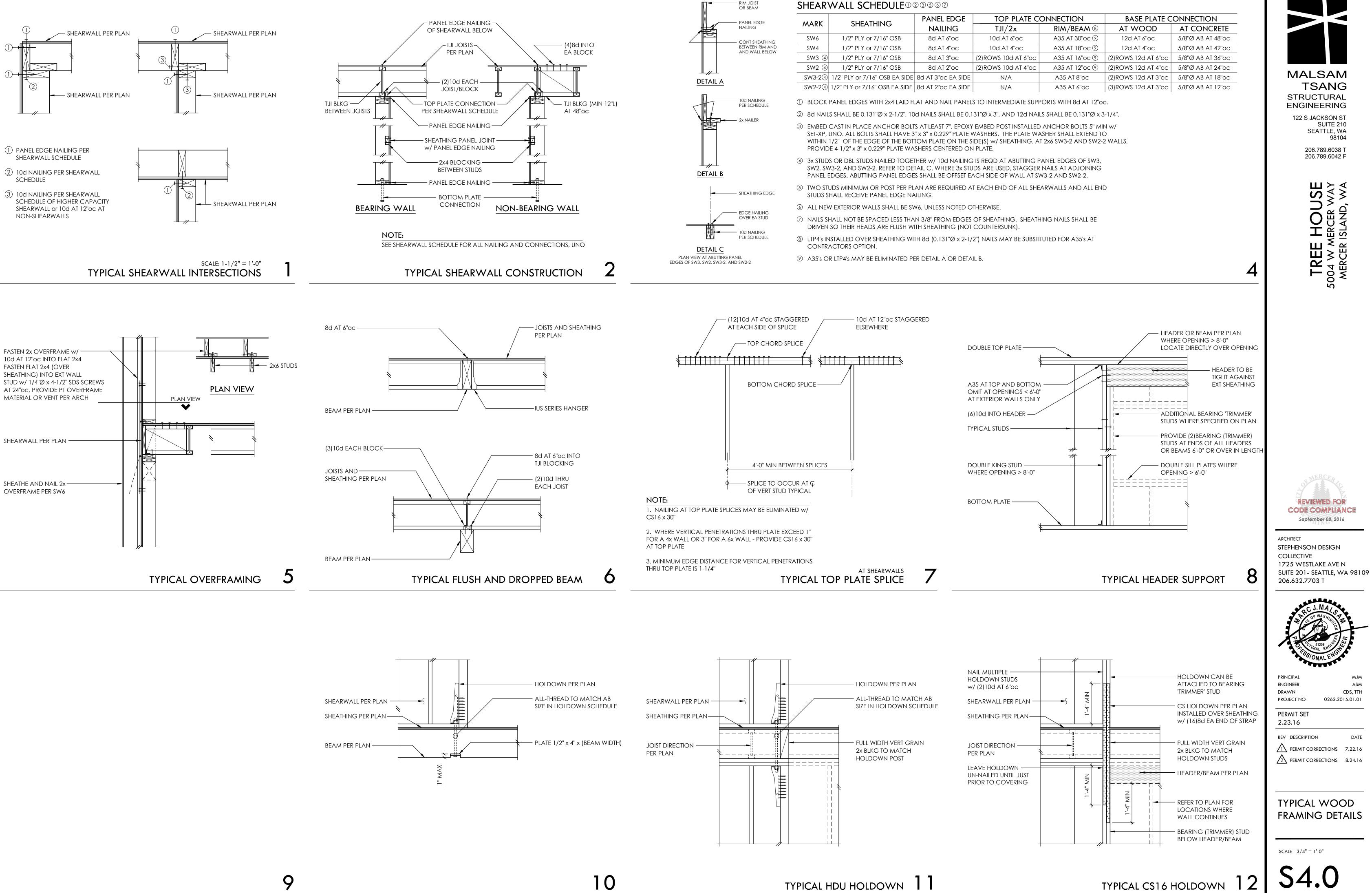
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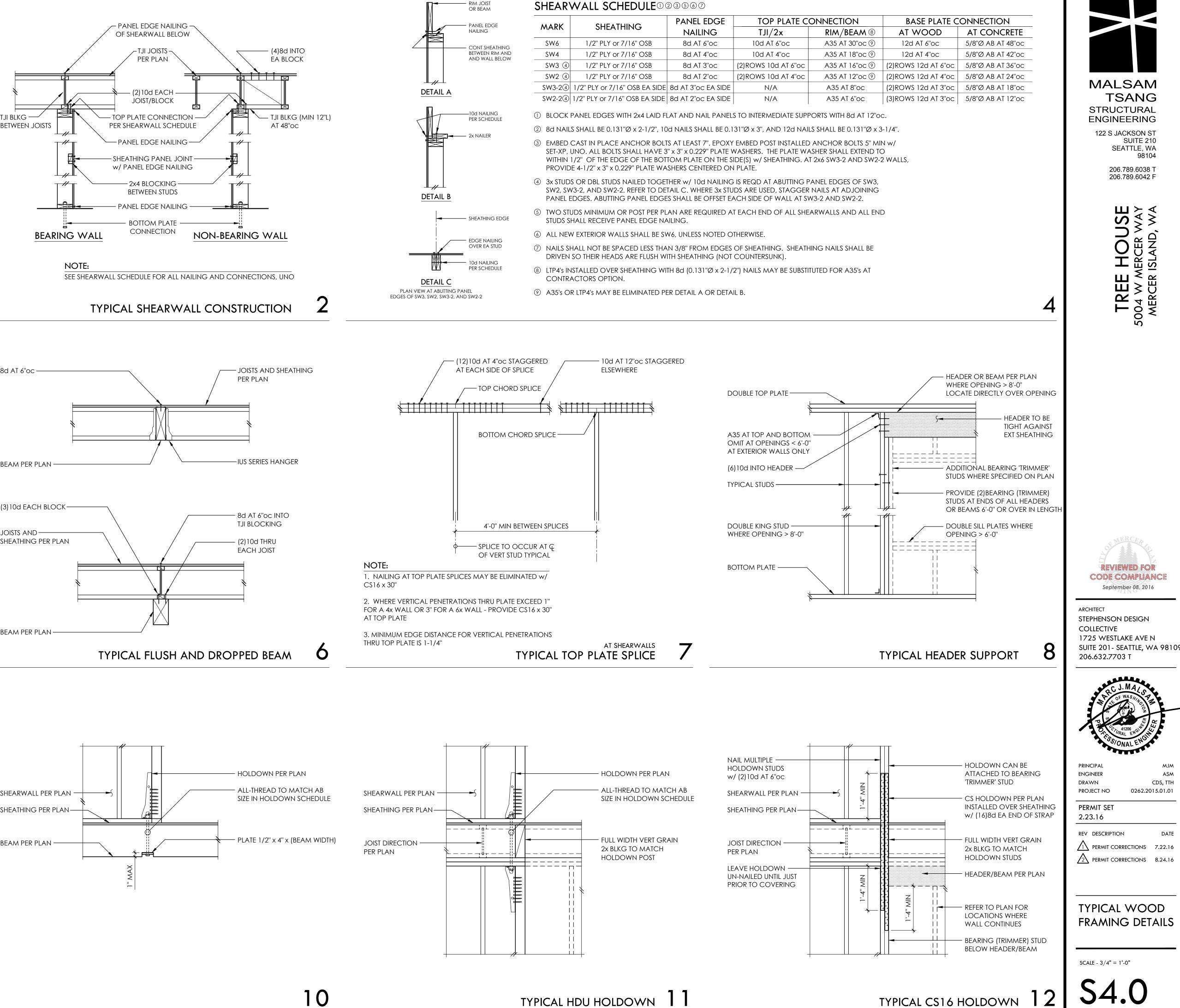
CDS, TTH

0262.2015.01.01









8d AT 6"oc	
PALLETIZED DECKING	
TAPERED DECK JOISTS	<u>∓</u>
LUS SERIES HANGER	
PT 2x LEDGER w/ (2)1/4"Ø x 4-1/2" GALV SDS SCREWS AT 16"oc	

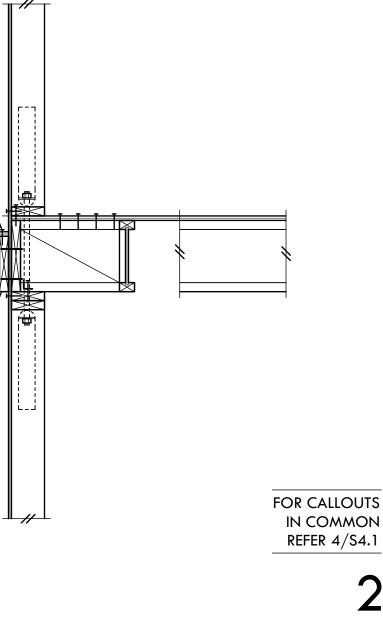
9

PANEL EDGE NAILING OF -----SHEARWALL BELOW

1-1/4" LSL RIM JOIST -OR BEAM PER PLAN

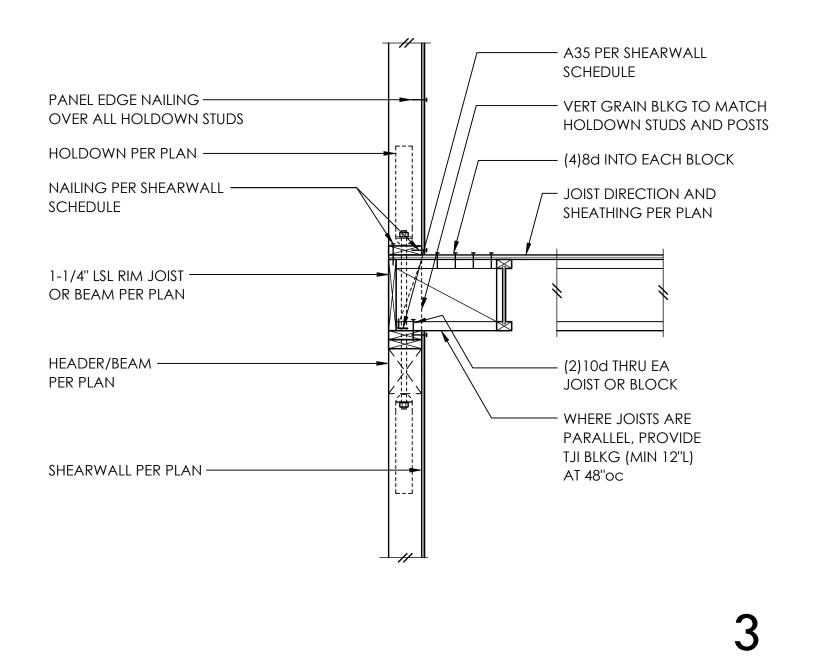
SHEARWALL PER PLAN -----

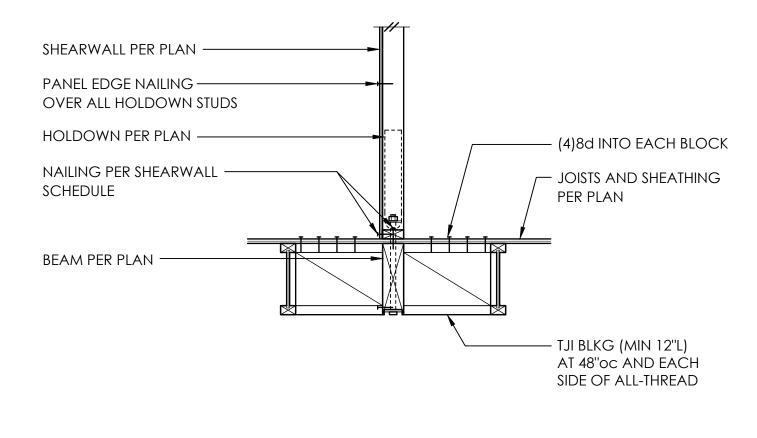
TJH Plotted by: Plotted Date

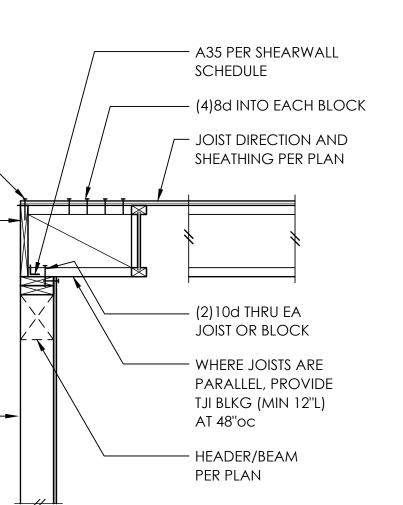


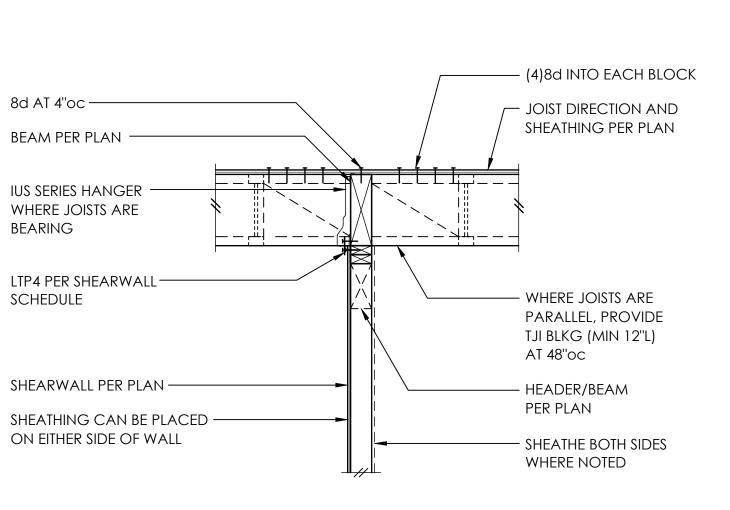
L

6

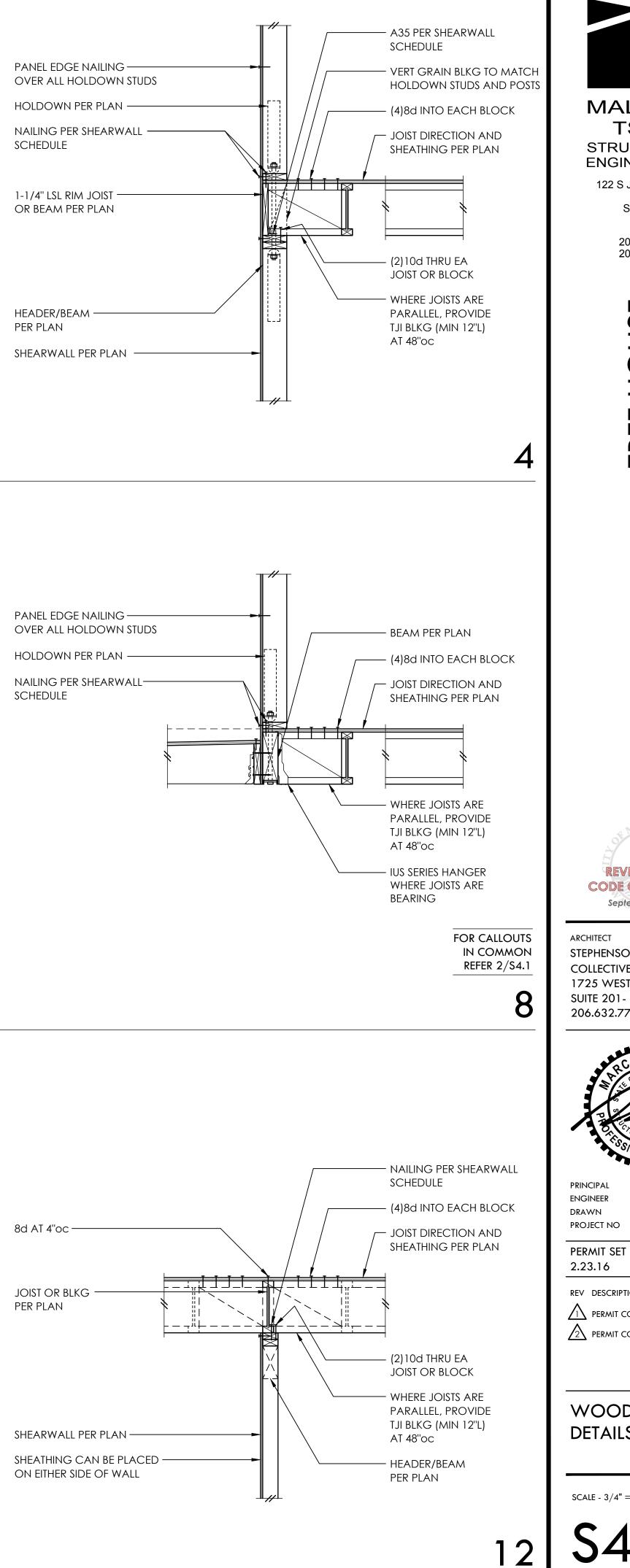








7



MALSAM TSANG STRUCTURAL ENGINEERING 122 S JACKSON ST SUITE 210 SEATTLE, WA 98104 206.789.6038 T 206.789.6042 F TREE HOUSE 5004 W MERCER WAY MERCER ISLAND, WA **REVIEWED FOR CODE COMPLIANCE** September 08, 2016 ARCHITECT STEPHENSON DESIGN COLLECTIVE 1725 WESTLAKE AVE N SUITE 201- SEATTLE, WA 98109 206.632.7703 T PRINCIPAL WIW ENGINEER ASM DRAWN CDS, TTH

2.23.16 REV DESCRIPTION DATE PERMIT CORRECTIONS 7.22.16 PERMIT CORRECTIONS 8.24.16

0262.2015.01.01

### WOOD FRAMING DETAILS

SCALE - 3/4" = 1'-0"

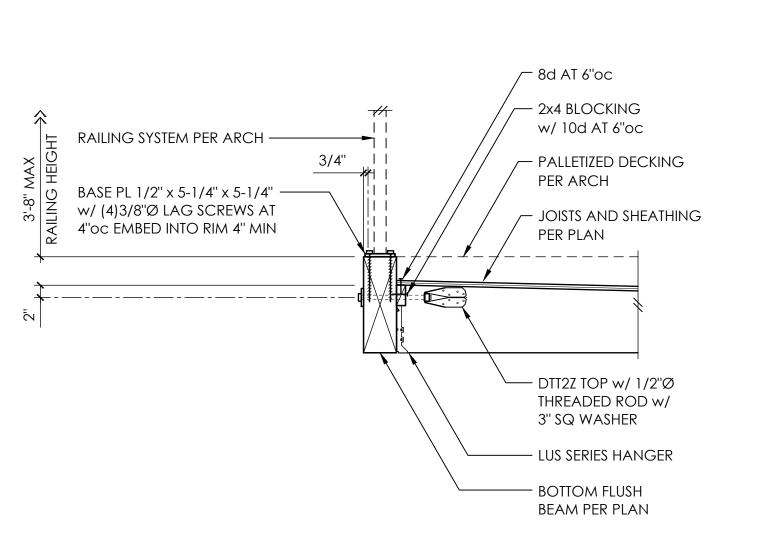
PANEL EDGE NAILING
HOLDOWN PER PLAN
NAILING PER
8d AT 6"oc
PALLETIZED DECKING
TAPERED DECK JOISTS AND SHEATHING PER PLAN
LUS SERIES HANGER
PT 2x LEDGER/ w/ (2)1/4"Ø x 4-1/2" GALV SDS SCREWS AT 16"oc
BEAM PER PLAN
10d AT 4"oc

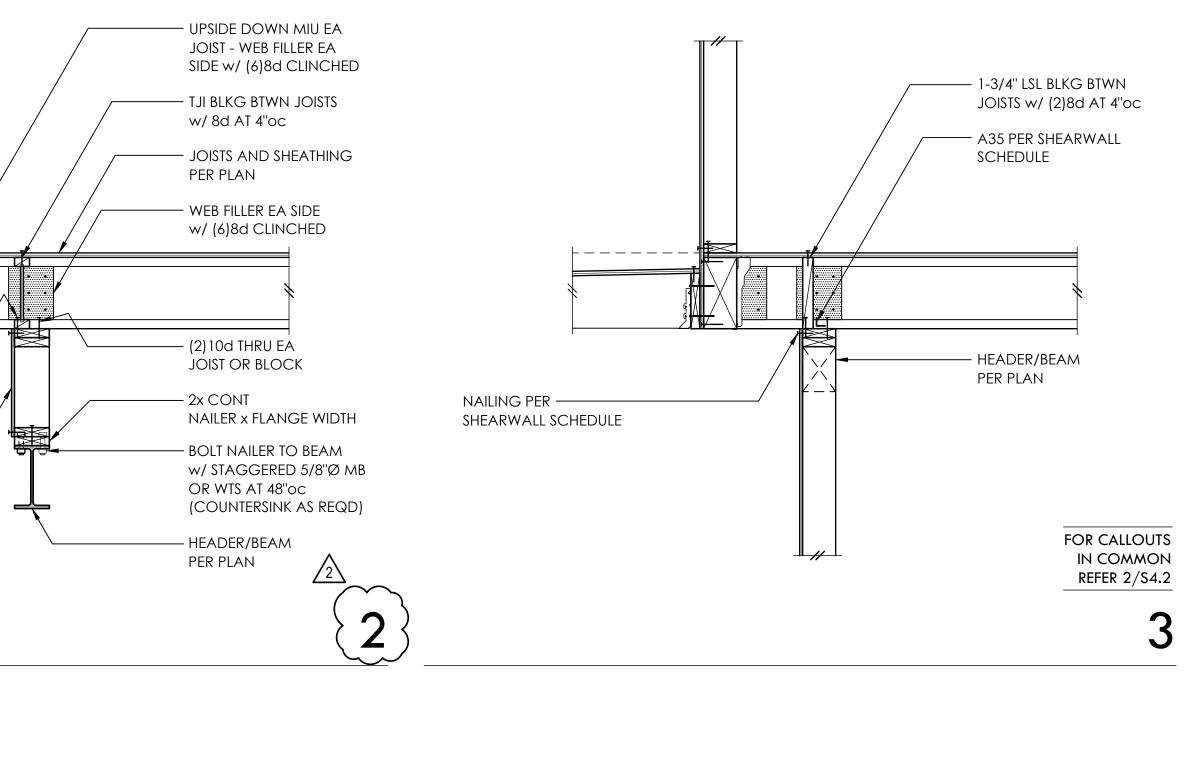
SHEATHE AND NAIL -

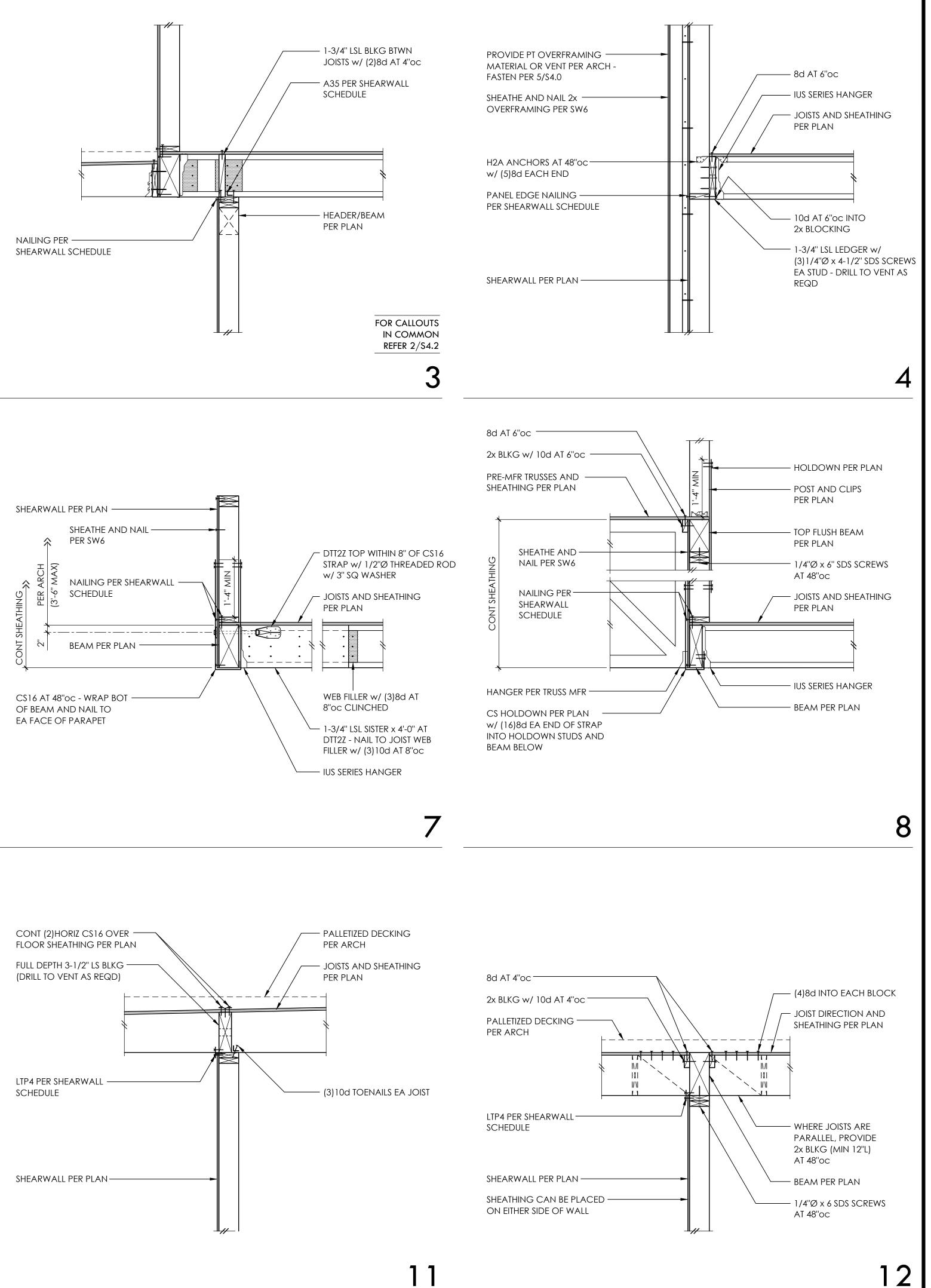
PER SW6

5

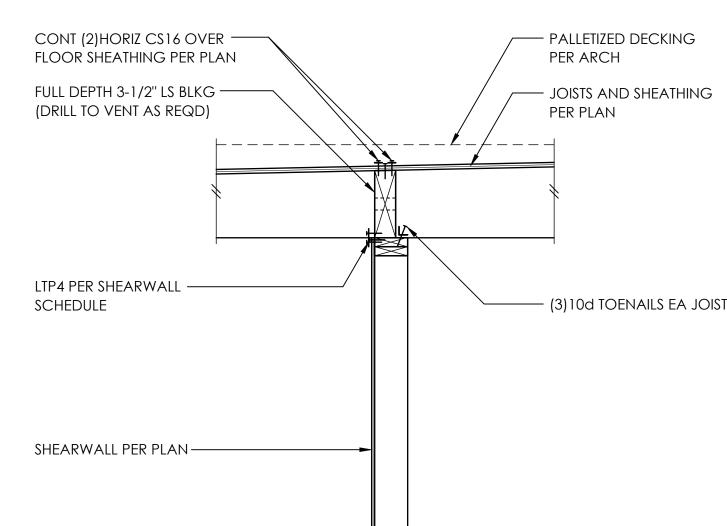
9











HOUSE VERCER WAY ISLAND, WA TREE 1 5004 W ME MERCER IS

MALSAM

STRUCTURAL

ENGINEERING

122 S JACKSON ST

SUITE 210

98104

SEATTLE, WA

206.789.6038 T

206.789.6042 F

TSANG



ARCHITECT STEPHENSON DESIGN COLLECTIVE 1725 WESTLAKE AVE N SUITE 201- SEATTLE, WA 98109 206.632.7703 T



PRINCIPAL WIW ENGINEER ASM DRAWN CDS, TTH PROJECT NO 0262.2015.01.01

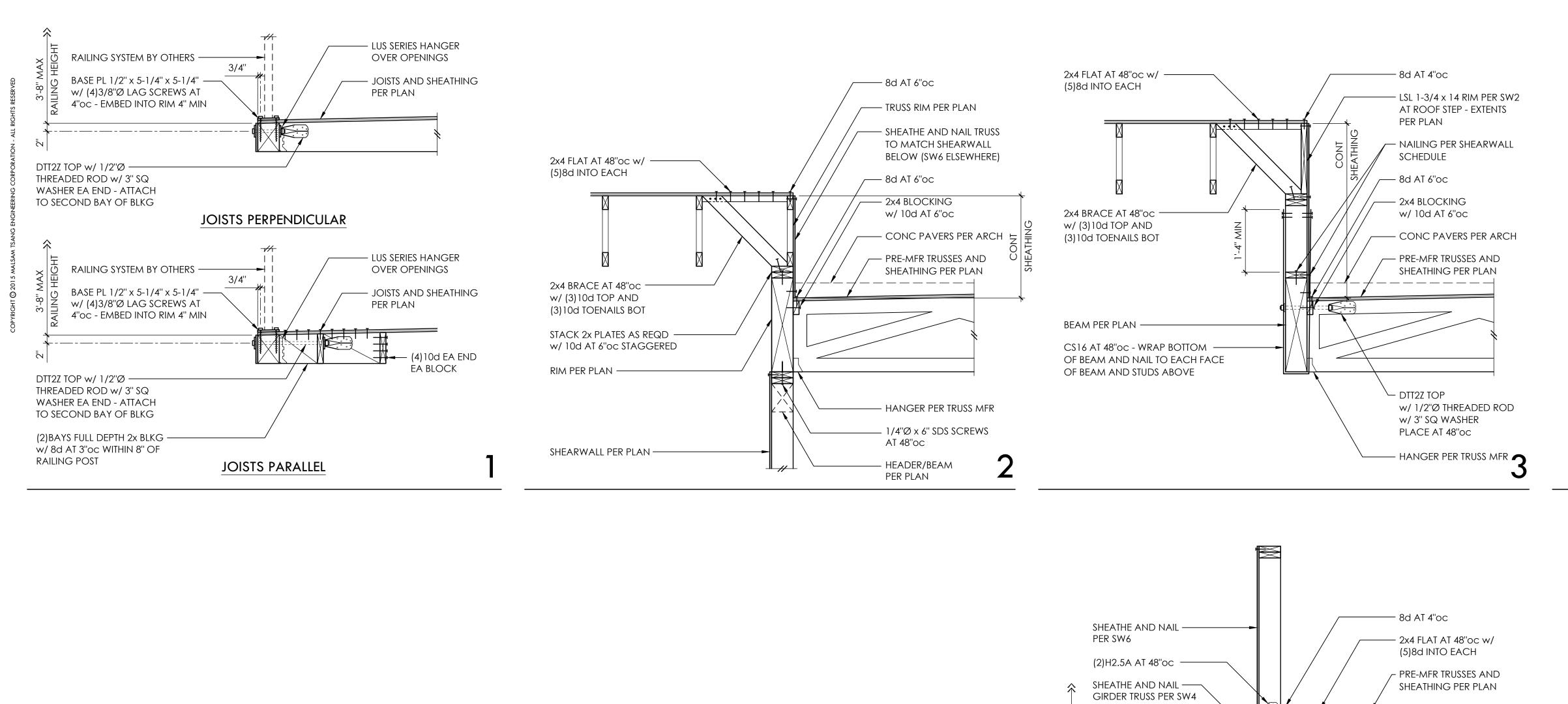
PERMIT SET

REV	DESCRIPTION	DATE
$\Lambda$	PERMIT CORRECTIONS	7.22.16
2	PERMIT CORRECTIONS	8.24.16

2.23.16

### WOOD FRAMING DETAILS

SCALE - 3/4" = 1'-0"



9



A35 AT 48"oc --

8d AT 4"oc —

(2)1/4"Ø x 3-1/2" SDS -

2x4 BRACE AT 48"oc -

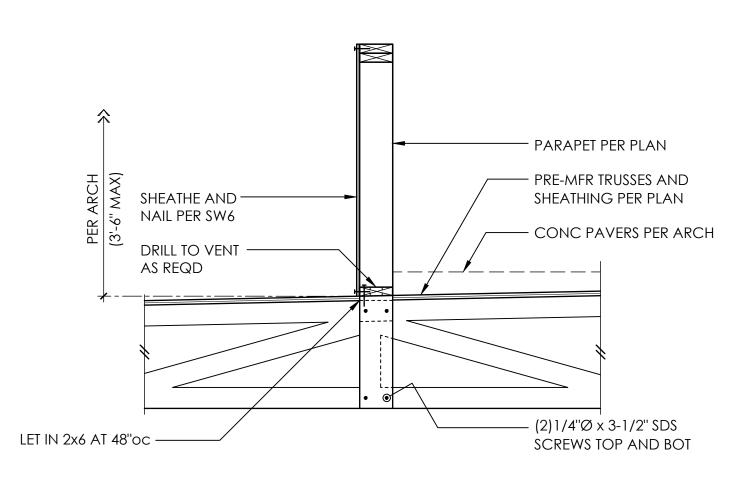
w/ (3)10d TOP AND

2x LEDGER -----

A34 BOT

SCREWS AT 48"C EA FLAT 2x4

★===



DTT1Z AT EA FLAT 2x4

w/ (2)10d AT 24"oc

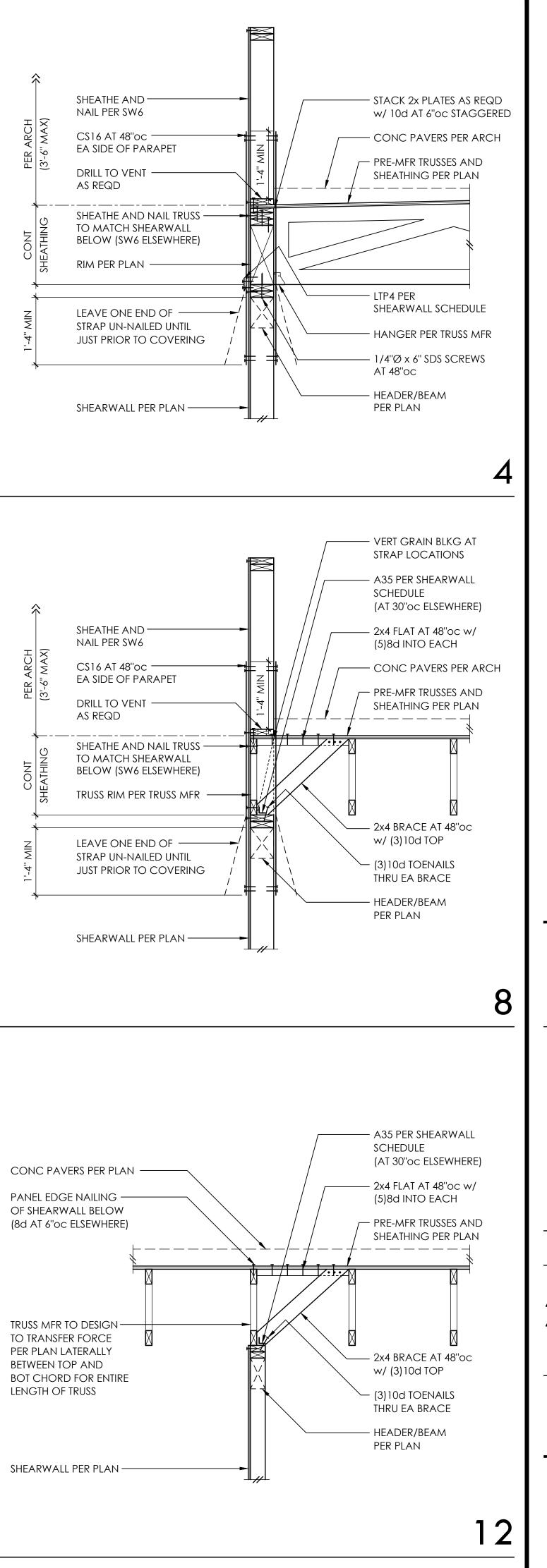
– GIRDER TRUSS PER PLAN

- 2x LEDGER

– 8d AT 4"oc

w/ SDWH TIMBER HEX HDG

SCREWS - 3" MIN THREAD EMBED







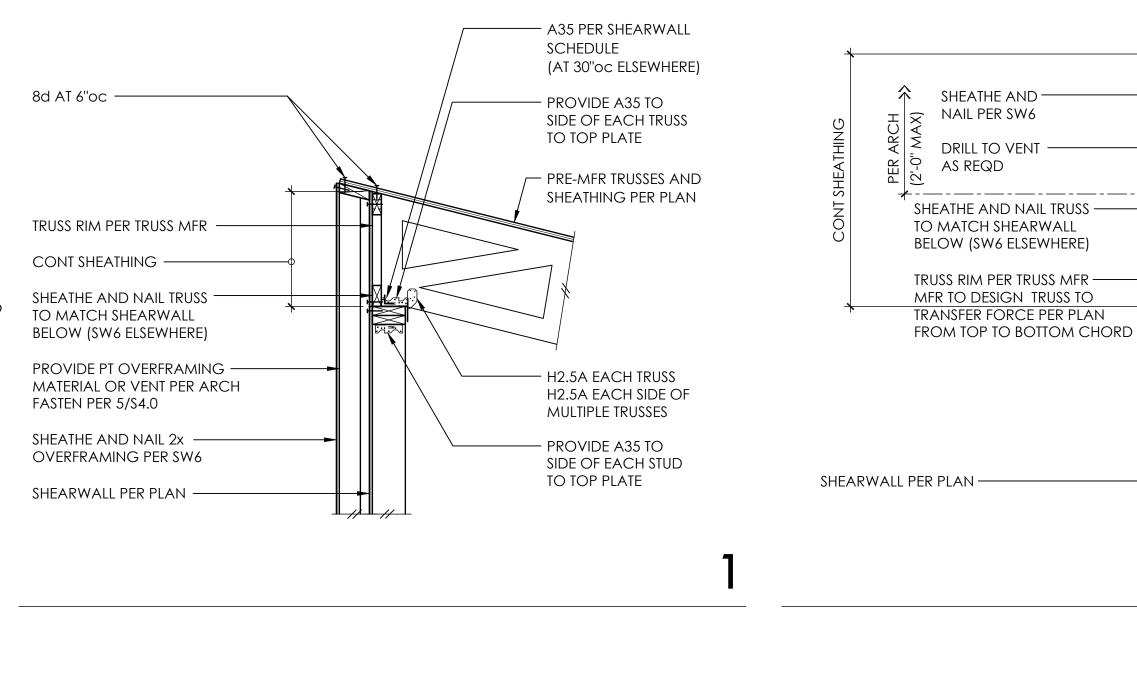
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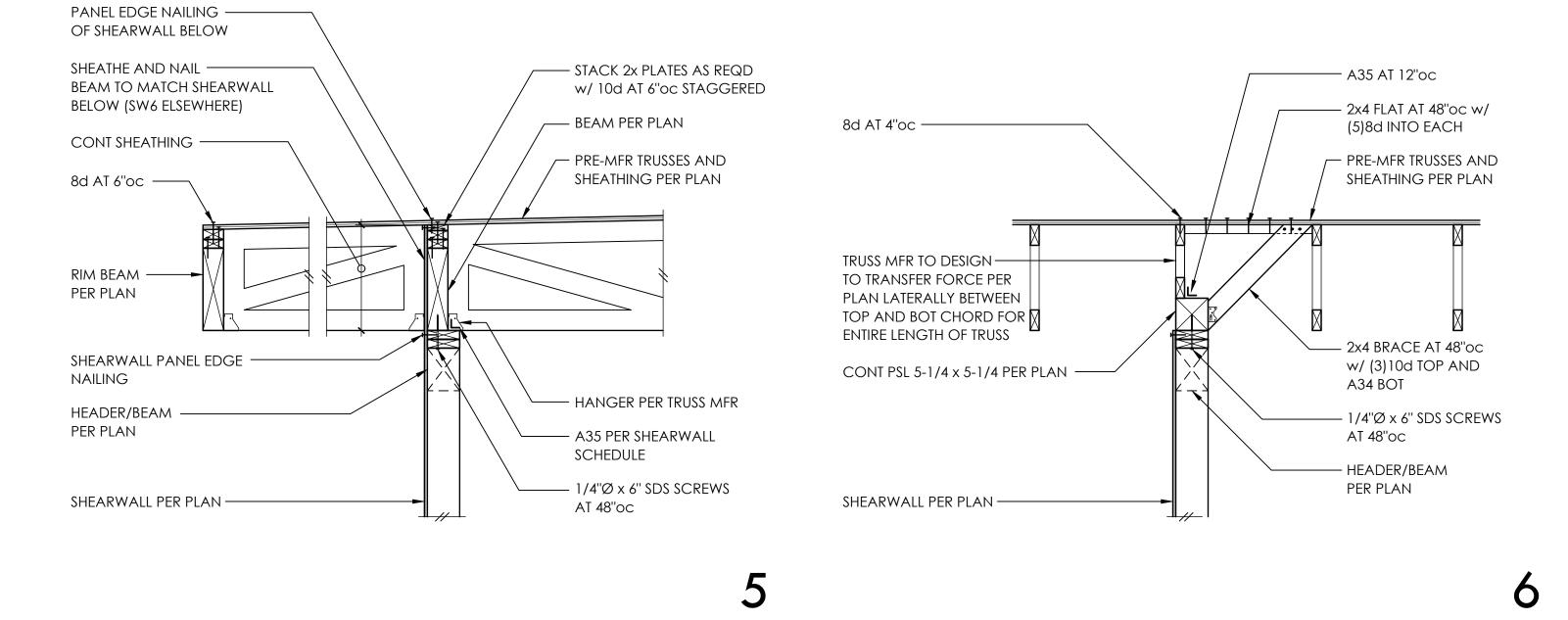
PERMIT SET 2.23.16 REV DESCRIPTION DATE PERMIT CORRECTIONS 7.22.16 PERMIT CORRECTIONS 8.24.16

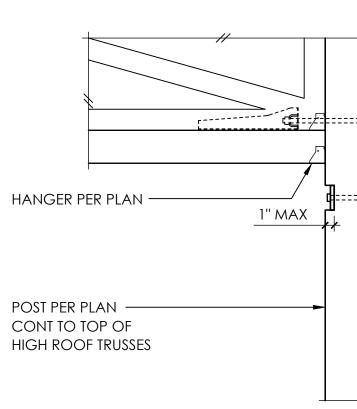
### WOOD FRAMING DETAILS

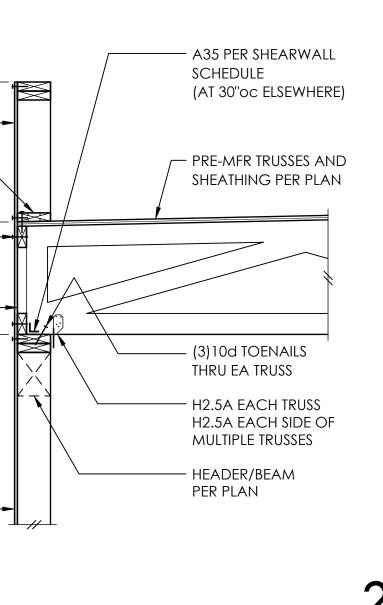
SCALE - 3/4" = 1'-0"

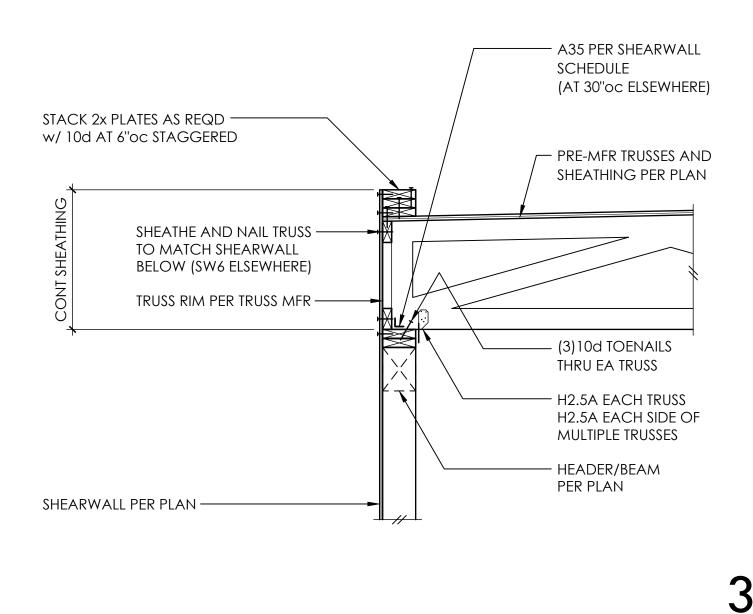
S4.3

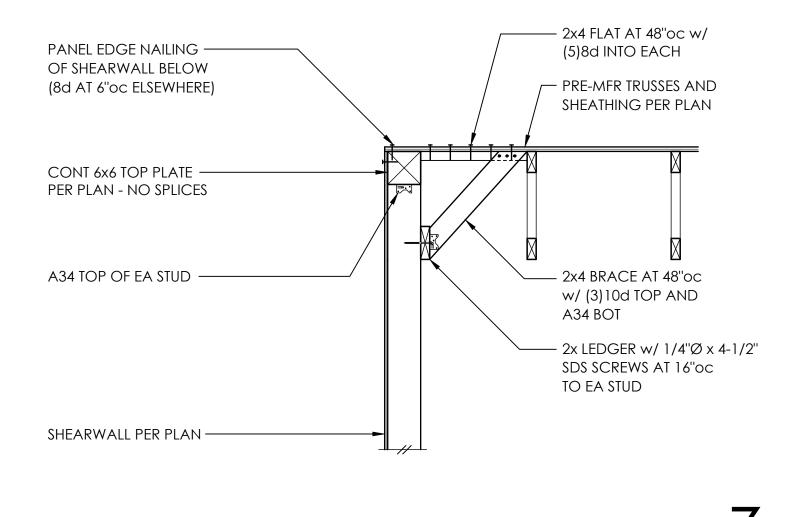


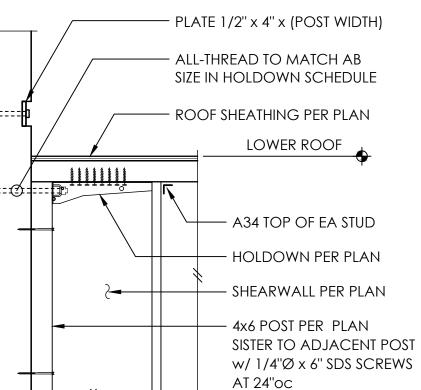


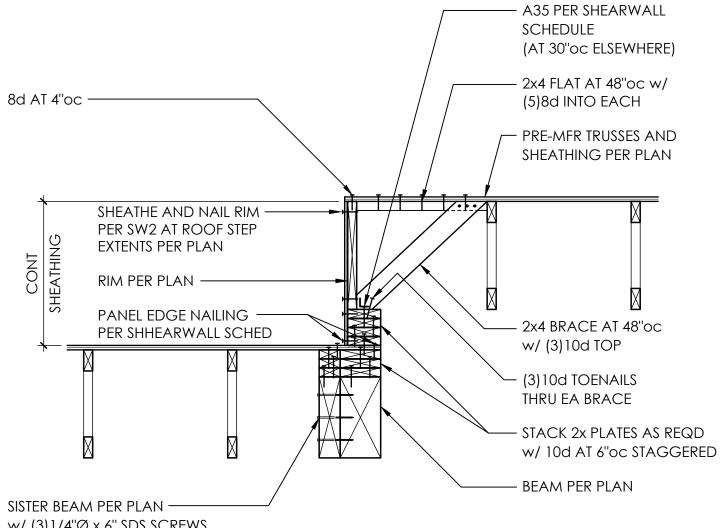




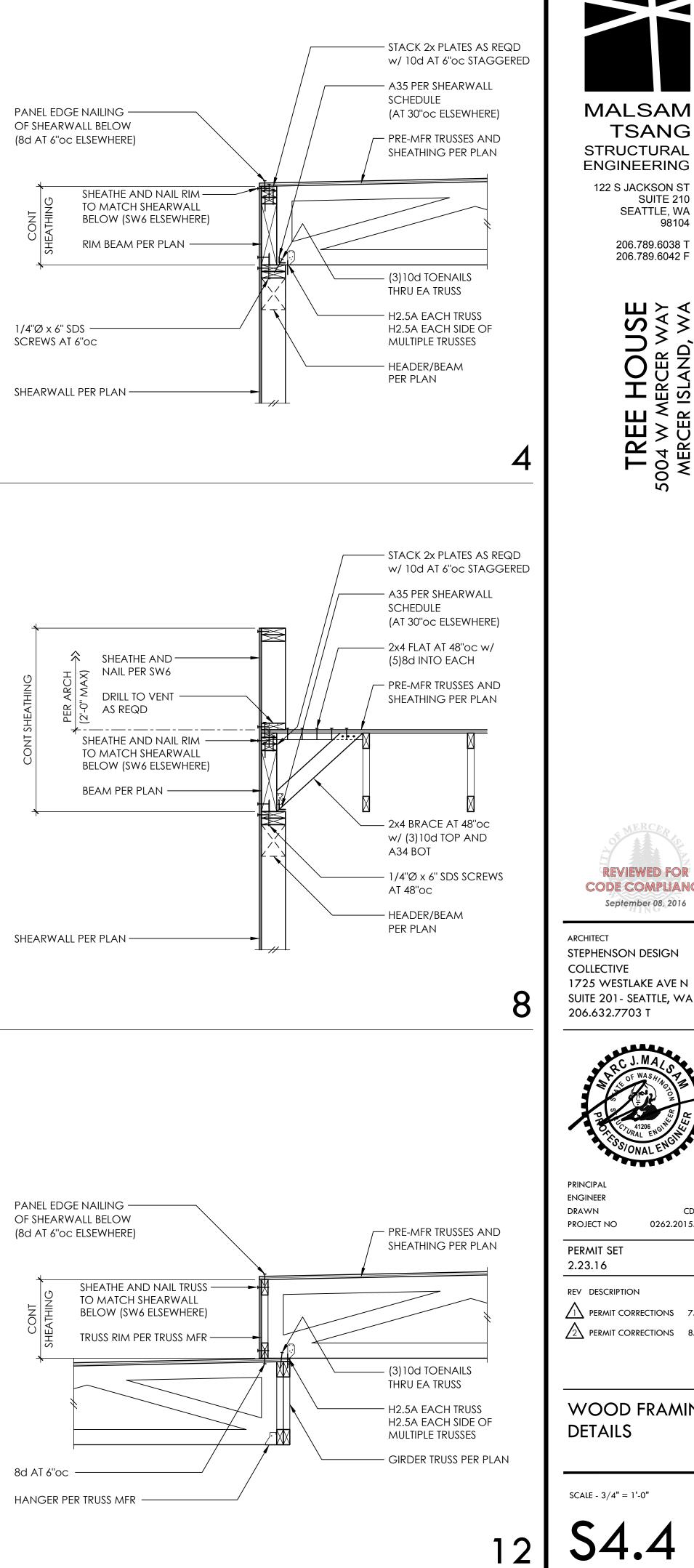








w/ (3)1/4"Ø x 6" SDS SCREWS AT 24"oc





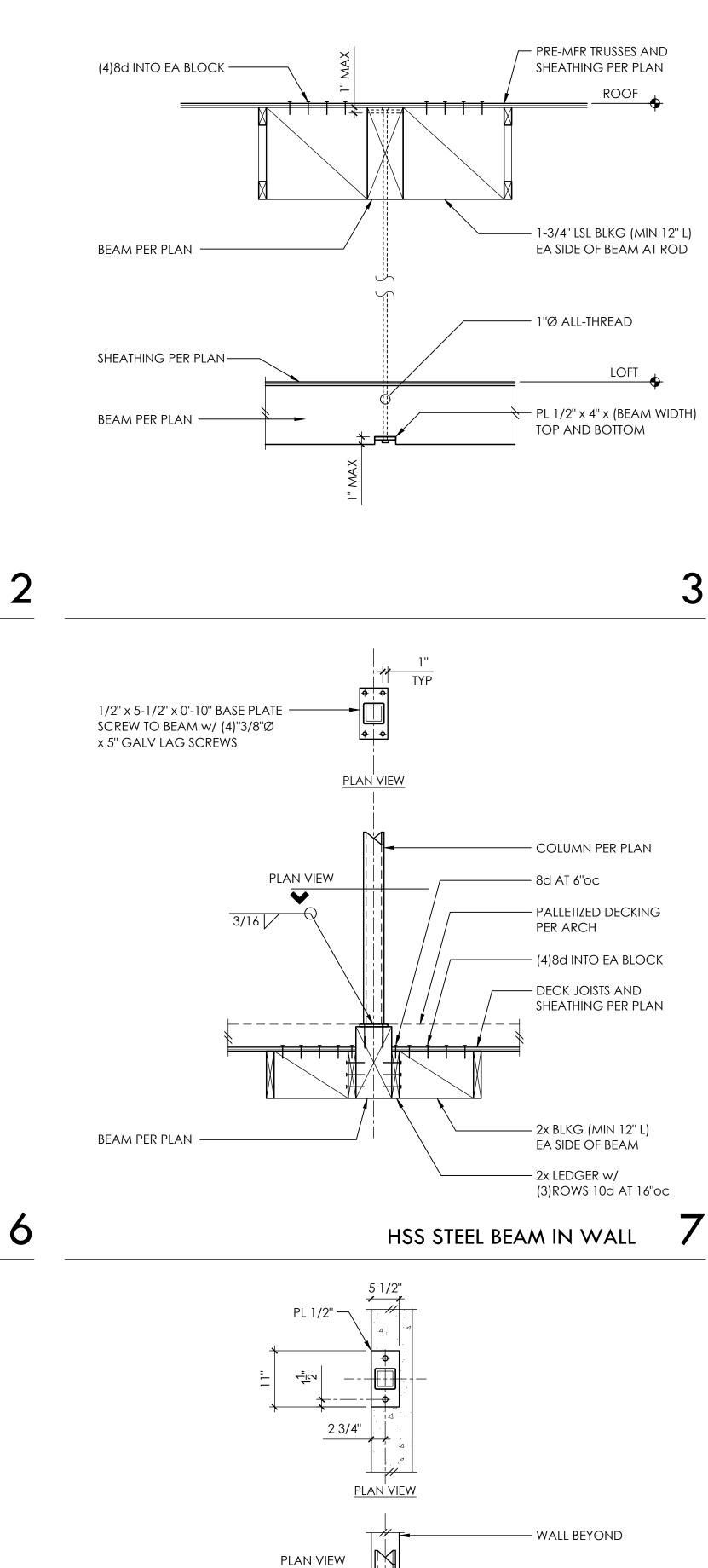
TSANG

### WOOD FRAMING DETAILS

SCALE - 3/4" = 1'-0"

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1" SHIM AND GROUT

