# **GENERAL NOTES**

### <u>GENERAL:</u>

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### INFRINGEMENT WILL BE VIGOROUSLY PROSECUTED.

ALL CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) AS AMENDED BY THE STATE OF WASHINGTON AND BE IN ACCORDANCE WITH WASHINGTON STATE LAWS, REGULATIONS AND VARIOUS CODES IMPOSED BY LOCAL AUTHORITIES.

DO NOT SCALE DRAWINGS OR DETAILS - USE GIVEN DIMENSIONS. CHECK DETAILS FOR LOCATION OF ALL ITEMS NOT DIMENSIONED ON THE PLANS. DIMENSIONS ON THE PLANS ARE TO FACE OF FRAMING OR CENTERLINE OF COLUMNS UNLESS NOTED OTHERWISE

DOOR AND CASED OPENINGS WITHOUT DIMENSIONS ARE TO BE 4" FROM FACE OF ADJACENT WALL OR CENTERED BETWEEN WALLS, UNLESS NOTED OTHERWISE.

VERIFY FIELD CONDITIONS PRIOR TO COMMENCEMENT OF EACH PORTION OF THE WORK.

THE CONTRACTOR SHALL COORDINATE ALL PORTIONS OF THE WORK AS DESCRIBED IN THE CONTRACT DOCUMENTS. NOTIFY THE ARCHITECT FOR RESOLUTION OF ALL DISCREPANCIES PRIOR TO CONSTRUCTION.

# CONTRACTORS RESPONSIBILITY:

CONTRACTOR TO VERIFY ALL DIMENSIONS AND STRUCTURAL MEMBER SIZES PRIOR TO CONSTRUCTION. CONTRACTOR TO INFORM ARCHITECT OF ANY DISCREPANCIES IN THE DRAWINGS OR FROM THE CODES. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE OWNER / ARCHITECT AND STRUCTURAL ENGINEER

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

ALL STRUCTURAL SYSTEMS SUCH AS WOOD TRUSSES 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

CONTRACTOR TO COORDINATE FRAMING LAYOUT WITH ELECTRICAL AND MECHANICAL PLAN.

### SOILS:

UNLESS A SOILS REPORT BY A SOILS ENGINEER IS PROVIDED AND ATTACHED THIS OFFICE ASSUMES NO RESPONSIBILITY AS TO THE PHYSICAL CHARACTERISTICS OF THE SOIL. FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING OF 2,000 PSF. ALL FOOTINGS SHALL BE CAST ON UNDISTURBED FIRM NATURAL SOIL OR COMPACTED SOIL OF 2.000 PSF BEARING CAPACITY AT LEAST 1'-6" BELOW LOWEST ADJACENT GRADE, FREE OF ORGANIC MATERIALS. FOOTING EXCAVATION SHALL BE FREE OF LOOSE SOILS, DEBRIS, AND FREE OF WATER AT ALL TIMES. THIS OFFICE TAKES NO RESPONSIBILITY IN VERIFYING THE ACCURACY OF ENGINEERING DATASUPPLIED BY OTHERS.

# CLEARING AND GRADING (T.E.S.C. MEASURES):

ALL CLEARING AND GRADING MUST BE IN ACCORDANCE WITH LOCAL JURISDICTION CLEARING AND GRADING EROSION CONTROL STANDARDS, DEVELOPMENT STANDARDS, LAND USE CODE, INTERNATIONAL RESIDENTIAL CODE, PERMIT CONDITIONS, AND ALL OTHER APPLICABLE CODES, ORDINANCES AND STANDARDS. THE DESIGN ELEMENTS WITH THESE PLANS HAVE BEEN REVIEWED O THESE REQUIREMENTS. ANY VARIANCE FROM THE ADOPTED EROSION CONTROL STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION.

A COPY OF THE APPROVED PLANS MUST BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.

ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE EFFECTED BY THE WORK.

FINAL SITE DRAINAGE MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT A MINIMUM OF 6" WITHIN THE FIRST 10'. Ref IRC R401.3

### CRAWL SPACE:

UNDER-FLOOR AREAS SHALL BE VENTED BY AN APPROVED MECHANICAL MEANS OR BY OPENINGS IN EXTERIOR FOUNDATION WALLS. SUCH OPENINGS SHALL HAVE A NET AREA OF NOT LESS THAN 1 SQ. FT. FOR EACH 150 SQ. FT. OF UNDER-FLOOR AREA. ONE OPENING SHALL BE WITHIN 3' OF EACH CORNER OF THE BUILDING. Ref IRC R408.2

CRAWL SPACE, UNOBSTRUCTED ACCESS, MINIMUM 18" x 24". Ref IRC R408.4

PROVIDE 18" MINIMUM CRAWL SPACE UNDER WOOD JOIST AND 12" MINIMUM CRAWL SPACE UNDER WOOD GIRDERS. Ref IRC

A GROUND COVER VAPOR BARRIER OF MIN. 6 MIL. (0.006") POLYETHYLENE (0R EQUIVALENT) SHALL BE INSTALLED IN ALL CRAWL SPACES, JOINTS LAPPED 12", EXTEND UP FOUNDATION WALL AND SECURE TO SILL PLATE WHEREVER PRACTICAL ALL WOOD IN CONTACT WITH CONCRETE, CMU OR WITHIN 8" OF SOILS SHALL BE PRESSURE TREATED WOOD. Ref IRC R317.1

### GARAGES:

OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. DOORS BETWEEN GARAGE AND DWELLING SHALL BE SOLID WOOD DOORS; MINIMUM 1 3/8" THICK WITH SELF CLOSING DEVICE. Ref R302.5.1

SEPARATION FROM DWELLING TO GARAGE, SHOP OR SIMILAR AREAS SHALL BE SEPARATED FROM RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2" GYPSUM BOARD APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8" TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY. THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2" GYPSUM BOARD OR EQUIVALENT. Ref IRC R302.6 & TABLE 302.6

HEATING AND/OR COOLING EQUIPMENT LOCATED IN GARAGE SHALL BE INSTALLED WITH PILOTS AND BURNERS OR HEATING ELEMENTS AND SWITCHES AT LEAST 18" ABOVE THE FLOOR LEVEL. Ref IRC G2408.2

# FIREPLACES:

FACTORY-BUILT FIREPLACES SHALL BE LISTED AND LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF THE LISTING. FACTORY-BUILT FIREPLACES SHALL BE TESTED IN ACCORDANCE WITH UL 127. Ref IRC R1004.1

MASONRY FIREPLACES, BARBECUES, SMOKE CHAMBERS AND FIREPLACE CHIMNEYS SHALL BE CONSTRUCTED OF MASONRY OR REINFORCED CONCRETE. FOUNDATIONS SHALL BE MIN. 12" THICK AND EXTEND MIN. 6" BEYOND MASONRY. FIREBOX WALLS MIN. 10" THICK EXCEPT MIN. 8" THICK WHERE A FIREBRICK LINING IS USED. COMBUSTIBLE MATERIALS SHALL NOT BE PLACED WITHIN 2 INCHES OF FIREPLACE, SMOKE CHAMBER OR CHIMNEY WALLS. COMBUSTIBLE MATERIAL SHALL NOT BE PLACED WITHIN 6" OF THE FIREPLACE OPENING. MIN. 4" THICK NON-COMBUSTIBLE HEARTH EXTENDING 16" IN FRONT AND 8" TO THE SIDE OF THE FIREPLACE OPENING. COMBUSTIBLE MATERIAL WITHIN 12" OF THE FIREPLACE OPENING SHALL NOT PROJECT MORE THAN 1/8" FOR EACH 1" DISTANCE FROM SUCH OPENING. Ref IRC R1001 - R1003

### **CEILING HEIGHTS:**

HABITABLE SPACE SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-0". NOT MORE THAN 50% OF REQUIRED FLOOR AREA OF A SPACE IS PERMITTED TO HAVE A SLOPED CEILING LESS THAN 7'-0" IN HEIGHT WITH NO PORTION LOWER THAN 5'-0". BATHROOM SHALL HAVE A MIN CEILING HEIGHT OF 6'-8" OVER THE FIXTURE AND ITS FRONT CLEARANCE AREA. Ref IRC R305

# ROOFING:

APPLY ROOFING IN ACCORDANCE WITH IRC R905.

BALCONIES, LANDINGS, EXTERIOR STAIRWAYS, OCCUPIED ROOFS AND SIMILAR SURFACES EXPOSED TO THE WEATHER AND SEALED UNDERNEATH SHALL BE WATERPROOFED AND SLOPED A MINIMUM OF 1/4" PER 12" (2% SLOPE) FOR DRAINAGE.

### <u>ATTIC:</u>

PROVIDE ATTIC VENTILATION AS INDICATED ON ROOF FRAMING PLANS. THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NOT MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY, WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. Ref IRC R806.2

ATTIC ACCESS SHALL HAVE A ROUGH FRAMED OPENING NOT LESS THAN 22 INCHES BY 30 INCHES LOCATED IN A READILY ACCESSIBLE LOCATION. THE MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE 30 INCHES MEASURED /ERTICALLY FROM THE BOTTOM OF THE CEILING FRAMING MEMBERS. Ref IRC R807. FOR ACCESS REQUIREMENTS WHERI MECHANICAL EQUIPMENT IS LOCATED IN ATTICS Ref IRC M1305.1.3

# <u>GLAZING:</u>

TO BE IN COMPLIANCE WITH IRC R308 AND WASHINGTON STATE SAFETY GLASS LAW.

GLAZING IN HAZARDOUS LOCATIONS SUCH AS GLASS ON DOORS, GLAZING WITHIN 24" ON EITHER SIDE OF A DOOR OPENING AREAS WITHIN 60" VERTICAL AND 36" HORIZONTAL OF THE BOTTOM LANDING OF A STAIRWAY, STORM DOORS, RAILINGS, SHOWER DOORS, SLIDING GLASS DOORS, AND TUB ENCLOSURES SHALL BE SAFETY GLAZING MATERIAL. Ref IRC R308.4 ALL EXTERIOR WALL GLAZING SHALL COMPLY WITH THE 2018 EDITION OF THE WASHINGTON STATE ENERGY CODE.

### EGRESS:

EGRESS IN EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY EXIT WITH A MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24" MINIMUM NET CLEAR OPENING WIDTH DIMENSION OF 20" AND A FINISHED SILL HEIGHT NOT MORE THAN 44" ABOVE THE FLOOR. IRC R310.1

ONE EXIT DOOR CONFORMING TO IRC R311.2 IS REQUIRED.

FIRE & CARBON MONOXIDE PROTECTION:

SMOKE & CARBON MONOXIDE DETECTOR POWER SOURCES TO BE INSTALLED IN ACCORDANCE WITH NFPA 72, IRC R314 & IRC R315. ALL ALARM DEVICES SHALL BE INTERCONNECTED PER IRC R314.1. FIREBLOCKING PER IRC R1003.19, R1001.12, R302.11 & R602.8. DRAFTSTOPPING PER IRC R302.12 & R502.12.

# VENTILATION & LIGHTING:

IDED WITH AN OPENABLE EXTERIOR OPENING OF AT LEAST 4% OF THE FLOOR AREA, A MECHANICAL VENTILATION SYSTEM MUST BE PROVIDED THAT PROVIDES MIN. .35 AIR CHANGES PER HOUR. IRC R303.1 DRYER & BATH FANS TO BE 50 CFM, AND RANGE/OVEN FANS TO BE 100 CFM MIN, VENT TO THE OUTSIDE. IRC303 AND 2006 WA

STATE VENTILATION AND INDOOR AIR QUALITY COD NATURAL LIGHTING TO BE NOT LESS THAN 8% OF THE FLOOR AREA OR ALL HABITABLE SPACES. IRC R303.

### <u>STAIRS:</u>

MINIMUM HEADROOM OF 6'-8" MEASURED VERTICALLY FROM A SLOPED PLANE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OR PLATFORM. IRC R311.7.2 MINIMUM WIDTH 36", IRC 311.7.1

MINIMUM TREAD 10", MAXIMUM RISER 7 3/4", HANDRAIL MINIMUM 34" AND MAXIMUM 38" ABOVE STAIR NOSING. HANDRAIL TO BE 1 1/4" TO 2" CROSS SECTION AND 1 1/2" AWAY FROM WALL. IRC R311.7.5 & 311.7.8. INSTALL FIRE BLOCKING AT MID STRINGER SPAN AND AT WALL ALONG STRINGER. COVER WALLS AND SOFFITS OF USABLE SPACE UNDER STAIR WITH 1/2" GYPSUM BOARD. IRC

GUARDRAILS: ANY WALKING SURFACE 30" OR MORE ABOVE GRADE OR ADJACENT SURFACE SHALL HAVE MIN. 36" HIGH GUARDRAIL. IRC R312.



### **BATHROOMS:**

ALL TUB AND SHOWER STALLS SHALL HAVE FIREBLOCKING BETWEEN STUDS. ALL GLAZING USED FOR DOORS OR ENCLOSURES IN BATHROOMS SHALL BE SAFETY GLAZING. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING A SHOWER OR BATHTUB WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 60 INCHES ABOVE THE STANDING SURFACE AND DRAIN INLET SHALL BE SAFETY GLAZING. IRC R308.4 BATH TUB & SHOWER STALL NON-ABSORBENT WAINSCOTS SHALL BE A MINIMUM OF 72 INCHES ABOVE THE FLOOR. IRC R307.2. WATERCLOSETS SHALL HAVE MIN. 15" TO SIDE WALLS FROM CENTER OF FIXTURE, AND MIN. 21" FRONT CLEARANCE. IRC R307.1 APPLIANCES IN A FIXED POSITION SHALL BE SECURELY FASTENED IN PLACE TO STRUCTURAL MEMBERS WITH STRAP ANCHORS

OR SIMILAR ANCHORING METHOD IRC G2404.4

## ENERGY:

R402.1.1. UNLIMITED GLAZING WITH MODIFICATIONS

ENERGY CREDITS - MAIN HOUSE - 4.5 CREDITS REQUIRED, 4.5 CREDITS SELECTED 0.5 CREDITS - OPTION 1A - EFFICIENT BUILDING ENVELOPE: TABLE 402.1.1 WITH THE FOLLOWING MODIFICATIONS: VERTICAL

1.0 CREDITS - OPTION 2B - AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION: COMPLIANCE BASED ON R402.4.1.2, REDUCE TESTED AIR LEAKAGE TO 2.0 ACH AND ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M1507.3 OF

THE INTERNATIONAL RESIDENTIAL CODE SHALL BE MET WITH A HEAT RECOVERY VENTILATION SYSTEM WITH A MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.70. 1.0 CREDITS - OPTION 3A - HIGH EFFICIENCY HVAC EQUIPMENT: GAS, PROPANE OR OIL-FIRED FURNACE WITH MINIMUM AFUE OF 94%, OR GAS, PROPANE OR OILED-FIRED BOILER WITH MINIMUM AFUE OF 92%.

1.0 CREDITS - OPTION 4 - HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM: ALL HEATING AND COOLING SYSTEM COMPONENTS INSTALLED INSIDE THE CONDITIONED SPACE. THIS INCLUDES ALL EQUIPMENT AND DISTRIBUTION SYSTEM COMPONENTS SUCH AS FORCED AIR DUCTS, HYDRONIC PIPING, HYDRONIC FLOOR HEATING LOOP, CONVECTORS AND RADIATORS. ALL COMBUSTION EQUIPMENT SHALL BE DIRECT VENT OR SEALED COMBUSTION, FOR FORCED AIR DUCTS: A MAXIMUM OF 10 LINEAR FEET OF

RETURN DUCTS AND 5 LINEAR FEET OF SUPPLY DUCTS MAY BE LOCATED OUTSIDE THE CONDITIONED SPACE. ALL METALLIC DUCTS LOCATED OUTSIDE THE CONDITIONED SPACE MUST HAVE BOTH TRANSVERSE AND LONGITUDINAL JOINTS SEALED WITH MASTIC. IF FLEX DUCTS ARE USED, THEY CANNOT CONTAIN SPLICES. FLEX DUCT CONNECTIONS MUST BE MADE WITH NYLON STRAPS AND INSTALLED USING A PLASTIC STRAPPING TENSIONING TOOL. DUCTS LOCATED OUTSIDE THE CONDITIONED SPACE. MUST BE INSULATED TO A MINIMUM OF R-8. LOCATING SYSTEM COMPONENTS IN CONDITIONED CRAWL SPACES IS NOT PERMITTED

DIRECT COMBUSTION HEATING EQUIPMENT WITH AFUE LESS THAN 80% IS NOT PERMITTED UNDER THIS OPTION. 1.0 CREDITS - OPTION 5B - EFFICIENT WATER HEATING: WATER HEATING SYSTEM SHALL INCLUDE ONE OF THE FOLLOWING: GAS,

MEETING THE REQUIREMENTS OF OPTION 3C. OR FOR R-2 OCCUPANCY, A CENTRAL HEAT PUMP WATER HEATER WITH AN EF GREATER THAN 2.0 THAT WOULD SUPPLY DHW TO ALL THE UNITS THROUGH A CENTRAL WATER LOOP INSULATED WITH R-8 MINIMUM PIPE INSULATION.

ENERGY CREDITS - GUEST HOUSE - 1.5 CREDITS REQUIRED, 1.5 CREDITS SELECTED 0.5 CREDITS - OPTION 1A - EFFICIENT BUILDING ENVELOPE: TABLE 402.1.1 WITH THE FOLLOWING MODIFICATIONS: VERTICAL FENESTRATION U=0.28, FLOOR R-38, SLAB ON GRADE AND BELOW GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB.

TESTED AIR LEAKAGE TO 3.0 ACH AND ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M1507.3 OF THE INTERNATIONAL RESIDENTIAL CODE SHALL BE MET WITH A HIGH EFFICIENCY FAN (MAXIMUM 0.35 WATTS/CFM), NOT INTERLOCKED WITH THE FURNACE FAN. VENTILATION SYSTEMS USING A FURNACE INCLUDING AN ECM MOTOR ARE ALLOWED PROVIDED THAT THEY ARE CONTROLLED TO OPERATE AT LOW SPEED IN VENTILATION ONLY MODE

0.5 CREDITS - OPTION 5A - EFFICIENT WATER HEATING: ALL SHOWERHEAD AND KITCHEN SINK FAUCETS INSTALLED IN THE HOUSE SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS

ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL RESIDENTIAL CODE AND THE WASHINGTON STATE ENERGY CODE, LATEST EDITION. VERIFY ALL CONDITIONS BEFORE PROCEEDING WITH WORK

# WALLS: INSULATED PER WSEC TABLE R402.1.1.

ROOF AND CEILING: INSULATED PER WSEC TABLE R402.1.1. PROVIDE INSULATION IN CEILING WHERE POSSIBLE AND IN 2x12 RAFTERS IF VAULTED CEILING CONDITION EXISTS. MAINTAIN A MINIMUM OF 2" CLEAR BETWEEN TOP OF INSULATION AND BOTTOM OF SHEATHING FOR VENTING. VENTING MUST OCCUR IN EACH JOIST SPACE. WHERE CONTINUOUS VENTING WITHIN A JOIST SPACE IS INTERRUPTED BY A HEADER (I.E., SKYLIGHT OR AT HIP END), PROVIDE (2) 1 1/2" VENTING HOLES AT THE TOP OF THE RAFTER AT THE HEADER TO ALLOW FOR CONTINUAL THROUGH-VENTING INTO THE NEXT JOIST SPACE.

FLOORS: INSULATE PER WSEC TABLE R402.1.1

HORIZONTALLY BENEATH THE SLAB FOR A COMBINED 24" MIN. INSULATION INSTALLED OUTSIDE THE FOUNDATION SHALL EXTEND DOWNWARD 24" MIN. OR TO THE FROSTLINE. WSEC 402.2.9.1

R402.4.1.1 FLOORS SEPARATING CONDITIONED SPACE FROM UNCONDITIONED SPACE SHALL HAVE MIN. 4 MIL POLYETHYLENE OR KRAFT FACED MATERIAL. ROOF/CEILING ASSEMBLIES WHERE THE VENTILATION SPACE ABOVE THE INSULATION IS LESS THAN AN AVERAGE OF 12 INCHES SHALL BE PROVIDED WITH A VAPOR RETARDER. WALLS SEPARATING CONDITIONED SPACE FROM UNCONDITIONED SPACE SHALL HAVE A VAPOR RETARDER INSTALLED. FACED BATT INSULATION SHALL BE FACE STAPLED. A GROUND COVER OF MIN. 6 MIL BLACK POLYETHYLENE SHALL BE LAID OVER THE GROUND WITHIN CRAWL SPACES W/ JOINTS LAPPED MIN. 12"

# HARRIS REMODEL 1640 72ND AVE SE MERCER ISLAND, WA 98040

METHOD OF COMPLIANCE - PRESCRIPTIVE METHOD FOR GROUP R OCCUPANCY, CLIMATE ZONE PER TABLE R301.1, TABLE

FENESTRATION U=0.28, FLOOR R-38, SLAB ON GRADE AND BELOW GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB.

UNDER THIS OPTION. ELECTRIC RESISTANCE HEAT AND DUCTLESS HEAT PUMPS ARE NOT PERMITTED UNDER THIS OPTION.

PROPANE OR OIL WATER HEATER WITH A MINIMUM EF OF 0.74 OR WATER HEATER HEATED BY GROUND SOURCE HEAT PUMP

0.5 CREDITS - OPTION 2A - AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION: COMPLIANCE BASED ON R402.4.1.2, REDUCE

SLAB ON GRADE: INSULATE PER TABLE R402.1.1. PROVIDE EXTRUDED RIGID CLOSED CELL INSULATION. INSULATION, INSTALLED NSIDE THE FOUNDATION WALL. SHALL EXTEND DOWNWARD FROM THE TOP OF THE SLAB 24" MIN. OR DOWNWARD AND THEN

VAPOR BARRIERS: VAPOR RETARDERS SHALL BE INSTALLED ON THE WARM SIDE (IN WINTER) OF INSULATION PER TABLE

VICINITY MAP



ZZanolli@fmsp.com 206.420.5115 



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# 2 A.B.E. DIAGRAM

	ELEV.	LENGTH	Ε×L
Д	38'-2"	49'-0"	1870.2
в	33'-10"	1-6	50.8
С	31'-4"	33'-4"	1044.4
D	29'-3"	2'-4"	68.3
E	28'-9"	7-4"	210.8
μ	28'-0"	2'-4"	65.3
G	25'-4"	20'-9"	525.6
H	20'-2"	17'-3"	347.8
	21'-4"	30'-3"	645.2
J	31'-0''	47'-5"	1469.9
K	22'-11"	8'-5"	192.9
L	22'-11"	2'-6"	57.3
Μ	27'-9"	8'-0"	222
N	28'-3"	2'-6"	70.6
0	27'-0"	7-6"	202.5
Р	31'-10''	41'-7"	1323.7
Q	31'-10''	20'-0"	636.7
R	35'-10"	2'-7''	92.6
9	35'-10"	36'-3"	1299
Ť	40'-0''	22'-0"	880
tot,	4	362'-10"	11275.6

A.B.E. = 11275.6 / 362'-10" = 31.07'

NOTE: POINTS G, H, I (LENGTH OF SEGMENT AND ELEVATIONS) HAVE BEEN UPDATED TO ACCOUNT FOR THE NEW ADDITION.

ALL THE OTHER POINTS SHOWN ARE BASED ON PREVIOUS HEIGHT CALCULATIONS PER BUILDING PERMIT #0706-236.







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Job No. Project Manager: Issue Date:

NO. DATE

REVISION 06/29/2022 PERMIT REVISION - 1 9/10/2022 CONSTRUCTION SET 09/16/2022 PERMIT REVISION 12/09/2022 CONSTRUCTION SET 02/03/2023 CONSTRUCTION SET 12/15/2023 PRICING SET 7 1/4/2024 PERMIT REVISION

# ARCHITECTURAL SITE PLAN

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EXISTING WALLS
EXISTING WALLS TO BE REMOVED



MAIN FLOOR DEMO PLAN

A2.2D

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![](_page_4_Figure_0.jpeg)

2110 Harris Remodel PRINTED: Thursday, January 4, 2024

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

# <u>LEGEND</u>

PROPOSED WALLS

\_\_\_\_\_ ELEMENT ABOVE

# GROSS SQUARE FOOTAGE - UPPER

EXIST. AREAS EXISTING HOUSE EXISTING DECK	2,333 SF 283 SF
TOTAL EXISTING AREA	2,616 SF
DECK TO BE DEMOLISHED	-283 SF
ADDED NEW FINISHED AREA: NEW DECK:	283 SF 225 SF 225 SF
TOTAL PROPOSED AREA:	<u>2,841 SF</u>

# <u>NOTES</u>

3

**1.RE-USED WINDOWS & DOORS** WINDOWS AND DOORS THAT WILL BE RE-USED TO BE VERIFIED TO MEET U=0.30 AND SAFETY GLAZING WHERE REQUIRED. WHEN MORE THAN ONE REPLACEMENT FENESTRATION UNIT IS BEING INSTALLEDD, AN AREA- WEIGHTED AVERAGE OF THE U-FACTOR SAHLL BE PERMITTED TO BE USED TO DEMONSTRATE COMPLIANCE. WSEC R503.1.1.1 AND WSEC TABLE R402.1.1.

![](_page_4_Picture_11.jpeg)

![](_page_4_Picture_12.jpeg)

# UPPER FLOOR PLAN

![](_page_4_Picture_14.jpeg)

![](_page_4_Picture_15.jpeg)

![](_page_5_Figure_0.jpeg)

![](_page_5_Figure_1.jpeg)

![](_page_5_Picture_3.jpeg)

# DEMOLITION NOTES

- 1 REMOVE EXISTING WALLS PER PLAN.
- 2 REMOVE EXISTING DOOR.
- 3 REMOVE EXISTING WINDOWS.
- 4 N/A

- 5 REMOVE EXISTING RAILING, SALVAGE TO REUSE IF FEASIBLE.
- 6 N/A
- 1 REMOVE EXISTING CABINETS.
- 8 DEMO GAS FIREPLACE.
- 9. REMOVE EXISTING DECK FLOOR.

# LEGEND

EXISTING WALLS

![](_page_5_Picture_17.jpeg)

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Job No. Project Manager:

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REVISION 06/29/2022 PERMIT REVISION - 1 9/10/2022 CONSTRUCTION SET 09/16/2022 PERMIT REVISION 12/09/2022 CONSTRUCTION SET 02/03/2023 CONSTRUCTION SET /7 1/4/2024 PERMIT REVISION

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1/4/2024

# UPPER FLOOR DEMO PLAN

A2.3D

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![](_page_6_Figure_0.jpeg)

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![](_page_7_Figure_0.jpeg)

![](_page_7_Figure_1.jpeg)

![](_page_7_Figure_2.jpeg)

![](_page_8_Figure_0.jpeg)

![](_page_9_Figure_0.jpeg)

TYPICAL WINDOW FLASHING DETAILS

1

<u>_7</u> _										~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
EXTERIOR DOOR SCHEDULE										
		SI	ZE						A	
LOCATION	NO.	WIDTH	HEIGHT	MFGR	TYPE	EGRESS	GLASS	U-VALUE	CPD#	NOTES:
MAIN FLOOR										
	202A	14'-1 3/16"	7'-11 3/4"	NANA	D1		YES	0.26	NAN-M-10-07768-00001	
	206A	6'-0 1/16"	9'-2 3/4"		D2					STEEL DOOR PER INTERIOR
UPPER FLOOR										
	301A	12'-9 3/4"	8'-1 1/2" 4' 9"	NANA	D1		YES	0.26	NAN-M-10-07768-00001	CUSTOM MULLIONS PER ELEVATIONS
	301B	10'-5 1/2"	8'-1 1/2"	NANA	D1		YES	0.26	NAN-M-10-07768-00001	CUSTOM MULLIONS PER ELEVATIONS

VINDOW SCHED	ULE									
UNIT DIMENSIONS										
LOCATION	NO.	WIDTH	HEIGHT	HEAD HEIGHT	MFGR	TYPE	EGRESS	GLASS	U-value	NOTES:
MAIN FLOOR				1			1			
	202C	14'-1 11/16"	10 3/4"	8'-3 1/4"		W3			Undefined	

INTERIOR DOOR S	SCHEDULE												
		SI	ZE			DOC	R				DETAILS		
LOCATION	NO.	WIDTH	HEIGHT	MFGR	TYPE	MATERIALS	HDWR	SAFETY GLASS	U-VALUE	HEAD	JAMB	SILL	NOTES:
MAIN FLOOR		1				-		ł	- I				
	202B	2'-3"	8'-0"										
	205A	3'-8 1/4"	8'-0 1/8"										
	205B	2'-1 1/16"	8'-0 1/16"										
	206B	2'-1 1/16"	8'-0 1/16"										
UPPER FLOOR									· · · · ·				
	303A	3'-8 1/2"	8'-0 3/4"										
	303B	4'-2 1/2"	9'-4 5/8"										

![](_page_9_Figure_8.jpeg)

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

U-VALUE	CPD#	NOTES:		
6	NAN-M-10-07768-00001			
		STEEL DOOR PER INTERIOR		
26	NAN-M-10-07768-00001	CUSTOM MULLIONS PER ELEVATIONS		
26	NAN-M-10-07768-00001	CUSTOM MULLIONS PER ELEVATIONS		

	SAFETY GLASS	U-value	NOTES:					
		Undefined						

![](_page_9_Picture_14.jpeg)

![](_page_9_Picture_15.jpeg)

C

![](_page_9_Picture_16.jpeg)

![](_page_9_Picture_17.jpeg)

Job No. Project Manager: Issue Date:

1/4/2024

6 12/15/2023 PRICING SET 7 1/4/2024 PERMIT REVISION

REVISION 06/29/2022 PERMIT REVISION - 1 9/10/2022 CONSTRUCTION SET 09/16/2022 PERMIT REVISION 12/09/2022 CONSTRUCTION SET 02/03/2023 CONSTRUCTION SET

2110

TB

NO. DATE

DOOR AND WINDOW SCHEDULES

![](_page_9_Picture_25.jpeg)

# STRUCTURAL NOTES

### GENERAL REQUIREMENTS

BUILDING CODE & REFERENCE STANDARDS: The "International Existing Building Code" (IEBC), 2018 Edition, as adopted and modified by the City of Mercer Island, governs the design and construction of this project. Reference to a specific section in the Code does not relieve the contractor from compliance with the entire materials reference standards noted below. The latest edition of the materials reference standards shall be used.

SCOPE OF STRUCTURAL WORK: The structural scope of work includes:

 Remodeling the existing main floor family room. • Adding an upper floor addition above the family room. This addition consists of an approximately 280 square foot master bedroom and 240 square

foot deck. The roof framing consists of pre-manufactured wood trusses, and the floor framing consists of a combination of wood l-joists and engineered lumber framing. The lateral force resisting system at the addition consists of wood-framed shear walls. The existing foundation below the family room and patio will be retrofit with pipe piles.

NOTE PRIORITIES: Notes on the individual drawings shall govern over these general notes.

STRUCTURAL DETAILS: The structural drawings are intended to show the general character and extent of the project and are not intended to show all details of the work.

ARCHITECTURAL DRAWINGS: Refer to the Architectural drawings for information including, but not limited to: dimensions, elevations, slopes, door and window openings, non-bearing walls, curtain walls, curbs, drains, railings, waterproofing, finishes and other nonstructural items.

STRUCTURAL RESPONSIBILITIES: The EOR is responsible for the strength and stability of the Addition Structure in its completed state.

CONTRACTOR RESPONSIBILITIES: The contractor is responsible for the means and methods of construction and all job-related safety standards such as OSHA and WISHA. The contractor is responsible for the strength and stability of the structure during construction and shall provide temporary shoring, bracing and other elements required to maintain stability until the structure is completed. It is the contractor's responsibility to be familiar with the work required in the construction documents and the requirements for executing it properly.

DISCREPANCIES: In case of discrepancies between these general notes, the contract drawings, and specifications, and/or reference standards, the EOR shall determine which shall govern. Discrepancies shall be brought to the attention of the EOR before proceeding with the work. Accordingly, any conflict in or between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site prior to fabrication and/or construction. Conflicts between the drawings and actual site conditions shall be brought to the attention of the EOR before proceeding with the work. All underground utilities shall be determined by the Contractor prior to excavation or drilling.

ADJACENT UTILITIES: The contractor shall determine the locations of all adjacent underground utilities prior to excavation or pile placement. Any utility information shown on the drawings and details is approximate and not necessarily complete.

# DESIGN CRITERIA

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads or the capacity of the partially completed construction.

DEAD LOAD:

Wood Deck w/ Pavers = 30 psf Wood Floor (Including Lightweight Topping) = 30 psf Wood Roof = 15 psf Normal Weight Concrete = 145 pcf

SNOW LOAD: The roof snow load is determined by using Chapter 7 of ASCE 7-16 in accordance with IBC Section 1608 and with the following factors Flat Roof Snow Load, Pf = 25 psf without drift

Basic Wind Speed (3-Second Gust)	napter 26 to 30 of ASCE 7-16 in accordance with IBC Section 1609 with the following factors: V = 97  MPH (Ultimate) / 75 MPH (ASD)							
Wind Importance Factor Iw = 1.0	Risk-Category = II							
Exposure Category = C	GCpi = ±0.18							
Kzt = 1.00								
Analysis Procedure - Directional Procedure per ASCE 7, Table 27.2-1								

SEISMIC DESIGN: Earthquake design is determined using Chapter 12 ASCE 7-16 in accordance with IBC Chapter 16 with the following factors: portance Factor le = 1.0Risk Category= II

Ss = 1.379 g	Sds = 1.013 g
S1 = 0.481 g	Sd1 = 0.583 g
Site Class = D - Default	Seismic Design Category = D
Redundancy Factor, $\rho = 1.0$ typical, 1.3 for select N-S	direction shear walls
Horizontal Irregularities: Type 2	
Vertical Irregularities: Type 4	

Wood Structure

 Basic Seismic Force Resisting System: A-15 (Bearing Wall Systems) Light-framed walls with wood structural panels rated for shear resistance Analysis Procedure: Equivalent lateral force procedure, per ASCE 7-16, Section 12.8 R = 6.5

- Cs = 0.17
- Cd = 4
- Ω = 3

LIVE L

Seismic demands on nonstructural components, structural components engineered as part of deferred submittals, and connections of those components to the primary structure shall be designed in accordance with the aforementioned building code, the general seismic criteria listed above, and the requirements of ASCE 7-16.

DESIGN BASE SHEAR: Design Base Shear (Seismic Governed) (ASD), V = 11.229K (Both Directions)

RAIN DESIGN: Rain load is determined using Chapter 8 of ASCE 7-16, in accordance with IBC Section 1611 with the following factors: i = 1.25 in/hr (100 year event - 60 minute duration)

OADS:	
Roof (Snow)	25 PSF
Decks	1.5 X occupancy served = 60 PSF
Residential Floor	40 PSF
alcony Railing & Guardrails (Residential)	200# (TOP RAIL)

DEFERRED SUBMITTAL LOADS: All pre-engineered, pre-fabricated, pre-manufactured, or other products designed by others shall be designed for the tributary dead and live loads plus wind, earthquake, and component, and cladding loads when applicable. Design shall conform to the project drawings

and specifications, reference standards, a	and governing coo	le.		
Roof Dead Load	15 PSF	Roof Live Load	25 PSF	
Top Chord Dead Load	8 PSF	Top Chord Snow Load	25 PSF	
Bottom Chord Dead Load	7 PSF	Bottom Chord Snow Load	0 PSF	
Total Deflection Limit	L/240			
Live Load Deflection Limit	L/360			
Truss Uplift Load (Gross)	5 PSF			

### SUBMITTALS

SUBMITTALS: Shop Drawings shall be submitted to the Architect/EOR prior to any fabrication or construction for all structural items as noted below. The contractor shall review and place a shop drawings stamp on the submittal before forwarding to the EOR. Submittals shall be made in time to provide a minimum of one week for review by the EOR. Additional submittals required for this project are specified in the specific sections below. Reference the individual material section for specific information to be included in the submittal.

If the shop drawings differ from or add to the design of the Structural drawings, they shall bear the seal and signature of the Washington State Registered Professional Engineer who is responsible for the design. TJI framing

ALTERNATES: Product or manufacturer components specified in these drawings are used as the basis of design for this project. Alternates for specified items may be submitted to the EOR for review. However, contractor shall submit a current ICC-ESR/IAPMO-ER report identifying that an alternative component has the same or greater load capacity than the specified item.

SHOP DRAWING REVIEW: Review by the Architect/EOR is for general compliance with the design concept and the contract documents. Dimensions and quantities are not reviewed by the EOR, and therefore, must be verified by the General Contractor. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications, nor departures therefrom. The contractor remains responsible for details and accuracy; for confirming and correlating all quantities and dimensions; for selecting fabrication processes; for techniques of assembly; and for performing work in a secure manner. When shop drawings (component design drawings) differ from or add to the requirements of the Structural drawings they shall be designed and stamped by the responsible SSE. Allow one week for EOR review time.

DEFERRED SUBMITTALS: Per IBC Section 107.3.4.1, drawings, calculations, and product data for the design and fabrication of items that are designed-by-others shall bear the seal and signature of the Washington State Registered Professional Engineer (SSE) who is responsible for the design and shall be submitted to the Architect/EOR and the building department for review prior to fabrication. Allow one week for EOR review time.

The SSE shall submit stamped and signed calculations and shop drawings to the EOR for review. Review of the SSE's shop drawings is for general compliance with design criteria and compatibility with the design of the primary structure and does not relieve the SSE of responsibility for that design. All necessary bracing, ties, anchorage, and proprietary products shall be furnished and installed per manufacturer's instructions or the SSE's design drawings and calculations. The design of the connection to the primary structure is the responsibility of the supplier and SSE. Submitted calculations are

Retrofit Pipe Pile Brackets & Anchors to Existing Concrete

NON-STRUCTURAL COMPONENTS: Design, detailing and anchorage of all nonstructural components shall be in accordance with ASCE 7-16, Chapter 13 and the project specifications. Nonstructural components designed by others shall not induce torsional loading into supporting steel structural members without additional bracing of those members to eliminate torsional forces. Torsional bracing shall be designed by the nonstructural component designer and approved by the EOR. Anchorage to the primary structure is per the bidder-design contractor or supplier.

### **TESTS & INSPECTIONS**

INSPECTIONS: All construction is subject to inspection by the Building Official in accordance with IBC Sec 110. The contractor shall coordinate all required inspections with the Building Official. Submit copies of all inspection reports to the Architect/EOR for review. The Building Official may accept inspection of and reports by approved inspection agencies in lieu of Building Official's inspections. The contractor shall obtain approval of Building Official to use the third-party inspection agency and contractor shall alert the Architect/EOR as such.

SPECIAL INSPECTIONS: In addition to the inspections required by IBC Sec 110, a Special Inspector shall be hired by the Owner as an independent third-party inspector to perform the special inspections per IBC Ch. 17. Special inspections shall be performed by an approved testing agency as outlined in the Special Inspection Schedule, the contract documents, and/or the project specification. Special Inspections shall meet the requirements outlines in the specific materials sections of IBC Sec 1705. The contractor is responsible for scheduling the inspections, per the city/Building Official requirements.

Special Inspections shall be performed for the following:

Steel Periodic inspection of fillet welds < 5/16-inch

Soils & Foundations Continuous inspection during driving and testing of piles.

Special Cases Continuous inspection of post-installed anchors during installation of anchors and reinforcing bars installed in horizontal or upwardly inclined orientations to resist sustained tension loads.

PREFABRICATED CONSTRUCTION: All prefabricated construction shall conform to the inspection requirements of the same material or construction type used for this project.

STRUCTURAL OBSERVATIONS: When required by the provisions of Section 1704.6.1, 1704.6.2, or 1704.6.3, the Owner or the Owner's authorized agent shall employ the EOR to perform structural observations. Structural observations do not include or waive the responsibility for the inspections in IBC Section 110 or the special inspections in Section 1705 or other sections in the code.

The following structural observations are required to be completed by the EOR during construction. The EOR is to be notified when elements listed below are substantially complete and ready for observation. Contact the EOR a minimum of (2) business days prior to covering the work. Substantial completion of Shearwall Nailing & Holdowns

### SOILS AND FOUNDATIONS

REFERENCE STANDARDS: Conform to IBC Chapter 18 "Soils and Foundations."

GEOTECHNICAL REPORT: Recommendations contained in "Foundations for North Covered Patio and Landscaping Improvements - Harris Residence

by Geotech Consultants, Inc., dated 12/21/2022, and were used for design.

DESIGN SOIL VALUES: 2" Ø Pipe Piles (Sched. 40)

Retaining Walls (Assumed) 200 PSF/FT Passive Lateral Pressure Active Lateral Pressure (restrained) 60 PSF/FT

FOUNDATION STEM WALLS: Unless otherwise noted on the drawings, the maximum unbalanced soil condition for all foundation stem walls (difference in elevation between interior and exterior soil grades) shall be 2'-6". Maintain a minimum 8" separation between finish grade and untreated wood

BACKFILLING: Backfill behind retaining and foundation walls shall be of free-draining material placed in maximum loose lifts of 12" or as directed by the Geotechnical Report. Backfill behind walls shall not be placed before the wall is properly supported by the floor slab or temporary bracing. Backfill shall be compacted using hand-operated equipment only. The contractor shall refrain from operating heavy equipment behind retaining and foundation walls within a distance equal to or greater than the height of the wall, unless otherwise approved by the EOR. All topsoil organics and loose surface soil shall be removed from beneath fill supporting concrete slab or paving.

maximum density at optimum moisture content using the Modified Proctor Test. PIN PILES

REFERENCE STANDARDS: Conform to: IBC Sections 1810.3.5.3.4.

SUBMITTALS: Conform to: (1) Design loads, calculations and shop drawings (component design drawings) stamped by EOR (or SSE) licensed in the state of Washington. (2) Placing drawings showing steel strength, diameter, and minimum embedment length.

SIZES: Pile size shall be as noted on the foundation drawings. Test piles are required for this project to verify pile capacities. Pile lengths shall be determined and verified at the site by the Geotechnical Engineer during the test pile procedure.

CAPACITY: Pile capacities shall be as noted on the foundation drawings. Allowable loads shall be verified by load tests in accordance with ASTM Section S 114.5 "quick load test." Pile installation must be observed by the Geotechnical Engineer to verify that the design bearing capacity of the piles has been attained and that construction conforms to the geotechnical engineer's recommendations.

STRUCTURAL STEEL

DESIGN STANDARDS: Structural steel for this project is designed in accordance with the latest edition of the AISC Steel Construction Manual.

REFERENCE STANDARDS: Conform to: (1) ANSI/AISC 360 "Specification for Structural Steel Buildings" - Referred to as "AISC Specification" (2) AWS D1.1 "Structural Welding Code - Steel."

SUBMITTALS: Submit shop drawings in accordance with AISC Specification Sec M1 "Shop and Erection Drawings."

	•	-	
MATERIAL C.			
MATERIALS.			

Bars & Plates	ASTM A36, Fy = 36 ksi	Steel Pipe	ASTM A53, Grade B, Fy = 35 ksi
HSS Structural Tubing	ASTMA500, Grade B, Fy=46ksi	Anchor Bolts & Bolts in Wood	ASTM A307
Anchor Rods (threaded/nutted)	ASTMF1554, Grade 36	Welding Electrodes	E70XX, 70 ksi, low hydrogen, typical
Adhesive Anchors	Per Drawings [Simpson SET-3G]	Concrete Screws	Simpson TITEN HD

WELDING: Conform to AWS D1.1. Welders shall be certified in accordance with AWS and WABO requirements. Use E70 electrodes of type required for materials to be welded.

SHOP PAINTING: Conform to AISC 360, AISC Specification Sec M3, and AISC Code Sec 6.5. Do not paint steel to be embedded in concrete or concealed by the interior building finish. All other interior steel shall be painted with one coat of grey shop primer. All exposed exterior steel shall be painted with an exterior multi-coat system as per the Architect or project specifications or galvanized per section below. Field touch-up painting shall be with primer for exposed interior surfaces and as per the Architect or project specifications for exposed exterior surfaces.

GALVANIZING: Where required, all exposed steel outside the building envelope shall be hot-dipped galvanized. Apply field touch-ups per project specifications.

ERECTION: Conform to AISC Specification Sec M4 "Erection" and AISC Code Sec 7 "Erection." Steel work shall be carried up true and plumb within the limits defined in AISC 303-16 Sec 7.11.

![](_page_10_Picture_79.jpeg)

for cursory review only and will generally not be returned. Deferred submittals include but are not limited to the following: Prefabricated Wood Roof Trusses

Handrails & Guardrails

6 K Allowable

Active Lateral Pressure (unrestrained)	30 PSF/FT
Uniform Seismic	8H

FOUNDATIONS: All foundations shall bear on structural compacted fill or competent native soil per the Geotechnical report or as noted in these documents. Exterior perimeter footings shall bear not less than 18 inches below finish grade, or as required by the Geotechnical Engineer and the Building Official. Interior footings shall bear not less than 12 inches below finish floor.

COMPACTION: Unless otherwise specified by a Geotechnical Engineer, footings shall be placed on compacted material and shall be well-graded granular material with no more than 5% passing a #200 sieve. Fills placed shall be in maximum 8" lifts and all bearing soils shall be compacted to 95%

MATERIALS: Conform to notes for STRUCTURAL STEEL, this sheet.

# WOOD FRAMING

REFERENCE STANDARDS: Conform to: (1) IBC Chapter 23 "WOOD."

(2) NDS and NDS Supplement - "National Design Specification for Wood Construction."

(3) ANSI/TPI 1 "National Design Standard for Metal-Plate-Connected Wood Truss Construction."

DEFERRED SUBMITTALS: Submit product data and proof of ICC-ESR/IAPMO-ER approval for framing members and fasteners that have been designed by others. Submit calculations prepared by the SSE (or Manufacturer's Professional Engineer) in the state of Washington for all members and connections designed by others along with shop drawings. All necessary bridging, blocking, blocking panels and web stiffeners shall be detailed and furnished by the supplier. Temporary and permanent bridging shall be installed in conformance with the manufacturer's specifications. Deflection limits shall be as noted under DESIGN LOADS section. Products included are:

Metal plate connected roof trusses (prefabricated roof trusses): shop drawings shall provide for shapes, bearing points, intersections, hips, and valleys shown on the drawings. The manufacturer shall provide special hip, valley and intersection areas (step down trusses, jack trusses and girder trusses) unless specifically indicated on the plans. Provide all truss-to-truss and truss-to-support connection details and required connection materials. Specify temporary and permanent bracing and connections on the shop drawings. Provide all truss reactions over 1000# on shop drawings.

ALTERNATES: Alternates for specified item may be submitted to the EOR for review. Contractor shall submit a current ICC-ESR/IAPMO-ER report identifying that an alternative component has the same or greater load capacity than the specified item.

IDENTIFICATION: All sawn lumber and pre-manufactured wood products shall be identified by the grade mark or a certificate of inspection issued by the certifying agency.

MATERIALS:

Sawn Lumber: Conform to grading rules of WWPA, WCLIB, or NLGA. Finger jointed studs acceptable at interior non-structural walls only. Member Use Size Species Grade

	SIZE	Species	Glade
tuds & Plates	2x, 3x	HF	No. 2
oists	2x	HF	No. 2
eams	3x, 4x	HF	No. 2
osts	4x, 6x	DF	No. 1
eams	6x	DF	No. 1

Metal Plate Connected Wood Roof Trusses: Reference DEFERRED SUBMITTAL section above. Conform to IBC Sec 2303.4 "Trusses."

Wood Structural Sheathing (Plywood): Wood APA-rated structural sheathing includes: all veneer plywood, oriented strand board, waferboard, particleboard, T1-11 siding, and composites of veneer and wood-based material. Conform to Product Standards PS-1 and PS-2 of the U.S. Dept. of Commerce and the American Plywood Association (APA) Minimum ADA Datin

Minimum APA Rating						
Thickness	Span Rating	Plywood Grade	Exposure			
15/32"	24/16	C-D	1			
23/32" T&G	24 OC	Sturd-I-Floor	1			
(2) 15/32"	24/16	C-D	1			
15/32"	32/16	C-D	1			
	Thickness 15/32" 23/32" T&G (2) 15/32" 15/32"	Minimum A   Thickness Span Rating   15/32" 24/16   23/32" T&G 24 OC   (2) 15/32" 24/16   15/32" 32/16	Minimum APA Rating   Thickness Span Rating Plywood Grade   15/32" 24/16 C-D   23/32" T&G 24 OC Sturd-I-Floor   (2) 15/32" 24/16 C-D   15/32" 24/16 C-D			

Joist Hangers and Connectors: Simpson Strong-Tie Company Inc. as specified in their latest catalogs was used as the basis of design for this project. Alternate connectors by other manufacturers may be substituted provided they have current ICC-ESR/IAPMO-ER approval for equivalent or greater load capacities and are reviewed and approved by the EOR prior to ordering. Connectors shall be installed per the manufacturer's instructions. Where connector straps connect two members, place 1/2 of the nails or bolts in each member. Unless noted otherwise all nails shall be full length common. Nail straps to wood framing as late as possible in the framing process to allow the wood to shrink and the building to settle.

Lag Bolts/Thru-Bolts/Anchor Bolts: Conform to ASTM A307. Provide plate washers under the heads and nuts of all bolts and lag screws bearing on

Nails and Staples: Conform to IBC Sec 2303.6 "Nails and Staples." Unless noted on plans, nail per IBC Table 2304.10.1. Unless noted otherwise all nails shall be COMMON. Nail sizes specified on the drawings are based on the following specifications:

Size	Length	Diameter
8d	2-1/2"	0.131"
10d	3"	0.148"
16d	3-1/2"	0.162"
16d Sinker	3-1/4'	0.148"

Wood Holdowns: Holdowns specified are as manufactured by Simpson Strong-Tie Company Inc. Additional framing members shall be provided per the manufacturer's requirements. Acceptable equivalent product substitutions are available from other manufacturers with EOR approval. Do not countersink holdown bolts.

Engineered Wood Products (EWP): The following materials are based on lumber manufactured by TrusJoist by Weyerhaeuser. Trus-Joist by

- Weyerhaeuser was used as the basis of design for this project. Alternate products by other manufacturers may be substituted provided they have current ICC-ESR/IAPMO-ER approval for equivalent or greater load and stiffness properties and are reviewed and approved by the EOR.
- a) Laminated Veneer Lumber (LVL): Conform to ICC-ES Report No. ESR-1387, CCMC Report No. 12627-R, or NES Report No. NER-481. b) Parallel Strand Lumber (PSL): Conform to ICC-ES Report No. ESR-1387, CCMC Report No. 11161-R, or NES Report No. NER-481. Use 2.0E
- unless noted otherwise. c) Laminated Strand Lumber (LSL): Conform to ICC-ES Report No. ESR-1387, CCMC Report No. 12627-R, or NES Report No. NER-481.
- e) I-JOISTS: Conform to ICC-ES Report No. ER-1153. Products shall be tested and evaluated in accordance with ASTM D5055. The manufacturer shall design the joists for the spans and conditions shown on the plans. Joists shall have wood chords and solid wood webs.

NAILING REQUIREMENTS: Provide minimum nailing in accordance with IBC Table 2304.10.1 "Fastening Schedule" except as noted on the drawings. Nailing for roof/floor diaphragms/shear walls shall be per drawings. Nails shall be driven flush and shall not fracture the surface of sheathing.

STANDARD LIGHT-FRAME CONSTRUCTION: Unless noted on the drawings, construction shall conform to IBC Sec 2308 "Conventional Light-Frame Construction" and IBC Sec 2304 "General Construction Requirements."

- (1) Wall Framing (Unless noted otherwise on plans and details) All interior walls shall be 2x4 @ 16"OC and all exterior walls shall be 2x6 @ 16"OC. Provide (2) bundled studs min at wall ends and each side of all openings. All solid sawn lumber beams and headers shall be supported by a minimum of (1) trim and (1) king stud and all glulam or engineered wood beams and headers by (2) trim and (2) king studs. Provide minimum (2) 2x8 headers at all interior and exterior wall openings. Stitch-nail bundled studs with (2) 10d @ 12"OC. Provide solid blocking thru floors to supports below for bearing walls and posts. Attach bottom plates of stud walls to wood framing below with 16d @ 12"OC or to concrete with 5/8"-dia. anchor bolts x 7" embedment at 48"OC. Refer to shear wall schedule for specific sheathing, stud, and nailing requirements at shear walls. Provide gypsum sheathing on interior surfaces and plywood sheathing on exterior surfaces.
- (2) Roof/Floor Framing: (Unless noted otherwise on plans and details) Provide double joists/rafters under all parallel bearing partitions and solid blocking at all bearing points. Provide double joists around all roof/floor openings. Multi-joists/rafters shall be stitch-nailed together with (2)10d @ 12"OC. Provide roof sheathing edge clips centered between framing at unblocked plywood edges. All floor sheathing shall have tongue and groove joints or be supported by solid blocking. Allow 1/8" spacing at all panel edges and ends of roof/floor sheathing. Roof/floor sheathing shall be laid face grain perpendicular to framing members.
- (3) Blocking: (Unless noted otherwise on plans and details) All blocking shall be full-height 2x at solid sawn framing systems or a full-height I-joist or

MOISTURE CONTENT: Wood material used for this project shall have maximum moisture content of 19% except for the pressure-treated wood sill plate.

PRESERVATIVE TREATMENT: Wood materials are required to be "treated wood" under certain conditions in accordance with IBC Sec 2304.12 "Protection against decay and termites." Conform to the appropriate standards of the American Wood-Preservers Association (AWPA) for sawn lumber, glued laminated timber, round poles, wood piles, and marine piles. Follow American Lumber Standards Committee (ALSC) quality assurance procedures. Products shall bear the appropriate mark. Coat all ends of cut pressure treated framing with treatment complying with AWPA U1.

METAL CONNECTORS/PT WOOD: All metal hardware and fasteners in contact with pressure treated lumber shall be stainless steel Type 316L. At the Owner's risk and discretion, hot-dipped galvanized metal hardware and fasteners may be investigated for use in lieu of stainless steel provided that the finish has a minimum zinc content of at least 1.85 oz./SF and its use is coordinated by the Contractor and Wood Supplier for the expected environment and moisture exposure for appropriate use based on the method of preservative treatment of the wood.

## RENOVATION

DEMOLITION: Contractor shall verify all existing conditions before commencing any demolition. Shoring shall be installed to support existing construction as required and, in a manner, suitable to the work sequences. 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. Demolition debris shall not be allowed to damage or overload the existing structure. Limit construction loading (including demolition debris) on existing floor systems to 40 psf.

ROT: Contractor shall check for rot at all exterior walls, existing toilet room floors and walls, areas showing water stains, and all wood members in basement and crawl spaces. All rot shall be removed and damaged members shall be replaced or repaired as directed by the EOR or Architect.

	DIBBLE ENGINEERS INC	www.dibbleengineers.com 1029 Market Street, Kirkland, WA 98033	425.828.4200
SEAL:	ROBB A. ROBB F. WA OF WA 3744 907-055 10NAI	DIBOLINA STITUTE 000 5 ELECTION 1/28/	23
HARRIS RESIDENCE	REMODEL	1640 72ND AVE SE MERCER ISLAND, WA 98040	
PROJECT #: DRAWN BY: DESIGNED F DATE: 09.14.2023 11.28.2023	23 TL 3Y: R/ DESCRIP PROGRE PERMIT	9-183 .T AD TION SS	
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## STRUCTURAL ABBREVIATIONS

ANCHOR BOLT ADDITIONAL ALTERNATE ARCHITECT(URAL) ALL-THREADED ROD BOTTOM OF BOUNDARY NAILING BUILDING BLOCKING BOTTOM BEARING BETWEEN CENTERLINE CONSTRUCTION or CONTROL JOINT CLEAR(ANCE) CONCRETE CONNECTION CONSTRUCTION CONTINUOUS CENTERED COUNTERSINK DOUBLE(R) DETAIL DOUGLAS FIR DIAGONAL DOWN DEPTH DOWEL DRAWING EACH EACH FACE EDGE NAILING ELEVATION EMBEDMENT ENGINEER EQUAL EACH SIDE EACH WAY EXISTING EXPANSION EXTERIOR FACE OF FLOOR FOUNDATION FIRE RETARDANT TREATED FORCED TRANSFER AROUND OPENING FOOTING GAUGE GALVANIZED GENERAL GLUE LAMINATED BEAM GRADE GIRDER TRUSS GYPSUM WALL BOARD HOLDOWN HEADER HEM-FIR HANGER HORIZONTAL HOLLOW STRUCTURAL SECTION HEIGHT INTERIOR

DEVELOPMENT LENGTH

ADD'L

ALT

ARCH

ATR

R/

BLDG

BLKG

BOTT

BRG

BTWN

CLR

CONC

CONN

CONST

CONT

CTRD

CTSK

DBL

DIAG

DWL

DWG

EMBEL

ENGR

FW

(E)

FLR

FRT

FNDN

FTAO

FTG

GALV

GEN

GLB

GWB

HDR

HGR

HORIZ

HSS

INT

HD

GA

	LLH	LONG LEG HORIZONTAL
	LLV	LONG LEG VERTICAL
	LUNGII	SPLICE LENGTH
	LSL	LAMINATED STRAND LUMBER
	LVL	LAMINATED VENEER LUMBER
	MAT'L	MATERIAL
	MAX	MAXIMUM
	MECH	
	MER	MANUFACTORER
	MISC	MISCELLANEOUS
	(N)	NEW
	ŇIĆ	NOT IN CONTRACT
	NOM	NOMINAL
	NIS	NUT TO SCALE
	OPNG	OPENING
	OPP	OPPOSITE
	OSB	ORIENTED STRAND BOARD
	OWWJ	OPEN WEB WOOD JOIST
	۲	PLATE
	PC	PRECASI
	PERP	PERPENDICULAR
	PLY	PLYWOOD
	PRE-MFR	PRE-MANUFACTURED
	PSL	PARALLEL STRAND LUMBER
	P-1	
	PI	PRESERVATIVE/PRESSURE-TREATEL
	REINE	REINFORCING
	REQ'D	REQUIRED
	RET	RETAINING
	SCHED	SCHEDULE
	SECT	SECTION
	SHIG	Sheathing Simil Ar
	SMS	SHEET METAL SCREW
	SOG	SLAB-ON-GRADE
	SPEC	SPECIFICATION
	SQ	SQUARE
	SS STAGG	STAINLESS STEEL STACCERED
	STD	STANDARD
	STIFF	STIFFENER
	STRUCT	STRUCTURAL
	SUPPL	SUPPLEMENT
	SW SYM	SHEAR WALL SYMMETRICAI
	T/	
	T&B	TOP & BOTTOM
	T&G	TONGUE & GROOVE
	THK, THK'N	THICK, THICKENED
	TRANSV	I HRUUGH TRANSVERSE
	I KANSV TYP	IRANSVERSE TYPICAI
	UNO	UNLESS NOTED OTHERWISE
	VERT	VERTICAL
	VIF	VERIFY IN FIELD
	WHS	WELDED HEADED STUD
	WIS	WELDED IHREADED SIUD
l	VVVF	WELDED WIRE FABRIC

![](_page_11_Figure_0.jpeg)

0' 2' 4'

# PLAN NOTES

- 1. REFERENCE S1.0 FOR STRUCTURAL GENERAL NOTES & ABBREVIATIONS.
- 2. DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID/STEEL. CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS ARE TO BE CENTERED ON FOOTING OR WALL PIER, UNO.
- 3. MOISTURE PROOF ALL WALLS BELOW GRADE PER ARCHITECT.
- 4. ALL RIMS SHALL BE LSL  $1\frac{3}{4} \times$  FULL-DEPTH TYP, UNO ON PLAN.
- 5. PROVIDE PANEL EDGE NAILING AT ALL HOLDOWNS, POSTS/BUNDLED STUDS.
- 6. THE BOTTOM OF ALL FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE AND BEAR UPON FIRM, UNDISTURBED SOIL OR ENGINEERED COMPACTED BACK-FILL.
- 7. FULLY BLOCK FLOOR CAVITY AT ALL POINT LOADS. POINT LOADS SHALL BE SUPPORTED CONTINUOUSLY THROUGH FLOORS TO THE FOUNDATION.
- 8. ALL WOOD IN CONTACT WITH WEATHER-EXPOSED CONCRETE OR WITHIN 8" OF FINISHED GRADE SHALL BE PRESSURE-TREATED.
- 9. USE HOT DIPPED GALVANIZED FASTENERS AND EITHER HOT DIPPED GALVANIZED OR ZMAX COATED HANGERS AT CONNECTORS TO PRESSURE TREATED LUMBER. 10. ALL DUCTS, CHASES AND PIPE/CONDUIT OPENINGS SHALL BE PER ARCHITECTURAL, MECHANICAL, PLUMBING,
- ELECTRICAL AND SPRINKLER DRAWINGS. CONTACT EOR FOR APPROVAL OF ANY OPENING NOT SHOWN ON THE STRUCTURAL DRAWINGS. FOR STAIR DETAILS AND GUARDRAILS, REFERENCE ARCHITECTURAL DRAWINGS.
- 11. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING. 12. ALL BEAMS ARE FLUSH WITH JOISTS UNO AS "DROP" INDICATING A DROPPED BEAM.
- 13. PROVIDE FULL HEIGHT SOLID BLOCKING OR DOUBLE JOISTS OVER SHEAR WALLS AND BEARING WALLS AT REPETITIVE FRAMING MEMBERS. AT SHEAR WALLS AND BEARING WALLS PARALLEL TO FRAMING, ALIGN (1) JOIST/BEAM OVER WALL (ADDITIONAL JOISTS MAY BE REQUIRED).
- 14. ISOLATED POST BASE SHALL BE A SIMPSON 'ABU' TO MATCH POST SIZE, UNO PER PLAN.
- 15. ALL WOOD EXPOSED TO WEATHER OR IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESSURE-TREATED PER STRUCTURAL GENERAL NOTES.
- 16. PROVIDE DOUBLE JOISTS AROUND ALL ROOF OPENINGS GREATER THAN 24"OC ONE SIDE.
- 18. PROVIDE SW-6 SHEATHING/NAILING ON EXTERIOR BUILDING, TYPICAL.
- 19. MATCH BUNDLED STUDS FROM ABOVE & EXTEND TO FOUNDATION.
- 20. HANGERS: ALL 2x HANGERS TO BE SIMPSON LUS SERIES. ALL I-JOIST HANGERS TO BE IUS SERIES. 21. JOIST BRIDGING PER JOIST MANUFACTURER, TYP.
- 22. ALL BEAMS ARE FLUSH WITH JOISTS UNO AS "DROP" INDICATING A DROPPED BEAM.
- 23. PROVIDE FULL HEIGHT SOLID BLOCKING OR DOUBLE JOISTS OVER SHEAR WALLS AND BEARING WALLS AT REPETITIVE FRAMING MEMBERS. AT SHEAR WALLS AND BEARING WALLS PARALLEL TO FRAMING, ALIGN (1) JOIST OVER WALL (ADDITIONAL JOISTS MAY BE REQUIRED).
- 24. PROVIDE SW-6 SHEATHING/NAILING ON EXTERIOR BUILDING, TYPICAL.
- 25. PROVIDE DOUBLE JOISTS AROUND ALL ROOF OPENINGS GREATER THAN 24"OC ONE SIDE.
- 26. ALL WOOD EXPOSED TO WEATHER SHALL BE PRESSURE-TREATED PER STRUCTURAL GENERAL NOTES.
- 27. HORIZONTAL STRAP TIES INDICATED ON THE SHEAR WALL PLANS ARE TO BE CENTERED OVER WALL TOP PLATE AND/OR HEADER, BLOCKING OR BEAM. CONTRACTOR SHALL COORDINATE ADDTIONAL WALL FURRING REQUIRED AT BEAMS AND POSTS WITH CONNECTIONS OR HOLDOWNS THAT EXCEED THE NOMINAL WALL THICKNESS.
- 28. TYPICAL TOP PLATE SPLICE: PROVIDE A MINIMUM 48" LAP W/ 16d @ 6"OC STAGGERED. REFERENCE DETAIL 9/S3.2.
- 29. TRUSS BRACING PER TRUSS MANUFACTURER, TYP.
- 30. ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING CRITERIA:
  - REFER TO THE STRUCTURAL GENERAL NOTES FOR STANDARD DEAD AND LIVE LOADS AND SUBMITTAL INFORMATION.
  - TRUSS LAYOUT SHOWN IS APPROXIMATE. TRUSS SUPPLIER IS RESPONSIBLE FOR FINAL TRUSS • LAYOUT AND CONFIGURATION. NOTIFY ENGINEER OF REVISIONS TO PLAN.
  - SHADED REGION INDICATES APPROXIMATE AREA OF OVER FRAMING. TRUSS MANUFACTURER IS RESPONSIBLE FOR DESIGNING THE OVER FRAMING REQUIRED. TRUSSES SHALL BE DESIGNED TO SUPPORT OVER FRAMING IN ADDITION TO THE STANDARD DESIGN LOADS.
  - ALL GIRDER TRUSSES SHALL BE SUPPORTED BY A MINIMUM OF (3) STUDS. TRUSS MANUFACTURER ٠ TO SUBMIT TO ENGINEER ALL LOCATIONS WHERE REACTIONS FROM GIRDER TRUSSES EXCEED 6,000 LBS. FOR REVIEW OF COLUMN SUPPORT CAPACITY.
  - PROVIDE SIMPSON H2.5A HURRICANE TIES AT ALL ROOF TRUSSES AND ROOF JOISTS, TYP. • ALL MULTIPLE STUDS UNDER HIP MASTER AND GIRDER TRUSS ENDS TO CONTINUE TO FOUNDATION.

# PILE PLAN NOTES

1. VERIFY ALL GRID DIMENSIONS WITH ARCHITECTURAL DRAWINGS. ALL DIMENSIONS ARE TO CENTERLINE OF PILE.

INDICATES 2"Ø PIPE PILE (6K ALLOWABLE CAPACITY).

# SHEAR WALL KEY PLAN NOTES

- 1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
- INDICATES SHEAR WALL TYPE PER 12/S3.1. (MINIMUM LENGTH WHERE NOTED)
- INDICATES TYPICAL HOLDOWN PER 10/S3.1 OR TIEDOWN PER 6/S3.1.
- 4. CONTRACTOR TO COORDINATE HOLDOWN ANCHOR BOLTS WITH STEEL POST BASE PLATES. 5. PROVIDE FULL HEIGHT SOLID BLOCKING OR DOUBLE JOISTS OVER SHEARWALLS AND BEARING WALLS AT REPETITIVE FRAMING MEMBERS. AT SHEARWALLS AND BEARING WALLS PARALLEL TO FRAMING, ALIGN (1) JOIST OVER WALL (ADDITIONAL JOISTS MAY BE REQUIRED).

![](_page_11_Figure_44.jpeg)

![](_page_11_Figure_45.jpeg)

![](_page_11_Figure_46.jpeg)

![](_page_12_Figure_0.jpeg)

L	LAP SPLICE 8							
BAR	DEVELOPME LENGTH, Lo							
SIZE	STANDARD							
f'c = 3000 ps	i / 3500 psi							
#3	17							
#4	22							
#5	28							

NOTES: 1. VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db

AND CLEAR COVER > db. 2. DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld. 3. TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON

DOCUMENTS AS "TOP BAR".

4. UNO, ALL LAPS SHALL BE MINIMUM CLASS B. 5. ALL TABULATED VALUES ARE IN INCHES.

6. Ldh = HOOKED BAR DEVELOPMENT LENGTH.

# **TYPICAL LAP SPLICE &** DEVELOPMENT LENGTH SCHEDULE SCALE: N.T.S.

![](_page_12_Figure_8.jpeg)

SCALE: NTS

**TYPICAL CONCRETE MEMBER INTERSECTIONS** 

![](_page_12_Figure_9.jpeg)

3001;

SCALE: NTS

![](_page_12_Figure_11.jpeg)

DOUBLE SIDED SHEAR WALL CORNER PLAN

![](_page_12_Figure_16.jpeg)

![](_page_12_Figure_17.jpeg)

![](_page_12_Figure_18.jpeg)

![](_page_12_Figure_19.jpeg)

![](_page_12_Figure_20.jpeg)

![](_page_12_Figure_21.jpeg)

-(E) CONC STEM WALL

- RETROFIT UNDERPINNING

PILE BRACKET BY OTHERS

-(E) CONC FTG

— RETROFIT PILE PER PLAN

 $\frac{\text{NOTE:}}{\text{db}} = \text{BAR DIAMETER, } \text{D} = \text{BEND DIAMETER}$ 

SCALE: NTS

TYPICAL REBAR BEND SCHEDULE

![](_page_12_Figure_23.jpeg)

![](_page_13_Figure_0.jpeg)

# PLAN VIEW -SHEAR WALL HOLDOWNS AT CORNER SCALE: NTS

1269x

TIE-DOWN STRAP SCHEDULE								
		ALTEF	RNATE					
MARK STRAP		MINIMUM END LENGTH	NAILING REQUIRED AT EACH END LENGTH	NAIL SPACING	NAIL ALLOWABLE UPLIFT STR ACING (LBS)		CLEAR SPAN	
А	CMST14	9"	(8) 16d	13⁄4"	1569	CS16	13"	
В	CMST14	14"	(13) 16d	13/4"	2550	MSTC40	16"	
D	CMST14	28"	(29) 16d	1 <sup>3</sup> ⁄4"	5690	MSTC66	16"	
E	CMST14	30"	(33) 16d	13⁄4"	6475	N/A	N/A	
F	CMST12	38"	(42) 16d	13⁄4"	9215	N/A	N/A	

<u>NOTES:</u>

- 1. FOLLOW ALL SIMPSON STRONG-TIE GUIDELINES NECESSARY TO ACHIEVE FULL ICC
- DESIGN VALUES. 2. STRAP MAY BE INSTALLED OVER OR
- UNDERNEATH PLYWOOD.
- 3. EDGE NAIL PLYWOOD TO STRAPPED POST. 4. WHERE STRAPS OCCUR OVER FLOOR BEAM, SEE 12/S3.4.
- 5. ADDED BLOCKING MAY BE ELIMINATED WHERE FLOOR FRAMING IS DIRECTLY BETWEEN POSTS.
- ON PLAN.
- 7. BASED ON SIMPSON CATALOG 2021-2023. FLR-TO-FLR HOLDOWN STRAP SCHEDULE

SCALE: NTS

HOLDOWN SCHEDULE (HF-SEISMIC)									
MARK		ALLOWABLE UPLIFT (LBS)		MIN END	STUD	CONCRETE	MIN STRAP		
		MID WALL	CORNER	END WALL		FASTENERS		END LENGHT	
M1	MST60	2800		(3) 2x	(21) 0.162"øx2½" NAILS	(3) <sup>1</sup> / <sub>2</sub> "ø <sub>x</sub> 4" Titen HD	20"		
M2	MST60	3675		(3) 2x	(25) 0.162"øx2½" NAILS	(4) <sup>1</sup> / <sub>2</sub> "ø <sub>X</sub> 4" Titen HD	24"		
11	HDU11-SDS2.5	9610		(4) 2x (ALT: 6x6)	(30) <sup>1</sup> / <sub>4</sub> "øx2 <sup>1</sup> / <sub>2</sub> " SDS	1"ø ATR [4]	N/A		
14	HDU14-SDS2.5	14445		6x6	$(36)^{1/4}$ "øx2 $^{1/2}$ " SDS	1"ø ATR [4]	N/A		

<u>NOTES:</u>

- 1. HOLDOWNS SPECIFIED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE CO. INC.; ACCEPTABLE EQUIVALENT PRODUCT SUBSTITUTIONS ARE AVAILABLE FROM OTHER MANUFACTURERS WITH EOR APPROVAL. FOLLOW ALL MANUFACTURER
- GUIDELINES NECESSARY TO ACHIEVE FULL ICC DESIGN VALUES. 2. REFERENCE PLANS FOR ADDITIONAL STUD REQUIREMENTS WHERE OCCURS.
- 3. HOLDOWN SHALL BE INSTALLED TIGHT TO STUDS WITHOUT FILLERS OR NOTCHING. DO NOT BEND ANCHORS.
- 6.  $M_{\#}$  indicates holdown strap on plan, typ.

HOLDOWN SCHEDULE (8" MIN STEM WALL)

SCALE: NTS

![](_page_13_Figure_23.jpeg)

# PLAN VIEW -

![](_page_13_Figure_25.jpeg)

![](_page_13_Figure_27.jpeg)

4. INSTALL HD ANCHOR INTO CORE DRILLED HOLE W/ PLATE WASHER & HEAVY HEX NUT PER 11/S3.0. 16" EMBED MIN.

	FOR HEM-FIR FRAMING W/ 10d COMMON NAILS (2018 IBC) & SIMPSON CATALOG 2021-2023											
	SW TYPE	WALL SHEATHING APA RATED	EDGE NAILING	BOTTOM PLATE ATTACHMENT	FRAMING CLIP TO WALL BELOW	MINIMUM RIM BOARD THICKNESS	FRAMING AT PANEL EDGES	BLOCKING AT ALL PANEL EDGES	ANCHOR BOLT TO CONCRETE FOUNDATION	SILL PLATE AT FOUNDATION	ALLOWABLE CAPACIT	SHEAR WALL Y (PLF)
	(3)	(10,11,12)	(4,5)		(6)		(1,2,7)		(8,9)		SEISMIC	WIND
	0111 0	157 "	101 @ 6"00		LTP5 @ 14"OC	1 <sup>1</sup> /."	0	2x 2x -	5∕8"ø @ 40"OC	P.T. 2x	288	404
0	2W-0	732		IDA SINKER @ 4 UC		1 / 4	ΖX		5∕8"ø @ 50"OC	P.T. 3x		404
SIDEI	0)1/ 4	SW−4 <sup>15</sup> ⁄ <sub>32</sub> " 10d @ 4	4.0 + .0 4"0.0	(2) ROWS	LTP5 @ 8"0C	1 <sup>3</sup> / <sub>4</sub> " 23	0	2x 2x 2x 2x 5%"ø @ 26 5%"ø @ 34	5∕8"ø @ 26"OC	P.T. 2x	427	599
NGLE-	5W-4		10d @ 4 0C	16d SINKER @ 6"OC, STAGGERED			X		5∕8"ø @ 34"OC	P.T. 3x		
SII	SW-3 15/32" 10d @ 3"0 STAGGEREL	10d @ 3"0C (2) ROWS	13/ "	13/ "	7		5∕8"ø @ 20"OC	P.T. 2x	E E O	701		
		732	STAGGERED	STAGGERED			174 JX	FLAT 2x	5∕8"ø @ 26"OC	P.T. 3x	556	/81
0	2SW-4	<sup>15</sup> / <sub>32</sub> " Both sides	10d @ 4"0C (15)	(3) ROWS 16d SINKER @ 4"OC, STAGGERED	LTP5 @ 8"OC & A35 @ 8"OC	3 <sup>1</sup> / <sub>2</sub> "	Зx	Зx	5∕8"ø @ 16"OC	Р.Т. Зх	855	1199
ouble sidei	2SW-3	<sup>15</sup> / <sub>32</sub> " Both Sides	10d @ 3"OC (15)	(3) ROWS 16d SINKER @ 4"OC, STAGGERED	LTP5 © 8"OC & A35 © 8"OC	3 <sup>1</sup> / <sub>2</sub> "	Зx	Зx	5∕8"ø @ 12"OC	P.T. 3x	1116	1468
ă	2SW-2 (14)	<sup>15</sup> / <sub>32</sub> " Both sides	10d @ 2"0C (15)	(3) ROWS 16d SINKER @ 4"OC, STAGGERED	LTP5 @ 8"OC & A35 @ 8"OC	3 <sup>1</sup> / <sub>2</sub> "	Зx	Зx	5∕8"ø @ 12"OC	P.T. 3x	1432	1468

<u>NOTES:</u>

- 1. ALL NAILS ARE COMMON, UNO. REFERENCE GENERAL STRUCTURAL NOTES FOR NAIL DIAMETER AND LENGTH.
- 2. REFERENCE SHEAR WALL KEY DETAIL FOR DESCRIPTION OF TERMS. 3. PROVIDE SHEAR WALL SHEATHING AND NAILING FOR ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF SHEAR
- WALLS ARE TYPICALLY AT WINDOWS, DOORWAYS OR AS SHOWN ON PLAN. 4. EDGE NAILING IS REQUIRED AT ALL HOLDOWN POSTS. EDGE NAILING IS REQUIRED TO EACH STUD USED IN BUILT-UP HOLDOWN
- POSTS. REFERENCE HOLDOWN SCHEDULE & DETAILS FOR ADDITIONAL INFORMATION. 5. INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS UNO IN SCHEDULE. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH FIELD
- NAILING AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND FIELD NAILING AT 6"OC WHERE STUDS ARE SPACED AT 24"OC. 6. SIMPSON STRONG-TIE "A35" MAY BE USED IN LIEU OF "LTP5." "LTP5" CLIPS SHALL BE ORIENTED LENGTHWISE (HORIZONTAL) AT PLATE TO RIM. USE  $0.131^{\circ}$  wails where clips are attached directly to framing. Use  $0.131^{\circ}$  where clips
- ARE INSTALLED OVER SHEATHING. 7. (2) 2x STUDS NAILED TOGETHER MAY BE USED IN PLACE OF SINGLE 3x STUD. DOUBLE 2x STUDS SHALL BE SECURED TOGETHER WITH FASTENERS OF THE SAME DIAMETER AND SPACING AS THE BOTTOM PLATE ATTACHMENT PER SCHEDULE.
- 8. ANCHOR BOLTS SHALL BE PROVIDED WITH HOT-DIPPED GALVANIZED STEEL PLATE WASHERS PER 2/S3.1. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE. PROVIDE AN ANCHOR BOLT AT EACH END OF EACH PLATE AND SHALL BE AT LEAST 7 TIMES THE ANCHOR BOLT DIAMETER FROM THE ENDS OF THE PLATE, BUT NOT MORE THAT 1/2 THE TABULATED ANCHOR BOLT SPACING OR 12". WHICHEVER IS LESS. SEE ANCHOR BOLT DETAIL FOR PLATE WASHER REQUIREMENTS. [ALT: 5/8"Øx8" TITEN HD ANCHOR SCREWS MAY BE USED IN LIEU OF ANCHOR BOLTS AT EXISTING CONCRETE, WITH PLATE WASHER & SPACING REQUIREMENTS PER SCHEDULE.]
- 9. PROVIDE HOT-DIPPED GALVANIZED NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) AT ALL PRESSURE TREATED LUMBER. REFERENCE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
- 10. PANELS MAY BE INSTALLED HORIZONTALLY IF STUDS ARE SPACED AT 16"OC MAX. 11. THE TOP EDGE OF THE WOOD STRUCTURAL PANEL SHALL BE ATTACHED TO THE UPPER TOP PLATE WITH EDGE NAILING. ROOF OR UPPER LEVEL UPLIFT CONNECTORS SHALL BE ON THE SAME SIDE OF THE WALL AS THE SHEATHING.
- 12. THE BOTTOM EDGE OF THE WOOD STRUCTURAL PANEL SHALL EXTEND TO AND BE ATTACHED TO THE BOTTOM OR SILL PLATE WITH EDGE NAILING.
- 13. REFERENCE DETAIL BELOW FOR STAGGERED NAIL AND SCREW SPACING AT RIM BOARDS. 14. WALL TYPE ACCEPTABLE WITH TRUSJOIST AND BOISE CASCADE RIM JOIST AND BLOCKING.
- 15. WHERE SHEATHING IS APPLIED ON BOTH SIDES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6"OC ON EITHER SIDE, THE WIDTH OF THE NAILED FACE OF THE FRAMING MEMBER SHALL BE 3x OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED. ALTERNATIVELY, PANELS SHALL BE STAGGERED SO THAT EDGE JOINTS ON OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUD.

![](_page_13_Figure_45.jpeg)

# WOOD-FRAMED SHEAR WALL SCHEDULE

SCALE: NONE

10

1615H

![](_page_13_Figure_50.jpeg)

![](_page_13_Figure_51.jpeg)

![](_page_14_Figure_0.jpeg)

# **TYPICAL WALL FRAMING DETAILS & NOTES**

![](_page_14_Figure_2.jpeg)

NOTES:

![](_page_14_Figure_3.jpeg)

![](_page_14_Figure_4.jpeg)

- STANDARD INDUSTRY STANDARDS.

# **TYPICAL INTERIOR** NON-BEARING WALL TOP PLATE ANCHORAGE SCALE: NTS

![](_page_14_Figure_8.jpeg)

![](_page_14_Figure_12.jpeg)

SCALE: NTS

![](_page_14_Figure_15.jpeg)

![](_page_14_Figure_16.jpeg)

![](_page_14_Figure_17.jpeg)

EXTERIOR/BEARING/SHEAR WALL STUDS				EXTERIOR/BEARING/			
STUD SIZE	MAX DEPTH OF EDGE CUT OR NOTCH	MIN STUD DEPTH REMAINING		STUD SIZE	MAX DIAMETER OF HOLE		
2x4	7⁄8"	25/8"		2x4	13/8"	ľ,	
2x6	1 <sup>3</sup> / <sub>8</sub> "	41/8"		2x6	21/8"	Ę	

EXTERIOR/BEARING/SHEAR WALL STUDS							
STUD SIZE	MAX DIAMETER OF HOLE	MIN DEPTH REMAINING AFTER BORING					
2x4	1 <sup>3</sup> ⁄8"	5/8" EA SIDE OF HOLE					
2x6	21/8"	5/8" EA SIDE OF HOLE					

NON-BEARING WALL STUDS				NON-BEARING WALL STUDS			
STUD SIZE	MAX DEPTH OF EDGE CUT OR NOTCH	MIN STUD DEPTH REMAINING	ST SI	UD ZE	MAX DIAMETER OF HOLE	MIN DEPTH REMAINING AFTER BORING	(
2x4	1 <sup>3</sup> / <sub>8</sub> "	21/8"	2	x4	2"	$\frac{5}{8}$ " ea side of hole	
2x6	21/8"	3 <sup>3</sup> /8"	2	x6	31/4"	$\frac{5}{8}$ " ea side of hole	

![](_page_15_Figure_0.jpeg)

![](_page_16_Figure_0.jpeg)

![](_page_16_Figure_5.jpeg)

![](_page_16_Figure_6.jpeg)

![](_page_16_Figure_9.jpeg)