PROPERTY OWNER

SAURABH KHANDELWAL & VEENA SHANKARAN 8460 SE 83RD ST MERCER ISLAND WA 98040

ARCHITECT

MARLO BROWN ARCHITECTS LLC 509 26TH AVE S SEATTLE WA 98144 CONTACT: MARLO BROWN INFO@MARLOBROWN.COM C. 425.577.1824

TAX LOT NUMBER

362570-0170

LEGAL DESCRIPTION

ISLAND POINT # 3 TGW UND INT IN TRACT B AND AN UND INT IN COMMUNITY TRACT PLAT BLOCK: PLAT LOT: 17

SCOPE OF WORK

REMODEL TO EXISTING SINGLE FAMILY RESIDENCE & ADDITION OF A NEW BEDROOM & OUTDOOR DECK ABOVE EXISTING OFFICE

BUILDING CODES

2018 INTERNATIONAL RESIDENTIAL CODE, 2018 INTERNATIONAL BUILDING CODE, 2018 INTERNATIONAL EXISTING BUILDING CODE, WA STATE ENERGY CODE, 2018 UNIFORM PLUMBING CODE, 2018 INTERNATIONAL MECHANICAL CODE, 2018 INTERNATIONAL FUEL GAS CODE, 2018 INTERNATIONAL FIRE CODE, 2018 MERCER ISLAND CITY CODES & AMENDMENTS.

ZONING RESTRICTIONS

ZONE	R-15
LOT AREA	13,312 SF
NET LOT AREA	12,422 SF
NUMBER OF EXISTING DWELLINGS	1
MAX LOT COVERAGE ALLOWED	
40%	5,324.8 SF
EXTG LOT COVERAGE HOUSE, GARAGE, EAVES, & GUTTERS	3,911 SF
EXTG LOT COVERAGE DRIVEWAY	568 SF
EXTG TOTAL LOT COVERAGE	4,479 SF
REMAINING AVAILABLE	845.8 SF
MAX HARDSCAPE ALLOWED	
9%	1,198.8 SF
EXTG REAR YARD HARDSCAPE TO BE REMOVED	- 859 SF
EXTG FRONT YARD HARDSCAPE	90 SF
EXTG TOTAL HARDSCAPE REMAINING	90 SF
AREA BORROWED FROM HARDSCAPE	845.8
REMAINING AVAILABLE	1,953.8 SF

SETBACKS FRONT YARD = 20 FT

REAR YARD = 25 FT

VARIABLE SIDE YARD CALCULATION REQ. LARGEST CIRCLE = 106' DIAMETER x 17% = 18.02 TOTAL SF REQ. FOR SIDE YARD 33% of 18.02 = 5.95 FT

SIDE YARD 1 = 5.95 FT SIDE YARD 2 = 6.04 FT SIDE YARD 3 = 6.04 FT

GARAGE ROOF NOT TALLER THAN 15 & 18 FT.

NON CONFORMING EAVES ON NORTH SIDE YARD SETBACK & REAR YARD SETBACK: THE PROPOSED STRUCTURAL WORK WILL NOT EXCEED ALTERATION TO 40% OR MORE OF EXISTING EXTERIOR WALLS. THE NON-CONFORMING AREA WILL NOT BE ENLARGED IN ANY WAY INCLUDING HEIGHT.

EXISTING LINEAR FEET OF ALL EXTERIOR WALLS = 310.27 FEET TOTAL LINEAR FEET TO BE ALTERED = 45.44 FEET 40% OF 310.27 FT = 124.108 FT TOTAL ALTERATION WILL THEREFORE NOT EXCEED ALLOWED.

GROSS FLOOR AREA

40 %	5, 324.8 SF
EXTG MAIN FLOOR HOUSE, GARAGE, MAIN FLOOR STAIR	2,933 SF
EXTG SECOND FLOOR	1,671 SF
EXTG TOTAL GROSS FLOOR AREA	4,604 SF
PROPOSED ADDITION	237 SF
PROPOSED GROSS FLOOR AREA NEW + EXISTING	4,841 SF

HEIGHT LIMIT

FORMULA: AVERAGE BUILDING ELEVATION = (Weighted Sum of the Mid-point Elevations) ÷ (Total Length of Wall Segments)

30 FT

 $(A \times a)$ through $(X \times x)$ added together = 84,774.515 a through x segments = 310.27 linear feet

84,774.515 Weighted Sum of the Mid-point Elevation / 310.27 ft = 273.22 AVERAGE GRADE

ECA

SEISMIC GEOLOGICAL HAZARD AREA KZT 1.9 INFEASIBLE FOR INFILTRATION WIND DESIGN EXPOSURE CATEGORY C

EASEMENTS

10 FT UTILITY EASEMENT CENTERED ON WEST PROPERTY LINE **5 FT UTILITY EASEMENT ALONG ROAD FRONTAGE**

FIRE CODE

CONSTRUCTION TYPE: VB ACCESS SLOPE DOES NOT EXCEED 10% FIRE ACCESS ROAD DOES NOT EXCEED 150 FT TURN AROUND: NONE PROVIDED BUT ACCESS IS WITHIN 150 FT OF ONE WIDTH OF EXISTING ACCESS ROAD IS 13 FT NO ACCESS GATES OR BOLLARDS PROPOSED HYDRANT FIRE FLOW 614 GPM AT 96 PSI. 825 REQUIRED; SEE BELOW FOR PROPOSED REMEDIATION OPTIONS. EXISTING SYSTEM IS 13D. ALTERNATIVE PATH PROPOSED FOR THE REMODEL/ ADDITION. ADD NFPA 72 FIRE ALARM, ALARM MONITORS, 5/8" DRYWALL AT ALL CEILINGS & WALLS. ALL NEW INTERIOR DOORS TO BE SOLID CORE. PROVIDE FIRE-RETARDANT COATING AT NEW ATTIC. ADD NEW SPRINKLER HEADS TO ALL EXISTING BATHROOMS AND CLOSETS MISSING SPRINKLER HEADS & TO NEW ADDITION & NEW

CIVIL

EXTERIOR DECK.

NO INCREASE OF IMPERVIOUS SURFACE. REPLACED IMPERVIOUS = 237 SF. IMPERVIOUS BACKYARD PAVER SLAB TO BE REMOVED = 859 SF

TREE REQUIREMENTS

ADDITION LESS THAN 500 SF.

TREE #3 RETAINED IN A ROLLING 5-YEAR PERIOD. THE 5-YEAR ROLLING PERIOD BEGINS 5-YEARS PRIOR TO THE DATE OF APPLICATION FOR A DEVELOPMENT APPROVAL THAT IS SUBJECT TO TREE RETENTION.

TREE #1 EXCEPTIONAL TREE WILL BE REMOVED. 6 REPLACEMENT TREES PROPOSED TREE CREATES ANNUAL HAZARDOUS SITUATIONS IN HIGH WINDS WITH BRANCHES DAMAGING EXISTING GARAGE.

TREE #2 TREE WILL BE REMOVED. 3 REPLACEMENT TREES PROPOSED. TREE CREATES ANNUAL HAZARDOUS SITUATIONS IN HIGH WINDS WITH BRANCHES DAMAGING EXISTING GARAGE.

FOLLOWING ANY REMOVAL, NEWLY PLANTED REPLACEMENT TREES TO BE PLANTED BETWEEN OCT 1 & APRIL 1.

REPLACEMENT TREES TO BE PLANTED WITH THE BELOW:

1) LOCATION IN ORDER OF PRIORITY: ON SITE OR ADJACENT TO CRITICAL AREAS 2) PACIFIC NORTHWEST NATIVE TREE

3) CONIFEROUS TREES TO BE AT LEAST 6 FT TALL, DECIDUOUS AT LEAST 1.5" CALIPER. 4) MUST MAINTAIN HEALTH OF REPLACEMENT TREES FOR 5 YEARS AND IF IT DIES IN THATTIME, REPLACE IT IN KIND.

BALD EAGLES

IF EAGLES ARE OBSERVED ON SITE DURING CONSTRUCTION, CONTRACTOR TO SUBMIT A REPORT IN COORDINATION WITH OWNERS PREPARED BY A WILDLIFE BIOLOGIST THAT DEMONSTRATES THAT THE PROJECT WILL NOT HAVE A NEGATIVE IMPACT ON THE EAGLES. DEVELOPMENT WILL ALSO NEED TO BE CONSISTENT WITH THE REQUIREMENTS OF THE U.S. FISH AND WILDLIFE'S NATIONAL BALD EAGLE MANAGEMENT GUIDELINES (2007).

SOLAR READINESS

275 SF RESERVED ON NEW ROOF AT ADDITION FOR SOLAR READINESS & SEE STRUCTURAL FOR ADDITIONAL LBS PER SF FOR PHOTOVOLTAIC SYSTEM GRAVITY LOAD TO BE APPLIED TO JOISTS, ROOF, ETC. IF ANY PANELS WILL BE ADDED TO OLD ROOF



HEATING SYSTEM

VERTICAL FENESTRATION U = 0.28FLOOR R-38 SLAB ON GRADE R-10 CONTINUOUS

MEET REQUIRED = 1.5 CREDITS

A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE BUILDER AND POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, UTILITY ROOM, OR AN APPROVED LOCATION INSIDE THE BUILDING. WHEN LOCATED ON AN ELECTRICAL PANEL, THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF HTE CIRUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL, OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST PREDOMINANT R-VALUES, OF INSULATION INSTALLED IN OR ON CEILING/ROOF, WALLS, FOUNDATION, BELOW GRADE WALLS, AND DUCTS OUTSIDE CONDITIONED SPACES, U-FACTORS FOR FENESTRATION AND THE SHGC OF FENESTRATION, THE RESULTS FROM ANY REQUIRED DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING DONE ON THE BUILDING, AND THE RESULTS FROM THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FLOW RATE TEST. WHERE THERE IS MORE THAN ONE VALUE FOR EACH COMPONENT, THE CERTIFICATE SHALL LIST THE VALUE COVERING THE LARGEST AREA. THE CERTIFICATE SHALL LIST THE TYPES AND EFFICIENCIES OF HEATING, COOLING, WHOLE-HOUSE MECHANICAL VENTILATION, AND SERVICE WATER HEATING APPLIANCES. WHERE GAS-FIRED UNVENTED ROOM HEATER, ELECTRIC FURNACE, OR BASEBOARD ELECTRIC HEATER IS INSTALLED IN THE RESIDENCE, THE CERTIFICATE SHALL LIST "GAS-FIRED UNVENTED ROOM HEATER," "ELECTRIC FURNACE" OR "BASEBOARD ELECTRIC HEATER," AS APPROPRIATE. AN EFFICIENCY SHALL OT BE LISTED FOR GAS-FIRED UNVENTED ROOM HEATERS, ELECTRIC FURNACES, OR ELECTRIC BASEBOARD HEATERS. THE CODE OFFICIAL MAY REQUIRE THAT DOCUMENTATION FROM ANY REQUIRED TEST RESULTS INCLUDE AN ELECTRONIC RECORD OF THE TIME, DATE, AND LOCATION OF THE TEST. A DATE-STAMPED SMART PHONE PHOTO OR AIR LEAKAGE SOFTWARE MAY BE USED TO SATISFY THIS REQUIREMENT.

PRESCRIPTIVE APPROACH REQUIREMENTS FENESTRAT SKYLIGHT CEILING VAULTED C WOOD FRA Floor **BELOW GR** SLAB R-VA

THE BUILDING OR DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE OF NOT EXCEEDING 5 AIR CHANGES PER HOUR. TESTING SHALL BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF 0.2 INCHES w.g. (50 PASCALS). FOR THIS TEST ONLY, THE VOLUME OF THE HOME SHALL BE THE CONDITIONED FLOOR AREA IN FT SQUARED MULTIPLIED BY 8.5 FEET. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL. TESTING SHALL BE PERFORMED AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING THERMAL ENVELOPE. ONCE VISUAL INSPECTION HAS CONFIRMED SEALING (SEE TABLE R402.1.1), OPERABLE WINDOWS AND DOORS MANUFACTURED BY SMALL BUSINESS SHALL BE PERMITTED TO BE SEALED OFF AT THE FRAME PRIOR TO THE TEST. SEE DETAILED CODE FOR EXCEPTIONS AND CONSIDERATIONS DURING TESTING.

MANUFACTURER.

AIR BARRIERS AND INSULATION INSTALLATION

DUCT INSULATION AND HOT WATER PIPE INSULATION AND SEALS

DUCTS SHALL BE INSULATED WITH R-8 OR R-10 IF IN-GROUND AND SHALL NOT DISPLACE REQUIRED EXTERIOR INSULATION AND HOT WATER PIPES WITH R-3. HOT WATER HEATER TO BE PLACED UPON A SURFACE WITH INCOMPRESSIBLE R-10. REFER TO SEATTLE RESIDENTIAL ENERGY CODE OR INTERNATIONAL MECHANICAL CODE AS APPROPRIATE FOR DETAILS RELATED TO SEALING OF DUCTS, AIR HANDLERS, AND FILTER BOXES.

RESIDENTIAL ENERGY CREDIT CALCULATIONS

FUEL NORMALIZATION = SYSTEM TYPE 2 HEAT PUMP NORMALIZATION CREDITS = 1.0

ADDITIONAL REQUIREMENTS AND MODIFICATIONS CHOSEN PER SEC R406 TABLE R406.3: ADDITION LESS THAN 500 SF = 1.5 CREDITS REQUIRED

CREDIT 1.3=0.5: PRESCRIPTIVE COMPLIANCE WITH THE FOLLOWING MODIFICATIONS:

CREDIT 2.2=01.0: REDUCE AIR LEAKAGE TO 2.0 AIR CHANGES ER HOUR MAXIMUM AT 50 PASCALS AND SUPPLY HEAT RECOVERY VENT WITH EFFICIENCY OF 0.65.

CERTIFICATIONS & TESTS

PRESCRIPTIVE APPROACH (SEE ABOVE CREDITS FOR MODIFICATIONS TO

IN LATINOACH NEQU	JINLIVILINIJ
TION	U=0.30
	U=0.50
	R-49
CEILING	R-38
AME WALL	R21 int
	R-30
RADE WALL	R-10/15/21int+5TB
LUE & DEPTH	10, 2FT

AIR LEAKAGE TESTING

AIR LEAKAGE TESTING FENESTRATION

WINDOWS, SKYLIGHTS, AND SLIDING GLASS DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.3 CFM PER SQ FT AND SWINGING DOORS NO MORE THAN 0.5 CFM PER SQ FT WHEN TESTED IN ACCORDANCE WITH NFRC 400 OR AAMA/WDMA/ CSA 101/I.S.2/A440 BY AN ACCREDITED LABORATORY AND LISTED AND LABLED BY THE

EXCEPTIONS: FIELD-FABRICATED FENESTRATION PRODUCTS AND CUSTOM EXTERIOR FENESTRATION PRODUCTS MANUFACTURED BY A SMALL BUSINESS PROVIDED THEY MEET THE APPLICABLE PROVISIONS OF CHAPTER 23 OF THE INTERNATIONAL BUILDING CODE. ONCE VISUAL INSPECTION HAS CONFIRMED THE PRESENCE OF A GASKET, OPERABLE WINDOWS AND DOORS MANUFACTURED BY SMALL BUSINESS SHALL BE PERMITTED TO BE SEALED OFF AT HTE FRAME PRIOR TO THE TEST.

FOR COMPONENT REQUIREMENTS OF THE MERCER RESIDENTIAL ENERGY CODE.

PROGRAMMABLE THERMOSTAT

EACH DWELLING UNIT IS REQ'D TO BE PROVIDED WITH AT LEAST 1 PROGRAMMABLE THERMOSTAT FOR EACH HEATING AND COOLING SYSTEM. WHERE PRIMARY HEATING SYSTEM IS A FORCED AIR FURNACE, AT LEAST ONE T-STAT PER DWELLING UNIT SHALL BE ENERGY STAR CERTIFIED AND CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY. THE T-STAT SHALL ALLOW FOR AT A MINIMUM 5-2 PROGRAMMABLE SCHEDULE (WEEKDAYS/WEEKENDS) AND BE CAPABLE OF PROVIDING AT LEAST TWO PROGRAMMABLE SET-BACK/SETUP PERIODS PER DAY. THIS T-STAT SHALL INCLUDE THE CAPABILITY TO SET BACK, SET UP, OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55 DEGREES F OR UP TO 85 DEGREES . THE T-STAT SHALL INITIALLY BE PROGRAMMED BY THE MANUFACTURER WITH A HEATING TEMPERATURE SET POINT NO HIGHER THAN 70 DEGREES F AND A COOLING TEMPERATURE SET POINT LOWER THAN 78 DEGREES F. THE T-STAT AND/OR CONTROL SYSTEM SHALL HAVE AN ADJUSTABLE DEADBAND OF NOT LESS THAN 10 DEGREES F. EXCEPTIONS INCLUDE SYSTEMS CONTROLLED BY THE OCCUPANT SENSOR THAT IS CAPABLE OF SHUTTING THE SYSTEM OFF WHENNO OCCUPANT IS SENSED FOR A PERIOD OF UP TO 30 MINUTES, SYSTEMS CONTROLLED SOLELY BY A MANUALLY OPERATED TIMER CAPABLE OF OPERATING THE SYSTEM FOR NO MORE THAN 2 HOURS, AND DUCTLESS MINI-SPLIT HEAT PUMPS SYSTEMS THAT HAVE AN INTEGRAL PROPRIETARY THERMOSTAT.

ATTIC ACCESS INSULATION

WEATHER STRIP AND INSULATE DOOR TO EQUIVALENT LEVEL OF INSULATION NEAR DOOR CEILING.

HIGH EFFICACY LUMINAIRES

MINIMUM 90% OF ALL INTERIOR LUMINAIRES SHALL BE HIGH EFFICACY LUMINAIRES & ALL TO BE IC-RATED.

VAPOR RETARDERS

WALL ASSEMBLIES IN THE BUILDING THERMAL ENVELOPE SHALL COMPLY WITH THE VAPOR RETARDER REQUIREMENTS OF SECTION R702.7 OF THE INTERNATIONAL RESIDENTIAL CODE OR SECTION 1405.3 OF THE INTERNATIONAL RESIDENTIAL BUILDING CODE, AS APPLICABLE.

NEW SOURCE SPECIFIC VENTILATION LOCATIONS PER IMC TABLE 403.3: BATHROOM & LAUNDRY & SPA FANS: MINIMUM 50CFM (INTERMITTENT)

KITCHEN FANS: MINIMUM 100CFM (INTERMITTENT) *SEE PLANS FOR ACTUAL SIZING. SOURCE SPECIFIC VENTILATION CONTROLLED BY MANUAL SWITCHES AND/OR TIMERS.

MAKE UP AIR

PER SRC M1503.4 MAKEUP AIR REQUIRED WHEN KITCHEN EXHAUST HOOD SYSTEMS ARE CAPABLE OF EXHAUSTING IN EXCESS OF 400 CFM & SHALL BE MECHANICALLY OR NATURALLY PROVIDED WITH MAKEUP AIR AT A RATE APPROXIMATELY EQUAL TO THE EXHAUST AIR RATE. SUCH MAKEUP AIR SYSTEMS SHALL BE QUIPPED WITH NOT LESS THAN ONE DAMPER. EACH DAMPER SHALL BE A GRAVITY DAMPER OR AN ELECTRICALLY OPERATED DAMPER THAT AUTOMATICALLY OPENS WHEN THE EXHAUST SYSTEM OPERATES. DAMPERS SHALL BE ACCESSIBLE FOR INSPECTION, SERVICE, REPAIR, AND REPLACEMENT WIHOUT REMOVING PERMANENT CONSTRUCTION OR ANY OTHER DUCTS TO CONNECTED TO THE DAMPER BEING INSPECTED, SERVICED, REPAIRED, OR REPLACED.

KITCHEN MAKE UP AIR

KITCHEN EXAUST MAKEUP AIR SHALL BE DISCHARGED INTO SAME ROOM IN WHICH THE EXHAUST SYSTEM IS LOCATED OR INTO ROOMS OR DUCT SYSTEMS THAT COMMUNICATE THROGH ONE OR MORE PERMANENT OPENINGS IWTH THE ROOM IN WHICH SUCH EXHAUST SYSTEM IS LOCATED. SUCH PERMANENT OPENINGS SHALL HAVE A NET CROSS-SECTIONAL AREA NOT LESS THAN THE REQUIRED AREA OF THE MAKEUP AIR SUPPLY OPENINGS.

AVG HEIGHT DIAGRAM



CONTACT ARCHITECT IMMEDIATELY CONCERNIN DRAWINGS PRIOR TO PROCEEDING WITH WORK

DO NOT SCALE DRAWINGS.

DIMENSIONS

DIMENSIONS ARE TO FACE OF CONCRETE AND FACE OF FRAMING UNLESS OTHERWISE NOTED. VERIFY ALL DIMENSIONS BEFORE BEGINNING WORK.

CODES ALL APPLICABLE CODES, ORDINANCES, AND MINIMUM STRUCTURAL REQUIREMENTS TAKE PRECEDENCE OVER ALL DRAWING NOTES, SPECIFICATIONS, AND SIZES.

DRAFTSTOPPING & FIREBLOCKING

PROVIDE APPROVED DRAFTSTOPPING & FIRE BLOCKING IN CONCEALED SPACE BETWEEN CEILING AND FLOOR PER IBC.

PROVIDE SOLID WOOD BLOCKING FOR SUPPORT AT ALL WALL MOUNTED FIXTURES

FLASHING

FLASH ALL OPENINGS WITH MINIMUM 26 GAUGE GALVANIZED OR ALUMINUM.

CAULK

CAULK ALL OPENINGS COMPLETELY.

PRESSURE TREATED WOOD ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY TO BE PRESSURE TREATED.

ROOF VENTING AT NEW ADDITION

PROVIDE 1 SQ FOOT OF VENTING PER 150 SQ FEET OF HEATED ROOF. 237 SF HEATED ROOF/150 SQ FT=1.58 SF* 144=227.52 SQ. IN. OF NET FREE VENTING. PROVIDE 15 LF @ 5 SQ.IN. PER FOOT OF EAVE VENTING & 13 LF OF RIDGE VENTING @ 18 SQ. IN. PER LF OF NET FREE VENTING.

CROSS VENTILATION REQUIRED. LEAVE 1" AIRSPACE ABOVE INSULATION.





IG ANY DISCREPANCIES IN THE	
K IN THE AFFECTED AREA.	

SHEET INDEX A1 PROJECT NOTES SURVEY A2 A3 SITE PLAN TREE PLAN Δ4 FIRST FLOOR DEMO A5 SECOND FLOOR DEMO A6 FIRST FLOOR PLAN A7 A8 SECOND FLOOR PLAN A9 ROOF PLAN A10 ELEVATIONS ELEVATIONS A11 SECTION & ENERGY FORM A12 A13 ENLARGED ASSEMBLIES A14 WINDOW DETAILS S1.1 STRUCTURAL NOTES S2.1 FIRST FLOOR FRAMING/FOUNDATION PLAN S2.2 SECOND FLOOR FRAMING PLAN S2.3 ROOF FRAMING PLAN S3.1 FOUNDATION DETAILS S4.1 TYPICAL WOOD FRAMING DETAILS S4.2 WOOD FRAMING DETAILS S4.3 WOOD FRAMING DETAILS

SE HOU KARAN HANK KHANDELWAL PROJECT NOTES PERMIT 2.29.24 A1

BOUNDARY SURVEY NOTES	PROJECT INFORM	IATION	BASIS OF BEARINGS		
. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND LEICA VIV	SURVEYOR:	PLOG ENGINEERING, PLLC	PER THE PLAT OF ISLAND POINT NUMBER 3, ACCORDING TO THE PLAT	SYMBOL LEGEND	
2 PROCEDURES LISED IN THIS SURVEY MEET OR EVOLED STANDARD	S SET	RAVENSDALE, WA 98051	COUNTY WASHINGTON.		
BY WAC 332-130-090. SURVEY WAS COMPLETED BY A FIELD TRAVERSE			ACCEPTED THE BEARING OF N 4"49" W FOR SE 83RD ST BASED ON		
ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS	I I TROPERTI OWINER:	VEENA SHANKARAN	TOORD MONOMENTS IN CASE.		
OTHERWISE NOTED.		MERCER ISLAND, WA 98040	VERTICAL DATUM & CONTOUR INTERVAL		TRAFFIC SIGNAL MAINTENANCE HOLE
ENCROACHMENTS NOTED AS "IN" OR "OUT" ARE RELATIVE TO THE	TAX PARCEL NUMBER	R: 362570-0170	ELEVATIONS SHOWN ON THIS DRAWING ARE BASE ON THE NORTH AMERICAN	QUARTER SECTION CORNER	PAD MOUNTED TRANSFORMER
FENCE DIMENSIONS ARE CENERALLY TO THE CENTERLINE OF THE	PROJECT ADDRESS:	8460 SE 83RD ST	GPS.	O FOUND REBAR AS NOTED	
FENCE UNLESS OTHERWISE NOTED.		MERCER ISLAND, WA 98040	2.0' CONTOUR INTERVAL – THE EXPECTED VERTICAL ACCURACY IS EQUAL TO $1/2$ THE CONTOUR INTERVAL OR \pm 1.0' FOR THIS PROJECT.	SET REBAR AND CAP LS 31976	AG A/C COMPRESSOR
. STRUCTURE LOCATIONS ARE MEASURED TO THE FINISHED FASCIA	PARCEL AREA:	13,312 S.F. (0.306 ACRES ±) AS SURVEYED		FOUND SURFACE MARKER/DISK	- YARD LIGHT
TREE LOCATIONS ARE MEASURED TO THE ESTIMATED CENTER OF	ГНЕ			SET SURFACE MARKER/DISK LS 31976	POWER POLE
TREE.	REFERENCE SURV	VEYS		SEWER MAINTENANCE HOLE	C GUY WIRE
ALL DIMENSIONS ARE IN DECIMAL FEET.	P1 – PLAT OF ISLAN P1 – PLAT OF ISLAN	ND POINT NO. 3, VOL 82, PGS 71-72 ND POINT NO. 4, VOL 96, PG 99		SEPTIC MAINTENANCE HOLE	● OF STREET LIGHT
		· · · · · · · · · · · · · · · · · · ·		O SEWER CLEAN OUT	OHUOVERHEAD UTILITIES (GENERAL/MIXED)
DPOGRAPHIC SURVEY NOTES	LEGAL DESCRIPTI	ION		SSSEWER LINE	OHEOVERHEAD ELECTRICAL
UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GRC OBSERVATIONS, UTILITY LOCATES BY THIRD PARTIES, AND AS-BUI	JND LOT 17 OF ISLAND F T RECORDED IN VOLUM	POINT NUMBER 3, ACCORDING TO THE PLA TE 82 OF PLATS, PAGES 71-72, RECORDS		STORM DRAIN MAINTENANCE HOLE	OHCOVERHEAD CABLE
PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY	COUNTY WASHINGTON	l.		CATCH BASIN (TYPE 2)	-OHT-OVERHEAD TELEPHONE
EXIST ON THIS SITE.	SITUATE IN THE COUL	NTY OF KING, STATE OF WASHINGTON.		CATCH BASIN (TYPE 1)	
CONTOURS SHOWN ARE BASED ON A FIELD SURVEY.				O STORM DRAIN CLEAN OUT	
TREE IDENTIFICATION WAS PERFORMED BY SURVEY FIELD PERSON AND SHOULD BE CONSIDERED A BEST GUESS. AN ARBORIST SH				ROUND YARD DRAIN	
BE RELIED UPON FOR MORE ACCURATE AND DETAILED IDENTIFICA OF TREE SPECIES AND HEALTH.	ION			SQUARE YARD DRAIN	
				STORM DRAIN LINE	
				WATER MAINTENANCE HOLE	• BOLLARD
				WY WATER VALVE	
					<u>SN</u> SIGN
				「H 「〇〇) FIRE HYDRANT	WF WETLAND FLAG
	FOUND MONUMENT				
	-1" BR. DISK W/PUN	NCH IN CONC.			SNAG
	1.2 BELOW SURFAC	/E			
					DECIDOOUS MOLTI-TRUNK
				GAS VALVE	
			GRAPHIC SCALE		
				— G — GAS LINE	CONIFER MULTI-TRUNK
γ			1 INCH = 10 FEET		
				■ <i>CTV</i> CABLE BOX	\bigvee \land
4				CABLE MAINTENANCE HOLE	
E A					
				ABBREVIATION LEGEND	
	\leq			DN = DOWN SP = SHORT PLAT	
	(),11/	1		BLA = BOUNDARY LINE ADJUSTMENT	
	60.1	\mathbf{N}		DLR = DIAMETER AT BREAST HEIGHT (FT) DLR = DRIP LINE RADIUS (FT)	
	⊢ I [≥]	``\		APN = ASSESSORS PARCEL NUMBER AF# = AUDITOR'S FILE NUMBER	
	0, ¹ 0			WD = WOOD CL = CHAIN LINK	
A E	V 4.4			(M) = AS MEASURED (C) = AS CALCULATED	













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



DEMO WALL KEY

L_____

DEMO WALL OR REMOVE WINDOW OR DOOR EXISTING WALL



(E) ROOF (E) STANDING SEAM ____





DEMO THIS (E) ROOF ABOVE OFFICE STANDING SEAM METAL ROOF

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _



A11



1 **IST FLOOR** SCALE: 1/4" = 1'-0"

		ARCHITECTS
MARLO BROWN ARCHITECTS, LLC 509 26th AVE S SEATTLE WA 98144	info@marlobrown.com PROPERTY OWNERS	KHANDELWAL HANKARAN 8460 SE 83RD ST MERCER ISLAND WA 98040
	Male M. BROWN	SIALE OF WASHINGION
KHANDELWAL HANKARAN HOUSE	FIRST FLOOR PLAN PERMIT 2.29.24	
	Α7	

WALL KEY

EXISTING 2X EXTERIOR WALL

EXISTING 2X4 INTERIOR WALL

EXISTING 2X6 INTERIOR WALL

NEW 2X6 EXTERIOR WALL

NEW 2X4 INTERIOR WALL

NEW 2X6 INTERIOR WALL

ACCOUSTICAL INTERIOR BATT 2X WALL

SYMBOL KEY

- A WINDOW SYMBOL
- OVERHEAD WINDOW SYMBOL
 - DOOR SYMBOL

(1)

 (\mathbf{S})

CD

- EXISTING SPRINKLER HEAD
- (FS) NEW FLUSH SPRINKLER HEAD
 - SMOKE DETECTOR/CARBON MONOXIDE DETECTOR
- EXHAUST FAN
- TEMPERED GLASS (ELEVATIONS)

1 A12 2 A11

> (E) ROOF (E) STANDING SEAM









 $\left(\frac{1}{A11} \right)$



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















2	1/	2"	MAX
W	/E	HE	IGHT

296'-8" EXISTING ROOF HEIGHT

ARCHITECTS
MARLO BROWN ARCHITECTS, LLC 509 26th AVE S SEATTLE, WA 98144 info@marlobrown.com frommers KHANDELWAL HANKARAN 8460 SE 83RD ST MERCER ISLAND WA 98040
10822 REGISTERED ARCHITECT MAREO M. BROWN STATE OF WASHINGTON
KHANDELWAL HANKARAN HOUSE Elevations Permit 2.29.24
A11

BUILDING DEPT STAMPS



2018 Washington State Energy Code – Residential Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family – New & Additions (effective February 1, 2021)

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

	, , ,	, ,			
Project Information		Cont	tact Infor	mation	
SAURABH KHANDELWAL & VEEN	IA SHANKARAN	MARLO BROWN ARCH	IITECTS	LLC	
8460 SE 83RD ST MERCER ISLAN	ND, WA 98040	509 26TH AVE S SEAT	TLE, WA	98144	
Instructions : This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant. Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits					
Authorized Representative Ma	rlo Brown 🖉	Digitally signed by Marlo Brown Date: 2024.02.20 13:04:17 -08'00'	Date	02/20/2024	
All Climate Zones (Table R402.1.1)					
	R-Val	ue ^a		U-Factor ^a	
Fenestration U-Factor ^b	n/	a		0.30	
Skylight U-Factor ^b	n/	а		0.50	
Glazed Fenestration SHGC ^{b,e}	n/	a		n/a	

Glazed Fenestration SHGC ^{b,e}	n/a	n/a	
Ceiling ^e	49 ^j	0.026	
Vood Frame Wall ^{g,h}	21 int	0.056	
loor	30	0.029	
Below Grade Wall ^{c,h}	10/15/21 int + TB	0.042	
ilab ^{d,f} R-Value & Depth	10, 2 ft	n/a	
<i>R</i> -values are minimums. <i>U</i> -factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed <i>R</i> -value of the insulation from Appendix			

- a than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix Table A101.4 shall not be less than the *R*-value specified in the table. b The fenestration *U*-factor column excludes skylights.
- "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at c the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.
- d R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1. e For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
- R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter f slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
- For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for g climate zone 5 of ICC 400.
- Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard h framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

Prescriptive Path – Single Family

2018 Washington State Energy Code – Residential Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family – New & Additions (effective February 1, 2021)

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. Small Dwelling Unit: 3 credits

Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area. Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf. 2. Medium Dwelling Unit: 6 credits

All dwelling units that are not included in #1 or #3

3. Large Dwelling Unit: 7 credits Dwelling units exceeding 5,000 sf of conditioned floor area

4. Additions less than 500 square feet: 1.5 credits

All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2				
Heating Options	Fuel Normalization Descriptions	Credits - select ONE heating option		User Notes
1	Combustion heating minimum NAECA ^b	0.0	•	Existing system
2	Heat pump ^c	1.0		
3	Electric resistance heat only - furnace or zonal	-1.0		
4	DHP with zonal electric resistance per option 3.4	0.5		
5	All other heating systems	-1.0		
Energy Options	Energy Credit Option Descriptions	Credits - s energy optic categ	elect ONE on from each gory ^d	
1.1	Efficient Building Envelope	0.5		
1.2	Efficient Building Envelope	1.0		
1.3	Efficient Building Envelope	0.5	•	
1.4	Efficient Building Envelope	1.0		
1.5	Efficient Building Envelope	2.0		
1.6	Efficient Building Envelope	3.0		
1.7	Efficient Building Envelope	0.5		
2.1	Air Leakage Control and Efficient Ventilation	0.5		
2.2	Air Leakage Control and Efficient Ventilation	1.0	•	
2.3	Air Leakage Control and Efficient Ventilation	1.5		
2.4	Air Leakage Control and Efficient Ventilation	2.0		
3.1ª	High Efficiency HVAC	1.0		
3.2	High Efficiency HVAC	1.0		
3.3ª	High Efficiency HVAC	1.5		
3.4	High Efficiency HVAC	1.5		
3.5	High Efficiency HVAC	1.5		
3.6ª	High Efficiency HVAC	2.0		
4.1	High Efficiency HVAC Distribution System	0.5		
4.2	High Efficiency HVAC Distribution System	1.0		

2018 Washington State Energy Code – Residential Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family – New & Additions (effective February 1, 2021)

Summary of Table R406.2 (cont.)						
Energy Options	Energy Credit Option Descriptions (cont.)	Credits - select ONE energy option from each category ^d		User Notes		
5.1 ^d	Efficient Water Heating	0.5				
5.2	Efficient Water Heating	0.5				
5.3	Efficient Water Heating	1.0				
5.4	Efficient Water Heating	1.5				
5.5	Efficient Water Heating	2.0				
5.6	Efficient Water Heating	2.5				
6.1 ^e	Renewable Electric Energy (3 credits max)	1.0				
7.1	Appliance Package	0.5				
Total Credits 1.5 CLEAR FORM						

b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)

c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)

d. You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.

e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See the complete Table R406.2 for all requirements and option descriptions.

ase print only pages 1 through 3 of this worksheet for submission to your building off

Prescriptive Path – Single Family

2

	ARCHITECTS
MARLO BROWN ARCHITECTS, LLC 509 26th AVE S SFATTI F WA 98144	info@marlobrown.com PROPERTY OWNERS KHANDELWAL HANKARAN 8460 SE 83RD ST MERCER ISLAND WA 98040
	Make Machinect Marko M. BROWN STATE OF WASHINGTON
KHANDELWAL HANKARAN HOUSE	SECTION & ENERGY FORM PERMIT 2.29.24
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WINDOW SCHEDULE									
ID QTY	R.O.	SIZE	SILL HT		NOTES	U	AREA		
	WIDTH	HEIGHT	(+/-) VERIFY		NOTES				
А	1	1'-10"	3'-8"	3'	F		0.28	7	1.96
В	1	12'-1"	3'-8"	3'	F/Bi		0.28	44	12.32
С	1	1'-10"	3'-8"	3'	F		0.28	7	1.96
D	1	7'-6"	6'-7"		F/C	TEMPERED	0.28	49	13.72
E	1	5'-3"	6'-7"		F/C	TEMPERED, EGRESS	0.28	35	9.8
F	1	5'-9 1/2"	4'	2'-8"	F		0.28	23	6.44
G	1	3'-3 1/4"	4'	2'-8"	F	TEMPERED	0.28	13	3.64
								178 ft²	49.84

	EXTERIOR DOOR SCHEDULE										
		R.O. SIZE (+/-) PAN		IELS	LEAF LEAF		NOTES				
		W	Н	LEFT	RIGHT	LEFT	RIGHT	GHT NOTES		UA	AREA
01	1	10'-10"	6'-7 3/4"	3	0	3'-6 3/4"	3'-6 3/4"	LOCKABLE, TEMPERED	0.28	20.16	72
02	1	12'-1 1	6'-7 3/4"	3	0	4'	4'	LOCKABLE, TEMPERED	0.28	22.68	81
03	1	8'-1 1/2"	6'-8 3/4"	2	0	4'	4'	LOCKABLE, TEMPERED	0.28	15.4	55
										58.24	208

	SKYLIGHT SCHEDULE							
ID	QTY	WIDTH	HEIGHT	NOTES	U	UA	AREA	
S1	1	36"	54"	TEMPERED	.48	6.72	14	

WINDOW & DOOR NOTES:

1. ALL WINDOW DIMENSIONS ARE TO ROUGH OPENING.

ALL DOOR DIMENSIONS ARE DOOR PANEL DIMENSIONS EXCEPT BI-FOLD DOORS

2. ALL NEW GLAZING AND DOOR U-VALUES PER WASHINGTON STATE ENERGY CODE TABLE R402.1.1 "INSULATION & FENESTRATION REQUIREMENTS FOR GROUP R OCCUPANCY CLIMATE ZONE 4C", 2018 EDITION.

-ALL WINDOW, DOOR, AND OVERHEAD GLAZING TO BE NFRC CERTIFIED PER MANUFACTURER.

3. VERIFY ALL ROUGH OPENINGS IN FIELD PRIOR TO ORDERING.

4. PROVIDE TEMPERED GLASS WHERE REQUIRED BY IRC R308. (AT LOCATIONS INCLUDING, BUT NOT LIMITED TO THOSE MARKED TEMPERED IN THE SCHEDULE & ELEVATIONS)

WINDOW TYPE CODES FOR REFERENCE: (VERIFY OPERATION W/ ELEVATIONS) F = FIXED, C = CASEMENT, Bi = BIFOLD

ALL NEW VERTICAL GLAZING: TOTAL AREA = 400 SF TOTAL UA = 114.8 AVERAGE U-VALUE = .287

WINDOW & DOOR TRIM NOTES:

1. BASEBOARD & TRIM REVEALS TO MATCH EXISTING, FINISH PER SPECIFICATIONS



STEP 1 APPLY SILL FLASHING. PARTIALLY PULL RELEASE PAPER.



STEP 2 APPLY SIDE FLASHING



STEP 4 APPLY VAPROLIQUI-FLASH TO OPENING

WINDOW

MOISTURE BARRIER LAPS OVER HEAD-FLASHING



STEP 8 SEALANT



STEP 7

METAL HEAD FLASHING, SET IN DOW 758 SEALANT AND FORM FOLDED UP END DAMS







STEP 5 APPLY VAPROLIQUI-FLASH TO HEAD/JAMBS OF

SEAL EDGE OF WRAPSHIELD TO WINDOW FLANGE & METAL FLASHING W/ DOW 758



STEP 6 INSTALL WINDOW



STEP 9

SILL FLASHING LAPS OVER MOISTURE BARRIER & ADHERES TO WRAPSHIELD

> APPLY DOW 758 SEALANT & BACKER ROD TO INTERIOR PRIOR TO APPLICATION OF LINER & STOOL





A14

CRITERIA

- DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2018) EDITION).
- 2. DESIGN LOADING CRITERIA: RESIDENTIAL - ONE AND TWO-FAMILY DWELLINGS MISCELLANEOUS LOADS ENVIRONMENTAL LOADS SNOW Ce=1.0, Is=1.0, Ct=1.1, Cs=1.0, Pg=25 PSF, Pf=20 PSF EARTHQUAKE . . . ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS

SITE CLASS=D (DEFAULT), Ss=1.466, Sds=0.98, S1=0.505, Sd1=0.86, Cs=0. 150, SDC D, Ie=1.0, R=6.5

- 3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.
- 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 SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS 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.
- CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN 17. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".
- 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. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S 19. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS: RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.
- 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.

QUALITY ASSURANCE

10. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1705 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND 21. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND TEST RESULTS. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION IS REQUIRED UNLESS NOTED OTHERWISE.

EXPANSION BOLTS AND THREADED EXPANSION INSERTS PER MANUFACTURER EPOXY GROUTED INSTALLATIONS PER MANUFACTURER

PERIODIC INSPECTION: INSPECTION SHALL BE PERFORMED AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS.

REQUIRING INSPECTION AT ALL TIMES THAT WORK IS PERFORMED.

GEOTECHNICAL

11. FOUNDATION NOTES: ALLOWABLE SOIL PRESSURE AND LATERAL EARTH PRESSURE ARE ASSUMED AND THEREFORE MUST BE VERIFIED BY A QUALIFIED SOILS ENGINEER OR APPROVED BY THE BUILDING OFFICIAL. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH AT LEAST 18" BELOW ADJACENT FINISHED GRADE. UNLESS OTHERWISE NOTED, FOOTINGS SHALL BE CENTERED BELOW COLUMNS OR WALLS ABOVE.

BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING. GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE.

RENOVATION

- COMMENCING ANY 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 40 PSF.
- 13. 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. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IF EXISTING CONDITIONS DETERMINED DURING WORK VARY FROM THE EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS.
- 14. 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. CORNERS SHALL NOT BE OVERCUT.
- 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. D. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE. DRILL AND EPOXY DOWELS MATCHING THE NEW REINFORCING INTO THE EXISTING CONCRETE WITH 6" EMBED, UNLESS OTHERWISE NOTED ON PLANS.
- 15. CONTRACTOR SHALL CHECK FOR DRY ROT 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.

CONCRETE

- 16. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 3,000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. REQUIRED CONCRETE STRENGTH IS BASED ON THE DURABILITY REQUIREMENTS OF SECTION 1904 OF THE IBC. DESIGN STRENGTH IS f'c = 2,500 PSI.
- GRADE 60, FY = 60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, FY = 40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, FY = 60,000 PSI.
- 18. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315R-18 AND 318-14. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 40 BAR DIAMETERS OR 2'-O" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-14, 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.

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED

FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER) 2" FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER). . 1-1/2" SLABS AND WALLS (INT. FACE). . . GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

20. CONCRETE WALL REINFORCING--PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

6" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
8" WALLS	#4 @ 12 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
10" WALLS	#4 @ 18 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS
12" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS

DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

ANCHORAGE

- CONTINUOUS INSPECTION: INSPECTOR SHALL BE ONSITE AND OBSERVE THE WORK 22. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.
 - 23. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) INTO CONCRETE SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-3G" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG, TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-4057. MINIMUM BASE MATERIAL TEMPERATURE IS 40 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.

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ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE 12. DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE 24. CONCRETE SCREW ANCHORS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "TITEN HD" HEAVY DUTY SCREW ANCHOR AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2713 (CONCRETE), NO. ESR-1056 (CMU), INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. SCREW ANCHORS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED.

	WOOD						
25.	25. FRAMING LUMBER SHALL BE S-DRY, KD, OR MC-19, AND GRADED AND MARK CONFORMANCE WITH WCLIB STANDARD No. 17, GRADING RULES FOR WEST LUMBER, 2018, OR WWPA STANDARD, WESTERN LUMBER GRADING RULES FURNISH TO THE FOLLOWING MINIMUM STANDARDS:						
	JOISTS AND BEAMS	(2X & 3X MEMBERS)	DOUG-FIR NO. 2 MINIMUM BASE VALUE, Fb = 900 PSI				
		(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1000 PSI				
	BEAMS	(INCL. 6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1350 PSI				
	POSTS	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fc = 1350 PSI				
		(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fc = 1000 PSI				
	STUDS, PLAT	ES & MISC. FRAMING:	DOUGLAS FIR-LARCH NO. 2				

26. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2,400 PSI, Fv =265 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI.

27. MANUFACTURED LUMBER, PSL, LVL, AND LSL SHOWN ON PLAN ARE BASED PRODUCTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION IN ACCORDANCE WITH ICC-ES REPORT ESR-1387. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.2E WS)	Fb = 2900 PSI,	E = 2200 KSI,	Fv = 290 PSI
LVL (2.0E-2600FB WS)	Fb = 2600 PSI,	E = 2000 KSI,	Fv = 285 PSI
LSL (1.55E)	Fb = 2325 PSI,	E = 1550 KSI,	Fv = 310 PSI

ALTERNATE MANUFACTURED LUMBER MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS. OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

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 OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

28. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1 OR PS 2.

ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.

FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.

WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

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.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

- 29. 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.
- OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL 30. PRESERVATIVE TREATED WOOD SHALL BE TREATED PER AWPA STANDARD U1 TO THE USE CATEGORY EQUAL TO OR HIGHER THAN THE INTENDED APPLICATION. TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO AWPA UC3B. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO AWPA UC4A. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO AWPA UC4B.
 - 31. FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

WOOD TREATMENT	CONDITION	PROTECTION
HAS NO AMMONIA CARRIER	INTERIOR DRY	G90 GALVANIZED
CONTAINS AMMONIA CARRIER	INTERIOR DRY	G185 OR A185 HOT DIPPED OR
		CONTINUOUS HOT-GALVANIZED
		PER ASTM A653
CONTAINS AMMONIA CARRIER	INTERIOR WET	TYPE 304 OR 316 STAINLESS
CONTAINS AMMONIA CARRIER	EXTERIOR	TYPE 304 OR 316 STAINLESS
AZCA	ANY	TYPE 304 OR 316 STAINLESS

INTERIOR DRY CONDITIONS SHALL HAVE WOOD MOISTURE CONTENT LESS THAN 19%. WOOD MOISTURE CONTENT IN OTHER CONDITIONS (INTERIOR WET, EXTERIOR WET, AND EXTERIOR DRY) IS EXPECTED TO EXCEED 19%. CONNECTORS AND THEIR FASTENERS SHALL BE THE SAME MATERIAL. COMPLY WITH THE TREATMENT MANUFACTURERS RECOMMENDATIONS FOR PROTECTION OF METAL.

TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY. AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2021. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER FOR MAXIMUM LOAD CARRYING CAPACITY. 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 "ITS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT TWO 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.

33. WOOD FASTENERS

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

SIZE	LENGTH	DIAMETER
6d	2"	0. 113"
8d	2-1/2"	0. 131"
10d	3"	0. 148"
12d	3-1/4"	0. 148"
16d B0X	3-1/2"	0. 135"

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. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.

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 BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

34. NOTCHES AND HOLES IN WOOD FRAMING:

- A. NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.
- B. IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.
- C. NOTCHES AND HOLES IN MANUFACTURED LUMBER AND PREFABRICATED PLYWOOD WEB JOISTS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS UNLESS OTHERWISE NOTED.

35. WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, THE AITC "TIMBER CONSTRUCTION MANUAL" AND THE AWC "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

B. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO 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. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING 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 TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C.. LAP TOP PLATES AT JOINTS A MINIMUM 4'-O" AND NAIL WITH TWELVE 16d NAILS @ 4" O.C. EACH SIDE JOINT.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @12" ON-CENTER. UNLESS OTHERWISE NOTED, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER. UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL)APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER 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 UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING BETWEEN RAFTERS AND JOISTS AT ALL BEARING POINTS WITH A MINIMUM OF (3) 16d TOE NAILS EACH END. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6" ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER 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 16d @ 12" ON-CENTER. MINIMUM TWO NAILS PER BLOCK, UNLESS OTHERWISE NOTED.

68	STRUCTURAL ENGINEERING
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DRAWN:	NHD	
CHECKED:	BDM	
APPROVED:	BDM	

REVISIO	NS:		

PROJECT TITLE:

Khandelwal Shankaran House

8460 SE 83rd St Mercer Island, WA 98040

ARCHITECT:

Marlo Brown Architects, LLC 509 26th Ave S Seattle, WA 98144

PERMIT

SHEET TITLE:

General Structural Notes

SCALE:	
	-
DATE:	
	February 13, 2024
PROJECT NO:	
	11712-2022-01
SHEET NO:	
C	



First Floor Framing/Foundation Plan



Legend	Scale: 1/4" = 1'-0"
	NEW STRUCTURAL WALL OR POST BELOW
	EXISTING WALL OR POST BELOW
	NON-STRUCTURAL WALL BELOW
[[]]	NEW STRUCTURAL WALL OR POST ABOVE
[[]]	EXISTING STRUCTURAL WALL OR POST ABOVE
	EXISTING STEM WALL & FOOTING
<u> </u>	SPAN DIRECTION
$\longleftrightarrow \rightarrow$	EXTENT OF JOISTS
	NEW HEADER/BEAM PER PLAN
	EXISTING HEADER/BEAM
	HANGER
● HDUx	HOLDOWN PER 12/S3.1 INTO (E) CONCRETE, U.N.O. HOLDOWN PER 8/S3.1 INTO (N) CONCRETE, U.N.O.

STRUCTURAL ENGINEERING SEATTLE 2124 Third Avenue, Suite 100 Seattle, WA 98121 TACOMA 934 Broadway, Suite 100 Tacoma, WA 98402 CENTRAL WASHINGTON 206.443.6212414 N Pearl Street, Suite 8ssfengineers.comEllensburg, WA 98926 Copyright 2024 Swenson Say Fagét - All Rights Reserved DESIGN: LAN DRAWN: NHD CHECKED: BDM APPROVED: BDM REVISIONS: PROJECT TITLE: Khandelwal Shankaran House 8460 SE 83rd St Mercer Island, WA 98040 ARCHITECT: Marlo Brown Architects, LLC 509 26th Ave S Seattle, WA 98144 ISSUE: PERMIT SHEET TITLE:

First Floor Framing/ Foundation Plan

SCALE:	1/4" = 1'-0" U.N.O.
DATE:	Echruphy 12 2024
	February 15, 2024
PROJECT NO:	11712-2022-01
SHEET NO:	

S2.1



Second	Floor	Framina	Plan
Jecona		runnig	IIMI



Legend	Scale: $\frac{1}{4^{n}} = 1^{n} - 0^{n}$
	NEW STRUCTURAL WALL OR POST BELOW
	EXISTING WALL OR POST BELOW
	NON-STRUCTURAL WALL BELOW
[[]]	NEW STRUCTURAL WALL OR POST ABOVE
[][]	EXISTING STRUCTURAL WALL OR POST ABOVE
Wx	SHEARWALL PER 12/S4.1
	SPAN DIRECTION
$\longleftrightarrow \rightarrow$	EXTENT OF JOISTS
	NEW HEADER/BEAM PER PLAN
	EXISTING HEADER/BEAM
	HANGER
	BLOCKED FLOOR DIAPHRAGM: 2x4 FLAT BLKG. AT ALL PLYWOOD PANEL EDGES. NAIL ALL PLYWOOD PANEL EDGES W/ 8d @ 4"oc & @ 12"oc FIELD
CSxx	HOLDOWN STRAP PER 10/S4.1

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D. MO
TO ASSOCIATE REPORT
JONAL DI
design: LAN
DRAWN: NHD
CHECKED: BDM
APPROVED: BDM
REVISIONS:
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PROJECT TITLE:
Khandelwal Shankaran
House
8460 SE 83rd St Mercer Island, WA 98040
ARCHITECT:
Marlo Brown Architects. LLC
509 26th Ave S
Seattle, WA 98144
ISSUE:
DEDWIT
SHEET TITLE:
Second Floor Framing Plan
SCALE:

SCALE:	1/4" = 1'-0" U.N.O.
DATE:	January 29, 2024
PROJECT NO:	11712-2022-01
SHEET NO:	

S2.2



	Roof Framing Plan
Legend	Scale: ¹ /4" = 1'-0"
	NEW STRUCTURAL WALL OR POST BELOW
	EXISTING WALL OR POST BELOW
	NON-STRUCTURAL WALL BELOW
Wx	SHEARWALL PER 12/S4.1
<u> </u>	SPAN DIRECTION
\longleftrightarrow	EXTENT OF JOISTS
	NEW HEADER/BEAM PER PLAN
	EXISTING HEADER/BEAM
	HANGER

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SHEET TITLE:

Roof Framing Plan

SCALE:	
	1/4" = 1'-0" U.N.O.
DATE:	
	January 29, 2024
PROJECT NO:	11712-2022-01
SHEET NO:	

S2.3

-]	
-	5	
	9	





4

REVISIONS:

Holdown Schedule

Plan	C	Anchor	Min. A.B. Embed (D)		Holdown Post ①	
Mark	Screws	Bolt	Stem Wall	Footing	if 2x4	if 2x6
HDU2-SDS2.5	(6)SDS ¹ /4"x2 ¹ /2"	⁵ ⁄8"ø	12"	4"	(2) 2x4	(2) 2x6
HDU4-SDS2.5	(10)SDS ¹ /4"x2 ¹ /2"	⁵ /8"ø	18"	6"	4x4	4x6
HDU5-SDS2.5	(14)SDS ¹ /4"x2 ¹ /2"	⁵ /8"ø	SB ⁵ /8x24	7"	4x4	4x6
HDU8-SDS2.5	(20)SDS ¹ /4"x2 ¹ /2"	⁷ /8"ø	SSTB28	8"	4x6	6x6
HDU11-SDS2.5	(30)SDS ¹ /4"x2 ¹ /2"	1"ø	SB1x30	10"	4x8	6x6
HDU14-SDS2.5	(36)SDS ¹ /4"x2 ¹ /2"	1"ø	N/A	12"	4x8	6x6

1 MINIMUM SIZE OF POST AT END OF WALL UNLESS OTHERWISE NOTED ON FRAMING PLANS.



Holdown Schedule

Plan	Screws	Anchor Bolt	A.B. Embed	Holdown Post ①	
Mark				if 2x4	if 2x6
HDU4	(10)SDS ¹ /4"x2 ¹ /2"	⁵ /8"ø	12"	4x4	4x6
HDU11	(30)SDS ¹ /4"x2 ¹ /2"	1"ø	24"	4x6	4x6
HDU14	(36)SDS ¹ /4"x2 ¹ /2"	1"ø	36"	4x8	6x6

① MINIMUM SIZE OF POST AT END OF WALL UNLESS OTHERWISE

NOTED ON FRAMING PLANS. (2) FIELD VERIFY CONCRETE WALL THICKNESS. ENGINEER TO BE NOTIFIED IF EXISTING WALL THICKNESS IS LESS THAN 8".

Typical HDU Holdown at Existing Concrete Wall 12

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SHEET TITLE:

ISSUE:

Foundation Details

SCALE:	3/4" = 1'-0" U.N.O.
DATE:	January 29, 2024
PROJECT NO:	11712-2022-01
SHEET NO:	

S3.1



	STEEL COLUMN PER PLAN
	6x6 POST
	PROVIDE VERT CRAIN
	BLKG. TO MATCH POST BELOW
	POST PER PLAN
	BENT R PER 11/S4.2
	MITER & BUTT WELD
3	BENT IL PER 8/S4.2
	m
	TOP PLATE (where occurs)
5	
	PANEL EDGE NAILING OVER ALL HOLDOWN STUDS/POST
	SHEARWALL PER PLAN
	SCHEDULE, TYP.
	8d @ 6"oc
	DECK JOISTS &
	SHEATHING PER PLAN
	2x LEDGER TO MATCH DECK FRAMING U.N.O. W/ (2)SDS ¹ /4 x3 ¹ /2" SCREWS @ 16"oc
9	

1	
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