PROJECT DESCRIPTION:

ZEYNEP AND UMUT ALEV HOUSE

REBUILDING EXISTING GARAGE/DECK (600 SQFT) ON EXISTING FOOTING THERE ARE NO CHANGES TO LOT COVERAGE, BUILDING ELEVATION, VEGETATION OR HARDSCAPE.

PROJECT TEAM:

OWNER: UMUT AND ZEYNEP ALEV

GENERAL CONTRACTOR: ROBERT O'KEEFE GREEN BRICK BUILD, LLC 375 NW GILMAN BLVD C203, ISSAQUAH, WA, 98027 STATE CONTRACTOR LICENSE # GREENBB792DA MI BUSINESS LICENCE NO: 604217636

ARCHITECTURAL DESIGNER: ZEYNEP B. ALEV STRUCTURAL ENGINEER: MCGRAW STRUCTURAL ENGINEERING, LLC 1118 ENSTAD LANE SILVERTON, OR, 97381

PROJECT IDENTIFICATION:

ADDRESS: 6848 SE 33 RD ST. MERCER ISLAND, WA 98040

LEGAL DESCRIPTION: PARCEL NO: 935910-0445 LOT AREA+/- 10.000 SQFT

LAND USE:

LAND USE ZONE: R 8.4

LOT SIZE: +-10,000 SQFT

TOTAL EXISTING LOT COVERAGE: 3,942 SQFT

(MAIN ROOF STRUCTURE AREA: 2,930 SQFT +VEHICULAR USE: 1,012 SQFT)

GENERAL NOTES:

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

UNLESS OTHERWISE NOTED PLAN DIMENSIONS ARE TO FACE OF STUDS AND FACE OF CONCRETE.

CONSULT ARCHITECT REGARDING ANY SUSPECTED ERRORS, OMISSIONS,

OR CHANGES ON PLANS BEFORE PROCEEDING WITH WORK.

VERIFY GRADES AND THEIR RELATIONSHIP TO THE BUILDING.

VERIFY ALL ROUGH IN DIMENSIONS.

VERIFY SIZE AND LOCATION, AS WELL AS PROVIDE ALL OPENINGS THROUGH FLOORS AND WALLS, FURRINGS, CURBS, ANCHORS, INSERTS, AND BACKING FOR SURFACE MOUNTED ITEMS.

FLOOR LINE REFERS TO TOP OF CONCRETE SLAB OR TOP OF WOOD SUBFLOOR. ALL INTERIOR FRAME PARTITIONS TO BE 2X4 STUDS @ 16"0C . ALL NEW EXTERIOR FRAME PARTITIONS TO BE 2X6 STUDS @ 16" OC UNLESS OTHERWISE NOTED. REFER TO STRUCTURAL SHEETS.

MECHANICALLY OPERATED VENTILATION SYSTEMS SHALL BE CAPABLE OF SUPPLYING OUTSIDE AIR AS SPECIFIED BY THE WASHINGTON STATE VENTILATION AND INDOOR AIR QUALITY CODE AND THE UNIFORM MECHANICAL CODE. SECTION 605.

FIRE DOORS, WINDOWS AND DAMPERS SHALL HAVE AN APPROVED LABEL. LABELS SHALL INDICATE THAT THE TEMPERATURE RISE ON THE UNEXPOSED SURFACE DOES NOT EXCEED 450° F ABOVE AMBIENT AT THE END OF 30 MINUTES OF FIRE EXPOSURE REFER TO PREVIOUS CONSTRUCTION



GENERAL DESIGN CRITERIA

SEE STRUCTURAL NOTES

CODE SUMMARY

BUILDING CODES: 2015 WA. STATE ENERGY CODE - PRESCRIPTIVE METHOD 2006 WA STATE INDOOR AIR QUALITY CODE INTERNATIONAL FIRE CODE INTERNATIONAL MECHANICAL CODE INTERNATIONAL FUEL GAS CODE (NATURAL GAS)

MICC 19.07.160(B)(1).

GARAGE:

- R309.1).

WAC 246-359-520 GUARDRAILS: PRE-MANUFACTURED STEEL GUARDRAILS w/ CABLE-RAIL SYSTEM COMPLYING WITH IRC (R312.1) SEE STRUCTURAL DRAWINGS FOR REQUIREMENTS

SHEET INDEX:

A00 COVER SHEET AND SITE PLAN A01 GARAGE AND DECK FLOOR PLAN A02 SECTIONS AND ELEVATIONS

A03 DETAILS S-G01 GENERAL STRUCTURAL NOTES S-G02 GENERAL NOTES AND SCHEDULES S-S01 STRUCTURAL PLANS S-S02 STRUCTURAL DETAILS





INTERNATIONAL BUILDING CODE REQUIREMENTS ARE TO BE FOLLOWED PER THE 2021 EDITION AS WELL AS ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION

THE PROPOSED DEVELOPMENT DOES NOT ALTER GEOLOGICALLY HAZARDOUS AREAS PER

COMPLY WITH THE IRC (INTERNATIONAL RESIDENTIAL CODE) REQUIREMENTS FOR A

• Garage floor surface must be approved non-combustible material (IRC R309.1) • A garage floor must be sloped toward the vehicle entry door to facilitate the drainage of liquids (IRC

• An automatic garage door opener must be listed and labeled for UL-325.

• A garage must have at least one GFCI-protected receptacle outlet at each vehicle bay [NEC 211.10(C)(4)]. • The wall between an attached garage and the house living area is required to be minimum 1/2" drywall. • Door between garage minimum a 20-minute fire rating solid door (IRC R302.5.1).

EXISTING STREET FACADE













EXISTING PLANTS

1 DRIENTAL GRASSES

BLUE FESCUE (FESTUCA GLAUCA)

GOLDEN JAPANESE FOREST GRASS (HAKONECHLOA MACRA AURCOLA)

2 BUSHES

(RHDDDDENDRDN GRIFFITHIAUM) HDNDRABLE JEAN MARIE

2 3 T

TOTAL EXISTING LOT COVERAGE: 3,942 SQFT (MAIN ROOF STRUCTURE AREA: 2,930 SQFT

ALEV HOUSE SITE PLAN

SCALE: 1/16"= 1'-0"



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Umut Alev

PROJECT CONTACT: ZEYNEP B. ALEV, PHONE: 425 233 5913 JURISDICTION: City of Mercer Island WA **ZONING: Residential**

DRAWING LOG:





MIRAGE PORCELAIN SIMULATED-WOOD PLANK DECKING OVER LATICRETE MORTAR PRODUCT W/SCHLUTER DITRA MAT FOR FRACTURE RESILIENCY MEMBRANE METAL FLASHING 1-1/8 APA- RATED DECKING (ALTERNATIVELY, USE 2 LAYERS OF $\frac{5}{8}$ " APA-RATED SHEATHING PER PANE) RECESSED LIGHTING DRIP EDGE REAR RAKE DETAIL 1 A03 SCALE: 1"=1'-0" R21 BATT INSULATION -EXTERIOR WALL SHEATHING WEATHER RESISTANT BARRIER-FIBER CEMENT SIDING 2" STARTER GRADE SLOPES AWAY FROM BUILDING EXISTING FOOTING DRAINAGE SYSTEM

3 WALL DETAIL ^{A03} SCALE: 1"=1'-0"

MIRAGE PORCELAIN SIMULATED-WOOD	
OVER LATICRETE MORTAR PRODUCT	
W/SCHLUTER DITRA MAT FOR FRACTURE	
RESILIENCY	
MEMBRANE	
METAL FLASHING	
1-1/8 APA- RATED DECKING	
(ALTERNATIVELY, USE 2 LAYERS OF $\frac{5}{8}$ "	
APA-RATED SHEATHING PER PANEL	E++
DRIP EDGE	

A03

A03

MIRAGE PORCELAIN SIMULATED-WOOD PLANK DECKING OVER LATICRETE MORTAR PRODUCT W/SCLUTER DITRA MAT FOR FRACTURE RESILIENCY MEMBRANE 1-1/8 APA- RATED DECKING (ALTERNATIVVELY, USE 2 LAYERS OF 5/8:" APA-RATED SHEATHING PER PANEL) R38 BATT INSULATION -



 $\frac{3}{4}$ DRYWALL 2"X6" STUDS @16" o.c. R21 BATT INSULATION ³/₄ EXTERIOR GRADE PLYWOOD SHEATHING WEATHER RESISTANT BARRIER - BEVEL FIBER CEMENT SIDING

2 EAVE DETAIL SCALE: 1"=1'-0"



DECK CONNECTION TO HOUSE DETAIL

SCALE: 1"=1'-0"

ÿM **V**A "0-- $\overline{}$ ш 11 98040 . . SCALE: NOTED OTHEF DRAWN BY: ZI Island Mercel St REBUILD 3rd Ô ECK S 6848 DESCRIPTION:GARAGE D SHEET TITLE: DETAILS House Alev PROJECT OWNER: Umut Alev PROJECT CONTACT: ZEYNEP B. ALEV, PHONE: 425 233 5913 JURISDICTION: City of Mercer Island WA ZONING: Residential **DRAWING LOG:**





PROJECT TITLE ALEV RESIDENCE DECK AND GARAGE REPLACEMENT 6848 SE 33RD ST MERCER ISLAND, WA 98040

sheet SO1



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PROJECT TITLE ALEV RESIDENCE DECK AND GARAGE REPLACEMENT 6848 SE 33RD ST MERCER ISLAND, WA 98040

S02

SHEET

GENERAL REQUIREMENTS:

- THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS SPECIFICALLY NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION
- THESE PLANS AND SPECIFICATIONS AND THE ENGINEERING AND DESIGN WORK THEY PERTAIN TO ARE INTENDED SOLELY FOR THE PROJECT SPECIFIED HEREIN. MCGRAW STRUCTURAL ENGINEERING, LLC DISCLAIMS ALL LIABILITY IF THESE PLANS AND SPECIFICATIONS OR THE DESIGN, ADVICE, AND INSTRUCTIONS PERTAINING THERETO ARE USED ON ANY PROJECT OR AT ANY LOCATION OTHER THAN THE PROJECT AND LOCATIONS SPECIFIED HEREIN.
- CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE AND REPORT ANY ERRORS, OMISSIONS, OR POSSIBLE DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS TO THE ENGINEER
- PRIOR TO PROCEEDING WITH THE WORK. SPECIAL CARE SHALL BE GIVEN TO SITE AND BUILDING LAYOUT THEREON. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND EQUIPMENT NECESSARY TO PROTECT THE STRUCTURE, WORKMEN AND OTHER PERSONS AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR SHALL AT HIS EXPENSE ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT THE SAME IN THE FIELD. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE OBSERVANCE OF ALL FEDERAL. STATE AND LOCAL SAFETY REGULATIONS DURING CONSTRUCTION, INCLUDING THE INSTALLATION OF UNDERGROUND SERVICES
- WORK WITH THESE DRAWINGS WITH CIVIL, MECHANICAL, ELECTRICAL AND FIRE PROTECTION DRAWINGS. NO PIPES, DUCTS, SLEEVES, CHASES, ETC., SHALL BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED, NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC..., UNLESS OTHERWISE NOTED. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS.
- NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES. NO CHANGES SHALL BE MADE TO THESE DRAWINGS WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE
- STRUCTURAL ENGINEER. 10. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.
- . OPTIONS, IF PROVIDED HEREIN, ARE FOR THE CONTRACTOR'S CONVENIENCE . HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY, SHALL COORDINATE ALL DETAILS, SHALL OBTAIN ALL REQUIRED APPROVALS, AND PAY ALL COSTS INCIDENT THERETO, REJECTION OF MATERIALS AND/OR WORKMANSHIP, ANY MATERIAL FOUND NOT TO MEET THE SPECIFICATIONS SHALL BE REMOVED FROM THE SITE IMMEDIATELY, IMPROPER MATERIAL ALREADY INSTALLED OR MATERIALS IMPROPERLY INSTALLED SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. IF THE CONTRACTOR SO ELECTS, INDIVIDUAL SITUATIONS WILL BE EVALUATED FOR POSSIBLE ACCEPTANCE IF CERTAIN MODIFICATIONS AS DETERMINED OR APPROVED BY THE ENGINEER OF RECORD ARE MADE. THE CONTRACTOR WILL BE BILLED BY THE ENGINEER AT THE ENGINEER'S NORMAL HOURLY RATE FOR ANY TIME SPENT EVALUATING AND/OR REDESIGNING FOR SUCH OCCURRENCES.

DESIGN STANDARDS

THE WASHINGTON AMENDED 2021 INTERNATIONAL BUILDING CODE (IBC) WITH SPECIFIC REFERENCED STANDARDS AS FOLLOWS:

- ASCE 7-16; MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- ACI 318-19; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- AISC SPECIFICATION FOR STEEL BUILDINGS; ANSI/AISC 360-16; AISC 341-16; SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS
- 2018 NDS; NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH 2018 SUPPLEMENT AND ADDENDUM. 2021 SDPWS SPECIAL DESIGN PROVISIONS FOR WIND/SEISMIC.
- TMS 402-16; BUILDING CODE FOR MASONRY STRUCTURES

DESIGN LOADS

ROOF DECK DL:	15 PSF				
ROOF DECK LL:	60 PSF (REDUCABLE FOR AREA PER IBC)				
SNOW:	25 PSF GROUND SNOW, 20 PSF SLOPED ROOF SNOW				
COLLATERAL:	N/A				
WIND LOAD:	98 MPH ULTIMATE DESIGN WIND SPEED (EXPOSURE C, ENCLOSED)				
SEISMIC:	DESIGN CATEGORY D (PER IBC), DESIGN CATEGORY D2 (PER IRC)				
SEISMIC FORCE RESISTING SYSTEM ("SFRS" PER TABLE 12.2-1 OF ASCE 7-16):					

A.15 - Light-frame (wood) walls sheathed with wood structural panels rated for

resistance		
R = 6.5	$\Omega_{ m o}$ = 2.5 (flexible diaphragms)	$C_{d} = 4.0$
$C_{\rm S} = 0.17$	$\Omega_{ m o}=$ 3.0 (rigid diaphragms)	$l_{\rm E} = 1.0$

UTILIZED SEISMIC ANALYTICAL PROCEDURE

shear res

ALL STRUCTURES ARE DESIGNED BY THE EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7-16 SECTION 12.8 AS REQUIRED BY SECTION 12.6. WHERE EXISTING CONSTRUCTION EXISTS, THE IEBC SHALL BE USED. NO STRUCTURAL ELEMENT/SYSTEM CONTAINED HEREIN SHALL BE EVALUATED UNLESS AN ALTERATION CHANGES THE LOAD PATH OR SIGNIFICANTLY INCREASES (MORE THAN 5%) ANY STRESS TO AN EXISTING ELEMENT.

FOUNDATION PARAMETERS

SOIL TYPE ASSUMED: SILTY-CLAY (TYPE 5 SOIL) PER IBC TABLE 1610.1 AND 1806.2 BEARING CAPACITY: 1500 PSF ALLOWABLE (SUSTAINED LOADS)

2000 PSF ALLOWABLE (SEISMIC OVERTURNING LOADS) AS PERMITTED BY ASCE 7-16 12134

GRADE SUPPORT SLABS AND SHALLOW FOUNDATIONS

- THE EXISTING FOUNDATION COMPRESSIVE STRENGTH. I'C IS BELIEVED TO EQUAL OR EXCEED **3000** PSI. HOWEVER, ANY NEW FOUNDATION WORK THAT MAY RESIDE IN THESE PLANS SHALL BE PROVIDED WITH **3000** PSI, BUT DESIGNED TO 2500 PSI THEREBY ELIMINATING THE REQUIREMENT FOR SPECIAL INSPECTIONS.
- FOUNDATIONS FOR GRADEBEAMS SUPPORTING SEISMIC FORCE RESISTING SYSTEMS (SFRS) SHALL BE INSTALLED WITH 3000 PSI AND DESIGNED TO 3000 PSI AS REQUIRED BY THE ACI 318.
- IF WET SOIL CONDITIONS EXIST, CONTACT THE ENGINEER. IT MAY BE PERMISSIBLE TO USE 6" OF $\frac{3}{4}$ " MINUS COMPACTED GRAVEL TO IMPROVE WET CONDITIONS THAT OFTEN CAUSE EXCESSIVE EARLY ONSET SETTLEMENT.



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REINFORCED CONCRETE

- 1. CEMENT FOR CONCRETE OR GROUT SHALL CONFORM TO ASTM C150, TYPE I. MINIMUM CEMENT CONTENT 500 LBS/CU YD
- 2. AGGREGATES SHALL CONFORM TO ASTM C33 FOR NORMAL WEIGHT CONCRETE AND ASTM C330 FOR LIGHTWEIGHT CONCRETE.
- READY MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94. 4. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST ACI CODE (ACI 318) AND DETAILING MANUAL (ACI 315), UNLESS OTHERWISE DETAILED OR NOTED IN DRAWINGS.
- CONCRETE SHALL HAVE A MINIMUM ULTIMATE STRENGTH AT 28 DAYS TABULATED BELOW. EXCEPTIONS SHALL BE NOTED HEREIN OR ON DRAWINGS. SUBMIT CONCRETE MIX DESIGNS TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. LOCATION

ALL SLABS & FOOTINGS FLUSH WITH SLABS: 3000 PSI; W/C=0.48 MAX [DESIGNED TO 2500 PSI] LOCATION

- THICKNESSES LESS THAN OR EQUAL TO 24" 3/4" AGGREGATE THICKNESSES EXCEEDING 24" THICKNESS 1" AGGREGATE OR $\frac{3}{4}$ " AGGREGATE
- 6. ADMIXTURES MAY BE USED WITH APPROVAL OF THE ENGINEER. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT. ALL CONCRETE WITH HORIZONTAL SURFACES EXPOSED TO THE WEATHER SHALL HAVE 5% ± 1% ENTRAINED AIR.
- INTERIOR SLABS AND FOOTINGS FLUSH WITH TOP OF SLAB SHALL HAVE A HARD STEEL TROWELED SURFACE.
- EXTERIOR SLABS TO HAVE LIGHT BROOM FINISH.
- 10. REFER TO DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR TEXTURES REQUIRED TO BE CAST INTO CONCRETE AND FOR EXTENT OF DEPRESSIONS, CURBS, AND RAMPS.
- 11. PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4 INCH CHAMFER UNIESS OTHERWISE NOTED
- 12. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE SECURED IN POSITION PRIOR TO POURING OF CONCRETE
- 13. MINIMUM EMBEDMENT OF ALL ANCHOR BOLTS (A.B.), UNLESS OTHERWISE NOTED ON PLANS: 7 INCHES IN FOOTINGS OR TOP OF CONCRETE, AND 4-1/2 INCHES INTO VERTICAL CONCRETE SURFACES. ALL BOLTS SHALL HAVE A STANDARD BOLT HEAD AT THE EMBEDDED END. ANCHOR BOLTS SHALL BE SPACED A MINIMUM 12 DIAMETERS. IN LIEU OF BOLTS OR DOWELS IN CONCRETE, APPROVED CAST IN PLACE THREADED INSERTS MAY BE USED. 14. LOCATION OF CONSTRUCTION JOINTS NOT SPECIFICALLY INDICATED ON DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING REINFORCING STEEL.
- 1.5. CONCRETE SLABS AND WALLS VARIATIONS FROM LEVEL TO BE 1/8 INCH IN TEN FEET MAXIMUM, UNLESS OTHERWISE NOTED ON DRAWINGS. 16. DETERMINE SIZE AND LOCATION OF ANCHOR BOLTS, PADS, SLEEVES, ETC., FOR MECHANICAL EQUIPMENT
- MANUFACTURER CERTIFIED DRAWINGS. 17. WHERE APPROVED BY ENGINEER, PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT SHALL NOT BE
- EMBEDDED THEREIN. 18. PROVIDE NO OPENINGS IN FRAMED SLABS, WALLS, AND BEAMS UNLESS SHOWN AND DETAILED ON STRUCTURAL
- DRAWINGS OR APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
- 19. FINE GROUT MINIMUM COMPRESSIVE STRENGTH SHALL BE 5000 PSI AT 28 DAYS. SUBMIT GROUT MIX DESIGN TO THE STRUCTURAL ENGINEER FOR REVIEW.
- 20. COARSE GROUT SHALL BE OF FLUID CONSISTENCY. APPROVED ADMIXTURES MAY BE ADDED TO THE GROUT MIX. GROUT SHALL ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS. SUBMIT GROUT MIX DESIGN TO THE STRUCTURAL ENGINEER FOR REVIEW.
- 21. DRY PACK SHALL OBTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH MEETING OR EXCEEDING THE CONCRETE SPECIFIED COMPRESSIVE STRENGTH fc AT 28 DAYS. SUBMIT GROUT MIX DESIGN TO THE STRUCTURAL ENGINEER FOR REVIEW
- 22. PROPER CURING OF ALL CONCRETE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE DONE IN A MANNER RECOMMENDED BY THE LATEST EDITION OF THE ACI CODE.
- 23. SHORING AND RESHORING DESIGN IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL CONFORM TO ACI 347R-. SHORING AND SUPPORTING FORMWORKS SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE CONCRETE STRENGTH IS AT LEAST 70 PERCENT OF DESIGN STRENGTH, OR 7 DAYS CURED, WHICHEVER IS MORE STRINGENT FROM CYLINDER TEST DATA.

REINFORCING STEEL

- 1. ALL REINFORCING STEEL, UNLESS OTHERWISE NOTED IN DRAWINGS, SHALL CONFORM TO ASTM A615, GRADE 60. 2. ALL WELDED WIRE FABRIC TO BE 60,000 PSI YIELD STRENGTH CONFORMING TO ASTM A497, A496 AND A185. ALL FABRIC SHALL BE IN FLAT SHEETS OF SIZE NOTED ON THE PLANS.
- 3. REINFORCING DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH CRSI "MANUAL OF STANDARD PRACTICE" LATEST EDITION.
- 4. ALL WELDING OF REINFORCING BARS SHALL BE DONE BY THE SHIELDED METAL ARC WELDING PROCESS, IN ACCORDANCE WITH AWS D12.1 (LATEST EDITION) AND BE PERFORMED BY CERTIFIED WELDERS AND CONTINUOUSLY INSPECTED BY A LICENSED INSPECTOR APPROVED BY THE LOCAL GOVERNING AUTHORITY.
- 5. ALL REINFORCING WHICH IS TO BE WELDED SHALL MEET ASTM A706 GRADE 60 OR A615 GRADE 60 WITH MAXIMUM EQUIVALENT CARBON OF 0.5 AS DEMONSTRATED BY MILL TEST REPORTS.
- 6. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. SPLICES AT OTHER LOCATIONS MAY BE ALLOWED ONLY IF APPROVED BY THE STRUCTURAL ENGINEER. 7. STANDARD LAP SPLICES FOR WELDED WIRE FABRIC SHALL BE 12 INCHES OR 2 WIRE SPACES, WHICHEVER IS
- GRFATER 8. VERTICAL BARS IN WALLS SHALL BE ACCURATELY POSITIONED AT THE CENTER OF WALL, UNLESS OTHERWISE NOTED
- ON DETAILS AND SHALL BE TIED IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS 9. SPLICES IN ADJACENT HORIZONTAL WALL REINFORCING BARS SHALL BE STAGGERED 4'-0" MINIMUM UNLESS
- OTHERWISE NOTED. 10. BARS NOTED "CONT." AND TYPICAL WALL REINFORCING SHALL HAVE A MINIMUM SPLICE EQUAL TO THE STANDARD
- LAP SPLICES UNLESS OTHERWISE SHOWN ON THE DRAWINGS. 11. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE SECURED IN POSITION PRIOR TO
- PLACING CONCRETE OR GROUT.
- 12. PROVIDE DOWELS IN FOOTINGS AND/OR GRADE BEAMS THE SAME GRADE, SIZE AND NUMBER AS VERTICAL WALL OR COLUMN REINFORCING. DOWELS SHALL HAVE A MINIMUM PROJECTION EQUAL TO STANDARD LAP SPLICE UNLESS OTHERWISE NOTED 13. PROVIDE THE FOLLOWING MINIMUM PROTECTIVE COVERING OF CONCRETE UNLESS OTHERWISE NOTED:

R:
- 3" CLEAR
2" CLEAR
1" CLEAR
EATHER:
3/4" CLEAR
3/4" CLEAR
1-1/2" CLEAR
3/4" CLEAR
1-1/2" CLEAR
3/4" CLEAR



PROJECT SCOPE NARRATIVE

- 1. STRUCTURAL ENGINEERING SCOPE: THIS PROJECT IS A LIMITED-SCOPE PROPOSAL FOR A GARAGE AND DECK REPLACEMENT DAMAGED BY WATER AND BUG INFESTATION. LIGHT-FRAME-CONSTRUCTION IS COMPRISED OF SAME GEOMETRIES AND FRAMING ORIENTATIONS AS THE EXISTING GARAGE BEING DEMOLISHED. MAIN LONGITUDINAL BEAM, BEING ROTTED AND EATEN, SHALL BE REPLACED WITH A W12 STEEL BEAM. BECAUSE OF THE SIMILAR SCOPE AND SIZE OF CONSTRUCTION, IT IS OBSERVED BY ENGINEERING JUDGEMENT THAT THE STRUCTURE WILL NOT CONTRIBUTE ANY MORE LOAD THAN BEFORE THE DEMOLITION BASED UPON PRESCRIPTIVE REQUIREMENTS FOUND IN SECTION 302.5 OF THE IEBC 2018. 2. THESE PLANS ARE INTENDED TO ACCOMPANY ARCHITECTURAL DRAWINGS PROVIDED BY OTHERS.

GENERAL STRUCTURAL NOTES

AGGREGATE

STRUCTURAL STEEL

- WIDE FLANGE BEAMS SHALL CONFORM TO ASTM A992, Fy=50KSI. STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B, TYPE E OR S, (Fy = 35 KSI).
- MISCELLANEOUS SHAPES AND PLATES SHALL CONFORM TO ASTM A36, UNLESS OTHERWISE NOTED.
- 4. STEEL TUBE SHALL CONFORM TO ASTM A500, GRADE B, (Fy = 46 KSI).
- 5. ALL MAIN MEMBERS SHALL HAVE BOLTS CONFORMING TO ASTM A325 OR F1852. 6. MACHINE BOLTS AND ANCHOR BOLTS SHALL CONFORM TO ASTM A307, GRADE A, UNLESS OTHERWISE NOTED.
- 7. ALL WELDING SHALL BE BY THE ELECTRIC SHIELDED ARC PROCESS, USING E70-XX ELECTRODES AND SHALL COMPLY WITH AWS D1.1 SPECIFICATIONS FOR WELDING AND FABRICATION.
- 8. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- 9. GIRDERS OF STEEL FRAMES SHALL BE SUPPORTED AT ALL TIMES UNTIL CONNECTIONS ARE FULLY WELDED AT DESIGNATED FIELD SPLICES TO PREVENT EXCESSIVE BENDING FROM THEIR OWN WEIGHT. 10. NO WELDING SHALL BE DONE UNTIL AS MUCH OF THE STRUCTURE THAT WILL BE STIFFENED THEREBY HAS BEEN PROPERLY
- ALIGNED.
- 11. SEQUENCE OF PLACING WELDS SHALL BE SUCH AS TO AVOID DISTORTION OF MEMBERS 12. ONE-SIDED CONNECTIONS WILL NOT BE PERMITTED UNLESS DETAILED ON THE DRAWINGS.
- 13. ALL BUTT WELDS SHALL BE FULL PENETRATION UNLESS OTHERWISE DETAILED ON THE PLANS.
- 14. ALL SHOP WELDING SHALL BE PERFORMED BY WELDERS HAVING A CURRENT AWS CERTIFICATE FOR THE TYPE OF WELDING BEING PERFORMED AND IN A SHOP LICENSED BY THE LOCAL AUTHORITY.
- 15. ALL FIELD WELDING SHALL BE DONE BY WABO CERTIFIED WELDERS AND CONTINUOUSLY INSPECTED BY A LICENSED INSPECTOR APPROVED BY THE LOCAL AUTHORITY.
- 16. ALL STEEL MEMBERS AND HARDWARE WHERE NOTED ON THE PLANS TO BE GALVANIZED SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION WITH A 6 MIL MINIMUM COATING.
- 17. SHOP PAINT ALL STEEL EXCEPT STEEL TO BE ENCASED IN CONCRETE, SURFACES TO BE WELDED, CONTACT SURFACES TO BE HIGH STRENGTH BOLTED. AFTER THE ERECTION IS COMPLETE TOUCH-UP ALL SHOP PRIMING COAT DAMAGED DURING TRANSPORTATION OR ERECTION AND PRIME ALL FIELD WELDS. ALL PRIMER PAINT SHALL CONFORM WITH FEDERAL SPECIFICATION TT-P-615D (2), TYPE 1.

WELD NOTES:

- 1. WELDED CONNECTIONS UNLESS NOTED OTHERWISE. a.) FLANGE TO FLANGE - FULL PENETRATION BUTT OR GROOVE WELD.
- b.) FLANGE TO WEB OR COLUMN. FULL PENETRATION BUTT OR GROOVE WELD

$$t = FLANGE THICKNESS \times .75 (3/8" MAX., 3/16" MIN.)$$

- $t = WALL THICKNESS OF CUT END \times .75, 1/4" MIN.$ (IF ORIENTATION ALLOWS, USE FILLET WELD AT FLAT, PERPENDICULAR PARTS BEING JOINED PER TABLE BELOW)
- 2. THE MINIMUM FILLET WELD SIZE SHALL BE THE GREATER OF: a.) AS NOTED ON DWG.
- b.) AS DEFINED IN NOTE "1." ABOVE, OR c.) BASED ON THE THICKER PART BEING JOINED:

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THICKNESS OF THINNER PART	MINIMUM FILLET WELD SIZE
TO 1/2" OVER 1/2" TO 3/4" OVER 3/4"	3/16" 1/4" 5/16"

3. MISCELLANEOUS STEEL SHALL BE ASTM A36, WELDED WITH E70XX ELECTRODES. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

4. BACK UP BARS @ ALL GROOVE WELDS ARE TO MEET "AWS" STANDARDS

- AND WILL BE SUPPLIED BY ERECTOR
- 5. BIN WALLS, STIFFENERS AND CHUTE TO BE CONTINUOUS SEAL WELD.

STRUCTURAL ABBREVIATIONS:

ABBREV	DEFINITION	A
AFF	ABOVE FINISHED FLOOR	HI
ARCH	ARCHITECT / ARCHITECTURAL	H١
BEJ	BUILDING EXPANSION JOINT	IN
btwn	BETWEEN	JB
BLDG	BUILDING	JT
BM	BEAM	KC
BOD	BOTTOM OF DECK	L
BOT	BOTTOM	LLI
BRG	BEARING	
	CENTER TO CENTER	LS
		LS
	CONCRETE MASONRY LINIT	L V A A
	CONCRETE	1VU NA
CONT	CONTINUOUS	M
COL	COLUMN	M
DBL	DOUBLE	М
DCJ	DOWELED CONSTRUCTION	М
	JOINT	М
DJ	DOUBLE JOIST	М
DWGS	DRAWINGS	M
EA	EACH	M
EF	EACH FACE	N
EJ	EXPANSION JOINT	N
ELEV	ELEVATION	0
EO3	EDGE OF SLAB	PA
		DI
		R
FXT	FXTERIOR	RF
FD	FLOOR DRAIN	RE
FND	FOUNDATION	
FO	FACE OF	RE
FF EL	FINISHED FLOOR ELEVATION	SF
FIN	FINISH	SI
fin Flr	FINISHED FLOOR	SJ
fob	FACE OF BUILDING	SL
FOC	FACE OF CONCRETE	T8
FOM	FACE OF MASONRY	T8
FOS	FACE OF SLAB/STUD	TH
FRMG	FRAMING	
		12
GK DIVI		
HOR7	HORIZONTAL	\/F
HSS	HOLLOW STRUCTURAL SHAPES	Ŵ

BBREV	DEFINITION
Γ	HEIGHT
/Y	HEAVY
Т	INTERIOR
E	JOIST BEARING ELEVATION
	JOINT
Cl	KEYED CONSTRUCTION JOIN
	LOW
H	LONG LEG HORIZONTAL
V	LONG LEG VERTICAL
Н	LONG SIDE HORIZONTAL
V	LONG SIDE VERTICAL
WT	LIGHTWEIGHT
VC	LIGHTWEIGHT CONCRETE
AS	MASONRY
ATL	MATERIAL
AX	MAXIMUM
D	METAL DECK
ECH	MECHANICAL
FR	MANUFACTURER
ID	MIDDLE
IN	MINIMUM
OD	MODIFY
OS	MID-DEPTH OF SLAB
MC	NOMINAL
ГS	NOT TO SCALE
С	ON CENTER
png	OPENING
νF	POWDER ACTUATED
	FASTENER
	PLATE
	radius
F	REFERENCED
INF	REINFORCE, REINFORCED,
	REINFORCING
QD	REQUIRED
	STEPPED FOOTING
Μ	SIMILAR
	Sawn Joint
	SLOPE
kВ	top and bottom
kG	TONGUE AND GROOVE
łΚ	THICK, THICKNESS
DF	TOP OF FOOTING
ЭМ	top of masonry
DS	TOP OF STEEL
	THICKENED SLAB
Έ	TYPICAL
NС	UNLESS OTHERWISE NOTED
т	

VERTICAL WELDED WIRE FABRIC /WF

GLUED LAMINATED TIMBER

- 2012
- 3
- ASSURANCE PROCEDURES.
- FOLLOWING STRUCTURAL USES AND APPLICABLE:
- a. SIMPLE SPAN BENDING MEMBER (B)
- b.
- COMPRESSION MEMBER (C) с. d. TENSION MEMBER (T
- (B, CB, C, OR T) LABELED ABOVE
- CONDITIONS SHALL BE PERMITTED.
- EXPOSURE.

- COATING

- SHIPMENT.

SAWN LUMBE

USE

DIM. LUMBER 2" TO 4" THICK BEAMS 5" X 5" AND LARGER POSTS (REGARDLESS OF SIZE) T & G DECKING

- PROVIDED TO THE SER
- FOLLOWING NAIL SIZES SHALL BE USED:

NOTED OTHERWISE.

_			
	NAIL	SHANK DIAMETER (IN.)	MIN. PENETRATION DEPTH INTO FRAMING MEMBER (IN.)
	6d	0.113	1.25
	8d	0.131	1.50
	10d	0.148	1.625
	12d	0.148	1.625
	16d	0.162	1.875

1. TEMPORARY SUPPORT OF THE HEAVY TIMBER SYSTEM INCLUDING, BUT NOT LIMITED TO, LATERAL BRACING, BRIDGING, BLOCKING, STRONG-BACKS (OR OTHER DEVICES AS REQUIRED), AND CONNECTIONS FROM THE TIMBER FRAME SYSTEM TO THE LATERAL FORCE RESISTING SYSTEM SHALL BE INSTALLED AND MAINTAINED WHILE THE REMAINDER OF CONSTRUCTION IS COMPLETED. ONCE ALL CONSTRUCTION IS COMPLETE, THE TEMPORARY SUPPORT SYSTEM COMPONENTS MAY BE REMOVED AND RETURNED TO THE SUPPLIER OF THAT MATERIAL.

2. THE STRUCTURAL GLUED LAMINATED TIMBER SHALL BE FURNISHED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE FOLLOWING SPECIFICATION: ANSI 117-2020, NDS 2012, AND THE AITC TIMBER CONSTRUCTION MANUAL,

FOR CUSTOM DESIGNED MEMBERS, SHOP DRAWINGS AND DETAILS SHALL BE FURNISHED BY THE MANUFACTURER/SELLER AND APPROVAL OBTAINED FROM THE STRUCTURAL ENGINEER BEFORE FABRICATION IS BEGUN. THE GENERAL CONTRACTOR SHALL FURNISH CONNECTION STEEL AND HARDWARE (SIMPSON OR APPROVED EQUAL) FOR JOINING STRUCTURAL GLUED LAMINATED TIMBER MEMBERS TO EACH OTHER AND TO THEIR SUPPORTS, EXCLUSIVE OF ANCHORAGE EMBEDDED IN MASONRY OR CONCRETE, SETTING PLATES, AND ITEMS FIELD-WELDED TO STRUCTURAL STEEL. STEEL CONNECTIONS SHALL BE FINISHED WITH A MINIMUM OF ONE COAT OF RUST-INHIBITING PAINT. MATERIALS, MANUFACTURER, AND QUALITY ASSURANCE - STRUCTURAL GLUED LAMINATED TIMBER OF SOFTWOOD SPECIES SHALL BE IN ACCORDANCE WITH ANSI/AITC STANDARD A190.1, AMERICAN NATIONAL STANDARD FOR STRUCTURAL GLUED LAMINATED TIMBER, OR OTHER CODE-APPROVED DESIGN, MANUFACTURING AND/OR QUALITY

END-USE APPLICATION - STRUCTURAL GLUED LAMINATED TIMBER MEMBERS SHALL BE MANUFACTURED FOR THE

CONTINUOUS OR CANTILEVERED SPAN BENDING MEMBER (CB)

24F-1.8E, 24F-V4 DF/DF 24F-1.8E, 24F-V8 DF/DF 24F-1.8E, 24F-V8 DF/DF 24F-1.8E, 24F-V8 DF/DF

3. DESIGN VALUES - STRUCTURAL GLUED LAMINATED TIMBER SHALL PROVIDE DESIGN VALUES FOR NORMAL LOAD DURATION AND DRY-USE CONDITION. THE DESIGN SHOULD SPECIFY A LAYUP COMBINATION FROM THE NOTED TYPES

4. APPEARANCE GRADE - GLULAM SHALL BE (FRAMING) (FRAMING-L) (INDUSTRIAL) (INDUSTRIAL-L) (ARCHITECTURAL) (PREMIUM) GRADE IN ACCORDANCE WITH ANSI/AITC STANDARD A190.1. LAMINATED ADHESIVES - ADHESIVES USED IN THE MANUFACTURE OF STRUCTURAL GLUED LAMINATED TIMBER SHALL MEET REQUIREMENTS FOR WET USE CONDITIONS IN UNCONDITIONED SPACES, OTHERWISE DRY-USE SERVICE

6. CAMBER (WHEN APPLICABLE) - STRUCTURAL GLUED LAMINATED TIMBER SHALL BE MANUFACTURED WITH A BUILT-IN CAMBER FOR (B) TYPE LAYUP CONFIGURATIONS (24F-1.8E, 24F-V4 DF/DF). CONTRACTOR SHALL ASSUME A CAMBER RADIUS OF 3500 FT UNLESS OTHERWISE NOTED FOR SIMPLE-SPAN CONFIGURATIONS. PRESERVATIVE-TREATMENT (WHEN APPLICABLE) - GLULAM SHALL BE PRESSURE TREATED AFTER MANUFACTURE IN

ACCORDANCE WITH AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STANDARD U1 WITH A CREOSOTE OR CREOSOTE/COAL TAR SOLUTION, A PENTACHLOROPHENOL IN OIL, A PENTACHLOROPHENOL IN LIGHT SOLVENT, A COPPER NAPHTHENATE, OR SIMILAR PRESERVATIVE AS REQUIRED FOR SOIL CONTACT AND/OR ABOVE GROUND

8. FIRE RESISTANCE (WHEN APPLICABLE) - GLULAM SHALL BE SIZED AND MANUFACTURED FOR ONE-HOUR FIRE RESISTANCE. THE USE OF PRESSURE IMPREGNATED FIRE RETARDANT TREATMENTS IS NOT RECOMMENDED. 9. PROTECTIVE SEALERS AND FINISHES - UNLESS OTHERWISE NOTED, SEALER SHALL BE APPLIED TO THE ENDS OF ALL MEMBERS. SURFACES OF MEMBERS SHALL BE SEALED WITH PENETRATING SEALER OR SEALED WITH PRIMER/SEALER

10. TRADEMARKS - MEMBERS SHALL BE MARKED WITH AAPA EWS TRADEMARK INDICATING CONFORMANCE WITH THE MANUFACTURING, QUALITY ASSURANCE, AND MARKING PROVISIONS OF ANSI/AITC STANDARD A190.1. 11. CERTIFICATES (WHEN APPLICABLE) - A CERTIFCATE OF CONFORMANCE MAY BE PROVIDED BY THE MANUFACTURER/SELLER TO INDICATE CONFORMANCE WITH ANSI/AITC STANDARD A190.1 IF REQUESTED. 12. PROTECTION FOR SHIPMENT - MEMBERS SHALL BE LOAD WRAPPED WITH A WATER-RESISTANT COVERING FOR

1. SAWN DIMENSION LUMBER SHALL MAINTAIN CONFORMANCE TO THE WEST COAST LUMBER INSPECTION BUREAU OR WESTERN WOOD PRODUCTS ASSOCIATION GRADING RULES.

KILN-DRIED LUMBER IS RECOMMENDED AT ALL MEMBERS COMMON TO 2-STORY AREAS. 3. LUMBER SHALL CORRESPOND PER USE, SPECIES, AND STRENGTH AS SHOWN BELOW:

	Fb (PSI)				
	DOUGLAS FIR-LARCH NO. 2	900			
	DOUGLAS FIR-LARCH NO. 1	1350			
	DOUGLAS FIR-LARCH NO. 1	1200			
	DOUGLAS FIR-LARCH COMM. DEX	1450			

4. ALL STRUCTURAL LUMBER IN CONTACT WITH CONCRETE, CMU, OR WEATHER SHALL BE PRESSURE TREATED (P.T.) OR PROTECTED WITH AN APPROVED MOISTURE BARRIER OR LAMINANT UNLESS NOTED OTHERWISE. 5. FRAMING ACCESSORIES AND STRUCTURAL FASTENERS SHALL BE MANUFACTURED BY SIMPSON STRONG TIE OR APPROVED FOLIAL) AND OF THE TYPE SIZE AND QUANTITY OF FASTENERS SHOWN ON STRUCTURAL DRAWINGS. WHERE SIMPSON CONNECTORS ON DRAWINGS DO NOT MENTION FASTENER QUANTITY, ASSUME THE MAXIMUM PER SIMPSON SPECIFICATIONS. IF SUBSTITUTIONS ARE MADE FOR SIMPSON PRODUCTS SPECIFIED, DOCUMENTATION OF EQUAL OR EXCEEDING STRUCTURAL CAPACITY SHALL BE

6. ALL NAILING TO BE COMMON WIRE NAILS EXCEPT FOR 16d NAILS, WHICH CANNOT FIT IN MOST NAIL GUNS. THEREFORE, USE COMMON WIRE NAILS FOR ALL NAILS LESS THAN OR EQUAL TO 16d NAILS. FOR 16d NAILS, USE BOX (OR SINKER NAILS), UNLESS NOTED OTHERWISE. 7. ALL NAILING TO BE IN ACCORDANCE WITH OREGON STRUCTURAL SPECIALTY CODE TABLE 2304.9.1. THE

8. BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. ALL BOLTS AND LAG SCREWS SHALL BE INSTALLED WITH STANDARD CUT WASHERS. ALL A307 BOLTS SHALL HAVE CUT THREADS. CUTTING AND NOTCHING OF IOISTS SHALL CONFORM ONLY TO IBC SECTIONS 2308.8.2, 2308.9.10, OR 2310.4.2 UNLESS SPECIFICALLY NOTED OTHERWISE.

9. SALVAGED LUMBER SHALL BE GRADED BY AN APPROVED GRADING AGENCY PRIOR TO USE AND SHALL MEET THE MINIMUM BENDING STRESSES SHOWN ABOVE. 10. USE A TYPICAL DOUBLE FLOOR JOIST UNDER PARTITION WALLS THAT RUN PARALLEL TO FLOOR JOISTS UNLESS

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IN THE EVENT CONFLICTS ARE DISCOVERE BETWEEN THE ORIGINAL SIGNED AND SEALE DOCUMENTS PREPARED BY THE ENGINEER OF RECORD AND/OR ANY SUBCONSULTANT, AND ANY COPY OF THE DOCUMENTS TRANSMITTED BY MAIL FAX, ELECTRONICALLY OR OTHERWISE, THE ORIGINAL SIGNED AND SEALED DOCUMENTS SHALL

PROJECT # DATE

22-108 5/8/2023

revisions				

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SHEET

HOLDOWN SCHEDULE (PER LATEST SIMPSON STRONGTIE)

MARK #	HOLDOWN	<u>FASTENERS</u> CONNECTION TO FRAMING MEMBERS	MINIMUM WOOD SIZE	ANCHOR TYPE INTO CONCRETE	ALLOWABLE TENSILE CAPACITY (Ibs)		
HDe	(E)STHD8	(20) 0.148 x 3 1/4 NAILS	2-2x or 4x Jamb	STRAP-TYPE	1220		
HDe	HDU2-SDS2.5	(8) 1/4"x2 1/2" SDS SCREWS	2-2x or 4x Jamb	5/8" ø x 6 1/2" EMBED A.B. [SEE 8/S01]	1400		

HOLDOWN NOTES:

. THE NUMBER AT THE BOTTOM OF THE DIAMOND (AN UPSIDEDOWN TRIANGLE) ON THE PLANS REPRESENTS THE MARK # HOLDOWN REQUIRED. A "(2)" PRECEDING THE NUMBER MEANS 2 STRAPS ARE REQUIRED ON EACH WALL JAMB WHETHER AT THE FAR AND NEAR SIDE OR A DOUBLED JAMB.

. ALL SPECIFIED PRODUCTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. ANY PRODUCT OF EQUAL OR GREATER CAPACITY MAY BE SUBSTITUTED AS FAR AS ITS ABILITY TO SUSTAIN WOOD SIZE AND ANCHORAGE.

3. WOOD MEMBERS ARE EXPRESSED IN NOMINAL DIMENSIONS. LARGER MEMBERS OR ANY COMBINATION THEREOF

MAY BE USED. 4. WHERE TWO OR MORE STEMWALLS MEET, AND ONE OR MORE CONTINUE PAST THE OTHER, IT IS NOT CONSIDERED A CORNER CONDITION FOR DETERMINING HOLDOWN LOCATIONS.

5. WHERE ANY DISCREPANCY OCCURS BETWEEN A SHEARWALL AND HOLDOWN SCHEDULE (OR THEIR SPECIFICATIONS THE MORE STRINGENT SHALL GOVERN.

6. WHERE MINIMUM WOOD SIZE IS SELECTED WITH A MULTI-PLY ORIENTATION, USE 10d x 3" NAILS AT 8"0/c, STAGGERED BETWEEN 2x MEMBERS.

. Anchors smaller than 3/4" diameter shall use standard simpson cut washers.

B. REFERENCE THE PAB SCHEDULE PER SIMPSON TO UNDERSTAND THE INSTALL OF FOOTINGS REQUIRING THE "F" AND "de" DIMENSIONING.

*HDe may utilize the STHD8 if noted in safe, working condition. Otherwise, use HDU2 with post-installed AB per detail 8/S01.

F#	B(in)	L (in)	T (in)*	Rebar Size	Required Spacing (in)	q _{allow} kips sustained
F18R	18" RC	DUND	12	#3	6" o/c E.W.	2.7
F18	18	18	12	#4	12" o/c E.W.	3.4
F24R	24" RC	DUND	12	#3	6" o/c E.W.	4.7
F24	24	24	12	#4	12" o/c E.W.	6.0
27	27	27	12	#4	12" o/c E.W.	7.6
30	30	30	12	#4	12" o/c E.W.	9.4
33	33	33	12	#4	12" o/c E.W.	11.3
36	36	36	12	#4	12" o/c E.W.	13.5
39	39	39	12	#4	12" o/c E.W.	15.8
42	42	42	12	#4	12" o/c E.W.	18.4
48	48	48	12	#4	12" o/c E.W.	24.0
*Contact	*Contact the local jurisdiction if frost depth exceeds the code minimum of 12"					

thereby negating the rebar spacing and thickness as noted above. **Based on a bearing capacity of 1500 PSF prescribed soil with a 25% decrease in required O.T. (or 33% increase in bearing capacity for seismic conditions per ASCE 7 §12.13.4).

SHEARWALL SCHEDULE (DER IBC 2021 SDDW/S ESP 1530) ANCHORAGE SCHEDULE

					2021, 507005, L5	n(-1559)			DULL
SHEAR WALL MARK#	PANEL TYPE	COMMON NAIL TYPE	EDGE NAILING	FIELD NAILING	FRAMING TYPE AT PANEL EDGES	ALLOWABLE SHEAR (plf)	1/2"x7" EMBED A.B. SPACING	5/8"x7" EMBED A.B. SPACING	A35 TOP PL SPACING
S6	15/32" APA-RATED	8d NAILS (.131")	6"	12"	Solid 2x at panel edges, top, and sill plates	280 (E) 390 (W)	45"	64"	24
S4	15/32" APA-RATED	8d NAILS (.131")	4	12"	Solid 2x at panel edges, top, and sill plates	430 (E) 603 (W)	29"	42"	12
S3	15/32" APA-RATED	10d NAILS (.148")	3	12"	Solid 2x at panel edges, top, and sill plates	665 (E) 930 (W)	19"	27"	9
S2 ¹⁰	15/32" APA-RATED	10d NAILS (.148")	2	12"	Solid 3x (or dbl 2x) at panel edges, top, and sill plates	870 (E) 1210 (W)	14"	21"	6

1. DOUBLE 2x SILL PLATES AND/OR DOUBLE 2x STUDS MAY BE USED IN LIEU OF 3x SPECIFIED WALLS WHEREBY THE EDGE SPACING IS LESS THAN 3" o/c.

2. THE LETTER AT THE TOP HALF OF THE DIAMOND SYMBOL ON THE PLANS SPECIFIES THE SHEARWALL TYPE.

3. UNLESS OTHERWISE NOTED, ALL SHEARWALL VERTICAL FRAMING TO BE 16" o/c MAXIMUM. IF STUDS ARE INSTALLED WITH A 24" o/c INTERMEDIATE PATTERN, MAXIMUM FASTENER SPACING TO INTERMEDIATE MEMBERS SHALL BE 6".

4. UNLESS OTHERWISE NOTED, DESIGNATED SHEAR WALLS ARE TO BE BLOCKED AT ALL PANEL EDGES AND SHEATHING IS TO EXTEND FROM BOTTOM PLATE TO TOP PLATE. 5. WHERE SPECIFIED SHEAR WALLS BEAR ON FLOORS BELOW, THE SOLE PLATES SHALL BE FASTENED TO A DOUBLE FLOOR JOIST OR BLOCKING BELOW THE FLOOR DECKING WITH 16d NAILS AT 4"o/c STAGGERED.

6. ALL NAILS IN THESE NOTES AND PLANS REFER TO THE COMMON WIRE NAIL GAGE. GALVANIZED BOX NAILS MAY SERVE AS A SUBSTITUTE FOR COMMON WIRE NAILS. 7. UNLESS OTHERWISE NOTED IN SCHEDULE ABOVE, ALL ANCHOR BOLTS SHALL BE 1/2" DIAMETER AT 48"0/c WITH 7" CONCRETE EMBEDMENT. ALL SILL PLATES SHALL HAVE AN A.B. BETWEEN 4" TO 12" OF EACH END.

8. ALL SHEARWALLS WITHIN THIS SCHEDULE SHALL REQUIRE A MINIMUM OF 0.229"x3"x3" WASHERS NO GREATER THAN 1/2" FROM THE WASHER EDGE TO THE SHEAR PANEL FOR SINGLE-SIDED SHEARWALLS. FOR TWO-SIDED SHEATHING SHEARWALLS, WASHERS MAY BE CENTERED.

9. ALL PLATE WASHERS SHALL BE A MINIMUM 0.229" THICK x 3" SQUARE WITH DIAGONAL SLOTS PERMISSIBLE. ALSO ACCEPTABLE TO USE SIMPSON PBS MATCHING ANCHOR BOLT SIZE PER SCHEDULE. 10. SHEARWALLS NOTED WITH SOLID 3x FRAMING AT SW PANEL EDGES MAY SUBSTITUTE WITH DOUBLE 2x FRAMING FASTENED TOGETHER WITH (2)10dx3" NAILS AT 8"o/c ALONG THE FLAT FACE-TO-FACE OF JAMB STUD.

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FOOTING SCHEDULE

QUALITY ASSURANCE PLAN

STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION, AS DEFINED BY IBC, SECTION 1704.6, SHALL BE PROVIDED BY THE STRUCTURAL ENGINEER OF RECORD. DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER AND THE BUILDING OFFICIAL. AT CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAS BEEN RESOLVED.

ANTICIPATED NUMBER OF VISITS TO THIS SITE SHALL BE 2 VISITS:

• 1ST VISIT TO ASSESS EXISTING CONDITIONS AFTER REMOVAL OF EXISTING DEBRIS AND DETERIORATED BEAMS. • 2ND VISIT TO ASSESS INSTALLATION OF STEEL BM, VERIFY IT'S COLUMN SUPPORT, AND VERIFY SHEARWALL NAILING.

THE PROJECT ENGINEER (ENGINEER) WILL MAKE VISITS TO THE SITE AT INTERVALS AGREED IN THE ENGINEERING CONTRACT IN ORDER TO OBSERVE THE PROGRESS AND QUALITY OF VARIOUS ASPECTS OF CONTRACTOR(S) WORK. BASED ON INFORMATION OBTAINED DURING SUCH VISITS AND ON SUCH OBSERVATIONS, ENGINEER SHALL ENDEAVOR TO DETERMINE IN GENERAL IF SUCH WORK IS PROCEEDING IN ACCORDANCE WITH THE DESIGN DOCUMENTS.

THE PURPOSE OF ENGINEER'S VISITS TO THE SITE WILL BE TO ENABLE ENGINEER TO PROVIDE FOR THE OWNER A GREATER DEGREE OF CONFIDENCE THAT THE COMPLETED WORK OF CONTRACTORIS) WILL CONFORM GENERALLY TO THE DESIGN DOCUMENTS AND THAT THE INTEGRITY OF THE DESIGN CONCEPT AS REFLECTED IN THE DESIGN DOCUMENTS HAS BEEN IMPLEMENTED BY THE CONTRACTOR(S). ON THE OTHER HAND, ENGINEER SHALL NOT, DURING SUCH VISITS OR AS A RESULT OF SUCH OBSERVATIONS OF CONTRACTOR(S) WORK IN PROGRESS, SUPERVISE, DIRECT OR HAVE CONTROL OVER CONTRACTOR(S) WORK NOR SHALL ENGINEER HAVE AUTHORITY OVER RESPONSIBILITY FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR(S), FOR SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL TO THE WORK OF CONTRACTOR(S) TO COMPLY TO THE LAWS, RULES, REGULATIONS, ORDINANCES, CODES OR ORDERS APPLICABLE TO CONTRACTOR(S) FURNISHING AND PERFORMING THEIR WORK. ACCORDINGLY, ENGINEER CAN NEITHER GUARANTEE THE PERFORMANCE OF THE CONSTRUCTION CONTRACTS BY CONTRACTOR(S) NOR ASSUME RESPONSIBILITY FOR CONTRACTOR(S) FAILURE TO FURNISH AND PERFORM THEIR WORK

WOOD STRUCTURAL PANELS							
1. WOOD STRUCTURAL PANELS SHALL CONF							
1-07 FOR CONSTRUCTION AND INDUSTRIAI							
STANDARD FOR WOOD-BASED STRUCTURAL							

SHOWN BELOW: FLOOR SHEATHING:

FOR BETTER PERFORMANCE]

FLOOR FASTENING:

WOOD-TO-WOOD SHALL BE 10D BOX / 8D COMMON NAILS @ 6"O.C. AT PANEL EDGES/BOUNDARIES AND 12"O.C. IN THE FIELD UNLESS NOTED OTHERWISE. WOOD-TO-STEEL SHALL BE TB1475S SIMPSON STRONG-DRIVE FASTENERS @ 6"O.C. AT ALL PANELS TO STEEL REGARDLESS OF PLAN OR PANEL ORIENTATION.

APA-RATED WOOD SHEARWALLS

 $/_{A}$ - Indicates required nailing - see shear wall schedule $\overline{ \# }$

- INDICATES REQUIRED HOLDOWN SEE HOLDOWN SCHEDULE
- USE "S6" NAILING W/ NO HOLDOWNS UNLESS OTHERWISE NOTED. IT IS PERMITTED TO USE THICKER WALL SHEATHING w/ "STD" NAILING TO MATCH OTHER WALL THICKNESSES. LOCATE HOLDOWNS AS CLOSE AS POSSIBLE TO ENDS OF SHEAR WALLS UNLESS OTHERWISE engineer.

TYPICAL HEADERS TH

- NAILED WITH APA-RATED $\frac{7}{16}$ " MIN. FILLER AND NAILED w/(3)16dx3" NAILS AT 12"0/c.
- "TH" HEADERS AT TOP STORY (ONLY SUPPORTING ROOF LOAD) SHALL BE:
- 3. "TH" HEADERS AT ALL OTHER STORIES (SUPPORTING A FLOOR) SHALL BE:

6X8 DF#1 (OR MULTI-PLY 2X EQUIVALENT - SEE NOTE #1)

ORM TO THE REQUIREMENTS OF "U.S. PRODUCT STANDARD PS AL PLYWOOD", "U.S. PRODUCT STANDARD PS 2-07 PERFORMANCE l-USE PANELS", OR "APA PRP-108 PERFORMANCE STANDARDS". UNLESS NOTED, PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, OF THE THICKNESS AND SPAN RATING

> MINIMUM 2-LAYERS OF $\frac{5}{8}$ " EXPOSURE 1 APA-RATED ($\frac{49}{20}$) PLYWOOD OR EQUIVALENT ORIENTED STRAND BOARD (OSB). LONG DIMENSION SHALL BE PERPENDICULAR TO FRAMING MEMBERS AND END JOINTS STAGGERED TO MIDPOINT OF ADJACENT PANEL. [NOTE: RECOMMENDED TO GLUE FLOOR SHEATHING IN OCCUPIED AREAS

SPECIFIED SHEAR WALLS ARE INDICATED BY WALLS:

NOTED. IT IS NOT ACCEPTABLE TO EPOXY ANCHORS INTO FOOTINGS UNLESS SPECIFIED BY THE

WOOD STRUCTURAL HEADERS SHALL BE OF DF OR MULTI-PLY 2x OF LIKE GRADE AND SPECIES GLUED AND

4x8 DF#2 (OR MULTI-PLY 2x EQUIVALENT - SEE NOTE #1)

MCGRAW STRUCTURAL ENGINEERING, LLC 118 ENSTAD LANE SILVERTON, OR 97381 P: 503.884.2178 E: ryanmcgrawse@gmail.com IN THE EVENT CONFLICTS ARE DISCOVERE BETWEEN THE ORIGINAL SIGNED AND SEALE DOCUMENTS PREPARED BY THE ENGINEER OF RECORD AND/OR ANY SUBCONSULTANT, AND ANY COPY OF THE DOCUMENTS TRANSMITTED BY MAIL, FAX, ELECTRONICALLY OR OTHERWISE, THE ORIGINAL SIGNED AND SEALED DOCUMENTS SHALL GOVERN PROJECT # 22-108

REVISIONS					

5/8/2023

DATE:



