TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING #20100430000680)

LOT 16, BLOCK 8, MADRONA CREST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 42 OF PLATS, PAGE 12, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

THE CENTERLINE OF SE 40TH ST BEARS S 89°56'52" E BETWEEN FOUND MONUMENTS PER PLAT.

REFERENCES

1. MADRONA CREST ADDITION, RECORDED IN VOLUME 42 OF PLATS, PAGE 12, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD88 PER GPS OBSERVATIONS

SURVEYOR'S NOTES

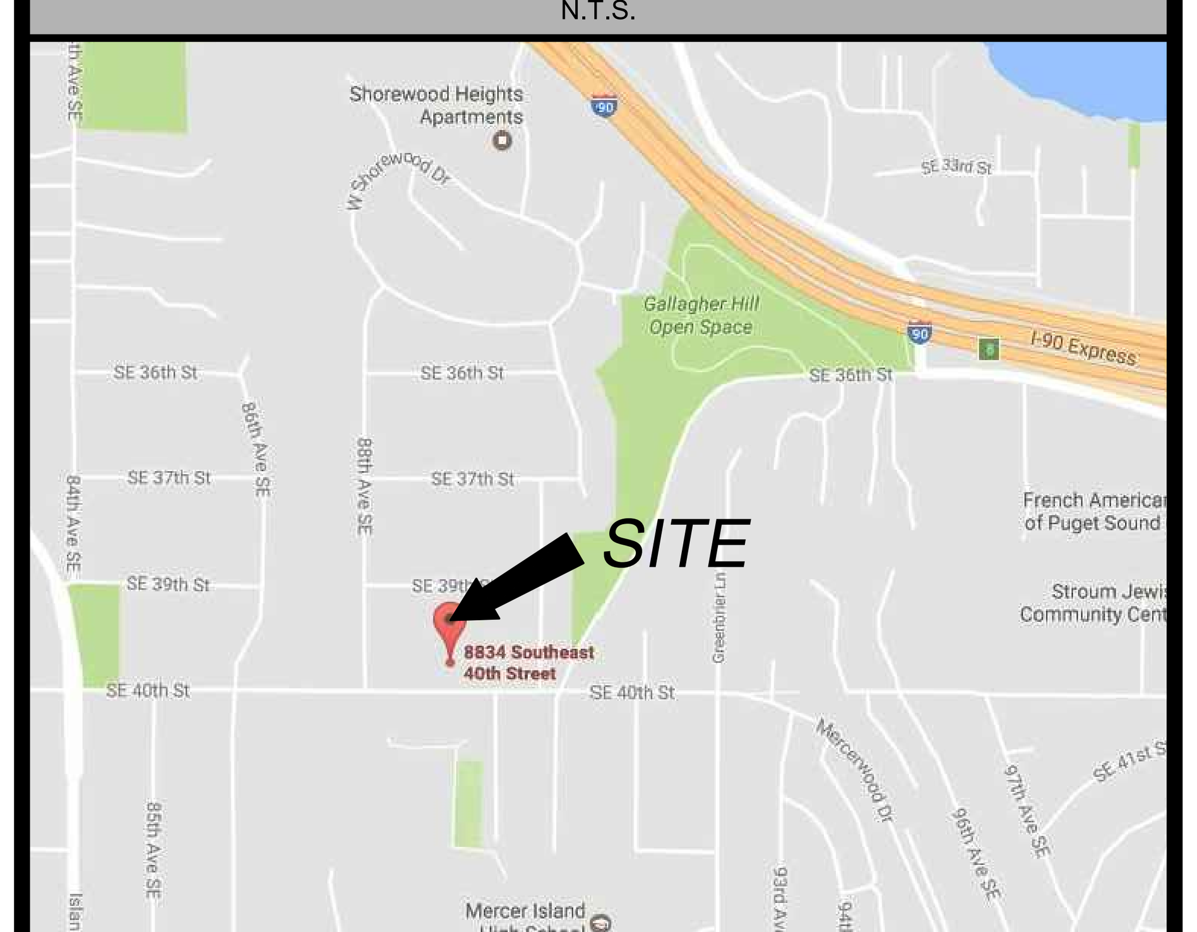
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN DECEMBER OF 2016 & DECEMBER OF 2021. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. BURIED UTILITIES SHOWN BASED ON RECORDS FURNISHED BY OTHERS AND VERIFIED WHERE POSSIBLE IN THE FIELD. TERRANE ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS OR ACCEPT RESPONSIBILITY FOR UNDERGROUND LINES WHICH ARE NOT MADE PUBLIC RECORD. FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO DESIGN CONTACT THE UTILITY OWNER/AGENCY. AS ALWAYS, CALL 1-800-424-5555 BEFORE CONSTRUCTION.
4. SUBJECT PROPERTY TAX PARCEL NO. 502190-0915
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 11,238± S.F. (0.26± ACRES)– 11,400 PER KING COUNTY ASSESSOR'S
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. INSTRUMENTATION FOR THIS SURVEY WAS A TRIMBLE ELECTRONIC DISTANCE MEASURING UNIT. PROCEDURES USED IN THIS SURVEY WERE DIRECT AND REVERSE ANGLES, NO CORRECTION NEEDED. SURVEY METHODS USED MEET STATE STANDARDS SET BY WAC 332-130-090.

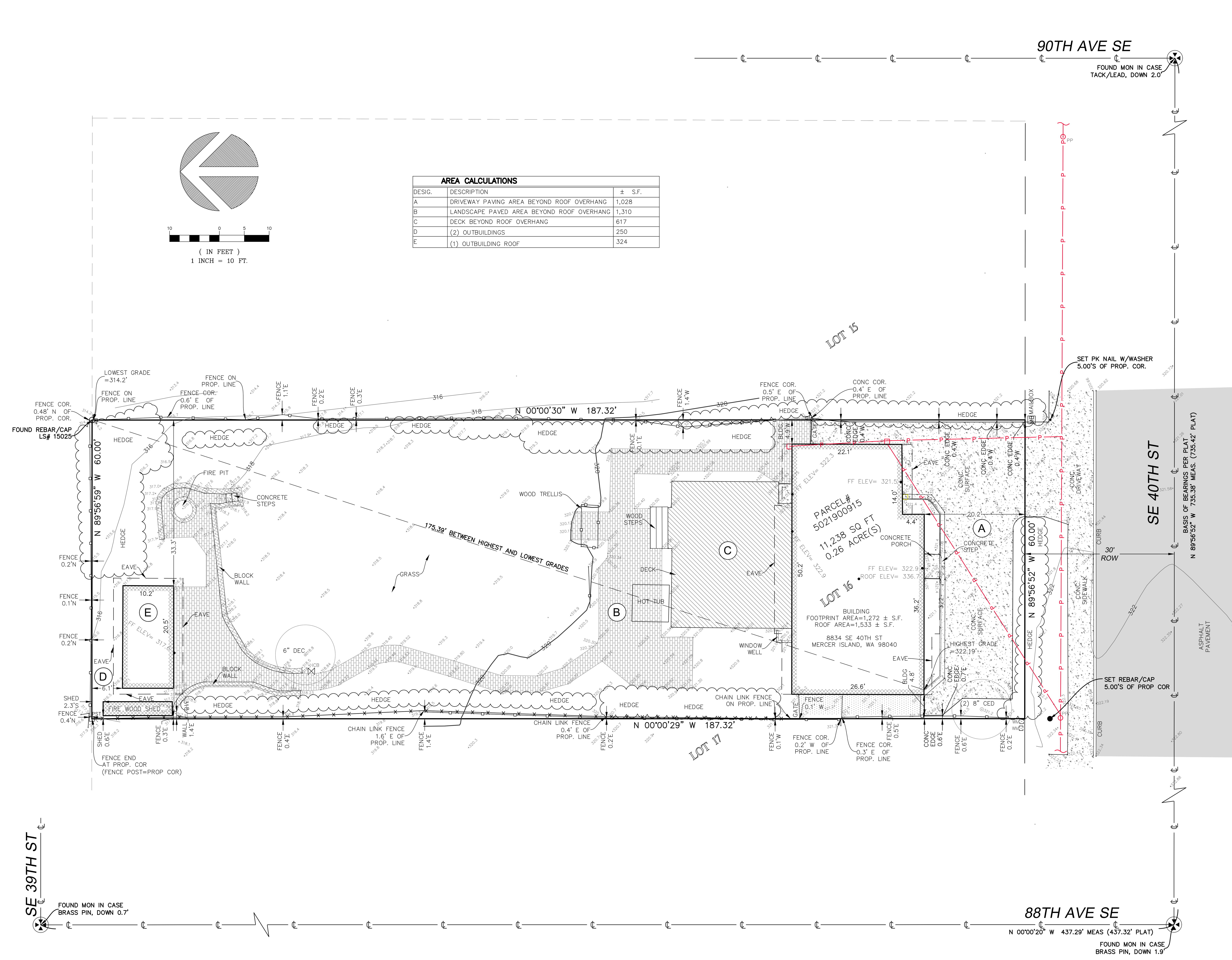
LEGEND

- ASPHALT SURFACE
- BRICK SURFACE
- BUILDING
- CENTERLINE ROW
- CONCRETE SURFACE
- CONCRETE WALL
- 100 CONTOUR (MAJOR)
- 102 CONTOUR (MINOR)
- DECK
- FENCE LINE (CHAIN LINK)
- FENCE LINE (WOOD)
- G GAS METER
- IRR CONTROL BOX
- REBAR & CAP (SET)
- GRAVEL SURFACE
- HEDGE ROW
- NAIL AS NOTED
- MB MAILBOX (RESIDENTIAL)
- MONUMENT IN CASE (FOUND)
- PST POST
- P POWER METER
- P POWER (OVERHEAD)
- PP POWER POLE
- SIZE TYPE TREE (AS NOTED)
- WM WATER METER

VICINITY MAP

N.T.S.





AREA CALCULATIONS		
DESIG.	DESCRIPTION	± S.F.
A	DRIVEWAY PAVING AREA BEYOND ROOF OVERHANG	1,028
B	LANDSCAPE PAVED AREA BEYOND ROOF OVERHANG	1,310
C	DECK BEYOND ROOF OVERHANG	617
D	(2) OUTBUILDINGS	250
E	(1) OUTBUILDING ROOF	324

STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

INDEXING INFORMATION

SE 1/4 SW 1/4
SECTION: 07
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING

measure success

TOPOGRAPHIC & BOUNDARY SURVEY

PARCEL NO. 5021900915

ROBINSON RESIDENCE
8834 SE 40TH ST
MERCER ISLAND, WA 98040

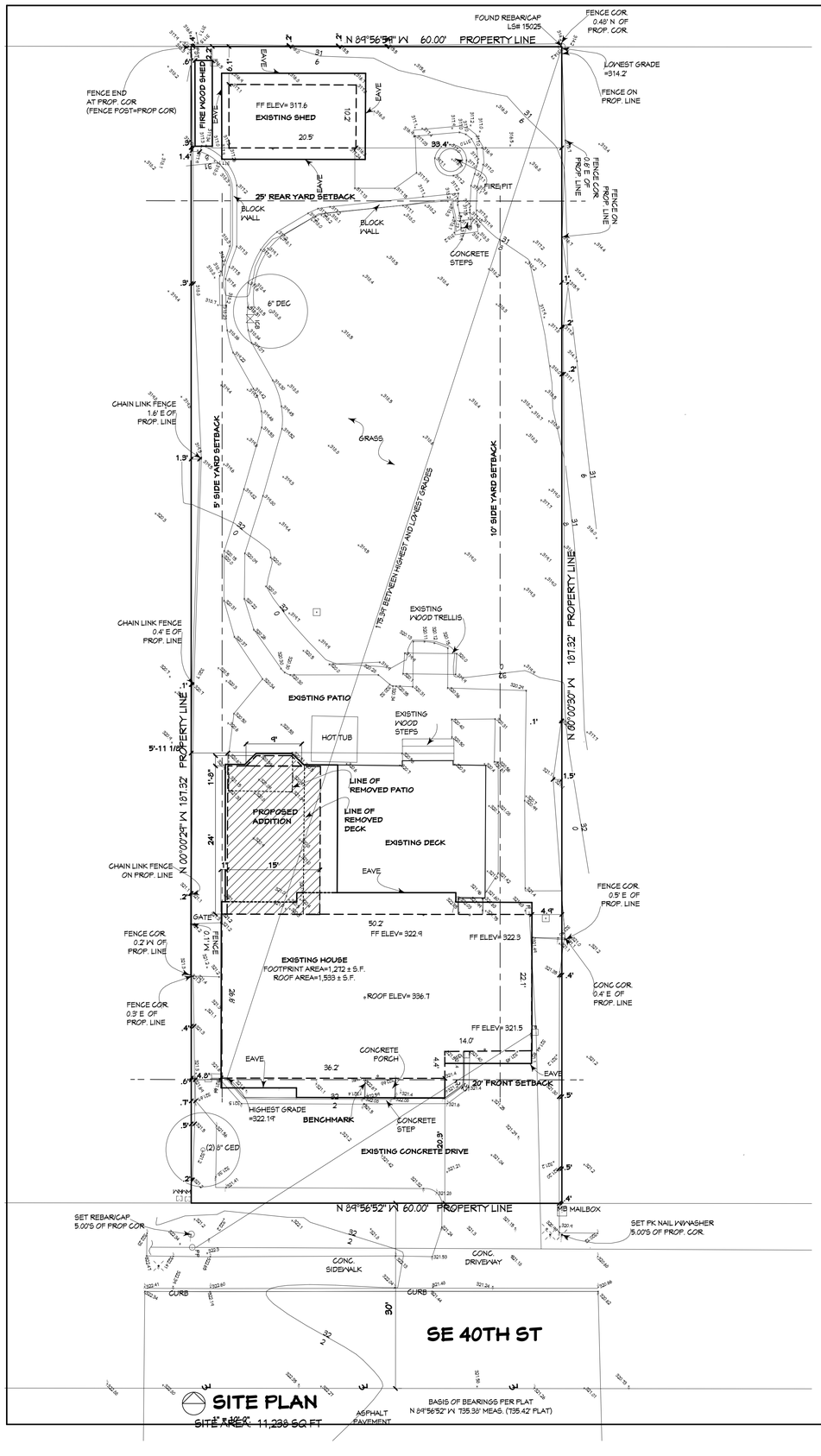
Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4488 support@terrane.net
www.terrane.net

JOB NUMBER:	161523
DATE:	12/16/16
DRAFTED BY:	IDV-PSC
CHECKED BY:	JGM
SCALE:	1"= 10'

REVISION HISTORY	
12/17/21	NEW TOPO
01/26/22	AREA CALCS

SHEET NUMBER

1 OF 1



SITE PLAN

1" = 10'-0"

SITE AREA: 11,238 SQ FT

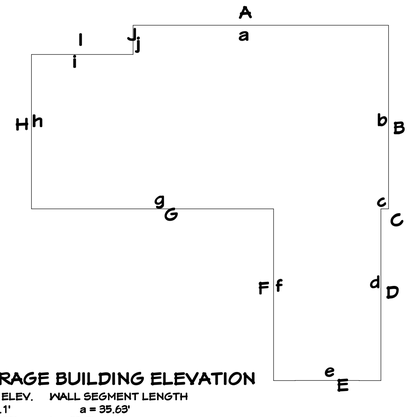
SCOPE OF WORK NARRATIVE:

1

CONSTRUCT ONE-STORY ADDITION OF 375 S.F. FOR REVISED BEDROOM AND NEW BATHROOM.

NOTES

PARCEL NUMBER:	5021400915
LEGAL DESCRIPTION:	LOT 16, BLOCK 3, MADRONA CREST ADDITION
OWNER:	ERIC & KAULANI ROBINSON
ZONING:	R-8.4
CODES:	2018 IRC, 2018 WA STATE ENERGY CODE
ENERGY CREDITS:	
CREDITS REQUIRED:	1.5 PER ADDITIONS < 500 S.F.
CREDITS PROVIDED:	1.5
USE OPTION 1.3, .5 CREDITS, EFFICIENT BUILDING ENVELOPE, U=.28 WINDOWS, R-38 FLOOR INSULATION,	
USE OPTION 3.1, 1 CREDIT, EFFICIENT HVAC, GAS MIN. AFUE 95%	
WHOLE HOUSE VENTILATION: FRESH AIR PER CODE INTEGRATED WITH FORCED AIR MECHANICAL SYSTEM	
LOT SLOPE CALCULATION:	
HIGHEST ELEVATION POINT OF LOT:	322.19'
LOWEST ELEVATION POINT OF LOT:	314.2'
ELEVATION DIFFERENCE:	7.99'
HORIZONTAL DISTANCE BETWEEN:	175.39'
LOT SLOPE:	4.55%
LOT COVERAGE CALCULATION:	
GROSS LOT AREA:	11238
ALLOWED LOT COVERAGE:	40%
ALLOWED LOT COVERAGE AREA:	4495.2 S.F.
EXISTING LOT COVERAGE	
MAIN STRUCTURE ROOF AREA:	1533 S.F.
ACCESSORY STRUCTURE ROOF AREA:	324 S.F.
VEHICULAR USE:	1028 S.F.
TOTAL EXISTING LOT COVERAGE AREA:	2885 S.F.
PROPOSED NEW ROOF AREA:	402 S.F.
TOTAL PROPOSED LOT COVERAGE:	3287 S.F. = 29.2%
HARDSCAPE CALCULATIONS:	
GROSS LOT AREA:	11238 S.F.
AREA BORROWED FROM LOT COVERAGE	1208.2 S.F.
ALLOWED HARDSCAPE:	9% OF LOT AREA +BORROWED AREA
ALLOWED HARDSCAPE AREA:	1011.42 + 1208.2 = 2219.62 S.F. = 19.75%
TOTAL EXISTING HARDSCAPE AREA	
UNCOVERED DECKS	617 S.F.
UNCOVERED PATIOS & WALKWAYS	1310 S.F.
TOTAL EXISTING HARDSCAPE	1927 S.F.
(TOTAL DECK AREA REMOVED)	(111 S.F.)
(TOTAL PATIO AREA REMOVED)	(65 S.F.)
TOTAL PROJECT HARDSCAPE AREA	1751 S.F. = 15.6%
GROSS FLOOR AREA CALCULATION:	
EXISTING MAIN LEVEL AREA	914 S.F.
EXISTING GARAGE AREA	306.7 S.F.
EXISTING ACCESSORY BUILDINGS	250 S.F.
TOTAL EXISTING FLOOR AREA	1470.7 S.F.
PROPOSED NEW AREA, MAIN LEVEL	375 S.F.
ALLOWED GROSS FLOOR AREA	11238 S.F. X 40% = 4495.2 S.F.
PROPOSED GROSS FLOOR AREA	1845.7 S.F. = 16.4%
BUILDING HEIGHT:	



AVERAGE BUILDING ELEVATION

MIDPT. ELEV.	WALL SEGMENT LENGTH
A = 321.1'	a = 35.63'
B = 321.25'	b = 25.7'
C = 321.2	c = 1'
D = 321	d = 24'
E = 320.6	e = 15'
F = 320.08	f = 24'
G = 320.5	g = 33.83'
H = 320.5	h = 21.6'
I = 321.42	i = 14.21'
J = 321.45	j = 4.08'

ABE CALCULATION

$$\frac{321(35.63) + 321.25(25.7) + 321.2(1) + 321(24) + 320.6(15) + 320.08(24) + 320.5(33.83) + 320.5(21.6) + 321.42(14.21) + 321.45(4.08)}{35.63 + 25.7 + 1 + 24 + 15 + 24 + 33.83 + 21.6 + 14.21 + 4.08}$$

AVERAGE BUILDING ELEVATION = 63859.68 / 199.05 = 320.79' (SEE SHEET A-3)
MAXIMUM BUILDING HEIGHT = 350.79'
EXISTING BUILDING HEIGHT = 336.2'
PROPOSED ADDITION HEIGHT = 335.46'

REVISIONS
1 PLAN REVIEW

CONSULTANTS
CK ENGINEERING, LLC
206 417 0670

4340 REGISTERED ARCHITECT
CYNTHIA BASSETT LARSEN
STATE OF WASHINGTON

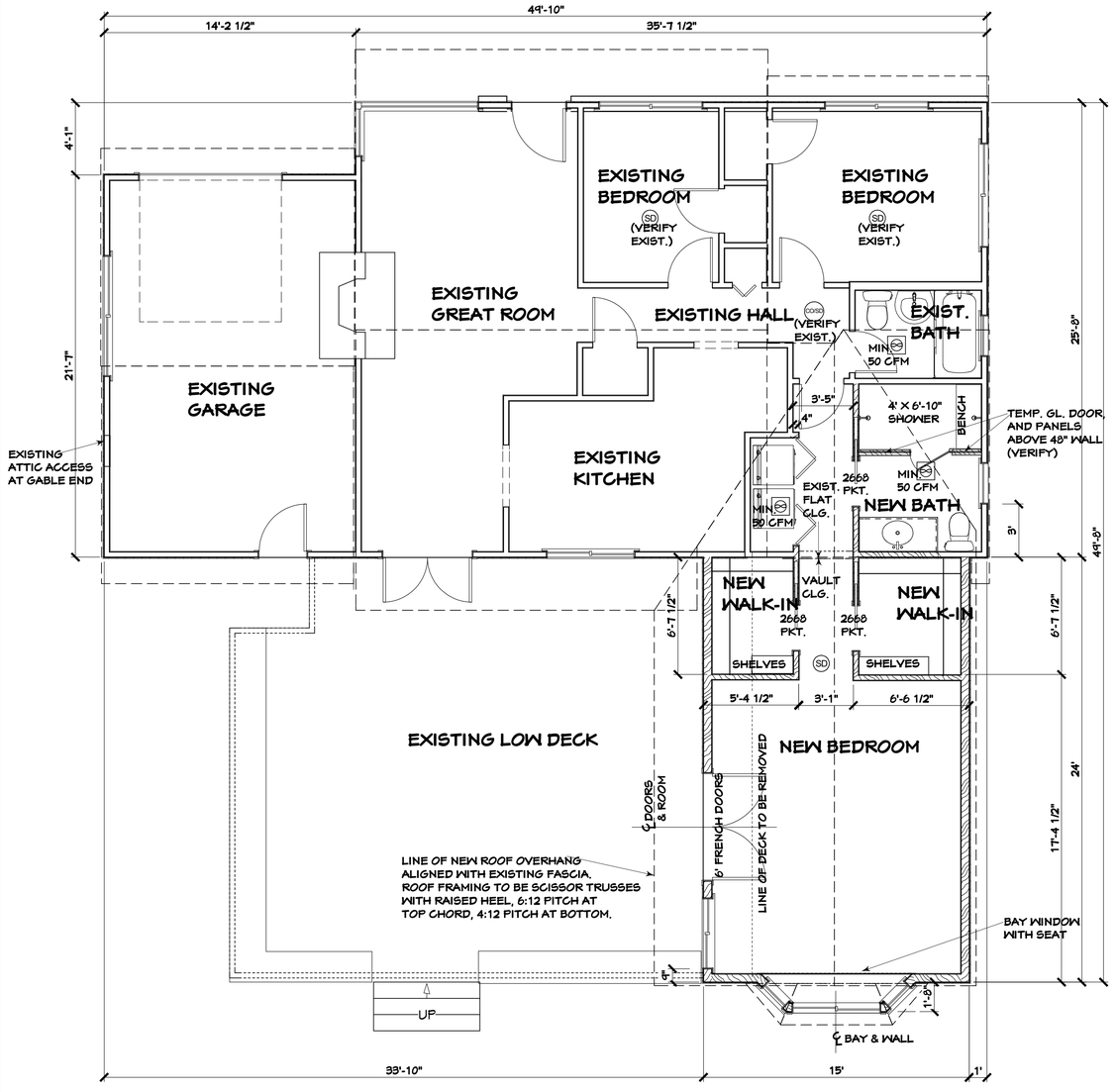
ROBINSON RESIDENCE
8824 SE 40TH ST.
MERCER ISLAND, WA 98040

BASSETT LARSEN DESIGN LLC
2704 34TH AVENUE SOUTH. SEATTLE, WA 98144. (206) 232-0602

SHEET TITLE
SITE PLAN
NOTES

SHEET A1
OF 3 SHEETS

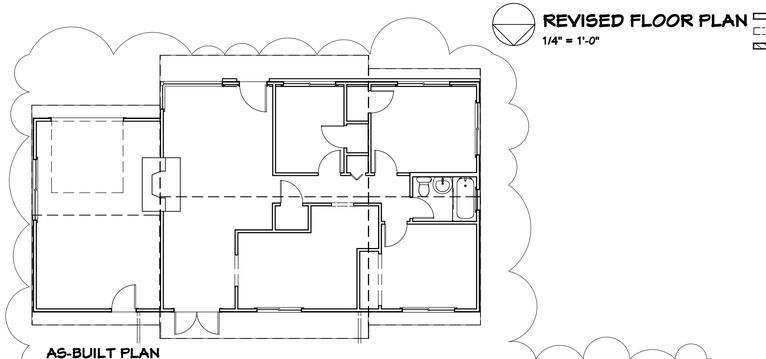
DATE 2-4-22



REVISED FLOOR PLAN

1/4" = 1'-0"

EXISTING
REMOVED
NEW



AS-BUILT PLAN

1/8" = 1'-0"

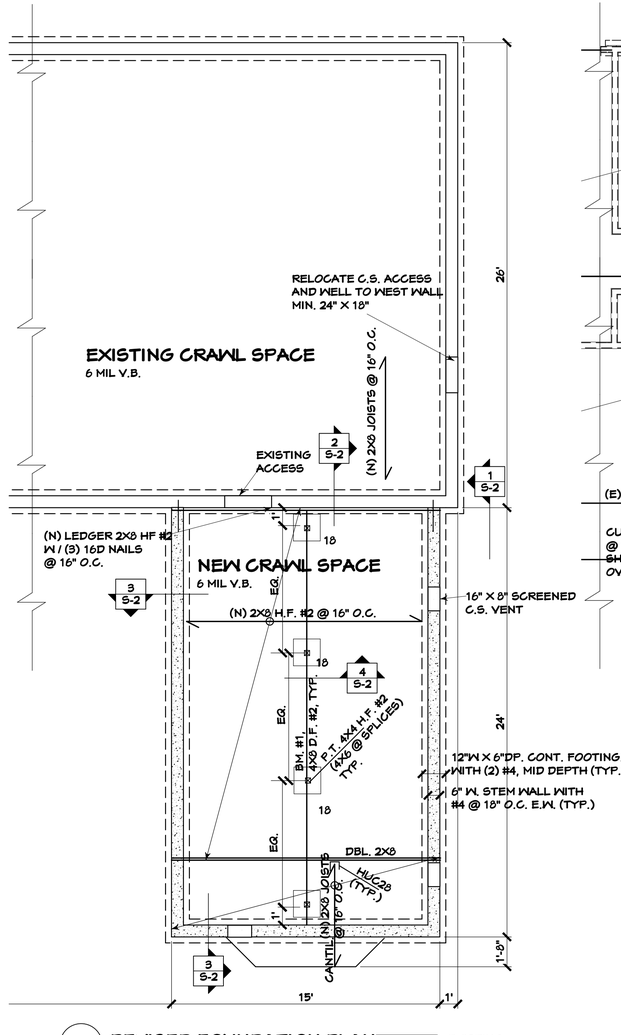
EXTERIOR WALL LENGTHS - DETERMINING "STRUCTURALLY ALTERED" PERCENTAGE

EXISTING EXTERIOR WALL LENGTHS
(14.208' + 35.625' + 25.66' + 49.833' + 21.583' + 4.083') = 150.99'

PROPOSED EXTERIOR WALL LENGTHS (NO OTHER CHANGES PROPOSED TO EXTERIOR WALLS)
(14.208 + 35.625' + 25.66' + 1' + 24' + 15' + 24' + 33.833' + 21.583' + 4.083') = 198.99'

EXTERIOR WALL LENGTH DIFFERENCE
198.99' - 150.99' = 48' = 31.8% DIFFERENCE

1



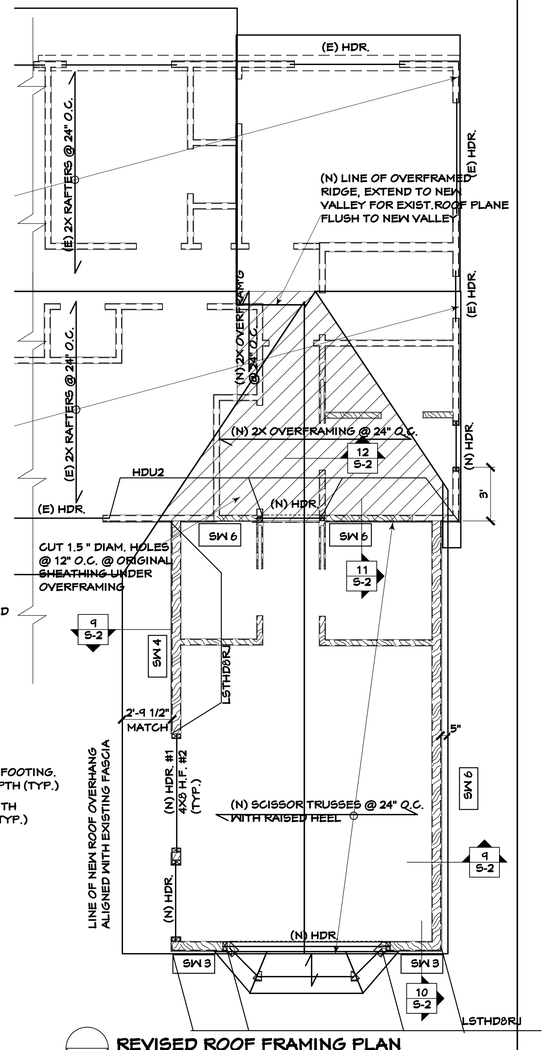
REVISED FOUNDATION PLAN

1/4" = 1'-0"

EXISTING
NEW

18" SQ. X 10" DP. FOOTING WITH (2) #4, E.W. TYP.

CRAWL SPACE VENTING:
VENTING REQUIRED
360 S.F. / 150 = 2.4 S.F. = 345.6 SQ. IN.
VENTING PROVIDED
3 VENTS, 16" X 8" = 384 SQ. IN.



REVISED ROOF FRAMING PLAN

1/4" = 1'-0"

ROOF VENTILATION
VENTILATION REQUIRED
360 S.F. / 150 = 2.4 S.F. = 345.6 SQ. IN.
VENTILATION PROVIDED
SOLID VENT BLOCK
48' X 4.71 SQ. IN. / FT. = 226 SQ. IN.
CONTINUOUS RIDGE VENT
24' X 12 SQ. IN. / FT. = 288 SQ. IN.

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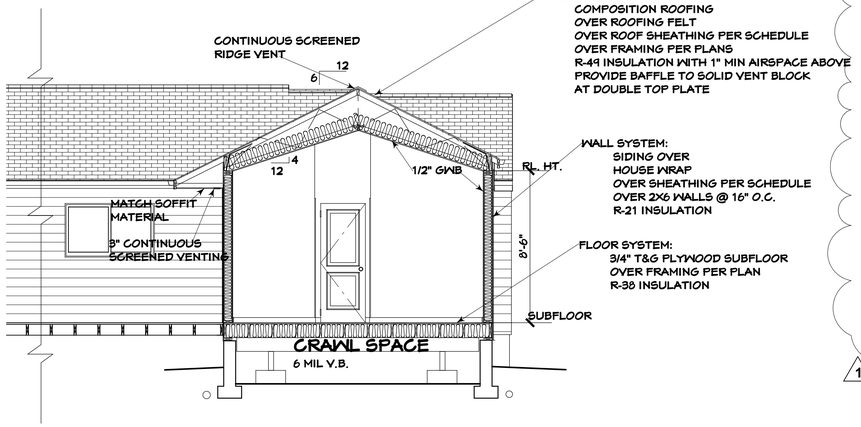
SHEET TITLE
REVISED FLOOR PLAN
REVISED FOUNDATION PLAN
REVISED ROOF FRAMING

SHEET A2
OF 3 SHEETS
DATE 2-4-22



ROOF SYSTEM:
COMPOSITION ROOFING
OVER ROOFING FELT
OVER ROOF SHEATHING PER SCHEDULE
OVER FRAMING PER PLANS
R-49 INSULATION WITH 1" MIN AIRSPACE ABOVE
PROVIDE BAFFLE TO SOLID VENT BLOCK
AT DOUBLE TOP PLATE

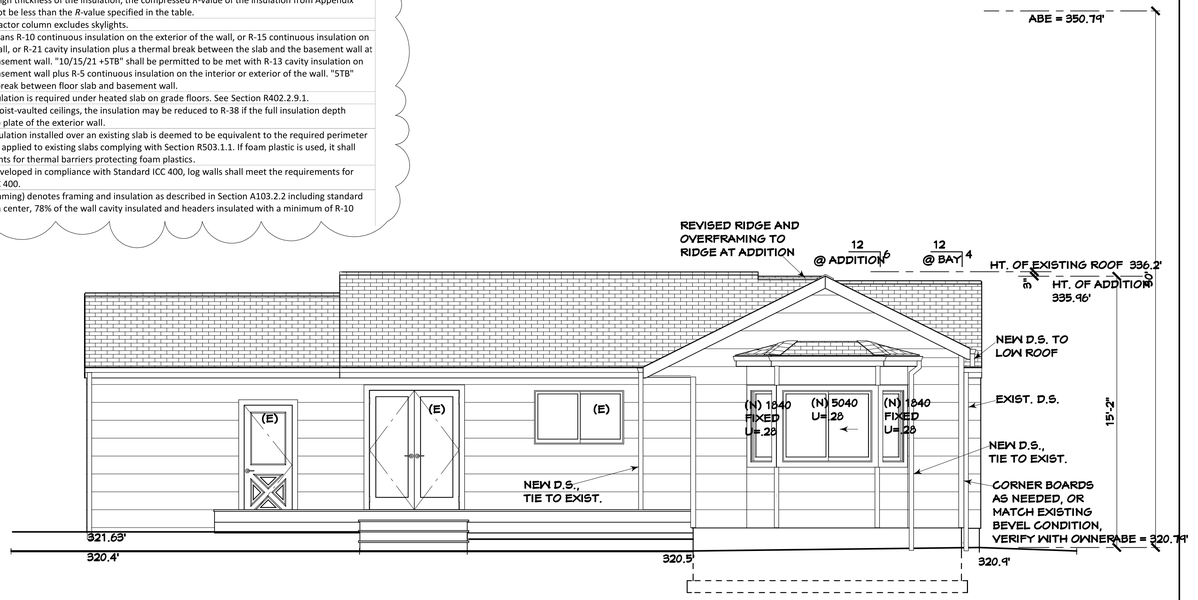
WALL SYSTEM:
SIDING OVER
HOUSE WRAP
OVER SHEATHING PER SCHEDULE
OVER 2X6 WALLS @ 16" O.C.
R-21 INSULATION

FLOOR SYSTEM:
3/4" T&G PLYWOOD SUBFLOOR
OVER FRAMING PER PLAN
R-38 INSULATION

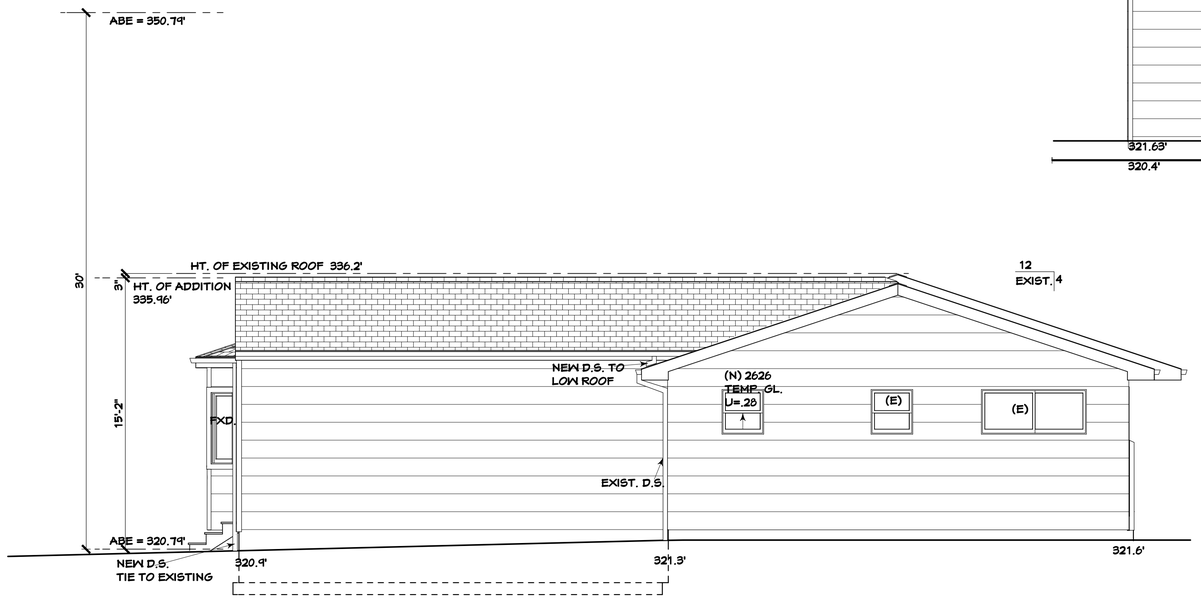
BUILDING SECTION A-A
1/4" = 1'-0"

All Climate Zones (Table R402.1.1)			
		R-Value [a]	U-Factor [a]
Fenestration U-Factor [b]		n/a	0.30
Skylight U-Factor [b]		n/a	0.50
Glazed Fenestration SHGC [b,e]		n/a	n/a
Ceiling [e]		49	0.026
Wood Frame Wall [g,h]		21 int	0.056
Floor		30	0.029
Below Grade Wall [c,h]		10/15/21 int + TB	0.042
Slab [d]	R-Value & Depth	10, 2 ft	n/a
a	*R*-values are minimums. *U*-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 *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.		
c	"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 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.		
f	R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter 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.		
g	For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for *climate zone* 5 of ICC 400.		
h	Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.		

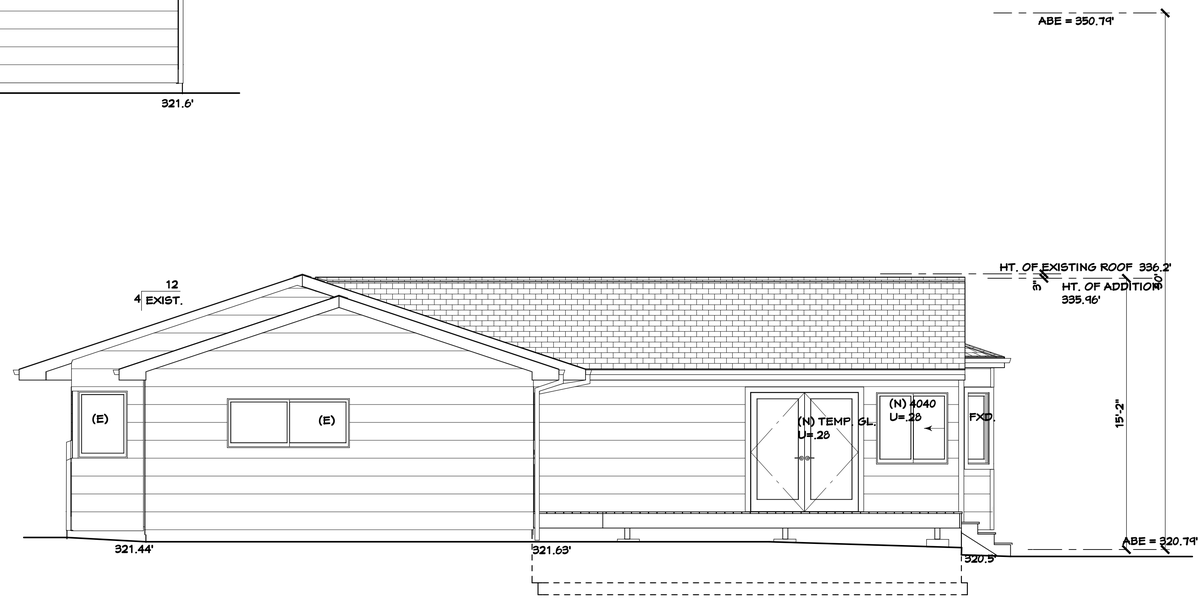
1



REVISED NORTH ELEVATION
1/4" = 1'-0"



REVISED WEST ELEVATION
1/4" = 1'-0"



REVISED EAST ELEVATION
1/4" = 1'-0"

REVISIONS
1 PLAN REVIEW

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MERCER ISLAND, WA 98040

BASSETT LARSEN DESIGN LLC
2704 34TH AVENUE SOUTH. SEATTLE, WA 98144 . (206) 232-0602

SHEET TITLE
BUILDING SECTION A-A
REVISED NORTH ELEVATION
REVISED EAST ELEVATION
REVISED WEST ELEVATION

SHEET A3
OF 3 SHEETS

DATE 2-4-22

STRUCTURAL NOTES

GENERAL REQUIREMENTS & DESIGN CRITERIA

BUILDING CODE & REFERENCE STANDARDS: THE "INTERNATIONAL BUILDING CODE", 2018 EDITION, GOVERNS THE DESIGN AND CONSTRUCTION OF THIS PROJECT. REFERENCE TO A SPECIFIC SECTION IN THE CODE DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE ENTIRE MATERIALS REFERENCE STANDARDS NOTED BELOW. THE LATEST EDITION OF THE MATERIALS REFERENCE STANDARDS SHALL BE USED.

ARCHITECTURAL DRAWINGS: REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, ELEVATIONS, SLOPES, DOOR AND WINDOW OPENINGS, NON-BEARING WALLS, STAIRS, CURBS, DRAINS, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES AND OTHER NONSTRUCTURAL ITEMS.

STRUCTURAL RESPONSIBILITIES: THE PE IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE PRIMARY STRUCTURE IN ITS COMPLETED STATE.

CONTRACTOR RESPONSIBILITIES: THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND ALL JOB RELATED SAFETY STANDARDS SUCH AS OSHA AND WSHA. THE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SHORING, BRACING AND OTHER ELEMENTS REQUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE WORK REQUIRED IN THE CONSTRUCTION DOCUMENTS AND THE REQUIREMENTS FOR EXECUTING IT PROPERLY.

DISCREPANCIES: IN CASE OF DISCREPANCIES BETWEEN THESE GENERAL NOTES, THE CONTRACT DRAWINGS AND SPECIFICATIONS, AND/OR REFERENCE STANDARDS, THE ENGINEER SHALL DETERMINE WHICH SHALL GOVERN. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

SITE VERIFICATION: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR CONSTRUCTION. CONFLICTS BETWEEN THE DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL UNDERGROUND UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION OR DRILLING.

WIND DESIGN: BASIC WIND SPEED (3-SECOND GUST), V = 85 MPH(ASD); WIND IMPORTANCE FACTOR, IW = 1.0; OCCUPANCY CATEGORY = II; EXPOSURE CATEGORY = B;

SEISMIC DESIGN: SEISMIC IMPORTANCE FACTOR IE = 1.0; OCCUPANCY CATEGORY = II; SS = 1.409G; S1 = 0.49G; SITE CLASS = D; SDS = 1.127G; SD1 = 0.49G; SEISMIC DESIGN CATEGORY = D; BASIC SEISMIC FORCE RESISTING SYSTEM = A-13 (BEARING WALL SYSTEMS) LIGHT-FRAMED WALLS WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE; CS = 0.121; R = 6.5; ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7, SEC 12.8.

SNOW LOAD: GROUND SNOW LOAD, PG = 25 PSF; FLAT ROOF SNOW LOAD, PF = 25 PSF (DRIFT LOADS CONSIDERED PER ASCE 7 WHERE APPLICABLE); SNOW EXPOSURE FACTOR, CE = 1.0; SNOW IMPORTANCE FACTOR, IS = 1.0; THERMAL FACTOR, CT = 1.0.

LIVE LOADS:

ROOF (LIVE)	20 PSF
ROOF (SNOW)	25 PSF
RESIDENTIAL FLOOR	40 PSF
RESIDENTIAL DECK	60 PSF

DEFERRED SUBMITTALS: ITEMS DESIGNED BY OTHERS SHALL INCLUDE CALCULATIONS, SHOP DRAWINGS AND PRODUCT DATA. DESIGN SHALL BE PREPARED BY THE PE AND SUBMITTED TO THE ARCHITECT AND PE FOR REVIEW PRIOR TO SUBMISSION TO THE JURISDICTION FOR APPROVAL. THE PE SHALL SUBMIT TO THE ENGINEER FOR REVIEW CALCULATIONS AND SHOP DRAWINGS THAT ARE STAMPED AND SIGNED BY THE PE. REVIEW OF THE PE'S SHOP DRAWINGS IS FOR GENERAL COMPLIANCE WITH DESIGN CRITERIA AND COMPATIBILITY WITH THE DESIGN OF THE PRIMARY STRUCTURE AND DOES NOT RELIEVE THE PE OF RESPONSIBILITY FOR THAT DESIGN. ALL NECESSARY BRACING, TIES, ANCHORAGE, AND PROPRIETARY PRODUCTS SHALL BE FURNISHED AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS OR THE PE'S DESIGN DRAWINGS AND CALCULATIONS.

INSPECTIONS: ALL CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL IN ACCORDANCE WITH IBC SEC 109. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE BUILDING OFFICIAL. SUBMIT COPIES OF ALL INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

PREFABRICATED CONSTRUCTION: ALL PREFABRICATED CONSTRUCTION SHALL CONFORM TO IBC SEC 1703.6.

GEOTECHNICAL INSPECTION: THE GEOTECHNICAL ENGINEER OR BUILDING OFFICIAL SHALL INSPECT ALL PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF CONCRETE AND REINFORCING STEEL AND PROVIDE A LETTER TO THE OWNER STATING THAT SOILS ARE ADEQUATE TO SUPPORT THE "ALLOWABLE FOUNDATION PRESSURE" SHOWN BELOW. SOIL VALUES SHALL BE FIELD VERIFIED BY THE BUILDING OFFICIAL OR THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

DESIGN SOIL VALUES:

ALLOWABLE BEARING PRESSURE (ASSUMED)	1500 PSF
PASSIVE LATERAL PRESSURE	150 PSF/FT
ACTIVE LATERAL PRESSURE (UNRESTRAINED)	35 PSF/FT
ACTIVE LATERAL PRESSURE (RESTRAINED)	50 PSF/FT
COEFFICIENT OF SLIDING FRICTION	0.25

SLABS-ON-GRADE & FOUNDATIONS: ALL FOUNDATIONS SHALL BEAR ON STRUCTURAL COMPACTED FILL OR COMPETENT NATIVE SOIL PER THE GEOTECHNICAL REPORT. ALL SLABS-ON-GRADE SHALL BE FOUNDED ON APPROPRIATE SUB-GRADE PREPARATION AS NOTED IN THE GEOTECHNICAL REPORT. EXTERIOR PERIMETER FOOTINGS SHALL BEAR NOT LESS THAN 18 INCHES BELOW FINISH GRADE, OR BY THE GEOTECHNICAL ENGINEER AND THE BUILDING OFFICIAL. INTERIOR FOOTINGS SHALL BEAR NOT LESS THAN 12 INCHES BELOW FINISH FLOOR.

COMPACTION: UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER, FOOTINGS SHALL BE PLACED ON COMPACTED MATERIAL AND SHALL BE WELL-GRADED GRANULAR MATERIAL WITH NO MORE THAN 5% PASSING A #2 SIEVE. FILLS PLACED SHALL BE IN MAXIMUM 8" LIFTS AND ALL BEARING SOILS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT USING THE MODIFIED PROCTOR TEST.

CAST-IN-PLACE CONCRETE & REINFORCEMENT

REFERENCE STANDARDS: CONFORM TO:
(1) ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY".
(2) IBC CHAPTER 19.
(3) ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE", SEC 3 "REINFORCEMENT AND REINFORCEMENT SUPPORTS."

FIELD REFERENCE: THE CONTRACTOR SHALL KEEP A COPY OF ACI FIELD REFERENCE MANUAL, SP-15, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301) WITH SELECTED ACI AND ASTM REFERENCES."

CONCRETE MIXTURES: CONFORM TO ACI 318 CHAPTER 5 "CONCRETE QUALITY, MIXING, AND PLACING."

MATERIALS: CONFORM TO ACI 318 CHAPTER 3 "MATERIALS" FOR REQUIREMENTS FOR CEMENTITIOUS MATERIALS, AGGREGATES, MIXING WATER AND ADMIXTURES.

REINFORCING BARS	ASTM A615, GRADE 60, DEFORMED BARS.
DEFORMED WELDED WIRE FABRIC	ASTM A497
BAR SUPPORTS	CRSI MSP-2, CHAPTER 3 "BAR SUPPORTS."
TIE WIRE	16.5 GAGE OR HEAVIER, BLACK ANNEALED.

MIX DESIGNS: PROVIDE A 5-SACK MINIMUM, 28-DAY COMPRESSIVE STRENGTH F'C = 2,500 PSI CONCRETE MIX WITH MAXIMUM 3/4" AGGREGATE AND 0.50 W/C RATIO FOR ALL ISOLATED POST AND CONTINUOUS WALL FOOTINGS, SLABS-ON-GRADE, AND BASEMENT WALLS EXTENDING NO MORE THAN 8" ABOVE FINISH GRADE ELEVATION. FOR BASEMENT WALLS EXTENDING MORE THAN 8" ABOVE FINISH GRADE AND ALL SITE WALLS, PROVIDE A 5-1/2 SACK MINIMUM F'C = 3,000 PSI CONCRETE MIX WITH MAXIMUM 3/4" AGGREGATE AND 0.50 W/C RATIO.

MIX DESIGN NOTES:
(1) W/C RATIO: WATER-CEMENTITIOUS MATERIAL RATIOS SHALL BE BASED ON THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS.
(2) CEMENTITIOUS CONTENT: THE USE OF FLY ASH, OTHER POZZOLANS, SILICA FUME, OR SLAG SHALL CONFORM TO ACI 301 SEC 4.2.2.8.B. MAXIMUM AMOUNT OF FLY ASH SHALL BE 20% OF TOTAL CEMENTITIOUS CONTENT UNLESS REVIEWED AND APPROVED OTHERWISE BY SER.
(3) AIR CONTENT: CONFORM TO ACI 301 SEC 4.2.2.4. HORIZONTAL EXTERIOR SURFACES IN CONTACT WITH THE SOIL REQUIRE ENTRAINED AIR. USE "MODERATE EXPOSURE". VERTICAL EXTERIOR SURFACES REQUIRE "MODERATE EXPOSURE". TOLERANCE IS +/- 1-1/2%. AIR CONTENT SHALL BE MEASURED AT POINT OF PLACEMENT.
(4) SLUMP: CONFORM TO ACI 301 SEC 4.2.2.2. SLUMP SHALL BE DETERMINED AT POINT OF PLACEMENT.
(5) NON-CHLORIDE ACCELERATOR: NON-CHLORIDE ACCELERATING ADMIXTURE MAY BE USED IN CONCRETE SLABS PLACED AT AMBIENT TEMPERATURES BELOW 50F AT THE CONTRACTOR'S OPTION.

FORMWORK: CONFORM TO ACI 301 SEC 2 "FORMWORK AND FORM ACCESSORIES." REMOVAL OF FORMS SHALL CONFORM TO SEC 2.3.2 EXCEPT STRENGTH INDICATED IN SEC 2.3.2.5 SHALL BE 0.75 F'C.

MEASURING, MIXING, AND DELIVERY: CONFORM TO ACI 301 SEC 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: CONFORM TO ACI 301 SEC 5.

REBAR FABRICATION & PLACING: CONFORM TO ACI 301, SEC 3.2.2 "FABRICATION", AND ACI SP-66 "ACI DETAILING MANUAL." CONFORM TO ACI 301, SEC 3.3.2 "PLACEMENT." PLACING TOLERANCES SHALL CONFORM TO SEC 3.3.2.1 "TOLERANCES."

SPLICES: CONFORM TO ACI 301, SEC 3.3.2.7. REFER TO PLANS FOR TYPICAL SPLICES.

FIELD BENDING: CONFORM TO ACI 301 SEC 3.3.2.8. "FIELD BENDING OR STRAIGHTENING." BAR SIZES #3 THROUGH #5 MAY BE FIELD BENT COLD THE FIRST TIME. OTHER BARS REQUIRE PREHEATING. DO NOT TWIST BARS.

CORNERS BARS: PROVIDE MATCHING-SIZED "L" CORNER BARS FOR ALL HORIZONTAL WALL AND FOOTING BARS WITH THE APPROPRIATE SPLICE LENGTH, UNO.

CONCRETE COVER: CONFORM TO THE FOLLOWING COVER REQUIREMENTS FROM ACI 301, TABLE 3.3.2.3:

CONCRETE CAST AGAINST EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER (#5 & SMALLER)	1-1/2"
BARS IN SLABS AND WALLS	3/4"

CONSTRUCTION JOINTS: CONFORM TO ACI 301 SEC 2.2.2.5, 5.1.2.3A, 5.2.2.1, AND 5.3.2.6. CONSTRUCTION JOINTS SHALL BE LOCATED AND DETAILED AS ON THE CONSTRUCTION DRAWINGS. USE OF AN ACCEPTABLE ADHESIVE, SURFACE RETARDER, PORTLAND CEMENT GROUT, OR ROUGHENING THE SURFACE IS NOT REQUIRED UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. WHERE SHEAR BOND IS REQUIRED, ROUGHEN SURFACES TO 1/4" AMPLITUDE.

WOOD FRAMING

REFERENCE STANDARDS: CONFORM TO:
(1) IBC CHAPTER 23 "WOOD",
(2) NDS AND NDS SUPPLEMENT – "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION",
(3) ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION",

DEFERRED SUBMITTALS: SUBMIT PRODUCT DATA AND PROOF OF ICC APPROVAL FOR FRAMING MEMBERS AND FASTENERS THAT HAVE BEEN DESIGNED BY OTHERS. SUBMIT CALCULATIONS PREPARED BY THE SSE IN THE STATE OF WASHINGTON FOR ALL MEMBERS AND CONNECTIONS DESIGNED BY OTHERS ALONG WITH SHOP DRAWINGS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS AND WEB STIFFENERS SHALL BE DETAILED AND FURNISHED BY THE SUPPLIER. TEMPORARY AND PERMANENT BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DEFLECTION LIMITS SHALL BE AS NOTED UNDER DESIGN LOADS SECTION.

IDENTIFICATION: ALL SAWN LUMBER AND PRE-MANUFACTURED WOOD PRODUCTS SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION ISSUED BY THE CERTIFYING AGENCY.

MATERIALS:
- SAWN LUMBER: CONFORM TO GRADING RULES OF WWPA, WCLIB OR NLGA. FINGER JOINTED STUDS ACCEPTABLE AT INTERIOR WALLS ONLY.

MEMBER USE	SIZE	SPECIES	GRADE
STUDS & POSTS	2X, 4X	HEM-FIR	NO. 2
RAFTERS	2X4 – 2X10	HEM-FIR	NO. 2
BEAMS	4X8 – 4X12	HEM-FIR	NO. 2
BEAMS	6X8 – 6X12	HEM-FIR	NO. 2
POSTS & TIMBERS	6X, 8X	DOUG-FIR	NO. 2

- GLUED LAMINATED TIMBER: CONFORM TO AITC 117 "STANDARD SPECIFICATIONS FOR STRUCTURAL GLUE-LAMINATED TIMBER OF SOFTWOOD SPECIES, MANUFACTURING AND DESIGN" AND ANSI/AITC A190.1 "STRUCTURAL GLUED LAMINATED TIMBER." CAMBER ALL GLUED LAMINATED MEMBERS BEAMS TO 2000' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.

MEMBER USE	SIZES	SPECIES	STRESS CLASS	USES
BEAMS	ALL	DF/DF	24F-1.8E	SIMPLE SPANS
	ALL	DF/DF	24F-1.8E [(-FB)=(+FB)]	CANTILEVER SPANS

- METAL PLATE CONNECTED WOOD ROOF TRUSSES: CONFORM TO IBC SEC 2303.4 "TRUSSES."
- WOOD STRUCTURAL SHEATHING (PLYWOOD): WOOD APA-RATED STRUCTURAL SHEATHING INCLUDES: ALL VENEER PLYWOOD, ORIENTED STRAND BOARD, WAFERBOARD, PARTICLEBOARD, T1-11 SIDING, AND COMPOSITES OF VENEER AND WOOD BASED MATERIAL. CONFORM TO PRODUCT STANDARDS PS-1 AND PS-2 OF THE U.S. DEPT. OF COMMERCE AND THE AMERICAN PLYWOOD ASSOCIATION (APA).

		MINIMUM APA RATING		
LOCATION	THICKNESS	SPAN RATING	PLYWOOD GRADE	EXPOSURE
ROOF	15/32"	32/16	C-D	1
FLOOR	23/32" T&G	24 OC	STURD-I-FLOOR	1
WALLS	15/32"	32/16	C-D	1
WALLS(ALT)	7/16" OSB	24/16	C-D	1

- JOIST HANGERS AND CONNECTORS: SHALL BE "STRONG TIE" BY SIMPSON COMPANY OR USP EQUIVALENT AS SPECIFIED IN THEIR LATEST CATALOGS. ALTERNATE CONNECTORS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUIVALENT OR GREATER LOAD CAPACITIES AND ARE REVIEWED AND APPROVED BY THE SER PRIOR TO ORDERING. CONNECTORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE 1/2 OF THE NAILS OR BOLTS IN EACH MEMBER. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE FULL LENGTH COMMON. NAIL STRAPS TO WOOD FRAMING AS LATE AS POSSIBLE IN THE FRAMING PROCESS TO ALLOW THE WOOD TO SHRINK AND THE BUILDING TO SETTLE.
- NAILS AND STAPLES: CONFORM TO IBC SEC 2303.6 "NAILS AND STAPLES." UNLESS NOTED ON PLANS, NAIL PER IBC TABLE 2304.9.1. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE COMMON. NAIL SIZES SPECIFIED ON THE DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8D	2-1/2"	0.131"
10D	3"	0.148"
(8D & 10D ALTERNATIVE) PASLODE TETRAGRIP NAILS	2-3/8"	0.113"
12D (16D SINKER)	3-1/4"	0.148"
16D	3-1/2"	0.162"

- LAG BOLTS/BOLTS: CONFORM TO ASTM A307.

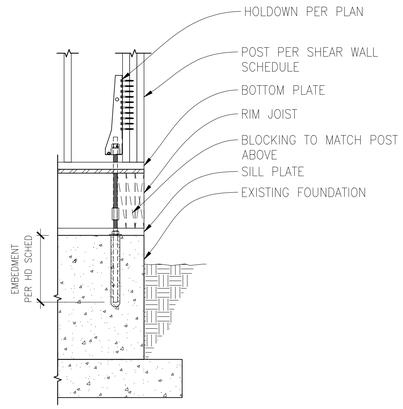
NAILING REQUIREMENTS: PROVIDE MINIMUM NAILING IN ACCORDANCE WITH IBC TABLE 2304.9.1 "FASTENING SCHEDULE" EXCEPT AS NOTED ON THE DRAWINGS. NAILING FOR ROOF/FLOOR DIAPHRAGMS/SHEAR WALLS SHALL BE PER DRAWINGS. NAILS SHALL BE DRIVEN FLUSH AND SHALL NOT FRACTURE THE SURFACE OF SHEATHING.

STANDARD LIGHT-FRAME CONSTRUCTION: UNLESS NOTED ON THE PLANS, CONSTRUCTION SHALL CONFORM TO IBC SEC 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION" AND IBC SEC 2304 "GENERAL CONSTRUCTION REQUIREMENTS."
(1) WALL FRAMING: UNLESS OTHERWISE NOTED, ALL INTERIOR WALLS SHALL BE 2X4 @ 16"OC AND ALL EXTERIOR WALLS SHALL BE 2X6 @ 16"OC. PROVIDE (2)BUNDLED STUDS MIN AT WALL ENDS AND EACH SIDE OF ALL OPENINGS. UNO, ALL SOLID SAWN LUMBER HEADERS SHALL BE SUPPORTED BY A MINIMUM OF (1)TRIM AND (1)KING STUD AND ALL GLULAM OR ENGINEERED WOOD HEADERS BY (2)TRIM AND (2)KING STUDS. AT FRAMED WALLS, UNO, ALL SOLID SAWN LUMBER BEAMS SHALL BE SUPPORTED ON A MINIMUM OF (2) BUNDLED 2X STUDS AND ALL GLULAM OR ENGINEERED WOOD BEAMS ON A MINIMUM OF (3) BUNDLED 2X STUDS. STITCH-NAIL BUNDLED STUDS WITH (2)10D @ 12"OC. UNO, ALL INTERIOR AND EXTERIOR HEADERS SHALL BE 4X6, PROVIDE SOLID BLOCKING THRU FLOORS TO SUPPORTS BELOW FOR BEARING WALLS AND POSTS. UNO, ATTACH BOTTOM PLATES OF STUD WALLS TO WOOD FRAMING BELOW WITH 16D @ 12"OC OR TO CONCRETE WITH 5/8"-DIA. ANCHOR BOLTS X 7" EMBEDMENT AT 48"OC. REFER TO SHEAR WALL SCHEDULE FOR SPECIFIC SHEATHING, STUD, AND NAILING REQUIREMENTS AT SHEAR WALLS. UNO, PROVIDE GYPSUM SHEATHING ON INTERIOR SURFACES AND PLYWOOD SHEATHING ON EXTERIOR SURFACES.
(2) ROOF/FLOOR FRAMING: UNLESS OTHERWISE NOTED, PROVIDE DOUBLE JOISTS/RAFTERS UNDER ALL PARALLEL BEARING PARTITIONS AND SOLID BLOCKING AT ALL BEARING POINTS. PROVIDE DOUBLE JOISTS AROUND ALL ROOF/FLOOR OPENINGS. UNO, MULTI-JOISTS/RAFTERS SHALL BE STITCH-NAILED TOGETHER WITH (2)10D @ 12"OC. PROVIDE ROOF SHEATHING EDGE CLIPS CENTERED BETWEEN FRAMING AT UNBLOCKED PLYWOOD EDGES. ALL FLOOR SHEATHING SHALL HAVE TONGUE AND GROOVE JOINTS OR BE SUPPORTED BY SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ROOF/FLOOR SHEATHING. ROOF/FLOOR SHEATHING SHALL BE LAID FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS.

MOISTURE CONTENT: WOOD MATERIAL USED FOR THIS PROJECT SHALL HAVE MAXIMUM MOISTURE CONTENT OF 19% EXCEPT FOR THE PRESSURE-TREATED WOOD SILL PLATE.

PRESERVATIVE TREATMENT: WOOD MATERIALS ARE REQUIRED TO BE "TREATED WOOD" UNDER CERTAIN CONDITIONS IN ACCORDANCE WITH IBC SEC 2304.11 "PROTECTION AGAINST DECAY AND TERMITES". CONFORM TO THE APPROPRIATE STANDARDS OF THE AMERICAN WOOD-PRESERVERS ASSOCIATION (AWPA) FOR SAWN LUMBER, GLUED LAMINATED TIMBER, ROUND POLES, WOOD PILES AND MARINE PILES. FOLLOW AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) QUALITY ASSURANCE PROCEDURES. PRODUCTS SHALL BEAR THE APPROPRIATE MARK.

METAL CONNECTORS/PT WOOD: CK ENGINEERING LLC RECOMMENDS THAT ALL METAL HARDWARE AND FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER BE STAINLESS STEEL TYPE 316L. AT THE OWNER'S RISK AND DISCRETION, HOT-DIPPED GALVANIZED METAL HARDWARE AND FASTENERS MAY BE INVESTIGATED FOR USE IN LIEU OF STAINLESS STEEL PROVIDED THAT THE FINISH HAS A MINIMUM ZINC CONTENT OF AT LEAST 1.85 OZ/SF AND ITS USE IS COORDINATED BY THE CONTRACTOR AND WOOD SUPPLIER FOR THE EXPECTED ENVIRONMENT AND MOISTURE EXPOSURE FOR APPROPRIATE USE BASED ON THE METHOD OF PRESERVATIVE TREATMENT OF THE WOOD.



ALL-THREAD ROD INSTALLATION INTO EXISTING FOUNDATION — 4

SCALE: N.T.S.

HOLDOWN SCHEDULE

MODEL # (1)	ANCHORAGE TYPE (3,5,6)	FASTENERS	END STUD REQUIRED (2,3)	CAPACITY (LBS) DOUG-FIR	CAPACITY (LBS) HEM-FIR
HDU2	5/8"ø ALL-THREAD ROD W/ 10" EPOXY EMBED INTO CONC	(6) 1/4"ø x 2 1/2" SDS WOOD SCREWS	(2) 2x STUDS[7]	1,500	1,500
LSTHD8/RJ	CAST-IN-PLACE	(16) 16d SINKERS	(2) 2x STUDS[7]	1,975	1,975

NOTES:
1. HOLDOWNS SPECIFIED ARE AS MANUFACTURED BY SIMPSON ANCHOR TIE DOWN CO., INC; ACCEPTABLE EQUIVALENT PRODUCT SUBSTITUTIONS ARE AVAILABLE FROM OTHER MANUFACTURERS WITH SER APPROVAL.
2. LOCATE ALL HOLDOWNS AT ENDS OF ALL SHEAR WALLS & FASTEN TO BUNDLED END STUDS.
3. BUNDLED END STUDS SHOULD BE STITCH-NAILED TOGETHER USING MINIMUM (2) 16d @ 10"OC, UNO.
4. LOCATE "HDU#", "LSTHD#" & "STHD#" HOLDOWNS AT CONCRETE FOUNDATION LEVEL. (DETAIL B & C) LOCATE "CS#", "MST", "MSTC#" & "CMST#" STRAPS AT FLOOR-TO-FLOOR CONNECTIONS. (DETAIL A)
5. ALL HOLDOWN ANCHOR BOLTS SHALL BE MIN 5" FROM CONCRETE WALL ENDS.
6. USE "SSTB" FOR 2x SILL PLATES & "SSTBL" FOR 3x SILL PLATES.
7. ADDITIONAL END STUD REQUIRED TO MEET MINIMUM 1 1/2" EDGE DISTANCE FROM CONCRETE CORNER TO "STHD" STRAP. USE "RJ" STYLE WITH "STHD" WHERE RIM JOIST IS PRESENT.
8. INSTALL ALL HOLDOWN HARDWARE PER MANUFACTURER'S INSTRUCTIONS & RECOMMENDATIONS.
9. USE SIMPSON SET-XP EPOXY FOR ANCHOR BOLT TO EXISTING CONCRETE INSTALLATION

HOLDOWN SCHEDULE — 8

SCALE: N.T.S.

WOOD-FRAMED SHEAR WALL SCHEDULE
FOR HEM-FIR/DOUG-FIR STUD FRAMING

SW TYPE	SW SHEATHING APA-RATED [1, 2, 12]	NAIL SIZE & SPACING @ PANEL EDGES [4, 5, 6]	RIM JOIST OR BLOCKING ATTACHMENT TO TOP PLATE BELOW [8, 9]	BOTTOM PLATE & EDGE MEMBER REQUIREMENTS [3, 7, 13] SHEAR NAILING TO WOOD FRAMING BELOW	BOTTOM PLATE AT FRAMING	SILL PLATE REQUIREMENTS ANCHOR BOLT TO CONCRETE FOUNDATION [10]	SILL PLATE AT FOUNDATION [11]	SHEAR LOAD CAPACITY (PLF)
SW-6	15/32" CD-EXT	0.131"ø x 2 1/2" @ 6"OC	CLIP @ 18"OC	0.148"ø x 3 1/4" @ 6"OC	2x	5/8"ø @ 48"OC	P.T. 2x	260
SW-4	15/32" CD-EXT	0.131"ø x 2 1/2" @ 4"OC	CLIP @ 14"OC	0.148"ø x 3 1/4" @ 4"OC	2x [15]	5/8"ø @ 32"OC	P.T. 2x	380
						5/8"ø @ 48"OC	P.T. 3x [15]	
SW-3	15/32" CD-EXT	0.131"ø x 2 1/2" @ 3"OC, STAGGERED	CLIP @ 12"OC	0.148"ø x 3 1/4" @ 4"OC & CLIP @ 18"OC	3x [15]	5/8"ø @ 24"OC	P.T. 2x	490
						5/8"ø @ 32"OC	P.T. 3x [15]	

NOTES:
1. INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY
2. WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.
3. BLOCKING IS REQUIRED AT ALL PANEL EDGES.
4. PROVIDE SHEAR WALL SHEATHING AND NAILING FOR ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY WINDOWS, OR DOORWAYS OR AS DESIGNATED ON PLANS. HOLDOWN REQUIREMENTS PER PLANS.
5. SHEAR WALLS DESIGNATED AS PERFORATED SHEAR WALLS REQUIRE SHEATHING, SHEAR WALL NAILING, ETC. ABOVE AND BELOW ALL OPENINGS).
6. SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLDOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT-UP HOLDOWN POSTS. ADDITIONAL INFORMATION PER HOLDOWN SCHEDULE & DETAILS.
7. INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.148"Ø x 2 1/2" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.148"Ø x 2 1/2" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC.
8. BASED ON 0.131"Ø x 1 1/2" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131"Ø x 2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.
9. FRAMING CLIPS: SIMPSON "A35" OR "LTP5" OR APPROVED EQUIVALENT.
10. ANCHOR BOLTS SHALL BE PROVIDED WITH HOT-DIPPED GALVANIZED STEEL PLATE WASHERS 3"x3"x0.229"(MIN). THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED 13/16"x1 3/4" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NUT. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGE OF THE SILL PLATE ON THE SIDE(S) WITH SHEATHING. WHERE SHEAR WALLS ARE SHEATHED ON BOTH SIDES OF 2x6 WALL FRAMING, USE 4.5"x4.5"x0.229"(MIN) PLATE WASHERS. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.
11. PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO-PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS. ADDITIONAL INFORMATION PER STRUCTURAL NOTES.
12. WHERE WOOD SHEATHING IS APPLIED OVER GYPSUM SHEATHING, CONTACT THE ENGINEER OF RECORD FOR ALTERNATE NAILING REQUIREMENTS.
13. AT ADJOINING PANEL EDGES, (2) 2x STUDS NAILED TOGETHER MAY BE USED IN PLACE OF SINGLE 3x STUD. DOUBLE 2X STUDS SHALL BE CONNECTED TOGETHER BY NAILING THE STUDS TOGETHER WITH 3" LONG NAILS OF THE SAME SPACING AND DIAMETER AS THE PLATE NAILING.
14. CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR ADHESIVE OR EXPANSION BOLT ALTERNATIVES TO CAST-IN-PLACE ANCHOR BOLTS. SPECIAL INSPECTION MAY BE REQUIRED.
15. NAIL STUDS TO 3x BOTTOM/SILL PLATES WITH EITHER (2) 0.148"Ø x4" END NAILS OR (4) 0.131"Ø x 2 1/2" TOENAILS.

WOOD-FRAMED SHEAR WALL SCHEDULE — 12

SCALE: N.T.S.

CK ENGINEERING LLC
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STEVEN COOKE — STATE OF WASHINGTON — 49213 — REGISTERED PROFESSIONAL ENGINEER

12/16/2021

ROBINSON RESIDENCE
8834 SE 40TH ST.
MERCER ISLAND, WA 98040

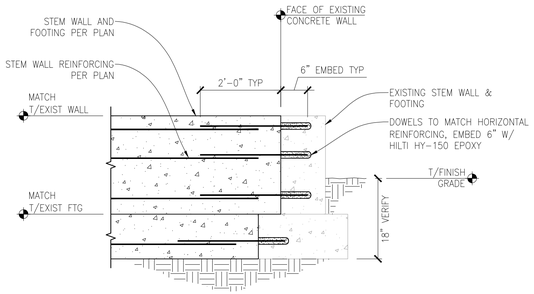
REVISION #	DATE	DESCRIPTION:

Drawn By: PK
Checked By: SC
Date: 12-16-2021

CK JOB NO.
21-066

STRUCTURAL NOTES/SCHED.

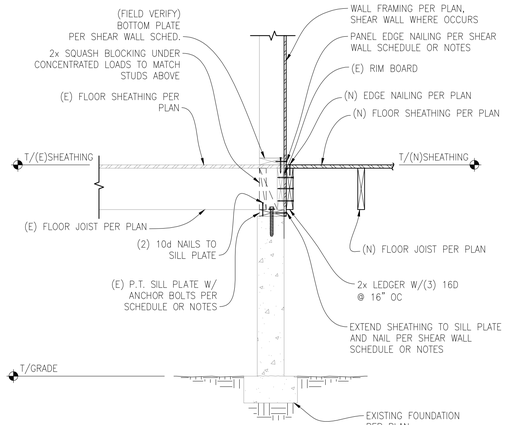
S-1.0



NEW FOUNDATION CONNECTION TO EXISTING

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

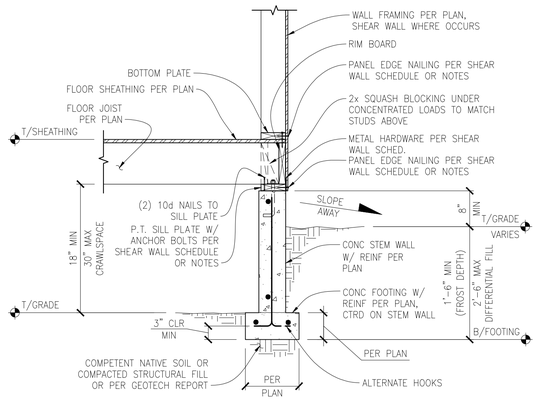
1



NEW FLOOR JOIST/SHEAR WALL TO EXISTING FLOOR JOIST/FOUNDTION CONNECTION

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

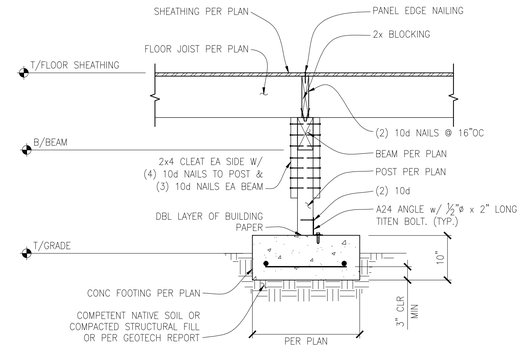
2



CRAWL SPACE EXTERIOR SHEAR WALL WITH JOISTS PERPENDICULAR

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

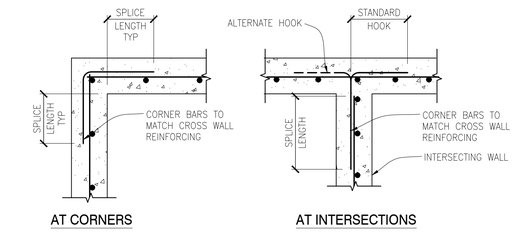
3



POST AND BEAM AT CRAWLSPACE

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

4



AT CORNERS

AT INTERSECTIONS

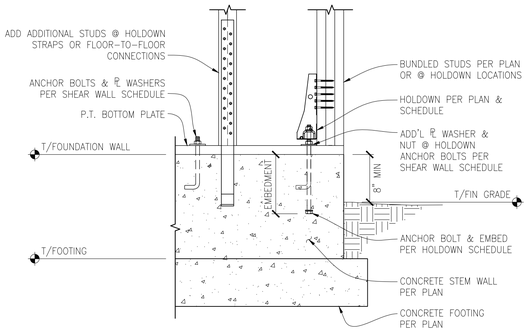
NOTES:
1. WALL SIZE & REINFORCING PER PLAN.
2. CORNER BARS SIZE & SPACING TO MATCH HORIZONTAL REINFORCING.

SPLICE LENGTH	
BAR	LENGTH
#4	28"
#5	36"

TYPICAL CORNER BARS AT CONCRETE WALLS - SINGLE MAT

SCALE: N.T.S.

5

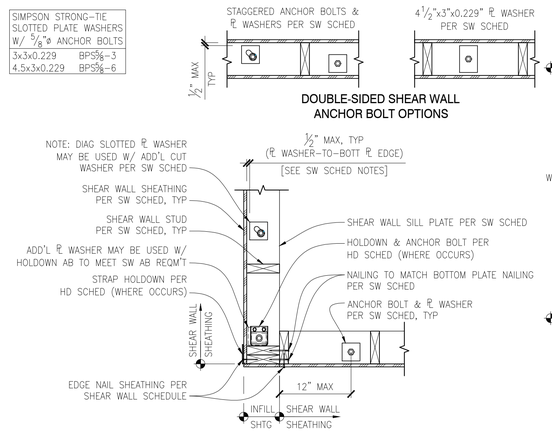


TYPICAL SHEAR WALL HOLDOWN CONNECTIONS AT FOUNDATION CONCRETE WALL

SCALE: N.T.S.

6

SIMPSON STRONG-TIE SLOTTED PLATE WASHERS W/ 5/8"ø ANCHOR BOLTS	
3x3x0.229	BPS5/8-3
4.5x3x0.229	BPS5/8-6

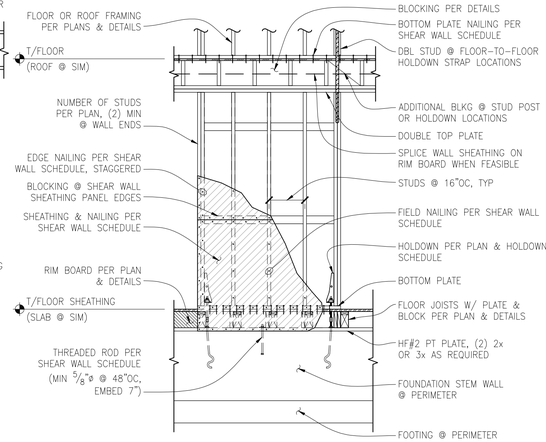


DOUBLE-SIDED SHEAR WALL ANCHOR BOLT OPTIONS

TYPICAL PLAN VIEW - SHEAR WALL HOLDOWNS & ANCHOR BOLTS

SCALE: 1" = 1'-0"

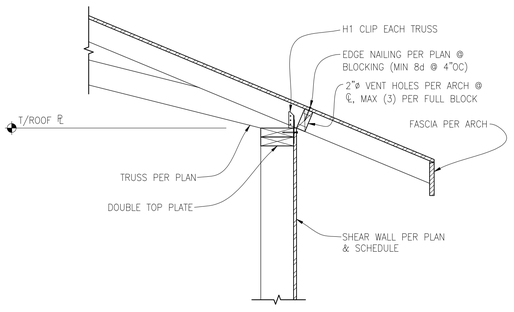
7



TYPICAL SHEAR WALL ELEVATION

SCALE: N.T.S.

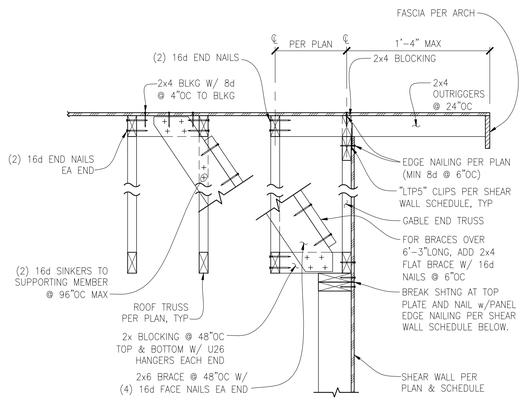
8



EXTERIOR SHEAR WALL PERPENDICULAR TO ROOF TRUSS

SCALE: 1" = 1'-0"

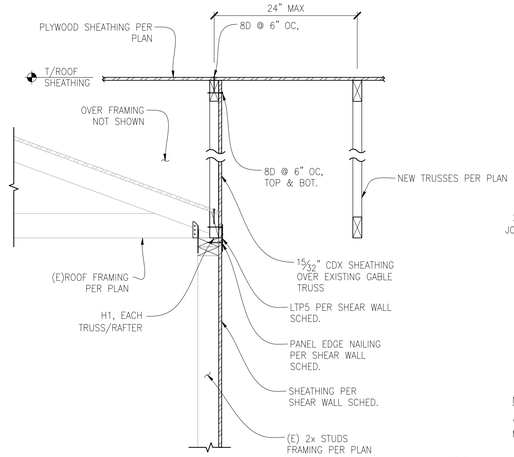
9



EXTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS

SCALE: N.T.S.

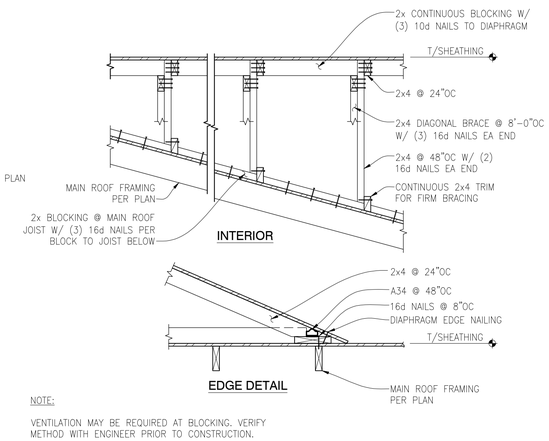
10



EXISTING TO NEW ROOF TRUSS CONNECTION

SCALE: 1" = 1'-0"

11



NOTE:

VENTILATION MAY BE REQUIRED AT BLOCKING. VERIFY METHOD WITH ENGINEER PRIOR TO CONSTRUCTION.

TYPICAL ROOF OVERFRAMING DETAIL

SCALE: N.T.S.

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STEVEN COOKE
STATE OF WASHINGTON
44212
REGISTERED PROFESSIONAL ENGINEER

12/16/2021

ROBINSON RESIDENCE
8834 SE 40TH ST.
MERCER ISLAND, WA 98040

REVISION #	DATE	DESCRIPTION:

Drawn By: PK
Checked By: SC
Date: 12-16-2021

CK JOB NO.
21-066

STRUCTURAL DETAILS

S-2.0