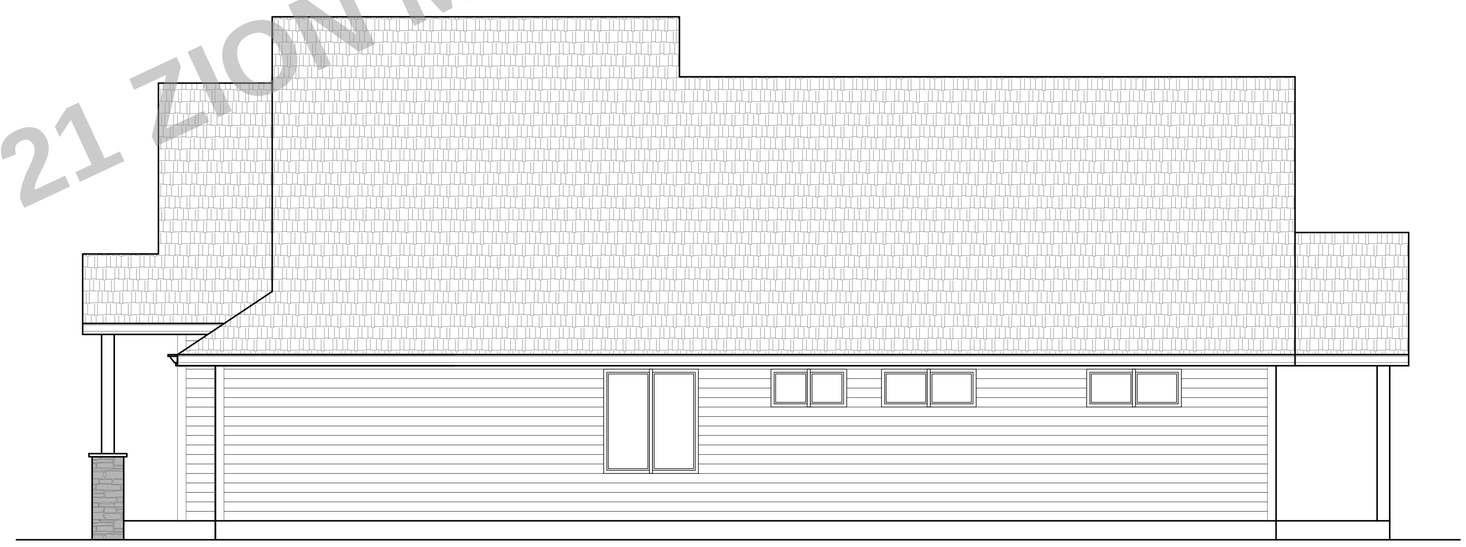
FRONT ELEVATION



RIGHT ELEVATION

LOT 21 ZION MEADOWS, SANDY OR

PLAN NO: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

CLIENT NAME: THE OLALLIE B RAZE LOT 21
LOCATION
SHEET TITLE: ELEVATIONS
SQUARE FEET:

DESIGN PROVIDENCE, LLC
RP RIII
PMB 322 12042 S.E. SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: 503-658-4589 Email: rpdesignprovidence@q.com
Web: DesignProvidence.com

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR THE USE IN CONSTRUCTION OF ONE BUILDING TO BE LOCATED AT THE ADDRESS OF THE CUSTOMER. THE CUSTOMER ACCEPTS THE LICENSE TO USE THE PLANS IN ACCEPTANCE OF THE FOLLOWING TERMS AND CONDITIONS: THE CUSTOMER AGREES NOT TO REPRODUCE, COPY OR TRANSFER THE PLANS OR ANY PART THEREOF TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN CONSENT OF THE DESIGNER. THE CUSTOMER AGREES NOT TO MODIFY OR ALLOW MODIFICATION OF THE PLANS BY ANYONE OTHER THAN THE DESIGNER OR HIS/HER AGENTS OR EMPLOYEES. THE CUSTOMER AGREES TO PROVIDE THE DESIGNER WITH A WRITTEN NOTICE OF ANY ALLEGED DEFECTS IN THE PLANS WITHIN 10 DAYS OF THE CUSTOMER'S DISCOVERY OF THE DEFECT. THE CUSTOMER AGREES TO PROVIDE THE DESIGNER WITH A REASONABLE OPPORTUNITY TO CORRECT ANY ALLEGED DEFECT. IN ADDITION TO THE FEES PAID TO THE DESIGNER FOR THE PLANS, THE CUSTOMER AGREES TO PAY THE DESIGNER FOR ANY ADDITIONAL WORK THE DESIGNER MUST PERFORM IN ORDER TO CORRECT THE PLANS TO THE CUSTOMER'S SATISFACTION. THE CUSTOMER MUST PAY THE DESIGNER'S FEES IN FULL BEFORE THE DESIGNER WILL RELEASE THE PLANS. THE CUSTOMER AGREES THAT THE DESIGNER'S LIABILITY FOR DAMAGES, IF ANY, ARISING OUT OF THE PROVISION OF PLANS HEREUNDER SHALL NOT EXCEED AN AMOUNT EQUAL TO THE FEES PAID TO THE DESIGNER FOR THE PLANS. THE CUSTOMER AGREES THAT THE DESIGNER'S LIABILITY FOR DAMAGES, IF ANY, ARISING OUT OF THE PROVISION OF ADDITIONAL SERVICES SHALL NOT EXCEED THE PRICE OF THE ADDITIONAL SERVICES. THE CUSTOMER AGREES TO INDEMNIFY AND HOLD THE DESIGNER HARMLESS FROM ANY CLAIMS OR LAWSUITS ARISING OUT OF OR CONNECTED WITH THE CUSTOMER'S USE OF THE PLANS, INCLUDING, BUT NOT LIMITED TO, CLAIMS OR LAWSUITS ALLEGING DEFECTS IN THE PLANS. THE CUSTOMER AGREES THAT THE DESIGNER'S LIABILITY FOR DAMAGES, IF ANY, ARISING OUT OF OR CONNECTED WITH THE CUSTOMER'S USE OF THE PLANS SHALL NOT EXCEED THE AMOUNT PAID TO THE DESIGNER FOR

REAR ELEVATION

LEFT ELEVATION

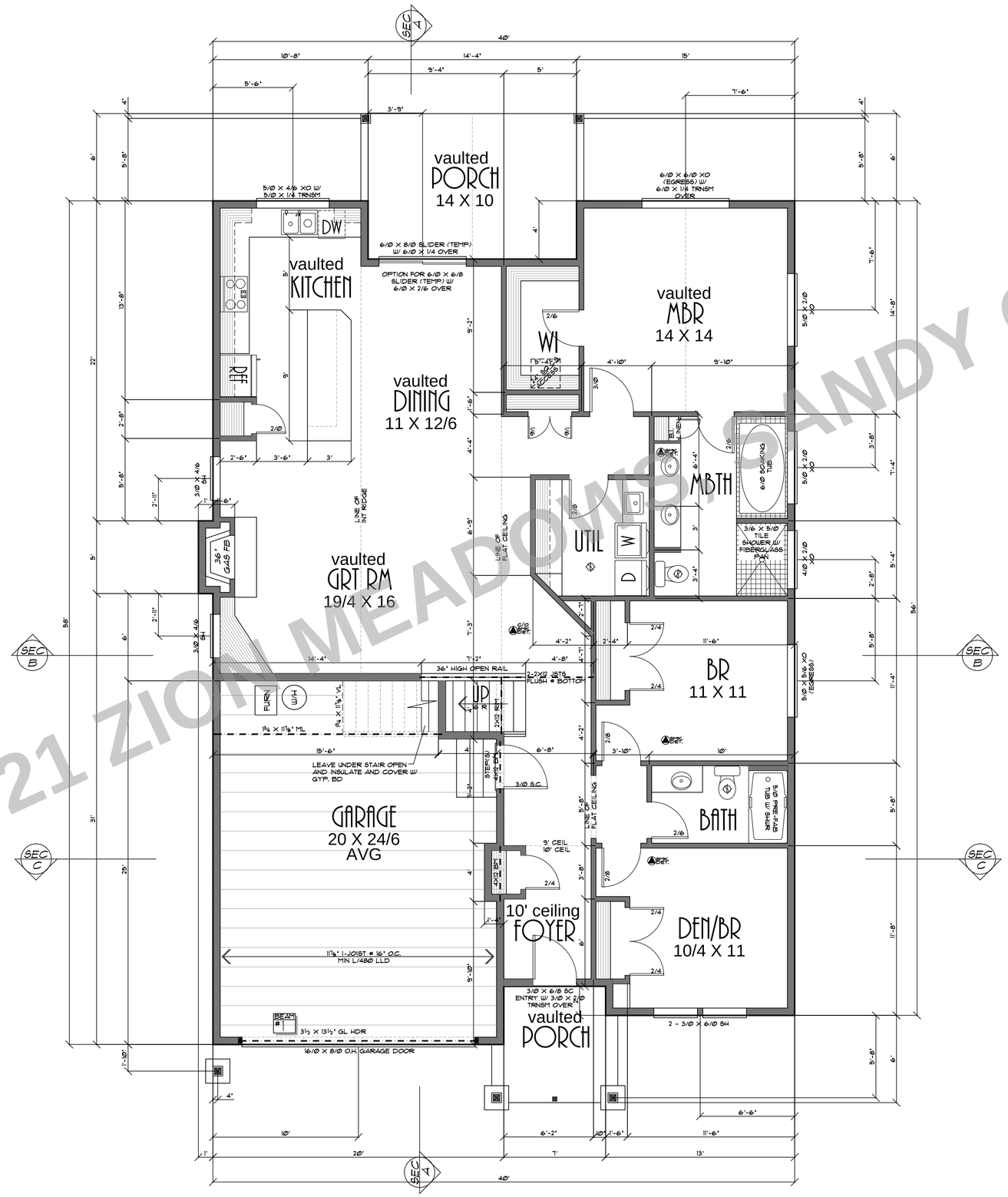
LOT 21 ZION MEADOWS, SANDY OR

PLAN NO: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

CLIENT NAME: THE OLALLIE B RAZE LOT 21
LOCATION
SHEET TITLE: ELEVATIONS
SQUARE FEET:

DESIGN PROVIDENCE, LLC
RP RIII
P.MB 322 12042 S.E. SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: 503-722-9445 Email: providencedesignllc@q.com
Web: Designprovidence-llc.com

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR THE USE IN CONSTRUCTION OF ONE BUILDING AT A SITE SELECTED BY THE CUSTOMER. NO OTHER USE OR REPRODUCTION IS PERMITTED WITHOUT THE WRITTEN CONSENT OF DESIGN PROVIDENCE, LLC. THE CUSTOMER ASSUMES ALL RESPONSIBILITY FOR THE WORKING OF THE PLAN FOR OUR PROJECT. WOULD BY WORKING OF THE PLAN FOR OUR PROJECT WOULD BY WORKING OF THE PLAN FOR OUR PROJECT WOULD BE INFRINGEMENT OF THE CUSTOMER'S RIGHTS. THE CUSTOMER AGREES TO INDEMNIFY AND HOLD HARMLESS DESIGN PROVIDENCE, LLC FROM ANY AND ALL CLAIMS, LIABILITY, DAMAGES, LOSSES, OR EXPENSES ARISING OUT OF OR IN CONNECTION WITH THE CUSTOMER'S USE OF THE PLANS. THE CUSTOMER CONTINUES TO BE RESPONSIBLE FOR THE PLANS AFTER THE CONSTRUCTION PHASE TO INDEMNIFY AND HOLD HARMLESS DESIGN PROVIDENCE, LLC FROM ANY CLAIMS, LIABILITY, DAMAGES, LOSSES, OR EXPENSES ARISING OUT OF OR IN CONNECTION WITH THE CUSTOMER'S USE OF THE PLANS. THE CUSTOMER AGREES TO PAY DESIGN PROVIDENCE, LLC ALL REASONABLE ATTORNEY FEES AND COSTS INCURRED IN ENFORCING THE TERMS OF THIS LICENSE. ALL REPRODUCTIONS MUST INCLUDE THE DESIGN PROVIDENCE, LLC COPYRIGHT NOTICE. DESIGN PROVIDENCE, LLC RETAINS OWNERSHIP OF ALL PLANS, DRAWINGS, AND SPECIFICATIONS. THE PLANS MUST BE RETURNED TO DESIGN PROVIDENCE, LLC UPON REQUEST. DESIGN PROVIDENCE, LLC RETAINS ALL RIGHTS TO THE PLANS, DRAWINGS, AND SPECIFICATIONS. THE CUSTOMER'S USE OF THE PLANS IS LIMITED TO THE PURPOSE STATED ABOVE. THE CUSTOMER'S USE OF THE PLANS FOR ANY OTHER PURPOSE IS PROHIBITED. THE CUSTOMER'S USE OF THE PLANS FOR ANY OTHER PURPOSE WILL BE DEEMED TO BE A WILLFUL INFRINGEMENT OF DESIGN PROVIDENCE, LLC'S COPYRIGHT. DESIGN PROVIDENCE, LLC'S COPYRIGHT IS INTENDED TO PROTECT ALL SUCH PLANS, DRAWINGS, AND SPECIFICATIONS, AND THE CUSTOMER'S USE OF THE PLANS FOR ANY OTHER PURPOSE WILL BE DEEMED TO BE A WILLFUL INFRINGEMENT OF DESIGN PROVIDENCE, LLC'S COPYRIGHT. DESIGN PROVIDENCE, LLC RETAINS ALL RIGHTS TO THE PLANS, DRAWINGS, AND SPECIFICATIONS. THE CUSTOMER'S USE OF THE PLANS IS LIMITED TO THE PURPOSE STATED ABOVE. THE CUSTOMER'S USE OF THE PLANS FOR ANY OTHER PURPOSE IS PROHIBITED.



LOT 21 ZION MEADOWS, SANDY OR

PLAN NO: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

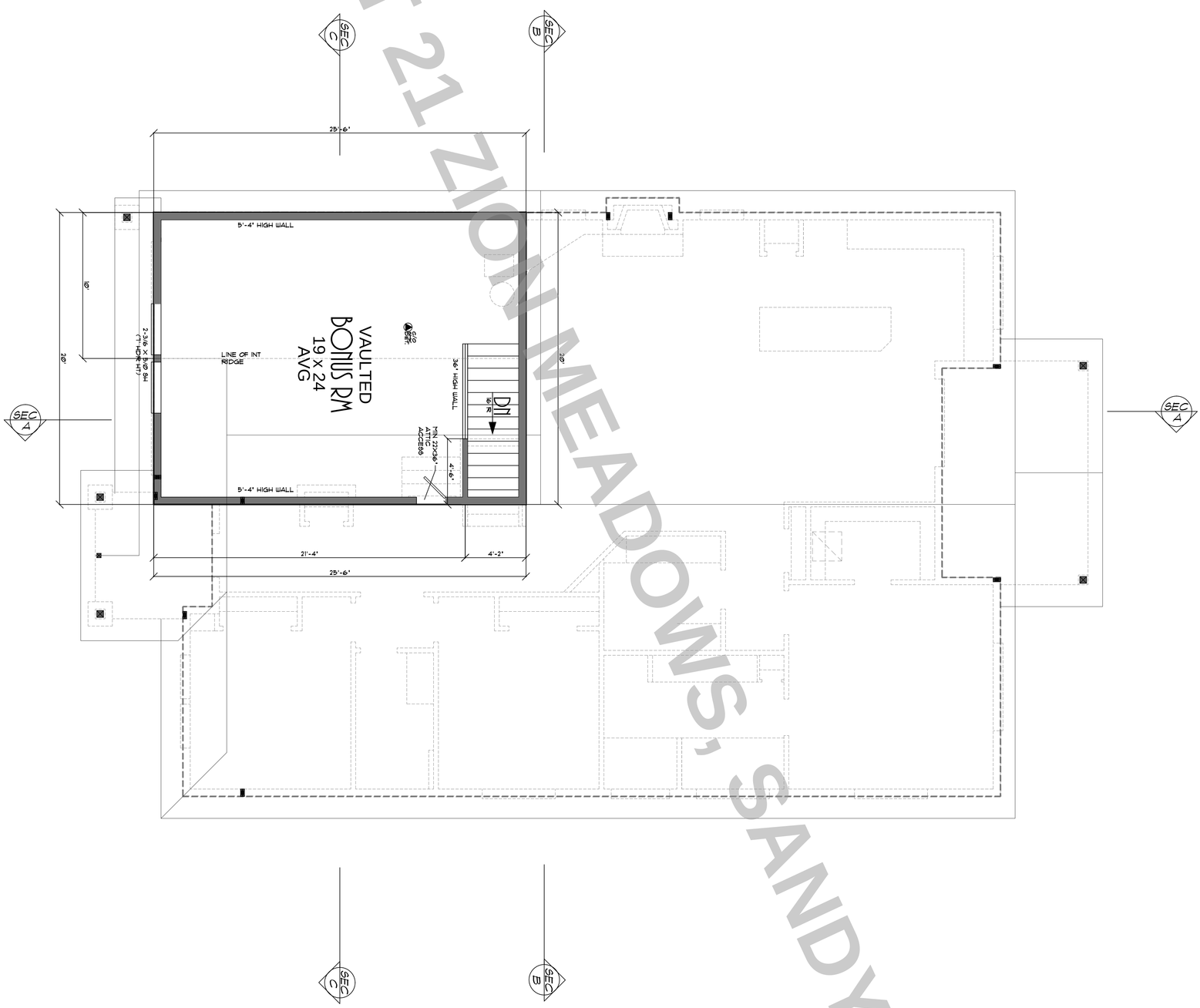
CLIENT NAME: THE OLALLIE B RAZE LOT 21
LOCATION:
SHEET TITLE: MAIN FLOOR PLAN
SQUARE FEET: 1720 SQUARE FEET

DESIGN PROVIDENCE, LLC
PHB 392 12045 S.E. SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: 503-760-0446 Email: Designprovidence@Q.com
Web: Designprovidence.com

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR THE USE IN CONSTRUCTING ONE HOME. THE PLANS ARE SUBJECT TO THE TERMS AND CONDITIONS OF A LICENSE AGREEMENT BETWEEN THE CUSTOMER AND DESIGN PROVIDENCE, LLC. ANY USE OF THE PLANS NOT ACCEPTABLE TO THE CUSTOMER, INCLUDING BUT NOT LIMITED TO: USE OF ANY PART OF THE PLANS FOR ANY OTHER HOME, USE OF ANY PART OF THE PLANS BY ANY OTHER PERSON OR ENTITY, MODIFICATION OF THE PLANS WITHOUT THE WRITTEN CONSENT OF DESIGN PROVIDENCE, LLC, OR REPRODUCTION OF THE PLANS IN ANY FORM WITHOUT THE WRITTEN CONSENT OF DESIGN PROVIDENCE, LLC, IS PROHIBITED. THE CUSTOMER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FOR THE CONSTRUCTION OF THE HOME. DESIGN PROVIDENCE, LLC, MAKES NO REPRESENTATIONS OR WARRANTIES REGARDING ANY IMAGE RENDERING OF THE HOME, INCLUDING BUT NOT LIMITED TO: THE ACCURACY OF THE COLORS, THE ACCURACY OF THE LANDSCAPING, THE ACCURACY OF THE SITE, THE ACCURACY OF THE SURROUNDING ENVIRONMENT, OR THE ACCURACY OF THE HOME'S ORIENTATION TO THE SITE. THE CUSTOMER IS RESPONSIBLE FOR ANY IMAGE RENDERING AS WELL AS THE PLANS, INCLUDING BUT NOT LIMITED TO: THE ACCURACY OF THE SITE, THE ACCURACY OF THE SURROUNDING ENVIRONMENT, OR THE ACCURACY OF THE HOME'S ORIENTATION TO THE SITE. CONTACT DESIGN PROVIDENCE, LLC, FOR ADDITIONAL INFORMATION.

UNAUTHORIZED USE OF, COPYING OF, THE PLANS, OR THE DESIGN, INCLUDING BUT NOT LIMITED TO: THE ARRANGEMENT OF ROOMS, THE SHAPE OF THE HOME, THE ROOF LINES, THE WINDOWS, THE DOORS, THE FRONT FACE, THE FLOOR PLAN, THE STAIRS, THE ROOMS, THE ELEVATIONS, THE FRONT ELEVATION, AND OR THE ROOF LINES, IS EXPRESSLY PROHIBITED. ANY UNAUTHORIZED USE OF THE PLANS, OR THE DESIGN, INCLUDING BUT NOT LIMITED TO: THE ARRANGEMENT OF ROOMS, THE SHAPE OF THE HOME, THE ROOF LINES, THE WINDOWS, THE DOORS, THE FRONT FACE, THE FLOOR PLAN, THE STAIRS, THE ROOMS, THE ELEVATIONS, THE FRONT ELEVATION, AND OR THE ROOF LINES, WILL BE PROSECUTED TO THE FULLEST EXTENT OF THE LAW.

SHEET NR:
3



LOT 21 ZION MEADOWS, SANDY OR

4

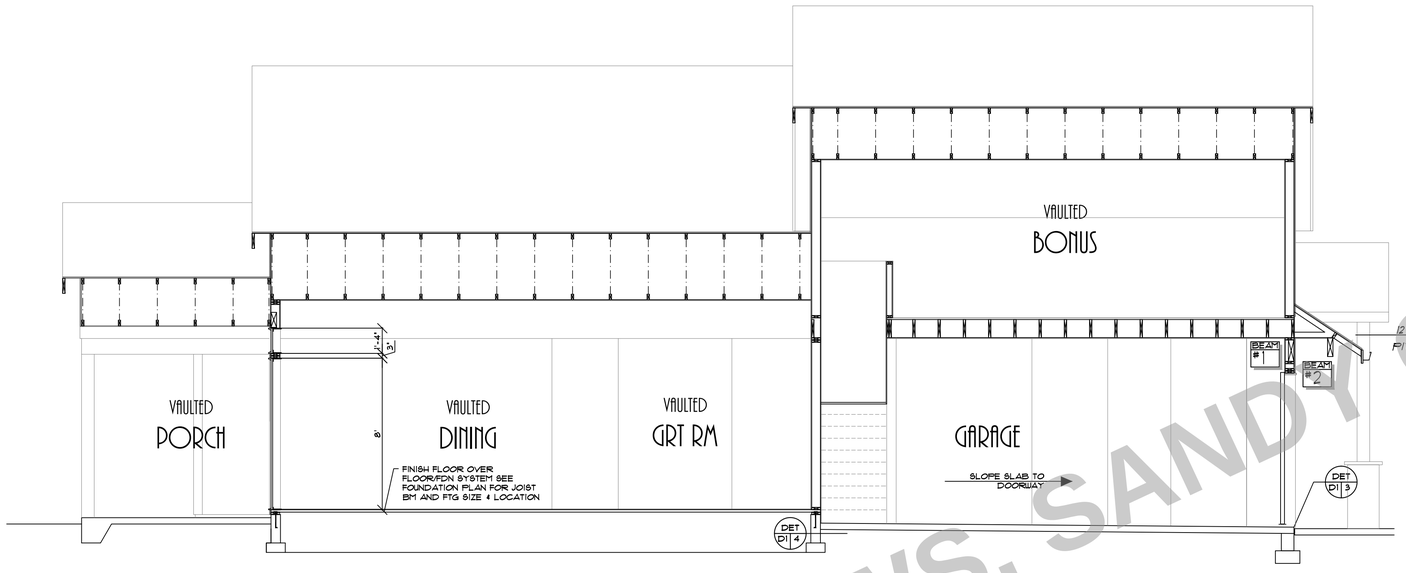
SHEET NO.

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR THE USE IN CONSTRUCTION OF ONE BUILDING ONLY & ARE SUBJECT TO THE CONDITIONS OF LICENSE ACCEPTED BY THE CUSTOMER. USE OF ANY PART OF THE PLANS BY ANY PARTY OTHER THAN THE CUSTOMER, EXCEPT ON LOAN BY THE CUSTOMER'S THIRD PARTIES NECESSARY TO ASSIST THE CUSTOMER IN LOAN THE PLANS IS NOT CONVENTED. THE CUSTOMER'S USE OF THE PLANS IS SUBJECT TO THE WORDING OF THE LICENSE AGREEMENT, WHICH ALSO PROHIBITS MODIFICATIONS OF THE PLANS, ANY PRODUCTION FROM THE PLANS IF A SAFETY IS INTERCEPTED BY THE USE OF THE PLANS, OR THE PLACEMENT OF THE PLANS IN PUBLIC DOMAIN. THE CUSTOMER IS RESPONSIBLE AND KNOWS LICENSEE'S AGREEMENT PRIOR TO CONSTRUCTION. THIS PLAN HAS BEEN PREPARED CAREFULLY FOR USE BY THE CUSTOMER, BUILDER, ADAPTATION OF THE PLANS TO MEET SPECIFIC STATE & LOCAL BUILDING CODES & REGULATIONS IS SOLELY THE CUSTOMER'S & CONTRACTOR'S RESPONSIBILITY. IN ADDITION CUSTOMER'S & CONTRACTOR'S ARE SOLELY RESPONSIBLE FOR ACCURACY & OVERALL INTEGRITY OF THE PLANS IN EXCESS OF THE LICENSE ITS AND FOR THEIR USE. THE CONTRACTOR THEREFORE MUST CAREFULLY INSPECT ALL DIMENSIONS & DETAILS IN THE PLANS FOR

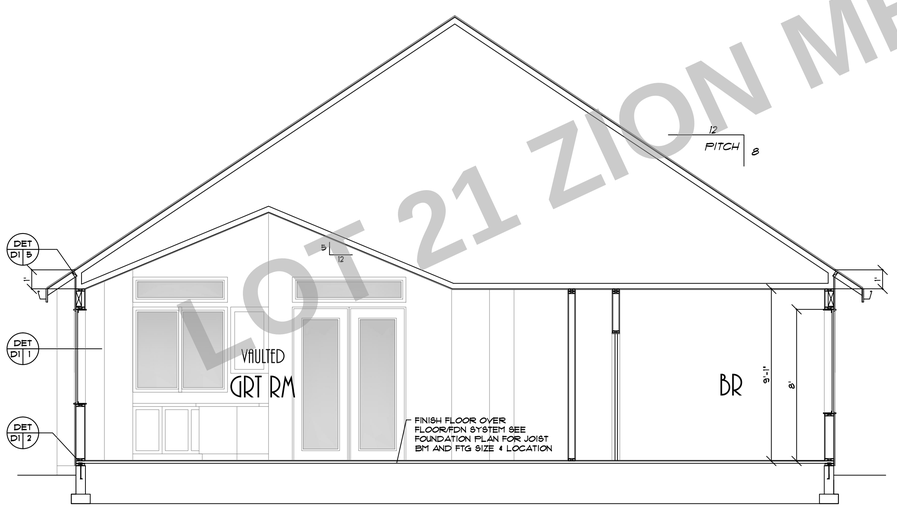
UNAUTHORIZED USE OR COPYING OF THE PLANS, OR THE DESIGN, ONLY DIRECT INFRINGERS ARE LIABLE TO THE PLAINTIFF, AT THE INFRINGER'S ONLY. INFRINGERS MAY INCLUDE LENDERS OF UP TO $50,000 PER WORK INFRINGED, AND UP TO $100,000 PER WORK INFRINGED WILLFULLY.

DESIGN PROVIDENCE, LLC
PMB 362 12042 S.E. SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: 503-760-0446 Email: Designprovidence@Q.com
Web: DesignprovidenceLLC.com

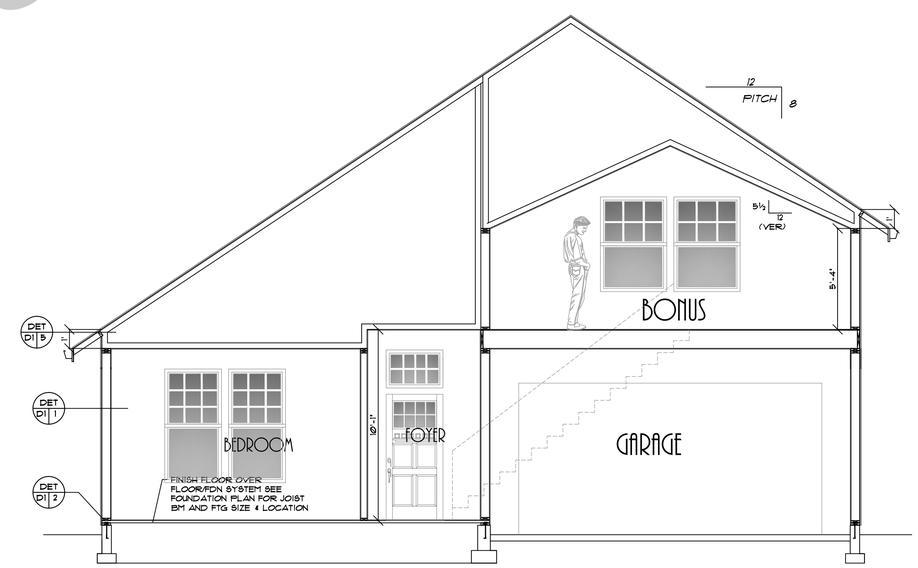
CLIENT NAME:	THE OLALLIE B RAZE LOT 21	PLAN NO:	82214 B
		DATE:	9-6-17
LOCATION		SCALE:	1/4" = 1'-0"
SHEET TITLE:	UPPER FLOOR PLAN		
SQUARE FEET:	465 SQUARE FEET		



CROSS SECTION A-A



CROSS SECTION B-B



CROSS SECTION C-C

LOT 21 ZION MEADOWS, SANDY OR

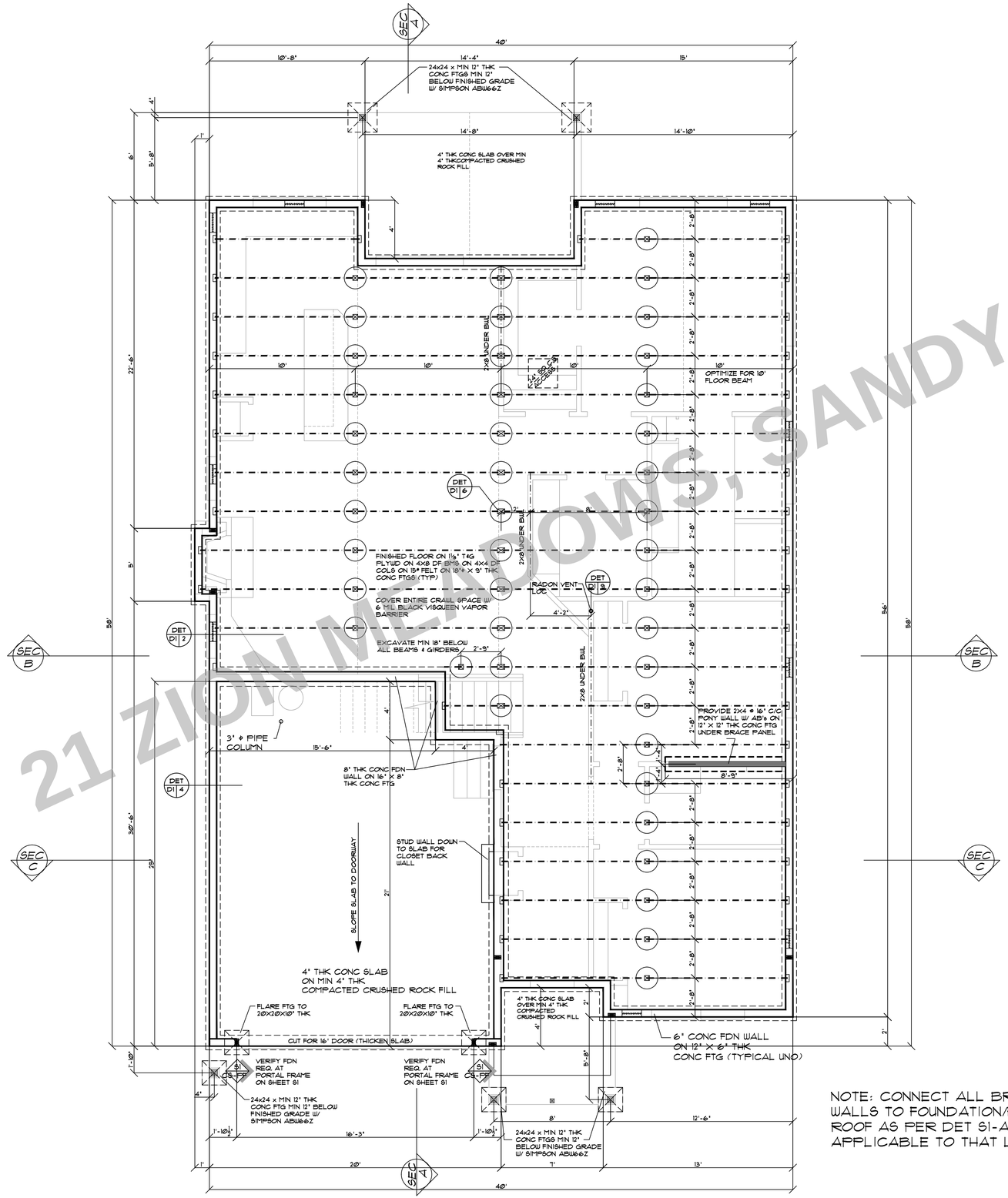
PLAN NO: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

CLIENT NAME: THE OLALLIE B RAZE LOT 21
LOCATION
SHEET TITLE: CROSS SECTIONS
SQUARE FEET:

DESIGN PROVIDENCE, LLC
PMB 362 2000 S.E. 34th AVENUE ST. CLOUD MAIL OR 97015
Phone & Fax: 503-760-0446 Email: Designprovidence@Q.com
Web: Designprovidence.com

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR THE USE IN CONSTRUCTING A SINGLE STRUCTURE ONLY. THE USE OF ANY COPY OR COPIES, ACCEPTED BY THE CLIENT, OTHER THAN FOR THE CONSTRUCTION OF A SINGLE STRUCTURE, OR ANY COPY OR COPIES NOT PAID FOR IN FULL, IS PROHIBITED. THE DESIGNER HAS EXERCISED REASONABLE CARE IN PREPARING THESE PLANS TO REFLECT THE INTENT OF THE CUSTOMER AS INTERPRETED BY THE DESIGNER. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR ACTUAL CONDITIONS, DIMENSIONS, OR OTHER MATTERS AFFECTING THE PROJECT. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE PLANS, SPECIFICATIONS, OR OTHER DOCUMENTS PROVIDED TO THE CUSTOMER. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR ANY ADDITIONS OR CHANGES TO THE PLANS, SPECIFICATIONS, OR OTHER DOCUMENTS NOT MADE BY THE DESIGNER. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR THE CONSTRUCTION OF A STRUCTURE FROM THESE PLANS UNLESS THE DESIGNER IS THE CONTRACTOR OR ARCHITECT OF RECORD. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR THE ENGINEERING OF THE STRUCTURE UNLESS THE DESIGNER IS THE ENGINEER OF RECORD. UNAUTHORIZED USE OR COPYING OF THE PLANS, OR THE DESIGN, IN WHOLE OR IN PART, IS PROHIBITED. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR LABELS THAT BLOCK, OBSCURE, OR OTHERWISE DAMAGE THE SURFACE OF THE PLANS. UNAUTHORIZED USE OR COPYING OF THE PLANS, OR THE DESIGN, INCLUDES THAT BLOCK, OBSCURE, OR OTHERWISE DAMAGE THE SURFACE OF THE LABELS, THAT BLOCK, OBSCURE, OR OTHERWISE DAMAGE THE SURFACE OF THE LABELS, THAT BLOCK, OBSCURE, OR OTHERWISE DAMAGE THE SURFACE OF THE LABELS, AND UP TO $10,000 PER WORK INFRINGED WILLFULLY.

SHEET NO:
5



NOTE: CONNECT ALL BRACE WALLS TO FOUNDATION/FLOOR AND ROOF AS PER DET S1-A AS APPLICABLE TO THAT LOCATION

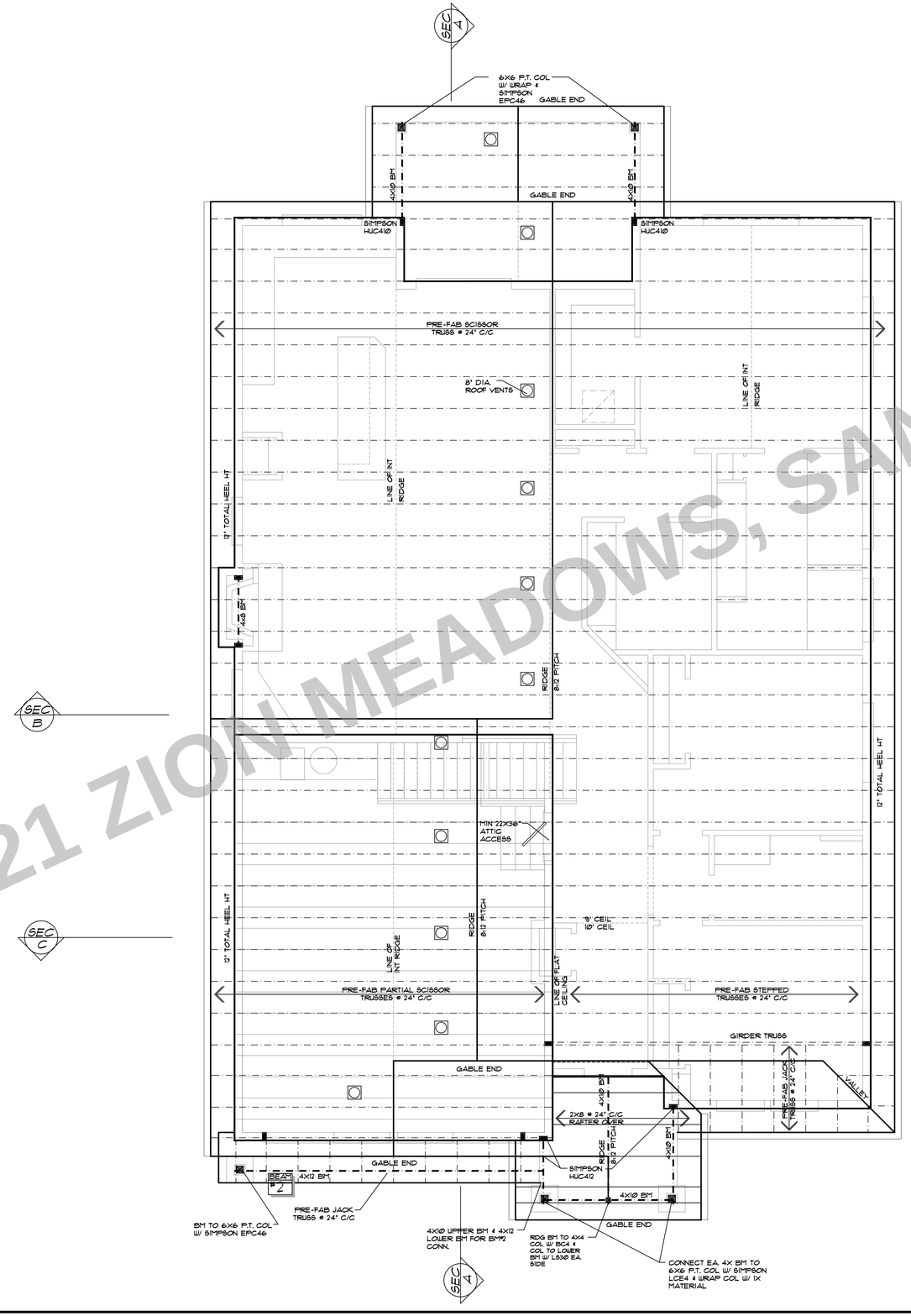
LOT 21 ZION MEADOWS, SANDY OR

PLAN NO.: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

CLIENT NAME: THE OLALLIE B RAZE LOT 21
LOCATION:
SHEET TITLE: FOUNDATION PLAN
SQUARE FEET:

DESIGN PROVIDENCE, LLC
R P R III
PMB 362 12042 S.E. SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: (503) 344-0127 Cell: (503) 704-0127
Web: Designprovidence.com E-mail: Jim@Designprovidence.com

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR THE USE IN CONSTRUCTION OF ONE BUILDING ONLY & ARE SUBJECT TO THE ANY CHANGE, OR REPRODUCTION OF ANY KIND WITHOUT THE WRITTEN CONSENT OF DESIGN PROVIDENCE, LLC. ANY REPRODUCTION OR USE OF THESE PLANS WITHOUT THE WRITTEN CONSENT OF DESIGN PROVIDENCE, LLC. IS PROHIBITED. THE PLANS CAN ONLY BE REVISED BY THE WORKING OF DESIGN PROVIDENCE, LLC. ANY CHANGES MADE TO THE PLANS BY OTHERS WITHOUT THE WRITTEN CONSENT OF DESIGN PROVIDENCE, LLC. WILL RELEASE DESIGN PROVIDENCE, LLC. OF ALL LIABILITY FOR THE PLANS. IT IS THE RESPONSIBILITY OF THE PERSON OR COMPANY THAT HAS ORDERED THE PLANS TO ENSURE THAT THE PLANS ARE ADEQUATE FOR THE SPECIFIC CONDITIONS OF THE PROJECT. DESIGN PROVIDENCE, LLC. IS NOT RESPONSIBLE FOR ANY CONDITIONS OR ISSUES THAT ARE NOT ADDRESSED IN THE PLANS. IN ADDITION TO THE ABOVE, IT IS THE RESPONSIBILITY OF THE PERSON OR COMPANY THAT HAS ORDERED THE PLANS TO ENSURE THAT ALL OF THE PLANS, SPECIFICATIONS, NOTES, DETAILS, ETC. ARE ADEQUATE FOR THE PROJECT. IN ADDITION TO THE ABOVE, IT IS THE RESPONSIBILITY OF THE PERSON OR COMPANY THAT HAS ORDERED THE PLANS TO ENSURE THAT ALL DIMENSIONS & DETAILS IN THE PLANS FOR WHICH CAREFULLY INSPECT ALL DIMENSIONS & DETAILS IN THE PLANS FOR CONSTRUCTION. IN ADDITION TO THE ABOVE, IT IS THE RESPONSIBILITY OF THE PERSON OR COMPANY THAT HAS ORDERED THE PLANS TO ENSURE THAT ALL OF THE PLANS, SPECIFICATIONS, NOTES, DETAILS, ETC. ARE ADEQUATE FOR THE PROJECT. DESIGN PROVIDENCE, LLC. IS NOT RESPONSIBLE FOR ANY CONDITIONS OR ISSUES THAT ARE NOT ADDRESSED IN THE PLANS



NOTE: MIN BEARING POST TO (2)2X TO MATCH WALL UNLESS NOTED OTHERWISE

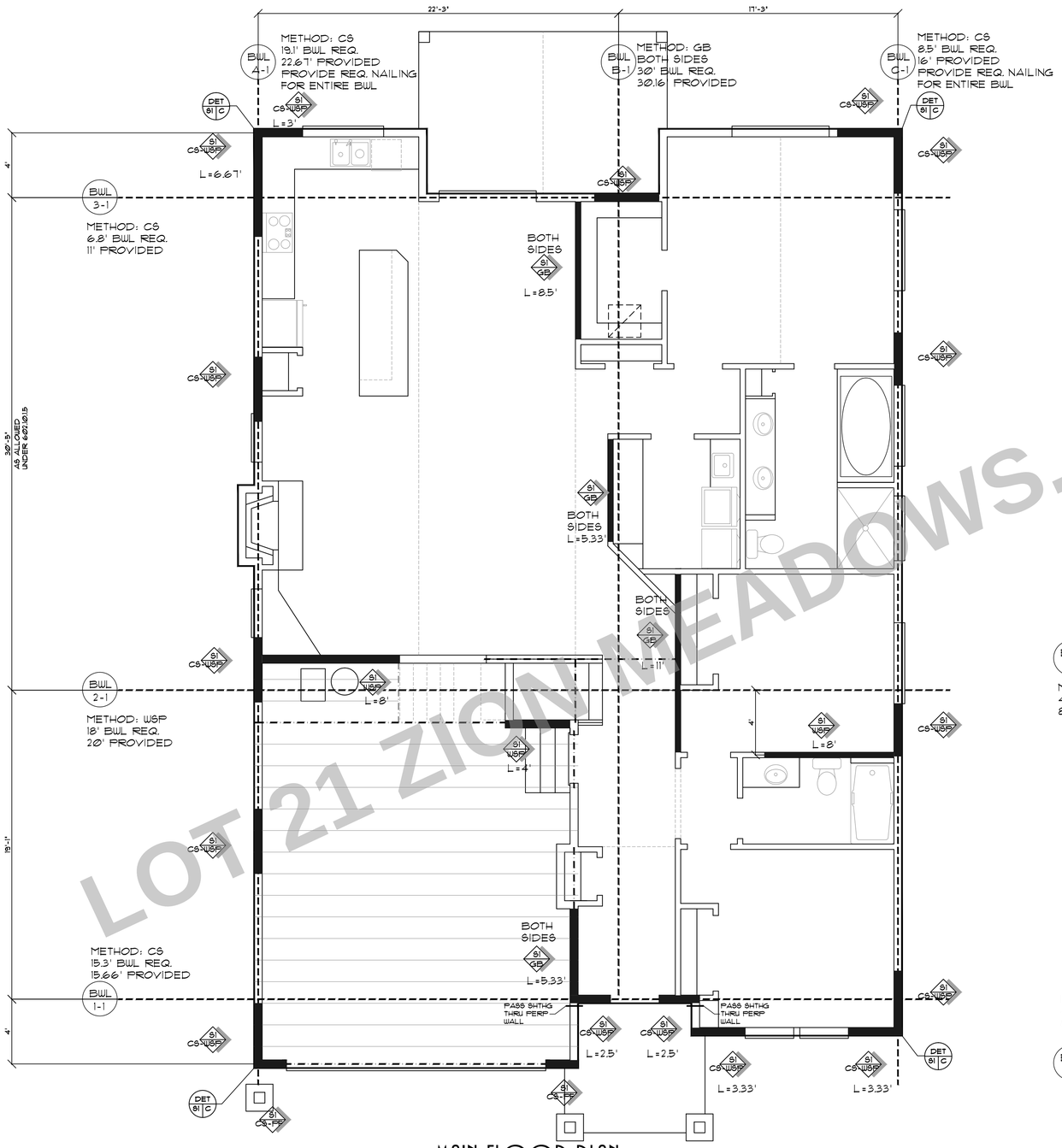
LOT 21 ZION MEADOWS, SANDY OR

PLAN NO: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

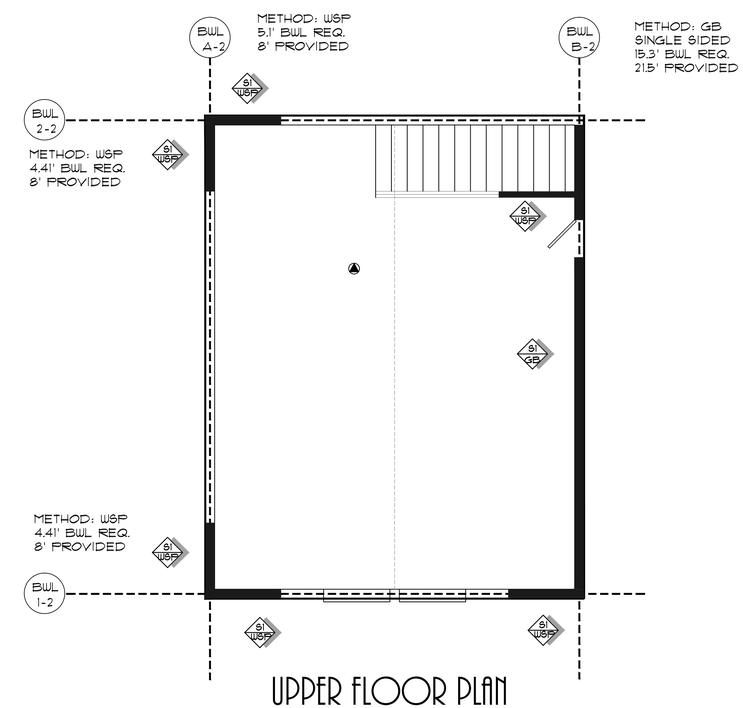
CLIENT NAME: THE OLALLIE & RAZE LOT 21
LOCATION:
SHEET TITLE: ROOF FRAMING PLAN
SQUARE FEET:

DESIGN PROVIDENCE, LLC
PMB 362 12042 S.E. SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: 503-312-5448 Email: Design.providence@Q.com

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR THE USE IN CONSTRUCTION OF ONE BUILDING ONLY & ARE SUBJECT TO THE COPYRIGHT LAWS OF THE UNITED STATES. NO PART OF THE PLANS OR ANY OTHER PART OF ANY BUILDING OR OTHER STRUCTURE MAY BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE PRIOR WRITTEN CONSENT OF THE DESIGNER. IT IS THE RESPONSIBILITY OF THE OWNER TO SEE THAT THE CONTRACTOR FOLLOWS THE PLANS AND SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR THE WORKING OF THE PLANS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY MATTER NOT SHOWN ON THE PLANS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY MATTER PERTAINING TO THE STRUCTURAL INTEGRITY OF THE PLANS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY MATTER PERTAINING TO ENGINEERING AND ENGINEERING SPECIFICATIONS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY MATTER PERTAINING TO ENERGY CALCULATIONS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY MATTER PERTAINING TO THE ELECTRICAL, MECHANICAL, PLUMBING OR FIRE PROTECTION SYSTEMS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY MATTER PERTAINING TO THE SITE, SITE PREPARATION, SITE DRAINAGE, SITE UTILITIES, SITE ACCESS, SITE PARKING, SITE LANDSCAPING, SITE SIGNAGE, SITE LIGHTING, SITE SAFETY, SITE SECURITY, SITE ACCESSIBILITY OR ANY OTHER SITE RELATED MATTER. THE DESIGNER IS NOT RESPONSIBLE FOR ANY MATTER PERTAINING TO THE FEASIBILITY & COST OF THE PLANS, THE DESIGNER'S FEE IS BASED ON THE ESTIMATED COST OF THE PLANS AS PROVIDED BY THE MOST CARDULLET ASPECT ALL DIMENSIONS & DETAILS IN THE PLANS FOR CONSTRUCTION PURPOSES. THE DESIGNER'S FEE IS BASED ON THE ESTIMATED COST OF THE PLANS AS PROVIDED BY THE MOST CARDULLET ASPECT



MAIN FLOOR PLAN



UPPER FLOOR PLAN

LOT 21 ZION MEADOWS, SANDY OR

PLAN NO: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

CLIENT NAME: THE OLALLIE B RAZE LOT 21
LOCATION:
SHEET TITLE: PRESCRIPTIVE WALL BRACING
SQUARE FEET:

DESIGN PROVIDENCE, LLC
PMB 302 12042 S.E. SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: 503-780-1448 Email: Designprovidence@Q.com

THESE PLANS HAVE BEEN PREPARED TO THE SPECIFIC FOR THE USE IN CONSTRUCTION OF AND BUILDING ON A LIKE SUBJECT TO THE ANY CONDITIONS, LIMITATIONS, OR RESTRICTIONS, INCLUDING WITHOUT LIMITATION ANY RIGHTS OF THIRD PARTIES, CITY OR COUNTY ORDINANCES, OR ANY OTHER LAWS, RULES, REGULATIONS OR ORDERS OF ANY GOVERNMENTAL AGENCY OR BODY, WHICH MAY AFFECT THE USE OF THE PLANS FOR ANY PARTICULAR PROJECT. INCLUDING WITHOUT LIMITATION, ANY RIGHTS OF THIRD PARTIES, ANY RESTRICTIONS OR REGULATIONS OR ORDINANCES OF ANY CITY OR COUNTY, OR ANY OTHER LAWS, RULES, REGULATIONS OR ORDERS OF ANY GOVERNMENTAL AGENCY OR BODY, WHICH MAY AFFECT THE USE OF THE PLANS FOR ANY PARTICULAR PROJECT. THE PLANS ARE NOT INTENDED FOR USE IN ADDITION OR ALTERATION TO ANY OTHER PLANS OR DRAWINGS. THE PLANS ARE NOT INTENDED FOR USE ON ANY OTHER PROJECT. THE PLANS ARE NOT INTENDED FOR USE BY ANY PERSON OR ENTITY OTHER THAN THE PERSON OR ENTITY FOR WHOM THE PLANS WERE PREPARED. THE PLANS ARE NOT INTENDED FOR USE AT ANY LOCATION OTHER THAN THE PROJECT SITE. THE PLANS ARE NOT INTENDED FOR USE AT ANY TIME OTHER THAN THE PRESENT. THE PLANS ARE NOT INTENDED FOR USE IN ANY MANNER OR FOR ANY PURPOSE OTHER THAN THE PURPOSE FOR WHICH THE PLANS WERE PREPARED

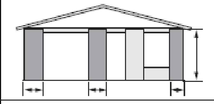
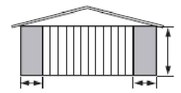
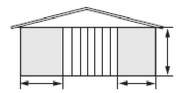
METHOD	MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA
S1 CS-WSP	CS-WSP	Wood structural panel	3/8″		6d common (2″ × 0.113″) nails at 6″ spacing (panel edges) and at 12″ spacing (intermediate supports) or 16 ga. × 1 3/4 staples at 3″ spacing (panel edges) and 6″ spacing (intermediate supports)
S1 WSP	WSP	Wood structural panel (see Section R604)	3/8″		For exterior sheathing see Table R602.3(3) For interior sheathing see Table R602.3(1)
S1 GB	GB	Gypsum board	1/2″		Nails or screws at 7″ spacing at panel edges including top and bottom plates; for all braced wall panel locations for exterior sheathing nail or screw size, see Table R602.3(1); for interior gypsum board nail or screw size, see Table R702.3.5

TABLE R602.3(3)
REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES[a,b,c]

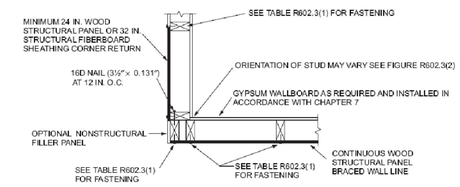
MINIMUM NAIL		MINIMUM WOOD STRUCTURAL PANEL SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (inches)	MAXIMUM WALL STUD SPACING (inches)	PANEL NAIL SPACING		MAXIMUM WIND SPEED (mph)		
							Wind exposure category		
Size	Penetration (inches)				Edges (inches o.c.)	Field (inches o.c.)	B	C	D
6d Common (2.0″ × 0.113″)	1.5	24/0	3/8	16	6	12	110	90	85
8d Common (2.5″ × 0.131″)	1.75	24/16	7/16	16	6	12	130	110	105
				24	6	12	110	90	85

For SI: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.

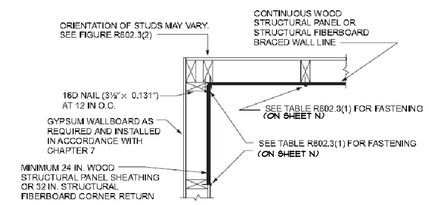
a. Panel strength axis parallel or perpendicular to supports. Three-ply plywood sheathing with studs spaced more than 16 inches on center shall be applied with panel strength axis perpendicular to supports.

b. Table is based on wind pressures acting toward and away from building surfaces per Section R301.2. Lateral bracing requirements shall be in accordance with Section R602.10.

c. Wood Structural Panels with span ratings of Wall-16 or Wall-24 shall be permitted as an alternate to panels with a 24/0 span rating. Plywood siding rated 16 oc or 24 oc shall be permitted as an alternate to panels with a 24/16 span rating. Wall-16 and Plywood siding 16 oc shall be used with studs spaced a maximum of 16 inches on center.



(a) OUTSIDE CORNER DETAIL



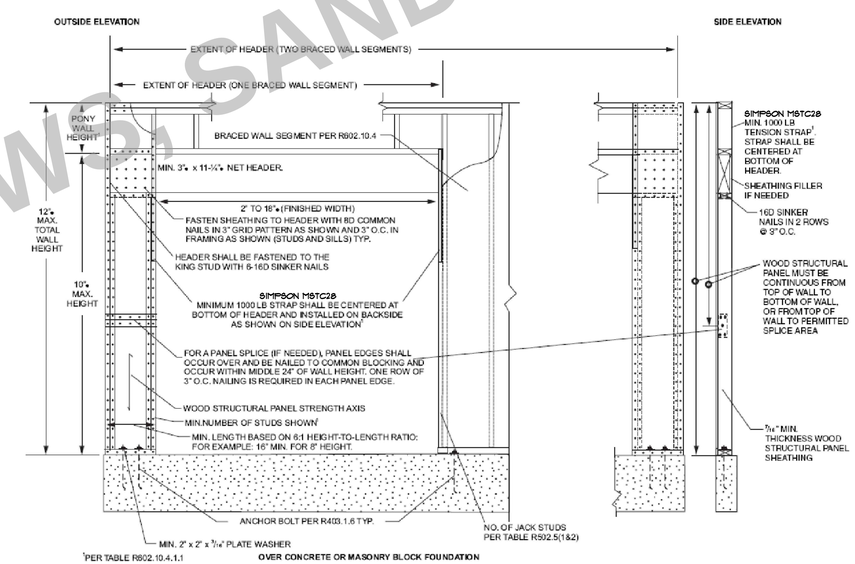
(b) INSIDE CORNER DETAIL

DET S1 C
OUTSIDE CORNER

NOTE: ALL REFERENCES TO TABLE R602.3(1) CAN BE FOUND ON SHEET N

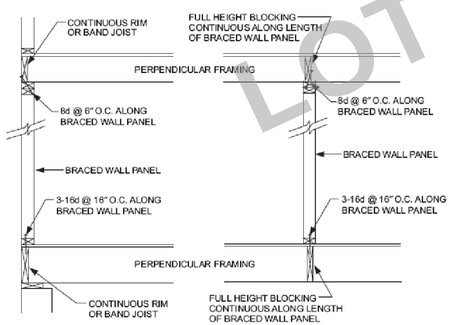
DET S1 C
INSIDE CORNER

S1 CS-PF



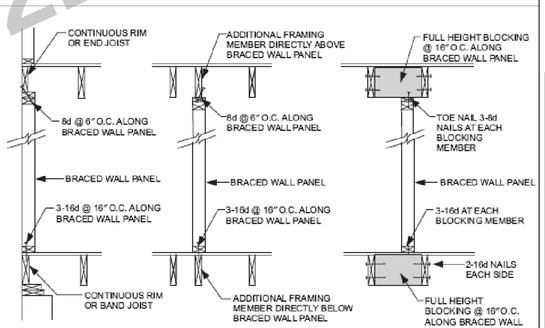
[1]PER TABLE R602.10.4.1.1

OVER CONCRETE OR MASONRY BLOCK FOUNDATION



b = 25.4 mm.

FIGURE R602.10.6(1)
BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING



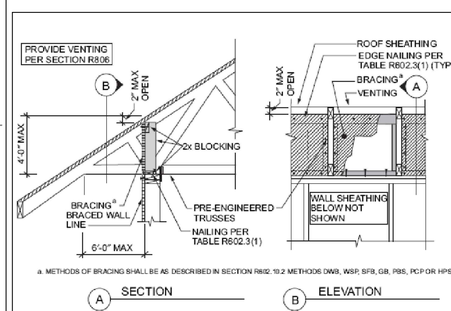
inch = 25.4 mm.

FIGURE R602.10.6(2)
BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING

DET S1 A

NOTE: CONNECT ALL BRACE WALLS TO FOUNDATION/FLOOR AND ROOF AS PER DET S1-A AS APPLICABLE TO THAT LOCATION

DET S1 A



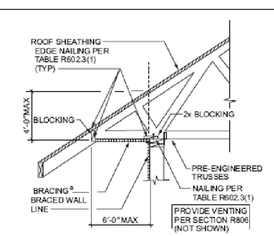
a. METHODS OF BRACING SHALL BE AS DESCRIBED IN SECTION R602.10.2 METHODS DWB, WSP, SFB, GB, PBS, PCP OR HPS

A SECTION

B ELEVATION

DET S1 B1

OR

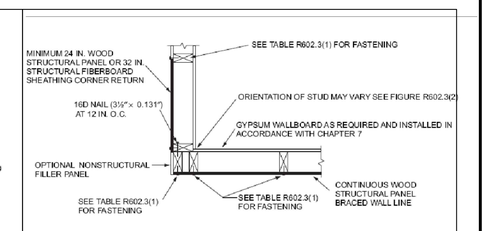


a. METHODS OF BRACING SHALL BE AS DESCRIBED IN SECTION R602.10.2 METHOD DWB, WSP, SFB, GB, PBS, PCP OR HPS

For SI: 1 inch = 25.4 mm.

FIGURE R602.10.6.2(2)
BRACED WALL PANEL CONNECTION OPTION TO PERPENDICULAR RAFTERS OR ROOF TRUSSES

DET S1 B2



(a) OUTSIDE CORNER DETAIL

DET S1 C
OUTSIDE CORNER

LOT 21 ZION MEADOWS, SANDY OR

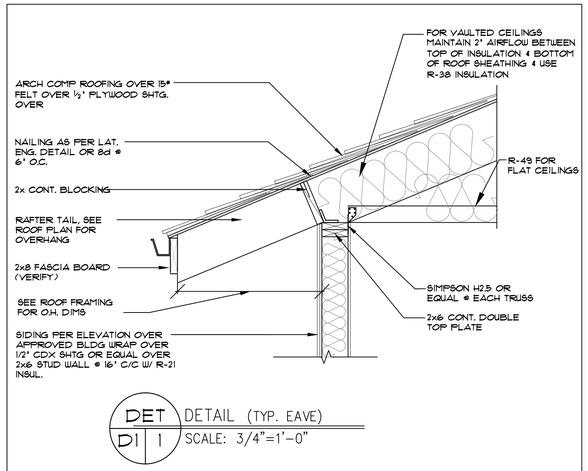
PLAN NO: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

CLIENT NAME: THE OLALLIE B RAZE LOT 21
LOCATION
SHEET TITLE: SHEAR DETAILS
SQUARE FEET:

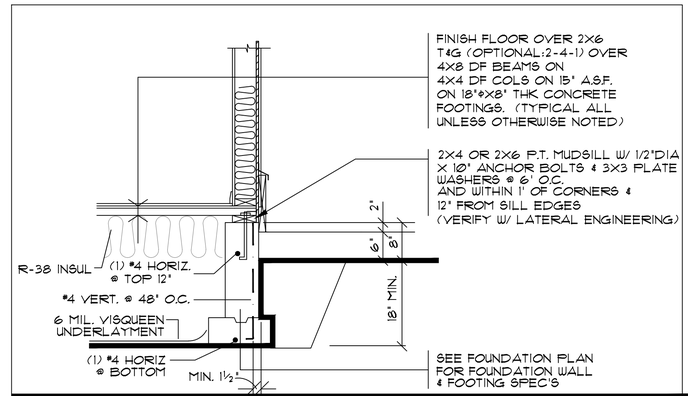
DESIGN PROVIDENCE, LLC
PMB 392 12045 S.E. SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: 503-760-0446 Email: Designprovidence@Q.com
Web: DesignProvidence.com

THESE PLANS HAVE BEEN LICENSED TO BE ACCEPTABLE FOR THE USE IN THE CONSTRUCTION OF A SINGLE FAMILY DWELLING ON A SINGLE LOT. THE LICENSE ACCEPTED BY THE OWNER(S) FOR THE CONSTRUCTION OF ANY DWELLING UNDER THESE PLANS MUST BE PURCHASED FROM DESIGN PROVIDENCE, LLC. THE LICENSE GRANTED TO THE OWNER(S) FOR THE USE OF THESE PLANS DOES NOT INCLUDE THE RIGHT TO REPRODUCE THE PLANS OR ANY PART THEREOF, OR TO PERMIT ANY OTHER PERSON OR ENTITY TO REPRODUCE THE PLANS OR ANY PART THEREOF, WITHOUT THE WRITTEN CONSENT OF DESIGN PROVIDENCE, LLC. ANY UNAUTHORIZED USE, COPYING OF THE PLANS, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED. ANY ALTERATIONS TO THE PLANS, INCLUDING BUT NOT LIMITED TO, ADDING OR REMOVING WALLS, WILL VOID THE LICENSE AND THE WARRANTY OF THE PLANS. ANY UNAUTHORIZED USE, COPYING OF THE PLANS, OR THE DESIGN, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF DESIGN PROVIDENCE, LLC, WILL BE PROSECUTED TO THE FULLEST EXTENT OF THE LAW.

SHEET NR: S1

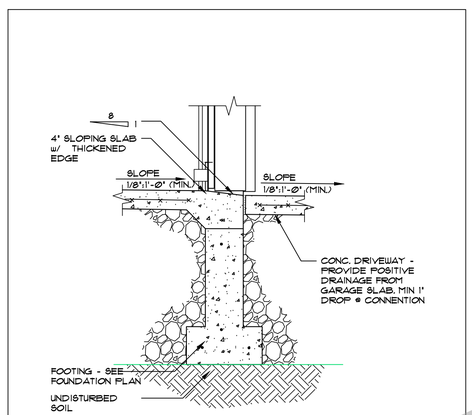


DET D1 1 DETAIL (TYP. EAVE)
SCALE: 3/4"=1'-0"

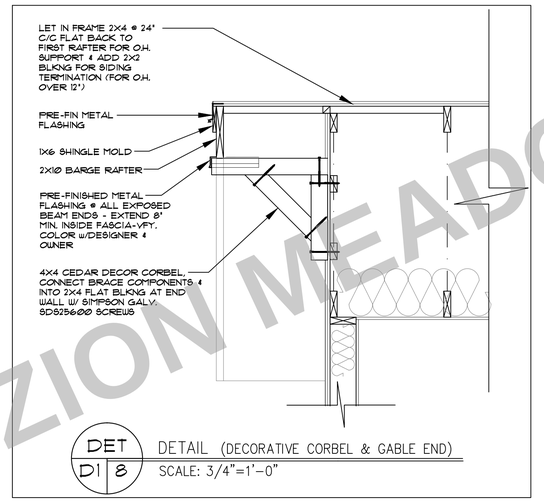


POST & BEAM FOOTING DETAIL

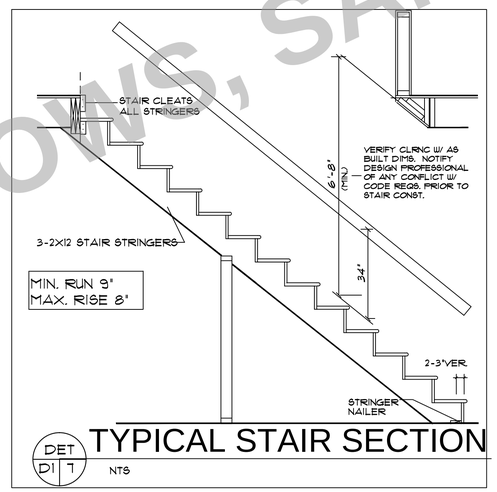
DET D1 2



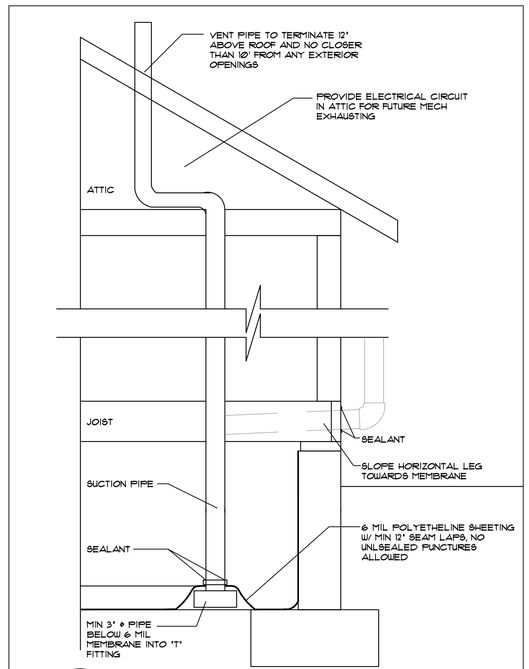
DET D1 3 DETAIL (GARAGE DOOR)
SCALE: 3/4"=1'-0"



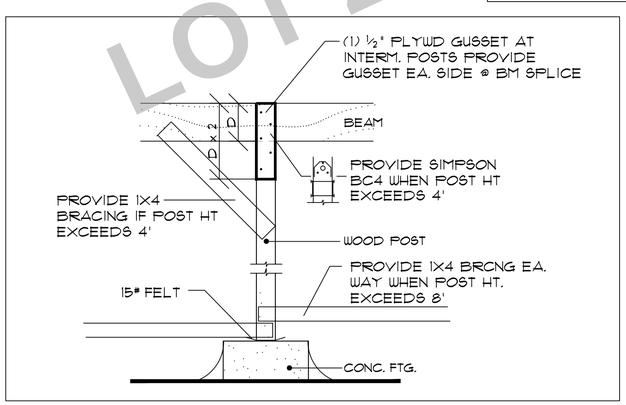
DET D1 8 DETAIL (DECORATIVE CORBEL & GABLE END)
SCALE: 3/4"=1'-0"



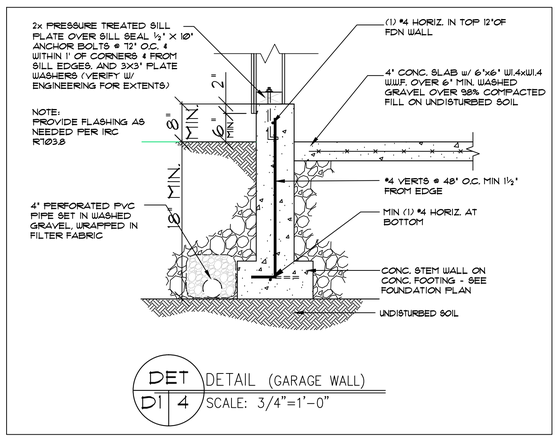
DET D1 7 TYPICAL STAIR SECTION
NTS



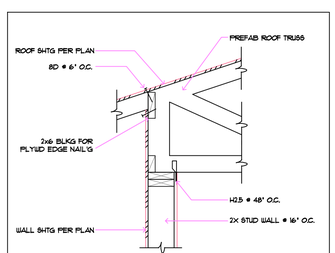
DET D1 9 DETAIL (PASSIVE RADON MITIGATION SYSTEM)
SCALE: 3/4"=1'-0"



DET D1 6 POST & BEAM FOOTING DETAIL



DET D1 4 DETAIL (GARAGE WALL)
SCALE: 3/4"=1'-0"



DET D1 5 ROOF TRUSS @ EXT WALL
RF TS RAISED HEEL
SCALE: 1" = 1'-0"

LOT 21 ZION MEADOWS, SANDY OR

PLAN NO: 82214 B
DATE: 9-6-17
SCALE: 1/4" = 1'-0"

CLIENT NAME: THE OLALLIE & RAZE LOT 21
LOCATION
SHEET TITLE: TYPICAL DETAILS
SQUARE FEET:

DESIGN PROVIDENCE, LLC
RP RJH
PMB 382 EXPO CENTER 7 SUNNYSIDE RD. CLACKAMAS, OR 97015
Phone & Fax: 503.670.0444 Email: Rjhdesignprovidence@yahoo.com
Web: Designprovidencellc.com

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR THE USE IN ONE SINGLE DWELLING. THE USE OF THESE PLANS IS SUBJECT TO CERTAIN TERMS & CONDITIONS, IT WAS ACCEPTED BY THE CUSTOMER. USE OF ANY PORTION OF THESE PLANS IN ANY OTHER DWELLING IS PROHIBITED. THE CUSTOMER MUST ENTER INTO A SEPARATE AGREEMENT WITH THE DESIGNER IN ORDER TO USE THE PLANS IN ANY OTHER DWELLING. THE CUSTOMER MAY NOT REPRODUCE, OR HAVE REPRODUCED, ANY PORTION OF THE PLANS WITHOUT THE WRITTEN CONSENT OF THE DESIGNER. THE CUSTOMER MAY MAKE ADDITIONAL COPIES OF THE PLANS FOR USE IN THE CONSTRUCTION OF THE SINGLE DWELLING. IN ADDITION, THE CUSTOMER MAY MAKE ADDITIONAL COPIES OF THE PLANS FOR THE SOLE PURPOSE OF OBTAINING BIDS FOR THE CONSTRUCTION OF THE SINGLE DWELLING. THE CUSTOMER MAY NOT MAKE ADDITIONAL COPIES OF THE PLANS FOR ANY OTHER PURPOSE. THE CUSTOMER IS PERMITTED TO MODIFY THE PLANS, OR HAVE THE PLANS MODIFIED, TO REFLECT SPECIFIC CHANGES REQUIRED BY THE CITY OR COUNTY IN WHICH THE DWELLING IS TO BE CONSTRUCTED. THE CUSTOMER MAY NOT MAKE OTHER MODIFICATIONS TO THE PLANS, OR HAVE OTHER MODIFICATIONS MADE, WITHOUT THE WRITTEN CONSENT OF THE DESIGNER. THE CUSTOMER IS PERMITTED TO USE THE PLANS TO CONSTRUCT ONE SINGLE DWELLING. THE CUSTOMER MAY NOT USE THE PLANS TO CONSTRUCT MORE THAN ONE DWELLING. THE CUSTOMER MAY NOT GIVE, SELL, OR OTHERWISE TRANSFER THE PLANS TO ANOTHER PARTY WITHOUT THE WRITTEN CONSENT OF THE DESIGNER. THE DESIGNER RESERVES THE RIGHT TO REVOKE THE CUSTOMER'S RIGHT TO USE THE PLANS IF, IN THE SOLE OPINION OF THE DESIGNER, THE CUSTOMER HAS VIOLATED THE TERMS OF THIS AGREEMENT. UPON REVOCATION, THE CUSTOMER MUST IMMEDIATELY RETURN ALL COPIES OF THE PLANS TO THE DESIGNER. THE CUSTOMER AGREES TO PAY ATTORNEY FEES AND OTHER COSTS INCURRED BY THE DESIGNER IN CONNECTION WITH ANY LITIGATION TO ENFORCE THE DESIGNER'S RIGHTS PURSUANT TO THIS AGREEMENT. UNAUTHORIZED USE OF COPIES OF THE PLANS, OR THE DESIGN, MAY CAUSE IMPORTANT FORCES, VALUES, AND FORMULAS TO BE UNBALANCED, AND THUS DANGEROUS. THE DESIGNER DISCLAIMS ANY LIABILITY FOR ANY DAMAGES RESULTING FROM UNAUTHORIZED USE OF THE PLANS. THE CUSTOMER AGREES TO INDEMNIFY THE DESIGNER FOR ANY DAMAGES RESULTING FROM UNAUTHORIZED USE OF THE PLANS. THE CUSTOMER AGREES TO PAY UP TO $10,000 PER WORK INFRINGED WILLFULLY.

SHEET NR:
D1

GENERAL NOTES

1. ALL WORK IS TO COMPLY WITH THE LATEST ADOPTED VERSION OF THE ORSC CODE AND ANY APPLICABLE STATE, COUNTY OR LOCAL REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE TO CHECK THE PLANS AND IS TO NOTIFY THE DESIGNER OF ANY ERRORS OR OMISSIONS PRIOR TO THE START OF CONSTRUCTION.
3. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS.
4. DESIGN LOADS:

ROOF	25 PSF (LIVE LOAD)
FLOOR	40 PSF (LIVE LOAD)
STAIRS	100 PSF
GARAGE FLOOR	125 PSF (2000# PT)
DECKS	75 PSF

(IF YOUR LOCAL AREA REQUIRES DIFFERENT DESIGN LOADS, CONSULT WITH A LOCAL STRUCTURAL ENGINEER TO DETERMINE THE APPROPRIATE REVISIONS.)

5. PROVIDE INSULATION BAFFLES AT EAVE VENTS BETWEEN RAFTERS.
6. ALL SMOKE DETECTORS SHALL BE POWERED BY 110V CURRENT, CONNECTED TO HOUSE ELECTRICAL SYSTEM, INTERCONNECT WITH EACH ONE SO THAT IF ANY ONE TRIPS THEY WILL ALL SOUND. THEY SHALL ALSO HAVE A BATTERY BACKUP AND BE LOCATED IN EACH BEDROOM AND ON EACH FLOOR LEVEL.
7. GUARDRAILS SHALL HAVE INTERMEDIATE RAILS SPACED SUCH THAT A SPHERE 4" IN DIA. CANNOT PASS THROUGH
8. PROVIDE GROUNDING ELECTRODE AT ELECTRICAL SERVICE CONSISTING OF A MINIMUM 20' LENGTH OF ½" ø STEEL REINFORCEMENT OF FOOTINGS. ELECTRODE SHALL EXTEND 12" MIN. ABOVE THE PLATE LINE.
9. THE MAXIMUM AMOUNT OF WATER USED BY NEW PLUMBING FIXTURES:

TOILETS	1.6 GALLONS/FLUSH
SHOWER HEADS	2.5 GALLONS/MINUTE
INTERIOR FAUCETS	2.5 GALLONS/MINUTE

10. IN THE EVENT OF CONFLICT BETWEEN PERTINENT CODES AND REGULATIONS AND REFERENCED STANDARDS OF THESE SPECIFICATIONS, THE MORE STRINGENT PROVISIONS SHALL GOVERN.
11. STRUCTURAL SPECIFICATIONS AND DRAWINGS FOR THIS WORK HAVE BEEN PREPARED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICE TO MEET MINIMUM REQUIREMENTS OF THE LATEST EDITION OF THE ORSC.
12. SPECIFICATIONS AND DRAWINGS INDICATE FINISHED STRUCTURE. BUILDER SHALL BE RESPONSIBLE FOR CONSTRUCTION METHODS, PROCEDURES, AND CONDITIONS (INCLUDING SAFETY.) EXCEPT AS SPECIFICALLY INDICATED OTHERWISE IN THE CONTRACT DOCUMENTS
13. CONSTRUCTION LOADS SHALL NOT OVERLOAD STRUCTURE NOR SHALL THEY BE IN EXCESS OF DESIGN LOADINGS INDICATED ON DRAWINGS.
14. BUILDER SHALL VERIFY ALL MATERIALS, DIMENSIONS, AND CONDITIONS SHOWN ON STRUCTURAL DRAWINGS OR NOTED IN STRUCTURAL SPECIFICATIONS. ANY VARIANCES WITHIN STRUCTURAL DRAWINGS AND SPECIFICATIONS, OR WITHIN CONDITIONS ENCOUNTERED AT JOB SITE, SHALL BE REPORTED TO OWNER IN WRITING BEFORE COMMENCEMENT OF ANY WORK EFFECTED BY SUCH VARIANCE.
15. BUILDER SHALL RIGIDLY ADHERE TO ALL LAWS, CODES, AND ORDINANCES WHICH APPLY TO THIS WORK. HE SHALL NOTIFY AND RECEIVE CLARIFICATION FROM OWNER IN WRITING OF ANY VARIATIONS BETWEEN CONTRACT DOCUMENTS AND GOVERNING REGULATIONS.
16. ALL MANUFACTURED MATERIALS, COMPONENTS, FASTENERS, ASSEMBLIES, ETC., SHALL BE HANDLED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND PROVISIONS OF APPLICABLE ICBO RESEARCH RECOMMENDATIONS. WHERE SPECIFIC MANUFACTURED PRODUCTS ARE CALLED FOR, GENERIC EQUALS WHICH MEET APPLICABLE STANDARDS AND SPECIFICATIONS MAY BE USED.
17. NO VARIANCE BY A BUILDING OFFICIAL SHALL BE BINDING ON DESIGNERS.
18. BUILDER SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESS POOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH ITEMS ARE FOUND, OWNER SHALL BE NOTIFIED IMMEDIATELY.

FLOOR PLAN NOTES

1. EACH BEDROOM TO HAVE A MINIMUM WINDOW OPENING OF 5.7 SQ FT WITH A MIN. WIDTH OF 20" AND A MIN. HEIGHT OF 22" AND A SILL LESS THAN 44" OFF THE FLOOR.
2. ALL WINDOWS WITHIN 18" OF THE FLOOR AND WITHIN 24" OF ANY DOOR ARE TO HAVE TEMPERED GLAZING. SEE SECTION R308.4 IN ORSC FOR ADDITIONAL INFO.
3. SKYLITES ARE TO BE GLAZED WITH TEMPERED GLASS ON OUTSIDE AND LAMINATED GLASS ON INSIDE (UNLESS PLEXIGLAS). GLASS TO HAVE MAXIMUM CLEAR SPAN OF 25". SKYLITE FRAME IS TO BE ATTACHED TO A 2 X CURB WITH MINIMUM OF 4" ABOVE ROOF PLANE.
4. ALL TUB OR SHOWER ENCLOSURES ARE TO BE GLAZED WITH SAFETY GLAZING.
5. ALL EXTERIOR WINDOWS ARE TO BE DOUBLE GLAZED AND ALL EXTERIOR DOORS ARE TO BE SOLID CORE WITH WEATHERSTRIPPING. PROVIDE 1/2" DEADBOLT LOCKS ON ALL EXTERIOR DOORS AND LOCKING DEVICES ON ALL DOORS OR WINDOWS WITHIN 10' (VERTICAL) OF GRADE. PROVIDE PEEP-HOLE @ 54" - 66" ABOVE FLOOR ON EXTERIOR DOORS.
6. PROVIDE COMBUSTION AIR VENTS (W/ SCREEN AND BACK DAMPER) FOR FIREPLACES, WOOD STOVES AND ANY APPLIANCES WITH AN OPEN FLAME.
7. BATHROOMS AND UTILITY ROOMS ARE TO BE VENTED TO THE OUTSIDE WITH A MINIMUM OF A 90 CFM FAN. RANGE HOODS ARE ALSO TO BE VENTED TO OUTSIDE.

INSULATION SPECIFICATIONS

1. ALL EXPOSED INSULATION IS TO HAVE A FLAME SPREAD RATING OF LESS THAN 25 & A SMOKE DENSITY RATING OF LESS THAN 450.
2. PERIMETER CONC. WALLS TO BE PROTECTED W/ RIGID FIBERBOARD INSULATION FROM TOP OF CONC WALL TO NOT LESS THAN 24" BELOW GRADE.
3. SLAB EDGE INSULATION IS TO BE R-15.
4. HEATING DUCTS TO BE INSULATED W/ R-8
5. WINDOWS SHALL MEET REQUIRED U FACTORS FOR THE CONTRACTOR'S CHOSEN PATH OF COMPLIANCE SEE TABLE N1102.1.(1)
6. ONE EXTERIOR DOOR MAY BE INSULATED TO A U-FACTOR OF 0.20. ALL OTHER EXTERIOR DOORS MAY NOT EXCEED 0.54.

TABLE 602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

DESCRIPTION OF BUILDING ELEMENTS	NO. & TYPE OF FASTENER [a,b,c,d]	SPACING OF FASTENERS
JOIST TO SILL OR GIRDER, TOE NAIL	3-8d	—
1" X 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-8d 2 STAPLES, 1¾"	— —
2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d	—
SOLE PLATE TO JOIST, SOLID DECK, OR BLOCKING , FACE NAIL	16d	16" O.C.
TOP OR SOLE PLATE TO STUD, END NAIL	2-16d	—
STUD TO SOLE PLATE, TOE NAIL	3-8d OR 2-16d	—
DOUBLE STUDS, FACE NAIL	10d	24" O.C.
DOUBLE TOP PLATES, FACE NAIL	10d	24" O.C.
SOLE PLATE TO JOIST, SOLID DECK, OR BLKG AT BRACED WALL PANELS	3-16d per 16'	—
DBL TOP PLATES, MIN. 48" OFFSET OF END JOINTS, FACE NAIL IN LAPPED AREA	8-16d	—
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOE NAIL	3-8d	—
RIM JOIST TO TOP PLATE, TOE NAIL	8d	6" O.C.
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS, FACE NAIL	2-10d	—
BUILT-UP HEADER, TWO PIECES WITH ½" SPACER	16d	16" O.C. ALONG EA EDGE
CONTINUED HEADER, TWO PIECES	16d	16" O.C. ALONG EA EDGE
CEILING JOISTS TO PLATE, TOE NAIL	3-8d	—
CONTINUOUS HEADER TO STUD, TOE NAIL	4-8d	—
CEILING JOIST, LAPS OVER PARTITIONS, FACE NAIL	3-10d	—
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3-10d	—
RAFTER TO PLATE, TOE NAIL	2-16d	—
1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d 2 STAPLES, 1¾"	— —
BUILT-UP CORNER STUDS	10d	24" O.C.
BUILT-UP GIRDERS AND BEAMS, 2-INCH LUMBER LAYERS	10d	NAIL EACH LAYER AS FOLLOWS: 32" O.C. & TOP & BOTTOM, STAGGERED TWO NAILS AT ENDS AND AT EACH SPLICE.
2" PLANKS	2-16d	AT EACH BEARING
ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS:		
TOE NAIL	4-16d	—
FACE NAIL	3-16d	—
RAFTER TIES TO RAFTERS, FACE	3-8d	—

DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER [b,c,d,e]	SPACING OF FASTENERS: EDGES (IN.) [f]	SPACING OF FASTENERS: INTERMEDIATE SUPPORTS [c,g] (IN.)
PLYWOOD AND WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND WALL SHEATHING TO FRAMING, AND PARTICLEBOARD WALL SHEATHING TO FRAMING			
5/16"-1/2"	6d COMMON NAIL (SUBFLOOR, WALL) 8d COMMON NAIL (ROOF)	6	12[g]
19/32"-1"	8d COMMON NAIL	6	12[g]
1 1/8"-1 1/4"	10d COM NAIL OR 8d DEFRMD NAIL	6	12
OTHER WALL SHEATHING[h]			
1/2" REGULAR CELLULOSIC FIBERBOARD SHEATHING	1½" GALVANIZED ROOFING NAIL, 6d COM NAIL, STAPLE 16 GA, 1½" LONG	3	6
1/2" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1½" GALVANIZED ROOFING NAIL, 8d COM NAIL, STAPLE 16 GA, 1½" LONG	3	6
25/32" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1¾" GALVANIZED ROOFING NAIL, 8d COM NAIL, STAPLE 16 GA, 1¾" LONG	3	6
1/2" GYPSUM SHEATHING	1½" GALVANIZED ROOFING NAIL, 6d COM NAIL, STAPLE GALVANIZED, 1½" LONG, 1¼" SCREWS, TYPE W OR S	4	8
5/8" GYPSUM SHEATHING	1¾" GALVANIZED ROOFING NAIL, 8d COM NAIL, STAPLE GALVANIZED, 1⅝" LONG, 1⅝" SCREWS, TYPE W OR S	4	8
PLYWOOD AND WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
3/4" AND LESS	6d DEFORMED NAIL OR 8d COM NAIL	6	12
7/8"-1"	8d COM NAIL OR 8d DEFORMED NAIL	6	12
1 1/8"-1 1/4"	10d COM NAIL OR 8d DEFORMED NAIL	6	12

FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM, 1 MPH = 1.609 KM/H.

a. ALL NAILS ARE SMOOTH-COMMON, BOX OR DEFORMED SHANKS EXCEPT WHERE OTHERWISE STATED. NAILS USED FOR FRAMING AND SHEATHING CONNECTIONS SHALL HAVE MINIMUM AVERAGE BENDING YIELD STRENGTHS AS SHOWN: 80 ksi (551 MPa) FOR SHANK DIAMETER OF 0.192" (10d COMMON NAIL), 90 ksi (620 MPa) FOR SHANK DIAMETERS LARGER THAN 0.142" BUT NOT LARGER THAN 0.177", AND 100 ksi (689 MPa) FOR SHANK DIAMETERS OF 0.142" OR LESS.
b. STAPLES ARE 16 GAUGE WIRE AND HAVE A MINIMUM 7/16-INCH O.D. CROWN WIDTH.
c. NAILS SHALL BE SPACED AT NOT MORE THAN 6 INCHES O.C. AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR GREATER.
d. FOUR-FOOT-BY-8-FOOT OR 4-FOOT-BY-9-FOOT PANELS SHALL BE APPLIED VERTICALLY.
e. SPACING OF FASTENERS NOT INCLUDED IN THIS TABLE SHALL BE BASED ON TABLE 602.3(2).
f. FOR REGIONS HAVING BASIC WIND SPEED OF 110 MPH OR GREATER, 8d DEFORMED NAILS SHALL BE USED FOR ATTACHING PLYWOOD AND WOOD STRUCTURAL PANEL ROOF SHEATHING TO FRAMING WITHIN MINIMUM 48-INCH DISTANCE FROM GABLE END WALLS, IF MEAN ROOF HEIGHT IS MORE THAN 25', UP TO 35' MAXIMUM.
g. FOR REGIONS HAVING BASIC WIND SPEED OF LESS THAN 110 MPH, NAILS FOR ATTACHING WOOD STRUCTURAL PANEL ROOF SHEATHING TO GABLE END WALL FRAMING SHALL BE SPACED 6" O.C. WHEN BASIC WIND SPEED IS GREATER THAN 100 MPH. NAILS FOR ATTACHING PANEL ROOF SHEATHING TO INTERMEDIATE SUPPORTS SHALL BE SPACED 6" O.C. FOR MINIMUM 48" DISTANCE FROM RIDGES, EAVES AND GABLE END WALLS, AND 4" O.C. TO GABLE END WALL FRAMING.
h. GYPSUM SHEATHING SHALL CONFORM TO ASTM C 79 AND SHALL BE INSTALLED IN ACCORDANCE WITH GA 253. FIBERBOARD SHEATHING SHALL CONFORM TO EITHER AHA 194.1 OR ASTM C 208.
i. SPACING OF FASTENERS ON FLOOR SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND AT ALL ROOF PLANE PERIMETERS ONLY. SPACING OF FASTENERS ON ROOF SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND AT ALL ROOF PLANE PERIMETERS. BLOCKING OF ROOF OR FLOOR SHEATHING PANEL EDGES PERPENDICULAR TO THE FRAMING MEMBERS SHALL NOT BE REQUIRED EXCEPT AT INTERSECTION OF ADJACENT ROOF PLANES. FLOOR AND ROOF PERIMETER SHALL BE SUPPORTED BY FRAMING
j. INTERIOR NON-BRACED WALL LINES MAY BE NAILED WITH A MINIMUM 4-10d NAILS.

FRAMING NOTES

1. ALL EXTERIOR WALL AND BEARING WALL OPENINGS TO HAVE 4X12 HEADERS UNLESS OTHERWISE INDICATED
2. JOISTS THAT ARE ATTACHED TO FLUSH BEAMS ARE TO BE HUNG WITH "SIMPSON" LU TYPE OR EQUIV.
2b. DOUBLE JOISTS THAT ARE ATTACHED TO FLUSH BMS ARE TO BE HUNG WITH "SIMPSON" LUS TYPE OR EQUIV.
3. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS OVER.
4. PROVIDE FIREBLOCKING, DRAFTSTOPS & FIRESTOPS AS PER THE ORSC SEC R602.8
5. LUMBER SPECIES:
   A. POSTS, BEAMS, HEADERS JOISTS AND RAFTERS — NO.2 DOUG FIR
   B. SILLS, PLATES, BLOCKING BRIDGING, ETC. — NO.3 DOUG FIR
   C. STUDS — STUD GRADE D.F.
   D. POST AND BEAM DECKING — UTILITY GRADE D.F.
   E. PLYWOOD SHEATHING — 1/2" CDX PLY, 32/16
   F. GLU-LAM BEAMS — fb-2400, DRY ADH.
6. NAILING SCHDULE SEE TABLE 602.3(1)
7. NOTCHES IN SOLID LUMBER JOISTS, RAFTERS, AND BEAMS SHALL NOT EXCEED ONE-SIXTH OF THE DEPTH OF THE MEMBER. HOLES SHALL NOT BE BORED OR CUT OF THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD OF THE SPAN. NOTCHES AT THE ENDS OF THE MEMBER SHALL NOT EXCEED ONE-FOURTH THE DEPTH OF THE MEMBER. THE TENSION SIDE OF MEMBERS 4" (102mm) OR GREATER IN NOMINAL THICKNESS SHALL NOT BE NOTCHED EXCEPT AT ENDS OF THE MEMBERS. THE DIAMETER OF HOLES BORED OR CUT INTO MEMBERS SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE MEMBER. HOLES SHALL NOT BE CLOSER THAN 2" TO THE TOP OR BOTTOM OF THE MEMBER, OR TO ANY OTHER HOLE LOCATED IN THE MEMBER. WHERE THE MEMBER IS ALSO NOTCHED, THE HOLE SHALL NOT BE CLOSER THAN 2" (51mm) TO THE NOTCH.
8. STUDS IN AN EXTERIOR WALL OR LOAD-BEARING PARTITIONS SHALL BE PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF ITS WIDTH. STUDS IN NON-LOAD-BEARING PARTITIONS SHALL BE PERMITTED TO BE NOTCHED TO A DEPTH NOT TO EXCEED 40% OF A SINGLE STUD WIDTH. STUDS SHALL BE PERMITTED TO BE DRILLED, PROVIDED THAT THE DIAMETER OF THE RESULTING HOLE IS NO GREATER THAN 40% OF THE STUD WIDTH, THE EDGE OF THE HOLE IS NO CLOSER THAN 5/8" (16mm) TO THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A CUT OR NOTCH.
9. INSTALL ALL HORIZONTAL MEMBERS WITH CROWN UP.
10. ALL MEMBERS IN BEARING SHALL BE ACCURATELY CUT AND ALIGNED SO THAT FULL BEARING IS PROVIDED WITHOUT USE OF SHIMS. BEARING POSTS SHALL HAVE FULL BLOCKING OR SUPPORT UNDER.
11. ALL JOISTS SHALL HAVE A MINIMUM OF 2" BEARING AT SUPPORTS. LAPPING JOISTS SHALL HAVE 6" LAPS CENTERED OVER INTERIOR SUPPORTS.
12. LEDGERS AND STUD WALL FOUNDATION SILL PLATES SHALL BE BOLTED TO CONCRETE W/ ANCHOR BOLTS OF SIZE AND MINIMUM SPACING AS SHOWN ON DRAWINGS. AT LEAST TWO BOLTS SHALL BE PROVIDED FOR EACH PIECE W/ ONE BOLT WITHIN 12" OF EACH END.
13. ALL PLYWOOD WALL SHEATHING SHALL BE APPLIED AS FOLLOWS: CENTER VERTICAL JOINTS OVER STUDS AND CENTER HORIZONTAL JOINT OVER 2" BLOCKING OR PLATE. NAIL TOP OF PANELS TO DOUBLE TOP PLATE, AND NAIL BOTTOM OF PANELS TO ANCHORED SILL PLATE. APPLY GYPSUM BOARD SO THAT END JOINTS OF ADJACENT COURSE DO NOT OCCUR AT THE SAME STUD.

FOUNDATION NOTES

1. FOOTINGS ARE TO BEAR ON UNDISTURBED LEVEL SOIL DEVOID OF ANY ORGANIC MATERIAL AND STEPPED AS REQUIRED TO MAINTAIN THE REQUIRED DEPTH BELOW THE FINAL GRADE.
2. SOIL BEARING PRESSURE ASSUMED TO BE 1500 PSF.
3. ANY FILL UNDER GRANULAR SUPPORTED SLABS TO BE A MINIMUM OF 4" GRANULAR MATERIAL COMPACTED TO 95%.
4. CONCRETE TO DEVELOP A MIN. OF 3000 PSI AT 28 DAYS WITH A MIN. OF 6 SACKS OF CEMENT PER YARD AND A MAXIMUM SLUMP OF 4".
5. CONCRETE SLABS TO HAVE CONTROL JOINTS AT 25' (MAXIMUM) INTERVALS EA WAY.
6. CONCRETE SIDEWALKS TO HAVE 3/4" TOOLED JOINTS AT 5' O.C. (MINIMUM)
7. REINFORCING STEEL TO BE A-615 GRADE 40, WELDED WIRE MESH TO BE A-185.
8. EXCAVATE THE SITE TO PROVIDE A MINIMUM OF 18" CLEARANCE UNDER ALL GIRDERS.
9. COVER ENTIRE CRAWLSPACE WITH 6 MIL BLACK VISQUEEN" AND EXTEND UP FDTN. WALLS TO P.T. MUDSILL.
10. PROVIDE A MINIMUM OF 1 SQ FT OF VENTILATION AREA FOR EACH 150 SQ FT OF CRAWLSPACE AREA. VENTS ARE TO BE CLOSABLE WITH 1/4" OPENINGS IN CORROSIVE RESISTANT SCREEN.
11. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED OR PROTECTED WITH 30# ROLL ROOFING.
12. BEAM POCKETS IN CONCRETE TO HAVE 1/2" AIRSPACE AT SIDES AND ENDS WITH A MINIMUM BEARING OF 3".
13. PROVIDE CRAWLSPACE DRAIN AS PER SEC. R405.1 OF ORSC.
14. THE GRADE AWAY FROM FND WALLS SHALL FALL 6" MIN. WITHIN FIRST 10'.
15. SLOPE FOR PERMANENT FILLS AND CUT SLOPES SHALL NOT EXCEED 2 UNITS HORIZ. TO 1 UNIT VERT.
16. BACKFILL SHALL NOT BE PLACED UNTIL WALL HAS SUFFICIENT STRENGTH AND HAS BEEN ANCHORED TO FLOOR ABOVE ON WALLS W/ MORE THAN 4' UNBALANCED BACKFILL.
17. BUILDER SHALL BE RESPONSIBLE FOR SUPPORT OF ALL TEMPORARY EMBANKMENTS AND EXCAVATIONS.
18. FOOTINGS SHALL BE FOUNDED ON FIRM, UNDISTURBED, NATIVE, FREE DRAINING SOILS. CONDITIONS FOUND TO BE OTHERWISE SHALL BE REPORTED TO OWNER.
19. ALL GROUND OVER WHICH FOOTINGS AND SLABS-ON-GRADE ARE TO BE PLACED SHALL BE FREE OF EXPANSIVE OR COMPRESSIBLE DEBRIS AND ORGANIC MATERIAL.
20. FOOTINGS AND SLABS-ON-GRADE CONCRETE SHALL NOT BE PLACED ON MUDDY OR FROZEN GROUND. SUB-GRADE FOR SLABS-ON-GRADE WHERE VAPOR BARRIER IS NOT REQUIRED SHALL BE DAMP AT TIME OF CONCRETE PLACEMENT.

ELECTRICAL REQUIREMENTS*

LIGHTING REQUIREMENTS:
AT LEAST ONE WALL SWITCH-CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED IN EVERY HABITABLE ROOM AND IN BATHROOMS, HALLWAYS, STAIRWAYS, ATTACHED GARAGES, DETACHED GARAGES PROVIDED WITH ELECTRICAL POWER AND AT THE EXTERIOR SIDE OF EGRESS DOORS.
STAIRWAY LIGHTING CONTROL:
ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS OF ILLUMINATION TO THE STAIR, INCLUDING THE LANDINGS AND TREADS, TO BE CONTROLLED BY A WALL SWITCH AT EACH FLOOR LEVEL. INTERIOR STAIRS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING AT THE TOP AND BOTTOM OF THE STAIR. EXTERIOR STAIRS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIR. EXCEPTION: WHERE THE DIFFERENCE BETWEEN FLOOR LEVELS REQUIRES LESS THAN 6 STAIR RISERS.
FIXTURES IN CLOTHES CLOSETS:
SURFACE MOUNTED FLUORESCENT FIXTURES SHALL BE INSTALLED ON THE WALL ABOVE THE DOOR OR ON THE CEILING, PROVIDED THERE IS A MINIMUM CLEARANCE OF 6" BETWEEN THE FIXTURE AND THE NEAREST POINT OF A STORAGE SPACE.
WET OR DAMP LOCATIONS:
FIXTURES INSTALLED IN WET OR DAMP LOCATIONS SHALL BE INSTALLED SO THAT WATER CANNOT ENTER OR ACCUMULATE IN WIRING COMPARTMENTS, LAMPHOLDERS OR OTHER ELECTRICAL PARTS. ALL FIXTURES INSTALLED IN WET LOCATIONS SHALL BE MARKED "SUITABLE FOR WET LOCATIONS". ALL FIXTURES INSTALLED IN DAMP LOCATIONS SHALL BE MARKED "SUITABLE FOR WET LOCATIONS" OR "SUITABLE FOR DAMP LOCATIONS"
LIGHT SWITCH ACCESS:
ALL SWITCHES SHALL BE LOCATED TO ALLOW OPERATION FROM A READILY ACCESSIBLE LOCATION.
RECEPTACLE OUTLET REQUIREMENTS:
IN EVERY KITCHEN, FAMILY ROOM, DINING ROOM, LIVING ROOM, DEN, BEDROOM, OR SIMILAR ROOM OR AREA OF DWELLING UNITS, RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET, MEASURED HORIZONTALLY FROM AN OUTLET IN THAT SPACE, INCLUDING ANY WALL SPACE THAT IS 2 FEET OR MORE IN WIDTH.
KITCHENS:
RECEPTACLE OUTLETS, WITH GFI PROTECTION, SHALL BE INSTALLED EVERY 24" ON ALL COUNTER SPACES THAT MEASURE 12" OR WIDER.
BATHROOMS:
AT LEAST ONE WALL RECEPTACLE OUTLET, WITH GFI PROTECTION, SHALL BE INSTALLED IN BATHROOMS ADJACENT TO EACH BASIN LOCATION.
OUTDOORS:
AT LEAST ONE RECEPTACLE OUTLET, WITH GFI PROTECTION, SHALL BE INSTALLED OUTDOORS AT THE FRONT AND BACK OF EACH DWELLING UNIT HAVING DIRECT ACCESS TO GRADE.
HALLWAYS:
HALLWAYS OF 10 FEET OR MORE IN LENGTH SHALL HAVE AT LEAST ONE RECEPTACLE OUTLET.
HVAC OUTLET:
A CONVENIENCE RECEPTACLE OUTLET SHALL BE INSTALLED FOR THE SERVICING OF HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT LOCATED IN ATTICS AND CRAWL SPACES.
WET LOCATIONS:
A RECEPTACLE INSTALLED IN A WET LOCATION SHALL BE IN A WEATHER PROOF ENCLOSURE THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN THE ATTACHMENT PLUG CAP IS INSERTED.

*ADDITIONAL INFORMATION CAN BE FOUND IN THE OREGON RESIDENTIAL SPECIALTY CODE BOOK IN SECTIONS:

E37-404 SWITCHES
E37-406 RECEPTACLE OUTLETS
E37-410 LIGHTING OUTLETS

ABRIDGED TABLE N1101.1(1)

BUILDING COMPONENTS	REQUIRED VALUE
WALL INSULATION ABOVE GRADE	R = 21[a]
WALL INSULATION BELOW GRADE[a]	R = 15
FLAT CEILINGS[d]	R = 49
VAULTED CEILINGS[a]	R = 30
UNDERFLOOR INSULATION	R = 38
SLAB FLOOR EDGE INSULATION	R = 15
HEATED SLAB FLOOR INTERIORS[i]	R = 10
WINDOW GLASS	U = 0.35
SKYLIGHT GLASS[j]	U = 0.60
EXT. DOORS[k]	U = 0.20
EXT. DOORS W/<2.5 SQ. FT. GLAZING	U = 0.40
FORCED AIR DUCT INSULATION	R = 8

ADDITIONAL NOTES

a. As allowed in Section N1101.4, thermal performance of a component may be adjusted provided that overall heat loss does not exceed the total resulting from conformance to the required U-value standards. Calculations to document equivalent heat loss shall be performed using the procedure and approved U-values contained in Table N1104.1(1).

b. R-values used in this table are nominal, for the insulation only in standard wood framed construction and not for the entire assembly.

c. Wall insulation requirements apply to all exterior wood framed, concrete or masonry walls that are above grade. This includes cripple walls and rim joist areas. R-19 Advanced Frame or 2x4 wall with rigid insulation may be substituted if total nominal insulation R-value is 18.5 or greater.

e. Below-grade wood, concrete or masonry walls include all walls that are below grade and do not include those portions of such walls that extend more than 24 inches above grade.

f. Insulation levels for ceilings that have limited attic/rafter depth such as dormers, bay windows or similar features totaling not more than 150 square feet in area may be reduced to not less than R-21, when reduced, the cavity shall be filled (except for required vent spaces)

g. The maximum vaulted ceiling surface area shall not be greater than 50% of the total heated space floor area unless area has a U-factor no greater than U-0.031. The factor of 0.042 is representative of a vaulted scissor truss. A 10 inch deep rafter vaulted ceiling with R-30 insulation is U-0.0033 and complies with this requirement, not to exceed 50% of the total heated space floor area.

j. Sliding glass doors shall comply with window performance requirements.

k. Reduced area may not be used as a trade off criterion for thermal performance of any component.

n. A maximum of 28 square feet of exterior door area per dwelling unit can have a U-factor of 54 or less.

n. Glazing that is either double pane with low-e coating on one surface, or triple pane shall be deemed to comply with this U-.40 requirement.

TABLE N1101.1(2) ADDITIONAL MEASURES

Envelope Enhancement Measure (Select One)	1	**High efficiency walls & windows:** Exterior walls—U-0.047(R-19 + 5 (insulation sheathing)/SIPS, and one of the following options: Windows—Max 15 percent of conditioned area; or Windows—U-0.30
	2	**High efficiency envelope:** Exterior walls—U-0.058/R-21 Intermediate framing, and Vaulted ceilings—U-0.033/R-30[a,d], and Flat ceilings—U-0.025/R-49, and Framed floors—U-0.025/R-38, and Windows—U-0.30; and Doors—All doors U-0.20, or Additional 15 percent of permanently installed lighting fixtures as high-efficacy lamps or Conservation Measure D and E
	3	**High efficiency ceiling, windows & duct sealing:** (Cannot be used with Conservation Measure E) Vaulted ceilings—U-0.033/R-30[a,d], and Flat ceilings—U-0.025/R-49, and Windows—U-0.30, and Performance tested duct systems[b]
	4	**High efficiency thermal envelope:** UA: Proposed UA is 15% lower than the Code UA when calculated in Table N1104.1(1)
	5	**Building tightness testing, ventilation & duct sealing:** A mechanical exhaust, supply, or combination system providing whole-building ventilation rates specified in Table N1101.1(3), or ASHRAE 62.2, and The dwelling shall be tested with a blower door and found to exhibit no more than 1. 6.0 air changes per hour[c], or 2. 5.0 air changes per hour[c] when used with Conservation Measure E, and Performance tested duct systems[b]
	6	**Ducted HVAC systems within conditioned space:** (Cannot be used with Conservation Measure B or C) All ducts and air handler are contained within building envelope[f]
Conservation Measure (Select One)	A	**High efficiency HVAC system:** Gas-fired furnace or boiler with minimum AFUE of 90% [a], or Air-source heat pump with minimum HSPF of 8.5 or Closed-loop ground source heat pump with minimum COP of 3.0
	B	**Ducted HVAC systems within conditioned space:** All ducts and air handler are contained within building envelope[f]
	C	**Ductless heat pump:** Replace electric resistance heating in at least the primary zone of dwelling with at least one ductless mini-split heat pump having a minimum HSPF of 8.5. Unit shall not have integrated backup resistance heat, and the unit (or units, if more than one is installed in the dwelling) shall be sized to have capacity to meet the entire dwelling design heat loss rate at outdoor design temperature condition. Conventional electric resistance heating may be provided for any secondary zones in the dwelling. A packaged terminal heat pump (PTHP) with comparable efficiency ratings may be used when no supplemental zonal heaters are installed in the building and integrated backup resistant heat is allowed in a PTHP
	D	**High efficiency water heating & lighting:** Natural gas/propane, on-demand water heating with min EF of 0.80, and A minimum 75 percent of permanently installed lighting fixtures as CFL or linear fluorescent or a min efficacy of 40 lumens per watt as specified in Section N1107.2[e]
	E	**Energy management device & duct sealing:** Whole building energy management device that is capable of monitoring or controlling energy consumption, and Performance tested duct systems[b], and A minimum 75 percent of permanently installed lighting fixtures as high-efficacy lamps.
	F	**Solar photovoltaic:** Minimum 1 watt/sq ft conditioned floor space[g]
	G	**Solar water heating:** Minimum of 40 ft² of gross collector area[h]

For SI: 1 square foot = 0.093 m², 1 watt per square foot = 10.8 W/m².

a. Furnaces located within the building envelope shall have sealed combustion air installed. Combustion air shall be ducted directly from the outdoors.
b. Documentation of Performance Tested Ductwork shall be submitted to the building official upon completion of work. This work shall be performed by a contractor certified by the Oregon Department of Energy's (ODOE) Residential Energy Tax Credit program and documentation shall be provided that work demonstrates conformance to ODOE duct performance standards.
c. Section N1107.2 requires 50 percent of permanently installed lighting fixtures to contain high efficacy lamps. Each of these additional measures adds an additional percent to the Section N1107.2 requirement.
d. A ⅔ advanced frame construction, which shall provide full required ceiling insulation value to the outside of exterior walls.
e. The maximum vaulted ceiling surface area shall not be greater than 50 percent of the total heated