OFFICIAL USE ONLY					
File Number:					
Date Received:					
Ву:					
Fee Paid:					
Approved Date:					
Denied Date:					
Ву:					

#### **Floodplain Development Permit Application**

Submit completed application and documentation to <a href="mailto:planningandzoning@ketchumidaho.org">planningandzoning@ketchumidaho.org</a> Or hand deliver to Ketchum City Hall, 191 5<sup>th</sup> St. W. Ketchum, ID If you have questions, please contact the Planning and Building Department at (208) 726-7801. To view the Development Standards, visit the City website at: <a href="mailto:www.ketchumidaho.org">www.ketchumidaho.org</a> and click on Municipal Code. You will be contacted and invoiced once your application package is complete.

#### When is a Floodplain Development Permit Application required?

The Floodplain Management Overlay Zoning District boundaries are represented on the official zoning map of the City.

All land within the external boundary of the special flood hazard area (SFHA) and all parcels with any portion thereof affected by said SFHA shall be considered to be within the Floodplain Management Overlay Zoning district.

All land areas within the external boundary of the SFHA shall be considered to be within the floodplain subdistrict of the Floodplain Management Overlay Zoning District. The City may make necessary interpretations of the boundary based upon the recommendation of the City Engineer or other expert.

All land areas within the external boundary of the regulatory floodway shall be considered to be within the floodway subdistrict of the Floodplain Management Overlay Zoning District. The City may make necessary interpretations of the boundary based upon the recommendation of the City Engineer or other expert.

NOTE: This permit is required for all properties containing 100 year floodplain area and Riparian Setbacks

PROPERTY OWNER INFORMATION					
Property Owner Name(s): MARSUPIAL P	ROPERTIES LLC				
Property Owner's Mailing Address: 1825	BALLARD CANYON	N ROAD, SOLVANG,	CA 93463		
Phone: (805)569-9364					
Email: AJensen@Rusack.com					
PROJECT INFORMATION					
Project Name: RUSACK RESIDENCE SHED AD	DITION				
Project Representative's Name (main poin	it of contact for p	roject): ANDREW E	BICK/ BICK ARCHITECTUR	E	
Project Representative's Phone: (208) 726	-8608				
Project Representative's Mailing Address:	PO BOX 9876, BO	ISE, ID 83707			
Project Representative's Email: AKBICK@G	MAIL.COM				
Architect's name, phone number, e-mail:	ANDREW BICK/ BIC	CK ARCHITECTURE (2	208) 726-8608, AKBICK@C	GMAIL.COM	
Landscape Architect's name, phone numb	er, e-mail: N/A				
Environmental consultant's name, phone	number, e-mail: ١	V/A			
Engineer's name, phone number, e-mail:	Snake river engi	NEERING, ANDREW	AITCHISON, 208-453-651	2, andrew@snaki	RIVERENGINEERING.C
Project Address: 411 NORTHWOOD WAY, KE	ETCHUM, ID 83340				
Legal Description of parcel: RPK049700000	10				
Lot Size: 1.21 ACRES (53,587 SQ FT)					
Zoning District: LR					
Overlay Zones – indicate all that apply:	☑ Floodplain		☑ Riparian Zone	☐ Avalanche	☐ Mountain
Brief description of project scope:  SCOPE-OF-WORK INCLUDES BUT IS NOT LIM RE-LOCATION OF EXTERIOR WALL, EXTENDI CONCRETE FLOOR W/ HYDRONIC HEAT ME ROOFING TO MATCH EXISTING. SITE WORK OF THE FLOODPLAIN, FLOODWAY, AND RIF	NG SHED 7 FEET W ELT SYSTEM. WALLS INCLUDES REMOV	EST. CONSTRUCTION TO BE WOOD STUD	N CONSISTS OF CONCRE FRAMED, ENGINEERED V	TE FOOTING AND S' WOOD TRUSSES. SID	TEM WALL, ING AND
Value of Project: \$ 6,000					
TYPE OF PROJECT – indicate all that apply	<i>ı</i> :				

☐ New Building in Floodplain	☐ Building Addition in Floodplain	☐ Emergency Streambank	💢 Other. Please describe:				
☐ Floodplain Development	☐ Streambank Stabilization / Stream Alteration	Stabilization / Stream Alteration	OUTSIDE OF FLOODPLAIN & FLOODWAY EXTENTS.				
PROPOSED SETBACKS – if project	is a new building or an addition to a	n existing building					
Front: 157' +/-	Side: 90' (NORTH)	Side: 15'7 3/8" (SOUTH)	Rear: 262' +/-				
ADDITIONAL INFORMATION							
Will fill or excavation be required in floodplain, floodway or riparian zone? Yes ☐ No ☒							
If Yes, Amount in Cubic Yards: Fill: CY Excavation: CY							
Will Existing Trees or Vegetation b	e Removed? Yes 🏻	No □					
Will new trees or vegetation be pla	anted? Yes 🗆 No						
Applicant agrees in the event of a dispute concerning the interpretation or enforcement of the Floodplain Management Overlay Application, in which the City of Ketchum is the prevailing party, to pay reasonable attorney fees, including attorney fees on appeal, and expenses of the City of Ketchum. I, the undersigned, certify that all information submitted with and upon this application form is true and accurate to the best of my knowledge and belief.							
JAMES LA TICLE		10/2/2023					
Signature of Owner/Representation	ve	Date					

#### FLOODPLAIN MANAGEMENT OVERLAY EVALUATION STANDARDS

#### Please provide a narrative to address each of the criteria below.

Criteria for Evaluation of Applications: The criteria of floodplain development permit applications shall be as follows:

- 1. The proposal preserves or restores the inherent natural characteristics of the river, floodplain, and Riparian Zone, including riparian vegetation and wildlife habitat. Development does not alter river channel unless all stream THE PROPOSED CHANGES TO NOT AFFECT THE RIPARIAN AREA & IS NOT CLOSE TO alteration criteria for evaluation are also met. THE RIPARIAN ZONE.
- 2. No temporary construction activities, encroachment, or other disturbance into the twenty-five foot (25') Riparian Zone, including encroachment of below grade structures, shall be permitted, except for approved stream stabilization work and restoration work associated with a riparian zone that is degraded. N/A
- 3. No permanent development shall occur within the twenty-five foot (25') Riparian Zone, except for approved stream stabilization work and restoration work associated with permit issued under this title, or exceptions as described below:
  - a. Access to a property where no other primary access is available. N/A
  - b. Emergency access required by the Fire Department. N/A
  - c. A single defined pathways or staircases for the purpose of providing access to the river channel and in order to mitigate multiple undefined social paths. N/A
  - d. Development by the City of Ketchum N/A
- 4. New or replacement planting and vegetation in the Riparian Zone shall include plantings that are low growing and have dense root systems for the purpose of stabilizing stream banks and repairing damage previously done to riparian vegetation. Examples of such plantings most commonly include red osier dogwood, common chokecherry, serviceberry, elderberry, river birch, skunk bush sumac, Beb's willow, Drummond's willow, little wild rose, gooseberry, and honeysuckle. However, in rare instances the distance from the top-of-bank to the mean highwater mark is significant and the native vegetation appropriate for the Riparian Zone are low growing, drought resistant grasses and shrubs. Replacement planting and vegetation shall be appropriate for the specific site conditions. Proposal does not include vegetation within the twenty-five foot (25') Riparian Zone that is degraded, not natural, or which does not promote bank stability. N/A
- Landscaping and driveway plans to accommodate the function of the floodplain allow for sheet flooding. Surface drainage is controlled and shall not adversely impact adjacent properties including driveways drained away from paved roadways. Culvert(s) under driveways may be required. Landscaping berms shall be designed to not dam or otherwise obstruct floodwaters or divert same onto roads or other public pathways. SHOULDN'T BE AN ISSUE WITH CURRENT DRIVEWAY.
- 6. Floodwater carrying capacity is not diminished by the proposal. TRUE.
- 7. Impacts of the development on aquatic life, recreation, or water quality upstream, downstream or across the stream are not negative. TRUE.
- Building setback in excess of the minimum required along waterways is encouraged. An additional ten-foot (10') building setback beyond the required twenty-five foot (25') Riparian Zone is encouraged to provide for yards, decks and patios outside the twenty five foot (25') Riparian Zone. N/A
- 9. The top of the lowest floor of a building located in, or partially within, the SFHA shall be at or above the Flood Protection Elevation (FPE). A building is considered to be partially within the SFHA if any portion of the building or appendage of the building, such as footings, attached decks, posts for upper story decks, are located within the SFHA. See section 17.88.060, figures 1 and 2 of this chapter to reference construction details. See Chapter 17.08 of this title for definition of "lowest floor." ADDITION IS ABOVE BASE FLOOD ELEVATION.
  - a. In the SFHA where Base Flood Elevations (BFEs) have been determined, the FPE shall be twenty-four inches (24") above the BFE for the subject property; twenty-four inches (24") or two (2) feet is the required freeboard in Ketchum city limits. N/A
  - b. In the SFHA where no BFE has been established, the FPE shall be at least two (2) feet above the highest adjacent grade. N/A
- 10. The backfill used around the foundation in the SFHA floodplain shall provide a reasonable transition to existing grade but shall not be used to fill the parcel to any greater extent. YES.
  - a. Compensatory storage shall be required for any fill placed within the floodplain. N/A
  - b. A CLOMR-F shall be obtained prior to placement of any additional fill in the floodplain. N/A
- 11. All new buildings located partially or wholly within the SFHA shall be constructed on foundations that are designed by a licensed professional engineer. OUR FOUNDATION IS DESIGNED BY A LICENSED ENGINEER.

- 12. Driveways shall comply with City of Ketchum street standards; access for emergency vehicles has been adequately provided for by limiting flood depths in all roadways to one foot (1-ft) or less during the 1% annual chance event. N/A
- 13. Landscaping or revegetation shall conceal cuts and fills required for driveways and other elements of the development. N/A
- 14. (Stream alteration.) The proposal is shown to be a permanent solution and creates a stable situation. N/A
- 15. (Stream alteration.) No increase to the one percent (1%) annual chance flood elevation at any location in the community, based on hydrologic and hydraulic analysis performed in accordance with standard engineering practice and has been certified and submitted with supporting calculations and a No Rise Certificate, by a registered Idaho engineer. N/A
- 16. (Stream alteration.) The project has demonstrated No Adverse Impact or has demonstrated all impacts will be mitigated. N/A
- 17. (Stream alteration.) The recreational use of the stream including access along any and all public pedestrian/fisher's easements and the aesthetic beauty shall not be obstructed or interfered with by the proposed work. N/A
- 18. (Stream alteration.) Fish habitat shall be maintained or improved as a result of the work proposed. N/A
- 19. (Stream alteration.) The proposed work shall not be in conflict with the local public interest, including, but not limited to, property values, fish and wildlife habitat, aquatic life, recreation and access to public lands and waters, aesthetic beauty of the stream and water quality. N/A
- 20. (Stream alteration.) The work proposed is for the protection of the public health, safety and/or welfare such as public schools, sewage treatment plant, water and sewer distribution lines and bridges providing particularly limited or sole access to areas of habitation. N/A
- 21. (Wetlands) Where development is proposed that impacts any wetland the first priority shall be to move development from the wetland area. Mitigation strategies shall be proposed at time of application that replace the impacted wetland area with an equal amount and quality of new wetland area or riparian habitat improvement.

N/A

# RUSACK RESIDENCE

411 NORTHWOOD WAY

**KEY PLAN:** 

AREA OF WORK -

KETCHUM, IDAHO 83333

# PROGRESS SET - JUNE 2022

PROGRESS SET Print Date: Tuesday, July 19, 2022

# PROJECT DIRECTORY:

# OWNER/TENANT:

GEOFF & ALISON RUSACK 1520 ROBLE DRIVE SANTA BARBARA CA 93110 Contact: GEOFF & ALISON RUSACK 805.569.9364

# **ARCHITECT:**

Andrew K Bick, Inc. P.O. Box 9876 Boise, Idaho 83707 208.726.8608 phone Contact: AKB or AKB, AS

## **CONTRACTOR:**

208.720.5866 cell

GRABHER CONSTRUCTION 1007 WARM SPRINGS RD, KETCHUM, ID 83340 TRENT AVERY 208.726.3916 phone

PROJECT RECAP: **SCOPE OF WORK:** 

> SCOPE-OF-WORK INCLUDES BUT IS NOT LIMITED TO, ADDITION TO DETACHED SHED AT AN EXISTING RESIDENCE. WORK IS TO INCLUDE RE-LOCATION OF EXTERIOR WALL, EXTENDING SHED 7 FEET WEST. CONSTRUCTION CONSISTS OF CONCRETE FOOTING AND STEM WALL, CONCRETE FLOOR W/ HYDRONIC HEAT MELT SYSTEM. WALLS TO BE WOOD STUD FRAMED, ENGINEERED WOOD TRUSSES. SIDING AND ROOFING TO MATCH EXISTING. SITE WORK INCLUDES REMOVAL OF (2) EXISTING TREES.

# **GENERAL NOTES:**

- 1. ALL NEW CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CITY, STATE AND NATIONAL CODES AS WELL AS ALL RULES AND REGULATIONS FROM GOVERNMENTAL AGENCIES HAVING JURISDICTION. ALL NEW CONSTRUCTION SHALL BE PER MANUFACTURER'S REQUIREMENTS. SPECIFICATIONS AND ACCEPTED GENERAL PRACTICES
- 2. ALL CONSTRUCTION SHALL BE CONSTRUCTED FROM CITY APPROVED AND STAMPED CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL OBTAIN ALL BUILDING, ELECTRICAL & MECHANICAL PERMITS AND INSPECTION APPROVALS FOR SUBSTANTIAL COMPLETION.
- 3. WHEN CONCEALED OR UNKNOWN CONDITIONS ARE DISCOVERED AND WILL AFFECT THE FINAL DESIGN OR CHANGE THE SCOPE OF WORK; CONTACT THE ARCHITECT OR OWNER FOR RESOLUTION PRIOR TO WORK.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCING, PROCEDURES, SHORING, BRACING SAFETY AND INSURANCE IN CONNECTION WITH THE WORK. ALL NECESSARY TEMPORARY CONSTRUCTION REQUIRED TO COMPLETE THE PROJECT SHALL BE INCLUDED IN THE BIDDING CONTRACTOR'S PRICE.
- 5. THE CONTRACTOR SHALL DO ALL NECESSARY CUTTING, PATCHING AND FITTING AS REQUIRED TO PERFORM THE WORK AND SHALL BE DONE WITH APPROPRIATE MATERIALS AND TOOLS TO INSURE THE HIGHEST QUALITY OF WORK.
- 6. ALL MATERIALS STORED ON SITE, EXISTING CONSTRUCTION AND FINISHED CONSTRUCTION SHALL BE PROTECTED FROM WEATHER, VANDALISM AND OTHER CONSTRUCTION ACTIVITIES TO PREVENT DAMAGE AND DETERIORATION UNTIL SUBSTANTIAL COMPLETION. FAILURE TO PROTECT MAY BE CAUSE FOR REJECTION OF WORK.
- 7. ALL WORK REQUIRED SHALL BE FURNISHED, INSTALLED COMPLETE AND IN OPERATING CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION AND/OR CONNECTION OF EQUIPMENT FOR A COMPLETE AND OPERATIONAL FACILITY UNLESS NOTED OTHERWISE.
- 8. THE DRAWINGS INDICATE LOCATIONS, DIMENSIONS AND TYPICAL DETAILS OF CONSTRUCTION. WORK NOT SPECIFICALLY DETAILED SHALL BE OF CONSTRUCTION SIMILAR TO THAT DETAILED.
- 9. REFER TO ALL DRAWING SHEETS FOR ADDITIONAL GENERAL NOTES.

Revision ID	ChID	Issue Name	Date

## ANDREW K. BICK INC.

p.o. box 9876 boise, IDAHO 83707 akbick@gmail.com 208.726.8608 phone

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ROJECTS OTHER THAN THE SPECIFIED PROJECT.

Issue Date:		#Issue Date	
Drawr	n By:	AKB, AS	
Check	ced By	: AKB	
Revision ID	ChID	Issue Name	Dat

# **RUSACK RESIDENCE** SHED ADDITION

411 NORTHWOOD WAY KETCHUM IDAHO 83333

**COVER SHEET** 

G0.01

# SHEET INDEX:

G0.01 COVER SHEET

G0.02 SYMBOLS AND ABBREVIATIONS A2.11 FLOOR PLAN

**BUILDING CODE DATA:** 

SITE ADDRESS:

PARCEL:

SECTION 12

ZONE:

2018 INTERNATIONAL BUILDING CODE

2018 INTERNATIONAL RESIDENTIAL CODE

RPK04970000010; 1.21 ACRES (53,587 SQFT)

2018 INTERNATIONAL EXISTING BUILDING CODE

2018 INTERNATIONAL ENERGY CONSERVATION CODE

LOT #1, RESUB OF LOT #2 NORTHWOOD PUDSUBDIVISION, T.4N., R.17E,

2018 INTERNATIONAL FIRE CODE

2411 NORTHWOOD WAY KETCHUM, ID 83340

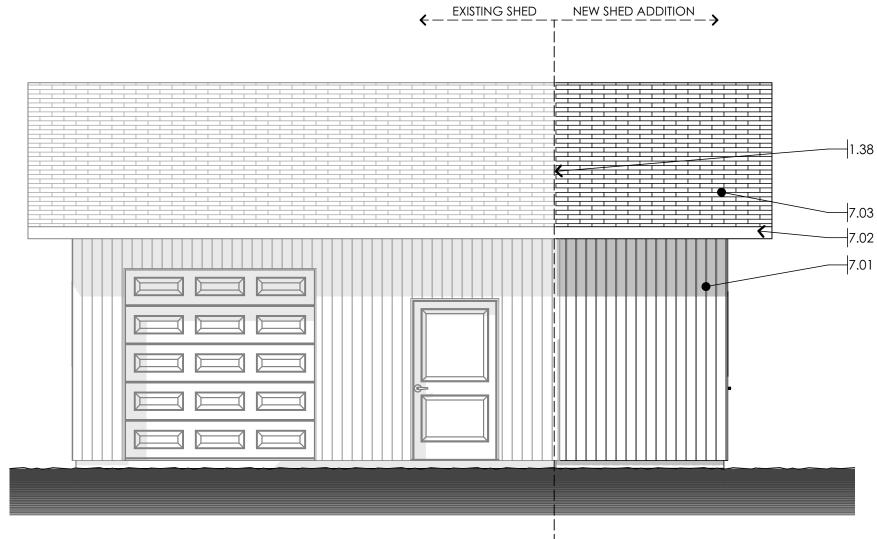
COVER SHEET

FDN./FRAMG. & SHEAR PLAN SD1.0 FDN./FRAMG DETAILS



VICINITY MAP:

	ABBREVIATIONS:				
		PTH GA GAUGE M		PROGRESS SET Print Date: Tuesday, July 19, 2022  QUARRY TILE  T TREAD, TOILET	
	AAL-CLR ANODIZED ALUMINUM CLEAR DBL DO BRONZE DEG DEG DEG DEG DEG DEG DEG DEG DEG DE	INY UBLE GALV GALVANIZED N GREE (S) GB GRAB BAR N MOLITION GC GENERAL CONTRACTOR N PARTMENT GCMU GLAZED CONCRETE MASONRY N MIL UNIT N MINING FOUNTAIN GEN GEN GENERATOR, GENERAL METER GFRC GLASS FIBER REINFORCED N GENAM CONCRETE N FUSER, DIFFERENCE GFRG GLASS FIBER REINFORCED GYPSUM MP PROOFING GL GRAM GND GROUND N MOP PROOFING GLZ GLAZING (ED) N MN GND GROUND N GO GP GYPSUM PLASTER N MONSPOUT, DOUBLE STRENGTH GRI GWB GWB GYPSUM WALL BOARD N MAENSION GWB GWB GYPSUM WALL BOARD N MONSPOUT, DOUBLE STRENGTH GRI GWB GWB GYBSUM WALL BOARD N MONSPOUT, DOUBLE STRENGTH GRI GWB GWB GYPSUM WALL BOARD N MONSPOUT, DOUBLE STRENGTH GRI GWB GYBSUM WALL BOARD N MONSPOUT, DOUBLE STRENGTH GRI GWB GYPSUM WALL BOARD N MOSTING HB HOSE BIB N HANSION BOLT HD HEAD, HEAVY DUTY N HANSION JOINT HDO HIGH DENSITY OVERLAY N HANSION JOINT	AINT MAINTENANCE QTR AS MASONRY QTY ATL MATERIAL AX MAXIMUM R B MACHINE BOLT BR MASTER BEDROOM RA C MISC. CHANNEL STEEL MEMBER RWE DF MEDIUM DENSITY FIBERBOARD RBR DO MEDIUM DENSITY OVERLAY RD ECH MECHANICAL RE ED MEDIUM, MEDICINE, MEDICAL REB EMB MEMBRANE REC ET METAL REF EZZ MEZZANINE REFI FR MANUFACTURER REG GR MANAGER REIN H MANHOLE IN MINIMUM, MINUTE (S) RESI RE MIRROR RET ISC MISCELLANEOUS REV K MASTER KEYED, MARK KR MARKER O MASONRY OPENING R METAL ROOFING R METAL ROOFING R METAL ROOFING	QUARTER TA TOILET ACCESSORIES Y QUANTITY T&B TOP AND BOTTOM T&G TONGUE AND GROOVE RADIUS, RISER, THERMAL RESISTANCE VALUE TBD TO BE DETERMINED, TACK BOAR RETURN AIR TC TOP OF CURB RESILIENT WALL BASE TD TRENCH DRAIN ROOF DRAIN ROF DRAIN REFER TO TEMP TEMPORARY, TEMPERATURE REFER TO TEMP TEMPORARY, TEMPERATURE RESILIENT FLOORING, REFERENCE TG RESILIENT FLOORING, REFERENCE TG RESILIENT FLOORING, REFERENCE TG REGULATE (TION), REGISTER REINFORCE (D), (ING), (MENT) THRES THRESHOLD REQUIRED TJ TOP OF JOINT, TOOL JOINT THE RETAINING TO TOP OF RASONRY ROOM TOP TOP OF MASONRY ROOM TOP TOPOGRAPHIC MAP	p.o. box 9876 boise, IDAHO 83707  akbick@gmail.com  208.726.8608 phone  COPYRIGHT © 2019 ANDREW K BICK, INC.
	AVG AVERAGE EL ELEC  AWP ACOUSTICAL WALL PANEL ELEC ELEC  ELEV ELEV  B B BATHROOM, BOLLARD EMBED EMB  BC BOTTOM OF CURB EMER EMI  BETW BETWEEN ENAM ENA  BFC BROOM FINISH CONCRETE ENCL ENC  BIT BITUMINOUS ENGR ENC  BLDG BUILDING ENTR ENT  BLK BLOCK (ING) EOS EDC  BLW BELOW EP ELE  BM BEAM EQ EQUIP EQUIP  BOT BOTTOM OF TRUSS ESCAL ESC  BR BEDROOM ESTR EXP  BRG BEARING EW EAC  BSMT BASEMENT EWC ELE  BTWN BETWEEN EXCAV EXC  C CHANNEL STEEL MEMBER EXPO EXP  C&G CURB AND GUTTER EXST EXT  CBB CATCH BASIN, CORNER BEAD EXTR EXT  CEM CEMENT BACKER BOARD  CC CENTER TO CENTER F FLU  CEM CERAMIC FAB FAB  CHANFER CHAMFER FAB FAB  CHEC CHAMFER FAB FAB  CHEC CHAMFER FAB FIRE  CHR CHAMFER FAB FIRE  CHR CHAMFER FAB FIRE  CHR CHAMFER FAB FIRE  CHR CHAMFER FOP FAB  CHR CHAIR RAILING FD FILO  CIP CAST-IN-PLACE FEC FIRE	VATION HDRL HANDRAIL CTRIC (AL) HDW HARDWARE N VATOR, ELEVATION HDWD HARDWOOD N BEDMENT HEX HEXAGONAL N BEGENCY HGL HALF GLASS AMEL HT HEIGHT N GINEER HORIZ HORIZONTAL N BISHER HORIZONTAL N BISHER HORIZONTAL N BISHER HORIZONTAL N BISHER HEATER N BISHER HEATER N BISHER HEATER N BISHER HEATER N BISHER HORIZONTAL N BISHER BISHER N BISHER HORIZONTAL N BISHER BISHER BISHER N BISHER BISHER BISHER N BISHER BISHER BISHER N BISHER	NORTH A NOT APPLICABLE RWI B NO BASE (EXPOSED WALL OR FOUNDATION) C NOISE CRITERIA C NOT IN CONTRACT B NARROW LIGHT SBR OF H NUMBER OM NOMINAL ON NONSLIP S NOT TO SCALE  A OVERALL C ON CENTER D OUTSIDE DIAMETER, OUTSIDE DIMENSION FF OFFICE FC OWNER FURNISHED/ CONTRACTOR INSTALLED H OPPOSITE HAND HCD OVERHEAD COILING BRILL HCD OVERHEAD COILING GRILL SHOP HCG OVERHEAD COILING SHUTTER HCD OVERHEAD COILING SHUTTER HCS OVERHEAD COILING SHUTTER HCS OVERHEAD COILING SHUTTER HCS OPENING PP OPPOSITE RD OVERFLOW ROOF DRAIN SM PP OPPOSITE SLN RD OVERHEAD SOC A PLANTED AREA	REVERSE TR TOP OF RIM D REDWOOD TRID TREATED L RAIN WATER LEADER TS TUBULAR STEEL TSL TOP OF SLAB SOUTH TSTAT THERMOSTAT SUPPLY AIR, SAFETY ANCHOR TOW TOP OF WALL SPLASH BLOCK TYP TYPICAL SEALANT AND BACKER ROD SOLID CORE UGND UNDERGROUND D SEAT COVER DISPENSER UH UNIT HEATER HED SCHEDULE UL UNDERWRITERS' LABORATORY RN SCREEN UON UNLESS OTHERWISE NOTED SOLAD DISPENSER, STORM DRAIN, UNO UNLESS NOTED OTHERWISE SOAP DISPENSER, STORM DRAIN, UNO UNLESS NOTED OTHERWISE SLAB TO DECK UR URINAL CT SECTION UV ULTRAVIOLET  M SPRAY-APPLIED FIRE RESISTANT MATERIAL V VOLT SHELF (S) VAR VARIES SHOWER VCT VINYL COMPOSITION TILE SHEET VENT VENTILATION G SHEATHING VEST VESTIBULE VG SHEETING VEST VESTIBULE VG SHEET VENT VENTILATION SIMILAR VIF VERTICAL GRAIN SINK VIN VINYL SKYLIGHT VAR VAPOR BARRIER SINK VIN VINYL SKYLIGHT VAR VENEER SHOER VCT VINYL COMPOSITION TILE SHELF (S) VG VERTICAL GRAIN SIMILAR VIF VERTICAL SKYLIGHT VAR VENEER SINK VIN VINYL SKYLIGHT VAR VENEER SINK VIN VINYL SKYLIGHT VAR VENEER SANITARY NAPKIN DISPENSER VR VAPOR BARRIER SINK VIN VINYL SKETIONAL OVERHEAD DOOR VWC VINYL WALL COVERING SCANITARY NAPKIN DISPENSER VR VAPOR RETARDER SOUNDPROOF (ING), W WEST, WIDE, WIDE FLANGE	ANDREW K. BICK STATE OF IDAHO 7-19-2022
	CONTROL JOINT  CL CENTERLINE  CLG CEILING  CLJ CONTROL JOINT  CLKG CEILING  CLJ CONTROL JOINT  CLKG CAULKING  CLO CLOSET  FIN FINI  CLOS CLOSURE  CLR CLEAR  CLEAR  CMP CORRUGATED METAL PIPE  CMU CONCRETE MASONRY UNIT  CNTR COUNTER  CO CASED OPENING, CLEAN OUT, FOC  COL CLOUMN  CONCRETE OPENING  CONC  CONCRETE  CONF  CONF  CONF  CONFERENCE  CONT  CONTR  CONSTRUCTION  FON  CONTR  CONTR  CONTR  CONTR  CONTR  CONTR  CONTR  CONTR  CONTR  CONCRETE  FOIC  FUR  CONF  CONC  CONCRETE  FOIC  FUR  CONT  CONTR  CO	SHED FLOOR, FACTORY FINISH  L GLASS  JST  JOIST  P  E HOSE CABINET  JT  JOINT  P  T HEAD MACHINE SCREW  T HEAD WOOD SCREW  K  KB  KB  KEY BOX  SHING, FLOOR LINE  ORESCENT  CTORY MUTUAL  JINDATION  LE OF CONCRETE  E OF FONDATION  LAM LAMINATE (TION)  P  TALL BY CONTRACTOR  LAW  LAVATORY  P  E REINFORCED PLASTIC  E RETARDANT TREATED  LINE  JINDALION  LIVE  LIVE  LONG LEG HORIZONTAL  P  LONG LING  JOINT  P  KK  KEY BOX  KNOCK DOWN  P  KITCHEN  P  KICKPLATE  P  ANGLE STEEL MEMBER  P  LABGLE STEEL STEEL  P  LABGLE STEEL STEEL  LABGLE STEEL STEEL  P  LABGLE STEEL STEEL  LAGLE STEEL  L	PRECAST CONCRETE  POUND PER CUBIC FOOT  PRECAST CONCRETE PAVERS,  PORTLAND CEMENT PLASTER  PORCELAIN ENAMEL  SS  FF PERFORATE (D)  SSF  BBD PEGBOARD  POST INDICATOR VALVE  ST  PLATE  AM PLASTIC LAMINATE  AS PLASTER  AST  PLASTIC  YWD PLYWOOD  STD  SIL  PANEL  TOL  POLISHED  PAIR  SCST  PRECAST  SEFAB  PREFABRICATED  PRESSURE  SW  ECSS  PRESSURE  SW  ECSS  PRESSURE  SW  ECCP  POUNDS PER QUARE FOOT  I POUNDS PER SQUARE INCH  POINT, POST TENSIONED,  PRESSURE TREATED  D PAPER TOWEL DISPENSER  D/R  PAPER TOWEL DISPENSER  RECEPTACLE  N PARTITION  R  PAPER TOWEL RECEPTACLE	SPACE (D)(S)(ING)  STEEL MEMBER, WOMEN'S RESTROOM  SPECIFICATIONS  WOMEN'S RESTROOM  WITH  SPANDREL PANEL GLASS  W/ WITH  SQUARE  SQUARE  WB WOOD BASE  SQUARE  WB WOOD BASE  SANITARY SEWER WC WATER CLOSET, WALL COVERING SYNTHETIC STUCCO FINISH  SERVICE SINK WCO WALL CLEAN-OUT STAINLESS STEEL WCP WOOD CEILING PANEL (ING) STREET, STAINED WD WOOD, WOOD DOOR  STATION WDP WOOD PANEL  SG STAGGERED WDW WINDOW  STANDARD WG STANDARD WG WALL GUARD  SEATING WH WALL GUARD  STEEL WHTR WATER HEATER  STONE WOM WALK-OFF-MAT WATER PEOPLIANT STEEL WCT WOM WALK-OFF-MAT WATER PEOPLIANT STEEL WHTR WATER RESISTANT WATER REPELLANT TREATMENT SIDEWALK, SOUTHWEST WS WE WEIGHT WEIGHT WEIGHT WEIGHT WEIGHT	THIS DRAWING DEPICTS IDEAS, DESIGNS, PLANS, A DETAILS WHICH ARE PROPRIETARY TO ANDREW K B INC. THEY WERE CREATED, DESIGNED, AND DEVELO FOR USE SOLELY IN CONNECTION WITH THE PROJ. SHOWN ON THIS DRAWING AND MAY BE USED O WITH THE PERMISSION OF ANDREW K BICK, INC. TRANSFER OF ANY RIGHTS THERETO IS INTENDED GRANTED BY DELIVERY HEREOF, AND EXCEPT UPON WRITTEN PERMISSION OF ANDREW K BICK, INC. DRAWING IS NOT TO BE DISCLOSED IN ANY WAY PROJECTS OTHER THAN THE SPECIFIED PROJECT.  ISSUE Date: #Issue Date  Drawn By: AKB, AS
	REFERENCE SYMBOLS		/MT PAVEMENT		Checked By: AKB  Revision   ChID   Issue Name   D
	WALL AND DOOR - EXISTING CONSTRUCTION	SECTION LETTER  WALL /BUILDING SEC  SHEET NO.	WINDOW TYPE	DOOR REFERENCE  WINDOW REFERENCE	
	WALL AND DOOR - NEW CONSTRUCTION	SHEET NO.  DETAIL NO.  PARTIAL SECTION DETAIL REFERENCE  DETAIL NO.  DETAIL REFERENCE  SHEET NO.  PLAN OR DETAIL NO.  ELEVATION REFERENCE  PARTIAL SECTION DETAIL REFERENCE  DETAIL REFERENCE  ENLARGED PLAN OR DETAIL	KEYED NOTE NO.  REFERENCE NOTE NO.  WALL TYPE	GRID LINE REFERENCE  KEYED NOTE NUMBER  SPECIFICATIONS REFERENCE NUMBER  WALL TAG ID	RUSACK RESIDENCE SHED ADDITION 411 NORTHWOOD WAY KETCHUM IDAHO 83333  SYMBOLS AND ABBREVIATIONS
		SHEET NO.			Stamp  Project No.  #PIn Sheet No.  G0.02



PROGRESS SET Print Date: Tuesday, July 19, 2022

SCALE: 1/4" = 1'-0" A2.11

INSTALLED IN NEW WALL, INFILL
OPENINGS.
EXISTING TREES TO BE REMOVED.
CONCRETE SLAB ON GRADE OVER
VAPOR RETARDER OVER
COMPACTED FILL, SLOPE TOWARDS
NEW DRAIN.
NEW SIDING TO MATCH EXISTING
NEW FASCIA TO MATCH EXISTING
FASCIA FASCIA.

NEW ASPHALT SHINGLE ROOF TO

MATCH EXISTING (VERIFY IN FIELD).

GYPSUM WALL BOARD NORTH 2

7-19-2022

ANDREW K. BICK INC.

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208.726.8608 phone

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KEYED NOTES:

1.35
LINE OF NEW ROOF ABOVE.

1.36
NEW WALL FRAMING TO ALIGN WITH EXISTING.

1.37
LINE OF EXISTING ROOF ABOVE.

1.38
CREATE SEEMLESS TRANSITION FROM EXISTING ROOF STRUCTURE TO NEW ADDITION

1.39
NEW OIL AND SAND SEPARATOR FLOOR DRAIN.

DRAIN. SALVAGE (2) WINDOWS TO BE RE-INSTALLED IN NEW WALL. INFILL

KEYED/REFERENCE

NOTES:

THIS DRAWING DEPICTS IDEAS, DESIGNS, PLANS, AND DETAILS WHICH ARE PROPRIETARY TO ANDREW K BICK, INC. THEY WERE CREATED, DESIGNED, AND DEVELOPED OR USE SOLELY IN CONNECTION WITH THE PROJECT HOWN ON THIS DRAWING AND MAY BE USED ON ITH THE PERMISSION OF ANDREW K BICK, INC. TRANSFER OF ANY RIGHTS THERETO IS INTENDED (
GRANTED BY DELIVERY HEREOF, AND EXCEPT UPON T WRITTEN PERMISSION OF ANDREW K BICK, INC. TH DRAWING IS NOT TO BE DISCLOSED IN ANY WAY FO PROJECTS OTHER THAN THE SPECIFIED PROJECT.

Issue D	Date:	#Issue Date	
Drawn	By:	AKB, AS	
Check		: AKB	
Revision ID	ChID	Issue Name	Date

# RUSACK RESIDENCE

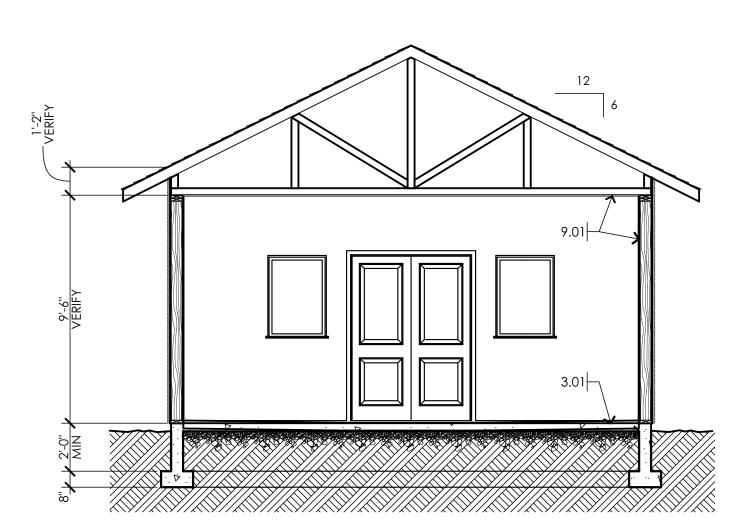
SHED ADDITION
411 NORTHWOOD WAY KETCHUM IDAHO 83333

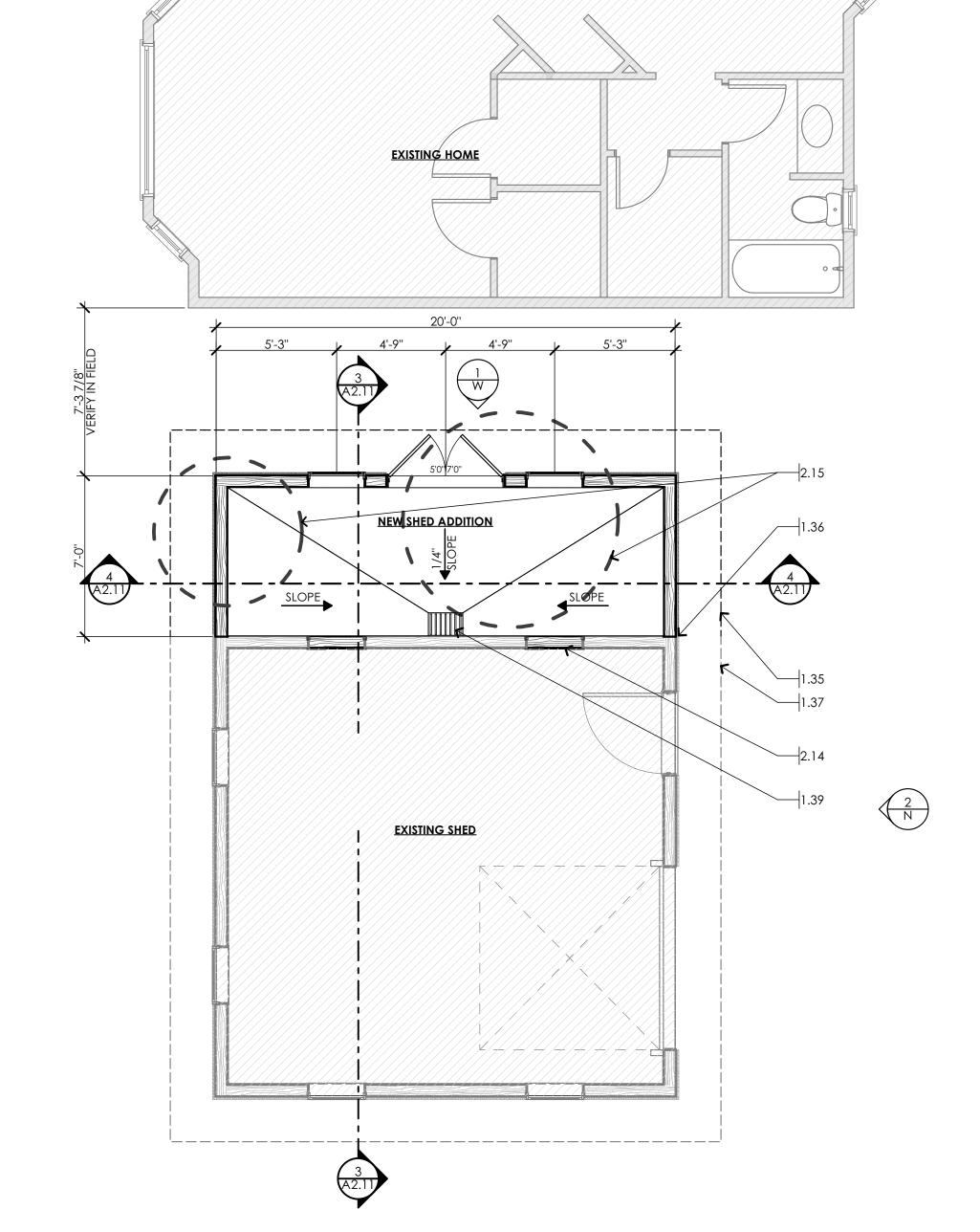
FLOOR PLAN

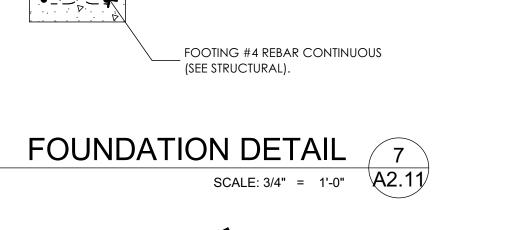
SCALE: 1/4" = 1'-0" A2.11

Project No.

WEST 5 SCALE: 1/4" = 1'-0" A2.11







SECTION 6

STEM WALL #4 REBAR TOP AND

BOTTOM CONTINUOUS

HOLD SILL PLATE FLUSH WITH

WALL CONNECTION.

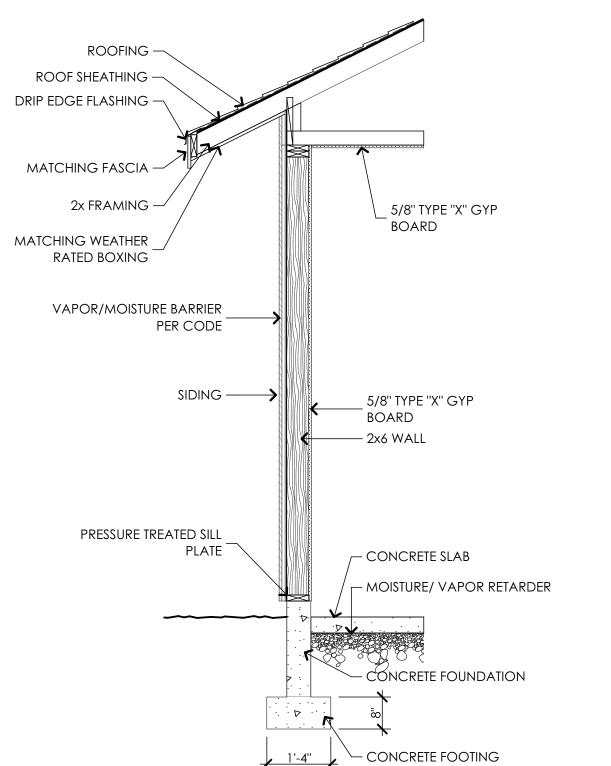
**EXPANSION JOINT** 

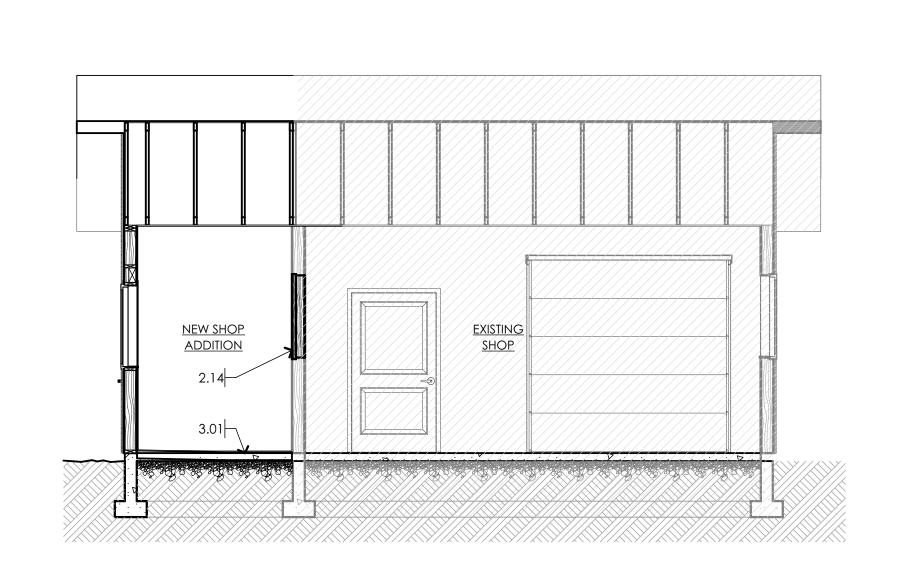
4" CONCRETE SLAB

OUTSIDE OF FOUNDATION WALL.

1/2" DIA ANCHOR BOLTS @6'-0" O.C. 7" INTO FOUNDATION. NOT MORE THAN

1'-0" FROM CORNER OR NEW/EXISTING







BUILDING SECTION 4

SCALE: 1/4" = 1'-0" A2.11



# STRUCTURAL NOTES:

#### 1. FOUNDATIONS & SLAB ON GRADE:

- a. INSTALL FOUNDATION AND PREPARE SOILS FOR SLABS & FOUNDATIONS ACCORDING TO IBC CHAPTER 18. PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURE AND AVOID EXCESSIVE WETTING & DRYING DURING EXCAVATIONS
- b. ALL FOOTING AND FOUNDATION DESIGNS ARE BASED ON AN ALLOWABLE SOIL BEARING CAPACITY OF 1,500 PSF BEARING ON COMPETENT NATIVE SOIL (CODE MINIMUM). IF THE SITE HAS A LOWER BEARING CAPACITY THAN ASSUMED THE FOUNDATION PLAN WILL NEED TO BE REDESIGNED. IF SOIL IS DISTURBED, COMPACT SOIL IN 8" LIFTS TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 OR IN ACCORDANCE WITH GEOTECHNICAL REPORT ASSOCIATED WITH PROJECT.
- REPLACE ANY ENCOUNTERED EXISTING FILL WITH COMPACTED FILL, SEE NOTE 1.B. ABOVE FOR MORE INFORMATION
- MINIMUM FROST DEPTH FROM LOWEST ADJACENT FINISH GRADE TO BOTTOM OF FOOTING SHALL BE MAINTAINED FOR ALL EXTERIOR FOOTINGS. CONTRACTOR TO VERIFY LOCATIONS FOR STEP FOOTINGS AND FOUNDATION WALLS BASED ON SITE RELATED FINISHED GRADE, IF NECESSARY. FOOTING STEPS ARE TO BE A MAXIMUM OF (2) VERTICALLY TO (1) HORIZONTALLY
- ALL SLARS SHALL HAVE REINFORCING PER PLANS & CONTROL JOINTS AT 10'-0" SPACING MAXIMUM.
- ALL STRUCTURAL FILL BELOW FOOTINGS SHALL EXTEND OUT PAST FOOTINGS AT A SLOPE OF 1 VERTICAL TO 2 HORIZONTAL UNITS TO COMPETENT SOILS
- PROVIDE ADEQUATE DRAINAGE BEHIND ALL WALLS TO ALLEVIATE ANY STANDING WATER.

ALL CONCRETE PAD & APRON LOCATIONS TO BE SECURED TO FOUNDATION WITH #4 DOWELS AT 24" O.C. EXTEND EXPOSED SIDES A MINIMUM OF 24" BELOW FINISHED GRADE

- a. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE CURRENT ACI "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" UNLESS NOTED.
- USE ASTM C150 COMPLIANT TYPE I/II CEMENT, MINIMUM OF 450#/YARD.
- ALLOW 5% (WITHIN 1.5%) ENTRAINED AIR IN EXPOSED CONCRETE. ALLOW 4" MAXIMUM SLUMP (WITHOUT SUPERPLASTICIZER).
- USE ¾" MAXIMUM NORMAL WEIGHT AGGREGATE. USE OF CHLORIDE ADMIXTURES IS PROHIBITED.
- THE MINIMUM COMPRESSIVE STRENGTHS FOR CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS (DESIGNED USING 2,500 PSI):
- f.a. ALL FOOTINGS, FOUNDATIONS, AND STEM WALLS F'C = 3,000 PSI.
- g.a. PLACED DIRECTLY AGAINST EARTH: 3".

- ALL EMBEDDED ANCHOR BOLTS SHALL BE A36 OR A307 OR F1554 GR. 36 STEEL W/7" MIN. EMBEDMENT. ANCHOR BOLTS TO BE WITHIN 1'-0" OF SILL PLATE ENDS, WITH A MIN. OF TWO PER WALL AND NO CLOSER THAN 6" FROM CONCRETE WALL CORNERS. REFER TO LOG NUFACTURERS SPECIFIC BOLT PLAN FOR LOG WALL ANCHORS. DO NOT POUR FOUNDATION WITH OUT LOG MANUFACTURER'S BOLT PLAN.
- SAWN CONTROL & CONSTRUCTION JOINTS SHALL BE MADE AS SOON AS POSSIBLE WITHOUT DAMAGE TO THE SURFACE. FILLING OF SAWN JOINTS WHERE REQUIRED SHALL BE DELAYED AS LONG AS POSSIBLE TO ALLOW MAXIMUM SHRINKAGE TO OCCUR IN SLABS
- WET SETTING OF REINFORCING BARS IN FOOTINGS AND WALLS IS NOT ALLOWED BLOCK-OUT ALL STEM WALLS AT ENTRIES AS REQUIRED.
- CONCRETE FORM WORK TO BE OF ADEQUATE STRENGTH AND BRACED TO PREVENT DEFORMATION
- ALL LOWER LEVEL AND RETAINING WALLS WHICH HAVE FILL HIGHER THAN AN INTERIOR FLOOR LEVEL SHALL HAVE AN APPROVED WATERPROOFING MEMBRANE APPLIED TO WITHIN 3" OF FINISHED GRADE HEIGHT
- PROVIDE ADEQUATE TEMPORARY BRACING OF CONCRETE AND/OR CMU RETAINING WALLS DURING BACKFILL PRIOR TO INSTALLATION OF MAIN FLOOR FRAMING AND BASEMENT CONCRETE SLAB ON GRADES. WALL DESIGNS ARE BASED ON TOP OF WALL RESTRAINED BY FINISHED FLOOR SYSTEM AND RESISTING SLIDING BY HAVING BASEMENT CONCRETE SLAB ON GRADE FLOOR INSTALLED
- RECOMMENDED THAT ALL GRADING, EXCAVATION, AND INSTALLATION OF FOUNDATIONS BE PERFORMED UNDER THE INSPECTION AND TESTING OF A QUALIFIED GEOTECHNICAL CONSULTANT DURING THE CRITICAL STAGES OF CONSTRUCTION
- STAIN & TEXTURE OF EXPOSED CONCRETE SURFACES PER OWNER'S DIRECTION.
- USE SIMPSON 'SET' OR EQUIVALENT FOR FASTENING POST-INSTALLED ANCHORS TO EXISTING CONCRETE
- USE 6x6-W4.0xW4.0 WELDED WIRE FABRIC (WWF) FOR SLABS REQUIRING REINFORCEMENT (UNLESS NOTED). PLACE 1-1/2" FROM BOTTOM OF SLAB USING APPROVED METAL DEVICES. LAP ONE FULL MESH AT SPLICES.
- USE ASTM C827 COMPLIANT NON-METALLIC, NON-SHRINK, 3-DAY 4000 PSI GROUT FOR BASEPLATES.
- u. USE ASTM C1116 COMPLIANT FIBRILLATED POLYPROPYLENE TO REINFORCE SLABS (IF USING FIBER REINFORCEMENT IN LIEU OF WWF).

#### 3. REINFORCING STEEL:

- USE ASTM A615 COMPLIANT GRADE 60 BARS; IF INTENDED TO BE WELDED, USE ASTM A706 COMPLIANT GRADE 60 BARS (WELDING OF REBAR NOT PERMITTED UNLESS SPECIFICALLY NOTED OR DETAILED).
- MINIMUM LENGTH OF LAPPED SPLICES SHALL BE 48 TIMES BAR DIAMETER UNLESS NOTED. SPLICE TOP BARS NEAR MID-SPAN, BOTTOM BARS NEAR SUPPORTS.
- OTHERWISE. STAGGER SPLICES IN WALLS SO THAT NO TWO ADJACENT BARS ARE SPLICED IN THE SAME LOCATION.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, FY = 75,000 PSI
- PROVIDE #4 CONTINUOUS HORIZONTALS AT TOP OF WALL, (2) #4 CONTINUOUS IN FOOTINGS, AND (2) #4 CONTINUOUS ABOVE ALL OPENINGS U.N.O. PROVIDE #4 HORIZONTALS AT ALL INTERSECTING FLOORS AND ROOF LEVELS, BOTTOM OF ALL WINDOWS AND AT 10'-0" O.C.
- PROVIDE #4 VERTICALS AT 24" O.C. AT EACH SIDE OF WALL OPENINGS AND AT EACH END OF WALLS W/ STANDARD HOOK EXTENDING INTO FOOTING PROVIDE FOUNDATION HOLD-DOWNS AT ALL SHEAR WALL LOCATIONS PER PLAN, IF APPLICABLE

- STRUCTURAL LUMBER SHALL BE DOUGLAS FIR-LARCH (DF-L) #2 OR BETTER.
- WOOD INSTALLED WITHIN 1" OF CONCRETE OR MASONRY SHALL BE REDWOOD OR PRESSURE TREATED. PROVIDE WET USE ADHESIVES.
- MAXIMUM LUMBER MOISTURE CONTENT SHALL BE 15%.
- ALL FRAMING SHALL BE IN ACCORDANCE WITH THE ADOPTED CODE.
- PROVIDE SOLID BLOCKING BELOW ALL BEARING WALLS AND POSTS. PROVIDE BLOCKING AT 24" O.C. AT JOISTS PARALLEL WITH BEARING WALLS ABOVE. MINIMUM HEADER AT BEARING WALL TO BE 4x8 WITH 2x6 TRIMMER STUD PLUS 2x6 KING STUD EACH SIDE. HEADERS WITH LARGER LOADING OR DIFFERENT BEARING/KING STUD CONDITIONS WILL BE CALLED OUT IN PLANS.
- BLOCK AND NAIL ALL HORIZONTAL PANEL EDGES AT SHEAR WALLS & AS NOTED ON THE PLAN.
- ROOF SHEATHING IN AREAS W/ SNOW LOAD < 50 PSF: 7/16" CDX MINIMUM, 24/16 SPAN RATING WITH 8D AT 6" O.C. EDGE AND 12" O.C. FIELD U.N.O. ROOF SHEATHING IN AREAS W/ SNOW LOAD > 50 PSF: 19/32" CDX MINIMUM, 32/16 SPAN RATING WITH 8D AT 6" O.C. EDGE AND 12" O.C. FIELD U.N.O.
- FLOOR SHEATHING: 3/4" CDX MINIMUM, 48/24 SPAN RATING WITH 10D AT 6" O.C. EDGE AND 12" O.C. FIELD U.N.O.
- EXT. WALL SHEATHING: 7/16" CDX MINIMUM, 24/16 SPAN RATING WITH AT 6" O.C. EDGE AND 12" O.C. FIELD U.N.O. m. ALL SPAN RATINGS TO MEET LOCAL CODES
- n. ORIENTED STRAND BOARD (OSB) WITH THE SAME SPAN RATING MAY BE SUBSTITUTED FOR PLYWOOD NOTED ABOVE. SHEATHING SHALL BE APA RATED EXPOSURE 1. STAGGER SHEATHING END JOINTS 4'-0". PROVIDE 1/8" MINIMUM SPACE AT ALL PANEL EDGES FOR
- o. ALL EXTERIOR WALLS TO BE 2x6 AT 16" O.C. AND INTERIOR NON-LOAD BEARING PARTITIONS TO BE 2x4 AT 16" O.C. STUD WALLS (U.N.O. ON PLAN).
- PROVIDE STEEL STRAPS AT PIPES IN STUD WALLS AS REQUIRED BY THE ADOPTED CODE. OVER-FRAMING SHALL BE DONE SUCH THAT VERTICAL LOADS ARE TRANSFERRED TO MAIN STRUCTURE BELOW BY DIRECT BEARING AT SPACING NOT TO EXCEED 24" O.C.
- METAL HANGERS AND CONNECTIONS ARE 'SIMPSON' AND SHALL BE INSTALLED PER 'SIMPSON' RECOMMENDATIONS.
- s. ENGINEERED "I" JOISTS TO CONFORM TO ASTM D2559 AND BE DESIGNED, CERTIFIED, ERECTED, INSTALLED, AND BRACED PER MANUFACTURER'S SPECS. ALL REFERENCES ON PLANS ARE FOR WEYERHAEUSER PRODUCTS. USE THESE PRODUCTS OR AN APPROVED EQUIVALENT.
- t. FRAME INTERIOR BEARING WALLS SHORT TO ACCOUNT FOR LOG SETTLING (APPLICABLE FOR LOG PROJECTS ONLY). u. Frame interior posts short to account for log settling. Use removable shims or settling Jack as necessary.
- v. ALL WINDOW SIZES ARE NOMINAL; VERIFY ACTUAL LOG OPENINGS WITH LOG & WINDOW MANUFACTURERS.
- w. ALL MICROLLAM LVL PRODUCTIONS SHALL CONFORM TO ASTM D2559 AND HAVE THE MINIMUM SECTION PROPERTIES OF Fb = 2600 PSI, Fv = 285 PSI, E = 2,000,000 PSI.
- x. ALL ROOF OPENINGS GREATER THAN 12"x12" SHALL BE FRAMED IN OPENINGS.
- y. GLUE-LAM BEAMS SHALL CONFORM TO ANSI/AITC A190.1 AND BE DOUGLAS FIR COMBINATION 24F-V4 FOR SIMPLY SUPPORTED AND 24F-V8 FOR CANTILEVERED AND/OR DOUBLE SPAN BEAMS, Fb = 2400 PSI, Fv = 165 PSI, E = 1,600,000 PSI. PROVIDE WET USE GLUE ON ALL
- z. ALL NAILS SPECIFIED TO BE COMMON WIRE NAILS U.N.O.

## 5. PRE-MANUFACTURED METAL PLATED TRUSSES:

- TRUSS MANUFACTURER TO PROVIDE PROOF OF 3RD PARTY INSPECTION PER IBC 2303.4.
- b. PRE-MANUFACTURED TRUSS PROVIDER TO VERIFY ALL LOADING PATTERNS TO FOOTINGS BELOW.
- PRE-MANUFACTURED TRUSS PROVIDER TO PROVIDE SUPPORT AT TRUSSES FOR LOADING SHOWN ON ALL PLANS, SECTIONS AND DETAILS. VERIFY SECOND FLOOR LOADING AND SPECIAL CASE POINT LOADING FROM LOG AND FRAMED ROOF SYSTEMS. d. ALL PRE-MANUFACTURED ROOF TRUSSES SHALL BE DESIGNATED AS A DEFERRED SUBMITTAL AND DESIGNED FOR THE ROOF LOADS SHOWN AND ACCOUNT FOR ANY REQUIRED ADDITIONAL DRIFT, VALLEY, OR EAVE LOADS PER CODE.
- e. IN ADDITION TO 7 PSF DEAD LOAD ON TOP CHORD, DESIGN BOTTOM CHORD FOR 10 PSF LIVE LOAD AND 10 PSF DEAD LOAD.
- f. TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (E.O.R.) FOR REVIEW AND COMPLIANCE.

## 6. GENERAL STRUCTURAL NOTES:

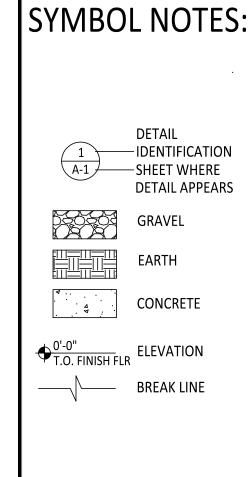
- CONTRACTOR TO VERIFY ALL OPENINGS, BUILDING DIMENSIONS, COLUMN LOCATIONS AND DIMENSIONS WITH OWNER, ENGINEER, DRAFTER, AND/OR COMPONENT MANUFACTURERS PRIOR TO POURING OF ANY CONCRETE FOUNDATIONS OR CONSTRUCTION.
- b. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS SUCH CHANGES ARE AUTHORIZED IN WRITING TO THE ENGINEER OF RECORD.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE SHORING AND/OR TEMPORARY STRUCTURAL STABILITY FOR ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR FINAL
- d. NOTCHING AND/OR CUTTING OF ANY STRUCTURAL MEMBER IN THE FIELD IS PROHIBITED, UNLESS PRIOR CONSENT IS GIVEN BY THE ENGINEER OF RECORD.
- e. DIMENSIONS SHOWN DO NOT INCLUDE THE THICKNESS OF ANY APPLIED FINISH MATERIALS. DIMENSIONS ARE EITHER TO FACE OF STUD, FACE OF MASONRY, OR CENTERLINE OF OPENINGS/STRUCTURE. f. ALL WORK TO CONFORM TO ALL LOCAL, STATE, AND NATIONAL CODES.
- g. CONTRACTOR IS RESPONSIBLE FOR ALL FEES, PERMITS, AND INSPECTIONS AS REQUIRED BY GOVERNING AGENCY.
- h. ALL ELEVATION REFERENCES ARE FROM THE MAIN FLOOR ELEVATION, SET AT 0'-0".
- i. ALL SHOP DRAWINGS FOR STRUCTURAL SYSTEMS TO BE REVIEWED AND STAMPED BY THE ENGINEER OF RECORD.

## 7. SPECIAL INSPECTIONS & STRUCTURAL OBSERVATIONS:

- a. PER IBC SECTION 1704, WHEN SPECIFICALLY REQUIRED BY THE LOCAL JURISDICTION, A REPRESENTATIVE FROM THE ENGINEER OF RECORD'S OFFICE SHALL BE PRESENT TO PERFORM ON-SITE STRUCTURAL OBSERVATION VISITS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL SIGNIFICANT TIMES OF CONSTRUCTION WITH THE ENGINEER OF RECORDS OFFICE PRIOR TO THE DAY OF CONSTRUCTION AND/OR PLACEMENT (MINIMUM OF 7 DAYS). SIGNIFICANT TIMES OF CONSTRUCTION ARE AS FOLLOWS:
- a.a. PLACEMENT OF STRUCTURALLY RELATED REINFORCED CONCRETE FOUNDATIONS, INCLUDING REBAR
- a.b. PLACEMENT OF PERIMETER LOAD BEARING WALLS, LOAD SUPPORTING BEAMS AND/OR HEADERS AND LATERAL RESISTING CONNECTION ELEMENTS.
- a.c. COMPLETION OF STRUCTURAL SYSTEMS AS REQUIRED AND/OR DEFINED BY THE LOCAL JURISDICTION.
- b. STRUCTURAL OBSERVATIONS DO NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL INSPECTIONS REQUIRED BY THE IBC SECTION 1705 OR OTHER SECTIONS OF THE CODE AS REQUIRED BY THE LOCAL BUILDING JURISDICTION.
- c. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED TO MEET THE REQUIREMENTS OF THE LATEST IBC AND THE LOCAL BUILDING JURISDICTION. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED PERSON WHO SHALL SHOW COMPETANCE TO THE SATISFACTION OF THE BUILDING OFFICIAL, OWNER, ARCHITECT AND ENGINEER OF RECORD FOR THE PARTICULAR OPERATION. ALL SPECIAL INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND ENGINEER OF RECORD WITH THE PROJECT INFORMATION AND

# RUSACK SHED ADD.

# KETCHUM, IDAHO



	overning Code:		AVITY LOAD	LDING CODE, OS (PSF):		
L	OCATION	DEAD LOAD		LIVE OR SNOW LC	AD	TOTAL
1	ST FLOOR	12 psf	+	40 psf	=	52 psf
	ROOF	17 psf	+ +	120psf	=	137psf
			WIND CRIT	ERIA:		
	W	IND SPEED:	115			
		EXPOSURE:	С			
	IMPC	PRTANCE, I:	1			
		!	SEISMIC CRI	TERIA:		
	RISK	CATEGORY:	II			
	DESIGN (	CATEGORY:	D			
		Sds: Sd1:	0.52 0.19			
		SITE CLASS:	D.13			
		ORTANCE, I:	1			
	RI	ESPONSE, R:	6.50			
	SOIL BEARING		1500 PSF			
	FROST DEPTH BEL	OW GRADE:	24 INCHES	5		

#### ABBREVIATIONS\*\* HGR: HANGER ARCH: ARCHITECT/ARCHITECTURAL HORIZ: HORIZONTAL **BLDG: BUILDING BLKG: BLOCKING** LSL: LAMINATED STRAND LUMBER **BOT: BOTTOM** LVL: LAMINATED VENEER LUMBER **BRG: BEARING** MIN: MINIMUM BTWN: BETWEEN CL: CENTERLINE NTS: NOT TO SCALE OC: ON CENTER CANT: CANTILEVER OSB: ORIENTED STRAND BOARD CLR: CLEAR

PE: PRE-ENGINEERED CMU: CONCRETE MASONRY UNIT PED: PEDESTAL COL: COLUMN PSL: PARALLEL STRAND LUMBER **CONC: CONCRETE** PT: PRESSURE TREATED **CONT: CONTINUOUS** COV'D: COVERED REINF: REINFORCE/REINFORCEMENT DE: DOOR EDGE **REF: REFRIGERATOR** DF: DOUGLAS FIR REQ'D: REQUIRED DBL: DOUBLE SCHD: SCHEDULE EA: EACH SL: SLIDING **ELEV: ELEVATION** SH: SINGLE HUNG **EN: EDGE NAILING** STD: STANDARD TBL: TABLE

**EXIST: EXISTING EXT: EXTERIOR T&G: TONGUE AND GROOVE** FDN: FOUNDATION TOW: TOP OF WALL FIN: FINISHED TYP: TYPICAL FLR: FLOOR VERT: VERTICAL FRMG: FRAMING **UNO: UNLESS NOTED OTHERWISE** FTG: FOOTING W/: WITH

W/H: WATER HEATER

W/O: WITHOUT

WS: WATER SOFTENER

\*\*NOTE: THIS IS A STANDARD LIST. SOME ABBREVIATIONS

FX: FIXED

GL: GRIDLINE

HDR: HEADER

GLB: GLULAM BEAM

MAY NOT APPEAR ON THE PLAN.

# **SHEET INDEX:**

SO.0 COVER SHEET

S1.0 FDN./FRMG. & SHEAR PLAN SD1.0 FDN./FRMG. DETAILS

524 CLEVELAND BLVD. #23

**CALDWELL, IDAHO 8360** 

obs@snakeriverengineering.co

**ERRORS & OMISSIONS OF** TRUCTURAL ENGINEER & SHA IOT EXCEED FEE FOR THE PROJE THIS PLAN IS PROPERTY OF SNAF

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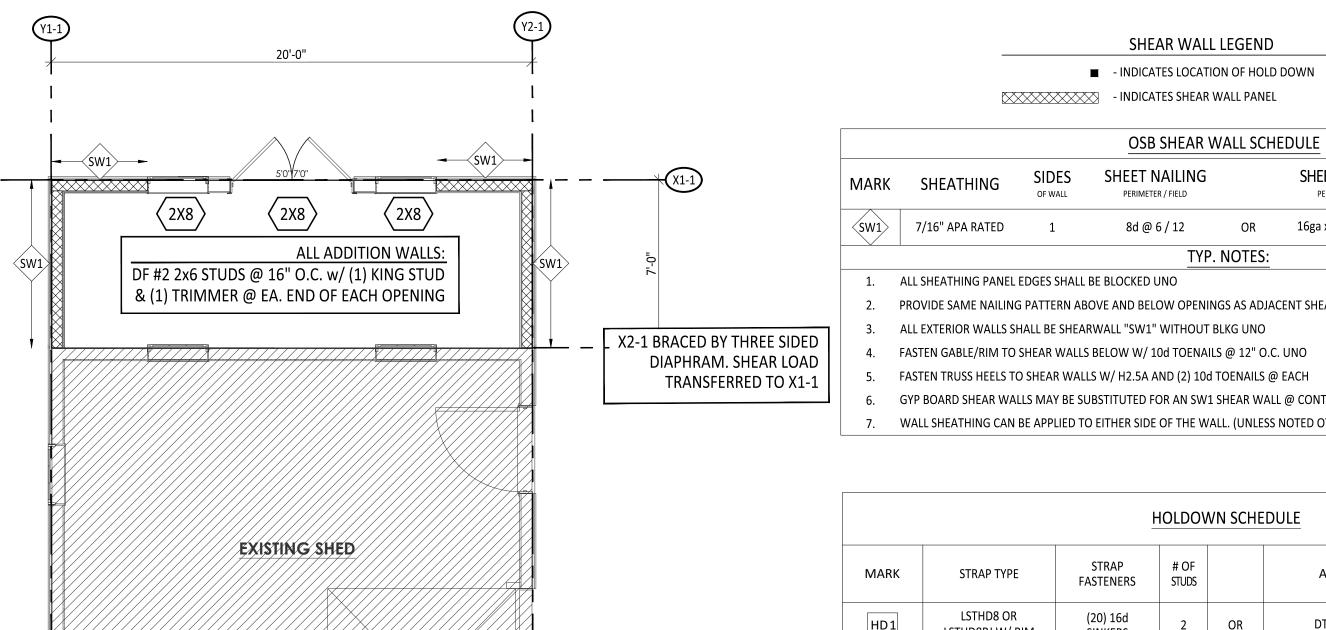
**PROJECT #:** | 2022-3775 **DATE:** 07/13/2022 DRAFTER: WJJ REVISION #:

REV. DATE:

**COVER** SHEET

SHEET

	BEAM / HEADER SCHEDULE (SEE DETAIL 8/SD1.0)								
	SETTING OF SETTING								
			TRIMMERS						
	DE 4.4.4	0.75	(TRIMMERS ON	NOTES					
HEADER	BEAM	SIZE	PLAN SUPERCEDE	NOTES					
			THOSE IN TABLE)						
<b>2x8</b>	(2x8)	(2) 2x8 DF #2	(1) TRIMMERS	OPT:4x8					



#### SHEAR WALL LEGEND

INDICATES LOCATION OF HOLD DOWN

- INDICATES SHEAR WALL PANE	L
-----------------------------	---

	OSB STILAR WALL SCILDOLL										
MARK	SHEATHING	SIDES OF WALL	SHEET NAILING PERIMETER / FIELD		SHEET STAPLING PERIMETER / FIELD	BLOCKING	NAILING (UI BOTTOM PLATE INTO				
SW1	7/16" APA RATED	1	8d @ 6 / 12	OR	16ga x 1½" @ 3 / 12	YES	(2) 16d NAI PER 16" BA				
			TYP.	NOTES:							

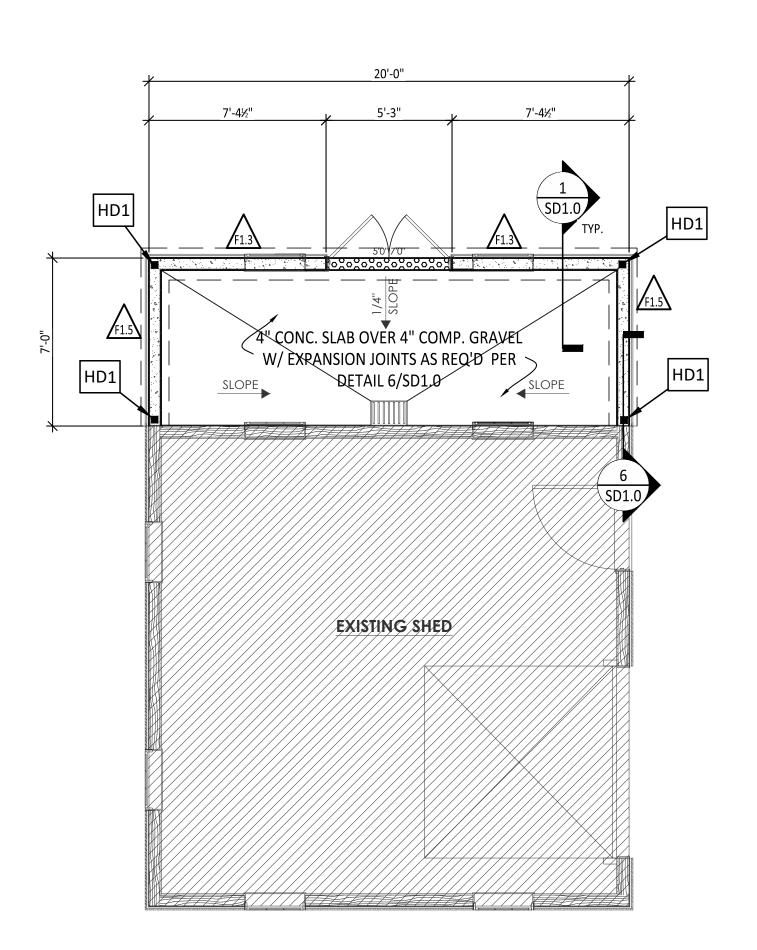
- PROVIDE SAME NAILING PATTERN ABOVE AND BELOW OPENINGS AS ADJACENT SHEAR PANEL.
- ALL EXTERIOR WALLS SHALL BE SHEARWALL "SW1" WITHOUT BLKG UNO

- WALL SHEATHING CAN BE APPLIED TO EITHER SIDE OF THE WALL. (UNLESS NOTED OTHERWISE)

HOLDOWN SCHEDULE									
MARK	STRAP TYPE	STRAP FASTENERS	# OF STUDS		ANCHOR BOLT	# OF STUDS	FASTENERS		
HD1	LSTHD8 OR LSTHD8RJ W/ RIM	(20) 16d SINKERS	2	OR	DTT2Z W/ ½Øx10"	2	(8) ½"x1½" SDS		

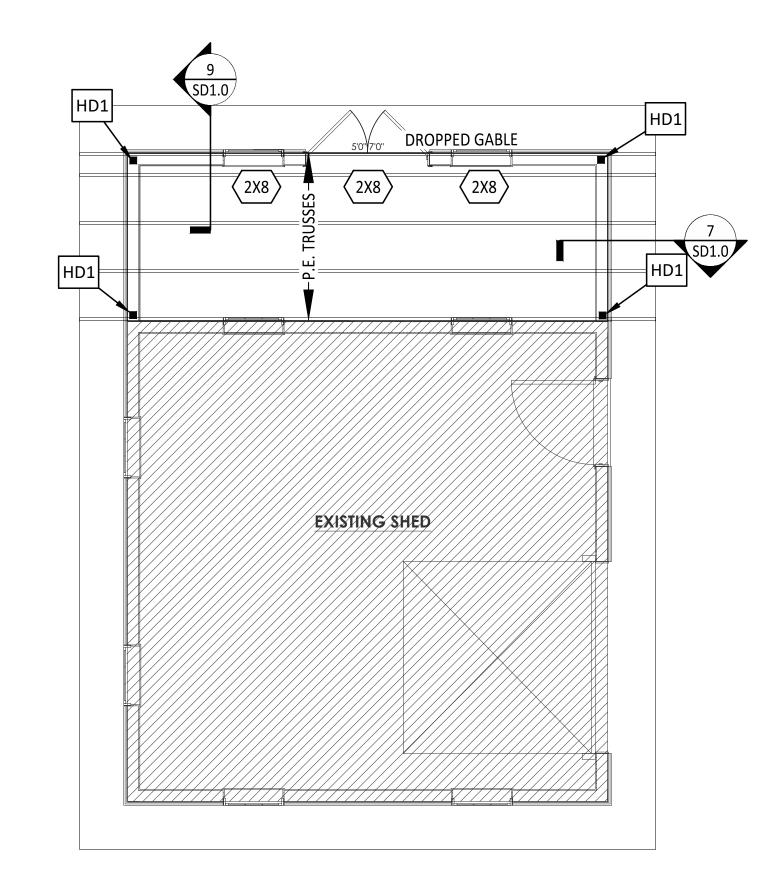
# MAIN SHEAR WALL & HEADER PLAN

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



FOUNDATION LEGEND	
-	- INDICATES LOCATION OF HOLD DOWN
	- INDICATES 6" CONC. WALL
500000000000000000000000000000000000000	- INDICATES BLOCKOUT

FOUNDATION SCHEDULE			
MARK	SIZE WxLxD	REINF.	COMMENTS
F1.3	1'-4"x10"xCONT.	(2) #4's CONT.	-
F1.5	1'-6"x10"xCONT.	(2) #4's CONT.	-



# **ROOF PLAN NOTES**

THIS TRUSS LAYOUT IS INTENDED TO BE USED AS A GENERAL GUIDELINE PROVIDED BY THE TRUSS SUPPLYING COMPANY FOR ACTUAL PLACEMENT AND DESIGN OF TRUSSES.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE BEARING

REFER TO INDIVIDUAL TRUSS DRAWINGS FOR REQUIRED TRUSS MEMBER

PROVIDE MINIMUM (2) STUDS UNDER ALL GIRDERS & BEAMS U.N.O.

BEAM / HEADER SCHEDULE (SEE DETAIL 8/SD1.0)				
HEADER	BEAM	SIZE	TRIMMERS (TRIMMERS ON PLAN SUPERCEDE THOSE IN TABLE)	NOTES
2x8	2x8	(2) 2x8 DF #2	(1) TRIMMERS	OPT:4x8

# FOUNDATION PLAN

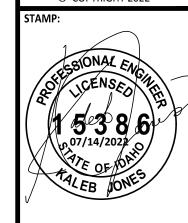
SCALE: 1/4" = 1'-0"

UPPER FRAMING PLAN

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

524 CLEVELAND BLVD. #23 CALDWELL, IDAHO 83605

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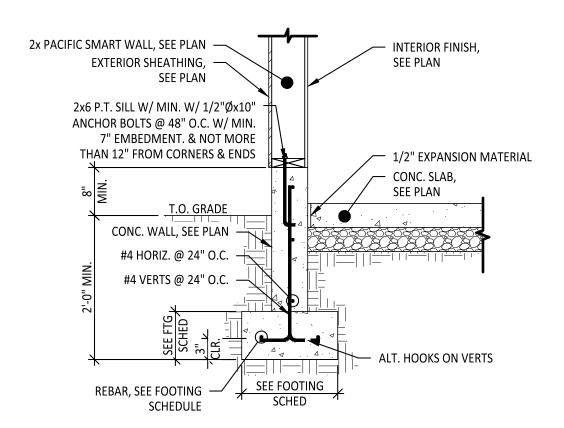


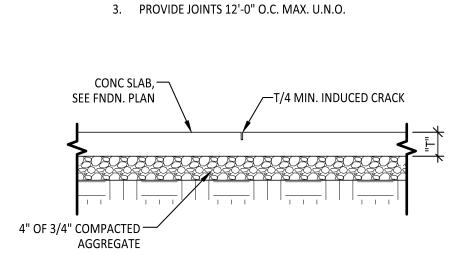
DRAFTER: WJJ

REV. DATE:

FDN./FRMG./ & SHEAR **PLAN** 

SHEET **S1.0** 



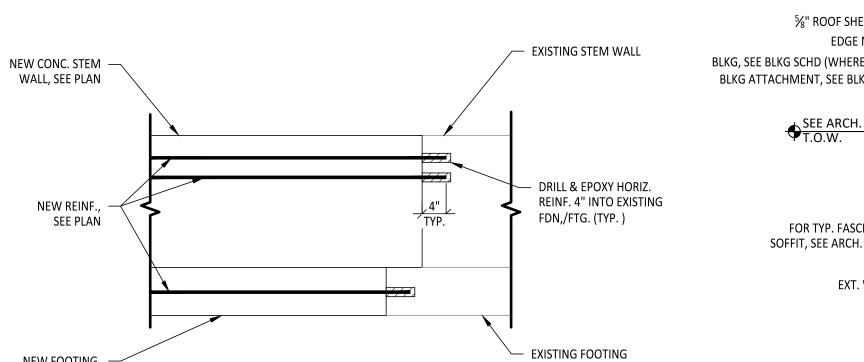


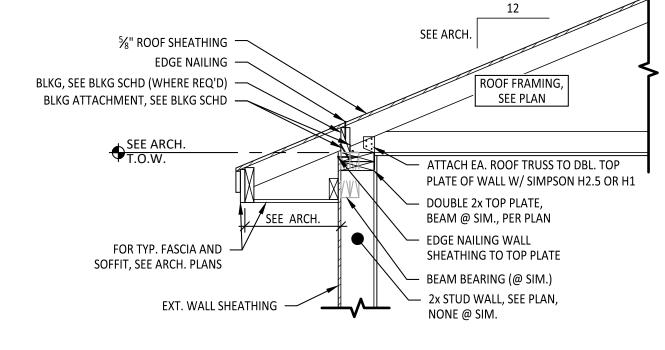
1. SAWED CUT TO BE MADE AS SOON AS POSSIBLE.

2. MAKE CUT WITHIN 4 HOURS AFTER FINISHED.

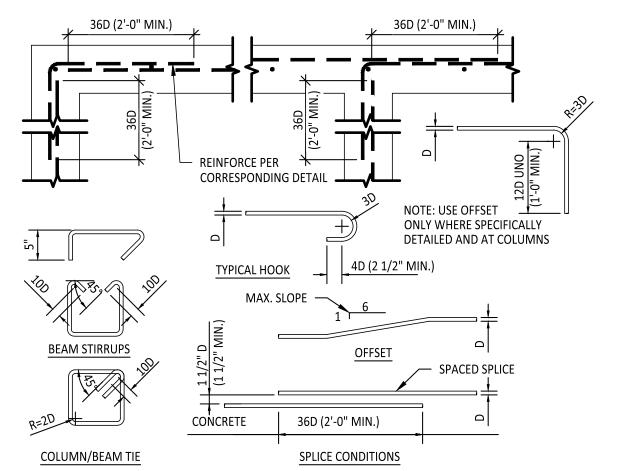
WITHOUT DAMAGING SURFACE.



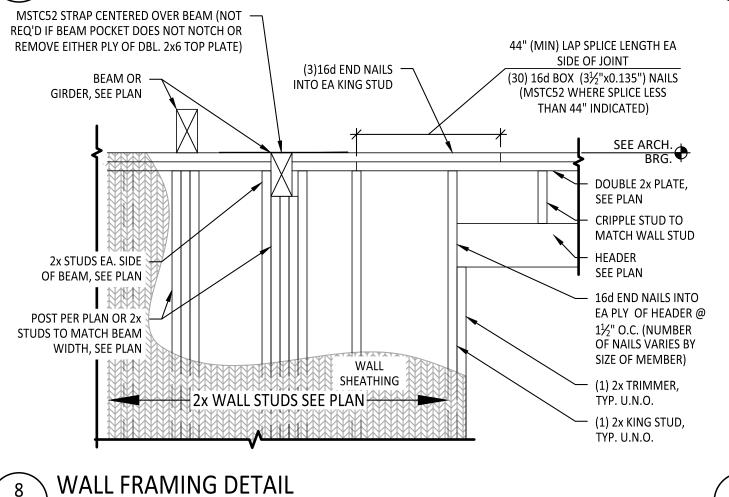


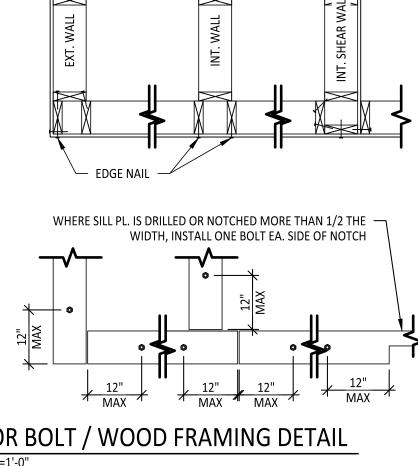




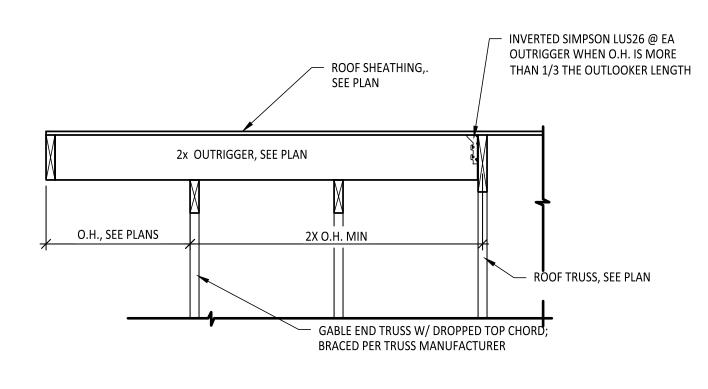


# CORNER REINFORCEMENT / REBAR DETAIL SD1.0 SCALE: 3/4"=1'-0"





4 ANCHOR BOLT / WOOD FRAMING DETAIL SD1.0 SCALE: 3/4"=1'-0"

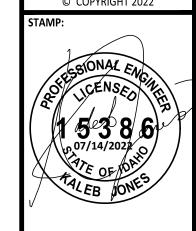


TYP. OUTLOOKER DETAIL SD1.0 | SCALE: 3/4" = 1'-0"



524 CLEVELAND BLVD. #230 CALDWELL, IDAHO 83605 (208) 453-6512 jobs@snakeriverengineering.com

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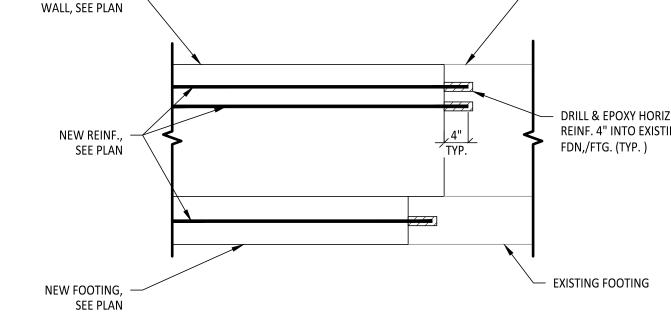


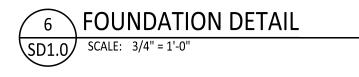
RUSACK SHED ADDITION

**DATE:** 07/13/2022 REV. DATE:

> FDN. **DETAILS**

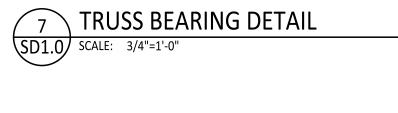
SHEET SD1.0





FOUNDATION DETAIL

SD1.0 SCALE: 3/4"=1'-0"



Completed by: TDS Review/Check: KKJ

**Project Name:** Rusack Shed Addition

SRE Project #: 2022-3775 City and State: Ketchum, Idaho

# **Structural Calculations**

**Project Title: Rusack Shed Addition** 

Location: Ketchum, Idaho

Job #: 2022-3775



Prepared in accordance with 2018 IBC. Calculations expire by: 7/13/2023



Completed by: TDS Review/Check: KKJ

**Project Name: Rusack Shed Addition** 

SRE Project #: 2022-3775 City and State: Ketchum, Idaho

#### **SITE SPECIFIC DESIGN CRITERIA:**

#### **Snow Criteria:**

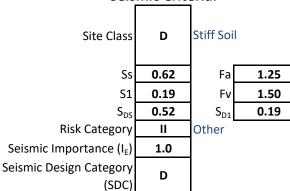
Roof Load (P <sub>f</sub> )	120 psf	
Ground Load (Pg)	120 psf	
Exposure Factor (C <sub>e</sub> )	1.0	Partially
Thermal Factor (C <sub>t</sub> )	1.0	Typical

Importance (I<sub>s</sub>)

#### Wind Criteria:

115 mph	115 n	Wind Speed (V <sub>3</sub> )
e <b>C</b> Open	С	Wind Exposure
<b>1.0</b>	1.0	Vind Importance (I <sub>w</sub> )
y II	II	<b>Building Category</b>
		•

#### **Seismic Criteria:**



#### Seismic Criteria (continued):

Wall	Design	Response
Material	Base Shear	Coeff., R
	1	

OSB	.10Wp	6.5	Typ @ Ext
GYP	.31Wp	2	Typ @ Int
CANT COL	.42Wp	1.5	

#### **Soil Criteria:**

Brg. Strength 1500 psf

#### STRUCTURE SPECIFIC DESIGN CRITERIA:

#### **Live Loads:**

_	. re Loud
Typ Residential	
Garage (P.V.)	50 psf
Sleeping Area's	30 psf

#### **Floor Dead Loads:**

TOTAL	12 psf
Misc	3.0
Flooring	2.5
Ceiling	2.0
Joist	2.0
Deck	2.5

#### Roof <u>Dead Lo</u>ads:

TOTAL	17 psf
Misc	4.5
Ceiling	3.0
Joist	2.5
Roofing	3.0
Insulation	2.0
Deck	1.5
Deck	1.5

#### **Interior Wall Dead Loads:**

TOTAL	8 psf
Misc	3.0
Gyp. Board	2.5
Studs	

#### **Exterior Wall Dead Loads:**

TOTAL	12 psf
Misc	3.0
Sheating	1.5
Gyp. Board	2.5
Insulation	0.5
Siding	2.5
Studs	2.0
_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

#### **Deck Dead Load**

Decking	4.4
Joist	2.0
	0.0
Misc	3.0
TOTAL	10 psf



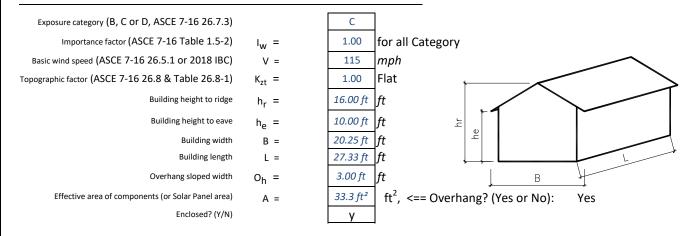
Completed by: TDS Review/Check: KKJ

Project Name: Rusack Shed Addition

**SRE Project** #: 2022-3775 City and State: Ketchum, Idaho

#### WIND ANALYSIS: Low-rise Building - Based on IBC / ASCE 7

#### **INPUT DATA**



#### **ANALYSIS**

#### **Velocity pressure**

 $q_h = 0.00256 K_z K_{zt} K_d \frac{K_e}{V} V^2$ 24.43 psf

q<sub>h</sub> = velocity pressure at mean roof height, h. (Eq. 26.10-1 page 268) where:

> $K_z$  = velocity pressure exposure coefficient evaluated at height, h, (Tab. 26.10-1, pg 2 0.85 K<sub>d</sub> = wind directionality factor. (Tab. 26.6-1, for building, page 266) 0.85

h = mean roof height **13.00** ft

K<sub>e</sub> = ground elevation factor. (1.0 per Sec. 26.9, page 268) < 60 ft, [Satisfactory] (ASCE 7-16 26.2.1) < Min (L, B), [Satisfactory] (ASCE 7-16 26.2.2)

#### **Design pressures for MWFRS**

 $p = q_h [(G C_{pf})-(G C_{pi})]$ 

psf (ASCE 7-16 28.3.4) where: p = pressure in appropriate zone. (Eq. 28.3-1, page 311).  $p_{min} =$ 16

G C<sub>pf</sub> = product of gust effect factor and external pressure coefficient, see table below. (Fig. 28.3-1, page 312 & 313)

G C<sub>pi</sub> = product of gust effect factor and internal pressure coefficient.(Tab. 26.13-1, Enclosed Building, page 271)

a = width of edge strips, Fig 28.3-1, page 312, MAX[MIN(0.1B, 0.1L, 0.4h), MIN(0.04B, 0.04L), 3] =

#### Net Pressures (psf), Basic Load Cases

100110330	iica (pai), b	asic Louc	Cases			
	Roof ang	le q =	18.43	Roof ar	ngle q =	18.43
Surface	C C	Net Pre	ess. W/	C C	Net Pre	ess. W/
	G C <sub>p f</sub>	(+GC <sub>pi</sub> )	(-GC <sub>pi</sub> )	G C <sub>p f</sub>	(+GC <sub>pi</sub> )	(-GC <sub>p i</sub> )
1	0.52	8.22	17.01	-0.45	-15.39	-6.60
2	-0.69	-21.25	-12.46	-0.69	-21.25	-12.46
3	-0.47	-15.84	-7.05	-0.37	-13.44	-4.64
4	-0.42	-14.54	-5.75	-0.45	-15.39	-6.60
5				0.40	5.37	14.17
6				-0.29	-11.48	-2.69
1E	0.78	14.66	23.46	-0.48	-16.12	-7.33
2E	-1.07	-30.54	-21.74	-1.07	-30.54	-21.74
3E	-0.67	-20.85	-12.05	-0.53	-17.34	-8.55
4E	-0.62	-19.50	-10.70	-0.48	-16.12	-7.33
5E				0.61	10.50	19.30
6E				-0.43	-14.90	-6.11

#### Net Pressures (psf), Torsional Load Cases

Tree Tressures (por/) Torsional Eou								
	Roof angle $q = 18.43$							
Surface		Net Press. W/						
	G C <sub>p f</sub>	(+GC <sub>pi</sub> )	(-GC <sub>pi</sub> )					
1T	0.52	2.05	4.25					
2T	-0.69	-5.31	-3.11					
3T	-0.47	-3.96	-1.76					
4T	0.00	-3.64	-1.44					
	Roof ar	ngle q =	0.00					
Surface	C C	Net Press. W/						
	G C <sub>p f</sub>	(+GC <sub>pi</sub> )	(-GC <sub>pi</sub> )					
5T	0.40	1.34	3.54					
6T	-0.29	-2.87	-0.67					

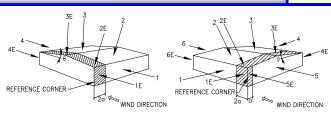
+ / - Wind Pressure 64% 3.00 ft

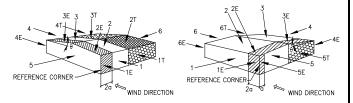


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**Project Name:** Rusack Shed Addition

SRE Project #: 2022-3775 City and State: Ketchum, Idaho





Load Case A (Transverse)

verse) Load Case B (Longitudinal)
Basic Load Cases

Load Case A (Transverse) Load Case B (Longitudinal)

<u>Torsional Load Cases</u>

#### Design pressures for components and cladding

#### $p = q_h[ (G C_p) - (G C_{pi})]$

where: p = pressure on component. (Eq. 30.3-1, pg 33)

p<sub>min</sub> = 16.00 psf (ASCE 7-16 30.2.2)

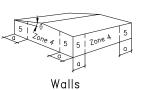
G C<sub>p</sub> = 1.00 external pressure coefficie

see table below. (ASCE 7-16 30.3.2)

q = 18.43 °

 $p_{overhang} = -84.28 psf$ 

(ASCE 7-16 28.3.3)







Roof 0≤7°

Roof 0>7°

	Effective	Zor	ne <b>1</b>	Zon	e 1'	Zor	ne <b>2</b>	Zon	e <b>2e</b>	Zon	e <mark>2</mark> n	Zon	e 2r
Comp. &	Area (ft²)	$GC_P$	- GC <sub>P</sub>	$GC_P$	- GC <sub>P</sub>								
Cladding	137	0.30	-0.80	0.30	-0.80	0.30	-2.20	0.30	-0.80	0.30	-1.95	0.30	-1.95
Coeffs.	Effective	Zor	ne <mark>3</mark>	Zon	e <b>3e</b>	Zon	e 3r	Zor	ne <b>4</b>	Zor	ne <b>5</b>		
Coens.	Area (ft²)	$GC_P$	- GC <sub>P</sub>										
	33	0.30	-2.50	0.30	-2.50	0.30	-1.80	0.99	-1.09	0.99	-1.37		

	Zone 1		Zon	ne <b>1</b> '	Zone 2		Zone 2e		Zone 2n		Zone 2r	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Comp. & Cladding	2.93	-15.15	2.93	-15.15	2.93	-49.35	2.93	-15.15	2.93	-43.21	2.93	-43.21
Pressures	Zoı	ne <b>3</b>	Zon	e 3e	Zon	ie <mark>3</mark> r	Zor	ne <b>4</b>	Zor	ne <b>5</b>		
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	(Max F	Pressure
	2.93	-56.67	2.93	-56.67	2.93	-39.57	19.68	-22.13	19.68	-29.11	56.67	psf)

OADS	LOAD CASE 'A' FACTORED L
3.2 psf	$0.6*W_r = (Z_2 + Z_3) * 0.6 =$
5.8 psf	$0.6*W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$
13.7 psf	$0.6*W_w = (Z_1 + Z_4) * 0.6 =$
20.5 psf	$0.6*W_{wE} = (Z_{1E} + Z4E) * 0.6 =$

LOAD CASE 'B' FACTORED L	OADS
$0.6*W_r = (Z_2 + Z_3) * 0.6 =$	4.7 psf
$0.6*W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$	7.9 psf
$0.6*W_w = (Z_5 + Z_6) * 0.6 =$	10.1 psf
$0.6*W_{wE} = (Z_{5E} + Z_{6E}) * 0.6 =$	15.2 psf

ROOF COMPONENTS	FACTORED LOAD
0.6*Z <sub>r,c&amp;c</sub> =	25.9 psf

WALL COMPONEN	WALL COMPONENTS FACTORED LOAD						
0.6*Z <sub>w,c&amp;c</sub> =	13.3 psf						



Completed by: TDS Review/Check: KKJ

Project Name: Rusack Shed Addition **SRE Project** #: 2022-3775

City and State: Ketchum, Idaho

#### OSB SEISMIC LOADING ANALYSIS

IBC / ASCE 7: Equivalent Lateral Force (ELF) Procedure:

#### **INPUT DATA**

#### **DESIGN SUMMARY**

Typical floor height:	h =	10	ft	$C_s = 1.2 * S_{DS} / (R / I_e) =$	0.0959		<= Applicable
Typical floor weight:	w., =	9.4	kips	Period Parameter, x =	0.75	. ASCE Tab 12.8-2	

Number of floors: n = 1 Period:  $T_a = C_t (h_n)^x = 0.16$  sec, ASCE 12.8.2.1

 $C_s < S_{D1} / [(R / I_e) T_a] = 0.1846$  , ASCE Tab 12.8.1.1 Importance factor (ASCE 11.5.1):  $I_e = 1.00$ <= Not Applicable

Design spectral response:  $S_{DS} = 0.52$  g  $C_s > 0.044 \, S_{DS} \, I_e = 0.0229$  , ASCE Tab 12.8.1.1 <= Not Applicable  $S_{D1} = 0.19$  g  $C_s > 0.5 S_1 / (R / I_e) = 0.0148$  , ASCE Tab 12.8.1.1 <= Not Applicable

k = 1.27 , (ASCE 12.8.3, page 91)

Mapped spectral resp.:  $S_1 = 0.19$  g

Period Parameter, C<sub>t</sub>:

(ASCE Tab 12.8-2):  $C_t = 0.020$  $V = C_s W = 0.0959 W$ 

Resp. coefficient: (ASCE

0.7 \* V = **0.0671** W Tab. 12.2.1): R = 6.5

Seismic design category: SDC =

kips, total  $h_n = 16.0 ft$ 

#### SEISMIC COMPONENT & ANCHORING ANALYSIS

Out-of-plane seismic force for wall design (ASCE 7, Sec.12.11.1)

$$W_{1,seismic} = MAX \left( 0.4 I S_{DS} W_p , 0.1 W_p \right)$$
 = **0.2** W<sub>p</sub> = **0.2** psf <= **USE FOR DIAPHRAGMS**

Where: 
$$W_p = 1.0 \text{ psf}$$
,  $I_e = 1.00$   
(CBC / IBC Tab. 1604.5 & ASCE 7 Tab. 1.5-2)

Out-of-plane seismic force for anchorage design

For seismic design category A & B, any diaphragm (ASCE 7 Sec. 12.11.2)

$$F_{anch,seismic} = MAX \left[ 0.4 S_{DS} IW_{p} \frac{\left(h + h_{p}\right)^{2}}{2h} , 0.1 W_{p} \frac{\left(h + h_{p}\right)^{2}}{2h} , 400 S_{DS} I , F_{min} \right] =$$

 $F_{min}$  = **0.13** plf, **2.04** W<sub>p</sub> = **208** plf (Horizontal) <= **Not Applicable** Where: (ASCE 7 Sec. 12.11.2 & 11.7.3)

For seismic design category C and above, flexible diaphragm (ASCE 7 Sec. 12.11.2.1)

$$F_{anch,seismic} = MAX \left[ 0.8 S_{DS} I W_p \frac{\left(h + h_p\right)^2}{2h} , 0.1 W_p \frac{\left(h + h_p\right)^2}{2h} , 400 S_{DS} I , F_{min} \right] =$$
= **4.07** W<sub>p</sub> = **208** plf (Horizontal) <= **Applicable**

For connections (ASCE 7 Sec. 12.11.2.1)

$$F_{conn,seismic} = MAX [0.133 S_{DS} w_p, 0.5 w_p] =$$
 **0.5** W<sub>p</sub> = **0.5** plf (Horizontal)



Completed by: TDS Review/Check: KKJ Project Name: Rusack Shed Addition

SRE Project #: 2022-3775 City and State: Ketchum, Idaho

#### WIND / SEISMIC SHEAR FORCE CALCULATIONS:

From ASCE 7-16 Wind & Seismic Loading Analysis

		Ro	of / Flo	or				Wall			Load	above				Loadin	g
Wall Line	Wind Force (psf)	Diaph. Weight	Wr, We truss trib (ft)	Area W (ft)	Area L (ft)	Wind Force (psf)	Wall DL (psf)	Wall ht (ft)	wall line dist (ft)	Upr. Fir Wall ht (ft)	Wind (#)	Seismic (#)	*C <sub>s</sub> (Wp)	=	Wind Force (kips)	Seismic Force (kips)	Lateral Control
X1-1	9.6	47	6.0	14.0	20.0	16.6	12.0	10.0	14.0				0.07	=	0.98	0.55	Wind
Y1-1	9.6	47	6.0	20.0	14.0	15.7	12.0	10.0	20.0				0.07	=	0.87	0.39	Wind
Y2-1	9.6	47	6.0	20.0	14.0	15.7	12.0	10.0	20.0				0.07	=	0.87	0.39	Wind



Completed by: TDS Review/Check: KKJ

Project Name: Rusack Shed Addition SRE Project #: 2022-3775 City and State: Ketchum, Idaho

SH		<u>L CALCUL</u>			
	X1-1	Y1-1	Y2-1		
		r Wall Forces			
Total length of wall	20.00 ft	7.00 ft	7.00 ft		
Total length of shear wall L =	20.00 ft	7.00 ft	7.00 ft		
Total length of full ht seg. $L_w =$	8.00 ft	7.00 ft	7.00 ft		
height of shear wall H =	10.00 ft	10.00 ft	10.00 ft		
Maximum opening height $H' =$	7.00 ft	0.00 ft	0.00 ft		
Total force at top of wall $V_1 =$	984 lbs	870 lbs	870 lbs		
Self weight $W_{DL self} =$	120 plf	120 plf	120 plf		
Applied dead load $W_{DL above} =$	40 plf	193 plf	193 plf		
Prefered OSB thickness in	7/16	7/16	7/16		
Prefered Gyp thickness in	1/2	1/2	1/2		
Wall Connected to Concrete y/n =	Υ	Υ	Υ		
		Wall Segment			
	4.00	7.00	7.00		
	4.00				
	Shear Tra	nsfer to Conc	rete		
T =	Not Req'd	586 lbs	586 lbs		
1/2 Anchor Bolts @	72 " O.C.	72 '' O.C.	72 '' O.C.		
Provide:	Code Min.	Code Min.	Code Min.		
Min # of 1/2 Anchor Bolts	(2) Min	(2) Min	(2) Min		
Load From Above	0.00	0.00	0.00		
		HD1	HD1		
	Shear R	esisting Syste	m		
Force Calculated	204.14	124.28	124.28		
	OSB	OSB	OSB		
Min Shear Wall Segment:	2.86 ft	2.86 ft	2.86 ft		
Provide: Va=	SW1	SW1	SW1		
Min Shear Wall Segment:					
Provide: Va=					
Ric	cking / Nailir	ng Framing At	tachment		
Blocking Unit Shear	49 plf	124 plf	124 plf		
Blocking	NONE	NONE	NONE		
Nailing	See SCHED	See SCHED	See SCHED		<del></del>
<u> </u>				l l	
0/ of full height segments 0/fb = 1 /1 =		Base Shear	1 000	<del>                                     </del>	
% of full height segments %fh = $L_w/L$ = % of maximum opening height %oh = H'/H =	0.400 0.700	1.000 0.000	1.000	<del>                                     </del>	<del></del>
% of maximum opening neight % on = H/H =  Shear cap adj factor SCAF =	0.700	1.00	0.000 1.00	+	<del></del>
Unit base shear vbase $V_1/L_w =$	123 plf	1.00 124 plf	1.00 124 plf	+	
Effective unit base shear vreq=v <sub>base</sub> /SCAF=	204 plf	124 plf	124 plf		<del></del>
Ovrtrn. mo. Ttl. length of wall OTM =	16.3 k-ft	8.7 k-ft	8.7 k-ft		
		adjustment f	actor		
	Jucai Wall	aujustinent T			
Resist moment total L. of wall RM =	32.0 k-ft	7.7 k-ft	7.7 k-ft		J
Resist moment total L. of wall RM = r=	32.0 k-ft 0.4878	7.7 k-ft 1.0000	7.7 k-ft 1.0000		<del></del>

Completed by: TDS Review/Check: KKJ

**Project Name:** Rusack Shed Addition

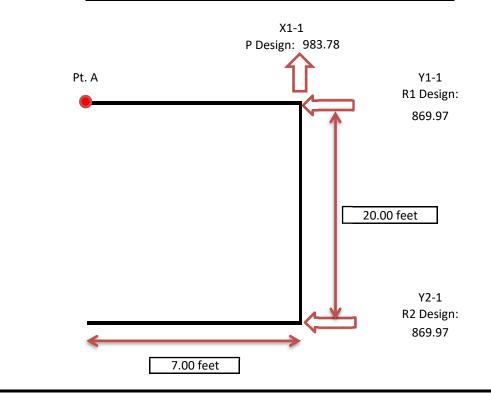
SRE Project #: 2022-3775 City and State: Ketchum, Idaho

### THREE-SIDED DIAPHRAGM CALCULATION:

From NDS Wind & Seismic 'Special Design Provisions for Wind & Seismic " Section 4.2.5.2

Design Criteria					
Diaphragm Length	Diaphragm Width				
L 7.00 feet	W 20.00 feet				
Check For Length<35'	ок				
Length To Width Ratio	0.35				
Check For <1:1 Length Ratio	ОК				

Forces in R1 & R2 D	ue to Rotation	
P Design	=	984 #
R1 Due to Rotation	=	172 #
R1 Due to Transverse Load	=	870 #
Governing Inplane Load R1	=	870 #
R2 Due to Rotation	=	172 #
R2 Due to Transverse Load	=	870 #
Governing Inplane Load R2	=	870 #





Completed by: TDS Review/Check: KKJ

Project Name: Rusack Shed Addition SRE Project #: 2022-3775 City and State: Ketchum, Idaho

#### **H1 Beam Calculations**

	Additional Drift	Roof	Floor	Deck	Wall	Total Load		
L						Total Load	Tota	l Load
Trib	0.0	2.33	0	0	3		4	
						11	355.	2 plf
Dead Load	- 0	39.6	0.0	0.0	36.0	75.6 plf		
Live / Snow Load	U	279.6	0.0	0.0		279.6 plf		
Description:	2.5 ft Opening	5.0 ft Opening						
Description.	2.5 Jt Opening	3.0 Jt Opening						
-								
Header Callout	(2)2x6	(2)2x6						
neader canout	DF-L No. 2	DF-L No. 2						
<del>-</del>	(1) 2x6	(1) 2x6						
Trimmers	DF-L No. 2	DF-L No. 2						
	(1) 2x6	(1) 2x6						
King Studs	DF-L No. 2	DF-L No. 2						
Wood Design								
Species	DF-L	DF-L						
Grade	No. 2	No. 2			ļ			
Width	3.00 in	3.00 in						
Depth	5.50 in	5.50 in						
Reaction		T	ı		1	1	T	1
Dead Load	95 lbs	189 lbs						
Live Load	350 lbs	699 lbs		ļ	Į	1	ļ	ļ
Load								
lu	2.5 ft	5.0 ft						
le	5.2 ft	9.5 ft						
_						•		
Adjustment Factors								
Cd	1.15	1.15			I	1	1	l
CF	1.3	1.3						
CI L	1.5	1.5						
Material Properties								
Fb	900 psi	900 psi						
-								
Fv	180 psi	180 psi						
E	1,600,000 psi	1,600,000 psi						
H-								
E Emin	1,600,000 psi	1,600,000 psi						
E	1,600,000 psi 580,000 psi	1,600,000 psi 580,000 psi						
E Emin	1,600,000 psi 580,000 psi 16.50 in^2	1,600,000 psi 580,000 psi 16.50 in^2						
E Emin Calculated Prop.	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4						
E Emin Calculated Prop.	1,600,000 psi 580,000 psi 16.50 in^2	1,600,000 psi 580,000 psi 16.50 in^2						
Calculated Prop.  A I S RB	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36						
Calculated Prop.  A I S	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi						
Calculated Prop.  A I S S RB Emin' FbE	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36						
Calculated Prop.  A I S RB Emin'	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi						
Calculated Prop.  A I S S RB Emin' FbE	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi						
E Emin  Calculated Prop.  A I S S S RB Emin' FbE Fb*	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi						
Calculated Prop.  A I S RB Emin' FbE Fb* CL	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi						
Calculated Prop.  A I S RB Emin' F-be F-b* CL	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi						
Calculated Prop.  A I S RB Emin' FbE Fb* CL	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi						
Calculated Prop.  A I S RB Emin' FbE Fb* CL  Shear and Moment	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1						
Calculated Prop.  A I S RB Emin' FbE Fb* CL  Shear and Moment  M V  Stress	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1						
Calculated Prop.  A I I S RB Emin' FbE Fb* CL Shear and Moment  Stress	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1						
Calculated Prop.  A I S RB Emin' FbE Fb* CL  Shear and Moment  M V  Stress fb Fb'	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1 3,330 lb-in 444 lbs	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi						
Calculated Prop.  A	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 1,346 psi 1 3,330 lb-in 444 lbs 220 psi 1,340 psi 0.16	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66						
Calculated Prop.  A I S RB Emin' FbE Fb* CL  Shear and Moment  Stress  fb Fb' Fb' Fb' Fb' Fb' Fb' Fb' Fb' Fb' Fb	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1 3,330 lb-in 444 lbs  220 psi 1,340 psi 0.16 40 psi	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi						
Calculated Prop.  A I I S RB Emin' FbE Fb* CL  Shear and Moment  M V  Stress  fb Fb' fb/Fb' fb/Fb' Fv' Fv'	1,600,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 1,346 psi 1 3,330 lb-in 444 lbs 220 psi 1,340 psi 0.16	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66						
Calculated Prop.  A I S RB Emin' FbE Fb* CL  Shear and Moment  Stress  fb Fb' Fb' Fb' Fb' Fb' Fb' Fb' Fb' Fb' Fb	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1 3,330 lb-in 444 lbs  220 psi 1,340 psi 0.16 40 psi	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi						
Calculated Prop.  A I I S RB Emin' FbE Fb* CL  Shear and Moment  M V  Stress  fb Fb' fb/Fb' fb/Fb' Fv' Fv'	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1  220 psi 1,340 psi 0.16 40 psi 207 psi 0.19 0.19	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi 207 psi 0.39 0.66						
Calculated Prop.  A I S RB Emin' FDE Fb* CL  Shear and Moment  M V  Stress  fb Fb' fb/Fb' fv/Fv' fv/Fv'	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1  3,330 lb-in 444 lbs  220 psi 1,340 psi 0.16 40 psi 207 psi 0.19	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi 207 psi 0.39						
Calculated Prop.  A I I S RB Emin' FbE Fb* CL  Shear and Moment  M V  Stress  fb Fb' Fb' Fb' Fb' Fv' fv/Fv' Max Ratio	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1  220 psi 1,340 psi 0.16 40 psi 207 psi 0.19 0.19	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi 207 psi 0.39 0.66						
Calculated Prop.  A I S RB Emin' FDE Fb* CL  Shear and Moment  M V  Stress fb Fb' fb/Fb' fv/Fv' Max Ratio	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1  3,330 lb-in 444 lbs  220 psi 1,340 psi 0.16 40 psi 207 psi 0.19 0.19 Pass	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi 207 psi 0.39 0.66 Pass						
Calculated Prop.  A I S RB Emin' FbE Fb* CL  Shear and Moment  M V  Stress  fb Fb' fb/Fb' fv/Fv' Max Ratio	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1  220 psi 1,340 psi 0.16 40 psi 207 psi 0.19 0.19 Pass	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi 207 psi 0.39 0.66 Pass						
Calculated Prop.  A	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1  3,330 lb-in 444 lbs  220 psi 1,340 psi 0.16 40 psi 207 psi 0.19 Pass  0.00 in L/6,395	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi 207 psi 0.39 0.66 Pass						
Calculated Prop.  A I S RB Emin' FDE Fb* CL  Shear and Moment  M V  Stress fb Fb' fb/Fb' fv/Fv' Max Ratio	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1 3,330 lb-in 444 lbs  220 psi 1,340 psi 0.16 40 psi 207 psi 0.19 Pass  0.00 in L/6,395 0.00 in	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi 207 psi 0.39 0.66 Pass						
Calculated Prop.  A	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 6.15 580,000 psi 18,429 psi 1,346 psi 1  3,330 lb-in 444 lbs  220 psi 1,340 psi 0.16 40 psi 207 psi 0.19 Pass  0.00 in L/6,395	1,600,000 psi 580,000 psi 580,000 psi 16.50 in^2 41.59 in^4 15.13 in^3 8.36 580,000 psi 9,964 psi 1,346 psi 1 13,320 lb-in 888 lbs  881 psi 1,335 psi 0.66 81 psi 207 psi 0.39 0.66 Pass						



Completed by: TDS Review/Check: KKJ

Project Name: Rusack Shed Addition SRE Project #: 2022-3775 City and State: Ketchum, Idaho

#### TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:	10' Tall Wall	King Stud (5' Max Opening)	10' Trimmer			
		I	I	I	L	
Туре:	2x Lumber (2"-4")	2x Lumber (2"-4")	2x Lumber (2"-4")			
Species:	DF-L	DF-L	DF-L			
Grade:	No. 2	No. 2	No. 2			
r		1	1	•	1	
Nominal width, t =	(1) 2	(1) 2	(1) 2			
Actual width =	1.50 in	1.50 in	1.50 in			+
Nominal depth, d = Actual depth =	6 5.50 in	6 5.50 in	6 5.50 in			
Span, L =	10.000 ft	10.000 ft	10.000 ft			
w/o Plates	9.750 ft	9.750 ft	9.750 ft			
Stud spacing, s =	16 in	40 in	16 in			
Lat. Pressure, w <sub>wind</sub> =	13.28 psf	13.28 psf	5.00 psf			
Axial load, P =	2071 lbs	50 lbs	3884 lbs			
Eccentricity, e =	0 in	0 in	0 in			
K <sub>cE</sub> =	0.3	0.3	0.3			
c =	0.8	0.8	0.8	<u> </u>		
w =	17.7 plf	44.5 plf	6.7 plf			
- -						
Fb	900 psi	900 psi	900 psi	<u> </u>		
Fv	180 psi	180 psi	180 psi			
Fc-prll	1,350 psi	1,350 psi	1,350 psi			
Fc-perp	625 psi	625 psi	625 psi			
C <sub>d</sub>	1.60	1.60	1.15			
$C_{F,Fb}$	1.30	1.30	1.30			
C <sub>F,FcprII</sub>	1.10	1.10	1.10			
С,	1.15	1.00	1.00			
C,	0.39	0.39	0.51			
C <sub>H</sub>	1.00	1.00	1.00			
C <sub>b</sub>	1.07	1.07	1.07			
F	1,600,000 psi	1,600,000 psi	1,600,000 psi			
Emin	580,000 psi	580,000 psi	580,000 psi			
Allowable Stress:					•	•
$F'_b = F_b C_d C_F C_r =$	2153 psi	1872 psi	1346 psi			
	288 psi	288 psi	207 psi			
	-		•			
$F_c^* = F_c C_d C_F =$	2376 psi	2376 psi	1708 psi			
$F_{cE} = (K_{cE} E')/(I_e/d)2 =$	1061 psi	1061 psi	1061 psi			
$F'_c = F_c C_d C_F C_p =$	938 psi	938 psi	876 psi			
$F'_{c perp} = F_{c perp} Cb =$	668 psi	668 psi	668 psi			
E' = E =	1600000 psi	1600000 psi	1600000 psi			
F <sub>bE</sub> =	2434 psi	2434 psi	2434 psi			
Slenderness Ratio:	< 50 OK	< 50 OK	< 50 OK			
R <sub>B</sub> =	17	17	17			
Bending:	< F'b OK	< F'b OK	< F'b OK			
$M = w L^2/8 + P e/12 =$	210 ft-lbs	529 ft-lbs	79 ft-lbs			
f <sub>b</sub> = M/S =	334 psi	840 psi	126 psi			
S =	8 in <sup>3</sup>	8 in <sup>3</sup>	8 in <sup>3</sup>			
Shear:	< F'v OK	< F'v OK	< F'v OK	İ		
V = w L/2 =	86 lbs	217 lbs	33 lbs			+
f <sub>v</sub> = 1.5 V/A =	16 psi	39 psi	6 psi	1		1
A =	8 in <sup>2</sup>	8 in <sup>2</sup>	8 in <sup>2</sup>	1		
Compression:	< F'c OK	≤ F'c OK	< F'c OK			
f <sub>c</sub> = P/A =	251 psi	6 psi	471 psi	1		+
Compression (perp.):	< F'c OK	< F'c OK	< F'c OK	1		+
f <sub>c perp</sub> = P/A =	251 psi	6 psi	471 psi			+
Combined:	< 1.0 OK	0 poi				+
				1	+	+
(fc/Fc)2 + {fb/[Fb(1-(fc/FcE)]} =	0.27			-		+
Deflection:	<u>&gt; 180 OK</u>	<u>&gt; 180 OK</u>	<u>&gt; 180 OK</u>			
D = 22.5 w L <sup>4</sup> /E' I =	0.11 in	0.27 in	0.04 in	-		+
I =	21 in^4	21 in^4	21 in^4			
SPAN /	1082	430	2872			



Completed by: TDS Review/Check: KKJ

**Project Name:** Rusack Shed Addition

SRE Project #: 2022-3775 City and State: Ketchum, Idaho

## **Individual Footing Design**

**Program:** Continuous Footing

Soil Bearing Pressure: 1500psf

Roof				
Roof Dead	( 17psf )	( 12.0ft )	=	204plf
Snow Live	( 120psf )	( 12.0ft )	=	1440plf

Misc				
Wall Load:	( 12psf )	( 10.0ft )	=	120plf
Conc Stem:	( 145pcf )	(2 x .5ft)	=	145plf
Misc Load:	( .0ft )	(.0ft) (.0ft)	=	plf

1909plf

Use Footing Width:	18	X	8	in
W/		(2)	#4	Cont.



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Project Name: Rusack Shed Addition SRE Project #: 2022-3775 City and State: Ketchum, Idaho

## **Individual Footing Design**

**Program:** Continuous Footing

Soil Bearing Pressure: 1500psf

	Roof			
Roo	of Dead (17psf)	( 3.0ft )	=	51plf
Sno	ow Live (120psf)	( 3.0ft )	=	360plf

Misc				
Wall Load:	( 12psf )	( 10.0ft )	=	120plf
Conc Stem:	( 145pcf )	(2 x .5ft)	=	145plf
Misc Load:	( .0ft )	(.0ft) (.0ft)	=	plf

676plf

Use Footing Width:	12	X	8	in
W/		(2)	#4	Cont.

#### **Construction Activity Plan**

#### Rusack Shed Addition 411 Northwood Way, Ketchum, ID 83340

- General information and schedule: SCOPE-OF-WORK INCLUDES BUT IS NOT LIMITED TO,
  ADDITION TO DETACHED SHED AT AN EXISTING RESIDENCE. WORK IS TO INCLUDE RELOCATION OF EXTERIOR WALL, EXTENDING SHED 7 FEET WEST. CONSTRUCTION
  CONSISTS OF CONCRETE FOOTING AND STEM WALL, CONCRETE FLOOR W/ HYDRONIC
  HEAT MELT SYSTEM. WALLS TO BE WOOD STUD FRAMED, ENGINEERED WOOD TRUSSES.
  SIDING AND ROOFING TO MATCH EXISTING. SITE WORK INCLUDES REMOVAL OF (2)
  EXISTING TREES. CONSTUCTION IS TO HAPPEN IN 2025.
- Vehicle parking and traffic control: VEHICLE PARKING WILL ALL HAPPEN ON SITE.
   TRAFFIC CONTROLD SHOULD NOT BE NEEDED.
- Material storage and deliveries: MATERIAL STORAGE AND DELIVERIES WILL HAPPEN ONSITE NEAR EXISTING SHED. DELIVERIES SHOULD BE MINIMAL.
- Temporary restrooms: TEMPORARY RESTROOMS WILL BE LOCATED ON SITE WEST OF ENTRY GATE TO PROPERTY.
- Trucking Routes: LONGEST TRUCKING ROUTE WILL BE FROM AC HOUSTON LUMBER LOCATED AT 341 LEWIS STREET. ROUTE WILL BE NORTH ON LEWIS, TAKE A RIGHT ONTO NORTHWOOD WAY, DRIVE NORTH ACROSS SADDLE ROAD, TAKE A LEFT AT 411 NORTHWOOD WAY (SITE LOCATION), KETCHUM, ID 83340
- Site clean-up provisions: RECYCLE BIN WILL BE LOCATED ON SITE, DUMPSTER WILL BE ON SITE AND ANY REFUSE CONCRETE WILL BE DUMPED IN BIN ONSITE.
- Job shacks and Dumpsters (if applicable): NO JOBSHACK WILL BE REQUIRED FOR THIS PROJECT.
- Screening (if applicable)
- Use of rights of way (if applicable)
- Riparian, hillside and tree protection (if applicable): STRAW WADDLE AND/OR SILT FENCE WILL BE CONSTRUCTED AROUND PERIMETER OF CONSTRUCTION ZONE FOR PROTECTION OF RIPARIAN AREA.
- Reseeding of disturbed areas (if applicable): RESEEDING OF AREA AROUND CONSTRUCTION AREA WILL CONSIST OF LIKE MATERIALS (BARK AND GRASS).
- All neighbors with properties adjacent to the project shall be provided notice of the project, schedule, and the general contractor's contact information in advance of construction.
- Speed limits for construction vehicles shall be limited to 15 miles per hour within one block of a construction site, unless otherwise determined by the Ketchum Police Department.