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ABBREVIATIONS

AB.	Anchor Bolt	LW.	Light Weight
ACI	American Concrete Institute		
ACT.	Acoustic Ceiling Tile	MFR.	Manufacturer
ADD.	Addition	M.	Bending Moment
ADD'L.	Additional	MATL.	Material
AFF.	Above Finish Floor	MAX.	Maximum
AGGR.	Aggregate	MB.	Machine Bolt
AIA	American Institute of Architects	MECH.	Mechanical
AISC	American Institute of Steel Construction	MED.	Medium
AISI	American Iron and Steel Institute	MEZZ.	Mezzanine
ALT.	Alternate	MIN.	Minimum
AL.	Aluminum	MISC.	Miscellaneous
ANSI	American National Standards Institute	MIX.	Mixture
APA	American Plywood Association	MK.	Mark
APPROX.	Approximate	ML	MicroLam
ARCH.	Architect or Architectural	MULT.	Multiple
ASTM	American Society for Testing and Materials		
AVG.	Average	N	North
AWS	American Welding Society	NF.	Near Face
		NO, or #	Number
BOTT.	Bottom	NOM.	Nominal
BD.	Board	NTS.	Not to Scale
BLDG.	Building	NS.	Near Side
BLKG.	Blocking		
BOD. or BO DECK	Bottom of Deck	OC.	On Center
BPL.	Base Plate	OD.	Outside Diameter
BRG.	Bearing	OPP.	Opposite
		ORIG.	Original
C	Channel	OSB	Oriented Strand Board
CG.	Center of Gravity	OVS.	Oversized
CF.	Cubic Foot	OWSJ	Open Web Steel Joist
COORD.	Coordinate		
CFS	Cold Formed Steel	PAF.	Powder Actuated Fastener
CJ.	Control Joint	PAR.	Parallel
CJP.	Complete Joint Penetration	PCF.	Pounds Per Cubic Foot
CL.	Center Line	PEMB	Pre-Manufactured Building
CLR.	Clear	PEN.	Penetration
COL.	Column	PERM.	Permanent
CONC.	Concrete	PERP.	Perpendicular
CONN.	Connection	PL.	Plate
CONST.	Construction	PP.	Partial Pen.
CONT.	Continuous	PROJ.	Project
CMU	Concrete Masonry Units	PSF.	Pounds Per Square Foot
CY.	Cubic Yard	PSI.	Pounds Per Square Inch
		P-T	Post Tension, Post Tensioned
DIAG.	Diagonal	P.T.	Pressure Treated
DIA.	Diameter		
DIM.	Dimensions	QTR.	Quarter
DF-L	Douglas Fir-Larch		
DWG.	Drawing	RAD. or R.	Radius
		REC.	Recommendation(s)
E	East	REF.	Reference
EA.	Each	REINF.	Reinforce, Reinforced,
EB.	Expansion Bolt		Reinforcement or Reinforcing
EJ.	Expansion Joint	Required	
ELEC.	Electric or Electrical	REV.	Revise or Revision
EL. or ELEV.	Elevation or Elevator	RM.	Room
ENG.	Engineer	RO.	Rough Opening
EOD. or EO DECK	Edge of Deck		
EOR	Engineer of Record	S	South
EN.	Edge Nail (Nailing)	SCHED.	Schedule
EQ.	Equal	SF.	Strut Force
EQUIP.	Equipment	SHTG.	Sheathing
EST.	Estimate	SIM.	Similar
EXIST. / (E)	Existing	SK.	Sketch
EXT.	Exterior	SPECS.	Specifications
		SQ.	Square
FAB.	Fabrication	SS.	Stainless Steel
FD.	Floor Drain	SSLT.	Short Slotted Holes Transverse
FF.	Far Face		to Direction of Load
FIN.	Finish	STD.	Standard
FLR.	Floor	STIR.	Stirrup
FND.	Foundation	STRUCT.	Structural
FS.	Far Side	SYM.	Symmetrical
FT. or '	Feet or Foot		
FTG.	Footing	T&G	Tongue and Groove
		T AND B	Top and Bottom
GALV.	Galvanize	TAN.	Tangent
GC.	General Contractor	THK.	Thick
GEN.	General (Notes)	THRU	Through
GLB.	Glu Lam Beam	TJI.	Trus Joist I-Joist
GR. or GRD.	Grade	TO.	Top Of
GRND.	Ground	TOC or TO CONC.	Top of Concrete
		TOF or TO FTG.	Top of Footing
HD.	Hold-down	TOL.	Tolerance
HORIZ.	Horizontal	TOM or TO MASONRY	Top of Masonry
		TOS or TO STL.	Top of Steel
ID.	Inside Diameter	TOW or TO WALL	Top of Wall
IF.	Inside Face	TRANSV.	Transverse
IN. or "	Inches	TYP.	Typical
INCL.	Include or Included		
		UNO.	Unless Noted Otherwise
JNT.	Joint		
		VERT.	Vertical
K	Kip (1,000 lbs.)	V.I.F.	Verify in the Field
KO.	Knockout	VOL.	Volume
LESK	LOCHSA ENGINEERING SKETCH	W	West
LAM.	Laminated	W	Wide Flange
lb.	Pound	WP.	Work Point
L	Angle	WT.	Weight
L.H.E.	Low Hydrogen Electrode		
LLBB.	Long Leg Back To Back	X-HVY	Extra Heavy
LLH	Long Leg Horizontal	X-S	Extra Strong
LLV	Long Leg Vertical		
LOC.	Locations	YD.	Yard
LONG.	Longitudinal		
LVL	Laminated Veneer Lumber	2L	Double Angle

SYMBOL LEGEND

SLOPE — Slope Direction (down / up)

Span Direction

98'-0" — Miscellaneous Elevation

99'-10" — Floor or Steel Elevation

Rigid Connection

Masonry (CMU) Wall

Concrete Wall

Earth

New Construction

Existing Construction

Existing Construction Beyond

Elevation Reference

Section Cut

LFRS — Lateral Force Resisting System

Fastener Notation

(2) 1 1/4"x3" — Quantity; Fastener Length; Fastener Diameter Size

Symbols for Concrete per ACI

AT — Spacing - Center to Center

Direction in Which Bars Extend

Limits of Area Covered By Bars or Post Tension

Symbols for Structural Steel per AISC

Brace Up; Brace Frame; Brace Down

Change (Step) in Elevation

SC 2 - 3 — Slip Critical Connection; Number of Bolts per Row; Number of Rows

1 — Revision Cloud and Number

Number of Nelson Studs required

W12x19 [10] c=3/4" — Camber size; AISC beam designation

14K (240/130) — Depth of steel joist; Uniform Live Load (PLF); Uniform Total Load (PLF); Series of steel joist

Welding symbols per AWS

GENERAL

1. The Contractor shall verify all dimensions prior to starting construction. The Architect shall be notified of any discrepancies or inconsistencies.
2. Summary of Work: Project consists of new construction as shown on these Contract Documents used in coordination with the Architectural and other discipline's documents. See also note 7.
3. Warranty: The EOR has used the degree of care and skill ordinarily exercised under similar circumstances by members of the profession in this locale and no other warranty, either expressed or implied, is made in connection with rendering professional services.
4. Structure noted in the drawings as existing or by others, shall be field verified by the contractor and any discrepancies noted shall be reported to the Architect/Structural Engineer.
5. Construction documents include but are not limited to: drawings, plan notes, typical details, general notes, custom details, specifications, etc. In addition to those prepared by other disciplines.
6. Do not scale the drawings for dimensions not shown.
7. Notes and details on the drawings shall take precedence over general notes, typical details, and the project specifications. Where discrepancies between specifications and drawings occur, use the more stringent requirement.
8. Typical details and schedules indicated may not be specifically referenced on the drawings. The contractor is responsible to determine where each typical detail or schedule applies. If locations are found where no typical detail, typical schedule, or specific detail applies, notify the Architect/Structural Engineer. - Drawings indicate general and typical details of construction. Typical details and general notes shall apply even if not specifically denoted on plans, uno. Where conditions are not specifically indicated similar details of construction shall be used, subject to review and approval by the Architect and the Structural Engineer of Record.
9. The contract Structural drawings and specifications represent the finished structure. They do not indicate the method of construction. Contractor to provide construction means, methods, techniques, sequences and procedures as required. Contractor to provide adequate excavation procedures, shoring, bracing and erection procedures complying with national, state and local safety ordinances. The Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to: bracing and shoring for loads due to hydrostatic, earth, wind or seismic forces, construction equipment, temporary loading, etc.
10. Observation visits (site visits) by representatives of Architect/Structural Engineer do not include inspection of construction means and methods. Site visits during construction are not continuous nor detailed inspection services which are to be performed by others. Observations are performed solely for the purpose of determining if the Contractor understands design intent shown in the contract drawings. Observations do not guarantee Contractor's performance and are not to be construed as supervision or verification of construction.
11. Notify the Structural Engineer prior to constructing or fabricating, when drawings by others show openings, pockets, etc., not shown on the structural drawings, but which are located in the structural members.
12. Products that require a report on code compliance shall have an ICC-ES or IAPMO report evaluated for the above listed governing building code. Where required by the governing jurisdiction, a submittal as an alternate material and method is required for all reports evaluated to an earlier edition of the IBC. Reports evaluated to codes other than the above listed code are not permitted, unless allowed by the governing jurisdiction.
13. Contractor shall investigate the site during clearing and earth work operations for filled excavations or buried structures such as cesspools, cisterns, foundations, utilities, etc. If any such structures are found, the Structural Engineer shall be notified immediately.
14. Construction materials shall be spread out when placed on framed floors or roofs. The construction material load shall not exceed the design live load per square foot. Provide adequate shoring and/or bracing where structure has not attained design strength.
15. See the architectural drawings for the following: Size and location of door and window openings, size and location of interior and exterior non-bearing partitions, size and location of concrete curbs, floor drains, slopes, depressed areas, changes in level, chamfers, grooves, inserts, size and location of floor and roof openings, floor and roof finishes, stair framing and details, dimensions not shown on the structural drawings, ceiling assemblies, exterior wall assemblies,etc.
16. See mechanical, plumbing, and electrical drawings for the following: Pipes, sleeves, hangers, trenches, wall, floor, and/or roof openings, duct penetration, electrical conduit runs, boxes, outlets in walls and slabs, concrete inserts for electrical, mechanical or plumbing fixtures, size and location of machine or equipment bases, anchor bolts for mounts, etc., except as shown or noted. See also note 13.
17. For mechanical and electrical equipment anchorage that is to be designed by others, see IBC section 1613 and ASCE 7 chapter 13. Use isolators, fasteners and bracing approved by ICC-ES or approved third party capable of transmitting code required lateral loads. Secure suspended equipment with lateral bracing.
18. For piping and ductwork bracing to be designed by others, see the latest edition of "Guidelines for Seismic Restraints of Mechanical Systems" by the Sheet Metal and Air Conditioning Contractors National Association.

SHOP DRAWINGS

1. Shop drawings and material submittals shall be submitted to the Architect and Structural Engineer of Record prior to any fabrication or construction. Electronic submittals shall be made where possible. Any submittals containing hard copies shall include one reproducible and one copy; reproducible will be marked and returned. Additional copies of reviewed shop drawings are the responsibility of the general contractor. No modifications or substitution of drawings and specifications will be accepted via shop drawing review. Contractor shall review and stamp shop drawings prior to submission to the Architect/Structural Engineer. Contractor shall review for completeness and compliance with contract documents including addendum's, clarifications, etc. See also note 7.
2. Submit shop drawings to the Architect/Structural Engineer as indicated or specified for review prior to fabrication. Review will be for general conformance with design intent conveyed in contract documents.
3. When an engineer is required to sign and stamp shop drawings and calculations, ensure seal indicates engineer as registered in state where project site occurs.
4. Shop drawings are not a part of contract documents, therefore, Architect's/Structural Engineer's review does not constitute an authorization to deviate from terms and conditions of the contract. See also note 7.
5. Review of submittals by the structural engineer will include checking for conformance with the design concept and general compliance with the information given in the construction documents. It will not include reviews of the accuracy or completeness of items such as quantities, dimensions, weights or thicknesses, fabrication processes, construction means or methods, coordination with the work of other trades, or construction safety precautions. Review of a specific item shall not indicate that the structural engineer has reviewed the entire assembly of which the item is a component. The structural engineer shall not be responsible for any deviations from the construction documents not brought to the structural engineer's attention in writing.
6. Submittals processed by the structural engineer are not change orders
7. Shop drawings will be rejected for incompleteness, lack of coordination with other portions of contract documents, lack of calculation (if required), or where modifications or substitutions are indicated without prior review per paragraph A above. Resubmittals shall be clouded and dated for all changes to the submittal. Only clouded portions of resubmittal will be reviewed and Structural Engineer of Record's review stamp applies to only these areas.
8. Submit shop drawings and calculations to governing code authority when specifically indicated or requested.
9. Maintain a copy of all shop drawings reviewed by the Architect/Structural Engineer at site during construction period.
10. Structural Engineer requires 10 working days after receipt of shop drawings and calculations for processing.
11. As a minimum shop drawing submittals shall include the following items plus, additional items listed in the project specifications for structural review, but not be limited to:
    - A. Construction sequence description
    - B. Contractor Quality Control testing procedures when required in specifications
    - C. Concrete mix designs
    - D. Concrete construction joint plans
    - E. Concrete reinforcing bar shop drawings and placing plans
    - F. Concrete accessories material specification, size and location
    - G. Precast concrete members shown on structural documents
    - H. Non-shrink grout material specifications and manufacturer's installation recommendations
    - I. Masonry materials and mix designs
    - J. Masonry reinforcing bar shop drawings and placing plans.
    - K. Masonry veneer out-of-plane anchorage system
    - L. Fabrication shop AISC Certification or statement of equivalent testing and inspection procedures.
    - M. Structural steel shop and erection drawings
    - N. Welding Procedure Specifications and certifications
    - O. Metal deck material submittal
    - P. Metal deck and accessories layout
    - Q. Open web steel joist layout, accessories, and calculations
    - R. Engineered wood beams (certificates shall be on site and be available upon request)

Sheet List 1 2

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STATE OF IDAHO
RILEY J MAHAFFEY
EXP. 05/31/2024

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LE JOB #224217

Jefferson Elementary School Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
REVISIONS:
1 05/16/23 Addendum #2
2 07/28/23 V.E.

DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.

S0.01
STRUCTURAL COVER SHEET

STRUCTURAL LOADS

SNOW LOADS:	
Ground Snow Load	Pg = 30 psf
Importance Factor	Is = 1.1
Exposure Factor	Ce = 1.0
Flat Roof Snow Load	Pf = 25.4 psf
Thermal Factor	Ct = 1.1
Snow Drifts	As indicated on drawings.
WIND LOADS:	
Basic Wind Speed	Vult = 115 mph
	Vasd = 89 mph
Risk Category	III
Exposure	C
Internal Pressure Coefficient	GCpi ± 0.18
SEISMIC LOADS:	
Risk Category	III
Importance Factor	Ie =1.25
Soil Site Class	C
Mapped Spectral Response Acceleration	
SS = 0.174 g	S1 = 0.08 g
SOIL FACTOR COEFFICIENTS:	
Fa = 1.3	Fv = 1.5
SPECTRAL RESPONSE COEFFICIENT:	
SDS = 0.151 g	SD1 = 0.08 g
SEISMIC DESIGN CRITERIA:	
Seismic Response Coefficient:	CS = 0.0943
Seismic Design Category	C
Analysis Procedure	Equivalent Lateral Force (ELF) Procedure
Structural System	Ordinary Reinforced Masonry Shear Walls
Response Modification Factor	2.0
Tabulated Overstrength Factor	2.5
ADDITIONAL ITEMS:	
Building Location	42.729017, -114.507928
Mean Building Height	25 feet
REDUNDANCY FACTORS:	
North/South Direction	rho = 1.0
East/West Direction	rho = 1.0
ROOF LIVE LOADS:	
Roof Live Load	20 psf (reducible)
SCHOOL LIVE LOADS:	
Concentrated Loads (All Conditions)	1000 lbs
Gymnasium, Main Floor and Balconies	100 psf (non-reducible)
STORAGE LIVE LOADS:	
Light Storage	125 psf (non-reducible)
Heavy Storage	250 psf (non-reducible)
MISCELLANEOUS LIVE LOADS:	
Marquees	75 psf (Except one and two family dwellings)
Guardrails/Balcony Rails	50 plf or 200lbs.
Mechanical Equipment	Weights Furnished by Manufacturer

CONCRETE

1. All aspects of work pertaining to the concrete construction shall be in accordance with ACI 318-14, 'Building Code Requirements for Structural Concrete' and the latest edition of 'Specifications for Structural Concrete for Buildings', ACI 301, with modifications as noted on the project drawings and\or specifications.
2. Concrete mix designs shall be submitted to the Structural Engineer for review. All mix designs shall be designed by a qualified testing laboratory and shall be wet stamped by a Civil Engineer licensed in the State of ID. Base design mix per compliance requirements of ACI 318-14 Section 26.4.
3. Portland cement shall conform to ASTM C150 Type I or II concrete minimum, use Type V where the concrete is in contact with soil and to a height 12" min. above the soil. Concrete that will be exposed to sulfate - containing solutions shall comply with IBC Section 1904.3. Severe (S2) and Very Severe (S3) sulfate exposures as identified in the project geotechnical report, the water cement ratio shall not exceed 0.45 and shall not exceed 0.50 for Moderate (S1) sulfate exposure. Type II cement shall be used at all other locations in the structure.
4. Fly ash may be used in concrete mixes. The fly ash shall conform to ASTM C618 Class F. The loss of ignition shall be limited to 2%. The addition rate for fly ash shall be limited to 15% of the cement weight. The contractor shall submit all certificates showing the fly ash is in accordance with the above criteria.
5. Do not use concrete or grout containing chlorides.
6. All concrete exposed to freeze - thaw cycles shall contain 6% +/- 1% of entrained air.
7. Hard rock concrete - aggregate shall conform to all requirements and tests of ASTM C33 and project specifications. Exceptions may be used only with approval of the Structural Engineer. Provide concrete mix design with proven shrinkage characteristics of less than 0.0005 inches/inch. Lightweight concrete - aggregate shall be in accordance with ASTM C330 and project specifications. Lightweight concrete mix designs shall be tested prior to approval, for shrinkage in accordance with ASTM C157. Shrinkage shall not exceed 0.0005 inches / inch.
8. Structural concrete 28-day strengths & types are as follows:

Location of Concrete	Strength, psi	Type	EXPOSURE CATEGORY/CLASS* F#	S#	W#	C#
Lean Mix	3000	Hard Rock	F0	S0	W1	C1
Footings	4000	Hard Rock	F0	S0	W1	C1
Stem Walls	4500	Hard Rock	F1	S1	P0	C0
Slab on Grade (Lowrise)	4000	Hard Rock	F0	S0	W1	C1
Pre-Cast	5000	Hard Rock	F0	S0	W1	C1

*Table 19.3.1.1 - Exposure Categories and Classes

Category	Class	Condition	
Freezing and thawing (F)	F0	Concrete not exposed to freezing-and-thawing cycles	
	F1	Concrete exposed to freezing-and-thawing cycles with limited exposure to water	
	F2	Concrete exposed to freezing-and-thawing cycles with frequent exposure to water	
	F3	Concrete exposed to freezing-and-thawing cycles with frequent exposure to water and exposure to deicing chemicals	
Sulfate (S)		Water-soluble sulfate (SO_4^{2-}) in soil, percent by mass (1)	Dissolved sulfate (SO_4^{2-}) in water, ppm(2)
	S0	$SO_4^{2-} < 0.10$	$SO_4^{2-} < 150$
	S1	$0.10 \le SO_4^{2-} < 0.20$	$150 \le SO_4^{2-} < 1500$ or seawater
	S2	$0.20 \le SO_4^{2-} \le 2.00$	$1500 \le SO_4^{2-} \le 10000$
	S3	$SO_4^{2-} > 2.00$	$SO_4^{2-} > 10000$
In contact with water (W)	W0	Concrete dry in service Concrete in contact with water and low permeability is not required	
	W1	Concrete in contact with water and low permeability is required	
Corrosion protection of reinforcement (C)	C0	Concrete dry or protected from moisture	
	C1	Concrete exposed to moisture but not to an external source of chlorides	
	C2	Concrete exposed to moisture and an external source of chlorides from deicing chemicals, salt, brackish water, seawater, or spray from these sources	

9. The modulus of elasticity of concrete, shall be tested in accordance with ASTM C469 for framed concrete slabs and beams and shall be at least the value given by the equations in section 19.2.2.1 of ACI 318 for the specified concrete 28-day strength.
10. All concrete shall be ready mix concrete and shall be mixed and delivered in accordance with ASTM C94 or ASTM C685.
11. Dry pack or grout under baseplates, sill plates, etc., see specifications. Strength requirements are as required for concrete. Minimum grout strength shall be f'c = 7,000 psi.
12. Concrete forms shall be laid out and constructed to provide the specified cambers indicated on the structural drawings.
13. Submit shop drawings to Architect/Structural Engineer indicating locations of concrete joints for review prior to placing concrete. Place joints at locations to minimize effects of shrinkage as well as being placed at points of low stress.
14. Concrete placement shall be in accordance with ACI standard 304 and project specifications. Provide keys in construction joints unless detailed otherwise. Thoroughly clean, remove laitance and thoroughly wet and remove standing water in construction joints before placing new concrete. At vertical joints, slush with a coat of neat cement before placing new concrete.
15. Roughen concrete surface to a full amplitude of 1/4 inch where masonry walls intersect concrete or where new concrete interfaces with existing concrete.
16. If columns and walls are placed with a floor, two hours must elapse between end of column or wall placement and beginning of the floor placement.
17. Clear coverage of concrete over reinforcing bars shall be as follows:

Location of Concrete	Minimum Concrete Cover
Concrete cast against and permanently exposed to earth	3"
Concrete exposed to earth or weather: #6 through #18 bar #5 bar and smaller	 2" 1 1/2"
Concrete not exposed to weather or in contact with ground, UNO: Slabs, Walls, Joist: #14 and #18 bar. #11 bar and smaller. Beams, Columns: Primary reinforcing, ties stirrups, spirals	 1 1/2" 3/4" 1 1/2"
Slab on grade:	2" clear from top
Precast concrete (Manufactured under plant control conditions):	See ACI 318-14 Table 20.6.1.3.3
Prestressed concrete coverage:	See ACI 318-14 Table 20.6.1.3.2

18. Prior to concrete placement, all reinforcing bars, anchor bolts and other concrete inserts shall be well secured in position.
19. Mechanical pipes or electrical conduit shall not pass through concrete columns or beams unless specifically detailed.
20. Unless otherwise indicated in the mechanical or electrical drawings or project specifications, mechanical pipes and electrical conduits which pass through slab on grade, concrete on steel deck, framed concrete floors and walls do not require sleeves. If sleeves are required, the sleeves shall be installed prior to placing concrete. Do not cut any reinforcing which may interfere with sleeve placement. Coring openings in concrete is not permitted. Notify the Structural Engineer in advance of conditions not shown on the structural drawings.
21. With the exception of slabs on grade and concrete on steel deck, the outside diameter of mechanical pipes and/or embedded electrical conduits (other than those passing through) shall not exceed 1/3 of the slab thickness and shall be centered between the top and bottom reinforcing, unless specifically detailed otherwise. Concentrations of mechanical pipes and/or electrical conduits shall be avoided except where detailed openings are provided. Conduit and pipe shall be spaced at 3" or 3 diameters on center, whichever is larger.
22. For slabs on grade and concrete on steel deck no pipes or conduits shall be placed within the indicated concrete slab thickness and shall be located below he slab unless specifically detailed otherwise.
23. The projecting corners of columns, beams, and walls, etc., shall be formed with a 3/4 in. chamfer, unless otherwise noted on architectural drawings or specifications.
24. Maintain concrete above 50 degrees Fahrenheit and in a moist condition for a minimum of 7 days after placement unless otherwise accepted by Architect/Structural Engineer.
25. Any curing compounds used on concrete that is to receive a resilient tile finish shall be approved by the Finish Applicator before use.
26. Contractor to coordinate with specifications for floor flatness and levelness and with architectural drawings and/or equipment manufacturer's requirements.

POST INSTALLED MECHANICAL ANCHORS

1. Mechanical anchors shall not be installed without prior approval of engineer unless specifically detailed on the drawings.
2. Over-drill as indicated by the Anchor Manufacturer, and to the depth indicated on the structural drawings.
3. Clean hole per manufacture requirements.
4. The following expansion type anchors are structurally acceptable for use in uncracked, cracked, and seismic concrete applications:
   A. Simpson Strong-Bolt 2 Wedge Anchor – ICC ESR-3037
   B. Hilti Kwik Bolt TZ – ICC ESR-4266
   C. Dewalt Power-Stud+ SD2, SD4, SD6 – ICC ESR-2502
5. The following expansion type anchors are structurally acceptable for use in fully grouted masonry:
   A. Hilti Kwik Bolt 3 – ICC ESR-1385
   B. Dewalt Power-Stud+ SD1 – ICC ESR-2966
6. The following screw type anchors are structurally acceptable for use in uncracked, cracked, and seismic concrete applications:
   A. Simpson Titen HD – ICC ESR-2713
   B. Hilti KH-EZ – ICC ESR-3027
   C. ITW RedHead Tapcon – ICC ESR-2202
   D. Dewalt SCREW-BOLT+ – ICC ESR-3889
7. The following drop in type anchors are structurally acceptable for use in uncracked, cracked, and seismic pt and hollow plank concrete applications:
   A. Hilti HDI-P TZ – ICC ESR-4236
   B. Dewalt Mini-Undercut + – ICC ESR-3912
8. The following screw type anchors are structurally acceptable for use in fully grouted masonry:
   A. Simpson Titen HD - ICC ESR-1056
   B. Hilti KW-EZ - ICC ESR-3056
   C. DeWalt SCREW-BOLT+ - ICC ESR-4042
9. Installation and inspection of post installed anchors shall be performed as required by ICC reports and manufacturer's instructions.

REINFORCING STEEL (FOR CONCRETE AND MASONRY)

1. All reinforcing steel shall be detailed and placed in accordance with the 'Building Code Requirements for Reinforced Concrete' (ACI 318) and the Manual of Standard Practice for Reinforced Concrete Construction' by CRSI and WCRSI as modified by the project drawings and specifications.
2. Deformed reinforcing bars shall conform to the requirements of ASTM A615 grade 60 and ASTM A706 grade 60 for deformed weldable bars.
3. Welding of reinforcing is permitted only where shown on the drawings or when approved by the structural engineer. Welding of reinforcing bars shall be with low hydrogen electrodes in accordance with the 'Recommended Practices for Welding Reinforcing Steel, Etc.', American Welding Society, AWS D1.4 and IBC table 1704.4.1 all reinforcing to be welded shall conform to ASTM A706 grade 60 uno.
4. All reinforcing bar bends shall be made cold.
5. Lap splices made at locations other than those specifically indicated on the drawings shall require approval by engineer prior to any fabrication or construction activities.
6. Reinforcing dowels between footings and walls or columns shall be the same number, size, spacing and grade as the specified vertical reinforcing, uno.
7. All reinforcing bars shall be marked so their identification can be made when the final in-place inspection occurs.
8. Welded wire fabric shall conform to ASTM A185.
9. Minimum lap of welded wire fabric shall be 6 inches or one full mesh and one half, whichever is greater.
10. Submit shop drawings to structural engineer: Placing drawings that detail fabrications, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

DEFERRED / DELEGATED STRUCTURAL COMPONENTS

1. Components referred to as Deferred Structural Components shall comply with these notes. These elements have not been permitted under the base building application. The contractor will be required to submit the component system documents to the building official for approval. The documents shall be stamped and signed by a structural engineer licensed by the state where the project is located. The deferred structural components shall not be installed until the design and submittal documents have been approved by the building official.
2. Prior to building department submittal, the deferred structural components submittals shall receive cursory review by Structural Engineer of Record for loads imposed on primary structure and general conformance with design concept of the project and general compliance with the information given in the Structural Contract Documents. Review of submittals does not constitute approval or acceptance of unauthorized deviation from Contract Documents.
3. Submittals of contractor-designed components shall include the designing structural engineer's stamp and signature, as noted above. The submittal shall be approved by the component vendor prior to review by the Structural Engineer of Record.
4. The designing professional is responsible for code conformance and all necessary connections not specifically called out on architectural or structural contract documents.
5. Submittals shall include details of connections to primary structure that indicate magnitude and direction of all loads imposed at point of connection.
6. Design criteria shall be provided with submittal and calculations shall be made available upon request.
7. Refer to other discipline's contract documents for additional deferred components that may require structural design and details. Connections of these elements shall not induce torsion on structural members.
8. Deferred Structural Components shall be manufactured, delivered, handled, stored, and field erected in conformance with instructions prepared by the component vendor.
9. The following list includes the items that are defined as Deferred Structural Components. Additional items may be included in the project specifications.
10. Deferred structural components:
    A. Handrails, guards, grab bars, and wall mounted shower seats
    B. Precast structural members
    C. Open web steel joist
    D. Masonry veneer out-of-plane anchorage system

EPOXY INSTRUCTIONS FOR ANCHORING REBAR AND BOLTS

1. Epoxy shall not be installed without prior approval of engineer unless specifically detailed on the drawings.
2. Bars must be deformed or threaded for the full embedment depth in epoxy.
3. Over-drill bar diameter as indicated by the Epoxy Manufacturer, and to the depth indicated on the structural drawings.
4. Clean hole per manufacture requirements.
5. Any dirt, rust, and oil on the bars shall be removed.
6. During the epoxy mixing and application process, install in strict accordance with ICC Report and the Epoxy Manufacturer's specifications exactly.
7. Vertical holes to be filled from the bottom are to use an epoxy gel. See also note 12.
8. The following epoxy systems are acceptable for use in fully grouted masonry:
   Hilti HIT-HY 270 – ICC ESR-4143
   Simpson SET-XP – IAPMO UESR-0265
   Dewalt AC100+ GOLD – ICC ESR-3200

   NOTE: Hilti HIT-HY 270 or Simpson SET-XP may be used for hollow cell masonry assemblies pending engineer of record review and approval of each application and location.
9. The following epoxy systems are acceptable for use in uncracked, cracked and seismic concrete applications:
   Hilti HIT-HY 200 – ICC ESR-3187
   Simpson SET-XP – ICC ESR-2508
   Dewalt Pure110+ – ICC ESR-3298
   Simpson AT-XP – IAPMO UESR-0263
   Hilti HIT-RE 500 V3 – ICC ESR-3814
   Dewalt AC200+ – ICC ESR-4027
10. Threaded anchor rods shall be ASTM F1554 Grade 55 unless noted otherwise.
11. Use of any other epoxy in a seismic / cracked concrete location will only be considered with an approved third party evaluation report that includes recognition of earthquake resistance in accordance with the current IBC.
12. Installation of adhesive anchors that are to be under sustained tension loading in horizontal to vertically overhead orientation shall be done by a certified adhesive anchor installer (AAI) as certified through ACIand in accordance with ACI 318-2014 (section 17.8.2.2). Proof of current certification shall be submitted to the engineer for approval prior to commencement of installation.
13. Per ACI 318-2014 (Section 17.1.2) adhesive anchors shall be installed in concrete having a minimum age of 21 days at time of anchor installation. For installation sooner than 21 days consult adhesive manufacturer.
14. If temperature of base material at time of adhesive installation is at 45 degrees (Fahrenheit) or less, an "acrylic" (cold weather) adhesive is required.

FACADE / VENEER SYSTEMS

1. Provide out-of-plane anchorage for all Facade / Veneer systems. The contractor is to coordinate the appropriate anchorage configuration with the Facade / Veneer system referenced within the construction documents. Such considerations would include, but not be limited to: structural support framing, sheathing, rigid insulation, air gaps, joint layouts, etc.
2. Anchors are to be sized and spaced as required to resist seismic loads in accordance with ASCE 7, Chapter 13.
3. Refer to architectural details for any further requirements.

MECHANICAL OPENINGS

1. General Contractor shall coordinate locations of all mechanical openings, including, but not limited to, trash chutes, plumbing shafts and ventilation shafts. Coordination shall include the Architect of Record (AOR) and all subcontractors, including mechanical subcontractors, and joist and decking suppliers.
2. Coordination shall be completed and approved prior to bid document completion.

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7451
07/28/23
STATE OF IDAHO
RILEY J MAHAFFEY
EXP. 05/31/2024

Lochsa engineering
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LE JOB #224217

Jefferson Elementary School Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
REVISIONS:
△
△

DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

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STRUCTURAL DESIGN NOTES

MASONRY

1. All reinforced masonry materials and construction shall conform to the following:
   A. International Building Code Chapter 21
   B. Building Code Requirements for Masonry Structures TMS 402
   C. Specification for Masonry Structures TMS 602
2. All masonry block shall conform to ASTM C90 grade N-1, F'm=2000 psi min and a minimum block net compressive strength of 2800 psi, per IBC Section 2105.2 and tested in conformance with IBC Section 2105.2.2.2
3. Mortar shall be Type S conforming to ASTM C.270 and Articles 2.1 (materials) and 2.6A (mixing) of TMS 602, IBC Section 2105.2 and project specifications.
4. Grout shall be fine or coarse grout and shall conform to Article 2.2 (materials) and 2.6B (mixing)of TMS 602, and ASTM C476 or has a compressive strength at 28 days that meets or exceeds F'm but shall not be less than 2000 psi as tested per ASTM C1019.
5. All masonry materials shall be submitted to the Structural Engineer for review, prior to ordering materials,in accordance with Section 1.5 of the TMS 602. Additionally, all mix designs shall be tested/designed by a qualified testing laboratory and stamped by an engineer licensed in the state the project is located.
6. All Masonry block shall be laid in Running Bond as defined in TMS402. Stack Bond is not allowed unless specifically specified on plans. Refer to architectural drawings for surface and height of units and joint type.
7. Solid grout all masonry below grade, all cells containing reinforcing and all horizontal bond beams and lintels for extents indicated unless noted otherwise on the drawings. In seismic design category D and above solid grout all masonry walls.
8. Grout shall be placed in accordance with TMS 602 Section 3.5 and Table 7.
9. Masonry reinforcing bars shall be per notes under 'Reinforcing Steel'.
10. Placement of reinforcing bars, ties and anchors shall conform to TMS 602 Section 3.4 unless noted otherwise on drawings. See also sheet S5.11.
11. Reinforcing bars in masonry shall be lapped 72 bar diameters, (db), unless noted otherwise in drawings. See also detail 1 / S5.11.
12. Unless noted otherwise on plans, minimum wall reinforcement shall be:
    A. #5 bar vertical centered in wall at 16 inches on center. Provide (2) #5 continuous vertical bars at all wall ends, corners, intersections and each side of control joints.
    B. Provide #5 bar each face at jambs of openings in walls.
    C. Provide (2) #5 bars horizontal in a continuous 8 inch deep minimum bond beam at all floor and roof lines and provide (2) #5 bar horizontal in a continuous 8 inch deep minimum bond beam at 48 inches on center between floor and roof lines, above roof lines and at top of parapets.
    D. Provide (2) #5 bars continuous at the bottom of a 24 inch deep solid grouted masonry lintel above openings in wall and extending 24 inches beyond edges of openings.
    E. Provide #5 bar horizontal in a continuous 8 inch deep minimum bond beam at sills of openings in wall and extending 24 inches beyond edges of openings. Unless noted otherwise on plans provide (6) #5 bars, 3 each face in 3 grouted cells centered on beams for beams bearing at an angle to wall and (6) #5 bars, 3 each face in 3 grouted cells at end of wall for beams bearing at wall ends.
13. Unless noted otherwise on plans, masonry control joints shall be located such that no straight run exceeds 24'-0" and shall not be located within 24 inches of the edge of an opening in the masonry or within 24 inches of a beam bearing location. If masonry control joints are not shown on the plans, the contractor shall provide a masonry control joint shop drawing layout for review and acceptance from the architect and structural engineer prior to beginning masonry construction.
14. Coring openings in masonry construction is not permitted without prior approval from the architect and structural engineer.
15. No pipes or electrical conduit shall pass through masonry lintels unless specifically detailed in plans.
16. Mechanical pipes and electrical conduits which pass through masonry walls do not require sleeves, unless otherwise indicated in the project specifications, mechanical and/or electrical drawings. If sleeves are required, install sleeves before grouting. Do not cut any reinforcing which may interfere with sleeve placement. Notify the Structural Engineer in advance of conditions not shown on the structural drawings.
17. Refer to architectural drawings for the following items: Jointing Plan, Surface and height of units, Laying pattern, Mortar joint finishing, weep hole spacing and locations, etc.

DECK CONNECTION, MECHANICAL FASTENERS

1. Connection of steel deck diaphragms shall be as specified on plan, unless approved otherwise.
2. Use mechanical deck fasteners in lieu of welds only when specified on plan or when approved by the engineer prior to installation.
3. Fasteners for attachment of steel deck to bar joist and structural steel framing shall be:
   A. Hilti X-HSN 24 (1/8 in. up to and including 3/8 in.) ICC ESR-2197 & ICC ESR-2776
   B. Hilti X-ENP-19 L15 (1/4 in. or thicker) ICC ESR-2197 & ICC ESR-2776
   C. Spacing of fasteners shall be as indicated on plans, UNO. Note that additional mechanical fasteners compared to welds might be required.
4. The contractor shall arrange for manufacturer's field representative to provide installation training for all products to be used, prior to commencement of work at no additional cost.
5. Only trained installers shall fasten the metal deck to the structural steel. A record of training shall be kept on site and be made available to the EOR and inspector as requested.
6. The contractor shall submit a pin placement plan to the EOR.
7. Sidelap connection type and spacing shall be as indicated on plans.

FOUNDATION

1. The design of the foundation system is based on the Geotechnical report (and any addenda) prepared by the following company:

Company:	EHM ENGINEERS, INC
Report No.	EHM No. 129-14
Dated:	06/24/2014

   Copies are available for review at the Architect's office and contractor shall have a copy at the job site.
2. The foundation system is designed based on the following:

Soil Bearing Capacity	2500 psf
Frost Depth	30"
Passive Pressure	304.5 psf

3. It is recommended that the contractor shall retain the services of a Geotechnical Engineer to perform necessary testing and inspections for quality control to ensure that the recommendations of chapter 18 of the IBC and presumptive soil loads noted above are complied with and achievable. If the recommendations of chapter 18 of the IBC and the presumptive soil loads noted above are not achievable, all work shall stop and the architect and structural engineer shall be notified immediately.
4. The contractor shall provide for proper dewatering of excavations from surface water, ground water, seepage, etc.
5. Drainage systems, including foundation, roof and surface drains, shall be installed as directed by the Geotechnical Report and IBC Section 1805.
6. Vapor retarder placed below slab on grade shall conform to ASTM E 1643 and ASTM E 1745. Coordinate placement with Geotech and/or Architectural drawings.
7. The Contractor shall provide for the installation and design of all cribbing, sheathing and shoring required to safely and adequately retain the earth banks and support any existing structures in accordance with all national, state and local safety ordinances.
8. All abandoned utilities, footings, etc., that interfere with the new construction shall be removed. Notify the Structural Engineer should any foundations for existing structures be encountered that are not shown on the structural drawings.
9. Footings shall be placed on a minimum of 12" of structural fill both vertically and horizontally to obtain the allowable soil bearing pressure per the geotechnical report and estimated according to depths shown on the drawings. Excavations for footings shall be approved by the Geotechnical Engineer prior to placing the concrete and reinforcing. The Contractor shall notify the Geotechnical Engineer when the excavations are ready for inspection. The Geotechnical Engineer shall submit a letter of compliance to the Owner. Should soil encountered at these depths not be approved by the Geotechnical Engineer, modified footing elevations or footing designs may be subject to additional engineering fees.
10. All excavations shall be properly backfilled. Footing backfill and utility trench backfill within the building perimeter shall be mechanically compacted in layers, to the approval of the Geotechnical Engineer. See Geotechnical report for requirements. Backfill by flooding will not be permitted.
11. The Contractor shall not backfill behind retaining walls before the concrete or masonry walls have reached full design strength. The Contractor shall brace or protect all building and pit walls below grade from lateral loads until attaching floors are completely in place and have reached full design strength. The Contractor shall provide for the design, any required permits and the installation of such bracing and protection.
12. Sub-base below, slabs on grade shall be supported on natural grade or structural fill as directed in the Geotechnical report or by a geotechnical engineer. Sub-grade will be compacted per the recommendations of the geotechnical engineer and no sub-grade rutting will be allowed at time of concrete placement under slabs on grade.
13. Unless otherwise noted, footings shall be centered below columns or walls.
14. EXISTING UTILITIES:
    A. The contractor shall determine the location of all adjacent underground utilities prior to any excavation, shoring, pile driving, or pier drilling. Any utility information shown on the plans and details are approximate and not verified by the structural Engineer of record. Contractor is to provide protection of any utilities or underground structures during construction.
15. NEW UTILITIES:
    A. Contractor to determine the location of all new below grade utilities and coordinate placement with new footings, see general details for foundation at or adjacent to excavations and utilities.
16. RETAINING WALLS:
    A. Grade on either side of concrete walls shall not vary by more than 4", uno. Slope of backfill shall not exceed 12H to 1V, uno. Backfill behind all retaining walls with free draining, granular fill installed per the Geotechnical Report. Provide for subsurface drainage. Design pressures used for the design of retaining walls are based on drained conditions.
    B. Retaining walls are to be designed for active and passive soil pressures, see note 2.
    C. Provide temporary shoring for tops of walls if backfill is placed prior to the supporting structure being constructed. Supporting structure is the floor framing and sheathing completely installed and attached to perpendicular walls.

SHOT PINS

1. Shot pin fasteners shall not be installed without prior approval of engineer unless specifically detailed on the drawings.
2. Installation and special inspection of fasteners shall be performed as required by ICC reports and manufacturers instructions.
3. Shot pins shall not be used for seismic anchoring or bracing applications, unless approved by the governing jurisdiction.
4. Shot pins in post-tension concrete are permitted only when the supplier can show that concrete spalling will not occur and are located so as to preclude damage to tendons and tendon anchorage.
5. See plans and details for spacing. Shot pins driven into concrete base material shall maintain a minimum edge distance at all concrete elements of 3" and minimum fastener spacing shall be 4". For interior and exterior framing, pins shall have a 3/4" and 1" minimum penetration respectively. Minimum concrete thickness shall be 3 times the penetration depth. Concrete shall attain full design strength prior to installing shot pins. Shot pins driven into steel base material shall maintain a minimum edge distance at all steel elements of 1/2" and minimum fastener spacing shall be 1". Length of pin shall be as required to penetrate through steel member uno. At steel thicker than 3/4", pins shall have a minimum point penetration of 1/2". Shot pins driven into solid grouted masonry shall maintain a minimum 4" distance from the top, bottom and edges of the wall and a minimum 1" distance from mortar joints. No more than one fastener may be installed in an individual CMU cell.
6. The following shot pins are approved for non-tension, shear only use in solid grouted masonry:
   Hilti Low Velocity X-U (0.157" dia.) – ICC ESR-2269
7. The following shot pins are approved for non-tension, shear only use in uncracked concrete:
   Hilti Low Velocity X-U (0.157" dia.) – ICC ESR-2269
8. The Following shot pins are approved for tension and shear in steel:
   Hilti Low Velocity X-U (0.157" dia.) – ICC-ESR 2269

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PROFESSIONAL ENGINEER REGISTERED 2023
17451
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STATE OF IDAHO
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Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #:-
REVISIONS:
△
△

DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

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S0.03

STRUCTURAL DESIGN NOTES

WOOD

1. GENERAL FRAMING
   - A. All wood framing details not shown otherwise shall be constructed to the minimum standards of section 2308 of the IBC.
   - B. Coordinate the size and location of all openings with mechanical and architectural drawings.
   - C. Provide double joists under all parallel partitions that extend over more than half the joist length and around all openings in floors or roofs uno. Provide solid blocking at all bearing points.
   - D. All wood framing in direct contact with concrete or masonry, exposed to weather, or that rest on exterior foundation walls and are located within 8" of earth, shall be pressure-treated with an approved preservative, see IBC section 2303.1.9. Cut or drilled sections of treated material shall be treated with an approved preservative per IBC section 2303.1.9. See IBC section 2304.12 for additional requirements.
   - E. Treated Wood shall be selected to prevent corrosion of metal fasteners and hangers.
   - F. Allow for 1/2" of wood shrinkage/compression at each level (including foundation). Values are cumulative for the height of the building. Building systems such as mechanical, electrical, plumbing, fire sprinklers, etc. shall have flexible components that account for the potential wood shrinkage/compression. Architectural finishes shall also account for the potential wood shrinkage/compression.
   - G. All stud wall top plates shall be double members spliced with 48" minimum lap with minimum of (24) 16d nails each end of splice – 48 nails total, unless noted otherwise.
   - H. Do not notch joists, rafters or beams, except where shown in details. Obtain engineer's approval for any holes or notches not detailed. Holes through sills, plates, studs and double plates in interior, bearing and shear walls shall not exceed 1/3 the plate width. Use bored holes located in the center of the stud or plate.
   - I. Cross-bridging or solid blocking shall be spaced per the more stringent of the lumber manufacturer's recommendations or the following:
     a. Rafters greater than 8 inches in depth = 10 ft. oc. maximum
     b. Floor joists greater than 4 inches in depth = 8 ft. oc. maximum
   - J. Moisture content of wood products shall not exceed 19% by weight.
   - K. All lumber shall be protected from weather prior to installation. Do not store lumber in direct contact with ground.
2. FASTENERS AND HARDWARE
   - A. Minimum nailing, unless otherwise noted, shall conform to table 2304.10.1 of the 2018 IBC. All nails shall be common, uno. Connections listed are minimum permissible. Details govern over schedule.
   - B. Bolts, anchor rods, and lag screws shall be centered in members, uno.
   - C. Nails shall meet the requirements of ASTM F1667. Where driving of nails would cause splitting, holes for the nails shall be pre-drilled, with a hole diameter equal to 70% of the nail diameter. Where automatic nailing is used, nail heads shall not penetrate plywood sheathing.
   - D. When multiple members are grouped together, fasten with: (2) rows of 16d nails at 12" oc. Use (3) rows of 16d nails at 12" oc. for depths 14" or greater.
   - E. All bolts in wood shall conform to ASTM A307 bolts and shall be installed in holes bored with a bit 1/16 inch larger than the diameter of the bolt. Oversized or slotted holes are not allowed unless specifically noted on plans. Bolts and nuts seating on wood shall have cut steel washers under heads and nuts. Spoil threads after installation to prevent loosening.
   - F. Lag screws shall meet the requirements of ANSI / ASME standard B18.2.1. Lead holes for the threaded portion of the shank shall have a diameter equal to 70% of the shank diameter with a depth equal to the screw length. Refer to 2018 NDS Section 12.1.4 for additional lag screw installation requirements.
   - G. Wood screws shall meet the requirements of ANSI / ASME standard B18.2.1. Lead holes for the threaded portion of the shank shall have a diameter equal to 70% of the shank diameter with a depth equal to the screw length. Refer to 2018 NDS Section 12.1.5 for additional wood screw installation requirements.
   - H. Specified hardware shall be Simpson Strong-Tie installed, see manufacturer's recommendations, uno.
   - I. Sill plate maximum anchor bolt spacing shall be 48 inches on center unless noted otherwise on plans and details. All anchor bolts (other than bolts for hold-downs) shall be 1/2" diameter with a minimum embedment of 9 inches into concrete uno. Anchor bolts for hold-downs shall not be considered as part of required anchor bolts for shear walls. All exterior walls shall be secured with minimum (3) anchor bolts. Interior walls may be driven shot pins according to alternate outlined herein, uno.
   - J. Anchor bolts shall have 3x3x1/4" thick slotted plate washers under each nut. Edge of plate washer to be within 1/2" of sheathing. At shear walls with sheathing on both faces alternate washer edges.
   - K. Corrosion resistance:
     a. All nails, bolts, screws and hardware shall be hot-dipped galvanized or stainless where exposed to weather or soil.
     b. All nails and screws fastened to pressure-preservative-treated wood (including wood sills) shall be hot-dipped galvanized per ASTM A153 or stainless steel Type 304 or 316.
     c. Electrogalvanized fasteners shall not be substituted for hot-dipped galvanized.
     d. Sheet metal connectors in contact with pressure-treated wood shall be stainless or galvanized coated per ASTM A653 class G185.
     e. Stainless steel or hot-dipped galvanized connectors shall use all fasteners of the same material.
3. SOLID SAWN LUMBER
   - A. Solid sawn lumber shall comply with the latest edition of the grading rules of the Western Wood Products Association (WWPA) or the West Coast Lumber Inspection Bureau (WCLIB).
   - B. All solid sawn lumber shall be stamped with the grade mark of an approved grading agency. Solid sawn lumber shall have the following minimum grades:

2x4 Studs and Blocking	DF-L No. 2
2x6 Studs and Blocking	DF-L No. 2
Joist, Top Plates, and Blocking	DF-L No. 2
4x Beams and Posts	DF-L No. 2
6x Beams and Posts	DF-L No. 1

   - C. Interior nonbearing partitions may be DF-L Stud Grade.
   - D. All exposed architectural lumber to be KILN DRIED (KD) uno. Moisture content at time of manufacturing 19 percent or less.
   - E. All lumber to be supplied with proper grade stamp to project.
4. GLUED-LAMINATED BEAMS (GLB)
   - A. GLB shall be Douglas Fir, combination 24F-V4 (1.8E) at simple span beams and 24F-V8 (1.8E) at cantilevered or continuous beams with the following minimum properties: Fb = 2400 psi, Fv = 265 psi, Fc (Perpendicular) = 650 psi
   - B. All beams shall be fabricated using waterproof exterior type adhesive.
   - C. Fabrication and handling shall be in accordance with the latest American Institute of Timber Construction (AITC) standards and ASTM D3737.
   - D. All beams shall bear the grade stamp and AITC stamp and certificate.
   - E. All beams shall have standard camber uno. on the drawings.
   - F. Unless noted on the drawings or specified by the architect, beams shall be 'INDUSTRIAL' appearance grade.
   - G. All laminations for 'GLU-LAM' beams shall be 1 1/2 inches thick and the overall size shall be as shown on the drawings. All laminations shall be parallel to the bottom of the beam, unless noted otherwise on the drawings.
   - H. Glued Laminated wood shop drawings shall be submitted to the architect for review before fabrication.
5. ENGINEERED LUMBER
   - A. All engineered lumber, shall be manufactured and installed in accordance with Truss Joist Engineered wood products by Weyerhueaser or approved equal manufacturing standards as referenced in ESR-1387, and shall have the following minimum properties:

Member	E=	Fb=	Fc (PERP.)	Fc (PAR.)	Fv=
Timber Strand, Laminated Strand Lumber (LSL)	1,550,000psi	2,325psi	900psi	2,050psi	310psi
Parallam, Parallel Strand Lumber (PSL)	2,000,000psi	2,900psi	625psi	2,900psi	290psi
Microlam, Laminated Veneer Lumber (LVL)	2,000,000psi	2,600psi	750psi	2,510psi	285psi

6. SHEATHING
   - A. Plywood for roofs and floors shall be C-C or C-D sheathing conforming to the current version of the Products Standard PS 1-09. Lay plywood with face grain perpendicular to supports. All nailing shall be with common nails and solid 2x blocking shall be placed at all ridges and valleys. All roof and floor sheathing shall be nailed with boundary nailing along the entire length of supporting members used as "Drag" members. A Drag member is a truss or beam designed to Provide blocking at panel edges where indicated on plans. All plywood shall be of the following nominal thickness and span/index rating and shall be nailed as follows unless noted otherwise:

Level	Thickness	Span Rating	Edge Nailing	Field Nailing
ROOF	19/32"	32/16	8d AT 6" OC.	8d AT 12" OC.

   - B. Plywood for shear walls shall be Structural I C-C or C-D, Span Index 24/0 conforming to PS 1-09. Thickness shall be as called for on the plans and shear wall schedule. Provide blocking at all panel edges. All walls designated as shear walls shall be connected to roof and floor diaphragms with boundary nailing to provide proper shear transfer.
   - C. As an alternate to plywood, American Plywood Association (APA) performance rated sheathing may be used with prior approval of the owner and architect. Rated sheathing shall comply with ICC-ES Report ESR-2586, Exposure 1, and shall have a span rating equivalent to or'better than the plywood it replaces. Attachment and thickness (within 1/32") shall be the same as the plywood it replaces. Install per manufacturer recommendations.
   - D. Refer to the plans and shear wall schedule for required sheathing and nailing. All walls not called out on plans, provide 7/16" min. APA rated sheathing on exterior surfaces nailed at all panel edges (block unsupported edges), top and bottom plates with 8d common nails at 6" oc. and to all intermediate studs and blocking at 12" oc. Allow 1/8" gap at all APA sheathing panel edges and ends.
7. PLATED WOOD TRUSSES
   - A. Superimposed Design criteria Loads (unless noted otherwise):

ROOF:	
WIND LOAD (UPLIFT)	= 20 psf
DEAD LOAD TOP CHORD	= 18 psf
DEAD LOAD BOTTOM CHORD	= 7 psf
LIVE LOAD	= 20 psf
SNOW LOAD	= 26 psf

   - B. Prefabricated wood trusses shall be designed to support self weight plus live load and superimposed dead loads including all mechanical units, point loads "P" in pounds, chord force "CF" in pounds, lateral force "V" in pounds per foot, and uplift forces "U" in pounds, as specified on the framing plans. Bridging size and spacing shall be specified by the truss manufacturer unless otherwise noted.
   - C. All wood truss designs shall comply with Chapter 23 and Section 2303.4 of the IBC. No truss member shall be stamped stud, utility, construction, or #3 grade.
   - D. All light metal plate connections shall comply with the latest edition of Truss Plate Institute, Inc. TPI 1 "National Design Standard for Metal Plate Connected Wood Truss Construction". Plate shall be flush with wood, but the wood shall not be crushed. All gusset plates shall extend at least 2 1/2" onto each member at each joint.
   - E. Lumber at plates shall be a complete section with no knots or excessive wane. No joint shall have more than 1/16" average gap between bearing surfaces.
   - F. All trusses are to be engineered by a truss manufacturer. Shop drawings and calculations shall be supplied for each truss and wet sealed by an engineer licensed in the appropriate state per the appropriate discipline. Submit shop drawings and calculations to the Engineer of Record for review.
   - G. Shop drawings shall include the following information:
     a. The allowable loads in pounds per effective nail for the lumber and plates used as allowed by ICC-ES and ICC-ES Report Number
     b. A statement that the min. plate size is 15 sq. in.
     c. Duration factors or stress reduction factors used in the design of the lumber and plates
     d. Top and bottom chord design loads in psf.
     e. Size, thickness, and exact location by Dim. of all plates
     f. The lumber species and grades used.
     g. The name and trademark of the plate manufacturer. The truss fabricator and the project name and address
     h. Computed mid-span deflection (total load)
     i. Any special details required at bearing points.
   - H. For all flat bottom chord trusses, size plate for 125 percent of member forces or use a stress reduction factor of 0.8 for plate values. No stress increase for duration of loading or for any other factor shall be used to increase plate values. Only one plate per panel point per truss side will be allowed. Each chord section shall extend through two panel points prior to being spliced.
   - I. Handle and install trusses according to Truss Plate Institute and Structural Building Components Association Publication: "BCSI (Building Component Safety Information) Guide to Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses."
   - J. Install pre-engineered wood trusses in accordance with the manufacturer's recommendations and specifications. Do not cur or modify trusses without the manufacturer's written authorization.

STRUCTURAL STEEL

1. Submit shop drawings to structural engineer indicating fabrication of structural steel components. Include details of cuts, connections, splices, camber, holes and other pertinent data. Include embedment drawings. Indicate welds by standard AWS symbols, distinguishing between shop and field welds,and show size, length and type of each weld. Indicate type, size and length of bolts distinguish between shop and field bolts. Identify retensioned and slip-critical high strength bolted connections.
2. Designing, detailing, fabrication, and erection of structural steel shall be in accordance with the American Institute of Steel Construction (latest edition and supplements). See general notes for additional information.
3. Structural steel not exposed to weather shall be left unpainted unless noted otherwise in the architectural drawings and/or specifications.
4. MATERIALS:
   - A. Structural Steel Shapes Shall Conform to the following:Structural steel "W" shapes shall comply to ASTM Standard A992.
   - B. Angles, plates "M" and "S" shapes, channels and bars shall comply to ASTM Standard A36, unless noted otherwise.
   - C. Steel pipe shall comply to ASTM Standard A53 grade B (Fy = 35 ksi).
   - D. Rectangular and square Hollow Structural Sections (HSS) shall comply to ASTM Standard A500 grade B (Fy = 46 ksi).
   - E. Round Hollow Structural Sections (HSS) shall comply to ASTM Standard A500 grade B (Fy = 42 ksi).
   - F. Raise - Pattern floor plates shall comply to ASTM A786.
   - G. Steel grating by the manufacturer, supplier, or contractor designed for loads and deflections as required by the adopted code and as indicated, unless noted otherwise. As a minimum, grating is to be designed for a 300# point load, a uniform live load of 100 psf and a maximum deflection of L/360 or 1/4". Submit style and layout for approval.
5. WELDING:
   - A. All welding shall comply to the American Welding Society Standard (AWS D1.1 and AWS D1.8). All welded joints shall be detailed as indicated by the prequalified joint details in the Structural Welding Code.
   - B. Weld lengths called for on plans are the net effective length required. Weld size shall be AISC minimum unless a larger size is noted. All welds shall use minimum E70XX electrodes.
   - C. Welding tests and inspections, see specifications.
   - D. Filler material covered in ANSI/AWS D1.1 TABLE 3.1.
6. BOLTING:
   - A. Anchor bolts and rods shall conform to ASTM F1554, grade 55 unless noted otherwise.
   - B. Bolts shall conform to ASTM A325-N TYPE 1 less than 1 1/2" dia. uno., see also note 'G' below.
   - C. Weather or Corrosion Resistance bolts are required to conform to A325-N Type 3.
   - D. Nuts shall conform to ASTM A563.
   - E. Washers shall conform to ASTM F436. Washers used in load transfer or subject to direct tension shall conform to ASTM F844.
   - F. Threaded rods shall comply to ASTM A36 uno.
   - G. Except as subsequently noted, high strength bolts need not be tightened beyond the snug-tight condition, as defined in section 8.1 of the specifications for structural joints using ASTM A325 or A490 Bolts. For connections subject to direct tension, connections for braced frames, and other connections shown or noted on the plans as SC (slip critical) or fully tensioned, bolts shall be tightened by one of the methods described in section 8.2 and to the minimum tension specified in section 8.2, Table 8.1.
   - H. Bolt holes in steel shall be 1/16 inch larger than nominal size of bolt used, except anchor bolt holes which may be 1/8" larger or as noted on drawings.
7. ANCHOR STUDS, SHEAR STUDS, AND DEFORMED ANCHORS:
   - A. Shall be manufactured by Nelson Stud Welding Co. or equal.
   - B. Headed studs (shear and anchor) shall be made of material conforming to ASTM A108.
   - C. Deformed anchors shall be made of material conforming to ASTM A496.
   - D. Studs and anchors shall be welded according to manufacturer's recommendations. Manual arc (stick) welding of headed studs and/or deformed anchors is not allowed: Paragraphs 7.5.5 to 7.5.5.6 of AWS D1.1, are deleted.
8. STEEL DECK:
   - A. Deck shall be cold rolled steel factory primer painted uno., and conforming to ASTM A 1008 grade 33 minimum (minimum yield of 38ksi), with the profile, depth, and uncoated thickness as indicated on the drawings. All metal accessories are to have the same thickness as the decking, uno.
   - B. Minimum bearing of steel deck on supports shall be 2 inches. All 3" deep steel deck shall have minimum bearing of 3". Sheets shall be attached to all supporting steel members as indicated on drawings and in accordance with manufacturer's recommendations.
   - C. Minimum deck connection shall be 7-1/2" puddle welds per sheet and 3/16" button punch or welds at 12" oc. uno. See plans for additional information.
   - D. See architectural, mechanical, electrical, etc., for sizes and locations of deck openings and for deck openings smaller than 12" not shown on the structural drawings. See general details for framing requirements at deck openings. Openings larger than 12" shall not be placed in deck unless specifically shown on the structural drawings.
   - E. DO NOT hang loads from metal deck. Provide engineered structural system to hang all loads from steel joists or beams. This includes but is not limited to metal stud soffit or ceiling framing, mechanical or plumbing equipment, etc.
   - F. Steel deck manufacturers shall submit shop drawings for approval.
   - G. Steel deck units with concrete fill shall be continuous over three or more spans. If steel deck units with concrete fill span less than 3 spans, the deck units shall be shored, uno. steel roof deck units shall be continuous over two or more spans, uno.
   - H. All exterior exposed or high moisture area decks are to be galvanized. Galvanized deck to be zinc coated steel per ASTM A653, grade 33 minimum (minimum yield of 38 ksi) and ASTM A653, G60 with the profile, depth and uncoated thickness as indicated on the drawings. All metal accessories are to have the same thickness as the decking, uno. Upon completion of erection, all welds on galvanized steel deck areas shall be de-slagged, cleaned and touched-up with a zinc rich primer.
9. OPEN WEB STEEL JOISTS
   - A. Steel joists and joist girders shall conform to SJI CJ-1.0, SJI K-1.1, SJI LH/DLH-1.1 & SJI JG-1.1 published by the Steel Joist Institute (SJI) and as adopted by the International Building Code Section 2207.
   - B. Steel joist fabricator shall submit shop drawings and calculations sealed by an engineer licensed in the appropriate state per the appropriate discipline for EOR records prior to project closeout.
   - C. Steel joist fabricator shall design and provide joist bridging as required by current SJI and AISC recommendations. As a minimum contractor is responsible for end bay bridging for wind uplift. As a minimum all joists 60 feet and longer must have bolted bridging in place prior to slackening of hoisting lines. Contractor to coordinate all other erection bridging requirements as required by the joist manufacturer.
   - D. Steel joist fabricator shall design joist and joist girder bearings to resist a horizontal force acting parallel to the joist. The force shall be the greater of: The strut force (SF) shown on plan or the seismic anchorage force Fp (per ASCE 7-10 section 12.11.2.). See notes E and F below.
   - E. Top chords of joists shall be designed for the seismic or wind Axial collector forces (tension or compression) shown on plan. SF = Strut Force. Strut forces shown on plans are **UNFACTORED** and **DO NOT** include overstrength per ASCE 7-10 12.10.2.1.
   - F. Steel joists shall be designed using the load provided per plan and forces below following minimum load criteria (All loads shown are **UNFACTORED** and **DO NOT** include overstrength factor per ASCE 7-10 12.11.2.2.2):

Uplift (Net Ultimate Uplift)	For joist with bare steel deck - 16 psf net uplift load shall be applied to the top chord. (Non - Reducible)
Fp (Seismic Axial Force)	700#

   - G. Refer to the framing plans for any additional concentrated or uniform load design requirements (Mechanical units, wind/seismic, screen walls platforms, etc.).
   - H. Contractor shall field install a web member on joists from point of load to nearest panel point on opposite chord when concentrated loads are not applied directly at panel points. See general details for additional information.
   - I. Joist bearings are shown flat in the details. Adjust for slope as required. Provide continuous 68 mils L- shaped strip if supporting steel members are not flat with respect to decking.
   - J. All OSHA requirements and standards for Open Web/Bar Joists shall be followed. Such requirements would include but not be limited to; bolted erection connections, bottom chord stability plates, bridging, etc.
   - K. The maximum Open Web Joist live load deflection shall be 1/360 of the span length.
   - L. DO NOT camber joists parallel to bearing walls, flat beams, etc. where the drawings show the supported deck directly attaching to both the joists and other bearing elements.

DESIGN CODES 2018

1. All design and construction shall conform to the 2018 International Building Code and local jurisdictional amendments per state, county, city. etc.
2. References to ASTM and other standards shall refer to the latest edition designated by IBC Chapter 35. Refer to the specifications for information in addition to that covered by these structural notes and drawings. The following standards were used for design.

Building Code Requirements for Structural Concrete	ACI 318-14
Specifications For Structural Steel Buildings	AISC 360-16
Minimum Design Loads For Buildings And Other Structures	ASCE 7-16
National Design Specifications For Wood Construction	NDS-18
Building Code Requirements For Masonry Structures	TMS 402-16

All specifications and codes noted shall be the latest approved editions and revisions by the governmental agency having jurisdiction over this project.

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Jefferson Elementary School
Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
REVISIONS:
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△

DRAWN BY: CT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.

S0.04
STRUCTURAL DESIGN NOTES

2018 IBC SPECIAL INSPECTION TABLES

IBC 2018 - Section	IBC 2018 - Task	IBC 2018 - Inspection Type	IBC 2018 - Description
INSPECTION DEFINITIONS:			
Perform	Perform these tasks for each weld, fastener, or bolted connection and noted verification		
Observe	Observe these items on a random basis during the course of each work day to insure that applicable requirements of the code are being met. Operations need not be delayer pending these inspections at contractor's risk		
Document	Document, with a report that the work has been performed in accordance with the contract documents. This is in addition to any other reports required in the Special Inspection guide specifications		
Continuous	The full-time observation of work requiring special inspection by an approved special inspector who is in the area where the work is being performed		
Periodic	The part-time or intermittent observations of work requiring special inspection by an approved special inspector who is present in the area where the work has been or is being performed and at the completion of the work		
	STRUCTURAL - STEEL - WELDING SECTION		
STEEL INSPECTION PRIOR TO WELDING - Verify the following are in compliance with IBC 1705.2.1, AISC 360-16: Table C-N5.4-1			
1	Verify that the welding procedures specifications (WPS) is available	Perform	
2	Verify manufacturer certifications for welding consumables are available	Perform	
3	Verify material identification	Perform	Type and Grade
4	Welder identification system	Perform	
5	Fit-up of groove welds (including joint geometry)	Observe	● Joint preparation ● Dimensions (alignment, root opening, root face, bevel) ● Cleanliness (condition of steel surfaces) ● Tacking (tack weld quality and location) ● Backing type and fit (if applicable)
6	Configuration and finish of access holes	Observe	
7	Fit-up of fillet welds	Observe	● Dimensions (alignment, gabs at root) ● Cleanliness (condition of steel surfaces) ● Tacking (tack weld quality and location)
STEEL INSPECTION DURING WELDING - Verify the following are in compliance with IBC 1705.2.1, AISC 360-16: Table C-N5.4-2			
8	Use of qualified welders	Perform	Welding by welders, welding operators, and tack welders who are qualified in conformance with requirements
9	Control and handling of welding consumables	Observe	● Packaging ● Electrode atmospheric exposure control
10	No welding over racked tack welds	Observe	
11	Environmental conditions	Observe	● Wind speed within limits ● Precipitation and temperature
12	Welding procedures specification followed	Observe	● Settings on welding equipment ● Travel speed ● Selected welding materials ● Shielding gas type / flow rate ● Preheat applied ● Interpass temperature maintained (min. / max.) ● Proper position (F, V, H, OH) ● Intermix of filler metals avoided
13	Welding techniques	Observe	● Interpass and final cleaning ● Each pass within profile limitations ● Each pass meets quality requirements
STEEL INSPECTION AFTER WELDING - Verify the following are in compliance with IBC 1705.2.1, AISC 360-16: Table C-N5.4-3			
14	Welds Cleaned	Observe	
15	Size, length, and location of all welds	Perform	Size, length, and location of all welds conform to the requirement of the detail drawings
16	Welds meet visual acceptance criteria	Perform and Document	● Crack prohibition ● Weld / base-metal fusion ● Crater cross section ● Weld profiles ● Weld size ● Undercut
17	Arc strikes	Perform	
18	k-area	Perform	When welding of doubler plates, continuity plates, or stiffeners has been performed in the k-area visually inspect the web k-area for cracks
19	Backing removed, weld tabs removed and finished, and fillet welds added where required	Perform	
20	Repair activities	Perform and Document	
21	Document acceptance or rejection of welded joint or member	Perform	
	STRUCTURAL - STEEL - BOLTING SECTION		
STEEL INSPECTION TASKS PRIOR TO BOLTING - Verify the following are in compliance with IBC 1705.2.2, AISC 360-16: Table C-N5.6-1			
1	Manufacturer's certifications available for faster materials	Perform	
2	Fasteners marked in accordance with ASTM requirements	Observe	
3	Proper fasteners selected for joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	Observe	
4	Proper bolting procedure selected for joint detail	Observe	
5	Connection elements, including appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	Observe	
6	Proper storage provided for bolts, nuts, washers, and other fastener components	Observe	
STEEL INSPECTION TASKS DURING BOLTING - Verify the following are in compliance with IBC 1705.2.1, AISC 360-16: Table C-N5.6-2			
7	Fastener assemblies of suitable condition, placed in all holes and washers (if required) are positioned as required	Observe	
8	Joint brought to the snug-tight condition prior to pretensioning operation	Observe	
9	Fastener component not turned by the wrench prevented from rotating	Observe	
10	Bolts are pretensioned in accordance with RCSC Specification, progressing systematically from the most rigid point toward the free edges	Observe	
STEEL INSPECTION TASKS AFTER BOLTING - Verify the following are in compliance with IBC 1705.2.1, AISC 360-16: Table C-N5.6-3			
11	Document acceptance or rejection of all bolted connections	Document	
	STRUCTURAL - STEEL - NON-DESTRUCTIVE TESTING		
NON-DESTRUCTIVE TESTING OF WELDED JOINTS - Verify the following are in compliance with IBC 1705.2.1, AISC 360-16: Section N5.5			
1	Use of qualified non-destructive testing personnel	Perform	Visual weld inspection and non-destructive testing (NDT) shall be conducted by personnel qualified in accordance with AWS D1.8 clause 7.2
	STRUCTURAL - STEEL - OTHER INSPECTIONS		
OTHER STEEL INSPECTIONS - Verify the following are in compliance with IBC 1705.2.1, AISC 341-16: Tables J8-1 and J10-1			
1	Anchor rods and other embedments supporting structural steel	Perform	Verify the diameter, grade, type, and length of the anchor rod or embedded item, and the extent or depth of embedment prior to placement of concrete
2	Fabricated steel or erected steel frame	Observe	Verify compliance with the details shown on the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection
3	Reduced beam sections (RBS) where / if occurs	Document	● Contour and finish ● Dimensional tolerances
4	Protected zones	Document	No holes or unapproved attachments made by fabricator or erector
5	H-piles where / if occurs	Document	No holes or unapproved attachments made by the responsible contractor

2018 IBC SPECIAL INSPECTION TABLES

IBC 2018 - Section	IBC 2018 - Task	IBC 2018 - Inspection Type	IBC 2018 - Description
	STRUCTURAL - COLD-FORMED METAL DECK - PLACEMENT SECTION		
METAL DECK INSPECTION PRIOR TO DECK PLACEMENT - Verify the following are in compliance with IBC 1705.2.2.1.1, SDI QA/QC-2017, Appendix 1, Table 1.1			
1	Verify compliance of materials (deck and all deck accessories) with construction documents, including profiles, material properties, and base metal thickness	Perform	
2	Document acceptance or rejection of deck and deck accessories	Document	
METAL DECK INSPECTION DURING DECK PLACEMENT - Verify the following are in compliance with IBC 1705.2.2.1.1, SDI QA/QC-2017, Appendix 1, Table 1.2			
3	Verify compliance of deck and all deck accessories installation with the construction documents	Perform	
4	Verify deck materials are represented by the mill certifications that comply with the construction documents	Perform	
5	documnet acceptance or rejection of installation of deck and deck accessories	Document	
METAL DECK INSPECTION AFTER DECK PLACEMENT - Verify the following are in compliance with IBC1705.2.2.1.1, SDI QA/QC-2017, Appendix 1, Table 1.3			
6	Welding procedure specification (WPS) available	Perform	
7	Manufactures certification for welding consumables available	Document	
8	Material identification (type / grade)	Document	
9	Check welding equipment	Document	
	STRUCTURAL - COLD-FORMED METAL DECK - WELDING SECTION		
METAL DECK INSPECTION DURING WELDING - Verify the following are in compliance with IBC 1705.2.2.1.1, SDI QA/QC-2017, Appendix 1, Table 1.4			
1	Use of qualified welders	Observe	
2	Control and handling of welding consumables	Observe	
3	Environmental conditions (wind speed, moisture, temperature)	Observe	
4	WPS followed	Observe	
METAL DECK INSPECTION AFTER WELDING - Verify the following are in compliance with IBC 1705.2.2.1.1, SDI QA/QC-2017, Appendix 1, Table 1.5			
5	Verify size and location of welds, including support, side-lap, and perimeter welds	Perform	
6	Welds meet visual acceptance criteria	Perform	
7	Verify repair activities	Perform	
8	Document acceptance or rejection of welds	Document	
	STRUCTURAL - COLD-FORMED METAL DECK - FASTENING SECTION		
METAL DECK INSPECTION BEFORE MECHANICAL FASTENING - Verify the following are in compliance with IBC 1705.2.2.1.1, SDI QA/QC-2017, Appendix 1, Table 1.6			
1	Manufacturer installation instructions available for mechanical fasteners	Observe	
2	Proper tools available for fastener installation	Observe	
METAL DECK INSPECTION BEFORE MECHANICAL FASTENING - Verify the following are in compliance with IBC 1705.2.2.1.1, SDI QA/QC-2017, Appendix 1, Table 1.7			
3	Fasteners are positioned as required	Observe	
4	Fasteners are installed in accordance with manufacturer's instructions	Observe	
METAL DECK INSPECTION BEFORE MECHANICAL FASTENING - Verify the following are in compliance with IBC 1705.2.2.1.1, SDI QA/QC-2017, Appendix 1, Table 1.8			
5	Check spacing, type, and installation of support fasteners	Perform	
6	Check spacing, type, and installation of side-lap fasteners	Perform	
7	Check spacing, type, and installation of perimeter fasteners	Perform	
8	Verify repair activities	Perform	
9	Document acceptance or rejection of mechanical fasteners	Document	
	STRUCTURAL - OPEN-WEB STEEL JOISTS SECTION		
OPEN-WEB STEEL JOIST AND GIRDERS - Verify the following are in compliance with SJI specification Section 2207.1 and IBC Table 1705.2.3			
1	Installation of open-web steel joists and joist girders	Periodic	● End connections - welded or bolted ● Bridging - horizontal and diagonal
	STRUCTURAL - CONCRETE CONSTRUCTION SECTION		
CONCRETE CONSTRUCTION, INCLUDING COMPOSITE DECK - Verify the following are in compliance with IBC Table 1705.3 (ACI 318 references noted in IBC Table)			
1	Inspect reinforcement, including prestressing tendons, and verify placement	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade, and size; that it is free of oil, dirt, and unacceptable rust; that it is located and spaced properly; that hooks, bends, ties, stirrups, and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instruction and/ or evaluation report
3	Inspect anchors cast in concrete	Periodic	Verify prior to paving concrete that cast in place anchors and post installed drilled anchors have proper embedment, spacing, and edge distance
4	Inspect anchors post-installed in hardened concrete members	● Continuous and Document ● Periodic	(a) Adhesive anchors installed in horizontally or upward inclined orientations to resist sustained tension loads, (b) Mechanical anchors and adhesive anchors not defined in 4a
5	Verify use of required mix design	Periodic	Verify that all mixes used comply with the approved construction documents
6	Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete	Continuous	At the time fresh concrete is sampled to fabricate specimens for strength test, verify these tests are performed by qualified technicians
7	Inspect concrete and shotcrete placement for proper application techniques	Continuous	Verify proper application techniques are used during concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated
8	Verify maintenance of specified curing temperature and technique	Periodic	Inspect curing, cold weather protection, and hot weather protection procedures
10	Inspect erection of precast concrete members	Periodic	
11	Verify in-situ concrete strength prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs	Periodic	
12	Inspect formwork for shape, location, and dimensions of the concrete member being formed	Periodic	

2018 IBC SPECIAL INSPECTION TABLES

IBC 2018 - Section	IBC 2018 - Task	IBC 2018 - Inspection Type	IBC 2018 - Description
	STRUCTURAL - MASONRY CONSTRUCTION SECTION (ALL RISK CATEGORIES) I-II		
MASONRY CONSTRUCTION - Verify the following are in compliance at start of construction with IBC 1705.4 (TMS 602-16 Specification Table 3 & 4 Quality Assurance Level 2)			
1a	Prior to construction, verification of compliance of submittals	Perform	
1b	Prior to construction, verification of f'm and f'ACC, except where specifically exempted by the code	Perform	
1c	During construction, verification of slump flow and Visual Stability Index (VSI) when self-consolidated grout is delivered to the project site	Perform	
2a	Proportions of site-prepared mortar	Periodic	
2b	Grade and size of prestressing tendons and anchorages	Periodic	
2c	Grade, type, and size of reinforcement, connectors, anchor bolts, and prestressing tendons and anchorages	Periodic	
2f	Sample panel construction	Periodic	
3a	Grout space	Periodic	
3b	Placement of prestressing tendons and anchorages	Periodic	
3c	Placement of reinforcement connectors and anchor bolts	Periodic	
3d	Proportions of site-prepared grout and prestressing grout for bonded tendons	Periodic	
4a	Materials and procedures with the approved submittals	Periodic	
4b	Placement of masonry units and mortar joints construction	Periodic	
4c	Size and location of structural members	Periodic	
4d	Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, and other construction	Periodic	
4f	Preparation construction, and protection of masonry during cold weather (temperature below 40°F (4.4°C)) or hot weather (temperature above 90°F (32.2°C))	Periodic	
5	Observe preparation of grout specimens, mortar specimens, and/or prisms	Periodic	
6	Inspect anchors post-installed in masonry members	● Continuous and Document ● Periodic	(a) Adhesive anchors installed in horizontally or upward inclined orientations to resist sustained tension loads (b) Mechanical anchors and adhesive anchors
	STRUCTURAL - WOOD CONSTRUCTION - SPECIALTY ITEMS SECTION		
WOOD CONSTRUCTION - Verify the following are in compliance with IBC 1705.5			
2	Metal-plate connected wood trusses spanning 60 feet or greater	Observe	Verify that the temporary installation restraint/ bracing and the permanent individual truss member restraint/ bracing are installed in accordance with the approved truss submittal package
	STRUCTURAL - WOOD CONSTRUCTION - SEISMIC AND WIND SECTION		
WOOD CONSTRUCTION SEISMIC AND WIND - Verify the following are in compliance with IBC 1705.11.2			
1	Nailing, bolting, anchoring and other fastening of elements of the main wind/ seismic force-resisting system	Observe	Includes connectors for: Shear wall sheathing, roof/ floor sheathing, drag strut/ collectors, braces, hold-downs, roof and floor framing connections to exterior walls
	GEOTECHNICAL - SOILS INSPECTION SECTION		
SOILS INSPECTION - Verify the following are in compliance with IBC Table 1705.6			
1	Materials below shallow foundations are adequate to achieve the design bearing capacity	Periodic	
2	Excavations are extended to proper depth and have reached proper material	Periodic	
3	perform classification and testing of compacted fill materials	Periodic	
4	Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill	Continuous	
5	Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly	Periodic	During fill placement, the special inspector shall verify that proper materials and procedures are used in accordance with the provisions of the approved geotechnical report

QUALITY ASSURANCE AND SPECIAL INSPECTION

1. Quality Assurance for Seismic Resistance
   - A. Special inspection in accordance with the requirements of IBC section 1704, 1705, and structural testing in accordance with the requirements of IBC section 1705.12 shall be required for:
   - B. All seismic force resisting systems shown in elevation
   - C. Designated seismic force resisting systems denoted by SFRS on plan or detail.
   - D. NOTE: Existing seismic force resisting systems denoted on plan or detail by SFRS shall require structural observation performed by a qualified third party, inspection and testing agency in accordance with IBC section 1709.1, any deficiencies or discrepancies from that shown on the structural drawings shall be reported to the engineer of record.
   - E. The type and frequency of special inspection, structural testing and subsequent reporting conforming to the requirements of IBC section 1704 and 1705 shall be submitted by the inspection and testing agencies to the architect/structural engineer for approval.
   - F. Structural observations and subsequent reporting of general conformance to the structural drawings shall be performed periodically by the engineer in responsible charge at his/her discretion or when specifically required by the building official.
2. Quality Assurance for General Construction
   - A. Testing Laboratory: Retained by owner and satisfactory to Architect/Structural Engineer and governing code authority to perform required tests and inspections of this contract and applicable code.
   - B. Material Certification: Submit laboratory test reports certifying materials are of identifiable tested stock to owner, testing laboratory, Architect/Structural Engineer and, upon request, to governing code authority. If laboratory test reports cannot be made available, testing laboratory will perform tests as directed by Architect/Structural Engineer. Contractor shall pay testing laboratory for costs related to tests and inspections of unidentifiable materials or materials furnished without laboratory test reports, materials found deficient after initial tests and inspections, or materials replacing deficient materials.
   - C. Special inspection in accordance with the requirements of IBC section 1704 and 1705 shall be required for items indicated on special inspection tables on this sheet.

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Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT # -
REVISIONS:
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△

DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

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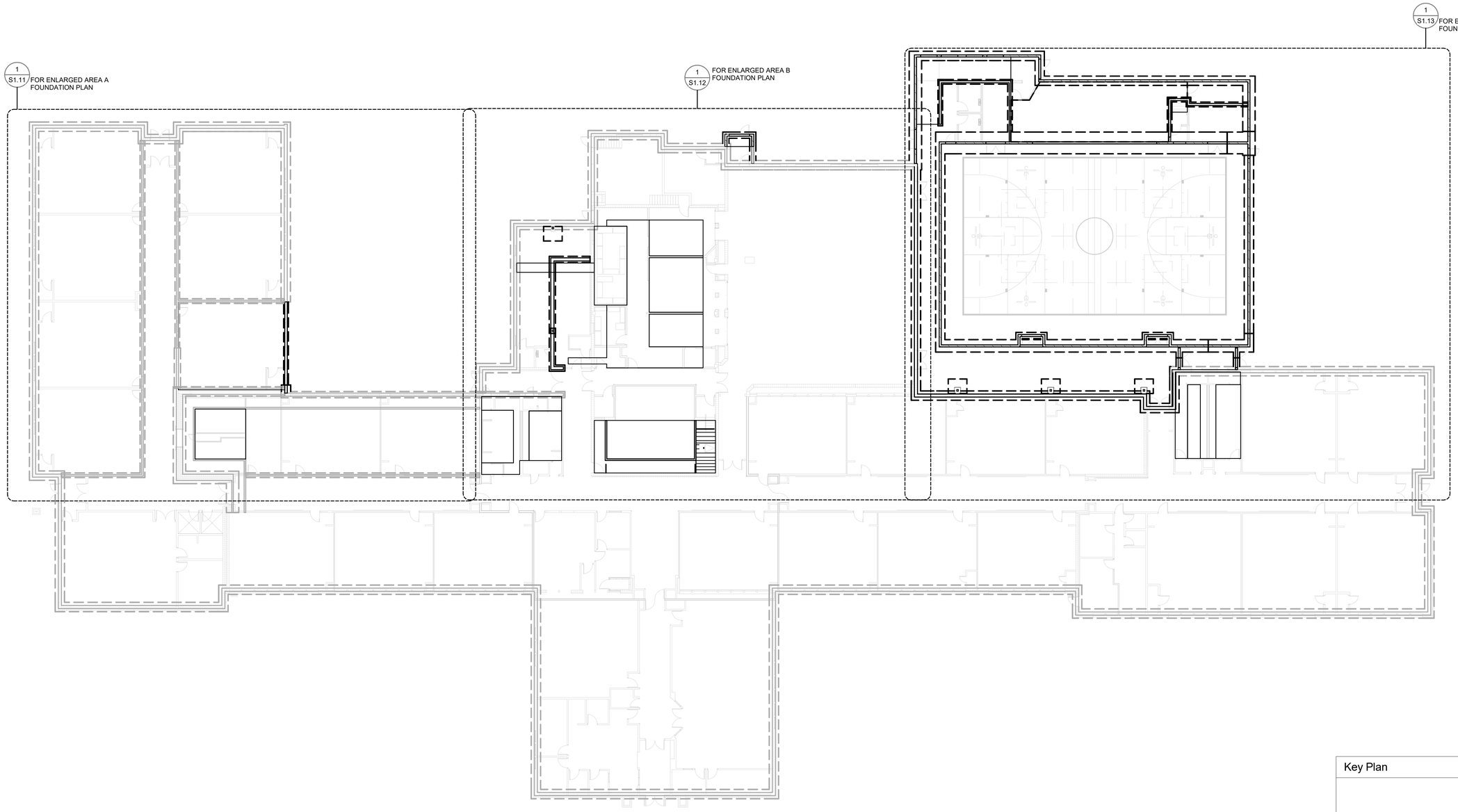
S0.05

SPECIAL INSPECTION TABLES

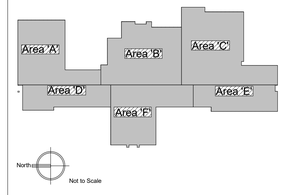
OVERALL PLAN NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For additional information not shown, see plans.



1 OVERALL FOUNDATION PLAN
1/16" = 1'-0"

Key Plan



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EXP. 05/31/2024

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BOISE IDAHO 83704
Phone (208) 342-7168
LE JOB #224217

Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
REVISIONS:
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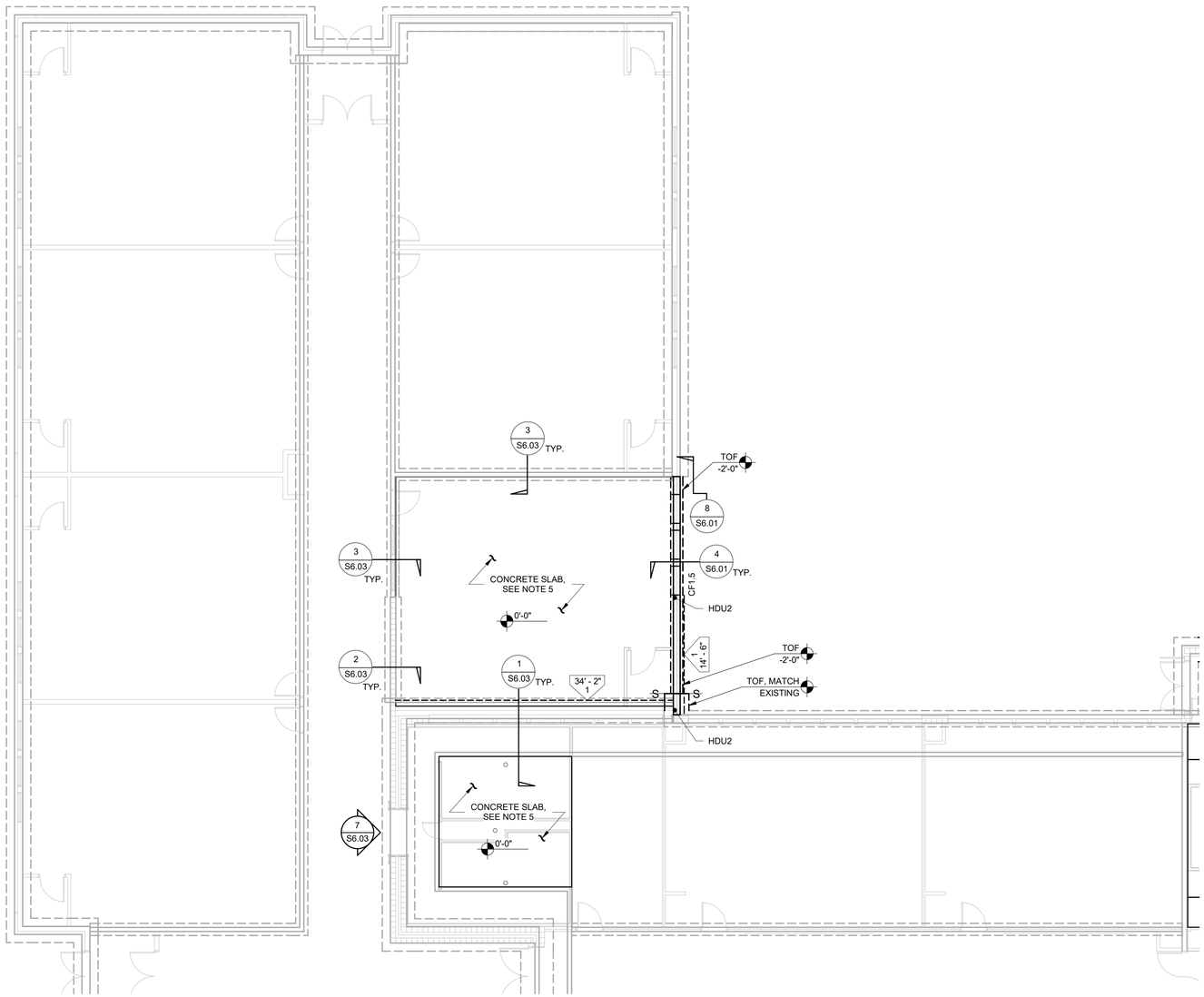
Agency Review

DRAWING NO.

S1.10
OVERALL FOUNDATION PLAN

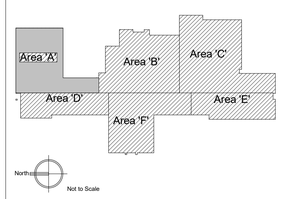


1 AREA A FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION PLAN NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. Top of concrete floor reference elevation = 0'-0" typical uno thus. X' - X"
5. Slab on grade shall be 4" thick concrete with 4x4 W2.9xW2.9 welded wire fabric, placed 2" clear from top of concrete. See architectural drawings for slab depressions, slopes, etc.
6. Top of exterior footing shall be elevation -2'-0" max. and top of interior footing shall be -0'-8" max., typ. uno. thus TOF X' - X"
7. Contractor to coordinate slab on grade control joints with 1 / S5.03 .
8. See Geo-Tech report for underslab and footing requirements.
9. For general concrete/foundation details, see sheets S5.01 thru S5.03.
10. F# and CF# Denotes footing type, see 6 / S4.01 .
11. Contractor to coordinate placement of utilities thru or adjacent to the footings or stem walls with detail 1 / S5.02 or the footings may be stepped per 2 / S5.02 at contractors option, typ.
12. S——S Indicates step(s) in footing, see 2 / S5.02 .
13. BPL (#) Denotes base plate type, see 1 / S4.01 .
14. HD# Denotes wood hold-down, see 3 / S4.02 for wood hold-down schedule.
15. -2 1/8" Denotes recess, sloped or elevated floor elevations, coordinate size and location with arch.
16. W# Denotes masonry wall type, see 4 / S4.02 for wall schedule.
17. C J Denotes masonry control joint location, see 3 / S5.11 for construction. Coordinate with architectural for locations.
18. 0' - 7" # Denotes wood shear wall, see 7 / S4.01.
    For construction Information, see 10 / S5.41.
    All wood shear walls are to be considered LFRS.
    Contractor to field coordinate actual wall lengths and hold-down locations with architectural drawings.
19. For all structural walls and shear walls not shown on this plan, see the framing plan at the floor or roof above.
20. P# Denotes pillaster, see 1 / S4.02 .
21. Floor shall be 3" hard rock concrete over the flutes of 2"x20 ga. galv. Verco W2 Formlok deck or equal. Total thickness = 5". Reinforce concrete with W2.0xW2.0-6X6 WWF placed 1" clear from top of concrete. Deck shall span continuous over 3 or more spans (4 supports). Shore single spans where they exceed 8'-0". Weld deck as follows: using 1/2" dia. net effective puddle welds.
    A. perpendicular bearing: 7 welds per sheet per support.
    B. parallel edges: at 12" oc.
    C. side seams: button punch at 12" oc.

Key Plan



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EXP. 05/31/2024

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LE JOB #224217

Jefferson Elementary School
Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
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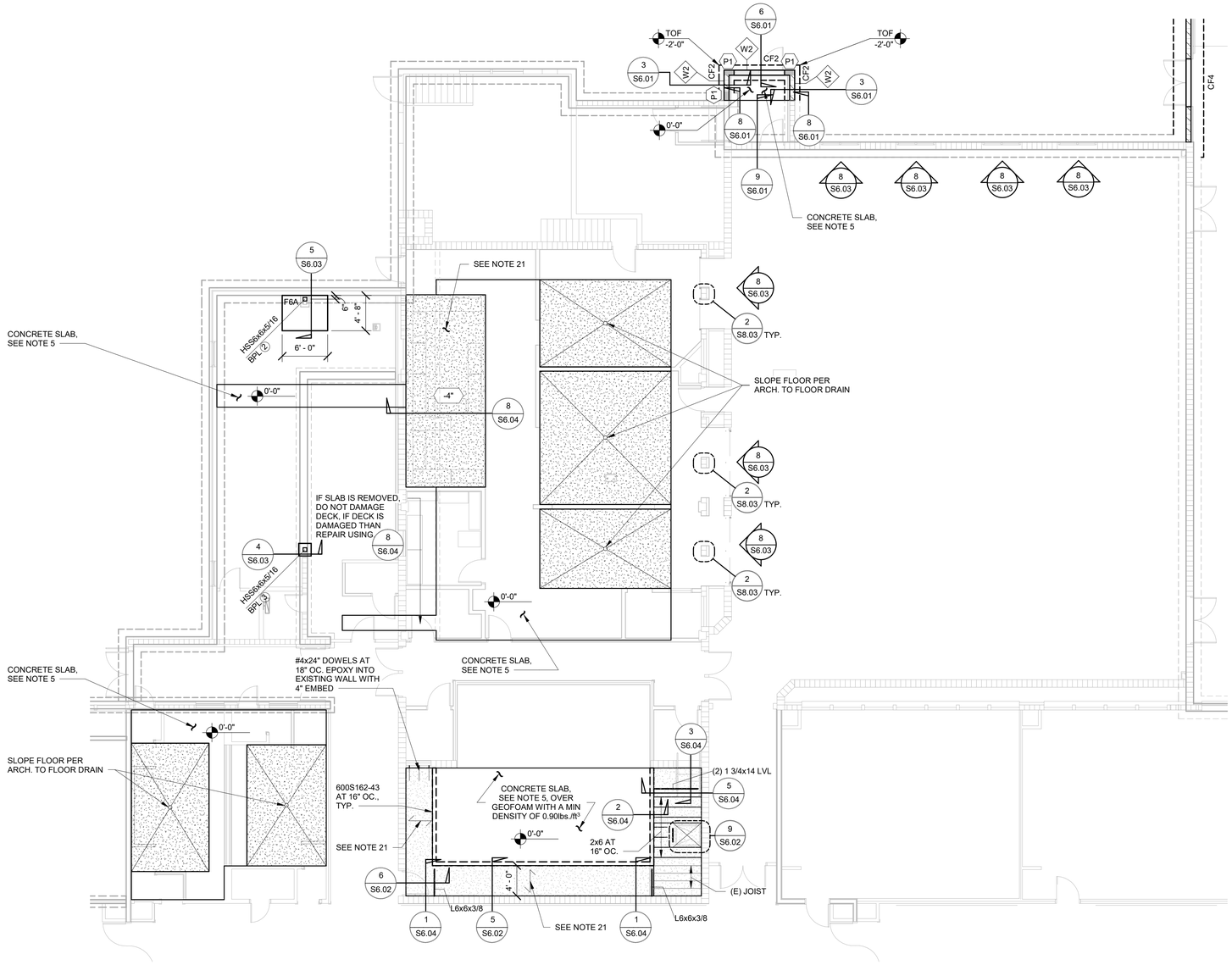
Agency Review

DRAWING NO.
S1.11
AREA A FOUNDATION PLAN



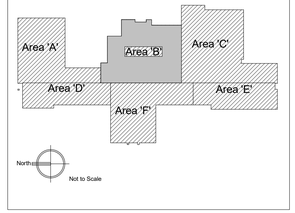
1 AREA B FOUNDATION PLAN

1/8" = 1'-0"

FOUNDATION PLAN NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. Top of concrete floor reference elevation = 0'-0" typical uno thus. X' - X"
5. Slab on grade shall be 4" thick concrete with 4x4 W2.9xW2.9 welded wire fabric, placed 2" clear from top of concrete. See architectural drawings for slab depressions, slopes, etc.
6. Top of exterior footing shall be elevation -2'-0" max. and top of interior footing shall be -0'-8" max., typ. uno. thus TOF X' - X"
7. Contractor to coordinate slab on grade control joints with 1 / S5.03 .
8. See Geo-Tech report for underslab and footing requirements.
9. For general concrete/foundation details, see sheets S5.01 thru S5.03.
10. F# and CF# — Denotes footing type, see 6 / S4.01 .
11. Contractor to coordinate placement of utilities thru or adjacent to the footings or stem walls with detail 1 / S5.02 or the footings may be stepped per 2 / S5.02 at contractors option, typ.
12. S S — Indicates step(s) in footing, see 2 / S5.02 .
13. BPL (#) — Denotes base plate type, see 1 / S4.01 .
14. HD# — Denotes wood hold-down, see 3 / S4.02 for wood hold-down schedule.
15. -2 1/8" — Denotes recess, sloped or elevated floor elevations, coordinate size and location with arch.
16. W# — Denotes masonry wall type, see 4 / S4.02 for wall schedule.
17. C J — Denotes masonry control joint location, see 3 / S5.11 for construction. Coordinate with architectural for locations.
18. 0' - 7" # — Denotes wood shear wall, see 7 / S4.01. For construction Information, see 10 / S5.41. All wood shear walls are to be considered LFRS. Contractor to field coordinate actual wall lengths and hold-down locations with architectural drawings.
19. For all structural walls and shear walls not shown on this plan, see the framing plan at the floor or roof above.
20. P# — Denotes pillaster, see 1 / S4.02 .
21. Floor shall be 3" hard rock concrete over the flutes of 2"x20 ga. galv. Verco W2 Formlok deck or equal. Total thickness = 5". Reinforce concrete with W2.0xW2.0-6X6 WWF placed 1" clear from top of concrete. Deck shall span continuous over 3 or more spans (4 supports). Shore single spans where they exceed 8'-0". Weld deck as follows: using 1/2" dia. net effective puddle welds.
    A. perpendicular bearing: 7 welds per sheet per support.
    B. parallel edges: at 12" oc.
    C. side seams: button punch at 12" oc.

Key Plan



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EXP. 05/31/2024

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LE JOB #224217

Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
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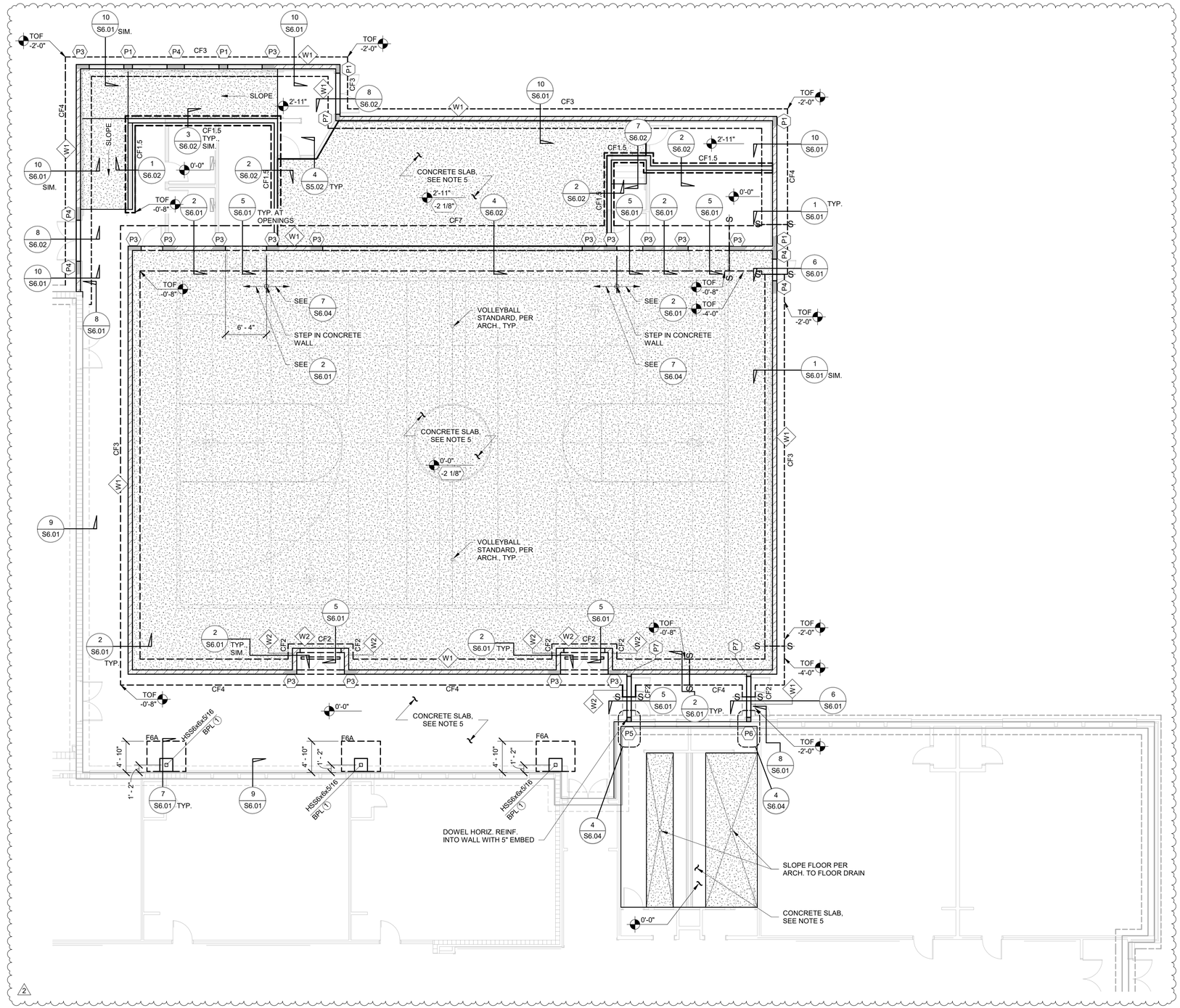
S1.12

AREA B FOUNDATION PLAN



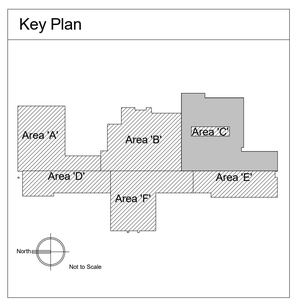
1 AREA C FOUNDATION PLAN

1/8" = 1'-0"

FOUNDATION PLAN NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. Top of concrete floor reference elevation = 0'-0" typical uno thus. X' - X"
5. Slab on grade shall be 4" thick concrete with 4x4 W2.9xW2.9 welded wire fabric, placed 2" clear from top of concrete. See architectural drawings for slab depressions, slopes, etc.
6. Top of exterior footing shall be elevation -2'-0" max. and top of interior footing shall be -0'-8" max., typ. uno. thus TOF X' - X"
7. Contractor to coordinate slab on grade control joints with 1 / S5.03 .
8. See Geo-Tech report for underslab and footing requirements.
9. For general concrete/foundation details, see sheets S5.01 thru S5.03.
10. F# and CF# Denotes footing type, see 6 / S4.01 .
11. Contractor to coordinate placement of utilities thru or adjacent to the footings or stem walls with detail 1 / S5.02 or the footings may be stepped per 2 / S5.02 at contractors option, typ.
12. S——S Indicates step(s) in footing, see 2 / S5.02 .
13. BPL (#) Denotes base plate type, see 1 / S4.01 .
14. HD# Denotes wood hold-down, see 3 / S4.02 for wood hold-down schedule.
15. -2 1/8" Denotes recess, sloped or elevated floor elevations, coordinate size and location with arch.
16. W# Denotes masonry wall type, see 4 / S4.02 for wall schedule.
17. CJ Denotes masonry control joint location, see 3 / S5.11 for construction. Coordinate with architectural for locations.
18. 0' - 7" # Denotes wood shear wall, see 7 / S4.01.
    For construction Information, see 10 / S5.41.
    All wood shear walls are to be considered LFRS.
    Contractor to field coordinate actual wall lengths and hold-down locations with architectural drawings.
19. For all structural walls and shear walls not shown on this plan, see the framing plan at the floor or roof above.
20. P# Denotes pillaster, see 1 / S4.02 .
21. Floor shall be 3" hard rock concrete over the flutes of 2"x20 ga. galv. Verco W2 Formlok deck or equal. Total thickness = 5". Reinforce concrete with W2.0xW2.0-6X6 WWF placed 1" clear from top of concrete. Deck shall span continuous over 3 or more spans (4 supports). Shore single spans where they exceed 8'-0". Weld deck as follows: using 1/2" dia. net effective puddle welds.
    A. perpendicular bearing: 7 welds per sheet per support.
    B. parallel edges: at 12" oc.
    C. side seams: button punch at 12" oc.

Key Plan



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LE JOB #224217

Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
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1 07/28/23 V.E.
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Agency Review

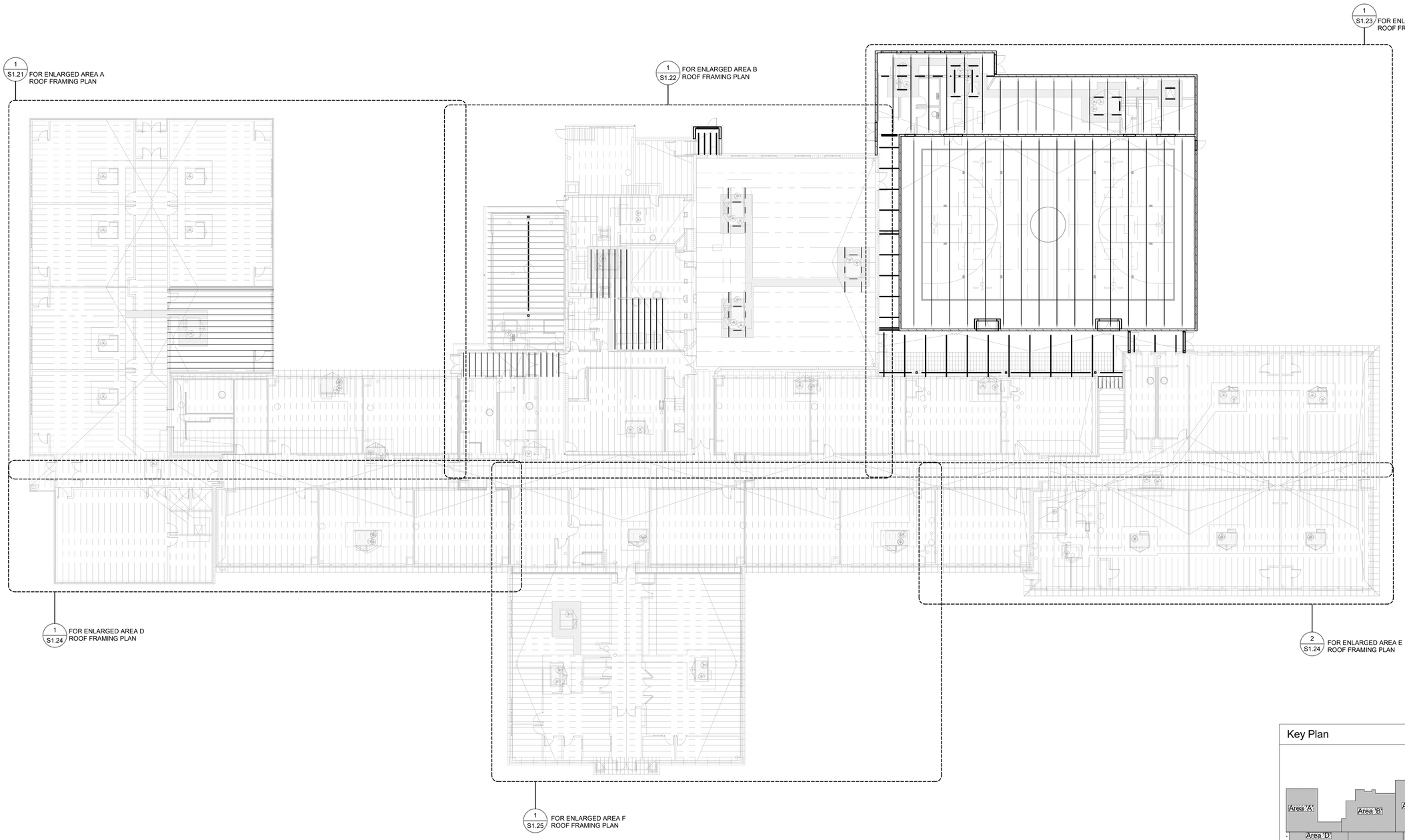
DRAWING NO.

S1.13

AREA C FOUNDATION PLAN

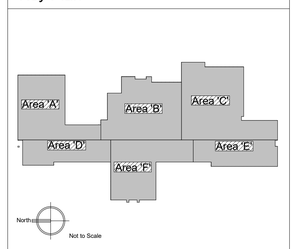
OVERALL PLAN NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For additional information not shown, see plans.



1 OVERALL ROOF FRAMING PLAN
1/16" = 1'-0"

Key Plan



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EXP. 05/31/2024

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Jefferson Elementary School Addition and Remodel

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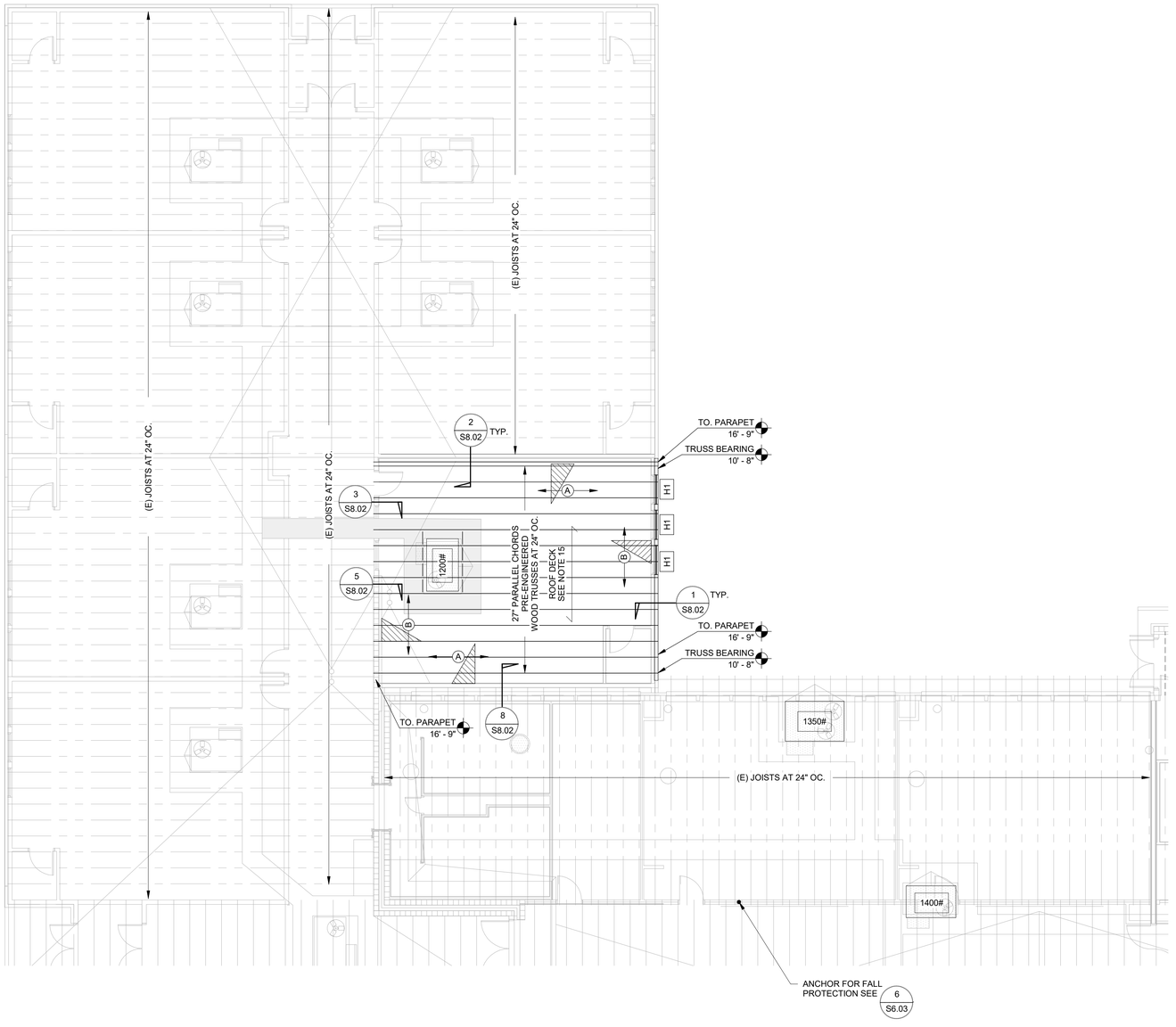
Agency Review

DRAWING NO.

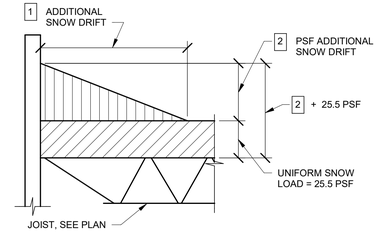
S1.20
OVERALL ROOF FRAMING PLAN



1 AREA A ROOF FRAMING PLAN
1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

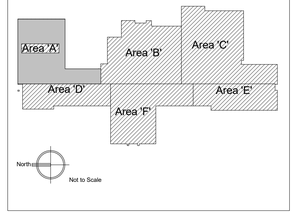
1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For general framing details, see sheets S5.11 thru S5.41.
5. 000# — Roof supported mechanical unit with operating weight. Provide 2x6 blocking under unit between truss. Coordinate exact location, size and number of deck penetrations with mechanical. For additional information, see 7 / S5.41 . At metal roof structure, see 3 / S5.21 for supplemental framing. At all replaced RTUS: If the weight of the new RTU exceeds the weight of the existing RTU, the EOR shall be notified. Strengthening of the existing structure may be required.
6. Field coordinate roof openings and support framing locations. For typical deck reinforcing at deck penetrations, see 7 / S5.41.
7. Roof shall be 1 1/2"x20 ga. Verco B DECK deck or equal. Deck shall span continuous over two or more spans ((3) supports). See Architectural drawings for insulation, roofing etc. Weld deck as follows: using 1/2" net effective puddle welds.
   A. perpendicular bearings: 7 welds per sheet per support.
   B. parallel edges: at 12" oc.
   C. side seams: button punch at 12" oc.
8. For beam to beam or beam to column connection, see 1 / S5.21.
9. BOD X' - X" — Denotes bottom of deck elevation. Work point is a projection up from grid or the center of framing/wall below.
10. L# — Denotes masonry lintel, see schedule on 2 / S4.02.
11. Joist bridging to be designed by joist manufacturer per SJI. For additional information, see 7 / S5.21 .
12. H# — Denotes header, see schedule on 5 / S4.01 .
13. For open web steel joist In addition to all loads indicated on plans, the joist manufacturer shall design all floor and roof joists for a 500 pound concentrated dead load at any location along the length of top chord, and a 250 pound concentrated dead load at any location along the length of bottom chord. The added load indicated above do not need to act simultaneously.
14. Joist manufacturer to apply 1/2" natural camber on first joist from wall.
15. Roof Deck
    19/32" APA T&G sheathing 40/20
    Nailing patterns:
    10d at 6" oc., all panel edges.
    10d at 12" oc., at intermediate supports stagger panel joints.
    For more information see 5 / S5.41.
16. Denotes deck direction.
17. A — Denotes snow drift area to be included in joist design by manufacturer. Loads are as indicated on the snow drift schedule below.
18. JB X' - X" — Denotes joist or beam bearing elevation.



SNOW DRIFT SCHEDULE

MARK	1 LENGTH	2 DRIFT
A	12'-0"	53.5 psf
B	13'-0"	28.5 psf

Key Plan



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EXP. 05/31/2024

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LE JOB #224217

Jefferson Elementary School
Addition and Remodel
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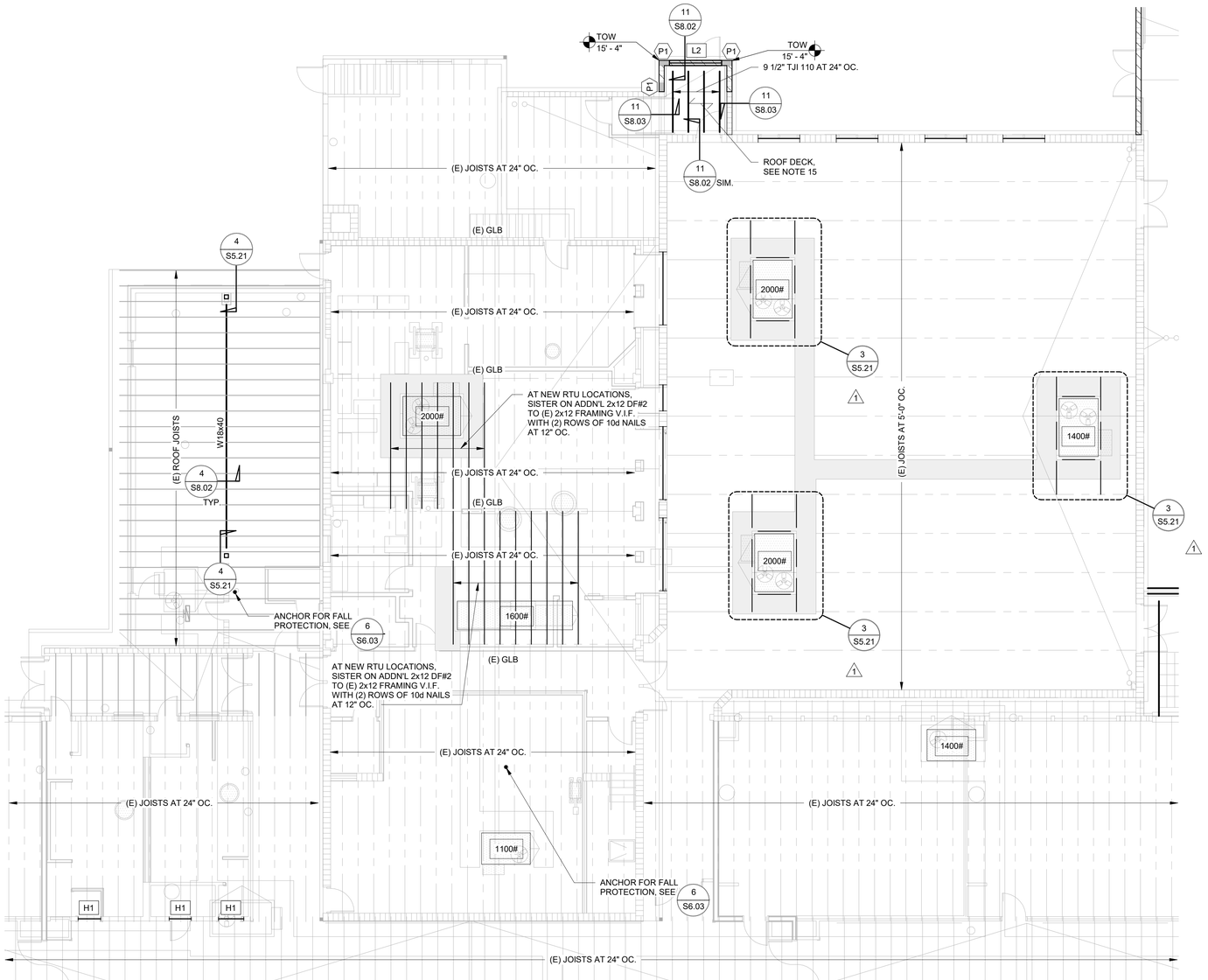
DRAWING NO.
S1.21
AREA A ROOF FRAMING PLAN

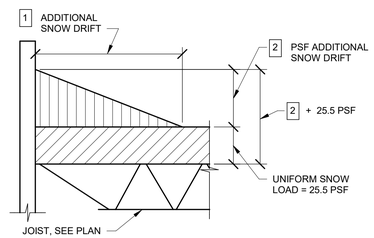


1 AREA B ROOF FRAMING PLAN

1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

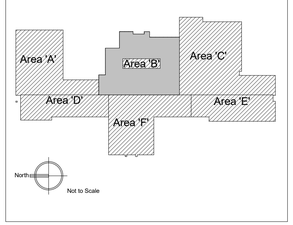
1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For general framing details, see sheets S5.11 thru S5.41.
5. 000# — Roof supported mechanical unit with operating weight. Provide 2x6 blocking under unit between truss. Coordinate exact location, size and number of deck penetrations with mechanical. For additional information, see 7 / S5.41 . At metal roof structure, see 3 / S5.21 for supplemental framing. At all replaced RTUS: If the weight of the new RTU exceeds the weight of the existing RTU, the EOR shall be notified. Strengthening of the existing structure may be required.
6. Field coordinate roof openings and support framing locations. For typical deck reinforcing at deck penetrations, see 7 / S5.41.
7. Roof shall be 1 1/2"x20 ga. Verco B DECK deck or equal. Deck shall span continuous over two or more spans ((3) supports). See Architectural drawings for insulation, roofing etc. Weld deck as follows: using 1/2" net effective puddle welds.
   A. perpendicular bearings: 7 welds per sheet per support.
   B. parallel edges: at 12" oc.
   C. side seams: button punch at 12" oc.
8. For beam to beam or beam to column connection, see 1 / S5.21.
9. BOD X' - X" — Denotes bottom of deck elevation. Work point is a projection up from grid or the center of framing/wall below.
10. L# — Denotes masonry lintel, see schedule on 2 / S4.02.
11. Joist bridging to be designed by joist manufacturer per SJI. For additional information, see 7 / S5.21 .
12. H# — Denotes header, see schedule on 5 / S4.01 .
13. For open web steel joist In addition to all loads indicated on plans, the joist manufacturer shall design all floor and roof joists for a 500 pound concentrated dead load at any location along the length of top chord, and a 250 pound concentrated dead load at any location along the length of bottom chord. The added load indicated above do not need to act simultaneously.
14. Joist manufacturer to apply 1/2" natural camber on first joist from wall.
15. Roof Deck
    19/32" APA T&G sheathing 40/20
    Nailing patterns:
    10d at 6" oc., all panel edges.
    10d at 12" oc., at intermediate supports stagger panel joints.
    For more information see 5 / S5.41.
16. Denotes deck direction.
17. A — Denotes snow drift area to be included in joist design by manufacturer. Loads are as indicated on the snow drift schedule below.
18. JB X' - X" — Denotes joist or beam bearing elevation.



SNOW DRIFT SCHEDULE

MARK	1 LENGTH	2 DRIFT
A	12'-0"	53.5 psf
B	13'-0"	28.5 psf

Key Plan



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Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
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1 05/16/23 Addendum #2
2
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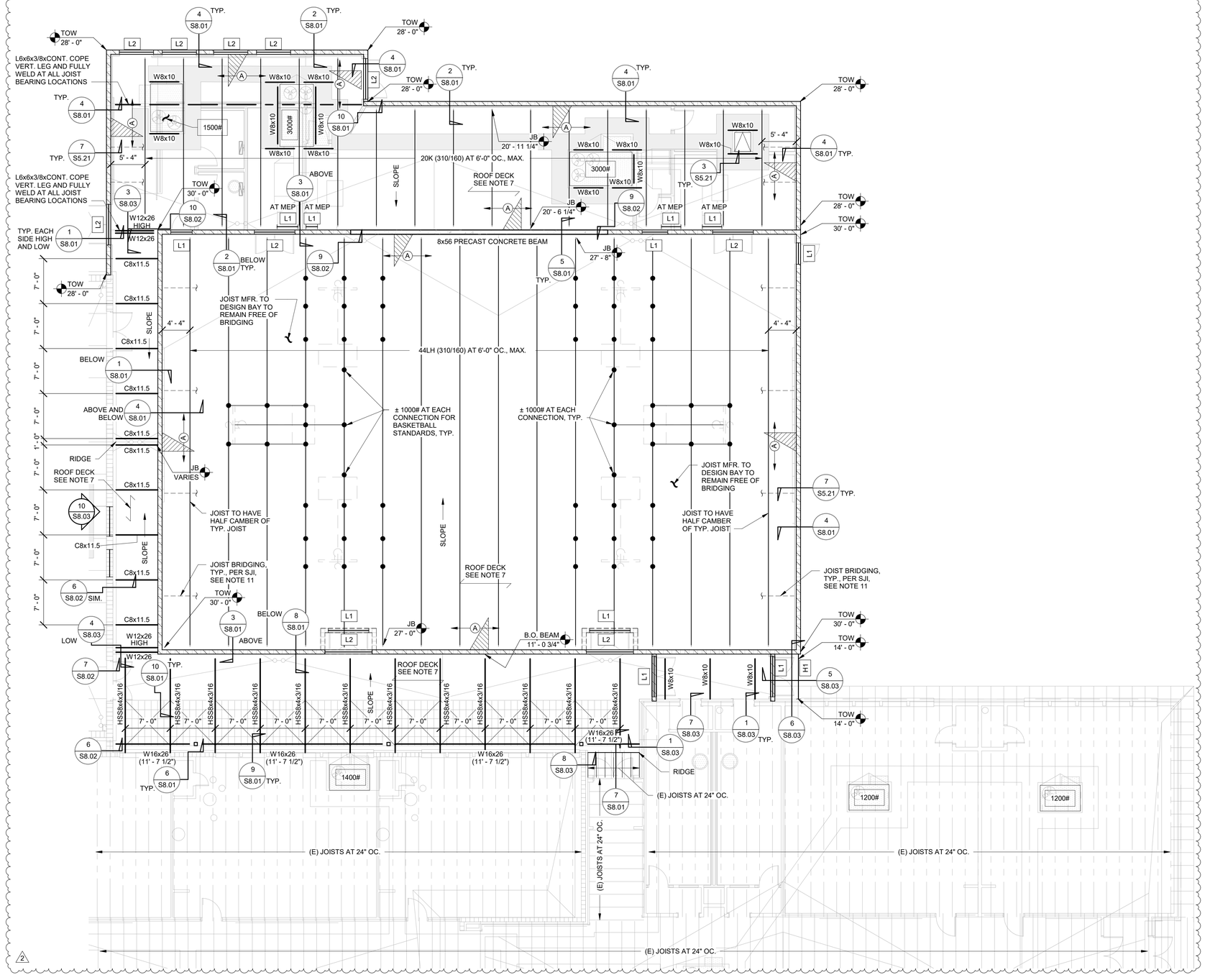
S1.22

AREA B ROOF FRAMING PLAN



1 AREA C ROOF FRAMING PLAN

1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For general framing details, see sheets S5.11 thru S5.41.
5. 000# — Roof supported mechanical unit with operating weight. Provide 2x6 blocking under unit between truss. Coordinate exact location, size and number of deck penetrations with mechanical. For additional information, see 7 / S5.41 . At metal roof structure, see 3 / S5.21 for supplemental framing. At all replaced RTUS: If the weight of the new RTU exceeds the weight of the existing RTU, the EOR shall be notified. Strengthening of the existing structure may be required.
6. Field coordinate roof openings and support framing locations. For typical deck reinforcing at deck penetrations, see 7 / S5.41.
7. Roof shall be 1 1/2"x20 ga. Verco B DECK deck or equal. Deck shall span continuous over two or more spans ((3) supports). See Architectural drawings for insulation, roofing etc. Weld deck as follows: using 1/2" net effective puddle welds.
   - A. perpendicular bearings: 7 welds per sheet per support.
   - B. parallel edges: at 12" oc.
   - C. side seams: button punch at 12" oc.
8. For beam to beam or beam to column connection, see 1 / S5.21.
9. BOD X' - X" — Denotes bottom of deck elevation. Work point is a projection up from grid or the center of framing/wall below.
10. L# — Denotes masonry lintel, see schedule on 2 / S4.02.
11. Joist bridging to be designed by joist manufacturer per SJI. For additional information, see 7 / S5.21 .
12. H# — Denotes header, see schedule on 5 / S4.01 .
13. For open web steel joist In addition to all loads indicated on plans, the joist manufacturer shall design all floor and roof joists for a 500 pound concentrated dead load at any location along the length of top chord, and a 250 pound concentrated dead load at any location along the length of bottom chord. The added load indicated above do not need to act simultaneously.
14. Joist manufacturer to apply 1/2" natural camber on first joist from wall.
15. Roof Deck
    19/32" APA T&G sheathing 40/20
    Nailing patterns:
    10d at 6" oc., all panel edges.
    10d at 12" oc., at intermediate supports stagger panel joints.
    For more information see 5 / S5.41.
16. Denotes deck direction.
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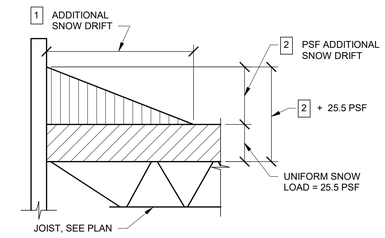
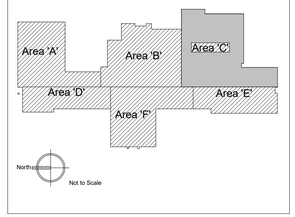
18. JB X' - X" — Denotes joist or beam bearing elevation.



SNOW DRIFT SCHEDULE

MARK	1 LENGTH	2 DRIFT
A	12'-0"	53.5 psf
B	13'-0"	28.5 psf

Key Plan



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PROFESSIONAL ENGINEER REGISTERED 745 07/28/23 STATE OF IDAHO RILEY J MAHAFFEY
EXP. 05/31/2024

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LE JOB #224217

Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
REVISIONS:
1 07/28/23 V.E.
2

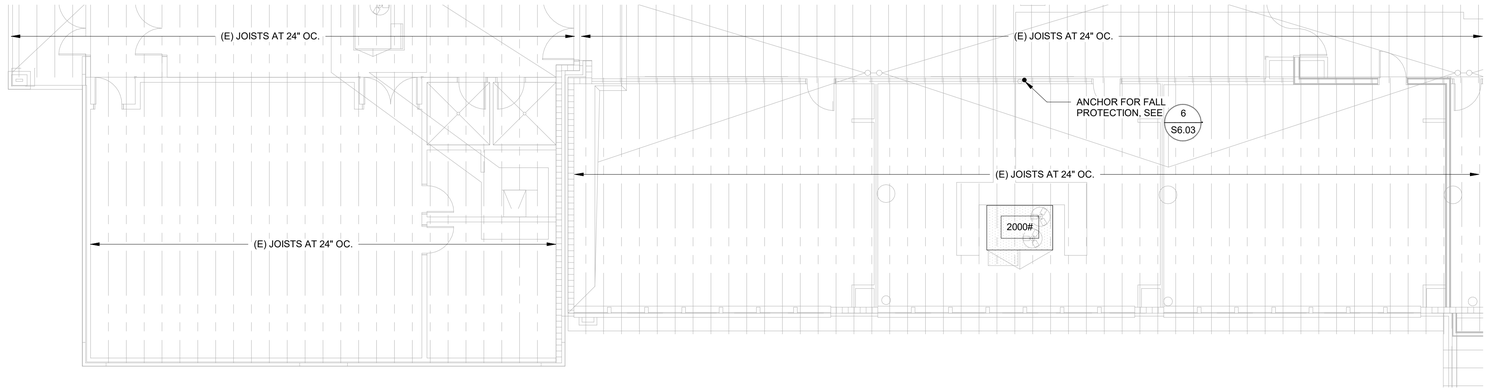
DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.

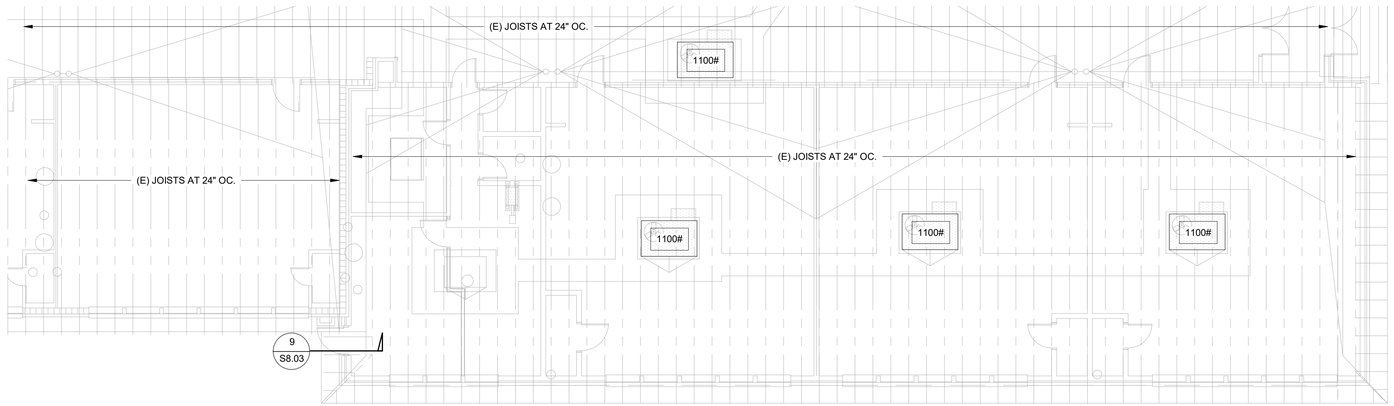
S1.23

AREA C ROOF FRAMING PLAN



1 AREA D ROOF FRAMING PLAN

1/8" = 1'-0"



2 AREA E ROOF FRAMING PLAN

1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

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   C. side seams: button punch at 12" oc.
8. For beam to beam or beam to column connection, see 1 / S5.21.
9. BOD / X' - X" — Denotes bottom of deck elevation. Work point is a projection up from grid or the center of framing/wall below.
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12. H# — Denotes header, see schedule on 5 / S4.01 .
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15. Roof Deck
    19/32" APA T&G sheathing 40/20
    Nailing patterns:
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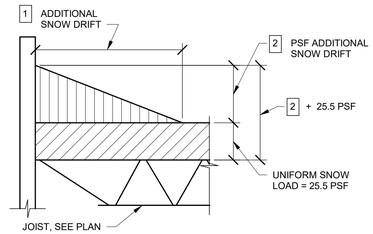
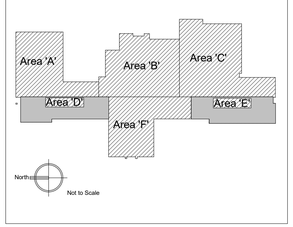
17. A — Denotes snow drift area to be included in joist design by manufacturer. Loads are as indicated on the snow drift schedule below.
18. JB / X' - X" — Denotes joist or beam bearing elevation.



SNOW DRIFT SCHEDULE

MARK	1 LENGTH	2 DRIFT
A	12'-0"	53.5 psf
B	13'-0"	28.5 psf

Key Plan



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PROFESSIONAL ENGINEER REGISTERED 2022 — 17451 — 07/28/23 — STATE OF IDAHO — RILEY J MAHAFFEY

EXP. 05/31/2024

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Phone (208) 342-7168
LE JOB #224217

Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT # -
REVISIONS:
△
△

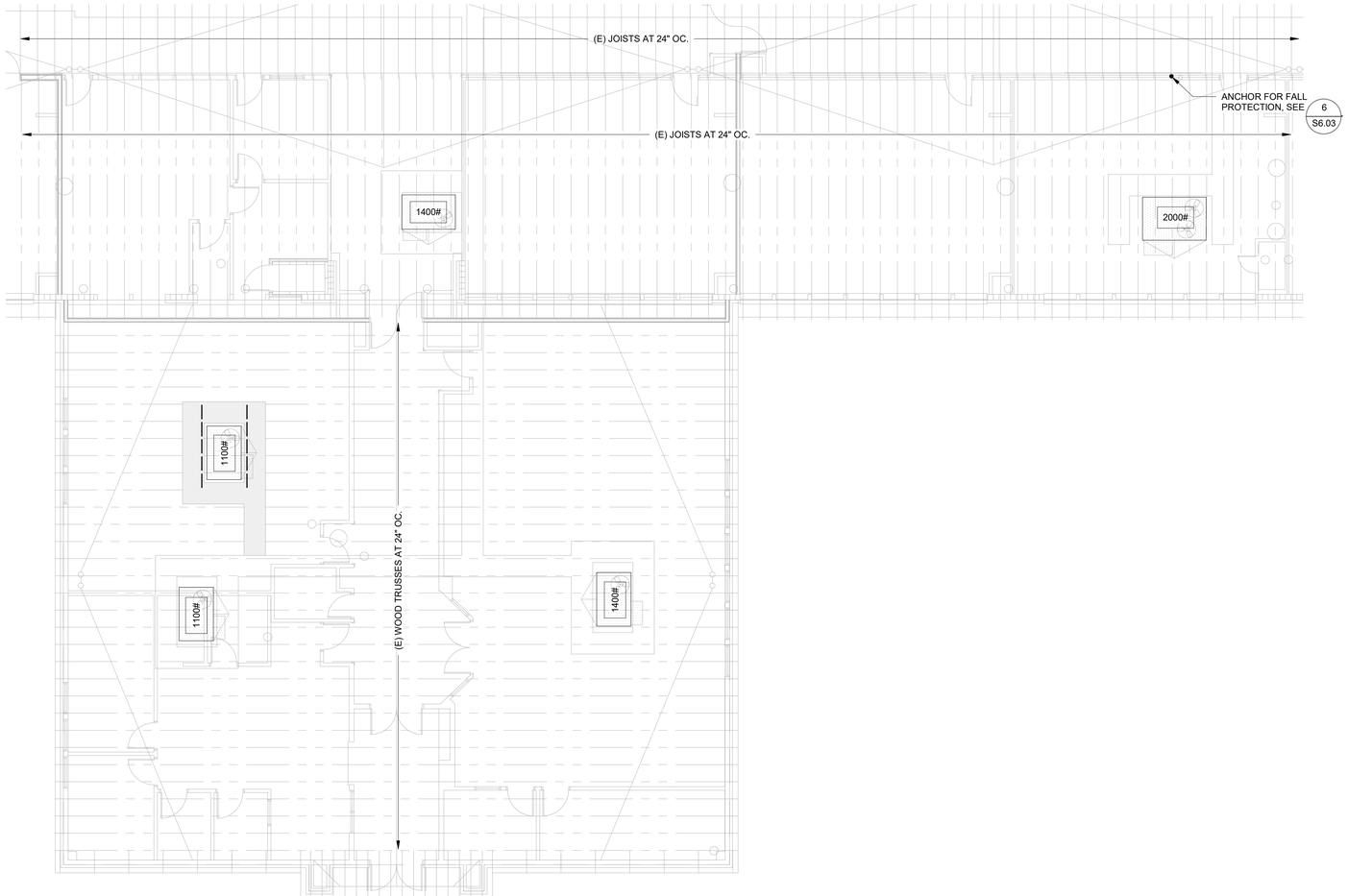
DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.

S1.24

AREA D AND E ROOF FRAMING PLAN



1 AREA F ROOF FRAMING PLAN
1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

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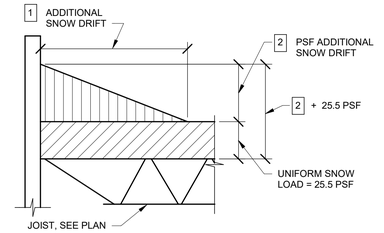
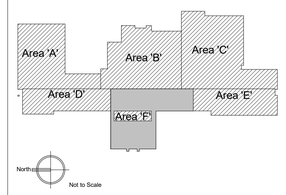


SNOW DRIFT SCHEDULE

MARK	1 LENGTH	2 DRIFT
A	12'-0"	53.5 psf
B	13'-0"	28.5 psf

Key Plan



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PROFESSIONAL ENGINEER REGISTERED 17451 07/28/23 STATE OF IDAHO RILEY J MAHAFFEY
EXP. 05/31/2024

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LE JOB #224217

Jefferson Elementary School
Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

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LKV PROJECT #: -
REVISIONS:
DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

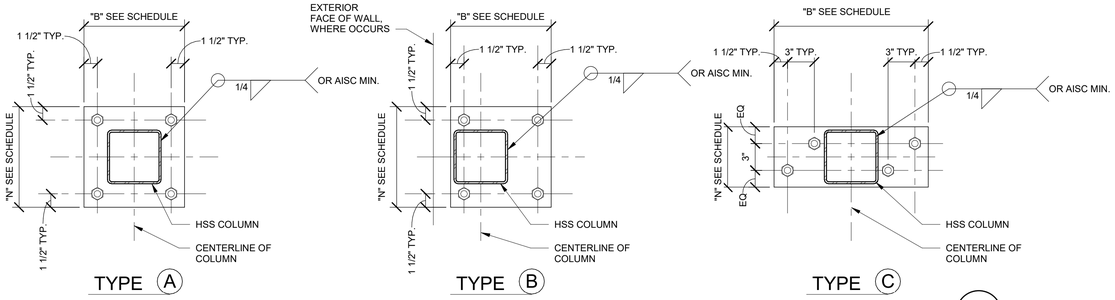
Agency Review

DRAWING NO.
S1.25
AREA F ROOF FRAMING PLAN

BASE PLATE SCHEDULE

BPL#	THICKNESS	DIM 'B'	DIM 'N'	ANCHOR BOLT	TYPE	REMARKS
1	3/4"	12"	12"	(4) 3/4" DIA. x 9" EMBED.	A	-
2	3/4"	12"	12"	(4) 3/4" DIA. x 9" EMBED.	B	-
3	3/4"	12"	8"	(4) 3/4" DIA. x 9" EMBED.	C	-

NOTES:
1. For grout thickness see schedule on 2 / S4.01.
2. Anchor bolt detail, see 3 / S4.01 typ. For bolt grade, see steel notes on sheet S0.04.
3. For anchor bolt hole size, see steel notes on S0.04. For anchor bolt sizes with plate washers, see 4 / S4.01 .



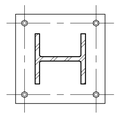
BASE PLATE DETAIL

NO SCALE

1

NON-SHRINK GROUT SCHEDULE

BASE PLATE MINIMUM WIDTH	MINIMUM NON-SHRINK GROUT THICKNESS *
UP TO 16"	1 1/2"

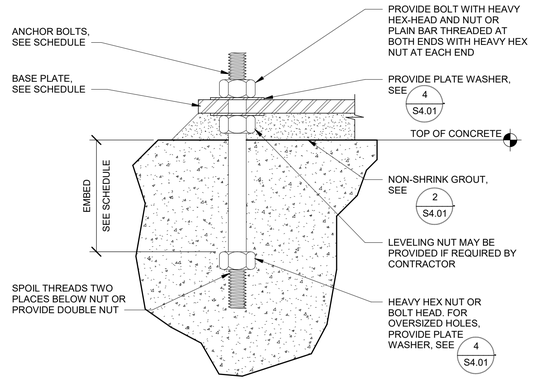


NOTES:
1. Minimum grout thickness shall be 2 times the anchor bolts diameter.
2. Minimum grout strength shall be f'c= 7,000 psi.

TYPICAL NON-SHRINK GROUT AT BASE PLATE

NO SCALE

2



TYPICAL HEADED ANCHOR BOLT

NO SCALE

3

ANCHOR ROD HOLE DIAMETER WITH PLATE WASHER

ANCHOR ROD DIAMETER, IN.	HOLE DIAMETER, IN.	PLATE WASHER DIAMETER, IN.	MIN. PLATE WASHER THICKNESS, IN.
3/4	1 5/16	2	3/8

NOTES:
1. Plate washers are required at contractor's option. For hole diameter with standard washers, see the steel notes on S0.04.
2. Verify adequate clearance for the required plate washer.
3. Circular or square washers meeting the size shown are acceptable.

ANCHOR ROD HOLE DIAMETER WITH PLATE WASHER

NO SCALE

4

HEADER/BEAM SCHEDULE

SYMBOL	HEADER	TRIMMER STUD(S)	KING STUD(S)
H1	(3) 2x10 DF#2	2x6 DF-L 1	2x6 DF-L 1

NOTES:
1. All bearing wall headers are H1 uno.
2. Simpson HU-MAX or HUC-MAX hanger where applicable uno, use trimmer studs at hanger backing.
3. Trimmer studs/posts in schedule typ. uno on plans.
4. Parallams at exterior framing are required to be wolmanized unless they are wrapped with a water proof membrane on (4) sides.
5. See 1 / S5.41 and 6 / S5.41 for additional information.

HEADER/BEAM SCHEDULE

NO SCALE

5

FOOTING SCHEDULE

MARK	SIZE WIDTH	SIZE LENGTH	SIZE THICKNESS	REINFORCING TOP	REINFORCING BOTTOM	REMARKS
CF1.5	1' - 6"	CONT.	1' - 0"	-	(2) #5 CONT.	
CF2	2' - 0"	CONT.	1' - 0"	-	(3) #5 CONT.	
CF3	3' - 0"	CONT.	1' - 0"	(4) #5 CONT. AND #5 AT 12" OC.	(4) #5 CONT. AND #5 AT 12" OC.	
CF4	4' - 0"	CONT.	1' - 0"	(5) #5 CONT. AND #5 AT 12" OC.	(5) #5 CONT. AND #5 AT 12" OC.	
CF7	7' - 0"	CONT.	1' - 0"	(8) #5 CONT. AND #5 AT 12" OC.	(8) #5 CONT. AND #5 AT 12" OC.	
F6A	6' - 0"	4' - 8"	1' - 0"	#5 AT 12" OC. EACH WAY	#5 AT 12" OC. EACH WAY	

NOTES:
1. All rebar to be evenly distributed in footing with minimum required clearances from edges.
2. Footing intersections and corners, see 5 / S5.01.

FOOTING SCHEDULE

NO SCALE

6

WOOD SHEAR WALL SCHEDULE

MARK	SHEATHING MATERIAL	EDGE NAILING	FIELD NAILING	SILL PLATE ANCHOR AT FOUNDATION / SILL PLATE ANCHOR AT FLOOR
1	7/16" APA RATED PLYWOOD ONE SIDE OF WALL	8d COMMON AT 6" OC.	8d COMMON AT 12" OC.	1/2" DIA. AB. AT 48" OC. / OR 16d COMMON AT 9" OC.

NOTES:
1. Studs to be spaced at 16" oc. max. Studs and Blocking at edges shall be 2x nominal. At wall with Blocking at panel edges, stagger nails.
2. Provide full height double studs at ends of shear wall unless noted as post on plan or detail hold-downs as specified on plans shall be attached to double stud or post per details and Mfr. recommendations. Face nail double stud with 16d common at 8" oc. staggered.
3. Install panels either horizontal or vertical.
4. Provide continuous 2x top plate at all shear walls, exterior walls and bearing walls. Lap splice top plate per general detail.
5. Where noted on plan, shear walls shall extend between openings or corner of wall unless length is noted. Sheathing shall not be interrupted by intersection walls.
6. 3/8" minimum nail spacing from panel, stud or block edge. All nails to be common nails. Minimum nail dimensions are as follows:
   A. 8d common = 0.131" dia. x 2 1/2" long
   B. 10d common = 0.148" dia. x 3" long
7. Oriented Strand Board (OSB) may be substitute for rated plywood. Provide same thickness, rating, nail size and spacing, and blocking.
8. A minimum of (2) anchor bolts shall be used on each plate piece. Provide anchor bolt within 9" of end of each piece.
9. When sheathing is applied on each face of wall, stagger plywood joints and use (2) 2x studs. When edge nailing is at 2" oc. stagger nails and use (2) 2x studs.
10. Min. embed anchor bolt depth: 1/2" dia. bolts x 9", 5/8" dia. bolts x 10", 3/4" dia. bolts x 12".
11. Fasteners (nails, screws, anchor bolts) in preservative treated wood are to be approved silicon bronze or copper, stainless steel or hot dipped zinc coated steel, per IBC 2304.9.5.

    The following notes only apply to projects located in seismic design categories D, E, and F:

12. Washer plate holes are permitted to be diagonally slotted with a width 3/16" larger than the bolt dia. and a slot length 1 3/4" or less, provided a standard cut washer is placed between the plate washer and the nut.
13. At shear walls where edge nailing is 4" oc. or less stagger nailing, also provide 3x nominal sill plate and 3x (or (2) 2x) nominal studs at panel joints.

SHEAR WALL SCHEDULE

NO SCALE

7

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Agency Review

DRAWING NO.

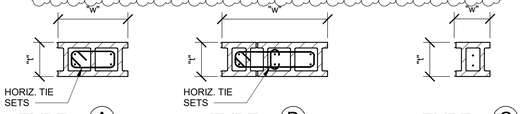
S4.01

SCHEDULES

MASONRY PILASTER SCHEDULE

MARK	"t"	"w"	REINFORCING VERTICAL	REINFORCING HORIZONTAL	STRENGTH F'm/F'c (psi)	TYPE
P1	8"	1' - 4"	(2) #5 EACH CELL ONE EACH FACE	#3 AT 8" OC.	2000	A
P2	8"	1' - 4"	NOT USED			A
P3	8"	2' - 8"	(2) #5 EACH CELL ONE EACH FACE	#3 AT 8" OC.	2000	B
P4	8"	2' - 0"	(2) #5 EACH CELL ONE EACH FACE	#3 AT 8" OC.	2000	B
P5	8"	0' - 8"	(2) #5 EACH CELL ONE EACH FACE	-	2000	C
P6	8"	0' - 8"	(2) #5 EACH CELL ONE EACH FACE	-	2000	C
P7	8"	1' - 0"	(2) #5 EACH CELL ONE EACH FACE	#3 AT 8" OC.	2000	A

NOTES:
1. See details on S5.11 for reinforcing placement.
2. All rebar centered in each cell, uno.
3. Pilasters shown on 2nd floor are to be cont. to foundation uno.
4. Pilasters are to be continuous to top of masonry, uno.



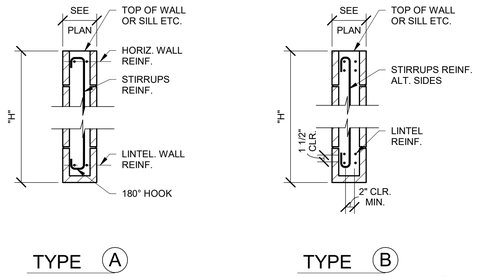
MASONRY PILASTER SCHEDULE AND SECTIONS 1

NO SCALE

LINTEL SCHEDULE

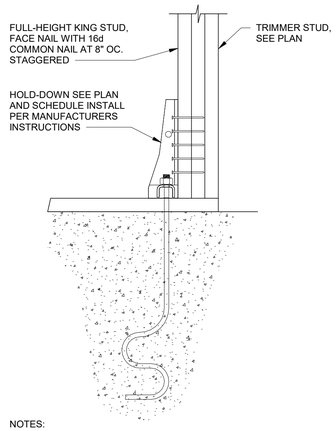
MARK	OPENING WIDTH	HEIGHT "H"	REINFORCING BOTTOM BARS	REINFORCING TOP BARS	STIRRUPS	F'm =	TYPE	NOTES
L1	SEE PLAN	24" MIN.	(2) #5	(2) #5	#3 AT 8" OC.	2000	A	-
L2	SEE PLAN	40" MIN.	(2) #5	(2) #5	#3 AT 8" OC.	2000	A	-

NOTES:
1. Typical lintel jamb construction, see 4 / S5.11.
2. #5 each face horizontal bars at 16" oc.



LINTEL SCHEDULE AND SECTIONS 2

NO SCALE



NOTES:
1. Enlarge footing to provide 3" clear at bolt as required.
2. Embed length is below curb or slab step where occurs.

HOLD-DOWN SCHEDULE

HOLD-DOWN	EMBED. AT FOUNDATION AND / OR ANCHOR BOLT	CONNECTION TO KING STUD	MIN. KING STUD WIDTH
HDU2	SSTB16 WITH 13" EMBED	(6) 1/4" x 2 1/2" SDS SCREWS	3"

NOTES:
1. Hold-down shall be Simpson or equal with ICC approval. All substitutes shall be reviewed by the engineer of record before installation.
2. Fixed-length straps shall be installed with and equal number of fasteners in each member.

TYPICAL WOOD HOLD-DOWN DETAILS 3

NO SCALE

MASONRY WALL SCHEDULE

MARK	WALL THICKNESS	REINFORCING VERTICAL	REINFORCING HORIZONTAL	STRENGTH F'm (psi)	REMARKS
W1	8"	STAGGER EACH FACE, SEE 5 / S5.11	#5 AT 48" OC. EACH FACE	2000	GROUT SOLID
W2	8"	#5 VERT. AT 48" OC.	#5 AT 48" OC. EACH FACE	2000	GROUT SOLID

NOTES:
1. W1 Typical reinforcing for all 8" masonry walls uno.
2. All wall reinforcing callout on foundation plan are continuous to top of wall uno.
3. All rebar centered in each cell, unless noted otherwise.
4. All walls to have (2) #5 in bond beams at 48" oc. uno. Also provide double bond beams at floors, roofs, and #5 at top of walls.
5. Provide additional reinforcing at wall openings, ends, corners and intersections per detail sheet S5.11 special inspection is required. See sheet S5.11 for masonry typ. details. Solid grout all cells. All masonry bearing walls are to be considered LFRS.

MASONRY WALL SCHEDULE 4

NO SCALE

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PROFESSIONAL ENGINEER REGISTERED
7451
07/28/23
STATE OF IDAHO
RILEY J MAHAFFEY
EXP. 05/31/2024

Lochsa engineering
201 N. Maple Grove Ste. 100
BOISE IDAHO 83704
Phone (208) 342-7168
LE JOB #224217

Jefferson Elementary School
Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

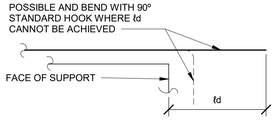
DATE: July 28, 2023
LKV PROJECT # : -
REVISIONS:
2 07/28/23 V.E.
1
DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.
S4.02
SCHEDULES – MASONRY PILASTER/LINTEL

BAR SIZE	f'c = 3000 psi				f'c = 4000 psi				f'c = 4500 psi			
	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	22	33	17	25	19	28	15	22	18	27	14	21
#4	29	43	22	33	25	37	19	29	24	35	18	27
#5	36	54	28	41	31	47	24	36	30	44	22	34
#6	43	64	33	50	37	56	29	43	35	53	27	41
#7	63	94	48	72	54	81	42	63	51	77	39	59
#8	72	107	55	82	62	93	48	71	59	88	45	68
#9	81	121	62	93	70	105	54	81	66	99	50	76
#10	91	136	70	105	79	118	61	91	74	111	57	86
#11	101	151	78	116	87	131	67	101	82	123	63	95
#14	121	181	93	139	105	157	81	121	99	148	76	114
#18	161	241	124	186	139	209	107	161	132	197	101	152

NOTES:
1. Table for use with normal weight hardrock concrete and grade 60 uncoated reinforcing bars. For lightweight aggregate use 1.3ℓ.
2. Top bars are horizontal bars with 12" or more of concrete cast in the member below the bar.
3. For bars enclosed in standard column spirals, use 0.75 ℓ or 12" min.
4. Development length of individual bars within a bundle shall be 1.2 ℓd for that bar in a (3) bar bundle and 1.33 ℓd for a (4) bar bundle.
5. Compression development length (only where indicated on drawings) For grade 60 bars use 22 bar diameters.
6. Case Selection
   - A. -For foundation reinforcement use Case 1 uno.
   - B. For foundation that have two layers of reinforcement in one direction top or bottom use Type 2.
   - C. -For column reinforcement and dowels use Case 1 uno.
   - D. -For beam reinforcement use Case 1 uno.
   - E. -For structural slab reinforcement use Case 2 uno.
   - F. -For slab on grade reinforcement use Case 1 uno.
   - G. -For wall reinforcement and dowels use Case 2 (Except as noted below) uno.
   - H. -For walls with a single mat of steel centered in the wall, use Case 1 for wall reinforcement and dowels uno.
   - I. -For chord steel reinforcement use Case 2 uno.



TENSION DEVELOPMENT LENGTH (CONCRETE ONLY) 1

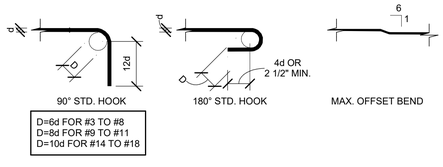
NO SCALE

BAR SIZE	LAP CLASS	f'c = 3000 psi				f'c = 4000 psi				f'c = 4500 psi			
		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	A	22	32	17	25	19	28	15	22	18	27	14	21
	B	28	42	22	32	24	36	19	28	23	35	18	27
#4	A	29	43	22	33	25	37	19	29	24	35	18	27
	B	37	56	29	43	32	48	25	37	31	46	23	35
#5	A	36	54	28	41	31	47	24	36	30	44	22	34
	B	47	70	36	54	40	60	31	47	39	57	29	44
#6	A	43	64	33	50	37	56	29	43	35	53	27	41
	B	56	84	43	64	48	72	37	56	46	69	35	53
#7	A	63	94	48	72	54	81	42	63	51	77	39	59
	B	81	122	63	94	70	106	54	81	66	100	51	77
#8	A	72	107	55	82	62	93	48	71	59	88	45	68
	B	93	139	72	107	80	121	62	93	77	114	58	88
#9	A	81	121	62	93	70	105	54	81	66	99	50	76
	B	105	157	81	121	91	136	70	105	86	129	66	99
#10	A	91	136	70	105	79	118	61	91	74	111	57	86
	B	118	177	91	136	102	153	79	118	96	144	74	112
#11	A	101	151	78	116	87	131	67	101	82	123	63	95
	B	131	196	101	151	113	170	87	131	107	160	82	124

NOTES:
1. Table for use with normal weight hardrock concrete and grade 60 uncoated reinforcing bars. For lightweight aggregate use 1.3ℓ.
2. Class A - Half or less of the bars are spliced within a required lap length. Class B - More than half of the bars are spliced within a required lap length.
3. Top bars are horizontal bars with 12" or more of concrete cast in the member below the bar.
4. For bars enclosed in standard column spirals, use 0.75ℓ or 12" min.
5. Lap splices of individual bars with a bundle shall be 1.2ℓ for that bar in a (3) bar bundle and 1.33ℓ for a (4) bar bundle. Entire bundles shall not be staggered such that they do not overlap.
6. ℓ - Basic lap length, shown at left.
7. Case Selection
   - A. -For foundation reinforcement use Case 1 uno.
   - B. -For column reinforcement and dowels use Case 1 uno.
   - C. -For beam reinforcement use Case 1 uno.
   - D. -For structural slab reinforcement use Case 2 uno.
   - E. -For slab on grade reinforcement use Case 1 uno.
   - F. -For wall reinforcement and dowels use Case 1 (Except as noted below) uno.
   - G. -For walls with a single mat of steel centered in the wall, use Case 1 for wall reinforcement and dowels uno.
   - H. -For chord steel reinforcement use Case 2 uno.
8. Different size bars are to be lapped by the larger bar.
9. Different diameter bars are to be lapped per the larger bar.

TENSION LAP SPLICE (CONCRETE ONLY) TENSION LAP SPLICE LENGTHS, (IN INCHES) FOR GRADE 60 UNCOATED BARS 2

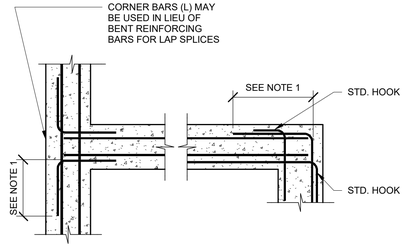
NO SCALE



NOTES:
1. All bends shall be made cold.
2. #14 and #18 bars shall be bend tested and lab approved prior to bending.

BAR BENDS 4

NO SCALE



NOTE:
1. Use tension lap splices, see 2 / S5.01.

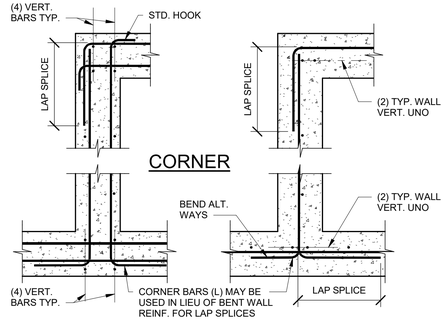
REINFORCING AT FOOTING INTERSECTIONS 5

NO SCALE

BAR SIZE	GRADE	l_{dh} (in)	
		f'c = 3000	f'c = 4000
#3	60	8	7
#4	60	11	9 1/2
#5	60	13 1/2	12
#6	60	16 1/2	14
#7	60	19	16 1/2
#8	60	22	19
#9	60	24 1/2	21 1/2
#10	60	31	6
#11	60	37	32
#14	60	49 1/2	43

HOOKED BAR SCHEDULE 3

NO SCALE

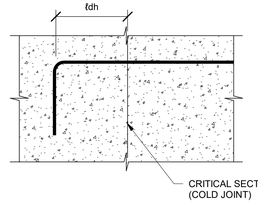


NOTE:
1. Use tension lap splices, see 2 / S5.01.

REINFORCING AT WALL INTERSECTIONS 6

NO SCALE

NOTES:
1. Table for use with normal weight hardrock concrete. For lightweight aggregate use 1.3ℓdh.
2. Table for use with uncoated reinforcement. For coated reinforcement, use 1.5ℓdh.
3. Effects of light weight aggregate and epoxy coating are cumulative.
4. For typical bar bends, see 4 / S5.01 .



GENERAL DETAIL NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For all top of footing, top of slab, and slab on grade construction, see foundation plan.
5. Columns and base plates are called out on plans and coordinated in the schedule shown on S4.01.
6. Sub-grade material below slabs and footings shall be constructed as indicated by geo-tech report.
7. For structural framing sizes, bottom of deck and top of steel elevations, see plans.
8. For floor deck size, attachment, span direction,and finish floor elevations, see plans.
9. For typical bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. For all typical construction details not shown on this sheet, see all "S5" series drawings.

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Jefferson Elementary School Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

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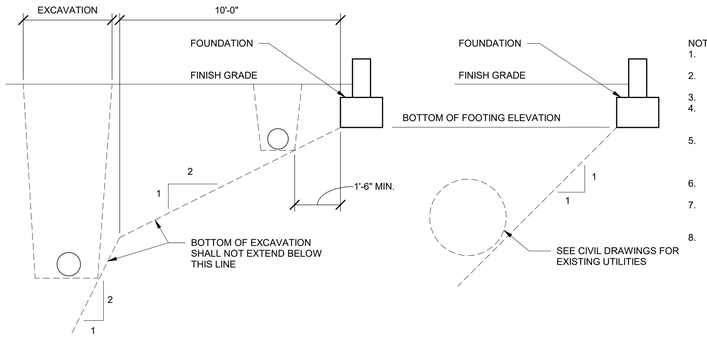
REVISIONS:
△
△

DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

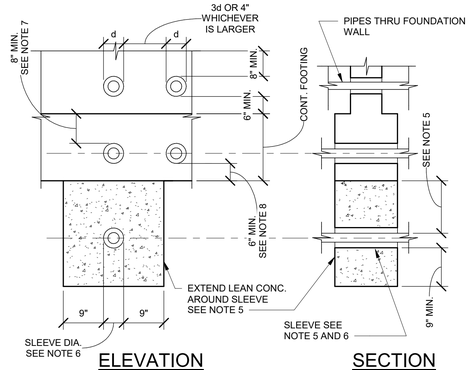
DRAWING NO.
S5.01
GENERAL CONCRETE DETAILS



FOUNDATION PARALLEL TO EXCAVATION

EXISTING UTILITY PARALLEL TO FOUNDATION

NOTES:
1. Contractor shall locate bottom of excavation to avoid surcharge on utilities and other foundations.
2. Contractor shall coordinate all excavations with foundation with foundation requirements.
3. Step foundation as required see 2 / S5.02.
4. Contractor shall adhere to the recommendations in the Geotechnical Notes, for all excavations, backfill requirements etc.
5. Pipes that are less than 4'-0" below foundation, provide sleeve and encase in lean concrete. For pipes more than 4'-0" below foundation, compact soil in pipe trench per soils report.
6. Sleeves shall be minimum 1" clear all around pipes, conduit etc.
7. For pipes within the footing thickness and are less than 8" from top of footing, step footing as required to pass pipes through stem wall.
8. For pipes passing through footing and are less than 6" clear from bottom of footing see 3 / S5.02 .



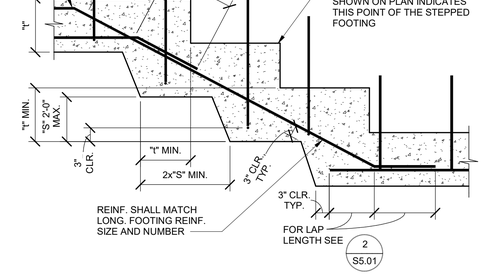
ELEVATION SECTION

UTILITY (PIPES) THROUGH FOUNDATIONS

FOUNDATION AT OR ADJACENT TO EXCAVATIONS AND UTILITIES

1

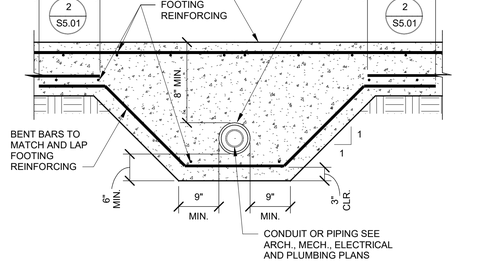
NO SCALE



STEPPED FOOTING

2

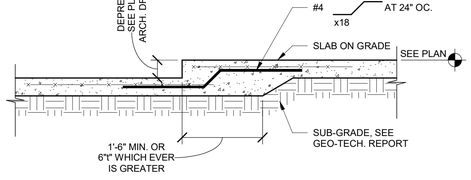
NO SCALE



THICKENED FOOTING AT CONDUIT AND PIPING

3

NO SCALE



STEP IN SLAB ON GRADE

4

NO SCALE

GENERAL DETAIL NOTES

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3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For all top of footing, top of slab, and slab on grade construction, see foundation plan.
5. Columns and base plates are called out on plans and coordinated in the schedule shown on S4.01.
6. Sub-grade material below slabs and footings shall be constructed as indicated by geo-tech report.
7. For structural framing sizes, bottom of deck and top of steel elevations, see plans.
8. For floor deck size, attachment, span direction,and finish floor elevations, see plans.
9. For typical bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. For all typical construction details not shown on this sheet, see all "S5" series drawings.

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Agency Review

DRAWING NO.

S5.02
GENERAL CONCRETE DETAILS

GENERAL DETAIL NOTES

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3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For all top of footing, top of slab, and slab on grade construction, see foundation plan.
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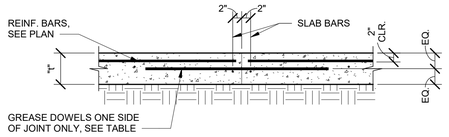
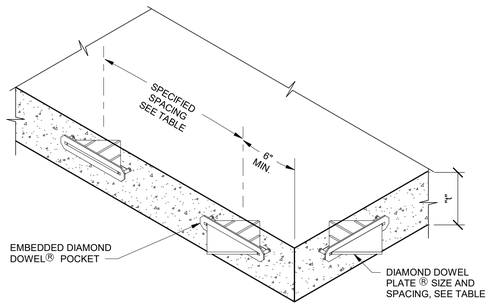
6. Sub-grade material below slabs and footings shall be constructed as indicated by geo-tech report.
7. For structural framing sizes, bottom of deck and top of steel elevations, see plans.
8. For floor deck size, attachment, span direction,and finish floor elevations, see plans.
9. For typical bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. For all typical construction details not shown on this sheet, see all "S5" series drawings.



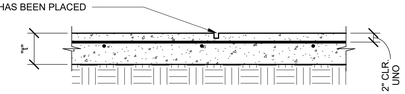
NOTE:
1. Contractors shall obtain architect's approval for all joint locations.

CONSTRUCTION JOINT (A)



ALT. CONSTRUCTION JOINT REINF. (C)

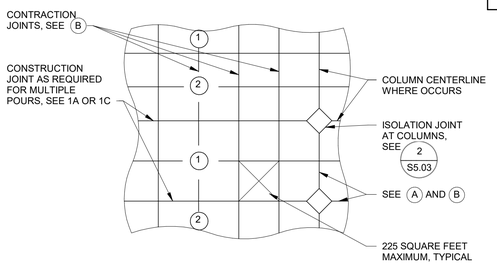
CONTRACTION JOINT, SAW CUT 1/8" WIDE x 1" DEEP MIN., SEE NOTE 2. SAWING MUST OCCUR AS SOON AS CONCRETE SURFACE IS FIRM ENOUGH SO CONCRETE WILL NOT BE DAMAGED, BUT NO LATER THAN 12 HOURS AFTER CONCRETE HAS BEEN PLACED



NOTES:
1. Contraction joint spacing to be max. 10'-0" for 4" slabs, or as directed per ACI 360.
2. Contraction joint to be 0'-1" for 4" slabs, 0'-1 1/4" for 5" slabs, and 0'-1 1/2" for 6" and thicker slabs.

CONTRACTION JOINT (B)

CONSTRUCTION JOINT - DOWELS OR DIAMOND PLATES SIZE AND SPACING				
	OPTION A - DOWELS		OPTION C - DIAMOND LOAD PLATE	
SLAB DEPTH "t" INCHES	DOWEL DIMENSIONS	DOWEL SPACING CENTER TO CENTER	DIAMOND LOAD PLATE DIMENSIONS	DIAMOND LOAD PLATE SPACING CENTER TO CENTER
4"	3/4" x 1'-4"	24"	1/4" x 4 1/2" x 4 1/2"	18"



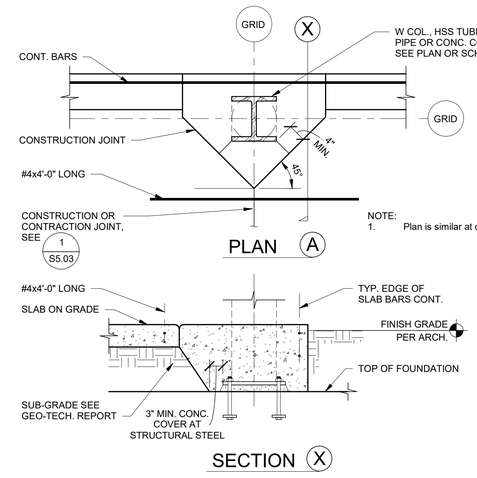
NOTES:
1. Slab shall be placed in strip pattern.

(1) = First (2) = Second

2. Strips to be divided by construction joints at the centerline of columns where they occur and subdivided as required into areas not exceeding 225 sqft. by construction joints.
3. In areas where columns do not occur provide construction and contraction joints as above.
4. Contractors shall obtain architect's approval for all joint locations.
5. Diamond Dowel System® is manufactured by PNA Construction Technologies, Inc. or Engineered approved equivalent.
6. Comply with ACI302.IR04, ACI360R-06 and ACI detailing material (SP66).
7. Use internal vibration to consolidate concrete around diamond shear plate, per industry guidelines.

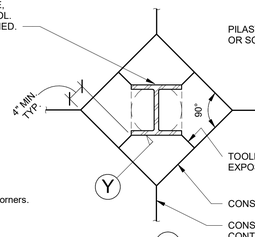
SLAB JOINT INFORMATION (1)

NO SCALE

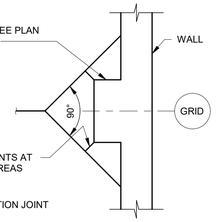


PLAN (A)

NOTE:
1. Plan is similar at corners.

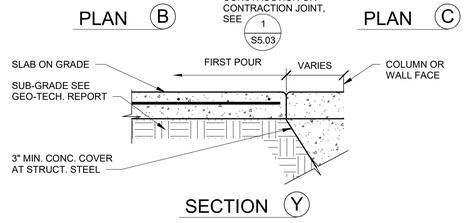


PLAN (B)



PLAN (C)

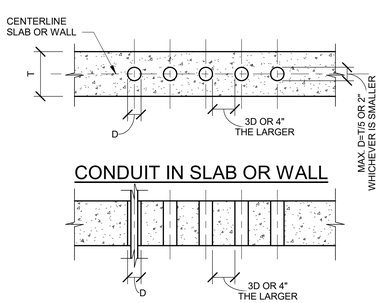
SECTION (X)



SECTION (Y)

COLUMN ISOLATION JOINTS (2)

NO SCALE



CONDUIT IN SLAB OR WALL

PIPING THRU SLAB OR WALL

NOTE:
1. Where clear distance between sleeves is impossible this area shall be treated as a slab opening or as a wall opening.

PIPING CONDUIT IN OR THRU SLAB OR WALL (3)

NO SCALE

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DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.

S5.03

GENERAL SLAB DETAILS

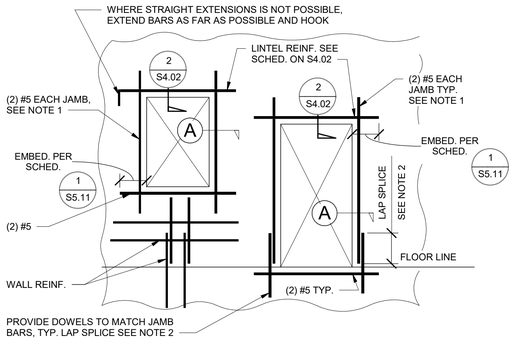
TENSION DEVELOPMENT AND LAP SPLICE LENGTH (FOR MASONRY ONLY)

CMU Thickness	BAR SIZE \ Placement of Bar	Masonry Design Strength f'm = 2000 psi Center	Edge
8"	#3	13.1	13.1
	#4	17.4	20.5
	#5	21.8	33.0
	#6	37.1	64 (2)
12"	#3	13.1	13.1
	#4	17.4	20.5
	#5	21.8	33.0
	#6	34.0	54.0

NOTES:
1. All lengths are in inches.
2. For bar placement, edge distance (d Dim.) see 5 / S5.11.
3. Where (2) bars per cell occur they shall be placed per edge condition see note 2.
   A. For 8" masonry wall, (2) bars per cell up to #5 are permitted.
4. NP indicates Not Permitted.
5. #10 and #11 bars where shown on plans or details require a mechanical splice.

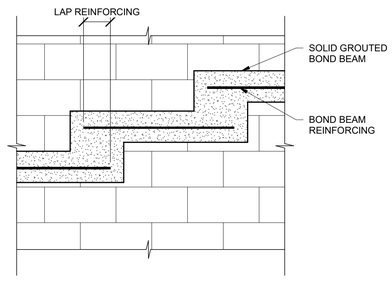
TENSION DEVELOPMENT AND LAP SPLICE LENGTH (FOR MASONRY ONLY) 1

NO SCALE



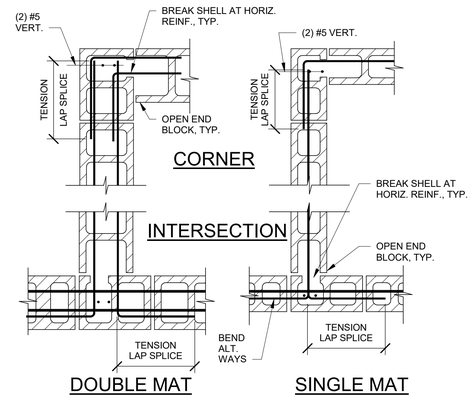
MASONRY WALL OPENINGS AND DETAILS 4

NO SCALE



STEPPED MASONRY WALL BOND BEAM 6

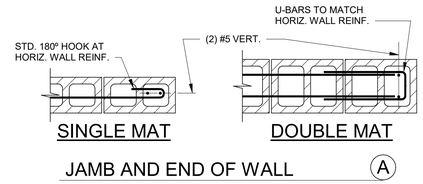
NO SCALE



NOTE:
1. Tension lap splice see schedule 1 / S5.11.

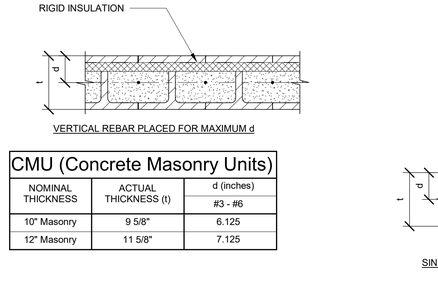
MASONRY WALL INTERSECTIONS 2

NO SCALE



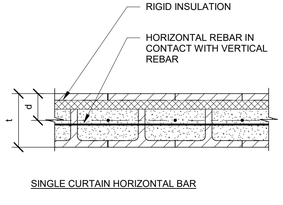
JAMB AND END OF WALL A

NOTES:
1. Extend jamb bars full height of wall when width of opening is more than 4'-0".
2. Typical tension lap splice per schedule 1 / S5.11 .



VERTICAL REBAR PLACED FOR MAXIMUM d

CMU (Concrete Masonry Units)		
NOMINAL THICKNESS	ACTUAL THICKNESS (t)	d (inches)
		#3 - #6
10" Masonry	9 5/8"	6.125
12" Masonry	11 5/8"	7.125



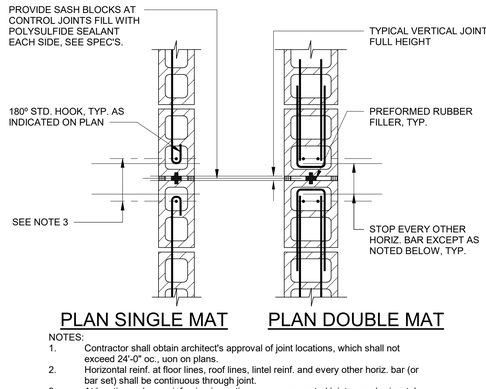
SINGLE CURTAIN HORIZONTAL BAR

NOTE:
1. Where two vertical reinforcing bars occur in a cell, bars shall be secured in place by a bar positioned at the top and bottom, and at intervals not exceeding 200 bar diameters.

HI-R MASONRY REBAR PLACEMENT 7

NO SCALE

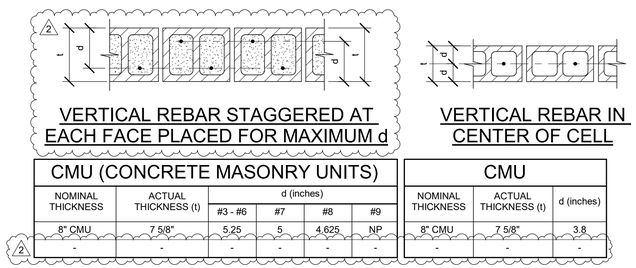
SCHED.I-68



NOTES:
1. Contractor shall obtain architect's approval of joint locations, which shall not exceed 24'-0" oc., uon on plans.
2. Horizontal reinf. at floor lines, roof lines, lintel reinf. and every other horiz. bar (or bar set) shall be continuous through joint.
3. At locations where reinforcing is continuous across control joint, wrap horizontal reinforcing with mastic for 1'-4" each side of joint. Do not lap bars within 4'-0" each side of joint.
4. Provide vertical wall reinf. each side of joint, #5 bars min.

PLAN DETAIL - MASONRY WALL CONTROL JOINT 3

NO SCALE

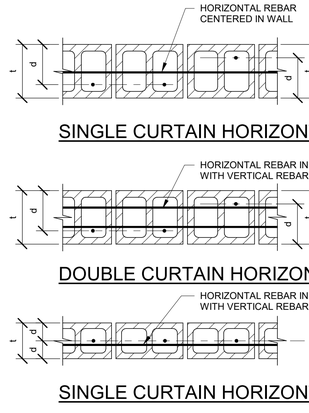


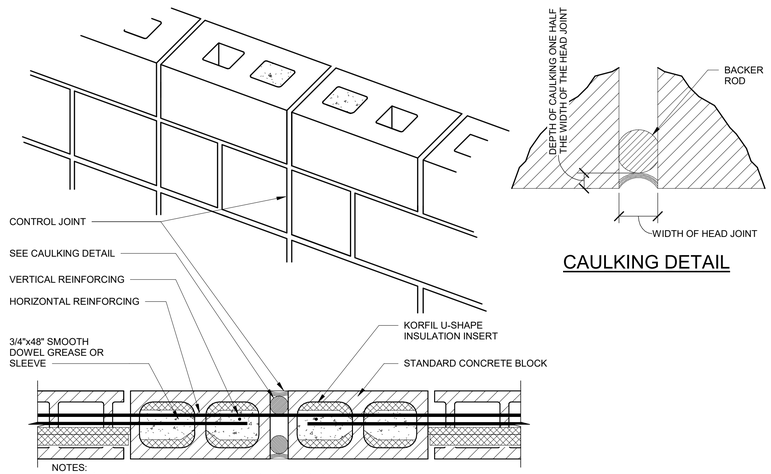
CMU (CONCRETE MASONRY UNITS)						CMU		
NOMINAL THICKNESS	ACTUAL THICKNESS (t)	d (inches)				NOMINAL THICKNESS	ACTUAL THICKNESS (t)	d (inches)
		#3 - #6	#7	#8	#9			
8" CMU	7 5/8"	5.25	5	4.625	NP	8" CMU	7 5/8"	3.8
-	-	-	-	-	-	-	-	-

NOTE:
1. Where two vertical reinforcing bars occur in a cell, bars shall be secured in place by a bar positioned at the top and bottom, and at intervals not exceeding 200 bar diameters.

PLAN DETAIL FOR REBAR PLACEMENT IN MASONRY 5

NO SCALE





NOTES:
1. Max. control joint spacing 24'-0" coordinate with architect.
2. Leave bond beam cont. at top of wall and at all intersecting floors.

CMU CONTROL JOINT AT HI-R BLOCK 8

NO SCALE

GENERAL DETAIL NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For all top of footing, top of slab, and slab on grade construction, see foundation plan.
5. Columns and base plates are called out on plans and coordinated in the schedule shown on S4.01.
6. Sub-grade material below slabs and footings shall be constructed as indicated by geo-tech report.
7. For structural framing sizes, bottom of deck and top of steel elevations, see plans.
8. For floor deck size, attachment, span direction,and finish floor elevations, see plans.
9. For typical bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. For all typical construction details not shown on this sheet, see all "S5" series drawings.

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EXP. 05/31/2024

Lochsa engineering
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BOISE IDAHO 83704
Phone (208) 342-7168
LE JOB #224217

Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

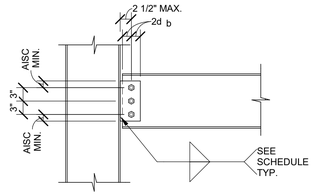
DATE: July 28, 2023
LKV PROJECT # : -
REVISIONS:
2 07/28/23 V.E.
1

DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

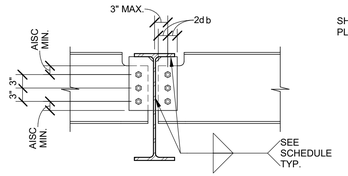
Agency Review

DRAWING NO.

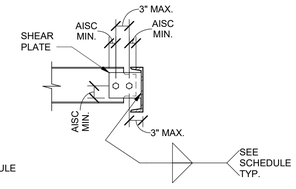
S5.11
GENERAL MASONRY DETAILS



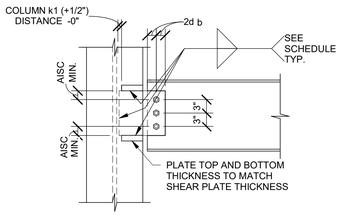
BEAM TO COLUMN FLANGE



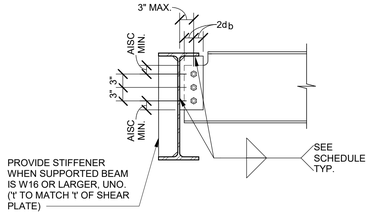
(2) SIDED BEAM TO BEAM



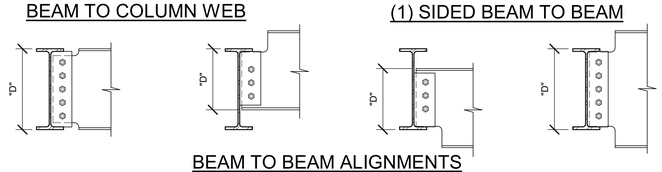
6" OR LESS CONNECTION



BEAM TO COLUMN WEB



(1) SIDED BEAM TO BEAM



BEAM TO BEAM ALIGNMENTS

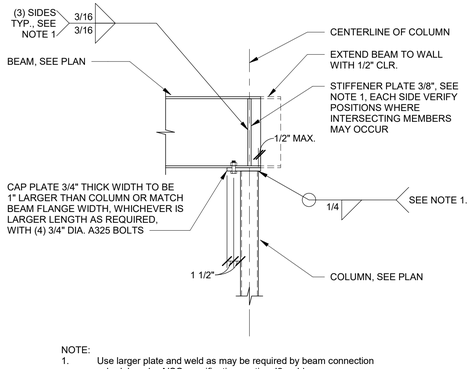
BEAM CONNECTION SCHEDULE

NOMINAL MEMBER DEPTH "D"	BOLT NO. AND SIZE	SHEAR PLATE THICKNESS	SIZE OF FILLET WELD
8" - 10"	(2) 3/4" DIA.	5/16	1/4
12" - 14"	(3) 3/4" DIA.	5/16	1/4
16"	(4) 3/4" DIA.	3/8	1/4
18"	(5) 3/4" DIA.	3/8	1/4
21"	(6) 1" DIA.	1/2	5/16
24"	(7) 1" DIA.	1/2	5/16
27"	(8) 1" DIA.	1/2	5/16
30" -33"	(9) 1" DIA.	1/2	5/16
36" - 40"	(10) 1" DIA.	1/2	5/16

NOTES:
1. All 3/4" dia. bolts shall be A325-N. All 1" dia. bolts shall be A490-N.
2. Provide larger welds where may be required by AISC.
3. Use larger plates and welds where required by brace frame connections or other specific details.
4. d_b = bolt diameter.
5. Use short slotted holes in one end of beam for field tolerances.
6. "D" = Nominal member depth.
7. Provide horizontal short slotted holes where beam web thickness "t" exceeds d/2-1/16" and number of bolts "n" exceeds 5 per AISC table 10-9.

TYPICAL BEAM CONNECTION SCHEDULE AND DETAILS (1)

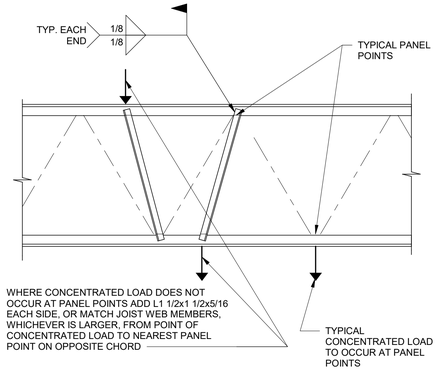
NO SCALE



NOTE:
1. Use larger plate and weld as may be required by beam connection schedule or by AISC specification section J2 welds.

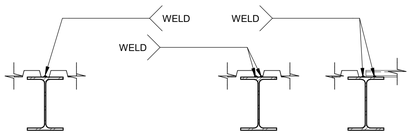
BEAM TO COLUMN (4)

3/4" = 1'-0" ST.ST.A-029



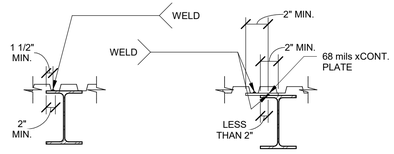
JOIST REINFORCEMENT DETAIL (5)

NO SCALE



DECK CENTERED (PREFERRED)

DECK SPLIT

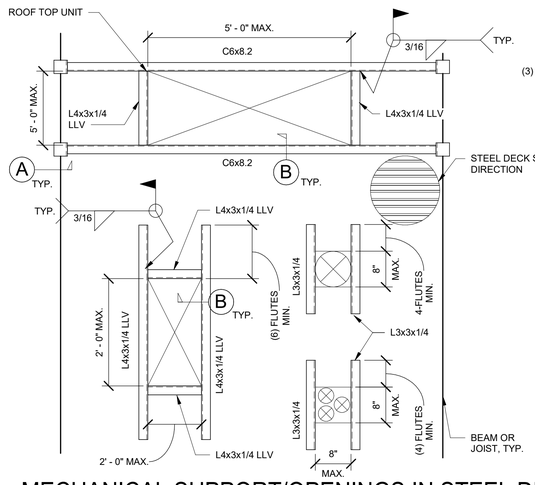


DECK NOT CENTERED WELDS AT DECK PARALLEL TO BEAMS

NOTE:
1. See steel deck welding schedule, notes and other details.

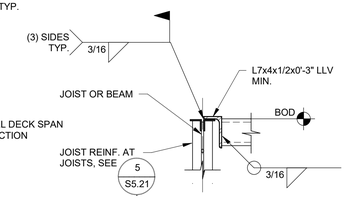
DECK WELDING (2)

NO SCALE



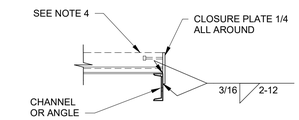
MECHANICAL SUPPORT/OPENINGS IN STEEL DECK (3)

NO SCALE

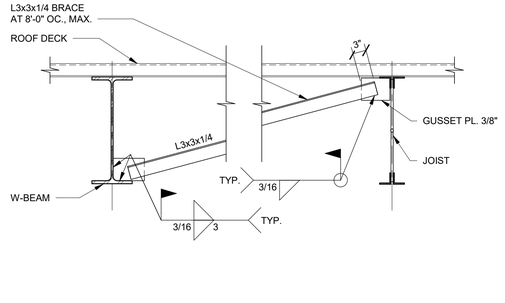


NOTES:
1. Added framing is not reqd. for openings where long opening dim. is less than 6".
2. For structure required to support mechanical unit weight use C6x8.2 under entire perimeter of curb, uno on plan.
3. See mech. for equipment mounting, attachment openings, etc.
4. Composite slab or roofing see plans and arch. drawings. Where hard rock conc. occurs provide 3/4" Dia. x 8" Nelson Headed Studs at 24" oc.
5. Steel deck attachment to opening framing, see plans.

CONN. TO JOIST OR BEAM (A)

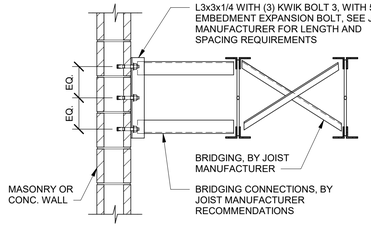


CLOSURE PLATE (B)



DIAGONAL BRACE CONNECTION AT JOIST (6)

NO SCALE



NOTE:
1. See plan, joist notes and manufacturer for bridging notes.

JOIST BRIDGING AT MASONRY WALL (7)

NO SCALE

GENERAL DETAIL NOTES

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3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For all top of footing, top of slab, and slab on grade construction, see foundation plan.
5. Columns and base plates are called out on plans and coordinated in the schedule shown on S4.01.
6. Sub-grade material below slabs and footings shall be constructed as indicated by geo-tech report.
7. For structural framing sizes, bottom of deck and top of steel elevations, see plans.
8. For floor deck size, attachment, span direction,and finish floor elevations, see plans.
9. For typical bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. For all typical construction details not shown on this sheet, see all "S5" series drawings.

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EXP. 05/31/2024

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Jefferson Elementary School Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
REVISIONS:
△
△

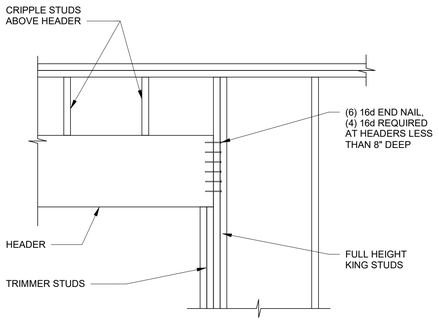
DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.
S5.21
GENERAL STRUCTURAL STEEL DETAILS

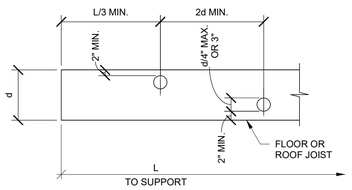
GENERAL DETAIL NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the Architect and Structural Engineer before performing alteration work.
4. For all top of footing, top of slab, and slab on grade construction, see foundation plan.
5. Columns and base plates are called out on plans and coordinated in the schedule shown on S4.01.
6. Sub-grade material below slabs and footings shall be constructed as indicated by geo-tech report.
7. For structural framing sizes, bottom of deck and top of steel elevations, see plans.
8. For floor deck size, attachment, span direction,and finish floor elevations, see plans.
9. For typical bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. For all typical construction details not shown on this sheet, see all "S5" series drawings.



NOTE:
1. Face nail all built-up studs with 16d at 8" oc., staggered.

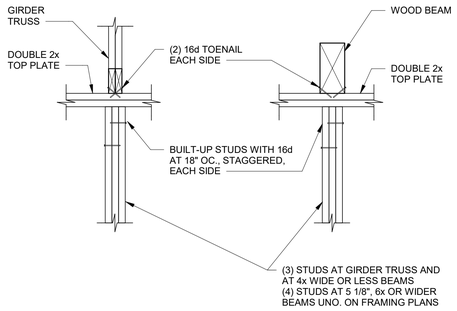
TYPICAL HEADER AT STUD WALL (1)
NO SCALE



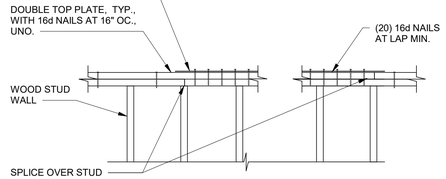
ELEVATION

NOTE:
1. Drilled holes as shown above may be used only with the approval of the structural engineer.

HOLES IN SAWN LUMBER (2)
NO SCALE

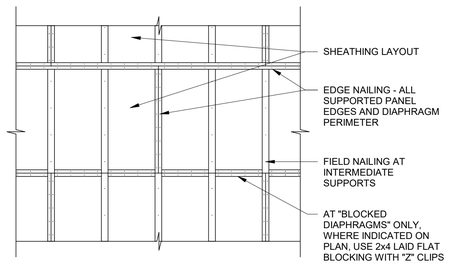


GIRDER TRUSS OR BEAM SUPPORT (3)
NO SCALE



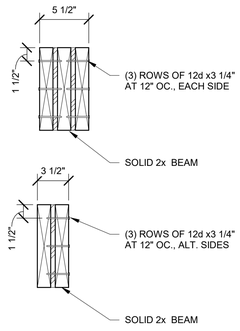
NOTES:
1. Do not splice top plates within 6'-0" of ends of plywood shear walls.
2. This detail required at all exterior walls and over shear walls - not required at interior non-shear walls.

STANDARD DOUBLE PLATE LAP WHERE STRAPPING NOT REQUIRED UNO. (4)
NO SCALE

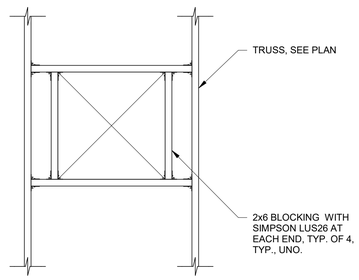


NOTES:
1. Minimum edge distance for nails shall be 3/8"
2. Minimum sheathing sheet size shall be 2'-0"x4'-0"
3. Nail head shall not break outer ply of sheathing.
4. Nails shall be common wire type. Pneumatic driven fasteners may be used with engineer approval.

DIAPHRAGM LAYOUT SCHEMATIC (5)
NO SCALE

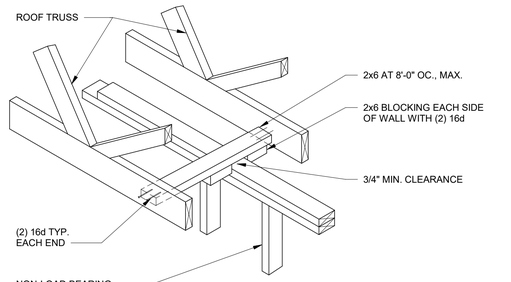


BUILT-UP HEADER (6)
NO SCALE

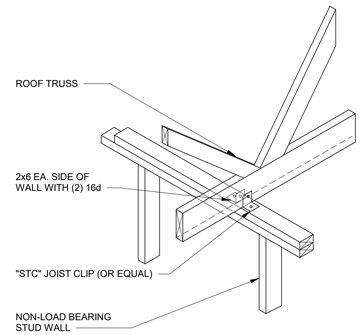


NOTE:
1. Blocking not required where opening is adjacent to truss.

TYPICAL OPENING IN ROOF FRAMING (7)
NO SCALE

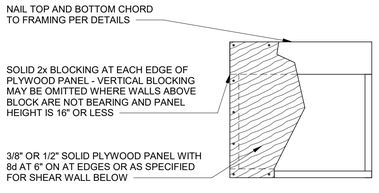


PARALLEL CONDITION

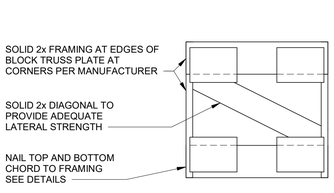


PERPENDICULAR CONDITION

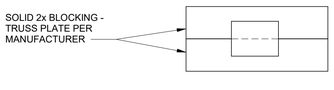
NON-LOAD BEARING WALL BRACING SCHEMATIC - WOOD ROOF TRUSSES (8)
NO SCALE



PREFAB TRUSS BLOCKING



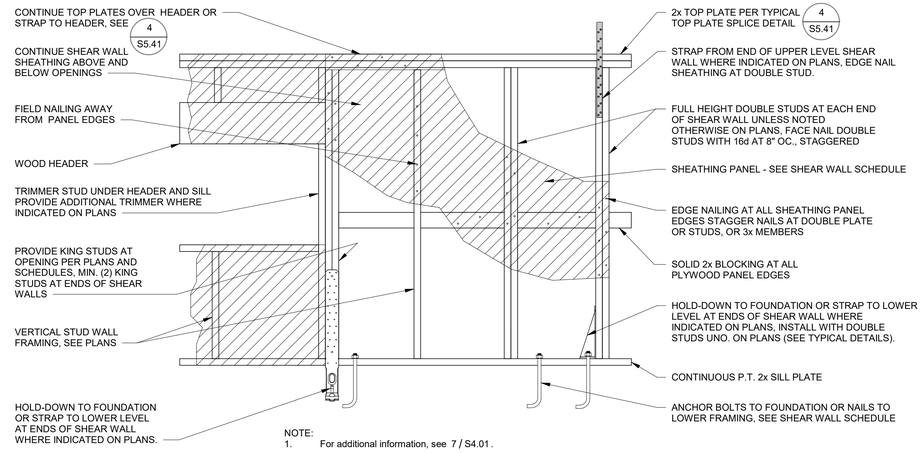
PREFAB TRUSS BLOCKING



PREFAB SOLID BLOCKING

NOTES:
1. Shear panel using either plywood panel or prefab truss blocking to be installed per details unless notes otherwise.
2. Blocking at top edge to be vertical X where installed under load bearing walls otherwise blocking may lay vertical X or horizontal X.
3. Truss manufacturer to design prefab blocking for lateral force.

TYPICAL SHEAR PANEL BLOCKING (9)
NO SCALE



NOTE:
1. For additional information, see 7 / S4.01 .

TYPICAL SHEAR PANEL CONSTRUCTION (10)
NO SCALE

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7451
07/28/23
STATE OF IDAHO
RILEY J MAHAFFEY
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BOISE IDAHO 83704
Phone (208) 342-7168
LE JOB #224217

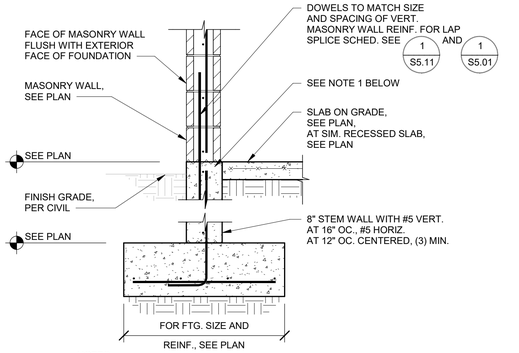
Jefferson Elementary School Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT # : -
REVISIONS:
1
2

DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

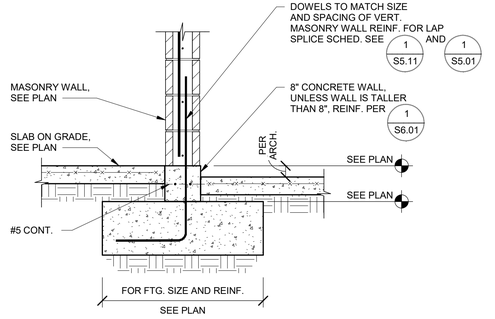
DRAWING NO.
S5.41
GENERAL WOOD FRAMING DETAILS



NOTES:
1. If it is not possible to achieve lap length indicated provide 90° standard hook with hook parallel to direction of stem wall.
2. At wall openings see 6 / S6.01 .

EXTERIOR MASONRY WALL AT FOOTING 1 / 2

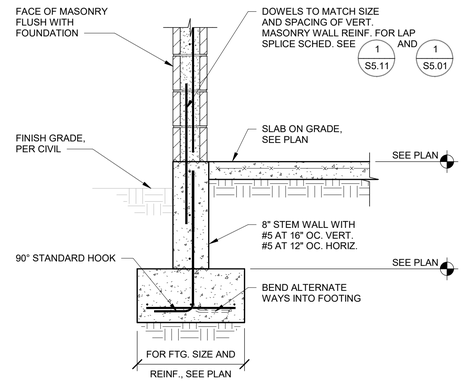
3/4" = 1'-0"



NOTES:
1. At slab openings, see 5 / S6.01 .
2. At SIM. 8" masonry wall is used, see wall type schedule on 4 / S4.02 .

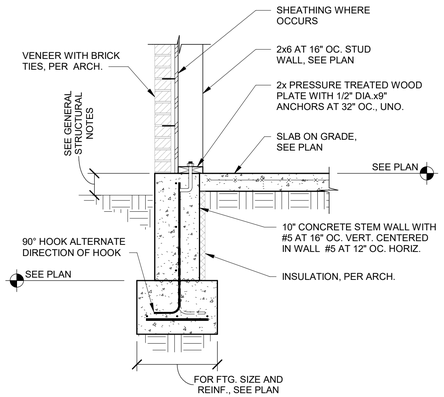
TYPICAL INTERIOR MASONRY FOOTING 2 / 2

3/4" = 1'-0"



EXTERIOR 8" MASONRY WALL FOOTING 3

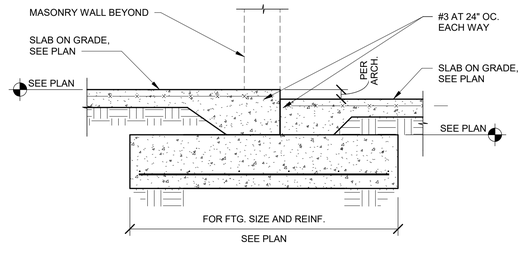
3/4" = 1'-0"



NOTE:
1. For typical framing at door openings see 6 / S6.01.

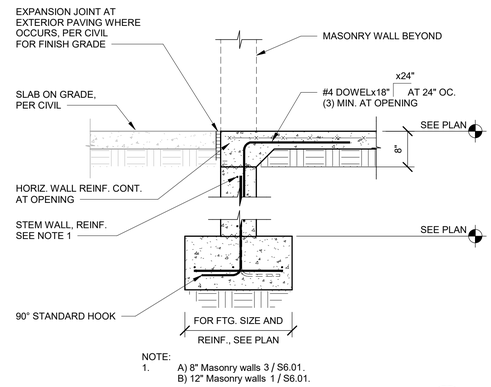
WOOD STUD WALL AT FOOTING 4

3/4" = 1'-0"



SLAB TRANSITION AT INTERIOR OPENING 5

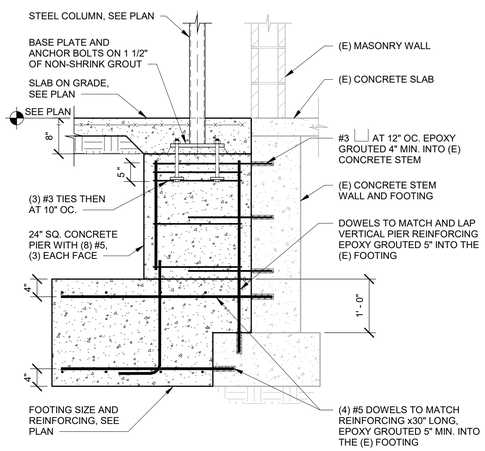
3/4" = 1'-0"



NOTE:
1. A) 8" Masonry walls 3 / S6.01.
B) 12" Masonry walls 1 / S6.01.

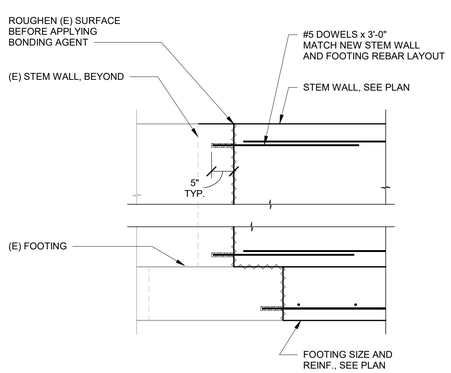
SLAB AT EXTERIOR WALL OPENING 6

3/4" = 1'-0"



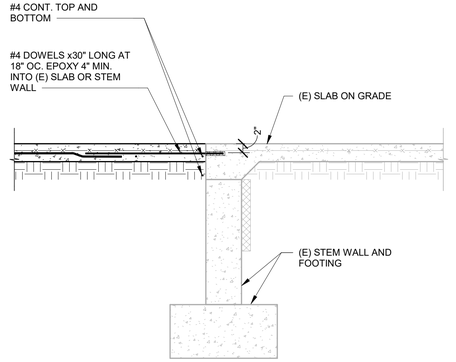
STEEL COLUMN AT FOOTING 7

3/4" = 1'-0"



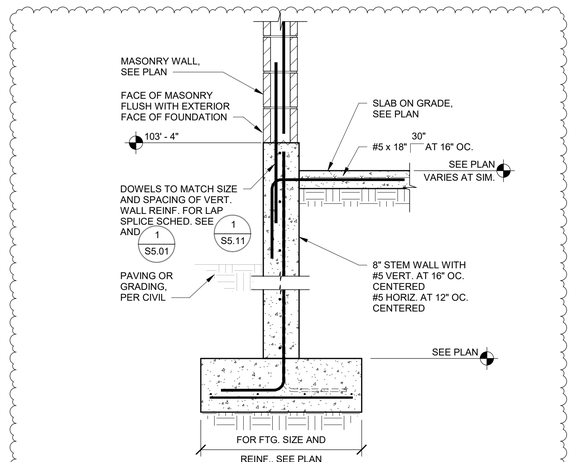
NEW STEM WALL AT EXISTING STEM WALL 8

3/4" = 1'-0"



NEW SLAB ON GRADE AT EXISTING SLAB ON GRADE 9

3/4" = 1'-0"



EXTERIOR MASONRY WALL AT ELEVATED SLAB 10 / 2

3/4" = 1'-0"

FOUNDATION DETAIL NOTES

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5. Footing designations are called out on the foundation plans and coordinated on the schedule sheet S4.01.
6. Slab on grade construction is called out on plans. Coordinate slab on grade construction with sheet S5.01.
7. Coordinate top of footing and top of slab elevations with foundation plans.
8. Columns and base plates are called out on plans and coordinated in the schedule shown on S4.01.
9. Sub-grade material below slabs and footings shall be constructed as indicated by geo-tech report. Coordinate vapor barrier placement below slab with arch and geo-tech report.
10. Contractor to coordinate exterior finish grade with architect and civil.
11. Coordinate non-shrink grout under steel columns with base plate schedule on sheet S4.01.
12. All rebar to maintain clear distances per concrete notes on sheet S0.02.
13. All concrete cold joints are to be roughened and cleaned to 1/4" amplitude, uno.
14. All hooked dowels are shown with 90° std. hook, see 4 / S5.01, uno.
15. All rebar shall maintain tension lap splice, see 5 / S5.01.
16. All dowels shall maintain development lengths, see 1 / S5.01. Concrete wall dowels are to extend to bottom of the footings and face of the footings. for dowels that are centered in wall alternate the hook direction.
17. Concrete strengths are provided in notes on sheet S0.02.
18. All exposed concrete edges shall have a 3/4" chamfer, typ., uno.
19. All cast in place anchor bolts are to be coordinated with the base plate schedule on sheet S4.01.
20. Provide 3" minimum concrete cover between surrounding soil and all embedded steel including, base plates, anchor bolts, headed anchors, columns, etc., uno.
21. All stem wall and footing reinforcing is to be continued thru column piers and footings, uno.
22. For structural bearing wall construction, see plans. Coordinate location with plans and architectural.
23. For all interior and exterior wall finishes, see architectural.
24. Rigid foundation insulation shown for reference only. Coordinate thickness and placement with arch.
25. Masonry veneer shown for reference only. Coordinate thickness and layout with arch. For typical anchorage, see veneer tie notes on sheet S0.02.

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2 07/28/23 V.E.
1

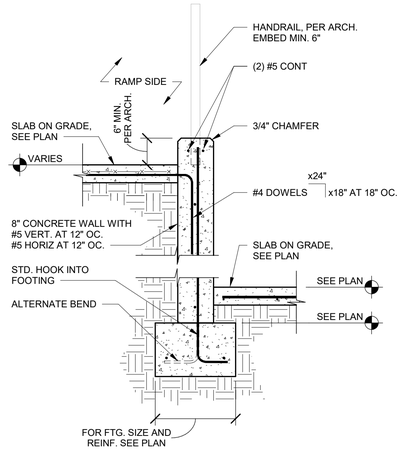
DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.

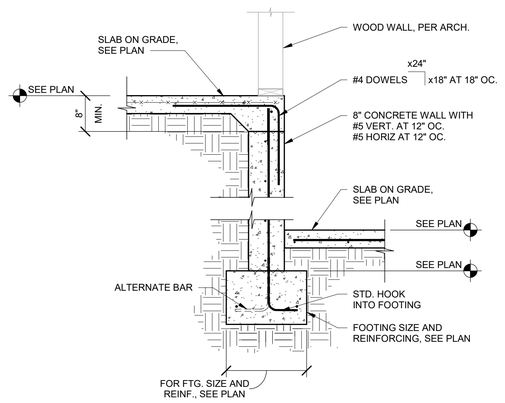
S6.01

FOUNDATION DETAILS



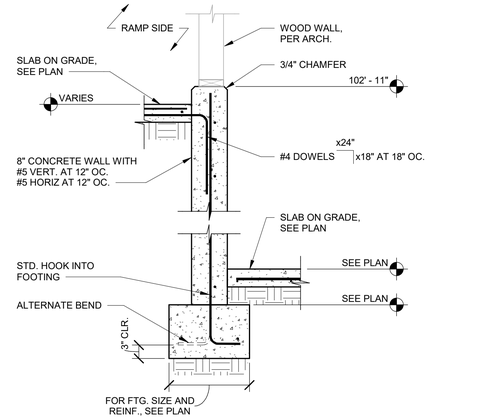
SECTION AT RAMP 1

3/4" = 1'-0"



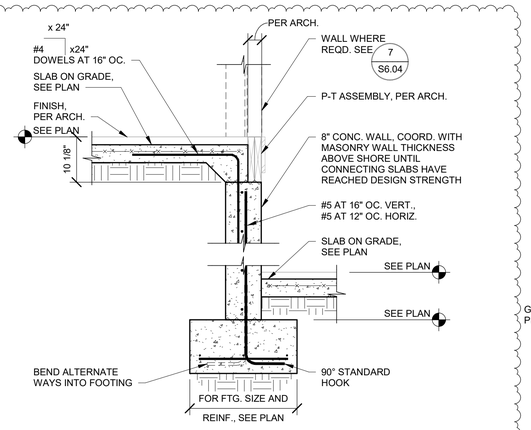
STAGE WALL 2

3/4" = 1'-0"



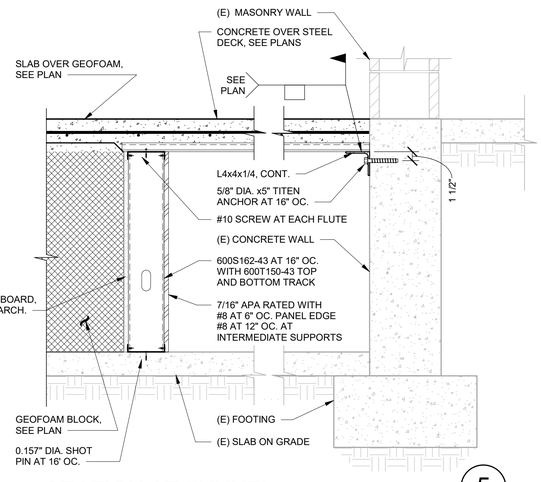
SECTION AT RAMP 3

3/4" = 1'-0"



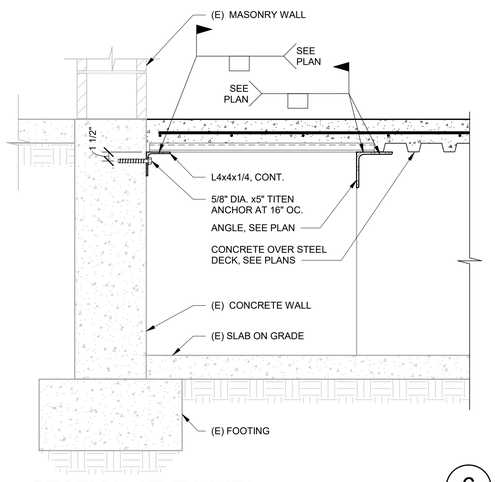
SECTION AT STAGE 4 (2)

3/4" = 1'-0"



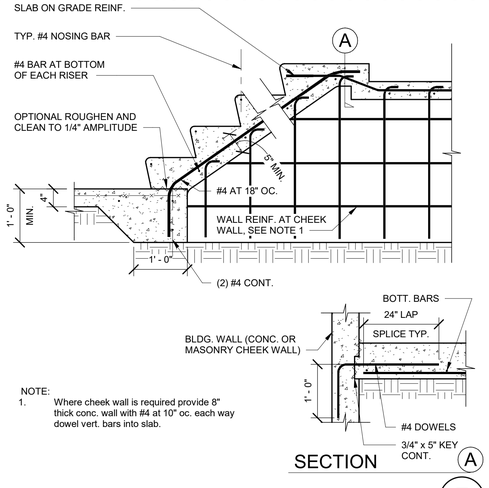
SECTION AT TUNNEL 5

1" = 1'-0"



SECTION AT TUNNEL 6

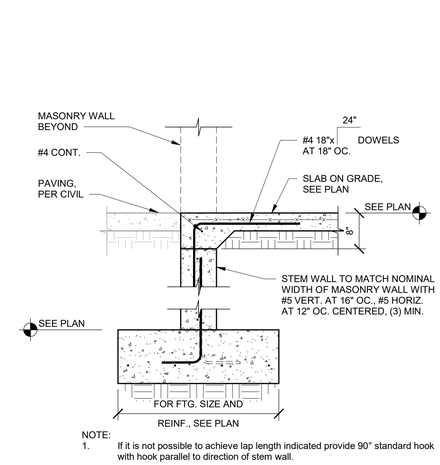
1" = 1'-0"



NOTE:
1. Where cheek wall is required provide 8" thick conc. wall with #4 at 10" oc. each way dowel vert. bars into slab.

CONCRETE STAIR ON GRADE 7

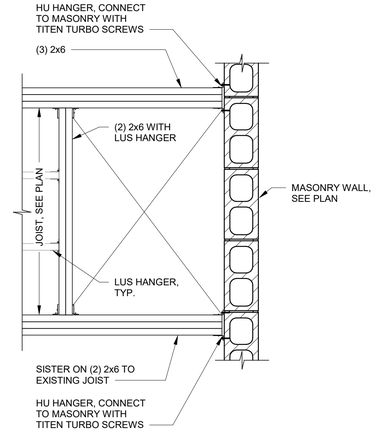
3/4" = 1'-0"



NOTE:
1. If it is not possible to achieve lap length indicated provide 90° standard hook with hook parallel to direction of stem wall.

EXTERIOR WALL THRU DOOR AT FOOTING 8

3/4" = 1'-0"



OPENING IN EXISTING FLOOR - PLAN VIEW 9

3/4" = 1'-0"

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10. Contractor to coordinate exterior finish grade with architect and civil.
11. Coordinate non-shrink grout under steel columns with base plate schedule on sheet S4.01.
12. All rebar to maintain clear distances per concrete notes on sheet S0.02.
13. All concrete cold joints are to be roughened and cleaned to 1/4" amplitude, uno.
14. All hooked dowels are shown with 90° std. hook, see 4 / S5.01, uno.
15. All rebar shall maintain tension lap splice, see 5 / S5.01.
16. All dowels shall maintain development lengths, see 1 / S5.01. Concrete wall dowels are to extend to bottom of the footings and face of the footings. for dowels that are centered in wall alternate the hook direction.
17. Concrete strengths are provided in notes on sheet S0.02.
18. All exposed concrete edges shall have a 3/4" chamfer, typ., uno.
19. All cast in place anchor bolts are to be coordinated with the base plate schedule on sheet S4.01.
20. Provide 3" minimum concrete cover between surrounding soil and all embedded steel including, base plates, anchor bolts, headed anchors, columns, etc., uno.
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25. Masonry veneer shown for reference only. Coordinate thickness and layout with arch. For typical anchorage, see veneer tie notes on sheet S0.02.

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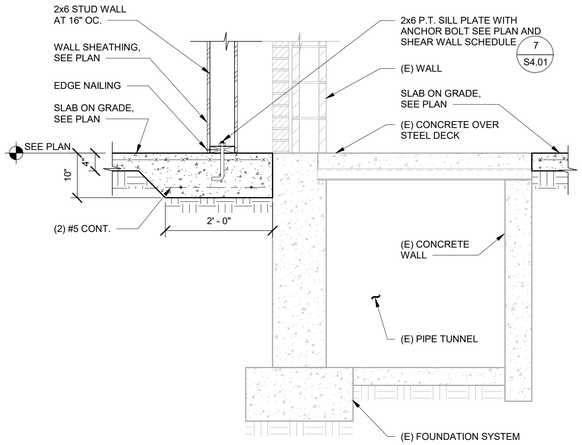
1 07/28/23 V.E.

DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

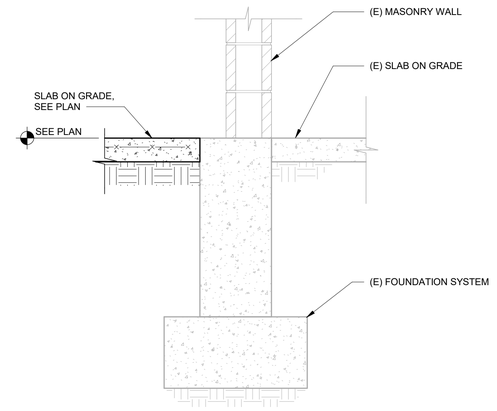
Agency Review

DRAWING NO.
S6.02
FOUNDATION DETAILS



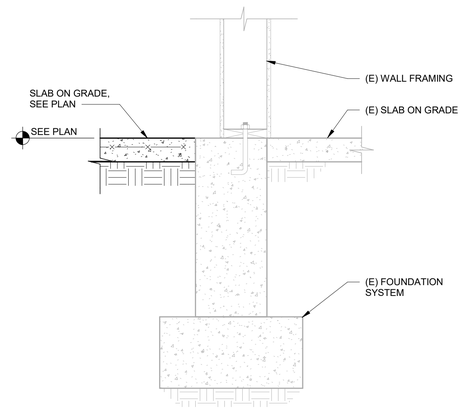
NEW SLAB ON GRADE AT (E) WALL 1

3/4" = 1'-0"



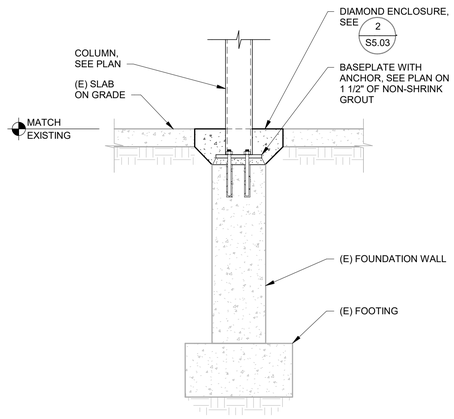
NEW SLAB ON GRADE AT (E) WALL 2

1" = 1'-0"



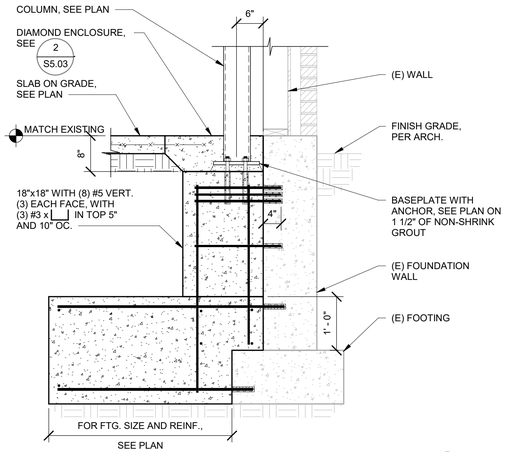
NEW SLAB ON GRADE AT (E) WALL 3

1" = 1'-0"



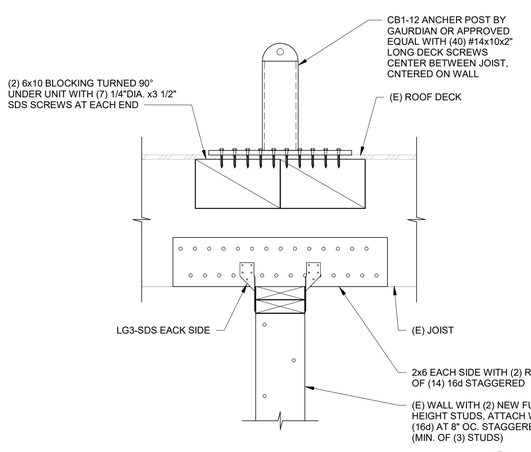
COLUMN AT EXISTING FOUNDATION 4

3/4" = 1'-0"



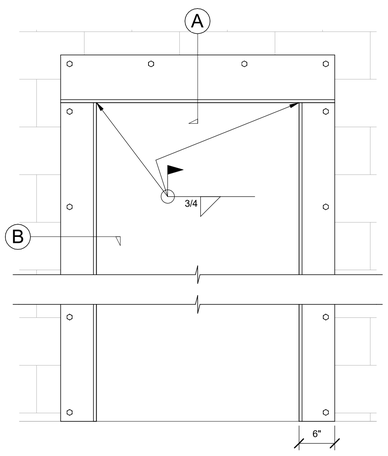
DETAIL SECTION 5

3/4" = 1'-0"



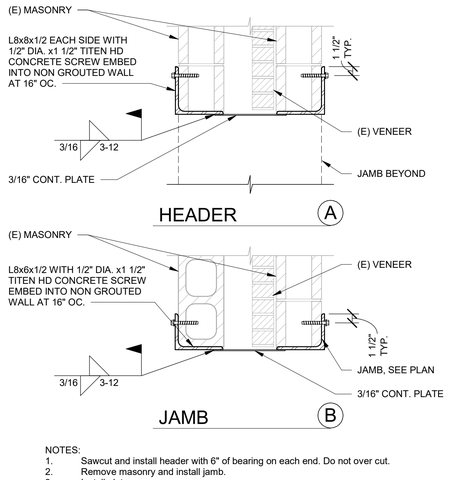
FALL PROTECTION CONNECTION 6

1 1/2" = 1'-0"

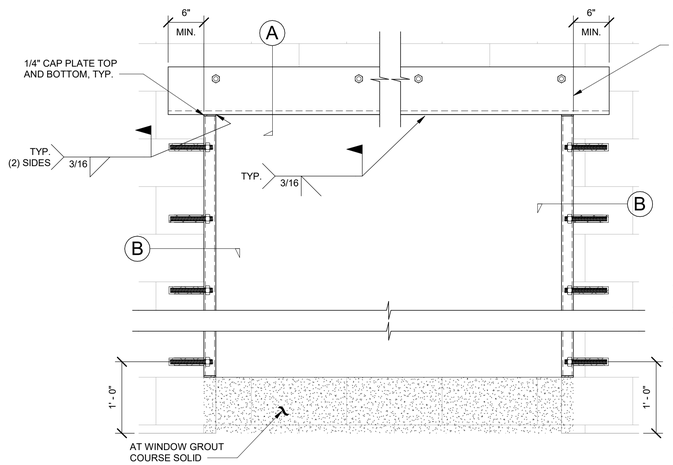


NEW OPENING IN EXISTING WALL 7

1" = 1'-0"



NOTES:
1. Sawcut and install header with 6" of bearing on each end. Do not over cut.
2. Remove masonry and install jamb.
3. Install plate.



NEW OPENING IN EXISTING WALL 8

1" = 1'-0"

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STATE OF IDAHO
RILEY J MAHAFFEY
EXP. 05/31/2024

Lochsa engineering
201 N. Maple Grove Ste. 100
BOISE IDAHO 83704
Phone (208) 342-7168
LE JOB #224217

Jefferson Elementary School Addition and Remodel

600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
REVISIONS:
△
△

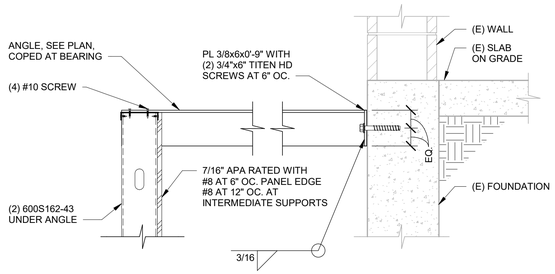
DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

DRAWING NO.

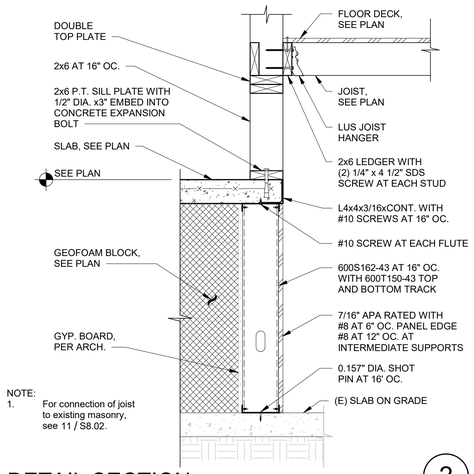
S6.03

FOUNDATION DETAILS



DETAIL SECTION 1

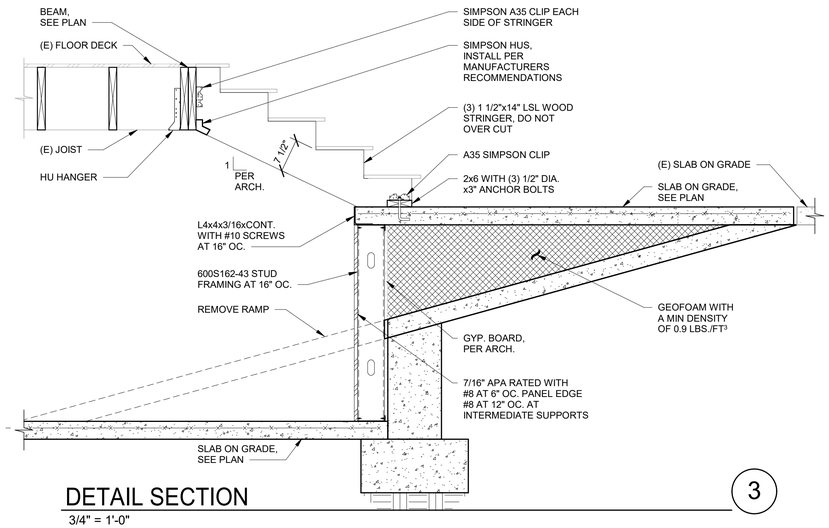
1" = 1'-0"



NOTE:
1. For connection of joist to existing masonry, see 11 / S8.02.

DETAIL SECTION 2

1" = 1'-0"



DETAIL SECTION 3

3/4" = 1'-0"

FOUNDATION DETAIL NOTES

1. For structural design notes, see sheets starting at S0.01.
2. Architectural backgrounds are shown for reference only. The dimensions shown apply to structural elements only. For dimensions not shown, see architect of record submittal.
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the architect and structural engineer before performing alteration work.
4. For concrete and foundation general details, see sheets S5.01 thru S5.03.
5. Footing designations are called out on the foundation plans and coordinated on the schedule sheet S4.01.
6. Slab on grade construction is called out on plans. Coordinate slab on grade construction with sheet S5.01.
7. Coordinate top of footing and top of slab elevations with foundation plans.
8. Columns and base plates are called out on plans and coordinated in the schedule shown on S4.01.
9. Sub-grade material below slabs and footings shall be constructed as indicated by geo-tech report. Coordinate vapor barrier placement below slab with arch and geo-tech report.
10. Contractor to coordinate exterior finish grade with architect and civil.
11. Coordinate non-shrink grout under steel columns with base plate schedule on sheet S4.01.
12. All rebar to maintain clear distances per concrete notes on sheet S0.02.
13. All concrete cold joints are to be roughened and cleaned to 1/4" amplitude, uno.
14. All hooked dowels are shown with 90° std. hook, see 4 / S5.01, uno.
15. All rebar shall maintain tension lap splice, see 5 / S5.01.
16. All dowels shall maintain development lengths, see 1 / S5.01. Concrete wall dowels are to extend to bottom of the footings and face of the footings. for dowels that are centered in wall alternate the hook direction.
17. Concrete strengths are provided in notes on sheet S0.02.
18. All exposed concrete edges shall have a 3/4" chamfer, typ., uno.
19. All cast in place anchor bolts are to be coordinated with the base plate schedule on sheet S4.01.
20. Provide 3" minimum concrete cover between surrounding soil and all embedded steel including, base plates, anchor bolts, headed anchors, columns, etc., uno.
21. All stem wall and footing reinforcing is to be continued thru column piers and footings, uno.
22. For structural bearing wall construction, see plans. Coordinate location with plans and architectural.
23. For all interior and exterior wall finishes, see architectural.
24. Rigid foundation insulation shown for reference only. Coordinate thickness and placement with arch.
25. Masonry veneer shown for reference only. Coordinate thickness and layout with arch. For typical anchorage, see veneer tie notes on sheet S0.02.

NEW PILASTER AT EXISTING - PLAN VIEW 4

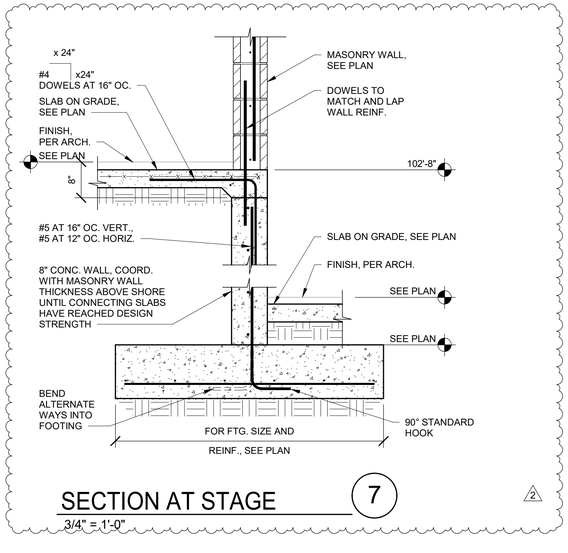
1 1/2" = 1'-0"

DETAIL SECTION 5

1" = 1'-0"

DETAIL SECTION 6

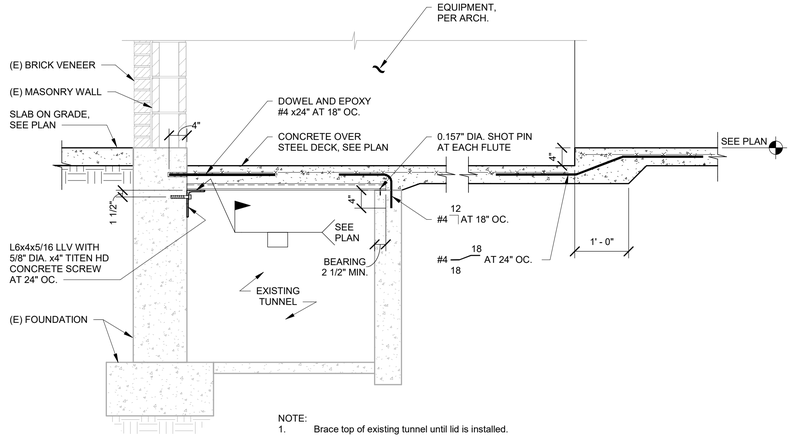
3/4" = 1'-0"



SECTION AT STAGE 7

3/4" = 1'-0"

2



NOTE:
1. Brace top of existing tunnel until lid is installed.

DEPRESSED SLAB OVER TUNNEL 8

3/4" = 1'-0"

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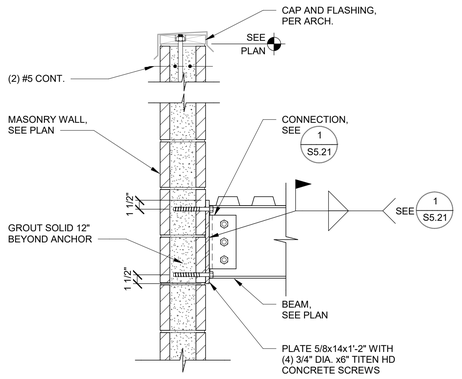
DRAWING NO.

S6.04

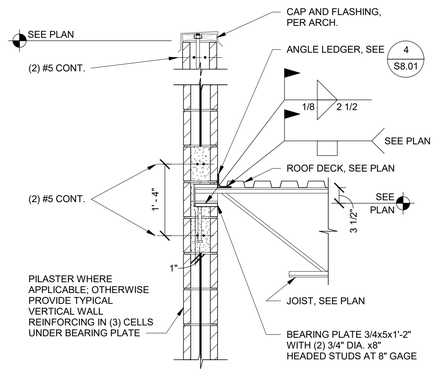
FOUNDATION DETAILS



NOTE:
1. At corner condition, locate anchors 4" away from outside face of corner.

BEAM AT MASONRY WALL 1

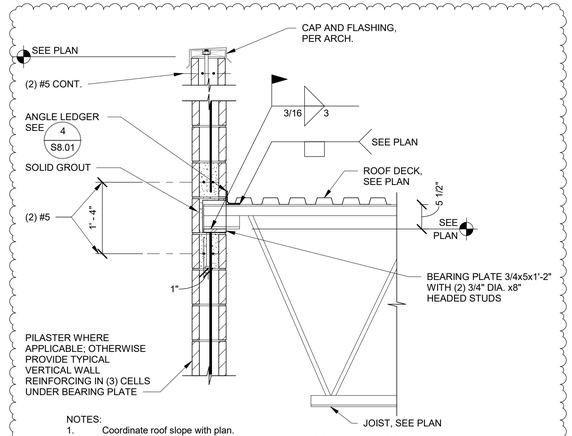
1" = 1'-0"



NOTES:
1. Coordinate roof slope with plan.
2. Solid grout joist pocket before any upper beams or joists are stacked above.
3. Center anchor bolts in wall.

STEEL JOIST POCKET AT MASONRY WALL 2

3/4" = 1'-0"



NOTES:
1. Coordinate roof slope with plan.
2. Solid grout joist pocket before any upper beams or joists are stacked above.
3. Center anchor bolts in wall.

STEEL JOIST SEAT TO 8" MASONRY WALL 3

3/4" = 1'-0"

ROOF FRAMING DETAIL NOTES

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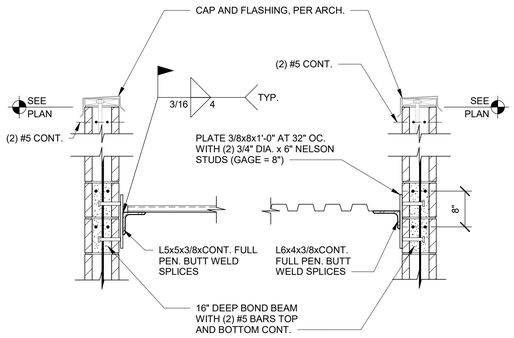
3. Contractor shall field verify existing structural conditions. If any discrepancies are found, contractor shall contact the architect and structural engineer before performing alteration work.
4. For structural steel general details, see sheet S5.21.
5. For structural wood framing general details, see sheet S5.41.
6. Columns are called out on foundation or level of origin plans
7. For all top of structural steel, bottom of deck or finish elevations, see framing plans.
8. For roof deck size, attachment and span direction, see plans.
9. For structural bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. Masonry veneer shown for reference only. Coordinate thickness and layout with arch. For typical anchorage, see veneer anchorage notes on sheet S0.03.



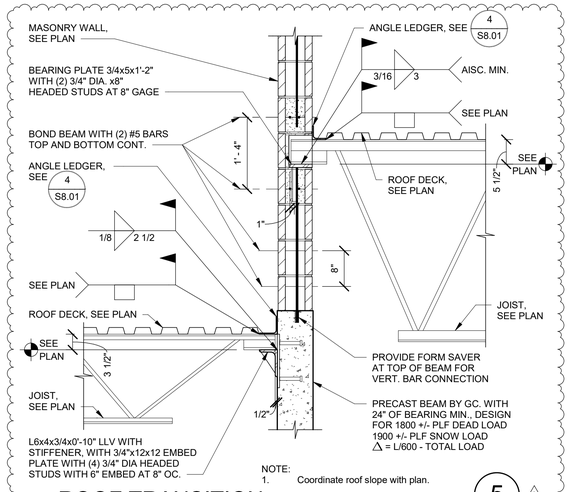
DECK SPAN PERPENDICULAR

DECK SPAN PARALLEL

NOTES:
1. See plan for ledger sizes and anchors, unless noted otherwise use this detail.
2. All deck edge shall be supported.

LEDGER ANGLES 4

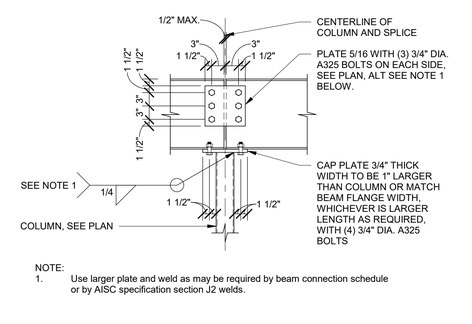
3/4" = 1'-0"



NOTE:
1. Coordinate roof slope with plan.

ROOF TRANSITION 5

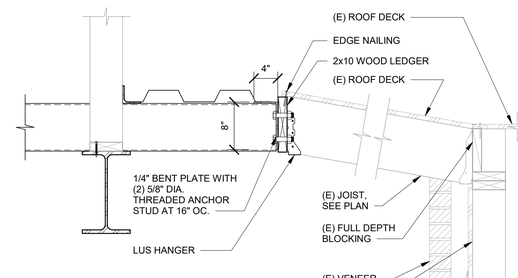
3/4" = 1'-0"



NOTE:
1. Use larger plate and weld as may be required by beam connection schedule or by AISC specification section J2 welds.

BEAM SPLICE AT COLUMN CONNECTION 6

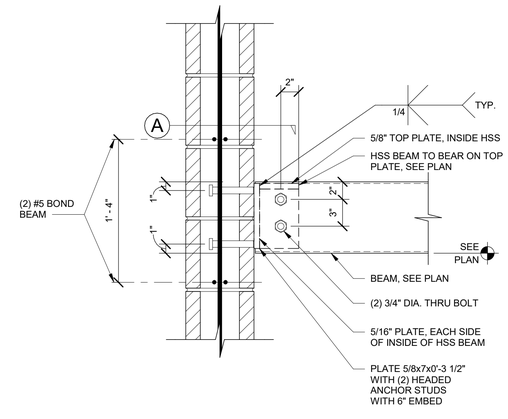
3/4" = 1'-0"

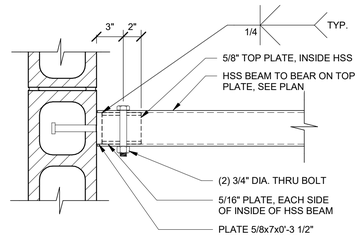


NOTES:
1. Coordinate roof slope with plan.
2. Solid grout joist pocket before any upper beams or joists are stacked above.
3. Center anchor bolts in wall.
4. For more information shown but not noted, see 9 / S8.01.

JOIST POCKET AT MASONRY WALL 7

1" = 1'-0"

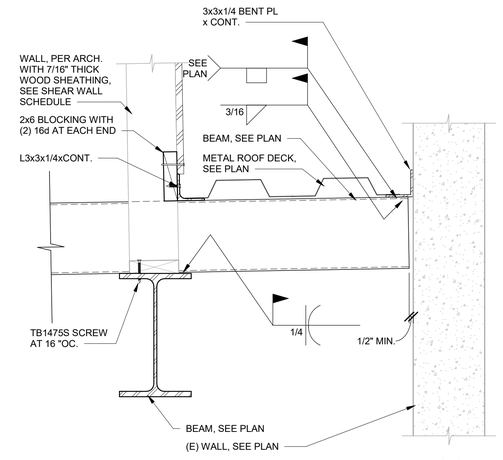




SECTION A

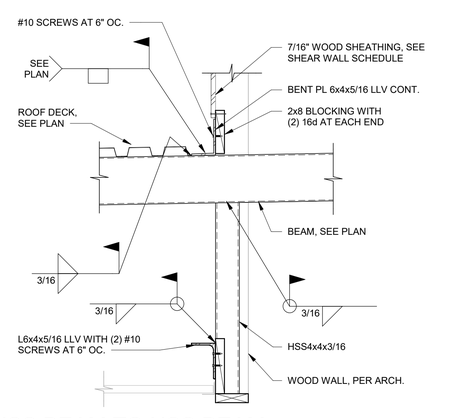
HSS BEAM TO MASONRY WALL CONNECTION 8

1 1/2" = 1'-0"



SECTION DETAIL 9

1 1/2" = 1'-0"



HSS BEAM TO HSS BEAM CONNECTION 10

1" = 1'-0"

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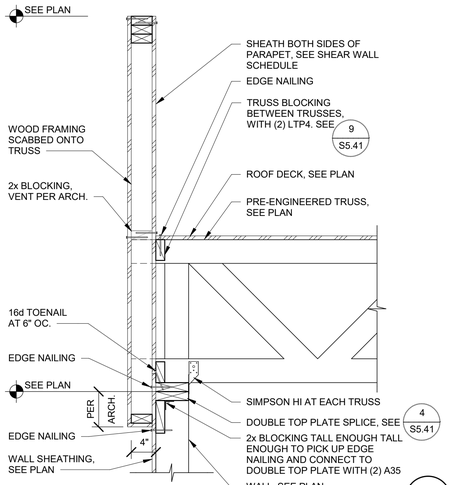
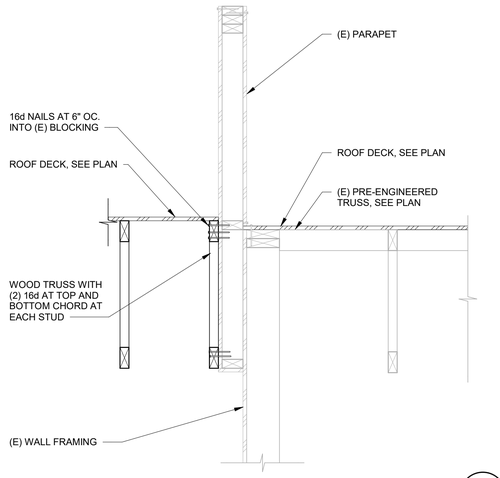
DRAWING NO.
S8.01
ROOF FRAMING DETAILS



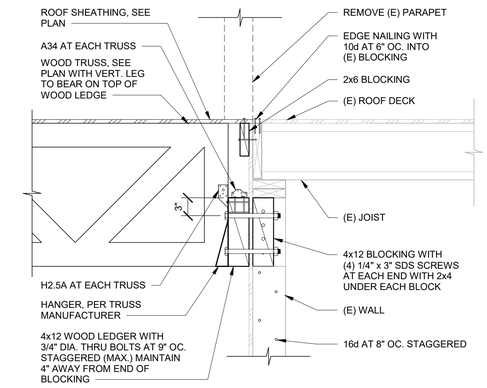
TRUSS AT EXTERIOR WALL 1

1" = 1'-0"



NEW TO EXISTING 2

1" = 1'-0"



TRUSS TO EXISTING WALL 3

1" = 1'-0"

ROOF FRAMING DETAIL NOTES

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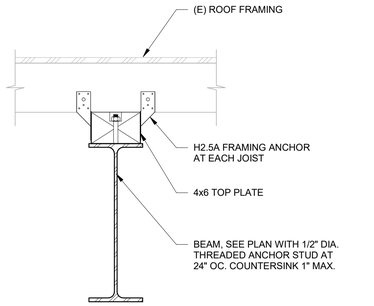
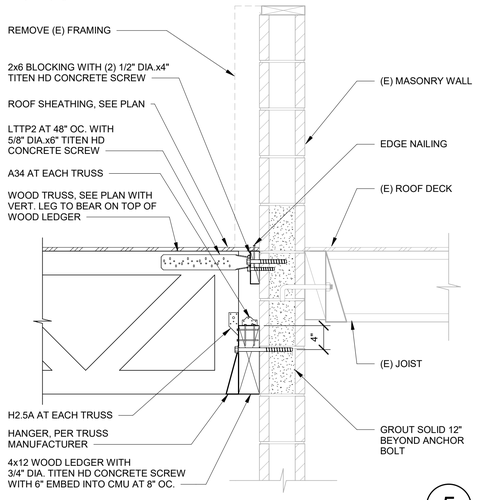
4. For structural steel general details, see sheet S5.21.
5. For structural wood framing general details, see sheet S5.41.
6. Columns are called out on foundation or level of origin plans
7. For all top of structural steel, bottom of deck or finish elevations, see framing plans.
8. For roof deck size, attachment and span direction, see plans.
9. For structural bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. Masonry veneer shown for reference only. Coordinate thickness and layout with arch. For typical anchorage, see veneer anchorage notes on sheet S0.03.



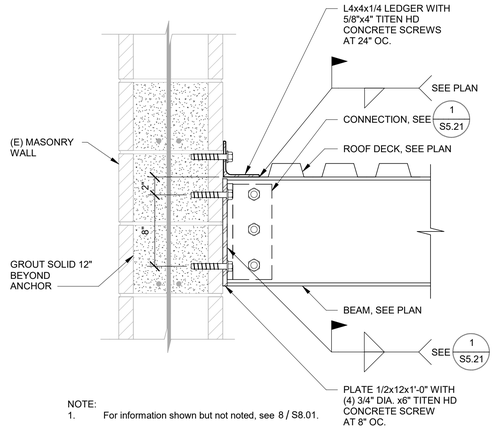
STEEL BEAM TO EXISTING FRAMING 4

1 1/2" = 1'-0"



NEW TRUSS TO EXISTING WALL 5

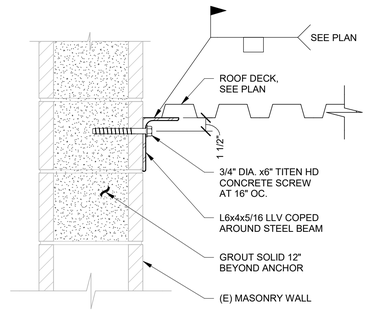
1" = 1'-0"



NOTE:
1. For information shown but not noted, see 8 / S8.01.

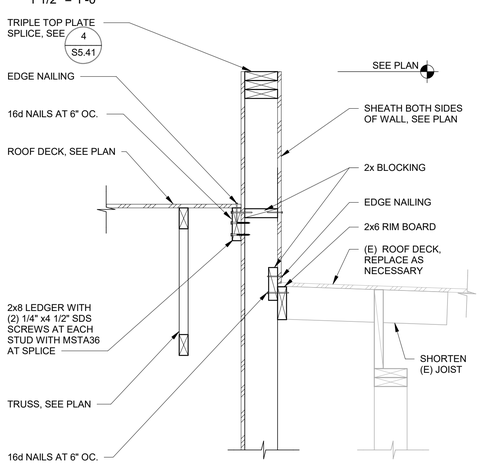
BEAM BEARING PLATE PERPENDICULAR TO WALL 6

1 1/2" = 1'-0"



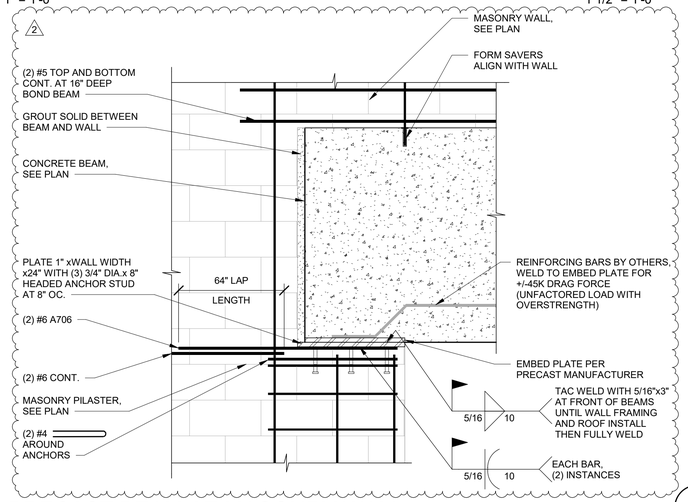
LEDGER BETWEEN JOISTS PERPENDICULAR TO WALL 7

1 1/2" = 1'-0"



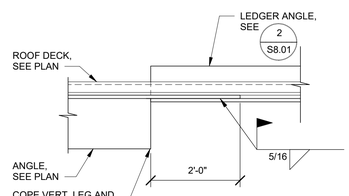
NEW ROOF TO EXISTING TRANSITION 8

1" = 1'-0"



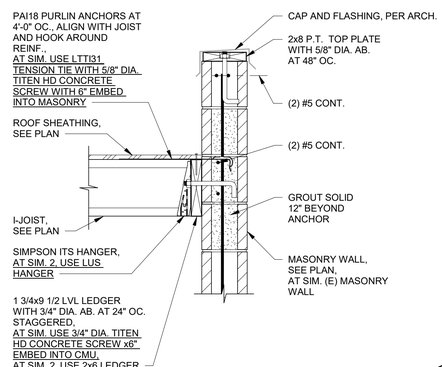
PRECAST BEAM AT MASONRY WALL 9

3/4" = 1'-0"



CHORD SPLICE 10

1 1/2" = 1'-0"



WOOD LEDGER AT MASONRY WALL 11

1" = 1'-0"

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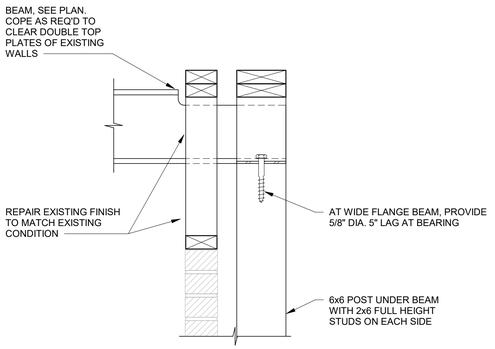
Agency Review

DRAWING NO.

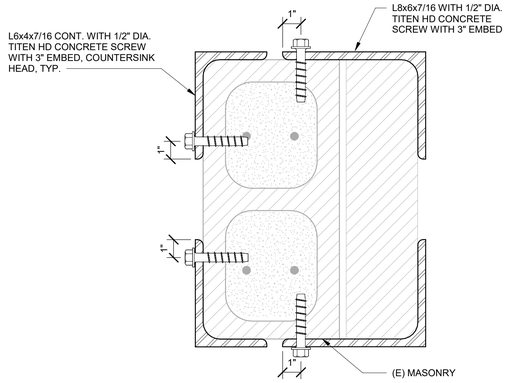
S8.02

ROOF FRAMING DETAILS



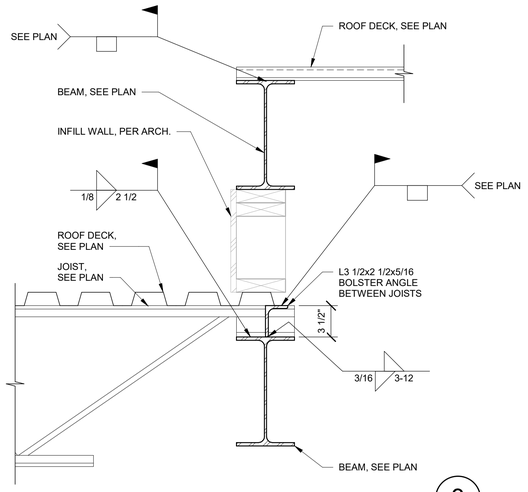
BEAM AT POST CONNECTION 1

1 1/2" = 1'-0"



MASONRY SUPPORT ANGLE CONNECTION 2

3" = 1'-0"



LOW TO HIGH ROOF TRANSITION 3

1 1/2" = 1'-0"

ROOF FRAMING DETAIL NOTES

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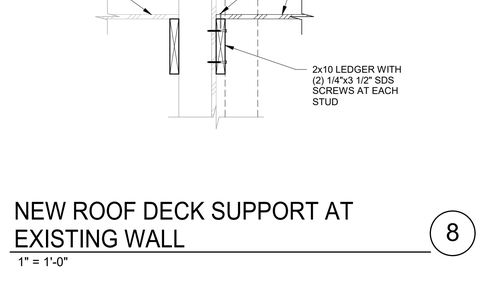
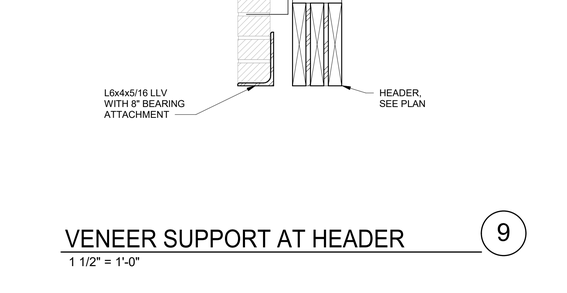
5. For structural wood framing general details, see sheet S5.41.
6. Columns are called out on foundation or level of origin plans
7. For all top of structural steel, bottom of deck or finish elevations, see framing plans.
8. For roof deck size, attachment and span direction, see plans.
9. For structural bearing wall construction, see plans. Coordinate location with plans and architectural.
10. For interior and exterior wall finishes, see architectural.
11. Masonry veneer shown for reference only. Coordinate thickness and layout with arch. For typical anchorage, see veneer anchorage notes on sheet S0.03.



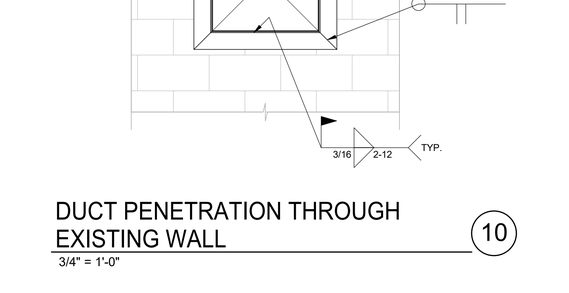
HIGH TO LOW ROOF TRANSITION 4

1" = 1'-0"



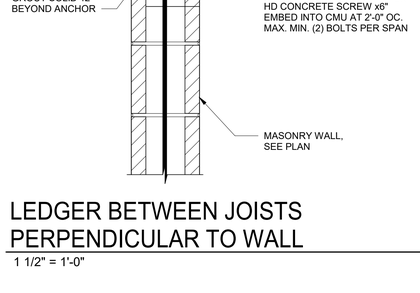
ENTRY SECTION 5 2

3/4" = 1'-0"



WOOD HEADER CONNECTION 6 2

3/4" = 1'-0"



DECK EDGE AT EXISTING WALL 7

3/4" = 1'-0"

NEW ROOF DECK SUPPORT AT EXISTING WALL 8

1" = 1'-0"

VENEER SUPPORT AT HEADER 9

1 1/2" = 1'-0"

DUCT PENETRATION THROUGH EXISTING WALL 10

3/4" = 1'-0"

LEDGER BETWEEN JOISTS PERPENDICULAR TO WALL 11

1 1/2" = 1'-0"

LKV ARCHITECTS
2400 E RIVERWALK DRIVE
BOISE, IDAHO 83706
WWW.LKVARCHITECTS.COM
208.336.3443

PROFESSIONAL ENGINEER REGISTERED
17451
07/28/23
STATE OF IDAHO
RILEY J MAHAFFEY
EXP. 05/31/2024

Lochsa engineering
201 N. Maple Grove Ste. 100
BOISE IDAHO 83704
Phone (208) 342-7168
LE JOB #224217

Jefferson Elementary School
Addition and Remodel
600 N. Fillmore Street, Jerome, Idaho

DATE: July 28, 2023
LKV PROJECT #: -
REVISIONS:
2 07/28/23 V.E.
1
DRAWN BY: GT/AC/WC
CHECKED BY: CH/BAF

Agency Review

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S8.03
ROOF FRAMING DETAILS