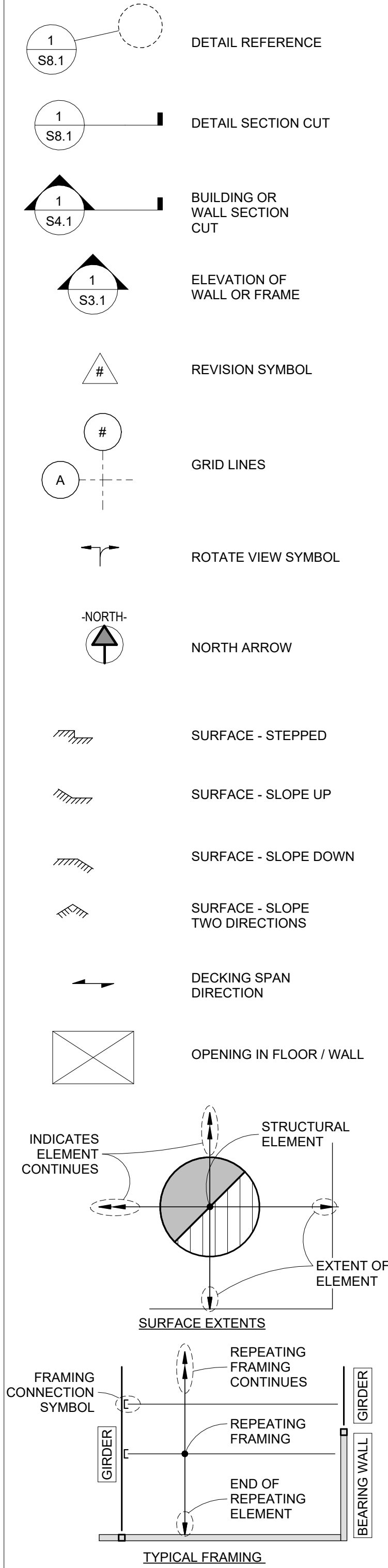


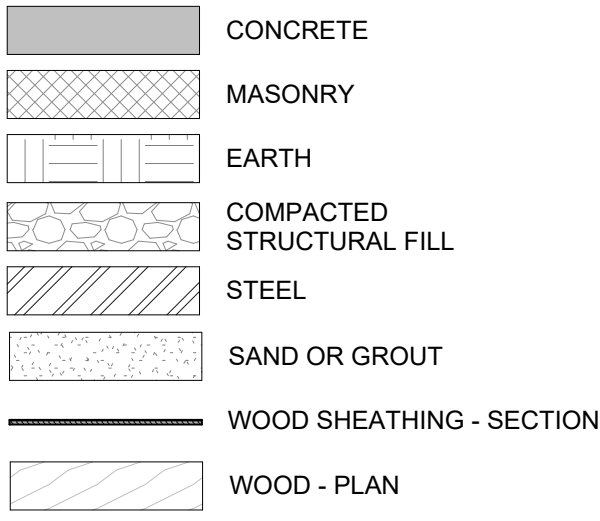
STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUNDS	IBC	INTERNATIONAL BUILDING CODE
AB	ANCHOR BOLT	ICF	INSULATED CONCRETE FORMS
ACI	AMERICAN CONCRETE INSTITUTE	ID	INSIDE DIAMETER
ADDL	ADDITIONAL	IN	INCH
ADJ	ADJACENT	INFO	INFORMATION
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	INT	INTERIOR
AFF	ABOVE FINISH FLOOR	JST	JOIST
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	JT	JOINT
ALT	ALTERNATE	K	KIP(S) (1,000 POUNDS)
ALUM	ALUMINUM	KSF	KIPS PER SQUARE FOOT
APA	AMERICAN PLYWOOD ASSOCIATION	KSI	KIPS PER SQUARE INCH
APPROX	APPROXIMATELY	L, 2L	ANGLE OR DOUBLE ANGLE
ARCH	ARCHITECTURAL	LAT	LATERAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LB	POUND
ASD	ALLOWABLE STRESS DESIGN	LF	LINEAR FOOT
ASSY	ASSEMBLY	LG	LIGHT GAUGE
ATR	ALL THREAD ROD	LL	LIVE LOAD
ATRA	ALL THREAD ROD WITH ADHESIVE	LLBB	LONG LEGS BACK TO BACK
AWS	AMERICAN WELDING SOCIETY	LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
B/	BOTTOM OF	LONG	LONGITUDINAL
BF	BRACED FRAME	LRFD	LOAD AND RESISTANCE FACTOR DESIGN
BLDG	BUILDING	LSL	LAMINATED STRAND LUMBER
BLKG	BLOCKING	LSH	LONG SLOTTED HOLE
BM	BEAM	LVL	LAMINATED VENEER LUMBER
BN	BOUNDARY NAIL	LWC	LIGHT WEIGHT CONCRETE
BOT	BOTTOM		
BRBF	BUCKLING RESTRAINED BRACED FRAME	MANUF	MANUFACTURER
BRNG	BEARING	MAX	MAXIMUM
BSMT	BASEMENT	MC	MISCELLANEOUS CHANNEL
BTWN	BETWEEN	MECH	MECHANICAL
BU	BUILT-UP	MF	MOMENT FRAME
		MFR	MANUFACTURER
C	CAMBER OR CHANNEL (AMERICAN STANDARD)	MEP	MECHANICAL, ELECTRICAL, PLUMBING
CANT	CANTILEVER	MIN	MINIMUM
CFS	COLD-FORMED STEEL	MIR	MIRROR
CIP	CAST IN PLACE	MISC	MISCELLANEOUS
CG	CENTER OF GRAVITY	MSA	MASONRY SCREW ANCHOR
CGS	CENTER OF GRAVITY OF (PRESTRESSING) STEEL	MT	MAGNETIC PARTICLE TESTING
CJ	CONTROL OR CONSTRUCTION JOINT	MTL	METAL
CJP	COMPLETE JOINT PENETRATION		
CL	CENTERLINE	(N)	NEW
CLG	CEILING	NDT	NON-DESTRUCTIVE TESTING
CLR	CLEARANCE; CLEAR	NIC	NOT IN CONTRACT
CLSM	CONTROLLED LOW STRENGTH MATERIAL	NOM	NOMINAL
CMU	CONCRETE MASONRY UNIT	NS	NEAR SIDE
COL	COLUMN	NTE	NOT TO EXCEED
CONC	CONCRETE	NTS	NOT TO SCALE
CONN	CONNECTION	NWC	NORMAL WEIGHT CONCRETE
CONST	CONSTRUCTION		
CONT	CONTINUOUS	OC	ON CENTER
COORD	COORDINATE	OCBF	ORDINARY CONCENTRIC BRACED FRAME
CSA	CONCRETE SCREW ANCHOR	OD	OUTSIDE DIAMETER
		OMF	ORDINARY MOMENT FRAME
d	PENNY (NAIL)	OPP	OPPOSITE
db	NOMINAL BAR DIAMETER	OWJ	OPEN WEB JOIST
DBA	DEFORMED BAR ANCHOR		
DBL	DOUBLE	PAF	POWER ACTUATED FASTENER
DBO	DESIGNED BY OTHERS	PC	PRECAST
DEG	DEGREE	PCF	POUNDS PER CUBIC FOOT
DEMO	DEMOLISH; DEMOLITION	PERP	PERPENDICULAR
DF/L	DOUGLAS FIR-LARCH	PJP	PARTIAL JOINT PENETRATION
DIA	DIAMETER	PL	PLATE
DIAG	DIAGONAL	PLF	POUNDS PER LINEAL FOOT
DIM	DIMENSION	PLWD	PLYWOOD
DIST	DISTANCE	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD	PSF	POUNDS PER SQUARE FOOT
DN	DOWN	PSL	PARALLEL STRAND LUMBER
DP	DEPTH OR DEEP	PT	PRESSURE TREATED
DTL	DETAIL	P/T	POST TENSIONED
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
		QTY	QUANTITY
(E)	EXISTING	RAD	RADIUS
E	MODULUS OF ELASTICITY	RBS	REDUCED BEAM SECTION
EA	EACH	REF	REFERENCE
EB	EXPANSION BOLT	REINF	REINFORCING
EJ	EACH FACE	REQD	REQUIRED
EJ	EXPANSION JOINT	RET	RETAINING
EL	ELEVATION	REV	REVISED, REVISION
ELEC	ELECTRICAL	RO	ROUGH OPENING
EN	EDGE NAIL		
EOR	ENGINEER OF RECORD	SC	SLIP CRITICAL
EQ	EQUAL; EARTHQUAKE	SCBF	SPECIAL CONCENTRIC BRACE FRAME
EW	EACH WAY	SOH	SCHEDULE
EXT	EXTERIOR	SEOR	STRUCTURAL ENGINEER OF RECORD
EXTD	EXTEND; EXTENDED	SFRS	SEISMIC FORCE RESISTING SYSTEM
		SHT	SHEET
fc	28 DAY CONC COMPRESSIVE STRENGTH	SHTG	SHEATHING
fm	MASONRY NET AREA COMPRESSIVE STRENGTH	SIM	SIMILAR
Fy	YIELD STRESS	SLBB	SHORT LEGS BACK TO BACK
Fu	TENSILE STRESS	SMF	SPECIAL MOMENT FRAME
F/	FACE OF	SMS	SHEET METAL SCREW
FAB	FABRICATED / FABRICATOR	SOG	SLAB ON GRADE
FF	FINISH FLOOR	SOMD	SLAB ON METAL DECK
FN	FIELD NAIL	SQ	SQUARE
FLR	FLOOR	SS	STAINLESS STEEL
FDN	FOUNDATION	SSH	SHORT SLOTTED HOLE
FRT	FIRE RETARDANT TREATED	STD	STANDARD
FS	FAR SIDE	STL	STEEL
FT	FEET	SQ	SQUARE
FTG	FOOTING	SYM	SYMMETRICAL
		T/	TOP OF
GA	GAUGE	T&B	TOP AND BOTTOM
GAF	GAS ACTUATED FASTENER	T&G	TONGUE AND GROOVE
GALV	GALVANIZED	THRD	THREADED
GLB	GLUE LAMINATED BEAM	TPL	TRIPLE
GR	GRADE	TRANS	TRANSVERSE
GWB	GYP SUM WALL BOARD	TYP	TYPICAL
GYP	GYP SUM		
HD	HOLDOWN	UNO	UNLESS NOTED OTHERWISE
HDG	HOT-DIP GALVANIZED	URM	UNREINFORCED MASONRY
HDR	HEADER	UT	ULTRASONIC TEST
HEX	HEXAGONAL		
HF	HEM-FIR	VERT	VERTICAL
HGR	HANGER	VIF	VERIFY IN FIELD
HORIZ	HORIZONTAL		
HSA	HEADED STUD ANCHOR	W/	WITH
HSS	HOLLOW STRUCTURAL SECTION	W/O	WITHOUT
HT	HEIGHT	WD	WOOD
HVAC	HEATING VENTILATION AIR CONDITIONING	WF	WIDE FLANGE
		WP	WORK POINT
		WT	WEIGHT
		WWR	WELDED WIRE REINFORCING

STRUCTURAL DRAWING SYMBOLS



STRUCTURAL MATERIAL PATTERNS



STRUCTURAL DRAWING INDEX

SHEET #	SHEET NAME	BID SET	PERMIT SET	ADDENDUM #1
S0.01	COVER SHEET	•	•	•
S0.02	STRUCTURAL NOTES & SPECIAL INSPECTION	•	•	•
S1.00	STRUCTURAL SITE PLAN	•	•	•
S1.01	ROOF FRAMING PLAN	•	•	•
S8.01	REPAIR DETAIL	•	•	•
S8.02	DETAILS	•	•	•
S8.03	DETAILS	•	•	•

CODE SUMMARY:

BUILDING CODE: 2022 OSSC
YEAR BUILT: 1964
AREA: 72000 SF (NO CHANGE)
BUILDING CONSTRUCTION TYPE: V-A (NO CHANGE)
OCCUPANCY CLASSIFICATION: E (NO CHANGE)

SCOPE OF WORK:

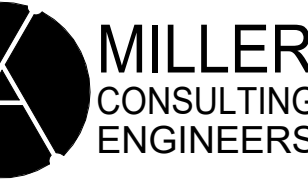
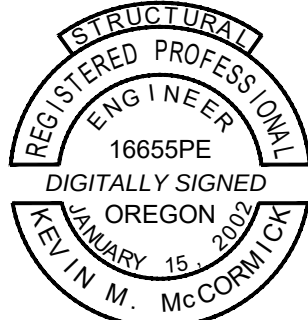
THE FOLLOWING PLANS ARE FOR THE MANDATORY REINFORCEMENT OF (E) GLUE LAMINATED BEAMS

PROJECT DESIGN TEAM:

MILLER CONSULTING ENGINEERS, INC
STRUCTURAL ENGINEER OF RECORD

PRIMARY CONTACT: KEVIN MCCORMICK, kevin@miller-se.com
SECONDARY CONTACT: JENNYLIN LOPEZ, jennylin.lopez@miller-se.com

THESE DRAWINGS HAVE BEEN DIGITALLY SIGNED IN ACCORDANCE WITH OREGON ADMINISTRATIVE RULE 820-025-0010. A DIGITAL SIGNATURE WATERMARK ON THIS PAGE INDICATES THIS SHEET IS PART OF AN ELECTRONICALLY SIGNED DOCUMENT. REFER TO INDEX ON THIS PAGE FOR ALL SHEETS INCLUDED WITH THIS DIGITAL SIGNATURE.



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CENTENNIAL ELEMENTARY SCHOOL

1315 ASPEN STREET
SPRINGFIELD, OREGON

SPRINGFIELD PUBLIC SCHOOLS

REV	DESCRIPTION	DATE
1	ADDENDUM #2	05-19-2026

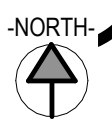
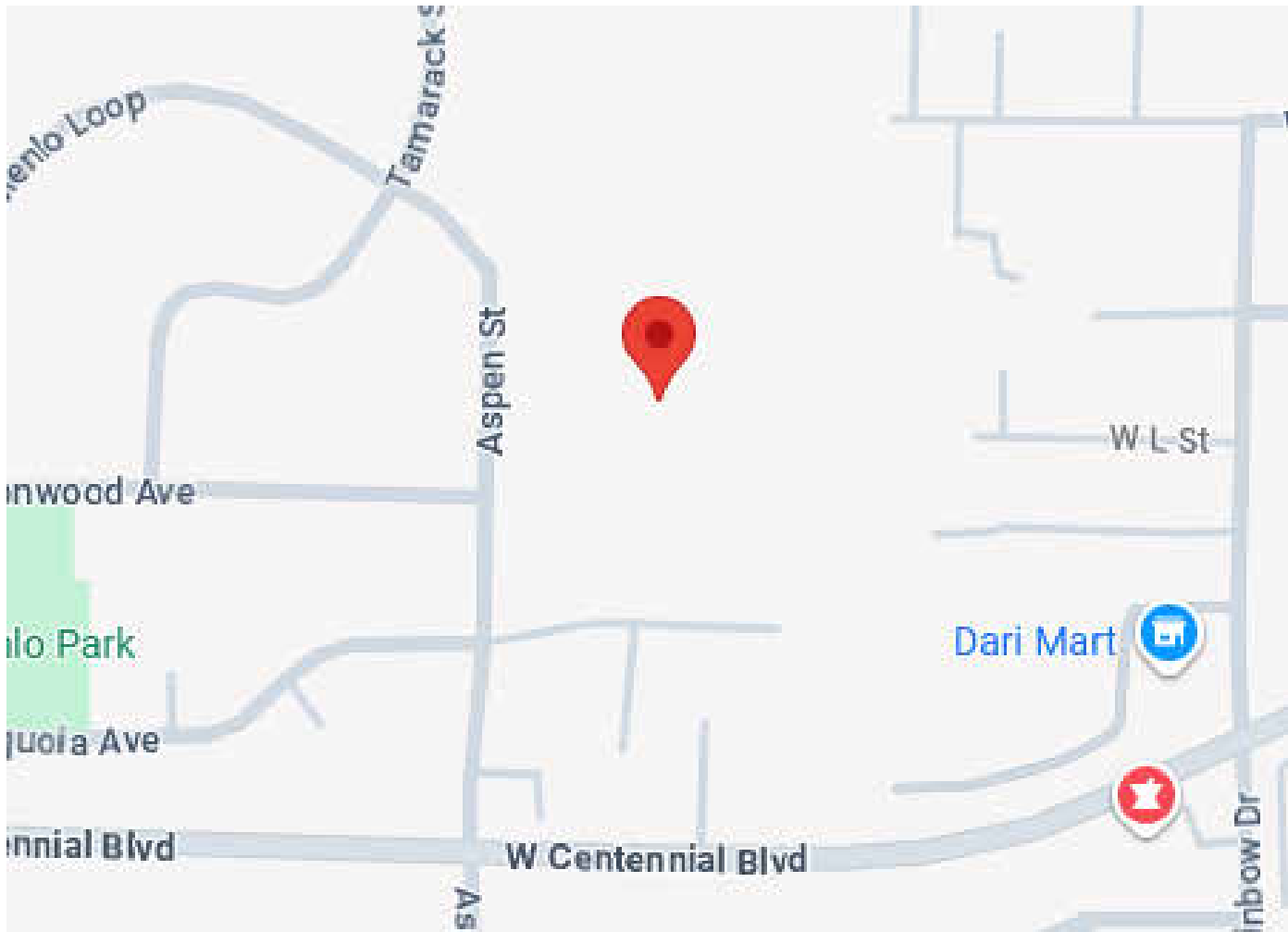
DESIGNED BY: JDL
CHECKED BY: KMM
MCE PROJ #: 251372
ISSUE DATE: 03.20.2026
ISSUANCE: PERMIT SET

SHEET CONTENT

COVER SHEET

SHEET

S0.01



VICINITY MAP

S0.01 | NOT TO SCALE

STRUCTURAL NOTES

GENERAL NOTES

THESE CONTRACT DOCUMENTS COMPRISED OF PLANS, SPECIFICATIONS, ENGINEERING AND DESIGN WORK ARE INTENDED SOLELY FOR THE PROJECT SPECIFIED HEREIN. MILLER CONSULTING ENGINEERS (MCE) DISCLAIMS ALL LIABILITY IF THESE PLANS AND SPECIFICATIONS OR THE DESIGN, ADVICE AND INSTRUCTIONS ATTENDANT THERE TO ARE USED ON ANY PROJECT OR AT ANY LOCATION OTHER THAN THE PROJECT AND LOCATION SPECIFIED HEREIN.

THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE TO ALL SAFETY REGULATIONS DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL METHODS, DIRECTION AND RELATED EQUIPMENT NECESSARY TO PERFORM THE WORK.

SHOULD ANY QUESTION ARISE REGARDING THE CONTRACT DOCUMENTS OR SITE CONDITIONS, THE CONTRACTOR SHALL REQUEST INTERPRETATION AND CLARIFICATION FROM THE ENGINEER BEFORE BEGINNING THE PROJECT. THE ABSENCE OF SUCH REQUEST SHALL SIGNIFY THAT THE CONTRACTOR HAS REVIEWED AND FAMILIARIZED THEMSELVES AND HAS COMPLETE COMPREHENSION OF ALL ASPECTS OF THE PROJECT.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL ITEMS AND WORK NECESSARY FOR COMPLETION OF THE PROJECT AS INDICATED BY THE CONTRACT DOCUMENTS. THE CONTRACT DOCUMENTS ARE STRUCTURAL ONLY AND DO NOT NECESSARILY INDICATE ALL NON-STRUCTURAL PORTIONS OF THE PROJECT INCLUDING, BUT NOT LIMITED TO, PLUMBING, FIRE SUPPRESSION, ELECTRICAL, MECHANICAL, LAND USE, SITE PLANNING, EROSION CONTROL FLASHING AND WATER-PROOFING. ALL NON-STRUCTURAL PORTIONS OF WORK, AND STRUCTURAL WORK NOTED AS DELEGATED TO AN IN THE SUBMITTAL SCHEDULE, ARE BEYOND THE SCOPE OF THESE DOCUMENTS AND ARE PROVIDED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL NON-STRUCTURAL ITEMS IMPACTED BY THE STRUCTURAL WORK. THESE ITEMS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR MODIFIED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED DESIGN PROFESSIONAL ENGAGED AT THE CONTRACTOR'S OWN EXPENSE.

ANY MATERIAL NOT AS SPECIFIED IN THE CONTRACT DOCUMENTS OR IMPROPER MATERIAL INSTALLATION OR WORKMANSHIP SHALL BE REMOVED AND REPLACED WITH SPECIFIED MATERIAL IN A WORKMANLIKE MANNER AT THE CONTRACTOR'S EXPENSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL MATERIALS FROM DAMAGE THROUGHOUT THE COURSE OF CONSTRUCTION. CHANGES TO THE CONTRACT DOCUMENTS REQUESTED BY THE CONTRACTOR TO ACCOMPLISH THEIR PREFERRED MEANS OR METHOD OF CONSTRUCTION MAY BE AT THE CONTRACTOR'S EXPENSE.

ALL MANUFACTURED PRODUCTS SPECIFIED SHALL BE USED UNLESS AN ALTERNATE IS SUBMITTED AND APPROVED BY THE SEOR. MANUFACTURED PRODUCTS REQUIRING A BUILDING CODE EVALUATION REPORT SHALL HAVE A CURRENT REPORT DEMONSTRATING CONFORMANCE WITH THE APPLICABLE BUILDING CODE, VALID AT THE TIME OF PRODUCT INSTALLATION.

TEMPORARY MEASURES/SHORING

THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL INSTANCES WHERE TEMPORARY MEASURES/SHORING ARE REQUIRED, AND SHALL AT THEIR OWN EXPENSE, ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY MEASURES/SHORING ARE REQUIRED. TEMPORARY MEASURES/SHORING SHALL:

- PROTECT PERSONNEL AND THE PUBLIC.
- PREVENT SETTLEMENT AND/OR DAMAGE TO THE BUILDING AND/OR EXISTING FACILITIES
- PROTECT STREETS, WALKWAYS, UTILITIES, AND IMPROVEMENTS.
- PROTECT ALL EXCAVATIONS AGAINST LOSS OF GROUND OR CAVING OF EMBANKMENTS DURING CONSTRUCTION.

BUILDING CODE

ALL PHASES OF THE WORK SHALL CONFORM TO THE 2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC), BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC), INCLUDING ALL REFERENCE STANDARDS, UNLESS NOTED OTHERWISE.

SPECIAL INSPECTION/TESTING

SPECIAL INSPECTION AND/OR TESTING IS REQUIRED IN ACCORDANCE WITH BUILDING CODE SECTION 1704. IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE SPECIAL INSPECTION AND TESTING BY A QUALIFIED THIRD PARTY, SUCH AS A TESTING AGENCY REVIEWED BY THE ENGINEER AND APPROVED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW SCHEDULING OF SPECIAL INSPECTION.

SPECIAL INSPECTIONS SHALL CONFORM TO SECTION 1705 OF THE BUILDING CODE, CONTRACT DOCUMENTS AND SUBMITTALS. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS. FOR PROJECT REQUIREMENTS REFER TO THE SPECIAL INSPECTION TABLES WITHIN THE CONTRACT DOCUMENTS.

STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION BY THE SEOR SHALL VERIFY BY PERIODIC VISUAL OBSERVATION THAT THE STRUCTURAL SYSTEM HAS GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AT SIGNIFICANT STAGES OF CONSTRUCTION AND AT COMPLETION AS REQUIRED IN ACCORDANCE WITH BUILDING CODE SECTION 1704.6. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW SCHEDULING FOR A STRUCTURAL OBSERVATION. STRUCTURAL OBSERVATION SHALL BE PERFORMED DURING CONSTRUCTION AT THE FOLLOWING TIMES:

- DURING PRESTRESSING OPERATIONS OF THE FIRST BEAM
- AFTER COMPLETION OF STRUCTURAL REINFORCING OF ALL BEAMS

SHOP DRAWINGS/SUBMITTALS

SUBMITTALS AND SHOP DRAWINGS FOR SPECIFIC PRODUCTS GENERATED BY THE SUPPLIER SHALL BE SUBMITTED FOR THE ITEMS NOTED IN THE SUBMITTAL SCHEDULE. SHOP DRAWINGS SHALL BE TO SCALE AND SHOW COMPLETE DETAILS AND INSTRUCTIONS FOR FABRICATION AND ASSEMBLY. SHOP DRAWINGS SHALL INDICATE ERECTION AND TEMPORARY BRACING INFORMATION FOR CONTRACTOR'S USE.

THE DESIGN OF ITEMS NOTED IN THE SUBMITTAL SCHEDULE AS DELEGATED DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DOCUMENTS FOR THE DESIGN AND FABRICATION OF DELEGATED DESIGN ITEMS (INCLUDING STRUCTURAL CALCULATIONS AND DRAWINGS) SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER REGISTERED IN THE STATE THAT THE PROJECT IS BEING CONSTRUCTED.

DEFERRED SUBMITAL ITEMS NOTED IN THE SUBMITTAL SCHEDULE ARE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND ARE REQUIRED TO BE SUBMITTED TO THE BUILDING OFFICIAL.

THE CONTRACTOR SHALL REVIEW AND MODIFY ALL SUBMITTALS AS REQUIRED FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SIGN AND DATE ALL SETS OF THE SUBMITTAL DOCUMENTS PRIOR TO SUBMITTAL TO THE ENGINEER. THE CONTRACTOR SHALL SCHEDULE SUBMITTALS TO ALLOW SUFFICIENT TIME FOR REVIEW AND POSSIBLE RE-SUBMITTAL. WHERE RE-SUBMITTALS ARE REQUIRED, CHANGES FROM THE PREVIOUS SUBMITTAL SHALL BE CLEARLY INDICATED WITH REVISION CLOUDS OR SIMILAR.

SUBMITTAL SCHEDULE				
ITEM	SUBMITTAL	SHOP DRAWINGS	DELEGATED DESIGN	DEFERRED SUBMITTAL
PRESTRESSING CABLE	X			
PRESTRESSING CABLE ACCESSORIES	X			
FABRICATED STRUCTURAL STEEL ELEMENTS	X	X		
STEEL WELDING PROCEDURES	X			
STRUCTURAL ADHESIVES FOR TIMBER CRACK REPAIR	X			
BEAM LIFTING PLAN			X	X
BONDING EPOXY	X			

STRUCTURAL DESIGN CRITERIA

LIVE LOAD REDUCTION FOR BEAMS AND COLUMNS WAS NOT USED. DESIGN FOR MECHANICAL LOADS INCLUDES ONLY THOSE INDICATED ON STRUCTURAL DRAWINGS. THE FOLLOWING ARE THE DESIGN REQUIREMENTS:

STRUCTURAL DESIGN CRITERIA	
RISK CATEGORY	III
SUPERIMPOSED DEAD LOAD (EXCLUDING STRUCTURAL FRAME SELF WEIGHT)	
ROOF (TOTAL INCLUDING ROOFING/CEILING)	15 PSF

ROOF LIVE LOAD	
ROOF LIVE LOAD	20 PSF OR 300LB CONCENTRATED LOAD
ROOF SNOW LOAD	
DESIGN ROOF SNOW LOAD	27 PSF
SNOW DRIFTING	AS NOTED ON PLANS (IF OCCURS)
IMPORTANCE FACTOR	I _s = 1.1
GROUND SNOW LOAD	P _g = 11 PSF

STRUCTURAL STEEL

DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360). QUALITY ASSURANCE (QA) IS REQUIRED FOR STRUCTURAL STEEL ITEMS PER AISC 360 AND 341 UNLESS SPECIFICALLY NOTED OTHERWISE. QUALITY CONTROL (QC) TO BE PROVIDED BY THE FABRICATOR, ERECTOR OR OTHER RESPONSIBLE CONTRACTOR AS APPLICABLE. CONTRACTOR AND SPECIAL INSPECTOR TO DOCUMENT QUALITY CONTROL AS REQUIRED IN AISC 360 SECTION N3 AND AISC 341 SECTION J2.

ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING MATERIAL STANDARDS:

STRUCTURAL STEEL MATERIAL STANDARDS		
SHAPE	ASTM SPECIFICATION	YIELD STRESS
W-SECTIONS	A992	50 KSI
RECTANGULAR HSS	A500, GRADE C	50 KSI
ROUND HSS	A500, GRADE C	46 KSI
PIPE	A53, GRADE B, TYPE E OR S	35 KSI
ALL OTHER SECTIONS AND PL	A36	36 KSI

ALL STRUCTURAL STEEL SHALL HAVE ONE SHOP COAT OF PRIMER. ALL EXPOSED STRUCTURAL STEEL AND FASTENINGS TO HAVE ONE FINISH COAT OF RUST INHIBITING PAINT, COLOR BY OWNER.

STRUCTURAL STEEL BOLTING

ALL BOLTS SHALL BE ASTM A307 GRADE A WITH MATCHING NUTS TIGHTENED TO A SNUG TIGHT CONDITION.

STRUCTURAL STEEL WELDING

ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS) D1.1 USING E70XX ELECTRODES. WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED BY AWS FOR THE WELD TYPES SPECIFIED. WELD LENGTHS SHOWN ARE EFFECTIVE AS SPECIFIED PER THE SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), WHERE WELD LENGTHS ARE NOT SHOWN, THE WELD SHALL BE FULL LENGTH OF MEMBERS BEING JOINED. FIELD WELDING SYMBOLS HAVE NOT NECESSARILY BEEN INDICATED ON THE DRAWINGS. WHERE SHOWN, PROPER FIELD WELDING PER AWS D1.1 SHALL BE USED. WHERE NO FIELD WELDING SYMBOLS ARE SHOWN, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE USE OF SHOP AND FIELD WELDS.

ALL PARTIAL JOINT PENETRATION GROOVE WELD SIZES SHOWN ON THE DRAWINGS REFER TO THE EFFECTIVE THROAT THICKNESS. ALL BUTT WELDS SHALL BE FULL PENETRATION WELDS UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOINT PREPARATION AND WELDING PROCEDURES THAT INCLUDE, BUT ARE NOT LIMITED TO: REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES AND TAPERS AND TRANSITIONS OF UNEQUAL PARTS.

ALL WELDS SHALL RECEIVE THE SAME FINISH COATING AS THE MEMBER BEING WELDED. ANY COATINGS ON THE STRUCTURAL AFFECTED BY WELDING SHALL BE REPAIRED AS REQUIRED.

POST-TENSIONING CABLES FOR WOOD BEAM STRENGTHENING

POST-TENSIONING CABLES SHALL MEET THE REQUIREMENTS SET FORTH IN THE SPECIFICATIONS FOR UNBONDED SINGLE STRAND TENDONS (LATEST EDITION) AND THE SPECIFICATION FOR SEVEN-WIRE PRESTRESSING STEEL STRAND FOR BARRIER CABLE APPLICATIONS PUBLISHED BY THE POST-TENSIONING INSTITUTE (PTI).

POST-TENSIONING CABLES SHALL BE INSTALLED TO THE JACKING PRESTRESS FORCE AS SPECIFIED ON THE PLANS. ANCHORAGES, COUPLERS AND FITTINGS SHALL MEET THE FOLLOWING:

- HAVE A BUILDING CODE EVALUATION REPORT
- DEVELOP A MINIMUM OF 100% OF THE ULTIMATE STRENGTH OF THE CABLE
- HAVE A GALVANIZED COATING

CABLES SHALL BE 1/2" DIAMETER CONFORMING TO ASTM A416, GRADE 270 FOR SEVEN-WIRE LOW RELAXATION STRAND. CABLE SHALL HAVE A ZINC GALVANIZED COATING CONFORMING TO ASTM A475

EACH STRESSING JACK AND GAUGE COMBINATION SHALL BE CALIBRATED AS A UNIT TO KNOWN STANDARDS AT INTERVALS NOT EXCEEDING 6 MONTHS. COPIES OF THE CALIBRATION CERTIFICATES FOR EACH JACK AND GAUGE COMBINATION BEING USED SHALL BE SUBMITTED TO THE SEOR FOR REVIEW.

CABLE INSTALLATION AND STRESSING OPERATIONS SHALL BE PERFORMED UNDER THE IMMEDIATE CONTROL OF A PERSON WHO IS A PTI CERTIFIED INSTALLER EXPERIENCED IN THIS TYPE OF WORK.

WOOD FRAMING

ALL WOOD STRUCTURAL GRADES SHALL BE PER TYPICAL WOOD FRAMING SCHEDULE UNLESS NOTED OTHERWISE.

TYPICAL WOOD FRAMING SCHEDULE	
MEMBER	VISUALLY GRADED (MIN)
COLUMNS	DF/L #1
BEAMS	DF/L #1
SILL PL TO CONCRETE/MASONRY	PT HF #2
BOT PL/SOLE PL/TOP PL	DF/L #2
STUDS	DF/L #2
BUILT-UP STUD PACKS	DF/L #2
JOISTS/RAFTERS	DF/L #2
PURLINS	DF/L #2
GIRTS	DF/L #2
BLOCKING	DF/L CONSTRUCTION
NON-STRUCTURAL FRAMING	DF/L CONSTRUCTION

ALL WOOD PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED UNLESS NOTED OTHERWISE. ALL COLUMNS SHALL HAVE SOLID BLOCKING FOR THE FULL COLUMN AREA TO SUPPORTING MEMBERS BELOW. COLUMNS SHALL ALIGN THROUGH ALL FLOORS TO THE FOUNDATION. ALL SAWN LUMBER SHALL HAVE A MOISTURE CONTENT LESS THAN 19% (S-DRY) PRIOR TO INSTALLATION OF NON-STRUCTURAL COMPONENTS.

WOOD FRAMING CONNECTIONS

PREDRILL ALL SCREWS INTO EXISITING LUMBER TO ¾ OF THE ROOT THREAD DIAMETER OF THE SCREW.

PREFABRICATED METAL TIMBER CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE, UNLESS NOTED OTHERWISE. ALL PREFABRICATED METAL TIMBER CONNECTORS AND HANGERS SHALL BE FULLY BOLTED, NAILED, AND/OR SCREWED AS INDICATED BY MANUFACTURER, UNLESS NOTED OTHERWISE. ALL CONNECTORS, HANGERS AND FASTENERS SHALL BE CORROSION PROTECTED PER MANUFACTURER'S RECOMMENDATIONS.

ALL BOLTS IN WOOD CONNECTIONS SHALL BE ASTM A307 GRADE A. ALL BOLT HEADS OR NUTS BEARING ON WOOD TO HAVE STANDARD WASHERS. BOLT HOLES IN WOOD SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT. ALL LAG SCREWS SHALL HAVE PILOT HOLES PER THE LAG SCREW PILOT HOLE SCHEDULE. REFER TO SECTION 12.1 OF THE NDS FOR ADDITIONAL INSTALLATION INSTRUCTIONS OF DOWEL-TYPE FASTENERS.

ENGINEERED LUMBER

ENGINEERED LUMBER SHALL HAVE A BUILDING CODE EVALUATION REPORT.

ALL ENGINEERED LUMBER EXPOSED TO WEATHER AND SUBJECT TO DECAY, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR PRESERVATIVE MATERIALS, RETENTION RATES, AND END USE.

GLUE LAMINATED (GLULAM) WOOD MEMBERS

GLULAM MEMBERS SHALL BE MANUFACTURED AND CERTIFIED PER THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC), ANSI/AITC A190.1, ASTM D3737 AND CERTIFICATION STAMPED. GLULAM MEMBERS SHALL CONTAIN AN AVERAGE MOISTURE CONTENT OF 16% OR LESS AT TIME OF MANUFACTURE. EASE EDGES ON GLULAM MEMBERS AS REQUIRED TO BE COMPATIBLE WITH STEEL AT CONNECTIONS.

GLULAM APPEARANCE SHALL BE AS FOLLOWS UNLESS SPECIFIED OTHERWISE ON THE ARCHITECTURAL DRAWINGS:

- NOT EXPOSED TO VIEW IN COMPLETED CONSTRUCTION: INDUSTRIAL APPEARANCE
- EXPOSED TO VIEW: ARCHITECTURAL APPEARANCE

THE APPEARANCE CERTIFICATION STAMP ON ARCHITECTURAL APPEARANCE MEMBERS SHALL BE PLACED ON SURFACES NOT EXPOSED IN COMPLETED CONSTRUCTION.

GLULAM BEAMS WITH A SIMPLE SPAN BETWEEN SUPPORTS SHALL HAVE A CAMBER EQUAL TO A 2600" RADIUS BETWEEN SUPPORTS FOR SPANS OVER 24', OR AS NOTED ON DRAWINGS. MULTI-SPAN AND CANTILEVER BEAMS SHALL NOT HAVE A CAMBER UNLESS NOTED OTHERWISE.

GLULAM MEMBERS SPECIFIED AS PRESERVATIVE TREATED SHALL BE TREATED WITH PERMAPOST KLEAR-GARD 25 OR EQUAL.

[FOR ALLOWABLE GLULAM BEAM PENETRATIONS SEE 10/58.00.]

GLULAM MEMBERS SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN PROPERTIES:

GLULAM BEAMS		
	SIMPLE SPAN	CONTINUOUS OVER MULTIPLE SUPPORTS OR CANTILEVER
COMBINATION SYMBOL (SPECIES)	24F-V4 (DF/DF)	24F-V8 (DF/DF)
MODULUS OF ELASTICITY, E (PSI)	1,800,000	1,800,000
FLEXURAL STRESS, F _b ^{min} (PSI)	+2,400 / -1,850	+2,400 / -2,400
TENSION STRESS, F _t (PSI)	1,100	1,100
COMPRESSION PERPENDICULAR TO GRAIN, F _c PERP (PSI)	650	650
COMPRESSION PARALLEL TO GRAIN, F _c (PSI)	1,650	1,650
HORIZONTAL SHEAR PARALLEL TO GRAIN, F _v (PSI)	285	285
SPECIFIC GRAVITY	0.50	0.50

LAMINATED VENEER LUMBER (LVL)

LVL FRAMING SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PROPERTY	MINIMUM VALUE
MODULUS OF ELASTICITY, E (PSI)	2,000,000
FLEXURAL STRESS, F _b (PSI)	2,600
TENSION STRESS, F _t (PSI)	1,895
COMPRESSION PERPENDICULAR TO GRAIN, F _c PERP (PSI)	750
COMPRESSION PARALLEL TO GRAIN, F _c (PSI)	2,510
HORIZONTAL SHEAR PARALLEL TO GRAIN, F _v (PSI)	285
SPECIFIC GRAVITY	0.50

ADHESIVE

PORTABLE EQUIPMENT SHALL BE USED EMPLOYING POSITIVE DISPLACEMENT METERING PUMPS WHICH ARE INTERLOCKED TO PROVIDE RESIN DELIVERY IN PROPORTIONS REQUIRED BY THE COMPOSITION OF THE TWO COMPONENT INJECTION ADHESIVE. MIXING OF THE ADHESIVE SHALL BE ACCOMPLISHED IN LINE WITH A STATIC MIXER. THE EQUIPMENT SHALL BE DRIVEN BY AIR OR ELECTRIC POWER. THE INJECTION EQUIPEMNT SHALL BE CAPABLE OF MAINTAINING THE VOLUME RATIO OF THE SPECIFIED ADHESIVE COMPONENTS DURING UNINTERRUPTED FLOW WITH A TOLERANCE OF +/- 5% PRESSURE CONTROL. THE INJECTION EQUIPMENT SHALL HAVE AN AUTOMATIC PRESSURE CONTROL DEVICE THAT ALLOWS OPERATION AT ANY PRESET PRESSURE WITHIN ITS OPERATING RANGE. THE INJECTION EQUIPMENT SHALL HAVE AN AUTOMATIC SHUT-OFF FEATURE TO PREVENT DELIVERY OF ONE ADHESIVE COMPONENT ONLY, WHEN THE OTHER COMPONENT SUPPLY IS EXHAUSTED.

WOOD BEAM REPAIRS - SPECIAL INSPECTIONS			
SYSTEM OR MATERIAL	FREQUENCY		REMARKS
	CONTINUOUS	PERIODIC	
POST-TENSIONED CABLE PLACEMENT		X	REINFORCING TO COMPLY WITH ALL CODE PROTECTION, SPACING AND TOLERANCE LIMITS.
POST-TENSIONED CABLE GRADE		X	
APPLICATION OF PRESTRESSING FORCES FOR POST-TENSIONED CABLES	X		DOCUMENT APPLIED FORCE AND ELONGATION.
EPOXY CRACK INJECTION AND INSTALLATION OF FASTENERS FOR REPAIR OF BEAM CRACKS	X		REFERENCE INSTALLATION SEQUENCE ON SHEET S1.02 AND DETAIL 3/S8.02

STEEL - SPECIAL INSPECTIONS				
SYSTEM OR MATERIAL	CODE OR STANDARD REFERENCE	FREQUENCY / INSPECTION		REMARKS
		CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	
STEEL FABRICATION				
MATERIAL VERIFICATION OF STRUCTURAL STEEL COMPONENTS	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N3.2		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	AISC 360 A3.5 AISC 360 N3.2 APPLICABLE AWS A5 DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
STRUCTURAL STEEL WELDING				
VERIFYING USE OF PROPER WPS'S	AISC 360 N3.2			RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS	AWS D1.1		X	RETAIN A RECORD OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	AWS D1.1 CLAUSE 6	X		
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"		X		

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CENTENNIAL ELEMENTARY SCHOOL

1315 ASPEN STREET
SPRINGFIELD, OREGON

SPRINGFIELD PUBLIC SCHOOLS

REV	DESCRIPTION	DATE
1	ADDENDUM #2	05-19-2026

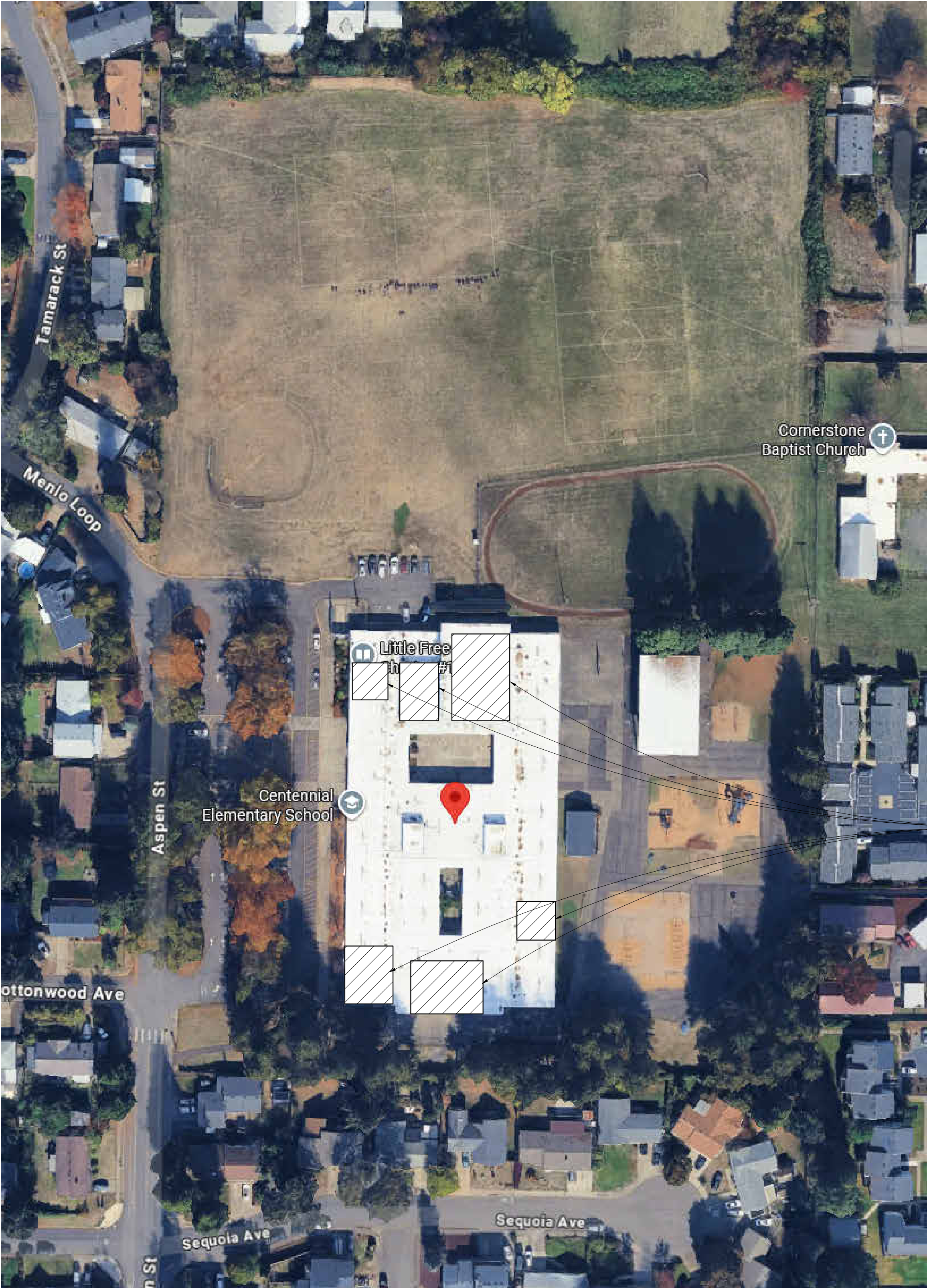
DESIGNED BY: JDL
CHECKED BY: KMM
MCE PROJ #: 251372
ISSUE DATE: 03.20.2026
ISSUANCE: PERMIT SET

SHEET CONTENT

STRUCTURAL NOTES & SPECIAL INSPECTION

SHEET

S0.02



1 STRUCTURAL SITE PLAN

S1.00 | NOT TO SCALE



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SHEET CONTENT
STRUCTURAL SITE PLAN

SHEET

S1.00

GENERAL SHEET NOTES:

- G1. SEE S0.02 AND SUBSEQUENT SHEETS FOR STRUCTURAL NOTES AND SPECIAL INSPECTION REQUIREMENTS
- G2. FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION OR PURCHASE OF MATERIALS
- G3. THESE PLANS ARE STRUCTURAL ONLY - SIDING, FLASHING, MOISTURE PROTECTION, ETC ARE DESIGNED BY OTHERS
- G4. ALL GLULAM BEAMS WITH CRACKS OR BEAMS SHOWING DELAMINATION SHALL PER REPAIR PER DETAIL 2/S8.02. VERIFY IN FIELD ALL BEAMS BEFORE PURCHASE OF MATERIAL. NOTIFY EOR
- G5. ALL GLULAM BEAMS THAT WILL BE REPAIR NEED SHORING TO LIFT BEAM UP BEFORE INSTALLING LVL'S AT EA SIDE.



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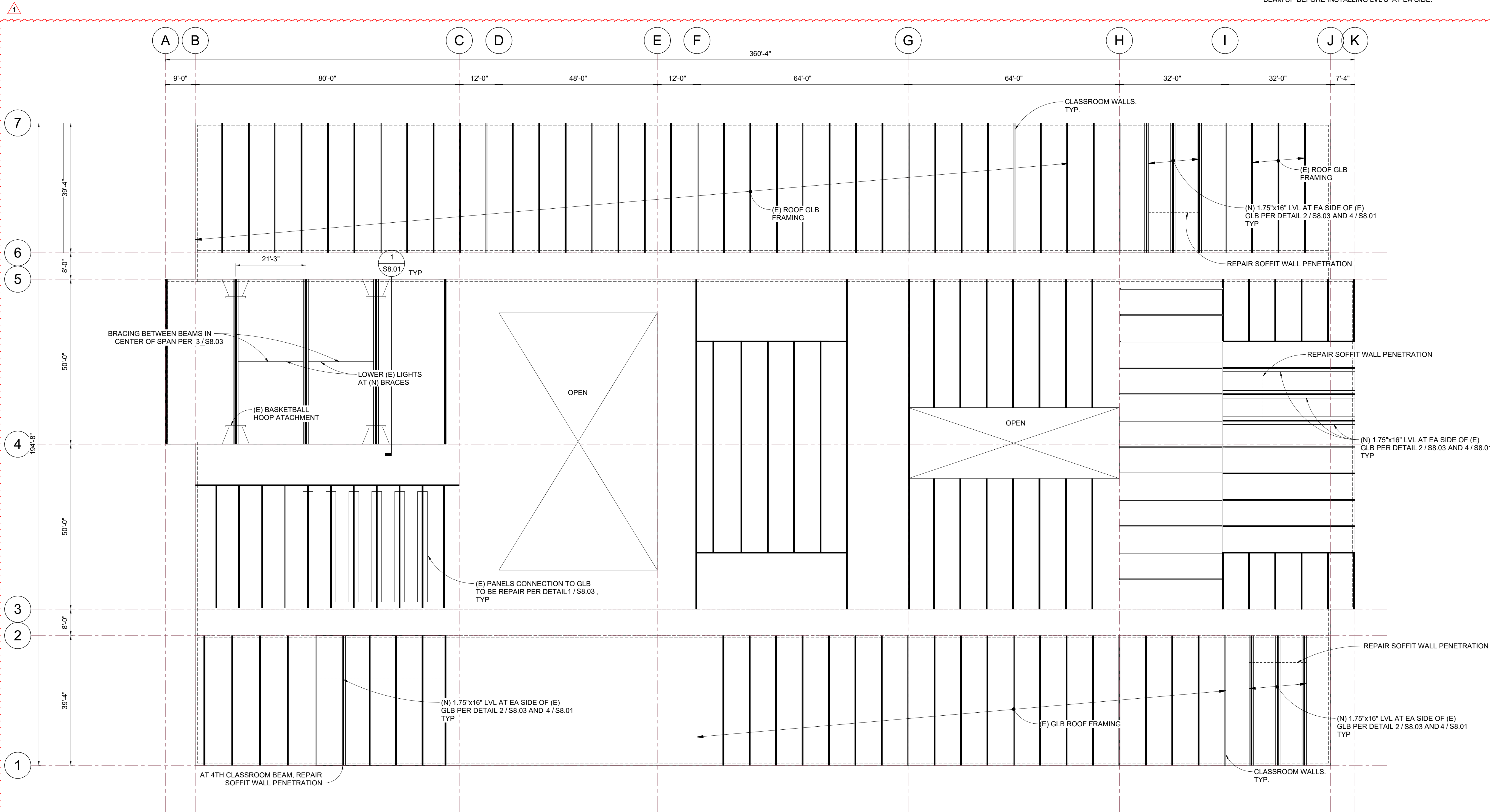
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SHEET CONTENT
ROOF FRAMING PLAN

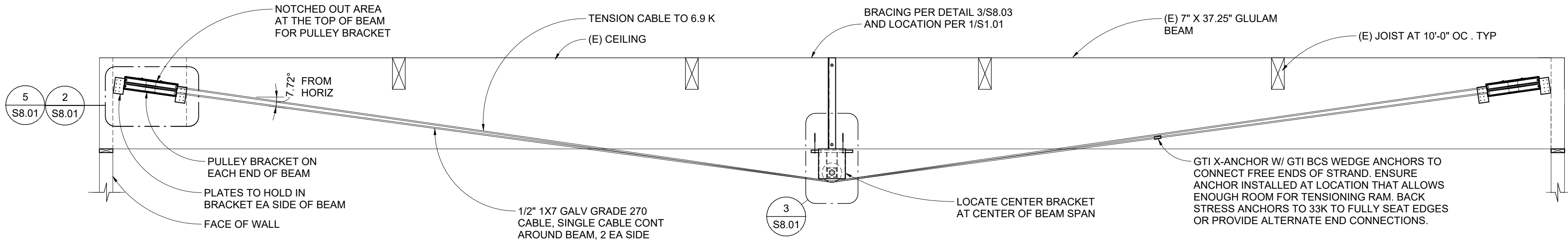
SHEET

S1.01



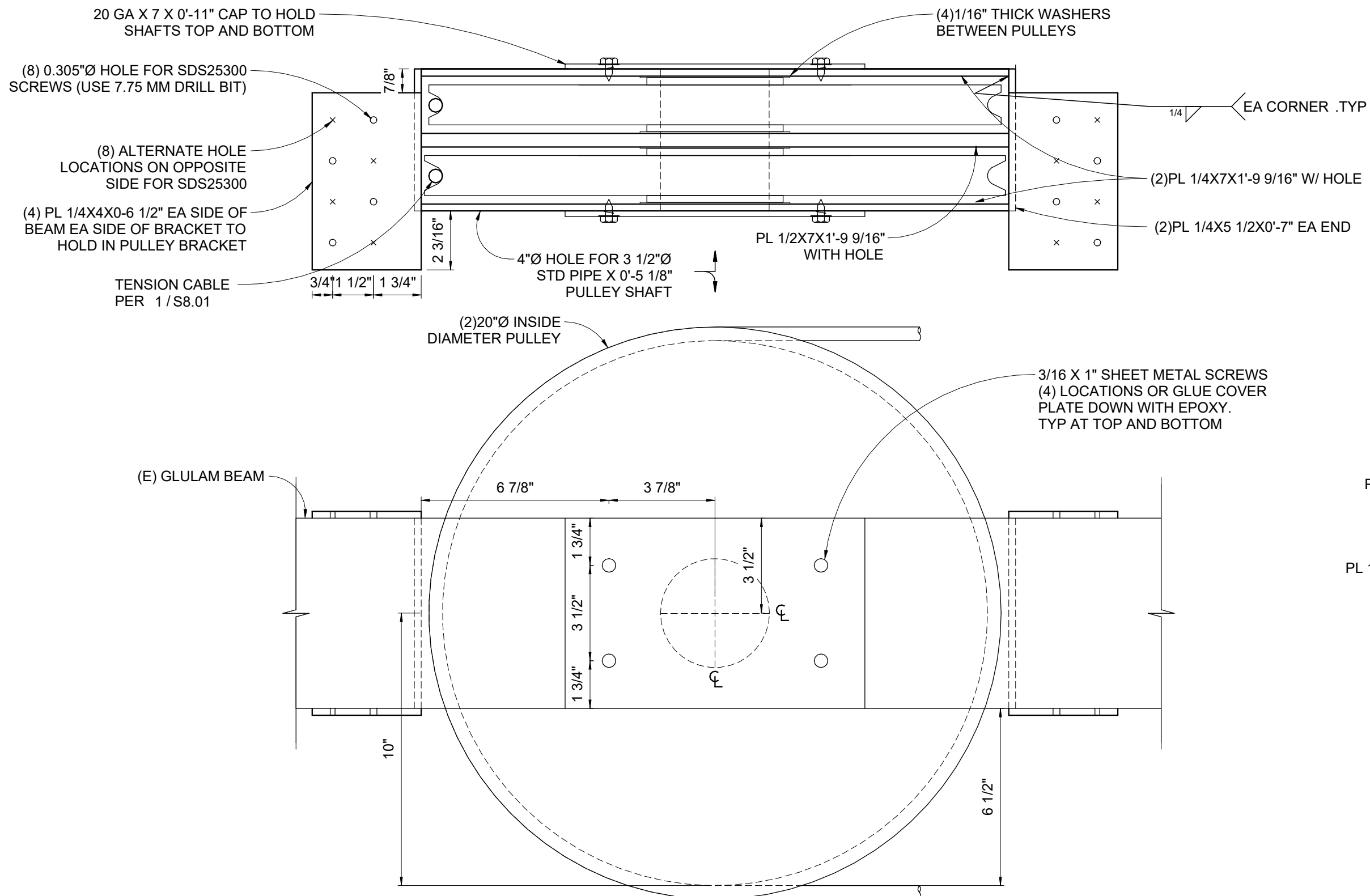
1 ROOF FRAMING PLAN

S1.01 | 1/16" = 1'-0"



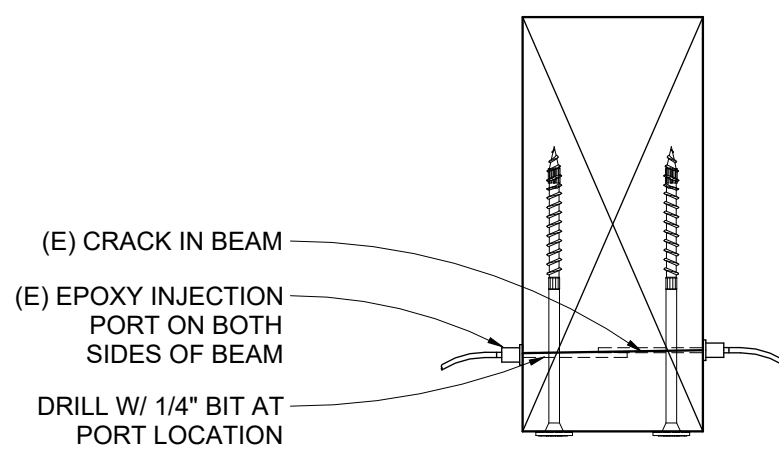
GYM BEAM TENSION CABLE REINFORCEMENT ELEVATION

S8.01 | 3/8" = 1'-0"

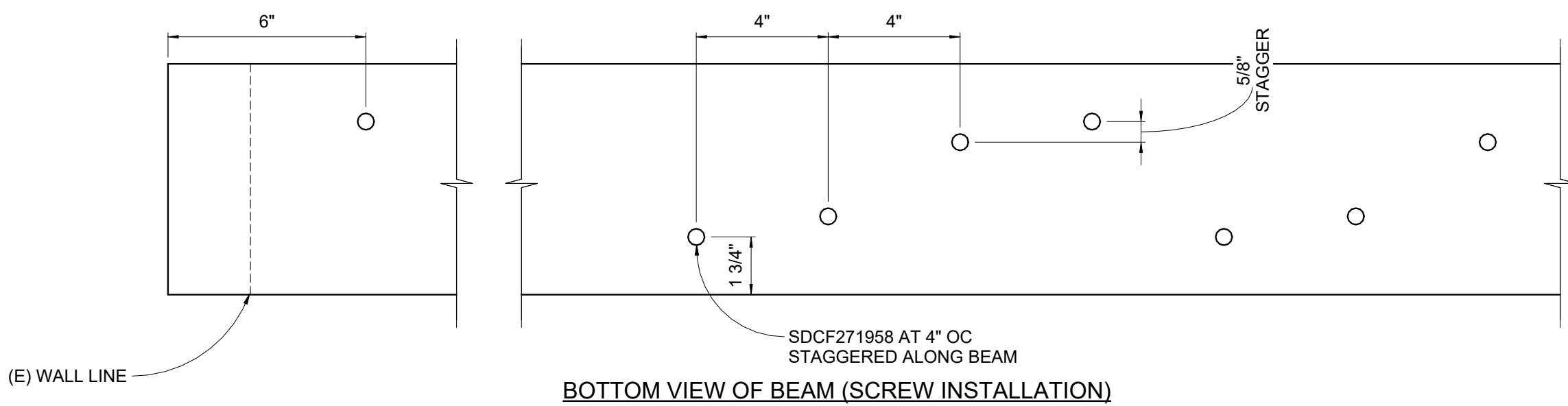


END BRACKET

S8.01 | 3" = 1'-0"



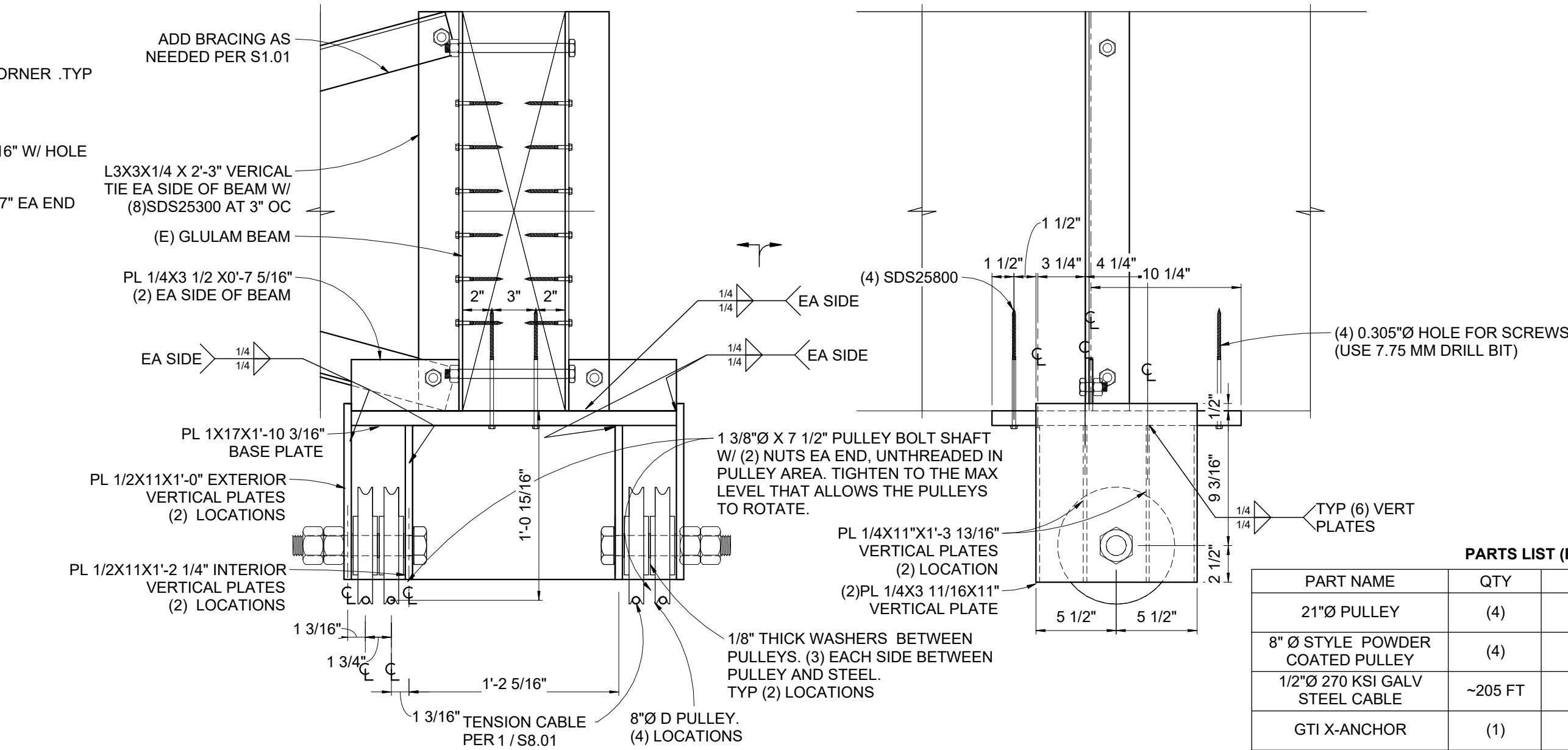
CROSS SECTION OF BEAM (CRACK INJECTION)



BOTTOM VIEW OF BEAM (SCREW INSTALLATION)

BEAM REPAIR PROCEDURE

S8.01 | 3" = 1'-0"



CENTER BRACKET

S8.01 | 1 1/2" = 1'-0"

STEP 1:
VERIFY ESTIMATED CRACK LOCATIONS SHOWN ON PLAN. MARK ANY CRACKING ON SIDE OR BOTTOM OF BEAM BEFORE JACKING UP BEAM. SAND SURFACE AROUND CRACK TO REMOVE PAINT OR OTHER COATING. CLEAN AREA AROUND CRACK TO ALLOW BONDING TO WOOD SURFACE. USE CLEAN COMPRESSED AIR TO BLOW OUT THE CRACK AND REMOVE ANY DUST OR DEBRIS.

STEP 2:
INSTALL HARDWARE SHOWN ON 2/S8.01 AND 3/S8.01

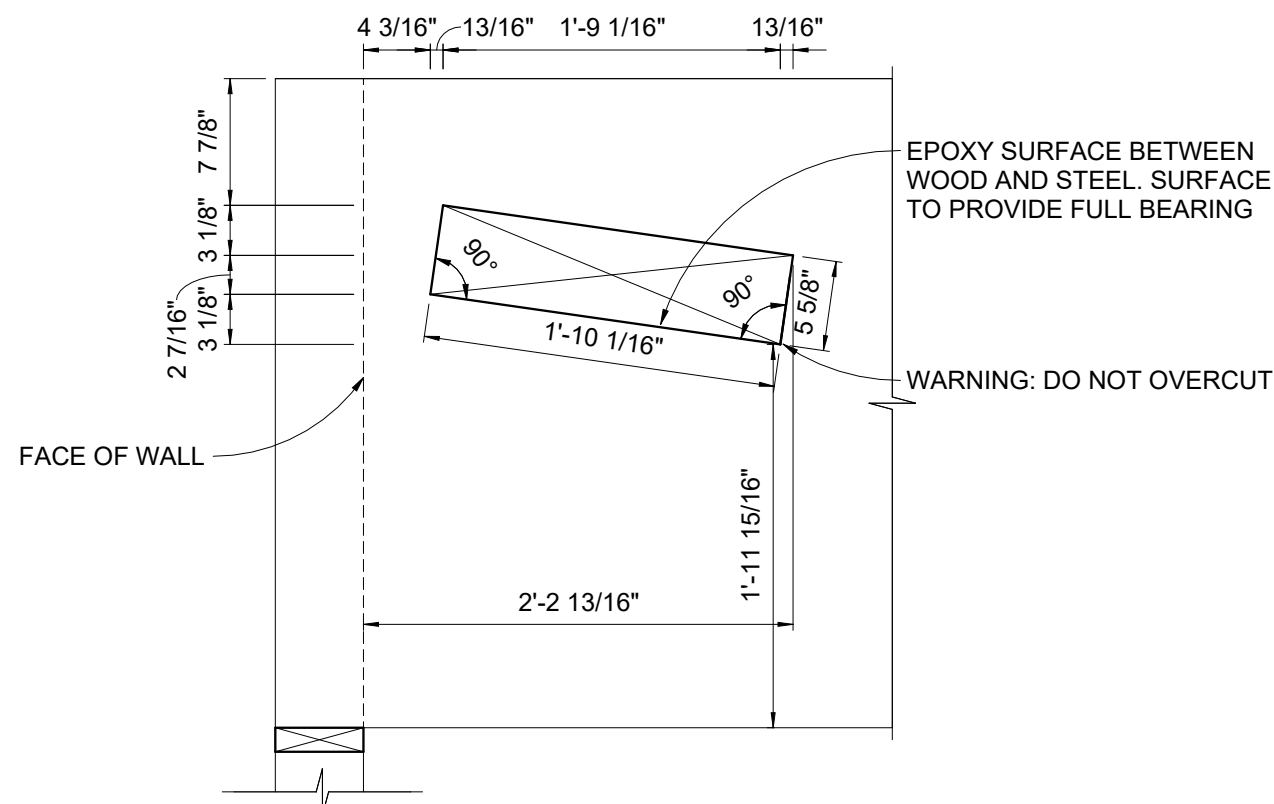
STEP 3:
INSTALL CABLE SHOW ON 1/S8.01 AND TENSION PER PLAN. WAIT ONE WEEK FOR BEAM TO LIFT.

STEP 4:
PRE-DRILL AND INSTALL SCREWS TO CLAMP BEAM TOGETHER. SCREWS MUST BE INSTALLED WITHIN CURE TIME OF INJECTION EPOXY IN SAME AREA OF BEAM.

STEP 5:
FILL MARKED AND CLEANED CRACKS WITH EPOXY. PRIOR TO EPOXY INJECTION, PROTECT ALL ADJACENT SURFACES FROM UNINTENDED CONTACT.
1) IDENTIFY PORT LOCATIONS ALONG CRACK. THERE SHOULD BE ONE PORT ON EACH END OF THE CRACK AND REPEATED EVERY 8" ALONG CRACK. DRILL WITH 1/4" BIT APPROXIMATELY HALF WAY INTO BEAM AT EACH IDENTIFIED LOCATION.
2) APPLY A SMALL AMOUNT OF GELMAGIC PASTE AROUND THE PORT BASE AND STICK AROUND EACH PREDRILLED LOCATION.
3) GENEROUSLY WORK GELMAGIC PASTE OVER THE ENTIRE LENGTH OF THE CRACK. IF CRACK IS PRESENT ON OPPOSITE SIDE OF BEAM BOTH SIDES MUST BE COVERED. MOUND THE PASTE AT LEAST 1/4" THICK AND 1" OUT FROM BASE OF PORT . MOUND 3/16" THICK AND 1" WIDE ALONG LENGTH OF CRACK.
4) ONCE OUTER PASTE HAS CURED START INJECTING T-88 EPOXY AT THE END OF THE CRACK OR LOWEST INJECTION PORT. MAKE SURE THE HEADS OF ALL PORTS ARE IN THE OPEN POSITION. CONTINUE UNTIL EPOXY EMERGES FROM THE ADJACENT PORT. AS SOON AS EPOXY EMERGES FROM THE ADJACENT PORT THE INJECTOR SHOULD BE TRANSFERRED TO THE NEXT PORT AND THE PREVIOUS PORT SEALED. CONTINUE UNTIL EVERY PORT HAS REFUSED EPOXY AND THE CRACK IS COMPLETELY FILLED.
5) GIVE THE T-88 INJECTION EPOXY SUFFICIENT TIME TO CURE. REMOVE THE INJECTION PORTS AND GELMAGIC PASTE. ENSURE NO RUN OUT OR SMEARING OF THE INJECTION EPOXY ONCE OUTER GEL IS REMOVED.

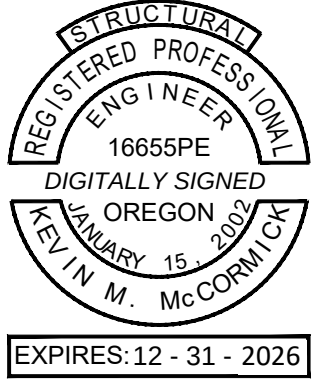
STEP 6:
SAND, RE-COAT OR REPAINT BEAMS TO MATCH (E) CONDITIONS

NOTE: SIMILAR MATERIALS TO BE USED WITH PRIOR APPROVAL BY THE ENGINEER OF RECORD



NOTCH DIMENSIONS

S8.01 | 1" = 1'-0"



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SPRINGFIELD PUBLIC SCHOOLS

REV	DESCRIPTION	DATE
1	ADDENDUM #2	05-19-2026

DESIGNED BY: SJD
CHECKED BY: RGV
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SHEET CONTENT

REPAIR DETAIL

SHEET

S8.01

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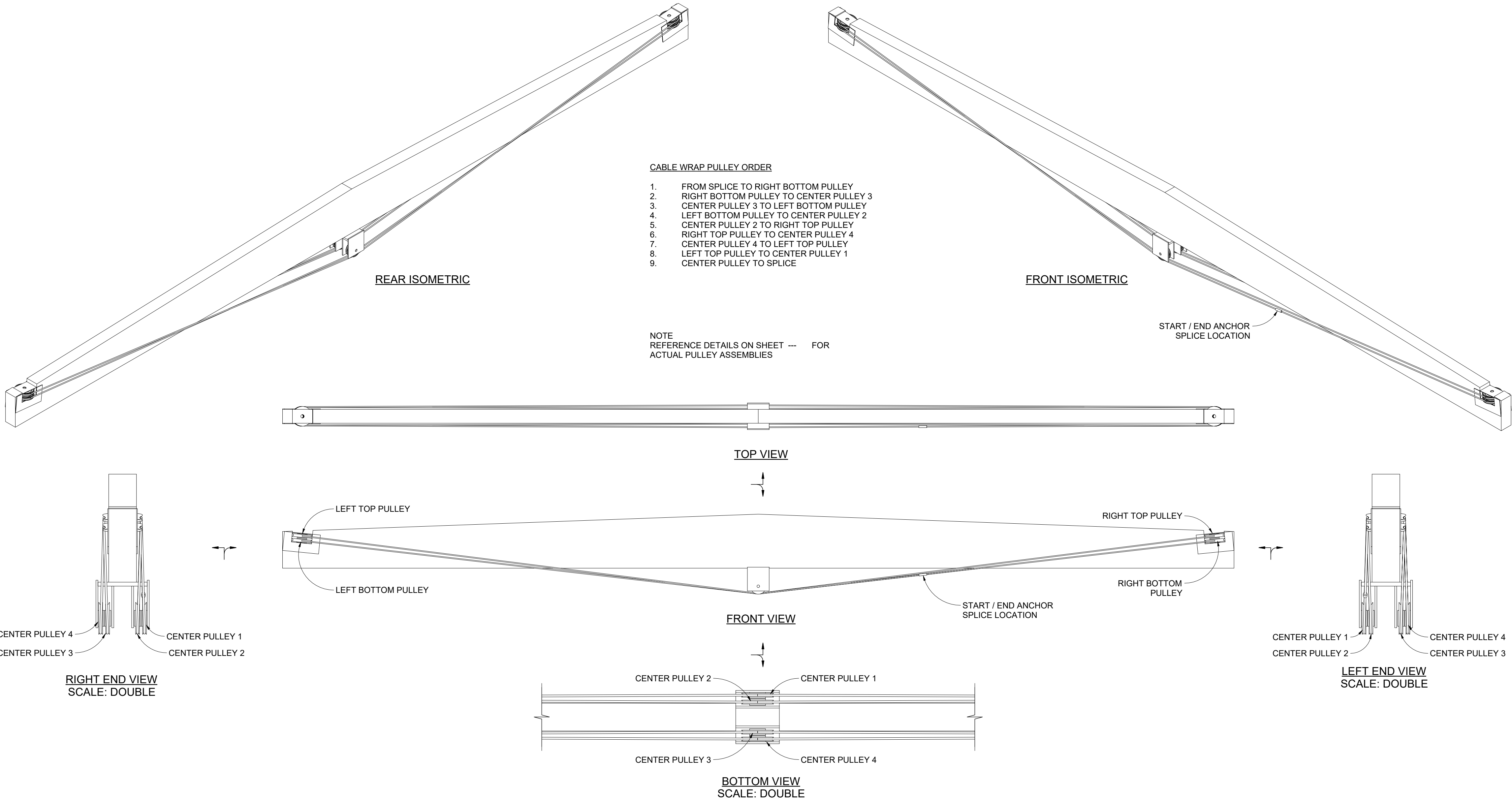
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SHEET CONTENT
DETAILS

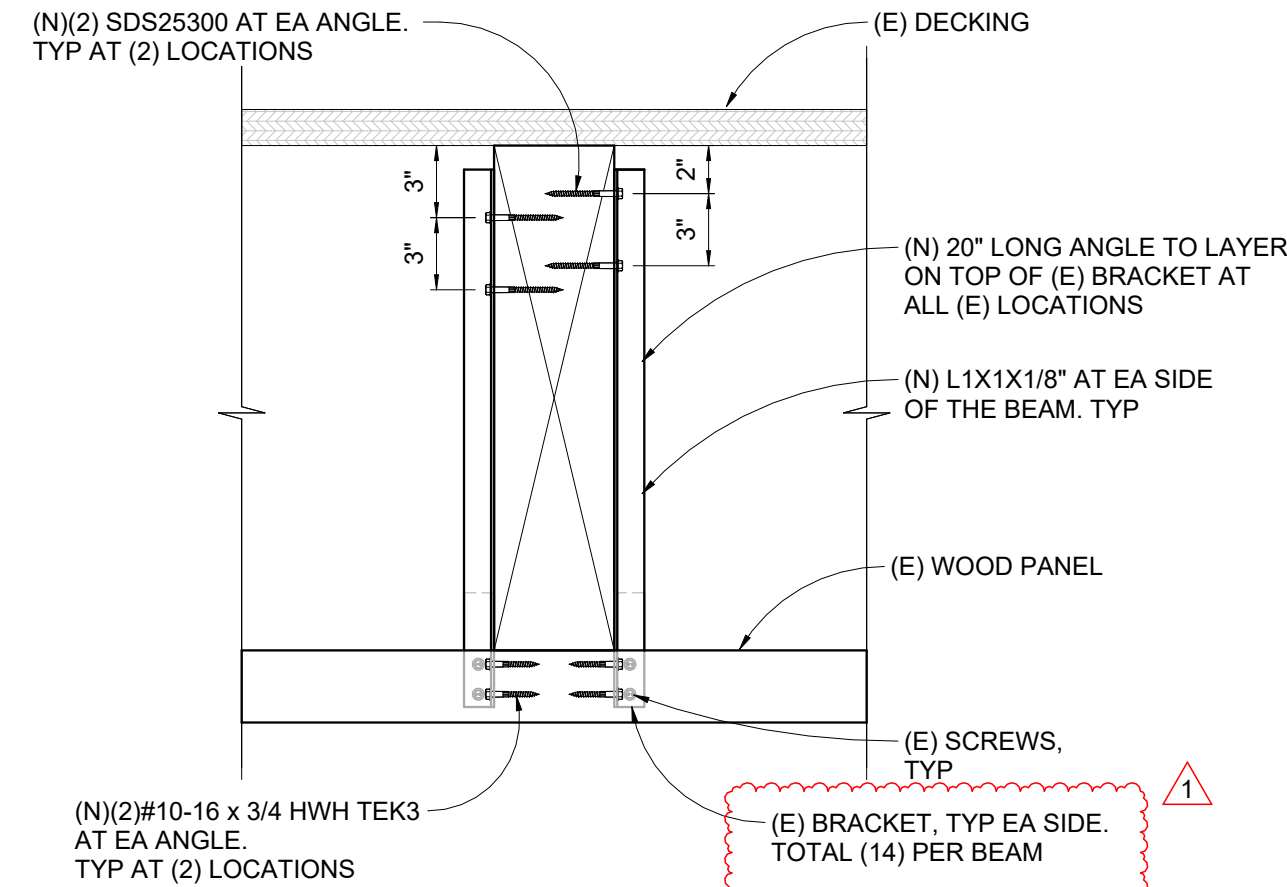
SHEET

S8.02



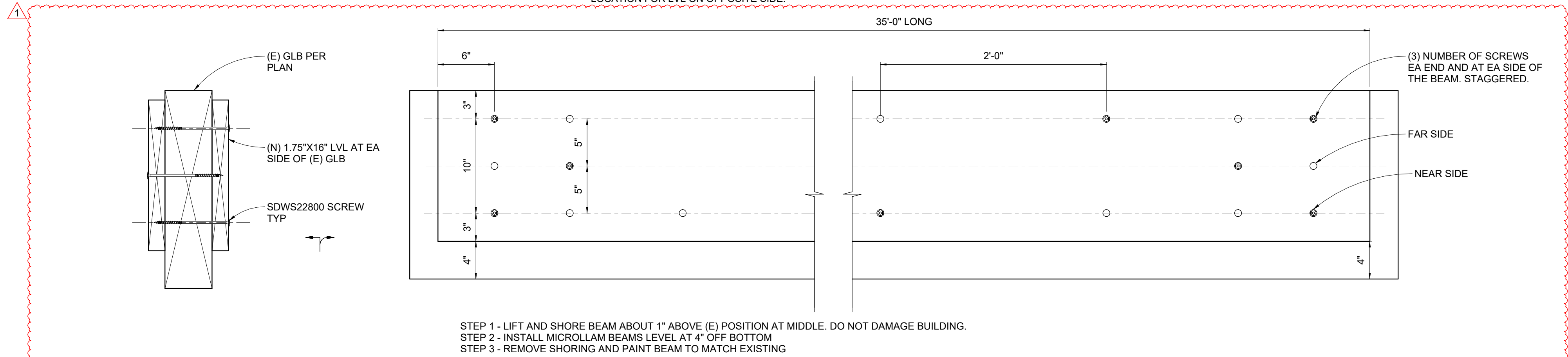
1 BEAM CABLE ASSEMBLY

S8.02 | 3/8" = 1'-0"



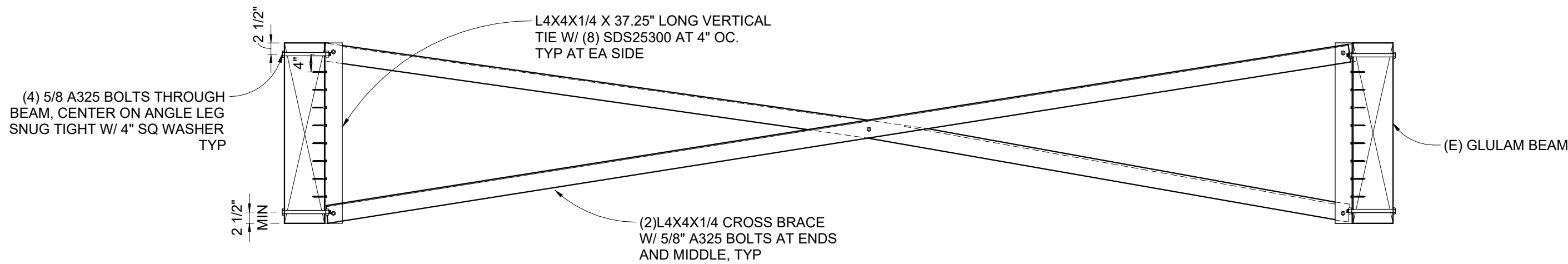
1 CAFETERIA PANEL CONNECTION

S8.03 | 1 1/2" = 1'-0"



2 CLASSROOM REPAIR

S8.03 | 1 1/2" = 1'-0"



3 GYM 1 BRACING

S8.03 | 1/2" = 1'-0"

NOTE: SCREWS AT 2'-0" OC TO BE STAGGERED AND ALTERNATE HOLE LOCATION FOR LVL ON OPPOSITE SIDE.

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SHEET CONTENT
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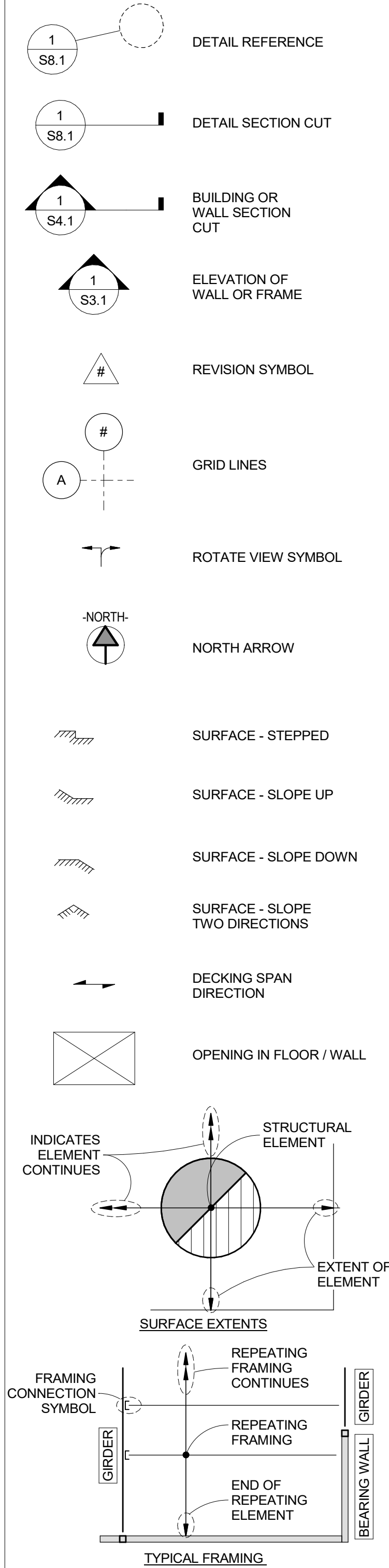
SHEET

S8.03

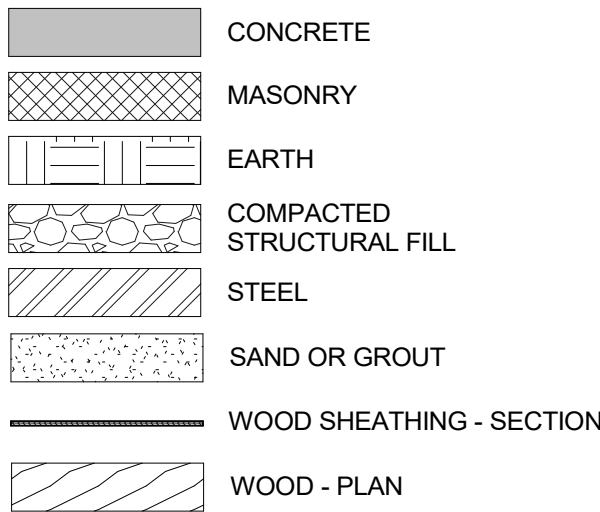
STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUNDS	IBC	INTERNATIONAL BUILDING CODE
AB	ANCHOR BOLT	ICF	INSULATED CONCRETE FORMS
ACI	AMERICAN CONCRETE INSTITUTE	ID	INSIDE DIAMETER
ADDL	ADDITIONAL	IN	INCH
ADJ	ADJACENT	INFO	INFORMATION
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	INT	INTERIOR
AFF	ABOVE FINISH FLOOR	JST	JOIST
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	JT	JOINT
ALT	ALTERNATE	K	KIP(S) (1,000 POUNDS)
ALUM	ALUMINUM	KSF	KIPS PER SQUARE FOOT
APA	AMERICAN PLYWOOD ASSOCIATION	KSI	KIPS PER SQUARE INCH
APPROX	APPROXIMATELY	L, 2L	ANGLE OR DOUBLE ANGLE
ARCH	ARCHITECTURAL	LAT	LATERAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LB	POUND
ASD	ALLOWABLE STRESS DESIGN	LF	LINEAR FOOT
ASSY	ASSEMBLY	LG	LIGHT GAUGE
ATR	ALL THREAD ROD	LL	LIVE LOAD
ATRA	ALL THREAD ROD WITH ADHESIVE	LLBB	LONG LEGS BACK TO BACK
AWS	AMERICAN WELDING SOCIETY	LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
B/	BOTTOM OF	LONG	LONGITUDINAL
BF	BRACED FRAME	LRFD	LOAD AND RESISTANCE FACTOR DESIGN
BLDG	BUILDING	LSL	LAMINATED STRAND LUMBER
BLKG	BLOCKING	LSH	LONG SLOTTED HOLE
BM	BEAM	LVL	LAMINATED VENEER LUMBER
BN	BOUNDARY NAIL	LWC	LIGHT WEIGHT CONCRETE
BOT	BOTTOM		
BRBF	BUCKLING RESTRAINED BRACED FRAME	MANUF	MANUFACTURER
BRNG	BEARING	MAX	MAXIMUM
BSMT	BASEMENT	MC	MISCELLANEOUS CHANNEL
BTWN	BETWEEN	MECH	MECHANICAL
BU	BUILT-UP	MF	MOMENT FRAME
		MFR	MANUFACTURER
C	CAMBER OR CHANNEL (AMERICAN STANDARD)	MEP	MECHANICAL, ELECTRICAL, PLUMBING
CANT	CANTILEVER	MIN	MINIMUM
CFS	COLD-FORMED STEEL	MIR	MIRROR
CIP	CAST IN PLACE	MISC	MISCELLANEOUS
CG	CENTER OF GRAVITY	MSA	MASONRY SCREW ANCHOR
CGS	CENTER OF GRAVITY OF (PRESTRESSING) STEEL	MT	MAGNETIC PARTICLE TESTING
CJ	CONTROL OR CONSTRUCTION JOINT	MTL	METAL
CJP	COMPLETE JOINT PENETRATION		
CL	CENTERLINE	(N)	NEW
CLG	CEILING	NOT	NON-DESTRUCTIVE TESTING
CLR	CLEARANCE; CLEAR	NIC	NOT IN CONTRACT
CLSM	CONTROLLED LOW STRENGTH MATERIAL	NOM	NOMINAL
CMU	CONCRETE MASONRY UNIT	NS	NEAR SIDE
COL	COLUMN	NTE	NOT TO EXCEED
CONC	CONCRETE	NTS	NOT TO SCALE
CONN	CONNECTION	NWC	NORMAL WEIGHT CONCRETE
CONST	CONSTRUCTION		
CONT	CONTINUOUS	OC	ON CENTER
COORD	COORDINATE	OCBF	ORDINARY CONCENTRIC BRACED FRAME
CSA	CONCRETE SCREW ANCHOR	OD	OUTSIDE DIAMETER
		OMF	ORDINARY MOMENT FRAME
d	PENNY (NAIL)	OPP	OPPOSITE
db	NOMINAL BAR DIAMETER	OWJ	OPEN WEB JOIST
DBA	DEFORMED BAR ANCHOR		
DBL	DOUBLE	PAF	POWER ACTUATED FASTENER
DBO	DESIGNED BY OTHERS	PC	PRECAST
DEG	DEGREE	PCF	POUNDS PER CUBIC FOOT
DEMO	DEMOLISH; DEMOLITION	PERP	PERPENDICULAR
DF/L	DOUGLAS FIR-LARCH	PJP	PARTIAL JOINT PENETRATION
DIA	DIAMETER	PL	PLATE
DIAG	DIAGONAL	PLF	POUNDS PER LINEAL FOOT
DIM	DIMENSION	PLWD	PLYWOOD
DIST	DISTANCE	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD	PSF	POUNDS PER SQUARE FOOT
DN	DOWN	PSL	PARALLEL STRAND LUMBER
DP	DEPTH OR DEEP	PT	PRESSURE TREATED
DTL	DETAIL	P/T	POST TENSIONED
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
		QTY	QUANTITY
(E)	EXISTING	RAD	RADIUS
E	MODULUS OF ELASTICITY	RBS	REDUCED BEAM SECTION
EA	EACH	REF	REFERENCE
EB	EXPANSION BOLT	REINF	REINFORCING
EF	EACH FACE	REQD	REQUIRED
EJ	EXPANSION JOINT	RET	RETAINING
EL	ELEVATION	REV	REVISED, REVISION
ELEC	ELECTRICAL	RO	ROUGH OPENING
EN	EDGE NAIL		
EOR	ENGINEER OF RECORD	SC	SLIP CRITICAL
EQ	EQUAL; EARTHQUAKE	SCBF	SPECIAL CONCENTRIC BRACE FRAME
EW	EACH WAY	SCH	SCHEDULE
EXT	EXTERIOR	SEOR	STRUCTURAL ENGINEER OF RECORD
EXTD	EXTEND, EXTENDED	SFRS	SEISMIC FORCE RESISTING SYSTEM
		SHT	SHEET
fc	28 DAY CONC COMPRESSIVE STRENGTH	SHTG	SHEATHING
fm	MASONRY NET AREA COMPRESSIVE STRENGTH	SIM	SIMILAR
Fy	YIELD STRESS	SLBB	SHORT LEGS BACK TO BACK
Fu	TENSILE STRESS	SMF	SPECIAL MOMENT FRAME
F/	FACE OF	SMS	SHEET METAL SCREW
FAB	FABRICATED / FABRICATOR	SOG	SLAB ON GRADE
FF	FINISH FLOOR	SOMD	SLAB ON METAL DECK
FN	FIELD NAIL	SQ	SQUARE
FLR	FLOOR	SS	STAINLESS STEEL
FDN	FOUNDATION	SSH	SHORT SLOTTED HOLE
FRT	FIRE RETARDANT TREATED	STD	STANDARD
FS	FAR SIDE	STL	STEEL
FT	FEET	SQ	SQUARE
FTG	FOOTING	SYM	SYMMETRICAL
		T/	TOP OF
GA	GAUGE	T&B	TOP AND BOTTOM
GAF	GAS ACTUATED FASTENER	T&G	TONGUE AND GROOVE
GALV	GALVANIZED	THRD	THREADED
GLB	GLUE LAMINATED BEAM	TPL	TRIPLE
GR	GRADE	TRANS	TRANSVERSE
GWB	GYP SUM WALL BOARD	TYP	TYPICAL
GYP	GYP SUM		
HD	HOLDOWN	UNO	UNLESS NOTED OTHERWISE
HDG	HOT-DIP GALVANIZED	URM	UNREINFORCED MASONRY
HDR	HEADER	UT	ULTRASONIC TEST
HEX	HEXAGONAL		
HF	HEM-FIR	VERT	VERTICAL
HGR	HANGER	VIF	VERIFY IN FIELD
HORIZ	HORIZONTAL		
HSA	HEADED STUD ANCHOR	W/	WITH
HSS	HOLLOW STRUCTURAL SECTION	W/O	WITHOUT
HT	HEIGHT	WD	WOOD
HVAC	HEATING VENTILATION AIR CONDITIONING	WF	WIDE FLANGE
		WP	WORK POINT
		WT	WEIGHT
		WWR	WELDED WIRE REINFORCING

STRUCTURAL DRAWING SYMBOLS



STRUCTURAL MATERIAL PATTERNS



STRUCTURAL DRAWING INDEX					
SHEET #	SHEET NAME	BID SET	PERMIT SET	ADDENDUM 1	ADDENDUM 2
S0.01	COVER SHEET	•	•	•	•
S0.02	STRUCTURAL NOTES & SPECIAL INSPECTION	•	•	•	•
S1.00	STRUCTURAL SITE PLAN	•	•	•	•
S1.01	ROOF FRAMING PLAN	•	•	•	•
S1.02	GYM ROOF REPAIR PLAN	•	•	•	•
S3.01	SECTIONS	•	•	•	•
S4.01	ELEVATIONS	•	•	•	•
S8.01	REPAIR DETAILS	•	•	•	•
S8.02	REPAIR DETAILS	•	•	•	•
S8.03	TYPICAL DETAILS	•	•	•	•

CODE SUMMARY:

BUILDING CODE: 2022 OSSC
YEAR BUILT: 1961-1964
AREA: 51400 SF
BUILDING CONSTRUCTION TYPE: V-B (ASSUMED, NO CHANGE)
OCCUPANCY CLASSIFICATION: E (NO CHANGE)

SCOPE OF WORK:

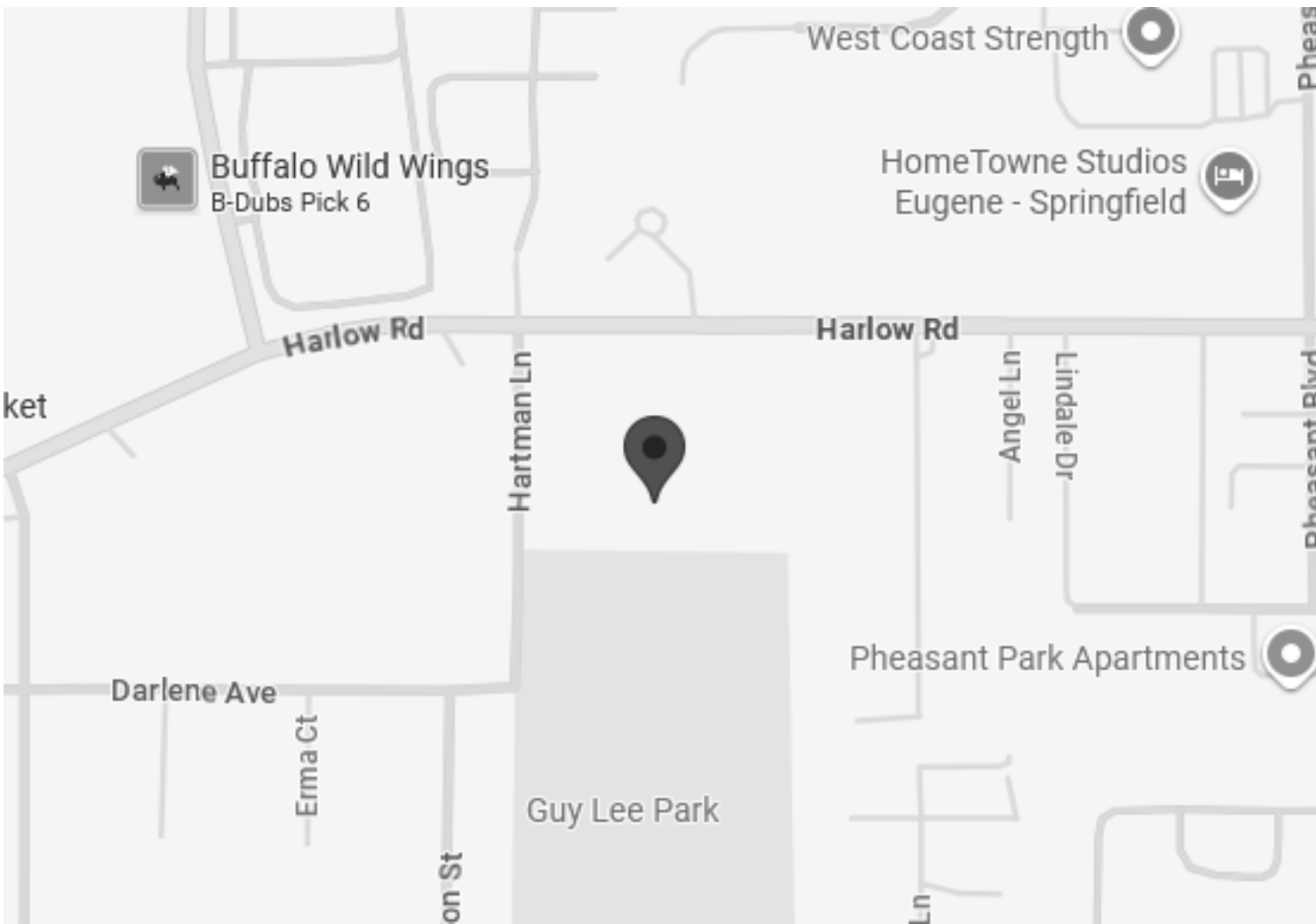
THE SCOPE OF THESE CONSTRUCTION DOCUMENTS INCLUDES STRENGTHENING OF GLULAM BEAMS AT THE GYMNASIUM USING POST TENSION CABLES ALONG THE BOTTOM TO PROVIDE ADDITIONAL FLEXURAL CAPACITY. AT THE STAGE AREA IN LIEU OF POST TENSIONING, ADDITIONAL COLUMNS AND FOOTINGS ARE ADDED FOR STRENGTHENING.

THE PROPOSED POST-TENSIONING SYSTEM IS DESIGNED TO AUGMENT THE STRUCTURAL CAPACITY UNDER SERVICE LOAD CONDITIONS. THE EXISTING GLULAM BEAMS RETAIN THEIR ORIGINAL INHERENT FIRE RESISTANCE RATING AND ARE CAPABLE OF MAINTAINING STRUCTURAL STABILITY UNDER DEAD LOAD CONDITIONS WITHOUT STRENGTHENING MEASURES.

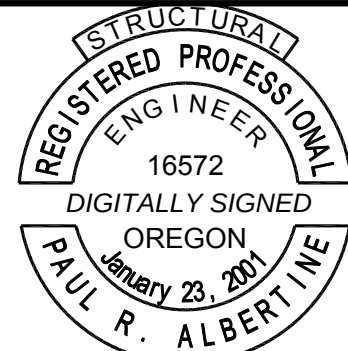
PROJECT DESIGN TEAM:

MILLER CONSULTING ENGINEERS, INC
STRUCTURAL ENGINEER OF RECORD

PRIMARY CONTACT: PAUL ALBERTINE, paul@miller-se.com
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GUY LEE ELEMENTARY SCHOOL

755 HARLOW ROAD
SPRINGFIELD, OREGON

SPRINGFIELD SCHOOL DISTRICT

REV	DESCRIPTION	DATE
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DESIGNED BY: EO
CHECKED BY: PRA
MCE PROJ #: 251372
ISSUE DATE: 3/20/2026
ISSUANCE: PERMIT SET

SHEET CONTENT

COVER SHEET

SHEET

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STRUCTURAL NOTES

GENERAL NOTES

THESE CONTRACT DOCUMENTS COMPRISED OF PLANS, SPECIFICATIONS, ENGINEERING AND DESIGN WORK ARE INTENDED SOLELY FOR THE PROJECT SPECIFIED HEREIN. MILLER CONSULTING ENGINEERS (MCE) DISCLAIMS ALL LIABILITY IF THESE PLANS AND SPECIFICATIONS OR THE DESIGN, ADVICE AND INSTRUCTIONS ATTENDANT THERETO ARE USED ON ANY PROJECT OR AT ANY LOCATION OTHER THAN THE PROJECT AND LOCATION SPECIFIED HEREIN.

THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE TO ALL SAFETY REGULATIONS DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL METHODS, DIRECTION AND RELATED EQUIPMENT NECESSARY TO PERFORM THE WORK.

SHOULD ANY QUESTION ARISE REGARDING THE CONTRACT DOCUMENTS OR SITE CONDITIONS, THE CONTRACTOR SHALL REQUEST INTERPRETATION AND CLARIFICATION FROM THE ENGINEER BEFORE BEGINNING THE PROJECT. THE ABSENCE OF SUCH REQUEST SHALL SIGNIFY THAT THE CONTRACTOR HAS REVIEWED AND FAMILIARIZED THEMSELVES AND HAS COMPLETE COMPREHENSION OF ALL ASPECTS OF THE PROJECT.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL ITEMS AND WORK NECESSARY FOR COMPLETION OF THE PROJECT AS INDICATED BY THE CONTRACT DOCUMENTS. THE CONTRACT DOCUMENTS ARE STRUCTURAL ONLY AND DO NOT NECESSARILY INDICATE ALL NON-STRUCTURAL PORTIONS OF THE PROJECT INCLUDING, BUT NOT LIMITED TO, PLUMBING, FIRE SUPPRESSION, ELECTRICAL, MECHANICAL, LAND USE, SITE PLANNING, EROSION CONTROL, FLASHING AND WATER-PROOFING. ALL NON-STRUCTURAL PORTIONS OF WORK, AND STRUCTURAL WORK NOTED AS DELEGATED DESIGN IN THE SUBMITTAL SCHEDULE, ARE BEYOND THE SCOPE OF THESE DOCUMENTS AND ARE PROVIDED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL NON-STRUCTURAL ITEMS IMPACTED BY THE STRUCTURAL WORK. THESE ITEMS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR MODIFIED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED DESIGN PROFESSIONAL ENGAGED AT THE CONTRACTOR'S OWN EXPENSE.

ANY MATERIAL NOT AS SPECIFIED IN THE CONTRACT DOCUMENTS OR IMPROPER MATERIAL INSTALLATION OR WORKMANSHIP SHALL BE REMOVED AND REPLACED WITH SPECIFIED MATERIAL IN A WORKMANLIKE MANNER AT THE CONTRACTOR'S EXPENSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL MATERIALS FROM DAMAGE THROUGHOUT THE COURSE OF CONSTRUCTION.

ALL MANUFACTURED PRODUCTS SPECIFIED SHALL BE USED UNLESS AN ALTERNATE IS SUBMITTED AND APPROVED BY THE SEOR. MANUFACTURED PRODUCTS REQUIRING A BUILDING CODE EVALUATION REPORT SHALL HAVE A CURRENT REPORT DEMONSTRATING CONFORMANCE WITH THE APPLICABLE BUILDING CODE, VALID AT THE TIME OF PRODUCT INSTALLATION.

TEMPORARY MEASURES/SHORING

THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL INSTANCES WHERE TEMPORARY MEASURES/SHORING ARE REQUIRED, AND SHALL AT THEIR OWN EXPENSE, ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY MEASURES/SHORING ARE REQUIRED. TEMPORARY MEASURES/SHORING SHALL:

- PROTECT PERSONNEL AND THE PUBLIC.
- PREVENT SETTLEMENT AND/OR DAMAGE TO THE BUILDING AND/OR EXISTING FACILITIES
- PROTECT STREETS, WALKWAYS, UTILITIES, AND IMPROVEMENTS.
- PROTECT ALL EXCAVATIONS AGAINST LOSS OF GROUND OR CAVING OF EMBANKMENTS DURING CONSTRUCTION.

BUILDING CODE

ALL PHASES OF THE WORK SHALL CONFORM TO THE 2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC), BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC), INCLUDING ALL REFERENCE STANDARDS, UNLESS NOTED OTHERWISE.

SPECIAL INSPECTION/TESTING

SPECIAL INSPECTION AND/OR TESTING IS REQUIRED IN ACCORDANCE WITH BUILDING CODE SECTION 1704. IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE SPECIAL INSPECTION AND TESTING BY A QUALIFIED THIRD PARTY, SUCH AS A TESTING AGENCY REVIEWED BY THE ENGINEER AND APPROVED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW SCHEDULING OF SPECIAL INSPECTION.

SPECIAL INSPECTIONS SHALL CONFORM TO SECTION 1705 OF THE BUILDING CODE, CONTRACT DOCUMENTS AND SUBMITTALS. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS. FOR PROJECT REQUIREMENTS REFER TO THE SPECIAL INSPECTION TABLES WITHIN THE CONTRACT DOCUMENTS.

STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION BY THE SEOR SHALL VERIFY BY PERIODIC VISUAL OBSERVATION THAT THE STRUCTURAL SYSTEM HAS GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AT SIGNIFICANT STAGES OF CONSTRUCTION AND AT COMPLETION AS REQUIRED IN ACCORDANCE WITH BUILDING CODE SECTION 1704.6. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW SCHEDULING FOR A STRUCTURAL OBSERVATION. STRUCTURAL OBSERVATION SHALL BE PERFORMED DURING CONSTRUCTION AT THE FOLLOWING TIMES:

1. DURING PRESTRESSING OPERATIONS OF THE FIRST BEAM
2. AFTER COMPLETION OF STRUCTURAL REINFORCING OF ALL BEAMS

SHOP DRAWINGS/SUBMITTALS

SUBMITTALS AND SHOP DRAWINGS FOR SPECIFIC PRODUCTS GENERATED BY THE SUPPLIER SHALL BE SUBMITTED FOR THE ITEMS NOTED IN THE SUBMITTAL SCHEDULE. SHOP DRAWINGS SHALL BE TO SCALE AND SHOW COMPLETE DETAILS AND INSTRUCTIONS FOR FABRICATION AND ASSEMBLY. SHOP DRAWINGS SHALL INDICATE ERECTION AND TEMPORARY BRACING INFORMATION FOR CONTRACTOR'S USE.

THE DESIGN OF ITEMS NOTED IN THE SUBMITTAL SCHEDULE AS DELEGATED DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DOCUMENTS FOR THE DESIGN AND FABRICATION OF DELEGATED DESIGN ITEMS (INCLUDING STRUCTURAL CALCULATIONS AND DRAWINGS) SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER REGISTERED IN THE STATE THAT THE PROJECT IS BEING CONSTRUCTED.

DEFERRED SUBMITAL ITEMS NOTED IN THE SUBMITTAL SCHEDULE ARE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND ARE REQUIRED TO BE SUBMITTED TO THE BUILDING OFFICIAL.

THE CONTRACTOR SHALL REVIEW AND MODIFY ALL SUBMITTALS AS REQUIRED FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SIGN AND DATE ALL SETS OF THE SUBMITTAL DOCUMENTS PRIOR TO SUBMITTAL TO THE ENGINEER. THE CONTRACTOR SHALL SCHEDULE SUBMITTALS TO ALLOW SUFFICIENT TIME FOR REVIEW AND POSSIBLE RE-SUBMITTAL. WHERE RE-SUBMITTALS ARE REQUIRED, CHANGES FROM THE PREVIOUS SUBMITTAL SHALL BE CLEARLY INDICATED WITH REVISION CLOUDS OR SIMILAR.

SUBMITTAL SCHEDULE				
ITEM	SUBMITTAL	SHOP	DELEGATE	DEFERRE
	L	DRAWING	D DESIGN	D SUBMITTAL
		S		L
PRESTRESSING CABLE	X			
PRESTRESSING CABLE ACCESSORIES	X			
FABRICATED STRUCTURAL STEEL ELEMENTS	X	X		
STEEL WELDING PROCEDURES	X			

STRUCTURAL DESIGN CRITERIA

LIVE LOAD REDUCTION FOR BEAMS AND COLUMNS WAS NOT USED. DESIGN FOR MECHANICAL LOADS INCLUDES ONLY THOSE INDICATED ON STRUCTURAL DRAWINGS. THE FOLLOWING ARE THE DESIGN REQUIREMENTS:

STRUCTURAL DESIGN CRITERIA		
RISK CATEGORY		III
DEAD LOAD		
ROOF		18 PSF
ROOF SNOW LOAD		
DESIGN ROOF SNOW LOAD		27 PSF
IMPORTANCE FACTOR		I _s = 1.1
GROUND SNOW LOAD		P _g = 11 PSF
EXPOSURE FACTOR		C _e = 1.0
THERMAL FACTOR		C _t = 1.0
SLOPE FACTOR		C _s = 1.0
FLAT ROOF SNOW LOAD		P _f = 9.4 PSF
WIND DESIGN DATA		
BASIC DESIGN WIND SPEED (3 SEC GUST)		V = 102 MPH
EXPOSURE		B

FOUNDATION CRITERIA

CONTRACTOR SHALL VERIFY SOIL CONDITIONS AT THE FOOTINGS AND MAKE ANY NECESSARY CORRECTIONS TO PLACE THEM ON FIRM NATIVE SOIL OR STRUCTURAL FILL COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT PER ASTM D698 (STANDARD PROCTOR) OR ASTM D1557 (MODIFIED PROCTOR). THE COMPACTION SHALL BE VERIFIED BY A QUALIFIED INSPECTOR APPROVED BY THE BUILDING OFFICIAL. COMPACTED STRUCTURAL FILL FOR DEPTHS GREATER THAN 12 INCHES SHALL COMPLY WITH PROVISIONS OF A GEOTECHNICAL REPORT STAMPED BY A LICENSED GEOTECHNICAL ENGINEER REGISTERED IN THE STATE THAT THE PROJECT IS BEING CONSTRUCTED.

CONCRETE

MIXING, BATCHING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE, ACI 318, ACI 301 AND BUILDING CODE CHAPTER 19.

ALL CONCRETE WITH REINFORCEMENT SHALL HAVE NO CHLORINE OR CHLORIDES. NO WATER MAY BE ADDED TO THE CONCRETE IN THE FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER IN CONJUNCTION WITH THE REVIEWED CONCRETE MIX DESIGN.

SLEEVES, OPENINGS, CONDUIT AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE REVIEWED BY THE SEOR BEFORE PLACING CONCRETE.

WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.

DESIGN OF FORMWORK, SHORING AND RE-SHORING DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE MOST RECENT EDITION OF ACI 347R.

CONCRETE MIX DESIGN REQUIREMENTS:

CONCRETE MIX DESIGN REQUIREMENTS				
MEMBER TYPE/LOCATION	COMPRESSIVE STRENGTH AT 28 DAYS, F _c (PSI)	MAXIMUM AGGREGATE SIZE	MAXIMUM W/C M RATIO	EXPOSURE CLASS
FOOTINGS AND MAT FOUNDATIONS	4000	1"	0.50	F0, S0, W1, C0
INTERIOR SLAB ON GRADE	3000	1"	0.45	F0, S0, W0, C0

CONCRETE MIX AIR CONTENT REQUIREMENTS:

AIR ENTRAINMENT SHALL BE PROVIDED IN ACCORDANCE WITH THE MAXIMUM AGGREGATE SIZE AND EXPOSURE CLASS OF THE MIX DESIGN SPECIFIED. THE AIR-ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260. MIX DESIGNS SPECIFIED AS EXPOSURE CLASS F0 DO NOT REQUIRE AIR ENTRAINMENT.

CONCRETE MIX AIR CONTENT REQUIREMENTS		
MAXIMUM AGGREGATE SIZE	CONCRETE SUBJECT TO FREEZE/THAW CYCLES (EXPOSURE CLASS F1)	CONCRETE SUBJECT TO CONTINUOUS MOISTURE AND/OR DEICING CHEMICALS (EXPOSURE CLASS F2, F3)
3/8"	6%	7.5%
1/2"	5.5%	7%
3/4"	5%	6%
1"	4.5%	6%
1-1/2"	4.5%	5.5%

CONCRETE REINFORCING STEEL

ALL REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM A615 OR A706, GRADE 60 UNLESS NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, PLASTIC CHAIRS OR METAL CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1. REINFORCING SHALL BE SECURELY TIED IN PLACE WITH #16 ANNEALED IRON WIRE PRIOR TO PLACING CONCRETE. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE *GUIDE TO PRESENTING REINFORCING STEEL DESIGN DETAILS*, ACI 315R-18. BAR LENGTHS DETAILED ARE OUT TO OUT AND DO NOT INCLUDE ALLOWANCE FOR HOOKS OR BENDS.

WELDING OR TACK WELDING OF REINFORCING BARS TO OTHER BARS OR EMBEDDED STEEL ITEMS IS PROHIBITED EXCEPT WHERE SPECIFICALLY NOTED ON THE DRAWINGS. ANY WELDING OF REINFORCEMENT NOT SHOWN ON THE DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE SEOR. WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS WITH PROCEDURES CONFORMING TO AWS D1.4

- WELDABLE REINFORCING STEEL: ASTM A706
- WELDING ELECTRODES: E9018, UNLESS NOTED OTHERWISE.

SPECIFIED CONCRETE COVER SHALL BE MAINTAINED TO ALL REINFORCEMENT AT CONCRETE REVEALS AND INSETS.

AT THE CONTRACTOR'S OPTION, MECHANICAL COUPLINGS MAY BE USED IN LIEU OF LAP SPLICES FOR ANY BAR SIZE AND AT ANY LOCATION, PROVIDED A BUILDING CODE EVALUATION REPORT DEMONSTRATES THE COUPLING CAN ACHIEVE A MINIMUM TENSILE STRENGTH OF 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR AND 100% OF THE SPECIFIED TENSILE STRENGTH OF THE SPLICED BAR.

TYPICAL REINFORCING DETAILING SHALL BE AS FOLLOWS:

- FOR STANDARD REBAR DIMENSIONS - SEE 1/58.03
- FOR CONCRETE COVER TO REINFORCING STEEL - SEE 2/58.03
- FOR STIRRUP AND TIE GEOMETRY - SEE 3/58.03
- FOR REINFORCING STANDARD HOOKS AND HOOK DEVELOPMENT LENGTHS - SEE 4/58.03
- FOR LAP SPLICES AND STRAIGHT BAR DEVELOPMENT LENGTHS - SEE 5/58.03

STRUCTURAL STEEL

DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360). QUALITY ASSURANCE (QA) IS REQUIRED FOR STRUCTURAL STEEL ITEMS PER AISC 360 AND 341 UNLESS SPECIFICALLY NOTED OTHERWISE. QUALITY CONTROL (QC) TO BE PROVIDED BY THE FABRICATOR, ERECTOR OR OTHER RESPONSIBLE CONTRACTOR AS APPLICABLE. CONTRACTOR AND SPECIAL INSPECTOR TO DOCUMENT QUALITY CONTROL AS REQUIRED IN AISC 360 SECTION N3 AND AISC 341 SECTION J2.

ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING MATERIAL STANDARDS:

STRUCTURAL STEEL MATERIAL STANDARDS		
SHAPE	ASTM SPECIFICATION	YIELD STRESS
RECTANGULAR HSS	A500, GRADE C	50 KSI
ALL OTHER SECTIONS AND PL	A572, GRADE 50	50 KSI

ALL STRUCTURAL STEEL SHALL HAVE ONE SHOP COAT OF PRIMER, EXCEPT SURFACES TO BE EMBEDDED IN CONCRETE OR MASONRY OR STEEL TO BE GALVANIZED. EMBEDDED SURFACES SHALL BE FREE OF CONTAMINANTS. ALL EXPOSED STRUCTURAL STEEL AND FASTENINGS TO HAVE ONE FINISH COAT OF RUST INHIBITING PAINT, COLOR BY OWNER.

STRUCTURAL STEEL BOLTING

ALL BOLTS IN STEEL TO STEEL CONNECTIONS SHALL BE ASTM F3125 GRADE A325 WITH MATCHING NUTS, UNLESS NOTED OTHERWISE. NUTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION, UNLESS CONNECTION IS NOTED AS SLIP-CRITICAL OR PRETENSIONED.

- SNUG TIGHT CONDITION SHALL BE PER RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS, SECTION 8.1.
- SLIP-CRITICAL AND PRETENSIONED CONNECTIONS, INSTALLATION OF FASTENERS SHALL BE PER RCSC SECTION 8.2.

STRUCTURAL STEEL WELDING

ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS) D1.1 USING E70XX ELECTRODES. WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED BY AWS FOR THE WELD TYPES SPECIFIED. WELD LENGTHS SHOWN ARE EFFECTIVE AS SPECIFIED PER THE SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). WHERE WELD LENGTHS ARE NOT SHOWN, THE WELD SHALL BE FULL LENGTH OF MEMBERS BEING JOINED. FIELD WELDING SYMBOLS HAVE NOT NECESSARILY BEEN INDICATED ON THE DRAWINGS. WHERE SHOWN, PROPER FIELD WELDING PER AWS D1.1 SHALL BE USED. WHERE NO FIELD WELDING SYMBOLS ARE SHOWN, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE USE OF SHOP AND FIELD WELDS.

ALL PARTIAL JOINT PENETRATION GROOVE WELD SIZES SHOWN ON THE DRAWINGS REFER TO THE EFFECTIVE THROAT THICKNESS. ALL BUTT WELDS SHALL BE FULL PENETRATION WELDS UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOINT PREPARATION AND WELDING PROCEDURES THAT INCLUDE, BUT ARE NOT LIMITED TO: REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES AND TAPERS AND TRANSITIONS OF UNEQUAL PARTS.

ALL WELDS SHALL RECEIVE THE SAME FINISH COATING AS THE MEMBER BEING WELDED. ANY COATINGS ON THE STRUCTURAL AFFECTED BY WELDING SHALL BE REPAIRED AS REQUIRED.

WOOD FRAMING

ALL WOOD STRUCTURAL GRADES SHALL BE PER TYPICAL WOOD FRAMING SCHEDULE UNLESS NOTED OTHERWISE.

TYPICAL WOOD FRAMING SCHEDULE	
MEMBER	VISUALLY GRADED (MIN)
COLUMNS	DF/L #1
BEAMS	DF/L #1
STUDS	DF/L #2
BUILT-UP STUD PACKS	DF/L #2
BLOCKING	DF/L CONSTRUCTION
NON-STRUCTURAL FRAMING	DF/L CONSTRUCTION

ALL WOOD PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED UNLESS NOTED OTHERWISE. ALL COLUMNS SHALL HAVE SOLID BLOCKING FOR THE FULL COLUMN AREA TO SUPPORTING MEMBERS BELOW. COLUMNS SHALL ALIGN THROUGH ALL FLOORS TO THE FOUNDATION. ALL SAWN LUMBER SHALL HAVE A MOISTURE CONTENT LESS THAN 19% (S-DRY) PRIOR TO INSTALLATION OF NON-STRUCTURAL COMPONENTS.

WOOD BEAM REPAIRS - SPECIAL INSPECTIONS			
SYSTEM OR MATERIAL	FREQUENCY		REMARKS
	CONTINUOUS	PERIODIC	
POST-TENSIONED CABLE PLACEMENT		X	REINFORCING TO COMPLY WITH ALL CODE PROTECTION, SPACING AND TOLERANCE LIMITS.
POST-TENSIONED CABLE GRADE		X	
APPLICATION OF PRESTRESSING FORCES FOR POST-TENSIONED CABLES	X		DOCUMENT APPLIED FORCE AND ELONGATION.

STEEL - SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY / INSPECTION		REMARKS
			CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	
STEEL FABRICATION					
MATERIAL VERIFICATION OF STRUCTURAL STEEL COMPONENTS	1507.4 2205.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N3.2		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	1705.2.1.1 TABLE 1705.2-5	AISC 360 A3.5 AISC 360 N3.2 APPLICABLE AWS AS DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
STRUCTURAL STEEL WELDING					
VERIFYING WELDER QUALIFICATIONS		AWS D1.1		X	RETAIN A RECORD OF QUALIFICATION CARDS
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"				X	

WOOD FRAMING CONNECTIONS

ALL NAILS SHALL BE COMMON. FASTENERS SHALL NOT BE OVERDRIVEN. PREDRILL ALL SCREWS INTO EXISTING LUMBER TO ¾ OF THE ROOT THREAD DIAMETER OF THE SCREW.

PREFABRICATED METAL TIMBER CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE, UNLESS NOTED OTHERWISE. ALL PREFABRICATED METAL TIMBER CONNECTORS AND HANGERS SHALL BE FULLY BOLTED, NAILED, AND/OR SCREWED AS INDICATED BY MANUFACTURER, UNLESS NOTED OTHERWISE. ALL CONNECTORS, HANGERS AND FASTENERS SHALL BE CORROSION PROTECTED PER MANUFACTURER'S RECOMMENDATIONS.

ALL BOLTS IN WOOD CONNECTIONS SHALL BE ASTM A307 GRADE A. ALL BOLT HEADS OR NUTS BEARING ON WOOD TO HAVE STANDARD WASHERS. BOLT HOLES IN WOOD SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT. ALL LAG SCREWS SHALL HAVE PILOT HOLES PER THE LAG SCREW PILOT HOLE SCHEDULE. REFER TO SECTION 12.1 OF THE NDS FOR ADDITIONAL INSTALLATION INSTRUCTIONS OF DOVEL-TYPE FASTENERS.

TYPICAL WOOD FRAMING CONNECTIONS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

- BUILT-UP STUD PACK FASTENING — SEE 6/58.03

ENGINEERED LUMBER

ENGINEERED LUMBER SHALL HAVE A BUILDING CODE EVALUATION REPORT.

ALL ENGINEERED LUMBER EXPOSED TO WEATHER AND SUBJECT TO DECAY, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR PRESERVATIVE MATERIALS, RETENTION RATES, AND END USE.

LAMINATED VENEER LUMBER (LVL)

LVL FRAMING SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PROPERTY	MINIMUM VALUE
MODULUS OF ELASTICITY, E (PSI)	2,000,000
FLEXURAL STRESS, F _b (PSI)	2,600
TENSION STRESS, F _t (PSI)	1,895
COMPRESSION PERPENDICULAR TO GRAIN, F _c PERP (PSI)	750
COMPRESSION PARALLEL TO GRAIN, F _c (PSI)	2,510
HORIZONTAL SHEAR PARALLEL TO GRAIN, F _v (PSI)	285
SPECIFIC GRAVITY	0.50

POST-TENSIONING CABLES FOR WOOD TRUSS STRENGTHENING

POST-TENSIONING CABLES SHALL MEET THE REQUIREMENTS SET FORTH IN THE SPECIFICATIONS FOR UNBONDED SINGLE STRAND TENDONS (LATEST EDITION) AND THE SPECIFICATION FOR SEVEN-WIRE PRESTRESSING STEEL STRAND FOR BARRIER CABLE APPLICATIONS PUBLISHED BY THE POST-TENSIONING INSTITUTE (PTI).

POST-TENSIONING CABLES SHALL BE INSTALLED TO THE JACKING PRESTRESS FORCE AS SPECIFIED ON THE PLANS. ANCHORAGES, COUPLERS AND FITTINGS SHALL MEET THE FOLLOWING:

- HAVE A BUILDING CODE EVALUATION REPORT
- DEVELOP A MINIMUM OF 100% OF THE ULTIMATE STRENGTH OF THE CABLE
- HAVE A GALVANIZED COATING

CABLES SHALL BE 1/2" DIAMETER CONFORMING TO ASTM A416, GRADE 270 FOR SEVEN-WIRE LOW RELAXATION STRAND. CABLE SHALL HAVE A ZINC GALVANIZED COATING CONFORMING TO ASTM A475.

EACH STRESSING JACK AND GAUGE COMBINATION SHALL BE CALIBRATED AS A UNIT TO KNOWN STANDARDS AT INTERVALS NOT EXCEEDING 6 MONTHS. COPIES OF THE CALIBRATION CERTIFICATES FOR EACH JACK AND GAUGE COMBINATION BEING USED SHALL BE SUBMITTED TO THE SEOR FOR REVIEW.

CABLE INSTALLATION AND STRESSING OPERATIONS SHALL BE PERFORMED UNDER THE IMMEDIATE CONTROL OF A PERSON WHO IS A PTI CERTIFIED INSTALLER EXPERIENCED IN THIS TYPE OF WORK.



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SPRINGFIELD SCHOOL
DISTRICT

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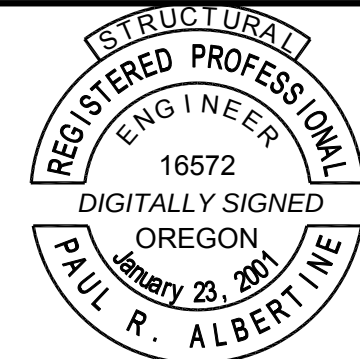
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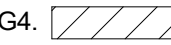
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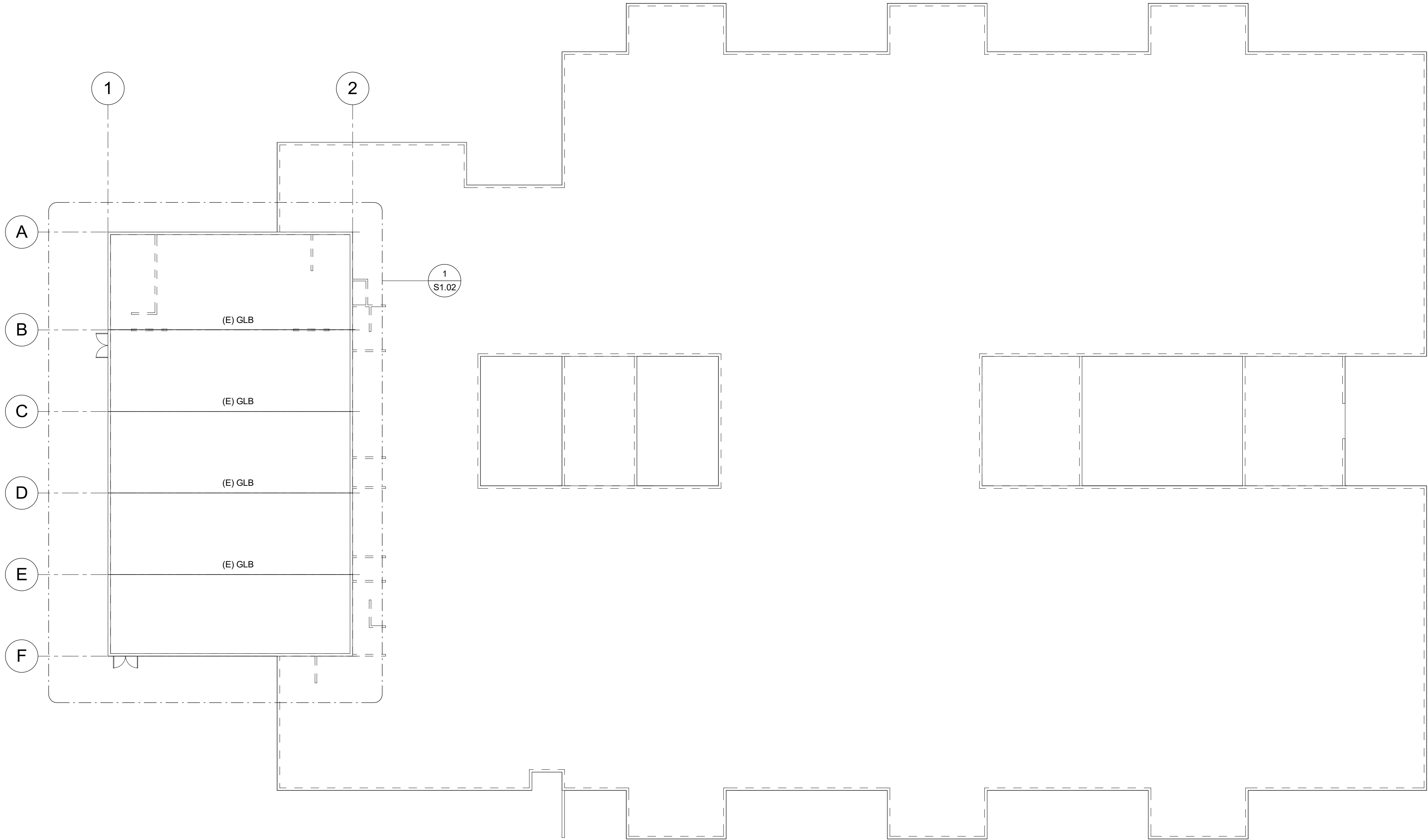
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MCE PROJ #: 251372
ISSUE DATE: 3/20/2026
ISSUANCE: PERMIT SET

SHEET CONTENT
STRUCTURAL SITE PLAN

SHEET

S1.00

- GENERAL SHEET NOTES:**
- G1. SEE S0.02 AND SUBSEQUENT SHEETS FOR STRUCTURAL NOTES AND SPECIAL INSPECTION REQUIREMENTS
 - G2. FIELD VERIFY EXISTING CONDITIONS AND ALL DIMENSIONS PRIOR TO DEMOLITION OR PURCHASE OF MATERIALS
 - G3. THESE PLANS ARE STRUCTURAL ONLY - SIDING, FLASHING, MOISTURE PROTECTION, ETC ARE DESIGNED BY OTHERS
 - G4.  (N) CABLE ANCHOR ASSEMBLY
 - G5. PREDRILL PILOT HOLES FOR ALL FASTENERS INTO EXISTING WOOD MEMBERS. HOLE SIZE TO BE 7/8 OF FASTENER ROOT DIAMETER.
 - G6. CONTRACTOR TO REMOVE AND REPLACE ARCHITECTURAL FINISHES AS NEEDED TO COMPLETE THE STRUCTURAL REPAIRS. MATCH EXISTING FINISHES.

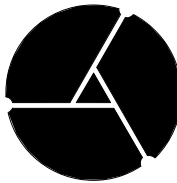


 **1** ROOF FRAMING PLAN
S1.01 | 1/16" = 1'-0"



RENEWS: 12-31-2027

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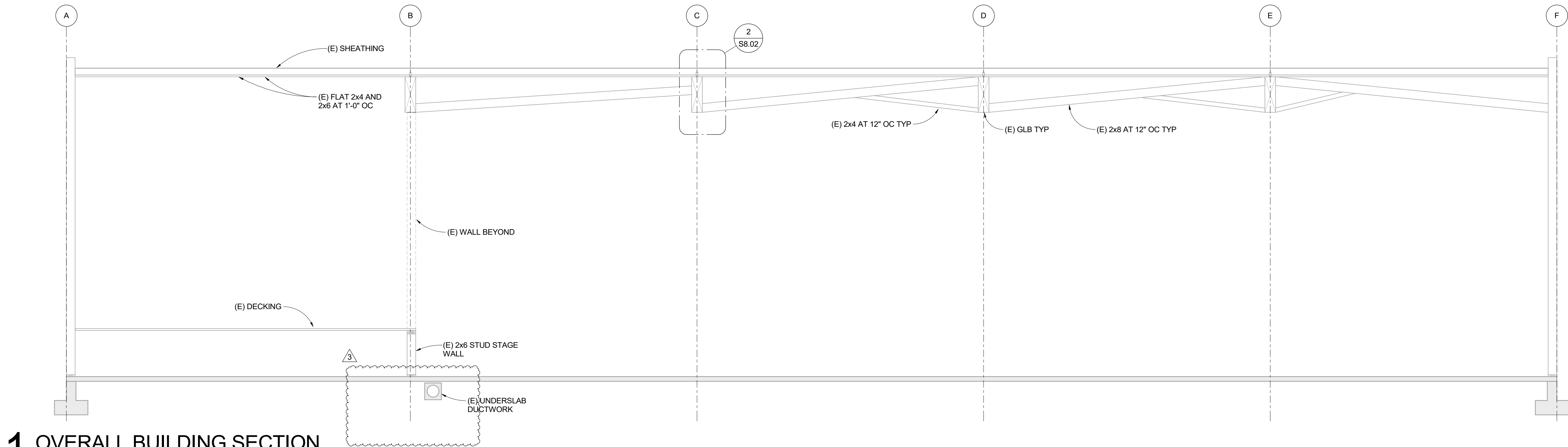
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SPRINGFIELD SCHOOL
DISTRICT

REV	DESCRIPTION	DATE
1	PERMIT SET	03/20/2026
2	ADDENDUM 1	04/08/2026

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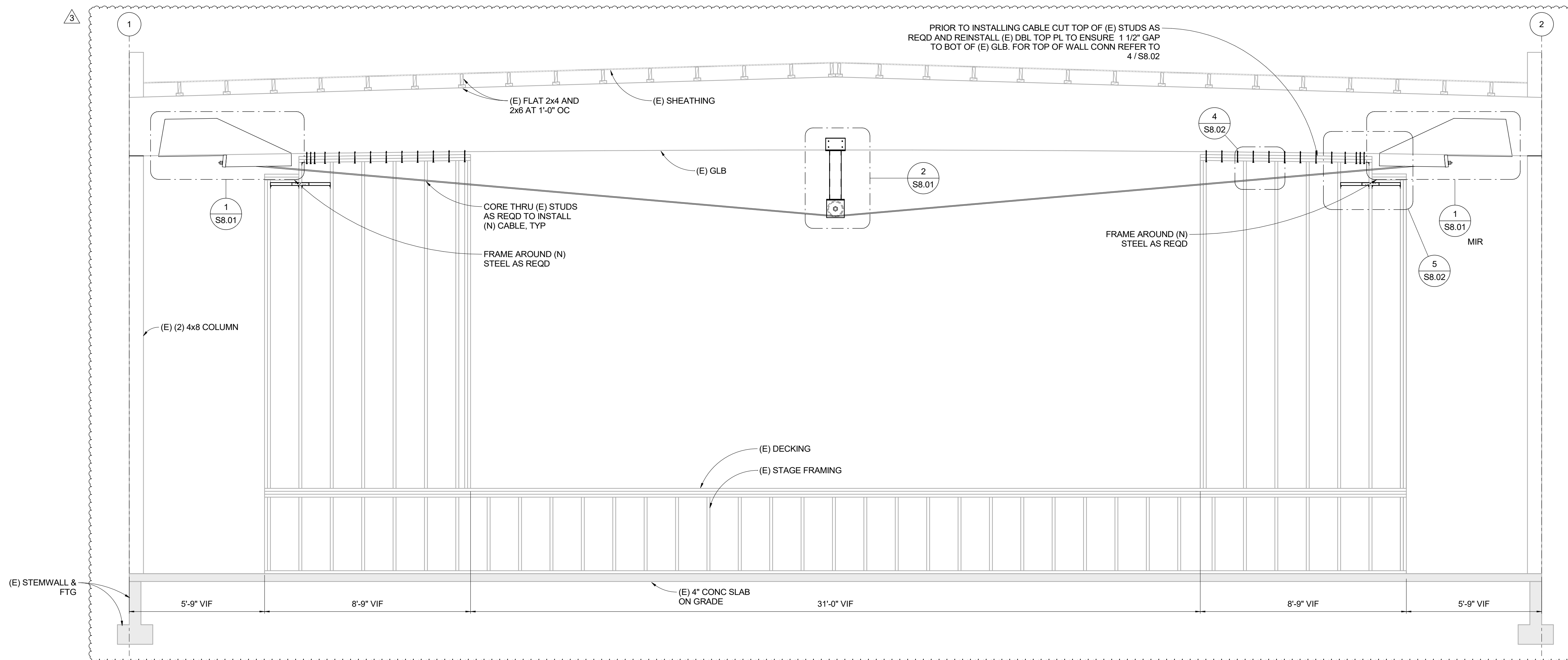
SHEET CONTENT
ROOF FRAMING PLAN

SHEET
S1.01



1 OVERALL BUILDING SECTION

S3.01 | 1/4" = 1'-0"



2 STAGE REPAIR SECTION

S3.01 | 3/8" = 1'-0"



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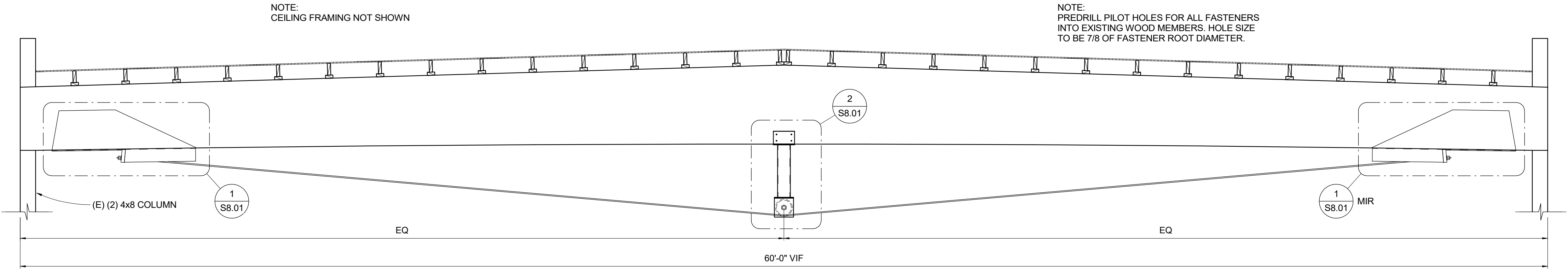
REV	DESCRIPTION	DATE
3	ADDEMDUM 2	5/15/2026

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SHEET CONTENT
SECTIONS

SHEET

S3.01



CABLE STRESSING NOTES

- JACKING FORCE TO BE 25.75 KIPS PER CABLE. JACKING FORCE TO BE APPLIED TO BOTH CABLES AT THE SAME TIME. LOADING IN EACH CABLE SHOULD BE WITHIN 10% OF EACH OTHER DURING THE JACKING PROCEDURE
- BACKSTRESS THE CABLES AT EACH END TO A FORCE OF 33 KIPS TO FULLY SEAT ANCHORAGE WEDGES. BACKSTRESSING OPERATIONS MAY BE DONE AT STEEL BEARING PLATE CONNECTIONS. DO NOT LOAD WOOD MEMBERS WITH BACKSTRESSING FORCES.



RENEWS: 12-31-2027

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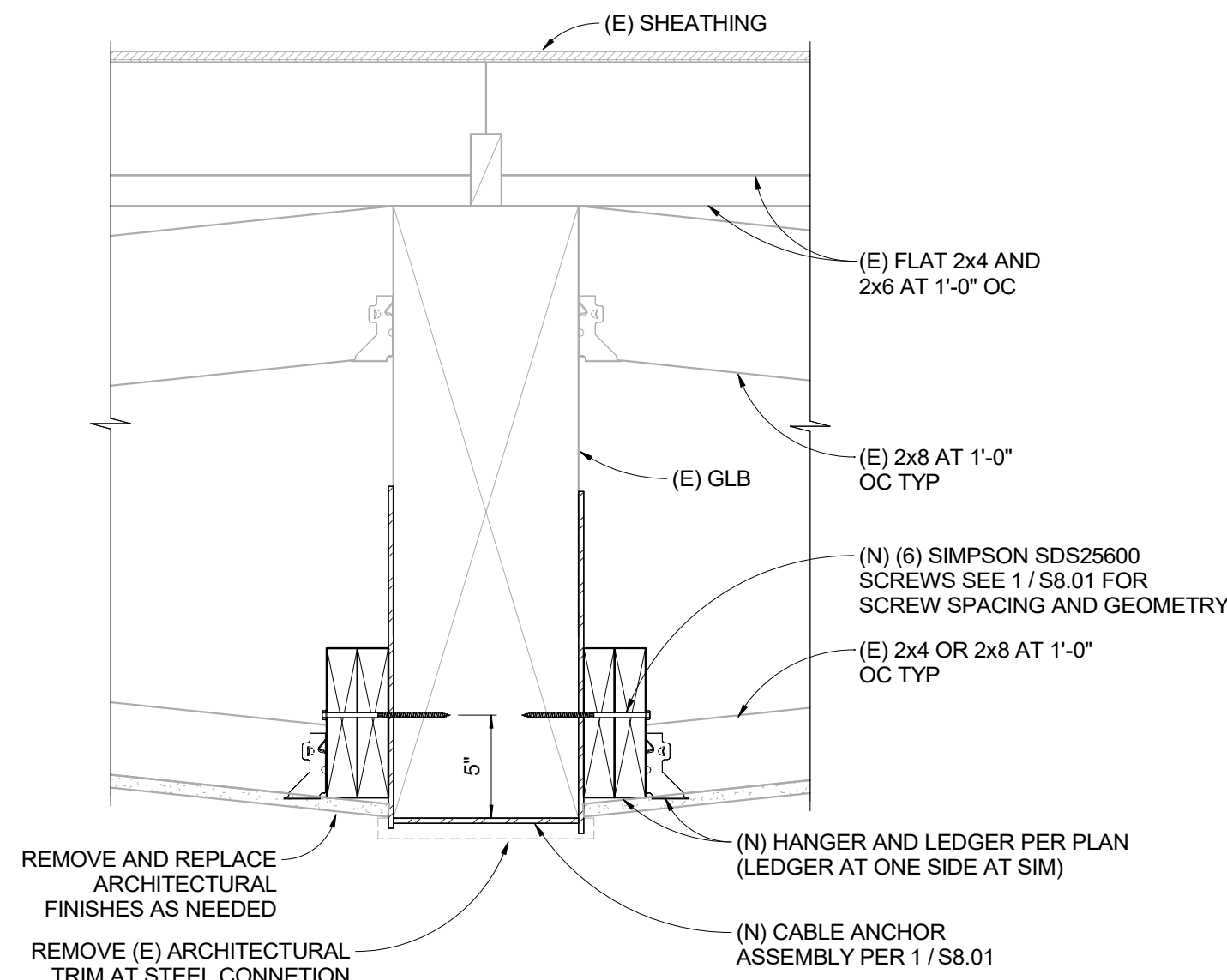
SHEET CONTENT
ELEVATIONS

SHEET

S4.01

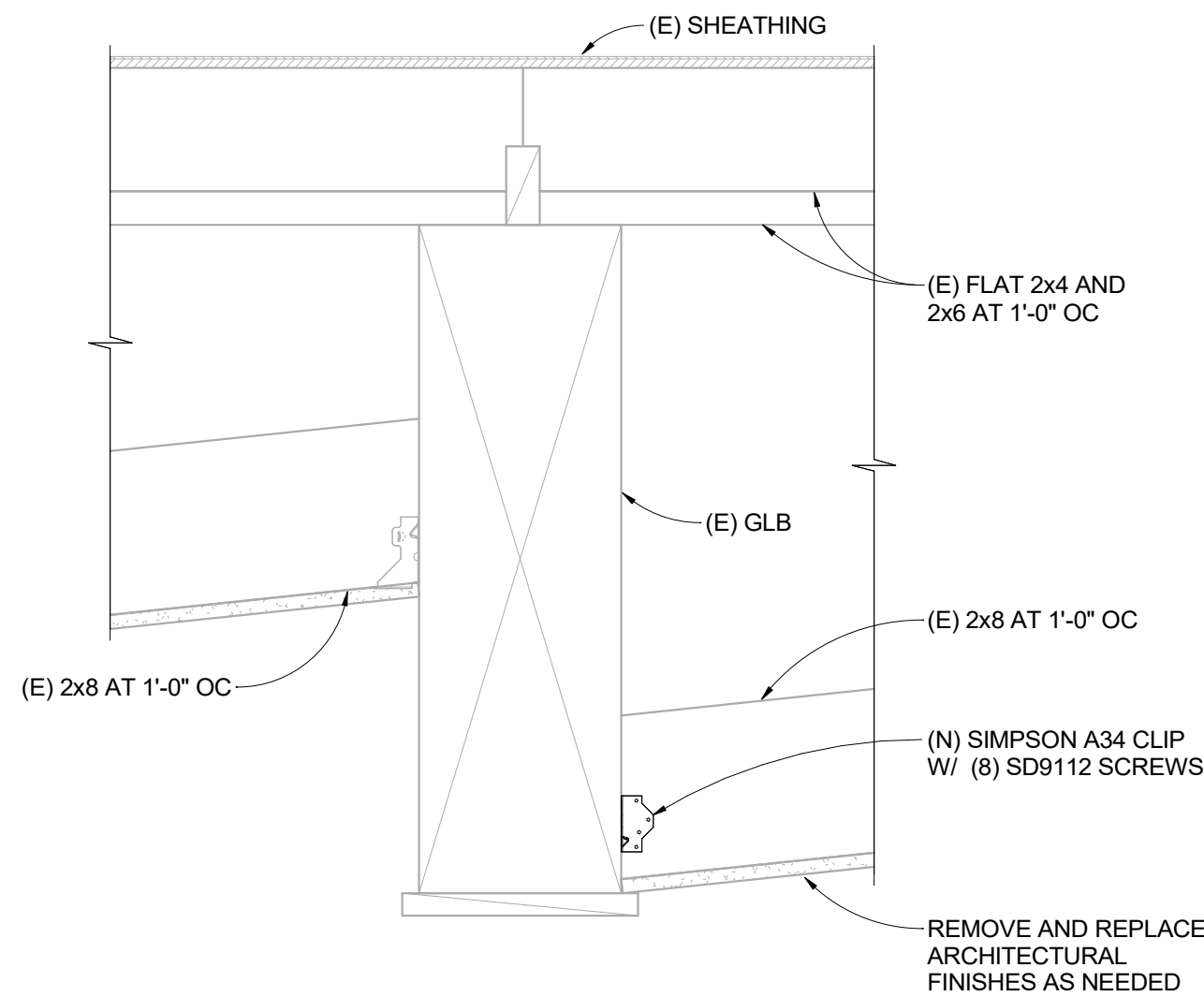
1 GLULAM BEAM REPAIR ELEVATION

S4.01 | 3/8" = 1'-0"



1 LEDGER AT CABLE ANCHOR ASSEMBLY

S8.02 | 1 1/2" = 1'-0"



2 GLULAM BEAM BRACE

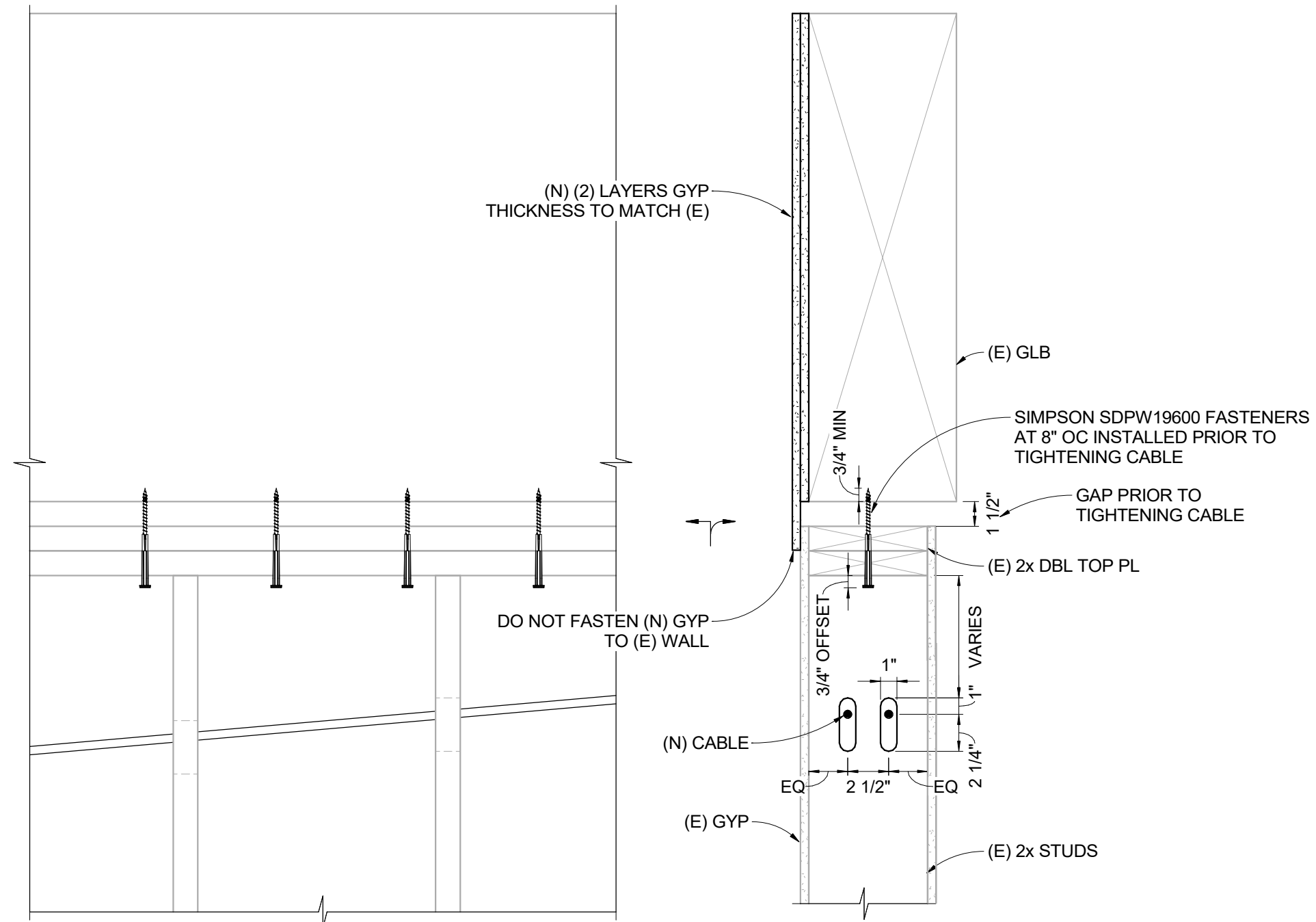
S8.02 | 1 1/2" = 1'-0"

3 TOP OF (N) COLUMN TO BEAM CONN - NOT USED

S8.02 | 1 1/2" = 1'-0"

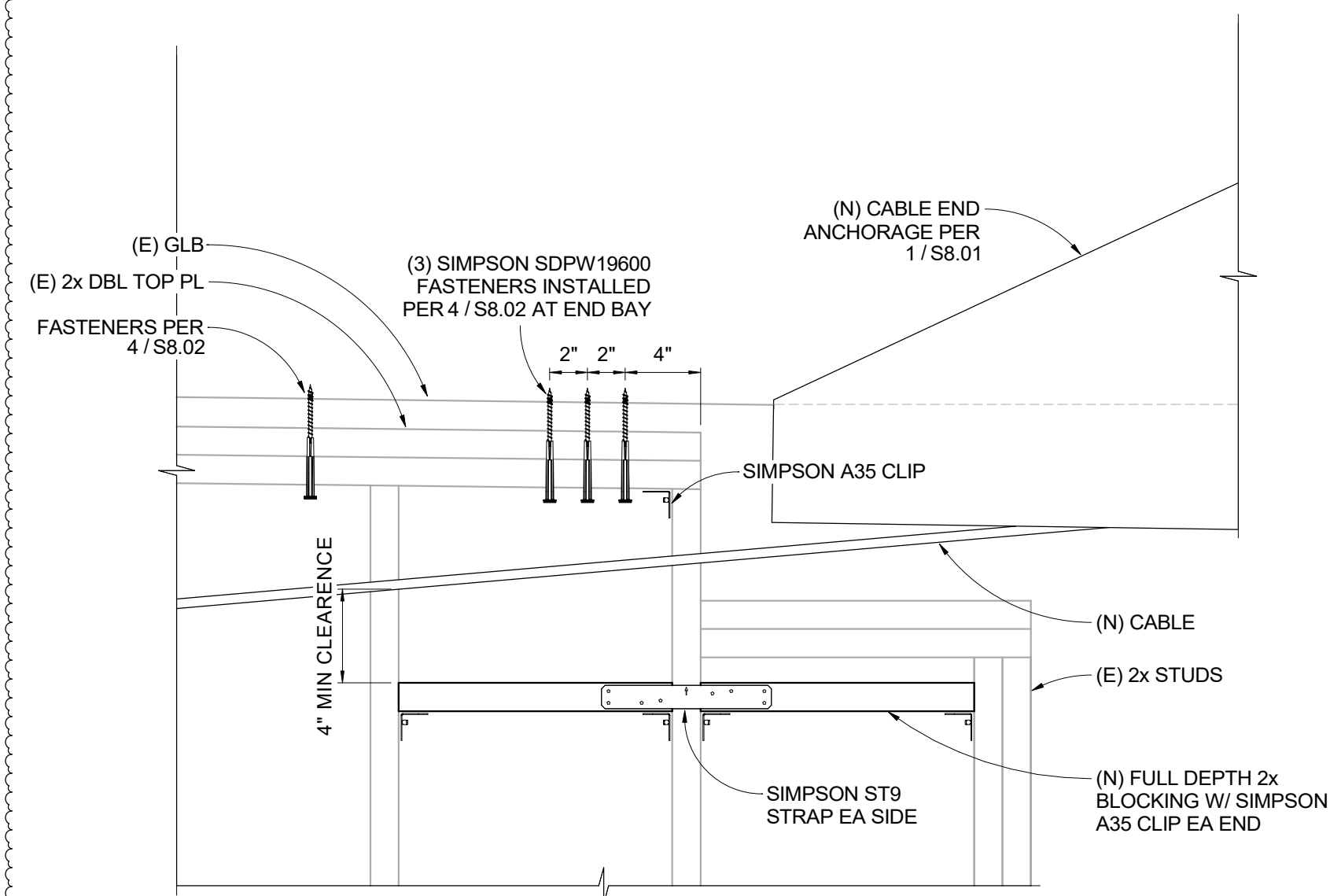
GENERAL SHEET NOTES:

- G1. PREDRILL PILOT HOLES FOR ALL FASTENERS INTO EXISTING WOOD MEMBERS. HOLE SIZE TO BE 7/8 OF FASTENER ROOT DIAMETER.
- G2. CONTRACTOR TO REMOVE AND REPLACE ARCHITECTURAL FINISHES AS NEEDED TO COMPLETE THE STRUCTURAL REPAIRS. MATCH EXISTING FINISHES.



4 CABLE AT (E) STUDS

S8.02 | 1 1/2" = 1'-0"



5 BLOCKING AT (E) STUD WALL

S8.02 | 1 1/2" = 1'-0"



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SHEET CONTENT
REPAIR DETAILS

SHEET

S8.02

1 STD REBAR DIMENSIONS

S8.03 | 1 1/2" = 1'-0"

ASTM STANDARD REINFORCING BARS		
BAR SIZE DESIGNATION	NOMINAL DIMENSIONS	
	DIAMETER, db (IN)	AREA (IN²)
#3	0.375	0.11
#4	0.500	0.20
#5	0.625	0.31
#6	0.750	0.44
#7	0.875	0.60
#8	1.000	0.79
#9	1.128	1.00
#10	1.270	1.27
#11	1.410	1.56
#14	1.693	2.25
#18	2.257	4.00

2 CAST-IN-PLACE NONPRESTRESSED CONCRETE REINF COVER

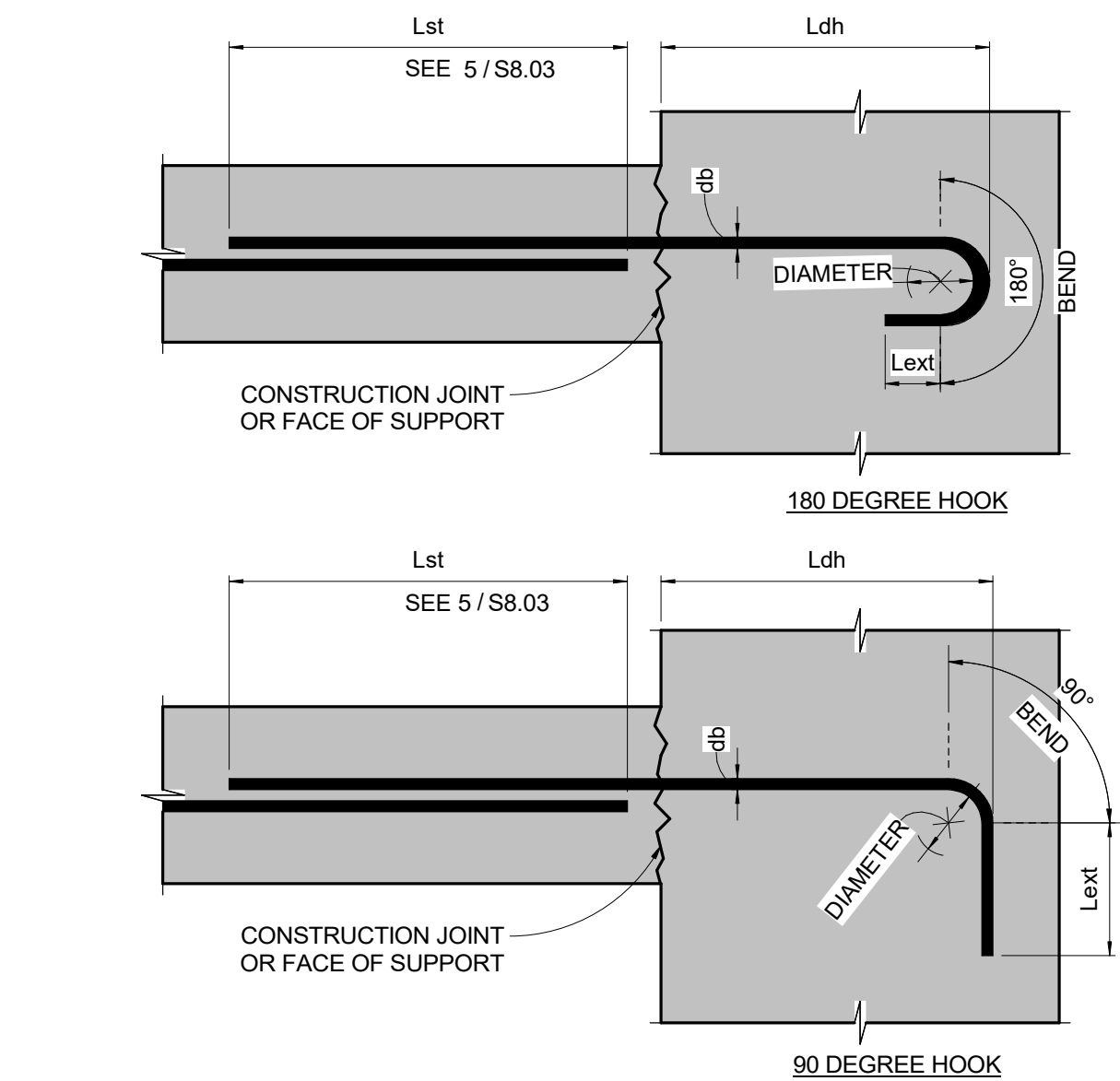
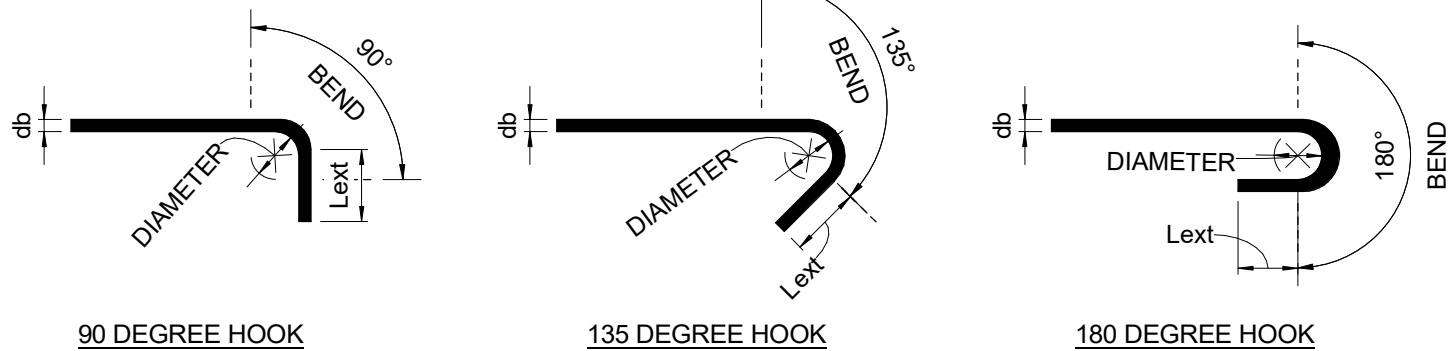
S8.03 | 1 1/2" = 1'-0"

CONCRETE EXPOSURE	MEMBER TYPE	REINFORCEMENT APPLICATION	REINFORCEMENT BAR SIZE	SPECIFIED COVER (INCHES)
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	ALL	#6 THROUGH #18	2
			#5 AND SMALLER / W31 OR D31 WIRE	1 1/2
NOT EXPOSED TO WEATHER / NOT IN CONTACT WITH GROUND	SLABS, JOISTS, AND WALLS	ALL	#14 AND #18	1 1/2
			#11 AND SMALLER	3/4
	BEAMS, COLS, PEDESTALS, AND TENSION TIES	PRIMARY REINFORCEMENT, STIRRUPS, TIES, SPIRALS AND HOOPS	ALL	1 1/2

3 STIRRUP HOOKS AND TIE BENDS

S8.03 | 1 1/2" = 1'-0"

STANDARD HOOK GEOMETRY FOR STIRRUPS, TIES, AND HOOPS			
TYPE OF STANDARD HOOK	BAR DIA, db	MIN INSIDE BEND DIAMETER	STRAIGHT EXTENSION, Lext
90 DEGREE	#3 THROUGH #5	4"db	GREATER OF 6"db AND 3"
	#6 THROUGH #8	6"db	
135 DEGREE	#3 THROUGH #5	4"db	GREATER OF 6"db AND 3"
	#6 THROUGH #8	6"db	
180 DEGREE	#3 THROUGH #5	4"db	GREATER OF 4"db AND 2 1/2"
	#6 THROUGH #8	6"db	



STANDARD HOOK GEOMETRY FOR DEVELOPMENT OF BARS IN TENSION			
TYPE OF STANDARD HOOK	BAR DIA, db	MIN INSIDE BEND DIAMETER	STRAIGHT EXTENSION, Lext ⁴
90 DEGREE	#3 THROUGH #8	6"db	12"db
	#9 THROUGH #11	8"db	
	#14 THROUGH #18	10"db	
180 DEGREE	#3 THROUGH #8	6"db	GREATER OF 4"db AND 2 1/2"
	#9 THROUGH #11	8"db	
	#14 THROUGH #18	10"db	

HOOK DEVELOPMENT LENGTHS (Ldh ^{1,2,3}) FOR GRADE 60 REBAR												
fc (PSI)	BAR DIA, db											
	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	
2500	6"	6"	9"	11"	14"	17"	21"	24"	29"	74"	114"	
3000	6"	6"	8"	11"	14"	16"	20"	23"	27"	71"	109"	
4000	6"	6"	8"	10"	13"	15"	18"	22"	26"	66"	102"	
4500	6"	6"	8"	10"	13"	15"	18"	22"	26"	65"	100"	
5000	6"	6"	8"	10"	12"	15"	18"	21"	25"	64"	98"	
6000	6"	6"	7"	10"	12"	15"	17"	21"	24"	63"	96"	

- NOTES:
- FOR HOOKS WITH SIDE COVER < 6db, MULTIPLY TABLE VALUES BY 1.25 (EXCEPT FOR #14 & #18 REINFORCING)
 - FOR HOOKS WITH OC SPACING < 6db, MULTIPLY TABLE VALUES BY 1.6 (EXCEPT FOR #14 & #18 REINFORCING)
 - FOR EPOXY-COATED HOOKS, MULTIPLY THE TABULATED VALUES BY 1.2
 - BAR DIMENSION REQUIRED TO MANUFACTURE HOOK

4 STANDARD HOOKS AND HOOK DEVELOPMENT LENGTH

S8.03 | 1 1/2" = 1'-0"

5 REBAR STRAIGHT BAR DEVELOPMENT / LAP SPlice LENGTH SCHEDULE

S8.03 | 1 1/2" = 1'-0"

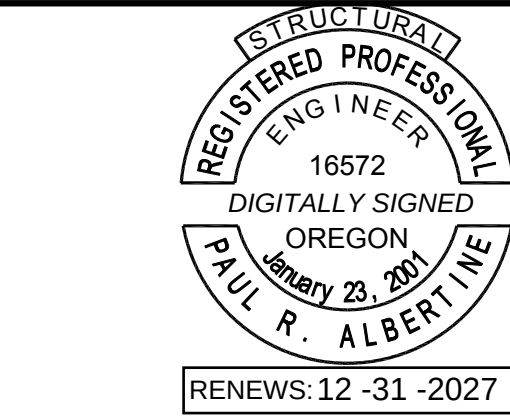
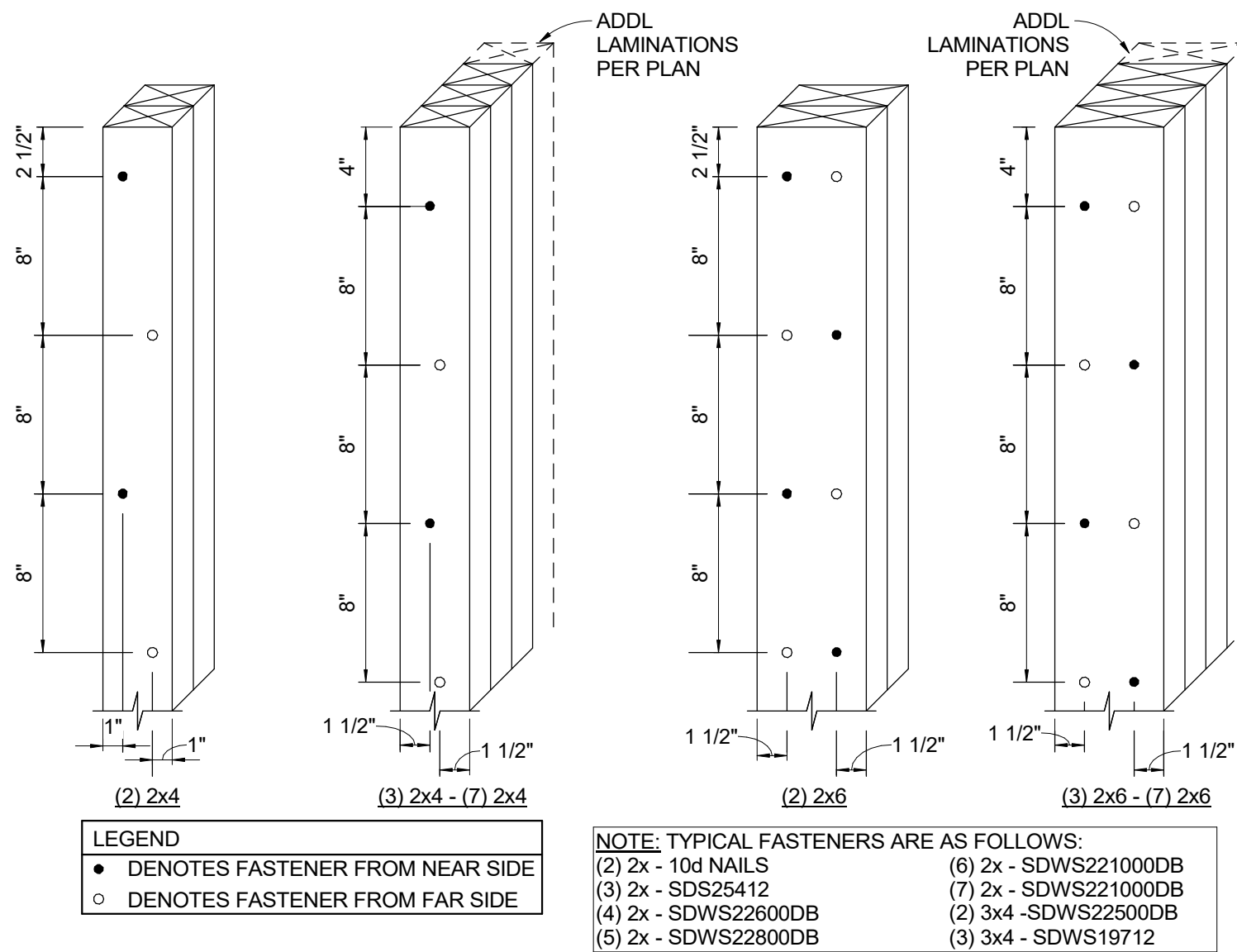
DEVELOPMENT LENGTH OF STRAIGHT BARS IN TENSION, Ld											
fc (PSI)	BAR LOCATION	BAR DIA, db									
		#3	#4	#5	#6	#7	#8	#9	#10	#11	
2500	TOP	18"	24"	35"	47"	76"	94"	114"	137"	160"	
	OTHER	14"	18"	27"	36"	59"	72"	88"	105"	123"	
3000	TOP	17"	22"	32"	43"	69"	86"	104"	125"	146"	
	OTHER	13"	17"	25"	33"	53"	66"	80"	96"	113"	
4000	TOP	14"	19"	28"	37"	60"	74"	90"	108"	127"	
	OTHER	12"	15"	21"	29"	46"	57"	69"	83"	98"	
4500	TOP	14"	18"	26"	35"	57"	70"	85"	102"	120"	
	OTHER	12"	14"	20"	27"	44"	54"	65"	79"	92"	
5000	TOP	13"	17"	25"	34"	54"	67"	81"	97"	114"	
	OTHER	12"	13"	19"	26"	42"	51"	62"	75"	87"	
6000	TOP	12"	16"	23"	31"	49"	61"	74"	88"	104"	
	OTHER	12"	12"	18"	24"	38"	47"	57"	68"	80"	

LAP SPlice LENGTH OF STRAIGHT BARS IN TENSION, Lst ³											
fc (PSI)	BAR LOCATION	BAR DIA, db									
		#3	#4	#5	#6	#7	#8	#9	#10	#11	
2500	TOP	23"	31"	45"	61"	99"	123"	149"	179"	208"	
	OTHER	18"	24"	35"	47"	77"	94"	115"	137"	160"	
3000	TOP	21"	28"	41"	56"	90"	112"	136"	163"	190"	
	OTHER	17"	22"	32"	43"	69"	86"	104"	125"	147"	
4000	TOP	19"	25"	36"	49"	78"	97"	117"	141"	166"	
	OTHER	16"	19"	28"	38"	60"	75"	90"	108"	128"	
4500	TOP	18"	23"	34"	46"	75"	91"	111"	133"	156"	
	OTHER	16"	18"	26"	36"	58"	71"	85"	108"	120"	
5000	TOP	17"	22"	32"	44"	71"	88"	106"	127"	149"	
	OTHER	16"	17"	25"	34"	55"	67"	81"	98"	114"	
6000	TOP	16"	20"	29"	40"	64"	80"	97"	115"	136"	
	OTHER	16"	16"	23"	32"	50"	62"	75"	89"	104"	

- NOTES:
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THE BARS
 - OTHER BARS ARE HORIZONTAL BARS WITH LESS THAN 12" OF FRESH CONCRETE CAST BELOW THE BARS AND VERTICAL BARS
 - NONCONTACT LAP SPICES ARE PERMITTED, PROVIDED THE TRANSVERSE CENTER-TO-CENTER SPACING OF SPICED BARS DOES NOT EXCEED THE LESSER OF ONE-FIFTH THE REQUIRED LAP SPICE LENGTH AND 6 INCHES
 - CLEAR COVER TO BARS SHALL BE IN ACCORDANCE WITH 2 / S8.03
 - MINIMUM SPACING BETWEEN LONGITUDINAL BARS SHALL BE 2"db
 - FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED VALUES BY 1.5

6 BUILT-UP STUD PACK FASTENING

S8.03 | 1 1/2" = 1'-0"



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REV	DESCRIPTION	DATE
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DESIGNED BY: EO
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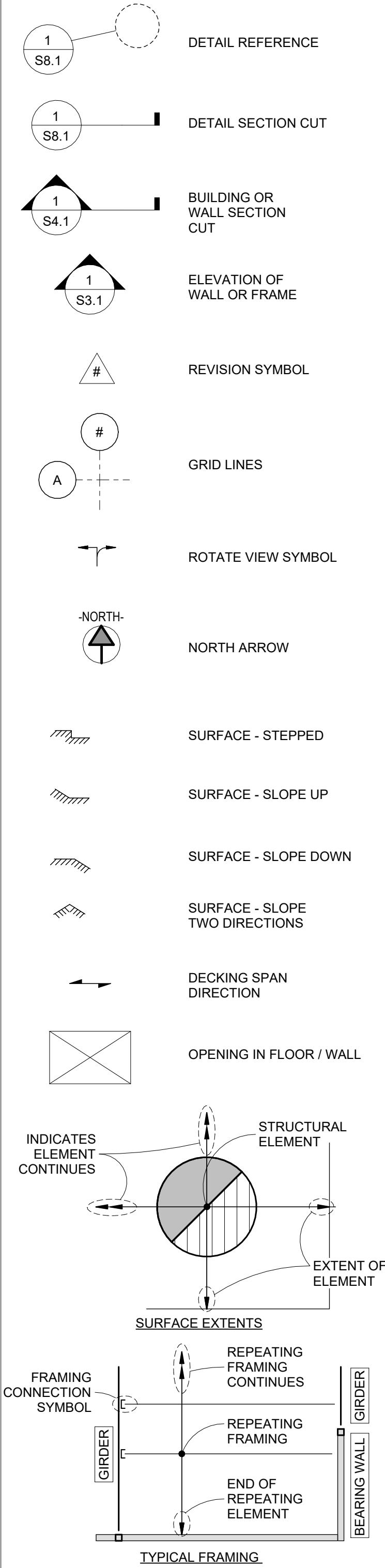
SHEET CONTENT
TYPICAL DETAILS

SHEET
S8.03

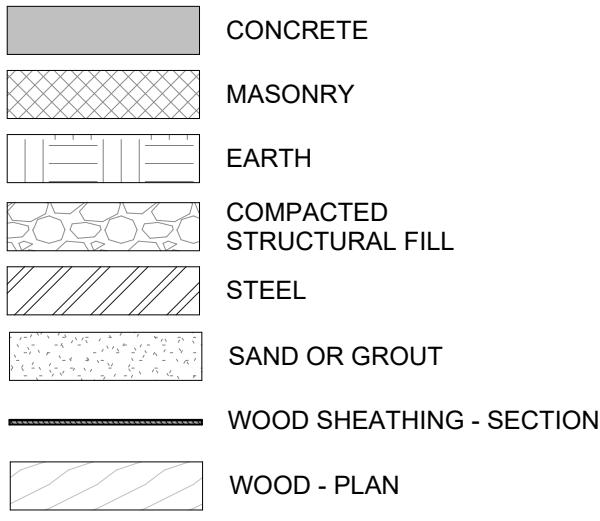
STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUNDS	IBC	INTERNATIONAL BUILDING CODE
AB	ANCHOR BOLT	ICF	INSULATED CONCRETE FORMS
ACI	AMERICAN CONCRETE INSTITUTE	ID	INSIDE DIAMETER
ADDL	ADDITIONAL	IN	INCH
ADJ	ADJACENT	INFO	INFORMATION
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	INT	INTERIOR
AFF	ABOVE FINISH FLOOR	JST	JOIST
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	JT	JOINT
ALT	ALTERNATE	K	KIP(S) (1,000 POUNDS)
ALUM	ALUMINUM	KSF	KIPS PER SQUARE FOOT
APA	AMERICAN PLYWOOD ASSOCIATION	KSI	KIPS PER SQUARE INCH
APPROX	APPROXIMATELY		
ARCH	ARCHITECTURAL	L, 2L	ANGLE OR DOUBLE ANGLE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LAT	LATERAL
ASD	ALLOWABLE STRESS DESIGN	LB	POUND
ASSY	ASSEMBLY	LF	LINEAR FOOT
ATR	ALL THREAD ROD	LG	LIGHT GAUGE
ATRA	ALL THREAD ROD WITH ADHESIVE	LL	LIVE LOAD
AWS	AMERICAN WELDING SOCIETY	LLBB	LONG LEGS BACK TO BACK
		LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
B/	BOTTOM OF	LONG	LONGITUDINAL
BF	BRACED FRAME	LRFD	LOAD AND RESISTANCE FACTOR DESIGN
BLDG	BUILDING	LSL	LAMINATED STRAND LUMBER
BLKG	BLOCKING	LSH	LONG SLOTTED HOLE
BM	BEAM	LVL	LAMINATED VENEER LUMBER
BN	BOUNDARY NAIL	LWC	LIGHT WEIGHT CONCRETE
BOT	BOTTOM		
BRBF	BUCKLING RESTRAINED BRACED FRAME	MANUF	MANUFACTURER
BRNG	BEARING	MAX	MAXIMUM
BSMT	BASEMENT	MC	MISCELLANEOUS CHANNEL
BTWN	BETWEEN	MECH	MECHANICAL
BU	BUILT-UP	MF	MOMENT FRAME
		MFR	MANUFACTURER
C	CAMBER OR CHANNEL (AMERICAN STANDARD)	MEP	MECHANICAL, ELECTRICAL, PLUMBING
CANT	CANTILEVER	MIN	MINIMUM
CFS	COLD-FORMED STEEL	MIR	MIRROR
CIP	CAST IN PLACE	MISC	MISCELLANEOUS
CG	CENTER OF GRAVITY	MSA	MASONRY SCREW ANCHOR
CGS	CENTER OF GRAVITY OF (PRESTRESSING) STEEL	MT	MAGNETIC PARTICLE TESTING
CJ	CONTROL OR CONSTRUCTION JOINT	MTL	METAL
CJP	COMPLETE JOINT PENETRATION		
CL	CENTERLINE	(N)	NEW
CLG	CEILING	NDT	NON-DESTRUCTIVE TESTING
CLR	CLEARANCE; CLEAR	NIC	NOT IN CONTRACT
CLSM	CONTROLLED LOW STRENGTH MATERIAL	NOM	NOMINAL
CMU	CONCRETE MASONRY UNIT	NS	NEAR SIDE
COL	COLUMN	NTE	NOT TO EXCEED
CONC	CONCRETE	NTS	NOT TO SCALE
CONN	CONNECTION	NWC	NORMAL WEIGHT CONCRETE
CONST	CONSTRUCTION		
CONT	CONTINUOUS	OC	ON CENTER
COORD	COORDINATE	OCBF	ORDINARY CONCENTRIC BRACED FRAME
CSA	CONCRETE SCREW ANCHOR	OD	OUTSIDE DIAMETER
		OMF	ORDINARY MOMENT FRAME
d	PENNY (NAIL)	OPP	OPPOSITE
db	NOMINAL BAR DIAMETER	OWJ	OPEN WEB JOIST
DBA	DEFORMED BAR ANCHOR		
DBL	DOUBLE	PAF	POWER ACTUATED FASTENER
DBO	DESIGNED BY OTHERS	PC	PRECAST
DEG	DEGREE	PCF	POUNDS PER CUBIC FOOT
DEMO	DEMOLISH; DEMOLITION	PERP	PERPENDICULAR
DF/L	DOUGLAS FIR-LARCH	PJP	PARTIAL JOINT PENETRATION
DIA	DIAMETER	PL	PLATE
DIAG	DIAGONAL	PLF	POUNDS PER LINEAL FOOT
DIM	DIMENSION	PLWD	PLYWOOD
DIST	DISTANCE	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD	PSF	POUNDS PER SQUARE FOOT
DN	DOWN	PSL	PARALLEL STRAND LUMBER
DP	DEPTH OR DEEP	PT	PRESSURE TREATED
DTL	DETAIL	P/T	POST TENSIONED
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
		QTY	QUANTITY
(E)	EXISTING	RAD	RADIUS
E	MODULUS OF ELASTICITY	RBS	REDUCED BEAM SECTION
EA	EACH	REF	REFERENCE
EB	EXPANSION BOLT	REINF	REINFORCING
EF	EACH FACE	REQD	REQUIRED
EJ	EXPANSION JOINT	RET	RETAINING
EL	ELEVATION	REV	REVISED, REVISION
ELEC	ELECTRICAL	RO	ROUGH OPENING
EN	EDGE NAIL		
EOR	ENGINEER OF RECORD	SC	SLIP CRITICAL
EQ	EQUAL; EARTHQUAKE	SCBF	SPECIAL CONCENTRIC BRACE FRAME
EW	EACH WAY	SOH	SCHEDULE
EXT	EXTERIOR	SEOR	STRUCTURAL ENGINEER OF RECORD
EXTD	EXTEND; EXTENDED	SFRS	SEISMIC FORCE RESISTING SYSTEM
		SHT	SHEET
fc	28 DAY CONC COMPRESSIVE STRENGTH	SHTG	SHEATHING
fm	MASONRY NET AREA COMPRESSIVE STRENGTH	SIM	SIMILAR
Fy	YIELD STRESS	SLBB	SHORT LEGS BACK TO BACK
Fu	TENSILE STRESS	SMF	SPECIAL MOMENT FRAME
F/	FACE OF	SMS	SHEET METAL SCREW
FAB	FABRICATED / FABRICATOR	SOG	SLAB ON GRADE
FF	FINISH FLOOR	SOMD	SLAB ON METAL DECK
FN	FIELD NAIL	SQ	SQUARE
FLR	FLOOR	SS	STAINLESS STEEL
FDN	FOUNDATION	SSH	SHORT SLOTTED HOLE
FRT	FIRE RETARDANT TREATED	STD	STANDARD
FS	FAR SIDE	STL	STEEL
FT	FEET	SQ	SQUARE
FTG	FOOTING	SYM	SYMMETRICAL
		T/	TOP OF
GA	GAUGE	T&B	TOP AND BOTTOM
GAF	GAS ACTUATED FASTENER	T&G	TONGUE AND GROOVE
GALV	GALVANIZED	THRD	THREADED
GLB	GLUE LAMINATED BEAM	TPL	TRIPLE
GR	GRADE	TRANS	TRANSVERSE
GWB	GYP SUM WALL BOARD	TYP	TYPICAL
GYP	GYP SUM		
HD	HOLDOWN	UNO	UNLESS NOTED OTHERWISE
HDG	HOT-DIP GALVANIZED	URM	UNREINFORCED MASONRY
HDR	HEADER	UT	ULTRASONIC TEST
HEX	HEXAGONAL		
HF	HEM-FIR	VERT	VERTICAL
HGR	HANGER	VIF	VERIFY IN FIELD
HORIZ	HORIZONTAL		
HSA	HEADED STUD ANCHOR	W/	WITH
HSS	HOLLOW STRUCTURAL SECTION	W/O	WITHOUT
HT	HEIGHT	WD	WOOD
HVAC	HEATING VENTILATION AIR CONDITIONING	WF	WIDE FLANGE
		WP	WORK POINT
		WT	WEIGHT
		WWR	WELDED WIRE REINFORCING

STRUCTURAL DRAWING SYMBOLS



STRUCTURAL MATERIAL PATTERNS



STRUCTURAL DRAWING INDEX				
SHEET #	SHEET NAME	BID SET	PERMIT SET	ADDENDUM #1
S0.01	COVER SHEET	•	•	•
S0.02	STRUCTURAL NOTES & SPECIAL INSPECTION	•	•	•
S1.00	STRUCTURAL SITE PLAN	•	•	•
S1.01	ROOF PLAN	•	•	•
S1.02	PARTIAL ROOF FRAMING PLAN	•	•	•
S8.01	DETAILS	•	•	•
S8.02	BOWSTRING TRUSS REPAIR DETAILS	•	•	•

CODE SUMMARY:

BUILDING CODE: 2022 OSSC
YEAR BUILT: 1951
AREA: 65000 SF (NO CHANGE)
BUILDING CONSTRUCTION TYPE: V-A (NO CHANGE)
OCCUPANCY CLASSIFICATION: E (NO CHANGE)

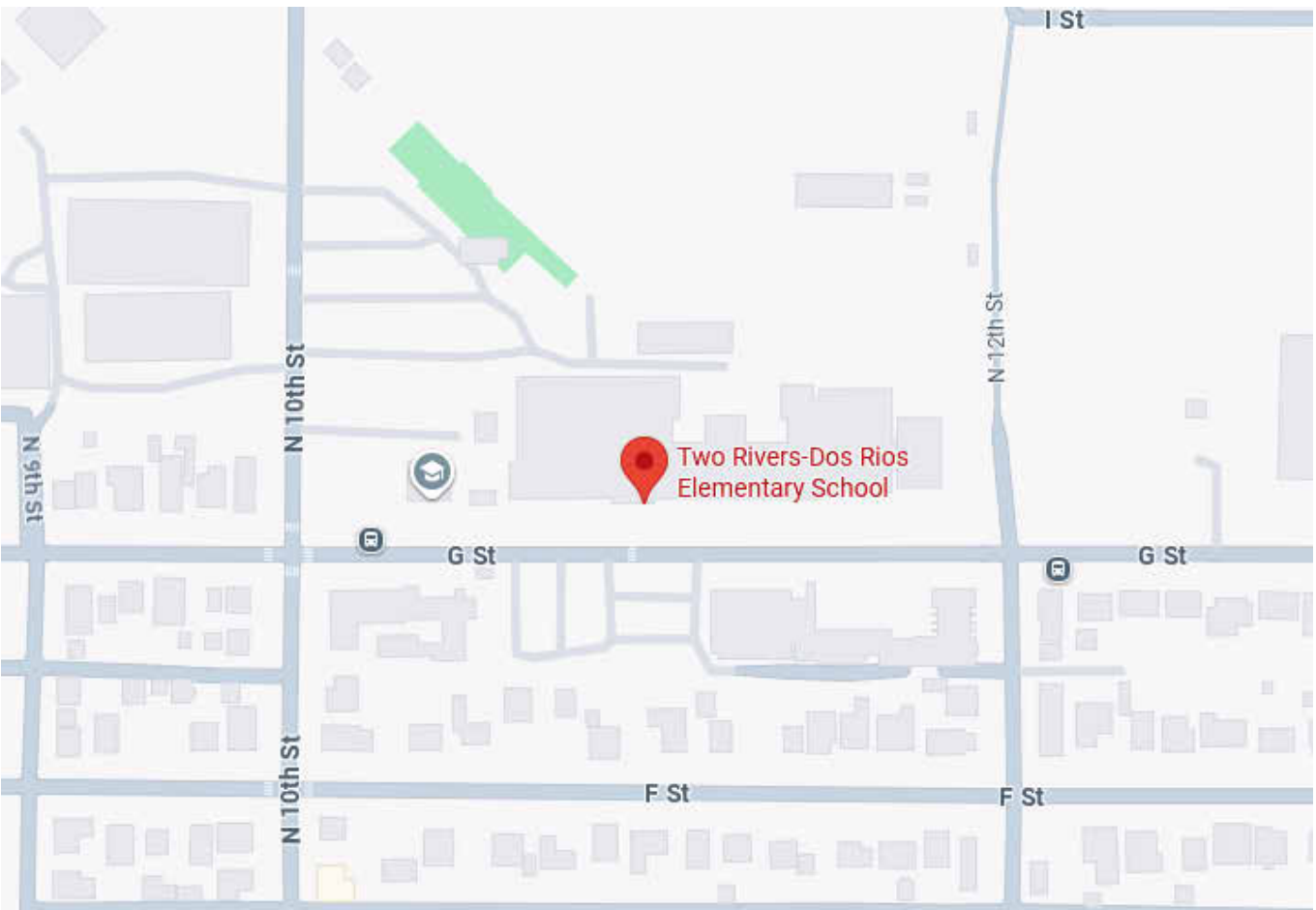
SCOPE OF WORK:

THE FOLLOWING PLANS ARE FOR THE MANDATORY REINFORCEMENT OF (E) GLUE LAMINATED BEAMS AND A REPAIR AT THE CAFETERIA TOP CHORD.

PROJECT DESIGN TEAM:

MILLER CONSULTING ENGINEERS, INC
STRUCTURAL ENGINEER OF RECORD

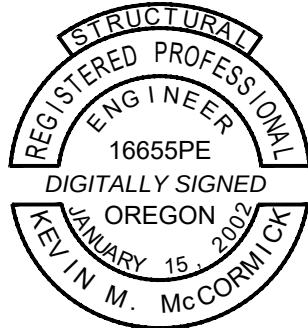
PRIMARY CONTACT: KEVIN MCCORMICK, kevin@miller-se.com
SECONDARY CONTACT: JENNYLIN LOPEZ, jennylin.lopez@miller-se.com



VICINITY MAP

S0.01 | NOT TO SCALE

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TWO RIVERS - DOS RIOS ELEMENTARY SCHOOL REPAIR

1084 G STREET
SPRINGFIELD, OREGON

SPRINGFIELD PUBLIC SCHOOLS

REV	DESCRIPTION	DATE
1	ADDENDUM #2	05-19-2026

DESIGNED BY: JDL
CHECKED BY: KMM
MCE PROJ #: 251372
ISSUE DATE: 03.20.2026
ISSUANCE: PERMIT SET

SHEET CONTENT
COVER SHEET

SHEET

S0.01

STRUCTURAL NOTES

GENERAL NOTES

THESE CONTRACT DOCUMENTS COMPRISED OF PLANS, SPECIFICATIONS, ENGINEERING AND DESIGN WORK ARE INTENDED SOLELY FOR THE PROJECT SPECIFIED HEREIN. MILLER CONSULTING ENGINEERS (MCE) DISCLAIMS ALL LIABILITY IF THESE PLANS AND SPECIFICATIONS OR THE DESIGN, ADVICE AND INSTRUCTIONS ATTENDANT THERETO ARE USED ON ANY PROJECT OR AT ANY LOCATION OTHER THAN THE PROJECT AND LOCATION SPECIFIED HEREIN.

THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE TO ALL SAFETY REGULATIONS DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL METHODS, DIRECTION AND RELATED EQUIPMENT NECESSARY TO PERFORM THE WORK.

SHOULD ANY QUESTION ARISE REGARDING THE CONTRACT DOCUMENTS OR SITE CONDITIONS, THE CONTRACTOR SHALL REQUEST INTERPRETATION AND CLARIFICATION FROM THE ENGINEER BEFORE BEGINNING THE PROJECT. THE ABSENCE OF SUCH REQUEST SHALL SIGNIFY THAT THE CONTRACTOR HAS REVIEWED AND FAMILIARIZED THEMSELVES AND HAS COMPLETE COMPREHENSION OF ALL ASPECTS OF THE PROJECT.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL ITEMS AND WORK NECESSARY FOR COMPLETION OF THE PROJECT AS INDICATED BY THE CONTRACT DOCUMENTS. THE CONTRACT DOCUMENTS ARE STRUCTURAL ONLY AND DO NOT NECESSARILY INDICATE ALL NON-STRUCTURAL PORTIONS OF THE PROJECT INCLUDING, BUT NOT LIMITED TO, PLUMBING, FIRE SUPPRESSION, ELECTRICAL, MECHANICAL, LAND USE, SITE PLANNING, EROSION CONTROL, FLASHING AND WATER-PROOFING. ALL NON-STRUCTURAL PORTIONS OF WORK, AND STRUCTURAL WORK NOTED AS DELEGATED DESIGN IN THE SUBMITTAL SCHEDULE, ARE BEYOND THE SCOPE OF THESE DOCUMENTS AND ARE PROVIDED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL NON-STRUCTURAL ITEMS IMPACTED BY THE STRUCTURAL WORK. THESE ITEMS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR MODIFIED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED DESIGN PROFESSIONAL ENGAGED AT THE CONTRACTOR'S OWN EXPENSE.

ANY MATERIAL NOT AS SPECIFIED IN THE CONTRACT DOCUMENTS OR IMPROPER MATERIAL INSTALLATION OR WORKMANSHIP SHALL BE REMOVED AND REPLACED WITH SPECIFIED MATERIAL IN A WORKMANLIKE MANNER AT THE CONTRACTOR'S EXPENSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL MATERIALS FROM DAMAGE THROUGHOUT THE COURSE OF CONSTRUCTION. CHANGES TO THE CONTRACT DOCUMENTS REQUESTED BY THE CONTRACTOR TO ACCOMPLISH THEIR PREFERRED MEANS OR METHOD OF CONSTRUCTION MAY BE AT THE CONTRACTOR'S EXPENSE.

ALL MANUFACTURED PRODUCTS SPECIFIED SHALL BE USED UNLESS AN ALTERNATE IS SUBMITTED AND APPROVED BY THE SEOR. MANUFACTURED PRODUCTS REQUIRING A BUILDING CODE EVALUATION REPORT SHALL HAVE A CURRENT REPORT DEMONSTRATING CONFORMANCE WITH THE APPLICABLE BUILDING CODE, VALID AT THE TIME OF PRODUCT INSTALLATION.

TEMPORARY MEASURES/SHORING

THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL INSTANCES WHERE TEMPORARY MEASURES/SHORING ARE REQUIRED, AND SHALL AT THEIR OWN EXPENSE, ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY MEASURES/SHORING ARE REQUIRED. TEMPORARY MEASURES/SHORING SHALL:

- PROTECT PERSONNEL AND THE PUBLIC.
- PREVENT SETTLEMENT AND/OR DAMAGE TO THE BUILDING AND/OR EXISTING FACILITIES
- PROTECT STREETS, WALKWAYS, UTILITIES, AND IMPROVEMENTS.
- PROTECT ALL EXCAVATIONS AGAINST LOSS OF GROUND OR CAVING OF EMBANKMENTS DURING CONSTRUCTION.

BUILDING CODE

ALL PHASES OF THE WORK SHALL CONFORM TO THE 2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC), BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC), INCLUDING ALL REFERENCE STANDARDS, UNLESS NOTED OTHERWISE.

SPECIAL INSPECTION/TESTING

SPECIAL INSPECTION AND/OR TESTING IS REQUIRED IN ACCORDANCE WITH BUILDING CODE SECTION 1704. IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE SPECIAL INSPECTION AND TESTING BY A QUALIFIED THIRD PARTY, SUCH AS A TESTING AGENCY REVIEWED BY THE ENGINEER AND APPROVED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW SCHEDULING OF SPECIAL INSPECTION.

SPECIAL INSPECTIONS SHALL CONFORM TO SECTION 1705 OF THE BUILDING CODE. CONTRACT DOCUMENTS AND SUBMITTALS: THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS. FOR PROJECT REQUIREMENTS REFER TO THE SPECIAL INSPECTION TABLES WITHIN THE CONTRACT DOCUMENTS.

STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION BY THE SEOR SHALL VERIFY BY PERIODIC VISUAL OBSERVATION THAT THE STRUCTURAL SYSTEM HAS GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AT SIGNIFICANT STAGES OF CONSTRUCTION AND AT COMPLETION AS REQUIRED IN ACCORDANCE WITH BUILDING CODE SECTION 1704.6. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW SCHEDULING FOR A STRUCTURAL OBSERVATION. STRUCTURAL OBSERVATION SHALL BE PERFORMED DURING CONSTRUCTION AT THE FOLLOWING TIME:

- AFTER COMPLETION OF STRUCTURAL REINFORCING OF ALL BEAMS

STRUCTURAL DESIGN CRITERIA

LIVE LOAD REDUCTION FOR BEAMS AND COLUMNS WAS NOT USED. DESIGN FOR MECHANICAL LOADS INCLUDES ONLY THOSE INDICATED ON STRUCTURAL DRAWINGS. THE FOLLOWING ARE THE DESIGN REQUIREMENTS:

STRUCTURAL DESIGN CRITERIA		
RISK CATEGORY		III
SUPERIMPOSED DEAD LOAD (EXCLUDING STRUCTURAL FRAME SELF WEIGHT)		
ROOF (TOTAL INCLUDING ROOFING/CEILING)		15 PSF
WALLS		8 PSF
ROOF LIVE LOAD		
ROOF LIVE LOAD		20 PSF OR 300LB CONCENTRATED LOAD
ROOF SNOW LOAD		
DESIGN ROOF SNOW LOAD		27 PSF
SNOW DRIFTING		AS NOTED ON PLANS (IF OCCURS)
IMPORTANCE FACTOR		I _s = 1.1
GROUND SNOW LOAD		P _g = 11 PSF
EXPOSURE FACTOR		C _e = 0.9
THERMAL FACTOR		C _t = 1.1

WOOD FRAMING

WOOD FRAMING CONNECTIONS

PREDRILL ALL SCREWS INTO EXISTING LUMBER TO ¾ OF THE ROOT THREAD DIAMETER OF THE SCREW.

PREFABRICATED METAL TIMBER CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE, UNLESS NOTED OTHERWISE. ALL PREFABRICATED METAL TIMBER CONNECTORS AND HANGERS SHALL BE FULLY BOLTED, NAILED, AND/OR SCREWED AS INDICATED BY MANUFACTURER, UNLESS NOTED OTHERWISE. ALL CONNECTORS, HANGERS AND FASTENERS SHALL BE CORROSION PROTECTED PER MANUFACTURER'S RECOMMENDATIONS.

ALL BOLTS IN WOOD CONNECTIONS SHALL BE ASTM A307 GRADE A. ALL BOLT HEADS OR NUTS BEARING ON WOOD TO HAVE STANDARD WASHERS. BOLT HOLES IN WOOD SHALL BE A MINIMUM OF 1/32G TO A MAXIMUM OF 1/16G LARGER THAN THE BOLT. ALL LAG SCREWS SHALL HAVE PILOT HOLES PER THE LAG SCREW PILOT HOLE SCHEDULE. REFER TO SECTION 12.1 OF THE NDS FOR ADDITIONAL INSTALLATION INSTRUCTIONS OF DOWEL-TYPE FASTENERS.

ENGINEERED LUMBER

ENGINEERED LUMBER SHALL HAVE A BUILDING CODE EVALUATION REPORT.

ALL ENGINEERED LUMBER EXPOSED TO WEATHER AND SUBJECT TO DECAY, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR PRESERVATIVE MATERIALS, RETENTION RATES, AND END USE.

GLUE LAMINATED (GLULAM) WOOD MEMBERS

GLULAM MEMBERS SHALL BE MANUFACTURED AND CERTIFIED PER THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC), ANSI/AITC A190.1, ASTM D3737 AND CERTIFICATION STAMPED. GLULAM MEMBERS SHALL CONTAIN AN AVERAGE MOISTURE CONTENT OF 16% OR LESS AT TIME OF MANUFACTURE. EASE EDGES ON GLULAM MEMBERS AS REQUIRED TO BE COMPATIBLE WITH STEEL AT CONNECTIONS.

GLULAM APPEARANCE SHALL BE AS FOLLOWS UNLESS SPECIFIED OTHERWISE ON THE ARCHITECTURAL DRAWINGS:

- NOT EXPOSED TO VIEW IN COMPLETED CONSTRUCTION: INDUSTRIAL APPEARANCE
- EXPOSED TO VIEW: ARCHITECTURAL APPEARANCE

THE APPEARANCE CERTIFICATION STAMP ON ARCHITECTURAL APPEARANCE MEMBERS SHALL BE PLACED ON SURFACES NOT EXPOSED IN COMPLETED CONSTRUCTION.

GLULAM BEAMS WITH A SIMPLE SPAN BETWEEN SUPPORTS SHALL HAVE A CAMBER EQUAL TO A 2600' RADIUS BETWEEN SUPPORTS FOR SPANS OVER 24', OR AS NOTED ON DRAWINGS. MULTI-SPAN AND CANTILEVER BEAMS SHALL NOT HAVE A CAMBER UNLESS NOTED OTHERWISE.

GLULAM MEMBERS SPECIFIED AS PRESERVATIVE TREATED SHALL BE TREATED WITH PERMAPOST KLEAR-GARD 25 OR EQUAL.

GLULAM MEMBERS SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN PROPERTIES:

GLULAM BEAMS		
	SIMPLE SPAN	CONTINUOUS OVER MULTIPLE SUPPORTS OR CANTILEVER
COMBINATION SYMBOL (SPECIES)	24F-V4 (DF/DF)	24F-V8 (DF/DF)
MODULUS OF ELASTICITY, E (PSI)	1,800,000	1,800,000
FLEXURAL STRESS, F _b ** (PSI)	+2,400 / -1,850	+2,400 / -2,400
TENSION STRESS, F _t (PSI)	1,100	1,100
COMPRESSION PERPENDICULAR TO GRAIN, F _c PERP (PSI)	650	650
COMPRESSION PARALLEL TO GRAIN, F _{ci} (PSI)	1,650	1,650
HORIZONTAL SHEAR PARALLEL TO GRAIN, F _v (PSI)	265	265
SPECIFIC GRAVITY	0.50	0.50

LAMINATED VENEER LUMBER (LVL)

LVL FRAMING SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PROPERTY	MINIMUM VALUE
MODULUS OF ELASTICITY, E (PSI)	2,000,000
FLEXURAL STRESS, F _b (PSI)	2,600
TENSION STRESS, F _t (PSI)	1,895
COMPRESSION PERPENDICULAR TO GRAIN, F _c PERP (PSI)	750
COMPRESSION PARALLEL TO GRAIN, F _{ci} (PSI)	2,510
HORIZONTAL SHEAR PARALLEL TO GRAIN, F _v (PSI)	285
SPECIFIC GRAVITY	0.50



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RIOS
ELEMENTARY
SCHOOL REPAIR

1084 G STREET
SPRINGFIELD, OREGON

SPRINGFIELD PUBLIC
SCHOOLS

REV	DESCRIPTION	DATE
1	ADDENDUM #2	05-19-2026

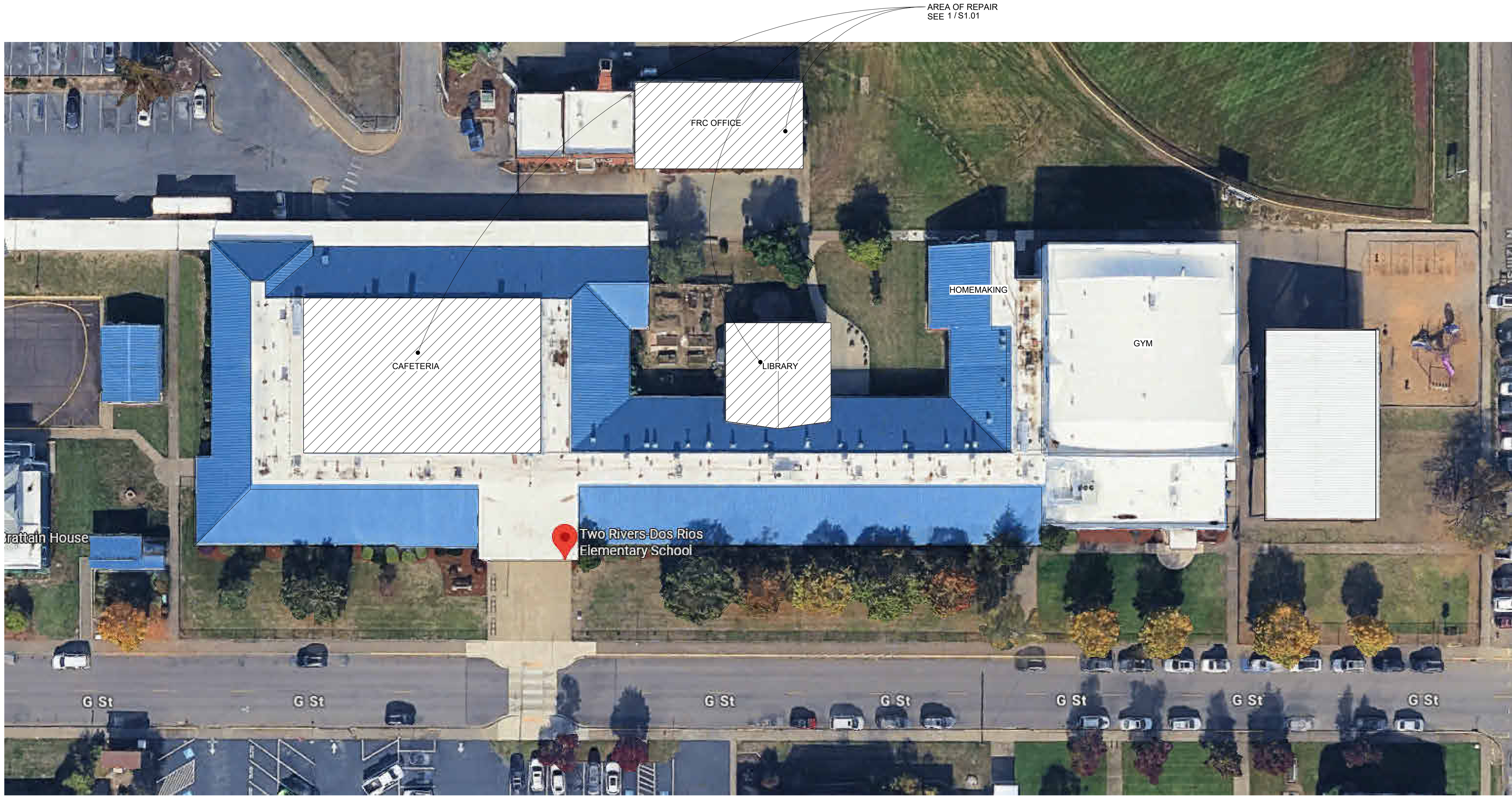
DESIGNED BY: JDL
CHECKED BY: KMM
MCE PROJ #: 251372
ISSUE DATE: 03.20.2026
ISSUANCE: PERMIT SET

SHEET CONTENT

STRUCTURAL NOTES &
SPECIAL INSPECTION

SHEET

S0.02



1

STRUCTURAL SITE PLAN

S1.00 | 1" = 30'-0"



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SHEET CONTENT
STRUCTURAL SITE PLAN

SHEET

S1.00

GENERAL SHEET NOTES:

- G1.

SEE S0.02 AND SUBSEQUENT SHEETS FOR STRUCTURAL NOTES AND SPECIAL INSPECTION REQUIREMENTS
- G2.

FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION OR PURCHASE OF MATERIALS
- G3.

THESE PLANS ARE STRUCTURAL ONLY - SIDING, FLASHING, MOISTURE PROTECTION, ETC ARE DESIGNED BY OTHERS



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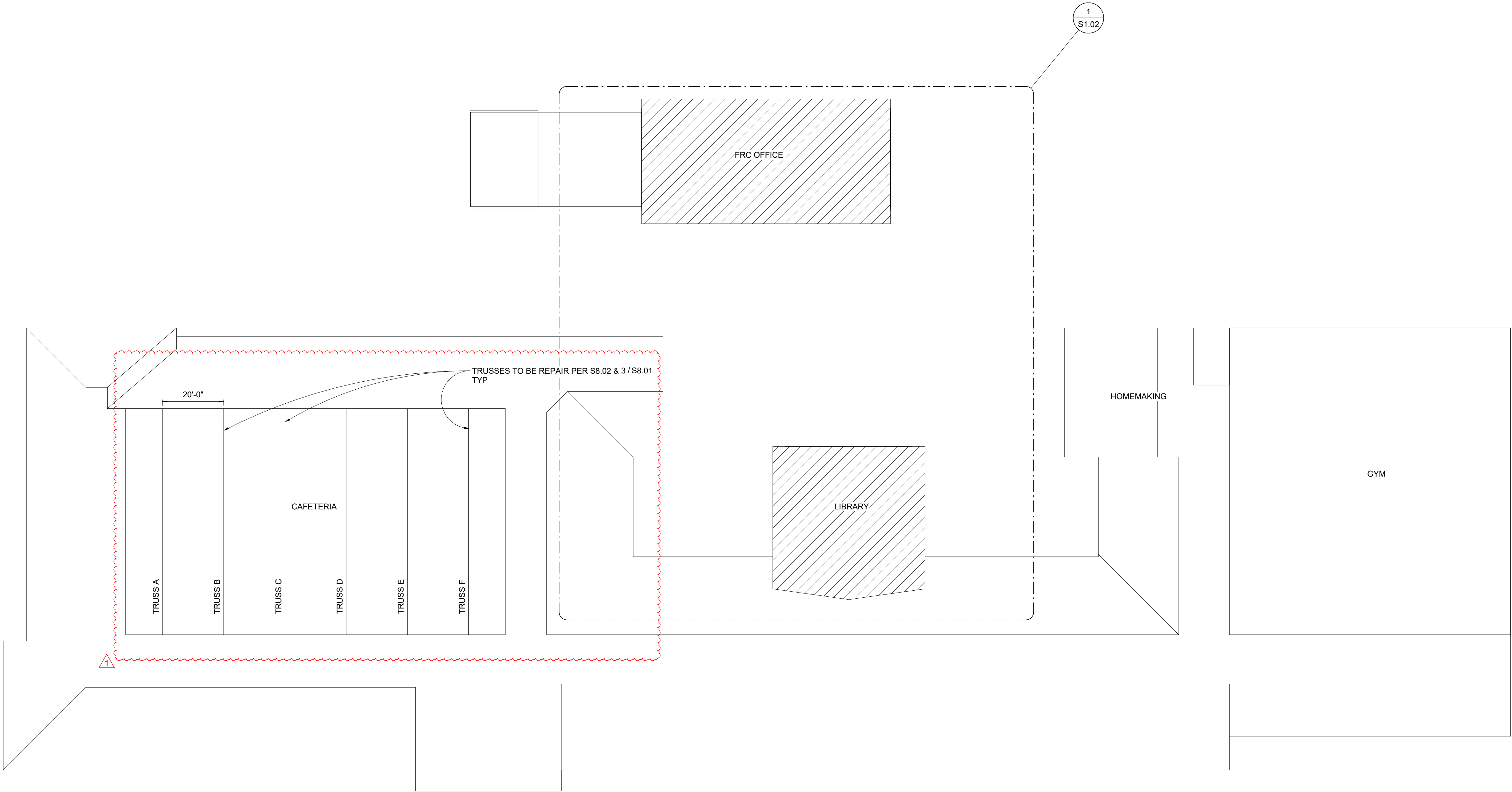
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SHEET CONTENT
ROOF PLAN

SHEET

S1.01



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GENERAL SHEET NOTES:

- | | |
|-----|---|
| G1. | SEE \$0.02 AND SUBSEQUENT SHEETS FOR STRUCTURAL NOTES AND SPECIAL INSPECTION REQUIREMENTS |
| G2. | FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION OR PURCHASE OF MATERIALS |
| G3. | THESE PLANS ARE STRUCTURAL ONLY - SIDING, FLASHING, MOISTURE PROTECTION, ETC ARE DESIGNED BY OTHERS |



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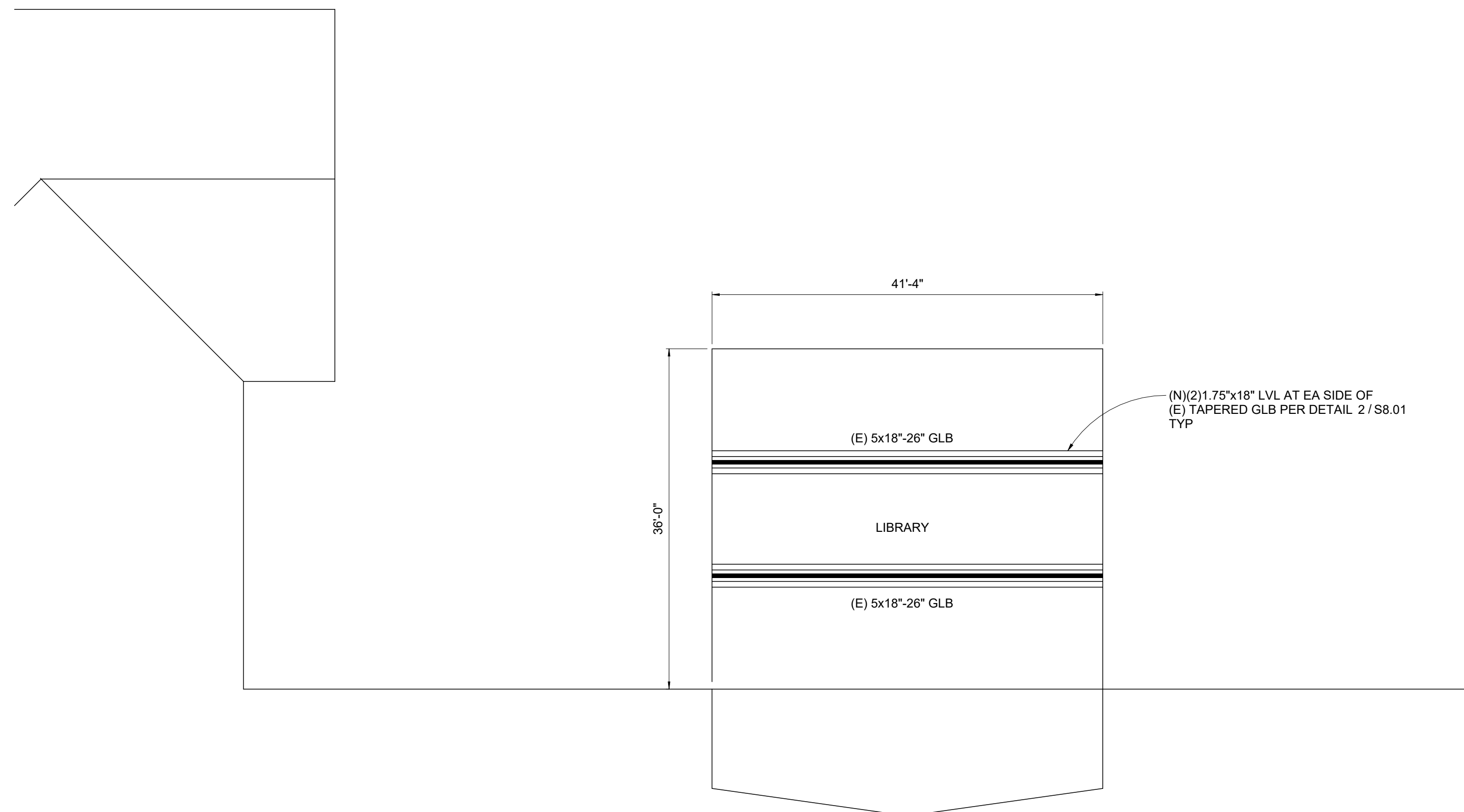
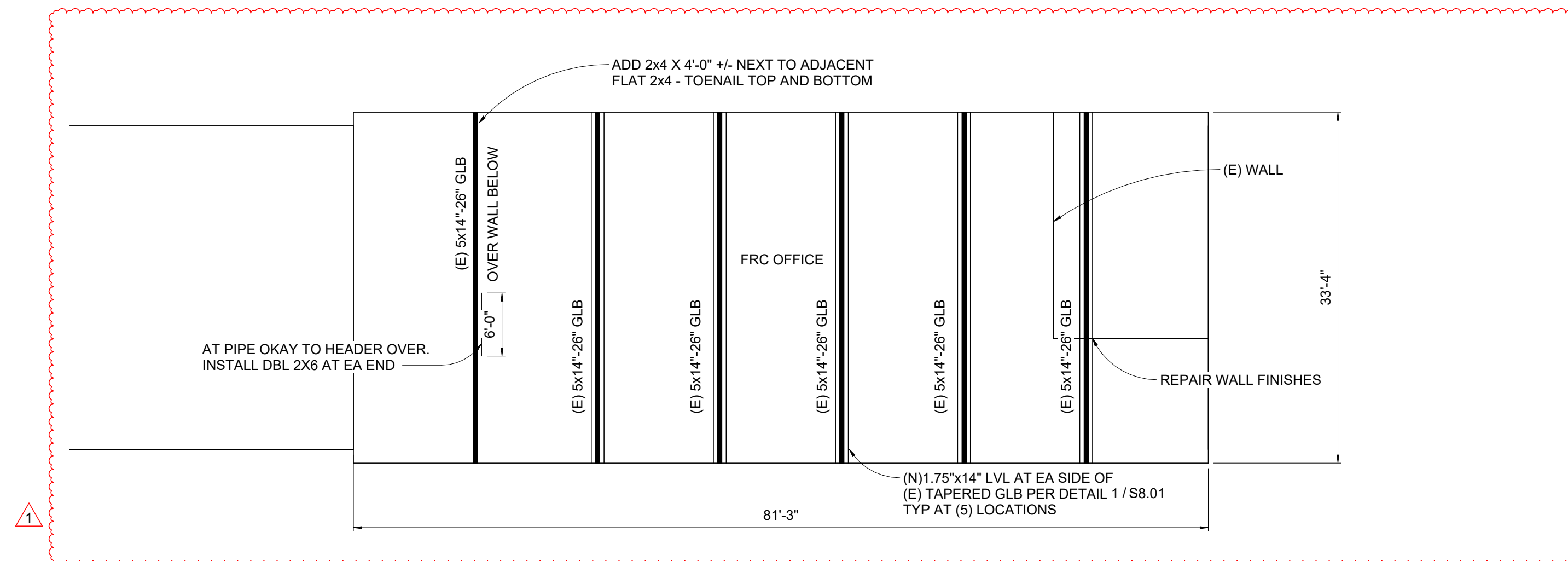
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SHEET CONTENT

PARTIAL ROOF FRAMING
PLAN

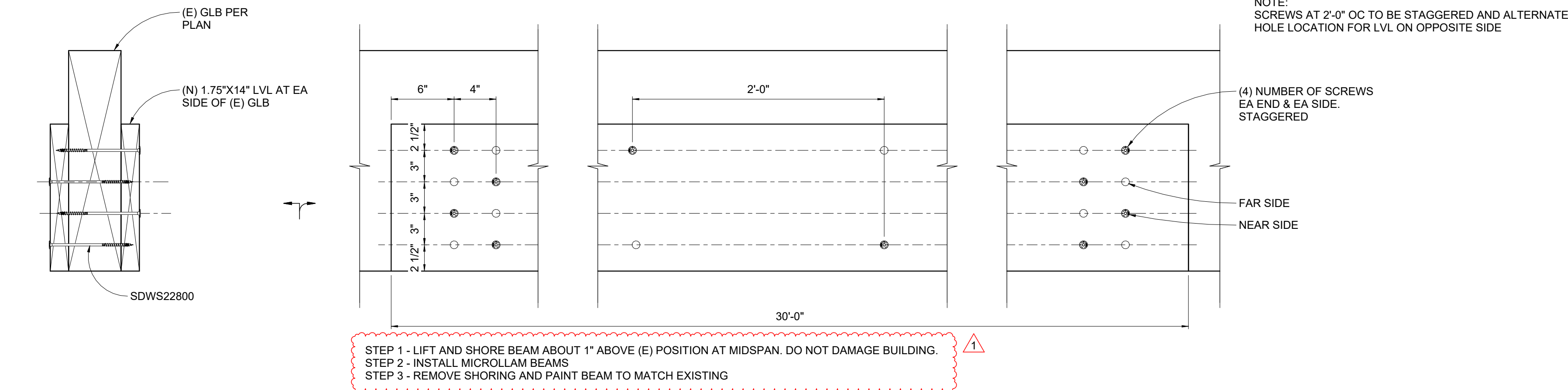
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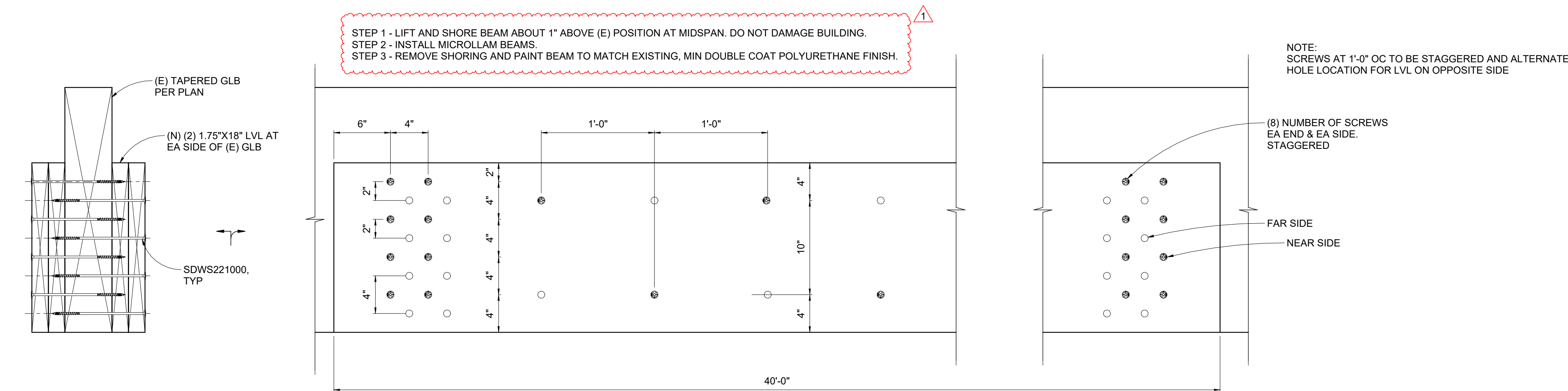
1 PARTIAL ROOF FRAMING PLAN

S1.02 | 1" = 10'-0"



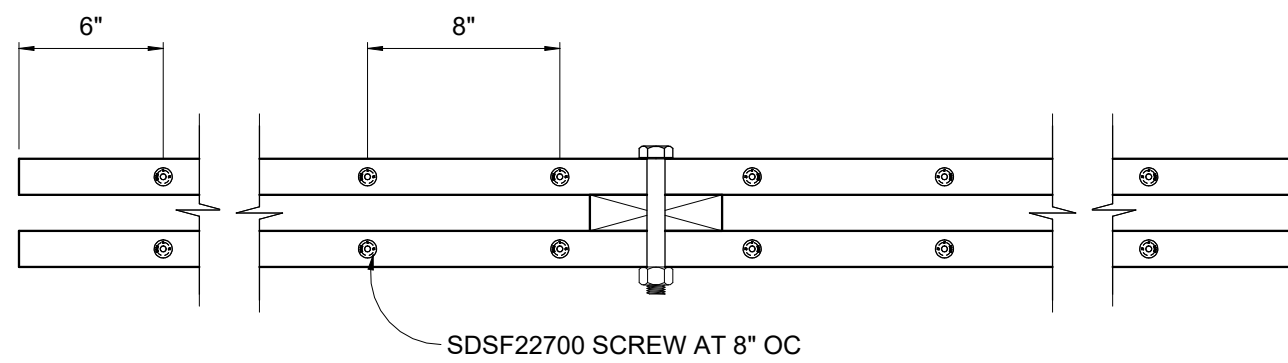
1 FRC REPAIR

S8.01 | 1 1/2" = 1'-0"



2 LIBRARY REPAIR

S8.01 | 1 1/2" = 1'-0"



STEP 1
VERIFY CRACK GOING THROUGH THE BOLT. SAND SURFACE AND CLEAN AREA AROUND CRACK TO ALLOW BONDING TO WOOD SURFACE. USE CLEAN COMPRESSED AIR TO BLOW OUT THE CRACK AND REMOVE ANY DUST OR DEBRIS.

STEP 2
PREDRILL AND INSTALL SCREWS TO CLAMP TOP CHORD TOGETHER. SCREWS MUST BE INSTALLED WITHIN CURE TIME OF INJECTION EPOXY IN SAME AREA OF BEAM.

STEP 3:
FILL MARKED AND CLEANED CRACKS WITH EPOXY. PRIOR TO EPOXY INJECTION, PROTECT ALL ADJACENT SURFACES FROM UNINTENDED CONTACT.
1)APPLY A SMALL AMOUNT OF GELMAGIC PASTE AROUND THE PORT BASE. PLACE THE PORT ON ONE END OF THE CRACK AND REPEAT EVERY 8" ALONG CRACK UNTIL ENTIRE CRACK IS PORTED.
2) GENEROUSLY WORK GELMAGIC PASTE OVER THE ENTIRE LENGTH OF THE CRACK. IF CRACK IS PRESENT ON OPPOSITE SIDE OF BEAM BOTH SIDES MUST BE COVERED. MOUND THE PASTE AT LEAST 1/4" THICK AND 1" OUT FROM BASE OF PORT . MOUND 3/16" THICK AND 1" WIDE ALONG LENGTH OF CRACK.
3)ONCE OUTER PASTE HAS CURED START INJECTING T-88 EPOXY AT THE END OF THE CRACK OR LOWEST INJECTION PORT. MAKE SURE THE HEADS OF ALL PORTS ARE IN THE OPEN POSITION. CONTINUE UNTIL EPOXY EMERGES FROM THE ADJACENT PORT . AS SOON AS EPOXY EMERGES FROM THE ADJACENT PORT THE INJECTOR SHOULD BE TRANSFERRED TO THE NEXT PORT AND THE PREVIOUS PORT SEALED. CONTINUE UNTIL EVERY PORT HAS REFUSED EPOXY AND THE CRACK IS COMPLETELY FILLED.
4)GIVE THE T-88 INJECTION EPOXY SUFFICIENT TIME TO CURE. REMOVE THE INJECTION PORTS AND GELMAGIC PASTE. ENSURE NO RUN OUT OR SMEARING OF THE INJECTION EPOXY ONCE OUTER GEL IS REMOVED.

STEP 4:
SAND TO REMOVE SURFACE GEL/EPOXY.

3 CAFETERIA TOP CHORD REPAIR - SEE S8.02

S8.01 | 1 1/2" = 1'-0"

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SHEET CONTENT

DETAILS

SHEET

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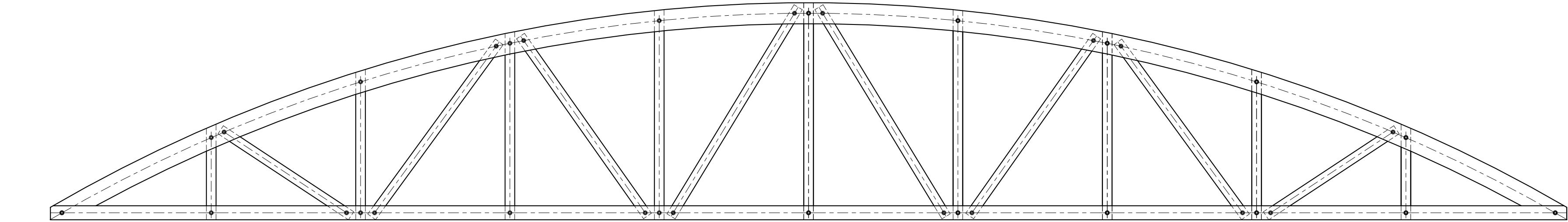
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SHEET CONTENT
BOWSTRING TRUSS
REPAIR DETAILS

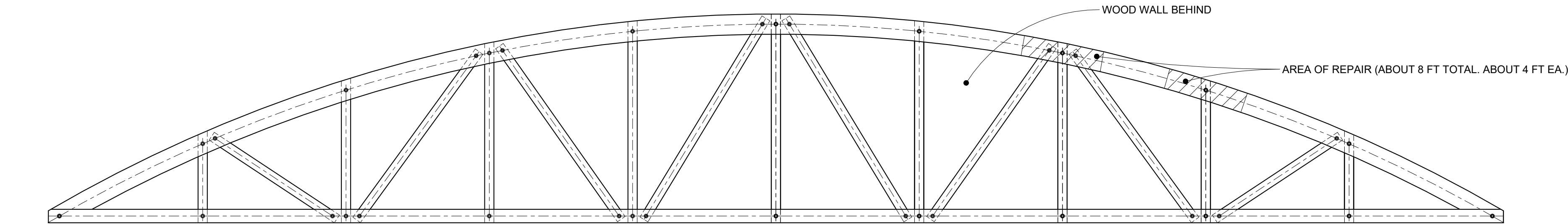
SHEET

S8.02



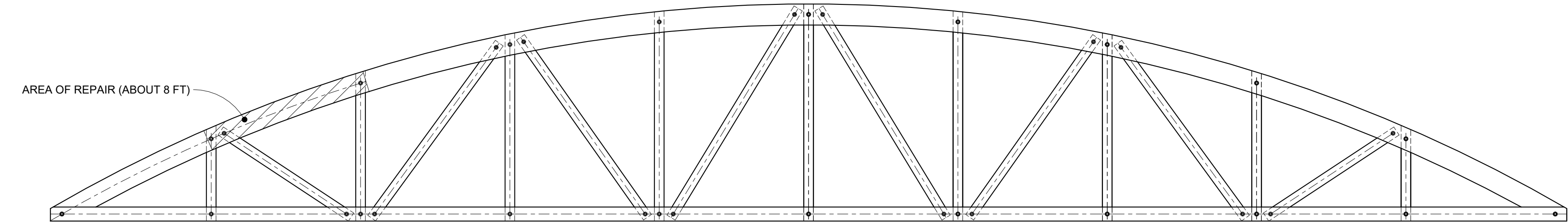
1 TRUSS A ELEVATION - NO REPAIRS REQUIRED

S8.02 | 1/4" = 1'-0"



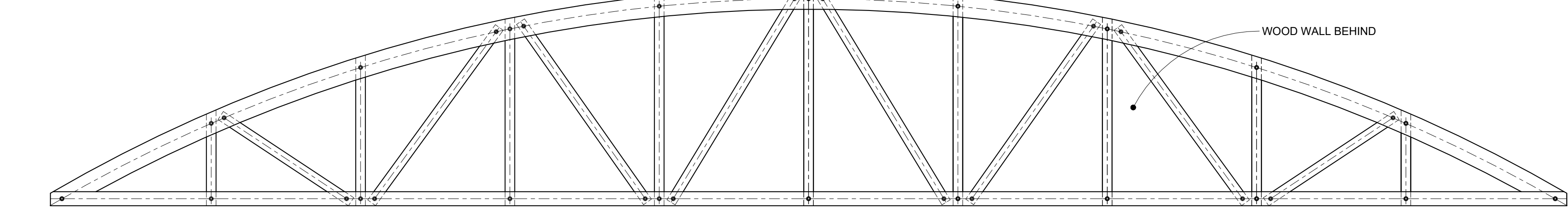
2 TRUSS B ELEVATION

S8.02 | 1/4" = 1'-0"



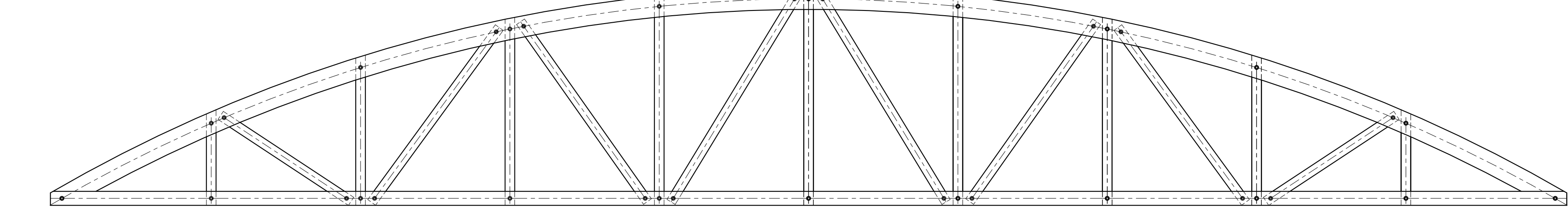
3 TRUSS C ELEVATION

S8.02 | 1/4" = 1'-0"



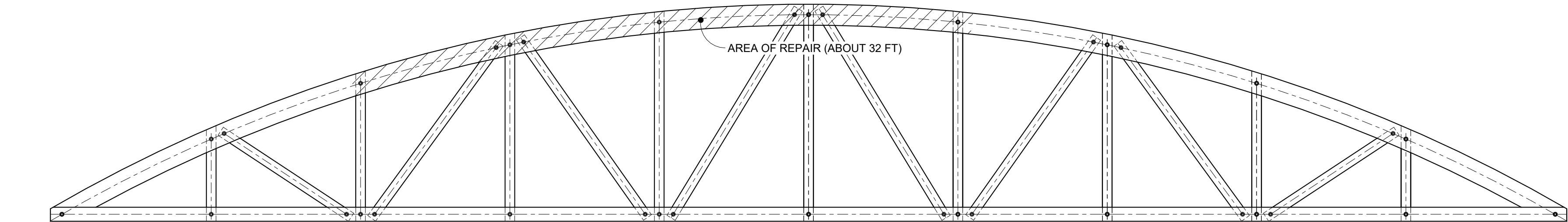
4 TRUSS D ELEVATION - NO REPAIRS REQUIRED

S8.02 | 1/4" = 1'-0"



5 TRUSS E ELEVATION - NO REPAIRS REQUIRED

S8.02 | 1/4" = 1'-0"



6 TRUSS F ELEVATION

S8.02 | 1/4" = 1'-0"