



# Porte Cochere Addition

West Siloam Springs Cherokee Hotel

## CONSTRUCTION DOCUMENTS

10.05.2018

INTEGRATED  
construction + design

9726 E. 42ND STREET  
SUITE 212  
TULSA, OK. 74146  
918.505.4875  
WWW.ICPLUSD.COM



SEAL:



PAUL R SHELL  
ARCHITECT OF RECORD  
LICENSE: #4721  
DRAWN BY:  
CHECKED BY:

### PROJECT TEAM

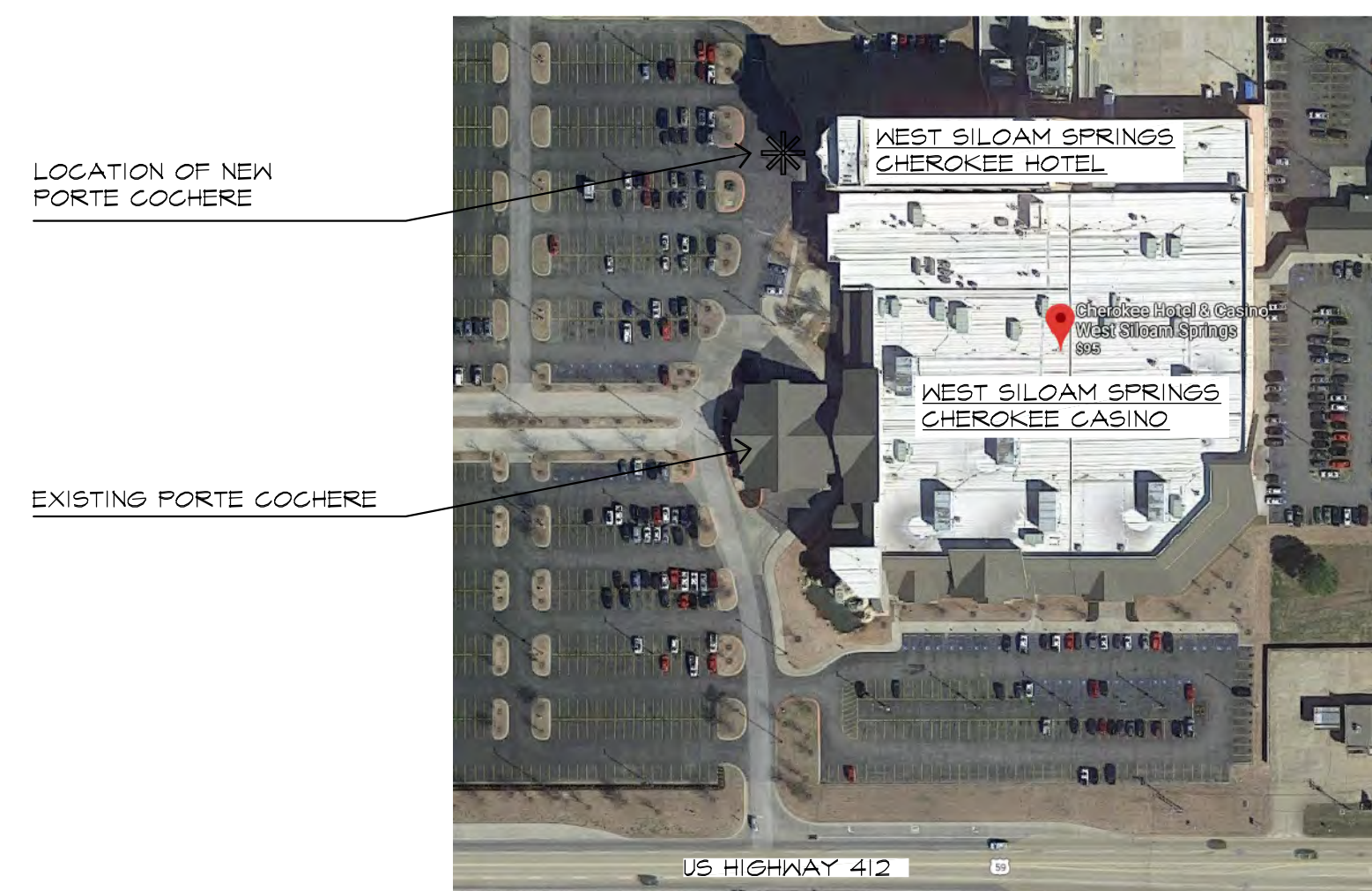
**OWNER**  
CHEROKEE NATION ENTERTAINMENT  
777 WEST CHEROKEE STREET  
CATOOSA, OK 74015

**ARCHITECT**  
INTEGRATED CONSTRUCTION  
PLUS DESIGN  
9726 E 42nd Street, Suite 212  
Tulsa, OK 74146  
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**MECHANICAL, PLUMBING, AND  
ELECTRICAL ENGINEERING**  
BURROWS & ASSOCIATES  
3924 N HIGHWAY 71  
ALMA, AR 72921  
phone: (479) 430-7500  
www.burrowsengineers.net

**STRUCTURAL ENGINEERING**  
INTEGRITY STRUCTURAL CORP.  
12777 JONES ROAD, SUITE 388  
HOUSTON, TX. 77070  
phone: (281) 894-7099  
www.integritystructural.com

### PROJECT LOCATION



### DRAWING SHEET INDEX

AO	COVER SHEET
<b>ARCHITECTURAL</b>	
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### DRAWING ABBREVIATIONS

AGT	ACOUSTICAL CEILING TILE	EQUIP.	EQUIPMENT	NA	NOT APPLICABLE
A.F.F.	ABOVE FINISH FLOOR	EWK	ELECTRIC WATER COOLER	N.I.G.	NOT IN CONTRACT
ADD.	ADDITION	EXIST.	EXISTING	N.T.S.	NOT TO SCALE
ADJ.	ADJACENT	EXT.	EXTERIOR	O.C.	ON CENTER
AHU	AIR HANDLING UNIT	FD	FLOOR DRAIN	O.D.	OUTSIDE DIAMETER
ALUM.	ALUMINUM	FE	FIRE EXTINGUISHER	PL	PLASTIC LAMINATE
APPROX.	APPROXIMATELY	F.F.E.	FINISH FLOOR ELEVATION	PLUMB.	PLUMBING
ARCH.	ARCHITECTURAL	FLUOR.	FLUORESCENT	PLYWD.	PLYWOOD
BRS.	BEARING	F.T.	FIRE TREATED	PT	PRESSURE TREATED
BLDG.	BUILDING	FTG.	FOOTING	MR&WB	MOISTURE RESISTANT GYPSUM WALL BOARD
BLK.	BLOCKING	GA.	GAUGE	RD	ROOF DRAIN
C.J.	CONTROL JOINT	GALV.	GALVANIZED	REQD.	REQUIRED
C.L.	CENTERLINE	GD.	GRADE	RM	ROOM
CLS.	CEILING	GYP BD	GYPSUM BOARD	RTU	ROOF TOP UNIT
CNU	CONCRETE MASONRY UNIT	H.M.	HOLLOW METAL	SCHED.	SCHEDULE
C.O.	CLEAN OUT	HDWR.	HARDWARE	SIM.	SIMILAR
CONT.	CONTINUOUS	HGT.A.	HEIGHT	SPEC.	SPECIFICATIONS
CORR.	CORRIDOR	HORIZ.	HORIZONTAL	STRUCT.	STRUCTURAL
CPT	CARPET	HVAC	HEATING/VENTILATING, AIR CONDITIONING	SUSP.	SUSPENDED
CT	CERAMIC TILE	HW	HOT WATER	THK.	THICKNESS
DEMO.	DEMOLITION	I.D.	INSIDE DIAMETER	TYP.	TYPICAL
D.F.	DRINKING FOUNTAIN	INT.B.	INTERIOR	U.C.	UNDERCOUNTER
DIA.	DIAMETER	J-BOX	JUNCTION BOX	U.L.	UNDERWRITERS LABORATORY
DIM.	DIMENSION	JT.	JOINT	U.N.O.	UNLESS NOTED OTHERWISE
DN	DOWN	K.D.	KNOCK DOWN	V.C.T.	VINYL COMPOSITION TILE
DWG.	DRAWING	LAV.	LAVATORY	VERT.	VERTICAL
ELEC.	ELECTRICAL	LAY.	LAYERS	VEST.	VESTIBULE
ELEV.	ELEVATION	MAX.	MAXIMUM	WD	WOOD
ENLG.	ENLARGED	MECH.	MECHANICAL	WC	WATER CLOSET
E.J.	EXPANSION JOINT	MFR.	MANUFACTURER	WLD.	WELDED
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	MIN.	MINIMUM		
EQ.	EQUAL	MISC.	MISCELLANEOUS		

### DRAWING SYMBOLS

BUILDING SECTION		WINDOW SYMBOL	
WALL SECTION		EQUIPMENT/ACCESSORIES NUMBER	
BUILDING ELEVATION		FLOOR ELEVATION	
DETAIL		EXISTING SPOT GRADE	
INTERIOR ELEVATION		NEW SPOT GRADE	
PARTITION TYPE		HEIGHT/ELEVATION REFERENCE	
HORIZONTAL ASSEMBLY		TEST BORING LOCATION	
ROOM NAME AND NUMBER		ENLARGED FLOOR PLAN OR PLAN DETAIL	
DOOR SYMBOL		STRUCTURAL GRID	

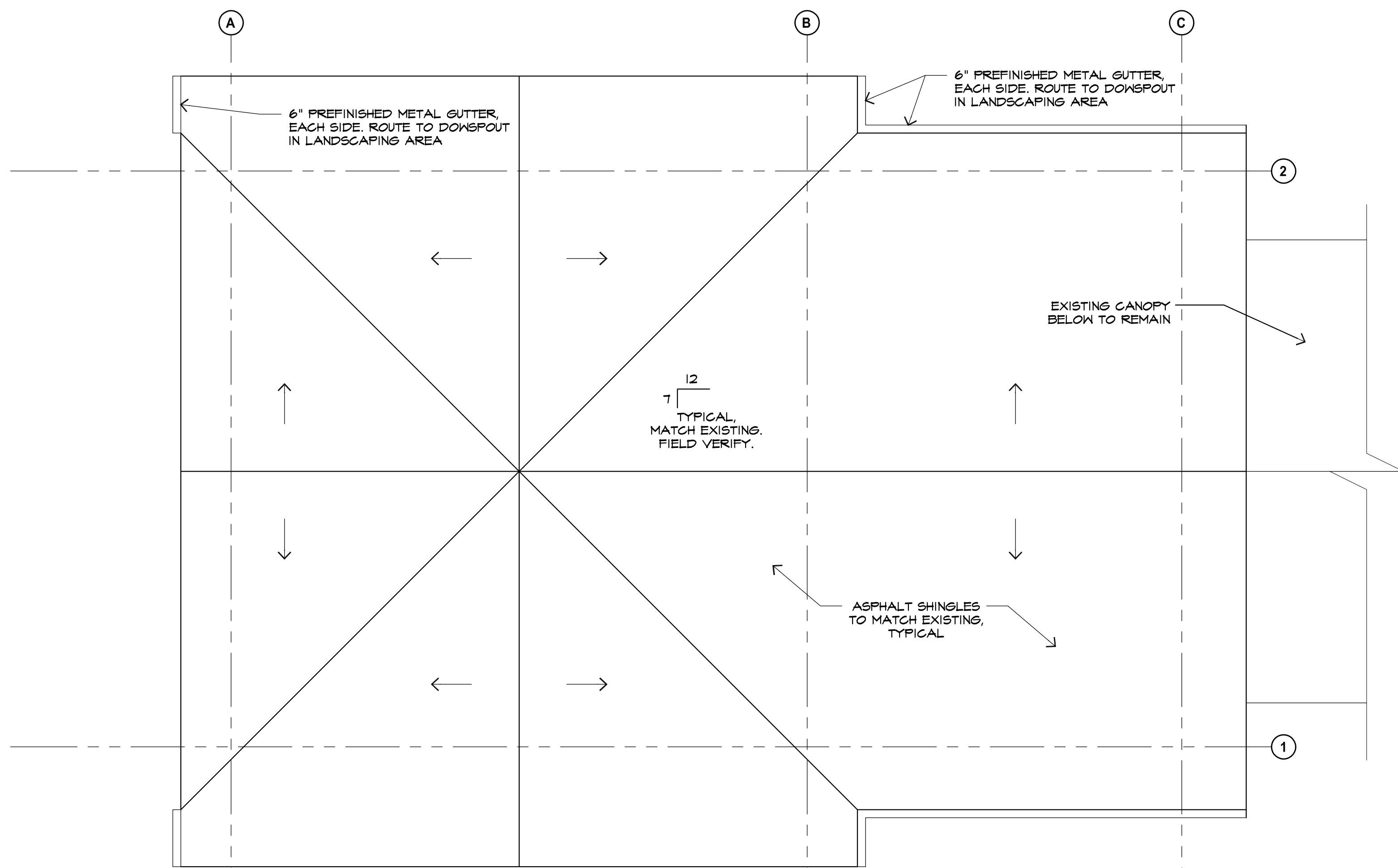
PROJECT NUMBER:  
14-028

West Siloam Springs Cherokee Hotel  
Porte Cochere Addition  
West Siloam Springs, OK.  
Cover Sheet

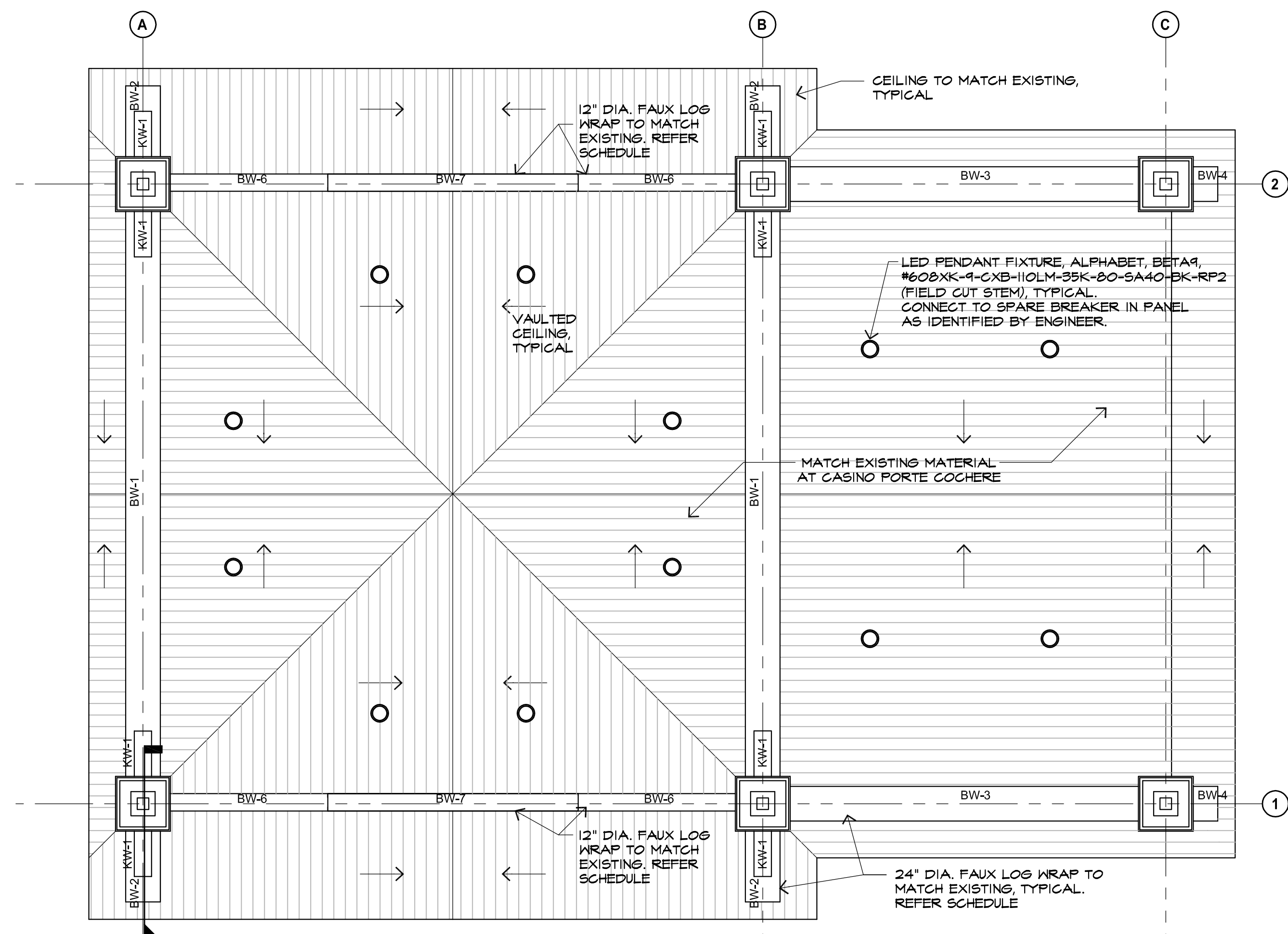
ISSUED/REVISION:  
10.05.18  
Construction Documents

SHEET NUMBER:

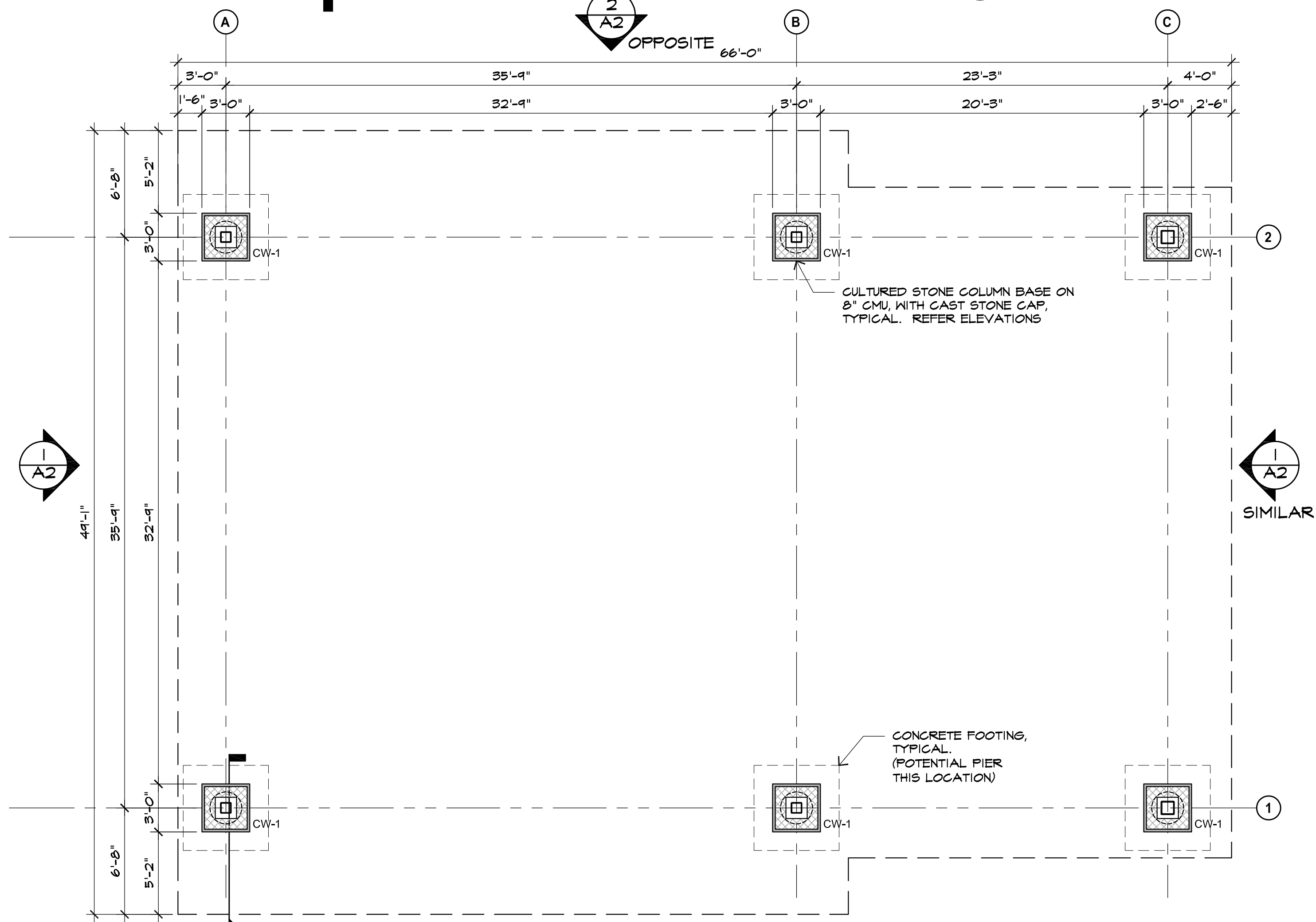
A0



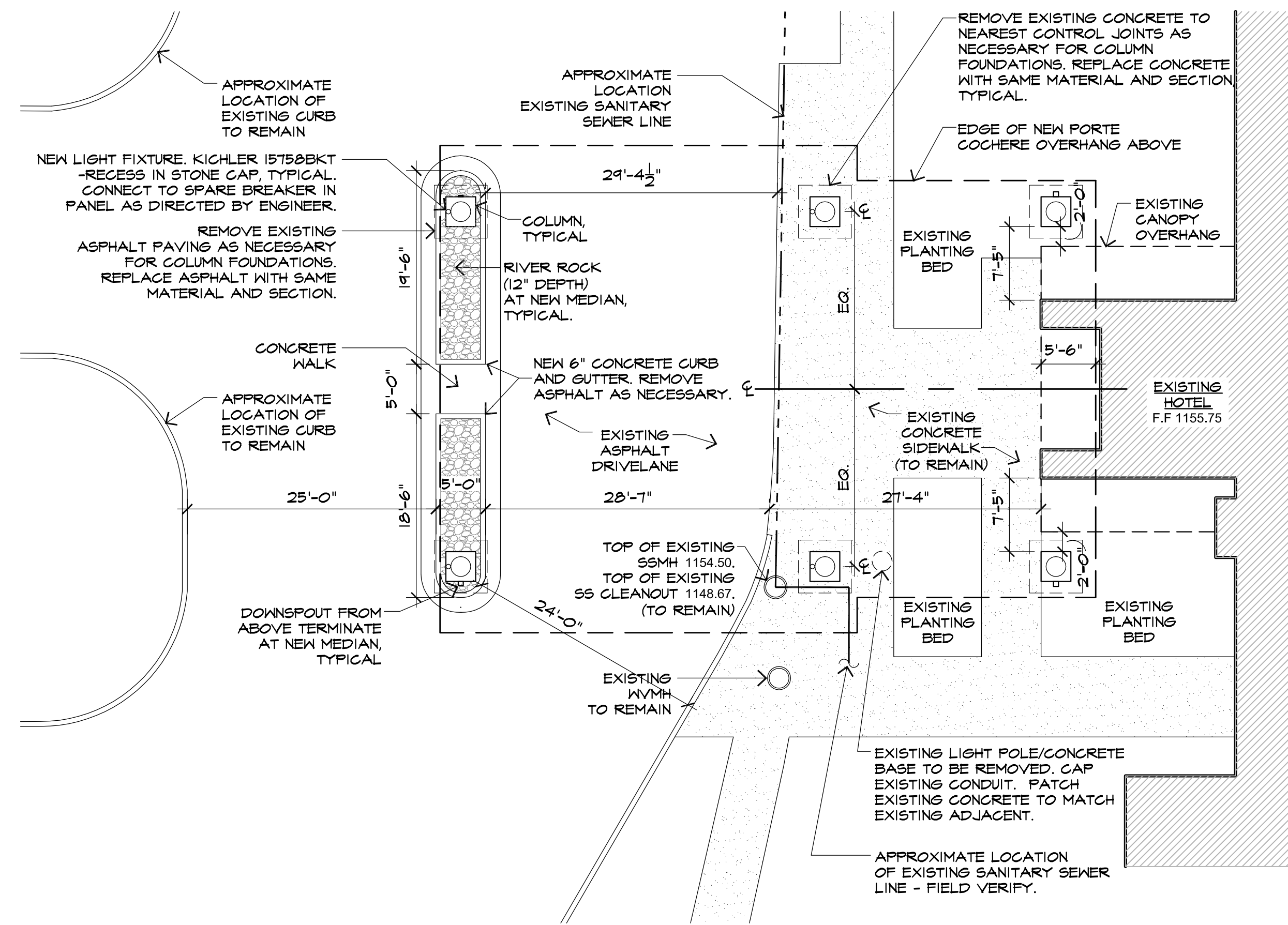
**4 ROOF PLAN**  
SCALE: 3/16" = 1'-0"



**3 REFLECTED CEILING PLAN**  
SCALE: 3/16" = 1'-0"



**2 PLAN**  
SCALE: 3/16" = 1'-0"



**1 SITE PLAN**  
SCALE: 1" = 10'-0"

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CHECKED BY:

PROJECT NUMBER:  
14-02B

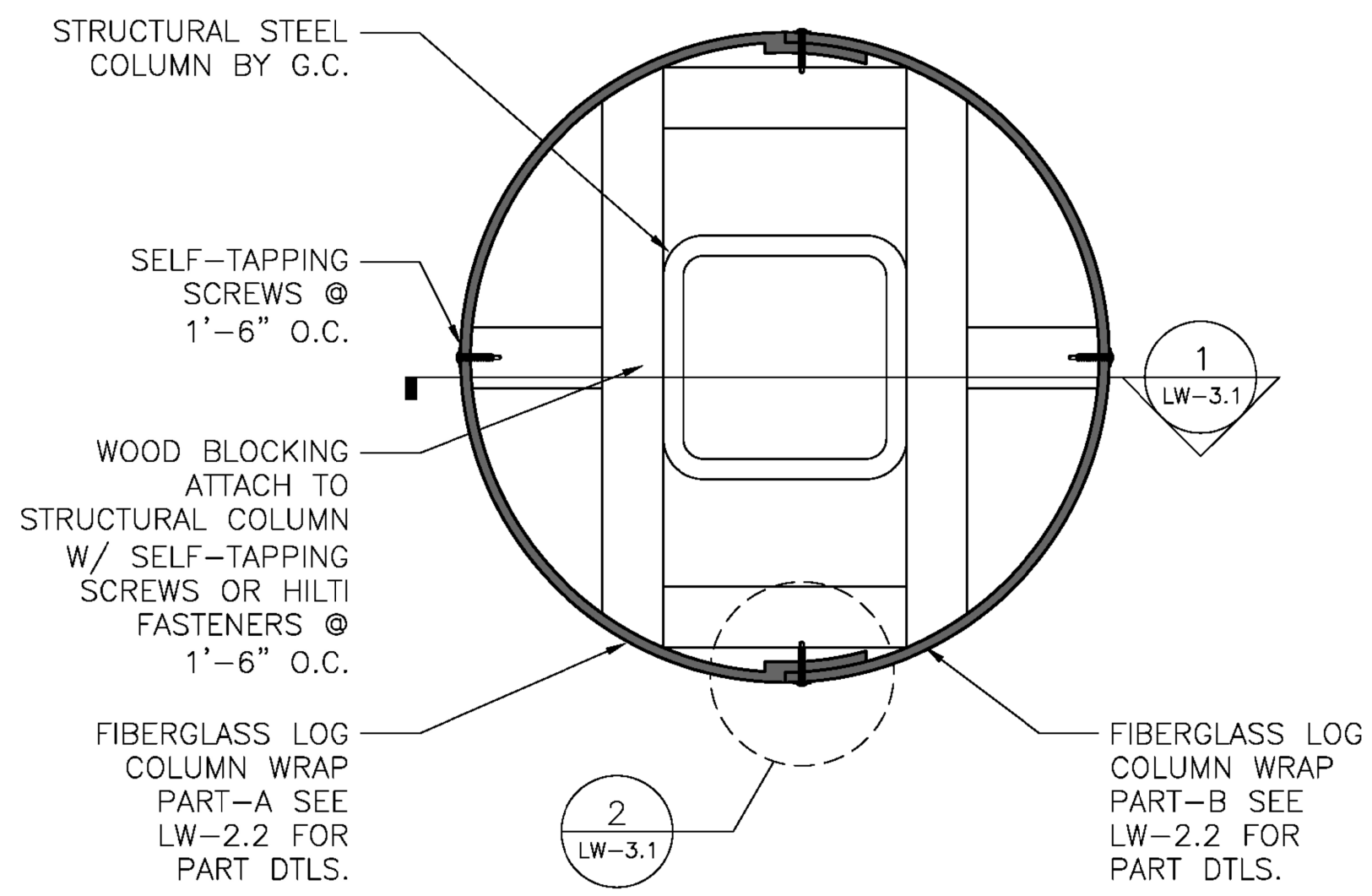
**West Siloam Springs Cherokee Hotel  
Porte Cochere Addition  
West Siloam Springs, OK.  
Site Plan and Porte Cochere Plans**

ISSUED/REVISION:  
10.05.18  
Construction Documents

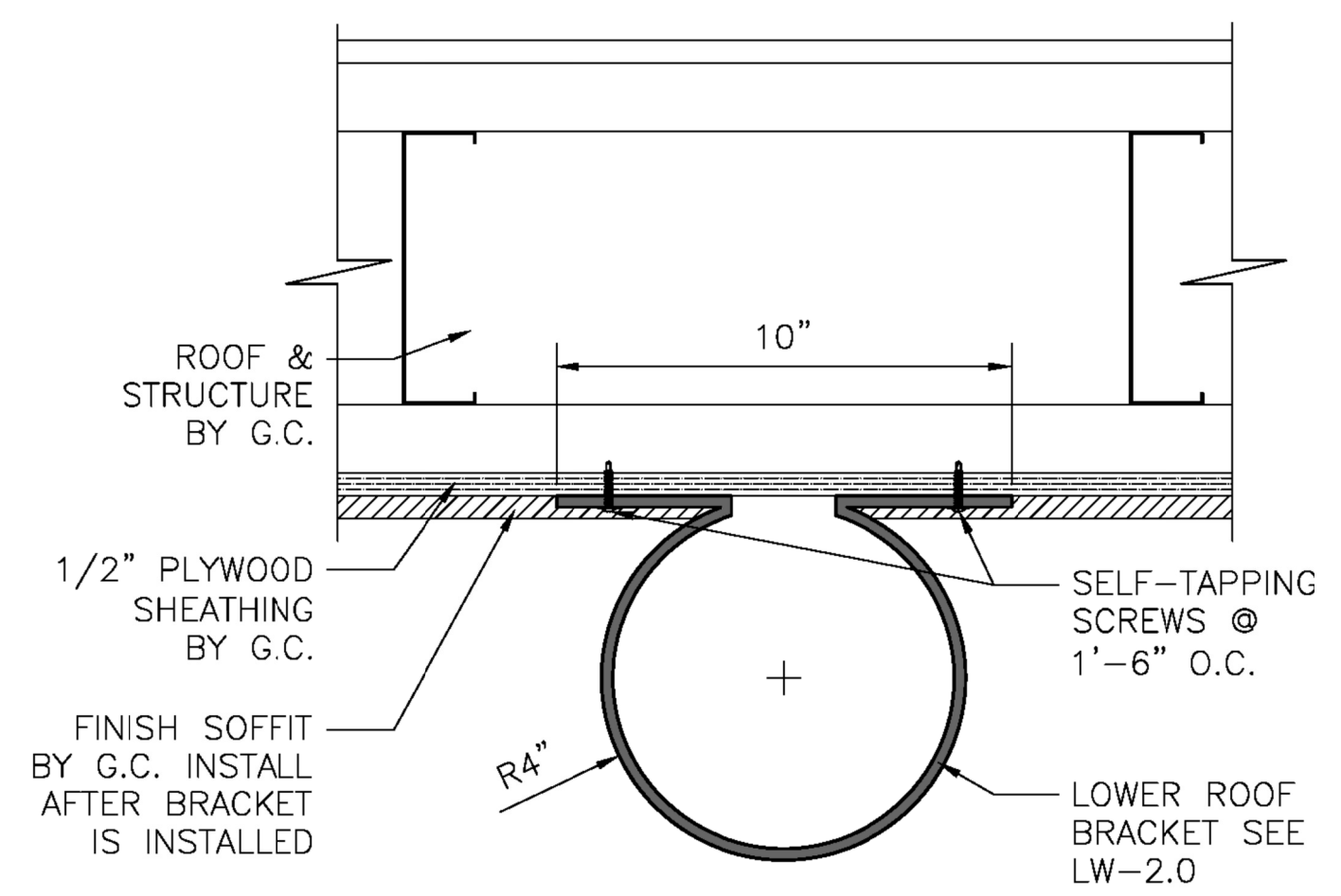
SHEET NUMBER:

**A1**

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**7 COLUMN CONN. DETAIL**  
SCALE: 3" = 1'-0"



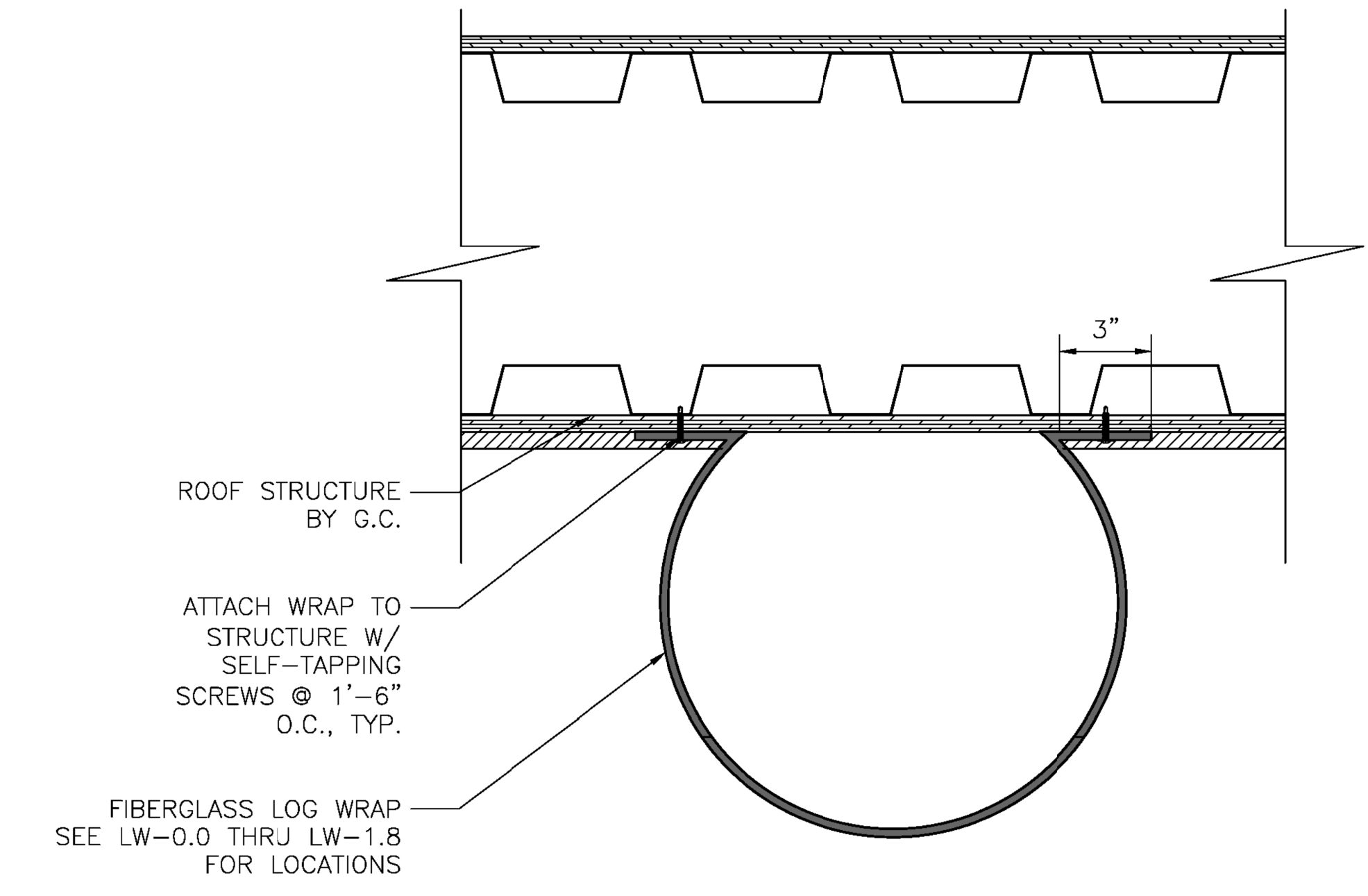
**6 ROOF BRACKET SOFFIT CONN.**  
SCALE: 3" = 1'-0"

FAUX LOG WRAP SCHEDULE						
UNIT TYPE	UNIT NUMBER	PART NUMBER	QUANTITY	WRAP SIZE	WRAP LENGTH	PART DRAWING
PC	1	BW-1	2	24" DIA.	32'-7"	4/A2
PC	2	BW-2	4	24" DIA.	4'-1"	4/A2
PC	3	BW-3	2	24" DIA.	20'-1"	4/A2
PC	4	BW-4	2	24" DIA.	1'-5"	4/A2
PC	5	BW-5	4	12" DIA.	18'-3"	5/A2
PC	6	BW-6	4	12" DIA.	18'-6"	5/A2
PC	7	BW-7	2	12" DIA.	14'-6"	5/A2
PC	8	KW-1	8	12" DIA.	9'-2"	-
PC	9	CW-1	6	24" DIA.	8'-2"	7/A2

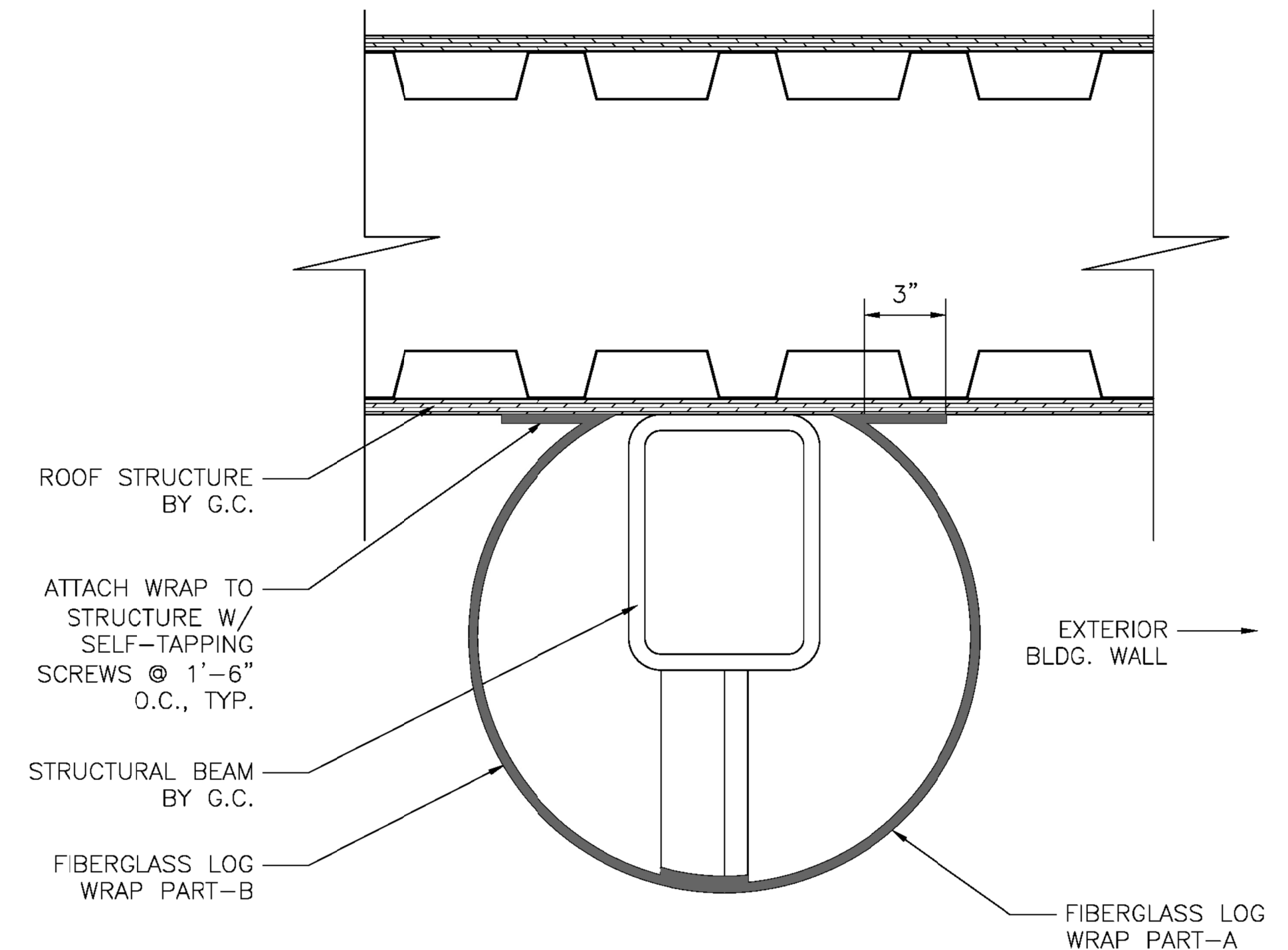
PC (PORTE COCHERE)  
BW (BEAM WRAP)  
KW (KICKER WRAP)  
CW (COLUMN WRAP)

**FAUX LOG WRAP NOTES:**

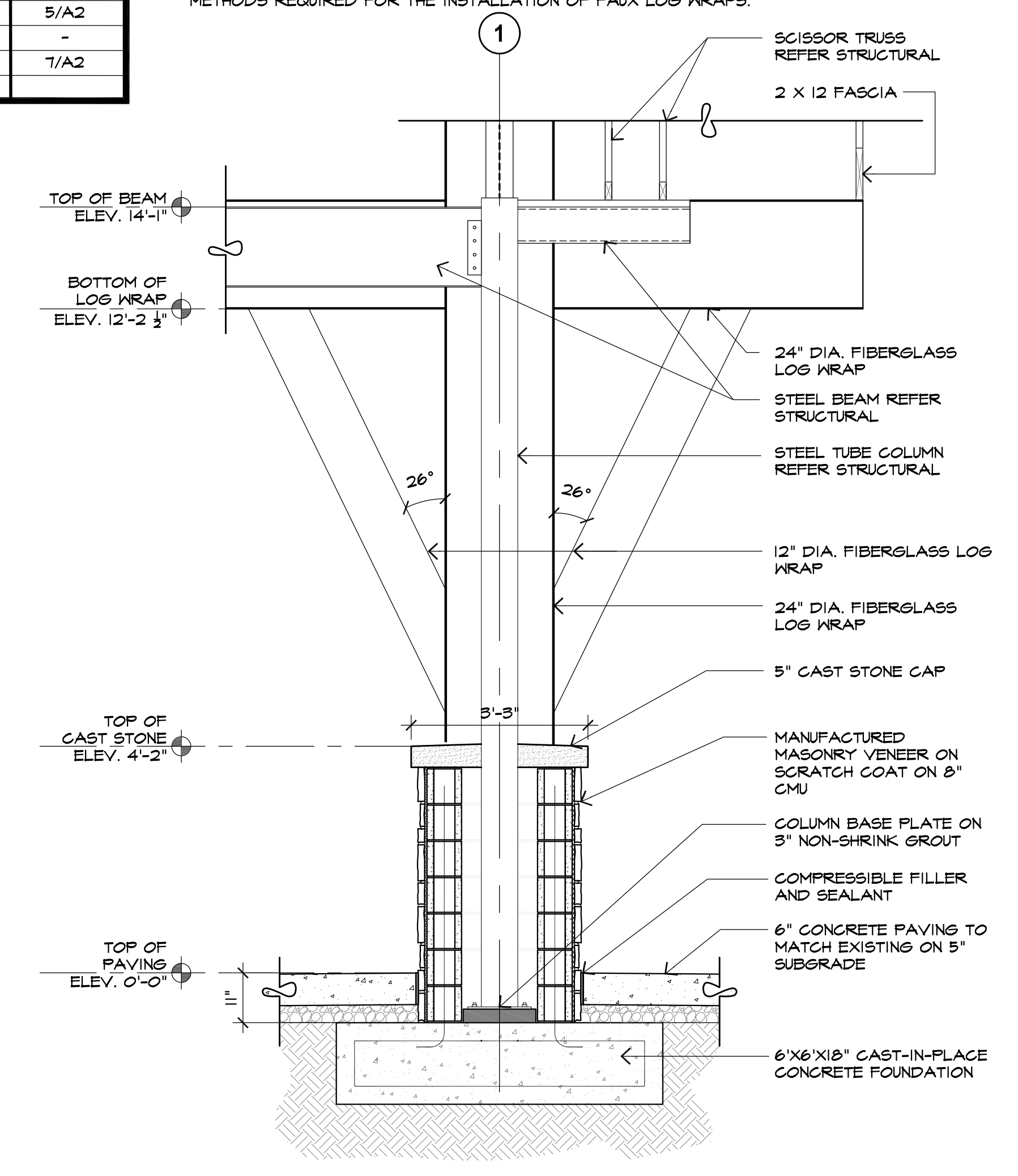
- WRAP LENGTHS ARE FROM FINISH SURFACE TO FINISHED SURFACE. ADDITIONAL LENGTH FOR WRAP CONNECTIONS MAY BE REQUIRED AS DETERMINED BY MANUFACTURER/SUPPLIER.
- DETAIL DRAWINGS ASSOCIATED WITH THIS SCHEDULE ARE PROVIDED AS A COURTESY AND ARE THE PROPERTY OF COST OF WISCONSIN, INC., 4201 HIGHWAY P, JACKSON, WI, 53031. THIS PRODUCT IS USED AS BASIS OF DESIGN. SUBSTITUTE PRODUCTS MAY BE SUBMITTED FOR APPROVAL BY OWNER DURING BIDDING.
- THE INFORMATION PROVIDED IN THE SCHEDULE AND ASSOCIATED DRAWINGS IS FOR REFERENCE ONLY AND IS NOT TO BE RELIED UPON FOR FABRICATION OR INSTALLATION OF FAUX LOG AND COLUMN WRAPS. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL RELY UPON MANUFACTURER/SUPPLIER SHOP DRAWINGS AND MANUFACTURER/SUPPLIER INSTALLATION METHODS REQUIRED FOR THE INSTALLATION OF FAUX LOG WRAPS.



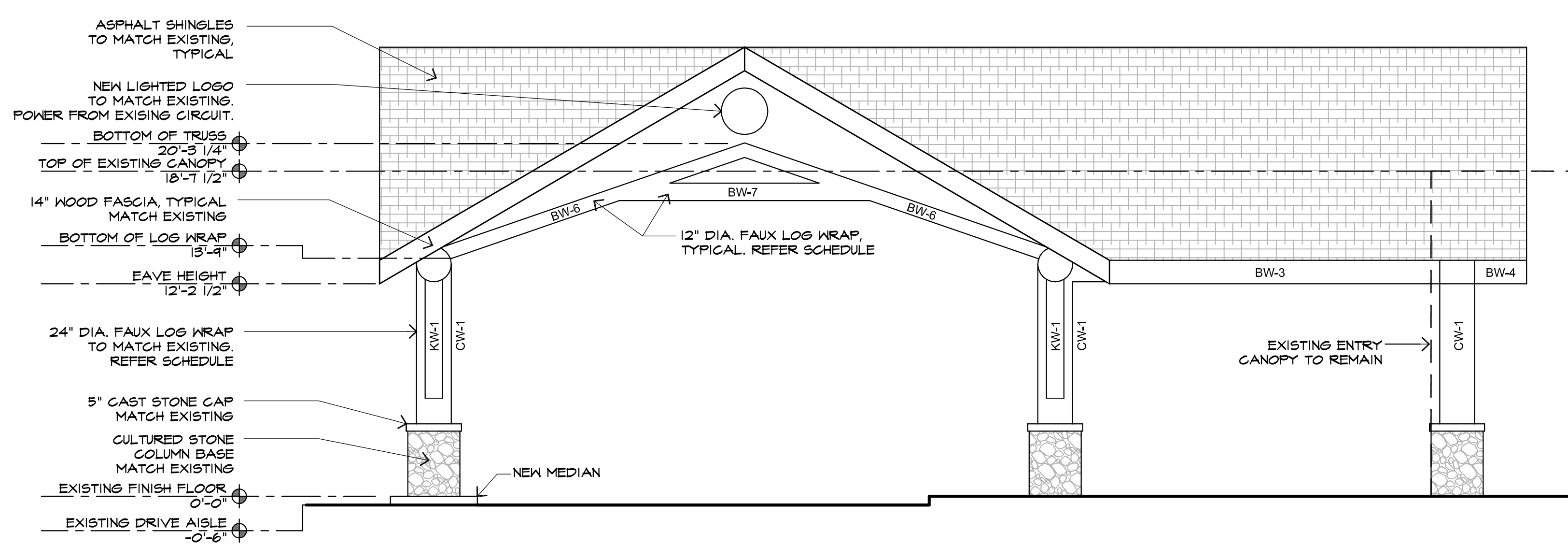
**5 TYP. LOG CONN. @ ROOF**  
SCALE: 3" = 1'-0"



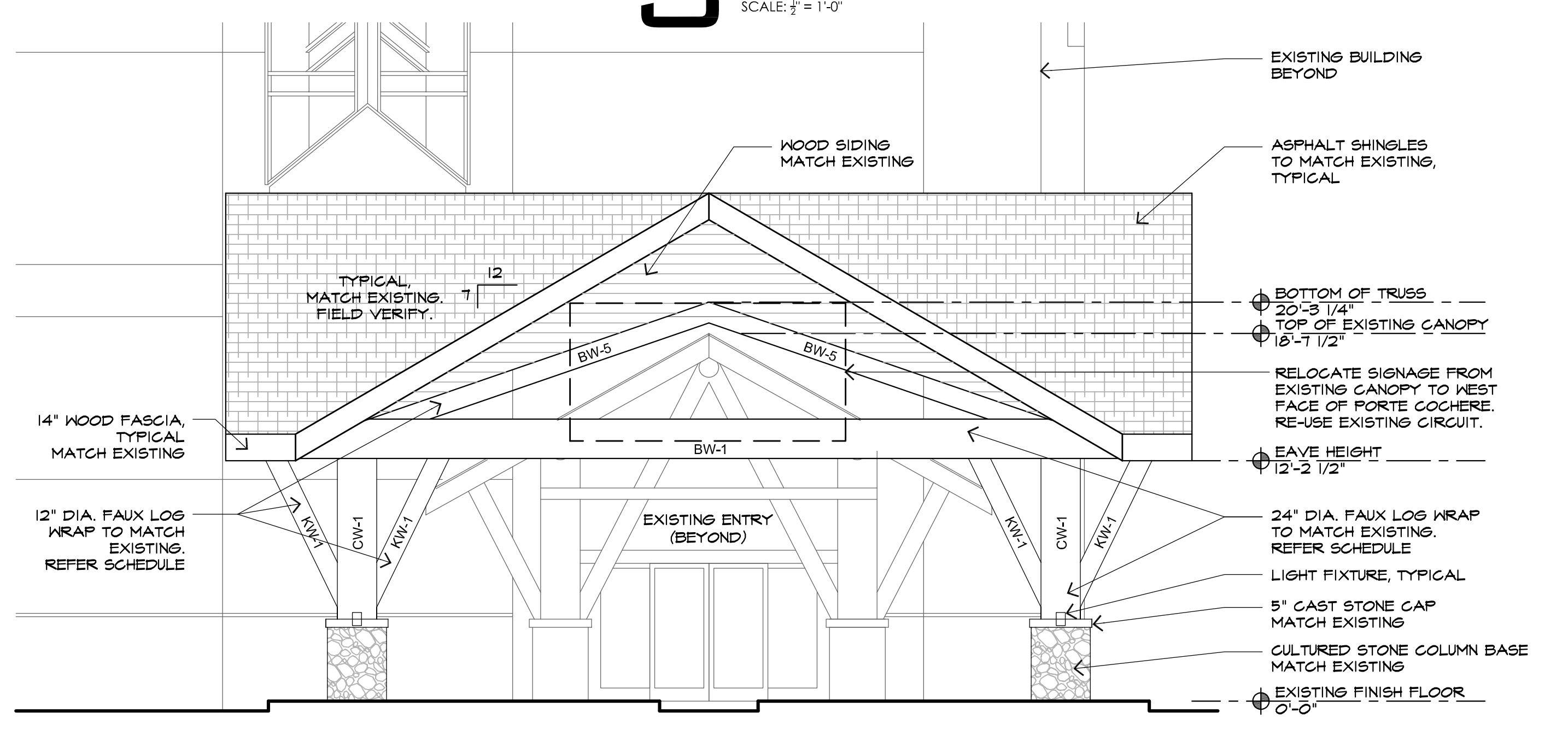
**4 BEAM/WRAP CONN. DETAIL**  
SCALE: 3" = 1'-0"



**3 SECTION**  
SCALE: 1/2" = 1'-0"



**2 SOUTH ELEVATION (NORTH OPPOSITE)**  
SCALE: 1/8" = 1'-0"



**1 WEST ELEVATION (EAST SIMILAR)**  
SCALE: 1/8" = 1'-0"

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14-02B

**West Siloam Springs Cherokee Hotel**  
**Porte Cochere Addition**  
**West Siloam Springs, Ok.**  
**Porte Cochere Elevations and**  
**Framing Diagram**

ISSUED/REVISION:  
10.05.18  
Construction Documents

SHEET NUMBER:

**A2**



# West Siloam Springs Cherokee Hotel Porte - Cochere Addition

West Siloam Springs, OK.

## DESIGN SPECIFICATIONS

- THE DESIGN OF THE STRUCTURES SHOWN WITHIN THESE CONTRACT DRAWINGS IS IN ACCORDANCE WITH:  
THE 2015 INTERNATIONAL BUILDING CODE.
- GUARDRAILS, AND HANDRAILS, AND THEIR ANCHORAGE AND CONNECTIONS, SHALL BE DESIGNED BY A REGISTERED STRUCTURAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED (SIGNED AND STAMPED SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW) FOR THE LOADS REQUIRED BY THE BUILDING CODE BUT NOT LESS THAN THE FOLLOWING:
  - THE TOP RAILS OF HANDRAILS AND GUARDRAILS: A LOAD OF 50 PLF OR A 200 POUND CONCENTRATED LOAD APPLIED IN ANY DIRECTION AT ANY POINT, AND HAVE ATTACHMENT ANCHORAGE SUFFICIENT TO TRANSFER THIS LOADING TO APPROPRIATE STRUCTURAL ELEMENTS OF THE BUILDING. THESE LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.
  - VEHICLE BARRIERS: A 6,000LB UN-FACTORED FORCE IN ANY DIRECTION HORIZONTALLY ACTING OVER A 1 SQUARE FOOT AREA MAX AT 1'-6" OR 2'-3" ABOVE FLOOR ELEVATION.
- ALL REFERENCES TO STANDARDS (SUCH AS ASTM, ACI, AISC ETC.) SHALL BE THE LATEST ACCEPTED STANDARD REFERRED TO BY THE CODE NOTED ABOVE.
- CONTRACTOR IS RESPONSIBLE FOR ALL METHODS AND PROCEDURES DURING CONSTRUCTION. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN INTEGRITY OF STRUCTURE DURING CONSTRUCTION.
- ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE DRAWINGS, SPECIFICATION, AND BUILDING CODE REFERENCED ABOVE.
- WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAIL, STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENT SHALL GOVERN.
- REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING FOR SLEEVES, CURBS, INSERTS, DEPRESSIONS, ETC., NOT SHOWN ON STRUCTURAL DRAWINGS. CONTRACTOR SHALL VERIFY ALL DROPS, OFFSETS, BLOCK-OUTS, FINISHED AND DIMENSIONS WITH OTHER DISCIPLINES PRIOR TO PROJECT LAYOUT.
- ESTABLISH AND VERIFY ALL OPENINGS, INSERTS, OR EQUIPMENT FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADE. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE SUBCONTRACTORS AND EQUIPMENT SUPPLIERS. EQUIPMENT BEING SUPPORTED BY OR SUSPENDED FROM THE STRUCTURE SHALL BE COORDINATED WITH THE MANUFACTURER OF ANY PRE-ENGINEERED FRAMING OR COMPONENTS. ALL OPENINGS SHALL BE PROPERLY REINFORCED AND APPROVED BY THE ENGINEER. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, DECKING, SLABS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
- THE STRUCTURAL INTEGRITY OF THE BUILDING RELIES ON THE FULL INTERACTION OF ALL ITS COMPONENT PARTS WITH NO PROVISIONS MADE FOR CONDITIONS AND/OR SEQUENCES OF CONSTRUCTION AND THE STRUCTURAL DESIGN IS BASED ON THIS PREMISE. THEREFORE, THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING OF THE STRUCTURE DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF BRACING FOR ALL WALLS, FORMWORK, AND SHORING DURING CONSTRUCTION.
- CONSTRUCTION MATERIALS SHALL BE SPREAD OUT DURING CONSTRUCTION SO AS NOT TO EXCEED THE DESIGN LIVE LOAD NOTED IN DRAWINGS.
- ALL ERECTION PROCEDURES SHALL COMPLY WITH OSHA STANDARDS.
- CONTRACTOR SHALL DETERMINE THE SCOPE OF WORK FROM THE CONTRACT DOCUMENTS TAKEN AS A WHOLE INCLUDING ARCHITECTURAL, CIVIL, INTERIOR DESIGN, LANDSCAPE AND MEP DRAWINGS. THE STRUCTURAL DRAWINGS SHALL NOT BE CONSIDERED SEPARATELY FOR THE PURPOSES OF BIDDING THE STRUCTURAL WORK. CONTRACTOR SHALL REVIEW THE ENTIRE DRAWING PACKAGE IN ORDER TO DETERMINE THE SCOPE OF STRUCTURAL WORK INCLUDING NECESSARY COORDINATION SHOWN IN OTHER CONSULTANT DRAWINGS.
- THE USE OR REPRODUCTION OF THESE DRAWINGS BY ANY CONTRACTOR, IN LIEU OF PREPARATION OF SHOP DRAWINGS, SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, DUE TO ANY ERRORS THAT MAY OCCUR.
- NOTED SCALES ARE FOR INFORMATION PURPOSES ONLY, CONTRACTOR SHALL NOT SCALE DRAWINGS FOR THE PURPOSE OF DETERMINING DIMENSIONAL WORK.
- APPROVED ALTERNATES MAY BE SUBMITTED BY CONTRACTOR AND REVIEWED BY DESIGN TEAM. IF ALTERNATE IS ACCEPTED, CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE CHANGES AND COSTS NECESSARY TO IMPLEMENT THE CHANGES.
- ALL ASPECTS OF THE FOUNDATION CONSTRUCTION SHALL BE IN COMPLIANCE WITH THESE DRAWINGS AND THE REFERENCED GEOTECHNICAL REPORT.
  - GEOTECHNICAL REPORT BY: KLEINFELDER
  - PROJECT NUMBER: 65999
  - REPORT DATE: FEBRUARY 20, 2006
  - ALLOWABLE FOOTING CAPACITY: 3,000 PSF TL

## DESIGN LOADS

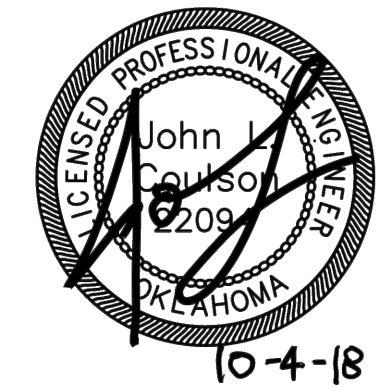
- THE DESIGN LOADS PERTINENT TO THE STRUCTURAL DESIGN OF THE STRUCTURES ARE AS FOLLOWS:  
(TRUSS MANUFACTURER: SEE TRUSS LOADING SCHEDULE FOR TRUSS CHORD DEAD AND LIVE LOADING REQUIREMENTS):
  - ROOF LIVE LOADS:
    - TYPICAL UNLESS NOTED OTHERWISE: 20 PSF
  - SNOW LOADS:
    - SNOW EXPOSURE FACTOR - Ce: 1.0
    - THERMAL FACTOR - Ct: 1.1
    - SNOW IMPORTANCE FACTOR - I: 1.0
    - GROUND SNOW LOAD - Pg: 10 PSF
    - FLAT ROOF SNOW LOAD - Pf: 9 PSF
  - WIND LOADS:
    - DESIGN WIND SPEED -  $V_{ult}$ : 115 MPH
    - DESIGN WIND SPEED -  $V_{ASD}$ : 90 MPH
    - WIND IMPORTANCE FACTOR - I: 1.0
    - WIND EXPOSURE: C
    - RISK CATEGORY: II
    - DESIGN METHOD: DIRECTIONAL
    - INTERNAL PRESSURE COEFFICIENT:  $\pm 0.18$
    - COMPONENT & CLADDING WIND PRESSURES:  
*LOADS ARE ASD AND ARE BASED ON TRIBUTARY AREAS OF 10 SF, AND MAY BE REDUCED FOR LARGER AREAS.*
      - ZONE 1 - ROOF: +18/-13 PSF
      - ZONE 2 - ROOF: +28/-20 PSF
      - ZONE 3 - ROOF: +36/-25 PSF
  - EARTHQUAKE LOADS:
    - Ss: 0.141
    - S1: 0.083
    - SITE CLASS: D
    - Sds: 0.15
    - Sd1: 0.133
    - SEISMIC DESIGN CATEGORY: A
    - RISK CATEGORY: II
    - SEISMIC IMPORTANCE FACTOR: 1.0
    - ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
    - R: 1 1/4 STEEL ORDINARY CANTILEVER COLUMNS

## DRAWINGS INDEX

Structural Drawing List for: **CHEROKEE NATION PORTE COCHERE**

Sheet No.	Sheet Name	Issued For Construction
S0-1A	STANDARD SPECIFICATIONS(1 OF 3)	10/5/2018
S0-1B	STANDARD SPECIFICATIONS(2 OF 3)	10/5/2018
S0-1C	STANDARD SPECIFICATIONS(3 OF 3)	10/5/2018
S0-2	STANDARD STRUCTURAL STEEL DETAILS	10/5/2018
S1-0	FOUNDATION AND ROOF FRAMING PLAN	10/5/2018
SD1-1	STRUCTURAL SECTIONS & DETAILS	10/5/2018

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West Siloam Springs, Ok.  
STANDARD SPECIFICATIONS ( 1 OF 3 )

10.05.18  
Construction Documents

**S0-1A**

SCALE: 1:1  
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## FIRE RETARDANT TREATED WOOD SPECIFICATIONS

- WHERE FIRE-RETARDANT-TREATED MATERIALS ARE INDICATED, USE MATERIALS COMPLYING WITH REQUIREMENTS IN THIS ARTICLE, THAT ARE ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND WITH FIRE-TEST-RESPONSE CHARACTERISTICS SPECIFIED AS DETERMINED BY TESTING IDENTICAL PRODUCTS PER TEST METHOD INDICATED BY A QUALIFIED TESTING AGENCY.
- CONTRACTOR TO PROVIDE SUBMITTAL AND ICC-EW REPORT FOR FIRE-RETARDANT TREATMENTS, INCLUDE PHYSICAL PROPERTIES OF TREATED LUMBER BOTH BEFORE AND AFTER EXPOSURE TO ELEVATED TEMPERATURES BASED ON TESTING BY A QUALIFIED INDEPENDENT TESTING AGENCY ACCORDING TO ASTM D 5664.
- USE TREATMENT THAT DOES NOT PROMOTE CORROSION OF METAL FASTENERS.
- EXTERIOR TYPE TREATED MATERIALS SHALL COMPLY WITH REQUIREMENTS SPECIFIED FOR ALL FIRE-RETARDANT TREATED LUMBER AND PLYWOOD BY PRESSURE PROCESS AFTER BEING SUBJECTED TO ACCELERATED WEATHERING ACCORDING TO ASTM D 2898. USE FOR EXTERIOR LOCATIONS AND WHERE INDICATED.
- INTERIOR TYPE A TREATED MATERIAL SHALL HAVE A MOISTURE CONTENT OF 28 PERCENT OR LESS WHEN TESTED ACCORDING ASTM D 3201 AT 92 PERCENT RELATIVE HUMIDITY. USE WHERE EXTERIOR TYPE IS NOT INDICATED.
- DESIGN VALUES WERE REDUCED WITH THE FOLLOWING FRT STRENGTH ADJUSTMENT FACTORS:

PROPERTY	DFL ADJUSTMENT FACTORS	SYP ADJUSTMENT FACTORS
F <sub>B</sub>	0.970	0.910
F <sub>v</sub>	0.960	0.950
F <sub>C</sub> (PERPENDICULAR)	0.950	0.950
F <sub>C</sub> (PARALLEL)	0.935	0.935
F <sub>t</sub>	0.874	0.874
E <sub>B</sub>	0.960	0.950

- THESE VALUES ARE THE MAXIMUM REDUCTIONS PROVIDED BY PRE-APPROVED TREATMENTS; PYRO-GUARD (ESR-1791) AND D-BLAZE (ESR-2645). THE TREATMENT USED MUST NOT HAVE REDUCTIONS GREATER THAN THOSE LISTED ABOVE. TREATED LUMBER SHALL BE TESTED ACCORDING TO ASTM D 5664 AND ASTM E 84 AND DESIGN VALUE ADJUSTMENT FACTORS SHALL BE CALCULATED ACCORDING TO ASTM D 6841. ENGINEER OF RECORD MUST APPROVE TREATMENT BASED ON A SUBMITTAL OF THIS INFORMATION PRIOR TO CONSTRUCTION. KILN-DRY LUMBER AFTER TREATMENT TO A MAXIMUM MOISTURE CONTENT OF 19 PERCENT. KILN-DRY PLYWOOD AFTER TREATMENT TO A MAXIMUM MOISTURE CONTENT OF 15 PERCENT.
- IDENTIFY FIRE-RETARDANT TREATED WOOD WITH APPROPRIATE CLASSIFICATION MARKING OF QUALIFIED TESTING AGENCY.
  - FOR EXPOSED ITEMS INDICATED TO RECEIVE A STAINED OR NATURAL FINISH, USE CHEMICAL FORMULAS THAT DO NOT BLEED THOUGH, CONTAIN COLORANTS, OR OTHERWISE ADVERSELY AFFECT FINISHES.
  - APPLICATION: TREAT ALL FRAMING INDICATED IN STRUCTURAL AND ARCHITECTURAL DRAWING DETAILS AND NOTES.
  - FIELD CUTS: DO NOT RIP OR MILL FIRE RETARDANT TREATED LUMBER. END CUTS, DRILLING HOLES AND JOINING CUTS ARE PERMITTED. PLYWOOD MAY BE CUT IN ANY DIRECTION.
  - SURFACES OF FRTW PSL, LVL, LSL, OR GLULAM MEMBERS SHALL BE TREATED IN FIELD BY CONTRACTOR WITH PAINT-ON OR SPRAY-ON PRODUCT TO PROVIDE FIRE RESISTANCE. PRODUCT SHALL BE NO-BURN AS SPECIFIED ON ARCHITECTURAL DRAWINGS AND SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS. ALTERNATIVELY, WHERE PSL BEAMS OR COLUMNS ARE NOT READILY AVAILABLE WITH AN APPROVED FRT PROCESS, OR FIELD APPLIED COATINGS ARE NOT PERMITTED, REFER TO THE TYPICAL STEEL FLITCH BEAM DETAIL AND THE TYPICAL LOOSE STEEL COLUMN DETAIL RESPECTIVELY FOR LIMITED ALTERNATE OPTIONS.

## WOOD FASTENER SPECIFICATIONS

- BOLTS
  - BOLTS SHALL MEET THE REQUIREMENTS OF ANSI/ASME STANDARD B18.2.1
  - HOLES SHALL BE A MINIMUM OF 1/32 INCH TO A MAXIMUM OF 1/16 INCH LARGER THAN THE BOLT DIAMETER. HOLES SHALL BE ACCURATELY ALIGNED AND BOLTS SHALL NOT BE FORCIBLY DRIVEN.
- LAG SCREWS
  - LAG SCREWS SHALL MEET THE REQUIREMENTS OF ANSI/ASME STANDARD B18.2.1.
  - LEAD HOLES OR LAG SCREWS SHALL BE BORED AS FOLLOWS TO AVOID SPLITTING OF THE WOOD MEMBER:
    - THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 60% OF THE SHANK DIAMETER WITH A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
    - THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF THE UNTHREADED SHANK.
  - THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED INTO ITS LEAD HOLE BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER.
  - MINIMUM PENETRATION OF LAG SCREWS SHALL BE 4 TIMES THE DIAMETER, 4D.
- WOOD SCREWS
  - WOOD SCREWS SHALL MEET THE REQUIREMENTS OF ANSI/ASME STANDARD B18.6.1.
  - THE LEAD HOLES FOR WOOD SCREWS SHOULD BE APPROXIMATELY 75% OF THE DIAMETER OF THE SCREW AT THE ROOT OF THE THREAD.
  - THE WOOD SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING WITH A SCREW DRIVER OR OTHER TOOL, NOT BY DRIVING WITH A HAMMER.
  - MINIMUM PENETRATION OF WOOD SCREWS SHALL BE 6 TIMES THE DIAMETER, 6D.
- NAILS
  - NAILS SHALL MEET THE REQUIREMENTS OF ASTM F 1667.
  - NAILS SHALL BE COMMON NAILS WITH SIZES AS FOLLOWS:

PENNYWEIGHT	DIAMETER	LENGTH
6D	0.113"	2"
8D	0.131"	2 ½"
10D	0.148"	3"
16D	0.162"	3 ½"
  - NAILS CALLED OUT AS 12D ARE SINKERS WITH A SHANK DIAMETER OF 0.148" AND A LENGTH OF 3.25".
  - TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF APPROXIMATELY 30° WITH THE MEMBER BEING TOE-NAILED AND STARTED APPROXIMATELY 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.
  - MINIMUM PENETRATION OF NAILS SHALL BE 6 TIMES THE DIAMETER, 6D.
- THE MINIMUM EDGE DISTANCE FOR FASTENERS NOTED ABOVE SHALL BE 1.5 TIMES THE DIAMETER AND THE MINIMUM END DISTANCE SHALL BE 4 TIMES THE DIAMETER, UNLESS NOTED OTHERWISE ON THE PLANS.

- POWER ACTUATED FASTENERS (PAF)
  - POWER ACTUATED FASTENERS SHALL BE HILTI DX FASTENING SYSTEM.
  - HILTI IS LOCATED IN TULSA, OK AND CAN BE REACHED AT 1-800-879-8000
  - OTHER MANUFACTURERS OF PAF SYSTEMS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER OF RECORD.
  - (HILTI X-CR) SHALL BE USED WHEN ATTACHED TREATED LUMBER TO CONCRETE OR STEEL.
  - PAF SHALL HAVE A MINIMUM EDGE DISTANCE TO THE FOUNDATION OF 1 ¾" INCHES, A MINIMUM FASTENER SPACING OF 3 INCHES, AND A MAXIMUM PENETRATION INTO CONCRETE OF 1 ¾" INCHES.
- HARDWARE
  - STRAPS, HOLDOWNS, TIES, HANGERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONG - TIE AND INSTALLED IN ACCORDANCE WITH THEIR RECOMMENDATIONS.
  - SIMPSON IS LOCATED THROUGHOUT THE UNITED STATES AND CAN BE REACHED AT 1-800-999-5099.
  - OTHER MANUFACTURERS OF HARDWARE MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER OF RECORD.
- CORROSION PROTECTION
  - ALL FASTENERS AND HARDWARE IN CONTACT WITH CONCRETE OR PRESSURE TREATED LUMBER SHALL BE GALVANIZED AT A MINIMUM. THIS REQUIREMENT INCLUDES, BUT IS NOT LIMITED TO, SILL WASHERS AND STUD END OR TOE-NAILS INTO SILL PLATES.

## POST-INSTALLED ANCHOR SPECIFICATIONS

- POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD. PROVIDE CONTINUOUS SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE EVALUATION REPORT (ICC-ES-ESR). CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TRAINING AND INSTALLATION OF ANCHORS AND FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY. CALL SIMPSON STRONG-TIE AT (800) 999-5099.
- POST-INSTALLED CONCRETE ANCHORS
  - MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED AND UN-CRACKED CONCRETE RECOGNITION. PRE-APPROVED MECHANICAL ANCHORS INCLUDE: SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713 CONCRETE, ICC-ES ESR-1056 CMU).
  - ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC308 FOR CRACKED AND UN-CRACKED CONCRETE RECOGNITION. PRE-APPROVED ADHESIVE ANCHORS INCLUDE SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4057).
- POST INSTALLED SOLID-GROUTED CONCRETE MASONRY ANCHORS
  - MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC01 OR AC106. PRE-APPROVED MECHANICAL ANCHORS INCLUDE SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES-1056).
  - ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC58. PRE-APPROVED ADHESIVE ANCHORS INCLUDE SIMPSON STRONG-TIE "SET" (ICC-ES-ESR-1772).

## PREMANUFACTURED WOOD TRUSS SPECIFICATIONS

- TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THIS SPECIFICATION AND WHERE ANY APPLICABLE FEATURE IS NOT SPECIFICALLY COVERED HEREIN, DESIGN SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE AMERICAN FOREST & PAPER ASSOCIATION'S (AF&PA)'S "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", ANSI/TPI, AND ALL APPLICABLE LEGAL REQUIREMENTS.
- TRUSS MANUFACTURER SHALL FURNISH SIGNED AND SEALED TRUSS DESIGN DRAWINGS PREPARED IN ACCORDANCE WITH ALL APPLICABLE LEGAL REQUIREMENTS BY AN ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- THE TRUSS MANUFACTURER SHALL SUBMIT THE TRUSS SUBMITTALS TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO THE MANUFACTURING OF TRUSSES.
- IN ADDITION TO CODE REQUIRED DEFLECTION-TO-SPAN RATIO LIMITS, TOTAL FLOOR AND FLAT ROOF TRUSS DEFLECTION SHALL BE LIMITED TO 7/8" MAX AFTER CAMBER, OR LESS WHERE NECESSARY TO PREVENT PONDING, BOUNCE OR VIBRATION.
- THE TRUSS DESIGN DRAWINGS SHALL INCLUDE THE FOLLOWING AS MINIMUM INFORMATION:
  - SLOPE OR DEPTH, SPAN AND SPACING;
  - LOCATION OF ALL JOINTS;
  - REQUIRED BEARING WIDTHS;
  - DESIGN LOADS AS APPLICABLE:
    - TOP CHORD LIVE LOAD (INCLUDING SNOW LOADS);
    - TOP CHORD DEAD LOAD;
    - BOTTOM CHORD LIVE LOAD;
    - BOTTOM CHORD DEAD LOAD;
    - CONCENTRATED LOADS AND THEIR POINTS OF APPLICATION
    - CONTROLLING WIND AND EARTHQUAKE LOADS
  - ADJUSTMENTS TO LUMBER AND METAL CONNECTOR PLATE DESIGN VALUES FOR CONDITIONS OF USE;
  - EACH REACTION FORCE AND DIRECTION;
  - METAL CONNECTOR PLATE EXCEPT WHERE SYMMETRICALLY LOCATED RELATIVE TO THE JOINT INTERFACE;
  - LUMBER SIZE, SPECIES, AND GRADE FOR EACH MEMBER;
  - CONNECTION REQUIREMENTS FOR: (A) TRUSS TO TRUSS GIRDER; (B) TRUSS PLY TO PLY; (C) FIELD ASSEMBLY OF TRUSSES;
  - CALCULATED DEFLECTION RATIO OR MAXIMUM DEFLECTION FOR LIVE AND TOTAL LOAD;
  - MAXIMUM AXIAL COMPRESSION FORCES IN THE TRUSS MEMBERS;
  - THE APPROXIMATE LOCATION FOR CONTINUOUS LATERAL PERMANENT BRACING OF TRUSS MEMBERS SUBJECT TO BUCKLING DUE TO COMPRESSION FORCES.
- LUMBER USED SHALL BE IDENTIFIED BY GRADE MARK OF A LUMBER INSPECTION BUREAU OR AGENCY APPROVED BY THE AMERICAN LUMBER STANDARDS COMMITTEE, AND SHALL BE THE SIZE, SPECIES, AND GRADE AS SHOWN ON THE TRUSS DESIGN DRAWINGS, OR EQUAL AS APPROVED BY THE TRUSS DESIGNER.
- MOISTURE CONTENT OF LUMBER SHALL BE NO LESS THAN 7% AT THE TIME OF MANUFACTURING.
- ADJUSTMENT OF VALUES FOR DURATION OF LOAD OR CONDITIONS OF USE SHALL BE IN ACCORDANCE WITH AF&PA'S "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION."
- METAL CONNECTOR PLATES SHALL BE MANUFACTURED BY A WOOD TRUSS COUNCIL OF AMERICA (WTCA) MEMBER PLATE MANUFACTURER AND SHALL NOT BE LESS THAN 0.036 INCHES IN THICKNESS (20 GAUGE) AND SHALL MEET OR EXCEED ASTM A653/A653M GRADE 33, AND GALVANIZED COATING SHALL MEET OR EXCEED ASTM A924/924M, COATING DESIGNATION G60. WORKING STRESSES IN STEEL ARE TO BE APPLIED TO EFFECTIVENESS RATIOS FOR PLATES AS DETERMINED BY TEST AND IN ACCORDANCE WITH ANSI/TPI 1.
- TRUSSES SHALL BE MANUFACTURED TO MEET THE QUALITY REQUIREMENTS OF ANSI/TPI 1 AND IN ACCORDANCE WITH THE INFORMATION PROVIDED IN THE FINAL APPROVED TRUSS DESIGN DRAWINGS.
- TRUSSES SHALL BE HANDLED DURING MANUFACTURING, DELIVERY, AND BY THE CONTRACTOR AT THE JOB SITE SO AS NOT TO BE SUBJECTED TO EXCESSIVE BENDING.
- TRUSSES SHALL BE UNLOADED IN A MANNER SO AS TO MINIMIZE LATERAL STRAIN. TRUSSES SHALL BE PROTECTED FROM DAMAGE THAT MIGHT RESULT FROM ON-SITE ACTIVITIES AND ENVIRONMENTAL CONDITIONS. TRUSSES SHALL BE HANDLED IN SUCH A WAY SO AS TO PREVENT TOPPLING WHEN BANDING IS REMOVED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE HANDLING, ERECTION, AND TEMPORARY BRACING OF THE TRUSSES IN GOOD WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN WTCA'S "JOB SITE WARNING POSTER" AND "WEB MEMBER PERMANENT BRACING: BRACE IT FOR STABILITY."
- APPARENT DAMAGE TO TRUSSES, IF ANY, SHALL BE REPORTED TO THE TRUSS MANUFACTURER PRIOR TO ERECTION.
- TRUSSES SHALL BE SET AND SECURED LEVEL AND PLUMB, AND IN CORRECT LOCATION.
- CUTTING AND ALTERING OF TRUSSES IS NOT PERMITTED. IF ANY TRUSS SHOULD BECOME BROKEN, DAMAGED, OR ALTERED, WRITTEN CONCURRENCE AND APPROVAL BY THE LICENSED DESIGN PROFESSIONAL FOR THE TRUSS MANUFACTURER IS REQUIRED.
- CONCENTRATED LOADS SHALL NOT BE PLACED ON TOP OF TRUSSES UNTIL ALL SPECIFIED BRACING HAS BEEN INSTALLED AND DECKING IN PERMANENTLY NAILED IN PLACE. SPECIFICALLY AVOID STACKING FULL BUNDLES OF PLYWOOD OR OTHER CONCENTRATED LOADS ON TOP OF TRUSSES.

## DECKING AND SHEATHING SPECIFICATIONS

- ROOF DECKING SHALL BE MINIMUM 19/32" APA RATED 40/20 SHEATHING EXPOSURE 1 GRADE PLYWOOD OR OSB, TYP. AND 23/32" APA RATED 48/24 SHEATHING EXPOSURE 1 GRADE PLYWOOD OR OSB FLOOR DECKING BELOW MECHANICAL UNITS MOUNTED ON A FLAT ROOF.
- FLOOR DECKING SHALL BE 23/32" APA RATED STURD-I-FLOOR 24 O.C. EXPOSURE 1 GRADE T&G PLYWOOD OR OSB, EXCEPT, OSB IS NOT PERMITTED FOR FLOOR DECKING AT UNCONDITIONED SPACES INCLUDING BALCONIES, OPEN CORRIDORS, AND BREEZEWAYS.
- WOOD SHEARWALLS SHALL BE MINIMUM 7/16" APA RATED 24/16 SHEATHING EXPOSURE 1 PLYWOOD OR OSB.
- WOOD SHEATHING FOR MISCELLANEOUS USES SHALL BE 7/16" APA RATED 24/16 SHEATHING EXPOSURE 1 PLYWOOD OR OSB.
- ORIENTED STRAND BOARD (OSB) MAY BE USED INTERCHANGEABLY WITH PLYWOOD U.N.O. AT VERTICAL APPLICATIONS.
- ANY/ALL WOOD SHEATHING ON EXTERIOR WALLS WITHIN 4 FT. ON EACH SIDE OF FIREWALLS ARE DIRECT BY FRTW.
- INTERIOR GYPSUM SHEARWALLS SHALL BE SHEATHING WITH 5/8" THICK TYPE X GYPSUM REGULAR CONFORMING TO THE REQUIREMENTS OF ASTM C 36 AND INSTALLED PER GA-216.
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FRTW SHEATHING.
- PROVIDE X" GAPS EVERY 80 FEET IN PLYWOOD DECKING FOR PLYWOOD RUNS LONGER THAN 80 FT.

## REINFORCED CONCRETE SPECIFICATIONS

- ALL CONCRETE SHALL COMPLY WITH THE FOLLOWING:

LOCATION	CONCRETE STRENGTH F'C	MAX W/CM RATIO	ENTRAINED AIR	MAX AGGREGATE SIZE
FOOTINGS AND PLINTHS	3,500 PSI	0.55	0+1.5%	¾"
- THIS SPECIFICATION ALSO APPLIES TO UN-REINFORCED TOPPING SLABS.
- CONCRETE SUPPLIER SHALL DETERMINE SLUMP FOR EACH MIX DESIGN TO PROVIDE PROPER WORKABILITY, ADEQUATE CONSOLIDATION AROUND REINFORCING STEEL, GOOD FINISHING AND GOOD OVERALL PERFORMANCE.
- CONCRETE SLUMP SHALL BE SHOWN ON EACH CONCRETE MIX DESIGN. SLUMP SHALL BE TESTED AT EACH TRUCK FOR THE PURPOSE OF DETERMINING AND ESTABLISHING CONSISTENCY. THOSE BATCHES FOR WHICH THE TESTED SLUMP DOES NOT MATCH THE MIX DESIGN SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND MAY BE REJECTED.
- CONCRETE FOR PIERS SHALL HAVE A SLUMP OF 8".
- IN NO CASE SHALL CONCRETE THAT IS STEEL TROWEL FINISHED INCLUDE ENTRAINED AIR.
- ADMIXTURES, AGGREGATES ETC, MAY NOT CONTAIN CHLORIDE SALTS.
- CONCRETE MATERIALS SHALL COMPLY WITH THE FOLLOWING:
  - PORTLAND CEMENT TYPE 1 AND CONFORMING TO THE REQUIREMENTS OF ASTM C150
  - MAXIMUM SOLUBLE CHLORIDE ION CONTENT SHALL BE LESS THAN 0.06 PERCENT BY WEIGHT OF CEMENT IN ACCORDANCE WITH ACI 350, SECTION 4.4.1
  - NORMAL WEIGHT AGGREGATE ASTM C33
  - LIGHT WEIGHT AGGREGATE ASTM C330
  - FINE AGGREGATE NATURAL SAND
  - FLY ASH ASTM C618, CLASS C OR F
  - SILICA FUME ASTM C1240, 10% MAX
  - SLAG CEMENT ASTM C989, 50% MAX, INCLUDING POZZOLANS AND SILICIA FUME
  - WATER ASTM C94 AND POTABLE
  - WATER REDUCING MIXTURES ASTM C494
  - AIR ENTRAINING ADMIXTURES ASTM C260
- THE FOLLOWING DESIGN STANDARDS SHALL APPLY:
  - TOLERANCES FOR CONST. ACI 117
  - READY-MIX CONCRETE ASTM C94 AND C685
  - MIXING, TRANSPORTING AND PLACEMENT ASTM 301, ACI 304, ACI318
  - DETAILING ACI 315
  - FINISHING ACI 302.1R
  - CURING ACI 308R AND ACI 302.1R
  - HOT AND COLD WEATHER ACI 305R AND 306R
- CONCRETE PROTECTION OF CONCRETE SHALL COMPLY WITH ACI 318 AS WELL AS MINIMUM COVER FOR FIRE RESISTANCE IBC TABLE 720.1. UNLESS NOTED OTHERWISE IN THE DRAWINGS, DETAILS, OR STANDARD DETAILS, COVER SHALL BE AS FOLLOWS:
  - FOOTINGS & PLINTHS 3" BOTTOM
  - SIDES IF CAST AGAINST EARTH 2" SIDES IF CAST AGAINST FORMS
- CONCRETE SUPPLIER SHALL BE CERTIFIED ACCORDING TO THE NATIONAL READY MIXED CONCRETE ASSOCIATION'S CERTIFICATION OF READY MIXED CONCRETE PRODUCTION FACILITIES.
- CONCRETE MIX DESIGNS SHALL BE DETERMINED BY QUALIFIED LAB AND REGISTERED ENGINEER. MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL AT LEAST 7 DAYS PRIOR TO THE DELIVERY OF THE MIX TO THE JOB SITE.
- AIR CONTENT FOR EACH BATCH OF CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM C173 OR C231 AT THE POINT OF PLACEMENT.
- HARD TROWELED SURFACES SHALL NOT BE AIR ENTRAINED.
- CONCRETE FOR CYLINDERS AND SLUMP TESTS SHALL BE TAKEN AT THE POINT OF PLACEMENT.
- ALL CONCRETE OUTSIDE CONDITIONED SPACES SHALL INCLUDE 4.0 GALLONS PER CUBIC YARD GRACE DCI/DCI-S AND INCLUDE A SILANE SEALER ON HORIZONTAL SURFACES.
- CONCRETE IN PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 7 OF ACI 362.1
- ALL TENDON ENDS OUTSIDE CONDITIONED SPACES SHALL BE ENCAPSULATED.
- WATER MAY NOT BE ADDED TO BATCH AT THE SITE UNLESS IT IS SPECIFICALLY NOTED THAT IT MAY BE ADDED ON THE TICKET PROVIDED BY THE READY-MIX COMPANY. IN NO CASE MAY MORE WATER BE ADDED TO MIX THAN ALLOWED ON TICKET.
- FOR SLABS ON GRADE THAT ARE NOT POST-TENSIONED, CONSTRUCTION OR CONTROL JOINTS, U.N.O. ON PLAN, SHALL BE CONSTRUCTED AS NOTED IN SLAB ON GRADE SPECIFICATIONS. COORDINATE LOCATIONS WITH ARCHITECT.
- CONTROL JOINTS SHALL BE SAWS AS SOON AS PRACTICALLY POSSIBLE. JOINTS SHOULD BE SAWS AS SOON AS THE CONCRETE WILL WITHSTAND THE ENERGY OF SAWSING WITHOUT RAVELING OR DISLOGGING AGGREGATE PARTICLES.
- CONSTRUCTION JOINTS ARE NOTED ON PLAN BUT MAY BE MOVED OR NEW ONES ADDED IF APPROVED BY ENGINEER.
- HORIZONTAL JOINTS SHALL NOT BE ALLOWED UNLESS NOTED IN THE DRAWINGS. IF APPROVED BY ENGINEER VERTICAL JOINTS IN FLEXURAL MEMBERS SHALL OCCUR AT THE 1/3 POINT OF A SPAN.
- CONSTRUCTION JOINTS BETWEEN PIERS AND PIER CAPS, FOOTINGS AND PLINTHS, AND COLUMNS OR WALLS SHALL BE PREPARED BY ROUGHENING THE CONTACT SURFACE TO A DEPTH OF ¾" OVER THE FULL CONTACT AREA. AFTER ROUGHENING, THE SURFACES SHALL BE CLEANED AND ALL LOOSE MATERIAL SHALL BE REMOVED.
- ALL KEYWAYS SHALL BE 2x4 AND CONTINUOUS UNLESS NOTED OTHERWISE.
- ALL JOINTS BELOW GRADE WHERE WATER MAY BE PRESENT ON ONE SIDE AND WHERE NOTED ON DRAWINGS SHALL BE HENRY SF302 "Synko-Flex" TYPE WATER STOPS.
- WATERSTOPS MAY ONLY BE PLACED IN KEYWAYS WHERE INDICATED BASED ON FORMING GEOMETRY AND REBAR PLACEMENT. WHEN THIS IS DONE THE KEY WAY SIZE SHOULD BE INCREASED SO THAT THE EFFECTIVE CONCRETE KEY SIZE IS NOT REDUCED BY THE WATER STOP.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED ¾" UNLESS NOTED OTHERWISE.
- PRIOR TO CONSTRUCTING FORMS OR PLACING CONCRETE, CONTRACTOR SHALL VERIFY FINISHES WITH ARCHITECT. UNLESS NOTED OTHERWISE BY ARCHITECT, FINISHES SHALL BE AS FOLLOWS:

EXPOSED TOPPING SLABS	LIGHT BROOM FINISH
EXPOSED VERTICAL SURFACES	RUBBED FINISH
PARKING AREAS	MEDIUM BROOM FINISH
BOTTOMS OF ELEVATED SLABS	CLASS "C" FINISH NOT EXPOSED TO VIEW
- CONTRACTOR SHALL IDENTIFY EACH TYPE OF FLOORING UTILIZED ON THE PROJECT AND DETERMINE FLOOR SURFACE CLASSIFICATION FOR EACH TYPE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY STANDARDS. CONTRACTOR SHALL PROVIDE APPROPRIATE FLATNESS AND LEVELNESS FOR EACH CLASSIFICATION IN ACCORDANCE WITH ACI 117.
- PRIOR TO CONSTRUCTING FORMS OR PLACING CONCRETE, CONTRACTOR SHALL NOTIFY SUBCONTRACTORS TO BE SURE SLEEVES, CONDUIT, CHASES, EMBEDDED ITEMS, BLOCK-OUTS, ETC. ARE PROPERLY INSTALLED. CONTRACTOR SHALL NOTIFY ENGINEER OR OWNERS' REPRESENTATIVE AT LEAST 48 HOURS PRIOR TO PLACING CONCRETE TO ALLOW TIME FOR OBSERVATION OF FORMS AND REINFORCING.
- CONCRETE SHALL BE PROTECTED FROM RAIN AND SNOW.
- AFTER FINISHING, CONCRETE SHALL BE CURED BY KEEPING CONCRETE DAMP AND COVERING WITH PLASTIC OR BURLAP FOR A MINIMUM OF 72 HOURS. A CURING COMPOUND MAY BE USED INSTEAD IF APPROVED BY ENGINEER.
- REPAIR RUNS, AND OTHER DAMAGED AREAS AS DIRECTED BY ENGINEER.
- REPAIR CONCRETE EXHIBITING HONEYCOMBS, ROCK POCKETS, AND SPALL, OR OTHERWISE DAMAGED SURFACES WITH DRY PACK CEMENT GROUT AND FINISHED FLUSH WITH ADJOINING SURFACE.
- FOR ELEVATED STRUCTURAL CONCRETE, FORMS MAY NOT BE REMOVED SOONER THAN 14 DAYS UNLESS JOB CURED CYLINDERS INDICATE THAT CONCRETE HAS REACHED 70% OF SPECIFIED STRENGTH (BUT NOT LESS THAN 3,000 PSI). FOR DECKS SUPPORTING MORE THAN 1 FLOOR (PODIUMS), SHORING SHALL NOT BE REMOVED UNTIL ALL REINFORCEMENT IS IN PLACE, CONCRETE REACHED DESIGN STRENGTH, AND TENDONS ARE FULLY STRESSED. RE-SHORING SHALL BEGIN IMMEDIATELY AFTER SHORING HAS BEEN REMOVED AND BE COMPLETED THE SAME DAY. COLUMN AND WALL FORMS MAY BE REMOVED THE NEXT DAY OR AS SOON AS IT CAN BE COMPLETED WITHOUT DAMAGING THE CONCRETE.

## STRUCTURAL STEEL SPECIFICATIONS

- DETAIL, FABRICATE, AND ERCT ALL STRUCTURAL STEEL IN CONFORMANCE WITH "CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES" OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), LATEST EDITION.
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWINGS:

WIDE FLANGE SHAPES	A992, A572-50 (FY=50 KSI)
CHANNELS	A992, A572-50 (FY=50 KSI)
PLATES & ANGLES	A36 (FY=36 KSI)
RECTANGULAR HSS	A500 GRADE B (FY= 46 KSI)
ROUND HSS	A500 GRADE B (FY=42 KSI)
BOLTS IN WOOD	A307
BOLTS IN STEEL TO STEEL CONNECTIONS	A325N, A325X, A325SSC, A490N, A490X, A490 SC
IN GRAVITY FRAMING CONDITIONS	
BOLTS IN STEEL TO STEEL CONNECTIONS	
IN VERTICAL BRACES AND MOMENT FRAMES	A325SC, A490SC
MISCELLANEOUS CONNECTIONS SUCH AS BRIDGING	A307
ANCHOR BOLTS	A36 OR F1554 (FY=36 KSI)
- BOLTS IN BEARING TYPE CONNECTIONS (N OR X) SHALL BE TIGHTENED IN ACCORDANCE WITH THE "TURN OF NUT" METHOD AND SHALL HAVE HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED. BOLTS IN SLIP CRITICAL TYPE CONNECTIONS (SC) SHALL HAVE A USE LOAD INDICATING WASHERS OR TENSION CONTROL BOLTS (TDB) AND SHOULD BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. UNLESS NOTED OTHERWISE ON DRAWINGS BOLTED CONNECTIONS SHALL BE OF THE FOLLOWING TYPES:
  - SHEAR CONNECTIONS TO BEAMS OR COLUMNS BEARING OR SLIP CRITICAL
  - MOMENT FRAMES SLIP CRITICAL
  - BRACED FRAMES SLIP CRITICAL
  - MISCELLANEOUS BEARING
- STRUCTURAL STEEL CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH PART 9 IN THE AISC STEEL CONSTRUCTION MANUAL, LATEST EDITION. FABRICATOR SHALL DESIGN ALL SHEAR CONNECTIONS FOR REACTIONS NOTED ON PLAN BUT IN NO CASE LESS THAN 12 KIPS.
- WELDING SHALL CONFORM WITH THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE" AWS D1.1
- SPLICING OR CUTTING OPENINGS IN STRUCTURAL MEMBERS IS NOT PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER OF RECORD. ALL SPLICES SHALL BE FULL PENETRATION ON WELDS.
- BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE CONTRACT DRAWINGS. WHERE NO CAMBER IS SPECIFIED, BEAMS SHALL BE FABRICATED SUCH THAT NATURAL CAMBER PRESENT IN BEAM IS UPWARD.
- SHOP DRAWINGS SHALL BE COMPLETE FABRICATION AND ERECTION DRAWINGS AND SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO STEEL FABRICATION AND/OR DELIVERY. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL AND MISCELLANEOUS STEEL, METAL DECK, HANDRAILS, STAIRS, AND THEIR CONNECTIONS. ALL SHOP DRAWINGS FOR STRUCTURAL STEEL CONNECTIONS, MISCELLANEOUS STEEL, METAL DECK, HANDRAILS, STAIRS, AND THEIR CONNECTIONS SHALL BE PREPARED BY AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
- SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW IN COMPLIANCE WITH DOCUMENTS SHOWING COMPLETE DETAILS FOR THE STRUCTURAL STEEL WORK BASED UPON THE CONTRACT DRAWINGS (ALL DRAWINGS INCLUDING STRUCTURAL, ARCHITECTURAL AND MEP ETC.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF THE SHOP DRAWINGS AND FOR SHOP AND FIELD MIS-FABRICATIONS. THE REVIEW OF THE CORRECTION OF ANY DRAWINGS SHALL NOT SERVE AS A RELIEF FROM RESPONSIBILITY FOR THE CORRECTNESS OF THE DETAILS. ENGINEER'S SHOP DRAWING REVIEW COVERS GENERAL DESIGN ONLY.
- PRIOR TO DETAILING CONNECTIONS FOR STRUCTURAL STEEL, THE STEEL FABRICATOR SHALL SUBMIT FOR APPROVAL REPRESENTATIVE DETAILS AND CALCULATIONS FOR EACH TYPE OF STRUCTURAL STEEL CONNECTION TO BE UTILIZED. AFTER APPROVAL THE DIRECTIONS MAY BE INCORPORATED INTO THE SHOP DRAWINGS ALONG WITH A TABLE OF DESIGN CAPACITIES FOR THE RANGE OF CONNECTIONS TO BE USED.
- RELIEF ANGLES, LOOSE LITTELS, AND EXPOSED FRAMING ROOF SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
- ANY AND ALL MIS-FABRICATIONS OF STRUCTURAL STEEL SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BEFORE ERECTION OF THE MEMBER.
- WELDING ELECTRODES SHALL CONFORM TO AWS D1.1 GRADE E70xx. E80 SERIES ELECTRODES SHALL BE USED FOR ASTM A706 REINFORCING BARS. ALL WELDING SHALL BE DONE BY WELDERS HOLDING VALID CERTIFICATES ISSUED BY AN ACCEPTED TESTING AGENCY AND HAVING CURRENT EXPERIENCE IN TYPE OF WELDS SHOWN ON THE DRAWINGS OR NOTES. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS.
- FULL PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY. TEST RESULTS SHALL BE REVIEWED BY QUALIFIED PERSONNEL AND ACCEPTED PRIOR TO REVIEW BY ENGINEER.
- HEADED STUDS SHALL BE NELSON GRANULAR FLUX-FILLED HEADED ANCHOR STUDS OR APPROVED EQUAL MADE FROM GOLD FINISHED LOW CARBON STEEL AND SHALL CONFORM FOR ASTM A108. GRADES 1015 OR 1020 WITH A MINIMUM TENSILE STRENGTH OF 60,000 PSI. STUD WELDING INSPECTION AND TESTING SHALL CONFORM TO AWS D1.1.
- DEFORMED BAR ANCHOR STUDS SHALL BE NELSON D2L GRANULAR FLUX-FILLED REBAR STUDS OR APPROVED EQUAL MADE FROM LOW CARBON ROLLED STEEL WITH A MINIMUM TENSILE STRENGTH OF 70,000 PSI. STUD WELDING INSPECTION AND TESTING SHALL CONFORM TO AWS D1.1.
- DRY PACK FOR COLUMN BASE PLATES AND BEARING PLATES SHALL BE NONMETALLIC SHINKING-RESISTANT GROUT WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI.
- FABRICATOR AND ERECTOR SHALL BE AISC APPROVED AND APPROVED BY THE CITY WHERE PROJECT IS LOCATED.
- REFER TO ARCHITECTURAL PLANS FOR ALL FIRE-PROOFING REQUIREMENTS.
- NON-SHRINK GROUT SHALL CONSIST OF PORTLAND CEMENT, SAND AND WATER AND WILL BE PROPORTIONED TO ACHIEVE A DESIGNED STRENGTH OF 5,000 PSI AT 28 DAYS, OR THE SCHEDULED CONCRETE STRENGTH, WHICHEVER IS GREATER.
- DRY-PACK GROUT UNDER COLUMN BASE PLATES AND AT POCKETS FOR ANCHOR BOLTS AFTER ERECTION OF THE MINIMUM AMOUNT OF FRAMING NECESSARY TO MAINTAIN A PLUMB POSITION.
- DRY-PACK GROUT HORIZONTAL WALL PANEL JOINTS WHERE INDICATED FOR FULL WIDTH AND THICKNESS OF PANEL, JOINTS SHALL BE CLEANED OF ALL LOOSE DIRT OR OTHER CONTAMINATES PRIOR TO GROUTING.

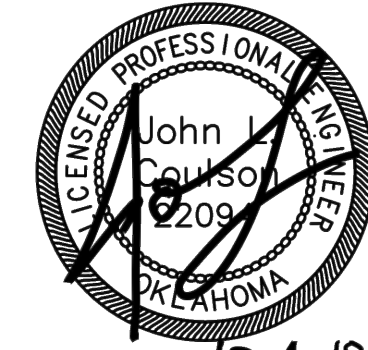
## REINFORCING STEEL SPECIFICATIONS

- REINFORCING BARS SHALL BE GRADE 60 AND CONFORM TO THE REQUIREMENTS OF ASTM A615.
- COMPLETE REINFORCEMENT DRAWINGS SHALL BE PREPARED BY FABRICATOR AND SUBMITTED TO ENGINEER FOR REVIEW.
- WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A185 AND SHALL BE PROVIDED IN FLAT SHEETS ONLY.
- WELDED WIRE FABRIC SHALL BE LAPPED AT LEAST 2 MESHES, BUT NOT LESS THAN 12 INCHES.
- ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE LATEST EDITION OF ACI 318 AND THE CRSI "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION", AND AS MODIFIED BY THE DRAWINGS.
- ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- WELDING OF REINFORCING BARS SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD. IF WELDING IS PERMITTED, IT SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.4.
- REINFORCING BARS, WELDED WIRE FABRIC AND ACCESSORIES SHALL BE STORED ABOVE THE GROUND SURFACE UPON PLATFORMS, SKIDS OR OTHER SUPPORTS.
- ALL REINFORCING SHALL BE SUPPORTED ON PLASTIC CHAIRS AT 48" O.C.
- UNLESS NOTED OTHERWISE, LAP SPLICES IN CONCRETE SHALL BE CLASS "B" TENSION LAP SPLICES PER SCHEDULE. STAGGER ALTERNATING SPLICES A MINIMUM OF ONE LAP LENGTH.
- ALL SPICE LOCATIONS SUBJECT TO APPROVAL AND SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS.
- EXTEND ALL HORIZONTAL REINFORCING CONTINUOUSLY AROUND CORNERS AND INTERSECTIONS OR PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.
- ALL REINFORCING STEEL BARS CROSSING A CONSTRUCTION JOINT SHALL CONFORM TO ONE OF THE FOLLOWING:
  - SPLICE CONNECTION SHALL DEVELOP FULL TENSILE CAPACITY OF BAR OR,
  - INSERTS SHALL BE "ZAP SCREW LOCK" TYPE II.
- REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. BARS MAY NOT BE BUNDLES AND SPACED FARTHER APART UNLESS APPROVED BY ENGINEER.
- DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SKEW HOOKS AS NECESSARY TO PROVIDE ADEQUATE CONCRETE COVER.
- SECURELY TIE ALL BARS IN POSITION BEFORE PLACING CONCRETE.
- SPLICED BARS SHALL BE PLACED AT THE SAME EFFECTIVE DEPTH UNLESS NOTED OTHERWISE.
- REINFORCING BARS NOTED "CONTINUOUS" OR WITH LENGTH NOT SHOWN SHALL BE FULLY CONTINUOUS AND SPLICED ONLY AS SHOWN, OR WHERE APPROVED BY THE ENGINEER.
- REINFORCING BAR HOOKS SHALL BE STANDARD ACI HOOKS UNLESS NOTED OTHERWISE.

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STANDARD SPECIFICATIONS ( 2 OF 3 )

10.05.18  
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SO-1B

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# SUBMITTALS AND CONSTRUCTION DOCUMENTATION

- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE FOLLOWING:
  - CONCRETE MIX DESIGNS
  - CONCRETE ACCESSORIES (CHAIRS, CURING COMPOUNDS, ADD MIXTURES ETC.)
  - REINFORCING STEEL
  - STRUCTURAL STEEL (INCLUDING CONNECTIONS) AND MISCELLANEOUS STEEL
  - WOOD TRUSSES AND ENGINEERED LUMBER
  - FRAMING HARDWARE
  - FIBERGLASS WRAPPING SYSTEM
  - CLADDING
  - ANY ITEMS NOT SPECIFICALLY DESIGNED BY THE ENGINEER THAT REQUIRE ENGINEER TO REVIEW FOR LOADING REQUIREMENTS SUCH AS GUARDRAILS, ETC.
- THOSE ITEMS NOT DESIGNED BY THE ENGINEER SHALL BE DESIGNED BY A THIRD PARTY PROFESSIONAL ENGINEER EMPLOYED BY CONTRACTOR LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. ENGINEER IS NOT RESPONSIBLE FOR THE DESIGN PREPARED BY THIRD PARTY ENGINEERS ON DEFERRED ITEMS. CONTRACTOR AND THIRD-PARTY ENGINEER SHALL RETAIN ALL RESPONSIBILITY FOR THE DESIGN OF THE PRODUCTS AND THE CONNECTIONS OF THE PRODUCTS TO THE BUILDING STRUCTURE.
- ALL SHOP DRAWINGS AND SUBMITTALS SHALL BE REVIEWED BY GENERAL CONTRACTOR AND STAMPED APPROVED OR EXCEPTIONS NOTED PRIOR TO BEING SENT TO ENGINEER. THOSE ITEMS THAT ARE NOT REVIEWED OR NOT REVIEWED ADEQUATELY BY GENERAL CONTRACTOR WILL BE RETURNED TO GENERAL CONTRACTOR BY THE ENGINEER WITHOUT BEING REVIEWED AND THIS SHALL NOT BE CAUSE FOR DELAY.
- CONTRACTOR SHALL PREPARE SUBMITTALS PER ARCHITECTS' PROJECT MANUAL.
- THE FAILURE BY THE CONTRACTORS TO SUBMIT A SHOP DRAWING OR SUBMITTAL SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO FURNISH AND INSTALL THE WORK.
- ENGINEER SHALL BE PROVIDED AT LEAST 10 FULL WORKING DAYS (NOT INCLUDING DELIVERY TIME) TO REVIEW SHOP DRAWINGS AND 2 FULL WORKING DAYS TO REVIEW RFIS. RFIS OR SUBSTITUTIONS THAT REQUIRED REDESIGN OR ANY OTHER CHANGES TO THE DRAWINGS MAY EXCEED TYPICAL REVIEW TIMES.
- SHOP DRAWINGS AND SUBMITTALS WILL ONLY BE REVIEWED FOR THE LIMITED PURPOSE OF CHECKING FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT SHOWN IN THE DRAWINGS.
- THE ENGINEER'S REVIEW IS LIMITED TO REVIEWING THAT THE APPLICABLE LOADS USED IN THE DESIGN PERFORMED BY THE THIRD-PARTY ENGINEER WERE GENERALLY IN CONFORMANCE WITH THE REQUIREMENTS LISTED ON DRAWINGS.
- NO WORK ON ANY STRUCTURAL ITEMS INDICATED ON ENGINEER'S DRAWINGS MAY PROCEED UNTIL ALL SUBMITTALS RELATED TO THAT ITEM HAVE BEEN SUBMITTED AND REVIEWED BY ENGINEER WITH NO EXCEPTIONS TAKEN.
- ANY CHANGES TO ENGINEER'S DESIGN THAT ARE REQUIRED TO ACCOMMODATE ANY ISSUE BY THIRD PARTY ENGINEER SHALL BE CLEARLY MARKED AND LOCATED AS A NOTIFICATION TO ENGINEER ON THE SUBMITTAL.
- REVIEW OF SHOP DRAWINGS SHALL NOT BE CONSTRUED AS AN APPROVAL OF ANY MEANS AND METHODS.
- THE USE OF REPRODUCTIONS OF HARD COPIES OR USE OF ENGINEERS ELECTRONIC COPIES IN LIEU OF THE INDEPENDENT PREPARATION OF SHOP DRAWINGS OR SUBMITTALS SIGNIFIES CONTRACTORS ACCEPTANCE OF ALL INFORMATION SHOWN IN HARD COPIES OR ELECTRONIC FILES AS CORRECT AND OBLIGATES HIMSELF TO ANY JOB EXPENSES REAL OR IMPLIED ARISING DUE TO ERRORS OR INCONSISTENCES THAT ARE IN THE HARD COPIES OR ELECTRONIC FILES. USE OF SUCH FILES IS SOLELY AT THE CONTRACTOR'S RISK.

# STANDARD ABBREVIATIONS

1. THIS IS A LIST OF THE STANDARD ABBREVIATIONS USED THROUGHOUT THIS SET OF PLANS. ABBREVIATIONS USED IN THE PLANS SET THAT ARE NOT DEFINED HERE MUST BE CONFIRMED WITH THE ENGINEER DIRECTLY. SEE TRUSS LOADING SCHEDULE FOR TRUSS ABBREVIATIONS NOT SHOWN.					
#	NUMBER OR LBS	FD	FLOOR DRAIN	PLF	POUNDS PER LINEAL FOOT
ACP	AUGER CAST PILE	FG	FINISHED GRADE	PT	POST-TENSIONING/
AHU	AIR HANDLER UNIT	FR(T)W	FIRE RETARDANT TREATED (WOOD)		POST-TENSIONED
ARCH	ARCHITECT/ARCHITECTURAL PLANS	FT	FEET OR FLOOR TRUSS	PSF	POUNDS PER SQUARE FOOT
DBL	DOUBLE	FTG	FOOTING	PSI	POUNDS PER SQUARE INCH
BFF	BELOW FINISHED FLOOR	FY	YIELD STRENGTH	PSL	PARALLEL STRAND LUMBER
BLDG	BUILDING	GA	GALVE	RD	ROOF DRAIN
BTM	BOTTOM	GB	GRADE BEAM	RE/REF	REFERENCE
CANT	CANTILEVERED	GT	GIRDER TRUSS	REIN	REINFORCEMENT
CGS	CENTER GRAVITY OF STRAND	H	HOLDOWN	RT	ROOF TRUSS
CIP	CAST-IN-PLACE	HF	HEM FIR (G=0.43)	RTU	ROOF TOP UNIT
CJ	CONTROL JOINT	HORIZ	HORIZONTAL	SC	STEEL COLUMN
CL	CENTERLINE	HS	HEADED STUD	SCHED	SCHEDULE
CLR	CLEAR	INT	INTERIOR	SIM	SIMILAR
CMU	CONCRETE MASONRY UNIT	K	KIPS	SL	SNOW LOAD
COL	COLUMN	KB	KNEE BRACE	SOG	SLAB-ON-GRADE
CONC	CONCRETE	KLF	KIPS PER LINEAL FOOT	SPA	SPACE
CONT	CONTINUOUS	KSI	KIPS PER SQUARE INCH	STAG	STAGGERED
CRB	CONVENTIONALLY REINFORCED BEAM	KSF	KIPS PER SQUARE FOOT	STD	STANDARDS
		LB	POUNDS	SFP	SPRUCE PINE FIR (G=0.42)
CSI	CONSTRUCTION JOINT	LSH	LONG SLOT HORIZONTAL	SW	SHEARWALL
CT	CORRIDOR TRUSS	LSV	LONG SLOT VERTICAL	SYF	SOUTHERN YELLOW PINE (G=0.55)
D	PENNY NAIL SIZE	LH	DEVELOPMENT LENGTH	T&B	TOP AND BOTTOM
DB	BAR DIAMETERS	LLH	LONG LEG HORIZONTAL	T&G	TONGUE & GROOVE
DBA	DEFORMED BAR ANCHOR	LLV	LONG LEG VERTICAL	TOC	TOP OF CONCRETE
DBL	DOUBLE	LONG	LONGITUDINAL	TOF	TOP OF FOOTING
DFL	DOUGLAS FIR LARCH (G=0.50)	LVL	LEVEL OR LAMINATED VENEER LUMBER	TOJ	TOP OF JOIST
DH	DROP HEAD	TOP	TOP OF PIER/PILE/PLINTH OR		
DIA	DIAMETER	MANUF	MANUFACTURER	TOP	TOP OF PLATE
DL	DEAD LOAD	MAX	MAXIMUM	TOS	TOP OF STEEL
DT	DRAG TRUSS	MEP	MECHANICAL, ELECTRICAL, & PLUMBING ENGINEER/PLANS	TOW	TOP OF WALL
EA	EACH			TRANS	TRANSVERSE
EF	EACH FACE	MF	MOMENT FRAME	TYP	TYPICAL
EJ	EXPANSION JOINT	MF(G)(R)	MANUFACTURER	UCA	UNDER COLUMN ABOVE
EL	EARTHQUAKE LOAD	MIN	MINIMUM	UNO	UNLESS NOTED OTHERWISE
EOR	ENGINEER OF RECORD	NLB	NON-LOAD BEARING	UPA	UNDER POST ABOVE
EP	EMBED PLATE	NTS	NOT TO SCALE	UWA	UNDER WALL ABOVE
EQ	EQUAL OR EQUALLY	OC	ON CENTER	VERT	VERTICAL
EW	EACH WAY	OCW	ON CENTER EACH WAY	W/	WITH
FE	FINISHED FLOOR ELEVATION	OSB	ORIENTED STRAND BOARD	W/O	WITHOUT
EXT	EXTERIOR	OH	OPPOSITE HAND	WL	WIND LOAD
F'C	28-DAY CONCRETE STRENGTH	PAF	POWDER ACTUATED FASTENER	WP	WORKING POINT
F'M	28-DAY MASONRY STRENGTH	PL	PLATE OR POINT LOAD		

# STATEMENT OF SPECIAL INSPECTIONS

- THE OWNER SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS AND TESTS DURING CONSTRUCTION ON THE TYPES OF CONSTRUCTION LISTED IN OF THE BUILDING CODE. THE GENERAL CONTRACTOR MAY NOT EMPLOY THE AGENCIES OR SPECIAL INSPECTORS. THESE INSPECTIONS AND TESTS ARE IN ADDITION TO THOSE REQUIRED IN SECTION 110 OF THE BUILDING CODE. THE APPROVED AGENCIES SHALL PROVIDE QUALIFIED SPECIAL INSPECTORS (SI) TO PERFORM THE REQUIRED INSPECTIONS.
- THE SI SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL. THE SI SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING HIS OR HER COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING. EXPERIENCE OR TRAINING SHALL BE CONSIDERED RELEVANT WHEN THE DOCUMENTED EXPERIENCE OR TRAINING IS RELATED IN COMPLEXITY TO THE SAME TYPE OF SPECIAL INSPECTION ACTIVITIES FOR PROJECTS OF SIMILAR COMPLEXITY AND MATERIAL QUALITIES. THESE QUALIFICATIONS ARE IN ADDITION TO THE QUALIFICATIONS SPECIFIED IN OTHER SECTION OF THIS CODE. THE SI SHALL HAVE EXPERIENCE WITH AT LEAST FIVE OTHER PROJECTS SIMILAR IN NATURE.
- THE PURPOSE OF THE INSPECTIONS SHALL BE TO ENFORCE COMPLIANCE WITH THE CONSTRUCTION DRAWINGS, SPECIFICATIONS, REFERENCED CODES, GEOTECHNICAL REPORT AND THE INTERNATIONAL BUILDING CODE. SPECIAL INSPECTIONS SHALL COMPLY WITH ALL ASPECTS OF THE BUILDING CODE.
- SI SHALL KEEP RECORD OF INSPECTIONS AND TESTS. THE SI SHALL SUBMIT REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OF RECORD (EOR), AND CONTRACTOR. REPORTS SHALL INDICATE THAT WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE EOR PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. A FINAL REPORT DOCUMENTING THE REQUIRED SPECIAL INSPECTIONS AND TESTS, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF THE WORK BY THE OWNER OR OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL.
- SPECIAL INSPECTIONS ARE REQUIRED FOR FABRICATED STRUCTURAL ITEMS CONSTRUCTED OFF SITE. THE SI SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO THE APPROVED CONSTRUCTION DOCUMENTS, REFERENCED STANDARDS, AND THE BUILDING CODE. APPROVAL SHALL BE BASED UPON REVIEW OF FABRICATION AND QUALITY CONTROL PROCEDURES AND PERIODIC INSPECTION OF FABRICATORS PRACTICES BY THE BUILDING OFFICIAL.
- SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. THE APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATORS WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED AGENCY. AT COMPLETION OF THE FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE OWNER OR OWNERS AGENT AND BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE QUALIFICATION OF THE FABRICATOR SHALL BE SUBMITTED TO EOR AND BUILDING OFFICIAL FOR REVIEW PRIOR TO REQUIREMENT FOR SPECIAL INSPECTIONS OF THE FABRICATOR BEING WAIVED.
- EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF AN ITEM LISTED TO REQUIRE SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL. THE STATEMENT OF RESPONSIBILITY SHALL ACKNOWLEDGE AWARENESS OF THE REQUIRED SPECIAL INSPECTIONS.
- REFER TO BUILDING CODE FOR ADDITIONAL SUBMITTALS THAT ARE REQUIRED BY THE CONTRACTOR TO THE BUILDING OFFICIAL.
- EACH SI IS RESPONSIBLE TO REVIEW THE PLANS THOROUGHLY AND SUFFICIENTLY AHEAD OF CONSTRUCTION TO ESTABLISH IF HE OR SHE IS QUALIFIED AND CAPABLE TO INSPECT THOSE ITEMS ENTRUSTED TO THEM. ALL AMBIGUITIES OR OMISSIONS IN THE APPROVED PLANS THAT CREATE A FORM OF DOUBT FOR THE SI SHALL BE RESOLVED THROUGH THE PROPER CHANNELS PRIOR TO CONSTRUCTION.
- STRUCTURAL OBSERVATIONS BY A RESISTED DESIGN PROFESSIONAL ARE REQUIRED FOR THIS PROJECT. THE STRUCTURAL OBSERVATIONS TO NOT WAIVE THE REQUIREMENTS FOR SPECIAL INSPECTIONS OR SERVE THE SAME PURPOSE. THE EOR OR ANOTHER QUALIFIED ENGINEER SHALL BE HIRED BY THE OWNER TO OBSERVE THE MOMENT FRAMES AND DIAPHRAGMS INCLUDING ATTACHMENTS TO EACH OTHER, COLLECTOR ELEMENTS AND FOUNDATIONS;
- GENERAL CONTRACTOR SHALL ARRANGE FOR A PRE-CONSTRUCTION MEETING TO INCLUDE OWNER, ARCHITECT, EOR AND SI.
- THE GEOTECHNICAL ENGINEER SHALL EXAMINE FOOTING EXCAVATION, PIER AND PIER CAP INSTALLATION, AND FILL PLACEMENT TO DETERMINE THAT THE PROPER DESIGN REQUIREMENTS HAVE BEEN REACHED. THE INSPECTION SHOULD BE PERFORMED PRIOR TO THE PLACEMENT OF THE REINFORCEMENT IN THE EXCAVATION.
- THE FOLLOWING ITEMS REQUIRE INSPECTION BY THE SI.

## Required Verification & Inspection of Struct. Steel.

- SPECIAL INSPECTIONS AND QUALITY ASSURANCE/CONTROL FOR STRUCTURAL STEEL INCLUDING FABRICATION AND ERECTION SHALL COMPLY WITH AISC 360-16 CHAPTER N ENTIRELY.
- SPECIAL INSPECTIONS AND QUALITY ASSURANCE/CONTROL FOR METAL DECKING INCLUDING FABRICATION AND INSTALLATION SHALL COMPLY WITH QA/QC - 2011 "STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR INSTALLATION OF STEEL DECKING" ENTIRELY.
- SPECIAL INSPECTIONS AND QUALITY ASSURANCE/CONTROL FOR LOAD BEARING LIGHT GAUGE METAL FRAMING INCLUDING FABRICATION AND INSTALLATION SHALL COMPLY WITH AISI 2015 "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL STRUCTURAL FRAMING CHAPTER D" ENTIRELY.
- WHERE COLD-FORMED STEEL TRUSSES SPAN 60 FEET OR GREATER, THE SI SHALL VERIFY THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING AND PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.
- QUALITY CONTROL (QC) SHALL BE PROVIDED BY FABRICATOR AND ERECTOR. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY SPECIAL INSPECTOR (SI).
- QA WORK MAY NOT BE WAIVED IN CASES WHERE QC WORK HAS OCCURRED. QA WORK SHALL BE DONE WEATHER OR NOT QC HAS BEEN COMPLETED UNLESS SPECIALLY APPROVED BY EOR OR BUILDING OFFICIAL.
- O = OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. P=PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.
- INSPECTION OF WELDING SHALL BE COMPLETED IN ACCORDANCE WITH AWS D1.1 AND D11.4.
- INSPECTION OF BOLTING SHALL BE COMPLETED IN ACCORDANCE WITH THE RCSC SPECIFICATION ON HIGH STRENGTH BOLTING.

STRUCTURAL STEEL FRAMING:		
	QC	QA
<b>INSPECTION TASK PRIOR TO WELDING</b>		
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O
WELDING PROCEDURE SPECIFICATION (WPS) AVAILABLE	P	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
WELDER IDENTIFICATION SYSTEM (MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS IF USED SHALL BE LOW-STRESS TYPE).	O	O
<b>FIT-UP OF GROOVE WELDS (INCLUDING GEOMETRY)</b>		
• JOINT PREPARATIONS	O	O
• DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)		
• CLEANLINESS (COND. OF STEEL SURFACES)		
• TACKING (TACK WELD QUALITY/LOCATION)		
• BACKING TYPE AND FIT (IF APPLICABLE)		
<b>FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)</b>		
• JOINT PREPARATIONS	P	O
• DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)		
• CLEANLINESS (CONDITION OF STEEL SURFACES)		
• TACKING (TACK WELD QUALITY/LOCATION)		
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
<b>FIT-UP OF FILLET WELDS</b>		
• DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	O	O
• CLEANLINESS (COND. OF STEEL SURFACES)		
• TACKING (TACK WELD QUALITY/LOCATION)		
CHECKING WELDING EQUIPMENT	O	-
<b>INSPECTION TASK DURING TO WELDING</b>	QC	QA
CONTROL AND HANDLING OF WELDING CONSUMABLES		
• PACKAGING	O	O
• EXPOSURE CONTROL		
NO WELDING OVER CRACKED TACK WELDS	O	O
ENVIRONMENTAL CONDITIONS		
• WIND SPEED WITHIN LIMITS	O	O
• PRECIPITATION AND TEMPERATURE		

WPS FOLLOWED					
• SETTINGS ON WELDING EQUIPMENT					
• TRAVEL SPEED					
• SELECTED WELDING MATERIALS					
• SHIELDING GAS TYPE/FLOW RATE		O			O
• PREHEAT APPLIED					
• INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.)					
• PROPER POSITION (F, V, H, OH)					
WELDING TECHNIQUES					
• INTERPASS AND FINAL CLEANING			O		O
• EACH PASS WITHIN PROFILE LIMITATIONS					
• EACH PASS MEETS QUALITY REQUIREMENTS					
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS			P		P
<b>INSPECTION TASK AFTER TO WELDING</b>			QC		QA
WELDS CLEARED			O		O
SIZE, LENGTH AND LOCATIONS OF WELDS			P		P
WELDS MEET VISUAL ACCEPTANCE CRITERIA					
• CRACK PROPAGATION					
• WELD/BASE-METAL FUSION					
• CRATER CROSS SECTION			P		P
• WELD PROFILES					
• WELD SIZE					
• UNDERCUT					
• POROSITY					
ARC STRIKES			P		P
K-AREA (WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 INCHES OF THE WELD)			P		P
WELD ACCESS HOLES IN ROLLED AND BUILT-UP HEAVY SHAPES (SEE AISC 360 A3.1C) AND BUILT-UP HEAVY SHAPES (SEE AISC SECTION A3.1d) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.			P		P
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)			P		P
REPAIR ACTIVITIES			P		P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER			P		P
NO PROHIBITED WELDS HAVE BEEN ADDED WITH APPROVAL OF THE EOR			O		O
NONDESTRUCTIVE TESTING (NDT) – ALL FULL PENETRATION WELDS SHALL BE TESTING UTILIZING NDT AND DOCUMENTED AS REQUIRED BY CHAPTER AISC 360 CHAPTER N AND AWS D1.1			P		P
<b>INSPECTION TASK PRIOR TO BOLTING</b>			QC		QA
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS.			O		P
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS			O		O
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)			O		O
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL			O		O
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED MEET APPLICABLE REQUIREMENTS.			O		O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENT FOR FASTENER ASSEMBLIES AND METHODS USED.			P		O
PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS.			O		O
<b>INSPECTION DURING BOLTING:</b>			QC		QA
FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS ARE POSITIONED AS REQUIRED.			O		O
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRE-TENSIONING OPERATION.			O		O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.			O		O
FASTENERS ARE PRE-TENSIONED IN ACCORDANCE THE RCSC SPECIFICATION PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TO TOWARDS THE FREE EDGES.			O		O
<b>INSPECTION AFTER BOLTING:</b>			QC		QA
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS			P		P
<b>OTHER ITEMS:</b>			QC		QA
VISUALLY INSPECT GALVANIZED STRUCTURAL STEEL MEMBERS AND EXPOSED CORNERS OF RECTANGULAR HSS FOR CRACKS SUBSEQUENT TO GALVANIZING. CRACKS SHALL BE REPAIRED OR THE MEMBER REJECTED.			O		O
INSPECT THE FABRICATED STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE SHOP DRAWINGS AND CONTRACT DRAWINGS (FABRICATOR'S QC). THIS INCLUDES ITEMS SUCH AS THE CORRECT APPLICATION OF SHOP JOINT DETAILS AT EACH CONNECTION.			O		-
INSPECT THE ERECTED STEEL FRAME TO VERIFY COMPLIANCE THE FIELD INSTALLED DETAILS ON THE ERECTION DRAWINGS AND CONTRACT DRAWINGS (ERECTOR'S QC). THIS INCLUDES ITEMS SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND CORRECT APPLICATION OF FIELD JOINT DETAILS AT EACH CONNECTION.			O		-
INSPECTION OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. AT A MINIMUM, INSPECT DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD AND EMBEDMENT INTO CONCRETE PRIOR TO PLACEMENT OF CONCRETE			-		O
INSPECT THE FABRICATED STEEL AND ERECTED STEEL FRAME AS APPLICABLE TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS. THIS INCLUDES SUCH ITEMS AS BRACES, STIFFENERS, MEMBER LOCATIONS AND THE CORRECT APPLICATION OF JOINT DETAILS AT EACH CONNECTION. THE ACCEPTANCE OR REJECTION OF JOINT DETAILS AND THE CORRECT APPLICATION OF THE JOINT DETAILS SHALL BE DOCUMENTED.			-		O
MATERIAL VERIFICATION INCLUDING, ALL IDENTIFICATION MARKINGS CONFORM TO AISC 360 AND OTHER ASTM STANDARDS NOTED IN CODE AND CONTRACT AND ERECTION DRAWINGS.			O		O
VERIFY ALL MATERIAL INCLUDES MANUFACTURER'S CERTIFIED TEST REPORTS.			O		O
VERIFY THAT ALL IDENTIFICATION MARKINGS CONFORM TO ASTM STANDARDS SPECIFIED IN THE CONSTRUCTION DOCUMENTS, ERECTION DRAWINGS, AND REFERENCED CODES.			P		O

## Required Special Inspections and Tests of Concrete Construction

- SPECIAL INSPECTIONS FOR STRUCTURAL CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318 AND IBC.
- SPECIAL INSPECTIONS OF WELDING AND QUALIFICATIONS OF SI'S FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.4 FOR SPECIATION INSPECTION AND OF AWS D1.4 FOR SI QUALIFICATION.

VERIFICATION AND INSPECTION TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
INSPECT REINFORCEMENT, INCLUDING REBARS AND PRE-STRESSING TENDONS AND VERIFY PLACEMENT	-	X	ACI 318: Ch. 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	-
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS	X	-	ACI 318: 17.8.2.4	-

A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATION TO RESIST SUSTAINED TENSION LOADS.	-	X	ACI 318: 17.8.2	
B. MECHANICAL ANCHORS NOT DEFINED IN A				
VERIFYING USE OF REQUIRED DESIGN MIX	-	X	ACI 318: Ch.19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	-	ASTM C 172 ASTM C 31 ACI 318: 26.4.5, 26.12	1908.10
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 26.4.7-26.4.9	1908.9
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.		X	ACI 318: 26.10.2	-
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X	ACI 318: 26.10.1(b)	

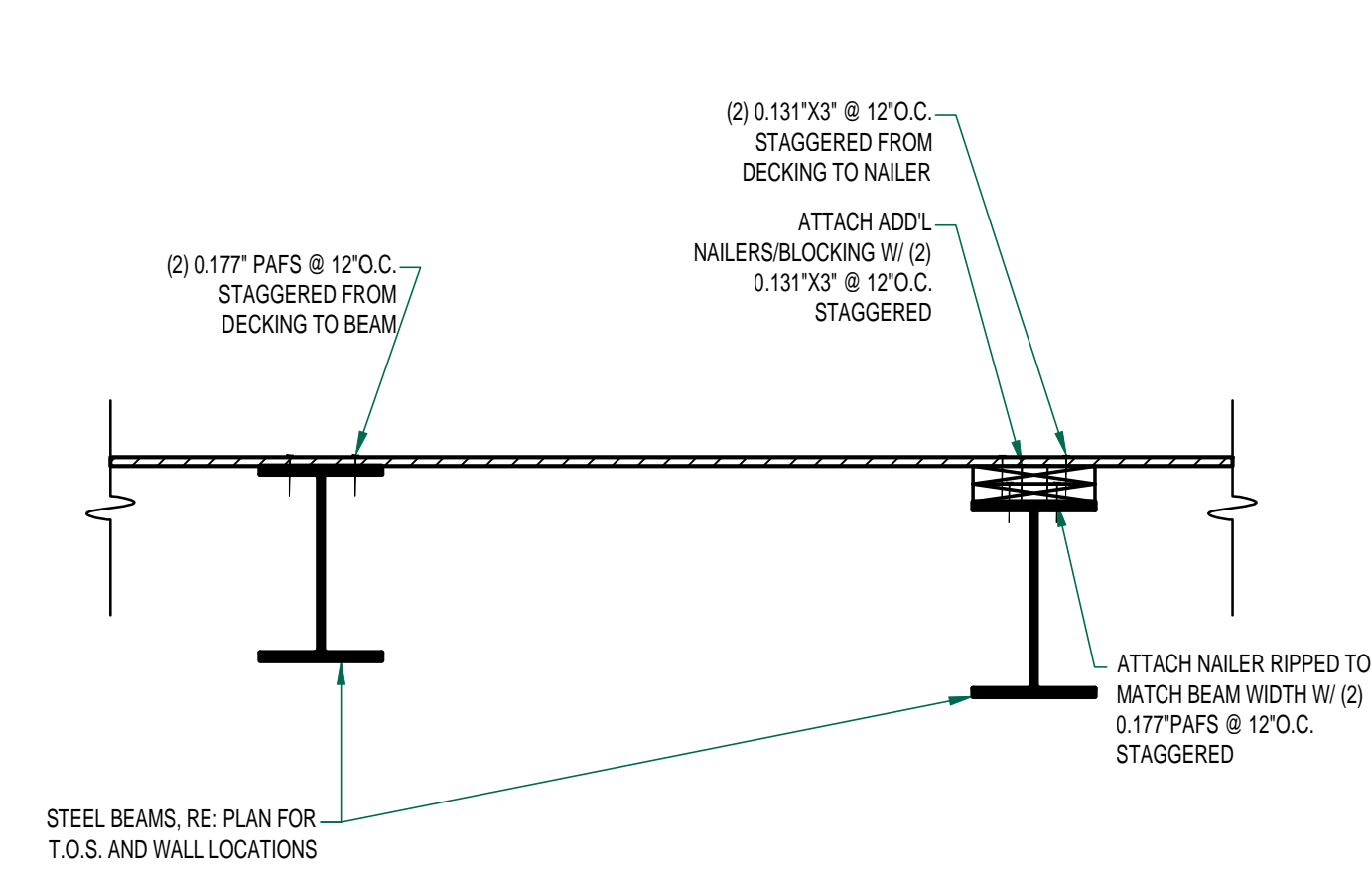
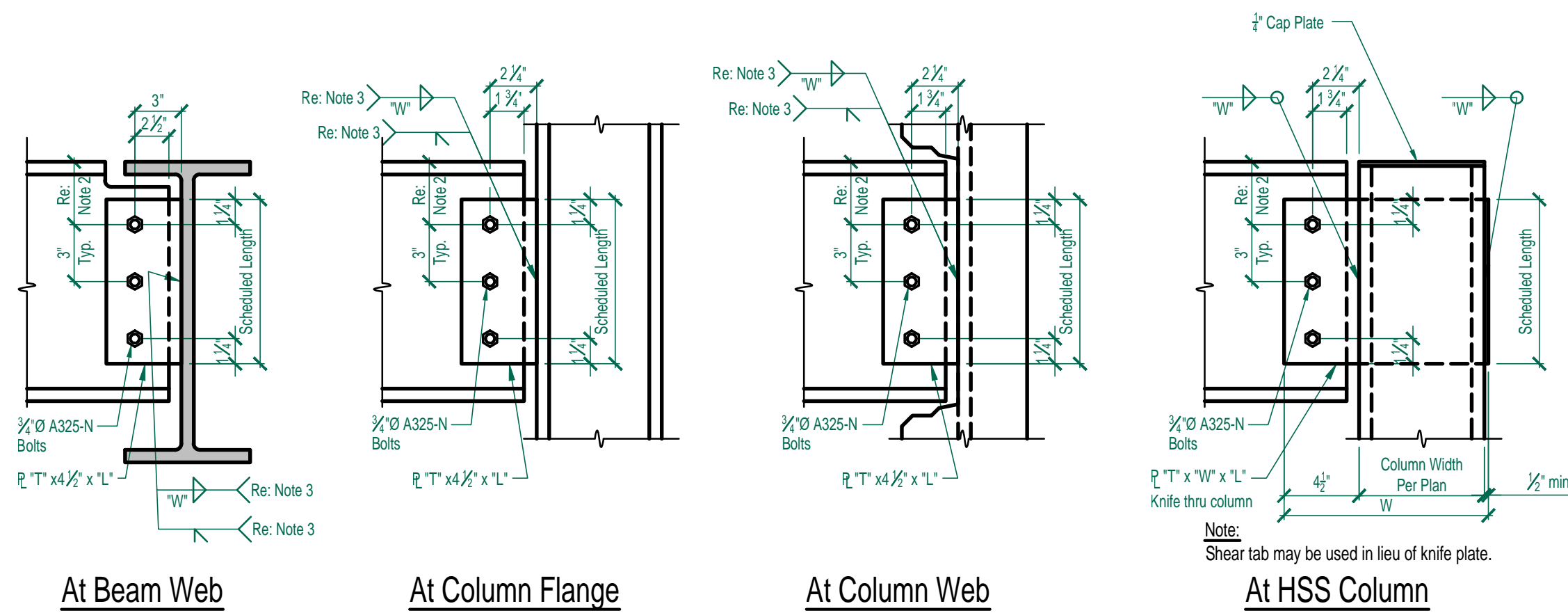
## Required Verification and Inspection of Structural Wood Construction

- SPECIAL INSPECTIONS OF WOOD FRAMING SHALL BE PERFORMED IN ACCORDANCE WITH THE IBC ENTIRELY.
- SPECIAL INSPECTIONS OF PREFABRICATED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES SHALL BE IN ACCORDANCE WITH THE NOTED ABOVE AND SECTION 1704.2.5 OF THE IBC.

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
DIAPHRAGMS:		
1. INSPECT WOOD STRUCTURAL PANEL SHEATHING TO ASCERTAIN WHETHER OR NOT IT IS OF THE GRADE AND THICKNESS SHOWN ON THE CONSTRUCTION DOCUMENTS.		X
2. VERIFY THE NOMINAL SIZE OF THE FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAIL DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THAT THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS IS IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.		X
VERIFY THAT THE NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAIL OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THAT THE SPACING BETWEEN FASTENERS IN EACH LINE AT THE EDGE MARGINS IS IN ACCORDANCE WITH THE DRAWINGS.		X
INSPECTION OF FIELD GLUING OPERATION OF ELEMENTS OF LATERAL FORCE (WIND OR SEISMIC) RESISTING SYSTEM.	X	
INSPECTION OF NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE LATERAL (WIND OR SEISMIC) FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES AND HOLD-DOWNS.		X
INSPECT ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS.		X
INSPECT EXTERIOR WALL COVERING AND WALL CONNECTION TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING.		
MATERIAL VERIFICATION OF CONNECTORS AND STRUCTURAL LUMBER THAT COMPLY WITH DESIGN DRAWINGS AND REFERENCED SPECIFICATIONS.		X
VERIFY THAT STUDS, PLATES, TRUSSES, BLOCKING AND OTHER STRUCTURAL MEMBER, ARE IN PLACE, PROPERLY SPACED AND CONNECTED AS SHOWN ON DRAWINGS		X
INSPECT WOOD AND GYPSUM SHEATHING TO ASCERTAIN WHETHER IT IS OF THE GRADE AND THICKNESS AS SHOWN ON THE CONTRACT DRAWINGS.		X

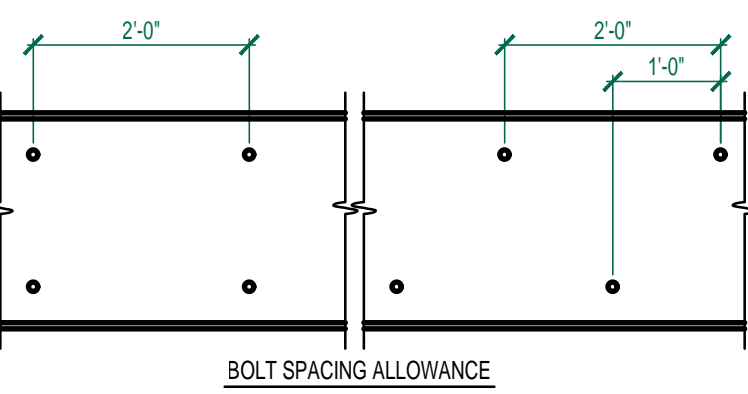
Shear Tab Connection Schedule					Fillet Weld	Capacity
Beam Size	Plate Length "L"	Plate Thickness "T"	# of Bolts "n"	Bolt Ø and Type	Size, in.	Kips
W 8	6"	5/16"	2	3/4"Ø A325-N	1/4	19.8
W 10	6"	5/16"	2	3/4"Ø A325-N	1/4	21.2
W 12	9"	5/16"	3	3/4"Ø A325-N	1/4	31.8
W 14	9"	5/16"	3	3/4"Ø A325-N	1/4	31.8
W 16	12"	5/16"	4	3/4"Ø A325-N	1/4	42.4
W 18	12"	5/16"	4	3/4"Ø A325-N	1/4	42.4
W 21	15"	5/16"	5	3/4"Ø A325-N	1/4	53.0
W 24	18"	5/16"	6	3/4"Ø A325-N	1/4	63.6
W 27	21"	5/16"	7	3/4"Ø A325-N	1/4	74.2
W 30	24"	3/8"	8	3/4"Ø A325-N	5/16	84.8
W 33 <sup>ø</sup>	27"	7/16"	9	3/4"Ø A325-N	3/8	95.4
W 36 <sup>ø</sup>	30"	7/16"	10	3/4"Ø A325-N	3/8	103.2

- Notes:
- Detail applies to all simply supported beams unless specific details for an alternate connection are provided.
  - "k" + 1 1/2" min. - "k" = Per AISC Tables. Distance from outer face of flange to web toe of fillet of rolled shape or equivalent distance on welded section, in.
  - If angle of framing exceeds 30° weld "W" shall be full open.
  - Capacity shown is for service load. To convert to a factored load capacity, multiply the service load capacity shown by 1.5
  - Support thickness shall not be less than 5/16".

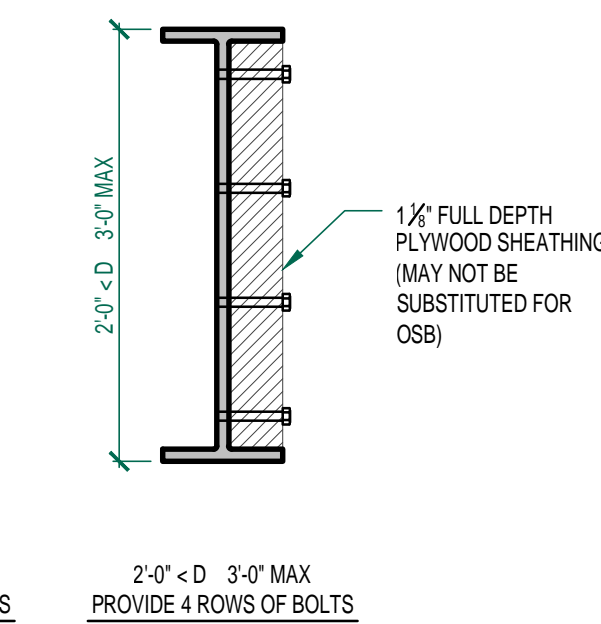
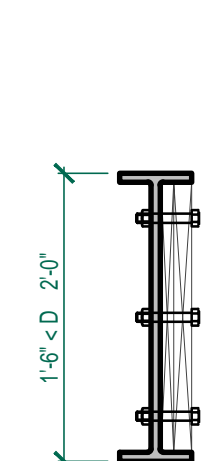
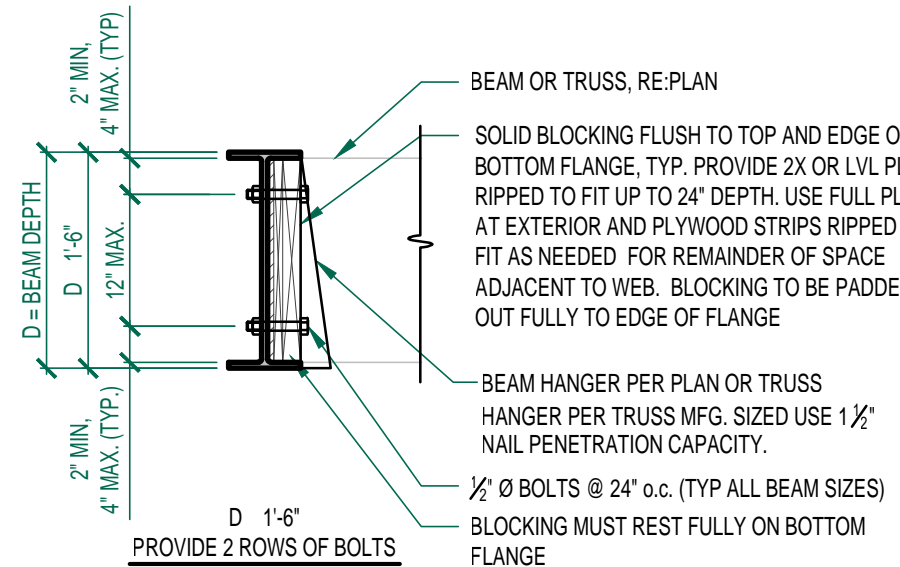


### 1 Standard Shear Tab Connection Detail and Schedule

Scale: None



- NOTE:
- TRUSS BLOCKING AND ASSOCIATED HOLES MAY BE OMITTED IF NOT BEING USED FOR ANY FACE MOUNTED CONNECTION BY BEAM, TRUSS, BRACING, ETC FOR TOP FLANGE HANGERS THAT DO NOT REQUIRE ANY FACE NAILING.
  - COORDINATE EXACT BOLT HOLE LOCATIONS WITH BEAM/TRUSS LOCATIONS TO AVOID FOULING
  - PROVIDE BLOCKING BOTH SIDES OF WEB AS REQUIRED WHERE APPLICABLE.
  - BLOCKING TO BE FRTW IN TYPE III CONSTRUCTION IN PLANE OF EXTERIOR WALL ABOVE OR BELOW.



### 3 Typical Steel Beam Blocking Detail

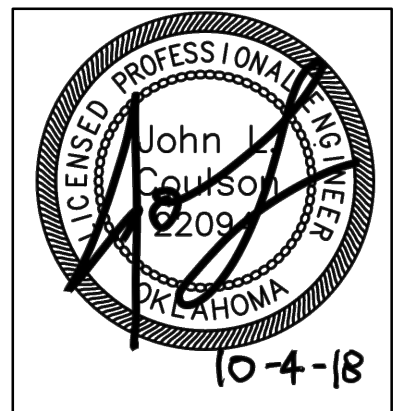
Scale: None

### 2 Typical Steel Beam Framing Attachment

Scale: None

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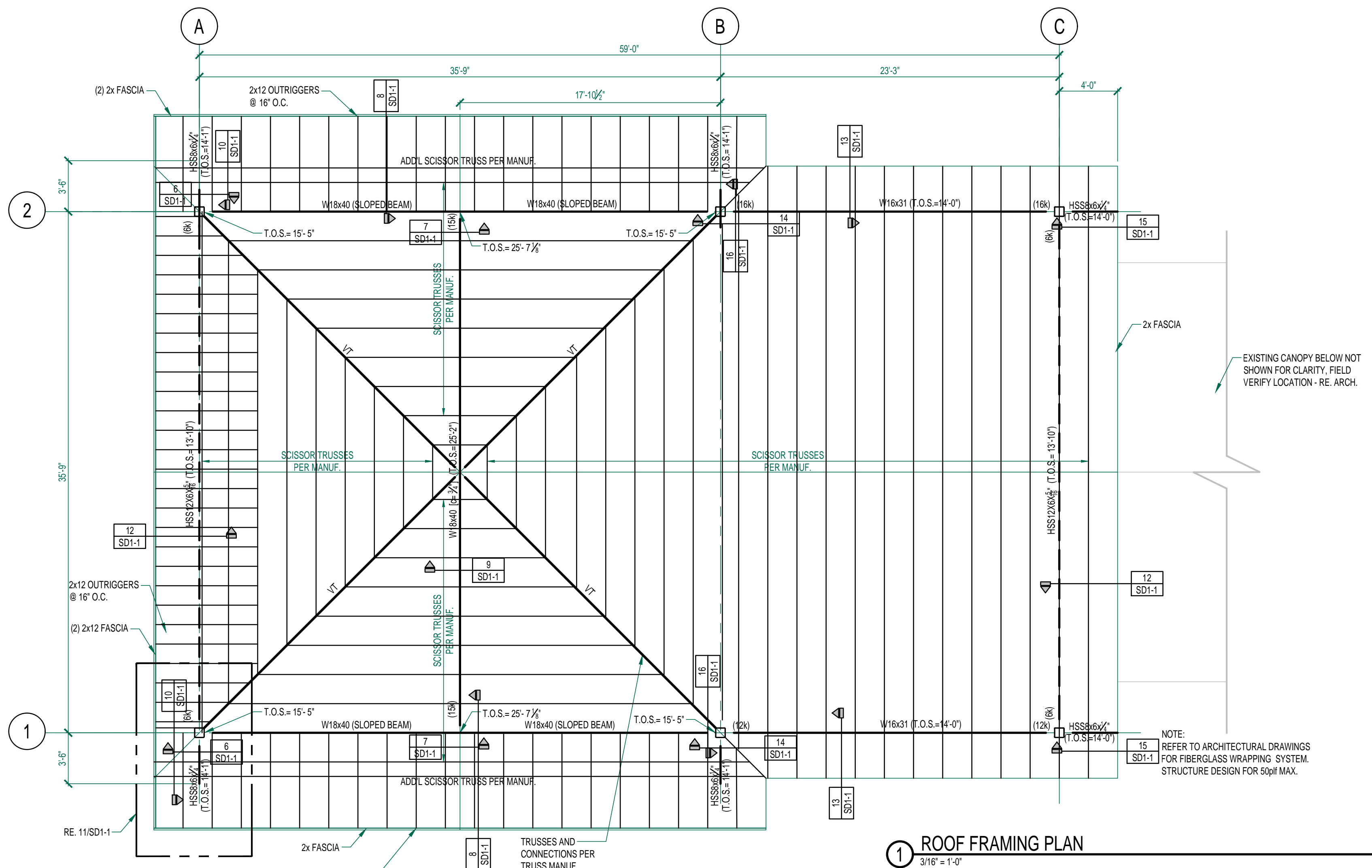
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Fax (281) 894-8943  
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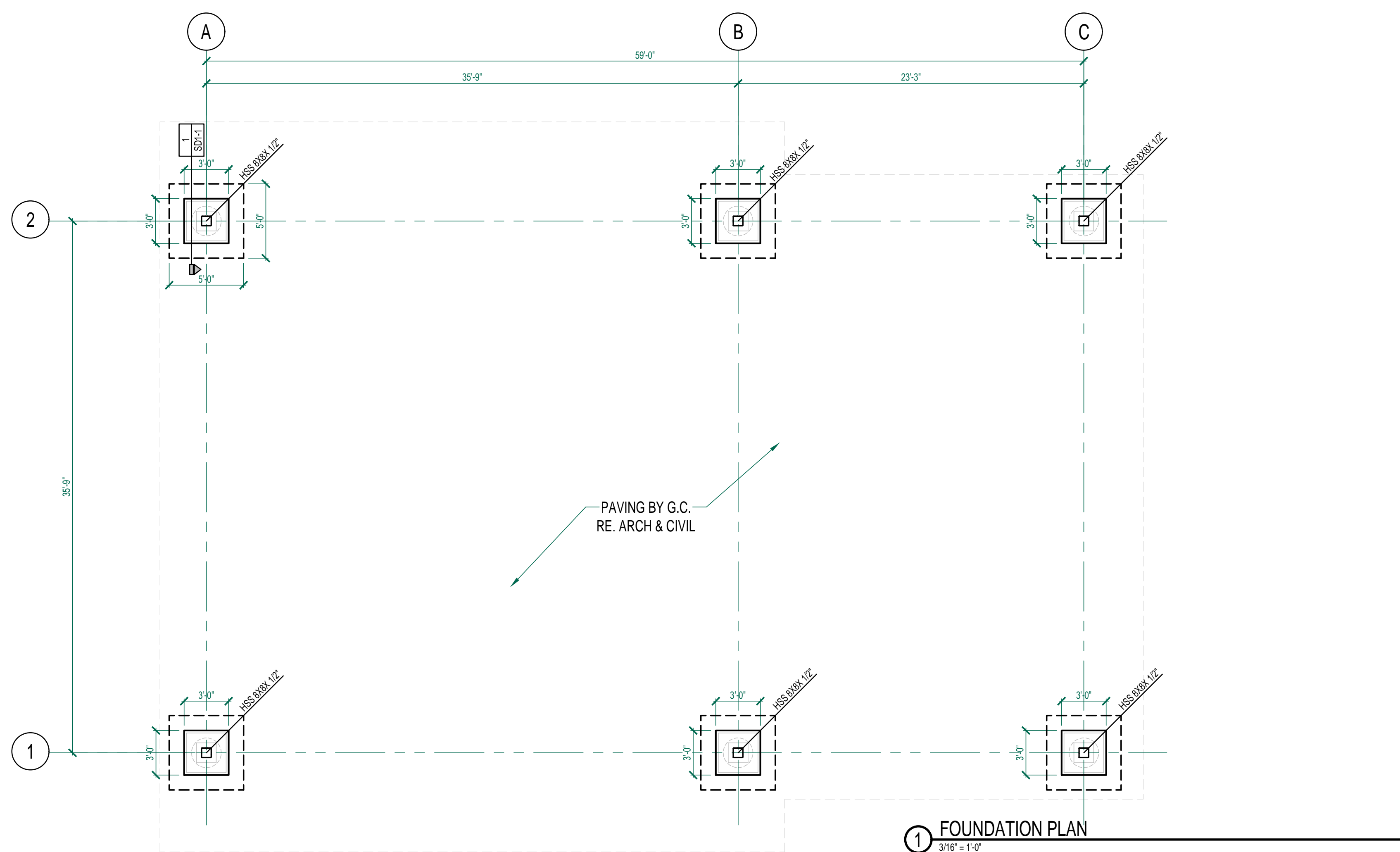
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STANDARD STRUCTURAL STEEL DETAILS

10.05.18  
Construction Documents



1 ROOF FRAMING PLAN  
3/16" = 1'-0"



1 FOUNDATION PLAN  
3/16" = 1'-0"

STEEL FRAMING LEGEND			
WEIGHT (LBS) PER FOOT	TOP OF STEEL RELATIVE TO PLATE HEIGHT (+18" U.N.O.)		
NOMINAL DEPTH	AISC SHAPE		
		UNFACTORED END REACTION	
(24K)	W18 X 40 (+18)	(24K)	

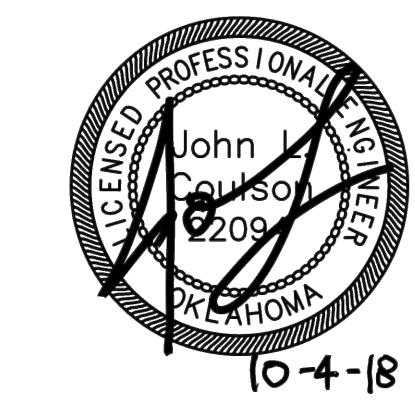
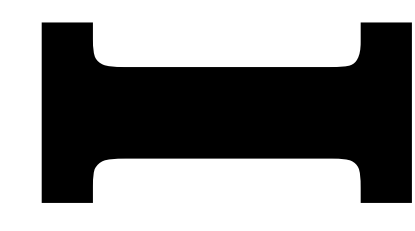
DECKING ATTACHMENT SCHEDULE				
LOCATION	PANEL EDGE BLOCKING	NAIL SIZE OPTION	BOUNDARY NAILING	FIELD NAILING
ROOFS	UNBLOCKED	8d / 0.131" x 2 1/2"	6" O.C.	6" O.C.

- NOTES:
1. NAIL LENGTH CHOICE MUST PROVIDE A MINIMUM PENETRATION OF 1-3/4" INTO ROOF FRAMING MEMBERS AND 1-1/2" INTO FLOOR FRAMING MEMBER. (SUBTRACT THICKNESS OF DECKING USED FROM NAIL LENGTH.)
  2. ALL BLOCKED DIAPHRAGMS TO HAVE ALL PANEL EDGES BLOCKED W/ MIN. 2x4 MATERIAL AND NAILED PER BOUNDARY NAILING REQUIREMENT.
  3. 'BOUNDARY NAILING' REFERS TO NAILING REQUIRED ALONG ALL THE EDGES OF EACH DECKING PANEL. ALSO SEE FRAMING DETAILS FOR ADDITIONAL LOCATIONS THAT REQUIRE BOUNDARY NAILING.
  4. 'FIELD NAILING' REFERS TO NAILING REQUIRED ALONG ALL INTERMEDIATE SUPPORTS UNDER EACH DECKING PANEL SHEET.
  5. CUT NAIL SPACING IN HALF AT OVERHANGS AND WITHIN ASCE ZONE 3 (CORNERS).
  6. ADDITIONALLY GLUE DECKING AS REQUIRED BY ARCHITECTURAL DRAWINGS.

- FOUNDATION PLAN NOTES:
1. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION OR PREPARATION OF SHOP DRAWINGS.
  2. ALL FOOTING BEARING SURFACES SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
  3. ELEVATIONS SHOWN ARE WITH RESPECT TO FINISHED FLOOR (0'-0") PER ARCH.
  4. ALL FOOTINGS SHALL BEAR AT -2'-6" BELOW EXISTING GRADE OR AT ADJACENT FOUNDATION BEARING ELEVATION; WHICHEVER IS GREATER.
  5. ALL COLUMNS SHALL BE SUPPORTED BY ISOLATED FOOTINGS. ISOLATED FOOTINGS SHALL BE CENTERED BELOW COLUMNS.

- FRAMING PLAN NOTES:
1. ALL ELEVATIONS SHOWN ARE REFERENCED TO EXISTING FINISHED FLOOR ELEVATION (0'-0"); RE: ARCH.
  2. VERIFY TOP OF STEEL, SLOPES, DEPRESSIONS, AND DRAINS WITH ARCHITECTURAL DRAWINGS & MEP PRIOR TO CONSTRUCTION.
  3. ALL BEAM AND GIRDER CONNECTIONS (EXCEPT MOMENT CONNECTIONS) SHALL BE STANDARD AISC FRAMED BEAM CONNECTIONS; RE: STANDARDS.
  4. ALL WOOD MEMBERS SHALL BE FRTW.
  5. RE: DECKING ATTACHMENT SCHEDULE FOR WOOD DECK ATTACHMENT INFORMATION.

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FOUNDATION & ROOF FRAMING PLAN

10.05.18  
Construction Documents

**S1-0**  
SCALE: 1/8" = 1'-0"  
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