

REPAIRS TO ROOF AND SKYLIGHT
AVCRAD BUILDING CORROSION CONTROL
SPRINGFIELD, MISSOURI

**SAPP
DESIGN
ARCHITECTS**

OWNER: STATE OF MISSOURI
MIKE KEHOE, GOVERNOR

MISSOURI NATIONAL GUARD
OFFICE OF THE ADJUTANT GENERAL
FACILITIES MANAGEMENT OFFICE

PROJECT
MANAGEMENT: MISSOURI NATIONAL GUARD

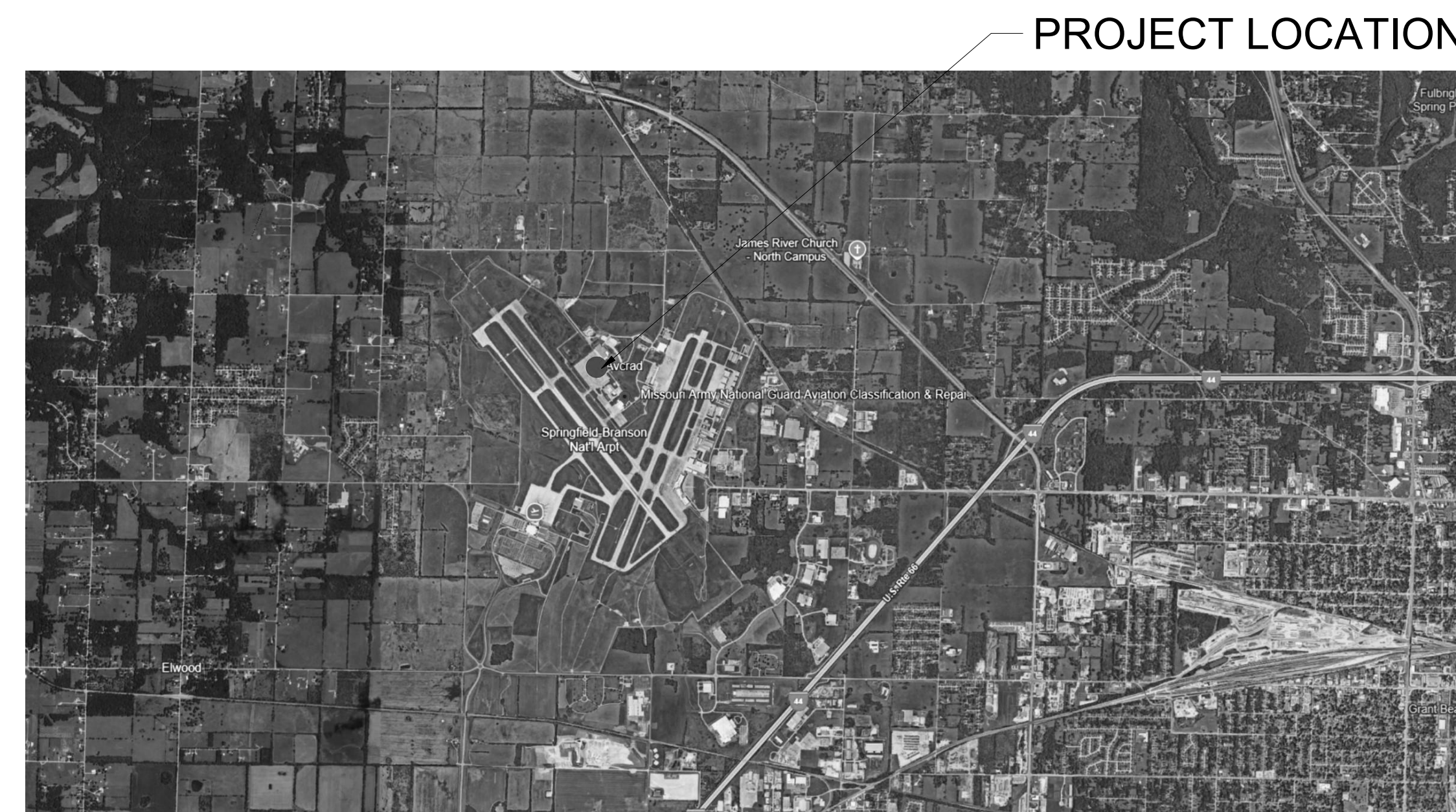
PROJECT NUMBER: T2527-01

SITE NUMBER: 6270
FACILITY NUMBER: 8136270007

DESIGNER: ARCHITECT OF RECORD
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STRUCTURAL STEEL NOTES

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SECTIONS:
 - W AND WT SHAPES - A992 OR A572 GR 50
 - HP, H, AND ST SHAPES - A36
 - ANGLES, CHANNELS, PLATES AND BAR STOCK - A36
 - STEEL PIPE - A53 GR B OR A500 GR.B, Fy=42ksi
 - STEEL TUBING - A500 GR.B, Fy=48ksi
 - ANCHOR BOLTS - ASTM F1554, GRADE 36
 - STEEL BOLTS - ASTM F1554, GRADE 36
 - STEEL NUTS - ASTM F1554, GRADE 36
 - STEEL WELDING - AWS D1.1
- DETAILS OUTLINE BASIC CONNECTION TYPES. BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS NOT DETAILED IN DRAWINGS SHALL BE SIZED BY STEEL DETAILER AS STANDARD AISC, TYPE 2. BEARING CONNECTIONS CAPABLE OF SUPPORTING REACTIONS DEVELOPED BY MAXIMUM UNIFORM LOAD CAPACITY ON A SIMPLE SPAN FOR BEAM AND BEAM SPAN GIVEN.
- STEEL SHALL BE DETAILED, FABRICATED AND ERECTED ACCORDING TO ALL APPLICABLE SECTIONS OF THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION, ASD.
- FOR BOLTED CONNECTIONS OF BEAMS AND COLUMNS USE SNUG TIGHT A325 OR A490 BOLTS, SIZE AS REQUIRED. BOLTS FOR SLIP-CRITICAL CONNECTIONS NOTED ON PLAN SHALL BE LOAD INDICATOR BOLTS (LIB) OR SHALL BE EQUIPPED WITH LOAD INDICATOR WASHERS WHICH PROVIDE AN EASY MEANS OF VISUALLY VERIFYING PROPER BOLT TENSION. WHERE LOAD INDICATOR BOLTS CANNOT BE USED DUE TO SPACE RESTRICTIONS FOR OTHER REASONS, BOLTS MAY BE TIGHTENED USING THE TURN OF THE NUT METHOD AS OUTLINED IN THE AISC "STEEL CONSTRUCTION MANUAL".
- HEAVY LOADS THAT EXCEED 75% OF ALLOWABLE LIVE LOADS SHOWN ON THE PLANS, FOR TEMPORARY EQUIPMENT, CONSTRUCTION MATERIALS, OR OTHER LOADS NOT SHOWN IN THE CONTRACT DOCUMENTS, SHALL NOT BE PLACED OR SUPPORTED FROM ELEVATED STRUCTURE WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
- PERFORM ALL WELDING WITH E70 XX ELECTRODE, UNLESS NOTED OTHERWISE OR UNLESS REQUIRED FOR SPECIAL CONNECTIONS.
- WELDING OF STRUCTURAL MEMBERS SHALL BE PERFORMED BY CERTIFIED WELDERS AND WELDING SHALL BE IN ACCORDANCE WITH "STRUCTURAL WELDING CODE" OF THE AMERICAN WELDING SOCIETY (AWS D1.1).
- INSPECTION OF STRUCTURAL STEEL CONNECTIONS SHALL BE PERFORMED BY A QUALIFIED INSPECTOR, APPROVED BY THE ENGINEER, RETAINED BY THE CONTRACTOR, AND APPROVED BY THE OWNER. INSPECTOR QUALIFICATION SHALL BE BASED ON COMPLIANCE WITH APPROPRIATE PROVISIONS OF THE AWS CODE. D1.1. INSPECTION SHALL INCLUDE VISUAL INSPECTION OF ALL COMPLETED STRUCTURAL WELDED CONNECTIONS. THE INSPECTING AGENCY SHALL BE NOTIFIED BEFORE ANY WELDING WORK BEGINS AND SHALL BE RESPONSIBLE FOR VERIFICATION OF WELDERS CERTIFICATIONS, INSPECTION OF CONNECTIONS BEFORE WELDING BEGINS, AND INSPECTION DURING WELDING UNTIL THE INSPECTOR IS SATISFIED THAT THE WELDING PROCESS IS BEING PERFORMED PER AWS REQUIREMENTS.
- PAINTED SURFACES MAY REQUIRE FIELD PAINTING TO TOUCH UP ABRASIONS OF THE SHOP COAT OR OTHER DAMAGE TO THE PAINTED SURFACE. CONTRACTOR SHALL COORDINATE.
- FIELD CUTTING, DRILLING OR OTHER MODIFICATION OF STRUCTURAL STEEL COMPONENTS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER. WHERE BEAM PENETRATIONS CANNOT BE AVOIDED OR WHERE CUTTING IS REQUIRED, CONTRACTOR SHALL SUBMIT TO THE ENGINEER ALL PERTINENT INFORMATION INCLUDING PENETRATION SHAPE, SIZE, LOCATION, AND METHOD OF CUTTING THE OPENINGS.

EXISTING DIMENSIONS & CONDITIONS

- THIS PROJECT CONSISTS OF AN ADDITION AND/OR MODIFICATIONS TO AN EXISTING BUILDING. INFORMATION ON EXISTING CONDITIONS, WHEN AVAILABLE, HAS BEEN TAKEN FROM THE ORIGINAL DESIGN DRAWINGS. THESE DRAWINGS WERE ASSUMED TO BE "AS-BUILT" DRAWINGS. SOME EXISTING CONDITIONS ARE INACCESSIBLE OR HIDDEN FROM VIEW AND CONDITIONS MAY BE DISCOVERED DURING CONSTRUCTION THAT VARY FROM THE ANTICIPATED CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING DIMENSIONS SHOWN ON THESE DRAWINGS AND TO VERIFY THE LOCATION OF ALL FRAMING MEMBERS AND ANY OBSTRUCTIONS WHICH WILL AFFECT THE WORK. AS A PART OF THE WORK, THE CONTRACTOR SHALL PREPARE AN ACCURATE FIELD SURVEY OF THE LOCATION OF ALL STRUCTURAL MEMBERS AND ANY OBSTRUCTIONS IN THE WORK AREA PRIOR TO BEGINNING SHOP DRAWINGS AND CONSTRUCTION. THIS SURVEY SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER WITH ANY VARIANCES NOTED.
- CONTRACTOR SHALL NOTIFY ENGINEER/ARCHITECT OF ANY DETERIORATION, CORROSION, CUTTING/NOTCHING OF MEMBERS, SIGNS OF WEAR, OR OTHER DAMAGE WHICH MAY COMPROMISE THE STRUCTURE. THESE CONDITIONS MAY NOT BE APPARENT UNTIL THE CONSTRUCTION WORK IS UNDERWAY.

STEEL DECK NOTES

- TYPICAL STEEL ROOF DECK SHALL BE 6" ACOUSTICAL DEEP-DEK, 18 GAGE, UNO. THE FINISH ON STEEL ROOF DECKING MATERIAL SHALL BE GALVANIZED 580 AND PRIME PAINTED GRAY BOTTOM, UNO.
 - ANCHOR ROOF DECK TO SUPPORTS W/ 3/4" PUDDLE WELDS @ 12" O.C. IN A 1/2" FASTENING PATTERN PER DETAIL 150.0. SIDELAP FASTENERS SHALL BE 1 1/2" LONG SEAM WELDS BY 3/8" WIDE, WITH A MINIMUM OF 9 WELDED SIDELAP FASTENERS PER SPAN.
 - DECK INSTALLATION, INCLUDING ACOUSTICAL AND ATTACHMENT REQUIREMENTS, SHALL BE IN ACCORDANCE WITH THE DECK MANUFACTURER AND PROJECT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL CONSTRUCTION PRACTICES.
- PROPERTIES OF STEEL DECK SHALL BE COMPUTED USING THE LATEST EDITION OF THE AMERICAN IRON AND STEEL INSTITUTE SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS. METAL DECK SHALL BE CAPABLE OF SUPPORTING THE LOADINGS AS CALLED FOR ON THE DRAWINGS OVER THE SPANS AND SPACINGS SHOWN FOR JOIST AND STEEL FRAMING.
- WHERE STEEL DECK IS PART OF A RATED ASSEMBLY SUPPLY ALL DECK AND COMPONENTS WHICH COMPLY WITH REQUIREMENTS OF UNDERWRITERS LABORATORY FOR EACH TYPE OF ASSEMBLY SPECIFIED. RE: PLANS AND DIVISION 7 OF THE SPECIFICATIONS, WHERE DECK IS TO RECEIVE SPRAY FIREPROOFING, FINISHES SHALL BE COMPATIBLE WITH FIREPROOFING MATERIAL AND COMPLY WITH U.L. ASSEMBLY REQUIREMENTS. BEFORE THE FIREPROOFING MATERIAL IS APPLIED THE DECK SURFACE TO BE TREATED SHALL BE FREE OF RUST, SCALE, OIL OR OTHER CONTAMINANTS OR ELEMENTS WHICH WILL IMPAIR BOND.
- LAYOUT DECK TO HAVE A MINIMUM OF THREE CONTINUOUS SPANS WHERE POSSIBLE. ATTACH TO JOIST AND BEAMS PER DECK ATTACHMENT DETAILS AND NOTES. WHERE DECK RISERS ARE CUT A PENETRATIONS, PROVIDE DECK SUPPORT ANGLES OR DECK STIFFENERS AS REQUIRED.
- WELDING OF STRUCTURAL MEMBERS SHALL BE PERFORMED BY CERTIFIED WELDERS AND AT ALL LOCATIONS WHERE DECK CHANGES DIRECTION, REFER TO PLANS FOR LOCATIONS WHERE DECK CHANGES DIRECTIONS BASED ON THE FRAMING LAYOUT.
- PROVIDE FILLERS AS REQUIRED TO SUPPORT DECK WHERE DECK IS SUPPORTED BY FRAMING. SUCH FILLERS ARE REQUIRED AT WALLS WHICH ARE PARALLEL TO JOISTS AND OTHER SIMILAR SITUATIONS.
- NOMINAL DIAMETER AND SMALLER PIPES MAY PENETRATE THE ROOF DECK WITHOUT THE ANGLE FRAME INDICATED IN "H" FRAME NOTE ON MISCELLANEOUS STEEL NOTES. SUPPORT FOR WEIGHT OF THE PIPE MUST BE PROVIDED BY UNISTRUT OR OTHER APPROVED FRAMING AS THE DECK IS NOT DESIGNED TO SUPPORT THE WEIGHT OF THE PIPE OR TO RESTRAIN LATERAL MOVEMENT OF THE PIPE.
- FINISH ON METAL DECK THAT ARE TO RECEIVE SPRAYED ON FIREPROOFING SHALL BE COMPATIBLE WITH THE FIREPROOFING MATERIAL.

MISCELLANEOUS STEEL NOTES

- PROVIDE AN ANGLE "H" FRAME BELOW ALL ROOF MOUNTED MECHANICAL EQUIPMENT INCLUDING ROOF DRAINS PER TYPICAL DETAIL, UNLESS NOTED OTHERWISE.
- REFER TO MEP/HVAC DRAWINGS FOR LOCATIONS OF ROOF OR FLOOR MOUNTED MECHANICAL EQUIPMENT. CONTRACTOR SHALL COORDINATE MEP/HVAC UNIT LOCATIONS AND VERIFY CONFORMANCE WITH STRUCTURAL FRAMING PLANS.
- PROVIDE ALL EMBED PLATES, LEDGERS, L-INLETS, AND BRACKETS AS REQUIRED FOR A COMPLETE SYSTEM AS OUTLINED IN THE CONTRACT DOCUMENTS.
- REFER TO STRUCTURAL STEEL NOTES FOR REQUIRED ASTM DESIGNATIONS FOR VARIOUS STEEL SHAPES AND PLATES AS WELL AS FINISHES, CONNECTION INFORMATION, AND QUALITY CONTROL.
- MECHANICAL CONTRACTOR SHALL DESIGN AND SUPPLY ALL FRAMING AS REQUIRED TO SUPPORT OR SUSPEND EQUIPMENT, DUCTS AND PIPING BETWEEN FRAMING OUTLINED IN THE CONTRACT DOCUMENTS. REFER TO MEP/HVAC DRAWINGS FOR LOCATIONS AND WEIGHTS OF ITEMS TO BE SUPPORTED OR SUSPENDED.

MEANS AND METHODS

- DESIGN LOADINGS AND STRUCTURAL ANALYSIS IS BASED ON CODE PRESCRIBED LOADS FOR THE COMPLETED STRUCTURE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION.
- THIS STRUCTURE IS DESIGNED TO BE STABLE AS A COMPLETE WHOLE. ANY AND ALL TEMPORARY BRACES AND SHORING REQUIRED TO RESIST ALL LOADS DURING CONSTRUCTION SHALL BE DESIGNED AND SUPPLIED BY THE CONTRACTOR.
- HEAVY LOADS THAT EXCEED 75% OF ALLOWABLE LIVE LOADS SHOWN ON THE PLANS, FOR TEMPORARY EQUIPMENT, CONSTRUCTION MATERIALS, OR OTHER LOADS NOT SHOWN IN THE CONTRACT DOCUMENTS, SHALL NOT BE PLACED OR SUPPORTED FROM ELEVATED STRUCTURE WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

STATEMENT OF SPECIAL INSPECTIONS

- SPECIAL INSPECTIONS ARE REQUIRED FOR THIS STRUCTURE IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE FOR THE ITEMS NOTED IN THE TABLE ON THIS SHEET.
- SPECIAL INSPECTIONS TESTING SHALL BE PERFORMED BY A QUALIFIED TESTING LABORATORY PROVIDED AND RETAINED BY THE GENERAL CONTRACTOR AND APPROVED BY THE ENGINEER.
- A LETTER OF SUBSTITUTION COMPLETION SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT BY THE SPECIAL INSPECTION PROVIDER PRIOR TO THE FINAL INSPECTION.

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL	CONTINUOUS	PERIODIC	REFERENCED STANDARD
1. MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK:			
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	—	X	APPLICABLE ASTM MATERIAL STANDARDS
B. MANUFACTURER'S CERTIFIED TEST REPORTS	—	X	
2. INSPECTION OF WELDING:			
a. COLD-FORMED STEEL DECK:			
a. FLOOR AND ROOF DECK WELDS.	—	X	AWS D1.3
b. REINFORCING STEEL:			
a. VERIFICATION OF WELDABILITY OF REINF STEEL OTHER THAN ASTM A 706.	—	X	
b. REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	—	AWS D1.4 OR ACI 318, SECTION 3.5.2
c. SHEAR REINFORCEMENT.	X	—	
d. OTHER REINFORCING STEEL.	—	X	

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:			
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	—	X	APPLICABLE ASTM MATERIAL SPECIFICATIONS; AISC 360, SECTION A3
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	—	X	
2. INSPECTION OF HIGH-STRENGTH BOLTING:			
A. BEARING-TYPE CONNECTIONS.	—	X	AISC 360, SECTION N5.6
B. SLIP-CRITICAL CONNECTIONS.	X	X	AISC 360, SECTION N5.6, TABLES N5.6-1, 2 & 3
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL:			
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	—	—	ASTM A 6 OR ASTM A 568
B. MANUFACTURER'S CERTIFIED MILL TEST REPORTS.	—	—	ASTM A 6 OR ASTM A 568
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:			
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	—	—	AISC 360, SECTION A3.5
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	—	—	
5. INSPECTION OF WELDING:			
AISC 360 SECTION N5.4, TABLES N5.4-1, 2 & 3			
A. STRUCTURAL STEEL:			
a. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS.	X	—	
b. MULTIPASS FILLET WELDS.	X	—	AWS D1.1
c. SINGLE-PASS FILLET WELDS > 5/16"	X	—	
d. SINGLE-PASS FILLET WELDS ≤ 5/16"	—	X	
e. FLOOR AND ROOF DECK WELDS.	—	X	AWS D1.3
B. REINFORCING STEEL:			
a. VERIFICATION OF WELDABILITY OF REINF STEEL OTHER THAN ASTM A 706.	—	X	AWS D1.4 OR ACI 318: 26.6.4
b. REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS AND SHEAR REINFORCEMENT.	X	—	
c. SHEAR REINFORCEMENT.	X	—	
d. OTHER REINFORCING STEEL.	—	X	
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:			
A. DETAILS SUCH AS BRACING AND STIFFENING.	—	X	AISC 360 SECTION N5.8
B. MEMBER LOCATIONS.	—	—	
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	—	—	

SCHEDULE - SPECIAL INSPECTIONS 2018

ABBREVIATIONS

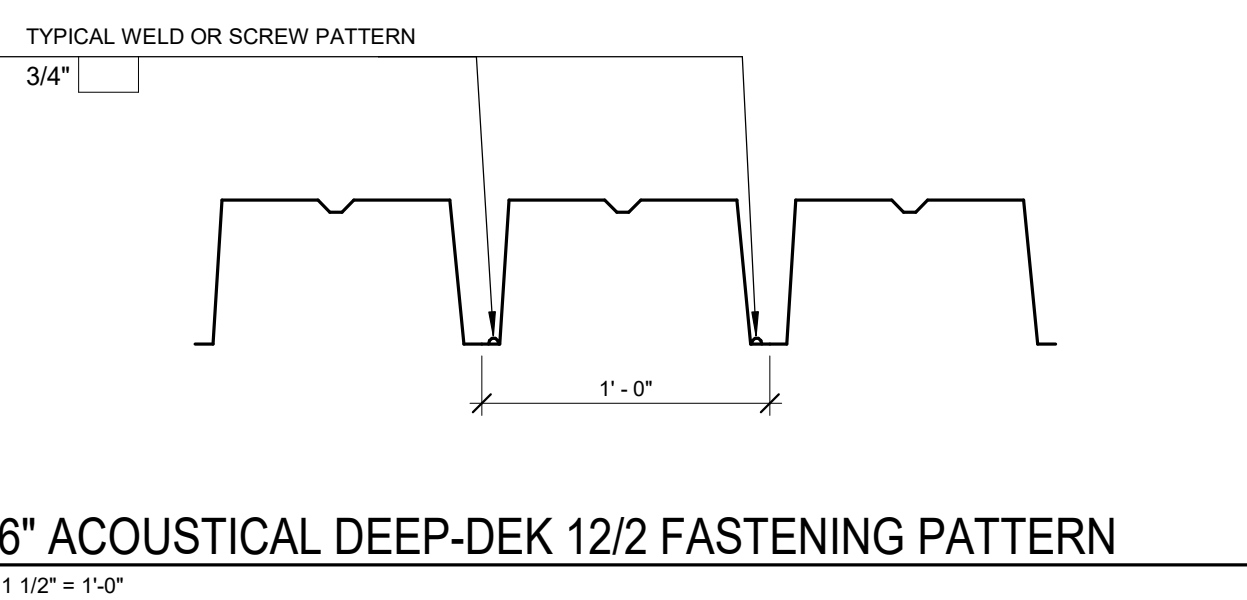
- A.R.= ANCHOR ROD
- ACI= AMERICAN CONCRETE INSTITUTE
- AISC= AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- AISI= AMERICAN IRON AND STEEL INSTITUTE
- ARCH= ARCHITECTURE/ARCHITECT
- ASTM= AMERICAN SOCIETY FOR TESTING AND MATERIALS
- A.W.= AMERICAN WELDING SOCIETY
- BAR= REBAR
- B.O.= BOTTOM OF
- B.O.A.= BACK OF ANGLE
- B.O.F.= BOTTOM OF FOOTING
- B.O.S.= BOTTOM OF STEEL BEARING
- BTM= BOTTOM
- CANT= CANTILEVERED
- C.I.P.= CAST-IN-PLACE
- C.J.P.= COMPLETE JOINT PENETRATION WELD
- CL= CENTERLINE
- CLP= CONCRETE MASONRY UNIT
- COL= COLUMN
- CONC= CONCRETE
- CONN= CONNECTION
- CONT= CONTINUOUS
- D.B.= DEFORMED BAR ANCHOR
- D.B.A.= DECK EDGE DIAMETER
- DL= DEAD LOAD
- DL= DETAIL
- DTL= ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT
- E.= EACH
- E.F.= EACH FACE
- EL= ELEVATION
- EPS= EXPANDED POLYSTYRENE
- EQ.= EQUAL
- E.W.= EACH WAY
- EXT= EXTERIOR
- FC= CONCRETE COMPRESSIVE STRENGTH FINISHED FLOOR
- F.F.= FOUNDATION
- F.O.W.= FACE OF WALL
- F.S.= FINISH
- FTG= FOOTING
- F.V.= FIELD VERIFY
- GAGE / GAUGE= GALVANIZED
- G.B.= GRADE BEAM
- G.C.= GENERAL CONTRACTOR
- H.= HIGH
- H.L.= HIGH & LOW
- H.A.S.= HEADED ANCHOR STUD
- HORIZ= HORIZONTAL
- INT= INTERNATIONAL BUILDING CODE
- INT= INTERIOR
- J.B.= JOIST BEARING
- J.B.E.= JOIST BEARING ELEVATION
- KIP= 1000 POUNDS
- KSI= KIIPS PER SQUARE INCH
- L.= LOW
- L.= LENGTH
- LB= POUNDS
- LSGF= LIGHT-GAGE STEEL FRAMING
- LFH= LONG FACE HORIZONTAL
- LFV= LONG FACE VERTICAL
- LL= LIVE LOAD
- LLH= LONG LEG HORIZONTAL
- LLV= LONG LEG VERTICAL
- LONG= LONGITUDINAL
- L.P.= LAYOUT POINT
- L.V.= LAMINATED VENEER LUMBER
- LWT= LIGHTWEIGHT
- MAX= MAXIMUM
- MECH= MECHANICAL
- MEP= MECHANICAL, ELECTRICAL, PLUMBING
- MFR= MANUFACTURER
- ML= THOUSANDS OF AN INCH
- MIN= MINIMUM
- MISC= MISCELLANEOUS
- MTL= METAL
- N.I.C.= NOT IN CONTRACT
- N.S.= NEAR SIDE
- N.T.S.= NOT TO SCALE
- N.W.= NORMAL WEIGHT
- N.C.= ON CENTER
- O.D.= OUTSIDE DIAMETER
- OPP= OPPOSITE / OPPOSITE HAND
- PAF= POWDER ACTUATED FASTENER
- P.C.F.= POUNDS PER CUBIC FOOT
- PEMB= PRE-ENGINEERED METAL BUILDING
- PLF= POUNDS PER LINEAR FOOT
- PPT= PRESERVATIVE PRESSURE TREATED
- PSF= POUNDS PER SQUARE FOOT
- PSI= POUNDS PER SQUARE INCH
- PT= POST TENSIONED
- REINF= REINFORCING
- REQ= REQUIRE
- RTU= ROOF TOP UNIT
- S.C.= SLIP CRITICAL
- SCH= SCHEDULE
- SDI= STEEL DECK INSTITUTE
- SM= SIMILAR
- SI= STEEL JOIST INSTITUTE
- SL= SNOW LOAD
- S.O.G.= SLAB ON GRADE
- SPECS= SPECIFICATIONS
- STD= STANDARD
- STL= STEEL
- T.= THICKNESS
- T.&B.= TOP AND BOTTOM
- T.O.= TOP OF
- T.O.FTG= TOP OF FOOTING
- T.O.PED= TOP OF PEDESTAL
- T.O.STL= TOP OF STEEL
- T.O.WALL= TOP OF WALL
- TYP= TYPICAL
- UL= ULTIMATE LOAD
- UNO.= UNLESS NOTED OTHERWISE
- VERT= VERTICAL
- VLD= VERTICAL LEG DOWN
- W.= WIDTH
- W.L.= WIND LOAD
- W.P.= WORK POINT
- WWF= WELDED WIRE FABRIC QUANTITY
- Ø= DIAMETER

LOADING TABLE AND CODE INFORMATION

DESIGN CODE	IBC 2018
RISK CATEGORY	
2. DEAD LOADS	IV
COLLATERAL LOADS	
A. TYPICAL ROOF DEAD LOAD	15 PSF
LIVE LOADS	
A. TYPICAL ROOF COLLATERAL LOAD	5 PSF
SNOW LOAD	
A. FLAT ROOF SNOW LOAD w/ RAIN-ON-SNOW (pf)	24 PSF
B. GROUND SNOW LOAD (pg)	20 PSF
C. EXPOSURE FACTOR (Ce)	0.9
D. THERMAL FACTOR (Ci)	1.2
E. IMPORTANCE FACTOR (Is)	1.0
F. DRIFT	PER CODE
WIND LOAD DESIGN CRITERIA	
A. ULTIMATE DESIGN WIND SPEED (Vult)	120 MPH
B. EXPOSURE CATEGORY	C
C. DIRECTIONALITY FACTOR (Kd)	0.85
D. TOPOGRAPHIC FACTOR (Kzt)	1.0
E. INTERNAL PRESSURE COEFFICIENT (GCpi)	+/- 0.18
F. INTERIOR WALLS AND PARTITIONS	5 PSF
SEISMIC LOAD DESIGN CRITERIA	
A. SHORT PERIOD ACCELERATION (SS)	0.18
B. LONG PERIOD ACCELERATION (S1)	0.101
C. SITE CLASS	D
D. SHORT PERIOD RESPONSE (SDS)	0.191
E. LONG PERIOD RESPONSE (SD1)	0.162
F. SEISMIC DESIGN CATEGORY	D
G. IMPORTANCE FACTOR (Ie)	1.5
H. ANALYSIS PROCEDURE	ELF
I. SEISMIC FORCE RESISTING SYSTEM	H
J. RESPONSE MODIFICATION FACTOR (R)	3
K. SYSTEM OVERSTRENGTH FACTOR (O)	3
L. DEFLECTION AMPLIFICATION FACTOR (Cd)	3
M. SEISMIC RESPONSE COEFFICIENT (CS)	0.100

SYMBOL LEGEND

TAG OR SYMBOL	DESCRIPTION
(X)	FOOTING TYPE (SEE SCHEDULE)
(C)	COLUMN TYPE (SEE SCHEDULE)
(B)	BASEPLATE TYPE (SEE COLUMN SCHEDULE AND PLAN)
(S)	SHEARWALL TYPE (SEE SCHEDULE)
(N)	NORTH ARROW (COORDINATE EXACT DIRECTION w/ ARCH AND CIVIL DWGS)
(M)	MOMENT CONNECTION (SEE PLAN AND NOTES)
(CL)	CENTERLINE
(K)	KEYNOTE
(E)	ELEVATION MARKER
(W)	WELD SYMBOL
(P)	PEDESTAL TAG
(R)	REINFORCING BAR
(T)	REVISION TAG
(B)	BRACE MEMBER SYMBOL



**STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR**



BEN C. JENNINGS
PE 2003014987

REPAIRS TO ROOF AND SKYLIGHT

AVCRAD BUILDING CORROSION CONTROL

5250 W DEPOT ROAD
SPRINGFIELD, MO 65802

PROJECT # T2527-01
SITE # 6270
ASSET # 8136270007

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 03/03/2026

CAD FILE: _____
DRAWN BY: KTB
CHECKED BY: BJC
DESIGNED BY: KTB

SHEET TITLE:

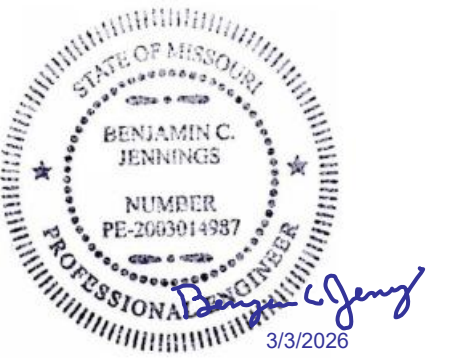
GENERAL NOTES

SHEET NUMBER:

S0.0



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PE 2003014987

REPAIRS TO ROOF AND
SKYLIGHT

AVCRAD BUILDING CORROSION
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5250 W DEPOT ROAD
SPRINGFIELD, MO 65802

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CAD FILE: _____
DRAWN BY: KTB
CHECKED BY: BCJ
DESIGNED BY: KTB

SHEET TITLE:

OVERALL
FRAMING PLAN

SHEET NUMBER:

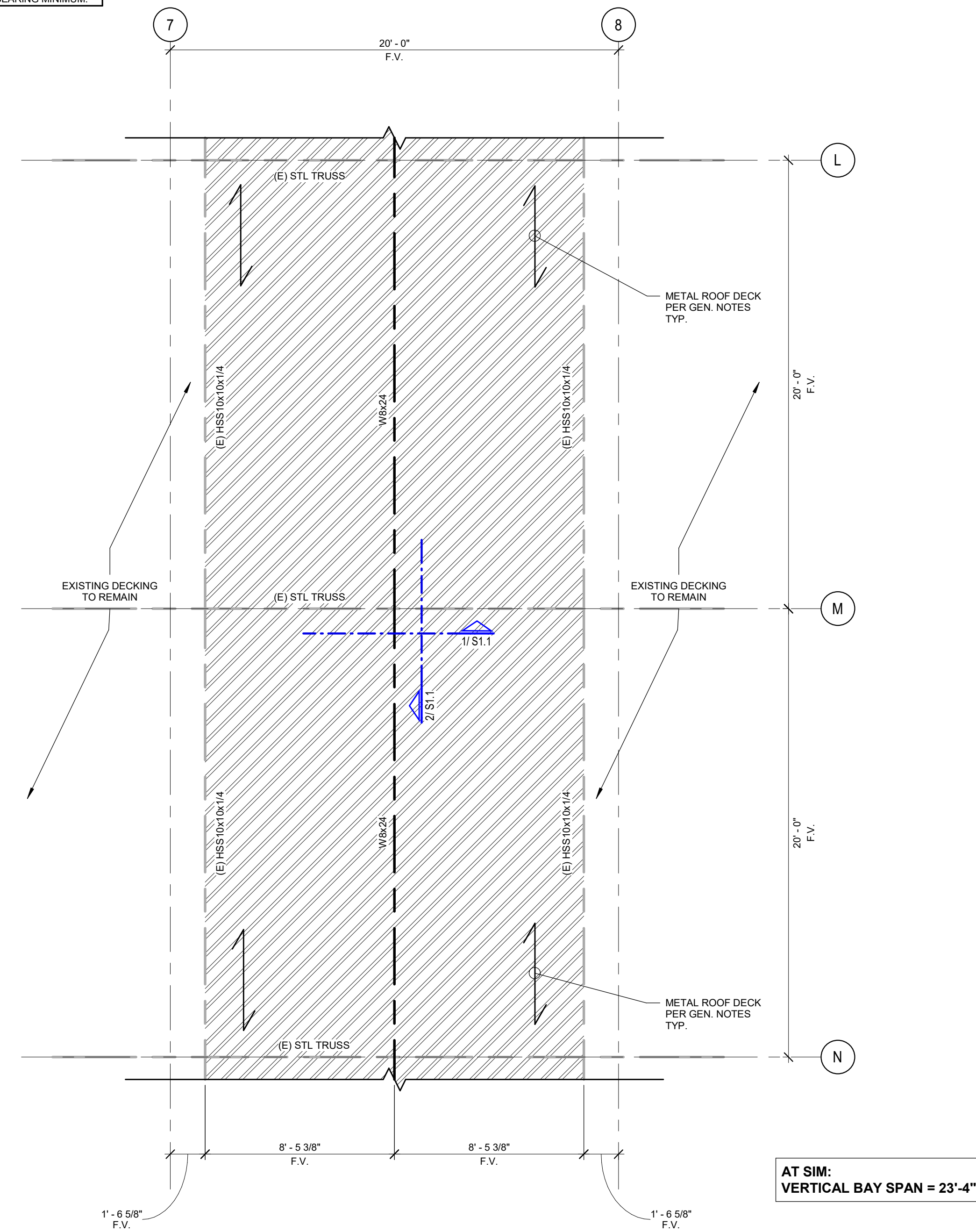
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HATCH LEGEND	
	HATCH INDICATES METAL ROOF DECK INFILL PER GENERAL NOTES

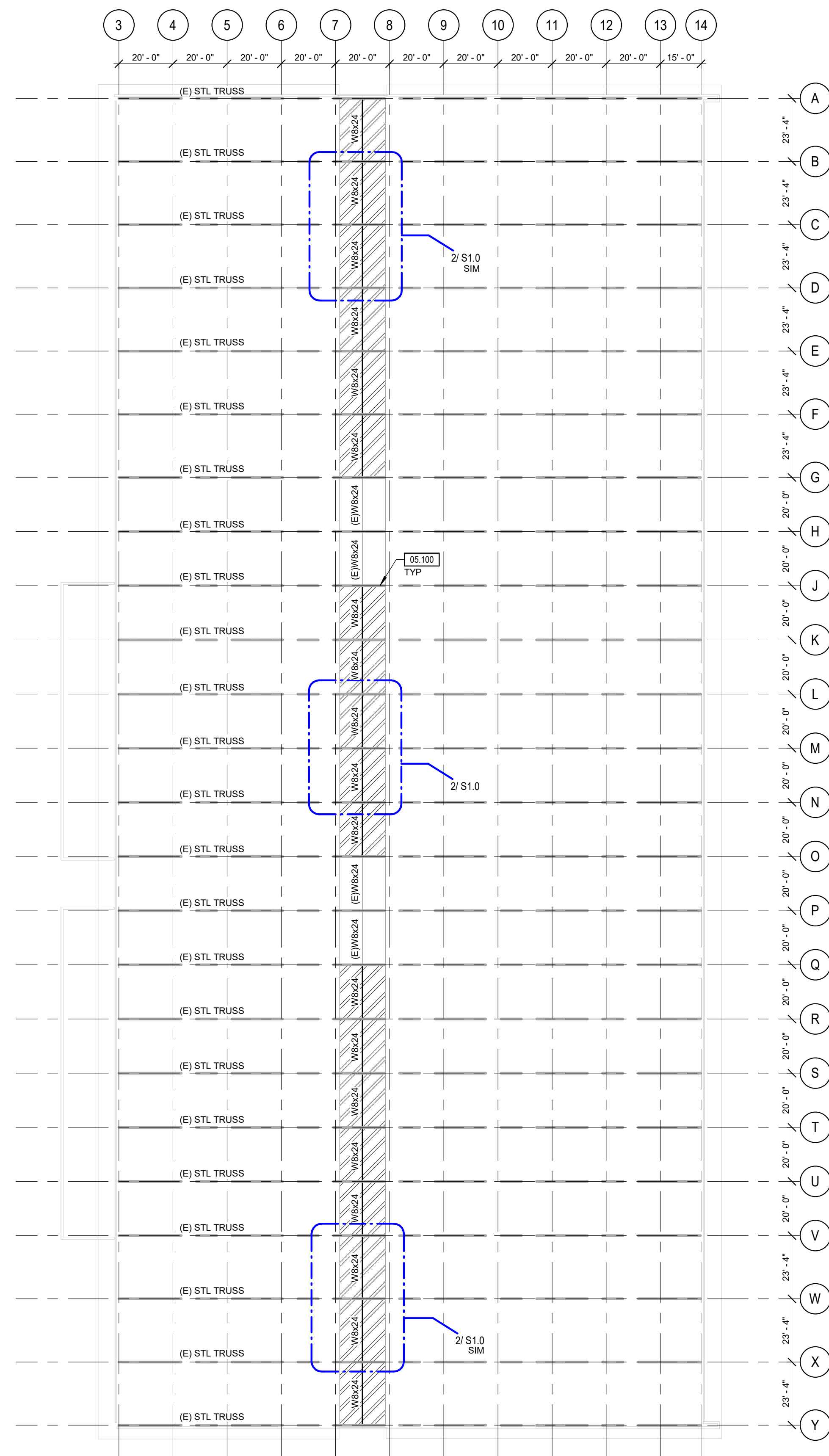
- PLAN NOTES - FRAMING**
1. ALL OPENING SIZES AND LOCATIONS, HEAD AND SILL ELEVATIONS, ETC. SHALL BE COORDINATED WITH OTHER DISCIPLINES.
 2. PROVIDE "H" FRAME AT ALL OPENINGS IN THE DECK GREATER THAN 10". THIS INCLUDES ROOF DRAINS.
 3. COORDINATE FIREPROOFING REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

NOTE:
REFERENCE "DOING STEEL" SHOP DRAWINGS, WORK ORDER 3004, FOR ALL EXISTING CONDITIONS

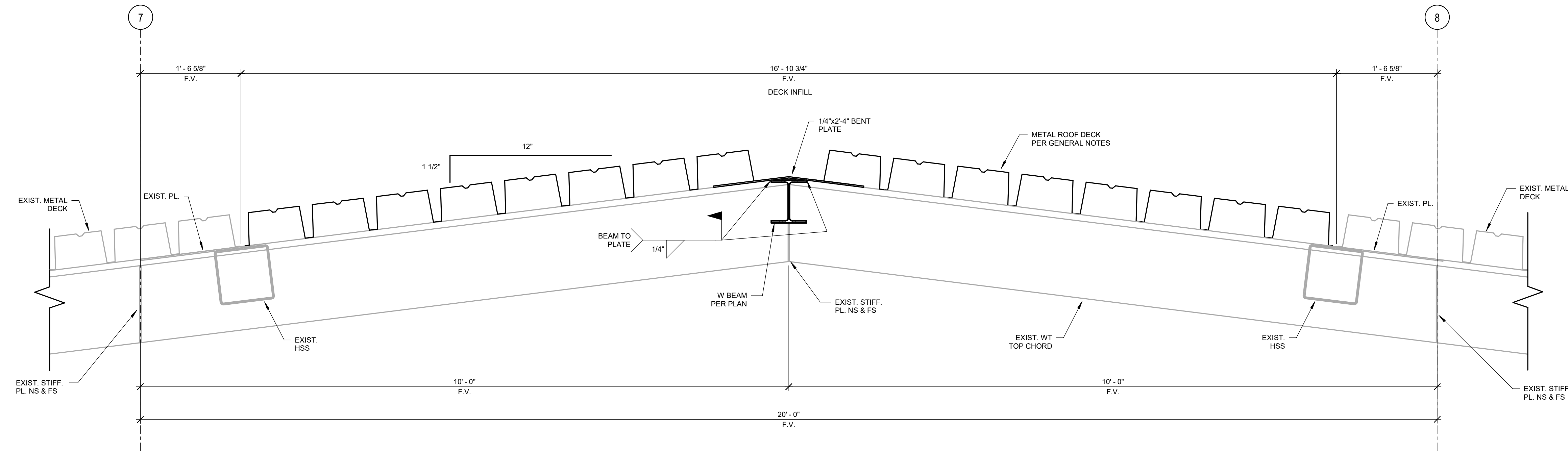
KEYNOTE LEGEND	
KEYNOTE	DESCRIPTION
05.100	NEST NEW DECK ONTO EXISTING AND PROVIDE 3" BEARING MINIMUM.



2 ENLARGED ROOF FRAMING PLAN
1/4" = 1'-0"

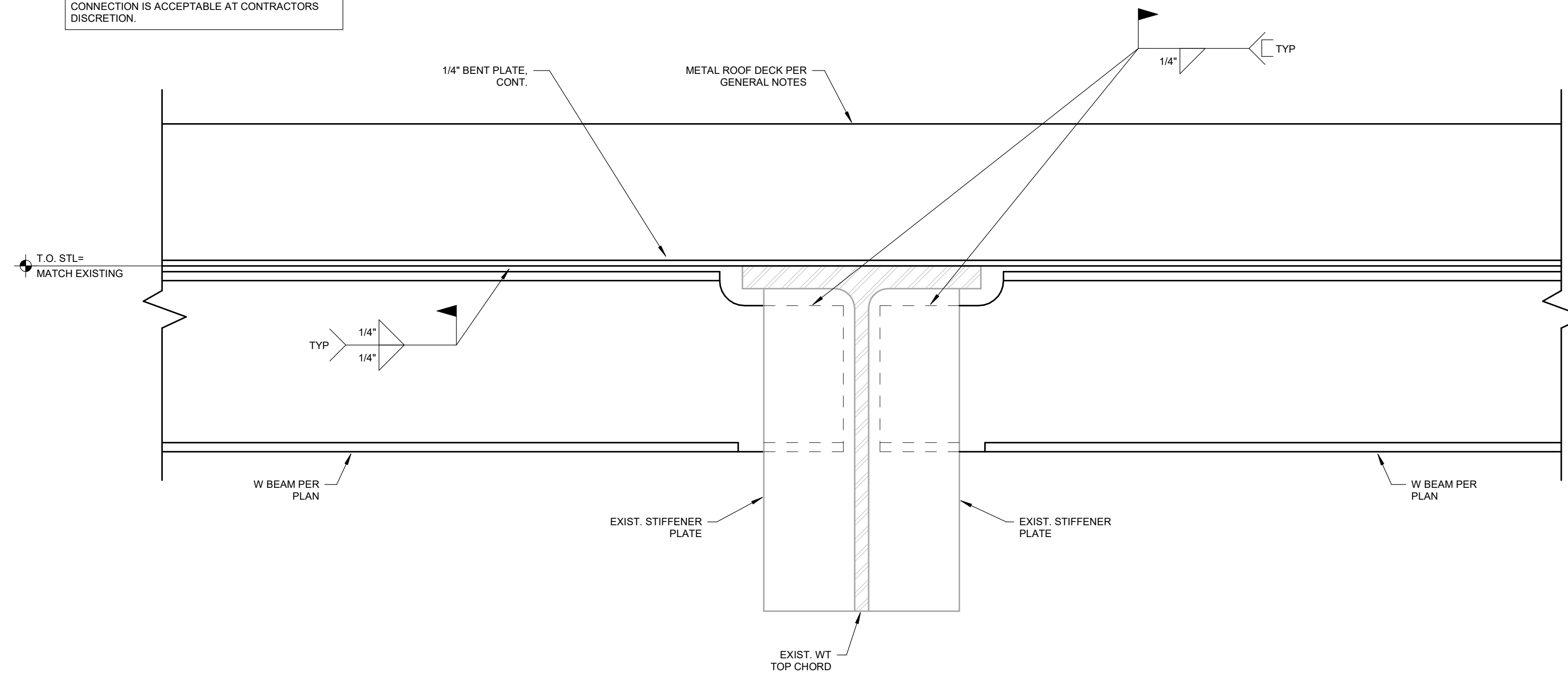


1 ROOF FRAMING PLAN
1" = 30'-0"



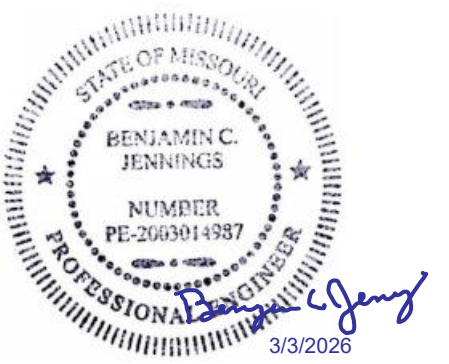
1 DECK INFILL AND SUPPORTING RIDGE BEAM WITH BENT PLATE AT EXISTING RIDGE
1" = 1'-0"

NOTE:
BOLTED CONNECTION IN LIEU OF WELDED
CONNECTION IS ACCEPTABLE AT CONTRACTORS
DISCRETION.



2 RIDGE BEAM TO TOP CHORD CONNECTION DETAIL
3" = 1'-0"

**SAPP
DESIGN
ARCHITECTS**



BEN C. JENNINGS
PE 2003014987

REPAIRS TO ROOF AND
SKYLIGHT

AVCRAD BUILDING CORROSION
CONTROL

5250 W DEPOT ROAD
SPRINGFIELD, MO 65802

PROJECT # T2527-01
SITE # 6270
ASSET # 8136270007

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 03/03/2026

CAD FILE: _____
DRAWN BY: KTB
CHECKED BY: BCJ
DESIGNED BY: KTB

SHEET TITLE:

FRAMING
DETAILS

SHEET NUMBER:

S1.1

LIGHTING FIXTURE SCHEDULE									
MARK	MANUFACTURER	MODEL	FINISH	MOUNTING	SOURCE	NOMINAL LUMEN OUTPUT	FIXTURE WATTS	VOLTAGE	NOTES
CL1	ACCLAIM	FLEXSI, FLX44 W FLEX49K, FLX419	STD	SURFACE	LED	-	5.4FT	24	2,3,4,5,6

ACCESSORIES/NOTES:
 1. MINIMUM 90-MINUTES OF INTEGRAL BATTERY BACKUP.
 2. PROVIDE FIXTURE LENGTH(S) AS INDICATED ON DRAWINGS.
 3. PROVIDE ALDRN DRIVER WITH 277V INPUT AND ASSOCIATED CIRCUITRY AS REQUIRED.
 4. PROVIDE ALL ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION.
 5. COORDINATE HEIGHT AND/OR EXACT INSTALLATION LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
 6. PROVIDE DMX RGBW IN-WALL CONTROLLER. REFER TO SPECIFICATIONS FOR REQUIREMENTS. COORDINATE LOCATION OF WALL CONTROLLER W/ OWNER.

FIRE SPRINKLER GENERAL NOTES:

- PROVIDE DESIGN, MATERIALS, EQUIPMENT, FABRICATION, INSTALLATION, ETC. FOR MODIFICATIONS OF AN EXISTING WET PIPE FIRE SPRINKLER SYSTEM. ALL PORTIONS OF THE FIRE SYSTEM SHALL BE THE RESPONSIBILITY OF THE FIRE SPRINKLER CONTRACTOR/ENGINEER. ANY PIPING SHOWN AT BUILDINGS OR ON SITE IS FOR REFERENCE ONLY.
- THE FIRE SPRINKLER SYSTEM DESIGN AND INSTALLATION SHALL COMPLY WITH 2018 INTERNATIONAL BUILDING CODE AND LATEST EDITION OF NFPA 13R, 13, AND 14 STATE AND LOCAL CODES AS ADOPTED BY THE CITY OF SPRINGFIELD, MISSOURI. REFER TO ARCHITECTURAL CODE SUMMARIES FOR SPECIFIC REQUIREMENTS. ALL FIRE SPRINKLER SYSTEM MATERIALS SHALL BE U.L. LISTED. FIRE SPRINKLER SYSTEM CONTRACTOR SHALL ENGINEER AND INSTALL THE FIRE SPRINKLER SYSTEM AS REQUIRED TO PROVIDE PROPER COVERAGE FOR THE AREA OF WORK.
- SECURE ALL FEES, PERMITS, ETC. AS NECESSARY IN CONJUNCTION WITH THIS WORK. CONTRACTOR SHALL PAY ALL TAP AND EQUIPMENT FEES.
- THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING HIS OWN FLOW READINGS FOR PURPOSES OF DESIGN.
- SPRINKLER HEADS IN AREAS WITH EXPOSED STRUCTURE SHALL BE CHROME PLATED, UPRIGHT HEADS. SPRINKLER HEADS AT FINISHED CEILING AREAS SHALL BE CONCEALED TYPE WITH WHITE COVER.
- SUBMIT PDF'S OF SCALED LAYOUT DRAWINGS, CALCULATIONS, AND CUT SHEETS TO A/E FOR COORDINATION AND APPROVAL. LAYOUT DRAWINGS SHALL INCLUDE SPRINKLER AND PIPING LOCATIONS, SERVICE DETAILS, ETC. SUBMIT REQUIRED MATERIALS TO AGENCY HAVING JURISDICTION FOR APPROVAL AND PERMIT.
- FIRE SPRINKLER WORK SHALL BE PERFORMED BY A QUALIFIED CONTRACTOR WITH AT LEAST 3 YEARS OF INSTALLATION EXPERIENCE ON PROJECTS WITH FIRE PROTECTION WORK SIMILAR TO THAT REQUIRED FOR THE PROJECT. THE FIRE SPRINKLER SYSTEM SHALL BE ENGINEERED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MISSOURI, AND THE DESIGN DRAWINGS AND CALCULATION SHALL BEAR HIS/HER MISSOURI SEAL AND SIGNATURE.
- PROVIDE FIRE DEPARTMENT CONNECTIONS IN ACCORDANCE WITH LOCAL FIRE DEPARTMENT REQUIREMENTS.

LIGHTING SYMBOLS:

- ILLUMINATED EXIT SIGN
- RECESSED CAN LIGHT FIXTURE
- LIGHT FIXTURE
- INDICATES UNSWITCHED "NIGHT LIGHT" FIXTURE
- EMERGENCY LIGHT FIXTURE
- FIXTURE TAG. REFER TO CORRESPONDING SCHEDULE FOR TAGGED EQUIPMENT

CONDUIT & CONDUCTOR SYMBOLS:

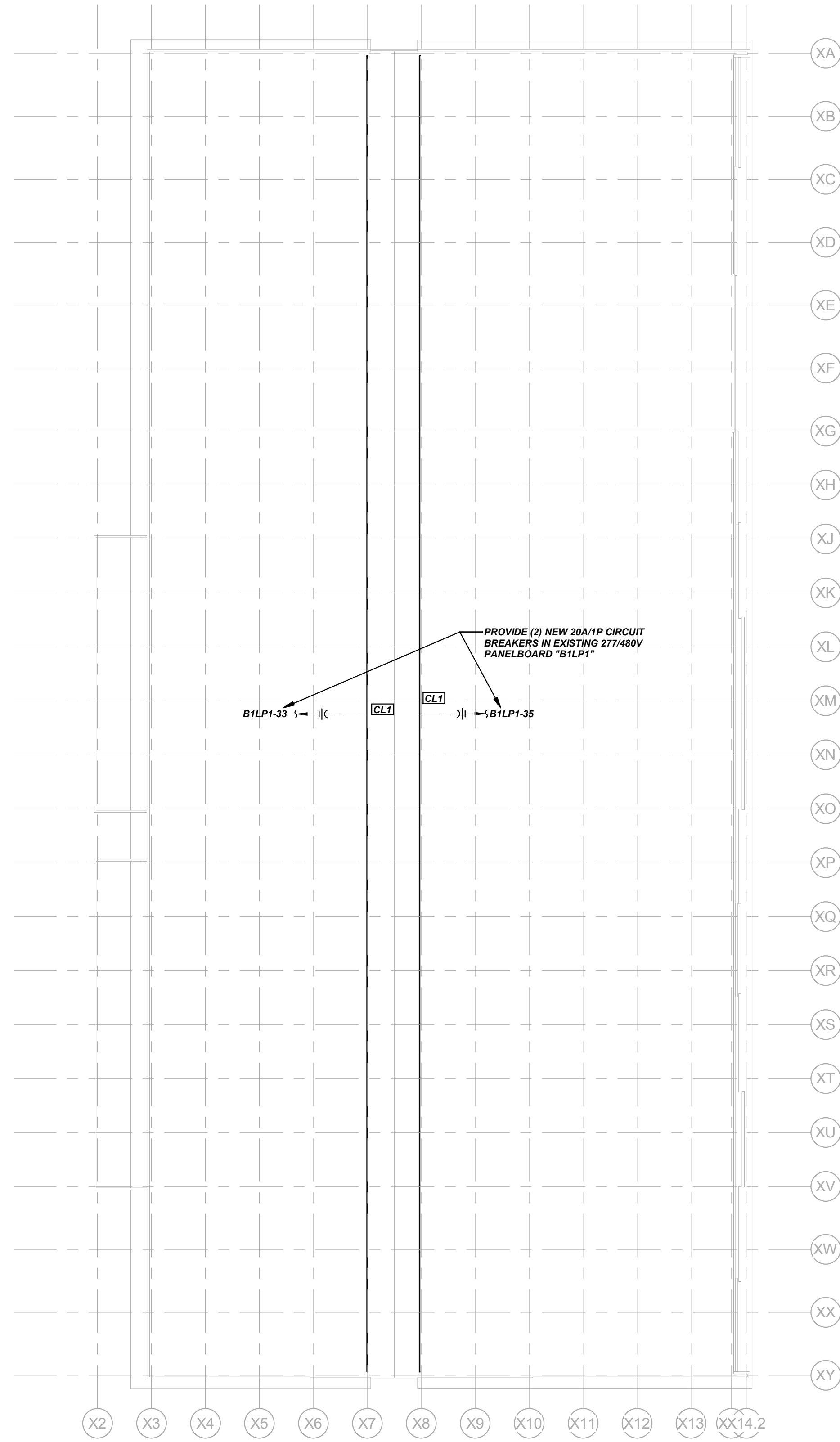
- CONDUIT CONCEALED IN CEILING OR WALL
- CONDUIT CONCEALED IN FLOOR SLAB
- CONDUIT EXPOSED/SURFACE RACEWAY
- #12 CONDUCTORS, TICK MARKS INDICATE QUANTITY
- HOME RUN WITH PANEL AND CIRCUIT DESIGNATION
- IP1-1 PARTIAL HOME RUN WITH PANEL AND CIRCUIT
- GROUND WIRE
- FEEDER PER SCHEDULE

BID ALTERNATE NOTES:

PROVIDE ALL LIGHTING WORK ON THIS SHEET UNDER ALTERNATE #1.

FIRE SPRINKLER SPECIAL NOTES:

- FIELD VERIFY EXTENTS OF EXISTING FIRE PROTECTION SYSTEM AND EXACT REQUIREMENTS FOR NECESSARY MODIFICATIONS.
- COORDINATE ALL WORK AFFECTING THE EXISTING FIRE PROTECTION SYSTEM WITH THE OWNER.
- IF THE FIRE SPRINKLER SYSTEM IS REQUIRED TO BE SHUT OFF AT ANY TIME, CONTACT THE OWNER'S FIRE PROTECTION VENDOR (JOHNSON CONTROLS) AT 417-883-8865.



1 LIGHTING PLAN
1/32" = 1'-0"
NORTH

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

**SAPP
DESIGN
ARCHITECTS**



ALLEN DAVIS, ENGINEER
PE - 2004017155

REPAIRS TO ROOF AND SKYLIGHT

AVCRAD BUILDING CORROSION CONTROL

5250 W DEPOT ROAD
SPRINGFIELD, MO 65802

SPRINGFIELD, MISSOURI

PROJECT # T2527-01
SITE # 6270
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DATE: _____
ISSUE DATE: 03/03/26

CAD FILE: _____
DRAWN BY: QJ
CHECKED BY: AD
DESIGNED BY: QJ

SHEET TITLE:

**ELECTRICAL
PLAN**

SHEET NUMBER:

E-1

CJD
Engineering | Energy | Innovation
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Missouri State Certificate of Authority #200502690366
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