ABBREVIATIONS

A.B.	ANCHOR BOLTS	IN.	INCH(ES)
ACOUS.	ACOUSTICAL	I.D.	INSIDE DIAMETER
ADM.	ADMINISTRATIVE	INSUL	INSULATION
ALS	ASSISTIVE LISTENING SYSTEM	ISA	INTERNATIONAL SYMBOL OF ACCESS
ALT.	ALTERNATE		
ALUM.	ALUMINUM	JT.	JOINT
APPROX.	APPROXIMATE	JST.	JOIST
ARCH.	ARCHITECTURAL		
		L.	LONG (LENGTH)
BLDG.	BUILDING	MAX.	MAXIMUM
BLK.	BLOCK	M.B.	MACHINE BOLTS
BLKG.	BLOCKING	MECH.	MECHANICAL
BM.	BEAM	MET.	METAL
B.N.	BOUNDARY NAIL	MEZZ.	MEZZANINE
BOT.	BOTTOM	MFR.	MANUFACTURER
BRD.	BOARD	MIN.	MINIMUM
BTR.	BETTER		
		N/A	NOT APPLICABLE
CAB.	CABINET	N.I.C.	NOT IN CONTRACT
CAC.	CALIFORNIA ADMIN-ISTRATIVE CODE	NOM.	NOMINAL
		N.T.S.	NOT TO SCALE
CAT.	CATWALK		
CEM. PLAS.	CEMENT PLASTER	O.C.	ON CENTER
CER.	CERAMIC	O.H.	OPPOSITE HAND
C.J.	CONSTRUCTION JOINT	OLA	OFFICE OF LOCAL ASSISTANCE
CLG.	CEILING	OPP.	OPPOSITE
CLR.	CLEAR		
C.O.	(GSA) CONTRACTING OFFICER		
COL.	COLUMN	PERIM.	PERIMETER
CONC.	CONCRETE	PBS	PUBLIC BUILDINGS SERVICE
CONN.	CONNECTION	P.C.C.	PRECAST CONCRETE
CONT.	CONTINUOUS	PL.	PLATE
CONTR.	CONTRACTOR	P.L.	PROPERTY LINE
C.M.U.	CONCRETE MASONRY UNIT	P.LAM.	PLASTIC LAMINATE
CSPE	CHLOROSULFONATED POLYETHYLENE ("HYPALON")	PLYWD.	PLYWOOD
		P.N.	PLATE NAIL
		P.S.F.	POUNDS PER SQUARE FOOT
		P.S.I.	POUNDS PER SQUARE INCH
DBL.	DOUBLE	P.T.	PRESSURE TREATED
DET.	DETAIL	PT.	POINT
D.F.	DOUGLAS FIR		
DIAG.	DIAGONAL	R.	RISER
DIA.	DIAMETER	RAD.	RADIUS
DIM.	DIMENSION	REINF.	REINFORCEMENT
DN.	DOWN	REQD.	REQUIRED
DP.	DEEP	RES.	RESILIENT
DR.	DOOR	R.O.	ROUGH OPENING
D.S.	DOWNSPOUT	R.S.	ROUGH SAWN
DSA	DIVISION OF THE STATE ARCHITECT	RDWD.	REDWOOD
		RO.	ROUGH
		R.W.L.	RAIN WATER LEADER
EA.	EACH	SA	SUSPENDED ACOUSTICAL
E.F.	EACH FACE	SCD	SEE CIVIL DRAWINGS
E.J.	EXPANSION JOINT	SHT.	SHEET
ELEV.	ELEVATION	S.H.	SINGLE HUNG
ELEC.	ELECTRICAL	SIM.	SIMILAR
E.N.	EDGE NAIL	SLDR.	SLIDER
E.Q.	EQUAL	SMD	SEE MECHANICAL DRAWINGS
EQPT.	EQUIPMENT	S.O.G.	SLAB ON GRADE
E.S.	EACH SIDE	SPEC(S)	SPECIFICATION(S)
E.W.	EACH WAY	SQ.	SQUARE
EXIST.	EXISTING	S.S.	STAINLESS STELL
EXP.	EXPANSION	S.S.D	SEE STRUCTURAL DRAWINGS
EXT.	EXTERIOR	S.S.P.	STANDARD STEEL PIPE
		STRUC.	STRUCTURAL
		SYM.	SYMMETRICAL
FDN.	FOUNDATION		
FHWS	FLAT HEAD WOOD SCREW		
FIN.	FINISH	T.	TREAD
FIN. FL.	FINISH FLOOR	T.&B.	TOP AND BOTTOM
F.J.	FLOOR JOIST	T.&G.	TONGUE AND GROOVE
FL.	FLOOR	T.C.	TOP OF CURB
FLUOR.	FLUORESCENT	TEL.	TELEPHONE
F.N.	FIELD NAIL	TERR.	TERRAZZO
F.O.C.	FACE OF CONCRETE	T.O.C.	TOP OF CONCRETE
F.O.F.	FACE OF FINISH	T.O.PL.	TOP OF PLATE LINE
F.O.M.	FACE OF MASONRY	T.O.S.	TOP OF STEEL
F.O.S.	FACE OF STUD	T.O.SF.	TOP OF SUBFLOOR
FRMG.	FRAMING	T.O.W.	TOP OF WALL
FRP	FIBERGLASS REINFORCED PANEL		
FT.	FOOT/FEET	T.P.	TOP OF PAVEMENT
		TRANSV.	TRANSVERSE
GA.	GAUGE	TR.	TREATED
GAL.	GALLON	TYP.	TYPICAL
GALV.	GALVANIZED		
GSS	GALVANIZED SHEET STELL		
GLB	GLUE LAMINATED BEAM	U.O.N.	UNLESS OTHERWISE NOTED
GRD.	GRADE		
GSA	GENERAL SERVICES ADMINISTRATION	VERT.	VERTICAL
		VG.	VERTICAL GRAIN
G.S.M.	GALVANIZED SHEET METAL		
GYP. BD.	GYPSUM BOARD	W.	WIDE
		WASH.	WASHER
		W/	WITH
H.D.	HOLD-DOWN	W/C	WATER CLOSET
HMA	HAZARDOUS MATERIALS ABATEMENT	WD.	WOOD
		W/O	WITHOUT
HORIZ.	HORIZONTAL	WP.	WATERPROOF
H.S.B.	HIGH STRENGTH BOLTS	WPF.	WEATHERPROOF
HT.	HEIGHT		
HDR.	HEADER	X	CROSS

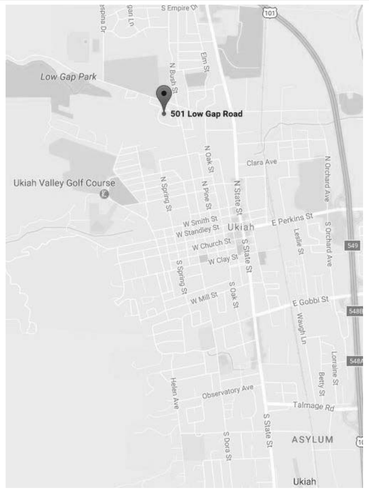
SYMBOLS

- ℄ AND
- @ AT
- ℄ CENTER LINE
- ϕ DIAMETER OR ROUND LINE
- (E) EXISTING
- ⊥ PERPENDICULAR
- # POUND OR NUMBER
- ℙ PLATE
- (N) NEW
- WP WORK POINT
- NOMINAL FLOOR LEVEL OR MATCH LINE
- 4 COLUMN GRID
- 4 LOUVER SYMBOL
- 4 DOOR SYMBOL
- 4 WINDOW SYMBOL
- 4 GATE SYMBOL
- 4 / A-4 SECTION / EXTERIOR ELEVATION SYMBOL
- SECTION / ELEVATION NUMBER
- SHEET NUMBER
- 4 / A-4 DETAIL SYMBOL
- DETAIL NUMBER
- SHEET NUMBER
- 1 / 4 / A-4 / 2 / 3 INTERIOR ELEVATION SYMBOL
- DETAIL NUMBER
- SHEET NUMBER
- 4 REVISION SYMBOL
- REF. N NORTH
- 1 EQUIPMENT SYMBOL
- 26 | 6 STUD SIZE
- TYPE NO.
- WIC- WOODWORK INSTITUTE SERIES DESIGNATION
- 100 / 36 | 24 | 30 CABINET DESIGNATION
- HEIGHT
- DEPTH
- WIDTH
- D14 KEY NOTE SYMBOL

MENDOCINO COUNTY ADMINISTRATION CENTER (SOUTH WING) ROOF & HVAC REPLACEMENT PROJECT

860 N. BUSH ST. UKIAH, CA 95482

LOCATION MAP



VICINITY MAP



PROJECT TEAM

OWNERS REPRESENTATIVE:

MENDOCINO COUNTY
851 LOW GAP RD
UKIAH, CA 95482
TEL: (707) 234-6054

PROJECT MANAGER:
DOUG ANDERSON
FACILITIES PROJECT SPECIALIST

ARCHITECTURE & STRUCTURAL:

INTERACTIVE RESOURCES, INC.
117 PARK PLACE
POINT RICHMOND, CA 94801
TEL: (510) 236-7435
FAX: (510) 232-5325

PRINCIPAL IN CHARGE:
BRANT FETTER, AIA
STRUCTURAL ENGINEER:
ALLAN WHITECAR, SE
ARCHITECTURAL ASSISTANT:
SABRINA RICHTER

MECHANICAL & PLUMBING:

LEFLER ENGINEERING
1651 SECOND STREET
TEL: (415) 456-4220
FAX: (415) 456-1248

PROJECT ENGINEER:
MICHAEL J. LEFLER, PE

ELECTRICAL:

BROKAW
6060 DAWN DRIVE
ROHNERT PARK, CA 94928, USA
TEL: (707) 799-6822

PROJECT ENGINEER:
COURTNEY CHUENYANE, PE, LEED AP

SCOPE OF WORK

A SUMMARY OF THE PROJECT SCOPE OF WORK INCLUDES - BUT IS NOT LIMITED TO - THE FOLLOWING:

SOUTH WING ADMINISTRATION CENTER

- REPLACEMENT OF THE EXISTING ROOF SYSTEM
- UPGRADE OF THE EXISTING DRAINAGE SYSTEM
- REPLACEMENT OF EXISTING MECHANICAL UNITS, SEE MECHANICAL DWGS FOR EXTENT

DRAWING INDEX

GENERAL SHEETS

ARCHITECTURAL

A000	COVERSHEET
AD105	DEMO ROOF PLAN - SOUTH
AD106	DEMO ROOF PLAN - EAST
A101	FLOOR PLAN - SOUTH
A102	FLOOR PLAN - EAST
A103	REFLECTED CEILING - SOUTH
A104	REFLECTED CEILING - EAST
A105	ROOF PLAN - SOUTH
A106	ROOF PLAN - EAST
A107	PHASE REFERENCE
A201	EXTERIOR ELEVATIONS (REFERENCE DRAWING)
A202	EXTERIOR ELEVATIONS (REFERENCE DRAWING)
A301	SECTIONS (REFERENCE DRAWING)
A501	ROOF DETAILS
A502	ROOF DETAILS
A503	ROOF DETAILS

STRUCTURAL

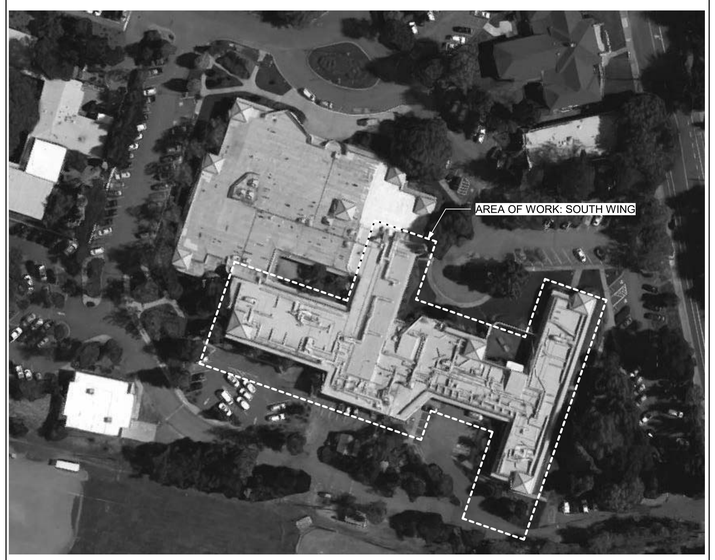
S101	STRUCTURAL PARTIAL FRAMING PLANS AND DETAILS

MECHANICAL AND PLUMBING

MP101	MECHANICAL AND PLUMBING SCHEDULES AND LEGENDS
MP203	MECHANICAL AND PLUMBING DEMOLITION ROOF PLAN - SOUTH
MP204	MECHANICAL AND PLUMBING DEMOLITION ROOF PLAN - EAST
MP501	MECHANICAL DETAILS
P303	PLUMBING ROOF PLAN - SOUTH
P304	PLUMBING ROOF PLAN - EAST
M303	MECHANICAL ROOF PLAN - SOUTH
M304	MECHANICAL ROOF PLAN - EAST
M601	TITLE 24 ENERGY CALCULATIONS
M602	TITLE 24 ENERGY CALCULATIONS
M603	TITLE 24 ENERGY CALCULATIONS
M604	TITLE 24 ENERGY CALCULATIONS
M605	TITLE 24 ENERGY CALCULATIONS

ELECTRICAL

E0.01	ELECTRICAL LEGEND AND ABBREVIATIONS
E1.01	DEMOLITION ROOF PLAN - SOUTH
E1.02	DEMOLITION ROOF PLAN - EAST
E2.01	ROOF PLAN - SOUTH
E2.02	ROOF PLAN - EAST
E3.01	PANEL SCHEDULES



PROJECT DATA

ADMINISTRATION BUILDING

BUILDING TYPE:	TYPE V-A W/ FULLY SPRINKLED FIRE PROTECTION
OCCUPANCY:	EXISTING B/A
BUILDING HEIGHT:	±14' - 5" MAX (±17'-5" @ PARAPETS), NO CHANGE TO BUILDING HEIGHT
NUMBER OF STORIES:	1 (EXISTING IN AREA OF WORK)
EXISTING OVERALL BUILDING AREAS:	AREA OF WORK: 32,400 SF TOTAL BUILDING AREA: 78,530

STORAGE BUILDING

BUILDING TYPE:	TYPE V-B W/ FULLY SPRINKLED FIRE PROTECTION
OCCUPANY:	EXISTING STORAGE
BUILDING HEIGHT:	±22' - 0" MAX, NO CHANGE TO BUILDING HEIGHT
NUMBER OF STORIES:	1 (EXISTING IN AREA OF WORK)
EXISTING OVERALL BUILDING AREAS:	TOTAL BUILDING AREA: 3,550 SF

APPLICABLE CODES:

2016 CALIFORNIA BUILDING CODE
2016 CALIFORNIA MECHANICAL CODE
2016 CALIFORNIA ELECTRICAL CODE
2016 CALIFORNIA PLUMBING CODE
2016 CALIFORNIA FIRE CODE
2016 CALIFORNIA ENERGY CODE
2017 CALDAAG / AMERICANS WITH DISABILITIES ACT

GENERAL NOTES

1. **EXISTING CONSTRUCTION:** EXISTING CONSTRUCTION, IF SPECIFICALLY NOTED IN THE ARCHITECTURAL DRAWINGS, SHALL ALWAYS BE PREFIXED BY "EXISTING" OR (E).
2. **NEW CONSTRUCTION:** NEW CONSTRUCTION, IF SPECIFICALLY NOTED IN THE ARCHITECTURAL DRAWINGS, SHALL EITHER BE UN-PREFIXED OR PREFIXED BY "NEW" (N), OR (NEW).
3. **EXISTING CONDITIONS AND DIMENSIONS:** FIELD VERIFY ALL CONDITIONS AND DIMENSIONS; REPORT DISCREPANCIES TO ARCHITECT PRIOR TO COMMENCING WORK. **NOTE:** INFORMATION SHOWN ON THE DRAWINGS WAS OBTAINED FROM ORIGINAL DRAWINGS PROVIDE BY THE COUNTY AND FROM LIMITED EXPLORATORY OBSERVATIONS. ALTHOUGH THE ARCHITECT ASSUMES THESE SOURCES TO BE RELIABLE AND OBSERVED CONDITIONS TO BE REPRESENTATIVE, ACTUAL CONDITIONS AND DIMENSIONS MAY VARY.
4. **REFERENCE DRAWINGS:** PDF FILES OF THE ORIGINAL CONSTRUCTION SET ARE AVAILABLE UPON REQUEST TO THE COUNTY.
5. **OBSOLETE EQUIPMENT:** PRIOR TO PROCEEDING WITH WORK, THE COUNTY WILL IDENTIFY ALL OBSOLETE EQUIPMENT, CONDUIT, ETC. THAT THE CONTRACTOR SHALL REMOVE AS PART OF THE SCOPE OF WORK.
6. **CURB-MOUNTED EQUIPMENT & LOUVERS:** THE TERM "CURB MOUNTED" ITEMS INCLUDES - BUT IS NOT LIMITED TO - MECHANICAL UNITS, EXHAUST FANS, AND SIMILAR ITEMS. UON, INTENT IS TO PROVIDE A MINIMUM CURB HEIGHT OF 8" MINIMUM ABOVE THE SURFACE OF THE ADJOINING ROOF PLANE IN CONFORMANCE WITH NRCA. WHERE NEW CURBS ARE NOT SPECIFICALLY REQUIRED BY THE DRAWINGS, THE (E) CURB MAY BE MODIFIED AS REQUIRED TO PROVIDE A HEIGHT OF 8 INCHES MINIMUM.
7. **EXISTING (E) TO REMAIN:** WHERE NOTED, "(E) TO REMAIN" INDICATES AN (E) ITEM THAT WILL REMAIN IN FINISHED WORK. NOTE THAT NEW WORK MAY REQUIRE DISCONNECTION/RECONNECTION OF THE (E) ITEM IN ORDER TO INSTALL THE NEW ROOFING SYSTEM AND ASSOCIATED FLASHINGS AND ACCESSORIES.
8. **REMOVAL OF EXISTING PENETRATION FLASHINGS:** UON, DEMOLITION WORK INCLUDES REMOVAL OF ALL (E) FLASHINGS AND CLEANING OF THE PENETRATING OBJECT AS REQUIRED TO PREPARE FOR INSTALLATION OF NEW PENETRATION FLASHING; TYPICAL UON. PENETRATING OBJECTS INCLUDES – BUT ARE NOT LIMITED TO – THE FOLLOWING: CONDUITS AND VENTS.

DECK NOTES

9. **UNIT PRICING:** PROVIDE UNIT PRICING FOR DETERIORATED NAILERS, SUBSTRATE DECK AND SUPPORTING FRAMING.

REVISION	DESCRIPTION	INITIAL	DATE

SCHEMATIC DESIGN SET	
CONSTRUCTION DOCUMENTS	10-04-17
ISSUED FOR PLAN CHECK	04-09-14
ISSUED FOR REVISIONS TO ORIGINAL	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETTER
No. C 35088
REN. 8.30.17
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES

ARCHITECTURE ▪ PLANNING ▪ ENGINEERING

117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

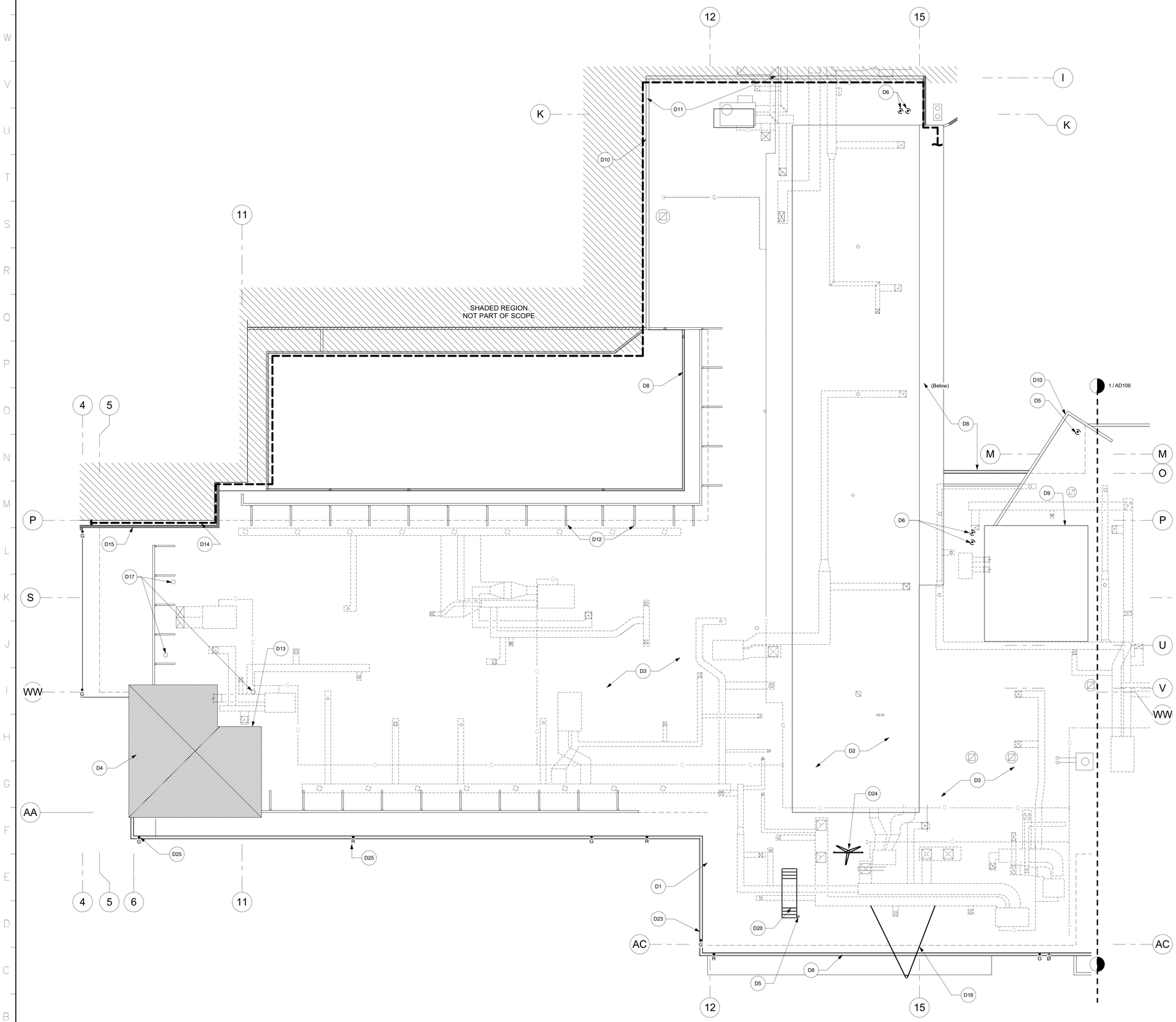
SHEET TITLE:

COVERSHEET

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MT
DESIGNER:	
PROJ MGR:	CLB
PEER REVIEW	

SHEET NUMBER:

A000



1 DEMO ROOF PLAN - SOUTH
1/8" = 1'-0"

DEMOLITION ROOF PLAN SHEET NOTES

1. **SUBSTRATE CONDITION CONFIRMATION:** AFTER REMOVING (E) ROOFING SYSTEMS, COORDINATE OBSERVATION OF THE CONDITION OF THE (E) PLYWOOD SUBSTRATE WITH THE ARCHITECT. REMOVE AND REPLACE ALL DECAYED OR OTHERWISE UNSUITABLE MATERIALS WITH NEW AS REQUIRED TO PROVIDE A SOUND SUBSTRATE FOR THE NEW ROOF SYSTEM.
2. **MPE SCOPE:** SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR BALANCE OF DATA REGARDING EXISTING EQUIPMENT TO BE REMOVED.
3. **QUANTITIES:** QUANTITIES - WHERE NOTED – ARE APPROXIMATE; CONTRACTOR TO VERIFY EXACT NUMBER IN FIELD.
4. MEP MAY REFER TO ROOF PENETRATIONS AS 'OUTLET' WHICH CAN INCLUDE ROOF DRAINS.

DEMOLITION ROOF PLAN KEY NOTES

D1 LINE OF (E) BUILDING BELOW SHOWN DASHED – TYPICAL, UON.

D2 (E) MODIFIED BITUMEN ROOFING SYSTEM: REMOVE MODIFIED BITUMEN ROOFING SYSTEM IN ITS ENTIRETY – INCLUDING WALL AND CURB FLASHINGS - AS REQUIRED TO FULLY EXPOSE SUBSTRATE. TYPICAL UON.

D3 (E) SPF (SPRAY POLYURETHANE FOAM) OVER (E) MODIFIED BITUMEN ROOFING SYSTEMS: REMOVE ROOFING SYSTEMS ENTIRELY – INCLUDING WALL AND CURB FLASHINGS - AS REQUIRED TO FULLY EXPOSE SUBSTRATE.

D4 (E) STANDING SEAM ROOF TO REMAIN – TYPICAL OF 4; (NIC).

D5 (E) PREFABRICATED ROOF DRAIN/OVERFLOW DRAIN UNIT: REMOVE UNIT IN ITS ENTIRETY - TYPICAL.

D6 REMOVE (E) DRAIN OR OVERFLOWS ASSEMBLIES FOR REPLACEMENT, REMOVE ROOF DECK FOR NEW LARGER SUMP WHERE OVERFLOW TO BE PROVIDED.

D7 (E) OVERFLOW LINE NOT SHOWN FOR CLARITY. REMOVE COMPLETE TO TERMINATION POINT IN THE SOFFIT VENTILATION SCREED - TYPICAL. SEE MECHANICAL DRAWINGS FOR BALANCE OF SCOPE OF WORK.

D8 REMOVE (E) GUTTERS AND DOWNSPOUTS AS REQUIRED TO ACCOMMODATE NEW WORK AND RETAIN FOR REINSTALLATION. – TYPICAL.

D9 REMOVE (E) T-111 PANELS AND/OR (E) PLYWOOD PANELS AT WALLS. TYPICAL. RETAIN (E) VENTS FOR REINSTALLATION.

D10 REMOVE AND RETAIN (E) COPING AT PERIMETER CURBS FOR REINSTALLATION - TYPICAL, SEE 7/A8.01.

D11 (E) COPING AT HIGH WALL TO REMAIN.

D12 (E) SUPPORT/BRACE TO REMAIN TYP. LOCATION APPROXIMATE ALONG SCREENING WALL.

D13 REMOVE (E) STUCCO PANELS BELOW STANDING SEAM METAL ROOFS - AT WALLS ADJOINING ROOFS – AS REQUIRED TO ACCOMMODATE NEW REGLETS AND COUNTERFLASHING; TYPICAL. RETAIN (E) VENTS FOR REINSTALLATION.

D14 LIMIT OF WORK, UON.

D15 REMOVE (E) BUILDING EXPANSION JOINT AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION, RETAIN FOR REINSTALLATION.

D16 (E) CRICKET TO REMAIN

D17 REMOVE AND RETAIN (E) ANTENNAS FOR NEW WORK.

D18 PROVIDE TEMPORARY BRACING FOR FLU.

D19 REMOVE AND RETAIN (E) SCREENING AT PERIMETER FOR REINSTALLATION - TYPICAL, SEE 5/A503

MPE COORDINATION

D20 REMOVE AND RETAIN ALUMINUM STEP OVER/ BRIDGING, RAILING ASSEMBLY. TYPICAL. CONSULT WITH OWNER RE. FINAL DESTINATION.

D21 REMOVE ABANDONED WEATHERHEAD.

D22 INSTALL 6" FLUE AND COMBUSTION AIR FOR A 100 GAL HWH.

D23 NOT USED.

D24 ANTENNA ARRAY TO REMAIN OPERATIONAL THROUGHOUT WORK.

D25 (E) DOWNSPOUT, OR OVERFLOW TYP. VERIFY LOCATIONS. REPLACE DOWNSPOUTS.

DEMOLITION KEY
12" = 1'-0"

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH / TRUE NORTH

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT BRANT S. FETER No. C 33098 REN. 8.30.19 STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
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PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
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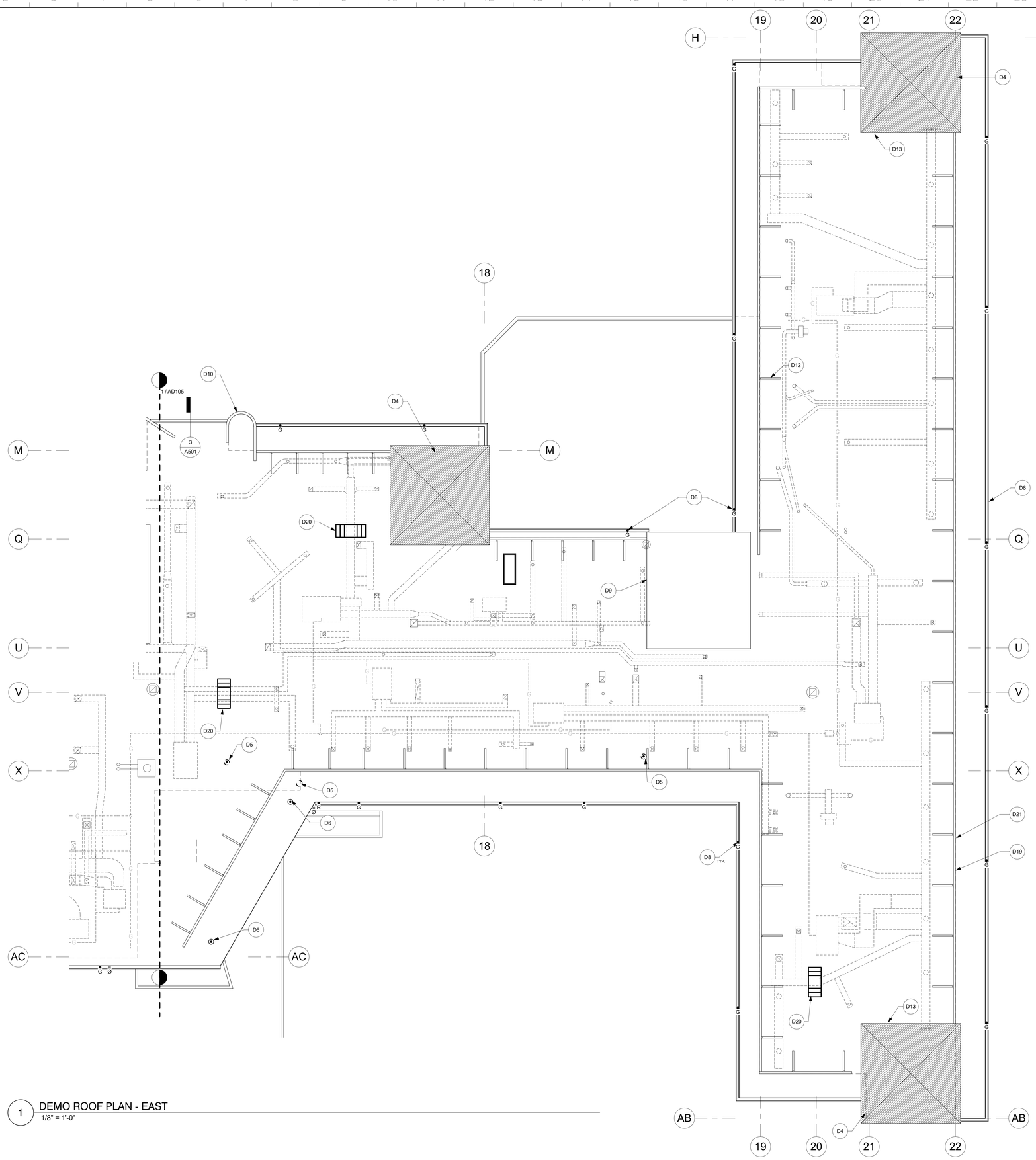
SHEET TITLE:

DEMO ROOF PLAN - SOUTH

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	DSP
DESIGNER:	EJA
PROJ MGR:	BSF
PEER REVIEW	

SHEET NUMBER:

AD105



1 DEMO ROOF PLAN - EAST
1/8" = 1'-0"

DEMOLITION ROOF PLAN SHEET NOTES

1. **SUBSTRATE CONDITION CONFIRMATION:** AFTER REMOVING (E) ROOFING SYSTEMS, COORDINATE OBSERVATION OF THE CONDITION OF THE (E) PLYWOOD SUBSTRATE WITH THE ARCHITECT. REMOVE AND REPLACE ALL DECAYED OR OTHERWISE UNSUITABLE MATERIALS WITH NEW AS REQUIRED TO PROVIDE A SOUND SUBSTRATE FOR THE NEW ROOF SYSTEM.
2. **MPE SCOPE:** SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR BALANCE OF DATA REGARDING EXISTING EQUIPMENT TO BE REMOVED.
3. **QUANTITIES:** QUANTITIES - WHERE NOTED – ARE APPROXIMATE; CONTRACTOR TO VERIFY EXACT NUMBER IN FIELD.
4. MEP MAY REFER TO ROOF PENETRATIONS AS 'OUTLET' WHICH CAN INCLUDE ROOF DRAINS.

DEMOLITION ROOF PLAN KEY NOTES

D1 LINE OF (E) BUILDING BELOW SHOWN DASHED – TYPICAL, UON.

D2 (E) MODIFIED BITUMEN ROOFING SYSTEM: REMOVE MODIFIED BITUMEN ROOFING SYSTEM IN ITS ENTIRETY – INCLUDING WALL AND CURB FLASHINGS - AS REQUIRED TO FULLY EXPOSE SUBSTRATE. TYPICAL UON.

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ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETER
No. C 35[illegible]
REN 8-30-17
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

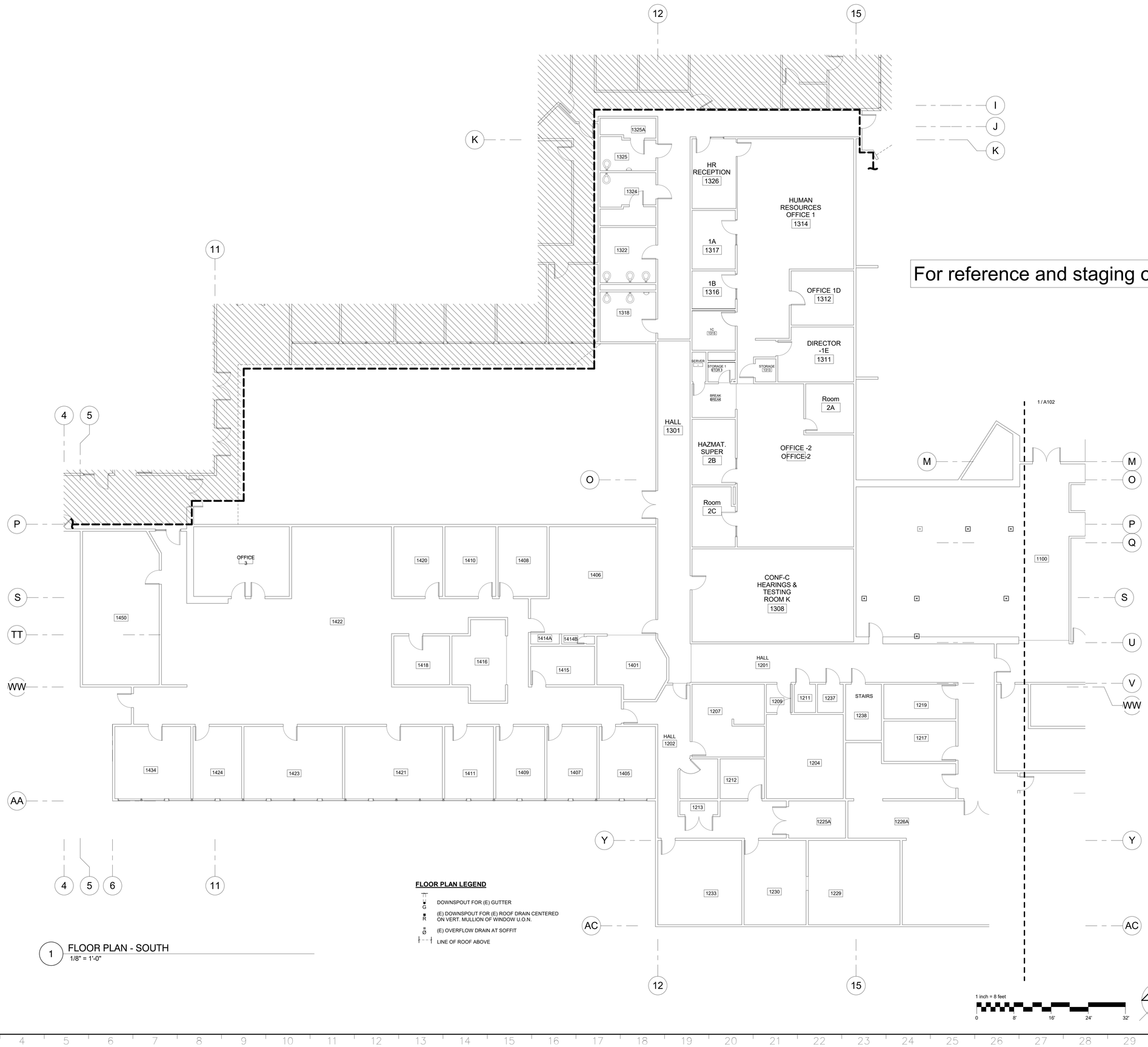
SHEET TITLE:

DEMO ROOF PLAN - EAST

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	SER, BSF
DESIGNER:	EJA
PROJ MGR:	BSF
PEER REVIEW	Checker

SHEET NUMBER:

AD106



REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETTER
No. C 30
REN. 8-31-19
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES

ARCHITECTURE ◦ PLANNING ◦ ENGINEERING

117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
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PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
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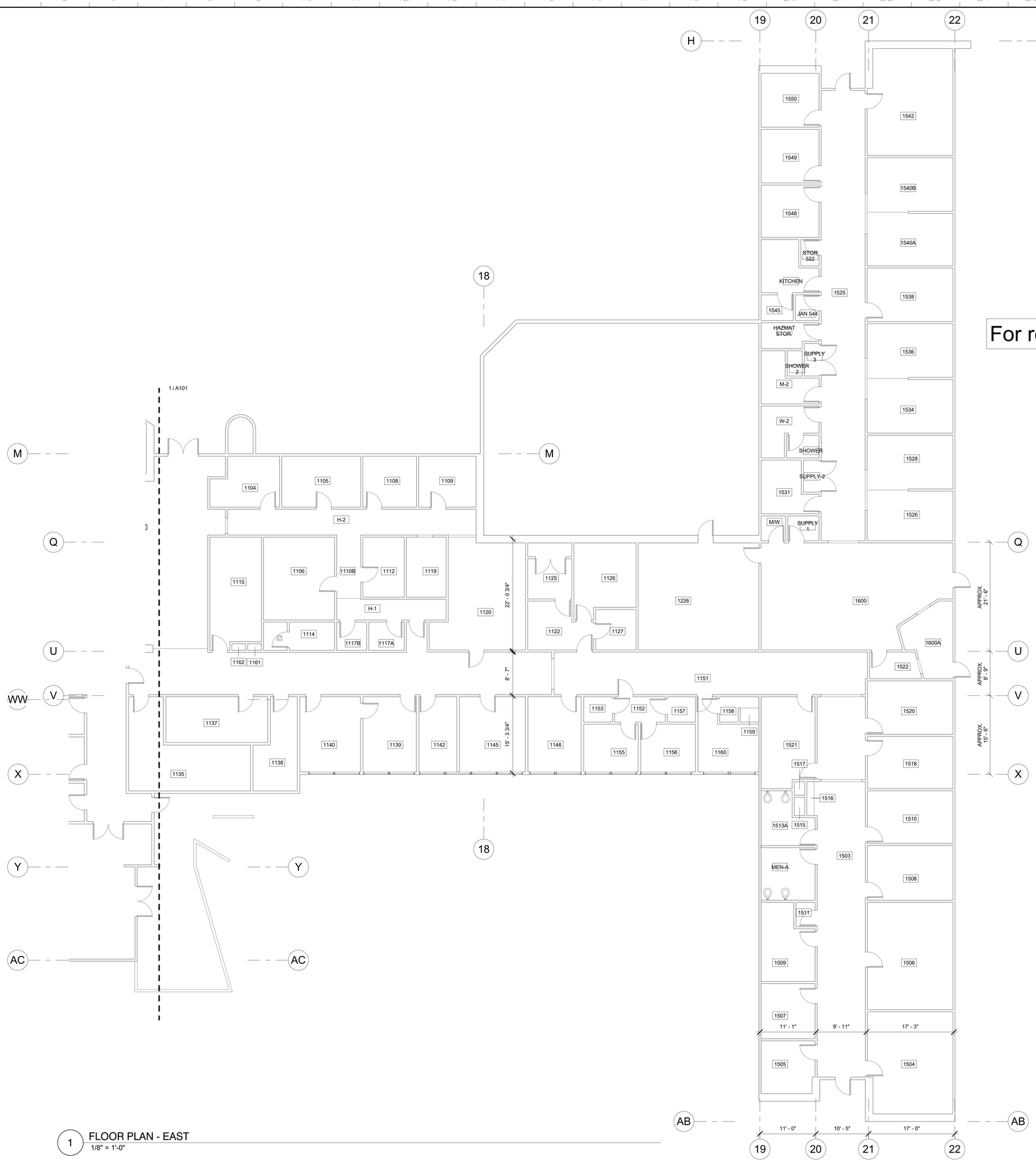
SHEET TITLE:

FLOOR PLAN - SOUTH

PROJ. NO.	2013-084-26
	PREPARATION AND REVIEW
DRAWN BY:	DSP
DESIGNER:	EJA
PROJ MGR:	BSF
PEER REVIEW	

SHEET NUMBER:

A101



1 FLOOR PLAN - EAST
1/8" = 1'-0"

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETTER
No. C 30[illegible]
REN 8-30-17
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
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117 PARK PLACE
POINT RICHMOND
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http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

FLOOR PLAN - EAST

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	Author
DESIGNER:	Designer
PROJ MGR:	BSF
PEER REVIEW	Checker

SHEET NUMBER:

A102

P:\2013\2013-084.26 Ukiah - Adm Ctr South Wing Mendicino Cnty\Production\ser\2013-084-26 Ukiah - Adm Ctr Roof South_ser.rvt

10/25/2017 9:58:57 AM

DEMO CEILING PLAN GENERAL NOTES

1. LIGHTING AND MECHANICAL REGISTER LOCATIONS ARE BASED ON DRAWINGS PROVIDED BY MENDOCINO COUNTY. ACTUAL LOCATIONS SHOULD BE VERIFIED IN FIELD BY CONTRACTOR IF NECESSARY.
2. SEE MECHANICAL PLANS FOR SCOPE OF WORK NOT SHOWN ON THIS PLAN.
3. (E) SPRINKLERS @ SOFFIT - TO REMAIN - NOT SHOWN FOR CLARITY.
4. (E) BATT INSULATION @ UNDERSIDE OF ROOF DECK TO REMAIN. REPLACE MISSING TO MATCH ADJOINING TYPE & R-RATING
5. REMOVE WATER-DAMAGED (E) ACOUSTICAL CEILING PANELS, TYP THROUGHOUT.

DEMO CEILING PLAN LEGEND

- EXISTING MECHANICAL RETURN
- EXISTING MECHANICAL SUPPLY
- EXISTING 2x4 LIGHTING FIXTURE
- EXISTING RECESSED CAN LIGHT
- G — DOWNSPOUT FOR (E) GUTTER
- R — (E) DOWNSPOUT FOR (E) ROOF DRAIN CENTERED ON VERT. MULLION OF WINDOW U.O.N.
- Ø — (E) OVERFLOW DRAIN AT SOFFIT
- REMOVE (E) SOFFIT FINISH TO PROVIDE ACCESS TO (E) ROOF DRAIN LEADER LINES. SHOWN SCHEMATICALLY, V.I.F. ACTUAL EXTENT
- REMOVE & RETAIN (E) ACOUSTICAL CEILING PANELS TO PROVIDE ACCESS TO (E) ROOF DRAIN LEADERS, SHOWN SCHEMATICALLY, S.M.D. AND V.I.F. ACTUAL EXTENT
- REMOVE (E) TEMPORARY "DRAIN" AND DAMAGED ACOUTICAL CEILING PANELS
- (E) RAIN WATER LEADERS, S.P.D.

FLOOR PLAN LEGEND

- G — DOWNSPOUT FOR (E) GUTTER
- R — (E) DOWNSPOUT FOR (E) ROOF DRAIN CENTERED ON VERT. MULLION OF WINDOW U.O.N.
- Ø — (E) OVERFLOW DRAIN AT SOFFIT
- LINE OF ROOF ABOVE

5 EXISTING FLOOR PLAN LEGEND
1/8" = 1'-0"

EXISTING CEILING PLAN LEGEND
1/8" = 1'-0"

Area not surveyed.

Area not surveyed.

1 REFLECTED CEILING PLAN - SOUTH
1/8" = 1'-0"

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH
TRUE NORTH

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT BRANT S. FETTER No. C 30288 REN. 8-31-19 STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
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117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
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http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

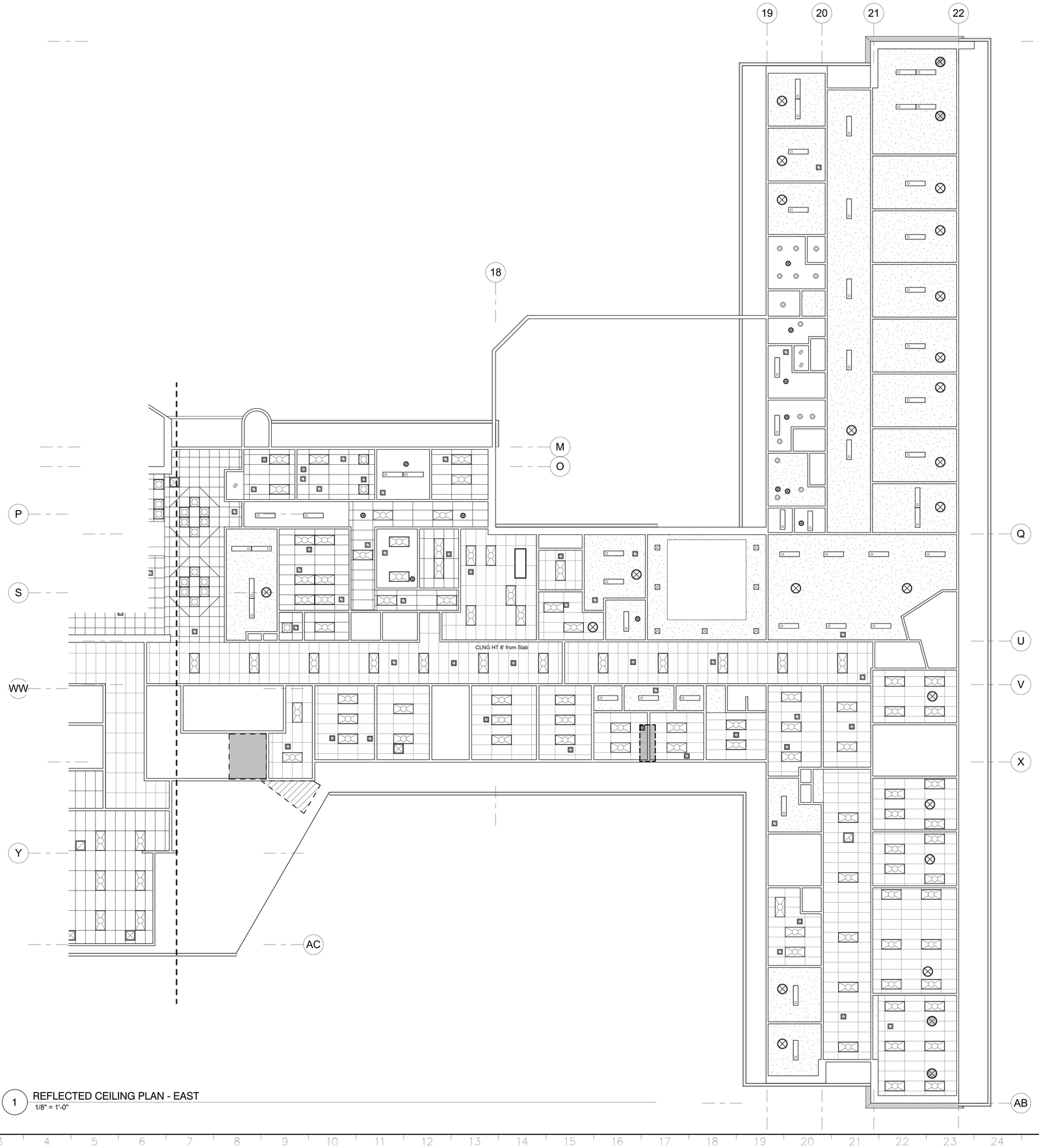
SHEET TITLE:

REFLECTED CEILING - SOUTH

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	DSP
DESIGNER:	BSF
PROJ MGR:	BSF
PEER REVIEW	

SHEET NUMBER:

A103



1 REFLECTED CEILING PLAN - EAST
1/8" = 1'-0"

CEILING PLAN GENERAL NOTES

1. LIGHTING AND MECHANICAL REGISTER LOCATIONS ARE BASED ON DRAWINGS PROVIDED BY MENDOCINO COUNTY. ACTUAL LOCATIONS SHOULD BE VERIFIED IN FIELD BY CONTRACTOR IF NECESSARY.
2. SEE MECHANICAL PLANS FOR SCOPE OF WORK NOT SHOWN ON THIS PLAN.
3. (E) SPRINKLERS @ SOFFIT - TO REMAIN - NOT SHOWN FOR CLARITY.
4. (E) BATT INSULATION @ UNDERSIDE OF ROOF DECK TO REMAIN. REPLACE MISSING TO MATCH ADJOINING TYPE & R-RATING.
5. REPLACE WATER-DAMAGED (E) ACOUSTICAL CEILING PANELS, TYP THROUGHOUT.

DEMO CEILING PLAN LEGEND

- EXISTING MECHANICAL RETURN
- EXISTING MECHANICAL SUPPLY
- EXISTING 2x4 LIGHTING FIXTURE
- EXISTING RECESSED CAN LIGHT
- DOWNSPOUT FOR (E) GUTTER
- (N) DOWNSPOUT FOR (E) ROOF DRAIN CENTERED ON VERT. MULLION OF WINDOW U.O.N.
- (N) OVERFLOW DRAIN AT SOFFIT
- REPLACE (E) SOFFIT FINISH WHERE REMOVED TO PROVIDE ACCESS TO (E) ROOF DRAIN LEADER LINES TO MATCH EXISTING ADJACENT. SHOWN SCHEMATICALLY, V.I.F. ACTUAL EXTENT
- REINSTALL (E) ACOUSTICAL CEILING PANELS REMOVED TO PROVIDE ACCESS TO (E) ROOF DRAIN LEADERS, SHOWN SCHEMATICALLY, S.M.D. AND V.I.F. ACTUAL EXTENT. REPLACE ANY IN KIND THAT MAY BE DAMAGED.
- INSTALL (N) ACOUSTICAL CEILING TILE TO MATCH (E) WHERE TEMPORARY DRAINS WERE REMOVED
- (N) RAIN WATER LEADERS, S.P.D.

CEILING PLAN LEGEND
1/8" = 1'-0"

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH
TRUE NORTH

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETER
No. C 33000
REN 8-30-19
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
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117 PARK PLACE
POINT RICHMOND
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http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

REFLECTED CEILING - EAST

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	DSP
DESIGNER:	BSF
PROJ MGR:	BSF
PEER REVIEW	Checker

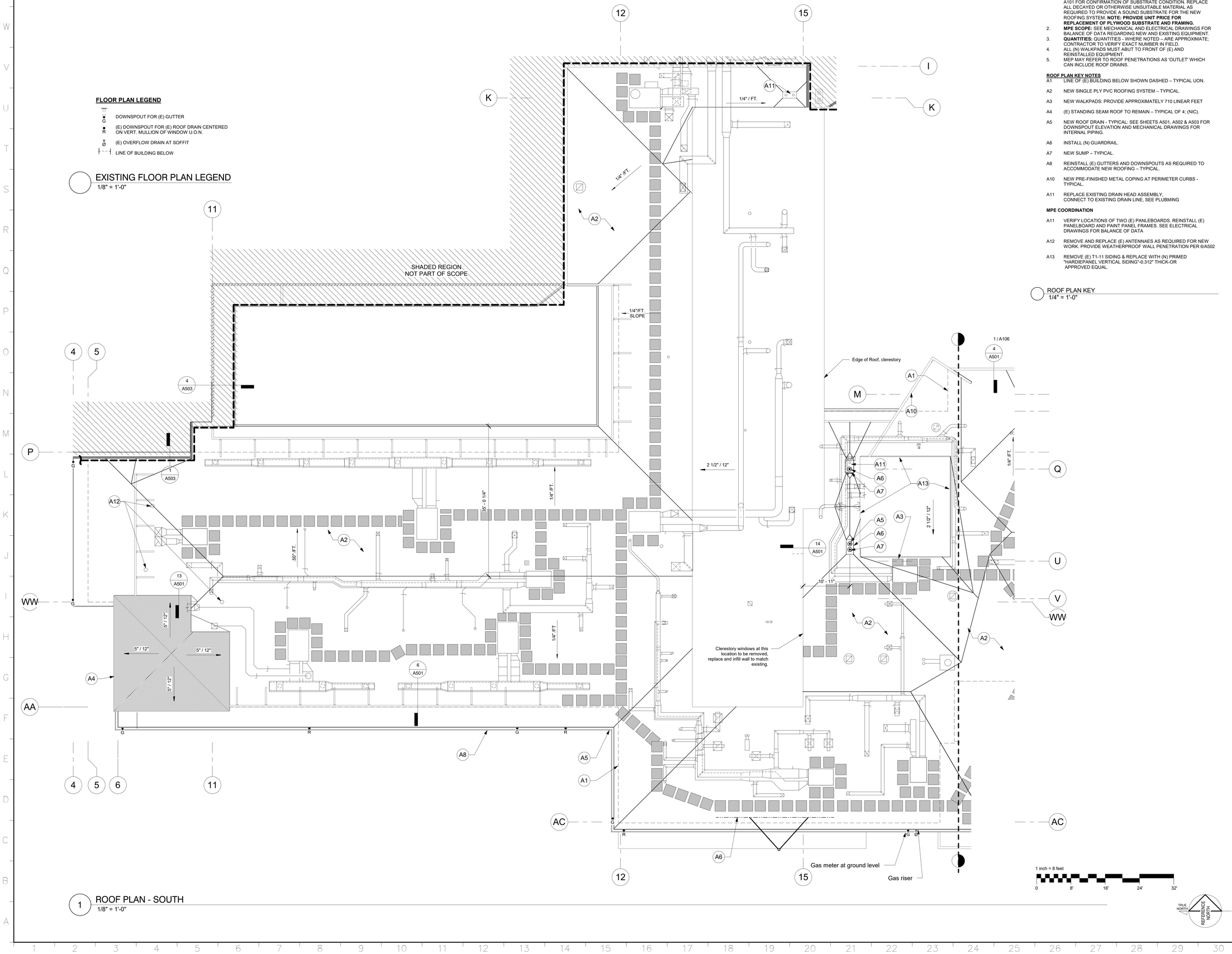
SHEET NUMBER:

A104

FLOOR PLAN LEGEND

- DOWNSPOUT FOR (E) GUTTER
- (E) DOWNSPOUT FOR (E) ROOF DRAIN CENTERED ON VERT. MULLION OF WINDOW U.O.N.
- (E) OVERFLOW DRAIN AT SOFFIT
- LINE OF BUILDING BELOW

EXISTING FLOOR PLAN LEGEND
1/8" = 1'-0"



1 ROOF PLAN - SOUTH
1/8" = 1'-0"

ROOF PLAN SHEET NOTES

1. **SUBSTRATE CONDITION CONFIRMATION:** SEE SHEET NOTE 1 ON A101 FOR CONFIRMATION OF SUBSTRATE CONDITION. REPLACE ALL DECAYED OR OTHERWISE UNSUITABLE MATERIAL AS REQUIRED TO PROVIDE A SOUND SUBSTRATE FOR THE NEW ROOFING SYSTEM. **NOTE: PROVIDE UNIT PRICE FOR REPLACEMENT OF PLYWOOD SUBSTRATE AND FRAMING.**
2. **MPE SCOPE:** SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR BALANCE OF DATA REGARDING NEW AND EXISTING EQUIPMENT.
3. **QUANTITIES:** QUANTITIES - WHERE NOTED – ARE APPROXIMATE; CONTRACTOR TO VERIFY EXACT NUMBER IN FIELD.
4. ALL (N) WALKPADS MUST ABUT TO FRONT OF (E) AND REINSTALLED EQUIPMENT.
5. MEP MAY REFER TO ROOF PENETRATIONS AS 'OUTLET' WHICH CAN INCLUDE ROOF DRAINS.

ROOF PLAN KEY NOTES

A1 LINE OF (E) BUILDING BELOW SHOWN DASHED – TYPICAL UON.

A2 NEW SINGLE PLY PVC ROOFING SYSTEM – TYPICAL.

A3 NEW WALKPADS: PROVIDE APPROXIMATELY 710 LINEAR FEET

A4 (E) STANDING SEAM ROOF TO REMAIN – TYPICAL OF 4; (NIC).

A5 NEW ROOF DRAIN - TYPICAL: SEE SHEETS A501, A502 & A503 FOR DOWNSPOUT ELEVATION AND MECHANICAL DRAWINGS FOR INTERNAL PIPING.

A6 INSTALL (N) GUARDRAIL.

A7 NEW SUMP – TYPICAL.

A8 REINSTALL (E) GUTTERS AND DOWNSPOUTS AS REQUIRED TO ACCOMMODATE NEW ROOFING – TYPICAL.

A10 NEW PRE-FINISHED METAL COPING AT PERIMETER CURBS - TYPICAL.

A11 REPLACE EXISTING DRAIN HEAD ASSEMBLY, CONNECT TO EXISTING DRAIN LINE, SEE PLUBMING

MPE COORDINATION

A11 VERIFY LOCATIONS OF TWO (E) PANLEBOARDS. REINSTALL (E) PANELBOARD AND PAINT PANEL FRAMES. SEE ELECTRICAL DRAWINGS FOR BALANCE OF DATA

A12 REMOVE AND REPLACE (E) ANTENNAES AS REQUIRED FOR NEW WORK. PROVIDE WEATHERPROOF WALL PENETRATION PER 6/A502

A13 REMOVE (E) T1-11 SIDING & REPLACE WITH (N) PRIMED "HARDIEPANEL VERTICAL SIDING"-0.312" THICK-OR APPROVED EQUAL.

ROOF PLAN KEY
1/4" = 1'-0"

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETER
No. C 39288
EXP. 6.30.17
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
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POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

ROOF PLAN - SOUTH

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	SER
DESIGNER:	EJA
PROJ MGR:	BSF
PEER REVIEW	

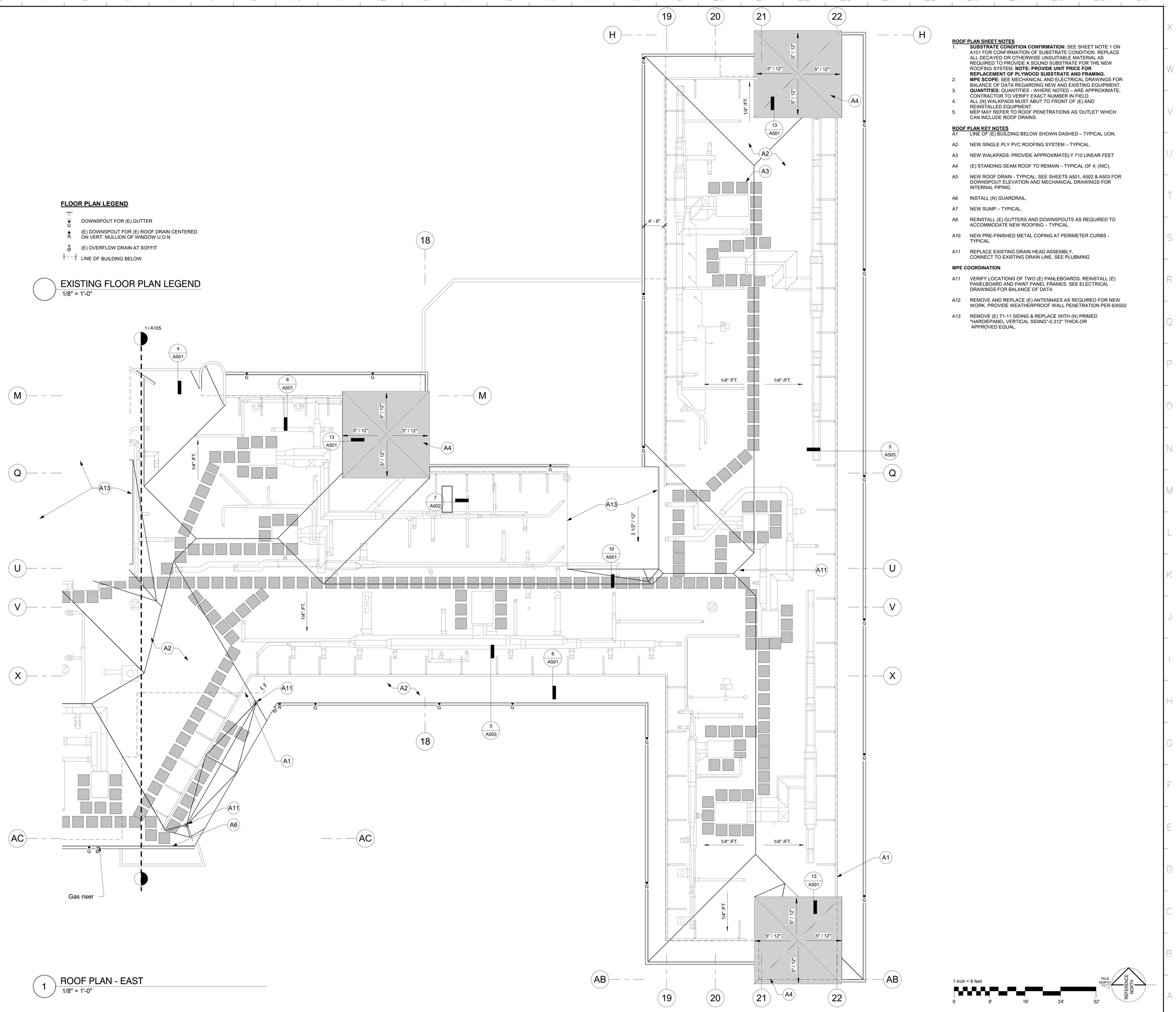
SHEET NUMBER:

A105

FLOOR PLAN LEGEND

- G — DOWNSPOUT FOR (E) GUTTER
- R — (E) DOWNSPOUT FOR (E) ROOF DRAIN CENTERED ON VERT. MULLION OF WINDOW U.O.N.
- Ø — (E) OVERFLOW DRAIN AT SOFFIT
- LINE OF BUILDING BELOW

EXISTING FLOOR PLAN LEGEND
1/8" = 1'-0"



1 ROOF PLAN - EAST
1/8" = 1'-0"

ROOF PLAN SHEET NOTES

1. **SUBSTRATE CONDITION CONFIRMATION:** SEE SHEET NOTE 1 ON A101 FOR CONFIRMATION OF SUBSTRATE CONDITION. REPLACE ALL DECAYED OR OTHERWISE UNSUITABLE MATERIAL AS REQUIRED TO PROVIDE A SOUND SUBSTRATE FOR THE NEW ROOFING SYSTEM. **NOTE: PROVIDE UNIT PRICE FOR REPLACEMENT OF PLYWOOD SUBSTRATE AND FRAMING.**
2. **MPE SCOPE:** SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR BALANCE OF DATA REGARDING NEW AND EXISTING EQUIPMENT.
3. **QUANTITIES:** QUANTITIES - WHERE NOTED – ARE APPROXIMATE; CONTRACTOR TO VERIFY EXACT NUMBER IN FIELD.
4. ALL (N) WALKPADS MUST ABUT TO FRONT OF (E) AND REINSTALLED EQUIPMENT.
5. MEP MAY REFER TO ROOF PENETRATIONS AS 'OUTLET' WHICH CAN INCLUDE ROOF DRAINS.

ROOF PLAN KEY NOTES

A1 LINE OF (E) BUILDING BELOW SHOWN DASHED – TYPICAL UON.

A2 NEW SINGLE PLY PVC ROOFING SYSTEM – TYPICAL.

A3 NEW WALKPADS: PROVIDE APPROXIMATELY 710 LINEAR FEET

A4 (E) STANDING SEAM ROOF TO REMAIN – TYPICAL OF 4; (NIC).

A5 NEW ROOF DRAIN - TYPICAL: SEE SHEETS A501, A502 & A503 FOR DOWNSPOUT ELEVATION AND MECHANICAL DRAWINGS FOR INTERNAL PIPING.

A6 INSTALL (N) GUARDRAIL.

A7 NEW SUMP – TYPICAL.

A8 REINSTALL (E) GUTTERS AND DOWNSPOUTS AS REQUIRED TO ACCOMMODATE NEW ROOFING – TYPICAL.

A10 NEW PRE-FINISHED METAL COPING AT PERIMETER CURBS - TYPICAL.

A11 REPLACE EXISTING DRAIN HEAD ASSEMBLY, CONNECT TO EXISTING DRAIN LINE, SEE PLUBMING

MPE COORDINATION

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A13 REMOVE (E) T1-11 SIDING & REPLACE WITH (N) PRIMED "HARDIEPANEL VERTICAL SIDING"-0.312" THICK-OR APPROVED EQUAL.

1 inch = 8 feet
0 8' 16' 24' 32'

TRUE NORTH / REFERENCE NORTH

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT — BRANT S. FETER — No. C 35[illegible] — REN. 8.30.17 — STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
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CALIFORNIA 94801
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PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

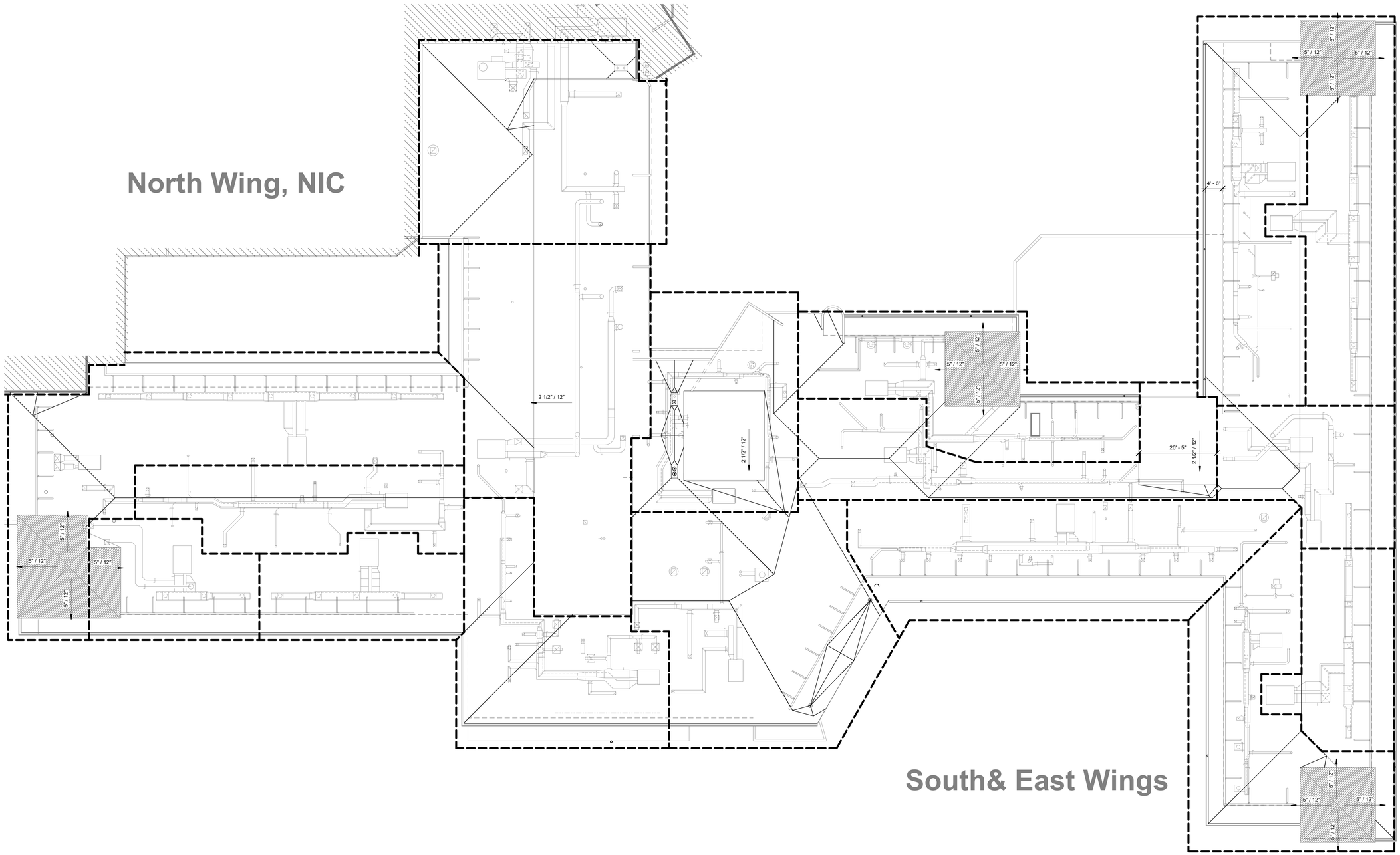
SHEET TITLE:

ROOF PLAN - EAST

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	SER
DESIGNER:	EJA. BSF
PROJ MGR:	BSF
PEER REVIEW	Checker

SHEET NUMBER:

A106



1 PHASE AREA RECOMMENDATIONS
3/32" = 1'-0"

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETTER
No. C 39[illegible]
REN. 5-30-19
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE
RESOURCES
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117 PARK PLACE
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PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

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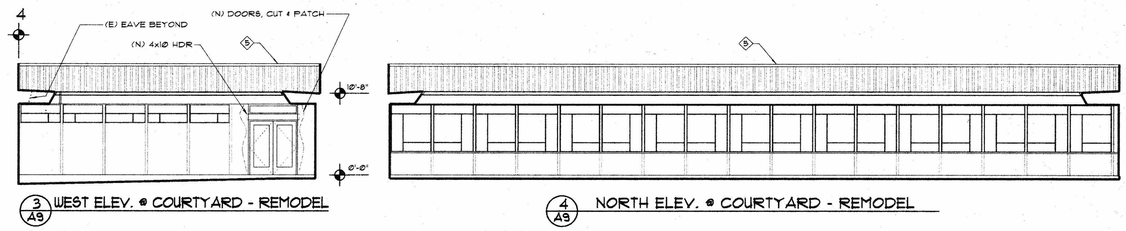
SHEET TITLE:

PHASE REFERENCE

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	bsf
DESIGNER:	BSF
PROJ MGR:	BSF
PEER REVIEW	doug

SHEET NUMBER:

A107

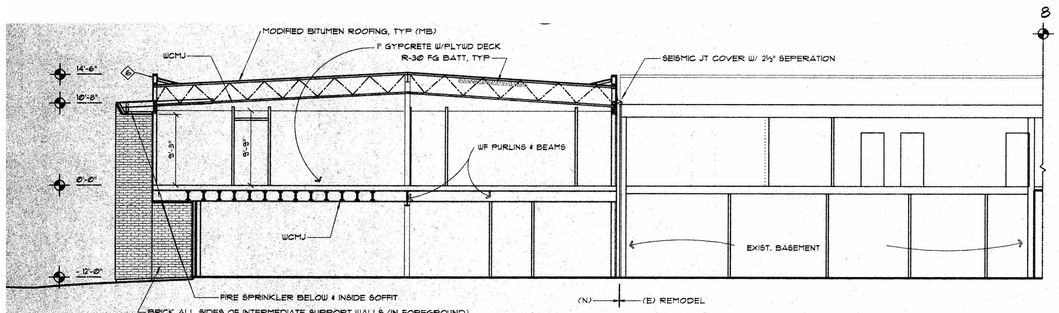


3/A9 WEST ELEV. @ COURTYARD - REMODEL

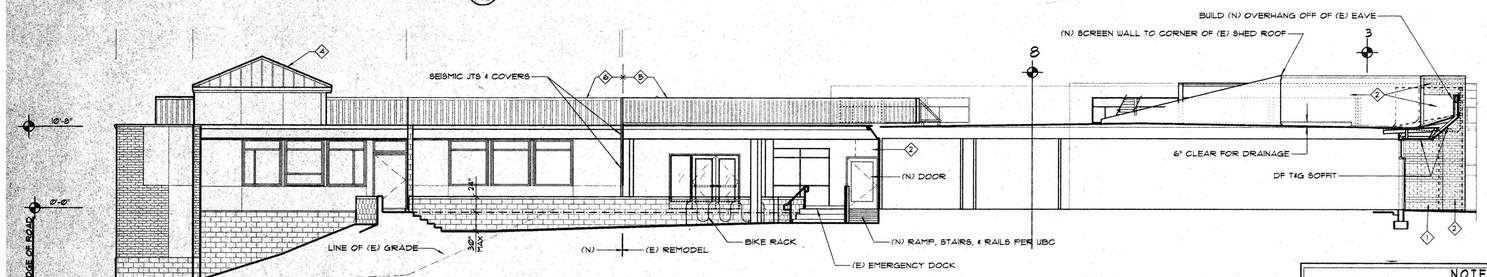
4/A9 NORTH ELEV. @ COURTYARD - REMODEL



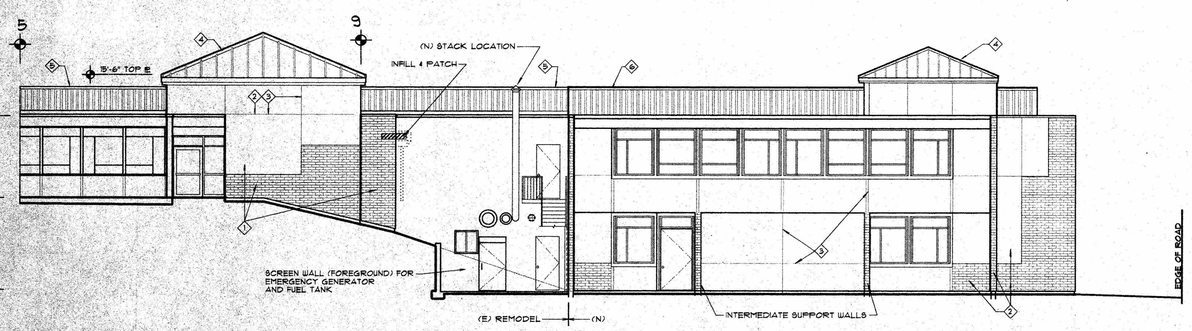
5/A9 BUILDING ELEVATION



7/A9 N.-S. BUILDING SECTION



9/A9 N.-S. BUILDING SECTION & EAST ELEVATION



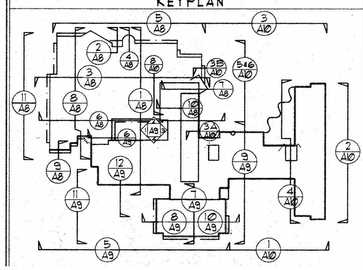
11/A9 WEST ELEVATION

FOR REFERENCE ONLY

NOTES

1. STUCCO WITH AND WITHOUT THIN BRICK OVER (E) CMU TO GRADE.
2. STUCCO WITH AND WITHOUT THIN BRICK ON NEW WOOD WALL.
3. STUCCO JOINTS, SPACE EQUAL OR ALIGN AS SHOWN. CHANNEL SCREED ¾"x¾" W/ WELDED INTERSECTION COMPONENTS, PRY OR EQ.
4. BATTEN SEAM METAL ROOFING, FACTORY PAINTED, CONCEALED FASTENER, "DESIGN SPAN BATTEN", ABC PACIFIC OR EQ. 5/12 PITCH.
5. ROOF SCREEN, "BOX RIB" METAL SIDING, FACTORY PAINTED.
6. ATTIC CLADDING, "BOX RIB" METAL SIDING, FACTORY PAINTED, OVER ½" TYPE X GUB, 1 HR.
7. THIN BRICK, OVER (E) STUCCO ON WOOD FRAMING.

KEYPLAN



NO.	REVISIONS/SUBMISSIONS	DATE
1	WORKING DRAWINGS	

JONATHAN BYER
ARCHITECT
P.O. BOX 21
WILLITS, CA 95490
707-459-4376

MENDOCINO COUNTY
ADMINISTRATION CENTER
LOW GAP ROAD, UKIAH, CALIFORNIA

ELEVATIONS AND SECTIONS

REGISTERED ARCHITECT JONATHAN E. BYER No. C-19978 EXPIRES 12-31-95 STATE OF CALIFORNIA

DESIGNED: J.B.	PROJECT NO: 9308 MCAC	
DRAWN: JB,EK,BW,RC	CADD FILE NAME: AC-A10	SCALE: 1/8" = 1'-0" (1:96)
CHECKED: J.B.	SHT NO. A - 9	
REVIEWED		
DATE: 08-15-94		

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT BRANT S. FETTER No. C 35[illegible] EXP. 6.30.17 STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
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860 N. BUSH ST.
UKIAH, CA 95482

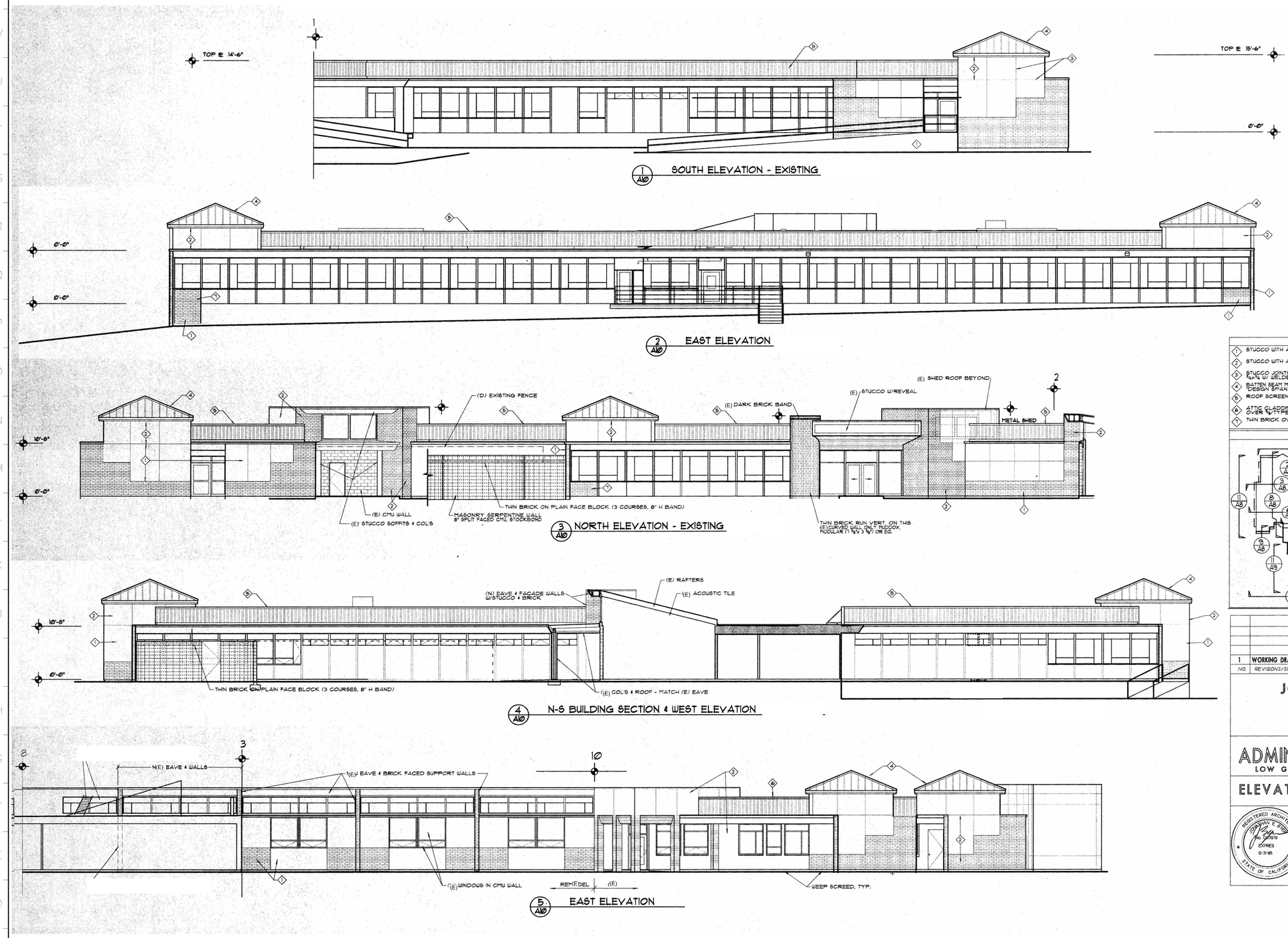
SHEET TITLE:

EXTERIOR ELEVATIONS (REFERENCE DRAWING)

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	DSP
DESIGNER:	bsf/eja
PROJ MGR:	BSF
PEER REVIEW	

SHEET NUMBER:

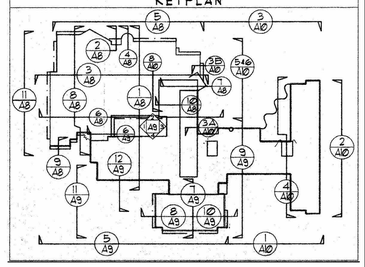
A201



NOTES

1. STUCCO WITH AND WITHOUT THIN BRICK OVER (E) CMU TO GRADE.
2. STUCCO WITH AND WITHOUT THIN BRICK ON NEW WOOD WALL.
3. STUCCO JOINTS, SPACE EQUAL OR ALIGN AS SHOWN. CHANNEL SCREED 6x4"ø W/ WELDED INTERSECTION COMPONENTS, FRY OR EQ.
4. BATTEN SEAM METAL ROOFING, FACTORY PAINTED, CONCEALED FASTENER, "DESIGN SPAN BATTEN" ABC PACIFIC OR EQ. 5/12 PITCH.
5. ROOF SCREEN, "BOX RIB" METAL SIDING, FACTORY PAINTED.
6. ATTIC CLADDING "BOX RIB" METAL SIDING, FACTORY PAINTED. OVER ⅝" TYPE X GWB, 1 HR.
7. THIN BRICK OVER (E) STUCCO ON WOOD FRAMING.

KEYPLAN



REV	DESCRIPTION	INIT	DATE
	100% DESIGN DEVELOPMENT SET		
	CONSTRUCTION DOCUMENTS SET		10-04-17
	ISSUED FOR PLAN CHECK		
	ISSUED FOR PERMIT		
	ISSUED FOR BID		
	ISSUED FOR CONSTRUCTION		

SEAL:

LICENSED ARCHITECT — BRANT S. FETER — No. C 30978 — EXP. 8-30-19 — STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES

ARCHITECTURE ◦ PLANNING ◦ ENGINEERING

117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

NO.	REVISIONS/SUBMISSIONS	DATE
1	WORKING DRAWINGS	

JONATHAN BYER
ARCHITECT
P.O. BOX 21
WILLITS, CA 95490
707-459-4376

MENDOCINO COUNTY
ADMINISTRATION CENTER
LOW GAP ROAD, UKIAH, CALIFORNIA

ELEVATIONS AND SECTIONS

REGISTERED ARCHITECT — JONATHAN E. BYER — No. C21976 — 12-31-95 — STATE OF CALIFORNIA

DESIGNED: J.B.	PROJECT NO: 9308 MCAC	
DRAWN: JB,EK,BW,RC	CADD FILE NAME: AC-A10	SCALE: 1/8" = 1'-0" (1:96)
CHECKED: J.B.	SHT NO.	A-10
REVIEWED		
DATE: 08-15-94		

SHEET TITLE:

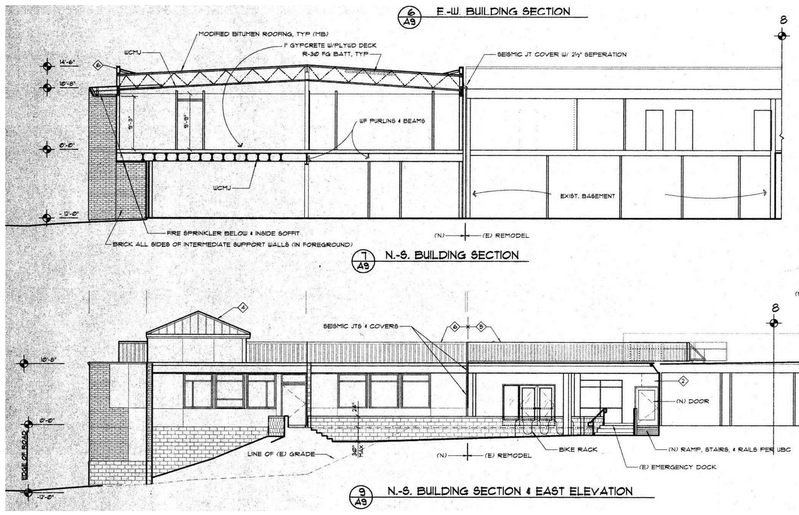
EXTERIOR ELEVATIONS (REFERENCE DRAWING)

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	Author
DESIGNER:	Designer
PROJ MGR:	BSF
PEER REVIEW	Checker

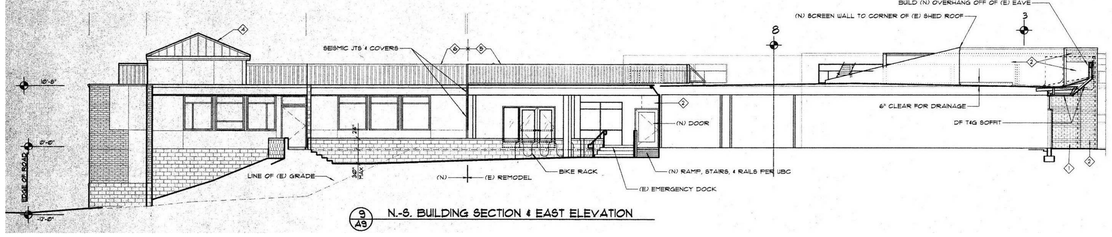
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A202

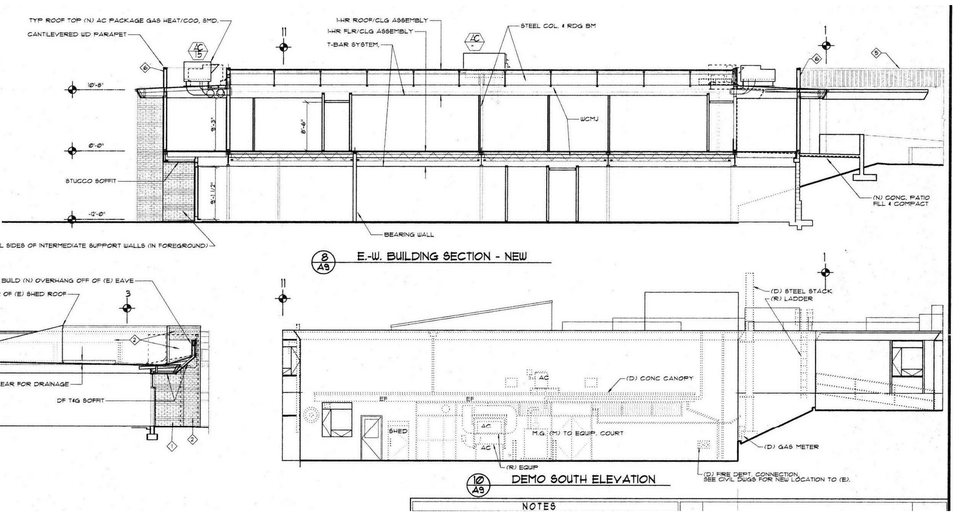
FOR REFERENCE ONLY



6/A5 E-W. BUILDING SECTION



9/A5 N.-S. BUILDING SECTION & EAST ELEVATION



7/A5 N.-S. BUILDING SECTION

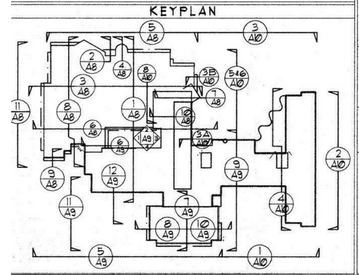
8/A5 E-W. BUILDING SECTION - NEW

10/A5 DEMO SOUTH ELEVATION

NOTES

1. STUCCO WITH AND WITHOUT THIN BRICK OVER (E) CMU TO GRADE.
2. STUCCO WITH AND WITHOUT THIN BRICK ON NEW WOOD WALL.
3. STUCCO JOINTS, SPACE EQUAL OR ALIGN AS SHOWN. CHANNEL SCREED 4"x¾" @ WELDED INTERSECTION COMPONENTS, FRY OR EQ.
4. BATTEN SEAM METAL ROOFING, FACTORY PAINTED CONCEALED FASTENER, "DESIGN SPAN BATTEN", ABC PACIFIC OR EQ. 5/12 PITCH.
5. ROOF SCREEN, "BOX RIB" METAL SIDING, FACTORY PAINTED.
6. ATTIC CLADDING, "BOX RIB" METAL SIDING, FACTORY PAINTED. OVER ⅝" TYPE X GWB, 1 HR.
7. THIN BRICK OVER (E) STUCCO ON WOOD FRAMING.

KEYPLAN



NO.	REVISIONS/SUBMISSIONS	DATE
1	WORKING DRAWINGS	

JONATHAN BYER
ARCHITECT
P.O. BOX 21
WILLITS, CA 95490
707-459-4376

MENDOCINO COUNTY
ADMINISTRATION CENTER
LOW GAP ROAD, UKIAH, CALIFORNIA

ELEVATIONS AND SECTIONS

DESIGNED: J.B.	PROJECT NO: 9208 MCAC
DRAWN: JB,EK,BW,RC	CADD FILE NAME: AC-A10
CHECKED: J.B.	SCALE: 1/8" = 1'-0" (11-96)
REVIEWED	SHT NO. A-8
DATE: 03-15-94	

FOR REFERENCE ONLY

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETTER
No. C 30288
REN. 8-30-19
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE
RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

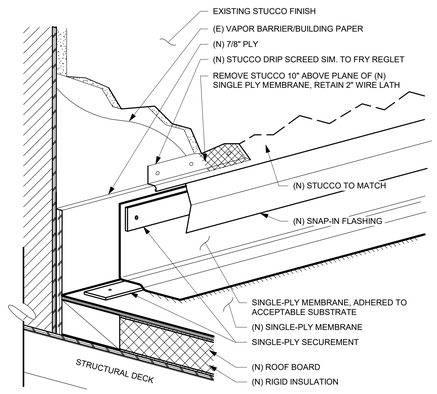
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SECTIONS (REFERENCE DRAWING)

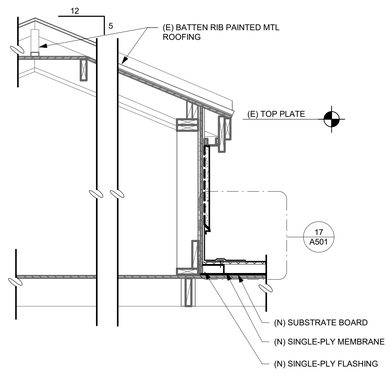
PROJ. NO.	2013-084-26
	PREPARATION AND REVIEW
DRAWN BY:	DSP
DESIGNER:	EJA
PROJ MGR:	BSF
PEER REVIEW	

SHEET NUMBER:

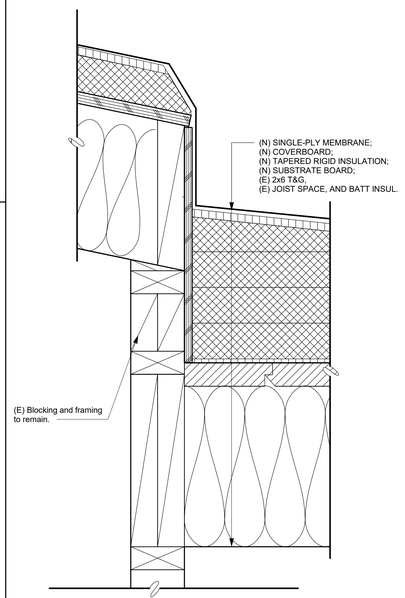
A301



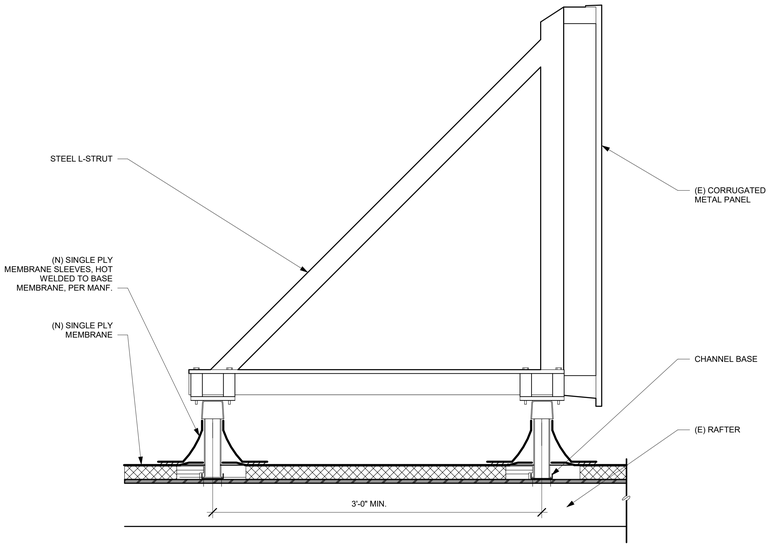
17 WALL FLASHING AT (E) STUCCO AND ROOF
1 1/2" = 1'-0"



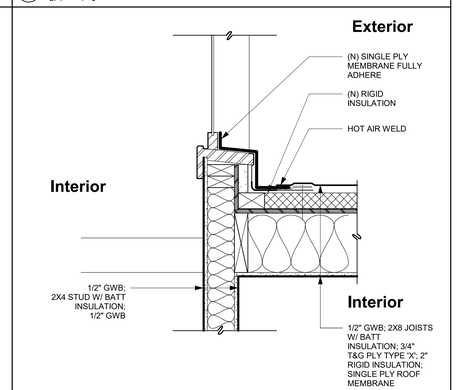
13 ROOFING AT RAISED STANDING SEAM METAL ROOFS
3/4" = 1'-0"



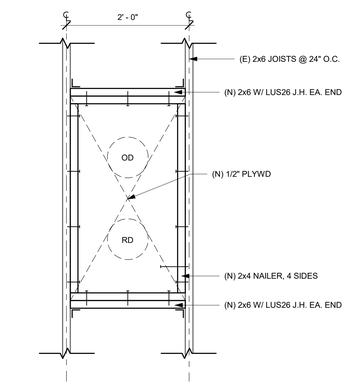
10 ROOF EDGE TO LOWER ROOF
3" = 1'-0"



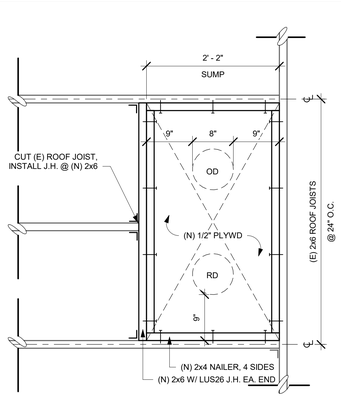
6 ROOF SCREEN DETAIL
1 1/2" = 1'-0"



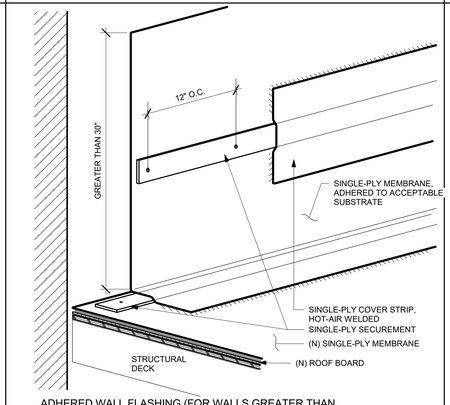
14 SILL DETAIL
1 1/2" = 1'-0"



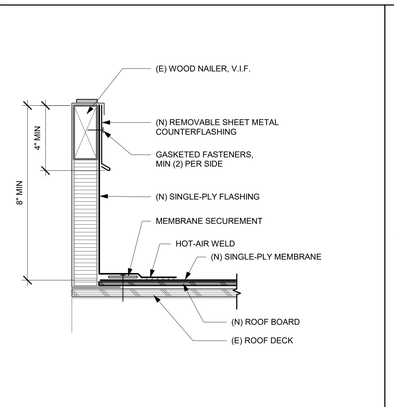
19 FRAMING AT NEW ROOF DRAIN SUMP - PARALLEL W/ FRAMING
1" = 1'-0"



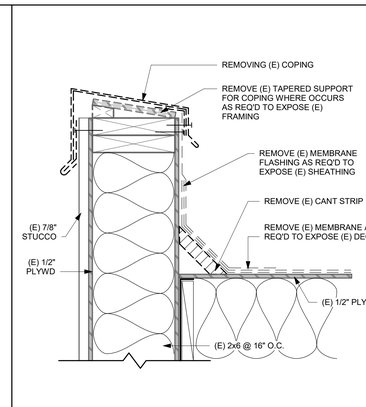
15 FRAMING AT NEW ROOF DRAIN SUMP
1" = 1'-0"



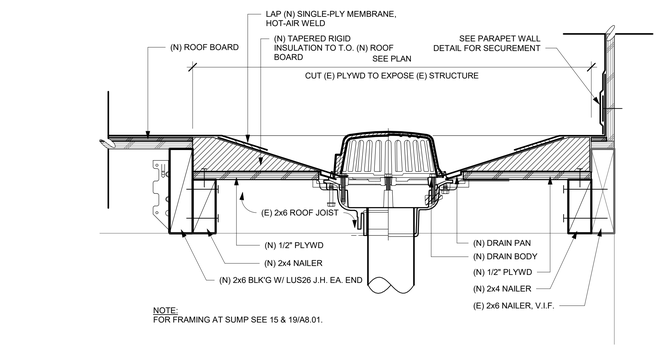
ADHERED WALL FLASHING (FOR WALLS GREATER THAN 30 INCHES IN HEIGHT)
11 1 1/2" = 1'-0"



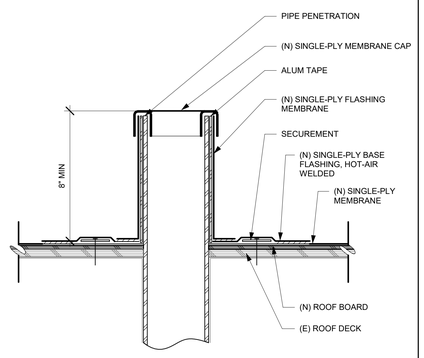
7 MECHANICAL CURB FLASHING
3" = 1'-0"



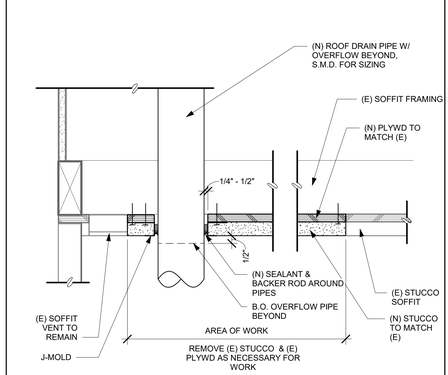
3 EXISTING PARAPET CAP
N.T.S.



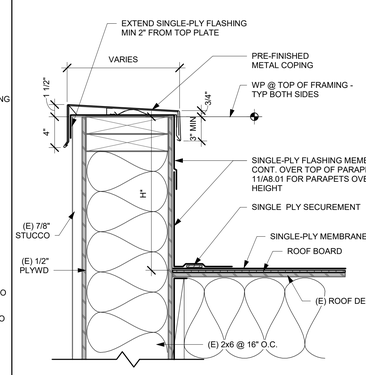
20 NEW ROOF DRAIN SUMP
3" = 1'-0"



12 VENT STACK FLASHING
3" = 1'-0"



8 DETAIL AT DRAIN PIPE THROUGH (E) SOFFIT
3" = 1'-0"



*NOTE: FOR PARAPET HEIGHTS ABOVE 30" SEI11 / A501

4 NEW PARAPET CAP
N.T.S.

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETER
No. C 39[illegible]
REN 8-30-19
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUST ST.
UKIAH, CA 95482

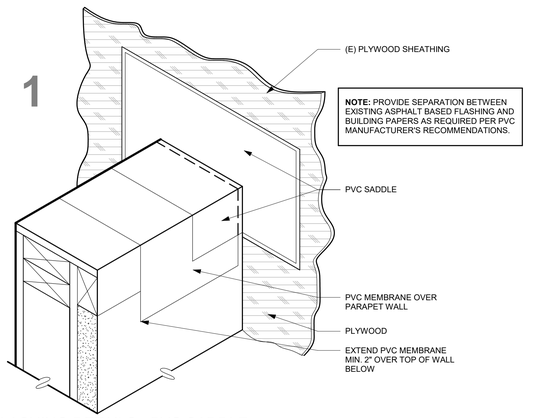
SHEET TITLE:

ROOF DETAILS

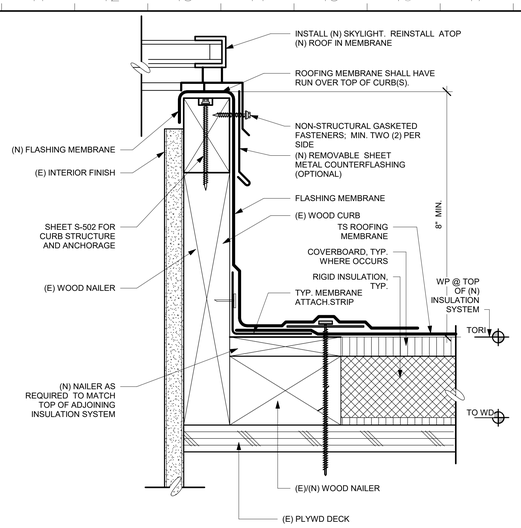
PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	DSP
DESIGNER:	EJA
PROJ MGR:	BSF
PEER REVIEW	

SHEET NUMBER:

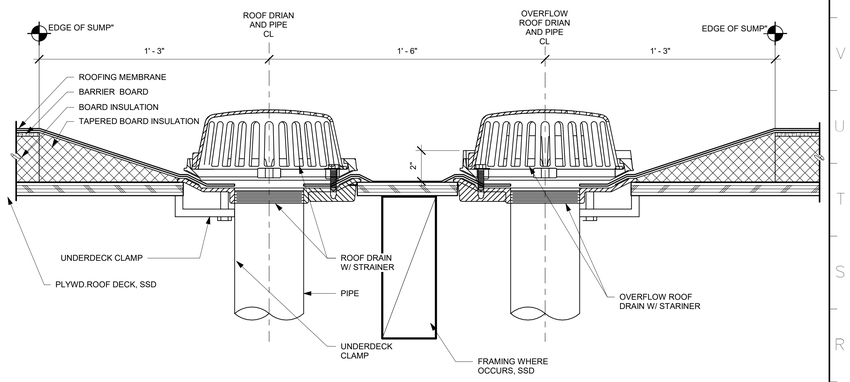
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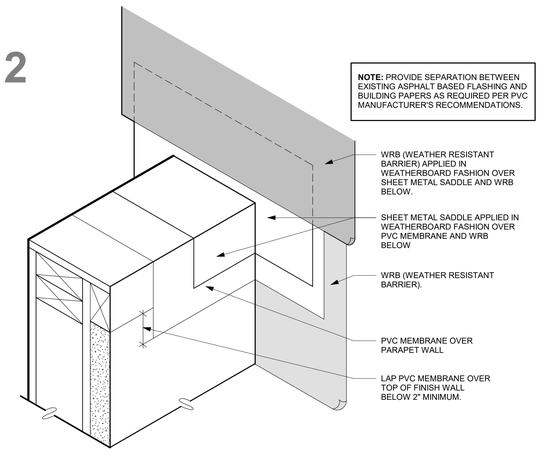
10 FLASHING DETAILS - PVC SADDLE
3" = 1'-0"



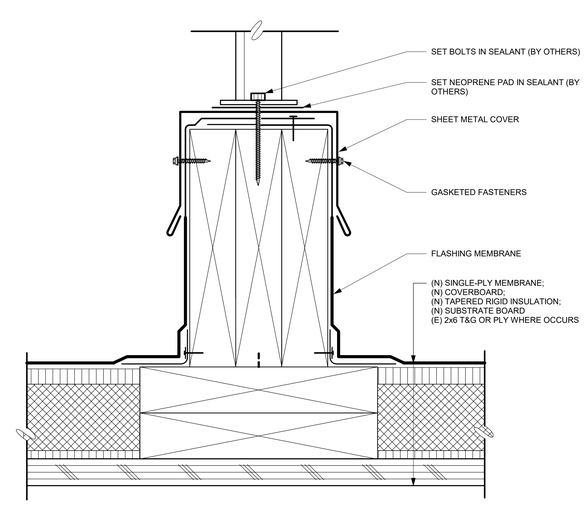
7 TYP. EQUIPMENT CURB
6" = 1'-0"



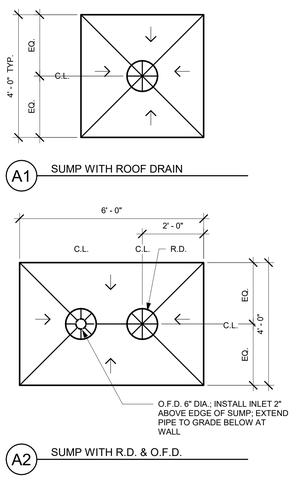
4 ROOF DRAIN SUMP AND OVERFLOW
3" = 1'-0"



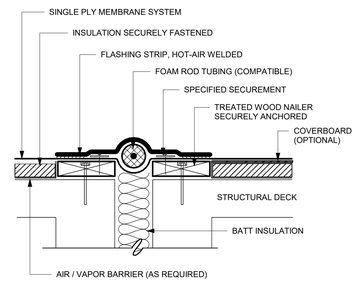
11 FLASHING DETAILS - SHEET METAL SADDLE
3" = 1'-0"



8 MEDIUM EQ. SUPPORT CURB
6" = 1'-0"



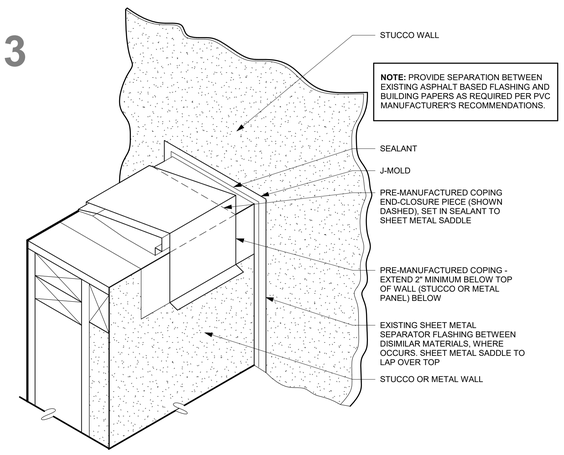
5 SCHEMATIC SUMP PLANS
1/2" = 1'-0"



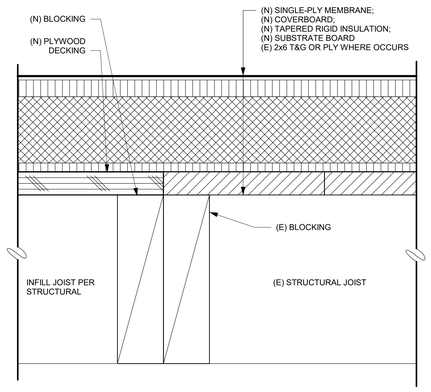
NOTES:

1. NAILERS SHALL BE SECURELY ANCHORED TO THE DECK TO RESIST A FORCE OF 300 POUNDS PER LINEAL FOOT IN ANY DIRECTION.
2. VAPOR BARRIER SHALL BE SEALED AT EDGES.

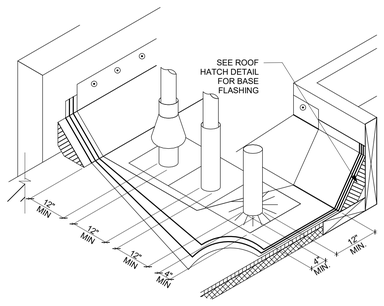
2 2" EXPANSION JOINT
3" = 1'-0"



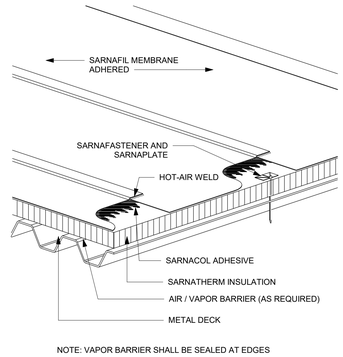
12 FLASHING DETAILS - COPING
3" = 1'-0"



9 ROOF DECK INFILL
6" = 1'-0"



6 TYP. PENETRATION
1/8" = 1'-0"



NOTE: VAPOR BARRIER SHALL BE SEALED AT EDGES

3 ADHERED SYSTEM
3" = 1'-0"

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT BRANT S. FETER No. C 35[illegible] REN 8.30.17 STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

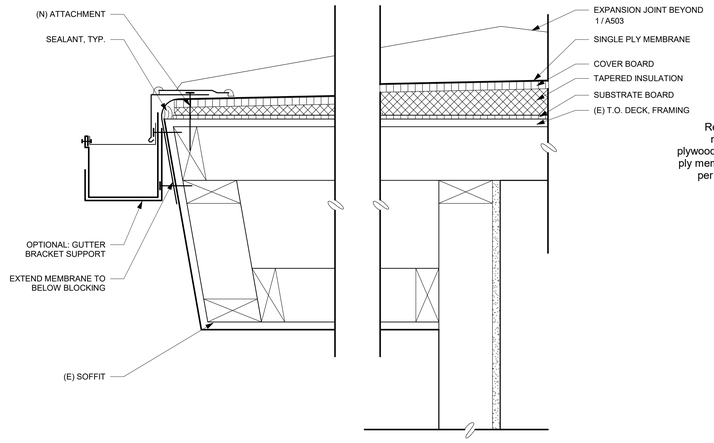
SHEET TITLE:

ROOF DETAILS

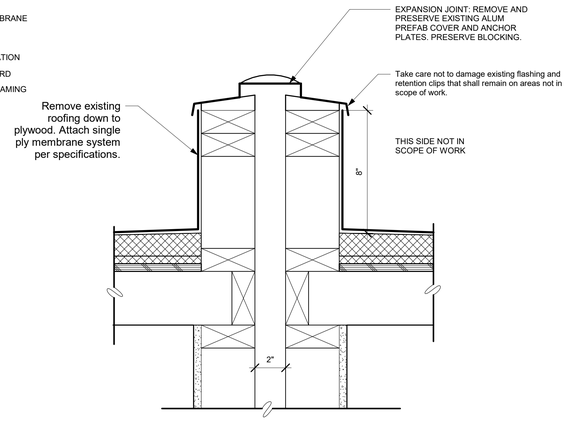
PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	Author
DESIGNER:	Designer
PROJ MGR:	BSF
PEER REVIEW	Checker

SHEET NUMBER:

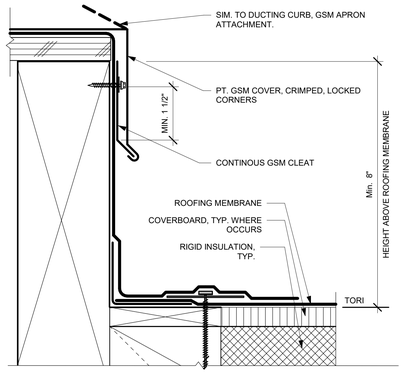
A502



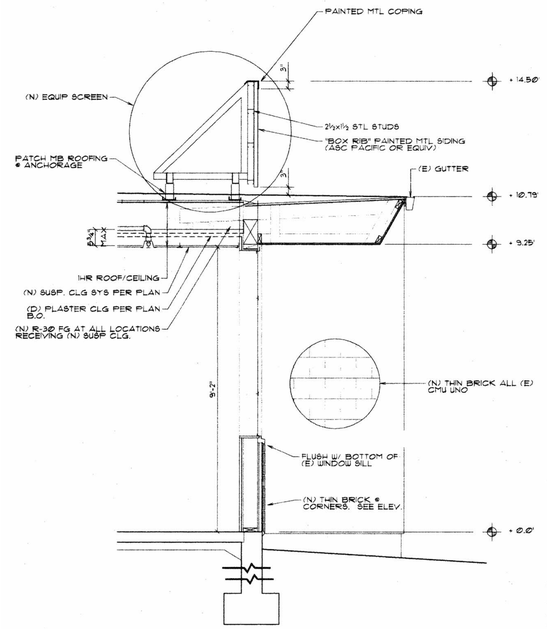
4 EXP. JOINT DETAIL @ GUTTER
3" = 1'-0"



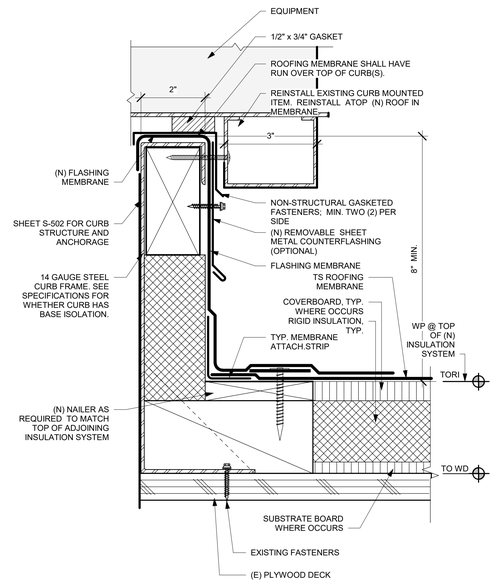
1 EXPANSION JOINT ON ROOF
3" = 1'-0"



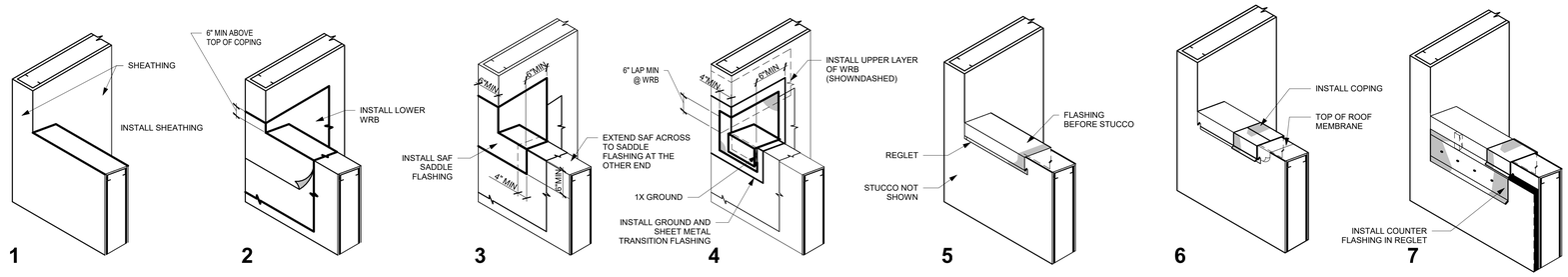
8 WOOD FRAMED CURB/PENETRATION TYP.
6" = 1'-0"



5 TYP (E) PERIMETER WALL & EAVE W/ TYP. ALTERATIONS
1/2" = 1'-0"



2 TYPICAL EQUIPMENT CURB
6" = 1'-0"



12 ROOF - ISO DETAIL
1/2" = 1'-0"

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

LICENSED ARCHITECT
BRANT S. FETER
No. C 35098
EXP. 5-31-19
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST
UKIAH, CA 95482

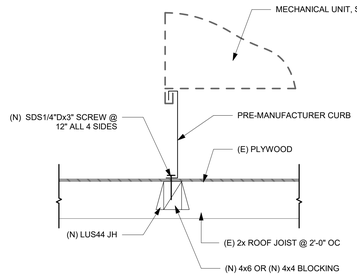
SHEET TITLE:

ROOF DETAILS

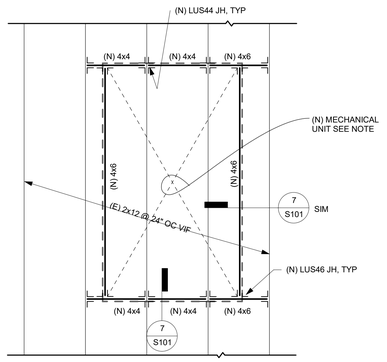
PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	Author
DESIGNER:	Designer
PROJ MGR:	BSF
PEER REVIEW	Checker

SHEET NUMBER:

A503



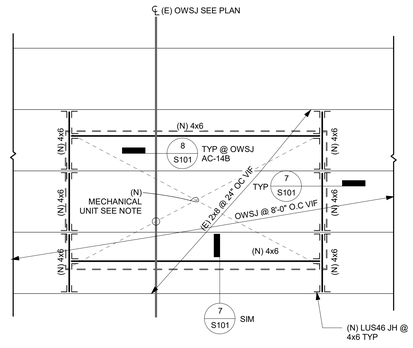
7 SECTION AT EQUIPMENT BASE
1" = 1'-0"



DETAIL NOTES:

USE THIS DETAIL FOR THE FOLLOWING AC UNITS-
AC-13 WT=875#
AC- 20 WT=750#

4 (N) FRAMING PLAN AT MECHANICAL EQUIPMENT AC-13 & AC-20
1/2" = 1'-0"



DETAIL NOTES:

USE THIS DETAIL FOR THE FOLLOWING AC UNITS-
AC-14B WT=750#
AC-15 WT=750#

1 (N) FRAMING PLAN AT MECHANICAL EQUIPMENT AC-14B & AC-15
1/2" = 1'-0"

8 CONNECTION DETAIL AT OWSJ
1" = 1'-0"

DETAIL NOTES:

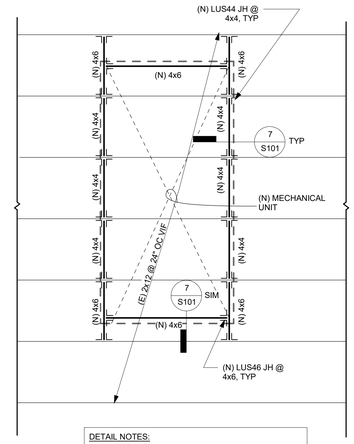
USE THIS DETAIL FOR THE FOLLOWING AC UNITS-
AC-26 WT=750#
AC-27 WT=1100#
AC-29 WT=1100#
AC-30 WT=875#
AC-31 WT=700#

5 (N) FRAMING PLAN AT MECHANICAL EQUIPMENT AC-26, AC-27, AC-29, AC-30 AND AC-31
1/2" = 1'-0"

DETAIL NOTES:

USE THIS DETAIL FOR THE FOLLOWING AC UNITS-
AC-14A WT=1100#
AC-16 WT=875#
AC-17 WT=875#

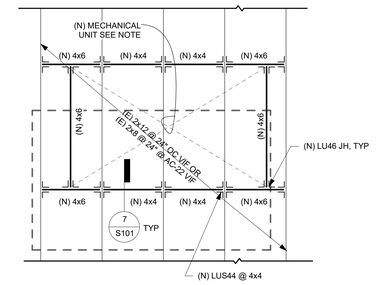
2 (N) FRAMING PLAN AT MECHANICAL EQUIPMENT AC-14A, AC-16 & AC-17
1/2" = 1'-0"



DETAIL NOTES:

USE THIS DETAIL FOR THE FOLLOWING AC UNITS-
AC-28 WT=700#

6 (N) FRAMING PLAN AT MECHANICAL EQUIPMENT AC-28
1/2" = 1'-0"



DETAIL NOTES:

USE THIS DETAIL FOR THE FOLLOWING AC UNITS-
AC-18 WT=750#
AC- 22 WT=750#
AC-23 WT=750#
AC- 24 WT=750#
AC- 25 WT=1300#

DRAWING NOTES:

1. CONTRACTOR TO VERIFY (E0 ROOF JOIST SIZE & DIRECTION AT ALL MECHANICAL UNITS. NOTIFY ARCHITECT IF DIFFERENT.

3 (N) FRAMING PLAN AT MECHANICAL EQUIPMENT AC-18, AC-22, AC-23, AC-24 & AC-25
1/2" = 1'-0"

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	07-14-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER
H. K. WHITECOTTON
DRAFT
STATE OF CALIFORNIA

CONSULTANT:

INTERACTIVE RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

STRUCTURAL PARTIAL FRAMING PLANS AND DETAILS

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MT
DESIGNER:	AKW
PROJ MGR:	BSF
PEER REVIEW	Checker

SHEET NUMBER:

S101

Air Conditioning Unit Schedule

UNIT NO.	MFGR.	MODEL NO.	EVAPORATOR FAN					COOLING							CONDENSER FANS				HEATING (GAS)		UNIT ELECTRICAL			MIN. EER	MIN. O.S.A. (CFM)	APPROX. UNIT WEIGHT (LB)	REMARKS
								COMPRESSOR		COIL																		
			CFM	WHEEL SIZE	EXTERNAL STATIC PRESSURE	FAN RPM	MOTOR BHP	NO.	TTL. KW.	AREA	ROWS	FINS/IN	TOTAL BTU/HR	SENSIBLE BTU/HR	NO.	RPM	WHEEL SIZE	MOTOR H.P.	INPUT BUTH	OUTPUT BTUH	VOLTAGE	PHASE	MCA				
AC-4	CARRIER	EXISTING	5,150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	EXISTING
AC-9	CARRIER	EXISTING	2,400	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	EXISTING
AC-13	CARRIER	48HCA07	2,400	15x15	0.8"	738	1.33	1	–	5.2	3	15	65,200	65,200	1	1100	22"ø	1/4	125,000	103,000	208	3	42.0	12.0	–	875	(1)
AC-14A	CARRIER	48HCD08	2,625	15x15	0.8"	764	1.03	2	–	11.1	4	15	79,300	77,700	1	1100	22"ø	1/4	125,000	103,000	208	3	50.0	12.0	–	1100	(2)
AC-14B	CARRIER	48HCA05	2,000	10x10	0.8"	1227	1.34	1	–	5.2	3	15	46,500	46,500	1	1100	22"ø	1/4	72,000	56,000	208	3	31.0	13.0	–	750	(1)
AC-15	CARRIER	48HCA05	1,600	10x10	0.8"	1103	0.91	1	–	5.2	3	15	43,700	43,700	1	1100	22"ø	1/4	72,000	56,000	208	3	31.0	13.0	–	750	
AC-16	CARRIER	48HCA07	2,400	15x15	0.8"	738	1.33	1	–	5.2	3	15	65,200	65,200	1	1100	22"ø	1/4	125,000	103,000	208	3	42.0	12.0	–	875	(1)
AC-17	CARRIER	EXISTING	3,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	EXISTING
AC-18	CARRIER	48HCA06	2,000	10x10	0.8"	1242	1.40	1	–	5.2	4	15	53,600	53,600	1	1100	22"ø	1/4	115,000	90,000	208	3	35.0	12.5	–	750	(1)
AC-20	CARRIER	48HCA05	1,600	10x10	0.8"	1103	0.91	1	–	5.2	3	15	43,700	43,700	1	1100	22"ø	1/4	72,000	56,000	208	3	31.0	13.0	–	750	
AC-22	CARRIER	48HCA05	1,600	10x10	0.8"	1103	0.91	1	–	5.2	3	15	43,700	43,700	1	1100	22"ø	1/4	72,000	56,000	208	3	31.0	13.0	–	750	
AC-23	CARRIER	48HCA06	2,250	10x10	0.8"	1325	1.76	1	–	5.2	4	15	55,300	55,300	1	1100	22"ø	1/4	115,000	90,000	208	3	35.0	12.5	–	750	(1)
AC-24	CARRIER	48HCA05	1,600	10x10	0.8"	1103	0.91	1	–	5.2	3	15	43,700	43,700	1	1100	22"ø	1/4	72,000	56,000	208	3	31.0	13.0	–	750	
AC-25	CARRIER	48HCD11	4,500	15x15	0.8"	964	2.87	2	–	11.1	4	15	109,200	108,200	1	1050	30"ø	1.0	180,000	148,000	208	3	63.0	12.0	–	1300	(2)
AC-26	CARRIER	48HCA05	1,800	10x10	0.8"	1164	1.11	1	–	5.2	3	15	45,200	45,200	1	1100	22"ø	1/4	72,000	56,000	208	3	31.0	13.0	–	750	(1)
AC-27	TRANE	EXISTING	3,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	EXISTING
AC-28	CARRIER	48HCA04	1,500	10x10	0.8"	1074	0.83	1	–	3.9	3	15	34,400	34,400	1	1100	22"ø	1/8	72,000	56,000	208	3	26.0	12.5	–	700	
AC-29	CARRIER	48HCD09	3,400	15x15	0.8"	885	2.04	2	–	11.1	4	15	91,200	91,200	1	1100	22"ø	1/4	125,000	103,000	208	3	50.0	12.0	–	1100	(2)
AC-30	CARRIER	48HCA07	2,400	15x15	0.8"	738	1.33	1	–	5.2	3	15	65,200	65,200	1	1100	22"ø	1/4	125,000	103,000	208	3	42.0	12.0	–	875	(1)
AC-31	CARRIER	48HCA04	1,050	10x10	0.8"	955	0.55	1	–	3.9	3	15	31,500	30,400	1	1100	22"ø	1/8	72,000	56,000	208	3	26.0	12.5	–	700	

* 105°F. AMBIENT, 80°F. EDB/62°F. EWB, CFM AS INDICATED

(1) DUCT SMOKE DETECTOR, ECONOMIZER, LOW NO_X BURNER, 2 STAGE HEAT, 1 STAGE COOLING, BELT DRIVE

(2) DUCT SMOKE DETECTOR, ECONOMIZER, LOW NO_X BURNER, 2 STAGE HEAT, 2 STAGE COOLING

(3) INSTALL CO_2 SENSOR IN ROOM AT THERMOSTAT TO CONTROL OUTSIDE DAMPER OF ECONOMIZER. PROVIDE CONTROLS AS REQUIRED. SET MINIMUM OUTSIDE AIR TO 300 CFM.

Fan Schedule

FAN NO.	MFGR.	MODEL NO.	CFM	S.P. ("WC)	RPM	WHEEL SIZE	BHP	MAX. SONES	MOTOR				WEIGHT (LBS.)	SERVICE	REMARKS
									H.P.	VOLTAGE	PHASE	WATTS			
E-1	GREENHECK	G103-VG	-900	0.375	1314	–	–	7.4	1/4	115	1	–	50	BATHROOMS	
E-2	GREENHECK	G085-VG	-325	0.375	1443	–	–	6.5	1/10	115	1	–	40	KITCHEN	
E-3	GREENHECK	G095-VG	-650	0.375	1448	–	–	7.7	1/10	115	1	–	50	BATHROOMS	
E-4	GREENHECK	G095-VG	-650	0.375	1448	–	–	7.7	1/10	115	1	–	50	BATHROOMS	
E-5	GREENHECK	G060-VG	-120	0.375	1725	–	–	4.5	1/10	115	1	–	18	RESTROOM	
E-6	GREENHECK	SWD-10-VG	-800	0.5	1379	–	–	10.0	1/4	115	1	–	58	MISC.	
E-7	GREENHECK	SWD-10-VG	-800	0.5	1379	–	–	10.0	1/4	115	1	–	58	MISC.	

Plumbing Legend

– – – –	RWL	RAINWATER LEADER PIPING
—G—	G.	GAS PIPING
—CD—	CD	CONDENSATE DRAIN PIPING
—◎—	FD, RD	FLOOR DRAIN, ROOF DRAIN
	VTR	VENT THROUGH ROOF
	HB	HOSE BIBB
	(1)	DESIGNATION OF SHEET NOTE #1
	(E)	EXISTING
	(N)	NEW
	TYP.	TYPICAL
		GAS COCK
	B.V.	BALL VALVE

Mechanical Legend

12"ø	ROUND DUCT, INSIDE DIAMETER INDICATED
18x12	RECTANGULAR DUCT, INSIDE WIDTH AND INSIDE DEPTH
	SUPPLY DUCT, SECTION
	RETURN DUCT, SECTION
	EXHAUST DUCT, SECTION
FD	FIRE DAMPER IN DUCT
FD, D	SINGLE BLADE VOLUME DAMPER
D	TURNING VANE
	TAKE-OFF WITH ADJUSTABLE TURNING VANE
	ROUND CONICAL TEE WITH TAKE-OFF AT 45° TO DIRECTION OF MAIN DUCT
	ACCESS PANEL IN DUCT
	INTERNAL ACOUSTIC INSULATION INSIDE DUCT, SIZES SHOWN ARE NET INSIDE
500 / 18x18x1	CEILING DIFFUSER, CFM ON TOP, NECK SIZE AND NUMBER OF DIRECTIONS OF BLOW ON BOTTOM
200 / 12x12	CEILING RETURN REGISTER, CFM ON TOP, NECK SIZE ON BOTTOM
200 / 12x12	CEILING EXHAUST REGISTER, CFM ON TOP, NECK SIZE ON BOTTOM
200 / 12x12	SIDEWALL EXHAUST, RETURN, OR RELIEF REGISTER, CFM ON TOP, NECK SIZE ON BOTTOM
500 / 18x12x1	SIDEWALL DIFFUSER, CFM ON TOP, NECK SIZE AND NUMBER OF DIRECTIONS OF BLOW ON BOTTOM
T	THERMOSTAT MOUNT ON WALL
TYP.	TYPICAL
(E)	EXISTING
(N)	NEW
NTS	NOT TO SCALE
DN	DOWN
AFF	ABOVE THE FINISHED FLOOR
(1)	DESIGNATION OF SHEET NOTE #1

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	04-06-16
ISSUED FOR PERMIT	
ISSUED FOR BID	09-13-17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER — MICHAEL J. LEFLER — Exp. 12-31-17 — No. 20208 — MECHANICAL — STATE OF CALIFORNIA

CONSULTANT:

LEFLER ENGINEERING, INC.
1651 Second Street
San Rafael, CA 94901
(415) 456-4220 (415)
456-1248 fax

INTERACTIVE
RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUST ST.
UKIAH, CA 95482

SHEET TITLE:

MECHANICAL AND PLUMBING SCHEDULES AND LEGENDS

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

MP101

Plot Date: October 03, 2017 - 12:04 pm
File Name: C:\Users\Michelle.rippstein\Local\temp\AcPublish_29\MP101.dwg

Sheet Notes

1. REMOVE EXISTING PIPING, PIPE SUPPORTS, ETC., TYPICAL. MAINTAIN PIPE THROUGH ROOF FOR CONNECTION TO NEW PIPING SYSTEM. CAP PIPING IN ORDER TO KEEP REMAINING PIPE CLEAN WHILE THE ROOF IS REPLACED.
2. REMOVE EXISTING DUCTWORK, DUCT SUPPORTS, ETC. BACK TO ROOF PENETRATION, TYPICAL. MAINTAIN DUCT THROUGH ROOF FOR CONNECTION TO NEW DUCT SYSTEM. SEAL DUCTS WITH THICK VISQUEEN OR EQUIVALENT IN ORDER TO KEEP DUCTS CLEAN WHILE THE ROOF IS BEING REPLACED.
3. REMOVE EXISTING AIR CONDITIONING UNIT AND ROOF CURB, TYPICAL.
4. REMOVE EXISTING EXHAUST FAN AND INSTALL NEW FAN ON NEW ROOF CURB AFTER ROOF IS REPLACED, TYPICAL.
5. REMOVE AND REINSTALL EXISTING CONDENSING UNIT ON NEW SLEEPERS. PROTECT THE PIPING AS REQUIRED. REFLASH THE ROOF CURB TO INTEGRATE WITH THE NEW ROOF. SEE ARCHITECTURAL FLASHING DETAILS.
6. REMOVE AND REINSTALL EXISTING ROOF OUTLET AFTER ROOF IS REPLACED.
7. EXISTING GAS PIPING TO EXISTING METER TO REMAIN.
8. EXISTING FLUE AND ROOF CURB TO BE REMOVED AND REPLACED AFTER THE ROOF IS REPLACED. REFLASH THE ROOF CURB TO INTEGRATE WITH THE NEW ROOF. SEE ARCHITECTURAL FLASHING DETAILS.
9. EXISTING DUCTWORK TO REMAIN.
10. EXISTING PIPING TO REMAIN.
11. EXISTING FLEXIBLE PIPE JOINTS TO REMAIN.
12. EXISTING AIR CONDITIONING UNIT AND ROOF CURB TO REMAIN. REFLASH THE ROOF CURB TO INTEGRATE WITH THE NEW ROOF. SEE ARCHITECTURAL FLASHING DETAILS. REMOVE AND REINSTALL THE RELIEF VENT ON THE NEW DUCTWORK.
13. SEE CONTINUATION ON SHEET MP204, TYPICAL.
14. REMOVE EXISTING EXHAUST FAN, ROOF CURB, AND DUCTWORK.
15. REMOVE EXISTING AIR CONDITIONING UNIT AND REINSTALL AS AC-17.
16. REMOVE EXISTING ROOF DRAINS AND ALL ASSOCIATED PIPING.

1 MECHANICAL AND PLUMBING DEMOLITION ROOF PLAN - SOUTH
1/8" = 1'-0"

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH / TRUE NORTH

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	04-06-16
ISSUED FOR PERMIT	
ISSUED FOR BID	09-13-17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. LEFLER
Exp. 12-31-17
No. 20208
MECHANICAL
STATE OF CALIFORNIA

CONSULTANT:

LEFLER ENGINEERING, INC.
1651 Second Street
San Rafael, CA 94901
(415) 456-4220 (415)
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CALIFORNIA 94801
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http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

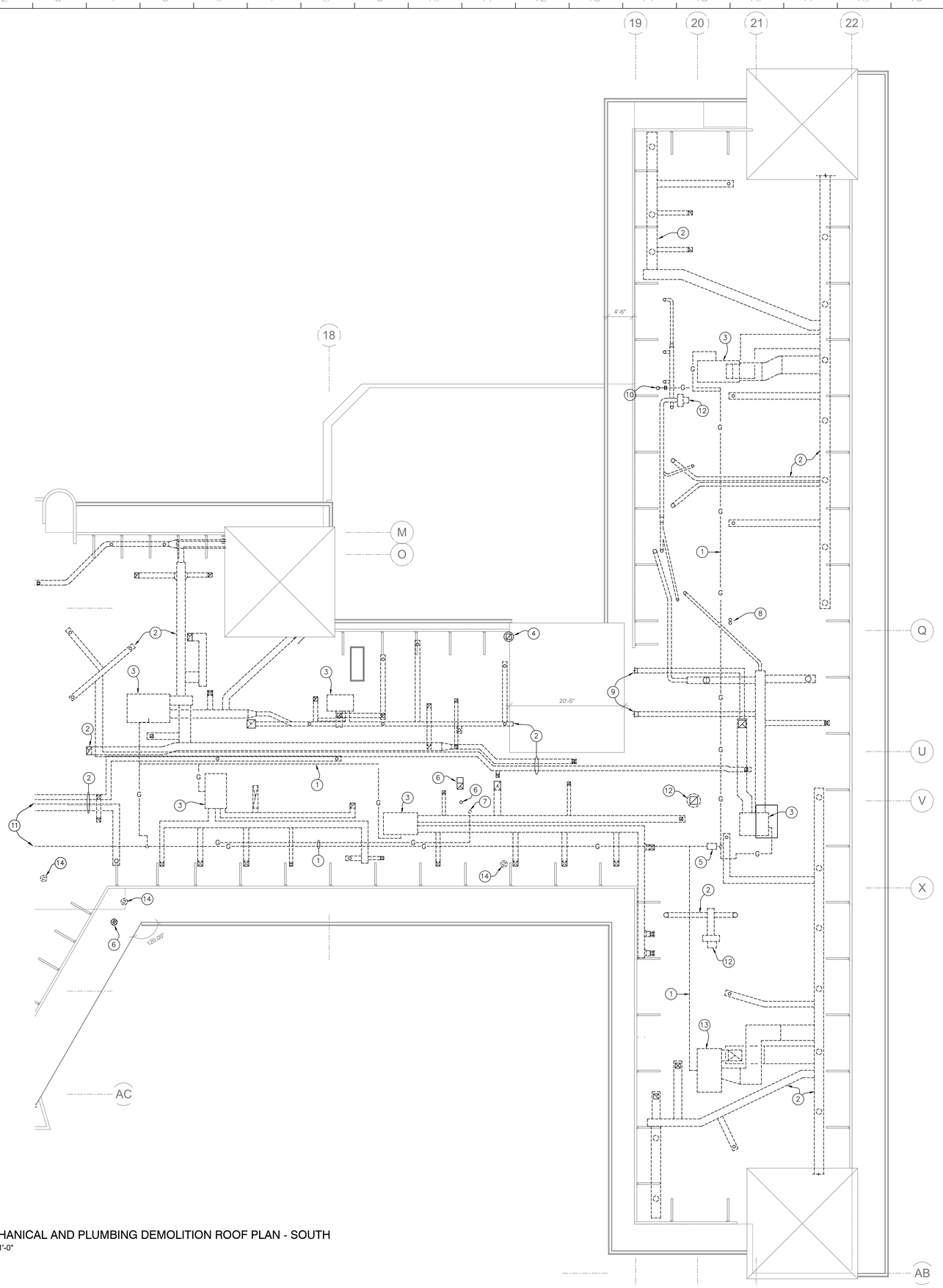
MECHANICAL AND PLUMBING DEMOLITION ROOF PLAN - SOUTH

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

MP203

Plot Date: October 04, 2017 - 12:58 pm
File Name: C:\Users\Mandie.coppola\Local\temp\AcPublish_12016\MP23.dwg



1 MECHANICAL AND PLUMBING DEMOLITION ROOF PLAN - SOUTH
1/8" = 1'-0"

Sheet Notes

1. REMOVE EXISTING PIPING, PIPE SUPPORTS, ETC., TYPICAL. MAINTAIN PIPE THROUGH ROOF FOR CONNECTION TO NEW PIPING SYSTEM. CAP PIPING IN ORDER TO KEEP REMAINING PIPE CLEAN WHILE THE ROOF IS REPLACED.
2. REMOVE EXISTING DUCTWORK, DUCT SUPPORTS, ETC. BACK TO ROOF PENETRATION, TYPICAL. MAINTAIN DUCT THROUGH ROOF FOR CONNECTION TO NEW DUCT SYSTEM. SEAL DUCTS WITH THICK VISQUEEN OR EQUIVALENT IN ORDER TO KEEP DUCTS CLEAN WHILE THE ROOF IS BEING REPLACED.
3. REMOVE EXISTING AIR CONDITIONING UNIT AND ROOF CURB, TYPICAL.
4. REMOVE EXISTING EXHAUST FAN AND REINSTALL ON NEW ROOF CURB AFTER ROOF IS REPLACED, TYPICAL.
5. REMOVE EXISTING GAS METER AND ALL ASSOCIATED PIPING AND SUPPORTS.
6. REMOVE AND REINSTALL EXISTING ROOF OUTLET AFTER ROOF IS REPLACED.
7. REMOVE EXISTING GAS PIPE THROUGH ROOF AND CAP IN CEILING BELOW.
8. REMOVE EXISTING HYDRONIC SYSTEM VENTS, TYPICAL. CAP PIPING IN THE CEILING BELOW.
9. EXISTING DUCTWORK TO REMAIN.
10. EXISTING PIPING TO REMAIN.
11. SEE CONTINUATION ON SHEET MP203, TYPICAL.
12. REMOVE EXISTING EXHAUST FAN AND INSTALL NEW.
13. REMOVE EXISTING AIR CONDITIONING UNIT AND REINSTALL AS AC–27.
14. REMOVE EXISTING ROOF DRAIN AND ALL ASSOCIATED PIPING.

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH / TRUE NORTH

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	04-06-16
ISSUED FOR PERMIT	
ISSUED FOR BID	09-13-17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. LEFLER
Exp. 12-31-17
No. 20208
MECHANICAL
STATE OF CALIFORNIA

CONSULTANT:

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(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

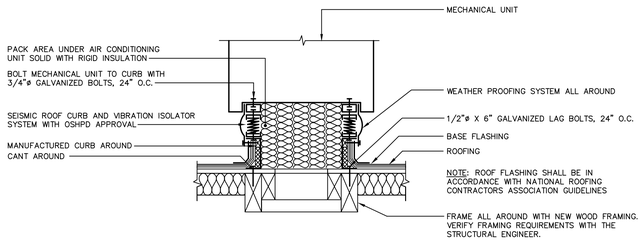
MECHANICAL AND PLUMBING DEMOLITION ROOF PLAN - EAST

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

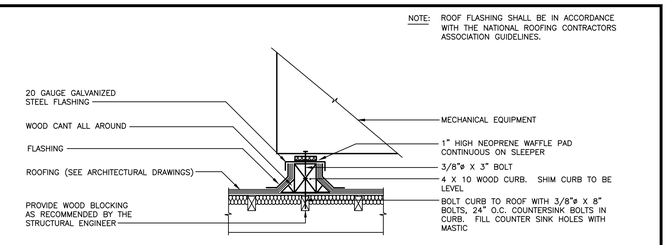
SHEET NUMBER:

MP204

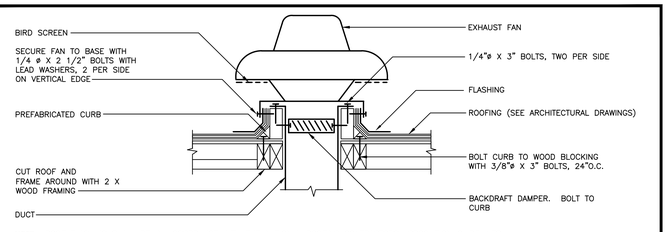
Plot Date: October 04, 2017 - 12:59 pm
File Name: C:\Users\Michelle.rippolda\Local\temp\AcPublish_12016\MP23.dwg



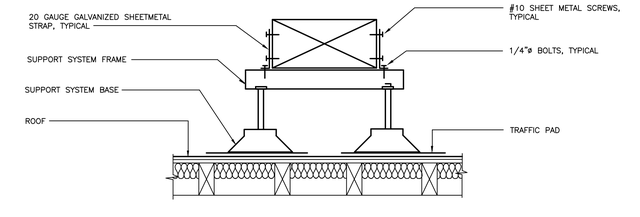
1 Detail – Mechanical Unit Support NOT TO SCALE



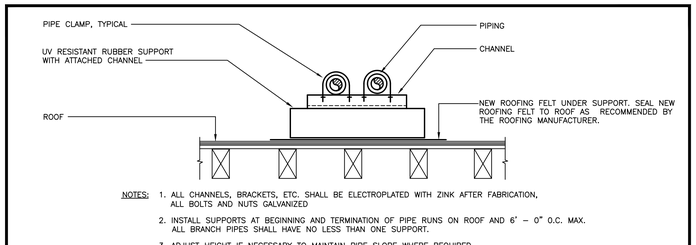
2 Detail – Equipment Support On Roof NOT TO SCALE



3 Detail – Exhaust Fan Support NOT TO SCALE

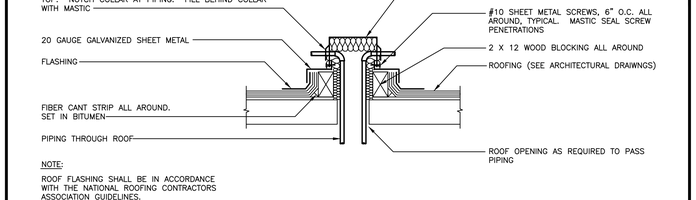


4 Detail – Duct Support On Roof NOT TO SCALE

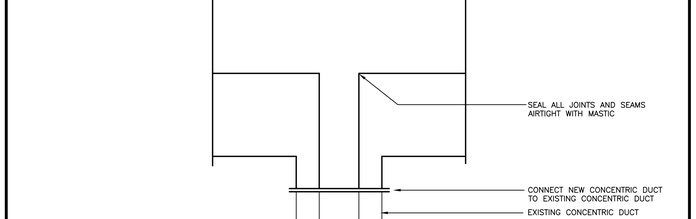


5 Detail – Duct Through Roof NOT TO SCALE

6 Detail – Pipe Support On Roof NOT TO SCALE



7 Detail – Pipe Through Roof NOT TO SCALE



8 Detail – Concentric Duct Section Detail NOT TO SCALE

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	04-06-16
ISSUED FOR PERMIT	
ISSUED FOR BID	09-13-17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. LEFLER
Exp. 12-31-17
No. 20208
MECHANICAL
STATE OF CALIFORNIA

CONSULTANT:

LEFLER ENGINEERING, INC.
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San Rafael, CA 94901
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http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

MECHANICAL DETAILS

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

MP501

Plot Date: October 05, 2017 - 12:03 pm
File Name: C:\Users\Michele\appdata\local\temp\AcPublish_2548\M101.dwg

Sheet Notes

1. INSTALL NEW ROOF DRAIN AND RECONNECT TO EXISTING RWL PIPING, TYPICAL.
2. NOT USED.
3. AIR CONDITIONING UNIT, TYPICAL. SEE MECHANICAL DRAWINGS.
4. INSTALL NEW COPPER CONDENSATE DRAIN PIPING AFTER THE ROOF IS REDONE, TYPICAL. CONNECT CONDENSATE DRAIN PIPING TO AIR CONDITIONING UNIT, TYPICAL. CONNECT THROUGH VENTED P-TRAP.
5. INSTALL NEW GALVANIZED STEEL PIPING AND FITTINGS AFTER THE ROOF IS REDONE, TYPICAL. CONNECT GAS PIPING TO AIR CONDITIONING UNITS THROUGH GAS COCK, DIRT LEG, AND UNION, TYPICAL.
6. SEE DETAIL 6/MP501 FOR PIPE SUPPORT ON ROOF, TYPICAL.
7. REMOVE EXISTING ROOF DRAIN. CAP PIPING BELOW ROOF.
8. SEE CONTINUATION ON SHEET P304, TYPICAL.
9. CONNECT NEW GAS PIPE TO EXISTING GAS PIPE ON ROOF.
10. EXISTING PIPING TO REMAIN.
11. TERMINATE OVER GUTTER, TYPICAL.
12. EXISTING FLEXIBLE PIPES TO REMAIN.
13. EXISTING PIPING TO EXISTING GAS METER TO REMAIN.
14. TERMINATE CONDENSATE DRAIN OVER ROOF DRAIN.
15. INSTALL NEW ROOF DRAIN. COMMENT NEW 3 INCH RWL PIPING. RUN PIPING TO CONNECT TO THE RWL PIPING FROM THE ADJACENT ROOF DRAIN.
16. INSTALL NEW OVERFLOW ROOF DRAIN. COMMENT NEW 3 INCH RWL PIPING. RUN PIPING TO COMBINE WITH THE RWL PIPING FROM THE ADJACENT OVERFLOW ROOF DRAIN AND RUN A 3 INCH RWL PIPE TO TERMINATE THROUGH THE NEAREST WALL UP HIGH. FLASH WALL PENETRATION WATERTIGHT.

1 PLUMBING ROOF PLAN - SOUTH
1/8" = 1'-0"

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH / TRUE NORTH

REV	DESCRIPTION	INIT	DATE
	100% DESIGN DEVELOPMENT SET		
	50% CONSTRUCTION DOCUMENTS SET		
	ISSUED FOR PLAN CHECK		04-06-16
	ISSUED FOR PERMIT		
	ISSUED FOR BID		09-13-17
	ISSUED FOR CONSTRUCTION		

SEAL:
REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. LEFLER
Exp. 12-31-17
No. 20208
MECHANICAL
STATE OF CALIFORNIA

CONSULTANT:

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456-1248 fax

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http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

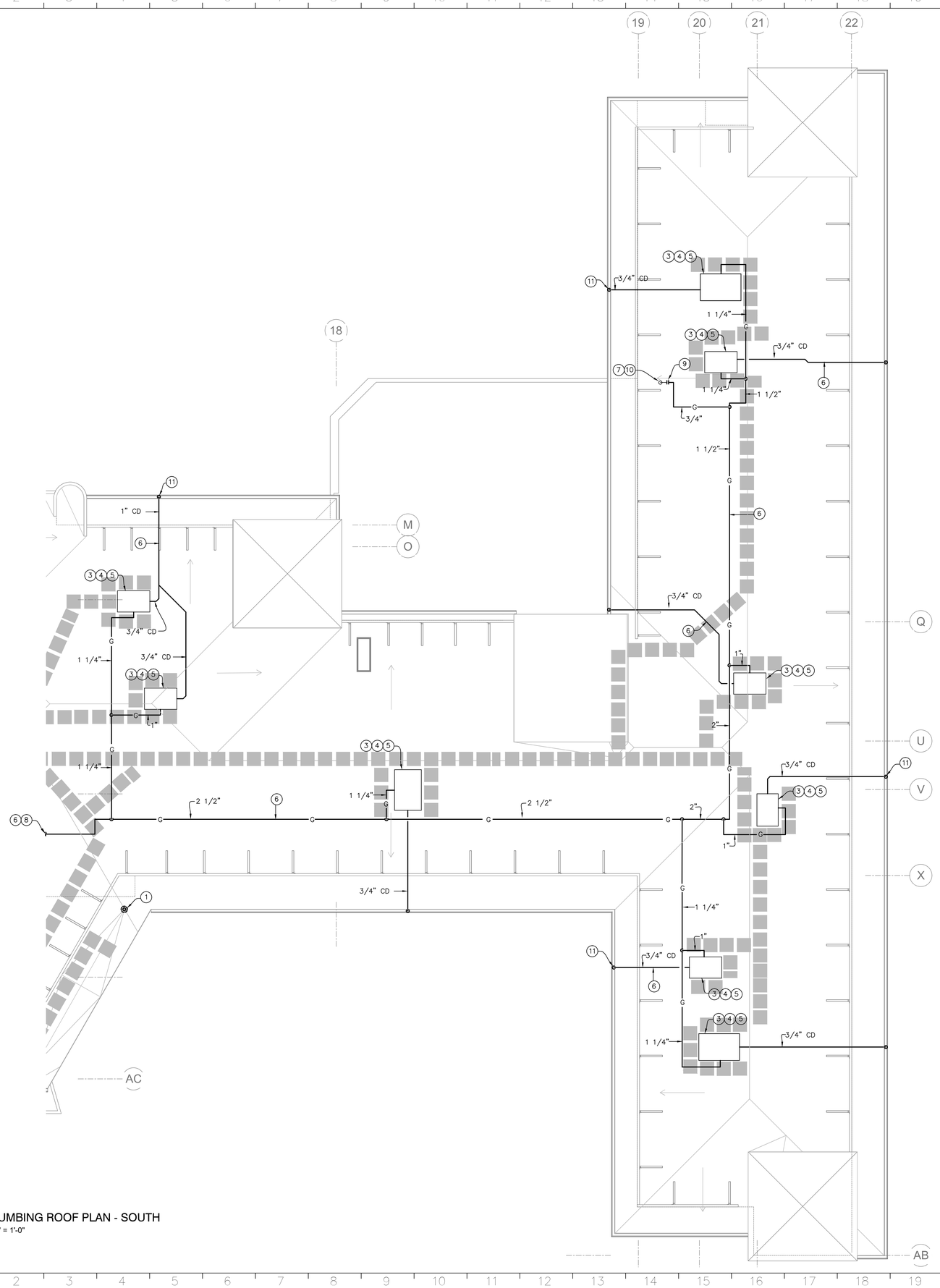
PLUMBING ROOF PLAN - SOUTH

PROJ. NO.	2013-084-26
	PREPARATION AND REVIEW
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

P303

Plot Date: October 03, 2017 - 12:01 pm
File Name: C:\Users\Michelle.coppola\Local\temp\AcPublish_29\459A23.dwg



1 PLUMBING ROOF PLAN - SOUTH
1/8" = 1'-0"

Sheet Notes

1. INSTALL NEW ROOF DRAIN AND OVERFLOW ROOF DRAIN, TYPICAL. CONNECT RWL PIPING.
2. INSTALL NEW ROOF DRAIN AND OVERFLOW ROOF DRAIN, TYPICAL. REMOVE EXISTING RWL PIPING AND CONNECT NEW LARGER RWL PIPING.
3. AIR CONDITIONING UNIT, TYPICAL. SEE MECHANICAL DRAWINGS.
4. REMOVE EXISTING CONDENSATE DRAIN PIPING WHILE THE ROOF IS BEING REPLACED. INSTALL NEW COPPER CONDENSATE DRAIN PIPING AFTER THE ROOF IS REDONE, TYPICAL. CONNECT CONDENSATE DRAIN PIPING TO AIR CONDITIONING UNIT, TYPICAL. CONNECT THROUGH VENTED P-TRAP. RUN TO TERMINATE DIRECTLY OVER GUTTER.
5. REMOVE EXISTING GAS PIPING WHILE THE ROOF IS BEING REPLACED. INSTALL NEW GAS PIPING WITH NEW GALVANIZED STEEL PIPING AND FITTINGS AFTER THE ROOF IS REDONE, TYPICAL. CONNECT GAS PIPING TO AIR CONDITIONING UNITS THROUGH GAS COCK, DIRT LEG, AND UNION, TYPICAL.
6. SEE DETAIL 6/MP501 FOR PIPE SUPPORT ON ROOF, TYPICAL.
7. SEE DETAIL 7/MP501 FOR DETAIL OF PIPE THROUGH ROOF, TYPICAL.
8. SEE CONTINUATION ON SHEET P.303, TYPICAL.
9. CONNECT NEW GAS PIPE TO EXISTING GAS PIPE ON ROOF. CONNECT THROUGH SEISMIC EXPANSION LOOP IN NEW PIPING.

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH / TRUE NORTH

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	04-06-16
ISSUED FOR PERMIT	
ISSUED FOR BID	09-13-17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. LEFLER
Exp. 12-31-17
No. 20208
MECHANICAL
STATE OF CALIFORNIA

CONSULTANT:

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http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

PLUMBING ROOF PLAN - EAST

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

P304

Plot Date: October 03, 2017 12:03 pm
File Name: C:\Users\Michelle.rippola\Local\temp\AcPublish_2948\M303.dwg

Sheet Notes

1. INSTALL NEW AIR CONDITIONING UNIT ON NEW CURB AFTER THE ROOF IS REPLACED, TYPICAL. SEE DETAIL 1/MP501. CONNECT DUCT SMOKE DETECTOR SHUT DOWN CONTROLS AND VERIFY PROPER OPERATION. BALANCE THE UNIT TO THE AIR FLOWS AS SCHEDULED. REMOVE EXISTING THERMOSTAT AND INSTALL NEW THERMOSTAT THAT IS COMPATIBLE WITH THE BUILDING CONTROLS AND WITH THE NEW AIR CONDITIONING UNIT.
2. INSTALL NEW EXHAUST FAN ON NEW ROOF CURB, RECONNECT DUCT. SEE DETAIL 3/MP501.
3. SEE DETAIL 4/MP501 FOR DUCT SUPPORT ON ROOF, TYPICAL.
4. SEE DETAIL 5/MP501 FOR DETAIL OF DUCT THROUGH ROOF, TYPICAL. FLASH NEW OR REFLASH EXISTING ROOF PENETRATION.
5. SEE DETAIL 6/MP501 FOR PIPE SUPPORT ON ROOF, TYPICAL.
6. SEE DETAIL 7/MP501 FOR DETAIL OF PIPE THROUGH ROOF, TYPICAL.
7. REMOVE AND REINSTALL EXISTING CONDENSING UNIT ON NEW CURB AFTER ROOF IS REPLACED. RECONNECT AND CHARGE REFRIGERANT LINES. SEE DETAIL 2/MP501.
8. RUN SUPPLY DUCT (TOP) AND RETURN DUCT (BOTTOM) STACKED ON ROOF. DUCTS SHOWN OFFSET ON PLANS ONLY FOR EASIER READING OF SIZES AND CONNECTIONS.
9. CONNECT NEW SUPPLY AND RETURN DUCTS TO EXISTING CONCENTRIC DUCTS THROUGH ROOF. VERIFY THE EXACT ARRANGEMENT OF THE EXISTING DUCT CONNECTION. SEE DETAIL 8/MP501.
10. REMOVE AND REINSTALL EXISTING AIR CONDITIONING UNIT ON NEW CURB AFTER THE ROOF IS REPLACED, TYPICAL. SEE DETAIL 1/MP501. CONNECT DUCT SMOKE DETECTOR SHUT DOWN CONTROLS AND VERIFY PROPER OPERATION. BALANCE THE UNIT TO THE AIR FLOWS AS SCHEDULED.
11. CONNECT NEW DUCT TO EXISTING DUCT, MAKE TRANSITION AS REQUIRED TO CONNECT TO EXISTING DUCT, TYPICAL. VERIFY EXACT SIZE AND LOCATION.
12. NOT USED.
13. EXISTING DUCTWORK TO REMAIN.
14. REINSTALL EXISTING OUTLET ON NEW ROOF CURB, CONNECT TO EXISTING DUCT THROUGH ROOF. SEE SIMILAR DETAIL 3/MP501. SEE DETAIL 3/MP501 FOR DUCT THROUGH ROOF.
15. INSTALL DUCT SMOKE DETECTOR, TYPICAL.
16. REINSTALL THE RELIEF VENT ON THE DUCT, SIMILAR TO EXISTING.
17. REMOVE AND REINSTALL EXISTING ROOF VENT. FLASH AS DETAILED BY THE ARCHITECT.
18. CUT ROOF AND RUN NEW DUCT TO NEW REGISTER IN CEILING. REGISTER SIZE AS INDICATED. COORDINATE WITH LIGHTS, ETC.
19. EXISTING AIR CONDITIONING UNIT TO REMAIN.
20. SEE CONTINUATION ON SHEET M304, TYPICAL.
21. EXISTING FLUE TERMINATION AND ROOF CAP. REMOVE AND REPLACE FLASHINGS AFTER THE ROOF IS REPLACED. SEE FLASHING DETAILS ON ARCHITECTURAL DRAWINGS.
22. REINSTALL EXISTING UNIT ON NEW ROOF CURB.

1 MECHANICAL ROOF PLAN - SOUTH
1/8" = 1'-0"

1 inch = 8 feet
0 8' 16' 24' 32'

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
CONSTRUCTION DOCUMENTS SET	10-04-17
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. LEFLER
Exp. 12-31-17
No. 22208
MECHANICAL
STATE OF CALIFORNIA

CONSULTANT:

LEFLER ENGINEERING, INC.
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117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH STREET
UKIAH, CA 95482

SHEET TITLE:

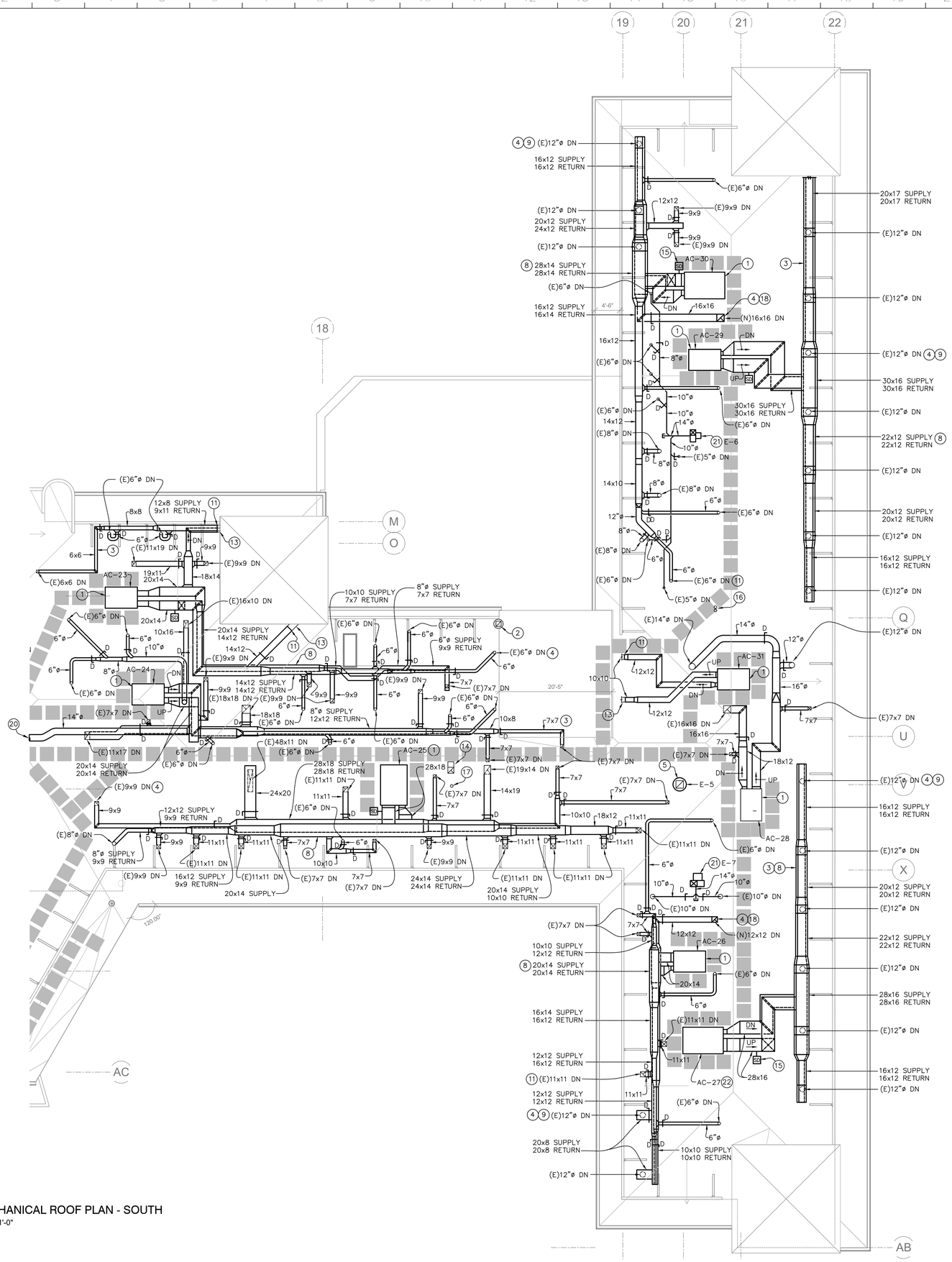
MECHANICAL ROOF PLAN - SOUTH

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

M303

Plot Date: November 08, 2017 - 7:24 am
File Name: C:\Users\Michelle.lapostata\Local\temp\AcPublish_4584\M23.dwg



1 MECHANICAL ROOF PLAN - SOUTH
1/8" = 1'-0"

Sheet Notes

1. INSTALL NEW AIR CONDITIONING UNIT ON NEW CURB AFTER THE ROOF IS REPLACED, TYPICAL. SEE DETAIL 1/MP501. CONNECT DUCT SMOKE DETECTOR SHUT DOWN CONTROLS AND VERIFY PROPER OPERATION. BALANCE THE UNIT TO THE AIR FLOWS AS SCHEDULED. REMOVE EXISTING THERMOSTAT AND INSTALL NEW THERMOSTAT THAT IS COMPATIBLE WITH THE BUILDING CONTROLS AND WITH THE NEW AIR CONDITIONING UNIT.
2. REMOVE AND REINSTALL EXISTING EXHAUST FAN ON NEW ROOF CURB AFTER ROOF IS REPLACED, TYPICAL. SEE DETAIL 3/MP501.
3. SEE DETAIL 4/MP501 FOR DUCT SUPPORT ON ROOF, TYPICAL.
4. SEE DETAIL 5/MP501 FOR DETAIL OF DUCT THROUGH ROOF, TYPICAL. FLASH NEW OR REFLASH EXISTING ROOF PENETRATION.
5. INSTALL NEW EXHAUST FAN ON NEW ROOF CURB. RECONNECT DUCT. SEE DETAIL 3/MP501.
6. NOT USED.
7. NOT USED.
8. RUN SUPPLY DUCT (TOP) AND RETURN DUCT (BOTTOM) STACKED ON ROOF. DUCTS SHOWN OFFSET ON PLANS ONLY FOR EASIER READING OF SIZES AND CONNECTIONS.
9. CONNECT NEW SUPPLY AND RETURN DUCTS TO EXISTING CONCENTRIC DUCTS THROUGH ROOF. VERIFY THE EXACT ARRANGEMENT OF THE EXISTING DUCT CONNECTION. SEE DETAIL 8/MP501.
10. NOT USED.
11. CONNECT NEW DUCT TO EXISTING DUCT, MAKE TRANSITION AS REQUIRED TO CONNECT TO EXISTING DUCT, TYPICAL. VERIFY EXACT SIZE AND LOCATION.
12. NOT USED.
13. EXISTING DUCTWORK TO REMAIN.
14. REINSTALL EXISTING OUTLET ON NEW ROOF CURB, CONNECT TO EXISTING DUCT THROUGH ROOF. SEE SIMILAR DETAIL 3/MP501. SEE DETAIL 3/MP501 FOR DUCT THROUGH ROOF.
15. INSTALL DUCT SMOKE DETECTOR, TYPICAL.
16. REMOVE EXISTING HYDRONIC AIR VENTS AND CAP BELOW ROOF, TYPICAL.
17. REMOVE AND REINSTALL EXISTING ROOF VENT. FLASH AS DETAILED BY THE ARCHITECT.
18. CUT ROOF AND RUN NEW DUCT TO NEW REGISTER IN CEILING. REGISTER SIZE AS INDICATED. COORDINATE WITH LIGHTS, ETC.
19. NOT USED.
20. SEE CONTINUATION ON SHEET M303, TYPICAL.
21. INSTALL EXHAUST FAN ON NEW SLEEPERS. RECONNECT TO DUCTS BELOW. SEE SIMILAR DETAIL 2/MP501.
22. REINSTALL EXISTING UNIT ON NEW ROOF CURB. INSTALL NEW ECONOMIZER SECTION IN EXISTING UNIT AND MODIFY ALL CONTROLS AS REQUIRED.

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH / TRUE NORTH

REV	DESCRIPTION	INIT	DATE
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	50% CONSTRUCTION DOCUMENTS SET		
	ISSUED FOR PLAN CHECK		04-06-16
	ISSUED FOR PERMIT		
	ISSUED FOR BID		09-13-17
	ISSUED FOR CONSTRUCTION		

SEAL:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. LEFLER
Exp. 12-31-17
No. 20208
MECHANICAL
STATE OF CALIFORNIA

CONSULTANT:

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PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

MECHANICAL ROOF PLAN - EAST

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

M304

Plot Date: October 03, 2017 12:01 pm
File Name: C:\Users\Mandie.rippola\Local\temp\AcPublish_2948\M23.dwg

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 1 of 4)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. MECHANICAL COMPLIANCE DOCUMENTS & WORKSHEETS (check box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, refer to the 2016 Nonresidential Manual

Note: The Enforcement Agency may require all forms to be incorporated onto the building plans.

YES	NO	Comp. Doc./Worksheet #	Title
☑	☐	NRCC-MCH-01-E (Part 1 of 3)	Certificate of Compliance, Declaration. Required on plans for all submittals.
☑	☐	NRCC-MCH-01-E (Part 2 of 3)	Certificate of Compliance, Required Acceptance Tests (MCH-02-A to 11-A). Required on plans for all submittals.
☑	☐	NRCC-MCH-01-E (Part 3 of 3)	Certificate of Compliance, Required Acceptance Tests (MCH-12-A to 18-A). Required on plans where applicable.
☑	☐	NRCC-MCH-02-E (Part 1 of 2)	Mechanical Dry Equipment Summary is required for all submittals with Central Air Systems. It is optional on plans.
☑	☐	NRCC-MCH-02-E (Part 2 of 2)	Mechanical Wet Equipment Summary is required for all submittals with chilled water, hot water or condenser water systems. It is optional on plans.
☐	☐	NRCC-MCH-03-E	Mechanical Ventilation and Reheat is required for all submittals with multiple zone heating and cooling systems. It is optional on plans.
☑	☐	NRCC-MCH-07-E (Part 1 of 2)	Power Consumption of Fans. Required on plans where applicable
☑	☐	NRCC-MCH-07-E (Part 2 of 2)	Power Consumption of Fans, Declaration. Required on plans where applicable

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 2 of 4)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

B. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required compliance documents)

Test Performed By:

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for HVAC systems. The designer is required to check the applicable boxes for all acceptance tests that apply and list all equipment that requires an acceptance test. All equipment of the same type that requires a test, list the equipment description and the number of systems.

Installing Contractor:
The contractor who installed the equipment is responsible to either conduct the acceptance test themselves or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible.

Enforcement Agency:
Plancheck – The NRCC-MCH-01-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked.
Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description	MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	MCH-09-A	MCH-10-A	MCH-11-A
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
AC-13	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-14A	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-14B	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-15	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-16	1	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐
AC-17	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-18	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-20	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-22	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-23	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 2 of 4)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

B. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required compliance documents)

Test Performed By:

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for HVAC systems. The designer is required to check the applicable boxes for all acceptance tests that apply and list all equipment that requires an acceptance test. All equipment of the same type that requires a test, list the equipment description and the number of systems.

Installing Contractor:
The contractor who installed the equipment is responsible to either conduct the acceptance test themselves or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible.

Enforcement Agency:
Plancheck – The NRCC-MCH-01-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked.
Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description	MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	MCH-09-A	MCH-10-A	MCH-11-A
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
AC-24	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-25	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-26	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-27	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-28	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-29	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-30	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
AC-31	1	☑	☑	☐	☑	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 3 of 4)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

C. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required compliance documents)

Test Performed By:

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Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description	MCH-12-A	MCH-13-A	MCH-14-A	MCH-15-A	MCH-16-A	MCH-17-A	MCH-18-A
Equipment Requiring Testing or Verification	# of Units	Fault Detection & Diagnostics for DX Units	Automatic Fault Detection & Diagnostics for Air & Zone	Distributed Energy Storage DX AC Systems	Thermal Energy Storage (TES) Systems	Supply Air Temperature Reset Controls	Condenser Water Reset Controls	ECMS
AC-13	1	☑	☐	☐	☐	☐	☐	☐
AC-14A	1	☑	☐	☐	☐	☐	☐	☐
AC-14B	1	☐	☐	☐	☐	☐	☐	☐
AC-15	1	☐	☐	☐	☐	☐	☐	☐
AC-16	1	☐	☐	☐	☐	☐	☐	☐
AC-17	1	☑	☐	☐	☐	☐	☐	☐
AC-18	1	☐	☐	☐	☐	☐	☐	☐
AC-20	1	☐	☐	☐	☐	☐	☐	☐
AC-22	1	☐	☐	☐	☐	☐	☐	☐
AC-23	1	☑	☐	☐	☐	☐	☐	☐

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 3 of 4)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

C. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required compliance documents)

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The contractor who installed the equipment is responsible to either conduct the acceptance test themselves or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible.

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Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description	MCH-12-A	MCH-13-A	MCH-14-A	MCH-15-A	MCH-16-A	MCH-17-A	MCH-18-A
Equipment Requiring Testing or Verification	# of Units	Fault Detection & Diagnostics for DX Units	Automatic Fault Detection & Diagnostics for Air & Zone	Distributed Energy Storage DX AC Systems	Thermal Energy Storage (TES) Systems	Supply Air Temperature Reset Controls	Condenser Water Reset Controls	ECMS
AC-24	1	☐	☐	☐	☐	☐	☐	☐
AC-25	1	☑	☐	☐	☐	☐	☐	☐
AC-26	1	☐	☐	☐	☐	☐	☐	☐
AC-27	1	☑	☐	☐	☐	☐	☐	☐
AC-28	1	☐	☐	☐	☐	☐	☐	☐
AC-29	1	☑	☐	☐	☐	☐	☐	☐
AC-30	1	☑	☐	☐	☐	☐	☐	☐
AC-31	1	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 4 of 4)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Chuck Clemons	Documentation Author Signature:	
Company:	Energy Calc Co.	Signature Date:	5/24/2017
Address:	45 Mitchell Blvd. #16	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	San Rafael, Ca. 94903	Phone:	(415)457-0990

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Mike Lefler	Responsible Designer Signature:	
Company :	Lefler Engineering Inc.	Date Signed:	5/24/17
Address:	1651 Second St.	License:	22208
City/State/Zip:	San Rafael, Ca. 94901	Phone:	(415) 456-4220

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 1 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Equipment Tags and System Description[1] – Dry Systems		AC-13	AC-14A	AC-14B
MANDATORY MEASURES	***T-24 Sections***	***Reference to the Requirements in the Contract Documents[2]***		
Heating Equipment Efficiency[3]	110.1 or 110.2(a)			
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)			
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)			
Furnace Standby Loss Control	110.2(d)			
Low Leakage AHUs	110.2(f)			
Ventilation[4]	120.1(b)			
Demand Control Ventilation[5]	120.1(c)4			
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(e)3			
Shutoff and Reset Controls[7]	120.2(e)			
Outdoor Air and Exhaust Damper Control	120.2(f)			
Isolation Zones	120.2(g)			
Automatic Demand Shed Controls	120.2(h)			
Economizer FDD	120.2(i)			
Duct Insulation	120.4			
PRESCRIPTIVE MEASURES				
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y Y/N	Y Y/N	Y Y/N
Supply Fan Pressure Control	140.4(c)			
Simultaneous Heat/Cool[8]	140.4(d)			
Economizer	140.4(e)			
Heat and Cool Air Supply Reset	140.4(f)			
Electric Resistance Heating[9]	140.4(g)			
Duct Leakage Sealing and Testing[10]	140.4(l)			

Notes:
1. Provide equipment tags (e.g. AHU 1 to 10) and system description (e.g. Single Duct VAV reheat) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where equipment is required to be listed per Title 20 1601 et seq.
4. Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.
5. If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.
6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications and the sequence of operation
7. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required). For all systems identify the specification for the thermostats and time clocks (if applicable).
8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 1 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Equipment Tags and System Description[1] – Dry Systems		AC-15	AC-16	AC-17
MANDATORY MEASURES	***T-24 Sections***	***Reference to the Requirements in the Contract Documents[2]***		
Heating Equipment Efficiency[3]	110.1 or 110.2(a)			
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)			
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)			
Furnace Standby Loss Control	110.2(d)			
Low Leakage AHUs	110.2(f)			
Ventilation[4]	120.1(b)			
Demand Control Ventilation[5]	120.1(c)4			
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(e)3			
Shutoff and Reset Controls[7]	120.2(e)			
Outdoor Air and Exhaust Damper Control	120.2(f)			
Isolation Zones	120.2(g)			
Automatic Demand Shed Controls	120.2(h)			
Economizer FDD	120.2(i)			
Duct Insulation	120.4			
PRESCRIPTIVE MEASURES				
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y Y/N	Y Y/N	Y Y/N
Supply Fan Pressure Control	140.4(c)			
Simultaneous Heat/Cool[8]	140.4(d)			
Economizer	140.4(e)			
Heat and Cool Air Supply Reset	140.4(f)			
Electric Resistance Heating[9]	140.4(g)			
Duct Leakage Sealing and Testing[10]	140.4(l)			

Notes:
1. Provide equipment tags (e.g. AHU 1 to 10) and system description (e.g. Single Duct VAV reheat) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where equipment is required to be listed per Title 20 1601 et seq.
4. Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.
5. If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.
6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications and the sequence of operation
7. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required). For all systems identify the specification for the thermostats and time clocks (if applicable).
8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 1 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Equipment Tags and System Description[1] – Dry Systems		AC-18	AC-20	AC-22
MANDATORY MEASURES	***T-24 Sections***	***Reference to the Requirements in the Contract Documents[2]***		
Heating Equipment Efficiency[3]	110.1 or 110.2(a)			
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)			
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)			
Furnace Standby Loss Control	110.2(d)			
Low Leakage AHUs	110.2(f)			
Ventilation[4]	120.1(b)			
Demand Control Ventilation[5]	120.1(c)4			
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(e)3			
Shutoff and Reset Controls[7]	120.2(e)			
Outdoor Air and Exhaust Damper Control	120.2(f)			
Isolation Zones	120.2(g)			
Automatic Demand Shed Controls	120.2(h)			
Economizer FDD	120.2(i)			
Duct Insulation	120.4			
PRESCRIPTIVE MEASURES				
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y Y/N	Y Y/N	Y Y/N
Supply Fan Pressure Control	140.4(c)			
Simultaneous Heat/Cool[8]	140.4(d)			
Economizer	140.4(e)			
Heat and Cool Air Supply Reset	140.4(f)			
Electric Resistance Heating[9]	140.4(g)			
Duct Leakage Sealing and Testing[10]	140.4(l)			

Notes:
1. Provide equipment tags (e.g. AHU 1 to 10) and system description (e.g. Single Duct VAV reheat) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where equipment is required to be listed per Title 20 1601 et seq.
4. Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.
5. If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.
6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications and the sequence of operation
7. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required). For all systems identify the specification for the thermostats and time clocks (if applicable).
8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 1 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Equipment Tags and System Description[1] – Dry Systems		AC-23	AC-24	AC-25
MANDATORY MEASURES	***T-24 Sections***	***Reference to the Requirements in the Contract Documents[2]***		
Heating Equipment Efficiency[3]	110.1 or 110.2(a)			
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)			
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)			
Furnace Standby Loss Control	110.2(d)			
Low Leakage AHUs	110.2(f)			
Ventilation[4]	120.1(b)			
Demand Control Ventilation[5]	120.1(c)4			
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(e)3			
Shutoff and Reset Controls[7]	120.2(e)			
Outdoor Air and Exhaust Damper Control	120.2(f)			
Isolation Zones	120.2(g)			
Automatic Demand Shed Controls	120.2(h)			
Economizer FDD	120.2(i)			
Duct Insulation	120.4			
PRESCRIPTIVE MEASURES				
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y Y/N	Y Y/N	Y Y/N
Supply Fan Pressure Control	140.4(c)			
Simultaneous Heat/Cool[8]	140.4(d)			
Economizer	140.4(e)			
Heat and Cool Air Supply Reset	140.4(f)			
Electric Resistance Heating[9]	140.4(g)			
Duct Leakage Sealing and Testing[10]	140.4(l)			

Notes:
1. Provide equipment tags (e.g. AHU 1 to 10) and system description (e.g. Single Duct VAV reheat) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
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5. If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.
6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications and the sequence of operation
7. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required). For all systems identify the specification for the thermostats and time clocks (if applicable).
8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	04-06-16
ISSUED FOR PERMIT	
ISSUED FOR BID	09-13-17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. LEFLER
Exp. 12-31-17
No. 22208
MECHANICAL
STATE OF CALIFORNIA

CONSULTANT:

LEFLER ENGINEERING, INC.
1651 Second Street
San Rafael, CA 94901
(415) 456-4220 (415) 456-1248 fax

INTERACTIVE
RESOURCES
ARCHITECTURE ◦ PLANNING ◦ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

501 LOW GAP RD
UKIAH, CA 95482

SHEET TITLE:

TITLE 24 ENERGY CALCULATIONS

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ. MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

M601

Plot Date: October 03, 2017 - 10:08 pm
File Name: C:\Users\Mike\Mike\projects\bcd\temp\ActPublish_25494M601.dwg

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 1 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Equipment Tags and System Description[1] – Dry Systems	AC-26	AC-27	AC-28
MANDATORY MEASURES	***T-24 Sections***	***Reference to the Requirements in the Contract Documents[2]***	
Heating Equipment Efficiency[3]	110.1 or 110.2(a)		
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)		
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)		
Furnace Standby Loss Control	110.2(d)		
Low Leakage AHUs	110.2(f)		
Ventilation[4]	120.1(b)		
Demand Control Ventilation[5]	120.1(c)4		
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(e)3		
Shutoff and Reset Controls[7]	120.2(e)		
Outdoor Air and Exhaust Damper Control	120.2(f)		
Isolation Zones	120.2(g)		
Automatic Demand Shed Controls	120.2(h)		
Economizer FDD	120.2(i)		
Duct Insulation	120.4		
PRESCRIPTIVE MEASURES			
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y Y/N	Y Y/N	Y Y/N
Supply Fan Pressure Control	140.4(c)		
Simultaneous Heat/Cool[8]	140.4(d)		
Economizer	140.4(e)		
Heat and Cool Air Supply Reset	140.4(f)		
Electric Resistance Heating[9]	140.4(g)		
Duct Leakage Sealing and Testing[10]	140.4(l)		

Notes:
1. Provide equipment tags (e.g. AHU 1 to 10) and system description (e.g. Single Duct VAV reheat) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where equipment is required to be listed per Title 20 1601 et seq.
4. Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.
5. If one or more space has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.
6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications and the sequence of operation
7. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required). For all systems identify the specification for the thermostats and time clocks (if applicable).
8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 1 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Equipment Tags and System Description[1] – Dry Systems	AC-29	AC-30	AC-31
MANDATORY MEASURES	***T-24 Sections***	***Reference to the Requirements in the Contract Documents[2]***	
Heating Equipment Efficiency[3]	110.1 or 110.2(a)		
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)		
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)		
Furnace Standby Loss Control	110.2(d)		
Low Leakage AHUs	110.2(f)		
Ventilation[4]	120.1(b)		
Demand Control Ventilation[5]	120.1(c)4		
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(e)3		
Shutoff and Reset Controls[7]	120.2(e)		
Outdoor Air and Exhaust Damper Control	120.2(f)		
Isolation Zones	120.2(g)		
Automatic Demand Shed Controls	120.2(h)		
Economizer FDD	120.2(i)		
Duct Insulation	120.4		
PRESCRIPTIVE MEASURES			
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y Y/N	Y Y/N	Y Y/N
Supply Fan Pressure Control	140.4(c)		
Simultaneous Heat/Cool[8]	140.4(d)		
Economizer	140.4(e)		
Heat and Cool Air Supply Reset	140.4(f)		
Electric Resistance Heating[9]	140.4(g)		
Duct Leakage Sealing and Testing[10]	140.4(l)		

Notes:
1. Provide equipment tags (e.g. AHU 1 to 10) and system description (e.g. Single Duct VAV reheat) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where equipment is required to be listed per Title 20 1601 et seq.
4. Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.
5. If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.
6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications and the sequence of operation
7. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required). For all systems identify the specification for the thermostats and time clocks (if applicable).
8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 2 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

B. Equipment Tags and System Description[1] – Wet Systems					
MANDATORY MEASURES	***T-24 Sections***	***Reference to the Requirements in the Contract Documents[2]***			
Heating Hot Water Equipment Efficiency[3]	110.1				
Cooling Chilled and Condenser Water Equipment Efficiency[3]	110.1, 140.4(i)				
Open and Closed Circuit Cooling Towers conductivity or flow-based controls	110.2(e) 1				
Open and Closed Circuit Cooling Towers Maximum Achievable Cycles of Concentration (LSI)[4]	110.2(e) 2				
Open and Closed Circuit Cooling Towers Flow Meter with analog output	110.2(e) 3				
Open and Closed Circuit Cooling Towers Overflow Alarm	110.2(e) 4				
Open and Closed Circuit Cooling Towers Efficient Drift Eliminators	110.2(e) 5				
Pipe Insulation	120.3				
PRESCRIPTIVE MEASURES					
Cooling Tower Fan Controls	140.4(h)2, 140.4(h)5	Y/N	Y/N	Y/N	
Cooling Tower Flow Controls	140.4(h)3				
Centrifugal Fan Cooling Towers[4]	140.4(h)4				
Air-Cooled Chiller Limitation[5]	140.4(j)				
Variable Flow System Design	140.4(k)				
Chiller and Boiler Isolation	140.4(k)				
CHW and HHW Reset Controls	140.4(k)				
WLHP Isolation Valves	140.4(k)				
VSD on CHW, CW & WLHP Pumps >5HP	140.4(k)				
DP Sensor Location	140.4(k)				

Notes:
1. Provide equipment tags (e.g. CH 1 to 3) or system description (e.g. CHW loop) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. For chillers operating at non-standard efficiencies provide the Kadj values. For chillers also note whether the efficiencies are Path A or Path B.
4. Identify if cooling towers have propeller fans. If towers use centrifugal fans document which exception is used.
5. If air-cooled chillers are used, document which exceptions have been used to comply with 140.4(j) and the total installed design capacity of the air-cooled chillers in the chilled water plant.
6. Identify the existence of a completed MCH-06-E when open or closed circuit cooling towers are specified to be installed, otherwise enter "N/A".

STATE OF CALIFORNIA
HVAC SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 08/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Wet System Requirements	(Page 3 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Chuck Clemons	Documentation Author Signature:
Company: Energy Calc Co.	Signature Date: 5/24/2017
Address: 45 Mitchell Blvd. #16	CEA/ HERS Certification Identification (If applicable):
City/State/Zip: San Rafael, Ca. 94903	Phone: (415)457-0990

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Mike Lefler	Responsible Designer Signature:
Company: Lefler Engineering Inc.	Date Signed: 5/24/17
Address: 1651 Second St.	License: 22208
City/State/Zip: San Rafael, Ca. 94901	Phone: (415) 456-4220

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Mechanical Ventilation and Reheat

ACTUAL DESIGN INFO (FROM EQUIPMENT SCHEDULES, ETC)						AREA BASIS			OCCUPANCY BASIS			ROOM BASIS	MINIMUM		VAV Reheated Primary Air CFM			VAV Deadband Primary Air CFM		
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
ZONE / SYSTEM / VAV BOX TAG	DESIGN PRIMARY COOLING AIRFLOW (CFM)	DESIGN PRIMARY DEADBAND AIRFLOW (CFM)	DESIGN PRIMARY HEATING AIRFLOW (CFM)	CNTRL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (ft²)	MIN CFM PER AREA	MIN CFM BY AREA	NUM. OF PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	MIN CFM BY ROOM	RESET/ VENT AIRFLOW (CFM)	COMPLIES?	PERCENTAGE BASED DESIGN PRIMARY COOLING AIR (CFM)	MAXIMUM REHEAT (CFM)	COMPLIES?	% BASED DESIGN PRIMARY COOLING AIR (CFM)	MAX DEADBAND AIRFLOW (CFM)	COMPLIES?
AC-13 Zone						2,332	0.15	350	33.3	15.0	500		500	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		500	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-14A Zone						1,844	0.15	277	20.0	15.0	300		300	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		300	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-14B Zone						2,551	0.15	383	26.7	15.0	400		400	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		400	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-15 Zone						756	0.15	113	20.0	15.0	300		300	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Mechanical Ventilation and Reheat

ACTUAL DESIGN INFO (FROM EQUIPMENT SCHEDULES, ETC)						AREA BASIS			OCCUPANCY BASIS			ROOM BASIS	MINIMUM		VAV Reheated Primary Air CFM			VAV Deadband Primary Air CFM		
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
ZONE / SYSTEM / VAV BOX TAG	DESIGN PRIMARY COOLING AIRFLOW (CFM)	DESIGN PRIMARY DEADBAND AIRFLOW (CFM)	DESIGN PRIMARY HEATING AIRFLOW (CFM)	CNTRL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (ft²)	MIN CFM PER AREA	MIN CFM BY AREA	NUM. OF PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	MIN CFM BY ROOM	RESET/ VENT AIRFLOW (CFM)	COMPLIES?	PERCENTAGE BASED DESIGN PRIMARY COOLING AIR (CFM)	MAXIMUM REHEAT (CFM)	COMPLIES?	% BASED DESIGN PRIMARY COOLING AIR (CFM)	MAX DEADBAND AIRFLOW (CFM)	COMPLIES?
											Total		400	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-25 Zone						2,209	0.15	331	33.3	15.0	500		500	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		500	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-26 Zone						1,442	0.15	216	16.7	15.0	250		250	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		250	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-27 Zone						1,462	0.15	219	16.7	15.0	250		250	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		250	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Mechanical Ventilation and Reheat

ACTUAL DESIGN INFO (FROM EQUIPMENT SCHEDULES, ETC)						AREA BASIS			OCCUPANCY BASIS			ROOM BASIS	MINIMUM		VAV Reheated Primary Air CFM			VAV Deadband Primary Air CFM		
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
ZONE / SYSTEM / VAV BOX TAG	DESIGN PRIMARY COOLING AIRFLOW (CFM)	DESIGN PRIMARY DEADBAND AIRFLOW (CFM)	DESIGN PRIMARY HEATING AIRFLOW (CFM)	CNTRL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (ft²)	MIN CFM PER AREA	MIN CFM BY AREA	NUM. OF PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	MIN CFM BY ROOM	RESET/ VENT AIRFLOW (CFM)	COMPLIES?	PERCENTAGE BASED DESIGN PRIMARY COOLING AIR (CFM)	MAXIMUM REHEAT (CFM)	COMPLIES?	% BASED DESIGN PRIMARY COOLING AIR (CFM)	MAX DEADBAND AIRFLOW (CFM)	COMPLIES?
AC-28 Zone						910	0.15	137	13.3	15.0	200		200	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		200	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-29 Zone						1,666	0.15	250	20.0	15.0	300		300	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		300	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-30 Zone						1,917	0.15	288	20.0	15.0	300		300	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		300	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-31 Zone						528	0.15	79	20.0	15.0	300		300	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. Mechanical Ventilation and Reheat

ACTUAL DESIGN INFO (FROM EQUIPMENT SCHEDULES, ETC)						AREA BASIS			OCCUPANCY BASIS			ROOM BASIS	MINIMUM		VAV Reheated Primary Air CFM			VAV Deadband Primary Air CFM		
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
ZONE / SYSTEM / VAV BOX TAG	DESIGN PRIMARY COOLING AIRFLOW (CFM)	DESIGN PRIMARY DEADBAND AIRFLOW (CFM)	DESIGN PRIMARY HEATING AIRFLOW (CFM)	CNTRL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (ft²)	MIN CFM PER AREA	MIN CFM BY AREA	NUM. OF PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	MIN CFM BY ROOM	RESET/ VENT AIRFLOW (CFM)	COMPLIES?	PERCENTAGE BASED DESIGN PRIMARY COOLING AIR (CFM)	MAXIMUM REHEAT (CFM)	COMPLIES?	% BASED DESIGN PRIMARY COOLING AIR (CFM)	MAX DEADBAND AIRFLOW (CFM)	COMPLIES?
											Total		300	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-20 Zone						1,465	0.15	220	33.3	15.0	499		499	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		499	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-22 Zone						1,634	0.15	245	20.0	15.0	300		300	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		300	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-23 Zone						1,232	0.15	185	20.0	15.0	300		300	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		300	☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
AC-24 Zone						2,597	0.15	390	26.7	15.0	400		400	☒ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	04-06-16
ISSUED FOR PERMIT	
ISSUED FOR BID	09-13-17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER — MICHAEL J. LEFLER — Exp. 12-31-17 — No. 22208 — MECHANICAL — STATE OF CALIFORNIA

CONSULTANT:

LEFLER ENGINEERING, INC.
1651 Second Street
San Rafael, CA 94901
(415) 456-4220 (415)
456-1248 fax

INTERACTIVE RESOURCES
ARCHITECTURE ◆ PLANNING ◆ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

TITLE 24 ENERGY CALCULATIONS

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

M602

Plot Date: October 03, 2017 - 12:07 pm
File Name: C:\Users\Michelle\appdata\local\temp\AcPubish_2948\M001.dwg

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 2 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Chuck Clemons	Documentation Author Signature:	
Company:	Energy Calc Co.	Signature Date:	5/24/2017
Address:	45 Mitchell Blvd. #16	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	San Rafael, Ca. 94903	Phone:	(415)457-0990

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Mike Lefler	Responsible Designer Signature:	
Company :	Lefler Engineering Inc.	Date Signed:	5/24/17
Address:	1651 Second St.	License:	22208
City/State/Zip:	San Rafael, Ca. 94901	Phone:	(415) 456-4220

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 1 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

A. MECHANICAL COMPLIANCE FORMS & WORKSHEETS
(indicate if worksheet is included)

For detailed instructions on the use of this and all Energy Standards compliance documents, refer to the 2016 Nonresidential Manual
Note: The Enforcement Agency may require all compliance documents to be incorporated onto the building plans. The NRCC-MCH-04-E and NRCC-MECH-05-E are alternative compliance documents to NRCC-MCH-01-E, NRCC-MCH-02-E and NRCC-MCH-03-E for projects using only single zone packaged HVAC systems.

YES	NO	Form	Title
✔		NRCC-MCH-04-E (1 of 2)	Certificate of Compliance. Required on plans when used.
✔		NRCC-MCH-04-E (2 of 2)	Mechanical Acceptance Tests. Required on plans when used.
✔		NRCC-MCH-05-E (1 of 2)	HVAC Prescriptive Requirements. It is required on plans when used.
✔		NRCC-MCH-05-E (2 of 2)	Mechanical SWH Equipment Summary is required for all submittals with service water heating, pools or spas. It is required on plans where applicable.

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 2 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and list all equipment that require an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this compliance document will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Enforcement Agency:
Systems Acceptance. Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

Systems Acceptance. Before occupancy permit is granted. All newly installed HVAC equipment must be tested using the Acceptance Requirements.
The NRCC-MCH-04-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for ALL newly installed and replaced equipment. In addition a Certificate of Acceptance documents shall be submitted to the building department that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of Section 10-103(b) and Title 24 Part 6. The building inspector must receive the properly filled out and signed compliance documents before the building can receive final occupancy.

Test Description		MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-11-A	MCH-12-A	MCH-14-A	MCH-18-A	Test Performed By:
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Automatic Demand Shed Control	FDD for Packaged DX Units	Distributed Energy Storage DX AC Systems	Energy Management Control System	
AC-23	1	✔	✔		✔				✔			
AC-24	1	✔	✔		✔							
AC-25	1	✔	✔		✔				✔			
AC-26	1	✔	✔		✔							
AC-27	1	✔	✔		✔				✔			
AC-28	1	✔	✔		✔							
AC-29	1	✔	✔		✔				✔			
AC-30	1	✔	✔		✔				✔			
AC-31	1	✔	✔		✔							

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 3 of 3)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Chuck Clemons	Documentation Author Signature:	
Company:	Energy Calc Co.	Signature Date:	5/24/2017
Address:	45 Mitchell Blvd. #16	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	San Rafael, Ca. 94903	Phone:	(415)457-0990

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Mike Lefler	Responsible Designer Signature:	
Company :	Lefler Engineering Inc.	Date Signed:	5/24/17
Address:	1651 Second St.	License:	22208
City/State/Zip:	San Rafael, Ca. 94901	Phone:	(415) 456-4220

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

Equipment Tag(s)[1]	AC-13			AC-14A			AC-14B		
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	78% AFUE	80% AFUE	78% AFUE	80% AFUE	78% AFUE	80% AFUE	78% AFUE	80% AFUE
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	13 SEER	14.0 SEER / 13	11.0 EER	12.0 EER	13 SEER	14.0 SEER / 13	11.0 EER	12.0 EER
Thermostats[5]	110.2(b), 110.2(c)	Setback	Setback	Setback	Setback	Setback	Setback	Setback	Setback
Furnace Standby Loss Control[6]	110.2(d)	n/a		n/a		n/a		n/a	
Low Leakage AHU	110.2(f)	NR	none	NR	none	NR	none	NR	none
Ventilation[7]	120.1(b)	500	500	500	500	400	400	400	400
Demand Control Ventilation[8]	120.1(c)4	NR	No	NR	No	NR	No	NR	No
Occupant Sensor Ventilation Control[8]	120.1(c)5, 120.2(e)3	NR	No	NR	No	NR	No	NR	No
Shutoff and Reset Controls[9]	120.2(e)	Req	Programmable	Req	Programmable	Req	Programmable	Req	Programmable S
Outdoor Air and Exhaust Damper Control	120.2(f)	Req	Auto	Req	Auto	Req	Auto	Req	Auto
Automatic Demand Shed Controls	120.2(h)	NR	none	NR	none	NR	none	NR	none
Economizer FDD	120.2(i)	Req		Req				NR	
Duct Insulation	120.4	n/a	none	n/a	none	n/a	none	n/a	none
PRESCRIPTIVE MEASURES									
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	50,183 Btu/hr 79,762 Btu/hr	103,000 Btu/hr 63,001 Btu/hr	24,384 Btu/hr 76,263 Btu/hr	103,000 Btu/hr 72,931 Btu/hr	32,943 Btu/hr 69,611 Btu/hr	56,000 Btu/hr 45,977 Btu/hr		
Economizer	140.4(e)	Req	Fixed Temp (Ir	Req	Fixed Temp (Int	NR	Fixed Temp (Inte		
Electric Resistance Heating[10]	140.4(g)	No	No	No	No	No	No		
Duct Leakage Sealing and Testing.[11]	140.4(l)	NR	No	NR	No	NR	No		

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heat pump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a **MCH-04-A** compliance document must be submitted.*

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

Equipment Tag(s)[1]	AC-15			AC-16		AC-17	
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	78% AFUE	80% AFUE	78% AFUE	80% AFUE	78% AFUE	80% AFUE
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	13 SEER	14.0 SEER / 13	13 SEER	14.0 SEER / 12	13 SEER	14.0 SEER / 12.(
Thermostats[5]	110.2(b), 110.2(c)	Setback	Setback	Setback	Setback	Setback	Setback
Furnace Standby Loss Control[6]	110.2(d)	n/a		n/a		n/a	
Low Leakage AHU	110.2(f)	NR	none	NR	none	NR	none
Ventilation[7]	120.1(b)	300	300	200	200	200	200
Demand Control Ventilation[8]	120.1(c)4	NR	No	NR	No	NR	No
Occupant Sensor Ventilation Control[8]	120.1(c)5, 120.2(e)3						
Shutoff and Reset Controls[9]	120.2(e)	Req	Programmable	Req	Programmable	Req	Programmable S
Outdoor Air and Exhaust Damper Control	120.2(f)	Req	Auto	Req	Auto	Req	Auto
Automatic Demand Shed Controls	120.2(h)	NR	none	NR	none	NR	none
Economizer FDD	120.2(i)	NR		NR		Req	
Duct Insulation	120.4	n/a	none	n/a	none	n/a	none
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	37,648 Btu/hr 44,090 Btu/hr	56,000 Btu/hr 41,906 Btu/hr	51,313 Btu/hr 77,372 Btu/hr	103,000 Btu/hr 61,818 Btu/hr	57,876 Btu/hr 95,228 Btu/hr	103,000 Btu/hr 59,852 Btu/hr
Economizer	140.4(e)	NR	Fixed Temp (Ir	Req	No Economizer	Req	Fixed Temp (Inte
Electric Resistance Heating[10]	140.4(g)	No	No	No	No	No	No
Duct Leakage Sealing and Testing.[11]	140.4(l)	NR	No	NR	No	NR	No

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heat pump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a **MCH-04-A** compliance document must be submitted.*

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

Equipment Tag(s)[1]	AC-18			AC-20		AC-22	
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	78% AFUE	80% AFUE	78% AFUE	80% AFUE	78% AFUE	80% AFUE
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	13 SEER	14.0 SEER / 13	13 SEER	14.0 SEER / 13	13 SEER	14.0 SEER / 13.(
Thermostats[5]	110.2(b), 110.2(c)	Setback	Setback	Setback	Setback	Setback	Setback
Furnace Standby Loss Control[6]	110.2(d)	n/a		n/a		n/a	
Low Leakage AHU	110.2(f)	NR	none	NR	none	NR	none
Ventilation[7]	120.1(b)	400	400	499	499	300	300
Demand Control Ventilation[8]	120.1(c)4	NR	No	NR	No	NR	No
Occupant Sensor Ventilation Control[8]	120.1(c)5, 120.2(e)3						
Shutoff and Reset Controls[9]	120.2(e)	Req	Programmable	Req	Programmable	Req	Programmable S
Outdoor Air and Exhaust Damper Control	120.2(f)	Req	Auto	Req	Auto	Req	Auto
Automatic Demand Shed Controls	120.2(h)	NR	none	NR	none	NR	none
Economizer FDD	120.2(i)	NR		NR		NR	
Duct Insulation	120.4	n/a	none	n/a	none	n/a	none
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	56,947 Btu/hr 76,442 Btu/hr	90,000 Btu/hr 52,044 Btu/hr	56,910 Btu/hr 61,177 Btu/hr	56,000 Btu/hr 43,417 Btu/hr	43,622 Btu/hr 54,553 Btu/hr	56,000 Btu/hr 41,982 Btu/hr
Economizer	140.4(e)	NR	Fixed Temp (Ir	NR	Fixed Temp (Int	NR	Fixed Temp (Inte
Electric Resistance Heating[10]	140.4(g)	No	No	No	No	No	No
Duct Leakage Sealing and Testing.[11]	140.4(l)	NR	No	NR	No	NR	No

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heat pump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a **MCH-04-A** compliance document must be submitted.*

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

Equipment Tag(s)[1]	AC-23			AC-24		AC-25	
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]	*Requirement*[2]	*As Scheduled*[3]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	78% AFUE	80% AFUE	78% AFUE	80% AFUE	78% AFUE	80% AFUE
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	13 SEER	14.0 SEER / 12	13 SEER	14.0 SEER / 13	11.0 EER	12.0 EER
Thermostats[5]	110.2(b), 110.2(c)	Setback	Setback	Setback	Setback	Setback	Setback
Furnace Standby Loss Control[6]	110.2(d)	n/a		n/a		n/a	
Low Leakage AHU	110.2(f)	NR	none	NR	none	NR	none
Ventilation[7]	120.1(b)	300	300	400	400	500	500
Demand Control Ventilation[8]	120.1(c)4	NR	No	NR	No	NR	No
Occupant Sensor Ventilation Control[8]	120.1(c)5, 120.2(e)3						
Shutoff and Reset Controls[9]	120.2(e)	Req	Programmable	Req	Programmable	Req	Programmable S
Outdoor Air and Exhaust Damper Control	120.2(f)	Req	Auto	Req	Auto	Req	Auto
Automatic Demand Shed Controls	120.2(h)	NR	none	NR	none	NR	none
Economizer FDD	120.2(i)	Req		NR		Req	
Duct Insulation	120.4	n/a	none	n/a	none	n/a	none
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	34,911 Btu/hr 48,188 Btu/hr	90,000 Btu/hr 53,200 Btu/hr	34,923 Btu/hr 68,746 Btu/hr	56,000 Btu/hr 42,800 Btu/hr	105,250 Btu/h 159,119 Btu/h	148,000 Btu/hr 104,928 Btu/hr
Economizer	140.4(e)	Req	Fixed Temp (Ir	NR	Fixed Temp (Int	Req	Fixed Temp (Inte
Electric Resistance Heating[10]	140.4(g)	NR	No	No	No	No	No
Duct Leakage Sealing and Testing.[11]	140.4(l)	NR	No	NR	No	NR	No

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heat pump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a **MCH-04-A** compliance document must be submitted.*

REV	DESCRIPTION	INIT	DATE

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	04-06-16
ISSUED FOR PERMIT	
ISSUED FOR BID	09-13-17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER — MICHAEL J. LEFLER — Exp. 12-31-17 — No. 22208 — MECHANICAL — STATE OF CALIFORNIA

CONSULTANT:

LEFLER ENGINEERING, INC.
1651 Second Street
San Rafael, CA 94901
(415) 456-4220 (415) 456-1248 fax

INTERACTIVE RESOURCES
ARCHITECTURE ◆ PLANNING ◆ ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

TITLE 24 ENERGY CALCULATIONS

PROJ. NO.	2013-084-26
	PREPARATION AND REVIEW
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

M603

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STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

Equipment Tag(s)[1]	AC-26		AC-27		AC-28	
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[2]	*As Scheduled*[2]	*Requirement*[2]	*As Scheduled*[2]	*Requirement*[2]	*As Scheduled*[2]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	78% AFUE	80% AFUE	78% AFUE	80% AFUE	80% AFUE	80% AFUE
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	13 SEER	14.0 SEER / 12.	11.0 EER	12.0 EER	13 SEER	14.0 SEER / 12.5
Thermostats[5]	110.2(b), 110.2(c)	Setback	Setback	Setback	Setback	Setback	Setback
Furnace Standby Loss Control[6]	110.2(d)	n/a		n/a		n/a	
Low Leakage AHU	110.2(f)	NR	none	NR	none	NR	none
Ventilation[7]	120.1(b)	250	250	250	250	200	200
Demand Control Ventilation[8]	120.1(c)4	NR	No	NR	No	NR	No
Occupant Sensor Ventilation Control[9]	120.1(c)5, 120.2(e)3						
Shutoff and Reset Controls[9]	120.2(e)	Req	Programmable	Req	Programmable	Req	Programmable S
Outdoor Air and Exhaust Damper Control	120.2(f)	Req	Auto	Req	Auto	Req	Auto
Automatic Demand Shed Controls	120.2(h)	NR	none	NR	none	NR	none
Economizer FDD	120.2(i)	NR		Req		NR	
Duct Insulation	120.4	n/a	none	n/a	none	n/a	none
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	45,211 Btu/hr / 55,289 Btu/hr	56,000 Btu/hr / 43,344 Btu/hr	53,946 Btu/hr / 75,765 Btu/hr	103,000 Btu/hr / 75,696 Btu/hr	23,011 Btu/hr / 36,220 Btu/hr	56,000 Btu/hr / 33,242 Btu/hr
Economizer	140.4(e)	NR	Fixed Temp (In	Req	Fixed Temp (Int	NR	Fixed Temp (Inte
Electric Resistance Heating[10]	140.4(g)	No	No	No	No	No	No
Duct Leakage Sealing and Testing.[11]	140.4(l)	NR	No	NR	No	NR	No

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heat pump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a* ***MCH-04-A*** *compliance document must be submitted.*

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

Equipment Tag(s)[1]	AC-29		AC-30		AC-31	
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[2]	*As Scheduled*[2]	*Requirement*[2]	*As Scheduled*[2]	*Requirement*[2]	*As Scheduled*[2]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	78% AFUE	80% AFUE	78% AFUE	80% AFUE	78% AFUE	80% AFUE
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	11.0 EER	12.0 EER	13 SEER	14.0 SEER / 12	13 SEER	14.0 SEER / 12.5
Thermostats[5]	110.2(b), 110.2(c)	Setback	Setback	Setback	Setback	Setback	Setback
Furnace Standby Loss Control[6]	110.2(d)	n/a		n/a		n/a	
Low Leakage AHU	110.2(f)	NR	none	NR	none	NR	none
Ventilation[7]	120.1(b)	300	300	300	300	300	300
Demand Control Ventilation[8]	120.1(c)4	NR	No	NR	No	NR	No
Occupant Sensor Ventilation Control[9]	120.1(c)5, 120.2(e)3						
Shutoff and Reset Controls[9]	120.2(e)	Req	Programmable	Req	Programmable	Req	Programmable S
Outdoor Air and Exhaust Damper Control	120.2(f)	Req	Auto	Req	Auto	Req	Auto
Automatic Demand Shed Controls	120.2(h)	NR	none	NR	none	NR	none
Economizer FDD	120.2(i)	Req		Req		NR	
Duct Insulation	120.4	n/a	none	n/a	none	n/a	none
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	56,670 Btu/hr / 86,594 Btu/hr	103,000 Btu/hr / 85,016 Btu/hr	47,090 Btu/hr / 69,539 Btu/hr	103,000 Btu/hr / 61,400 Btu/hr	21,382 Btu/hr / 31,357 Btu/hr	56,000 Btu/hr / 30,619 Btu/hr
Economizer	140.4(e)	Req	Fixed Temp (In	Req	Fixed Temp (Int	NR	Fixed Temp (Inte
Electric Resistance Heating[10]	140.4(g)	No	No	No	No	No	No
Duct Leakage Sealing and Testing.[11]	140.4(l)	NR	No	NR	No	NR	No

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heat pump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a* ***MCH-04-A*** *compliance document must be submitted.*

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units — (Page 2 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Chuck Clemons	Documentation Author Signature:	
Company:	Energy Calc Co.	Signature Date:	5/24/2017
Address:	45 Mitchell Blvd. #16	CEA/HERS Certification Identification (if applicable):	
City/State/Zip:	San Rafael, Ca. 94903	Phone:	(415)457-0990

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Mike Lefler	Responsible Designer Signature:	
Company :	Lefler Engineering Inc.	Date Signed:	5/24/17
Address:	1651 Second St.	License:	22208
City/State/Zip:	San Rafael, Ca. 94901	Phone:	(415) 456-4220

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-07-E
Power Consumption of Fans Requirements — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-13 - Supply Fan	*1.330*	*86.5 %*	*97.0 %*	*1.0*	*1,183*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,183*	W
	02	SUPPLY DESIGN AIRFLOW	*2,400*	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP_f) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.493*	W/CFM
	04	SP_x		in W.C or Pa
	05	SP_f		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_x – 1)/SP_f		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.493*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-07-E
Power Consumption of Fans Requirements — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-14A - Supply Fan	*1.030*	*86.5 %*	*97.0 %*	*1.0*	*916*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*916*	W
	02	SUPPLY DESIGN AIRFLOW	*2,625*	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP_f) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.349*	W/CFM
	04	SP_x		in W.C or Pa
	05	SP_f		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_x – 1)/SP_f		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.349*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-07-E
Power Consumption of Fans Requirements — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-14B - Supply Fan	*1.340*	*86.5 %*	*97.0 %*	*1.0*	*1,191*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,191*	W
	02	SUPPLY DESIGN AIRFLOW	*2,000*	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP_f) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.596*	W/CFM
	04	SP_x		in W.C or Pa
	05	SP_f		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_x – 1)/SP_f		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.596*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-07-E
Power Consumption of Fans Requirements — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-15 - Supply Fan	*0.910*	*86.5 %*	*97.0 %*	*1.0*	*819*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*819*	W
	02	SUPPLY DESIGN AIRFLOW	*1,600*	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP_f) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.512*	W/CFM
	04	SP_x		in W.C or Pa
	05	SP_f		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_x – 1)/SP_f		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.512*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-07-E
Power Consumption of Fans Requirements — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-16 - Supply Fan	*1.330*	*86.5 %*	*97.0 %*	*1.0*	*1,183*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,183*	W
	02	SUPPLY DESIGN AIRFLOW	*2,400*	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP_f) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.493*	W/CFM
	04	SP_x		in W.C or Pa
	05	SP_f		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_x – 1)/SP_f		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.493*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-07-E
Power Consumption of Fans Requirements — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-17 - Supply Fan	*1.130*	*86.5 %*	*97.0 %*	*1.0*	*1,005*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,005*	W
	02	SUPPLY DESIGN AIRFLOW	*2,100*	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP_f) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.478*	W/CFM
	04	SP_x		in W.C or Pa
	05	SP_f		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_x – 1)/SP_f		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.478*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-07-E
Power Consumption of Fans Requirements — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-18 - Supply Fan	*1.400*	*86.5 %*	*97.0 %*	*1.0*	*1,245*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,245*	W
	02	SUPPLY DESIGN AIRFLOW	*2,000*	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP_f) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.622*	W/CFM
	04	SP_x		in W.C or Pa
	05	SP_f		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_x – 1)/SP_f		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.622*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-MCH-07-E
Power Consumption of Fans Requirements — (Page 1 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH) — Date Prepared: 5/24/2017

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-20 - Supply Fan	*0.910*	*85.5 %*	*97.0 %*	*1.0*	*819*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*819*	W
	02	SUPPLY DESIGN AIRFLOW	*1,600*	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP_f) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.512*	W/CFM
	04	SP_x		in W.C or Pa
	05	SP_f		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_x – 1)/SP_f		
C) Calculate Adjusted

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-22 - Supply Fan	*0.910*	*85.5 %*	*97.0 %*	*1.0*	*819*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*819*	W
	02	SUPPLY DESIGN AIRFLOW	*1,600*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.512*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.512*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-23 - Supply Fan	*1.760*	*86.5 %*	*97.0 %*	*1.0*	*1,565*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,565*	W
	02	SUPPLY DESIGN AIRFLOW	*2,250*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.695*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.695*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-24 - Supply Fan	*0.910*	*85.5 %*	*97.0 %*	*1.0*	*819*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*819*	W
	02	SUPPLY DESIGN AIRFLOW	*1,600*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.512*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.512*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-25 - Supply Fan	*2.870*	*89.5 %*	*97.0 %*	*1.0*	*2,466*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*2,466*	W
	02	SUPPLY DESIGN AIRFLOW	*4,500*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.548*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.548*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-26 - Supply Fan	*1.110*	*86.5 %*	*97.0 %*	*1.0*	*987*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*987*	W
	02	SUPPLY DESIGN AIRFLOW	*1,800*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.548*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.548*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-27 - Supply Fan	*1.290*	*86.5 %*	*97.0 %*	*1.0*	*1,147*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,147*	W
	02	SUPPLY DESIGN AIRFLOW	*3,000*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.382*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.382*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-28 - Supply Fan	*0.830*	*85.5 %*	*97.0 %*	*1.0*	*747*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*747*	W
	02	SUPPLY DESIGN AIRFLOW	*1,500*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.498*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.498*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-29 - Supply Fan	*2.040*	*89.5 %*	*97.0 %*	*1.0*	*1,753*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,753*	W
	02	SUPPLY DESIGN AIRFLOW	*3,400*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.516*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.516*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 2 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-30 - Supply Fan	*1.330*	*86.5 %*	*97.0 %*	*1.0*	*1,183*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*1,183*	W
	02	SUPPLY DESIGN AIRFLOW	*2,400*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.493*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.493*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: *Mendocino Co. Admin. Ctr. (MECH)*	Date Prepared: *5/24/2017*

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
AC-31 - Supply Fan	*0.550*	*85.5 %*	*97.0 %*	*1.0*	*495*

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01	TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	*495*	W
	02	SUPPLY DESIGN AIRFLOW	*1,050*	CFM
A) If filter pressure drop (SP_d) is greater than 1 inch W. C. or 245 Pascal then enter SP_d on line 4. Enter Total Fan pressure drop across the fan (SP_t) on line 5.	03	TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	*0.471*	W/CFM
	04	SP_d		in W.C or Pa
	05	SP_t		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06	Fan Adjustment = 1-(SP_d – 1)/SP_t		
C) Calculate Adjusted Fan Power Index and enter on row 7	07	ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	*0.471*	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised MMYY) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 2 of 2)
Project Name: Mendocino Co. Admin. Ctr. (MECH)	Date Prepared: 5/24/2017

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Chuck Clemons	Documentation Author Signature:	
Company:	Energy Calc Co.	Signature Date:	5/24/2017
Address:	45 Mitchell Blvd. #16	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	San Rafael, Ca. 94903	Phone:	(415)457-0990

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Mike Lefler	Responsible Designer Signature:	
Company:	Lefler Engineering Inc.	Date Signed:	5/24/17
Address:	1651 Second St.	License:	22208
City/State/Zip:	San Rafael, Ca. 94901	Phone:	(415) 456-4220

REV	DESCRIPTION	INIT	DATE
	100% DESIGN DEVELOPMENT SET		
	50% CONSTRUCTION DOCUMENTS SET		
	ISSUED FOR PLAN CHECK		04-06-16
	ISSUED FOR PERMIT		
	ISSUED FOR BID		09-13-17
	ISSUED FOR CONSTRUCTION		

SEAL:

REGISTERED PROFESSIONAL ENGINEER — MICHAEL J. LEFLER — Exp. 12-31-17 — No. 22208 — MECHANICAL — STATE OF CALIFORNIA

CONSULTANT:

LEFLER ENGINEERING, INC.
1651 Second Street
San Rafael, CA 94901
(415) 456-4220 (415)
456-1248 fax

INTERACTIVE RESOURCES
ARCHITECTURE ◆ PLANNING ◆ ENGINEERING

117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com

PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

TITLE 24 ENERGY CALCULATIONS

PROJ. NO.	2013-084-26
PREPARATION AND REVIEW	
DRAWN BY:	MN
DESIGNER:	MJL
PROJ MGR:	MJL
PEER REVIEW	

SHEET NUMBER:

M605

Plot Date: October 03, 2017 - 12:05 pm
File Name: C:\Users\Mike\Appdata\Local\temp\AcPublish_2948\M601.dwg

ELECTRICAL SPECIFICATIONS

ELECTRICAL

1.01- RELATED DOCUMENTS
A. The General Conditions, Supplementary Conditions and Division 1 apply to the electrical work.

1.02 - WORK INCLUDES
A. Work included in this section: All materials, labor, equipment, services, and incidentals necessary to install the Electrical Work as shown on the drawings and as specified hereinafter, including, but not limited to the following:
1. Branch circuit wiring, wiring devices and connections to all equipment requiring electrical service.
2. Electrical equipment grounding system.
3. Mechanical equipment power and control connections as stated in the mechanical and electrical specifications and as shown on the mechanical and electrical drawings.
4. Raceways, outlet boxes and power connections for security and access control system. Coordinate all requirements with Owner.
5. Sleeves, inserts and blocking in cast concrete as required for work in this section.
6. All required incidental work, such as excavating and backfilling, roof flashing, and testing.
7. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.

1.03 - INCORPORATED DOCUMENTS
A. Requirements of the general conditions, supplementary conditions, and division 1. sections apply to all work in this section, unless modified herein.
B. Published specifications, standard tests or recommended methods of trade, industry or government organizations apply to work of this section where cited by abbreviations noted below, unless modified herein.
1. NATIONAL ELECTRICAL CODE, LATEST EDITION, (NEC).
2. NEMA STANDARDS
3. UNDERWRITERS' LABORATORIES, INC. (UL).
4. LOCAL UTILITY COMPANY REGULATIONS.
5. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

1.04 - CONDITIONS AT SITE:
A. Visit to site is required of all bidders prior to submission of bid. All will be held to have familiarized themselves with all discernible conditions and no extra payment will be allowed for work required because of these conditions, whether specifically mentioned or not.

1.05 - QUALITY ASSURANCE
A. Conformance:
1. All work shall conform to the applicable requirements of Article 1.03 above.
2. The Contractor shall notify the Architect, prior to submission of bid, about any part of the design which fails to comply with abovementioned requirements.
3. If after contract is awarded, minor changes and additions are required by aforementioned authorities, even though such work is not shown on drawings or covered in specifications, they shall be included at Contractor's expense.
B. Coordination:
1. The Contractor shall become familiar with the conditions at the job site, and with the drawings and specifications and plan the installation of the electrical work to conform with the existing conditions and that shown and specified so as to provide the best possible assembly of the combined work of all trades.
2. The Contractor shall work out in advance all "tight" conditions, involving all trades and if found necessary, supplementary drawings shall be prepared by this Contractor, for the Architect's approval, before work proceeds in these areas. No additional costs will be considered for work which must be relocated due to conflicts with the work of other trades.

1.06 - SUBMITTALS
A. Product Data:
1. Comply with the General Provisions of the Contract.
2. Within 15 days after award of the Contract, submit:
a. Complete material list of all items proposed to be furnished and installed under this Section, including but not limited to the following items: Circuit breakers, lighting fixtures, conduit, devices, enclosures, etc.
b. Manufacturers' specifications and other data required to demonstrate compliance with the specified requirements.
c. Manufacturers' recommended installation procedures which, when approved by the Architect, shall become the basis for inspecting and accepting or rejecting actual installation procedures used on the work.
3. Shop Drawings: Furnish shop drawings and/or equipment cuts for the following:
a. Disconnect Switches
4. Test Reports:
a. Factory Tests where indicated for specific equipment.
b. Field Tests: Performance tests as specified for specific equipment.
c. When series rated circuit breakers are used, provide a letter from the manufacturer of the equipment confirming that U.L. series rating exists for all protective devices. State the available fault current from the Utility Company and indicate that the overcurrent devices exceed the available fault current at the respective point of protection.

1.07- MATERIALS
A. Materials of the same type or classification, used for the same purpose, shall be the product of the same manufacturer.

1.08 - ACCEPTABLE MANUFACTURERS
A. Materials shall be of make mentioned elsewhere in this specification. All materials shall be the best of their several kinds, perfectly new and approved by the Underwriters' Laboratories.
B. Where material, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired quality, style and utility and shall be the basis of the bid. Materials so specified shall be furnished under the contract unless changed by written approval of the Owner's Representative. Where two or more designations are listed, choice shall be optional with this Contractor, but this Contractor must submit his choice for final approval.

1.09 - DELIVERY, STORAGE AND HANDLING
A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all trades.
B. Delivery and Storage: Deliver all materials to the job site in their original containers with all labels intact and legible at time of use. Store in strict accordance with approved manufacturers' recommendations.
C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.
D. This Contractor shall personally, or through an authorized representative, check all materials upon receipt at jobsite for conformance with approved shop drawings and/or plans and specifications.

1.10 - SCHEDULING/SEQUENCING
A. Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet the construction schedule, together with any special handling charges, shall be borne by this Contractor.

1.11 - REQUIREMENTS
A. The contract drawings indicate the extent and general arrangements of the conduit wiring systems, etc. If any departures from the contract drawings are deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted as soon as practicable, and within 10 days after award of the electrical contract.
B. UNLESS MATERIAL LIST AND DATA IS RECEIVED AS A COMPLETE AND ALL INCLUSIVE SUBMITTAL WITHIN THE STIPULATED TIME ALL ITEMS SHALL BE PROVIDED AS SPECIFIED-WITH NO DEVIATIONS PERMITTED.
C. Any and all additional costs incurred by the substitution of electrical material or equipment, or installation thereof, whether architectural, structural, plumbing, mechanical or electrical, shall be borne by the Contractor under this section.

1.12 - IDENTIFICATION
A. Switchboards, feeder circuit breakers in switchboards, panels, disconnect switches, motor starters and motor disconnect switches, cabinets, and other apparatus used for the operation of, or control of circuits, appliances or equipment, shall be properly identified by means of engraved laminated plastic descriptive nameplates mounted on apparatus using stainless steel screws. Nameplates shall have white letters with black background and be submitted to the Architect for approval. Cardholders in any form are not acceptable.
B. Each branch circuit of panelboards to have a permanently fixed number with directory, mounted under celluloid on inside of cabinet door, showing circuit numbers, room number feed and typewritten description of equipment supplied by breakers.
C. Each Panelboard, Switchboard and Motor Control Center shall be provided with an Arc-Flash warning label per NEC requirements.

PART 2 - PRODUCTS:

2.01 - GENERAL
A. Materials shall be new, packed in original containers, installed and turned over to the Owner free of defects.
B. Materials shall bear Underwriters' Laboratory label.
C. Furnish equipment and materials for any one system by same manufacturer.

2.02 - MATERIALS
A. Conduit
1. Conduit shall be delivered to the site of construction in the original bundles. Each length shall bear the label of the National Board of Fire Underwriters. All conduit subjected to rough usage while on the job, before installation, shall be removed from the premises upon notice.
2. Raceway and boxes located as indicated on drawings and at other locations required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements. Raceway and boxes are shown in approximate locations unless dimensioned. Provide raceway to complete wiring system.
3. Rigid Steel: Hot dipped galvanized, used exposed and in concrete slab, with completely watertight fittings.
4. Use flexible conduit for all motor connections; Flexible metal type provide with code size (minimum No. 12) bare ground wire in all flexible conduit.
5. Conduit Bends - Long Radius.
6. Installation:
a. Outdoor Locations:
• Above Grade: Provide IMC or rigid steel conduit. Provide cast metal outlet, pull, and junction boxes.
• Flexible Connection: WP Flexible metal conduit.
• Watertight and corrosion resistant fittings, couplings, boxes, etc.

B. Conduit Fittings:
1. Fittings for rigid steel and flexible type conduit shall be of a type as required, malleable iron or steel, galvanized or sheradized.

C. Outlet Boxes and Junction Boxes:
1. Surface mounted outlet boxes for wet locations, cast aluminum FS or FD type with gasketed spring lid cover.
2. All connectors from conduit to junction or outlet boxes shall have integral insulated throats.

D. Power Wire and Cable:
1. Copper 90% conductivity. Solid copper for conductors smaller than No. 8 AWG. Stranded copper for conductors No. 8 AWG and larger. No conductors smaller than No. 12 AWG, except as noted.
2. Insulation type: #12 to #1 AWG: THWN for wet locations and THHN for dry locations. #1/0 through #4/0 AWG: XHHW (55 Mils). 250MCM and larger: XHHW (65 Mils).
3. Conductors No. 8 and larger and as otherwise noted on drawings shall be stranded.
4. Connections to devices from "through, feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
5. Neutral conductor identified by white outer covering braid, with different tracers of "EZ" numbering tags used where more than one neutral conductor is contained in a single unit.
6. Neatly arrange and "marlin" wired in panels and other equipment with "T and B Ty-rap" or approved equal plastic type strapping.
7. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags.
8. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color coded as follows:

Voltage	Phasing	A Phase	B Phase	C Phase	Neutral
120/240	1p3w	Black	Red	-	White
120/208	3p 4w	Black	Red	Blue	White
208	3w	Black	Red	Blue	-
277/480	3p 4w	Brown	Orange	Yellow	White
480	3w	Brown	Orange	Yellow	-

E. Receptacles: Leviton or equal, 125 volts, specification grade, conventional style, white color, except as noted:
1. 20A 3PG 125 volt duplex
2. 20A 3PG 125 volt ground fault interrupter receptacle
3. 20A 3PG 125 volt duplex
4. 20A 3PG 125 volt isolated ground receptacle, 3 wire, orange color 1 I.G.
5. Special appliances receptacles: Match NEMA configuration of equipment plug.

H. Plates: Leviton white, or equal, except as noted:
1. Weatherproof duplex receptacle plates for exterior locations and for all type FS or FD boxes _ Hubbell #5221 or equal.

I. Motor Disconnect Switches and Safety Switches: Heavy Duty Type, cover interlocked with operating handle so that cover cannot be opened with switch in closed position and switch cannot be closed with cover in open position, 240 or 480 volt rating, as required or as noted on drawings, in Nema 1 enclosure indoors, 3R enclosure outdoors, or as otherwise noted. All motor circuit fuses shall be dual element type.

J. Lugs and Connectors: Thomas and Betts "lock-tite", for No. 4 and larger wire; "Scotchlock" with insulator for No. 6 and smaller wire.

K. Splice Insulation: "Scotch" electrical tape with vinyl plastic backing or rubber tape with protective friction tape for interior work.

L. Grounding:
1. Install ground wires in rigid conduit. Provide physical protection for grounding electrode and bonding conductors in accordance with nec 250-64. Grounding conductors shall be in conduit and installed in accordance with NEC 250-64(e).
2. All grounding electrode conductor connections "thermite" or "cad_weld" welded.
3. Terminate grounding conduits at equipment with ground bushing, with ground wire connected through bushing.
4. Provide No. 12 stranded (green) THHN conductor from outlet box to ground screw of every receptacle except isolated ground receptacles.
5. Ground all isolated sections of metallic raceways.
6. Provide #12 minimum stranded (green) THHN conductor sized per NEC, or as noted, connected continuously throughout branch circuit for all circuits, bonded to panel ground bus, and to all electrical devices and equipment enclosures.
7. After installation, test system, using the three-point fall of potential method only. Record results and submit to Architect for approval. If resistance to ground exceeds three (3) ohms, install additional ground rods, bonded and interconnected to grounding electrode system. Provide additional grounding until resistance is less than three (3) ohms.

L. Circuit Breakers:
1. General: Circuit breakers shall be molded case rated for 480 or 240 volts, multiple or single pole and amperage rating as shown on the drawings, bolt on, manually operated with "de-ion" arc chutes.
2. Main circuit breaker shall be shall be rated to interrupt the available short circuit current min 42,000 amps RMS or as noted on the drawings.
3. Distribution circuit breakers shall be rated for the amps interrupting capacity noted on the drawings or U.L. series rated with the main circuit breaker.
4. Branch circuit breakers shall be rated for the amps interrupting capacity or U.L. series rated with the distribution and main circuit breakers, General Electric type TEB or equal, minimum 10,000 A.I.C for 120/208 volt, type TED or equal, minimum 14,000 A.I.C for 277/480 volt.
5. Where mechanical equipment is U.L. listed for overcurrent protection with fuses or HACR type circuit breakers, provide fuses where a fused switch is shown. Where the overcurrent protection is a circuit breaker provide HACR, (HACR means Heating, Air-Conditioning and Refrigeration) type.
6. Provide GFCI rated circuit breakers in all locations within 6-feet of water.

O. Starters:
1. Magnetic starters shall be rated in accordance with latest published NEMA standards for size and horsepower rating, Westinghouse A-200 series or equal. Provide with overload sensor in each phase, hand-off-auto switch, red "run" pilot light, in Indoor NEMA 1,Outdoor NEMA 4X, or NEMA 3R enclosure as shown. Coil shall be rated 120 VAC. Starters shall be across-the-line non-reversing unless otherwise noted.
2. Contacts: Across-the-line magnetic starters shall be equipped with double break silver alloy contacts. All contacts shall be replaceable without removing power wiring or removing starter from panel. The starter must have straight-through wiring.
3. Coils: Coils shall be of molded construction. All coils shall be replaceable from the front without removing the starter from the panel.
4. Overload Relays and Thermal Units: Overload relays shall be the melting

P. Motor Connections:
1. Install motor circuits complete for all motors by other trades as shown on drawings.
2. Furnish and install all disconnect switches, outlet boxes, starters, timeswitches etc., where noted.
3. All motor and temperature control low voltage wiring shall be installed and connected by Division 15 Section of specifications, unless otherwise indicated on electrical and mechanical drawings.

PART 3 - EXECUTION

3.01 - INSPECTION

A. Examine the areas and conditions under which the work of this Section will be installed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 - PREPARATION
A. Drawings
1. The general arrangement and location of wiring and equipment is shown on the electrical drawings and shall be installed in accordance therewith, except for minor changes required by conflict with the work of other trades.
2. Drawings indicate the circuit and panel which supplies each device or fixture. Provide and install conduit and conductors to make all connections from panel to nearest device and from first device to additional devices on same circuit. Conduit size and fill shall satisfy NEC requirements. Two or three different phases supplied by a 3_phase panel may share a single neutral only if circuit positions are adjacent in the panel and the breakers will have to be provided with a handle tie or multi-pole breaker per NEC requirements. If more than three current carrying conductors are installed in one conduit, conductor size shall be increased as required per Note 8 to Table 310_16 of the NEC.
3. Control wiring is generally not shown on the plans. Contractor shall refer to control diagrams and provide and install all wiring and raceways required to make all interconnections.
4. All branch circuit wiring No. 12 or larger as noted, all control wiring No. 14 or larger.
5. All dimensions, together with locations of doors, partitions, etc. are to be taken from the Architectural Drawings, verified at site by this Contractor.
6. Maintain "as-constructed" Record Drawings at all times, showing the exact location of concealed conduits and feeders installed under this contract, and actual numbering of each circuit. Upon completion of work and before acceptance can be considered, this Contractor must forward to the Owner's Representative corrected Record Drawings in Autocad format indicating the electrical work as installed.

3.03 - FIELD QUALITY CONTROL
A. All workmanship shall be first class and carried out in a manner satisfactory to and approved by the Architect.
B. This Contractor shall personally, or through an authorized and competent representative, constantly supervise the work and so far as possible keep the same foreman and workmen on the job throughout.

3.04 - INSTALLATION/APPLICATION/ERECTION
A. Cutting, repairing and structural reinforcing for the installation of this work shall be done by the General Contractor in conformance with the Architect's requirements.
B. Provide and place in form work all conduit, inserts and sleeves in time to prevent any delay in the concrete work.

3.05 - ADJUSTING AND CLEANING
A. Main switchboard, panelboards and all other electrical equipment not "finish painted" under other sections shall be touched up where finished surface is marred or damaged. Panelboards in finished areas shall be painted to match wall.
B. All equipment, lighting fixtures, etc., shall be left in clean condition, with all shipping and otherwise unnecessary labels removed therefrom.

C. Excavate and trench as necessary for the electrical installation, and when the work has been installed, inspected and approved, backfill all excavations with imported sandy soil in maximum 8" (eight inch) layers, moisten and machine tamp to 95% compaction, and restore the ground and/or paving or floor surfaces to their original condition. Comply with requirements of Division 2.

3.06 - SCHEDULES
A. Coordination: Coordinate installation of electrical items with the schedule for other work to prevent unnecessary delays in the total Work.

3.07 - TESTING
A. Grounding System:
1. All ground connections shall be checked and the entire system shall be checked for continuity. The resistance of the ground system shall be measured using a 3 point fall_of_potential method. The maximum ground resistance shall be three ohms. If the measured ground resistance exceeds three ohms, additional ground rods shall be installed until a value of three ohms or less is obtained.
2. Ground tests shall meet the requirements of the National Electric Code.
B. Power Distribution System:
1. Tests: Test main switchboard, distribution boards,and panelboards for grounds and shorts with mains disconnected from feeders, branch circuits connected and circuit breakers closed, all fixtures in place and permanently connected and grounding jumper to neutral lifted and with all wall switches closed.
2. Test each individual circuit at each panelboard with equipment connected for proper operation. Inspect the interior of each panel.
3. Check verification of color coding, tagging, numbering, and splice make up.
4. Verify that all conductors associated with each circuit are in same conduit.
5. Demonstrate that all lights, jacks, switches, outlets,and equipment operate satisfactorily and as called for.

ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
A.F.F.	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
ANN	ANNUNCIATOR
APPROX	APPROXIMATE
ARF	ABOVE RAISED FLOOR
ATS	AUTOMATIC TRANSFE SWITCH
AWG	AMERICAN WIRE GAUGE
BAT	BATTERY
BFG	BELOW FINISH GRADE
CATV	CABLE TELEVISION
℄	CENTERLINE
C, CND	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CO	CONDUIT ONLY
COMM	COMMUNICATIONS
CONST	CONSTRUCTION
CONT	CONTINUED
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CS	CONTROLLED SWITCHED RECEPTACLE
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
(D)	DEMOLITION
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EXHAUST FAN
EGU	ENGINE GENERATOR UNIT
EM	EMERGENCY LIGHT W/BATTERY BACKUP
EMT	ELECTRICAL METALLIC CONDUIT
ENT	ELECTRICAL NON-METALLIC CONDUIT
EP	EXPLOSION PROOF
EQ	EQUAL
EQUIV	EQUIVALENT
EWC	ELECTRIC WATER COOLER
(F)	FUTURE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FAN COIL
FDR	FEEDER
FLUOR	FLUORESCENT
FU	FUSE
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
HID	HIGH INTENSITY DISCHARGE
HO	CONTROL SWITCH, "HAND - OFF"
HOA	CONTROL SWITCH, "HAND - OFF- AUTO"
HOR	CONTROL SWITCH, "HAND - OFF- REMOTE"
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATION & AIR-COND.
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KV	KILO VOLT
KVA	KILO VOLT-AMP
KW	KILO WATT
KWH	KILO WATT-HOUR
LPS	LOW PRESSURE SODIUM
LTG	LIGHTING
LV	LOW VOLTAGE
MAX	MAXIMUM
MC	METAL-CLAD
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR, MFGR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MDP	MAIN DISTRIBUTION BOARD
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
(N)	NEW
N, NEUT	NEUTRAL
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PB	PULL BOX, ELECTRICAL
(R)	RELOCATE
RECP	RECEPTACLE, OUTLET
REQ	REQUIRED
RGS, RSG	RIGID GALVANIZED STEEL CONDUIT
RTU	REMOTE TERMINAL UNIT
SP	SPACE, SPARE
SS	STAINLESS STEEL
STD	STANDARDS, APPLICABLE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TP	TAMPER PROOF
TV	TELEVISION
TVSS	TRANSIENT VOLT. SURGE SUPPRESSOR
TYP	TYPICAL
UF	UNDER FLOOR
UG	UNDER GROUND
U.O.N.	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLT
VA	VOLT-AMP
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
W/0	WITHOUT
WH	WATER HEATER
WHM	WATT-HOUR METER
WP	WEATHER PROOF
XFMR	TRANSFORMER

ELECTRICAL SHEET INDEX

E0.01 ELECTRICAL LEGEND AND ABBREVIATIONS
E1.01 ELECTRICAL DEMOLITION ROOF PLAN - SOUTH
E1.02 ELECTRICAL DEMOLITION ROOF PLAN - EAST
E2.01 ELECTRICAL ROOF PLAN - SOUTH
E2.02 ELECTRICAL ROOF PLAN - EAST
E3.01 PANEL SCHEDULES

EQUIPMENT

- POWER OUTLET , DUPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
- DISCONNECT, NON-FUSED
- DISCONNECT, WITH FUSE
- STARTER, NON-FUSED
- STARTER, WITH FUSE
- DIVISION 15 FAN
- STARTER, WITH CIRCUIT BREAKER
- PANELBOARD FLUSH
- PANELBOARD SURFACE
- ENCLOSURE FLUSH
- ENCLOSURE SURFACE
- DISTRIBUTION BOARD
- MOTOR

CIRCUITING

- ELECTRICAL CIRCUIT - CONCEALED
- ELECTRICAL CIRCUIT - EXPOSED
- ELECTRICAL CIRCUIT - DEMOLITION
- ELECTRICAL CIRCUIT - HOME RUN
- ELECTRICAL CIRCUIT - STUB OUT
- ELECTRICAL CIRCUIT - STUB DOWN
- ELECTRICAL CIRCUIT - STUB UP
- ELECTRICAL CIRCUIT - COMPLETE CONNECTION OF EQUIPMENT OR DEVICE

MISCELLANEOUS

- XX — DEMO KEYED NOTE TAG
- XX-XX — ELECTRICAL EQUIPMENT TAG
- 1 — KEYED NOTE TAG
- XXXX — LIGHT FIXTURE TAG
- X / X — MECHANICAL EQUIPMENT TAG
- 1 — REVISION DELTA
- 1 — EQUIPMENT MANUFACTURER'S IDENTIFICATION NUMBER

REV	DESCRIPTION	INIT	DATE
	PERMIT		

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	09/05/17
ISSUED FOR BID	10/27/17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER — JOHNNEY A. CHOATE — No. E18905 — Exp. 12-31-17 — ELECTRICAL — STATE OF CALIFORNIA

09/05/2017

CONSULTANT:

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PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

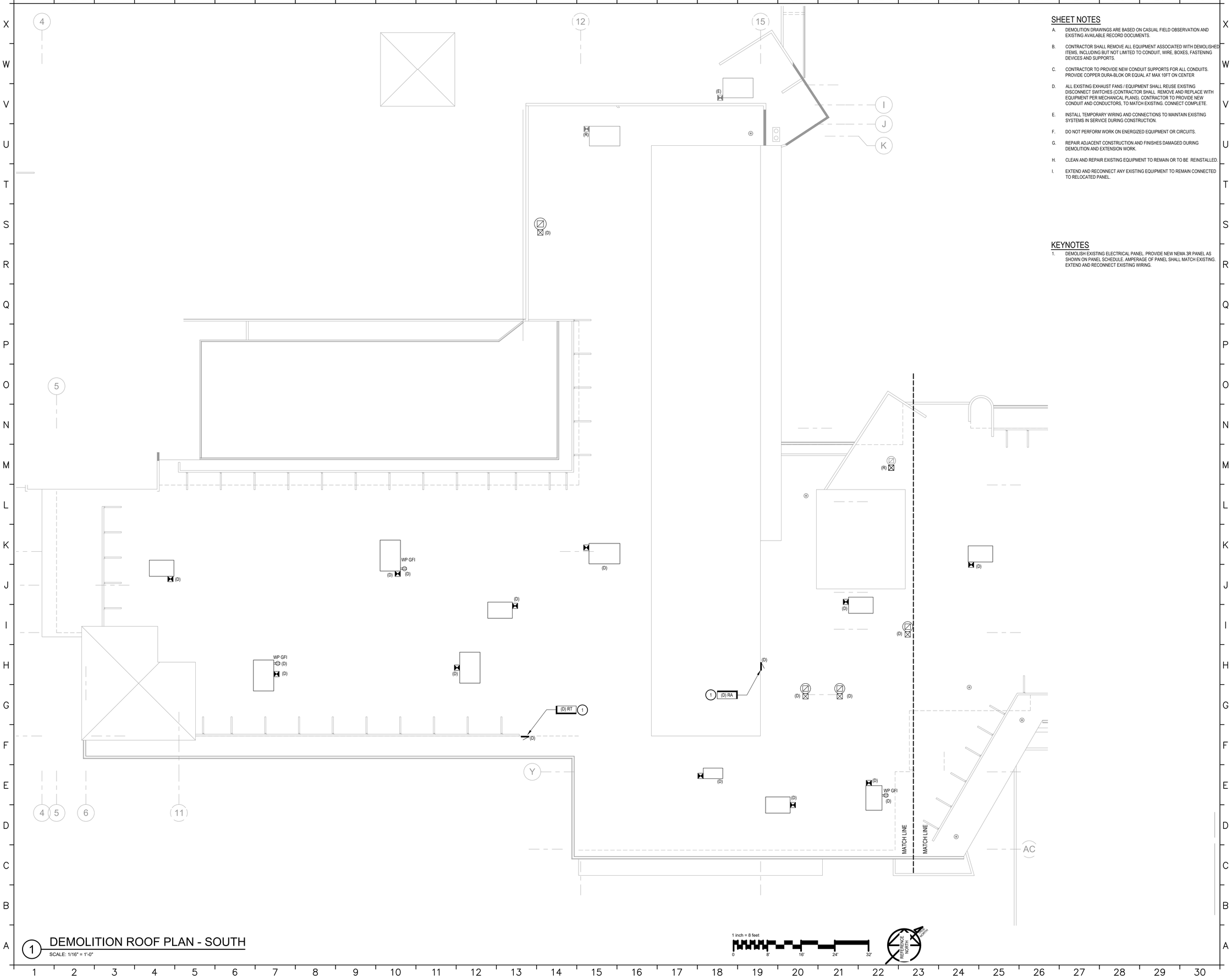
SHEET TITLE:

ELECTRICAL LEGEND AND ABBREVIATIONS

PROJ. NO.	2013-084-24
	PREPARATION AND REVIEW
DRAWN BY:	CAC
DESIGNER:	CAC
PROJ MGR:	CAC
PEER REVIEW	MOB

SHEET NUMBER:

E0.01



SHEET NOTES

A. DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND EXISTING AVAILABLE RECORD DOCUMENTS.

B. CONTRACTOR SHALL REMOVE ALL EQUIPMENT ASSOCIATED WITH DEMOLISHED ITEMS, INCLUDING BUT NOT LIMITED TO CONDUIT, WIRE, BOXES, FASTENING DEVICES AND SUPPORTS.

C. CONTRACTOR TO PROVIDE NEW CONDUIT SUPPORTS FOR ALL CONDUITS. PROVIDE COPPER DURA-BLOK OR EQUAL AT MAX 10FT ON CENTER

D. ALL EXISTING EXHAUST FANS / EQUIPMENT SHALL REUSE EXISTING DISCONNECT SWITCHES (CONTRACTOR SHALL REMOVE AND REPLACE WITH EQUIPMENT PER MECHANICAL PLANS). CONTRACTOR TO PROVIDE NEW CONDUIT AND CONDUCTORS, TO MATCH EXISTING. CONNECT COMPLETE.

E. INSTALL TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION.

F. DO NOT PERFORM WORK ON ENERGIZED EQUIPMENT OR CIRCUITS.

G. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK.

H. CLEAN AND REPAIR EXISTING EQUIPMENT TO REMAIN OR TO BE REINSTALLED.

I. EXTEND AND RECONNECT ANY EXISTING EQUIPMENT TO REMAIN CONNECTED TO RELOCATED PANEL.

KEYNOTES

1. DEMOLISH EXISTING ELECTRICAL PANEL. PROVIDE NEW NEMA 3R PANEL AS SHOWN ON PANEL SCHEDULE. AMPERAGE OF PANEL SHALL MATCH EXISTING. EXTEND AND RECONNECT EXISTING WIRING.

1 DEMOLITION ROOF PLAN - SOUTH

SCALE: 1/16" = 1'-0"

1 inch = 8 feet

0 8' 16' 24' 32'

REV	DESCRIPTION	INIT	DATE
	PERMIT		

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	09/05/17
ISSUED FOR BID	10/27/17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER — COURTNEY A. CHRISTIAN — No. E18905 — Exp. 12-31-17 — ELECTRICAL — STATE OF CALIFORNIA

09/05/2017

CONSULTANT:

BrokawDesign
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PROJECT:

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860 N. BUSH ST.
UKIAH, CA 95482

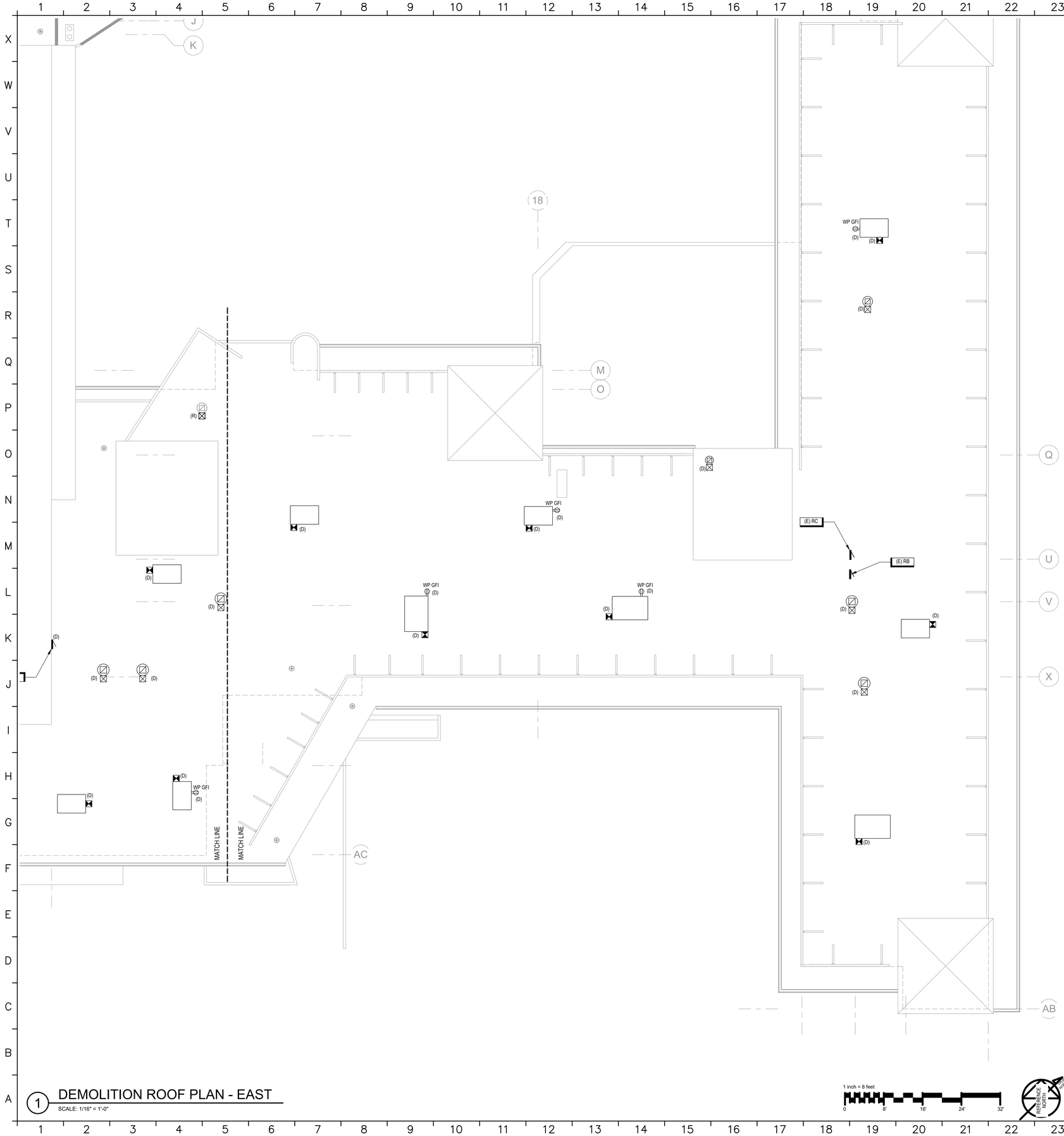
SHEET TITLE:

DEMOLITION ROOF PLAN - SOUTH

PROJ. NO.	2013-084-24
PREPARATION AND REVIEW	
DRAWN BY:	CAC
DESIGNER:	CAC
PROJ MGR:	CAC
PEER REVIEW:	MOB

SHEET NUMBER:

E1.01



SHEET NOTES

A. DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND EXISTING AVAILABLE RECORD DOCUMENTS.

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C. CONTRACTOR TO PROVIDE NEW CONDUIT SUPPORTS FOR ALL CONDUITS. PROVIDE COPPER DURA-BLOK OR EQUAL AT MAX 10FT ON CENTER

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G. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK.

H. CLEAN AND REPAIR EXISTING EQUIPMENT TO REMAIN OR TO BE REINSTALLED.

I. EXTEND AND RECONNECT ANY EXISTING EQUIPMENT TO REMAIN CONNECTED TO RELOCATED PANEL.

1 DEMOLITION ROOF PLAN - EAST
SCALE: 1/16" = 1'-0"

1 inch = 8 feet
0 8' 16' 24' 32'

REFERENCE NORTH

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SEAL:

REGISTERED PROFESSIONAL ENGINEER — COURTNEY A. CHRISTOPHER — No. E18905 — Exp. 12-31-17 — ELECTRICAL — STATE OF CALIFORNIA

09/05/2017

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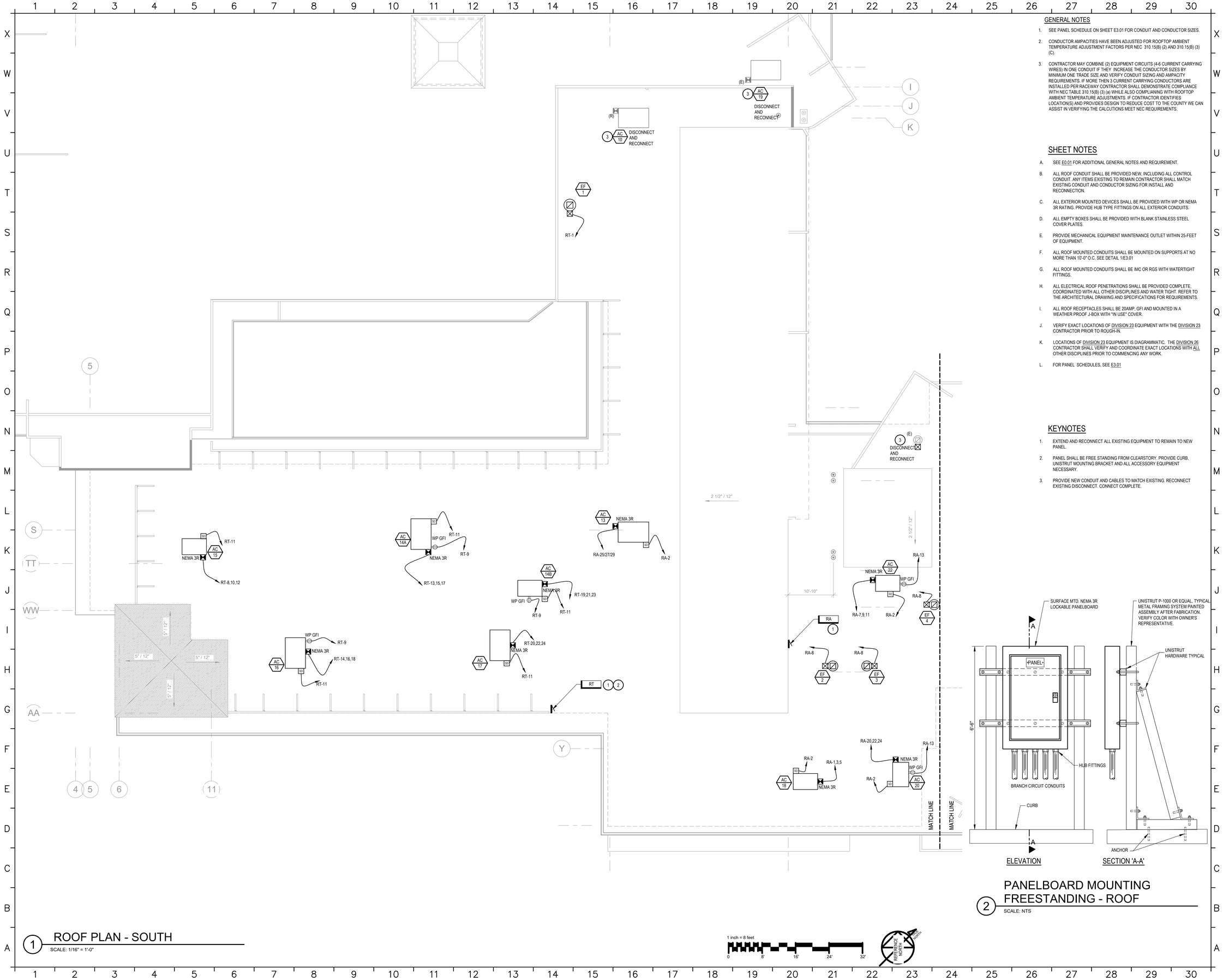
SHEET TITLE:

DEMOLITION ROOF PLAN - EAST

PROJ. NO.	2013-084-24
PREPARATION AND REVIEW	
DRAWN BY:	CAC
DESIGNER:	CAC
PROJ MGR:	CAC
PEER REVIEW	MOB

SHEET NUMBER:

E1.02



1 ROOF PLAN - SOUTH
SCALE: 1/16" = 1'-0"

2 PANELBOARD MOUNTING FREESTANDING - ROOF
SCALE: NTS

GENERAL NOTES

1. SEE PANEL SCHEDULE ON SHEET E3.01 FOR CONDUIT AND CONDUCTOR SIZES.
2. CONDUCTOR AMPACITIES HAVE BEEN ADJUSTED FOR ROOFTOP AMBIENT TEMPERATURE ADJUSTMENT FACTORS PER NEC 310.15(B) (2) AND 310.15(B) (3) (C).
3. CONTRACTOR MAY COMBINE (2) EQUIPMENT CIRCUITS (4-6 CURRENT CARRYING WIRES) IN ONE CONDUIT IF THEY INCREASE THE CONDUCTOR SIZES BY MINIMUM ONE TRADE SIZE AND VERIFY CONDUIT SIZING AND AMPACITY REQUIREMENTS. IF MORE THEN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED PER RACEWAY CONTRACTOR SHALL DEMONSTRATE COMPLIANCE WITH NEC TABLE 310.15(B) (3) (a) WHILE ALSO COMPLIANING WITH ROOFTOP AMBIENT TEMPERATURE ADJUSTMENTS. IF CONTRACTOR IDENTIFIES LOCATION(S) AND PROVIDES DESIGN TO REDUCE COST TO THE COUNTY WE CAN ASSIST IN VERIFYING THE CALCUTIONS MEET NEC REQUIREMENTS.

SHEET NOTES

A. SEE E0.01 FOR ADDITIONAL GENERAL NOTES AND REQUIREMENT.

B. ALL ROOF CONDUIT SHALL BE PROVIDED NEW, INCLUDING ALL CONTROL CONDUIT. ANY ITEMS EXISTING TO REMAIN CONTRACTOR SHALL MATCH EXISTING CONDUIT AND CONDUCTOR SIZING FOR INSTALL AND RECONNECTION.

C. ALL EXTERIOR MOUNTED DEVICES SHALL BE PROVIDED WITH WP OR NEMA 3R RATING. PROVIDE HUB TYPE FITTINGS ON ALL EXTERIOR CONDUITS.

D. ALL EMPTY BOXES SHALL BE PROVIDED WITH BLANK STAINLESS STEEL COVER PLATES.

E. PROVIDE MECHANICAL EQUIPMENT MAINTENANCE OUTLET WITHIN 25-FEET OF EQUIPMENT.

F. ALL ROOF MOUNTED CONDUITS SHALL BE MOUNTED ON SUPPORTS AT NO MORE THAN 10'-0" O.C. SEE DETAIL 1/E3.01

G. ALL ROOF MOUNTED CONDUITS SHALL BE IMC OR RGS WITH WATERTIGHT FITTINGS.

H. ALL ELECTRICAL ROOF PENETRATIONS SHALL BE PROVIDED COMPLETE, COORDINATED WITH ALL OTHER DISCIPLINES AND WATER TIGHT. REFER TO THE ARCHITECTURAL DRAWING AND SPECIFICATIONS FOR REQUIREMENTS.

I. ALL ROOF RECEPTACLES SHALL BE 20AMP, GFI AND MOUNTED IN A WEATHER PROOF J-BOX WITH "IN USE" COVER.

J. VERIFY EXACT LOCATIONS OF DIVISION 23 EQUIPMENT WITH THE DIVISION 23 CONTRACTOR PRIOR TO ROUGH-IN.

K. LOCATIONS OF DIVISION 23 EQUIPMENT IS DIAGRAMMATIC. THE DIVISION 26 CONTRACTOR SHALL VERIFY AND COORDINATE EXACT LOCATIONS WITH ALL OTHER DISCIPLINES PRIOR TO COMMENCING ANY WORK.

L. FOR PANEL SCHEDULES, SEE E3.01

KEYNOTES

1. EXTEND AND RECONNECT ALL EXISTING EQUIPMENT TO REMAIN TO NEW PANEL.
2. PANEL SHALL BE FREE STANDING FROM CLEARSTORY. PROVIDE CURB, UNISTRUT MOUNTING BRACKET AND ALL ACCESSORY EQUIPMENT NECESSARY.
3. PROVIDE NEW CONDUIT AND CABLES TO MATCH EXISTING. RECONNECT EXISTING DISCONNECT. CONNECT COMPLETE.

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	PERMIT		

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50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	
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SEAL:



CONSULTANT:

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PROJECT:

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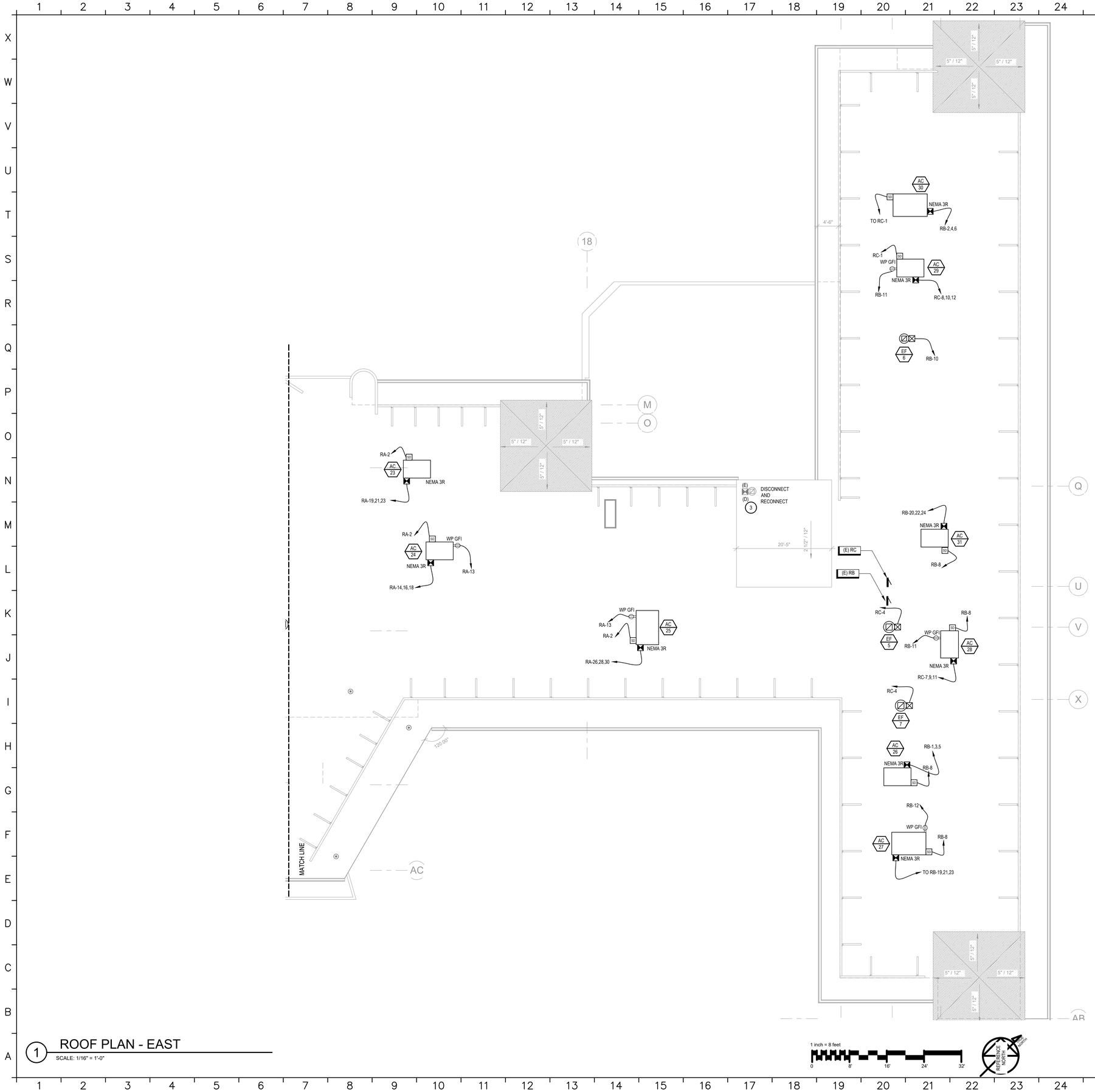
SHEET TITLE:

ROOF PLAN - SOUTH

PROJ. NO.	2013-084-24
PREPARATION AND REVIEW	
DRAWN BY:	CAC
DESIGNER:	CAC
PROJ MGR:	CAC
PEER REVIEW	MOB

SHEET NUMBER:

E2.01



1 ROOF PLAN - EAST
SCALE: 1/16" = 1'-0"

1 inch = 8 feet
0 8' 16' 24' 32'

RECTANGLE NORTH

GENERAL NOTES

1. SEE PANEL SCHEDULE ON SHEET E3.01 FOR CONDUIT AND CONDUCTOR SIZES.
2. CONDUCTOR AMPACITIES HAVE BEEN ADJUSTED FOR ROOFTOP AMBIENT TEMPERATURE ADJUSTMENT FACTORS PER NEC 310.15(B) (2) AND 310.15(B) (3) (C).
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SHEET NOTES

A. SEE E0.01 FOR ADDITIONAL GENERAL NOTES AND REQUIREMENT.

B. ALL ROOF CONDUIT SHALL BE PROVIDED NEW, INCLUDING ALL CONTROL CONDUIT. ANY ITEMS EXISTING TO REMAIN CONTRACTOR SHALL MATCH EXISTING CONDUIT AND CONDUCTOR SIZING FOR INSTALL AND RECONNECTION.

C. ALL EXTERIOR MOUNTED DEVICES SHALL BE PROVIDED WITH WP OR NEMA 3R RATING. PROVIDE HUB TYPE FITTINGS ON ALL EXTERIOR CONDUITS.

D. ALL EMPTY BOXES SHALL BE PROVIDED WITH BLANK STAINLESS STEEL COVER PLATES.

E. PROVIDE MECHANICAL EQUIPMENT MAINTENANCE OUTLET WITHIN 25-FEET OF EQUIPMENT.

F. ALL ROOF MOUNTED CONDUITS SHALL BE MOUNTED ON SUPPORTS AT NO MORE THAN 10'-0" O.C. SEE DETAIL 1/E3.01

G. ALL ROOF MOUNTED CONDUITS SHALL BE IMC OR RGS WITH WATERTIGHT FITTINGS.

H. ALL ELECTRICAL ROOF PENETRATIONS SHALL BE PROVIDED COMPLETE, COORDINATED WITH ALL OTHER DISCIPLINES AND WATER TIGHT. REFER TO THE ARCHITECTURAL DRAWING AND SPECIFICATIONS FOR REQUIREMENTS.

I. ALL ROOF RECEPTACLES SHALL BE 20AMP, GFI AND MOUNTED IN A WEATHER PROOF J-BOX WITH "IN USE" COVER.

J. VERIFY EXACT LOCATIONS OF DIVISION 23 EQUIPMENT WITH THE DIVISION 23 CONTRACTOR PRIOR TO ROUGH-IN.

K. LOCATIONS OF DIVISION 23 EQUIPMENT IS DIAGRAMMATIC. THE DIVISION 26 CONTRACTOR SHALL VERIFY AND COORDINATE EXACT LOCATIONS WITH ALL OTHER DISCIPLINES PRIOR TO COMMENCING ANY WORK.

L. FOR PANEL SCHEDULES, SEE E3.01

KEYNOTES

1. NOT USED.
2. NOT USED.
3. PROVIDE NEW CONDUIT AND CABLES TO MATCH EXISTING. RECONNECT EXISTING DISCONNECT. CONNECT COMPLETE.

REV	DESCRIPTION	INIT	DATE
	PERMIT		

100% DESIGN DEVELOPMENT SET	
50% CONSTRUCTION DOCUMENTS SET	
ISSUED FOR PLAN CHECK	
ISSUED FOR PERMIT	09/05/17
ISSUED FOR BID	10/27/17
ISSUED FOR CONSTRUCTION	

SEAL:

REGISTERED PROFESSIONAL ENGINEER — TIMOTHY A. CHRISTENSEN — No. E18905 — Exp. 12-31-17 — ELECTRICAL — STATE OF CALIFORNIA

09/05/2017

CONSULTANT:

BrokawDesign
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PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

ROOF PLAN - EAST

PROJ. NO.	2013-084-24
PREPARATION AND REVIEW	
DRAWN BY:	CAC
DESIGNER:	CAC
PROJ MGR:	CAC
PEER REVIEW	MOB

SHEET NUMBER:

E2.02

(D) PANEL RA

PANEL SCHEDULE

PANEL NAME: **(D) RA** | VOLTAGE: 208 | NEMA RATING: 3R | NOTES: .
MAINS RATING: MLO (A) | PHASE: 3 | AIC RATING: 22K
BUS RATING: 400 (A) | WIRE: 4

CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1								A								2
3								B			20/1	(E) EXISTING				4
5								C			20/1	(E) RECEP COMP ROOM				6
7								A			20/1	(E) EXHAUST FANS				8
9								B			20/1	*(D) GFI RECP*				10
11								C			20/1	*(D) GFI RECP*				12
13								A								14
15				(E) COMP ROOM	20/2			B			40/3	*(D) AC-2*				16
17								C								18
19								A								20
21				*(D) AC-6*	50/3			B			60/3	*(D) AC-7*				22
23								C								24

LOADS:
PHASE A: (KVA)
PHASE B: (KVA)
PHASE C: (KVA)
TOTAL: (CONNECTED KVA)
(CONNECTED A)

USE LEGEND: "H" HVAC; "L" LIGHTING; "M" MOTOR; "O" OTHER; "R" RECEPTACLE; "P" PANEL

LOAD TYPE: HVAC; LIGHTING; MOTOR; OTHER; RECEPTACLE; PANEL

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP

NEC DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)		100%	
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS		100%	
		DEMAND KVA:	
		DEMAND AMPS:	

(E) PANEL RB

PANEL SCHEDULE

PANEL NAME: **(E) RB** | VOLTAGE: 208 | NEMA RATING: 3R | NOTES: .
MAINS RATING: MLO (A) | PHASE: 3 | AIC RATING: 22K
BUS RATING: 225 (A) | WIRE: 4

CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1								A								2
3								B								4
5								C								6
7								A								8
9								B			*19/1*	*(D) EXHAUST FAN #3*				10
11				*(D) Recp. GFI AC-3*	20/1			C			26/1	*(D) GFI*				12
13								A								14
15				(E) EXHAUST FAN #1	15/3			B			40/3	*(D) AC-31*				16
17								C								18
19								A								20
21				*(D) AC-28*	60/3			B				(E) PANEL RC				22
23								C								24

LOADS:
PHASE A: (KVA)
PHASE B: (KVA)
PHASE C: (KVA)
TOTAL: (CONNECTED KVA)
(CONNECTED A)

USE LEGEND: "H" HVAC; "L" LIGHTING; "M" MOTOR; "O" OTHER; "R" RECEPTACLE; "P" PANEL

LOAD TYPE: HVAC; LIGHTING; MOTOR; OTHER; RECEPTACLE; PANEL

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP

NEC DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)		100%	
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS		100%	
		DEMAND KVA:	
		DEMAND AMPS:	

(E) PANEL RC

PANEL SCHEDULE

PANEL NAME: **(E) RC** | VOLTAGE: 208 | NEMA RATING: 3R | NOTES: .
MAINS RATING: MLO (A) | PHASE: 3 | AIC RATING: 22K
BUS RATING: 125 (A) | WIRE: 4

CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1								A								2
3				(E) EXISITING	20/2			B			*19/1*	*(D) EXHAUST FAN #28*				4
5								C			20/1	*(D) RECP. GFI HA - 2*				6
7				*(D) AC-27*	30/3			A								8
9								B			60/3	*(D) AC-26*				10
11								C								12

LOADS:
PHASE A: (KVA)
PHASE B: (KVA)
PHASE C: (KVA)
TOTAL: (CONNECTED KVA)
(CONNECTED A)

USE LEGEND: "H" HVAC; "L" LIGHTING; "M" MOTOR; "O" OTHER; "R" RECEPTACLE; "P" PANEL

LOAD TYPE: HVAC; LIGHTING; MOTOR; OTHER; RECEPTACLE; PANEL

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP

NEC DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)		100%	
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS		100%	
		DEMAND KVA:	
		DEMAND AMPS:	

(D) PANEL RT

PANEL SCHEDULE

PANEL NAME: **(D) RT** | VOLTAGE: 208 | NEMA RATING: 3R | NOTES: .
MAINS RATING: MLO (A) | PHASE: 3 | AIC RATING: 22K
BUS RATING: 225 (A) | WIRE: 4

CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1								A			20/1	(E) EXISTING				2
3				*(D) AC-1*	30/3			B			40/2	*(D) AC-18*				4
5								C								6
7				*EXISTING*	20/1			A								8
9				*(D) EXISTING*	20/1			B								10
11								C								12
13								A								14
15				*(D) AC-17*	60/3			B			60/3	*(D) AC-14*				16
17								C								18
19								A								20
21				*(D) AC-9*	100/3			B			100/3	*(D) AC-10*				22
23								C								24

LOADS:
PHASE A: (KVA)
PHASE B: (KVA)
PHASE C: (KVA)
TOTAL: (CONNECTED KVA)
(CONNECTED A)

USE LEGEND: "H" HVAC; "L" LIGHTING; "M" MOTOR; "O" OTHER; "R" RECEPTACLE; "P" PANEL

LOAD TYPE: HVAC; LIGHTING; MOTOR; OTHER; RECEPTACLE; PANEL

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP

NEC DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)		100%	
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS		100%	
		DEMAND KVA:	
		DEMAND AMPS:	

(N) PANEL RA

PANEL SCHEDULE

PANEL NAME: **(N) RA** | VOLTAGE: 208 | NEMA RATING: 3R | NOTES: .
MAINS RATING: MLO (A) | PHASE: 3 | AIC RATING: 22K
BUS RATING: 400 (A) | WIRE: 4

CKT NO	CONDUIT	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CONDUIT	CKT NO
1		6		H				4.20	A	0.20		20/1	DUCT SMOKE DETECTORS	R	10	10	3/4"	2
3	1"	6		H	AC-18	50/3		4.20	B	1.00		20/1	EXISTING	R	10	10	3/4"	4
5		6		H				4.20	C	1.00		20/1	RECP COMP ROOM	R	10	10	3/4"	6
7		8		H	AC-22	40/3		3.72	A	1.00		20/1	EXHAUST FANS	R	10	10	3/4"	8
9	1"	8		H				3.72	B	1.00		20/1	GFI RECP	R	10	10	3/4"	10
11		8		H				3.72	C	1.00		20/1	GFI RECP	R	10	10	3/4"	12
13	3/4"	10	10	R	ROOF RECEPTACLES	20/1		1.00	A	3.72				H		8		14
15	3/4"	10		R	COMP ROOM	20/2		1.00	B	3.72		40/3	AC-24	H		8	1"	16
17		10		R				1.00	C	3.72				H		8		18
19		6		H				4.20	A	3.72				H		8		20
21	1"	6		H	AC-23	50/3		4.20	B	3.72		40/3	AC-20	H		8	1"	22
23		6		H				4.20	C	3.72				H		8		24
25		6		H				5.04	A	7.20				H		2		26
27	1"	6		H	AC-13	50/3		5.04	B	7.20		80/3	AC-25	H		2	1 1/2"	28
29		6		H				5.04	C	7.20				H		2		30
31									A									32
33					SPACE				B				**SPACE**					34
35									C									36
37									A									38
39					SPACE				B				**SPACE**					40
41									C									42

LOADS:
PHASE A: 34.0 (KVA)
PHASE B: 34.8 (KVA)
PHASE C: 34.8 (KVA)
TOTAL: 103.6 (CONNECTED KVA)
287.8 (CONNECTED A)

USE LEGEND: "H" HVAC; "L" LIGHTING; "M" MOTOR; "O" OTHER; "R" RECEPTACLE; "P" PANEL

LOAD TYPE: HVAC; LIGHTING; MOTOR; OTHER; RECEPTACLE; PANEL

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP

NEC DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)	8.20	100%	8.20
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS	95.40	100%	95.40
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS		100%	
		DEMAND KVA:	103.60
		DEMAND AMPS:	287.8

MODIFIED PANEL RB

PANEL SCHEDULE

PANEL NAME: **(E) RB** | VOLTAGE: 208 | NEMA RATING: 3R | NOTES: **EXISTING PANEL**
MAINS RATING: MLO (A) | PHASE: 3 | AIC RATING: 22K
BUS RATING: 225 (A) | WIRE: 4

CKT NO	CONDUIT	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CONDUIT	CKT NO
1		8		H				3.72	A	5.04				H		6		2
3	1"	8		H	AC-26	40/3		3.72	B	5.04		50/3	AC-30	H		6	1"	4
5		8		H				3.72	C	5.04				H		6		6
7		8		H				3.12	A	1.00		20/1	DUCT SMOKE DETECTOR	R	10	10	3/4"	8
9	1"	8		H	AC-31	30/3		3.12	B	0.60		20/1	EXHAUST FAN	H	10	10	3/4"	10
11		8		H				3.12	C	1.00		20/1	EXTERIOR RECP	R	10	10	3/4"	12
13		12		H				1.00	A					H				14
15	1"	12		H	(E) EXHAUST FAN	15/3		1.00	B				SPACE	H				16
17		12		H				1.00	C					H				18
19		4		H				6.00	A					P				20
21	1"	4		H	AC-27	60/3		6.00	B				PANEL RC	P				22
23		4		H				6.00	C					P				24

LOADS:
PHASE A: 19.9 (KVA)
PHASE B: 19.5 (KVA)
PHASE C: 19.9 (KVA)
TOTAL: 59.2 (CONNECTED KVA)
164.6 (CONNECTED A)

USE LEGEND: "H" HVAC; "L" LIGHTING; "M" MOTOR; "O" OTHER; "R" RECEPTACLE; "P" PANEL

LOAD TYPE: HVAC; LIGHTING; MOTOR; OTHER; RECEPTACLE; PANEL

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP

NEC DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)	2.00	100%	2.00
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS	57.24	100%	57.24
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS		100%	
		DEMAND KVA:	59.24
		DEMAND AMPS:	164.6

MODIFIED PANEL RC

PANEL SCHEDULE

PANEL NAME: **(E) RC** | VOLTAGE: 208 | NEMA RATING: 3R | NOTES: **EXISTING PANEL**
MAINS RATING: MLO (A) | PHASE: 3 | AIC RATING: 22K
BUS RATING: 125 (A) | WIRE: 4

CKT NO	CONDUIT	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CONDUIT	CKT NO
1	3/4"	10	10	H	EXHAUST FAN EF-1	20/1		0.60	A	1.00		20/1	ROOFTOP RECEPTACLES	R	10	10	3/4"	2
3						20/1			B	1.00		40/2	EXISTING	H		8	1"	4
5						20/1			C	1.00				H		8		6
7	3/4"	10	10	R	EXISTING	20/1		1.00	A	3.72		**40/3**	AC-15	H		8	1"	8
9	3/4"	10	10	R	ROOF RECEPTACLES	20/1		1.00	B	3.72				H		8		10
11	3/4"	10	10	R	DUCT SMOKE DETECTOR	20/1		1.00	C	3.72				H		8		12
13		4		H				6.00	A	5.04				H		6		14
15	1"	4		H	AC-14A	60/3		6.00	B	5.04		**50/3**	AC-16	H		6	1"	16
17		4		H				6.00	C	5.04				H		6		18
19		8		H				3.72	A	5.04				H		6		20
21	1"	8		H	AC-14B	40/3		3.72	B	5.04		**50/3**	AC-17	H		6	1"	22
23		8		H				3.72	C	5.04				H		6		24

LOADS:
PHASE A: 25.5 (KVA)
PHASE B: 25.5 (KVA)
PHASE C: 25.5 (KVA)
TOTAL: 76.6 (CONNECTED KVA)
212.7 (CONNECTED A)

USE LEGEND: "H" HVAC; "L" LIGHTING; "M" MOTOR; "O" OTHER; "R" RECEPTACLE; "P" PANEL

LOAD TYPE: HVAC; LIGHTING; MOTOR; OTHER; RECEPTACLE; PANEL

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP

NEC DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)	4.00	100%	4.00
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS	72.56	100%	72.56
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS		100%	
		DEMAND KVA:	76.56
		DEMAND AMPS:	212.7

(N) PANEL RT

PANEL SCHEDULE

PANEL NAME: **(N) RT** | VOLTAGE: 208 | NEMA RATING: 3R | NOTES: .
MAINS RATING: MLO (A) | PHASE: 3 | AIC RATING: 22K
BUS RATING: 225 (A) | WIRE: 4

CKT NO	CONDUIT	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CONDUIT	CKT NO
1	3/4"	10	10	H	EXHAUST FAN EF-1	20/1		0.60	A	1.00		20/1	ROOFTOP RECEPTACLES	R	10	10	3/4"	2
3						20/1			B	1.00		40/2	EXISTING	H		8	1"	4
5						20/1			C	1.00				H		8		6
7	3/4"	10	10	R	EXISTING	20/1		1.00	A	3.72		**40/3**	AC-15	H		8	1"	8
9	3/4"	10	10	R	ROOF RECEPTACLES	20/1		1.00	B	3.72				H		8		10
11	3/4"	10	10	R	DUCT SMOKE DETECTOR	20/1		1.00	C	3.72				H		8		12
13		4		H				6.00	A	5.04				H		6		14
15	1"	4		H	AC-14A	60/3		6.00	B	5.04		**50/3**	AC-16	H		6	1"	16
17		4		H				6.00	C	5.04				H		6		18
19		8		H				3.72	A	5.04				H		6		20
21	1"	8		H	AC-14B	40/3		3.72	B	5.04		**50/3**	AC-17	H		6	1"	22
23		8		H				3.72	C	5.04				H		6		24

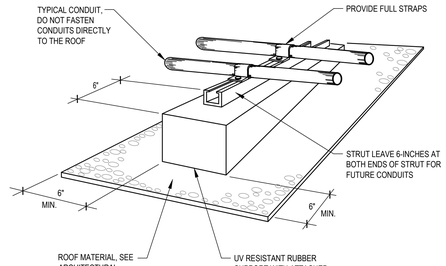
LOADS:
PHASE A: 25.5 (KVA)
PHASE B: 25.5 (KVA)
PHASE C: 25.5 (KVA)
TOTAL: 76.6 (CONNECTED KVA)
212.7 (CONNECTED A)

USE LEGEND: "H" HVAC; "L" LIGHTING; "M" MOTOR; "O" OTHER; "R" RECEPTACLE; "P" PANEL

LOAD TYPE: HVAC; LIGHTING; MOTOR; OTHER; RECEPTACLE; PANEL

BREAKER OPTIONS:
GFCI - GROUND FAULT CIRCUIT INTERRUPTER
HACR - HEATING/AIR CONDITIONING RATED
LO - LOCK-ON DEVICE
PA - PADLOCK ATTACHMENT
ST - SHUNT TRIP

NEC DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR. LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR. LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)	4.00	100%	4.00
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS	72.56	100%	72.56
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS		100%	
		DEMAND KVA:	76.56
		DEMAND AMPS:	212.7



DETAIL NOTES

A. LOCATE SUPPORTS AS REQUIRED BY CODE BUT NOT MORE THAN 10 FEET ON CENTER.

1 ROOF MOUNTED ELECTRICAL SLEEPER

SCALE: NTS

REV	DESCRIPTION	INIT	DATE
	PERMIT		
	100% DESIGN DEVELOPMENT SET		
	50% CONSTRUCTION DOCUMENTS SET		
	ISSUED FOR PLAN CHECK		
	ISSUED FOR PERMIT		09/05/17
	ISSUED FOR BID		10/27/17
	ISSUED FOR CONSTRUCTION		

SEAL:

REGISTERED PROFESSIONAL ENGINEER — GREGORY A. CHRISTENSEN — No. E18925 — Exp. 12-31-17 — ELECTRICAL — STATE OF CALIFORNIA

09/05/2017

CONSULTANT:

BrokawDesign
www.BROKAWDESIGN.com

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117 PARK PLACE
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PROJECT:

MENDOCINO COUNTY ADMINISTRATION CENTER – SOUTH WING

860 N. BUSH ST.
UKIAH, CA 95482

SHEET TITLE:

PANEL SCHEDULES

PROJ. NO. 2013-084-24
PREPARATION AND REVIEW
DRAWN BY: CAC
DESIGNER: CAC
PROJ MGR: CAC
PEER REVIEW MOB

SHEET NUMBER:

E3.01