TENANT IMPROVEMENTS FOR

HUMBOLDT COUNTY DISTRICT ATTORNEY

VICTIM / WITNESS AND CAST

825 5TH STREET - EUREKA, CALIFORNIA

NICHOLS MELBURG & ROSSETTO
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CONSULTANTS

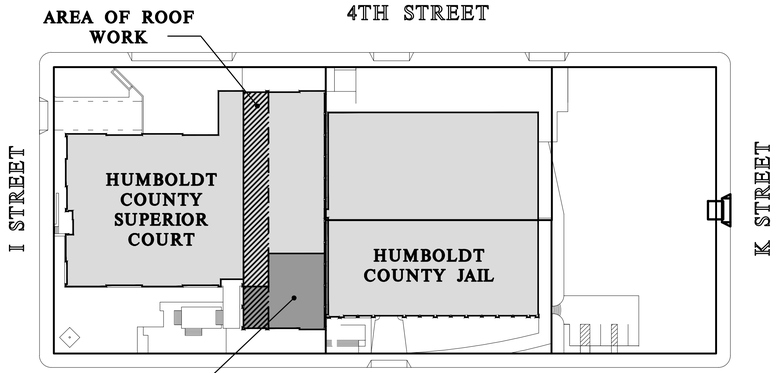
GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE ADOPTED ORDINANCES AND CODES. ANY DISCREPANCIES BETWEEN THESE CODES AND THE CONSTRUCTION DOCUMENTS SHOULD IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE COUNTY. THE CONSTRUCTION DOCUMENTS SHALL NOT BE CONSTRUED AS TO PERMIT WORK THAT DOES COMPLY WITH THESE CODES.
2. DIMENSIONS SHALL TAKE PRECEDENCE OVER ITEMS AS GRAPHICALLY DEPICTED IN THESE DRAWINGS. DO NOT SCALE DRAWINGS. DIMENSIONS NOTED AS "CLEAR" (CLR) ARE TAKEN TO THE FACE OF FINISH MATERIALS. VERIFY DIMENSIONS OF PREFABRICATED AND MANUFACTURED ITEMS AND COORDINATE ROUGH OPENINGS ACCORDINGLY.
3. ALL CONSTRUCTION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURERS LATEST PUBLISHED SPECIFICATIONS AND INSTRUCTIONS. ALL DISCREPANCIES BETWEEN THESE SPECIFICATIONS AND INSTRUCTIONS AND THE CONTRACT DOCUMENTS, SHALL BE BROUGHT TO THE ATTENTION OF THE COUNTY IN WRITING PRIOR TO COMMENCING WORK.
4. VERIFY ALL DIMENSIONS, EXISTING UTILITY LOCATIONS, AND EXISTING CONDITIONS AFFECTED BY THE CONTRACT PRIOR TO STARTING CONSTRUCTION. ANY DISCREPANCIES OR INCONSISTENCIES FOUND SHALL BE BROUGHT TO THE ARCHITECTS AND COUNTYS ATTENTION BEFORE WORK PROCEEDS.

DEFERRED SUBMITTALS

1. FIRE ALARM SYSTEM
2. FIRE SPRINKLER SYSTEM

SITE PLAN



CODES / STANDARDS

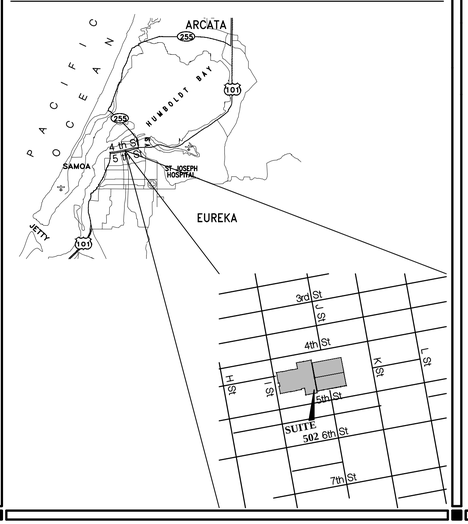
APPLICABLE CODES:
ALL WORK PERFORMED & PRODUCTS FURNISHED SHALL COMPLY AS APPLICABLE WITH THE LATEST REGULATIONS OF:

- TITLE 19 C.C.R, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
- 2016 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
- 2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
- 2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
- 2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
- 2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
- 2016 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
- 2016 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
- 2016 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24 C.C.R.
- 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.
- 2016 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.

APPLICABLE STANDARDS:
ALL WORK PERFORMED & PRODUCTS FURNISHED SHALL COMPLY AS APPLICABLE WITH THE LATEST REGULATIONS OF:

- 2016 NFPA 13 AUTOMATIC SPRINKLER SYSTEMS (CALIFORNIA AMENDED)
- 2013 NFPA 14 INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (CALIFORNIA AMENDED)
- 2013 NFPA 20, PUMPS FOR FIRE PROTECTION
- 2013 NFPA 24, FIRE SERVICE MAINS (CALIFORNIA AMENDED)
- 2013 NFPA 72 NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED)
- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
  CHAPTER 4, PART 1, TITLE 24, C.C.R, ADMINISTRATIVE REQUIREMENTS (PARTIAL LISTING ONLY)

VICINITY MAP



PROJECT DESCRIPTION

THE HUMBOLDT COUNTY DISTRICT ATTORNEYS OFFICE WILL REMODEL THE SOUTHERN END OF THE FIFTH FLOOR OF THE COUNTY COURTHOUSE (APPROXIMATELY 3,950 SQUARE FEET). THE ADDRESS OF THE PROJECT IS 825 5TH STREET, EUREKA, CALIFORNIA 95501. THE REMODELED SPACE, HEREAFTER REFERRED TO AS SUITE 502, CONSISTS OF OFFICE, INTERVIEW, AND ADMINISTRATION SPACES FOR SERVICING THE 'VICTIM / WITNESS' AND 'C.A.S.T' PROGRAMS. WORK WILL CONSIST OF DEMOLISHING EXISTING INTERIOR WALLS AND REMOVING EXISTING MECHANICAL EQUIPMENT CURRENTLY HOUSED ON THE 5TH FLOOR FAN ROOMS. NEW WORK WILL AFFECT AREAS WITHIN SUITE 502, AS WELL AS EFFORTS CONSEQUENT TO REMOVING AND INSTALLING NEW MECHANICAL SYSTEMS.

WORK ON THE COURTHOUSE ROOF (APPROX. 4,400 S.F.) CONSISTS OF REPLACING ROOFING MATERIAL ON LOWER WESTERN ROOF, REPLACING TWO MECHANICAL ENCLOSURES, AND THE ADDITION OF THREE MECHANICAL UNITS. NEW DUCTS WITHIN THE BUILDING WILL BE INTEGRATED WITH EXISTING DUCTS, WITH CALIBRATION OF THE RESULTING SYSTEM.

FIRE INSPECTION

1. FIRE DEPARTMENT TO PERFORM INSPECTION & APPROVAL OF FIRE ALARM AND FIRE SPRINKLERS

DRAWING INDEX

DWG. #	DESCRIPTION
GENERAL	
G001	COVER SHEET
G111	LIFE SAFETY PLAN
G212	ACCESSIBILITY REQUIREMENTS
ARCHITECTURAL	
A101	DEMOLITION FLOOR PLAN
A102	CEILING DEMOLITION PLAN
A201	NEW WORK PLAN
A202	NEW WORK PLAN - ELEV. COR.
A211	NEW WORK DIMENSION PLAN
A212	NEW WORK DIM. - ELEV. COR.
A241	ROOF PLAN
A242	PENTHOUSE PLAN
A243	ROOF SLAB PLAN
A251	REFLECTED CEILING PLAN
A252	RCP - ELEVATOR CORRIDOR
A501	INTERIOR ELEVATIONS
A502	INTERIOR ELEVATIONS
A503	INTERIOR ELEVATIONS
A504	INTERIOR ELEVATIONS
A710	DOOR & WINDOW SCHEDULES
A721	DOOR & WINDOW DETAILS
A811	EXTERIOR DETAILS
A812	EXTERIOR DETAILS
A813	EXTERIOR DETAILS
A901	INTERIOR DETAILS - FRAMING
A931	INTERIOR DETAILS - CEILING
A941	INTERIOR DETAILS - CASEWORK
INTERIORS	
ID200	FINISHES SCHEDULE
PLUMBING	
P001	LEGEND, SCHEDULES & NOTES
P003	EQUIPMENT SCHEDULES
P204	PLUMBING FIFTH FLR. PLAN
P205	PLUMBING ROOF PLAN
P501	DETAILS
MECHANICAL	
M001	LEGEND & NOTES
M002	SCHEDULES
M003	TITLE 24 COMPLIANCE
M004	TITLE 24 COMPLIANCE
M101	MECH. FIFTH FLR. DEMO. PLAN
M102	MECH. ROOF DEMO. PLAN
M201Z	MECH. GROUND FLR. ZONING
M201	MECH. GROUND FLR. PLAN
M202Z	MECH. FIRST FLR. ZONING
M202	MECH. FIRST FLR. PLAN
M203	MECH. SECOND FLR. PLAN
M204Z	MECH. FIFTH FLR. ZONING
M204	MECH. FIFTH FLR. PLAN
M205	MECH. ROOF PLAN
M401	RISER DIAGRAMS
M501	MECH. DETAILS
M502	MECH. DETAILS
M503	MECH. DETAILS
M504	MECH. DETAILS
M601	CONTROLS
M602	CONTROLS
M603	CONTROLS
ELECTRICAL	
E001	ELECTRICAL SYMBOLS LIST
E101	FIFTH FLR. DEMOLITION PLAN
E201	FIFTH FLR. LIGHTING PLAN
E202	FIFTH FLR. PWR. & SIGNAL PLAN
E203	FIFTH FLR. MECH. POWER PLAN
E204	ELECTRICAL ROOF PLAN
E301	SINGLE LINE DIAGRAM
E302	PANEL SCH. & MCC SPECS
E401	LIGHTING FIXTURE SCHEDULE
E402	DIST. LIGHTING CONTROLS
E501	TITLE 24 FORMS (INDOOR)
E502	TITLE 24 FORMS (INDOOR)
E503	TITLE 24 FORMS (POWER)
E601	DETAILS
E602	FIRE ALARM SYMBOLS LIST
T001	LOW VOLTAGE DETAILS

LICENSE STAMPS

LICENSED ARCHITECT — LYLE MATT — C 27504 — REN. 10/31/19 — STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

COVER SHEET

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

G001

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Plot Date: June 28, 2019 - 2:21 pm
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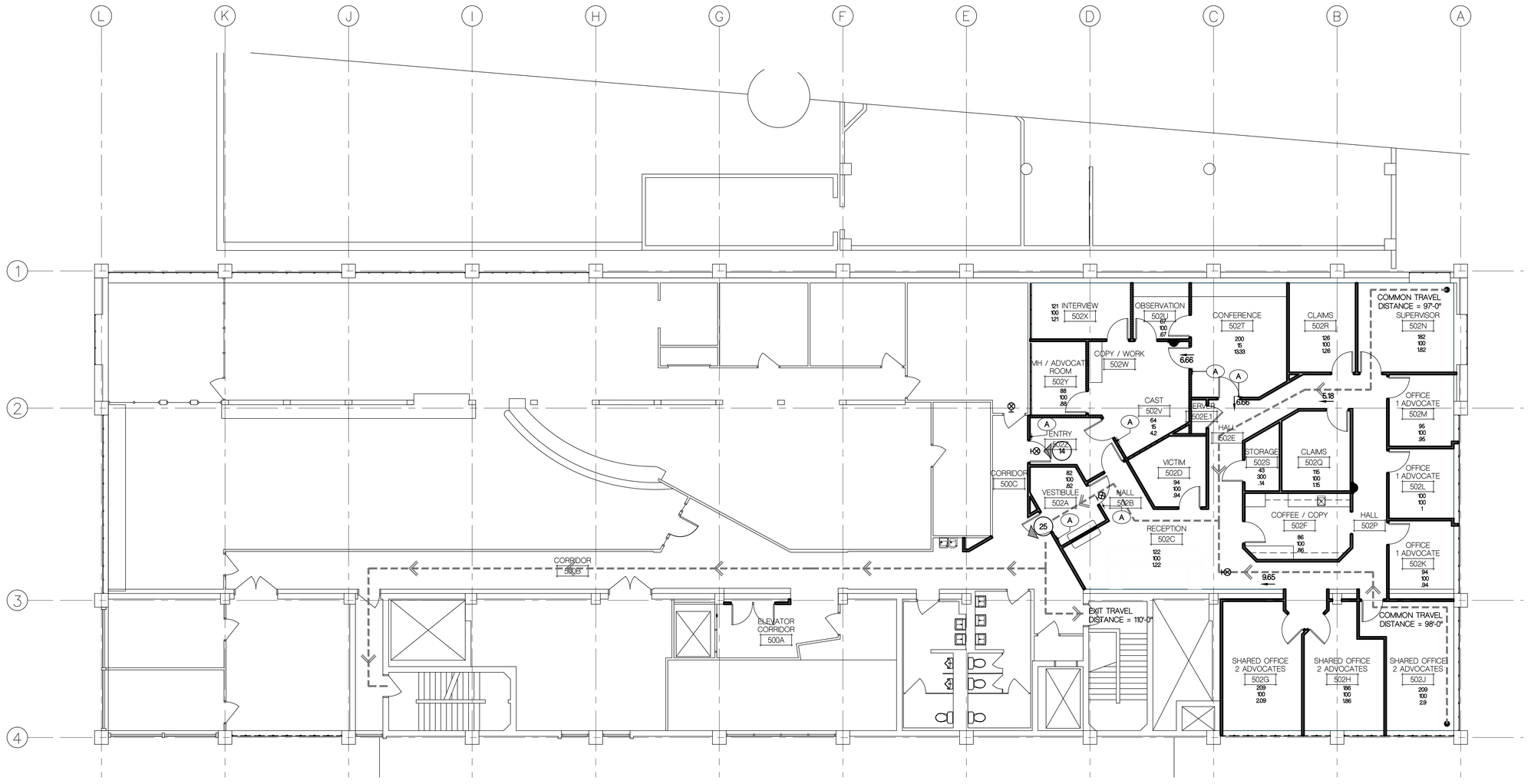

NORTH

LIFE SAFETY PLAN

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

0' 1' 4' 8' 16' 32'

PROJECT DATA

EXISTING BUILDING AREA:

BASEMENT	50,578 SQ FT
GROUND FLOOR	33,650 SQ FT
FIRST FLOOR	33,650 SQ FT
SECOND FLOOR	33,650 SQ FT
THIRD FLOOR	30,898 SQ FT
FOURTH FLOOR	14,280 SQ FT
FIFTH FLOOR	14,280 SQ FT
PENTHOUSE	1,944 SQ FT
	212,928 SQ FT

AREA SUITE 502:

3,400 SQ FT

OCCUPANCY GROUP CLASSIFICATIONS :

BUSINESS: B

CONSTRUCTION TYPE:

TYPE II, FULLY SPRINKLERED

PROJECT AREA:

3,398 SQ FT

EXIT CALC.: CBC 1006.2.1

39 PEOPLE < 50
ONE EXIT REQUIRED FROM SUITE

LEGEND

ROOM DATA
726 = AREA OF ROOM SQUARE FOOTAGE
100 = OCCUPANT LOAD FACTOR
7.26 = OCCUPANTS IN ROOM

= EXIT

(25) = COMBINED OCCUPANT LOAD WITH ADJOINING ROOMS EXITING THROUGH 1 ADJACENT SPACE.

(3)← = LOCAL OCCUPANT LOAD THROUGH DOOR/CORRIDOR

= FIRE EXTINGUISHER, 2A-10B:C RATING U.N.O.

= ILLUMINATED DIRECTIONAL SIGN

(A) = EXIT ROUTE SIGN

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KYLE MATT
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STATE OF CALIFORNIA

PROJECT NAME

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VICTIM / WITNESS & CAST

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825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

LIFE SAFETY PLAN

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

G111

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Plot Date: June 28, 2019 - 2:22 pm
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VICTIM / WITNESS & CAST

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825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

ACCESSIBILITY REQUIREMENTS

DRAWING STATUS

CONSTRUCTION DOCUMENTS

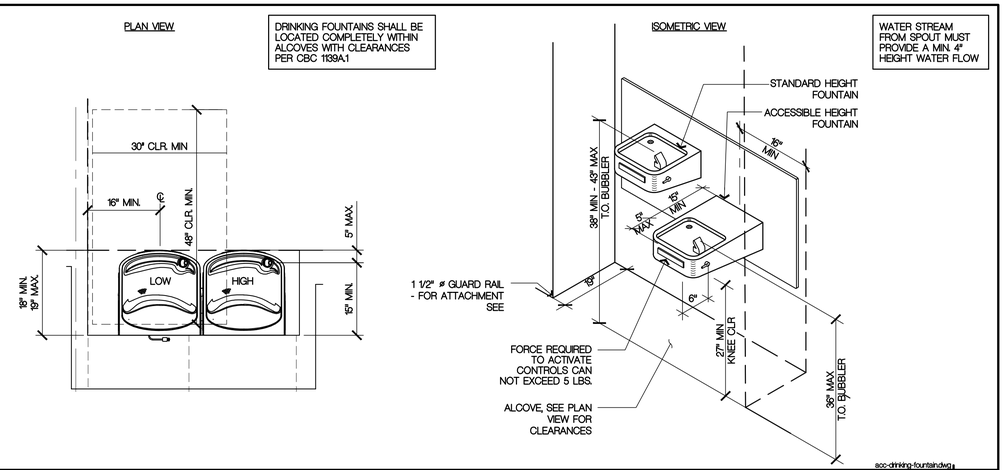
REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

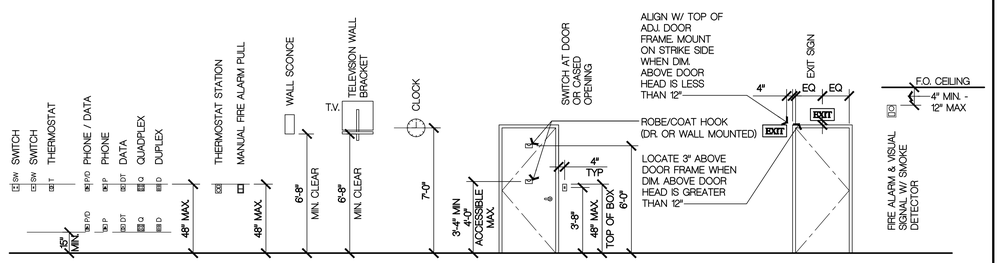
SHEET No.

G212



ACCESSIBLE DRINKING FOUNTAIN

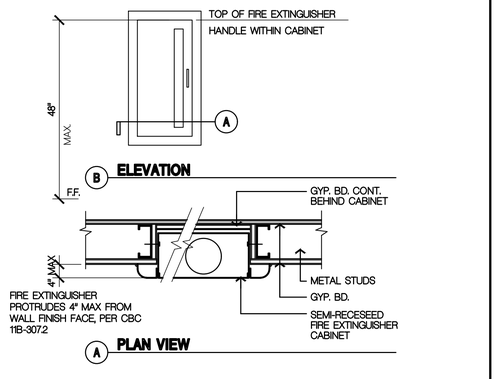
SCALE: 3/4"=1'-0" (1)



18-5778 G212

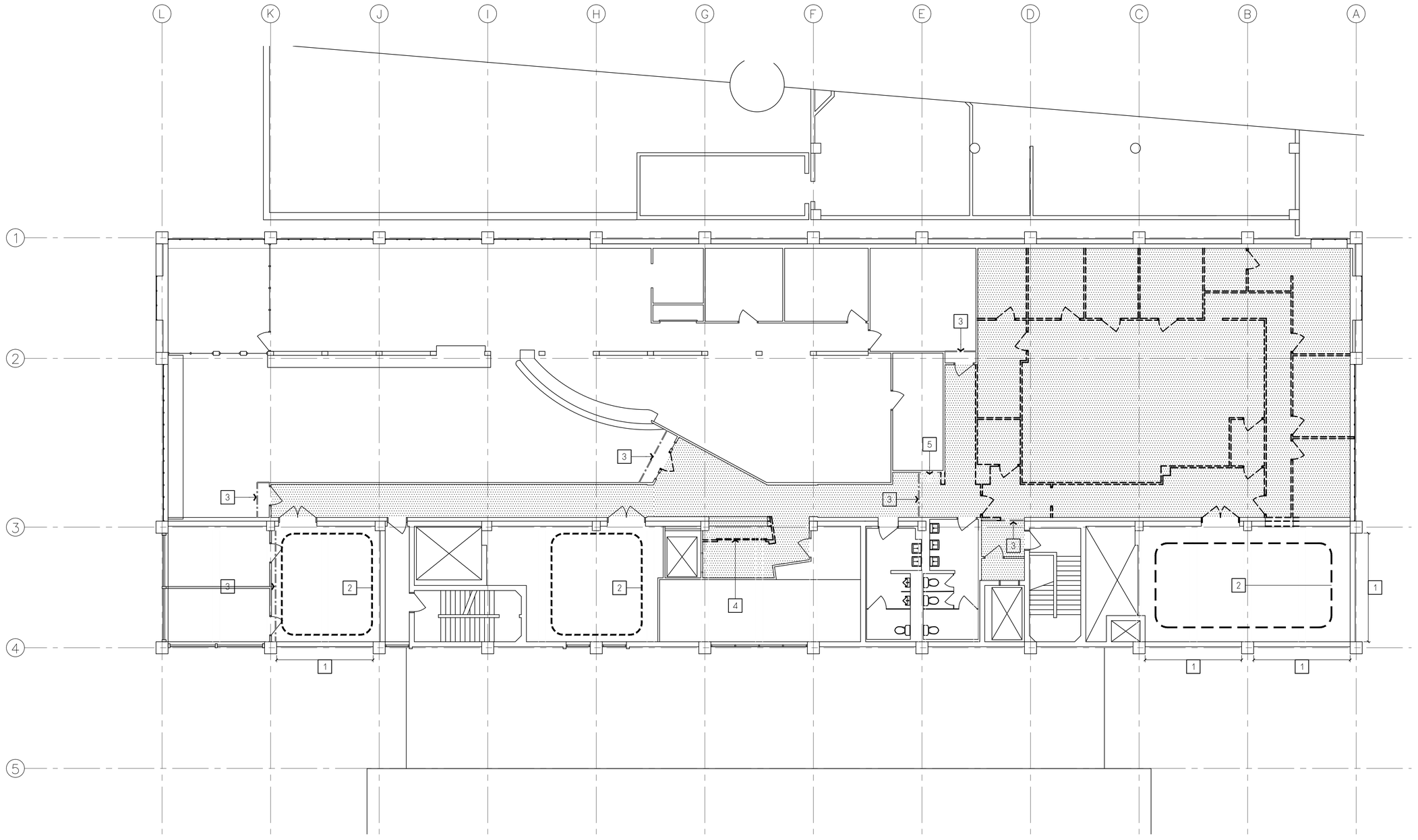
ELECTRICAL DEVICES MOUNTING HEIGHTS AND CLEARANCES

SCALE: 1/4"=1'-0" (2)



SEMI-RECESSED FIRE EXTINGUISHER CABINET

SCALE: 1-1/2" = 1'-0" (3)



DEMOLITION PLAN

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

0' 1' 4' 8' 16' 32'

LEGEND

(ALL ITEMS ARE EXISTING, UNLESS NOTED (N) OR NEW)

- WALLS TO BE REMOVED
- INTERIOR PARTITION WALL
- CONCRETE WALL
- WINDOWS TO REMAIN
- (E) CONCRETE COLUMN
- REMOVE FLOORING
- DOORS TO BE REMOVED
- DOORS TO REMAIN

GENERAL NOTES

A. FIELD-VERIFY EXISTING CONSTRUCTION DEPICTED IN THESE DRAWINGS AS IT IS UNCOVERED DURING CONSTRUCTION. NOTIFY THE COUNTY AND ARCHITECT PROMPTLY IF EXISTING CONDITIONS ARE NOT AS INDICATED.

B. COORDINATE DEMOLITION WORK OF ALL DISCIPLINES WITH LOCATIONS AND DIMENSIONS OF NEW CONSTRUCTION INDICATED IN THESE DRAWINGS. PRIOR TO COMMENCING ANY DEMOLITION WORK, COORDINATE WITH APPROVED SHOP DRAWINGS AND MANUFACTURER'S DATA FOR NEW SYSTEMS, EQUIPMENT, FEATURES OF CONSTRUCTION AND TEMPORARY AND FINAL CONDITIONS AS INDICATED IN THESE DOCUMENTS.

C. DEMOLITION AND REMOVAL OF EXISTING CONSTRUCTION, FIXTURES, EQUIPMENT, AND FINISHES SHALL BE PERFORMED IN A NEAT, WORKMANLIKE MANNER, WITH CLEAN, STRAIGHT EDGES SUITABLE TO ACCOMMODATE NEW CONSTRUCTION, WHERE APPLICABLE.

D. ALL EXISTING CONSTRUCTION, FIXTURES, EQUIPMENT AND FINISHES TO REMAIN SHALL BE PROTECTED FROM DAMAGE DURING DEMOLITION AND NEW CONSTRUCTION.

E. AT WALLS TO BE REMOVED UNDER THIS CONTRACT, WORK SHALL INCLUDE REMOVAL AND CAPPING OFF OF ALL MECHANICAL, PLUMBING, ELECTRICAL AND RELATED PIPING, FIXTURES, CONDUIT, CABLING AND ALL OTHER EQUIPMENT WITHIN WALLS.

SHEET NOTES

(ALL ITEMS ARE EXISTING, UNLESS NOTED (N) OR NEW)

1. REMOVE LOUVERS, COMPLETE
2. REMOVE MECHANICAL EQUIPMENT AND DUCTING, SEE M101 FOR MORE INFORMATION
3. TEMPORARY BARRIER FOR DUST CONTAINMENT, SEE A200 PHASING FOR COORDINATION
4. REMOVE FRAMED WALLS AND ELECTRICAL EQUIPMENT IN ELEVATOR LOBBY
5. REMOVE AND RELOCATE DRINKING FOUNTAIN

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C 27504
REN. 10/31/19
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

DEMOLITION PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/8" = 1'-0"
Job No.	18-6452

SHEET No.

A101

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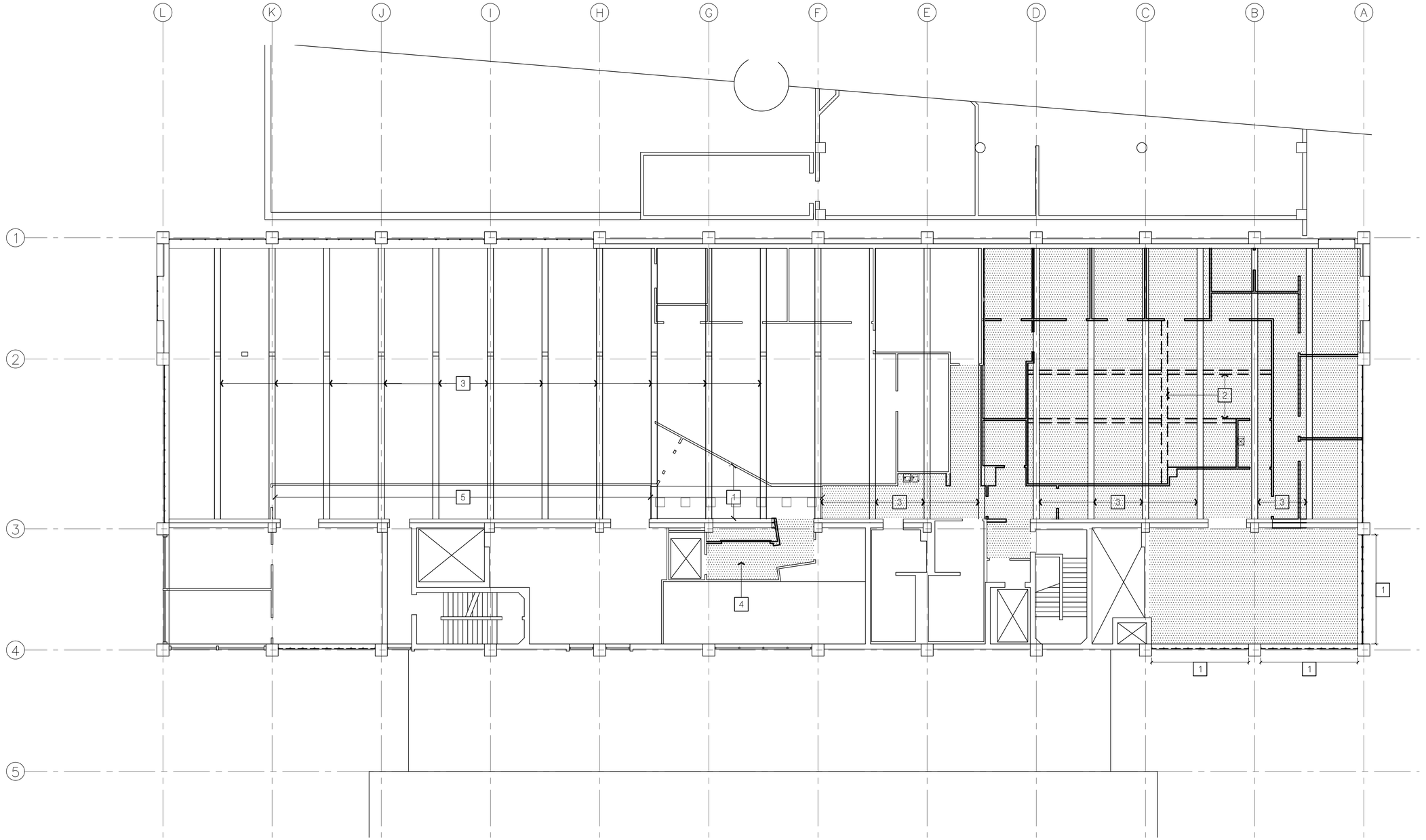

CEILING DEMOLITION PLAN

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

0' 1' 4' 8' 16' 32'

LEGEND

(ALL ITEMS ARE EXISTING, UNLESS NOTED (N) OR NEW)

- REMOVE WALLS
- (E) INTERIOR PARTITION WALL
- (E) CONCRETE WALL
- REMOVE SOFFIT
- (E) CONCRETE COLUMN
- REMOVE CEILING

GENERAL NOTES

A. FIELD-VERIFY EXISTING CONSTRUCTION DEPICTED IN THESE DRAWINGS AS IT IS UNCOVERED DURING CONSTRUCTION. NOTIFY THE COUNTY AND ARCHITECT PROMPTLY IF EXISTING CONDITIONS ARE NOT AS INDICATED.

B. COORDINATE DEMOLITION WORK OF ALL DISCIPLINES WITH LOCATIONS AND DIMENSIONS OF NEW CONSTRUCTION INDICATED IN THESE DRAWINGS. PRIOR TO COMMENCING ANY DEMOLITION WORK, COORDINATE WITH APPROVED SHOP DRAWINGS AND MANUFACTURER'S DATA FOR NEW SYSTEMS, EQUIPMENT, FEATURES OF CONSTRUCTION AND TEMPORARY AND FINAL CONDITIONS AS INDICATED IN THESE DOCUMENTS.

C. DEMOLITION AND REMOVAL OF EXISTING CONSTRUCTION, FIXTURES, EQUIPMENT, AND FINISHES SHALL BE PERFORMED IN A NEAT, WORKMANLIKE MANNER, WITH CLEAN, STRAIGHT EDGES SUITABLE TO ACCOMMODATE NEW CONSTRUCTION, WHERE APPLICABLE.

D. ALL EXISTING CONSTRUCTION, FIXTURES, EQUIPMENT AND FINISHES TO REMAIN SHALL BE PROTECTED FROM DAMAGE DURING DEMOLITION AND NEW CONSTRUCTION.

E. AT WALLS TO BE REMOVED UNDER THIS CONTRACT, WORK SHALL INCLUDE REMOVAL AND CAPPING OFF OF ALL MECHANICAL, PLUMBING, ELECTRICAL AND RELATED PIPING, FIXTURES, CONDUIT, CABLING AND ALL OTHER EQUIPMENT WITHIN WALLS.

SHEET NOTES

(ALL ITEMS ARE EXISTING, UNLESS NOTED (N) OR NEW)

1. (E) ARCHED GYP BOARD CEILING TO REMAIN.
2. REMOVE (E) SOFFIT
3. STRUCTURAL JOISTS WRAPPED IN GYP. BD. TO REMAIN
4. REMOVE SUSPENDED CEILING AND SOFFIT, COMPLETE
5. (E) SUSPENDED CEILING TO REMAIN.

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VICTIM / WITNESS & CAST

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825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

CEILING DEMOLITION PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/8" = 1'-0"
Job No.	18-6452

SHEET No.

A102

Login Name: Charles3
Plot Date: June 28, 2019 - 2:28 pm
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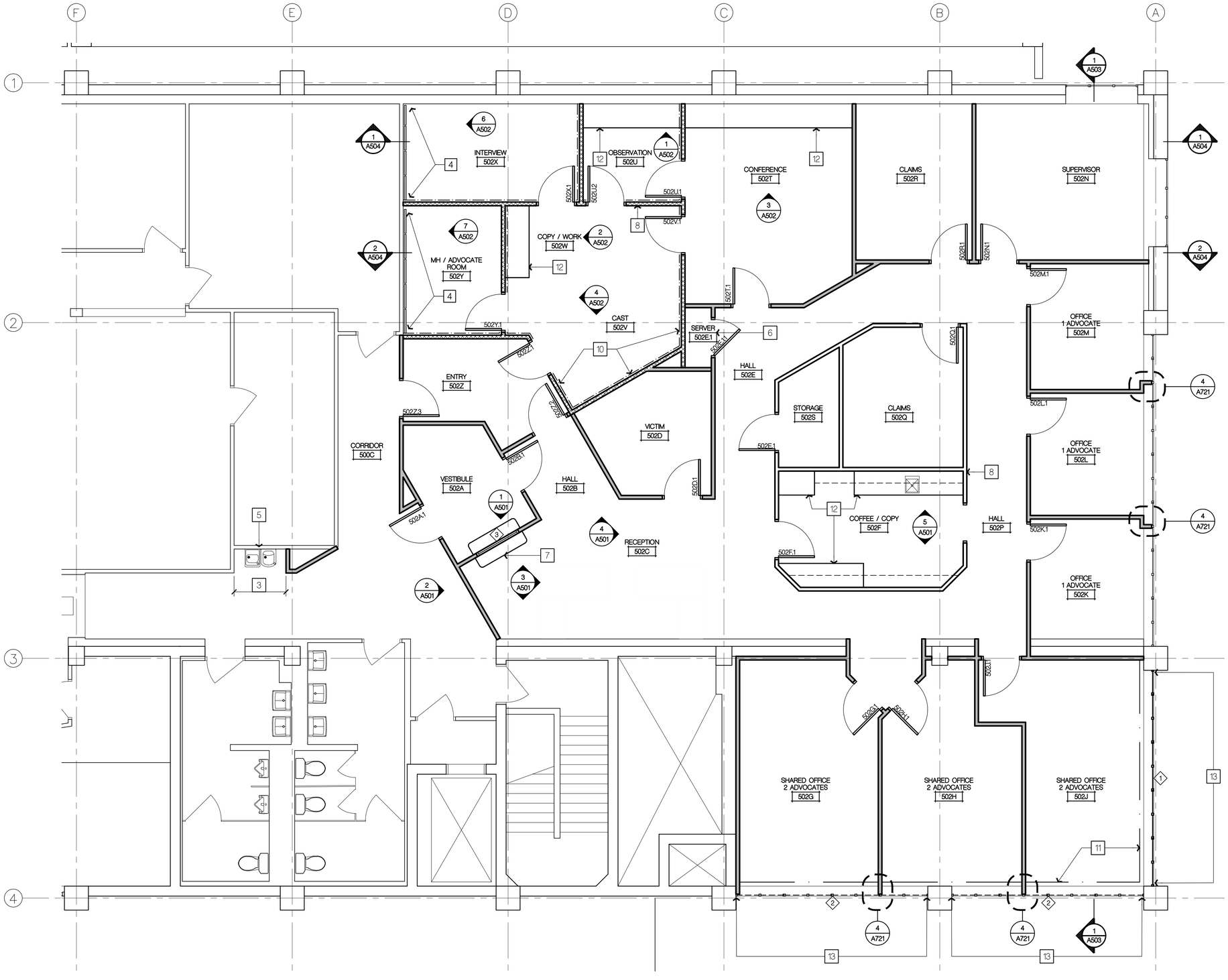

NEW WORK PLAN

SCALE: 1/4" = 1'-0"

0' 6" 2' 4' 8' 16'

FLOOR PLAN SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. REFER TO A501 & A502 FOR INTERIOR ELEVATIONS
2. REFER TO ID200 FOR ROOM FINISHES
3. DRINKING FOUNTAIN
   REFER TO A211 FOR DIMENSION PLAN
   REFER TO 1/G212 FOR ACCESSIBILITY
4. FABRIC WRAPPED ACOUSTIC WALL PANELS (SEE 6/A502)
5. NEW LOCATION OF (E) DRINKING FOUNTAIN INSTALL PER 1/G212
6. OWNER FURNISHED AND INSTALLED FIBER OPTIC CABLE AND SWITCH; CONTRACTOR INSTALL/TEST CABLING (SEE E202, T001)
7. TRANSACTION WINDOW W/ SOLID SURFACE COUNTER (SEE 6/A941)
8. FIRE EXTINGUISHER (SEE 3/G212)
9. (N) ELEVATOR MOTOR CONTROL PANEL
10. RESILIENT CHANNELS AT STUD WALLS
11. FURRING @ FACE OF CONCRETE WALLS @ ROOMS 502G, 502H, 502J
12. CASEWORK, SEE INTERIOR ELEVATIONS
13. PREP HEAD, SILL, AND JAM FOR NEW WINDOW

GENERAL NOTES

1. PATCH, REPAIR, REFINISH EXISTING WALLS TO MATCH NEW ADJACENT CONSTRUCTION.

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- 3-5/8" METAL STUD 362S162-33 @ 16" O.C.; FULL HEIGHT PARTITION W/ GYP BD BOTH SIDES, 6" ABOVE FINISHED CEILING (SEE 2&3/A901)
- 3-5/8" METAL STUD 362S162-33 @ 16" O.C.; FULL HEIGHT PARTITION W/ GYP BD BOTH SIDES TO UNDERSIDE OF STRUCTURE (SEE 2&4/A901)
- 3-5/8" METAL STUD 362S162-33 @ 16" O.C. W/ RESILIENT CHANNELS; FULL HEIGHT PARTITION W/ GYP BD BOTH SIDES TO UNDERSIDE OF STRUCTURE, U.N.O. (SEE 12/A901)
- ALUMINUM WINDOWS TO MATCH EXISTING (SEE A710 FOR SCHEDULE & 7-10/A721 FOR DETAILS)
- HOLLOW METAL DOOR & FRAME (SEE A710 FOR SCHEDULE & A721 FOR DETAILS) — 502X1
- EXISTING INTERIOR PARTITION WALL
- EXISTING CONCRETE COLUMN
- EXISTING CONCRETE WALL
- EXISTING WINDOWS
- EXISTING DOOR

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LICENSED ARCHITECT — KYLE MATT — C 27504 — REN. 10/31/19 — STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

NEW WORK PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

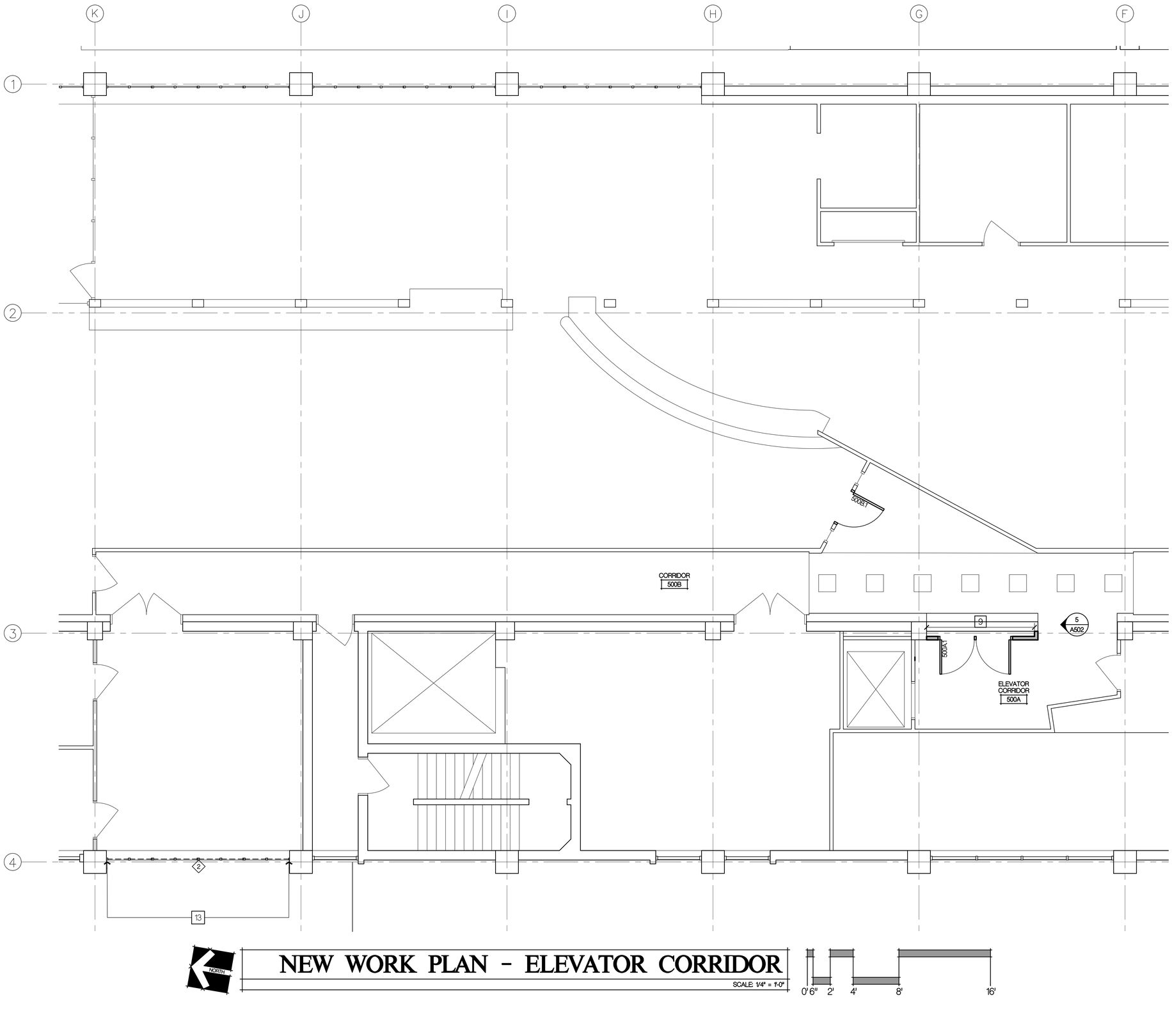
Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.

A201

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:23 pm
File Name: x:\Projects\2018\18-6452 Humboldt Co. 5th Flr Courthouse\Drawings\HC-CH-5th_FL05-FLAN.dwg
XREFS: x-HC-CH-5th_FLR1 | x-HC-CH-5th_TB | x-HC-CH-5th_GRID | x-HC-CH-5th_FL05-RCP



NEW WORK PLAN - ELEVATOR CORRIDOR

SCALE: 1/4" = 1'-0"

0' 6" 2' 4' 8' 16'

FLOOR PLAN SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. REFER TO A501 & A502 FOR INTERIOR ELEVATIONS
2. REFER TO ID200 FOR ROOM FINISHES
3. DRINKING FOUNTAIN
   REFER TO A211 FOR DIMENSION PLAN
   REFER TO 1/G212 FOR ACCESSIBILITY
4. FABRIC WRAPPED ACOUSTIC WALL PANELS (SEE 6/A502)
5. NEW LOCATION OF (E) DRINKING FOUNTAIN INSTALL PER 1/G212
6. OWNER FURNISHED AND INSTALLED FIBER OPTIC CABLE AND SWITCH; CONTRACTOR INSTALL/TEST CABLING (SEE E202, T001)
7. TRANSACTION WINDOW W/ SOLID SURFACE COUNTER (SEE 6/A941)
8. FIRE EXTINGUISHER (SEE 3/G212)
9. (N) ELEVATOR MOTOR CONTROL PANEL
10. RESILIENT CHANNELS AT STUD WALLS
11. FURRING @ FACE OF CONCRETE WALLS @ ROOMS 502G, 502H, 502J
12. CASEWORK, SEE INTERIOR ELEVATIONS
13. PREP HEAD, SILL, AND JAM FOR NEW WINDOW

GENERAL NOTES

1. PATCH, REPAIR, REFINISH EXISTING WALLS TO MATCH NEW ADJACENT CONSTRUCTION.

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- 3-5/8" METAL STUD 362S162-33 @ 16" O.C.; FULL HEIGHT PARTITION W/ GYP BD BOTH SIDES, 6" ABOVE FINISHED CEILING (SEE 2&3/A901)
- 3-5/8" METAL STUD 362S162-33 @ 16" O.C.; FULL HEIGHT PARTITION W/ GYP BD BOTH SIDES TO UNDERSIDE OF STRUCTURE (SEE 2&4/A901)
- 3-5/8" METAL STUD 362S162-33 @ 16" O.C. W/ RESILIENT CHANNELS; FULL HEIGHT PARTITION W/ GYP BD BOTH SIDES TO UNDERSIDE OF STRUCTURE, U.N.O. (SEE 12/A901)
- ALUMINUM WINDOWS TO MATCH EXISTING (SEE A710 FOR SCHEDULE & 7-10/A721 FOR DETAILS)
- HOLLOW METAL DOOR & FRAME (SEE A710 FOR SCHEDULE & A721 FOR DETAILS) — 502X1
- EXISTING INTERIOR PARTITION WALL
- EXISTING CONCRETE COLUMN
- EXISTING CONCRETE WALL
- EXISTING WINDOWS
- EXISTING DOOR

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LICENSE STAMPS

LICENSED ARCHITECT — KYLE MATTY — C 27504 — REN. 10/31/19 — STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

NEW WORK PLAN ELEVATOR CORRIDOR

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

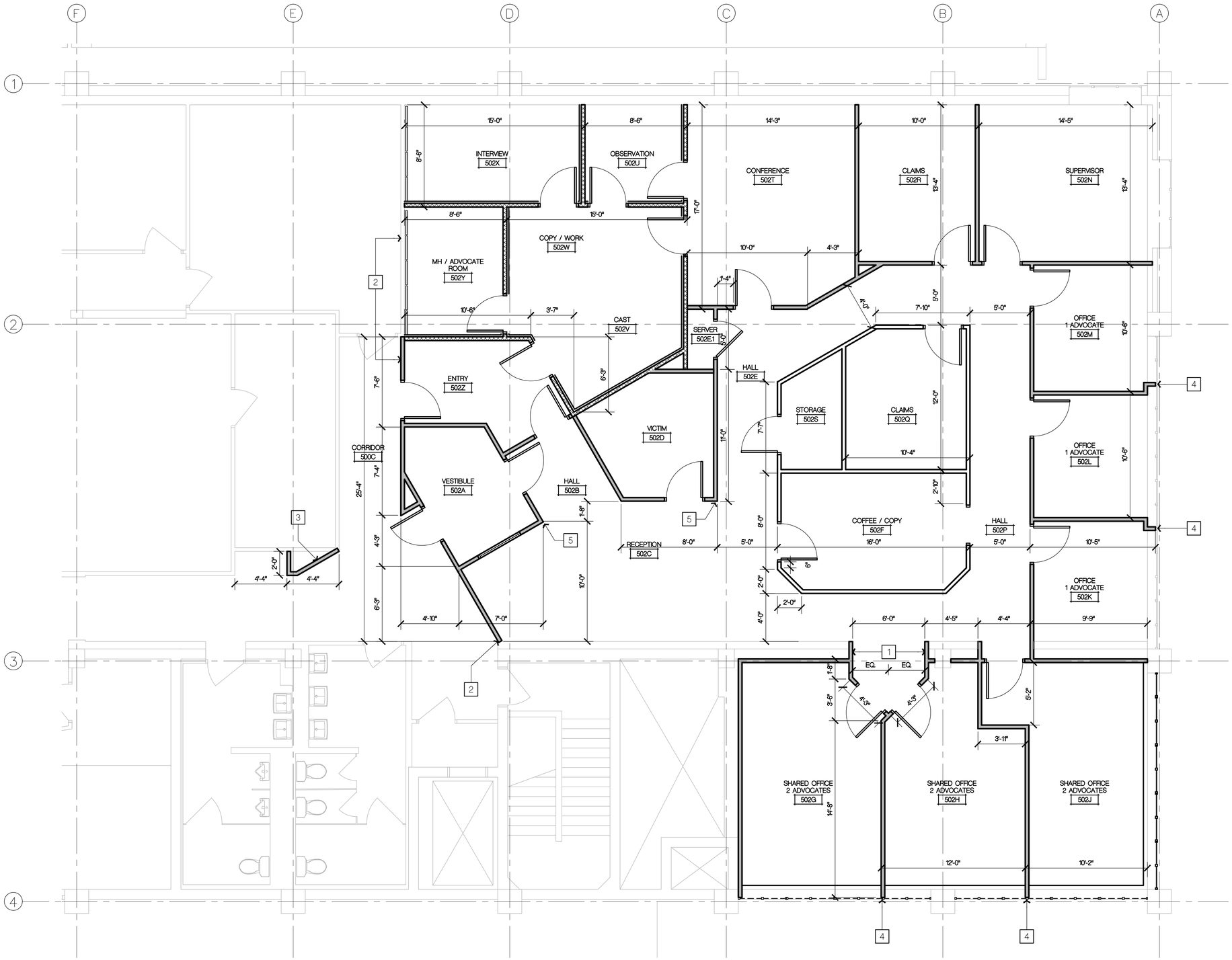
Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.

A202

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:01 pm
File Name: J:\Projects\2018\18-6452 Humboldt Co. 5th Flr. Courthouse\Drawings\HC-CH-5th_FLR\S-FLAN.dwg
XREFS: x-HC-CH-5th_FLR | x-HC-CH-5th_TB | x-HC-CH-5th_GRID | x-HC-CH-5th_FLR-RCP



NEW WORK DIMENSION PLAN

SCALE: 1/4" = 1'-0"

0' 6" 2' 4' 8' 16'

GENERAL NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

A. ALL DIMENSIONS TO FACE OF FRAMING U.N.O

B. STRUCTURAL GRID TO CENTER OF CONCRETE COLUMNS, TYP.

DIMENSION PLAN SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. FRAMING FLUSH WITH EXISTING WALL
2. ALIGN WITH EXISTING WALL
3. ALIGN FRAMING WITH NEW WALL BEHIND LOBBY ENTRY DOOR
4. ALIGN WALLS WITH WINDOW MULLIONS (SEE 8/A720
5. ALIGN WALLS & SOFFITS AT CORNERS (SEE A251 FOR CEILING DIMENSIONS)

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LICENSE STAMPS

LICENSED ARCHITECT
KYLE MATT
C 27504
REN. 10/31/19
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
NEW WORK DIMENSION PLAN

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

A211

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:58 pm
File Name: J:\Projects\2018\18-6452 Humboldt Co. 5th Flr. Courthouse\Drawings\HC-CH-5th_FLR5-DM.dwg
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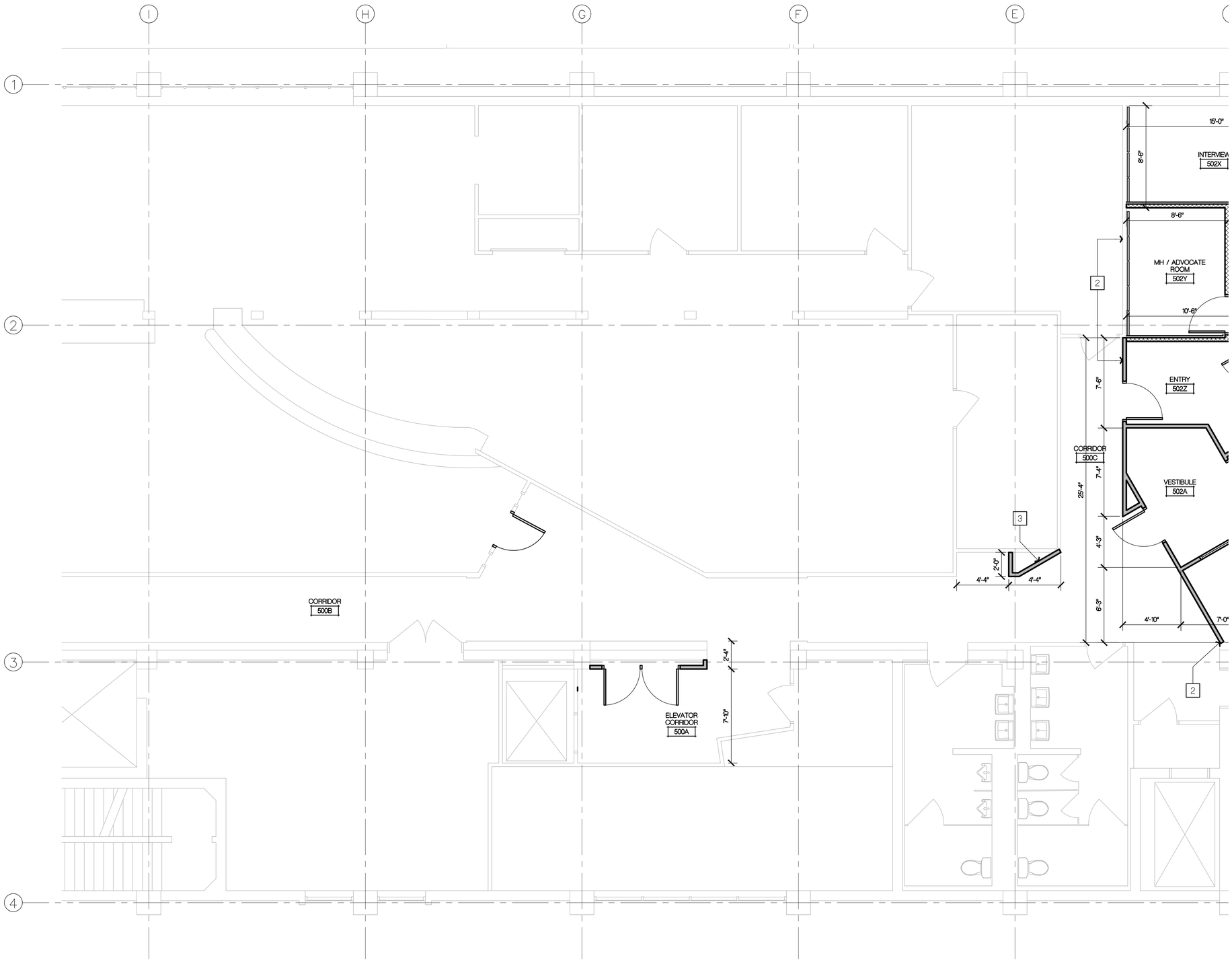

NEW WORK DIMENSION PLAN - ELEVATOR CORRIDOR

SCALE: 1/4" = 1'-0"

0' 6" 2' 4' 8' 16'

GENERAL NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

A. ALL DIMENSIONS TO FACE OF FRAMING U.N.O

B. STRUCTURAL GRID TO CENTER OF CONCRETE COLUMNS, TYP.

DIMENSION PLAN SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. FRAMING FLUSH WITH EXISTING WALL
2. ALIGN WITH EXISTING WALL
3. ALIGN FRAMING WITH NEW WALL BEHIND LOBBY ENTRY DOOR
4. ALIGN WALLS WITH WINDOW MULLIONS (SEE 8/A721)
5. ALIGN WALLS & SOFFITS AT CORNERS (SEE A251 FOR CEILING DIMENSIONS)

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STATE OF CALIFORNIA

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VICTIM / WITNESS & CAST

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825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

NEW WORK DIMENSION PLAN ELEVATOR CORRIDOR

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

A212

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:54 pm
File Name: x:\HC-CH-5th_TB\18-6452 Humboldt Co. 5th Fl. Courthouse\Drawings\HC-CH-5th_FLR5-DMN.dwg
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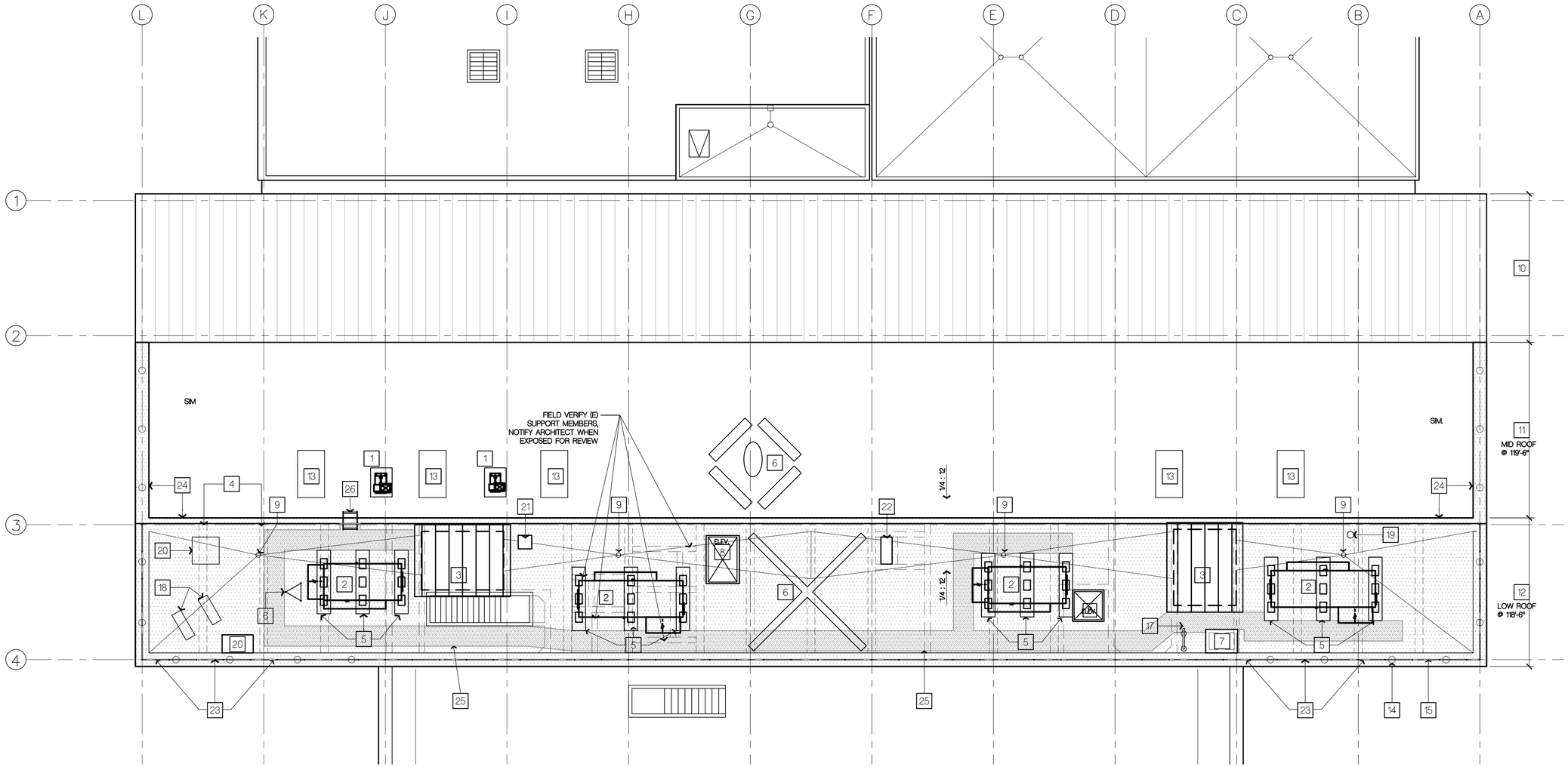

ROOF PLAN

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

0' 1' 4' 8' 16' 32'

GENERAL NOTES

1. ROOF SLOPE TO FOLLOW EXISTING SLOPE OF CONCRETE ROOF SLAB ON AREA OF NEW PVC ROOFING. ROOFING MATERIAL AND SLOPE ON MIDDLE ROOF TO REMAIN.
2. CONTRACTOR TO PROTECT AND PRESERVE EXISTING ROOFING MATERIALS AND EXISTING EQUIPMENT THAT ARE TO REMAIN IN PLACE. REMOVE AND REINSTALL ALL EQUIPMENT NECESSARY TO INSTALL THE ROOFING SYSTEM
3. PROVIDE FLASHING AND ROOF ACCESSORIES AT ALL NEW AND EXISTING EQUIPMENT AND PENETRATIONS
4. REFER TO SPEC SECTION 03 94 00 CONCRETE CRACK REPAIR. ANTICIPATE THE REPAIR OF 100 LINEAR FEET OF TYPE 1 CRACKS AND 100 LINEAR FEET OF TYPE 2 CRACKS.
5. CABLING AND WAVEGUIDE PATHWAYS ARE EXTREMELY IMPORTANT ON THE ROOF AREA. SERVICE TO THE TOWERS MUST BE MAINTAINED DURING CONSTRUCTION

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- PVC ROOFING SYSTEM (SEE 12/A813) SEE GENERAL NOTE 4
- STANDING SEAM METAL ROOFING
- (E) METAL RAILING (TO REMAIN)

ROOF PLAN SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. EXHAUST FAN
2. (N) MECHANICAL UNIT
3. MECHANICAL ENCLOSURE @ (E) CHASE (SEE 12/A811 & A812 & A813)
4. (E) CONCRETE BEAM
5. CONCRETE CURB (SEE 2&3/A811)
6. (E) VERIZON COMMUNICATIONS TOWER
7. BOILER VENT, INSTALL ALUMINUM EXPANDED METAL SCREEN
8. ELEVATOR SHAFT, INSTALL LOUVERED 5x5 PENTHOUSE GRAVITY VENT
9. CHIP OUT EXISTING ROOF DRAIN. INSTALL NEW ROOF DRAIN, SEE 1/A811
10. (E) METAL HIGH ROOF TO REMAIN
11. MID ROOF, (E) TORCH DOWN ROOFING OVER METAL DECK AND SLAB (TO REMAIN)
12. LOW ROOF, FULLY ADHERED PVC ROOFING OVER CONCRETE SLAB
13. EXISTING MECHANICAL UNIT TO REMAIN
14. OPENING IN CONC PARAPET FOR LIGHTING FIXTURE
15. EXISTING PARAPET RAILING
16. NOT USED
17. (E) PIPES TO REMAIN
18. (E) MINI SPLIT TO REMAIN, REMOVE AND REINSTALL
19. (E) VENT PIPE
20. (E) EQUIPMENT TELECOM EQUIPMENT TO REMAIN
21. (E) GRAVITY VENT, REMOVE AND REINSTALL
22. (E) DUCT SHAFT
23. (E) METAL RAILING
24. REMOVE AND REPLACE COPING AT MID ROOF PERIMETER
25. WALKING PADS (SEE 10/A811)
26. ACCESS LADDER (SEE 12/A811)

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PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

ROOF PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

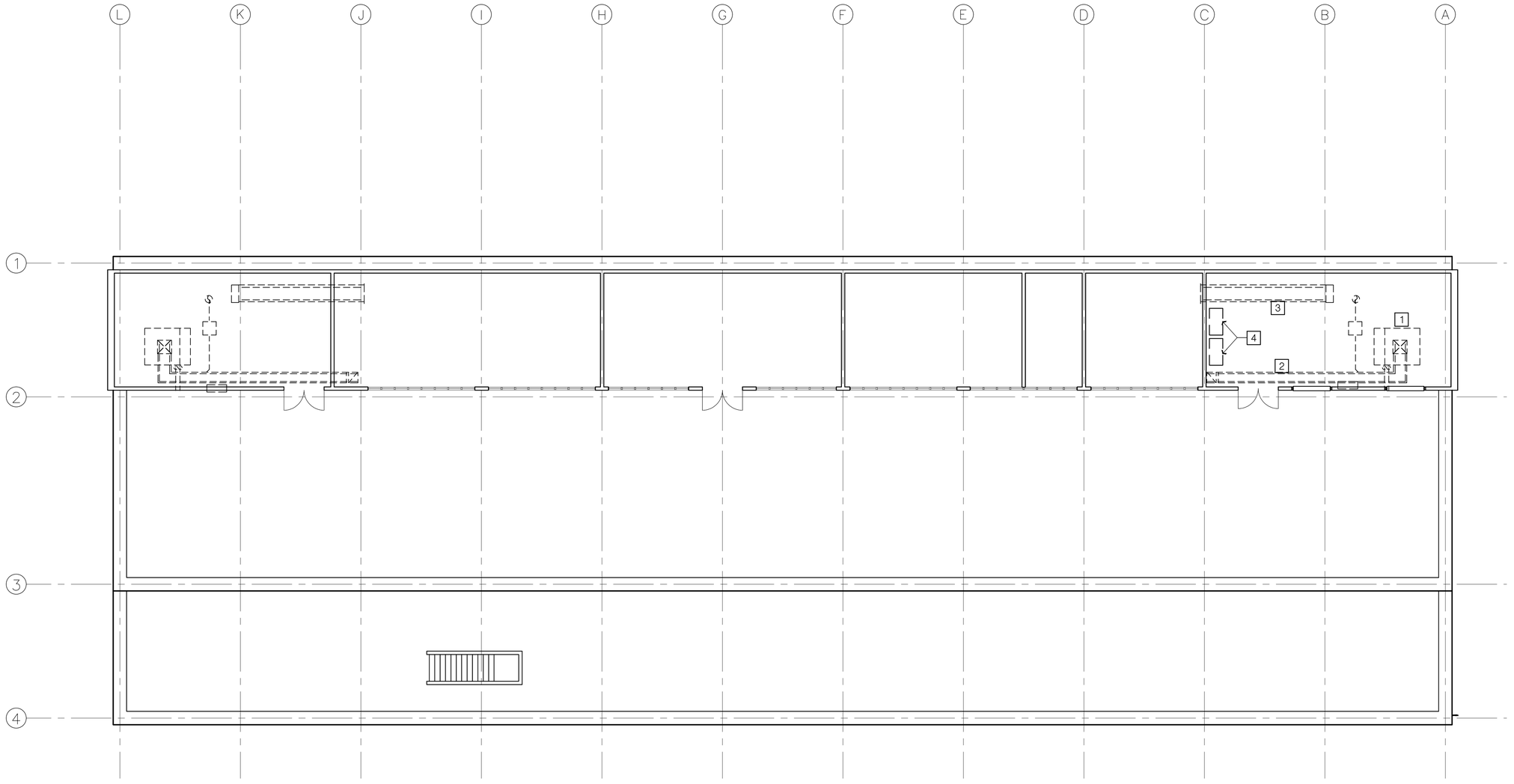
Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

A241

Login Name: CharlesS
Plot Date: JUN 28, 2019 - 2:56 pm
File Name: K:\Projects\2018\18-6452-Humboldt Co. 5th Flr Courthouse\Drawings\HC-CH-5th_FL\R6-ROOF.dwg
XREFS: x-HC-CH-5th_TB | x-HC-CH-5th_Roof | x-HC-CH-5th_GRID



PENTHOUSE PLAN

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

0' 1' 4' 8' 16' 32'

PENTHOUSE SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. EXISTING AIR HANDLER
2. EXISTING SUPPLY AIR
3. EXISTING RETURN AIR
4. MOTOR CONTROL CENTER, SEE ELECTRICAL DRAWINGS

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STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY
DISTRICT ATTORNEY
REMODEL FOR

VICTIM /
WITNESS
& CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

PENTHOUSE PLAN

DRAWING STATUS

CONSTRUCTION
DOCUMENTS

REVISIONS

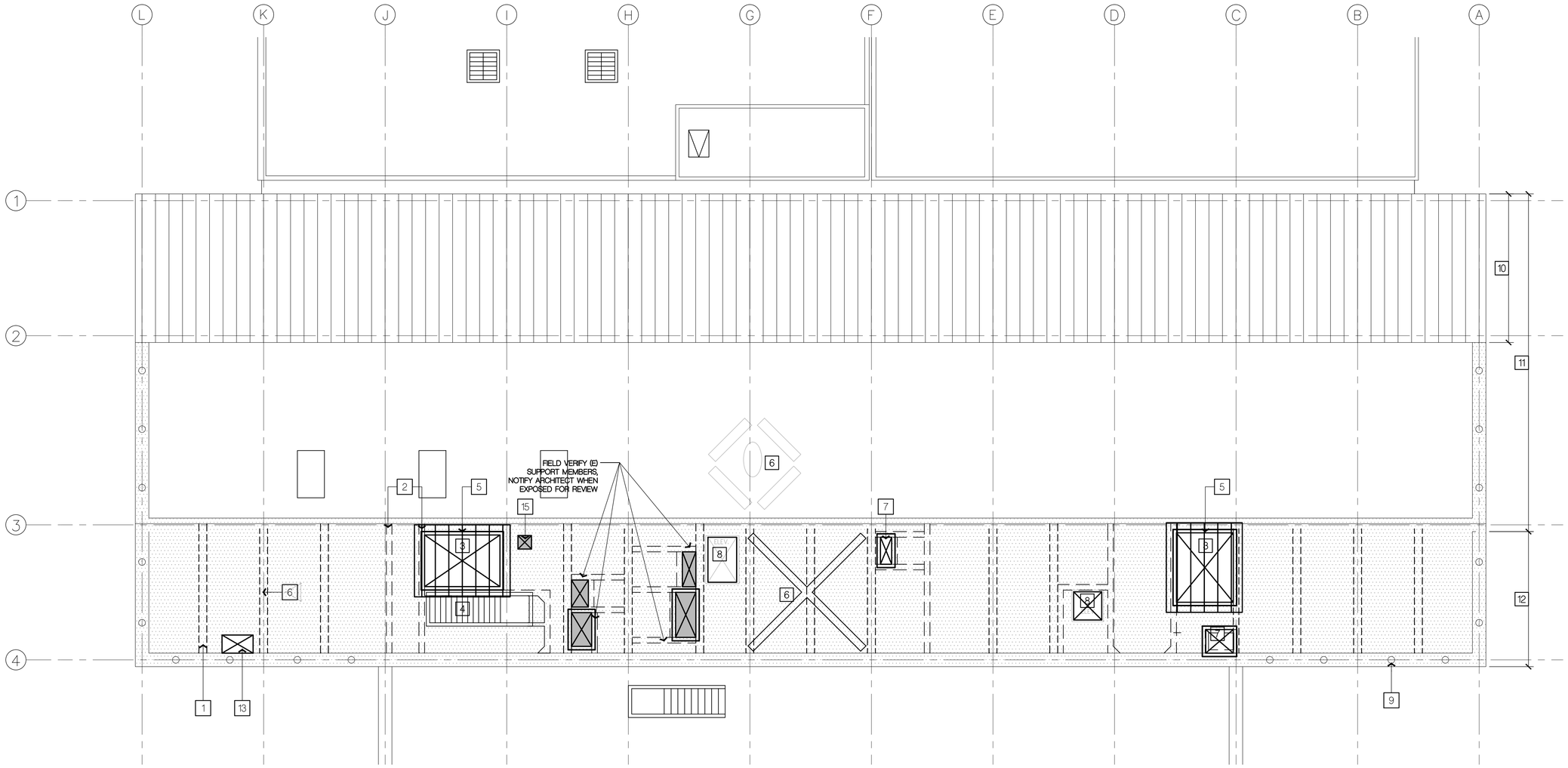
Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.

A242

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:07 pm
File Name: W:\Active Jobs\2018\18-6452 Humboldt Co. 5th Flr. Courthouse\Drawings\HC-CH-5th_FLR6-RENT.dwg
XREFS: x-HC-CH-5th_TB | x-HC-CH-5th_Penthouse | x-HC-CH-5th_GRID | x-HC-CH-5th_MECH-RENT | x-HC-CH-5th_TITLEBLOCK | x-HC-CH-5th_FLR6-RENT



ROOF SLAB PLAN

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

0' 1' 4' 8' 16' 32'

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- NEW ROOF
- INFILL EXISTING OPENING IN CONC ROOF (SEE 5 & 10/A811)
- (E) CONC BEAM, 14" TYP (BELOW)
- (E) CONC WALL, 10" TYP (BELOW)

ROOF PLAN SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. (E) CONCRETE BEAM
2. (E) CONC WALL BELOW (10" TYP)
3. (E) MECHANICAL CHASE W/ ENCLOSURE, (SEE 5/A811)
4. (E) CONCRETE STAIRS
5. CONC CURB @ EXISTING ROOF OPENING
6. (E) COMMUNICATIONS TOWER
7. VENT SHAFT TO REMAIN
8. ELEVATOR SHAFT
9. OPENING IN CONC PARAPET FOR LIGHTING FIXTURE, (SEE 7/A811)
10. HIGH ROOF, METAL
11. MID ROOF, BUILT-UP ROOFING OVER METAL DECK AND TOPPING SLAB
12. LOW ROOF, BUILT-UP ROOFING OVER CONCRETE SLAB WITH CONCRETE BEAMS
13. (E) VENT TO FAN ROOM
14. (E) EQUIPMENT TO REMAIN
15. (E) DUCT SHAFT

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LICENSE STAMPS

LICENSED ARCHITECT
KYLE MATT
C 27504
REN. 10/31/19
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

ROOF SLAB PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

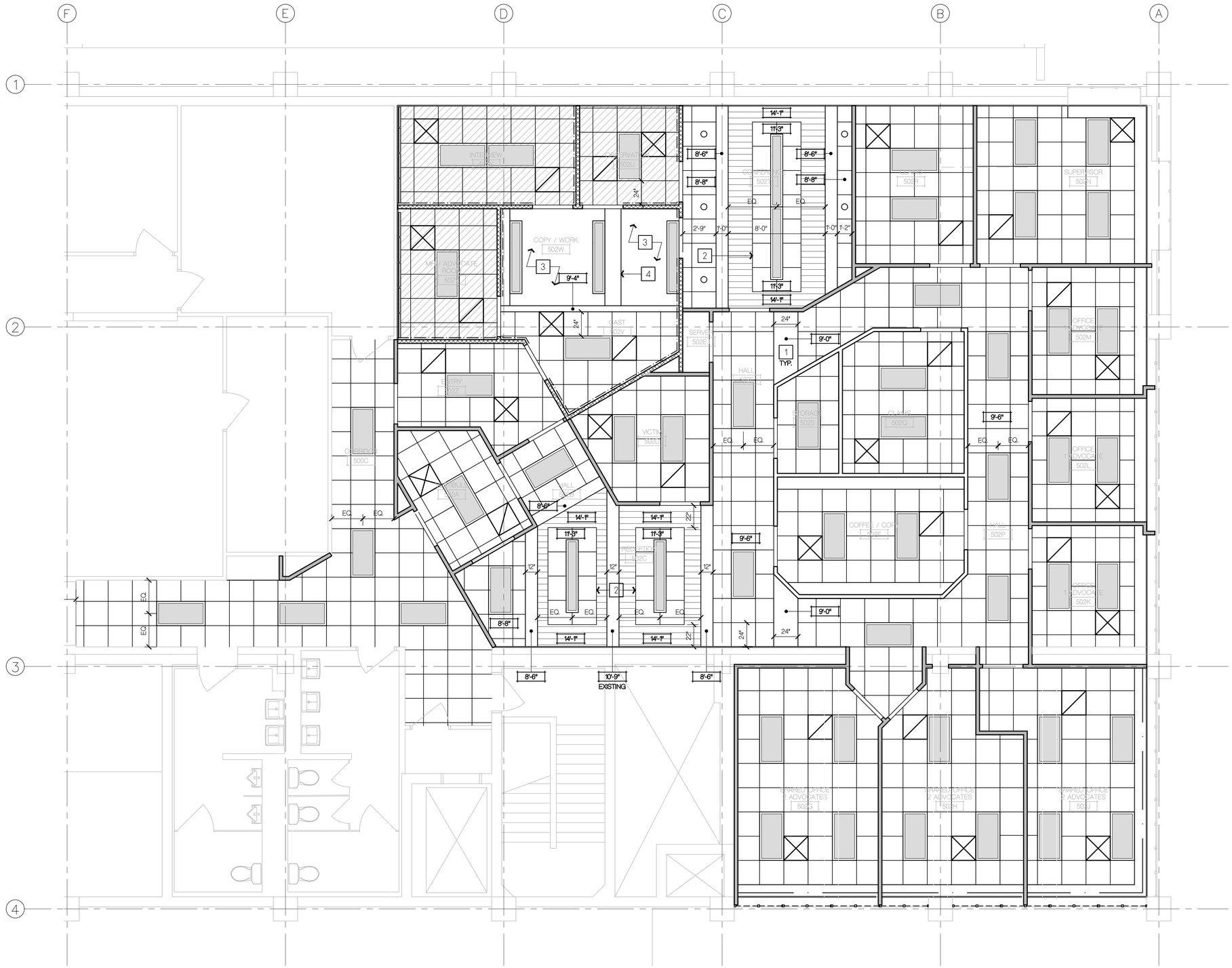
Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

A243

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:38 pm
File Name: J:\Projects\2018\18-6452 Humboldt Co. 5th Flr. Courthouse\Drawings\HC-CH-5th_FLR6-ROOF-SLAB.dwg
XREFS: J:\HC-CH-5th_TB1.dwg; J:\HC-CH-5th_Roof.dwg; J:\HC-CH-5th_LGRD



REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

0' 6" 2' 4' 8' 16'

CEILING PLAN SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. SOFFIT (SEE 3/A931)
2. FLOATING SUSPENDED CEILING (SEE 4/A931 FOR EDGE CONDITON)
3. OPEN TO CLERESTORY CEILING @ UNDERSIDE OF ROOF
4. EXISTING BAR JOIST WRAPPED WITH GYP. BOARD W/ UP/DOWN LIGHTING FIXTURE, (SEE 4/A502)
5. SOFFIT TO BE ADDED AT NEW FRAMING
6. 12" FROM SOFFIT TO SUSPENDED CEILING
7. LIGHTING RECESS IN HARD LID CEILING
8. ARCHED HARD LID CEILING TO REMAIN

GENERAL NOTES

1. CEILINGS @ 9'-6" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED
2. WALLS IN ROOMS 502U, 502X, 502Y HAVE GYP BD BOTH SIDES OF WALL TO 6" ABOVE HARD LID CEILING (SEE 1/A504)
3. U.N.O. CEILING TILES TO BE CENTERED IN ROOMS AND HALLWAYS

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- SUSPENDED STRIP LIGHTING FIXTURE
- 2 x 4 LIGHTING FIXTURE
- RECESSED LIGHT
- SUPPLY AIR
- RETURN AIR
- 2 X 2 SUSPENDED CEILING (SEE A931 FOR DETAILS)
- OPEN TO (E) STRUCTURAL METAL DECK ABOVE, PAINT. +14'-1" A.F.F.
- GYP. BOARD
- AREAS WITH HARD LID CEILING ABOVE SUSPENDED CEILING (SEE, 1/A504)
- 3-5/8" METAL STUD 362S162-33 @ 16" O.C. W/ RESILIENT CHANNELS; FULL HEIGHT PARTITION W/ GYP BD BOTH SIDES TO UNDERSIDE OF STRUCTURE, U.N.O.

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CONSULTANTS

LICENSE STAMPS

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PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

REFLECTED CELING PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.

A251

Login Name: CharlesS
Plot Date: JUN 28, 2019 - 2:58 pm
File Name: x:\HC-CH-5th\Working\18-6452 Humboldt Co. 5th Flr. Courthouse\Drawings\HC-CH-5th_FLR-RCP.dwg
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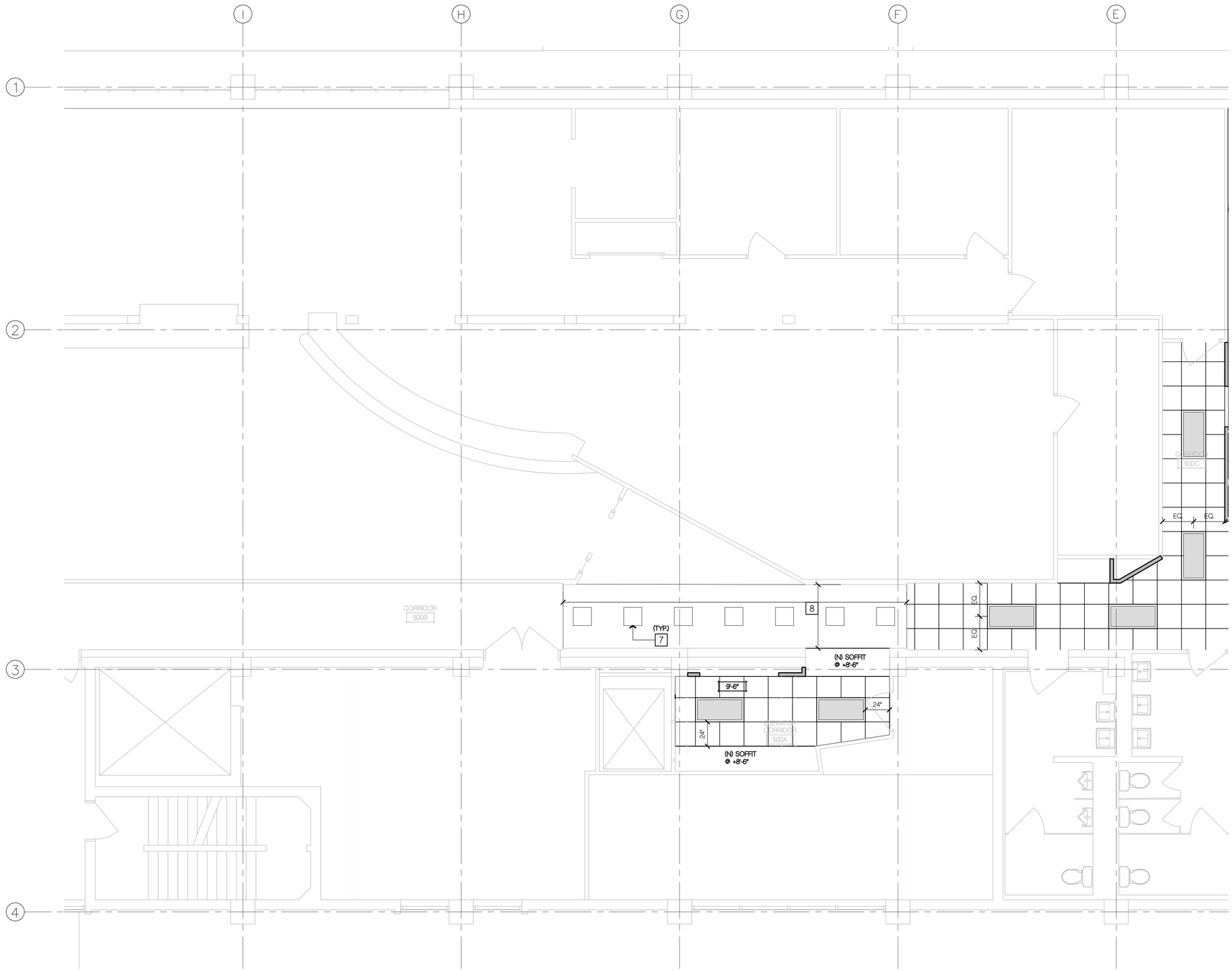

REFLECTED CEILING PLAN - ELEVATOR CORRIDOR

SCALE: 1/4" = 1'-0"

0' 6" 2' 4' 8' 16'

CEILING PLAN SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. SOFFIT (SEE 3/A931)
2. FLOATING SUSPENDED CEILING (SEE 4/A931 FOR EDGE CONDITON)
3. OPEN TO CLERESTORY CEILING @ UNDERSIDE OF ROOF
4. EXISTING BAR JOIST WRAPPED WITH GYP. BOARD W/ UP/DOWN LIGHTING FIXTURE, (SEE 4/A502)
5. SOFFIT TO BE ADDED AT NEW FRAMING
6. 12" FROM SOFFIT TO SUSPENDED CEILING
7. LIGHTING RECESS IN HARD LID CEILING
8. ARCHED HARD LID CEILING TO REMAIN

GENERAL NOTES

1. CEILINGS @ 9'-6" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED
2. WALLS IN ROOMS 502U, 502X, 502Y HAVE GYP BD BOTH SIDES OF WALL TO 6" ABOVE HARD LID CEILING (SEE 1/A504)
3. U.N.O. CEILING TILES TO BE CENTERED IN ROOMS AND HALLWAYS

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- SUSPENDED STRIP LIGHTING FIXTURE
- 2 x 4 LIGHTING FIXTURE
- RECESSED LIGHT
- SUPPLY AIR
- RETURN AIR
- 2 X 2 SUSPENDED CEILING (SEE A931 FOR DETAILS)
- OPEN TO (E) STRUCTURAL METAL DECK ABOVE, PAINT. +14'-1" A.F.F.
- GYP. BOARD
- AREAS WITH HARD LID CEILING ABOVE SUSPENDED CEILING (SEE, 1/A504)
- 3-5/8" METAL STUD 362S162-33 @ 16" O.C. W/ RESILIENT CHANNELS; FULL HEIGHT PARTITION W/ GYP BD BOTH SIDES TO UNDERSIDE OF STRUCTURE, U.N.O.

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CONSULTANTS

LICENSE STAMPS

LICENSED ARCHITECT
KYLE MATTHEW CHAMBERLIN
C 27504
REN. 10/31/19
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

REFLECTED CELING PLAN ELEVATOR CORRIDOR

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.

A252

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:58 pm
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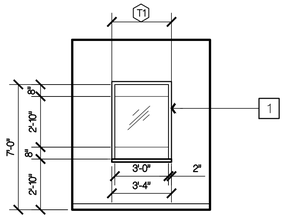

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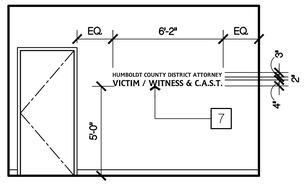
502A LOBBY — 1



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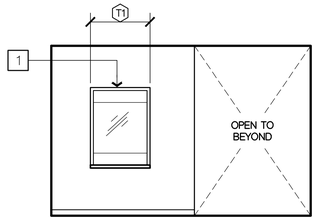
500C CORRIDOR — 2



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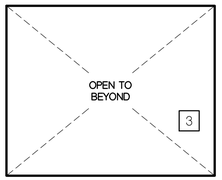

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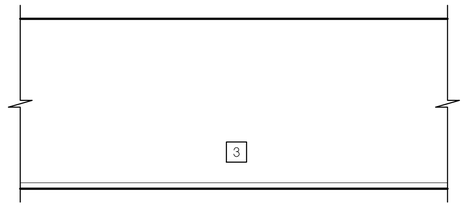

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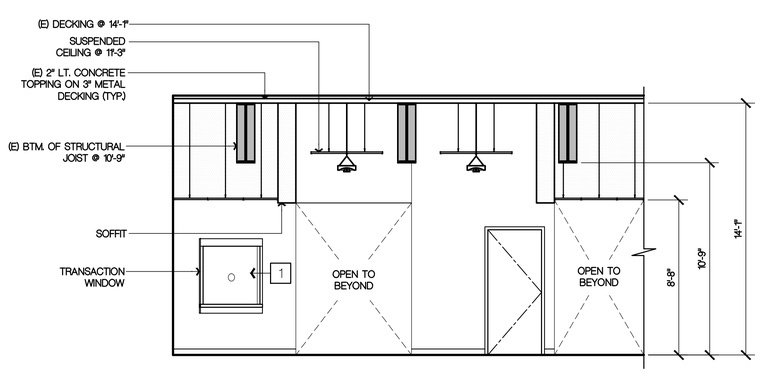

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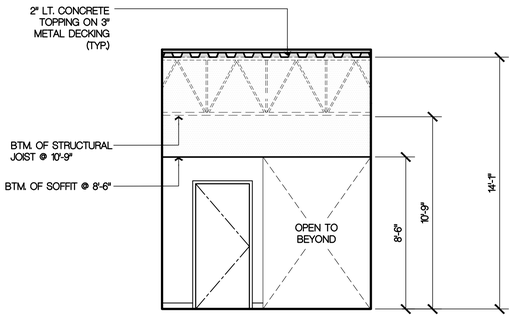
502C RECEPTION



SOUTH

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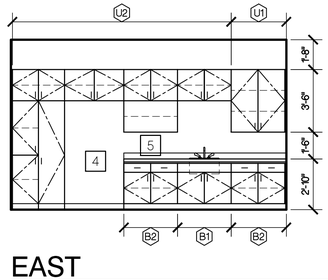
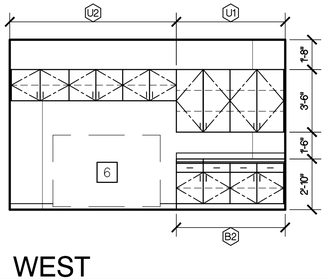


EAST
502F COFFEE / COPY



WEST

5

INTERIOR ELEVATION SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. TRANSACTION WINDOW (SEE 6/A941)
2. SUITE SIGNAGE
3. OWNER FURNISHED RECEPTION DESK
4. OWNER FURNISHED REFRIGERATOR
5. OWNER FURNISHED MICROWAVE
6. OWNER FURNISHED COPIER
7. RAISED MILL FINISHED ALUMINUM LETTERS WITH STUD MOUNTING HARDWARE. MATCH RECORDER'S OFFICE LETTERING STYLE.

GENERAL NOTES

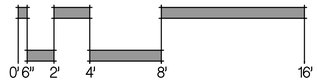
1. REFER TO A941 FOR CASEWORK DETAILS

2. REFER TO MECHANICAL, PLUMBING, & ELECTRICAL FOR ADDITIONAL INFORMATION

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- GYP. BOARD
- ENCLOSED BY SOFFIT // ABOVE CEILING
- (#) CASEWORK, SEE A941



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CONSULTANTS

LICENSE STAMPS

LICENSED ARCHITECT — KYLE MATTHEW CHARLES — C 27504 — REN. 10/31/19 — STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

INTERIOR ELEVATIONS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.

A501

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:42 pm
File Name: M:\Projects\2018\18-6452 Humboldt Co. 5th Flr. Courthouse\Drawings\HC-CH-5th_FLR5-ELEV.dwg
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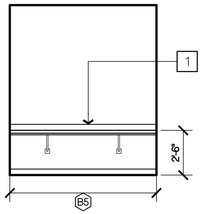

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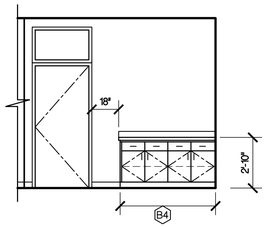

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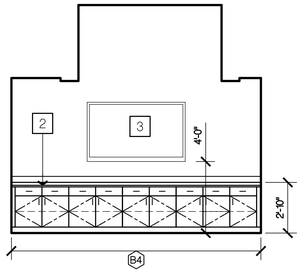
502W COPY / WORK — 2



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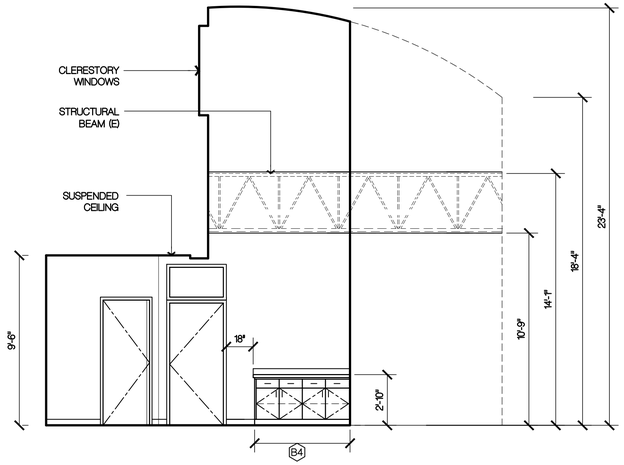
502T CONFERENCE — 3



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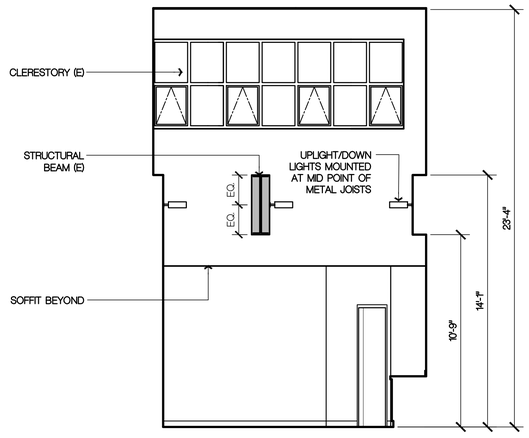
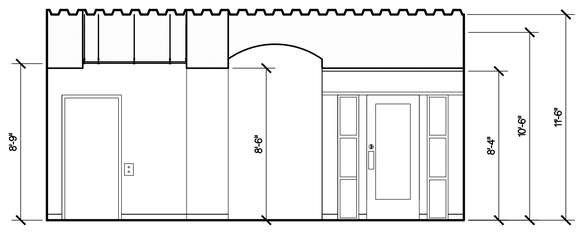
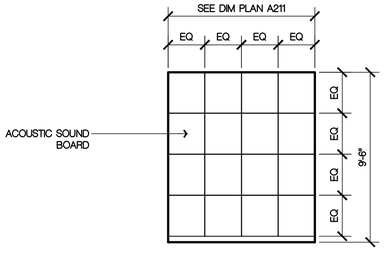
502V CAST / WAITING — 4



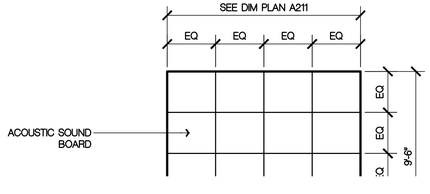
WEST — 4



NORTH THRU GRIDLINE G
ELEVATOR LOBBY — 5



NORTH
502X INTERVIEW — 6



INTERIOR ELEVATION SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. OBSERVATION DESK / COUNTERTOP, COORDINATE LOCATION OF OWNER FURNISHED A/V EQUIPMENT
2. COORDINATE LOCATION OF OWNER FURNISHED A/V EQUIPMENT
3. OWNER FURNISHED LCD SCREEN

GENERAL NOTES

1. REFER TO A941 FOR CASEWORK DETAILS
2. REFER TO MECHANICAL, PLUMBING, & ELECTRICAL FOR ADDITIONAL INFORMATION

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- GYP. BOARD
- ENCLOSED BY CEILING/SOFFIT
- (@) CASEWORK, SEE A941

0' 6" 2' 4' 8' 16'

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CONSULTANTS

LICENSE STAMPS

LICENSED ARCHITECT — KYLE MATTHEW ROSSETTO — C 27504 — REN. 10/31/19 — STATE OF CALIFORNIA

PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
INTERIOR ELEVATIONS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.
A502

Login Name: CharlesS
Plot Date: JUN 28, 2019 - 2:42 pm
File Name: w:\projects\2018\18-6452 Humboldt Co. 5th Flr Courthouse\Drawings\HC-CH-5th_FLR\5-ELEV.dwg
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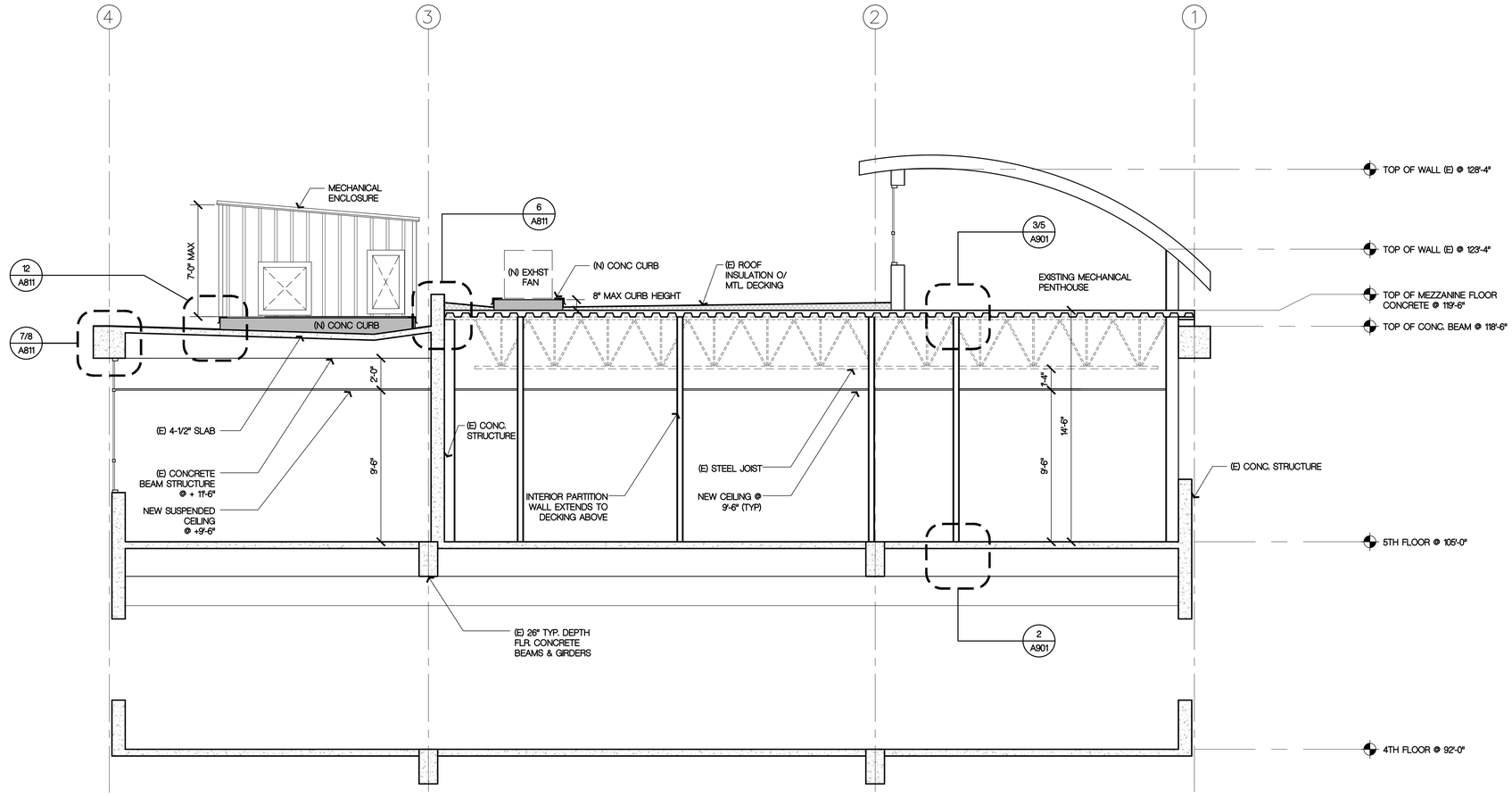

NORTH THRU GRIDLINE B
SUITE 502 SECTION — 1

INTERIOR ELEVATION SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

GENERAL NOTES

1. REFER TO MECHANICAL, PLUMBING, & ELECTRICAL FOR ADDITIONAL INFORMATION

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- CONCRETE CURB
- (E) CONCRETE STRUCTURE
- ROOF INSULATION

0' 6" 2' 4' 8' 16'

NICHOLS MELBURG ROSSETTO
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CONSULTANTS

LICENSE STAMPS

LICENSED ARCHITECT — KYLE MATT — C 27504 — REN. 10/31/19 — STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

INTERIOR ELEVATIONS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.

A503

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:42 pm
File Name: J:\Projects\2018\18-6452 Humboldt Co. 5th Fl. Courthouse\Drawings\HC-CH-5th_FLR\S-ELEV.dwg
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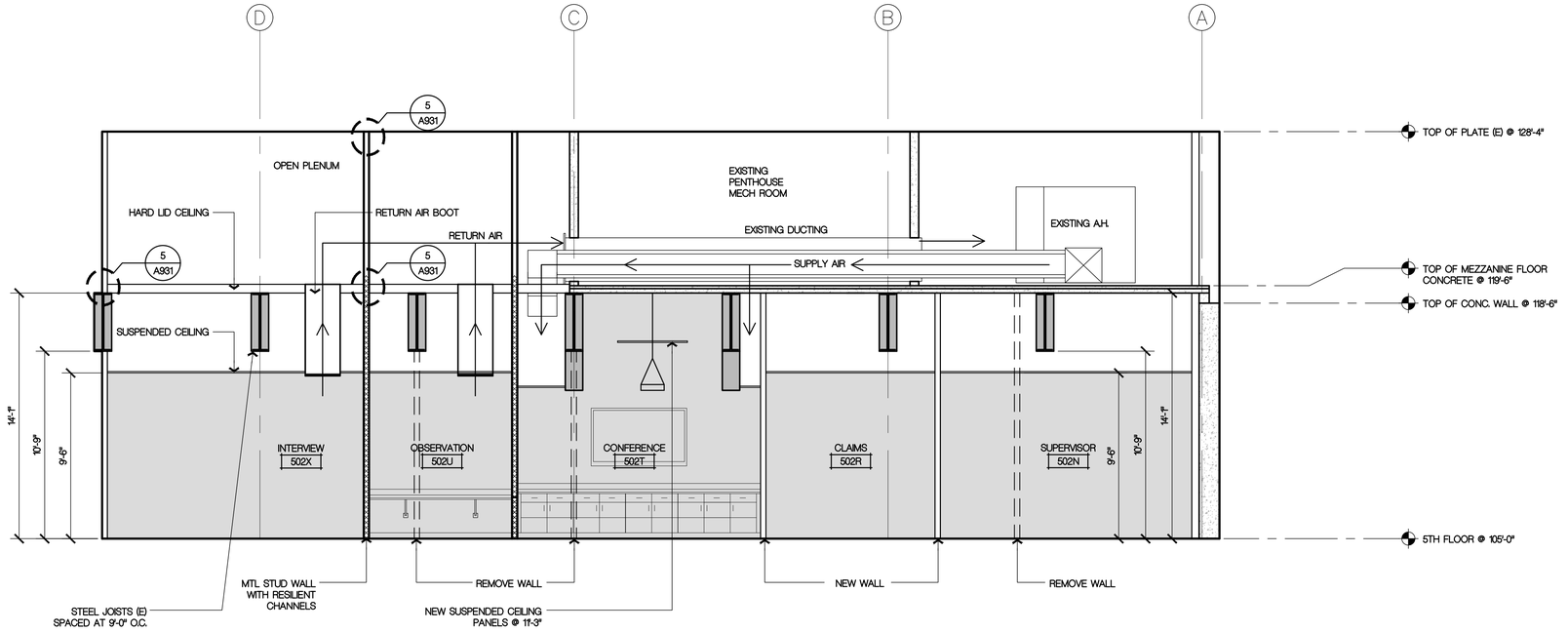
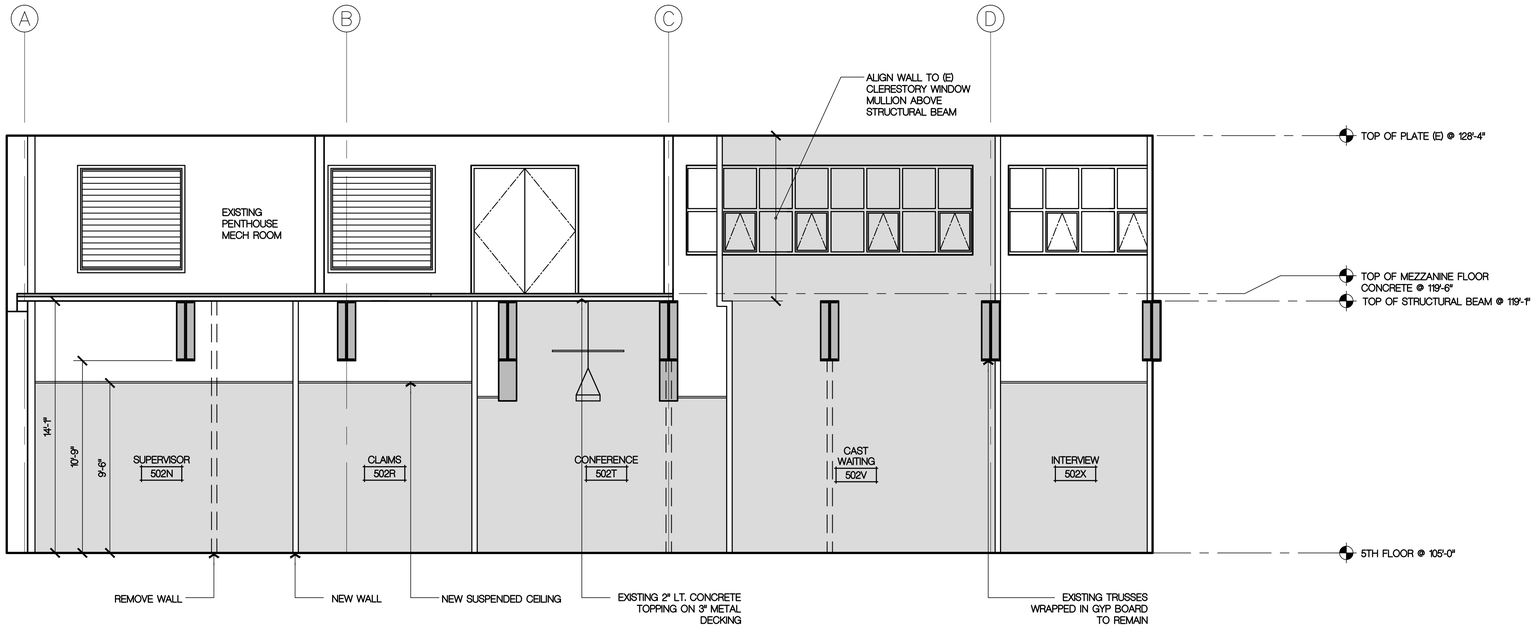


EAST BETWEEN GRIDLINE 1 & 2
SUITE 502 SECTION — 1



WEST BETWEEN GRIDLINE 1 & 2
SUITE 502 SECTION — 2

INTERIOR ELEVATION SHEET NOTES

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

1. OPEN AIR PLENUM
2. ALIGN WALL WITH EXISTING CLERESTORY WINDOW MULLION

GENERAL NOTES

1. REFER TO MECHANICAL, PLUMBING, & ELECTRICAL FOR ADDITIONAL INFORMATION
2. RESILIENT CHANNELS TO END 6" ABOVE GYP. BD. CEILING

LEGEND

(ALL ITEMS ARE NEW, UNLESS NOTED (E) OR EXISTING)

- REMOVE WALLS
- NEW WALLS
- NEW WALLS W/ RESILIENT CHANNELS
- EXISTING CONCRETE WALLS
- EXISTING TRUSSES TO REMAIN
- FINISHED SPACES

0' 6" 2' 4' 8' 16'

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CONSULTANTS

LICENSE STAMPS

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PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

INTERIOR ELEVATIONS

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

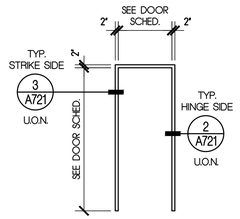
Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	1/4" = 1'-0"
Job No.	18-6452

SHEET No.

A504

Login Name: CharlesS
Plot Date: June 28, 2019 - 2:43 pm
File Name: J:\Projects\2018\18-6452 Humboldt Co. 5th Flr. Courthouse\Drawings\HC-CH-5th_FURS-ELEV.dwg
xREFS: x-HC-CH-5th_TTB | x-HC-CH-5th_FLR | x-HC-CH-5th_RCP | x-HC-CH-5th_GRID

HOLLOW METAL DOOR FRAME TYPES



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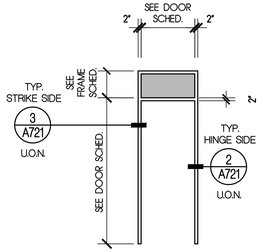
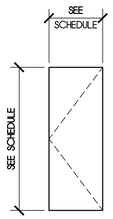


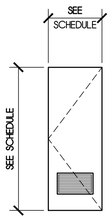
B

DOOR TYPES - WOOD



S1

FLUSH SLAB
SOLID CORE WOOD



L1

FLUSH SLAB
SOLID CORE WOOD
W/ LOUVER

DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME TYPE	FRAME WIDTH	FRAME TRANSOM	FRAME FINISH
500A.1	PR 3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
500B.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502A.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502B.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502D.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502E.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502E.1.1	3-0 x 7-0	L	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502F.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502G.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	B	VERIFY	3-0 x 1-0	PAINT
502H.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	B	VERIFY	3-0 x 1-0	PAINT
502J.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	B	VERIFY	3-0 x 1-0	PAINT
502K.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	B	VERIFY	3-0 x 1-0	PAINT
502L.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	B	VERIFY	3-0 x 1-0	PAINT
502M.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	B	VERIFY	3-0 x 1-0	PAINT
502N.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	B	VERIFY	3-0 x 1-0	PAINT
502Q.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502R.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502T.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502U.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502U.2	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502V.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502X.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502Y.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502Z.1	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502Z.2	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT
502Z.3	3-0 x 7-0	S	P-LAM	PRE-FINISH	H.M.	A	VERIFY	-	PAINT

DOOR SCHEDULE NUMBERED NOTES

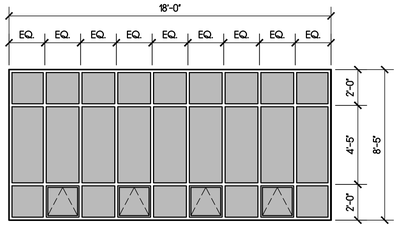
(SEE "REMARKS" COLUMN AT DOOR SCHEDULE FOR SPECIFIC DOORS TO WHICH THE FOLLOWING NOTES APPLY, TYPICAL. REFER TO DOOR HARDWARE SCHEDULE IN SPECIFICATIONS FOR ADDITIONAL INFORMATION, WHERE APPLICABLE.)

1. LOCKSET
2. SELF-CLOSING AND LATCHING DOOR W/ 12" STRIKE SIDE BY 48" DEEP CLEAR SPACE ON SIDE OPPOSITE SWING OF DOOR (PUSH-SIDE). CBC 11B-404.2.4
3. PUSH / PULL HINGES AND HARDWARE
4. DOOR WITH "PANIC" EGRESS HARDWARE
5. DOOR SHALL HAVE A READILY VISIBLE, DURABLE SIGN ON OR ADJACENT TO THE DOOR STATING "THIS DOOR MUST REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" CBC 1008.1.9
6. PROVIDE PRIVACY LATCH. CBC 11B-213.2.1

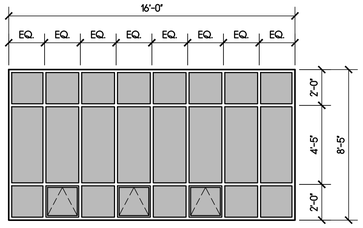
DOOR AND HARDWARE GENERAL NOTES

1. COORDINATE ALL WORK BETWEEN DOORS, HARDWARE AND ELECTRICAL.
2. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. BOTH THE DEAD BOLT AND LATCH MUST REACT WITH A SINGLE HAND MOTION. CBC 1008.1.9, RMC 16.14.080.
3. A MAXIMUM OF 1/2" TOTAL VERTICAL RISE IS REQUIRED AT EACH SIDE OF ALL DOORS, INCLUDING THRESHOLDS. CBC 11B-404.2.5
4. MAXIMUM DOOR OPENING EFFORT TO BE 5 POUNDS AT EXTERIOR AND INTERIOR DOORS, AND 15 POUNDS AT FIRE DOORS. CBC 11B-404.2.9
5. ALL DOORS TO BE EQUIPPED WITH SINGLE-EFFORT, NON-GRASP HARDWARE (I.E., LEVER) CENTERED BETWEEN 34 INCHES AND 44 INCHES ABOVE THE FINISH FLOOR. CBC 11B-404.2.7
6. FOR DOORS WITH CLOSERS, THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM. CBC 11B-404.2.8
7. FOR SELF-CLOSING AND LATCHING DOORS, PROVIDE 12 INCH STRIKE-SIDE BY 48 INCH DEEP CLEAR SPACE ON SIDE OPPOSITE SWING OF DOOR (PUSH-SIDE). CBC 11B-404.2.4
8. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE A TIGHT GRASPING PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
9. THRESHOLDS SHALL BE 1/2" HIGH MAXIMUM. CHANGE OF LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH SLOPE NOT STEEPER THAN 12. RAISED THRESHOLDS SHALL COMPLY WITH AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH CBC SECTION 11B-203 AND 11B-303.

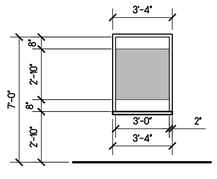
WINDOW TYPES



1 ALUMINUM WINDOW W/ HOPPER



2 ALUMINUM WINDOW W/ HOPPER



3 ALUMINUM TRANSACTION WINDOW WITH SOLID SURFACE COUNTER

LEGEND

GLAZING

ALUMINUM WINDOW WALL GENERAL NOTES

1. GLAZING AT ALL EXTERIOR ALUMINUM WINDOW WALL UNITS SHALL BE PPG SOLARBAN 80, OR EQUAL.
2. GLAZING AT ALL INTERIOR ALUMINUM WINDOW UNITS SHALL BE CLEAR
3. GLAZING IN THE FOLLOWING LOCATIONS SHALL BE OF SAFETY GLAZING MATERIAL IN ACCORDANCE WITH CBC SECTION 2406.2...

   A) FIXED AND SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANELS IN SWINGING DOORS.

   B) FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24" ARC OR EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE.

   C) INDIVIDUAL FIXED OR OPERABLE PANELS, OTHER THAN THOSE LOCATIONS DESCRIBED ABOVE, THAT MEET ALL OF THE FOLLOWING CONDITIONS:
   I) EXPOSED AREA OF INDIVIDUAL PANE IS GREATER THAN 9 S.F. AND
   II) EXPOSED BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR, AND
   III) EXPOSED TOP EDGE IS GREATER THAN 36" ABOVE THE FLOOR, AND
   IV) WALKING SURFACES ARE HORIZONTALLY WITHIN 36" OF GLAZING.

4. DIMENSIONS SHOWN ON WINDOW SCHEDULE ARE NOMINAL DIMENSIONS. FIELD VERIFY ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS FOR ARCHITECT'S REVIEW. IF THERE ARE ANY INCONSISTENCIES BETWEEN THE WINDOW SCHEDULE AND THE DOOR SCHEDULE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO BRING THESE TO THE ARCHITECT'S ATTENTION PRIOR TO CONSTRUCTION.

WINDOW GENERAL NOTES

1. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE A TIGHT GRASPING PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
2. WINDOWS TO MATCH EXISTING ALUMINUM WINDOWS, PROVIDE MOCK-UP OF OPERABLE WINDOW AND FIXED WINDOW. MATCH EXISTING STYLE AND FINISH.
3. DOOR HARDWARE SCHEDULE, SEE SPECIFICATIONS 08 71 00

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CONSULTANTS

LICENSE STAMPS

LICENSED ARCHITECT
KYLE MATTHEWS
C 27504
REN. 10/31/19
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

DOOR & WINDOW SCHEDULE

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

A710

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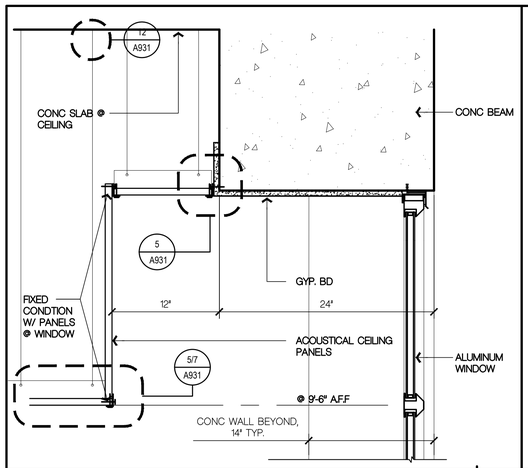
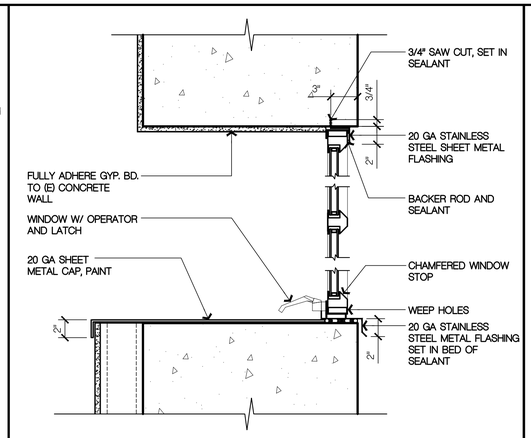


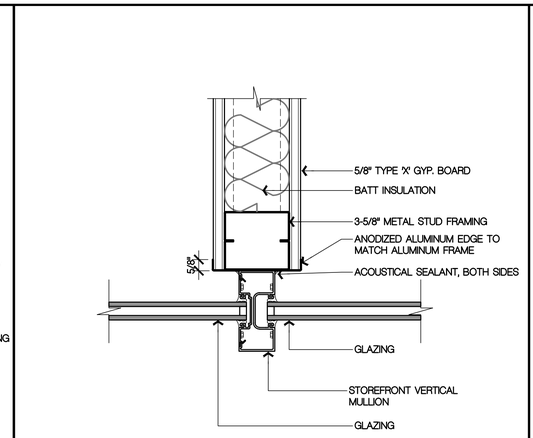
ALUMINUM WINDOW AT ACOUSTICAL PANEL POCKET

SCALE: 1 1/2 = 1'-0" — 10



ALUMINUM WINDOW HEAD + SILL

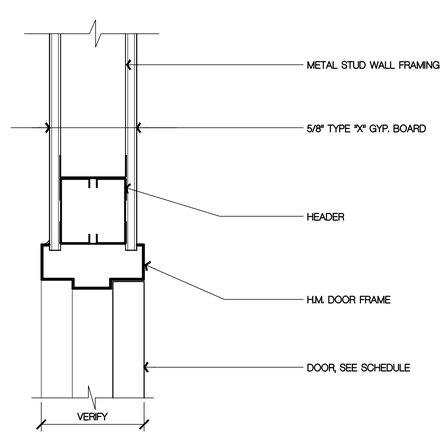
SCALE: 1 1/2 = 1'-0" — 7



int-wall_storefront_mullion.dwg

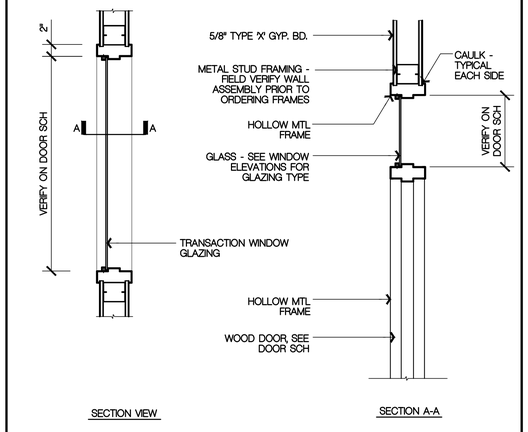
INTERIOR WALL AT STOREFRONT VERTICAL MULLION

SCALE: 3" = 1'-0" — 4



HOLLOW METAL DOOR HEAD

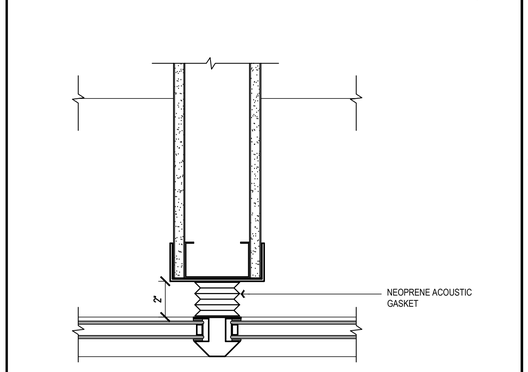
N.T.S. — 1



TRANSOM WINDOW

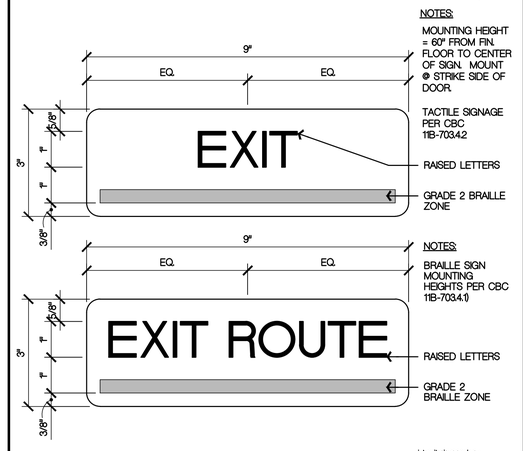
transom-window

SCALE: 1" = 1'-0" — 11



ALUMINUM WINDOW AT PARTITION WALL

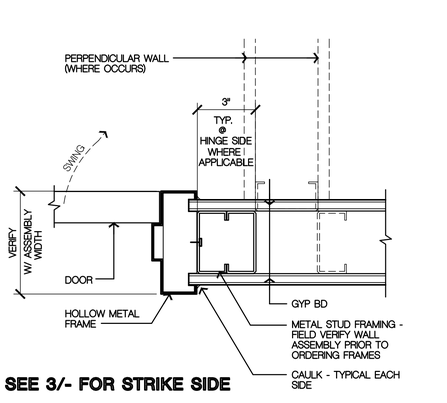
SCALE: 3 "=1'-0" — 8



int-exit-signage.dwg

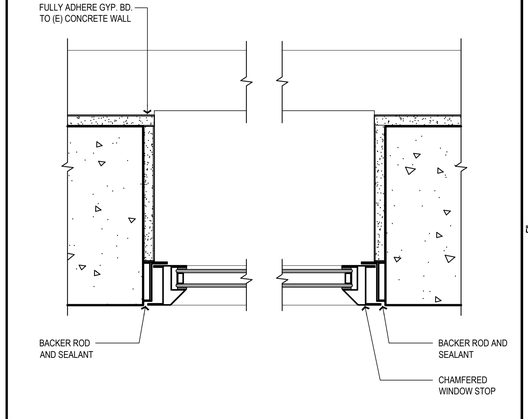
EXIT SIGNAGE

SCALE: 6" = 1'-0" — 5



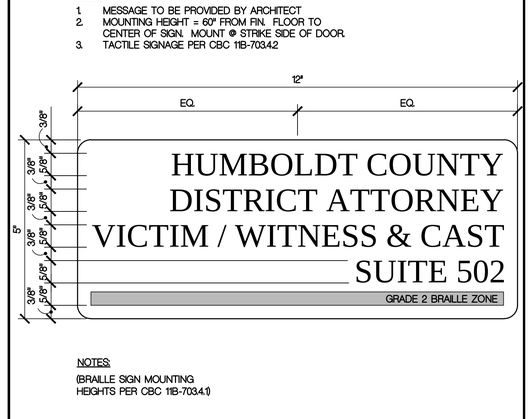
HOLLOW METAL DOOR JAMB - HINGE SIDE

N.T.S. — 2



ALUMINUM WINDOW JAMB

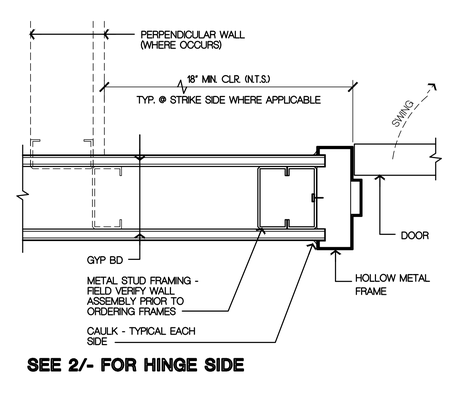
SCALE: 3 "=1'-0" — 9



int-room-signage.dwg

SUITE SIGNAGE

SCALE: 6" = 1'-0" — 6



HOLLOW METAL DOOR JAMB - STRIKE SIDE

N.T.S. — 3

NICHOLS MELBURG & ROSSETTO
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CONSULTANTS

LICENSE STAMPS

LICENSED ARCHITECT — KYLE MATTHEW ROSSETTO — C 27504 — REN. 10/31/19 — STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

DOOR & WINDOW DETAILS

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	NMR
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

A721

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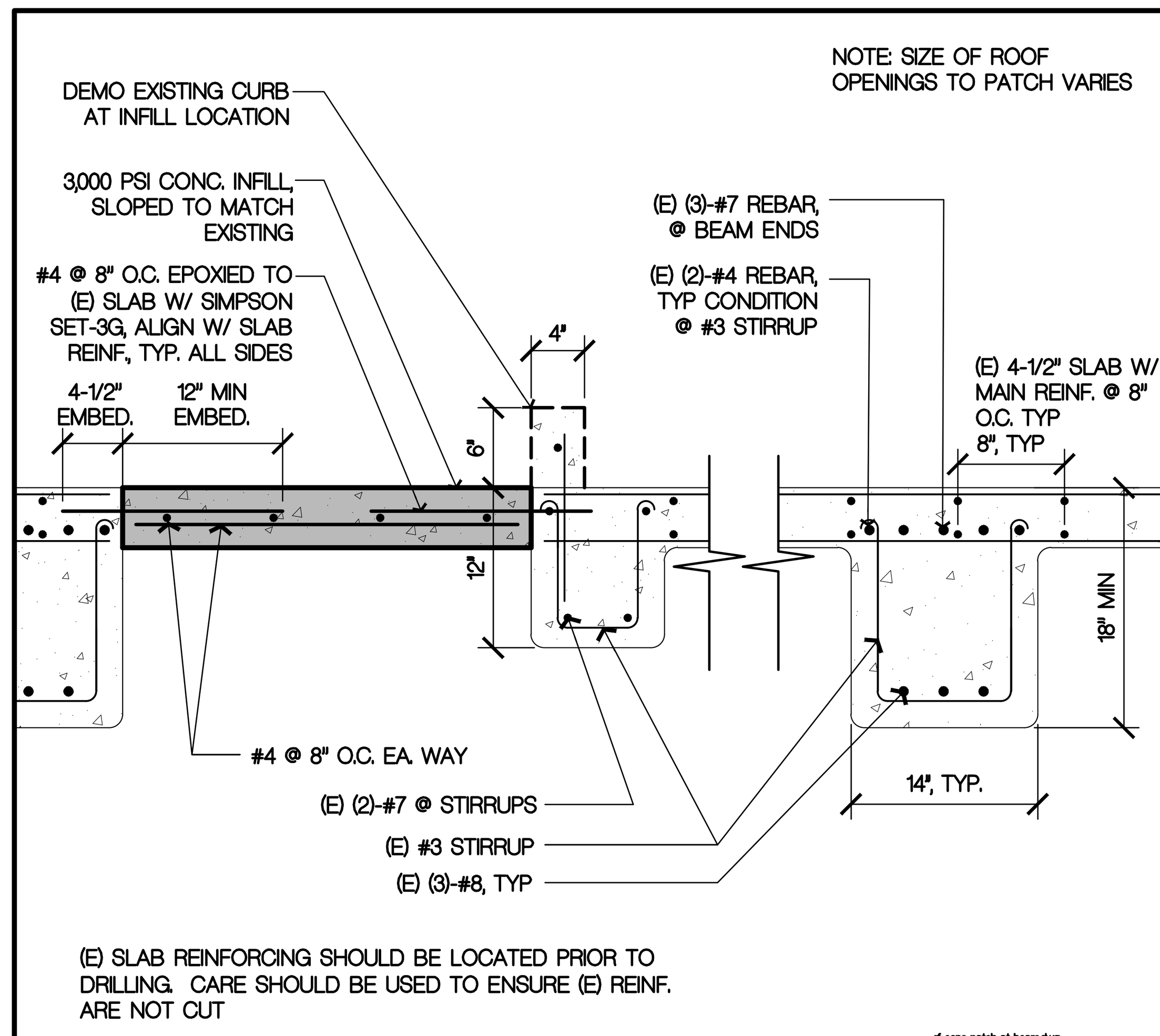
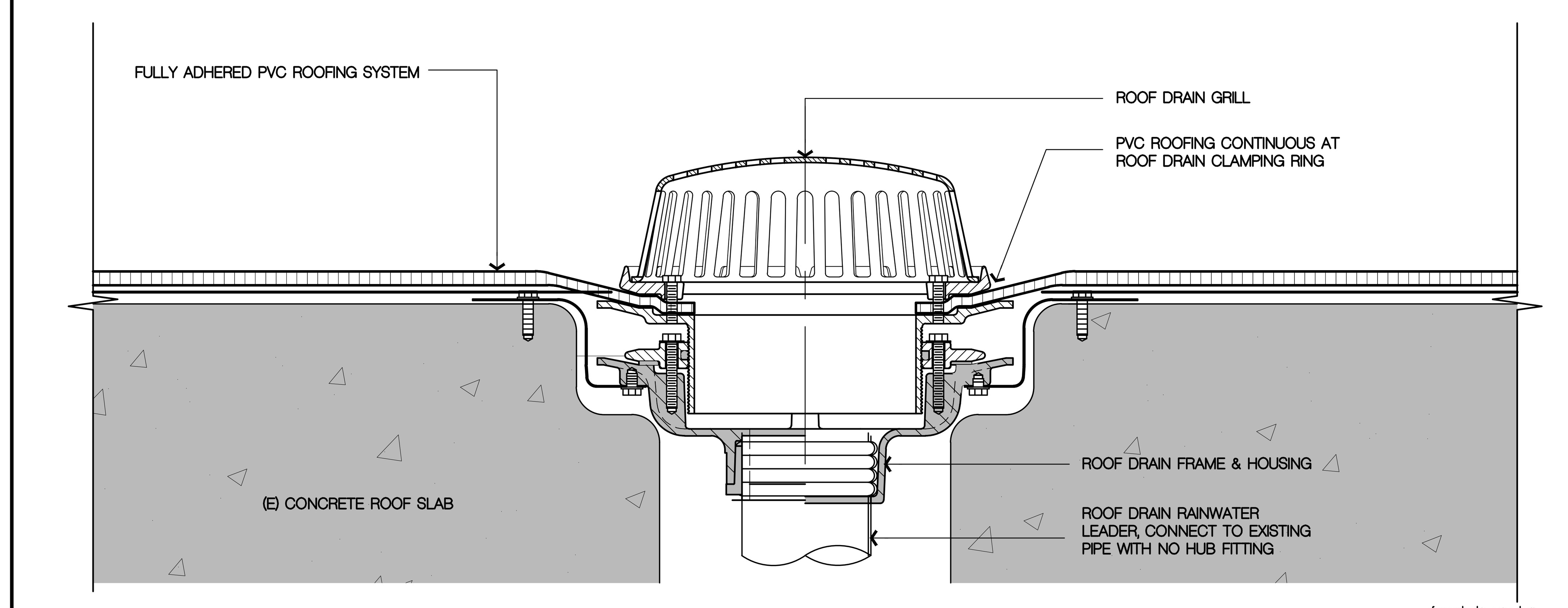


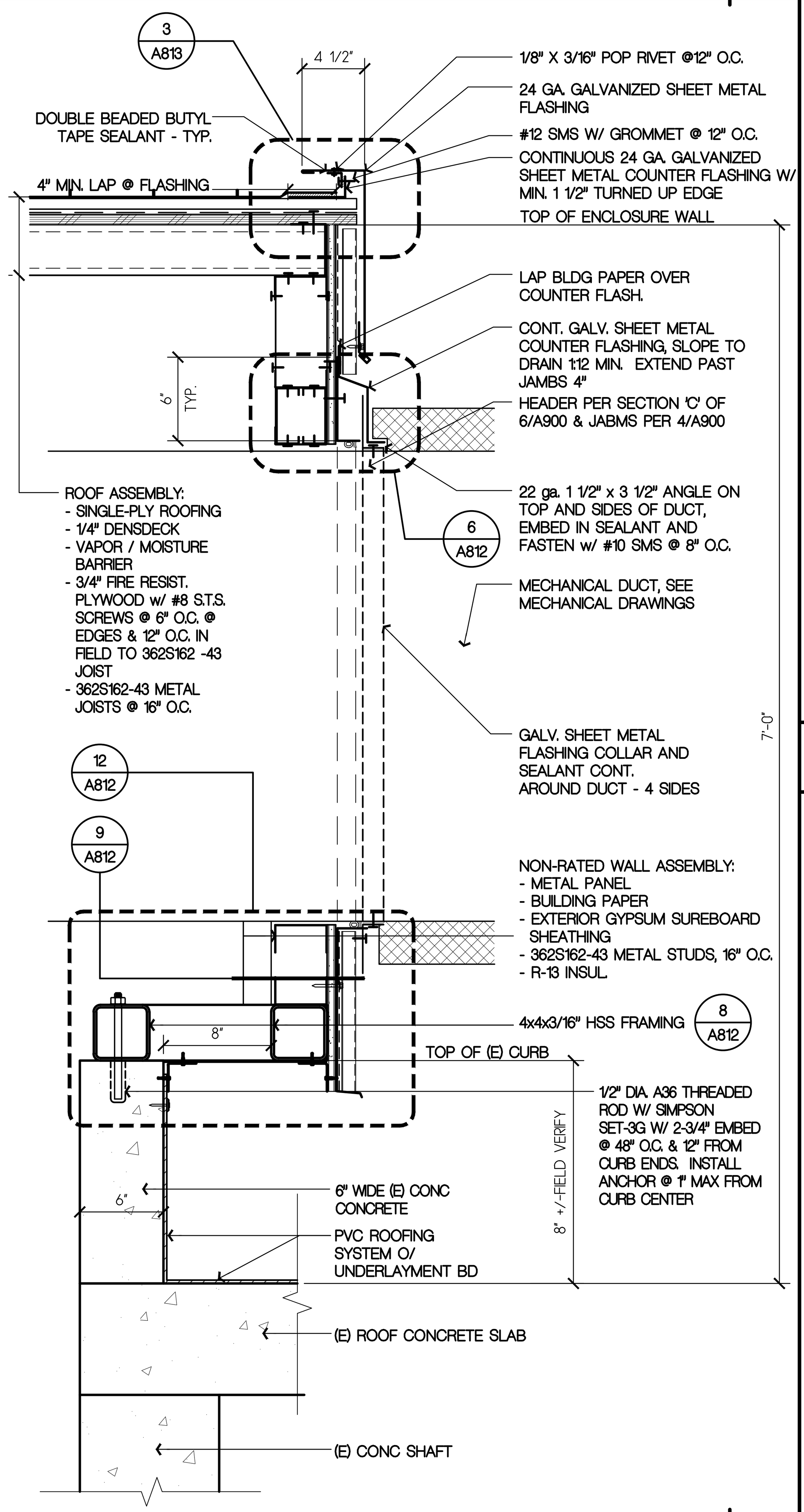
CONC. INFILL AT (E) SLAB OPENING W/ CONC. PERIMETER BEAMS

1" = 1'-0" (10)



ROOF DRAIN AT OPENING IN CONC ROOF

NTS (1)



MECHANICAL DOGHOUSE WALL SECTION

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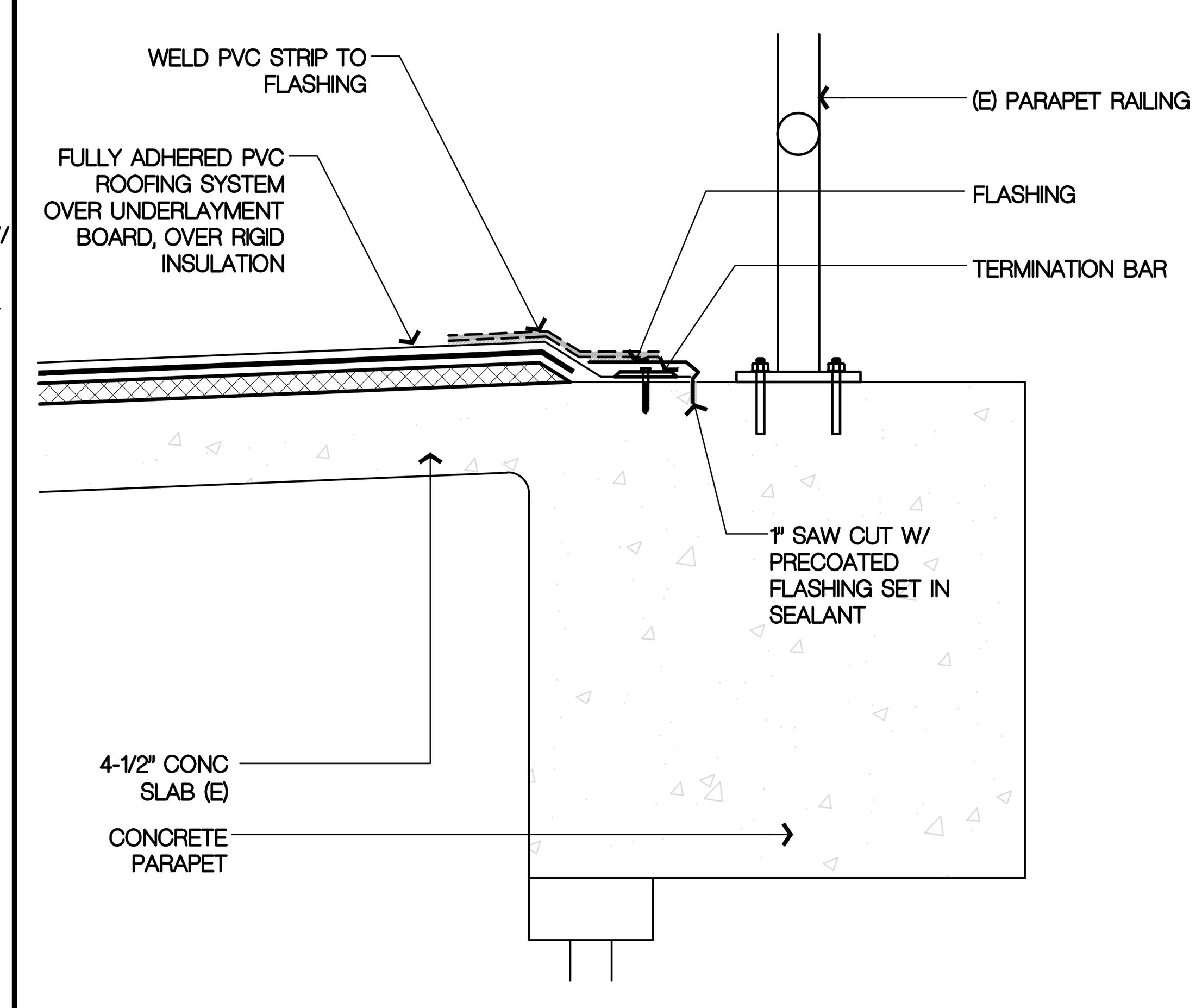
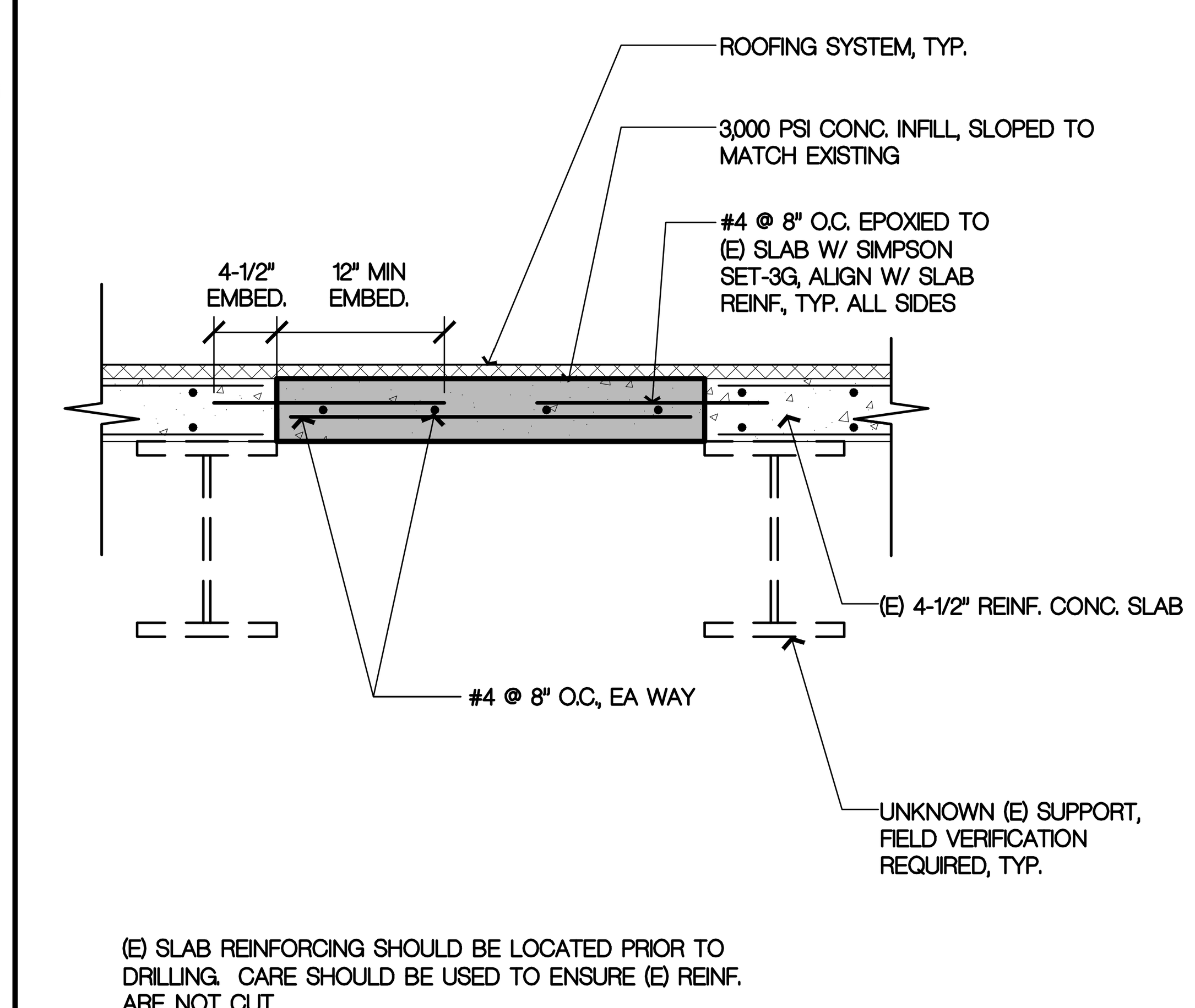


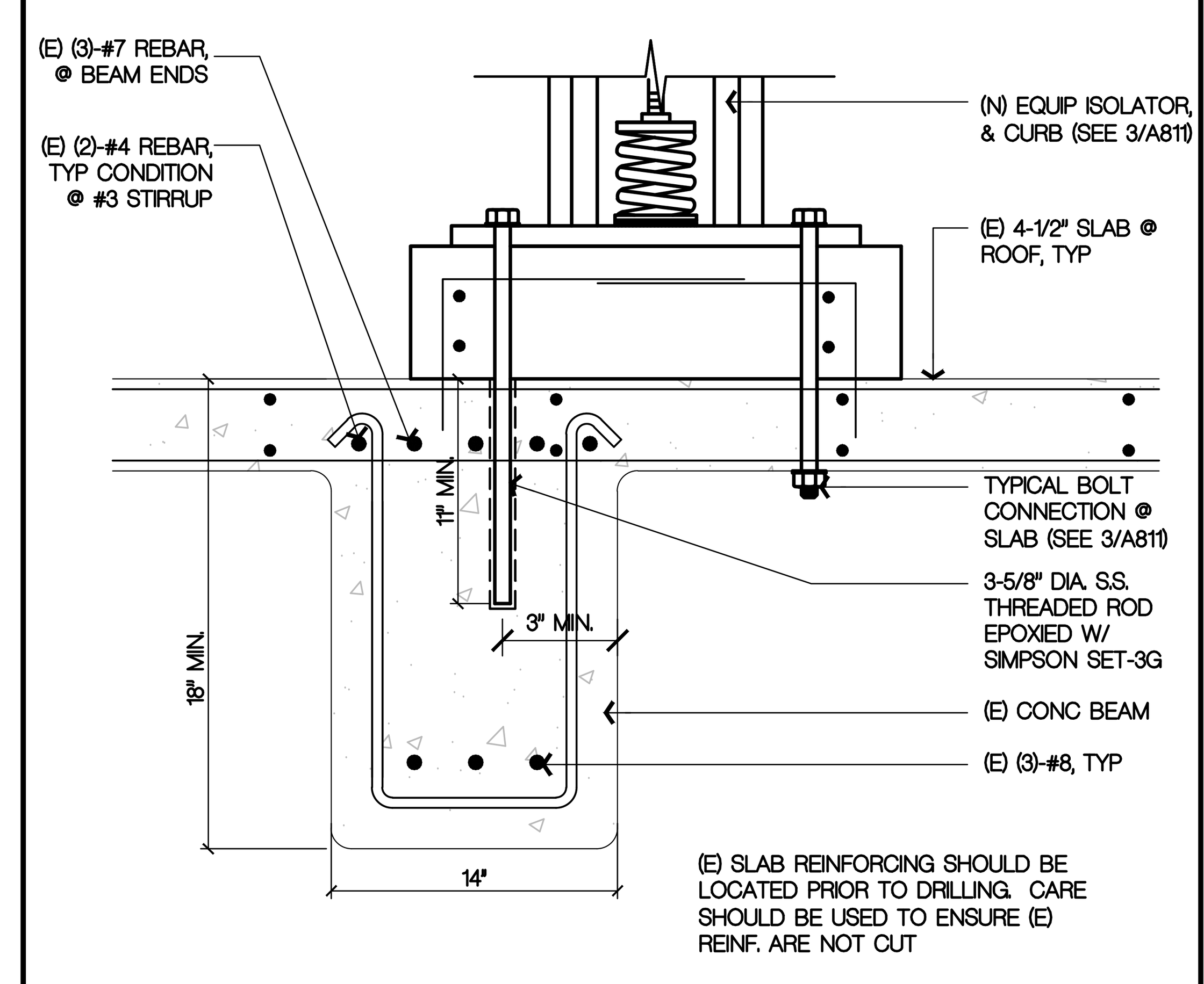
LOW PARAPET AT ROOF EDGE WITH RAILING

SCALE: 1-1/2" = 1'-0" (8)



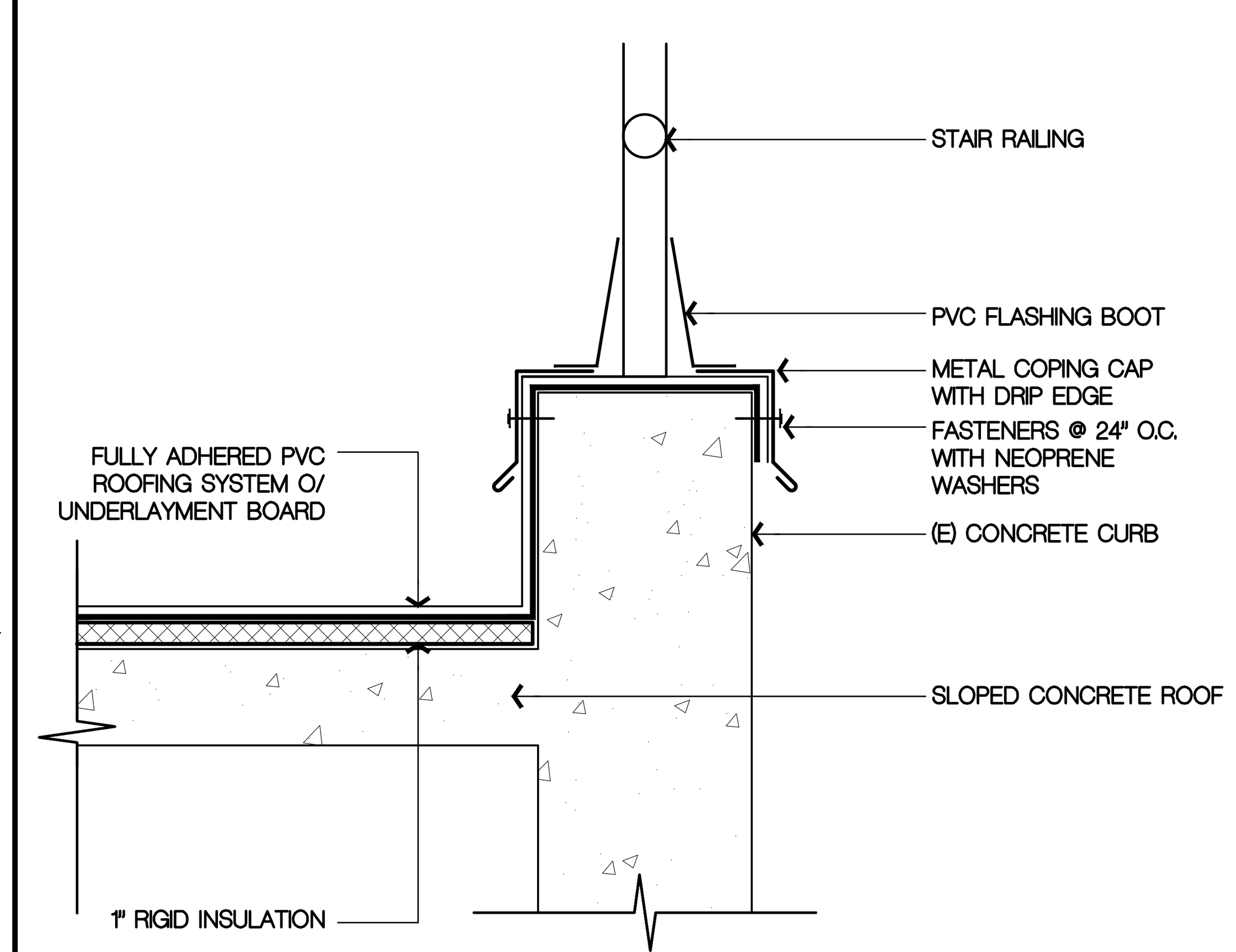
CONC. INFILL AT (E) SLAB OPENING

1" = 1'-0" (5)



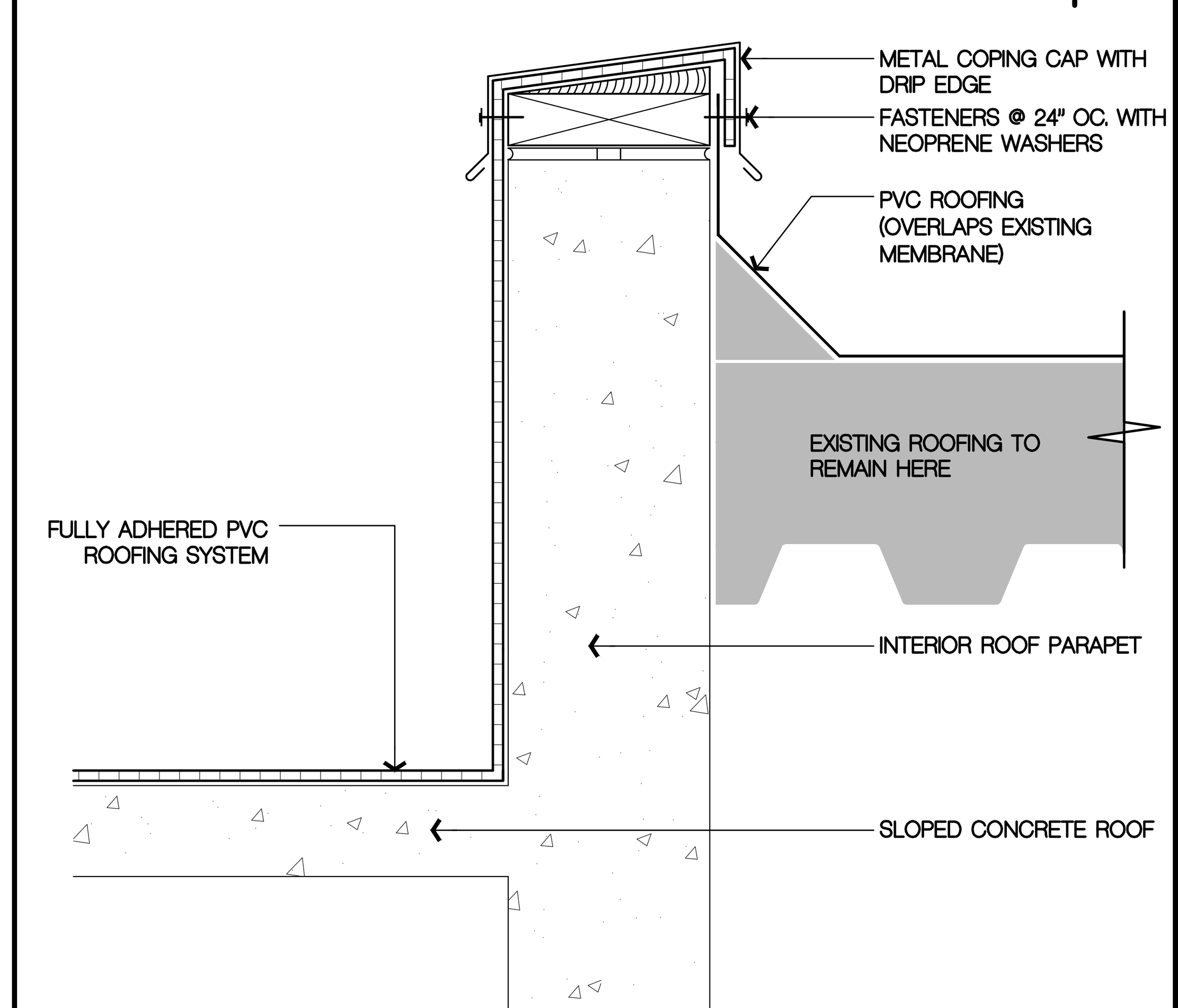
EQUIPMENT PAD ISOLATOR AT CONC ROOF

1-1/2" = 1'-0" (2)



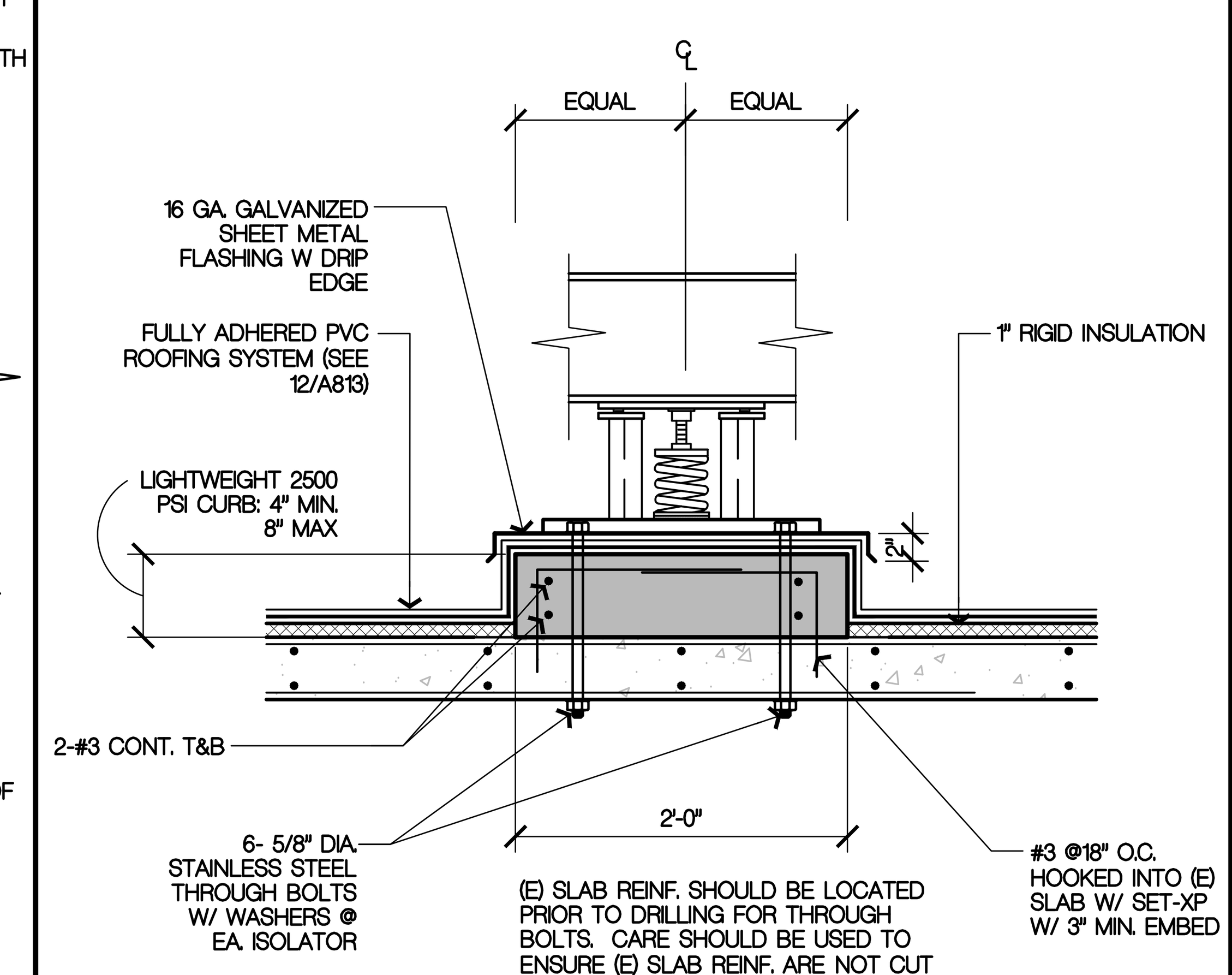
ROOF AT CONC STAIR CURB

SCALE: 1-1/2" = 1'-0" (9)



ROOF PARAPET AT INTERIOR ADJACENCY

SCALE: 1-1/2" = 1'-0" (6)



CONCRETE ROOF CURB & ANCHORAGE

SCALE: 1" = 1'-0" (3)

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CONSULTANTS

LICENSE STAMPS

LICENSED ARCHITECT
KYLE MATT
C 27504
REN. 10/31/19
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
EXTERIOR DETAILS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

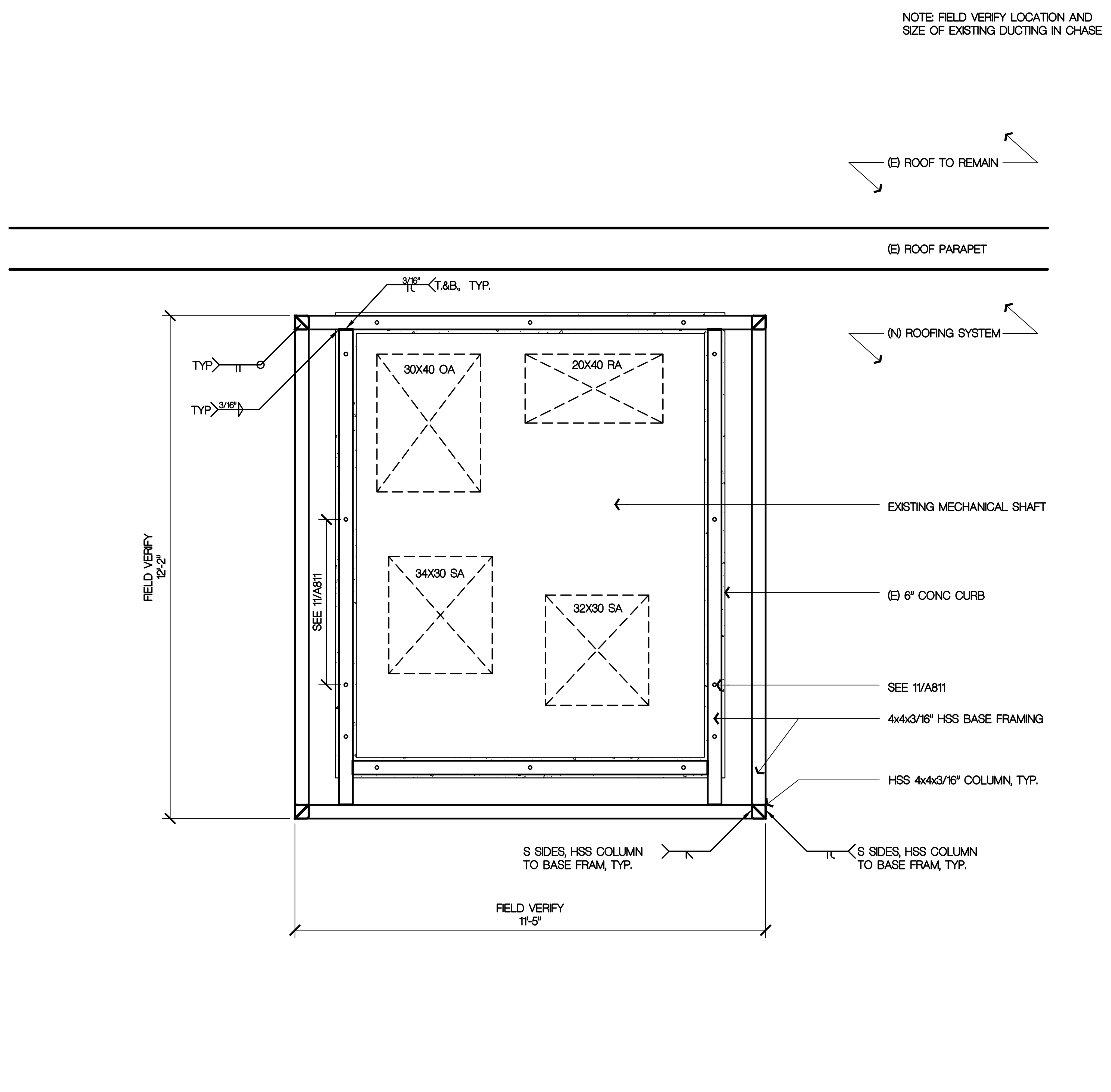
REVISIONS

Sym.	Description	By	Date

Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

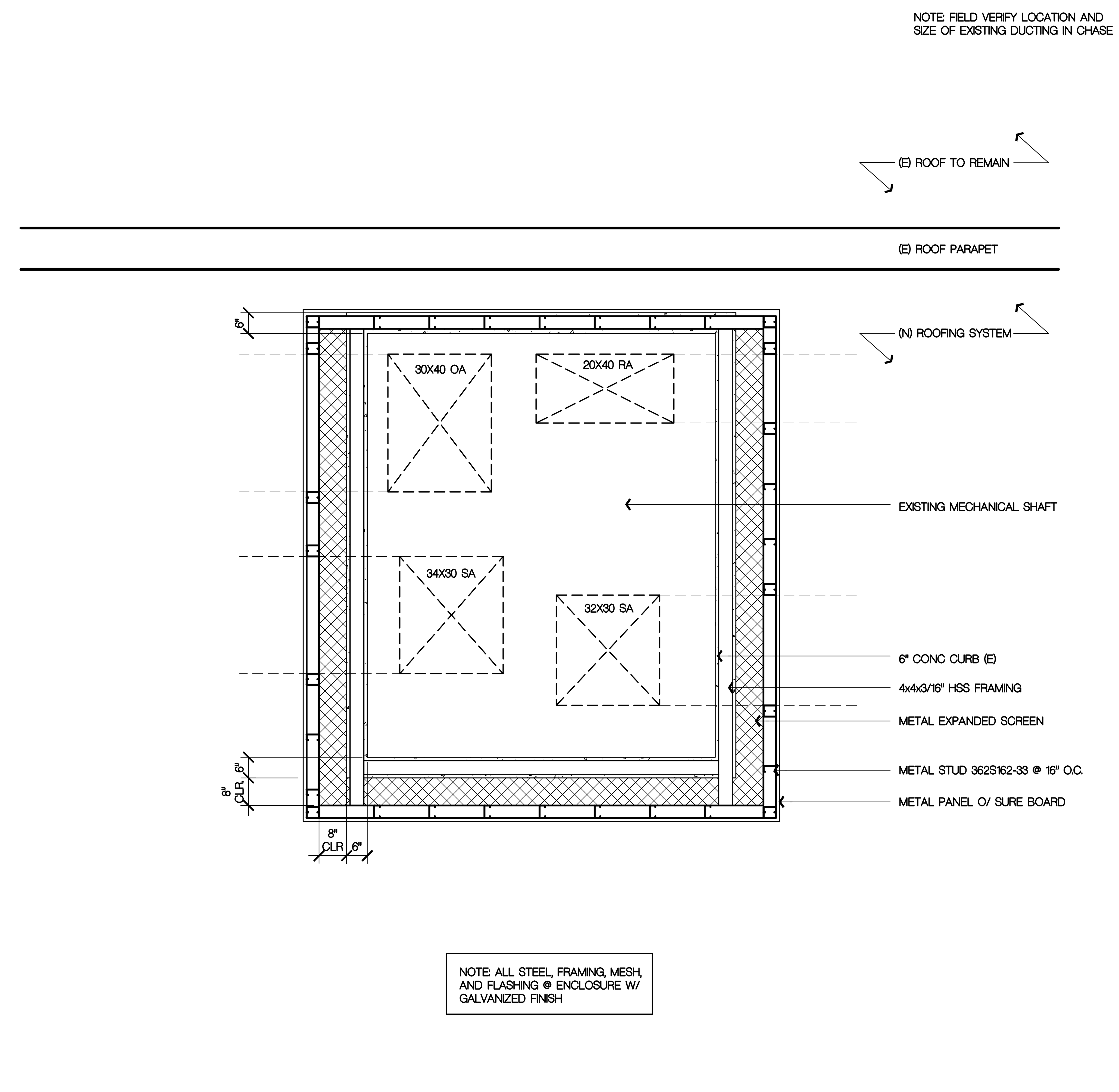
SHEET No.

A811



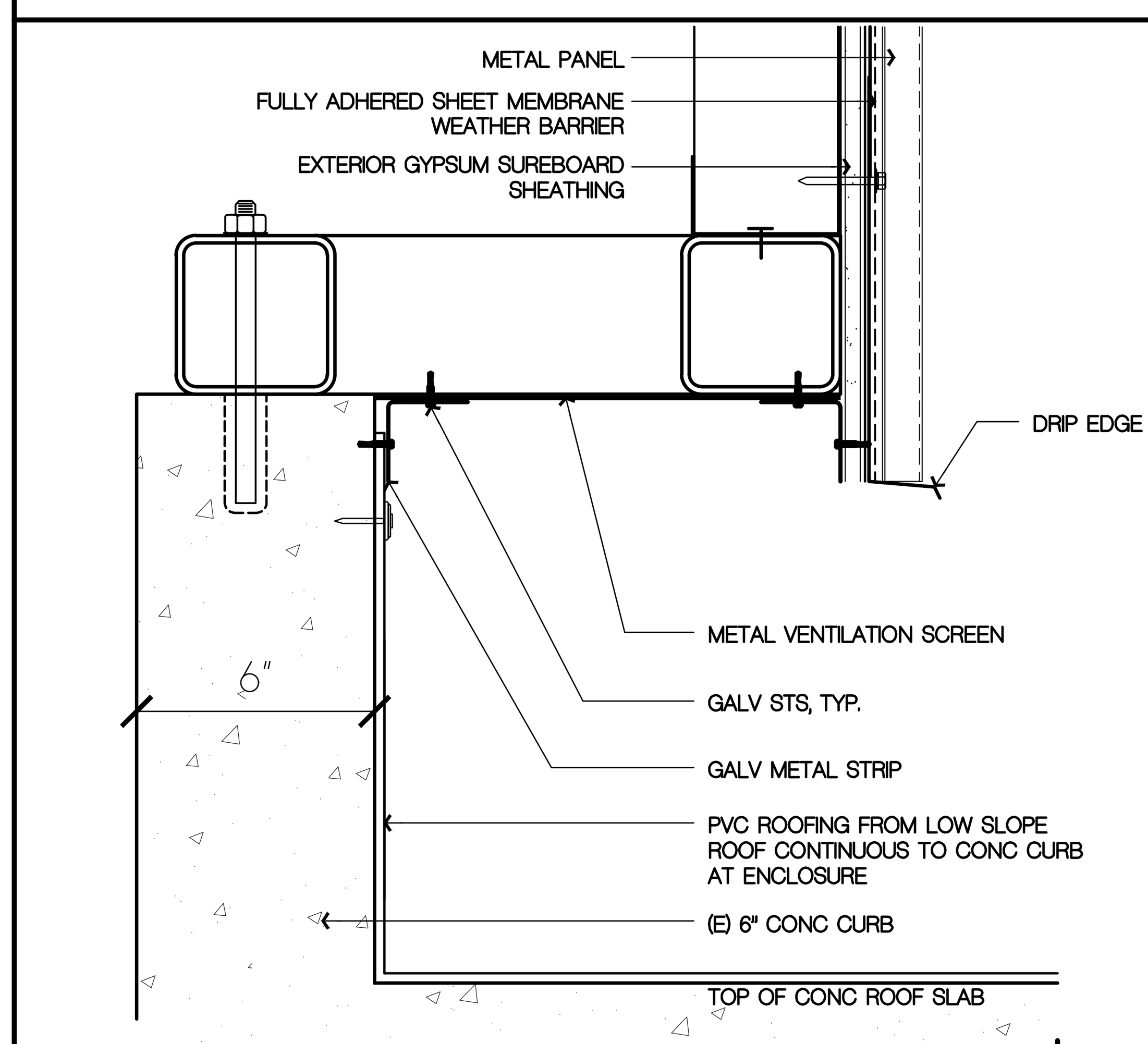
MECHANICAL ENCLOSURE BASE FRAME PLAN

SCALE: 1/2" = 1'-0" (8)



MECHANICAL ENCLOSURE AT ROOF METAL STUD FRAMING

SCALE: 1/2" = 1'-0" (2)



MECHANICAL ENCLOSURE SILL FLASHING

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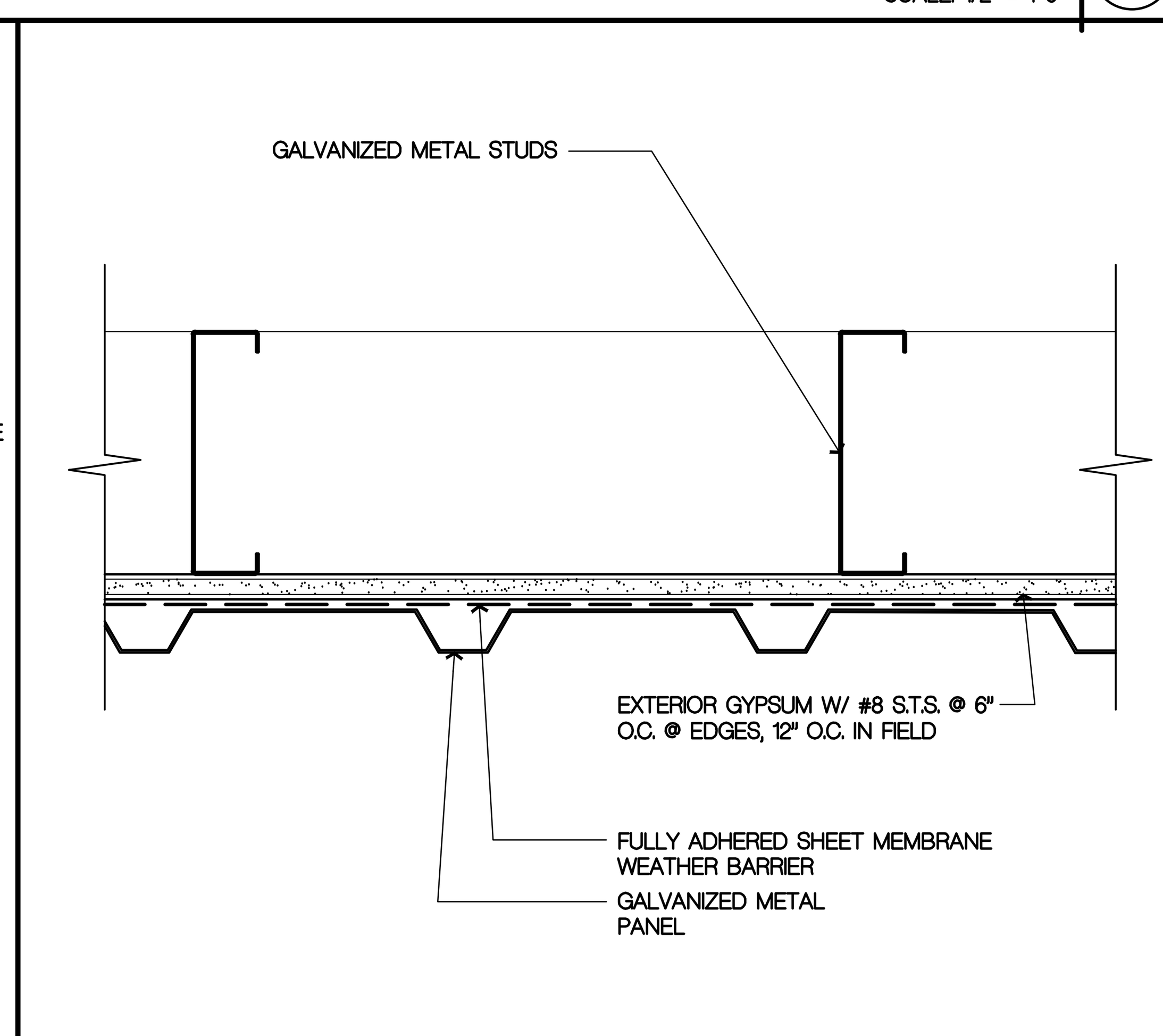
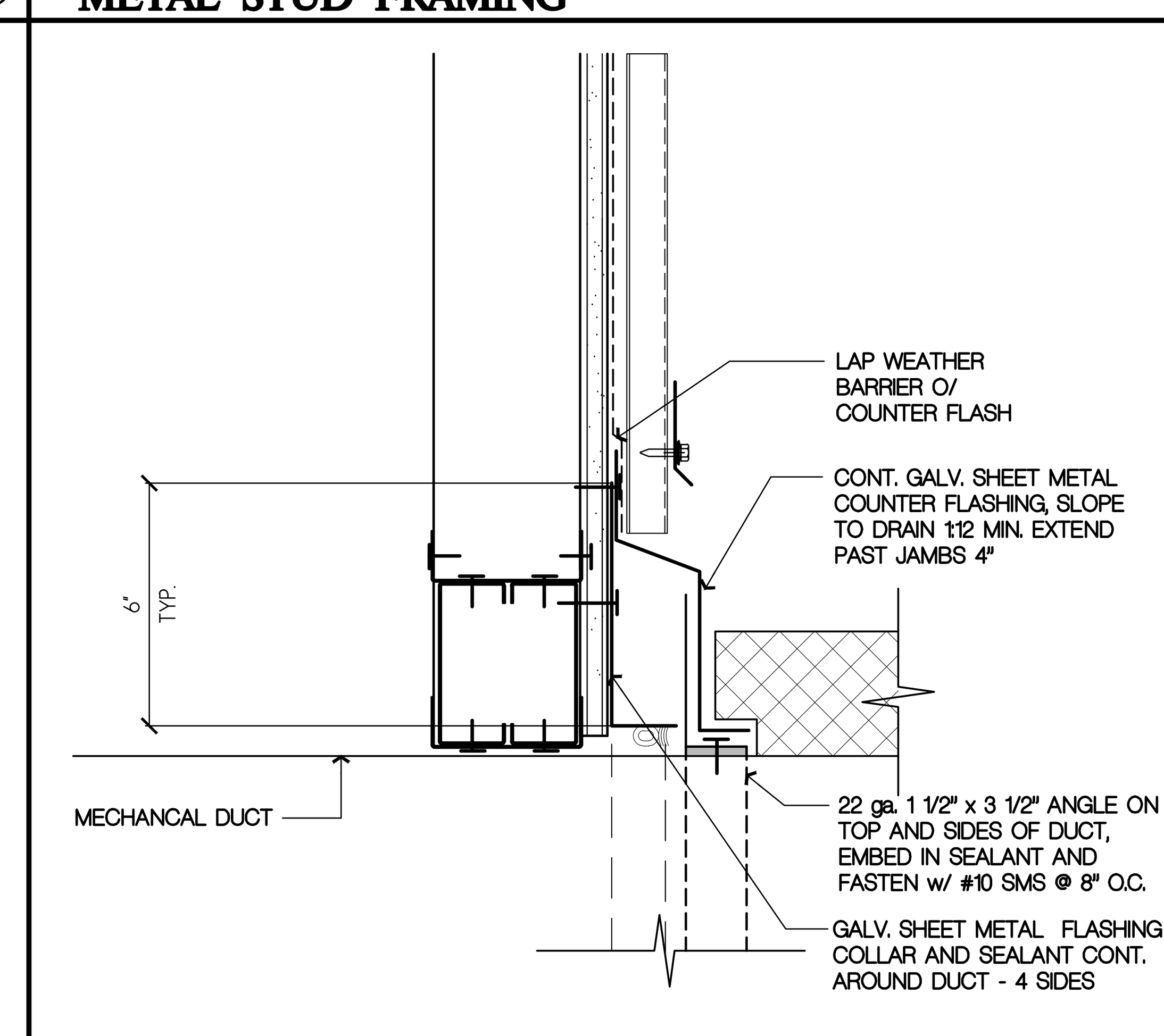


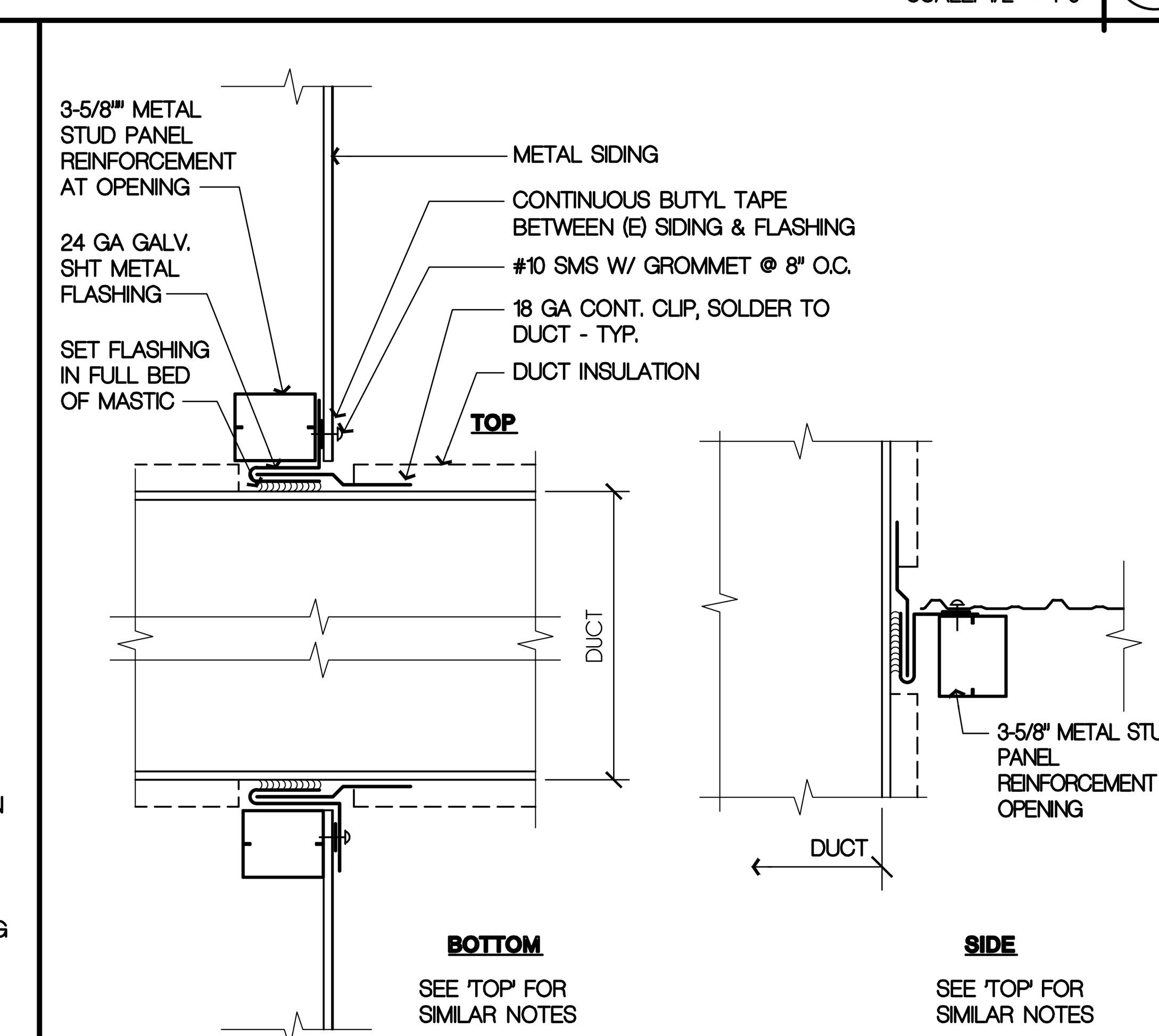
MECHANICAL ENCLOSURE WALL ASSEMBLY

SCALE: N.T.S (9)



MECHANICAL ENCLOSURE DUCT PENETRATION

SCALE: N.T.S (6)



DUCT AT PENTHOUSE WALL

SCALE: N.T.S. (3)

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CONSULTANTS

LICENSE STAMPS

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HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

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Scale	AS NOTED
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SHEET No.

A812

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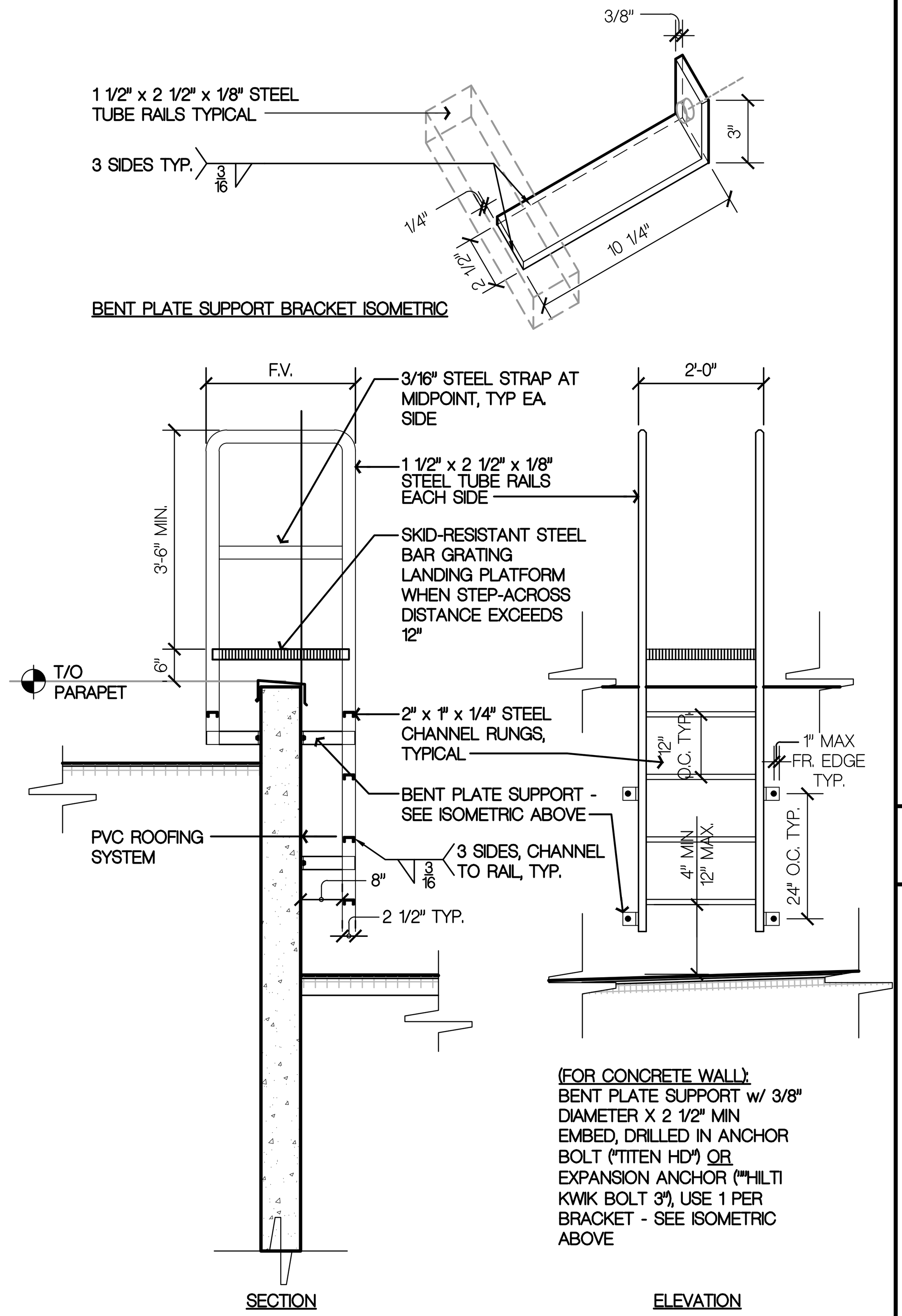
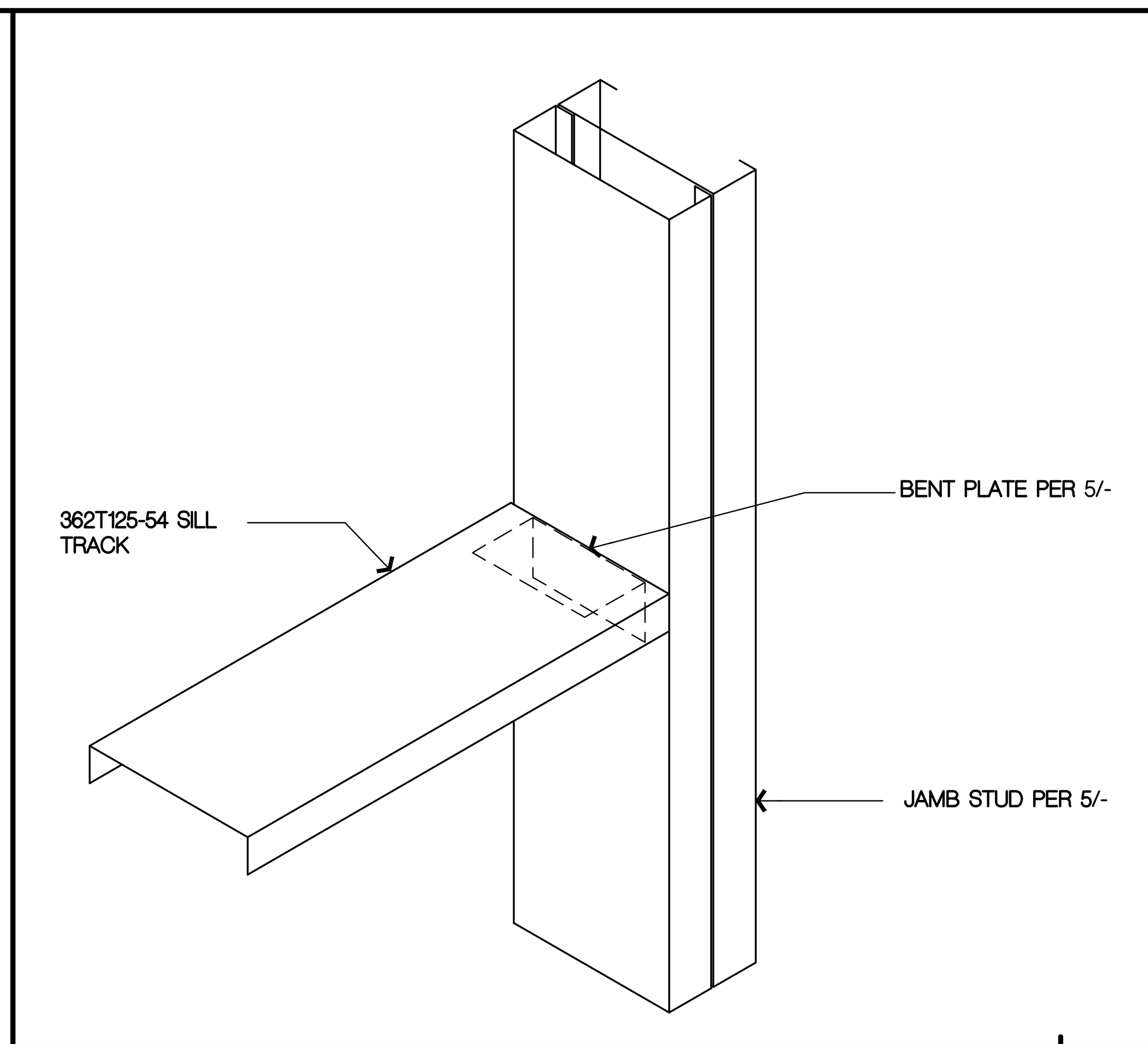
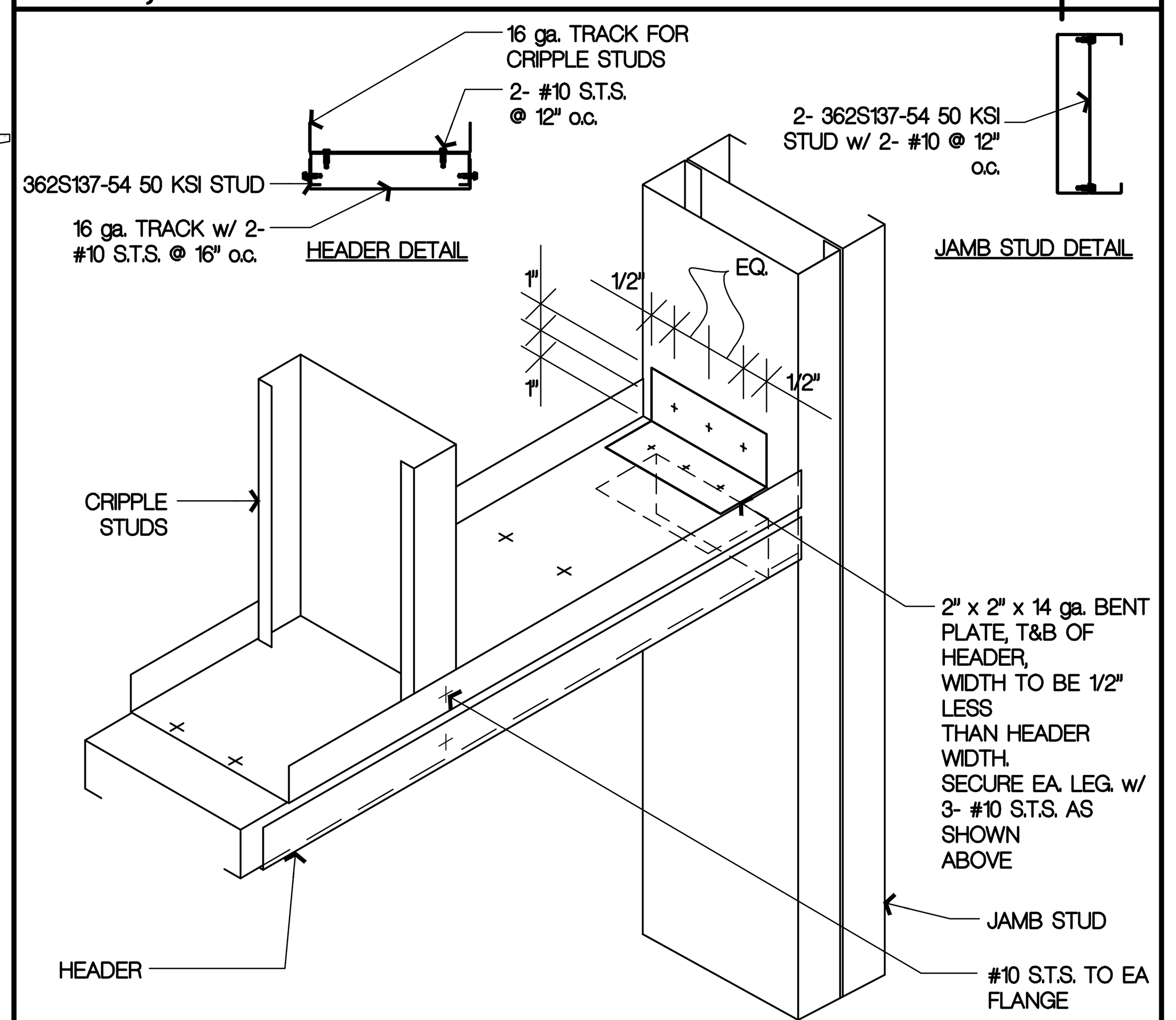


3/8"
1 1/2" x 2 1/2" x 1/8" STEEL TUBE RAILS TYPICAL
3 SIDES TYP.
1/4"
10 1/4"
3"
BENT PLATE SUPPORT BRACKET ISOMETRIC
F.V.
2'-0"
3/16" STEEL STRAP AT MIDPOINT, TYP EA. SIDE
1 1/2" x 2 1/2" x 1/8" STEEL TUBE RAILS EACH SIDE
3'-6" MIN.
SKID-RESISTANT STEEL BAR GRATING LANDING PLATFORM WHEN STEP-ACROSS DISTANCE EXCEEDS 12"
T/O PARAPET
2" x 1" x 1/4" STEEL CHANNEL RUNGS, TYPICAL
BENT PLATE SUPPORT - SEE ISOMETRIC ABOVE
PVC ROOFING SYSTEM
3 SIDES, CHANNEL TO RAIL, TYP.
8"
2 1/2" TYP.
1" MAX FR. EDGE TYP.
12" O.C. TYP.
4" MIN. 12" MAX
24" O.C. TYP.
SECTION
ELEVATION
(FOR CONCRETE WALL): BENT PLATE SUPPORT w/ 3/8" DIAMETER X 2 1/2" MIN EMBED, DRILLED IN ANCHOR BOLT ("TITEN HD") OR EXPANSION ANCHOR ("HILTI KWIK BOLT 3"), USE 1 PER BRACKET - SEE ISOMETRIC ABOVE
NOTE: ALL EDGES AND CORNERS TO BE EASED AND GROUND SMOOTH, PRIME AND PAINT - TYP
(FOR METAL STUD FRAMING): BENT PLATE SUPPORT w/ 1/4" x 2" SELF TAPPING SCREWS, USE 1 PER BRACKET - SEE ISOMETRIC ABOVE

ROOF ACCESS LADDER AT PARAPET
SCALE: 1/2"=1'-0" (10)

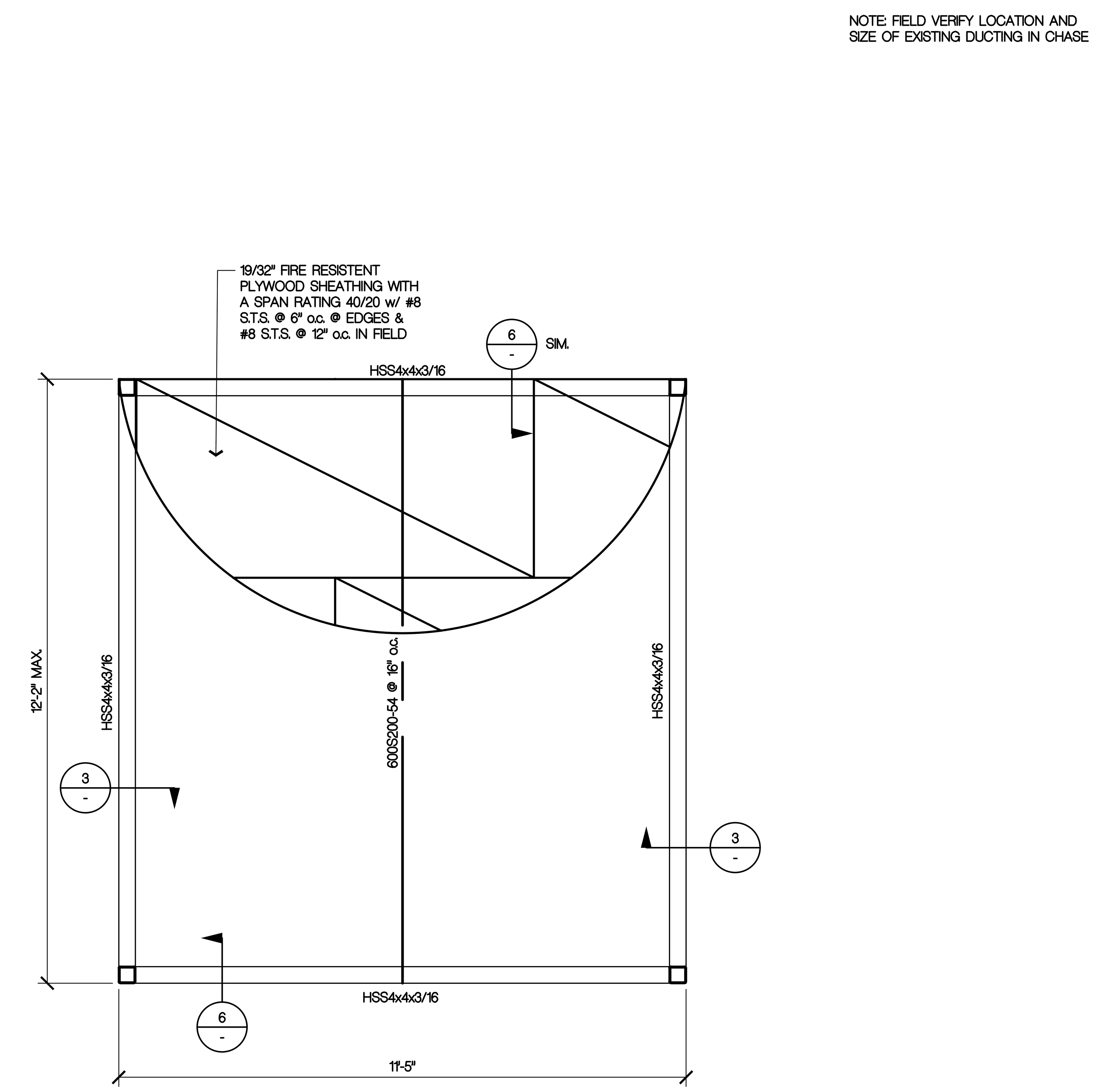


MECHANICAL ENCLOSURE SILL, TYP
SCALE: N.T.S (7)



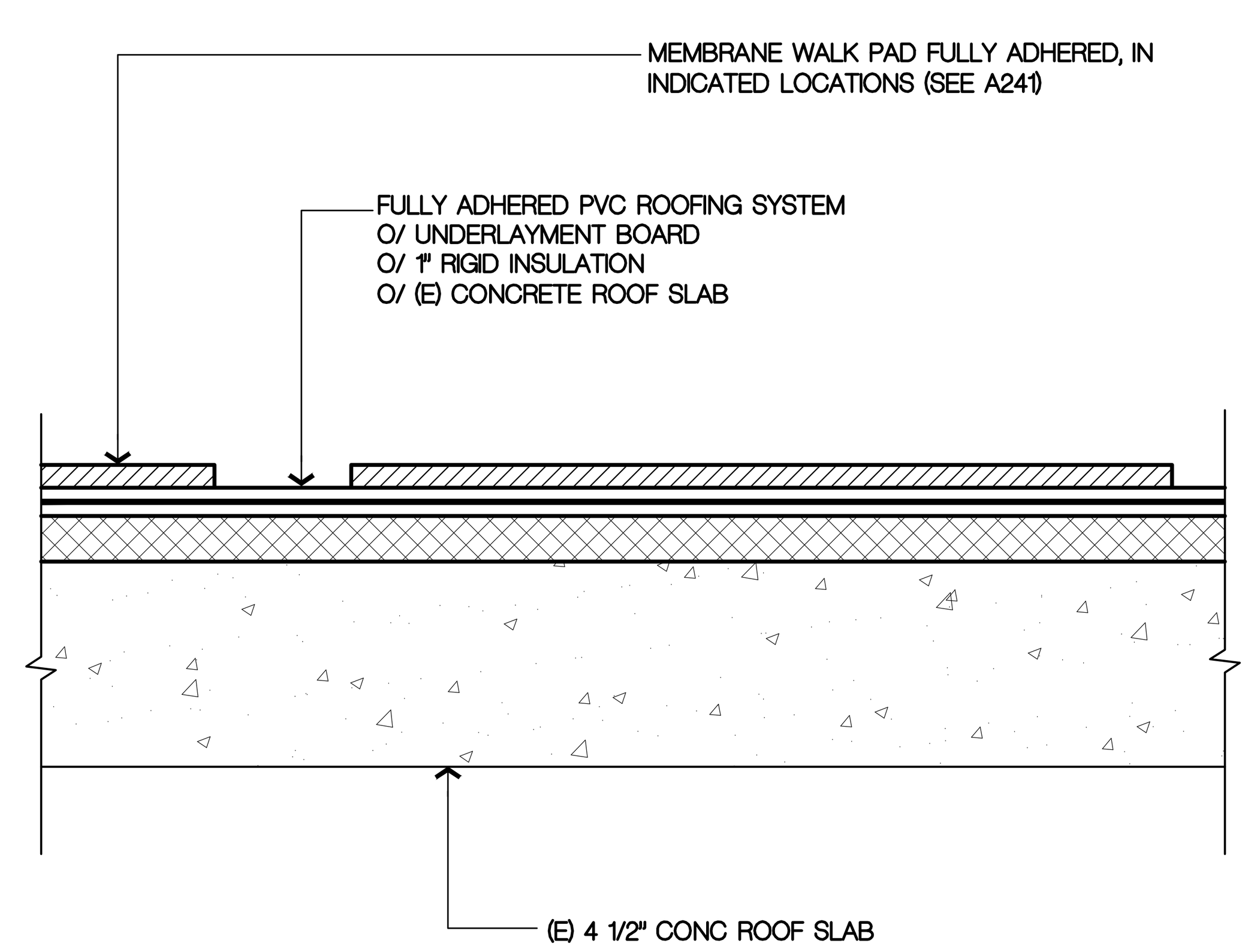
16 ga. TRACK FOR CRIPPLE STUDS
2- #10 S.T.S. @ 12" o.c.
362S137-54 50 KSI STUD
16 ga. TRACK w/ 2- #10 S.T.S. @ 16" o.c.
HEADER DETAIL
2- 362S137-54 50 KSI STUD w/ 2- #10 @ 12" o.c.
JAMB STUD DETAIL
1"
1/2"
EQ.
1/2"
CRIPPLE STUDS
2" x 2" x 14 ga. BENT PLATE, T&B OF HEADER, WIDTH TO BE 1/2" LESS THAN HEADER WIDTH. SECURE EA. LEG w/ 3- #10 S.T.S. AS SHOWN ABOVE
JAMB STUD
HEADER
#10 S.T.S. TO EA FLANGE

MECHANICAL ENCLOSURE HEADER, TYP.
SCALE: N.T.S (8)

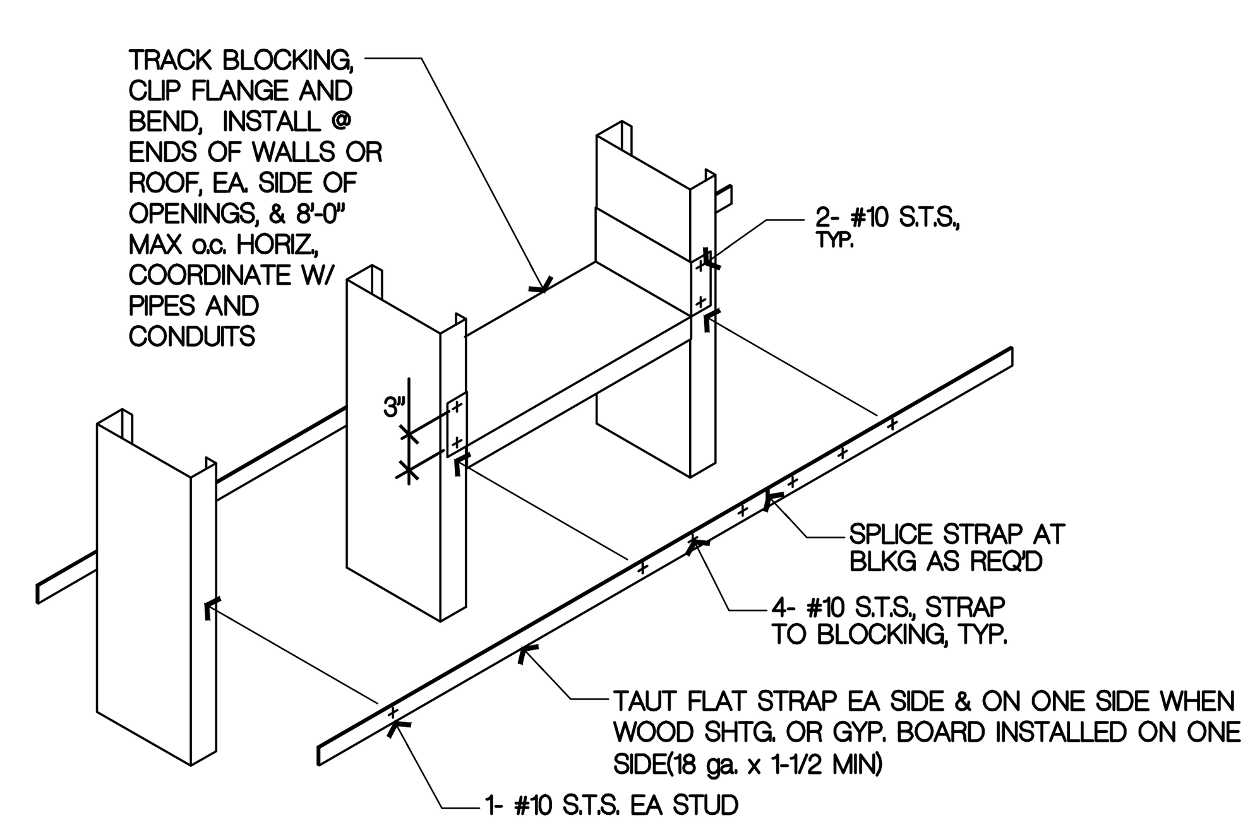


NOTE: FIELD VERIFY LOCATION AND SIZE OF EXISTING DUCTING IN CHASE
19/32" FIRE RESISTENT PLYWOOD SHEATHING WITH A SPAN RATING 40/20 w/ #8 S.T.S. @ 6" o.c. @ EDGES & #8 S.T.S. @ 12" o.c. IN FIELD
6 - SIM.
HSS4x4x3/16
12'-2" MAX.
HSS4x4x3/16
600S200-54 @ 16" o.c.
HSS4x4x3/16
3 -
3 -
6 -
HSS4x4x3/16
11'-5"

MECHANICAL ENCLOSURE BASE FRAME PLAN
SCALE: 1/2" = 1'-0" (2)

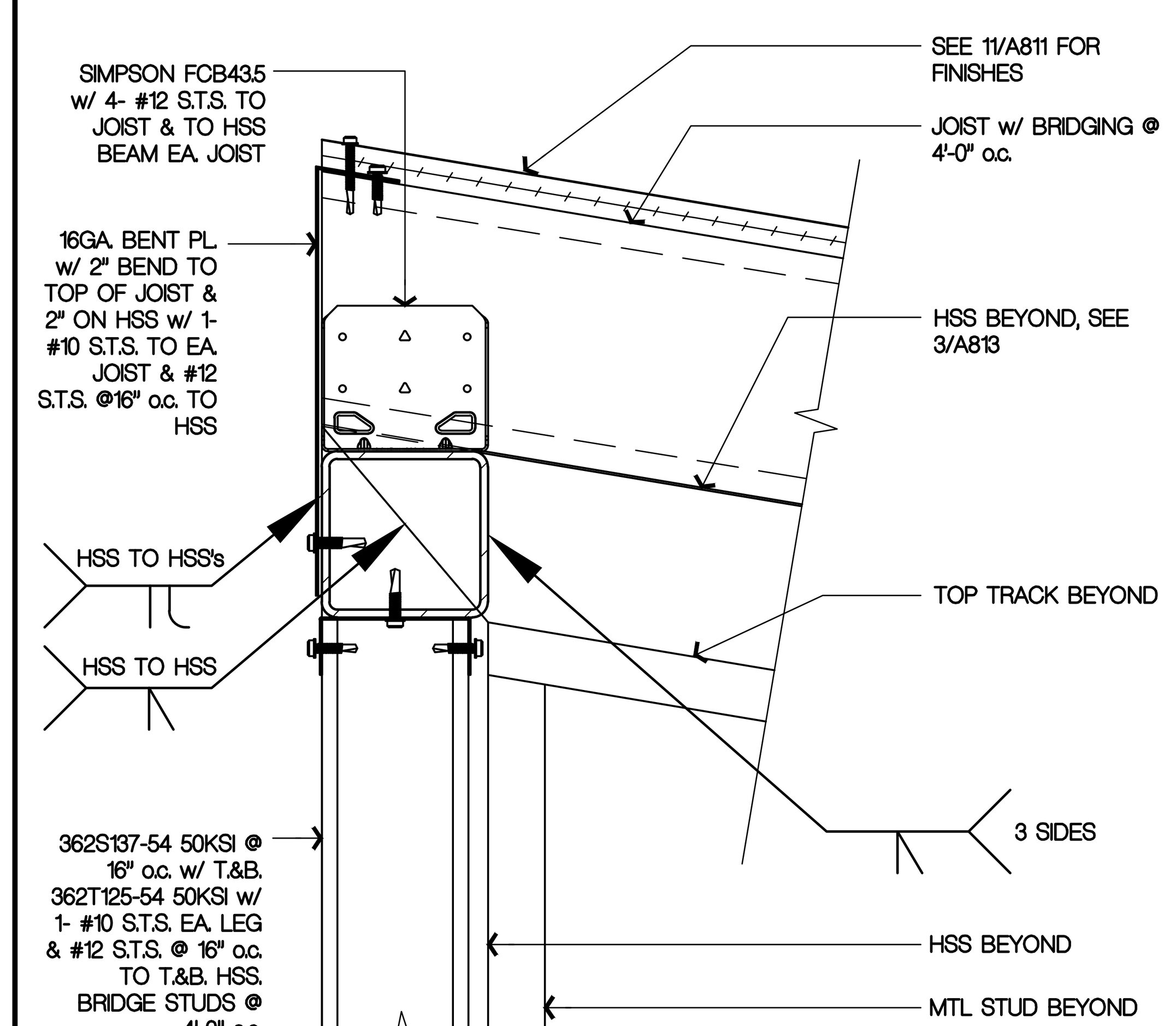


ROOFING SYSTEM, TYPICAL
SCALE: 3"=1'-0" (12)



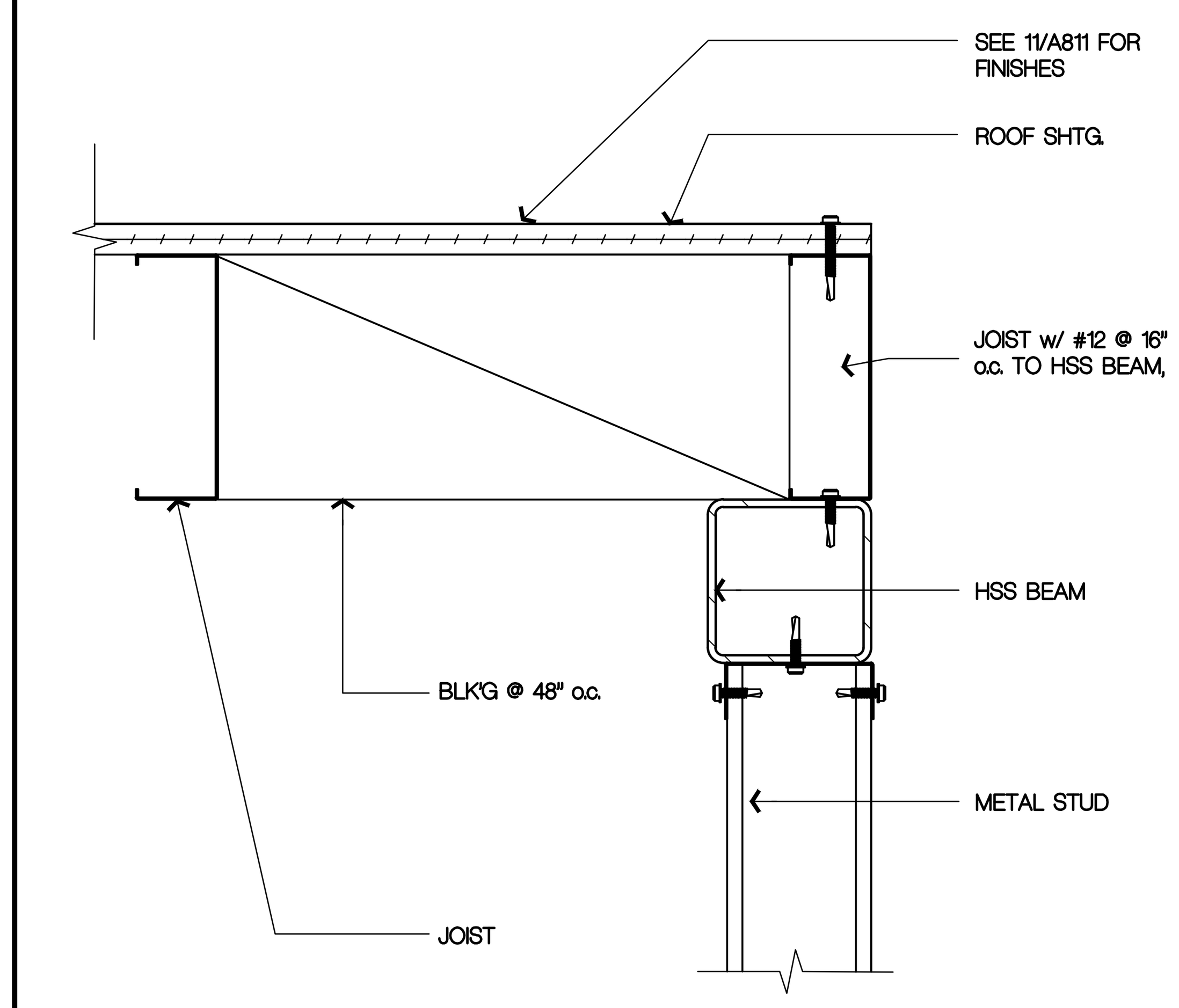
TRACK BLOCKING, CLIP FLANGE AND BEND, INSTALL @ ENDS OF WALLS OR ROOF, EA. SIDE OF OPENINGS, & 8'-0" MAX o.c. HORIZ., COORDINATE W/ PIPES AND CONDUITS
2- #10 S.T.S, TYP.
3"
SPLICE STRAP AT BLKG AS REQ'D
4- #10 S.T.S, STRAP TO BLOCKING, TYP.
TAUT FLAT STRAP EA SIDE & ON ONE SIDE WHEN WOOD SHTG. OR GYP. BOARD INSTALLED ON ONE SIDE(18 ga. x 1-1/2 MIN)
1- #10 S.T.S. EA STUD

MECHANICAL ENCLOSURE BLOCKS & STRAPS FOR STUDS & JOISTS
SCALE: N.T.S (9)



SIMPSON FCB435 w/ 4- #12 S.T.S. TO JOIST & TO HSS BEAM EA. JOIST
SEE 11/A811 FOR FINISHES
JOIST w/ BRIDGING @ 4'-0" o.c.
16GA. BENT PL. w/ 2" BEND TO TOP OF JOIST & 2" ON HSS w/ 1- #10 S.T.S. TO EA. JOIST & #12 S.T.S. @16" o.c. TO HSS
HSS BEYOND, SEE 3/A813
HSS TO HSS's
HSS TO HSS
TOP TRACK BEYOND
3 SIDES
362S137-54 50KSI @ 16" o.c. w/ T&B. 362T125-54 50KSI w/ 1- #10 S.T.S. EA. LEG & #12 S.T.S. @ 16" o.c. TO T&B. HSS. BRIDGE STUDS @ 4'-0" o.c.
HSS BEYOND
MTL STUD BEYOND

MECHANICAL ENCLOSURE JOIST CONNECTION TO HSS
SCALE: N.T.S (6)



MECHANICAL ENCLOSURE JOIST PARALLEL TO HSS
SCALE: N.T.S (3)

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LICENSED ARCHITECT
KYLE MATT
C 27504
REN. 10/31/19
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
EXTERIOR DETAILS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

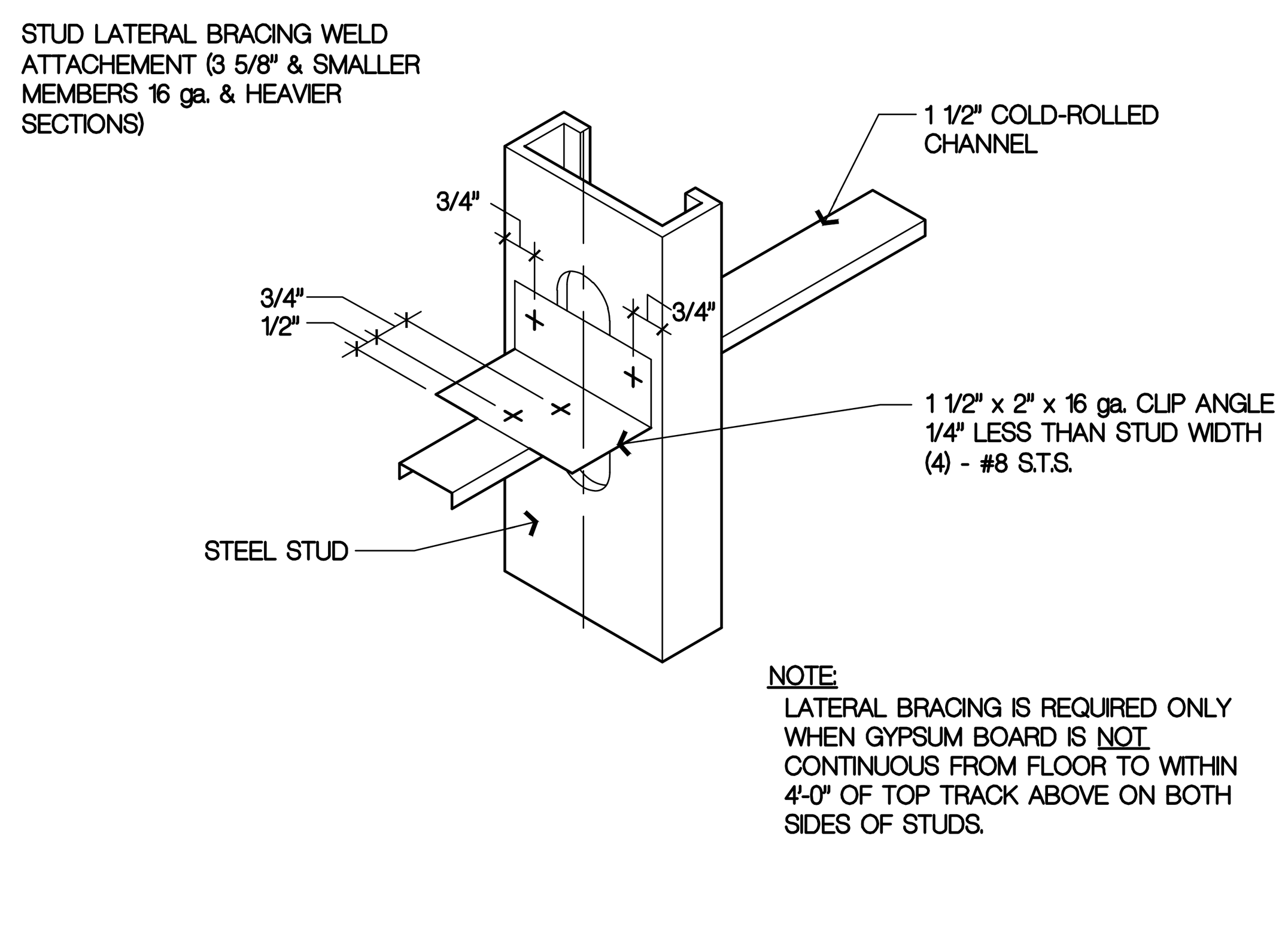
REVISIONS

Sym.	Description	By	Date

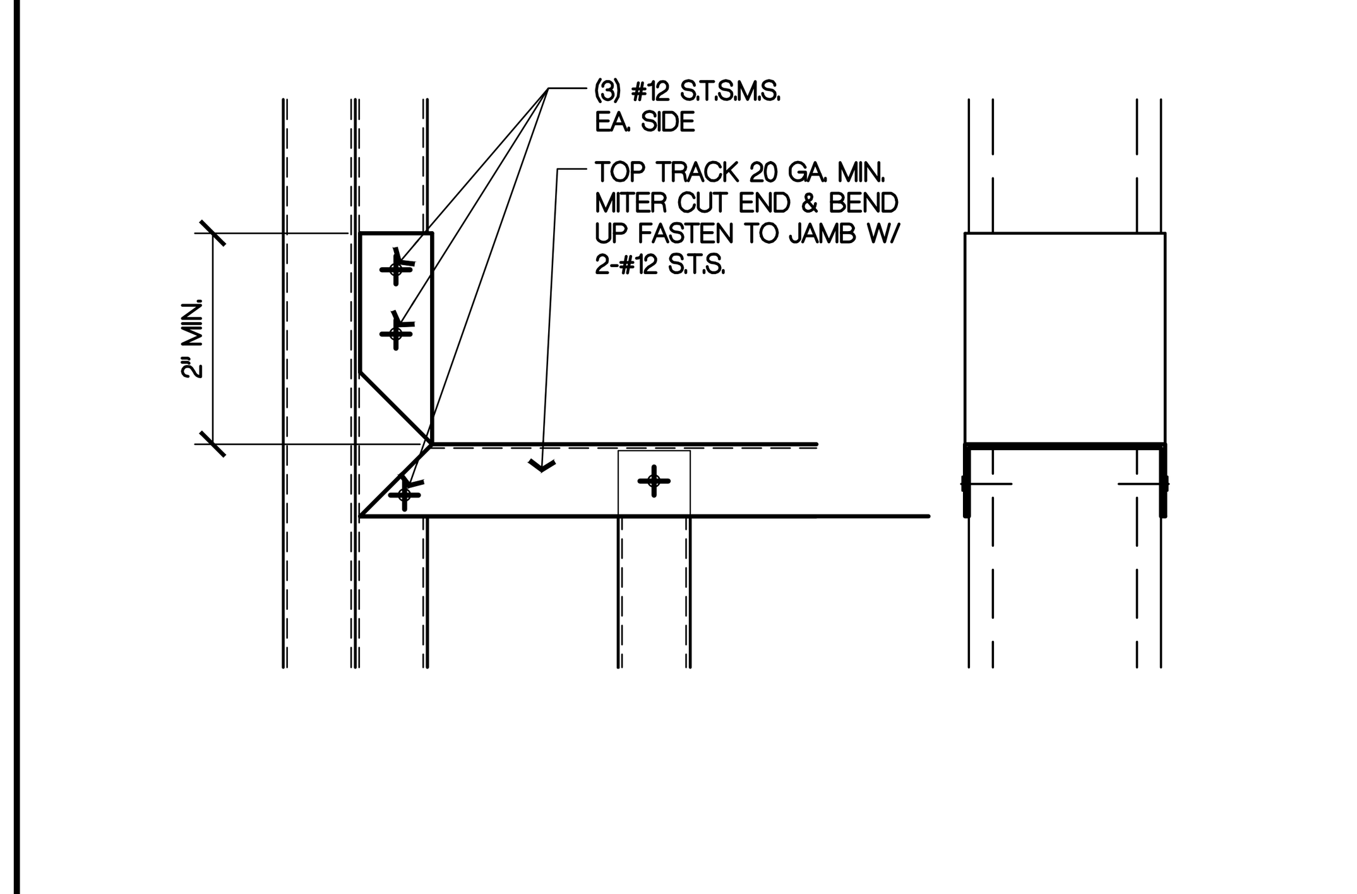
Drawn By	CDS
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

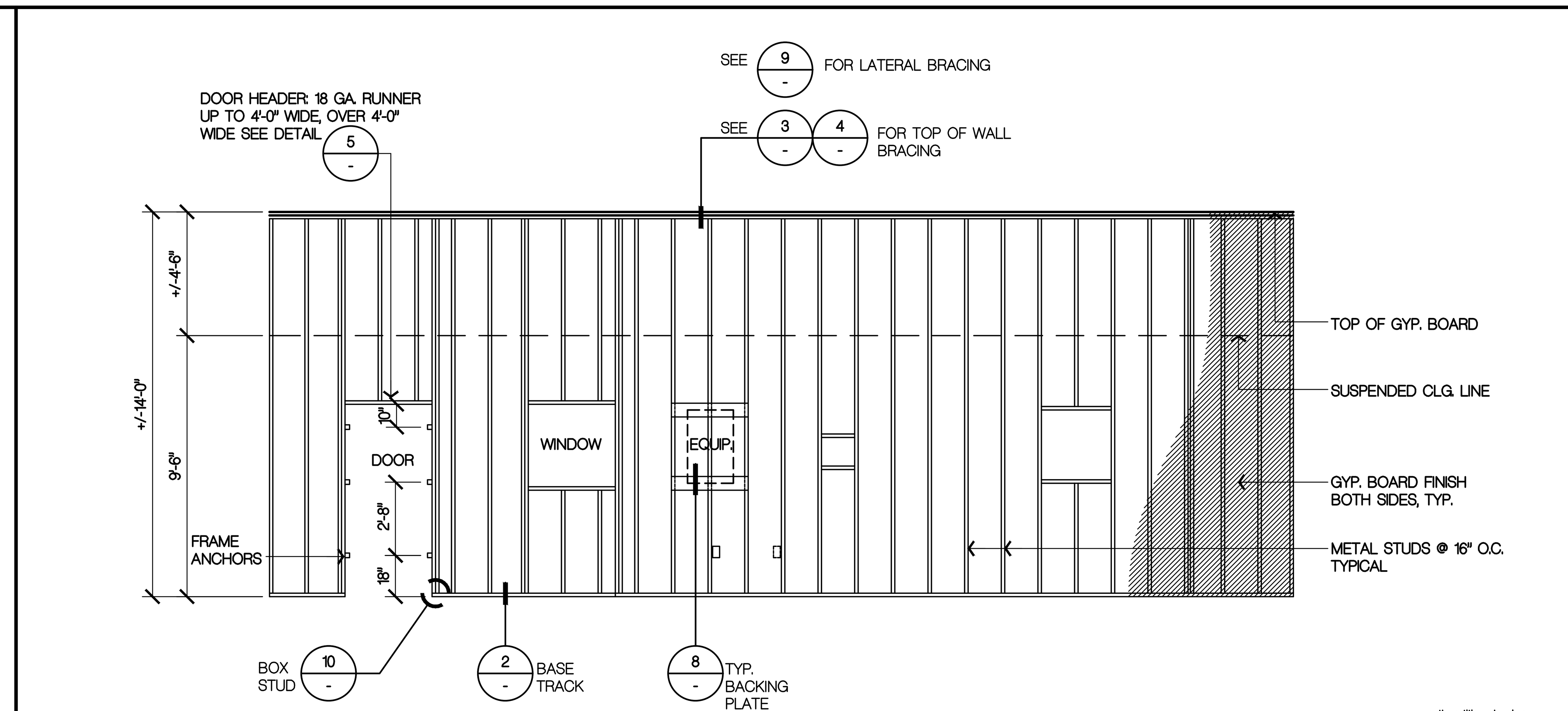
A813



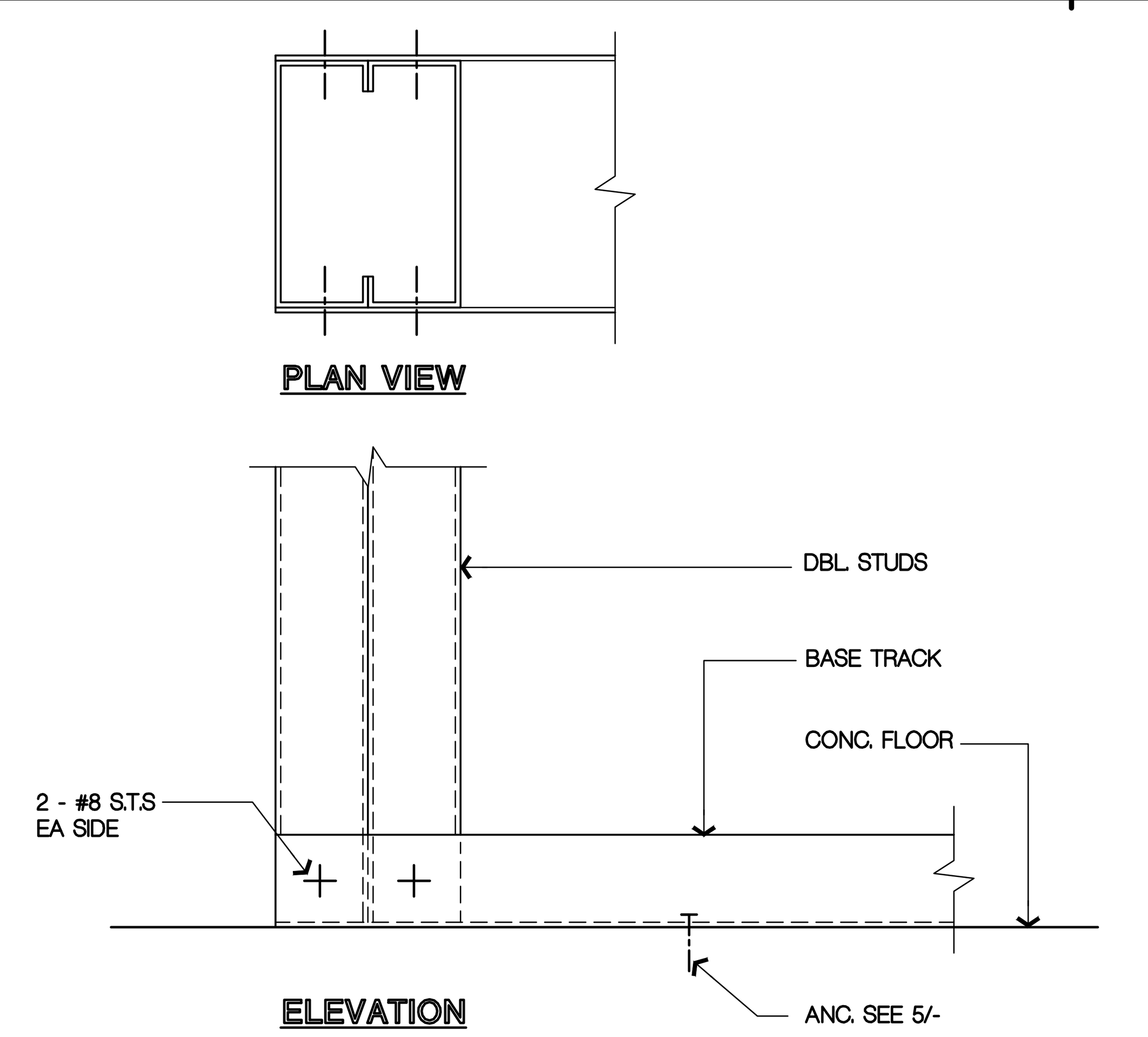
STEEL STUD LATERAL BRACING — N.T.S. — 10



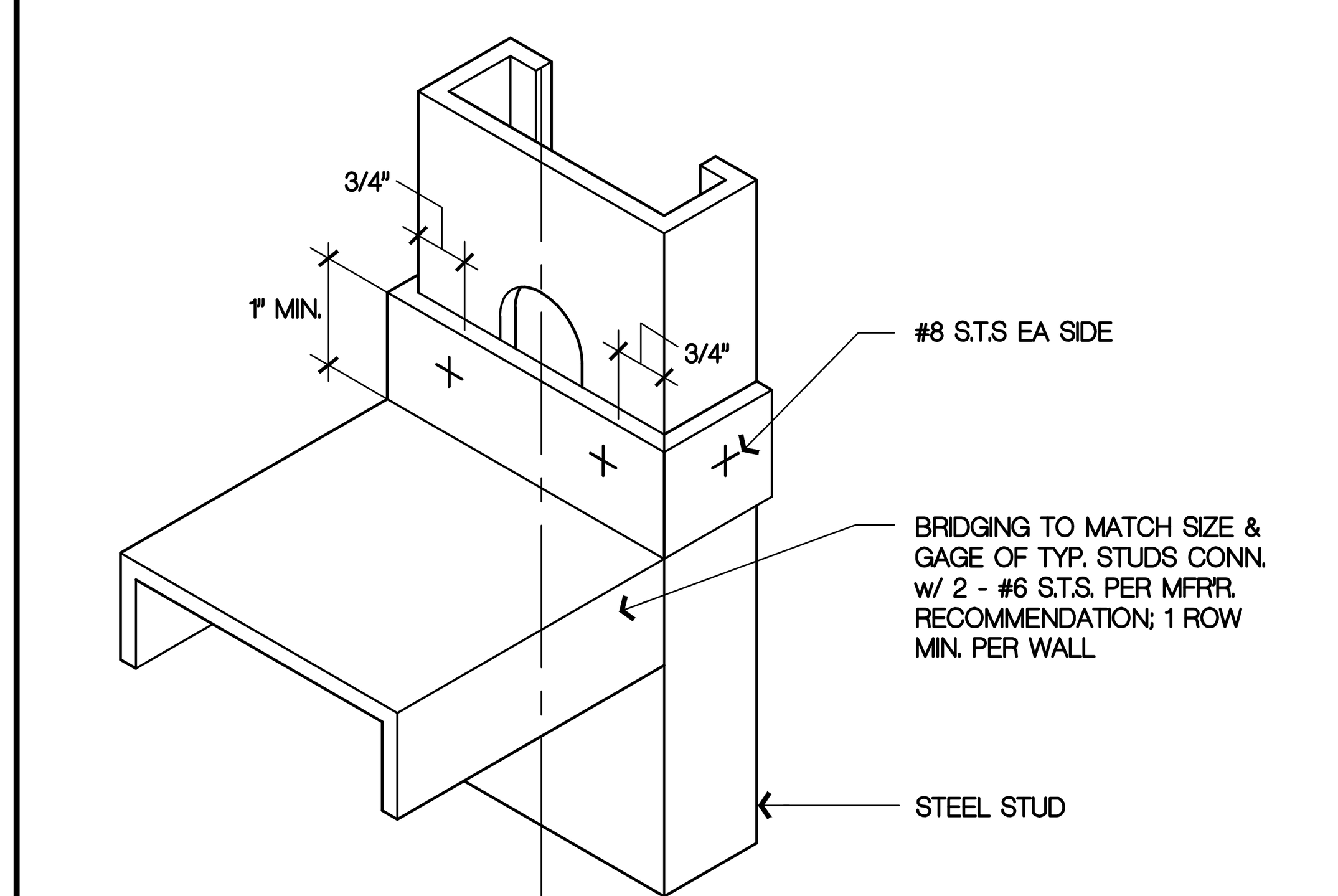
SPLICE DETAIL — N.T.S — 7



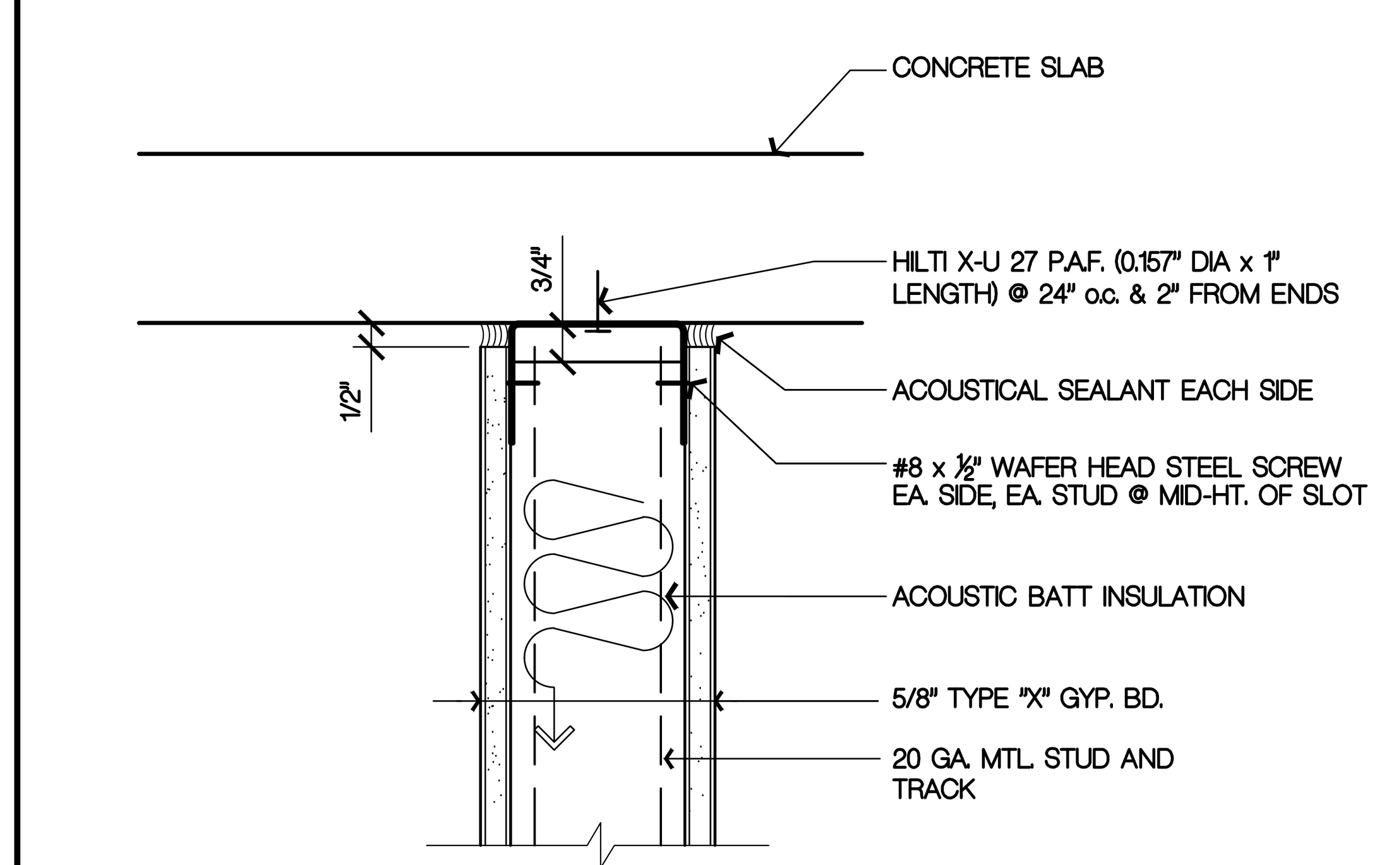
TYPICAL PARTITION DETAIL REFERENCE ELEVATION — SCALE: 1/4" = 1'-0" — 1



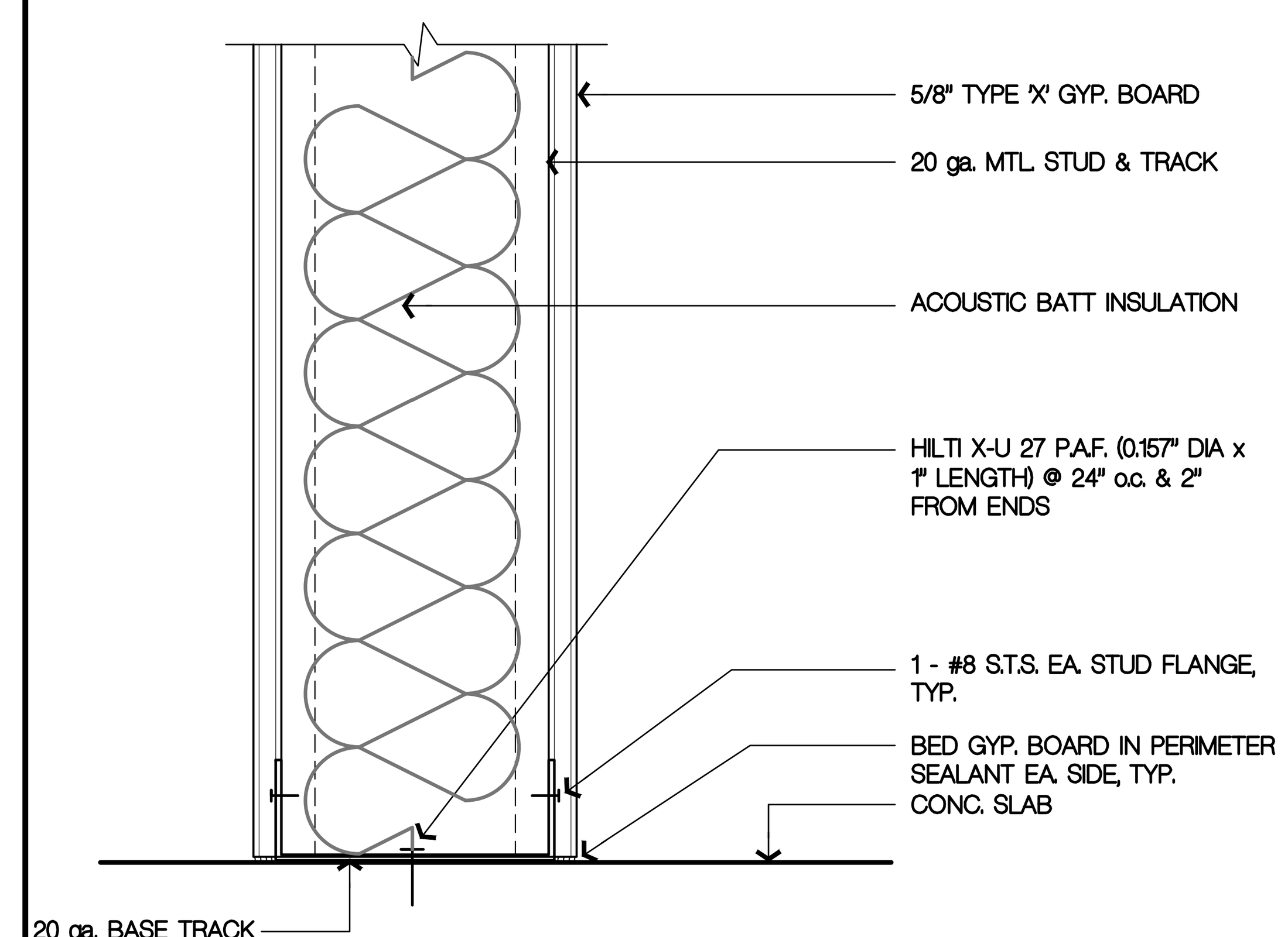
BOXED STUD DETAIL — N.T.S. — 11



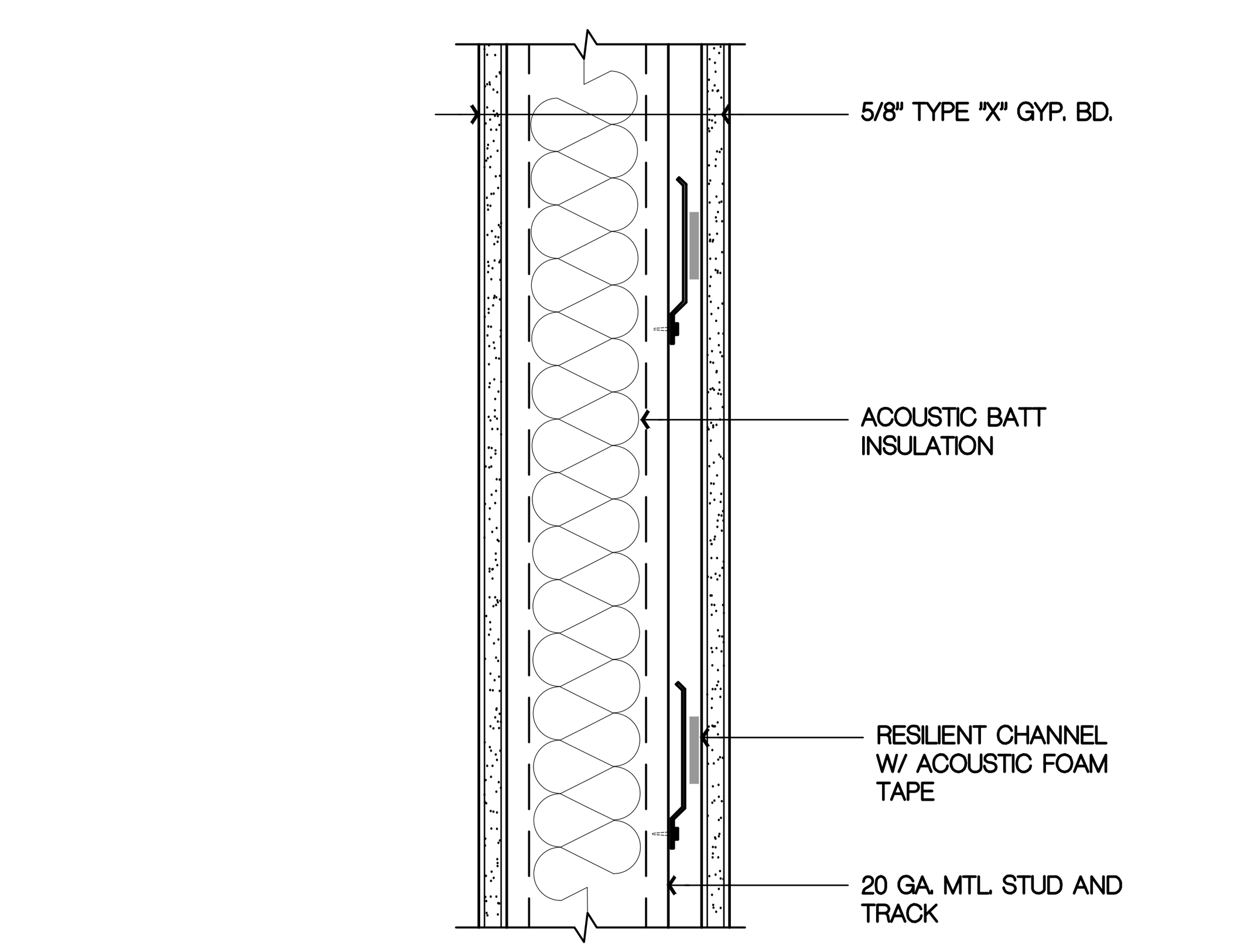
BLOCKING DETAIL — N.T.S. — 8



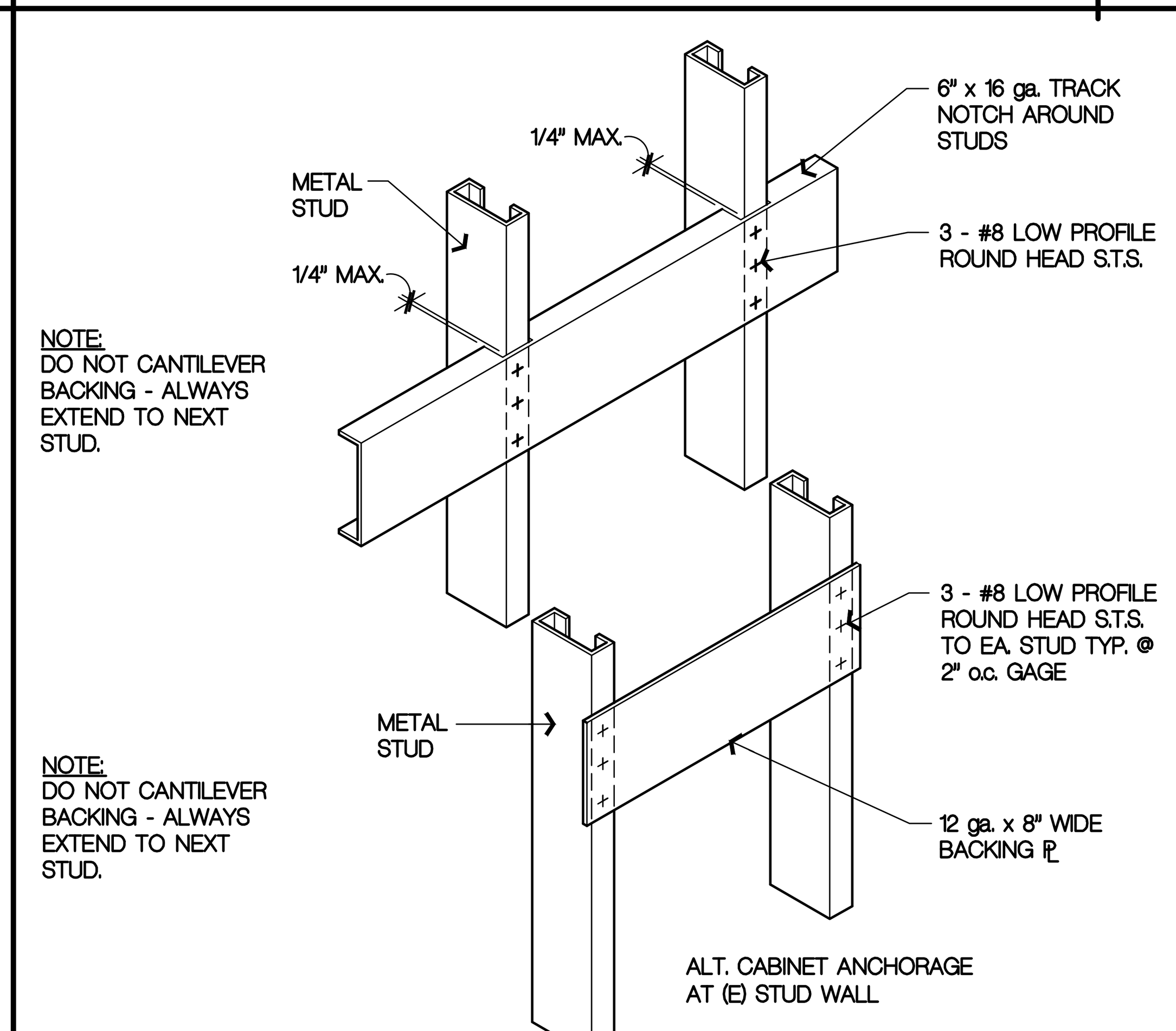
FULL HEIGHT WALL — SCALE: 3" = 1'-0" — 5



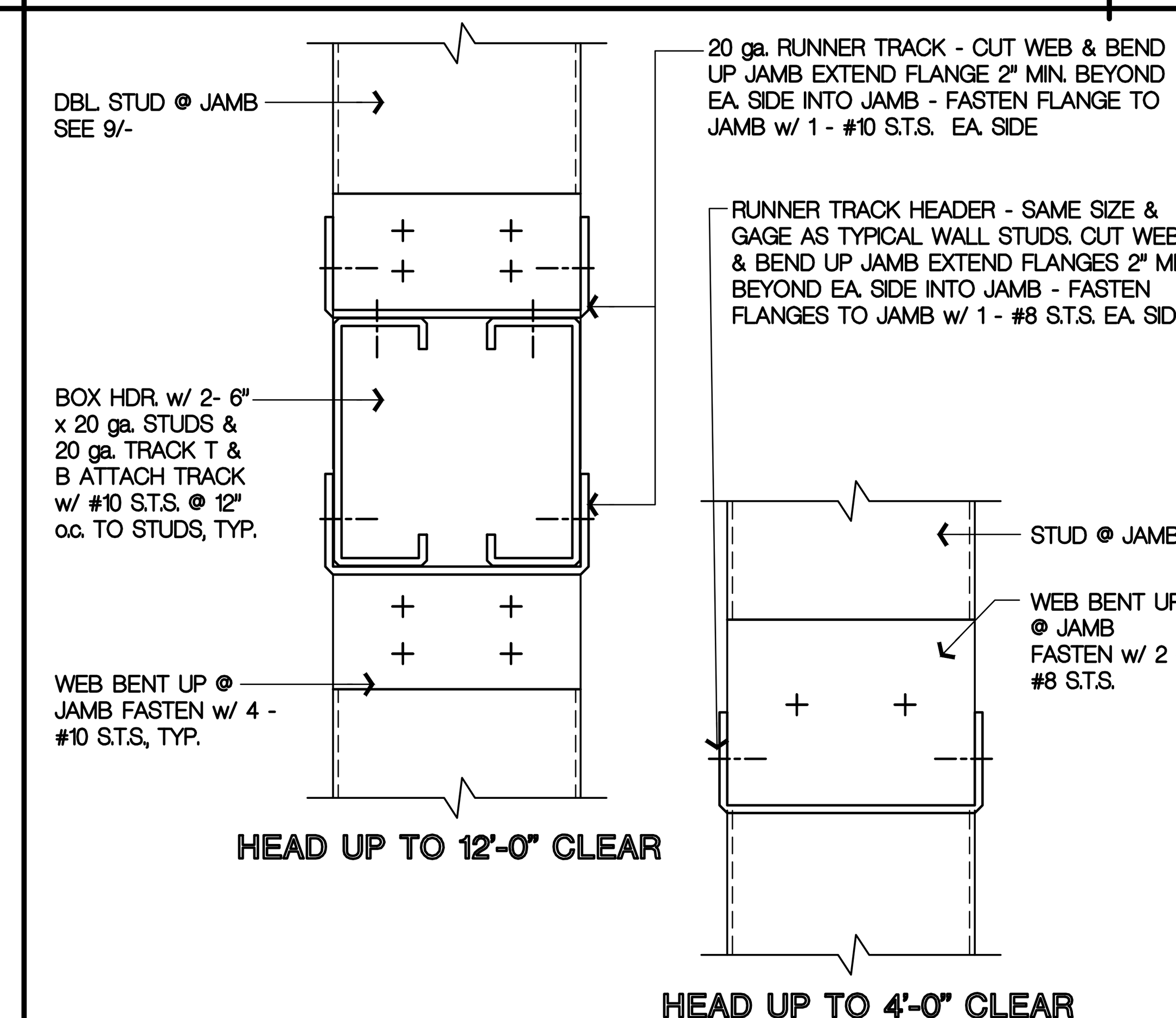
BASE TRACK DETAIL — SCALE: 3" = 1'-0" — 2



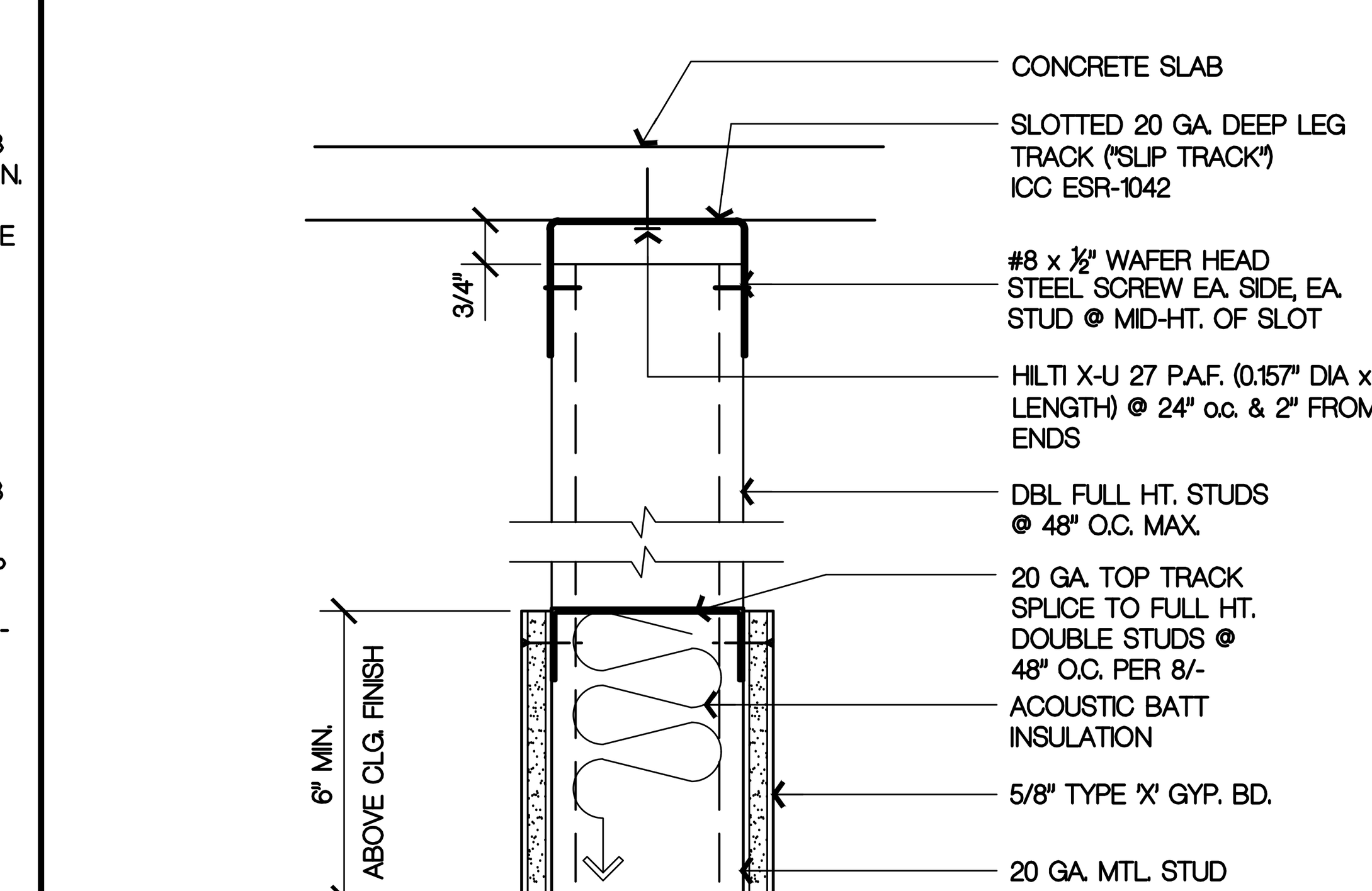
METAL STUD WALL W/ RESILIENT CHANNELS — SCALE: 3"=1'-0" — 12



TYPICAL BACKING PLATE DETAIL — N.T.S. — 9



TYPICAL DOOR AND WINDOW HEADER — SCALE: 3" = 1'-0" — 6



TOP TRACK DETAIL — SCALE: 3" = 1'-0" — 3

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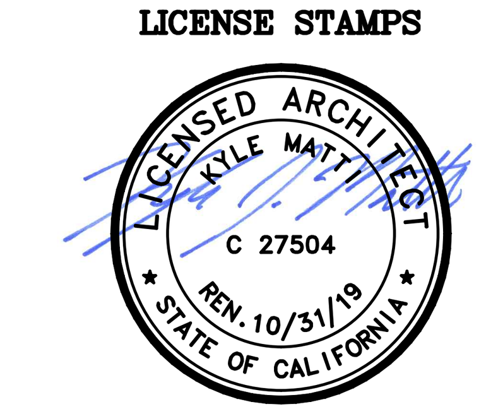


PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
INTERIOR DETAILS FRAMING

DRAWING STATUS
CONSTRUCTION DOCUMENTS

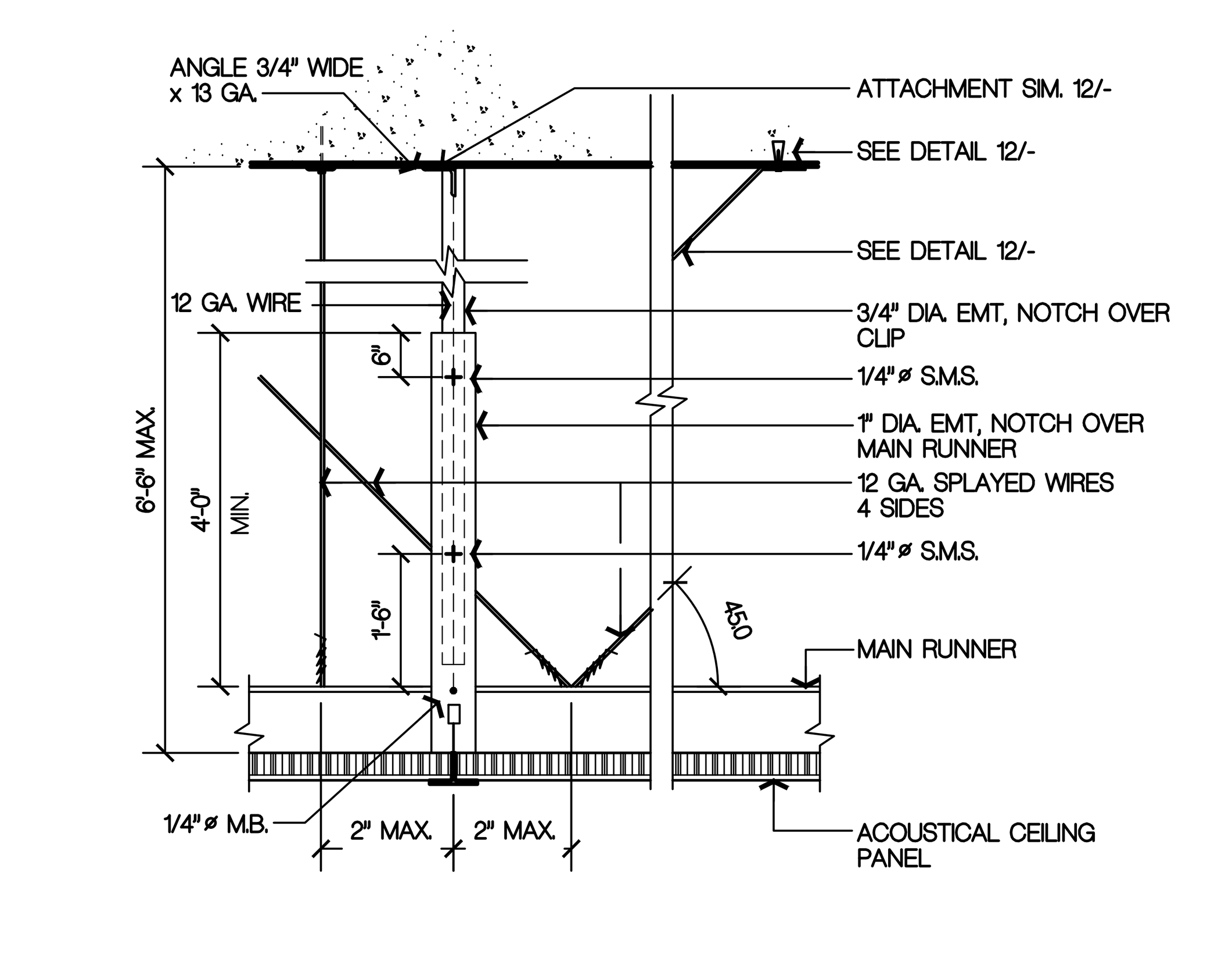
REVISIONS

Sym.	Description	By	Date

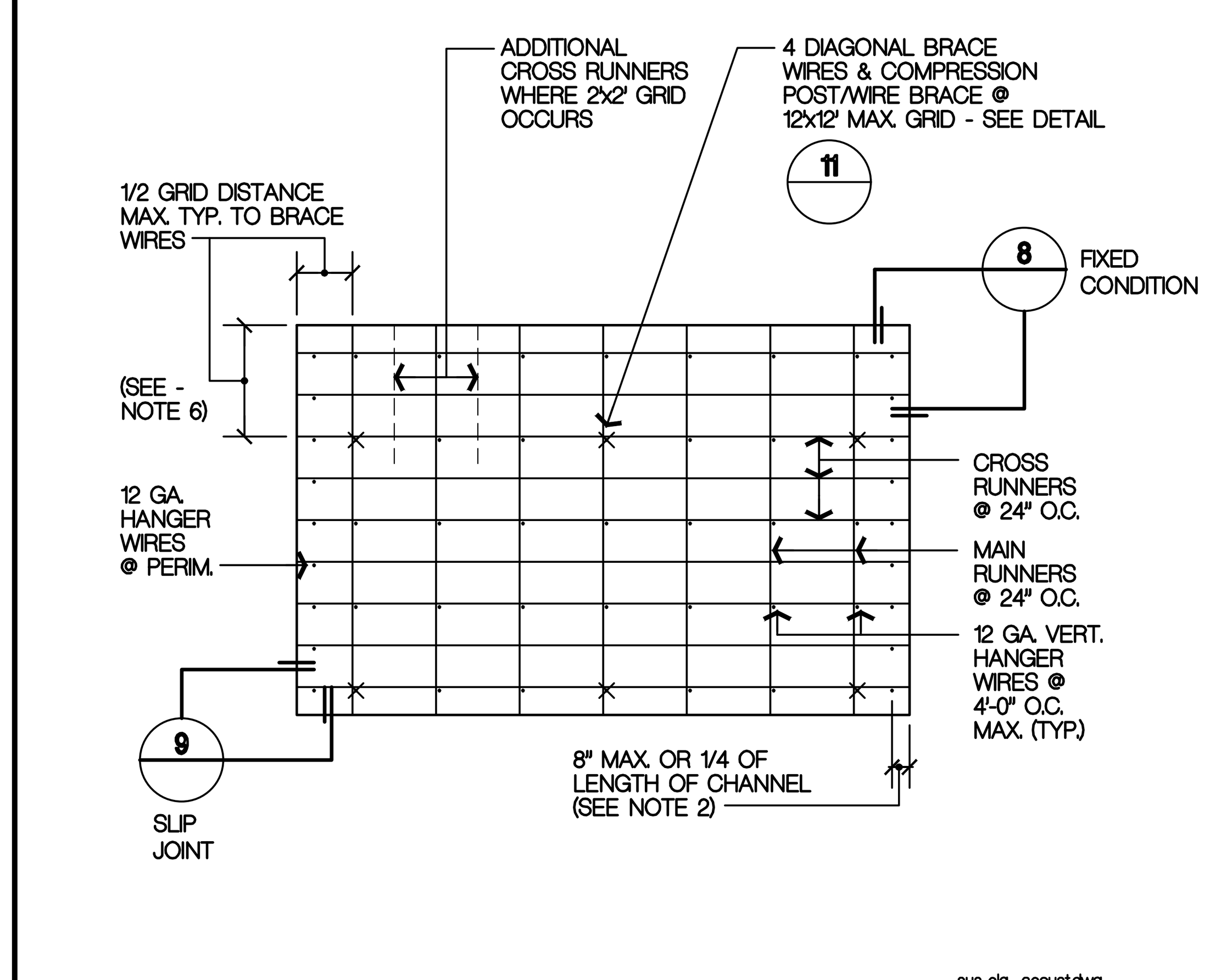
Drawn By	NMR
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

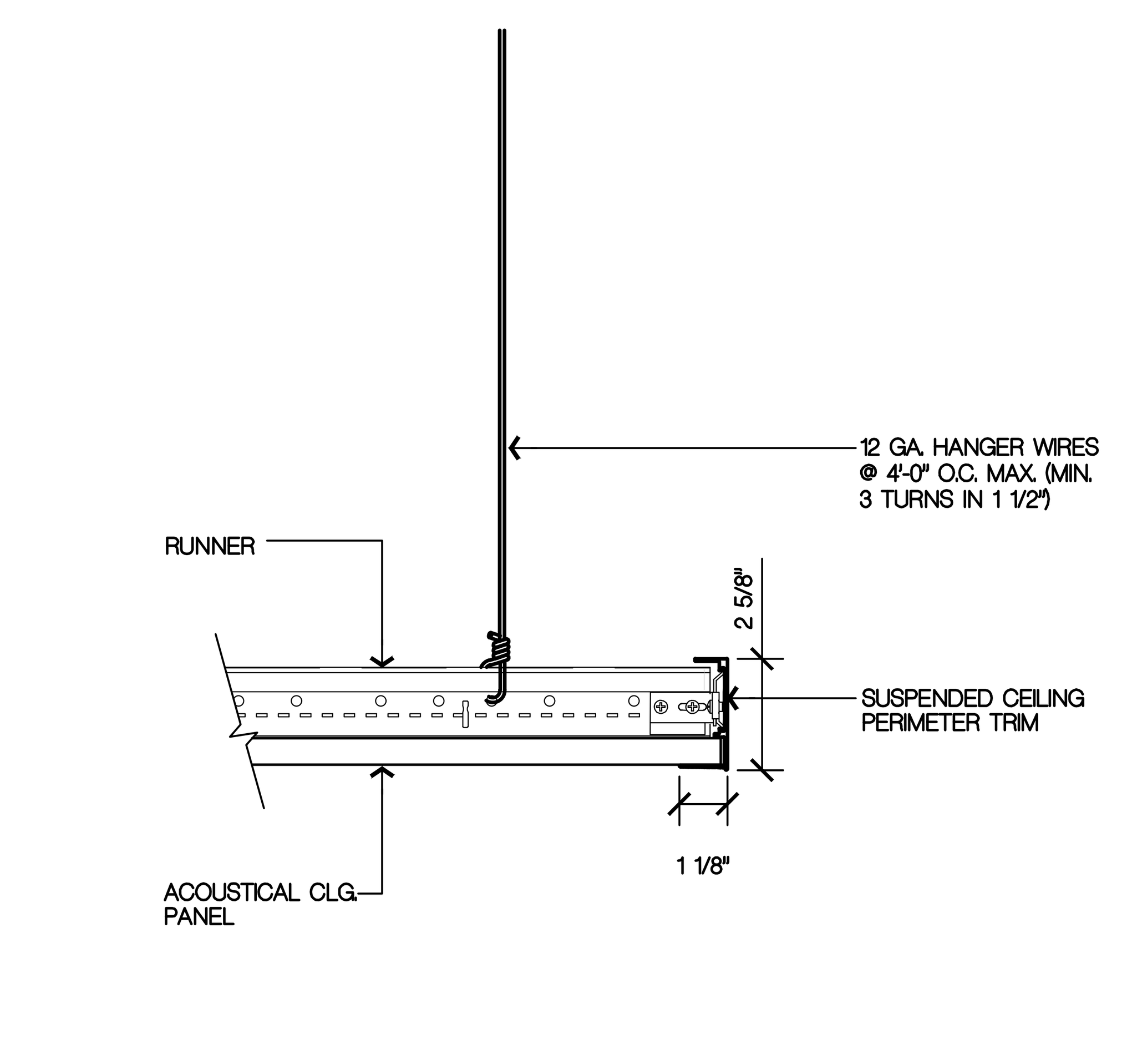
A901



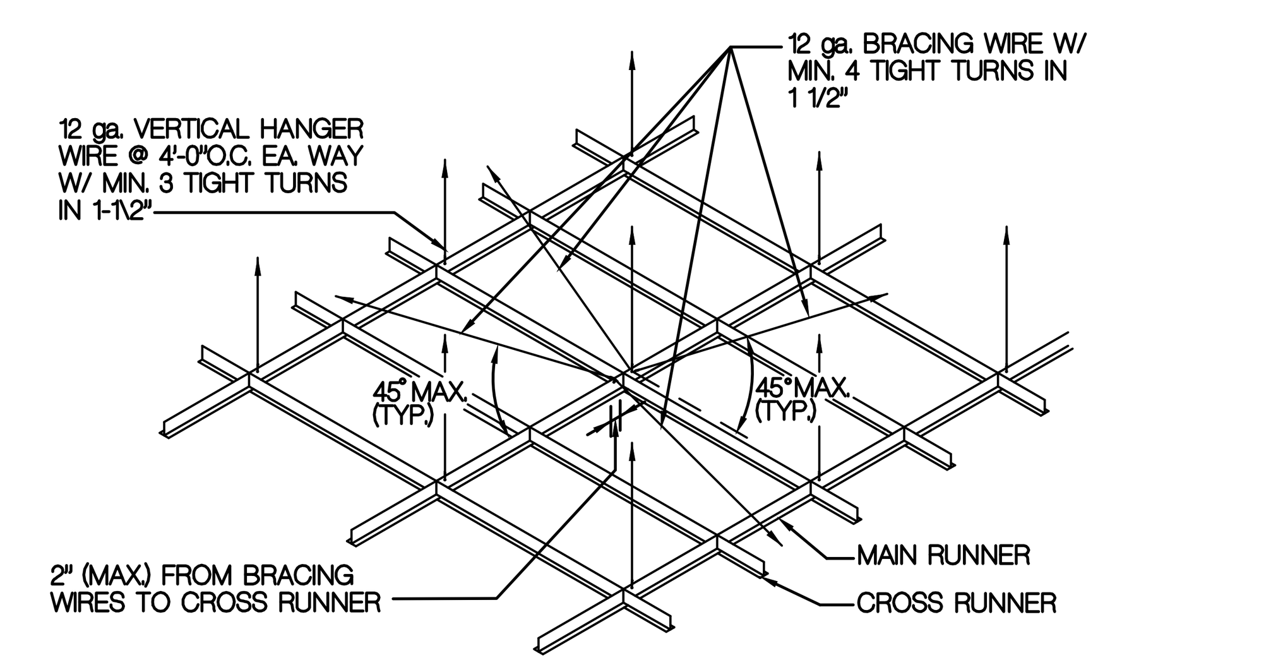
SUSP. ACOUSTICAL CLG. COMPRESSION POST / WIRE BRACE
1/2" = 1'-0" (10)



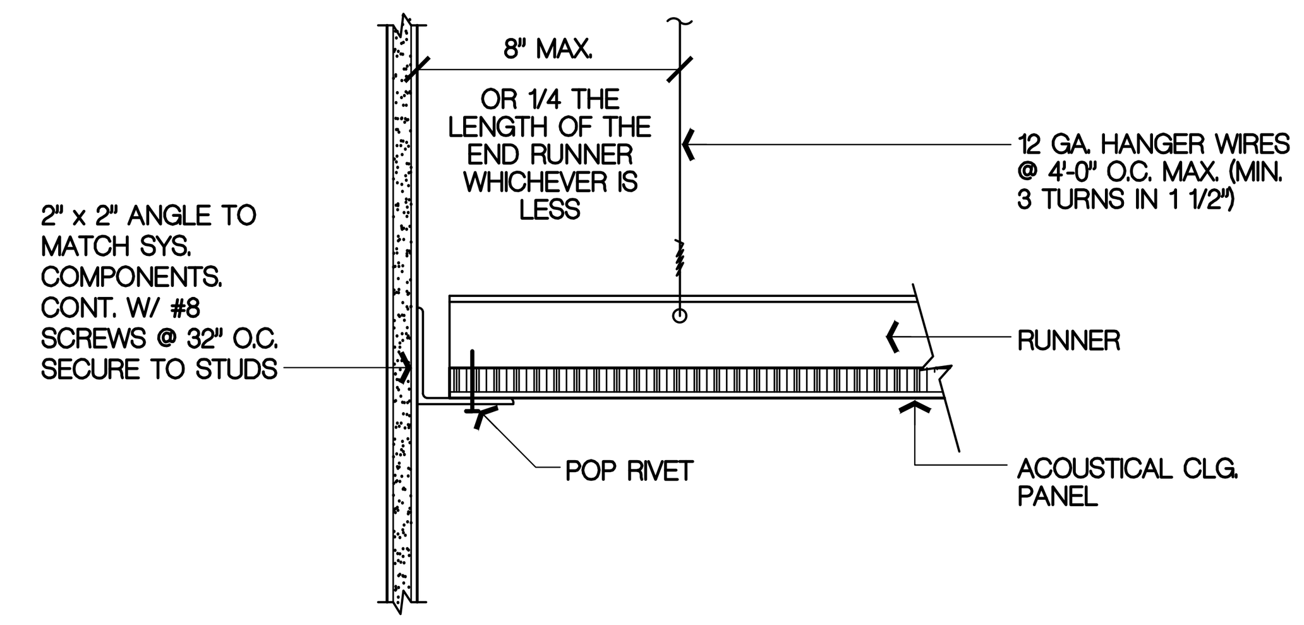
DIAGRAMMATIC ACOUSTICAL CEILING SUSPENSION SYSTEM
N.T.S. (7)



SUSPENDED ACOUSTICAL CEILING AT PERIMETER EDGE
3" = 1'-0" (4)



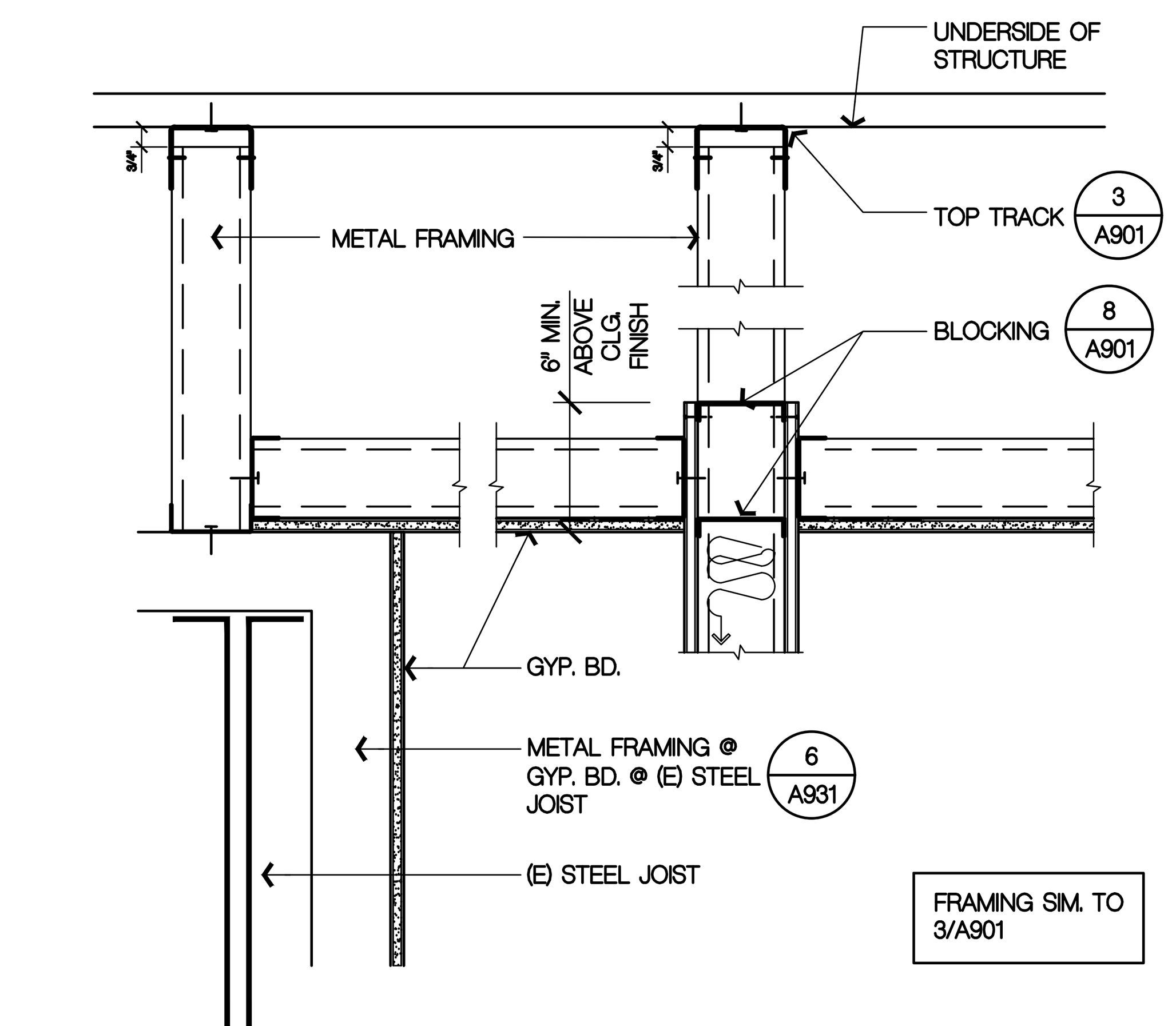
DIAGRAMMATIC ACOUSTICAL CEILING SUSPENSION SYSTEM
N.T.S. (11)



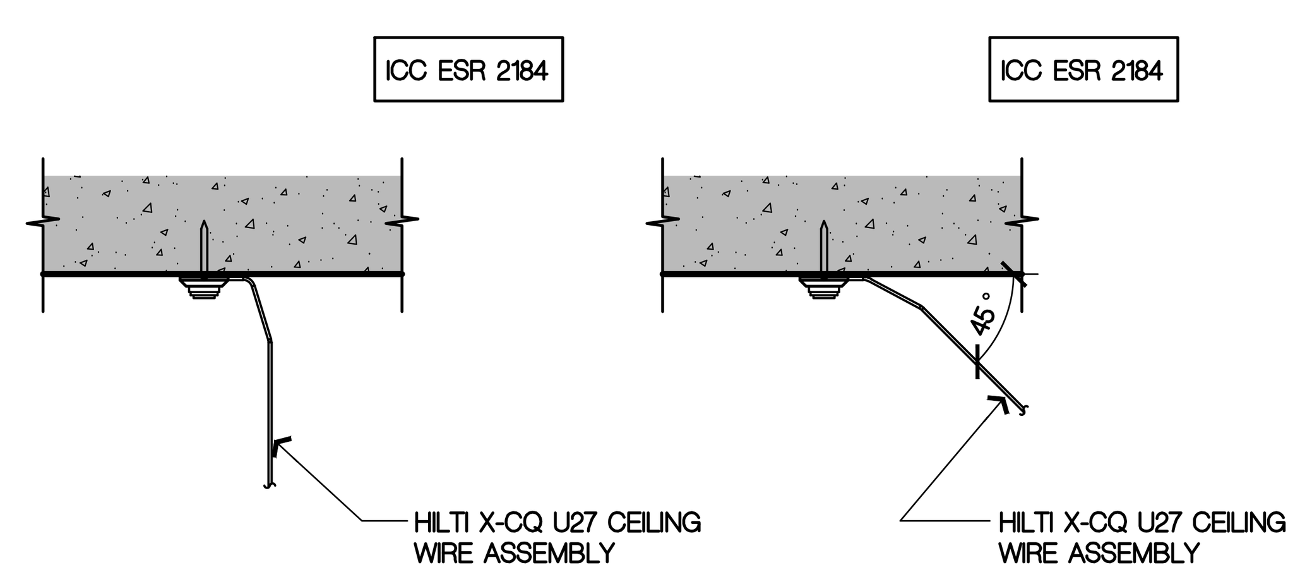
INSTALLATION OPTION
MNFR'S SYSTEM COMPLIANT SEISMIC PERIMETER CLIP AND SCREW INTO EACH RUNNER W/ SYSTEM COMPLIANT WALL ANGLE MOLDING

sus-clg_fixed.dwg

SUSPENDED ACOUSTICAL CEILING FIXED CONDITION AT WALL
3" = 1'-0" (8)



TOP TRACK DETAIL AT FRAMED GYP. BD. CEILING
SCALE: 1 1/2" = 1'-0" (5)

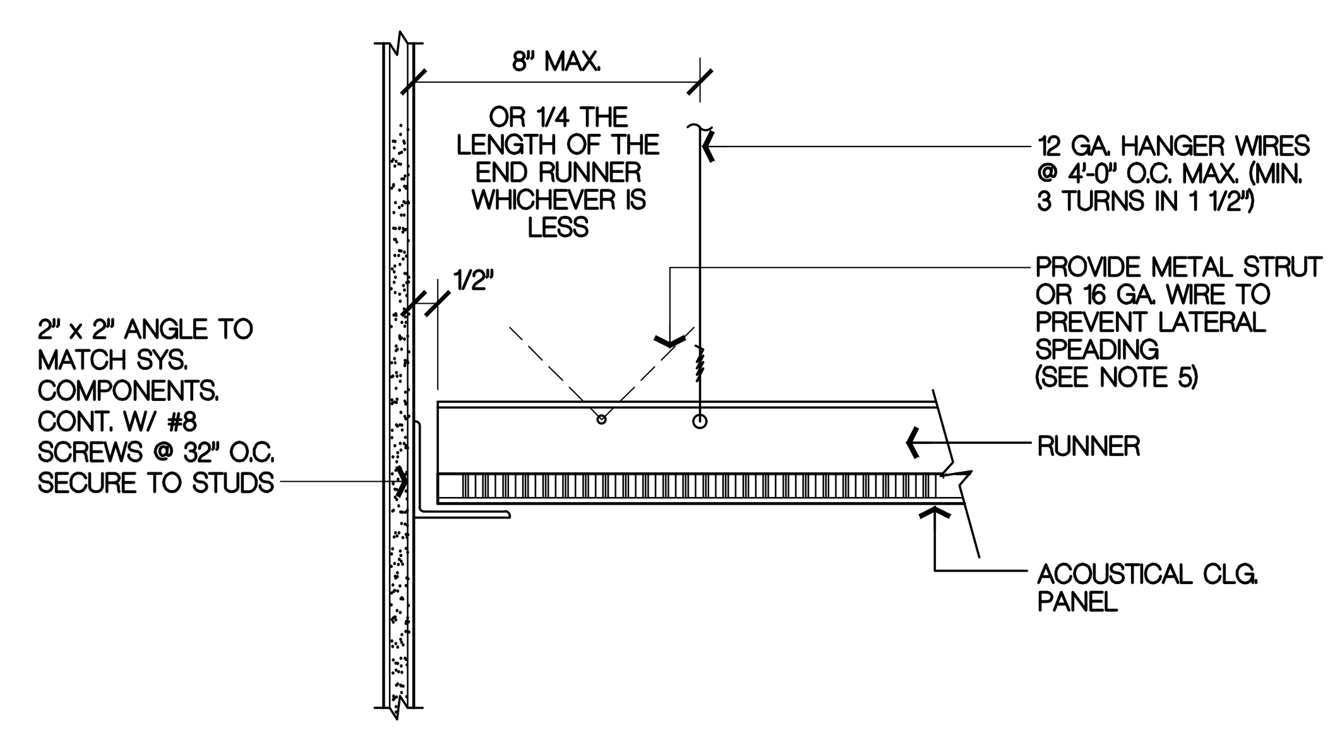


A. VERTICAL HANGER WIRE ATTACHMENT

B. SPLAYED SEISMIC BRACING WIRE ATTACHMENT

sus-clg_wire-attach.dwg

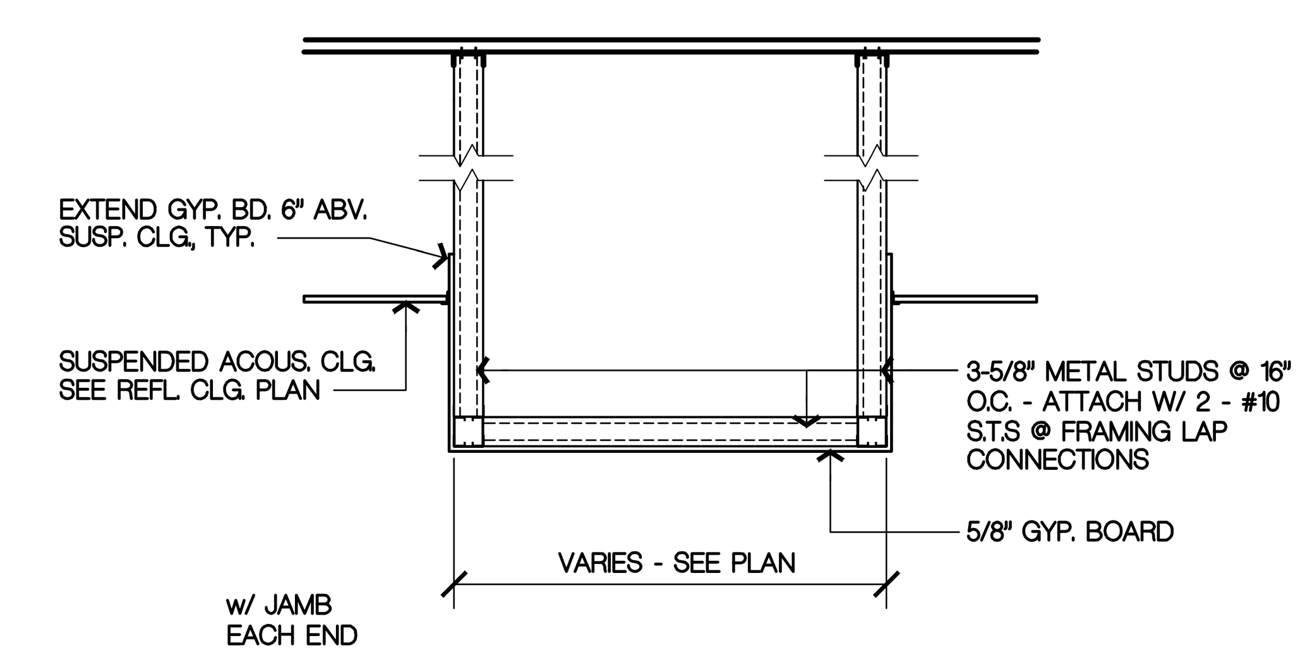
SUSPENDED ACOUSTICAL CEILING BRACING WIRE ATTACHMENT
SCALE: 3"=1'-0" (12)



INSTALLATION OPTION
MNFR'S SYSTEM COMPLIANT SEISMIC PERIMETER CLIP WITH NO SCREW IN CLIP FOR SLIP JOINT. PROVIDE MNFR'S SYSTEM COMPLIANT WALL ANGLE MOLDING

sus-clg_slip.dwg

SUSPENDED ACOUSTICAL CEILING SLIP JOINT AT WALL
3" = 1'-0" (9)



SOFFIT DETAIL
N.T.S. (6)

SUSPENDED CEILING NOTES:

1. 12 gauge (8 ga at gyp. bd.) hanger wires may be used for up to and including 4'-0" x 4'-0" grid spacing along main runners. Splices will not be permitted in any hanger wires. See (4)
2. Provide 12 ga. (8 ga at gyp. bd.) hanger wires at the ends of all main and cross runners within 8" from the support or within 1/4 of the length of the end tee, whichever is least, for the perimeter of the ceiling area. End connections for runners which are designed and detailed to resist the applied horizontal forces may be used in lieu of the 12 ga. hanger wires subject to agency review and approval.
3. Provide trapeze or other supplementary support members at obstructions to main hanger spacing. Provide additional hangers, struts or braces as required at all ceiling breaks, soffits or discontinuous areas. Hanger wires that are more than 1 in 6 out of plumb wall shall have counter-sloping wires.
4. Ceiling grid members may be attached to not more than 2 adjacent walls. Ceiling grid members should be at least 1/2 inch free of other walls, If walls run diagonally to ceiling grid system runners, one end of main and cross runners should be free and a minimum of 1/2" clear of wall. See (5/6)
5. At the perimeter of the ceiling area where main or cross runners are not connected to the adjacent wall, provide interconnection between the runners at the free end to prevent lateral spreading. A metal strut or 16 ga. wire with a positive mechanical connection to the runner may be used. Where the perpendicular distance from the wall to the first parallel runner is 12" or less, this interlock is not required. See (7)
6. Provide sets of four 12 ga. splayed bracing wires oriented 90 degrees from each other at not more than 12 feet by 12 feet on center. Provide bracing wires at locations not more than 1/2 of the above spacings from each perimeter wall and at the edge of vertical ceiling offsets. The slope of these wires should not exceed 45 degrees from the plane of the ceiling and should be taut without causing the ceiling to lift. Splices in bracing wires are not to be permitted. See (7) (10)
7. Fasten hanger wires with not less than 3 tight turns. Fasten bracing splay wires with 4 tight turns. Make all tight turns within a distance of 1-1/2 inches. Hanger or bracing wire anchors to the structure should be installed in such a manner that the direction of the wire aligns as closely as possible with the direction of the forces acting on the wire.
8. Separate all ceiling hanging and bracing wires at least 6 inches from all unbraced ducts, pipes, conduit, etc. It is acceptable to attach lightweight items, such as single electrical conduit not exceeding 3/4" nominal diameter, to hanger wires using connectors acceptable to U.B.C..
9. Attach all light fixtures to the ceiling grid runners to resist a horizontal force equal the weight of the fixtures.
10. Flush or recessed light fixtures and air terminals or services weighing less than 56 pounds may be supported directly on the runners of heavy duty grid system but, in addition, they must have a minimum of two 12 ga. slack safety wires attached to the fixture at diagonal corners and anchored to the structure above.

    All flush or recessed light fixtures and air terminals or services weighing 56 pounds or more must be independently supported by not less than 4 taut 12 ga. wires each attached to the fixture and to the structure above regardless of the type of ceiling grid system used.

    The 4 taut 12 ga. wires including their attachment to the structure above must be capable of supporting 4 times the weight of the unit.
11. All fixtures and air terminals or services supported on intermediate duty grid systems must be independently supported by not less than 4 taut 12 ga. wires each attached to the fixture or terminal and to the structure above.
12. Support surface mounted light fixtures by at least two positive devices which surround the ceiling runner and which are each supported from the structure above by a 12 ga. wire. Spring clips or clamps that connect only to the runner are not acceptable. Provide additional supports when light fixtures are 8 feet or longer.
13. Support pendant mounted light fixtures directly from the structure above with hanger wires or cables passing through each pendant hanger and capable of supporting 4 times the weight of the fixture.
14. Lay-in ceiling assemblies in exitways shall be installed with a main runner or cross runner surrounding all sides of each piece of tile board or panel and each light fixture or grill splices and intersections of such runners shall be attached with through connectors such as pop rivets, screws, pins, plates with bent tabs or by other approved connectors. Expansion joints shall be provided in the ceiling at intersections of corridors and at junctions of corridors and lobbies or other similar areas.
15. Gypboard suspended ceiling systems shall comply with Title 24, CCR, and gypboard ceilings should not support materials or building components other than grills, light fixtures, small electrical conduits, small ducts and the like. All such components should be supported either directly from main runners, or by supplemental framing which is supported by main runners.
16. Suspended acoustical ceiling systems shall comply with 2016 CBC (2015 IBC), ASTM C635, ASTM C636, CISCA (FOR SEISMIC ZONES 3 & 4), AND ASCE 7.05. No vertical loads other than gypboard dead load should be applied to cross-furring.

GENERAL CEILING NOTES:

ALL WORK SHALL COMPLY WITH 2016 CBC (2015 IBC), ASTM C635, ASTM C636, CISCA (FOR SEISMIC ZONES 3 & 4), AND ASCE 7.05 PARTICULAR ATTENTION IS DIRECTED TO INDEPENDANT SUSPENSION OF FIXTURES, DUCTS, DIFFUSERS, GRID INTERSECTIONS, SPLICES, PERIMETER DETAILS AND SEISMIC REQUIREMENTS.

NOTES:
(1). The 2x4 sub-purlins, located in the roof in a typical type tilt-up structure, are not considered to be structural members.
(2). The strut shall be vertical, and shall not hang more than 1 in 6 out-of- plumb.
(3). Struts shall be designed in accordance with chapter 22 Steel, 2013 Edition of the California Building Code (2012 IBC).

PIPE:

ACCEPTABLE STRUT SIZES AND LENGHTS

TRADE SIZE	ALLOWABLE LENGTH	
	EMT	IMC or RMC
1/2"	3'-10"	4'-4"
3/4"	5'-2"	5'-7"
1"	6'-6"	7'-0"
1 1/4"	8'-6"	9'-0"
1 1/2"	9'-10"	10'-5"
2"	---	13'-2"

EMT - Electrical Metallic Tubing
IMC - Intermediate Metal Conduit
RMC - Rigid Metal Conduit

sus-clg_notes.dwg

SUSPENDED CEILING NOTES
N.T.S. (3)

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SHEET No.
A931

Login Name: CharlesG
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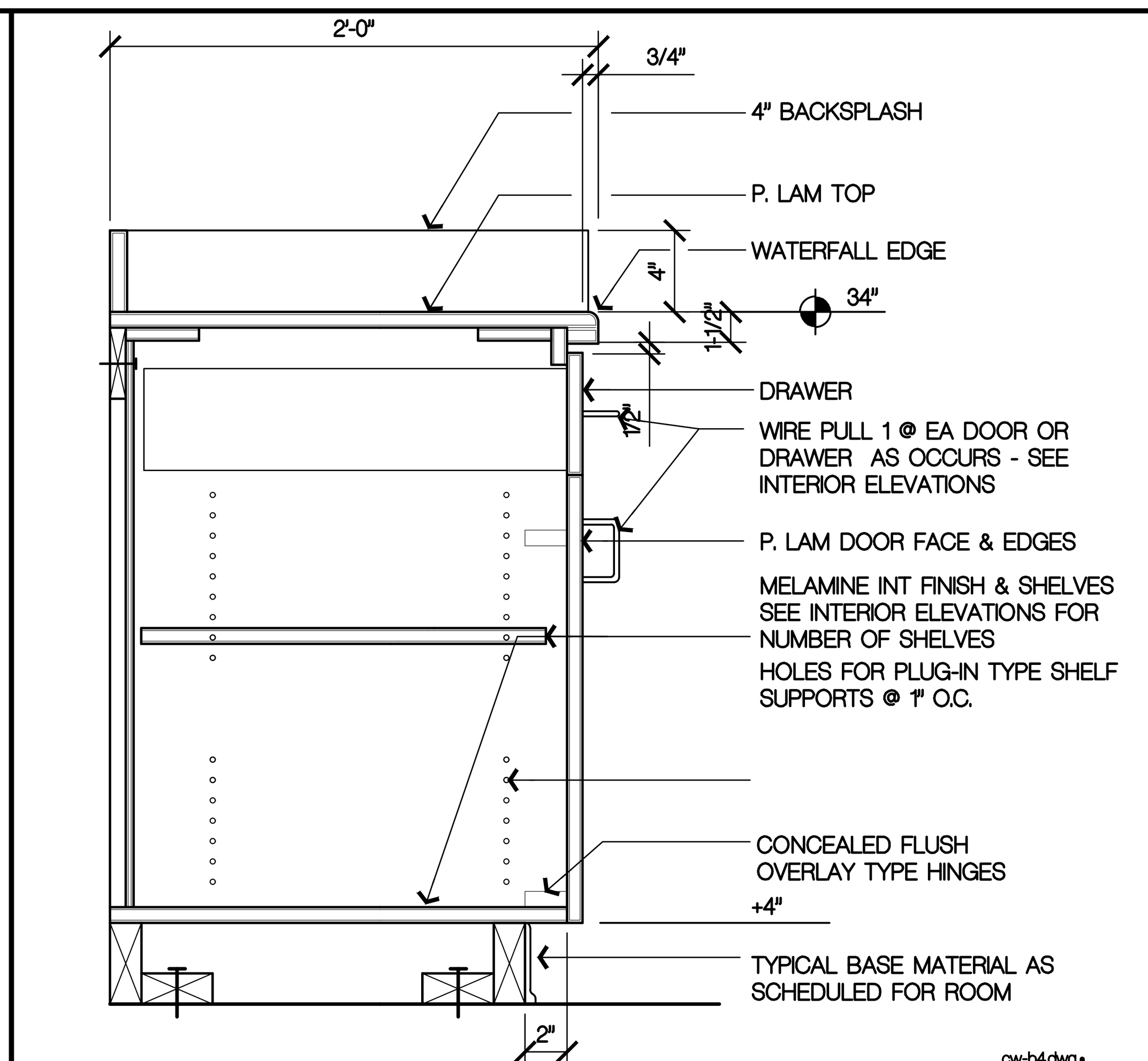
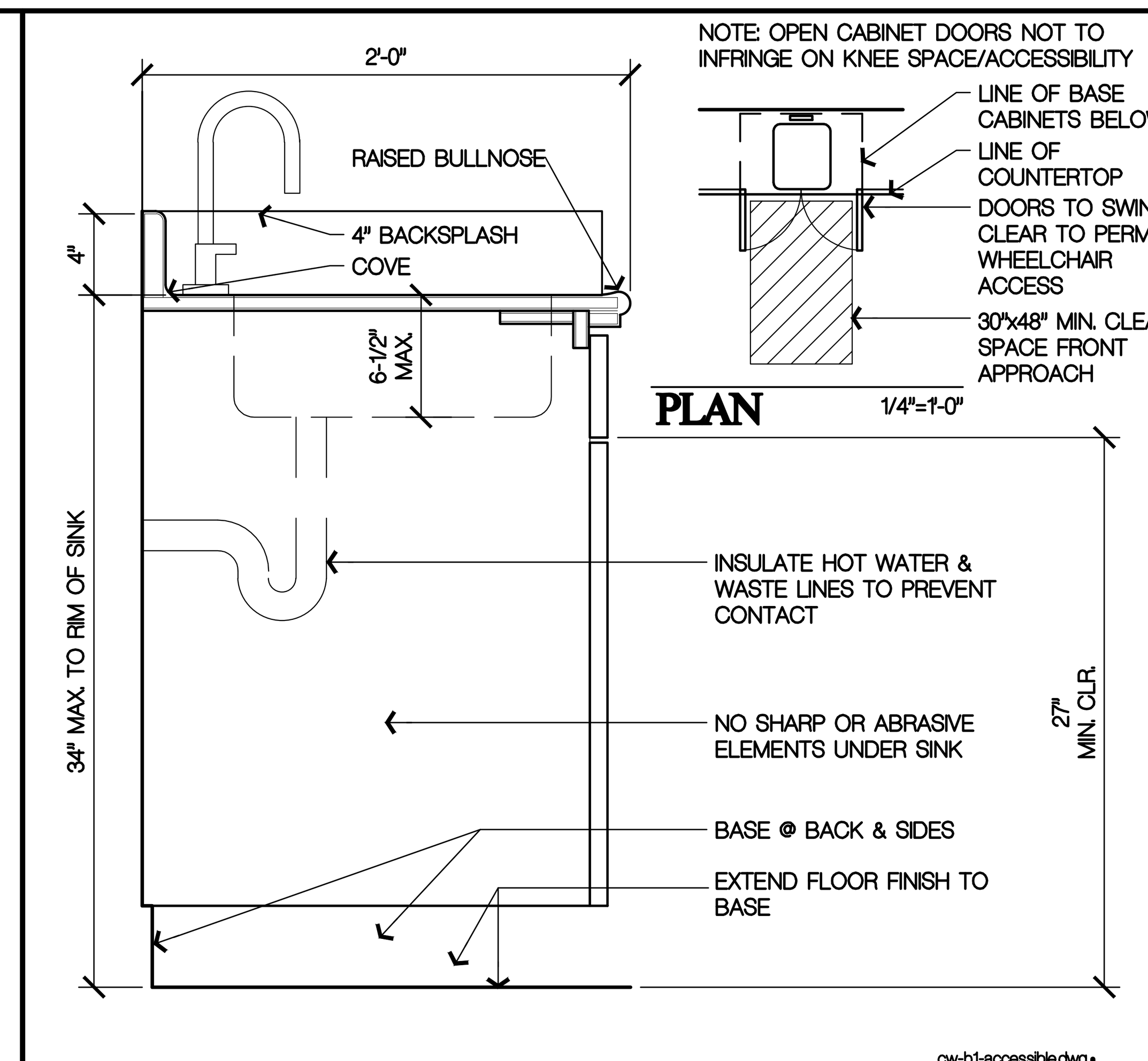
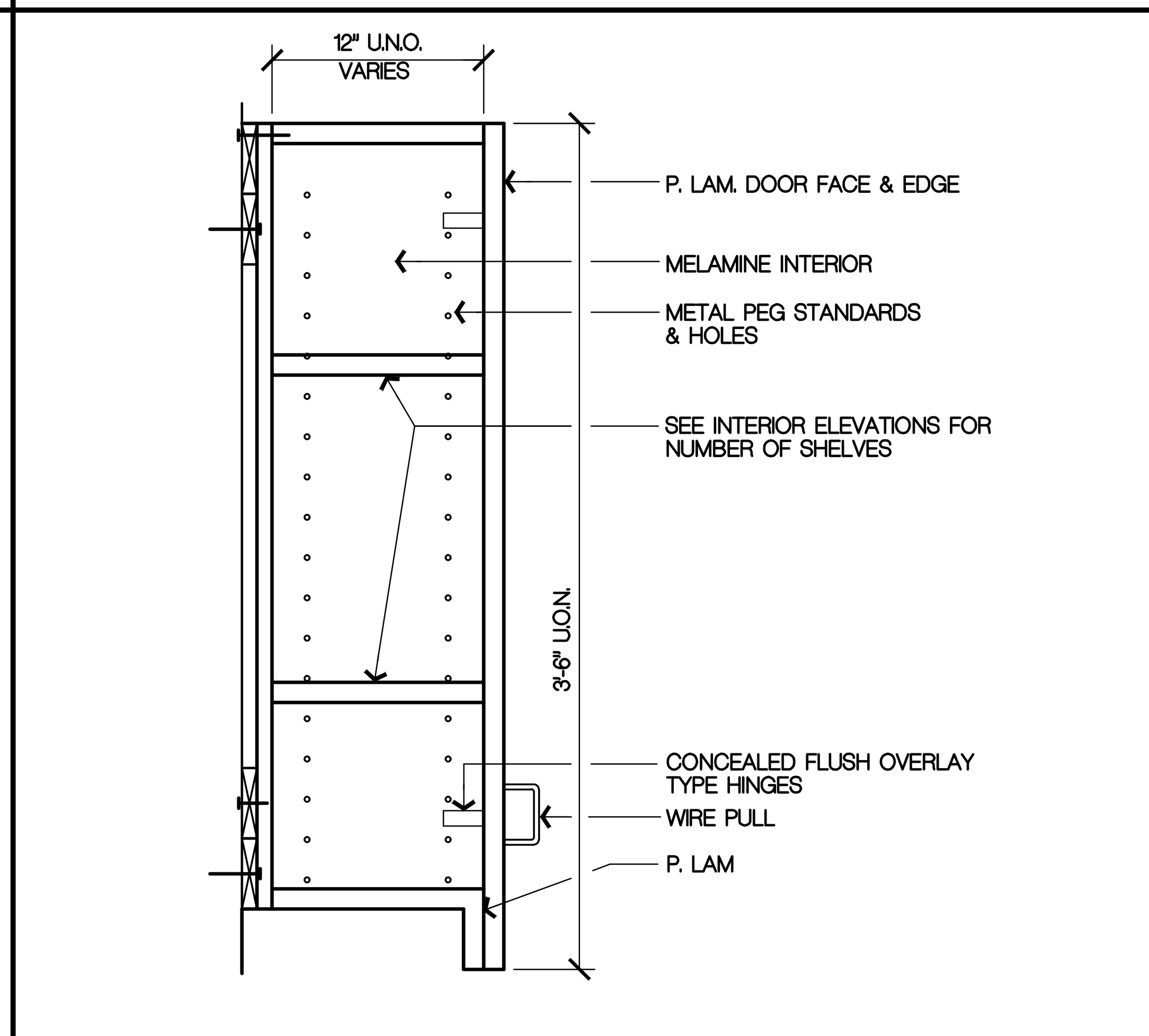


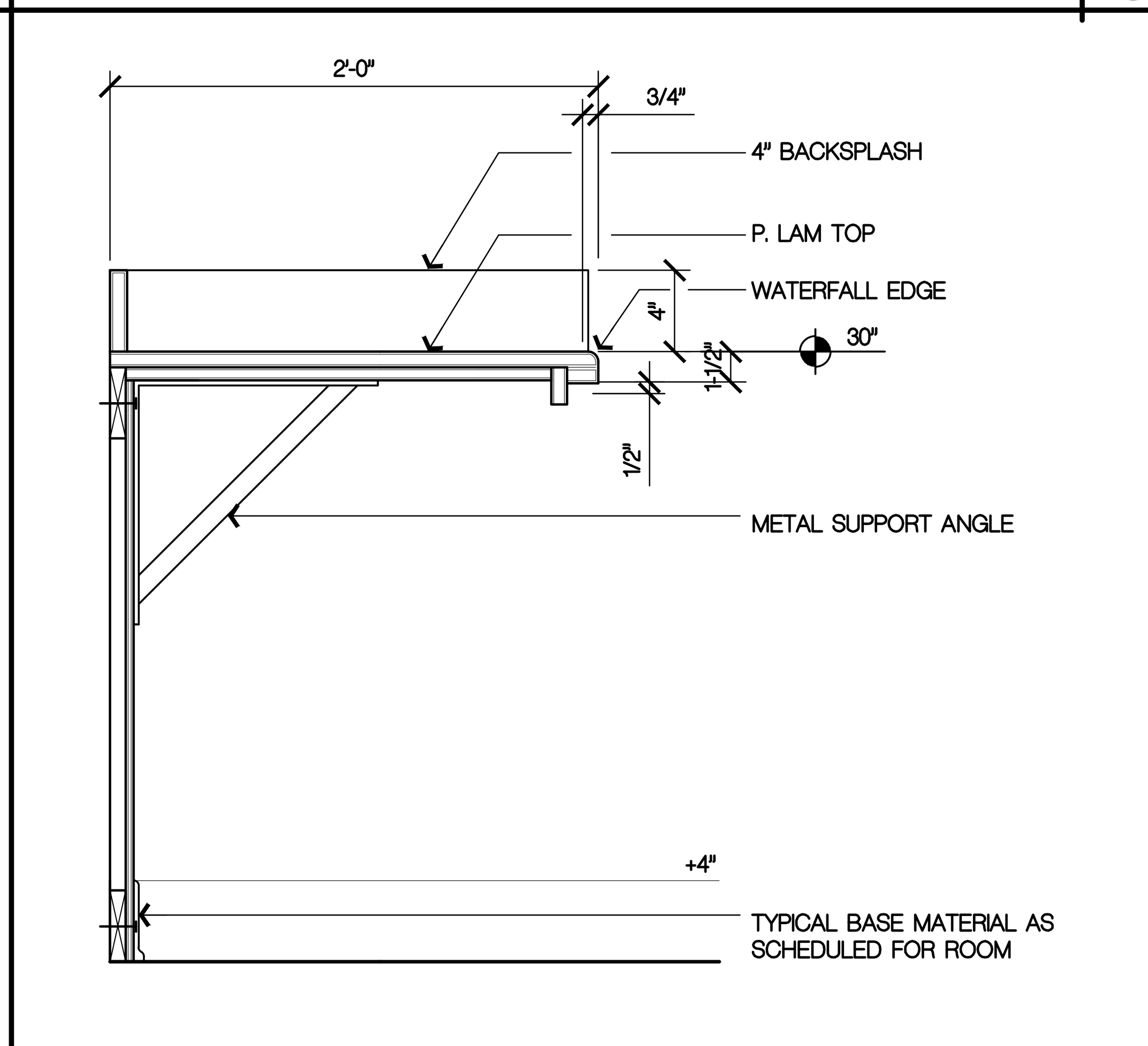
LOWER CABINET (B4) — SCALE: 1-1/2" = 1'-0" — 4



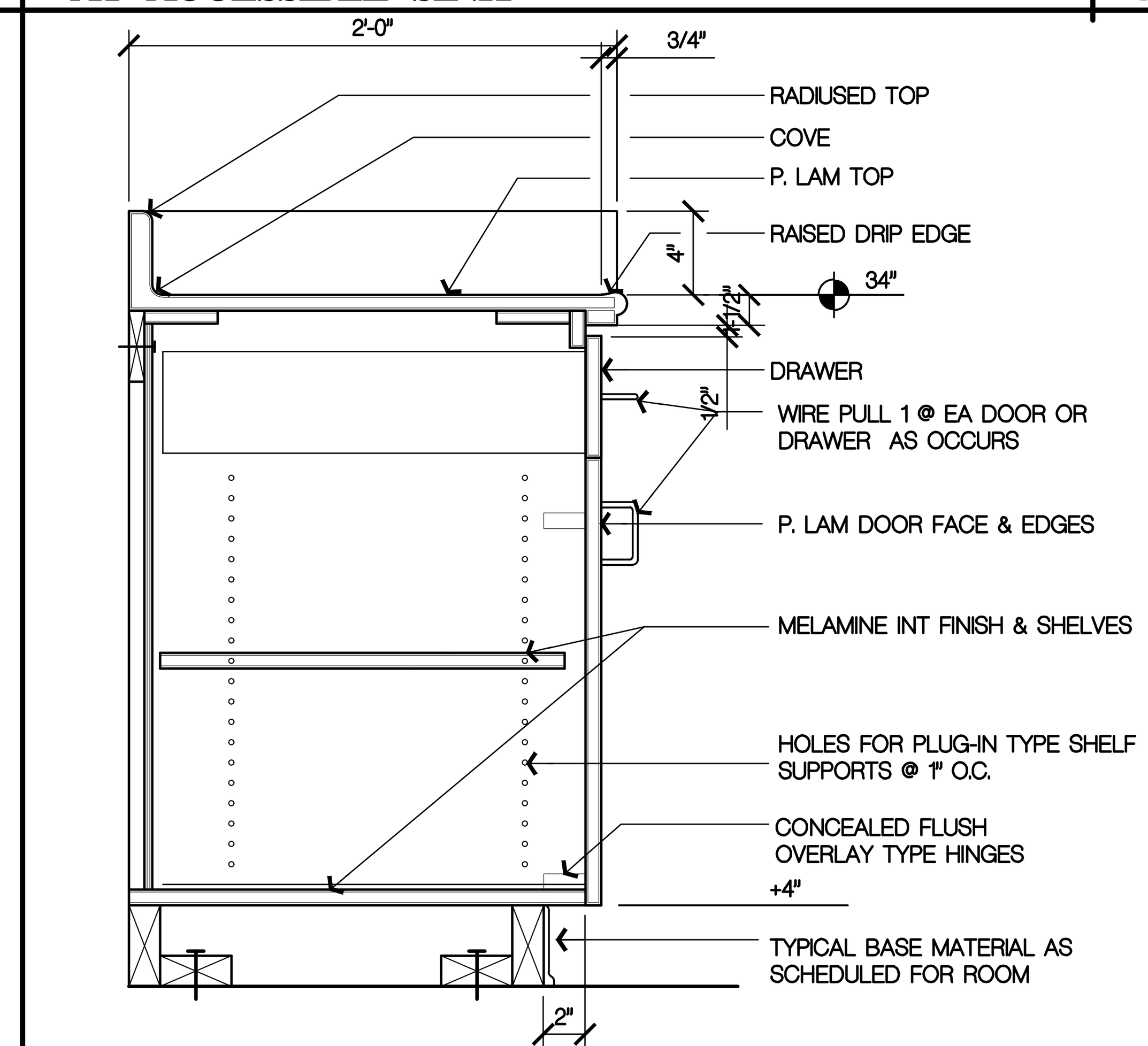
LOWER CABINET AT ACCESSIBLE SINK (B1) — SCALE: 1-1/2" = 1'-0" — 1



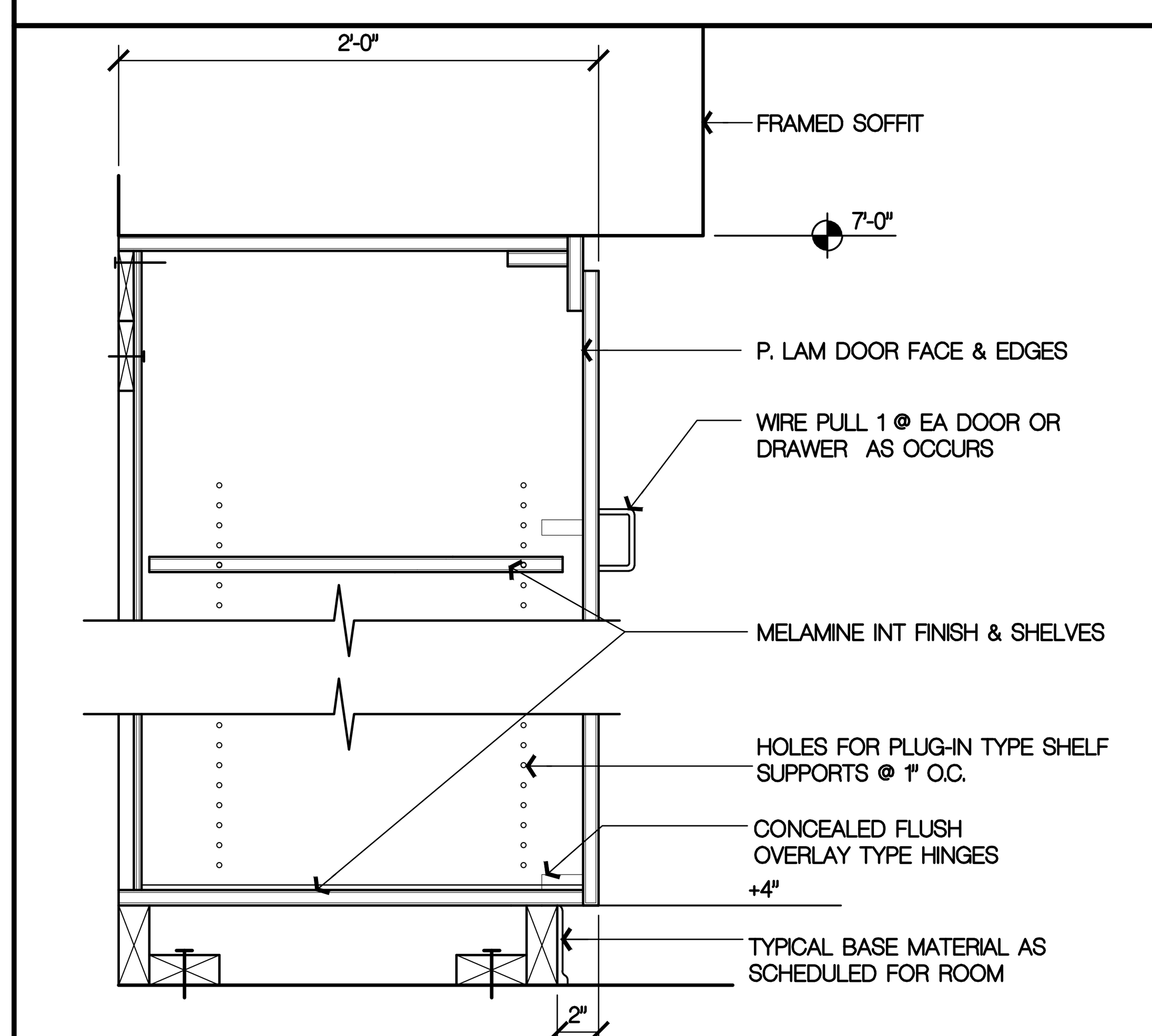
UPPER CABINET (U1) — SCALE: 1-1/2" = 1'-0" — 8



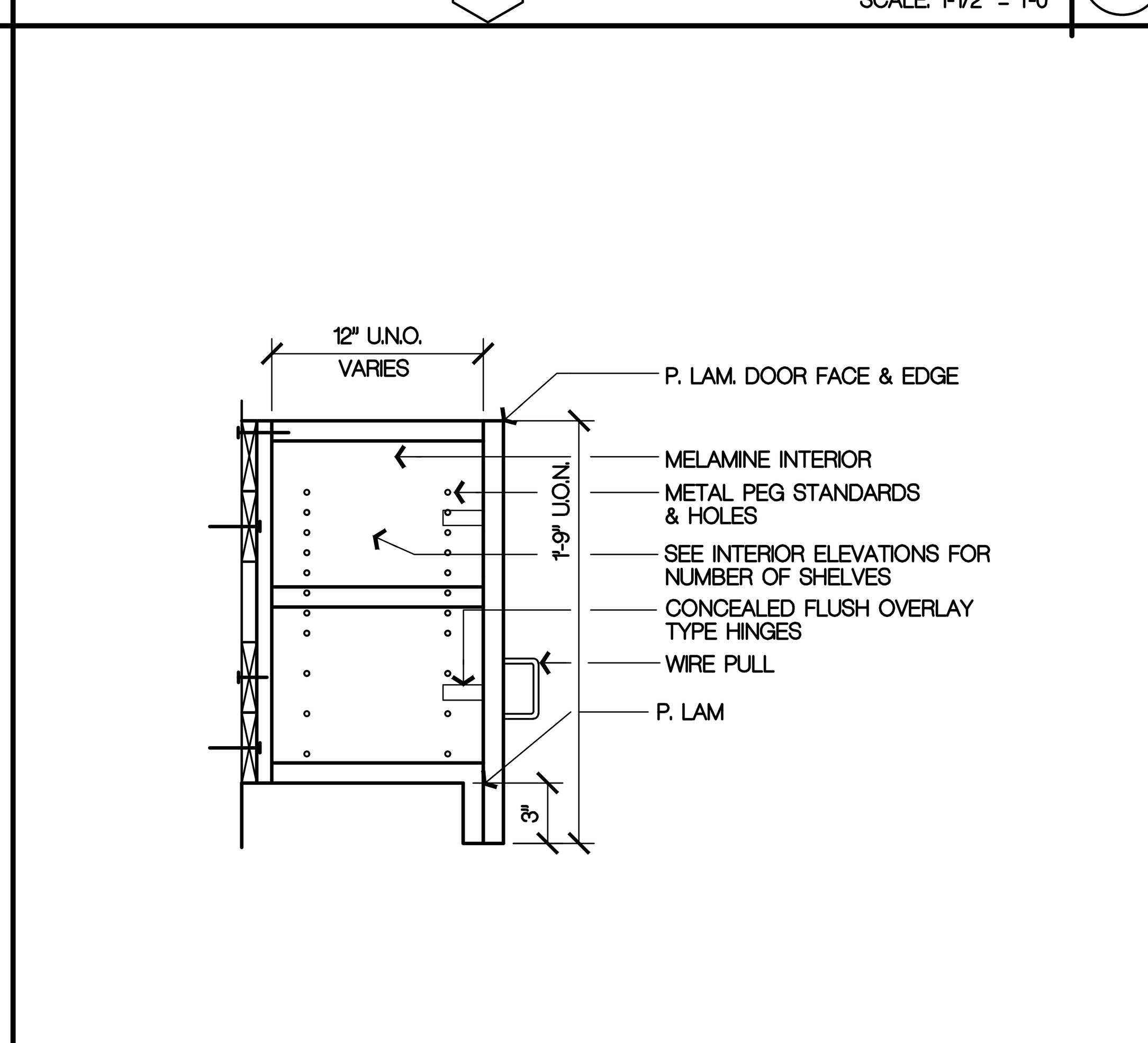
OBSERVATION COUNTER (B5) — SCALE: 1-1/2" = 1'-0" — 5



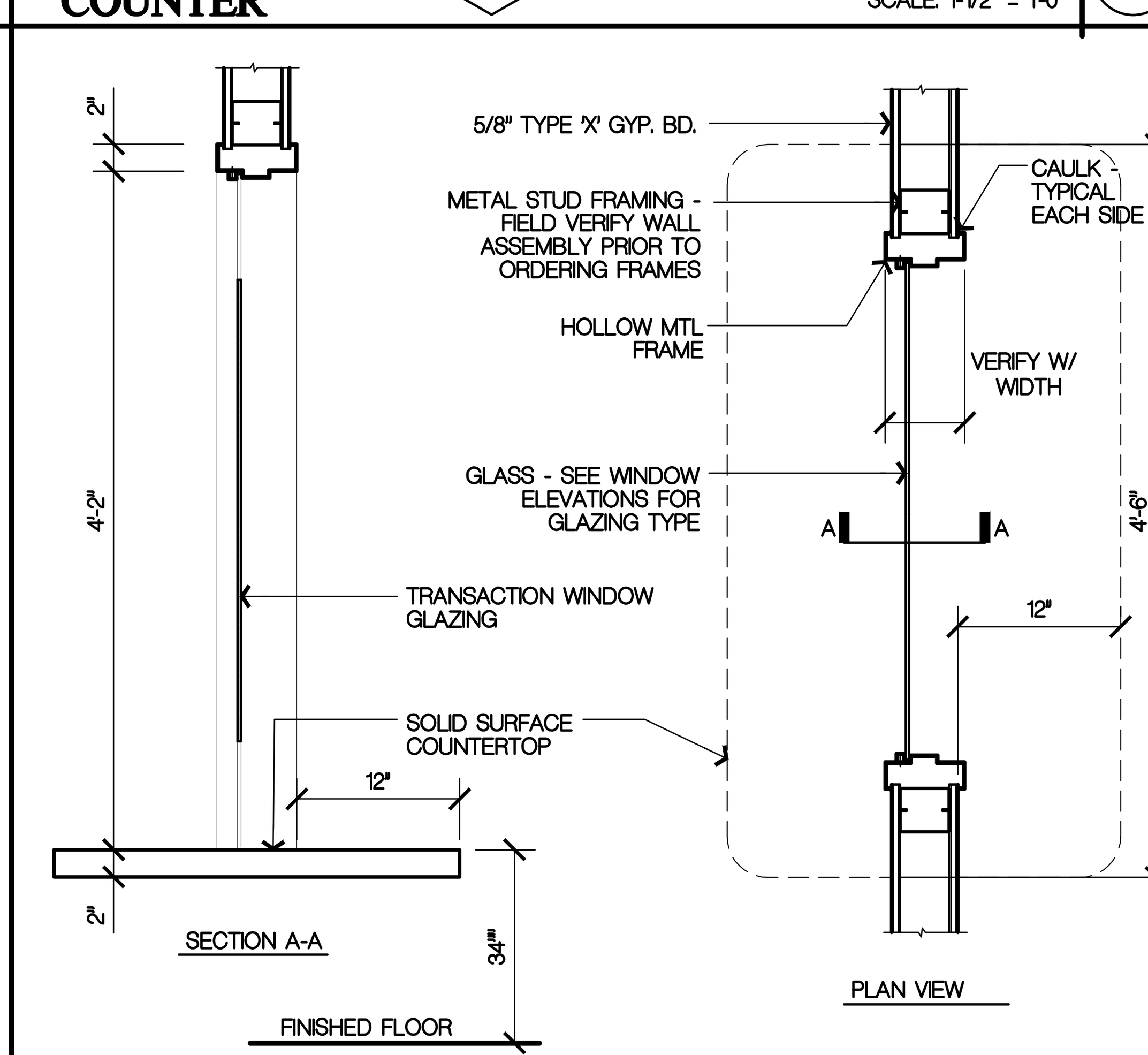
LOWER CABINET (B2) — SCALE: 1-1/2" = 1'-0" — 2



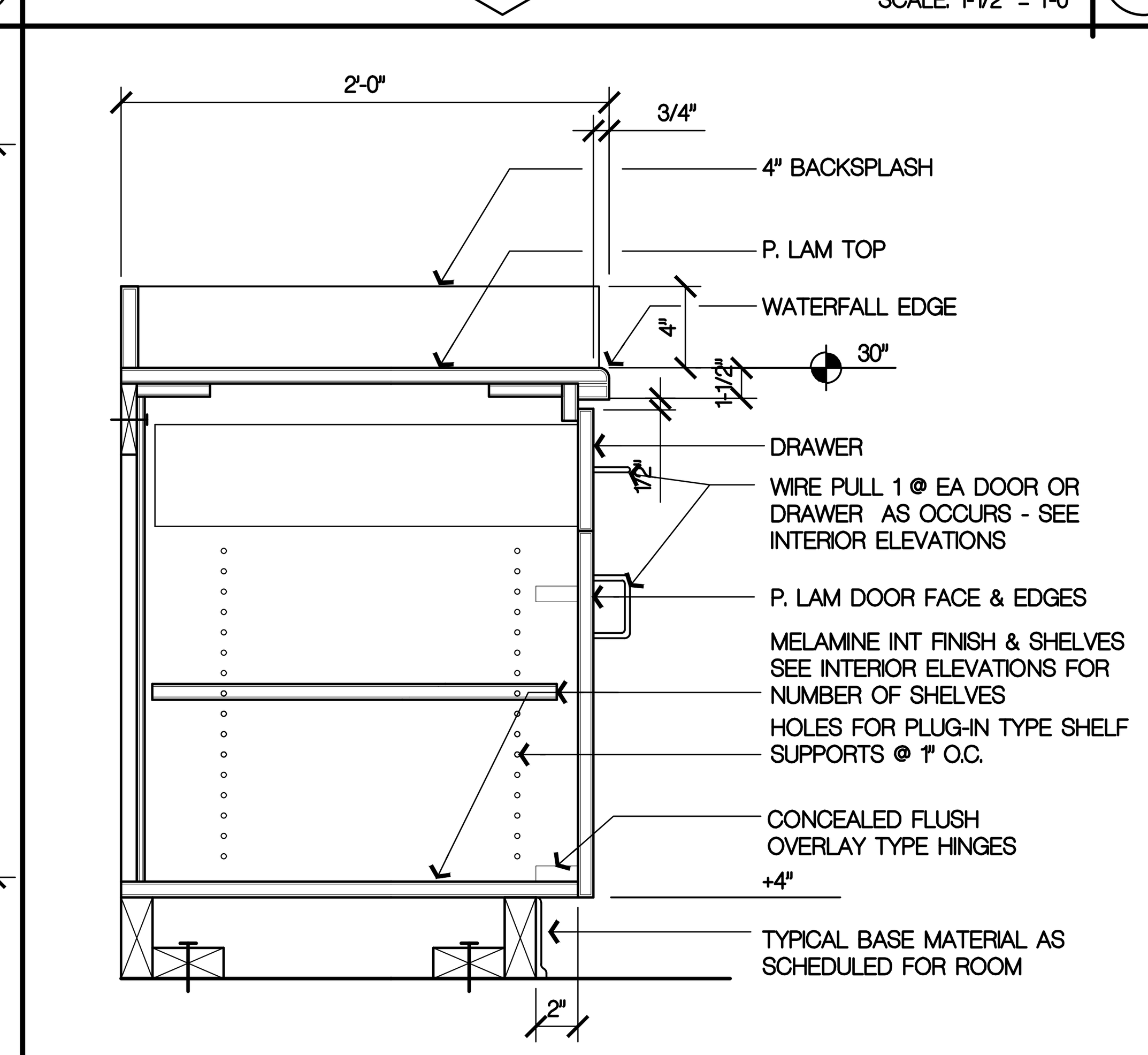
CLOSET CABINET (C1) — SCALE: 1-1/2" = 1'-0" — 12



UPPER CABINET (U2) — SCALE: 1-1/2" = 1'-0" — 9



TRANSACTION WINDOW (T1) — SCALE: 1" = 1'-0" — 6



LOWER CABINET (B3) — SCALE: 1-1/2" = 1'-0" — 3

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CONSULTANTS

LICENSE STAMPS

LICENSED ARCHITECT — KYLE MATT — C 27504 — REN. 10/31/19 — STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
INTERIOR DETAILS CASEWORK

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	NMR
Checked By	DRC
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

A941

LEGEND

FINISH — FINISH TAG

FLOOR / BASE / WALL / CEILING — ROOM FINISHES TAG (SEE FINISH SCHEDULE FOR ALL FINISH LOCATIONS)

DIRECTION OF FINISH MATERIAL
FINISH TRANSITION

FINISH — LOCATION OF ACCENT PAINT

FINISH ABBREVIATIONS

ACT	ACOUSTICAL TILE	PRT	TOILET PARTITION
ACTS	ACOUSTICAL TILE SCRUBABLE	PRV	PRIVACY CURTAIN
B	WALL BASE	P-1	PAINT - EGGSHELL
BG	BUMPER GUARD	P-1A	PAINT - SEMI-GLOSS
C	CONCRETE	P-1E	PAINT - EPOXY
CG-1	CORNER GUARD - SURFACE MOUNTED	QRZ	QUARTZ SURFACING
CG-2	CORNER GUARD - END WALL	RAF	RUBBER ATHLETIC FLOORING
CHR	CHAIR RAIL	RF	RUBBER FLOORING
CPT	CARPET	RP	RESIN PANEL
CR	CRASH RAIL	RT	RUBBER TILE
DR	DOOR	SCB	SELF COVE BASE
DWP	DECORATIVE WALL PANEL	SCR	SHOWER CURTAIN
EP	EXTERIOR PAINT	SDT	STATIC DISSIPATIVE TILE
EPX	EPOXY	SSM	SOLID SURFACING MATERIAL
ETR	EXISTING TO REMAIN	SV	SHEET VINYL
EXP	EXPOSED STRUCTURE	SVT	SHEET VINYL TILE
FF	FACTORY FINISH	TB	TILE BASE
FRL	FIBER REINFORCED LAMINATE	TER	TERRAZZO
FRP	FIBERGLASS REINF. PANEL	TRS	TRANSITION STRIP
FT	FLOOR TILE	VCT	VINYL COMPOSITION TILE
GL	GLASS	VT	VINYL TILE
HIC	HIGH IMPACT WALL COVERING	WB	1" MINI BLINDS
HR	HAND RAIL	WC	WALL COVERING
LCK	LOCKERS	WCB	WALL COVERING BORDER
LVT	LUXURY VINYL TILE	WD	WOOD CEILING PANELS
ME	MATCH EXISTING	WOM	WALK OFF MAT
MTL	METAL	WP	WALL PROTECTION
NS	NATURAL STONE	WS-1	WINDOW SHADE (SINGLE ROLL)
PB	PROFILE WALL BASE (MITERED)	WS-2	WINDOW SHADE (DOUBLE ROLL)
PG	PRESSED GLASS	WSV	WELDED SHEET VINYL
PL	PLASTIC LAMINATE	WT	WALL TILE
		UON	UNLESS OTHERWISE NOTED

GENERAL NOTES

A. EXISTING CLG HTS SHOWN ON THIS SCHEDULE ARE NOMINAL AND MAY VARY SLIGHTLY WITH ACTUAL FIELD CONDITIONS.

B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS.

C. ALL INTERIOR WALL & CLG. FINISHES SHALL COMPLY WITH CBC TABLE 803.9 AND SECTION 803 (FLAME SPREAD RATINGS). PROVIDE A CLASS B (26-75 FLAME SPREAD RATING) AT ROOMS OR AREAS AND A CLASS A (0-25 FLAME SPREAD RATING) AT ALL EXITWAYS. FINISHES SHALL ALSO COMPLY WITH CBC SECTION 1224.4.11 AND TABLE 1224.1.

D. SEE INTERIOR ELEVATIONS, SECTIONS & REFLECTED CEILING FOR ADDITIONAL INFORMATION.

E. ALL ROOM FINISHES DESIGNATED AS EXISTING THAT ARE AFFECTED BY CONSTRUCTION SHALL BE PATCHED TO MATCH ADJACENT FINISHES SO THAT THERE WILL BE NO DISCERNABLE DIFFERENCES BETWEEN NEW AND EXISTING SURFACES.

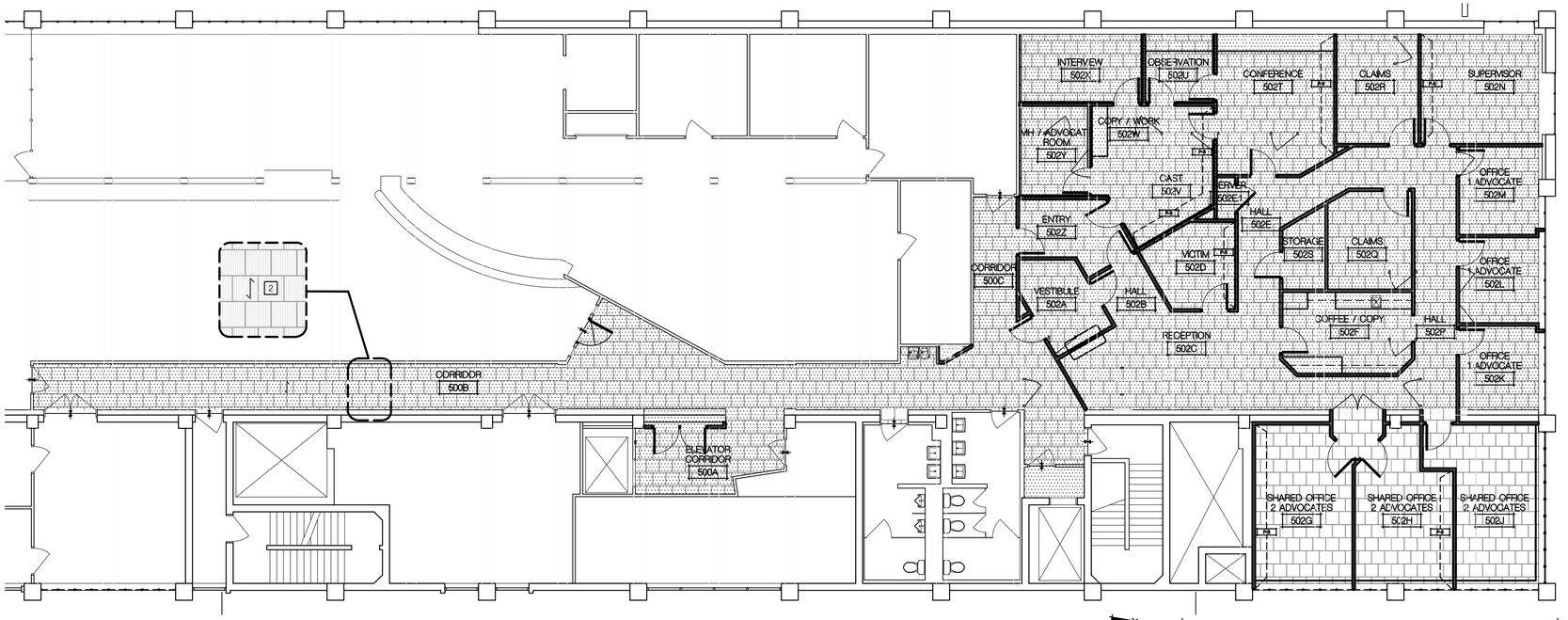
F. ACOUSTICAL TILE, CARPETING & VINYL WALL FABRIC SAMPLES MUST BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION. CARPET SAMPLES MUST BE ACCOMPANIED BY A REPORT FROM A TESTING LABORATORY CERTIFYING A FLAME-SPREAD RATING OF 75 OR LESS AS PER ASTM-84-68. ALSO ACCEPTABLE IS NBIR 78-1436 PER SQ. CENTIMETER FOR SPRINKLERED BUILDINGS.

G. ALL INTERIOR FLOOR FINISHES SHALL COMPLY WITH CBC SECTION 804.

H. WOOD GRAIN PLASTIC LAMINATES SHALL BE ORIENTED WITH THE GRAIN VERTICALLY (INCLUDING DRAWERS) SUCH THAT THE "GRAIN" MATCHES AND ALIGNED VERTICALLY FROM DRAWER TO DRAWER AND FROM DOOR TO DRAWER AS OCCURS.

ROOM FINISH REMARKS

1. SEE FINISH PLAN FOR ACCENT WALL LOCATIONS.
2. DIRECTION OF FLOOR PATTERN TYPICAL THROUGHOUT.



FINISH PLAN

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

FINISH SCHEDULE

NO.	ROOM NAME	FLOOR MATERIAL	FLOOR BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	SOFFIT FINISH	CASEWORK UPPER CABINET	CASEWORK BASE CABINET	CASEWORK COUNTERTOP/ TRANSACTION TOP	DOOR FINISH	DOOR FRAME FINISH	WINDOW SHADES	ROOM FINISH REMARKS
500A	ELEVATOR CORRIDOR	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	ETR, PL-2	P-2	-	
500B	CORRIDOR	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1/ETR	-	-	-	-	ETR, PL-2	P-2	-	
500C	CORRIDOR	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	ETR, PL-2	P-2	-	
502A	VESTIBULE	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	SSM-1	PL-2	P-2	-	
502B	HALL	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	-	
502C	RECEPTION	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1	P-1	-	-	SSM-1			-	
502D	VICTIM WAITING	LVT-1	PRB-1	P-1	P-1	P-3	P-1	ACT-1	-	-	-	-	PL-2	P-2	-	
502E	HALL	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1	P-1	-	PL-1	PL-3			-	
502E.1	SERVER	LVT-1	B-1	P-1	P-1	P-1	P-1	GYP.	P-1	-	-	-			-	
502F	COFFEE/COPY	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	P-1	PL-2	PL-1	PL-3	PL-2	P-2	-	
502G	SHARED OFFICE	LVT-1	B-1	P-3	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	WS-1	
502H	SHARED OFFICE	LVT-1	B-1	P-1	P-1	P-3	P-1	ACT-1	-	-	-	-	PL-2	P-2	WS-1	
502J	SHARED OFFICE	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	WS-1	
502K	OFFICE 1 ADV.	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	WS-1	
502L	OFFICE 1 ADV.	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	WS-1	
502M	OFFICE 1 ADV.	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	WS-1	
502N	SUPERVISOR	LVT-1	B-1	P-3	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	WS-1	
502P	HALL	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-			-	
502Q	CLAIMS	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	-	
502R	CLAIMS	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	-	
502S	STORAGE	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	-	
502T	CONFERENCE	LVT-1	B-1	P-1	P-1	P-3	P-1	ACT-1	-	-	PL-1	PL-3	PL-2	P-2	-	
502U	OBSERVATION	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	PL-1	PL-3	PL-2	P-2	-	
502V	CAST WAITING	LVT-1	PRB-1	P-1	P-1	P-3	P-1	ACT-1	P-1	-	-	-	PL-2	P-2	-	
502W	COPY/WORK	LVT-1	PRB-1	P-1	P-1	P-1	P-1	OPEN	P-1	-	PL-1	PL-3			-	
502X	INTERVIEW	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	-	INSTALL ACOUSTIC WALL PANELS ON NORTH WALL
502Y	MH / ADVOCATE	LVT-1	B-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	-	INSTALL ACOUSTIC WALL PANELS ON NORTH WALL
502Z	ENTRY	LVT-1	PRB-1	P-1	P-1	P-1	P-1	ACT-1	-	-	-	-	PL-2	P-2	-	

FINISH LEGEND

09 65 00 - LUXURY VINYL FLOORING

LVT-1	MANUFACTURER	ARMSTRONG
	COLLECTION	NATURAL CREATIONS CLASSICS
	DESIGN	JET
	COLOR	NATURAL TP782
	SIZE	18" x 18" SQUARE TILE
	INSTALL	ASHLAR

09 65 13 - WALL BASE

B-1	MANUFACTURER	BURKE
	STYLE	4" COVED RUBBER WALL BASE
	COLOR	527 CLAY
PRB-1	MANUFACTURER	BURKE
	STYLE	4 1/2" CONTEMPORARY WALL BASE
	COLOR	527 CLAY

09 91 00 - PAINT

P-1	MANUFACTURER	DUNN EDWARDS
	COLOR	DE6205 STUCCO TAN
	FINISH	EGGSHELL
	LOCATION	FIELD COLOR
P-2	MANUFACTURER	DUNN EDWARDS
	COLOR	DE6214 PIGEON GRAY
	FINISH	EPOXY
	LOCATION	DOOR FRAMES
P-3	MANUFACTURER	DUNN EDWARDS
	COLOR	DET602 GRAY MONUMENT
	FINISH	EGGSHELL
	LOCATION	ACCENT

06 40 00- PLASTIC LAMINATE

PL-1	MANUFACTURER	PIONITE
	COLOR	PASSIN THROUGH AV250
	FINISH	SUEDE
	LOCATION	BASE CABINET
PL-2	MANUFACTURER	WILSONART
	COLOR	MANGALORE MANGO 7984-38
	FINISH	FINE VELVET
	LOCATION	UPPER CABINET/DOOR
PL-3	MANUFACTURER	PIONITE
	COLOR	CINDER GRAY CONCRETE
	COLOR #	AG471
	FINISH	SUEDE
	LOCATION	COUNTERTOP

06 61 16 - SOLID SURFACE

SSM-1	MANUFACTURER	CORIAN
	COLOR	HAZELNUT
	LOCATION	TRANSACTION TOP

09 51 13 ACOUSTIC CEILINGS (TILE)

ACT-1	MANUFACTURER	ARMSTRONG CEILING
	STYLE	ULTIMA HIGH NRC
	EDGE PROFILE	15/16" BEVELED TEGULAR
	SIZE	24" x 24"
	COLOR	WHITE

12 24 00 - WINDOW SHADES

WS-1	MANUFACTURER	MECHO SYSTEM
	STYLE	THERMOVEIL DENSE - 3% OPEN BASKET WEAVE - 1500 SERIES
	COLOR	1516 EGGSHELL

NICHOLS MELBURG & ROSSETTO
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http://www.nmrdesign.com

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Sym.	Description	By	Date

Drawn By	NMR
Checked By	.
Date Drawn	06/28/19
Scale	AS NOTED
Job No.	18-6452

SHEET No.

ID200

Login Name: Charles5
Plot Date: June 28, 2019 - 3:45 pm
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XREFS: x-HC-CH-5th_TB | x-HC-CH-5th_FLR | x-HC-CH-5th_GRID

ABBREVIATIONS

A/C	AIR CONDITIONING	HWP	HEATING WATER PUMP
ABV	ABOVE	HWR	HEATING WATER RETURN
ACCEPT	ACCEPTANCE	HWS	HEATING WATER SUPPLY
ACU	AIR CONDITIONING UNIT	HX	HEAT EXCHANGER
AD	ACCESS DOOR	ID	INSIDE DIAMETER
ADA	AMERICANS WITH DISABILITIES ACT	IE	INVERT ELEVATION
ADD	ADDITION	IN	INCH
AFF	ABOVE FINISH FLOOR	IW	INDUSTRIAL WASTE
AHJ	AUTHORITY HAVING JURISDICTION	L	LENGTH
AHU	AIR HANDLING UNIT	LBS	POUNDS
AP	ACCESS PANEL	LP	LOW PRESSURE
APPROX	APPROXIMATE	LPC	LOW PRESSURE CONDENSATE
ARCH	ARCHITECTURAL	LPS	LOW PRESSURE STEAM
ARI	AMERICAN REFRIGERATION INSTITUTE	M	MOTOR
AS	AIR SEPARATOR	MA	MIXED AIR
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MAU	MAKEUP AIR
AUTO	AUTOMATIC	MAX	MAXIMUM
AUX	AUXILIARY	MC	MECHANICAL CONTRACTOR
AV	AIR VENT	MCC	MOTOR CONTROL CENTER
B	BOILER	MECH	MECHANICAL
BAS	BUILDING AUTOMATION SYSTEM	MIN	MINIMUM
BDD	BACKDRAFT DAMPER	MPC	MEDIUM PRESSURE CONDENSATE
BFF	BELOW FINISH FLOOR	MPS	MEDIUM PRESSURE STEAM
BLDG	BUILDING	MV	MANUAL AIR VENT
BOD	BOTTOM OF DUCT	(N)	NEW
BOP	BOTTOM OF PIPE	N/A	NOT APPLICABLE
BSMT	BASEMENT	NC	NORMALLY CLOSED
BV	BALL VALVE	NO	NORMALLY OPENED
BYV	BUTTERFLY VALVE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
C	COMMON, CONDENSATE OR CONDUIT	NIC	NOT IN CONTRACT
CA	CONTROL AIR, or COMBUSTION AIR	NTS	NOT TO SCALE
CAC	CALIFORNIA ADMINISTRATIVE CODE	OA	OUTSIDE AIR
CAP	CAPACITY	OBD	OPPOSED BLADE DAMPER
CAV	CONSTANT AIR VOLUME	OC	ON CENTER
CB	CHILLED BEAM	OD	OUTSIDE DIAMETER
CBC	CALIFORNIA BUILDING CODE	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CC	COOLING COIL OR CONTROLS CONTRACTOR	OFOI	OWNER FURNISHED OWNER INSTALLED
CD	CONSTRUCTION DOCUMENTS	P	PUMP OR PRESSURE OR POLE
CEC	CALIFORNIA ELECTRICAL CODE	PC	PUMPED CONDENSATE
CFC	CALIFORNIA FIRE CODE	PCR	PRESSURIZED CONDENSATE RETURN
CFM	CUBIC FEET PER MINUTE	PD	PRESSURE DROP
CH	CHILLER	PE	PNEUMATIC ELECTRIC
CHV	CHECK VALVE	PF	PRE FILTER
CHWP	CHILLED WATER PUMP	PG	PIPE GUIDE OR PRESSURE GAUGE
CHWR	CHILLED WATER RETURN	PH	PHASE
CHWS	CHILLED WATER SUPPLY	PLBG	PLUMBING
CL	CENTERLINE	POC	POINT OF CONNECTION
CLG	CEILING	POD	POINT OF DISCONNECTION
CMC	CALIFORNIA MECHANICAL CODE	PS	PRESSURE SENSOR
CONN	CONNECTION	PSI	POUNDS PER SQUARE INCH
CP	CONTROL PANEL	PSIG	POUNDS PER SQUARE INCH – GAUGE
CPC	CALIFORNIA PLUMBING CODE	QTY	QUANTITY
CV	CONSTANT VOLUME OR CONTROL VALVE	(R)	REMOVE
CWP	CONDENSER WATER PUMP	R	RISERS, RELOCATE OR RISE
CWR	CONDENSER WATER RETURN	RA	RETURN AIR
CWS	CONDENSER WATER SUPPLY	REB	REBALANCE
D	DROP OR DRAIN	REF	RELIEF FAN
DDC	DIRECT DIGITAL CONTROL	REFRIG	REFRIGERANT
DEMO	DEMOLISH / DEMOLITION	REL	RELOCATE
DEPT	DEPARTMENT	REQ'D	REQUIRED
DET	DETAIL	REV	REVISE, REVISION OR REVOLUTIONS
DIA	DIAMETER	RF	RETURN FAN
DIFF	DIFFERENCE	RHC	REHEAT COIL
DISCH	DISCHARGE	RL	REFRIGERANT LIQUID
DN	DOWN	RM	ROOM
DTR	DOWN THRU ROOF	RS	REFRIGERANT SUCTION
DV	DIAPHRAGM VALVE	RTU	ROOFTOP UNIT
DWG	DRAWING	SA	SUPPLY AIR
DX	DIRECT EXPANSION	SAN	SANITARY
(E)	EXISTING TO REMAIN	SD	SMOKE DAMPER
EA	EXHAUST AIR OR EACH	SEN	SENSIBLE
EC	ELECTRICAL CONTRACTOR	SF	SUPPLY FAN OR SQUARE FEET
ECON	ECONOMIZER	SP	STATIC PRESSURE
EF	EXHAUST FAN	SPEC	SPECIFICATION
EL	ELEVATION	SQ FT	SQUARE FEET
ELEC	ELECTRICAL	SQ IN	SQUARE INCH
EQUIP	EQUIPMENT	ST	STRAINER OR SOUND TRAP OR STEAM TRAP
ESP	EXTERNAL STATIC PRESSURE	STD	STANDARD
ET	EXPANSION TANK	STRUC	STRUCTURAL
EXH	EXHAUST	T	THERMOSTAT OR THERMOMETER OR THROAT
FC	FLEXIBLE CONNECTION OR FAIL CLOSED	TCP	TEMPERATURE CONTROL PANEL
FCU	FAN COIL UNIT	TDH	TOTAL DYNAMIC HEAD
FD	FIRE DAMPER	TEMP	TEMPERATURE
FF	FINISH FLOOR OR FINAL FILTER	THRU	THROUGH
FFE	FINISH FLOOR ELEVATION	TI	TENANT IMPROVEMENT
FLR	FLOOR	TOP	TOP OF DUCT
FPB	FAN POWERED BOX	TS	TEMPERATURE SENSOR
FR	FIRE WRAP	TSP	TOTAL STATIC PRESSURE
FSD	FIRE/SMOKE DAMPER	TYP	TYPICAL
FT	FOOT / FEET	UC	UNDERCUT DOOR
G	GAS	UG	UNDERGROUND
GA	GAUGE, GAGE	UH	UNIT HEATER
GALV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE
GLV	GLOBE VALVE	UTR	UP THRU ROOF
GN	GENERAL NOTE	V	VENT
GND	GROUND	VAV	VARIABLE AIR VOLUME
GPM	GALLON PER MINUTE	VD	VOLUME DAMPER
GV	GATE VALVE	VEL	VELOCITY
HC	HEATING COIL	VFD	VARIABLE FREQUENCY DRIVE
HP	HORSEPOWER	W/	WITH
HP	HIGH PRESSURE	W/O	WITHOUT
HP	HEAT PUMP	WG	WATER GAUGE
HPC	HIGH PRESSURE CONDENSATE	WMS	WIRE MESH SCREEN
HPS	HIGH PRESSURE STEAM	WPD	WATER PRESSURE DROP
HRU	HEAT RECOVERY UNIT	WSHP	WATER SOURCE HEAT PUMP
HVAC	HEATING, VENTILATION & AIR CONDITIONING	WT	WEIGHT
HW	HEATING WATER	XFMR	TRANSFORMER

HVAC LEGEND

SYMBOL	DESCRIPTION
	GENERAL
	LIMIT OF DEMOLITION
	POINT OF CONNECTION
(#)	KEYNOTE
(M)	FURNISHED & INSTALLED BY MECHANICAL
(ME)	FURNISHED BY MECHANICAL INSTALLED BY ELECTRICAL
(EM)	FURNISHED BY ELECTRICAL INSTALLED BY MECHANICAL
(E)	FURNISHED & INSTALLED BY ELECTRICAL
(RAR/EAR)	SUPPLY, RETURN, & EXHAUST REGISTER NECK SIZE AIR QUANTITY (C.F.M.)
(REAG)	RELIEF AIR GRILLE NECK SIZE AIR QUANTITY (CFM)
	LINEAR SUPPLY & RETURN # OF SLOTS – SLOT WIDTH CFM TOTAL LENGTH (FT)
	DUCTWORK
	REMOVE EXIST. EQUIP., PIPES, OR DUCT SHOWN HATCHED
	EXIST. DIFFUSER, RETURN AIR GRILLE OR EXHAUST GRILLE TO BE REMOVED
	RELOCATED EXIST. DIFFUSER, RETURN AIR GRILLE OR EXHAUST GRILLE TO
	EXIST. DIFFUSER, RETURN AIR GRILLE OR EXHAUST GRILLE TO REMAIN OR BE RELOCATED
	EXIST. MECHANICAL EQUIPMENT & DUCT
	EXIST. DUCTWORK TO BE REMOVED & CAPPED
	LINEAR DIFFUSER
	SUPPLY AIR
	RETURN AIR
	EXHAUST AIR
14x12 / 14x12	RECTANGULAR DUCT SIZE (WIDTH x DEPTH IN INCHES)
14"ø / 14"ø	ROUND DUCT SIZE (WIDTH x DEPTH IN INCHES)
R	DUCT RISE / DUCT DROP
	DUCT WITH SOUND INSULATION
	STAINLESS STEEL DUCTWORK
	FLEXIBLE DUCT
	RECTANGULAR DUCT UP
	RECTANGULAR DUCT DOWN
	DUCT TRANSITION (RECTANGULAR TO ROUND)
D.L./U.C.	DOOR LOUVER OR UNDERCUT
	AUTOMATIC DAMPER (WITH ACTUATOR)
	BACKDRAFT DAMPER
	MANUAL VOLUME DAMPER
FSD	COMBINATION FIRE & SMOKE DAMPER
FD	FIRE DAMPER
	CONTROLS (PLAN)
CO2	CO2 SENSOR
NO2	NITROGEN DIOXIDE SENSOR
H	HUMIDITY SENSOR
O	OXYGEN SENSOR
T	ROOM THERMOSTAT & ZONE NUMBER
S	SWITCH (MANUAL WALL MOUNT OR DOOR INTERLOCK)
SD	SMOKE DETECTOR
CO	CARBON MONOXIDE SENSOR
DP	PRESSURE SENSOR (DUCT MOUNTED)
P	PRESSURE SENSOR (ROOM PRESSURE)
V	PURGE EXHAUST CONTROL SWITCH
HS	VISUAL STROBE AND AUDIBLE HORN
RS	REFRIGERANT LEAK DETECTION SENSOR
	PIPING
4"–HWS	PIPE TAG (E.G. 2"–CHWS)
	PIPE RISE
	PIPE DROP
	PIPE BRANCH
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BALL VALVE
	BUTTERFLY VALVE
M	CIRCUIT SETTER
	REDUCER
	STRAINER
	UNION
	AIR VENT VALVE
	PRESSURE GAUGE
	THERMOMETER
	CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE & TEMPERATURE RELIEF VALVE
	PIPE ANCHOR

DEMOLITION NOTES

1. THE MECHANICAL DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE THE DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR UTILITIES. SEE ARCHITECTURAL PLANS, WHERE PROVIDED ON PROJECT, FOR EXTENT OF DEMOLITION.
2. ITEMS NOT INDICATED TO BE REMOVED SHALL BE PROTECTED IN PLACE.
3. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS INDICATED TO BE REMOVED. PENDING OWNER'S INSPECTION AND REVIEW, ALL SUCH ITEMS SHALL BE REMOVED INTACT, FULLY FUNCTIONAL AND SUITABLE FOR REUSE, AND SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR SHALL CONFIRM WITH THE OWNER'S REPRESENTATIVE ACCEPTANCE OR REFUSAL OF SUCH ITEMS. ALL ITEMS ACCEPTED BY THE OWNER SHALL BE DELIVERED BY THE CONTRACTOR TO ONSITE STORAGE LOCATIONS AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ALL ITEMS REFUSED BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR IN AN APPROVED MANNER.
4. NO EXISTING EQUIPMENT OR MATERIAL SHALL BE REUSED WITHOUT THE SPECIFIC APPROVAL OF THE OWNER'S REPRESENTATIVE.
5. REMOVAL OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE SATISFACTORY PERFORMANCE OF THE GENERAL WORK. NOT ALL EXISTING CONDITIONS ARE DETAILED ON THE DRAWINGS. CONTRACTOR SHALL SURVEY THE SITE AND MAKE ALL NECESSARY CHANGES REQUIRED BASED ON THE EXISTING CONDITIONS FOR THE PROPER INSTALLATION OF NEW WORK.
6. UNLESS NOTED OTHERWISE, EXISTING PIPING AND COMPONENTS RENDERED DEFUNCT AS PART OF THIS PROJECT SHALL BE ADDRESSED IN THE FOLLOWING MANNER: DEFUNCT PIPING LOCATED IN CONCEALED AREAS WITHIN EXISTING TO REMAIN WALLS, BELOW SLAB, OR BELOW GRADE SHALL BE ABANDONED IN PLACE OR REMOVED AS NECESSARY TO AVOID INTERFERENCE WITH NEW WORK. EXISTING DEFUNCT PIPING AND COMPONENTS LOCATED IN EXPOSED AREAS AND IN ATTIC SPACE SHALL BE REMOVED TO THE NEAREST OPERATIONAL PIPING MAIN AND CAPPED, INCLUDING ALL ASSOCIATED HANGERS AND STRUCTURAL SUPPORTS. EXISTING DEFUNCT VENTS THROUGH ROOF SHALL BE REMOVED. COORDINATE REMOVAL WITH ROOFING CONTRACTOR.
7. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPING & DUCT RUNS, REUSE AS REQUIRED AND REMOVE ALL UNUSED DUCT AND PIPING.
8. THE EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND SHOWN FOR REFERENCE CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO SUBMITTING BID. ALL DEMOLITION, ALTERATION, EXTENSION, RELOCATION, REHABILITATION WORK SHALL BE INCLUDED IN CONTRACT. NO ADDITIONAL ALLOWANCE OR CHANGE ORDERS WILL BE ACCEPTED.
9. CONTRACTOR IS RESPONSIBLE TO RELOCATE OR REMOVE FROM WALLS, CEILINGS, FLOOR SPACES, ETC. ANY EXISTING PIPING, DUCT, FIRE-SMOKE DAMPERS, OR OTHER MECHANICAL EQUIPMENT WHICH INTERFERES WITH PLANNED REMODEL WORK.
10. NOTIFY THE ENGINEER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, OR NOT INDICATED ON "AS-BUILT" DRAWINGS OR WAS BURIED UNDERGROUND OR EMBEDDED IN STRUCTURE WALLS.
11. CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT, UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE SMALLEST AREA POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
12. EQUIPMENT, MATERIALS AND SUPPLIES TEMPORARILY REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
13. DEMOLITION WORK SHALL BE DONE IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO USERS OF THE PREMISES AND ADJACENT SITE, AND NOT INTERFERE WITH ITS OPERATION. ANY DEMOLITION WORK TO BE PERFORMED MUST BE PLANNED IN ADVANCE.
14. RESEAL ALL PENETRATIONS OR OPENING THROUGH WALLS, CEILING, FLOORS, ETC., TO MAINTAIN THE RATING OF STRUCTURE.
15. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGED MATERIALS SHALL REMAIN IN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER AND NEATLY PILE OR STORE AND PROTECT FROM DAMAGE. DISPOSE OF ALL HAZARDOUS MATERIAL PER FEDERAL, STATE AND LOCAL REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION.
16. ALL DEMOED, ALTERED AND RELOCATED COMPONENTS SHALL BE REFLECTED ON THE AS-BUILT RECORD DOCUMENTS.

DESIGN CRITERIA

DESIGN CRITERIA HAS BEEN ESTABLISHED UPON THOROUGH REVIEW OF AS BUILT DRAWINGS AND CORRESPONDENCE WITH THE HUMBOLDT COUNTY COURT BUILDING ENGINEERING. DESIGN CRITERIA IS AS FOLLOWS:

SUMMER OUTDOOR CONDITIONS

78°F DB, 66°F WB

WINTER OUTDOOR CONDITIONS

35°F DB

INDOOR CONDITIONS

75°F, 40%-60% RH

CHILLED WATER

44°F SUPPLY, 54°F RETURN, CONSTANT VOLUME, NO RESET SCHEDULE

HEATING HOT WATER

140°F SUPPLY, 110°F RETURN, CONSTANT VOLUME, NO RESET SCHEDULE

ZONE EQUIPMENT

GROUND FLOOR - EXISTING CONSTANT AIR VOLUME WITH ZONE REHEAT COILS, PNEUMATIC

1ST FLOOR - EXISTING CONSTANT AIR VOLUME WITH ZONE REHEAT COILS, PNEUMATIC

5TH FLOOR SOUTH - NEW VARIABLE AIR VOLUME TERMINAL UNITS WITH REHEAT COILS, DDC

CONTROLS VENDOR

JOHNSON CONTROLS METASYS

CONTACT GARY HODSON (541) 227-5702

SEE AIR FLOW RISER DIAGRAM ON SHEET M401 FOR ADDITIONAL INFORMATION

MECHANICAL GENERAL NOTES

1. ALL DRAWINGS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO ANY CONSTRUCTION, INCLUDING STRUCTURAL, PLUMBING, AIR CONDITIONING AND ELECTRICAL. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND AT NO EXPENSE TO THE OWNER.
2. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
3. DO NOT SCALE DRAWINGS. ALL DIMENSIONS AND JOB SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF CONSTRUCTION AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.
4. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK AND PROVIDE A FULLY OPERATIONAL SYSTEM. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND GOVERNING REGULATIONS AND MEET THE APPROVAL OF THE CITY AND STATE FIRE MARSHALL.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF DEMOLITION AND/OR NEW WORK.
6. ALL EQUIPMENT THAT IS REMOVED AND NOT REUSED SHALL BE COORDINATED WITH, AND/OR RETURNED TO, THE BUILDING OWNER.
7. ALL EXISTING DUCT TAPS THAT ARE REMOVED AND NOT REUSED SHALL BE CAPPED AIRTIGHT AND SEALED WITH "MIRACLE" DUCT SEALER AND D-617 OR EQUAL.
8. VERIFY FINAL LOCATION OF THERMOSTATS WITH ARCHITECT AND/OR TENANT CONSTRUCTION COORDINATOR PRIOR TO ANY INSTALLATION WORK.
9. CONTRACTOR SHALL PROVIDE RECORD/AS BUILT DOCUMENTS TO CONSTRUCTION COORDINATOR, ARCHITECT AND ENGINEER AT COMPLETION OF CONSTRUCTION.
10. MAINTAIN NET FREE AREA EQUAL TO DUCT SIZE WHERE FIRE DAMPERS OCCUR.
11. ROOM THERMOSTATS SHALL BE CAPABLE OF BEING SET TO MAINTAIN SPACE TEMPERATURE SET POINTS FOR 55° F TO 85° F AND SHALL BE CAPABLE OF OPERATING THE HEATING AND COOLING IN SEQUENCE. THERMOSTATS SHALL BE ADJUSTABLE TO PROVIDE A TEMPERATURE RANGE OF UP TO 5° F BETWEEN FULL HEATING AND FULL COOLING BEING SUPPLIED. TEMPERATURE CONTROL SYSTEM SHALL OPERATE IN ACCORDANCE WITH THE BASE BUILDING SEQUENCE OF OPERATION
12. PROVIDE MINIMUM DUCT RADIUS ON ELBOWS AT 1-1/2 TIMES DUCT SIZE.
13. ALL CEILING DIFFUSERS ARE 4-WAY THROW UNLESS NOTED OTHERWISE.
    13.1. DIFFUSERS SHALL BE ADJUSTED BY MECHANICAL CONTRACTOR AND/OR TEST & BALANCE CONTRACTOR FROM 4-WAY TO 3-WAY OR 2-WAY WHEN WITHIN 3'-0" OF ADJACENT WALL OR CORNER. SUBMIT PROPOSED ADJUSTMENTS IN WRITING PRIOR TO ADJUSTING
14. CONTRACTOR SHALL STRICTLY COORDINATE ALL CEILING DIFFUSERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN. IF ANY DISCREPANCIES ARE ENCOUNTERED THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION. VERIFY WITH OWNERS REPRESENTATIVE IN FIELD PRIOR TO INSTALLATION.
15. RETURN AIR PLENUM SHALL NOT CONTAIN ANY COMBUSTIBLES.
16. ALL CEILING SPACE SHALL BE USED AS A RETURN PLENUM EXCLUDING THE STAIRWAYS, RESTROOMS, LOBBY, EXISTS CORRIDORS AND ELEVATOR MACHINE ROOM.
17. MATERIALS EXPOSED WITHIN DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2 AND 605.0 OF THE 2016 CMC. ALL MATERIALS EXPOSED WITHIN THE CEILING PLENUM SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 50.
18. PROVIDE SMOKE DETECTORS IN MAIN SUPPLY AIR DUCTS OF AIR MOVING SYSTEMS EXCEEDING 2,000 CFM PER SECTION 608.0 CMC.
19. MECHANICAL SYSTEMS SHALL COMPLY WITH REQUIREMENTS OF 2016 CFC SECTION 606.
20. VENTS SHALL NOT TERMINATE LESS THAN 3-FT. ABOVE ANY OUTSIDE- OR MAKEUP-AIR INLET LOCATED WITHIN 10-FT. AT THE ROOF LEVEL, PER CMC 806.6.
21. HEATING HOT WATER AND CHILLED WATER PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE.
22. THE CONTRACTOR SHALL COORDINATE ALL CEILING ACCESS PANELS FOR SERVICING MECHANICAL EQUIPMENT/DEVICES WITH THE ARCHITECT AND INTERIOR DESIGNER AS APPLICABLE.
23. PRIOR TO ROUGH-IN OF ELECTRICAL, PROVIDE COORDINATION SHOP DRAWINGS OF T-STAT LOCATIONS TO ARCH./ENG. FOR REVIEW.
24. DUCT SEALING:
    24.1. DUCTWORK SHALL BE SEALED PRIOR TO DELIVERY TO JOB SITE.
    24.2. DUCTWORK SHALL BE SEALED DURING DELIVERY.
    24.3. DUCTWORK SHALL BE SEALED UPON INSTALLATION.
    24.4. OPENINGS INTO EQUIPMENT AND DUCTWORK SHALL BE SEALED DURING CONSTRUCTION.
25. ALL CONTROL WIRING ROUTED IN CEILING PLENUM SHALL BE CLEARLY IDENTIFIED & SECURED TO DUCTWORK OR TIGHT TO STRUCTURE TO PREVENT DAMAGE DURING FUTURE TENTANT IMPROVEMENT PROJECTS.
26. THE CONTRACTOR SHALL VERIFY ALL DIFFUSER/GRILLE/REGISTER/BORDER AND FRAME TYPES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ORDERING. COORDINATE ALL FINISHES WITH ARCHITECT.
27. ALL HVAC SYSTEMS INCLUDING HYDRONIC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH AN APPROVED METHOD PER THE CMC SECTION 314.1, CALGREEN AND THE ENERGY EFFICIENCY STANDARDS.
28. THROUGH-PENETRATIONS AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER OR AS OTHERWISE PERMITTED BY CBC, SECTION 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION FOR DETAILS LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION AND OTHER PERMITTED MEANS AND METHODS OF PENETRATION PROTECTION SHALL BE SUBMITTED FOR OSHPD FDD REVIEW AND APPROVAL PRIOR TO INSTALLATION.
29. PROVIDE BALANCING VOLUME DAMPERS IN EACH BRANCH DUCT AND IN EACH MAIN DUCT TO PROVIDE FOR COMPLETE AIR BALANCING. PROVIDE ADEQUATE ACCESS. OPPOSED BLADE DAMPERS (OBD'S) ARE NOT CONSIDERED BALANCING DAMPERS. COORDINATE ALL LOCATIONS WITH ARCHITECT'S REFLECTED CEILING PLAN WHERE REMOTE BALANCING DAMPERS ARE REQUIRED.
30. INSTALL DIELECTRIC INSULATION WHERE COPPER PIPES CONNECT TO FERROUS PIPES, COMPONENTS AND EQUIPMENT.
31. OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON FAN SHUTDOWN.

EQUIPMENT ANCHORAGE AND SYSTEM BRACING

1. ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CALIFORNIA BUILDING CODE REQUIREMENTS IN ACCORDANCE WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS - ASCE 7-10, SECTION 13.6 AND TABLE 13.6-1.
   a. ALL PERMANENT EQUIPMENT AND COMPONENTS.
   b. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICE SUCH AS ELECTRICITY, GAS OR WATER.
   c. MOVABLE EQUIPMENT WHICH IS STATION IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.
2. THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT TO BE DETAILED ON PLAN. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
   a. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   b. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR HUNG FROM WALL.
3. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE INSTALLED PER SMACNA GUIDELINES AND/OR MANUFACTURER'S RECOMMENDATIONS.
4. SEISMIC ANCHORAGE OF EQUIPMENT AND BRACING OF PIPING/DUCTWORK SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS - ASCE 7-10, SECTION 13.6 AND TABLE 13.6-1.

APPLICABLE CODES

2016	CALIFORNIA BUILDING CODE
2016	CALIFORNIA MECHANICAL CODE
2016	CALIFORNIA PLUMBING CODE
2016	CALIFORNIA ELECTRICAL CODE
2016	CALIFORNIA FIRE CODE
2016	CALIFORNIA ENERGY STANDARDS
2016	CAL GREEN CODE
	ALL OTHER APPLICABLE LOCAL AND STATE LAWS AND REGULATIONS

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949.751.5800 www.tklsc.com

Project Leader - Jeff Halliwell
Mechanical Lead - Jeff Halliwell
tklsc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER — T. JWAN TANG — No. M29973 — EXP. 06-30-20 — MECHANICAL — STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

LEGEND , SCHEDULES & NOTES

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

M001

Login Name: jhalliwell
Plot Date: June 27, 2019 - 5:28 pm
File Name: P:\2018\0922 Humboldt County Courthouse Rmdl\Drawings and Models\CAD\Mechanical\M001.dwg
XREFS: x-HC-CI-5th_TITLEBLOCK

AIR HANDLING UNIT

TAG	#	MANUF.	MODEL NUMBER	SERVICE	TOTAL SA (CFM)	TOTAL RA (CFM)	MIN OA (CFM)	SUPPLY FAN								RETURN FAN								ELECTRICAL							C.D. CONNECTION		FILTER TYPE	COOLING COIL TAG	HEATING COIL TAG	VIBRATION ISOLATION TAG	DETAIL REFERENCE	CONTROL DIAGRAM	OPERATING WEIGHT (LBS)	REMARKS
								QTY	DRIVE TYPE	AIR FLOW (CFM)	E.S.P. (IN WG)	T.S.P. (IN WG)	EFF. (%)	FAN SPEED (RPM)	MOTOR (BHP)	MOTOR (HP)	QTY	DRIVE TYPE	AIR FLOW (CFM)	E.S.P. (IN WG)	T.S.P. (IN WG)	EFF. (%)	FAN SPEED (RPM)	MOTOR (BHP)	MOTOR (HP)	MCA (A)	MOCP (A)	VOLTAGE (V)	PHASE	HERTZ (HZ)	SCCR (KA)	EMERGENCY POWER	QTY	SIZE (IN)							
AH	G1S	AAON	RNA-020	GROUND LEVEL - SOUTH	8,060	0	8,060	1	DIRECT	8,060	2.66	3.65	67.2	1,581	6.89	10	-	-	-	-	-	-	-	-	-	38	60	208	3	60	5	YES	1	1	2" MERV 8	CC-1	HC-1	VI-2	4/M502	1/M603	3,600	FURNISH WITH FACTORY INSTALLED VFD. INDICATED WEIGHTS INCLUDE VIBRATION ISOLATION.
AH	G1N	AAON	RNA-020	GROUND LEVEL - NORTH	9,720	0	9,720	1	DIRECT	9,720	3.04	4.09	68.1	1,448	9.17	15	-	-	-	-	-	-	-	-	-	58	100	208	3	60	5	YES	1	1	2" MERV 8	CC-2	HC-2	VI-2	4/M502	1/M603	3,700	FURNISH WITH FACTORY INSTALLED VFD. INDICATED WEIGHTS INCLUDE VIBRATION ISOLATION.
AH	1S	AAON	RNA-013	FIRST FLOOR - SOUTH	6,400	6,400	770	1	DIRECT	6,400	2.00	3.07	68.3	1,379	4.53	7.5	2	DIRECT	6,400	1.00	1.27	45.7	1,672	1.40	2	45	60	208	3	60	5	NO	1	1	2" MERV 8	CC-3	NONE	VI-2	4/M502	1/M602	4,500	FURNISH WITH FACTORY INSTALLED VFD. INDICATED WEIGHTS INCLUDE VIBRATION ISOLATION.
AH	1N	AAON	RNA-013	FIRST FLOOR - NORTH	6,700	5,525	1,080	1	DIRECT	6,700	2.00	3.08	65.5	1,708	4.97	7.5	2	DIRECT	5,525	1.00	1.23	42.7	1,617	1.27	2	45	60	208	3	60	5	NO	1	1	2" MERV 8	CC-4	NONE	VI-2	4/M502	1/M602	4,500	FURNISH WITH FACTORY INSTALLED VFD. INDICATED WEIGHTS INCLUDE VIBRATION ISOLATION.

(EXISTING) AIR HANDLING UNIT

TAG	#	MANUFACTURER	MODEL NUMBER	LOCATION	EXISTING SA (CFM)	ADJUSTED SA (CFM)	ESP	COOLING		HEATING		HP	VOLTAGE	PHASE	WEIGHT	REMARKS
								EAT DB/WB	LAT DB/WB	TOTAL	SENSIBLE					
AH	5S	DAIKIN	CAH012FDAC	FAN ROOM #731	5,970	6,425	1.5	75/61	51.5	150	144	7.5	208	3	4,000	

HYDRONIC AIR COILS-INTEGRAL

TAG	#	SERVICE	AIR FLOW (CFM)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	TOTAL CAPACITY (BTU/HR)	SENSIBLE CAPACITY (BTU/HR)	FLUID FLOW (GPM)	EWT (°F)	LWT (°F)	WATER PRESSURE DROP (FT)	MAXIMUM WORKING PRESSURE (PSIG)	FACE AREA (SQ FT)	FACE VELOCITY (FPM)	ROWS	FPI	BRANCH PIPE SIZE (IN)	VALVE TYPE	DETAIL REFERENCE	REMARKS
CC	1	AH-G1S	8,060	78	66	55	54	284,860	193,610	61	44	54	5.87	125	18.7	431	6	10	2-1/2	3-WAY	1/M502	
HC	1		8,060	35	34	65	49	284,600	-	19.3	140	110	1.8	125	7.28	1107	2	10	2	3-WAY	2/M502	
CC	2	AH-G1N	9,720	78	66	57	56	277,740	196,650	61	44	54	15.1	125	18.7	520	4	10	2-1/2	3-WAY	1/M502	
HC	2		9,720	35	34	68	51	371,500	-	25	140	110	2.8	125	7.28	1336	2	12	2	3-WAY	2/M502	
CC	3	AH-1S	6,400	76	63	55	54	156,520	134,450	34	44	54	8.5	125	13.1	490	4	10	2	3-WAY	1/M502	
CC	4	AH-1N	6,700	76	63	55	54	162,750	138,130	35	44	54	9	125	13.1	513	4	10	2	3-WAY	1/M502	

FANS

TAG	#	MANUFACTURER	MODEL NUMBER	SERVICE	TYPE	DRIVE TYPE	AIR FLOW (CFM)	EXTERNAL STATIC PRESSURE (IN WG)	FAN SPEED (RPM)	MOTOR ENCLOSURE	MOTOR (BHP)	ELECTRICAL CONNECTION					VIBRATION ISOLATION TAG	DETAIL REFERENCE	CONTROL DIAGRAM	OPERATING WEIGHT (LBS)	REMARKS
												MOTOR (HP)	VOLTAGE (V)	PHASE	HERTZ (HZ)	EMERGENCY POWER				
EF	E-2A	GREENHECK	USF-315-BI	BASEMENT, GROUND FL - NORTH	UTILITY	BELT	1,760	1.40	1,487	TEFC	0.72	1	208	3	60	YES	VI-1	5/M502	3/M602	250	FURNISH WITH BACKDRAFT DAMPER
EF	E-2C	GREENHECK	USF-313-BI	1ST & 2ND FLOOR RESTROOMS - NORTH	UTILITY	BELT	1,275	1.15	1,474	TEFC	0.42	0.5	208	3	60	NO	VI-1	5/M502	4/M602	200	FURNISH WITH BACKDRAFT DAMPER

VIBRATION ISOLATION

TAG	#	MANUFACTURER	MODEL NUMBER	SERVICE	DEFLECTION (IN.)	BASE TYPE	REMARKS
VI	1	M.W. SAUSSE	RMJAB-EQ-SH	UTILITY FANS	2	STEEL	STEEL BASE WITH SPRINGS VIBRATION ISOLATORS
VI	2	M.W. SAUSSE	RMLS-SB-EQ	ROOFTOP AIR HANDLING UNITS	2	STEEL	STEEL BASE RAILS WITH SPRINGS VIBRATION ISOLATORS

NOTE: THE FOLLOWING ITEMS SHALL BE DEFERRED SUBMITTALS PER C.B.C. SECTION 107.3.4.1

A. STRUCTURAL CALCULATIONS AND DETAILS FOR ALL MECHANICAL EQUIPMENT WEIGHING OVER 400 LBS. PER C.B.C. SECTION 1613. CALCULATIONS SHALL BE REVIEWED BY STRUCTURAL ENGINEER PRIOR TO SUBMITTAL TO GOVERNING AUTHORITY.

SUBMITTAL DOCUMENTS FOR DEFERRED ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW, AND FORWARDED TO THE CITY OF EUREKA WITH NOTATION INDICATING THAT THE SUBMITTED ITEMS MEET THE DESIGN INTENT OF THE BUILDING.

DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE CITY OF EUREKA.

V.A.V. BOXES

UNIT NO. / BOX SIZE	MANUFACTURER & MODEL NO.	C.F.M. RANGE	INLET SIZE (DIA.) (1)	DISCH. PLENUM LENGTH (FT.)	HEATING HOT WATER COIL (EXTERIOR ZONES)							REMARKS
					MODEL NO.	COIL SIZE (INCHES)	MIN. B.T.U.H. 2-ROW	RATED C.F.M.	RATED G.P.M.	PIPE SIZE	VALVE SIZE	
												INDICATED CAPACITY IS MINIMUM AND IS BASED ON 30°F. TEMP. DIFF. BETWEEN ENT. AIR TEMP. AND ENT. WATER TEMP. AT RATED C.F.M. AND G.P.M.
6	INTERIOR ZONE TITUS MODEL DESV	200–450	6	4	–	12 x 12–1/2	13200	200	1.0	1/2"	1/2"	
8		350–800	8	4	–	12 x 12–1/2	23100	350	2.0	1/2"	1/2"	
10		600–1400	10	4	–	18 x 14	34800	600	3.0	1/2"	1/2"	
12	EXTERIOR ZONE TITUS MODEL DESV WITH 2–ROW HEATING COIL	1000–2000	12	8	–	18 x 14	54500	1000	4.0	3/4"	3/4"	
14		1200–2800	14	8	–	20 x 18	80600	1500	6.0	3/4"	3/4"	(1) UNLESS NOTED OTHERWISE ON FLOOR PLANS
16		2000–4000	16	8	–	24 x 18	120000	2000	7.0	1"	1"	
20		3000–6000	24X16	8	–	38 x 18	171000	3000	8.0	1"	1"	

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Project Leader - Jeff Halliwell
Mechanical Lead - Jeff Halliwell
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER T. JWAN TANG No. M29973 Exp. 06-30-20 MECHANICAL OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

SCHEDULES

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

M002

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 of
Project Name: Humboldt County Courthouse	Date Prepared: 01/03/19

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

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.

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 Controlled Ventilation (DCV)	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
AH-G1S, G1N, 1S, 1N	4	☑	☐	☐	☑	☐	☐	☐	☐	☐	☐

Add Row | Remove Last

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 of
Project Name: Humboldt County Courthouse	Date Prepared: 01/03/19

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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-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
AH-G1S, G1N, 1S, 1N	4	☐	☐	☐	☐	☑	☐	☐

Add Row | Remove Last

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 of
Project Name: Humboldt County Courthouse	Date Prepared: 01/03/19

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: tk1sc	Documentation Author Signature:
Company: tk1sc	Signature Date: 01/16/19
Address: 15231 Laguna Canyon Road, Suite 100	CEA/ HERS Certification Identification (If applicable):
City/State/Zip: Irvine, CA 92618	Phone: 949-751-5800

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
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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).
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Responsible Designer Name: Tjwan Tang	Responsible Designer Signature:
Company: tk1sc	Date Signed: 01/16/19
Address: 15231 Laguna Canyon Road, Suite 100	License: M29973
City/State/Zip: Irvine, CA 92618	Phone: 949-751-5800

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 of
Project Name: Humboldt County Courthouse	Date Prepared: 01/14/19

A. Mechanical Ventilation and Reheat

In lieu of this compliance document, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet. Mechanical Ventilation and Reheat worksheet available on the Energy Commission's website at: http://www.energy.ca.gov/title24/2016standards/.
Note: In all of the calculations that compare a supply quantity to the REQ'D V.A. quantity, the actual percentage of outdoor air in the supply is ignored.
Areas in buildings for which natural ventilation is used should be clearly designated. Specifications must require that building operating instructions include explanations of the natural ventilation system.

ACTUAL DESIGN (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 HEATING AIRFLOW (CFM)	DESIGN PRIMARY OUTDOOR AIRFLOW (CFM)	CONTROL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (ft²)	MIN CFM PER AREA	MIN CFM BY AREA	NUMBER OF PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	MIN CFM BY ROOM	REQ'D VENT AIRFLOW (CFM)	COMPLIES?	REQ'D DESIGN PRIMARY COOLING AIR	MAXIMUM REHEAT (CFM)	COMPLIES?	PRIMARY COOLING AIR	AIRFLOW	COMPLIES?
S.1	1210	250	605	Yes	0	400	0.15	60	4	20	80		80	PASS	1210	605	PASS			PASS
S.2	1305	270	755	Yes	0	210	0.15	35	2	20	40		40	PASS	1305	755	PASS			
S.3	1700	340	850	Yes	0	300	0.15	45	3	20	60		60	PASS	1700	850	PASS			
S.4	260	60	130	Yes	0	700	0.15	105	1	20	20		105	PASS		130	PASS			
S.5	700	140	350	Yes	0	180	0.15	30	1	20	20		30	PASS	700	350	PASS			
S.6	160	40	80	Yes	0	245	0.15	40	2	20	40		40	PASS		80	PASS			
S.7	240	50	120	Yes	0	225	0.15	35	10	20	200		200	PASS		120	PASS			
S.8	340	70	170	Yes	0	485	0.15	75	5	20	100		100	PASS	340	170	PASS			
S.9	330	70	165	Yes	0	525	0.15	50	3	20	60		60	PASS	330	165	PASS			
AH-G1S	8060			Yes	0	8060	0.15	1410	94	15	1410		8060	PASS			N/A			N/A
AH-G1N	9720			Yes	0	10600	0.15	1590	106	15	1590		9720	PASS			N/A			N/A
AH-1S	6400			Yes	0	5130	0.15	770	51	15	765		770	PASS			N/A			N/A
AH-1N	6700			Yes	0	7150	0.15	1073	72	15	1080		1080	PASS			N/A			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 of
Project Name: Humboldt County Courthouse	Date Prepared: 01/14/19

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http://www.nmrdesign.com

CONSULTANTS
tk1sc COLLABORATIVE
15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com

Project Leader - Jeff Halliwell
Mechanical Lead - Jeff Halliwell
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER — T. JWAN TANG — No. M29973 — Exp. 06-30-20 — MECHANICAL — STATE OF CALIFORNIA

PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
TITLE 24 COMPLIANCE FORMS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
M003

Login Name: jhalliwell
Plot Date: June 27, 2019 - 5:28 pm
File Name: P:\2018\2018-0922 Humboldt County Courthouse Proj\Drawings and Models\CAD\Mechanical\M003_M004.dwg
xREFS: x-HC-CH-5th_TITLEBLOCK

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-03-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry System Requirements	(Page 1 of 3)
Project Name: Humboldt County Courthouse	Date Prepared: 01/03/19

A. Equipment Tags and System Description[1]- Dry Systems

MANDATORY MEASURES	T-24 Sections	Reference to the Requirements in the Contract Documents[2]		
Heating Equipment Efficiency[3]	110.1 or 110.2(a)	N/A	N/A	N/A
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)	N/A	N/A	N/A
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)	N/A	N/A	N/A
Furnace Standby Loss Control	110.2(d)	N/A	N/A	N/A
Low Leakage AHUs	110.2(f)	IOM	IOM	IOM
Ventilation[4]	120.1(b)	M002	M002	M002
Demand Control Ventilation[5]	120.1(c)4	N/A	N/A	N/A
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(e)3	N/A	N/A	N/A
Shutoff and Reset Controls[7]	120.2(e)	M601	M601	M601
Outdoor Air and Exhaust Damper Control	120.2(f)	M601	M601	M601
Isolation Zones	120.2(g)	N/A	N/A	N/A
Automatic Demand Shed Controls	120.2(h)	N/A	N/A	N/A
Economizer FDD	120.2(i)	N/A	N/A	N/A
Duct Insulation	120.4	M003		
PRESCRIPTIVE MEASURES				
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	◉ Yes ○ No	◉ Yes ○ No	◉ Yes ○ No
Supply Fan Pressure Control	140.4(c)	M601	M601	M601
Simultaneous Heat/Cool[8]	140.4(d)	M601	M601	M601
Economizer	140.4(e)	M601	M601	M601
Heat and Cool Air Supply Reset	140.4(f)	M601	M601	M601
Electric Resistance Heating[9]	140.4(g)	N/A	N/A	N/A
Duct Leakage Sealing and Testing[10]	140.4(l)	N/A	N/A	N/A

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 SYSTEM REQUIREMENTS
CEC-NRCC-MCH-03-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Wet System Requirements	(Page 3 of 3)
Project Name: Humboldt County Courthouse	Date Prepared: 01/03/19

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: tk1sc	Documentation Author Signature:
Company: tk1sc	Signature Date: 01/16/19
Address: 15231 Laguna Canyon Road, Suite 100	CEA/ HERS Certification Identification (If Applicable):
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Address: 15231 Laguna Canyon Road, Suite 100	License: M29973
City/State/Zip: Irvine, CA 92618	Phone: 949-751-5800

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 of
Project Name: Humboldt County Court	Date Prepared: 01/03/19

A. Constant Volume Fans 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).
If the total horsepower of all fans in the system is less than 25 hp, then this should be noted in the FAN DESCRIPTION column and the rest of this section left blank. If the total system horsepower is not obvious, such as when a VAV System has many fan-powered boxes, then this section must be completed.
Note: VAV fans and Constant Volume fans should be summarized on separate compliance documents.

01	02	03		04	05
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR	EFFICIENCY DRIVE	NUMBER OF FANS	PEAK WATTS (A02 * A04 * 746)/(A03a * A03b)
AH-G1S (LESS THAN 25 HP)					NaN
AH-G1N (LESS THAN 25 HP)					NaN
AH-1S SUPPLY (LESS THAN 25 HP)					NaN
AH-1N SUPPLY (LESS THAN 25 HP)					NaN

Add Row Remove Last

B. Variable Air Volume Fans 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 (802 * 804 * 746)/(803a * 803b)
					NaN

Add Row Remove Last

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 05)	NaN	W
	02 SUPPLY DESIGN AIRFLOW		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_T) on line 5.	03 TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	NaN	W/CFM
	04 SP_x		in W.C. or Pa
B) Calculate Fan Adjustment and enter on line 6.	05 SP_T		in W.C. or Pa
C) Calculate Adjusted Fan Power Index and enter on row 7	06 Fan Adjustment = 1-(SP. - 1)/SP.	Infinity	
	07 ADJUSTED FAN POWER INDEX (Line 3 x Line 6)	NaN	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 of
Project Name: Humboldt County Court	Date Prepared: 01/03/19

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TITLE-24 MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY

1. ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, T HAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE.
2. PIPING AND DUCTING SYSTEMS SHALL BE INSULATED IN ACCORDANCE WITH THE SECTIONS 120.3, 120.4, 120.7 OF TITLE 24 EES, CHAPTER 6 OF THE 2016 CMC, AND ALL CODES HAVING JURISDICTION.
3. ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTION 110.2 AND 120.2 E.E.S.
4. ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTION 110.1-110.3, 110.5, 120.1-120.4 TITLE-24 ENERGY STANDARDS.
5. EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH AN AUTOMATIC TIME SWITCH WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOW OPERATION OF THE SYSTEM DURING OFF-HOURS FOR UP TO 4 HOURS. THE TIME SWITCH SHALL BE CAPABLE OF PROGRAMMING DIFFERENT SCHEDULES FOR WEEKDAYS AND WEEKENDS, INCORPORATE AN AUTOMATIC HOLIDAY "SHUT-OFF" FEATURE THAT TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS, THEN RESUMES THE NORMALLY SCHEDULED OPERATION, AND HAS PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LOSS OF THE DEVICE'S PROGRAM AND TIME SETTING FOR AT LEAST 10 HOURS IF POWER IS INTERRUPTED.
6. EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH CONTROLS THAT TEMPORARILY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN A SETBACK HEATING AND COOLING THERMOSTAT SETPOINT.
7. EACH SPACE CONDITIONING ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO TEMPERATURE WITHIN THE ZONE. WHERE USED TO CONTROL HEATING, THE CONTROL SHALL BE ADJUSTABLE DOWN TO 55°F OR LOWER. FOR COOLING, THE CONTROL SHALL BE ADJUSTABLE UP TO 85°F OR HIGHER. WHERE USED TO CONTROL BOTH HEATING AND COOLING, THE CONTROL SHALL BE CAPABLE OF PROVIDING A DEAD BAND OR AT LEAST 5°F WITHIN WHICH THE SUPPLY OR HEATING AND COOLING IS SHUT OFF OF REDUCED TO A MINIMUM.
8. THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN °F.
9. THERMOSTATS SHALL HAVE ADJUSTABLE SETPOINT STOPS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.
10. HEAT PUMPS SHALL BE INSTALLED WITH CONTROLS TO PREVENT ELECTRIC RESISTANCE SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE. ELECTRIC RESISTANCE SUPPLEMENTARY HEATING OPERATION IS PERMITTED DURING TRANSIENT PERIODS, SUCH AS START-UPS AND FOLLOWING ROOM THERMOSTAT SETPOINT ADVANCE, WHEN CONTROLS ARE PROVIDED WHICH USE PREFERENTIAL RATE CONTROL, INTELLIGENT RECOVERY, STAGING, RAMPING, OR SIMILAR CONTROL MECHANISMS DESIGNED TO PRECLUDE THE UNNECESSARY OPERATION OF SUPPLEMENTARY HEATING DURING THE RECOVERY PERIOD. SUPPLEMENTARY HEATER OPERATION IS ALSO PERMITTED DURING DEFROST.
11. GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS.
12. ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE, EXCEPT FOR COMBUSTION AIR OPENINGS.
13. ALL BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH AND PERFORMED BY A COMPANY CERTIFIED BY THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS (1983), OR ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS (1986).
14. OUTSIDE AIR CERTIFICATION: THE SYSTEM SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY THE INSTALLING LICENSED C-20 MECHANICAL CONTRACTOR.
15. THE AIR CONDITIONING SYSTEM SHALL BE ENERGIZED 1 HOUR IMMEDIATELY PRIOR TO OCCUPANCY TO PROVIDE THE MINIMUM REQUIRED VENTILATION RATE.

CALGREEN MANDATORY MEASURE NOTES

1. FOR NEW BUILDING 10,000 SQUARE FEET AND OVER, BUILDING COMMISSIONING SHALL BE INCLUDE IN THE DESIGN AND CONSTRUCTION PROCESSES OF THE BUILDING PROJECT TO VERIFY THAT THE BUILDING SYSTEMS AND COMPONENTS MEET THE OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS. THE COMMISSIONING REQUIREMENTS SHALL INCLUDE OWNER'S PROJECT REQUIREMENTS (OPR), BASIS OF DESING (BOD), COMMISSIONING MEASURES, COMMISSIONING PLAN, FUNCTIONAL PERFORMANCE TESTING, DOCUMENTATION AND TRAINING AND A FINAL COMMISSIONING REPORT. (CALGREEN SECTION 5.410.2)
2. PROVIDE TESTING AND ADJUSTING OF SYSTEMS IN ACCORDANCE WITH CALGREEN SECTION 5.410.4.
3. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF ADDITION OR ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MINIMUM EFFICIENCY REPORTING VALUVE (MERV) OF 8, BASED ON ASHRAE 52.2-1999. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION. (CALGREEN SECTION 5.504.1)
4. AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND EBRIS, WHICH MAY ENTER THE SYSTEM. (CALGREEN SECTION 4.501 OR 5.504.3)
5. ALL PAINTS, ADHESIVES, SEALANTS AND CAULKS SHALL MEET THE REQUIREMENTS OF CALGREEN SECTION 4.504.2 OR 5.504.4.
6. IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES ATLEAST A MINIMUM EFFICIENCY REPORTING VALUVE (MERV) OR 8. MERV 8 SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMEDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUVE SHALL BE INCLUDED IN THE OPERATIONS AND MAINTENANCE MANUAL. (CALGREEN SECTION 5.504.5.3)
7. FOR BUILDINGS OR ADDITIONS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA ENERGY CODE. (CALGREEN SECTION 5.506.2)
8. HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN ANY CHLOROFLUOROCARBONS (CFSs). (CALGREEN SECTION 5.508.1.1)
9. HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN ANY HALONS. (CALGREEN SECTION 5.508.1.2)
10. LOW-RISE RESIDENTIAL- EACH BATHROOM SHALL BE MECHANICALLY VENTILATED. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGES OF LESS THAN OR EQUAL TO 50% TO A MAXIMUM OF 80%. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT. (CALGREEN SECTION 4.506)

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PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
TITLE 24 COMPLIANCE FORMS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
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Scale	
Job No.	18-6452

SHEET No.
M004

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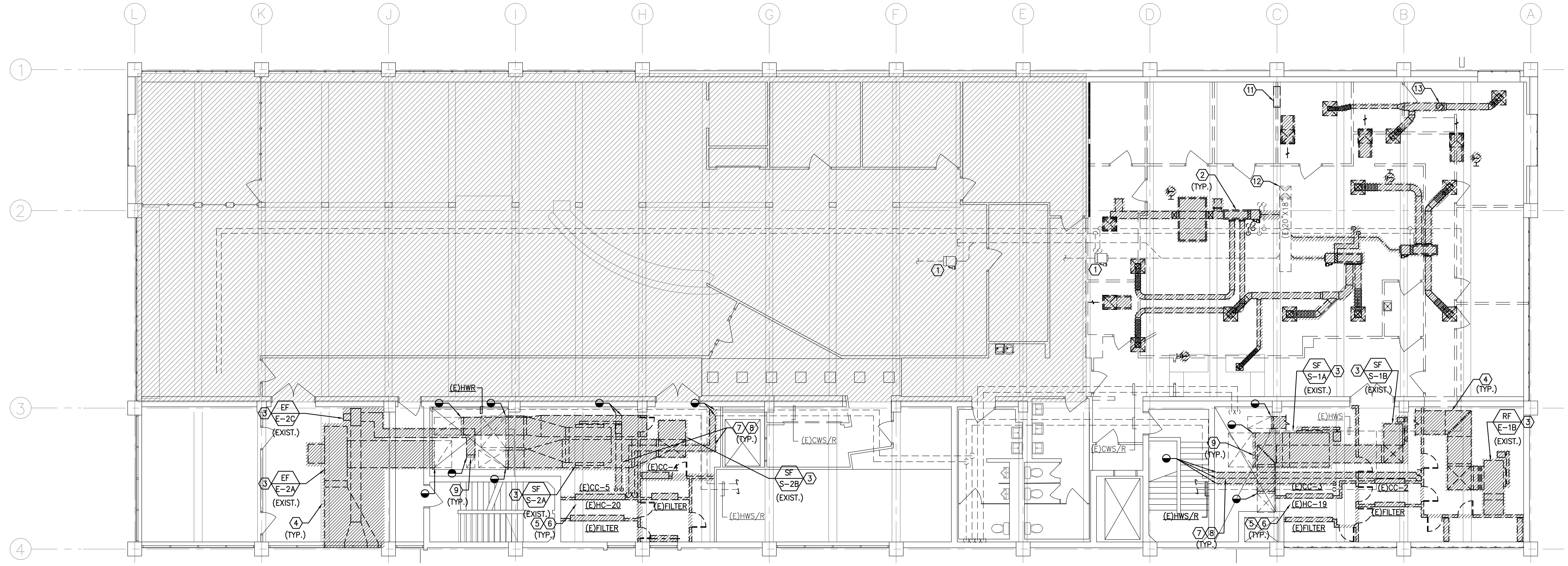

MECHANICAL 5TH FLOOR DEMOLITION PLAN

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

NORTH

1

DEMOLITION NOTES:

(1) EXISTING VAV BOX TO REMAIN AS INDICATED.

(2) EXISTING VAV BOX AND ALL ASSOCIATED CONTROLS SHALL BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.

(3) EXISTING FAN AND ALL ASSOCIATED CONTROLS SHALL BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.

(4) EXISTING DUCTWORK TO BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.

(5) EXISTING COOLING COIL TO BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.

(6) EXISTING HEATING COIL TO BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.

(7) EXISTING HWS&R PIPING TO BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.

(8) EXISTING CWS&R PIPING TO BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.

(9) PATCH AND REPAIR DUCT OPENINGS AND WALLS AFTER REMOVAL.

(10) PATCH AND REPAIR DUCT OPENINGS AND WALLS AFTER REMOVAL.

(11) EXISTING RETURN AIR OPENING ABOVE CEILING TO REMAIN.

(12) EXISTING 20"X18" SUPPLY AIR DUCT UP TO EXISTING AHU-5 LOCATED IN PENTHOUSE.

(13) EXISTING 12"ø SUPPLY AIR DUCT UP TO EXISTING VAV BOX LOCATED IN PENTHOUSE. DEMOLISH EXISTING DUCTWORK AND VAV BOX INSIDE PENTHOUSE AND CAP.

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LICENSE STAMPS

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

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SHEET TITLE
MECHANICAL 5TH FLOOR DEMOLITION PLAN

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

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Drawn By	
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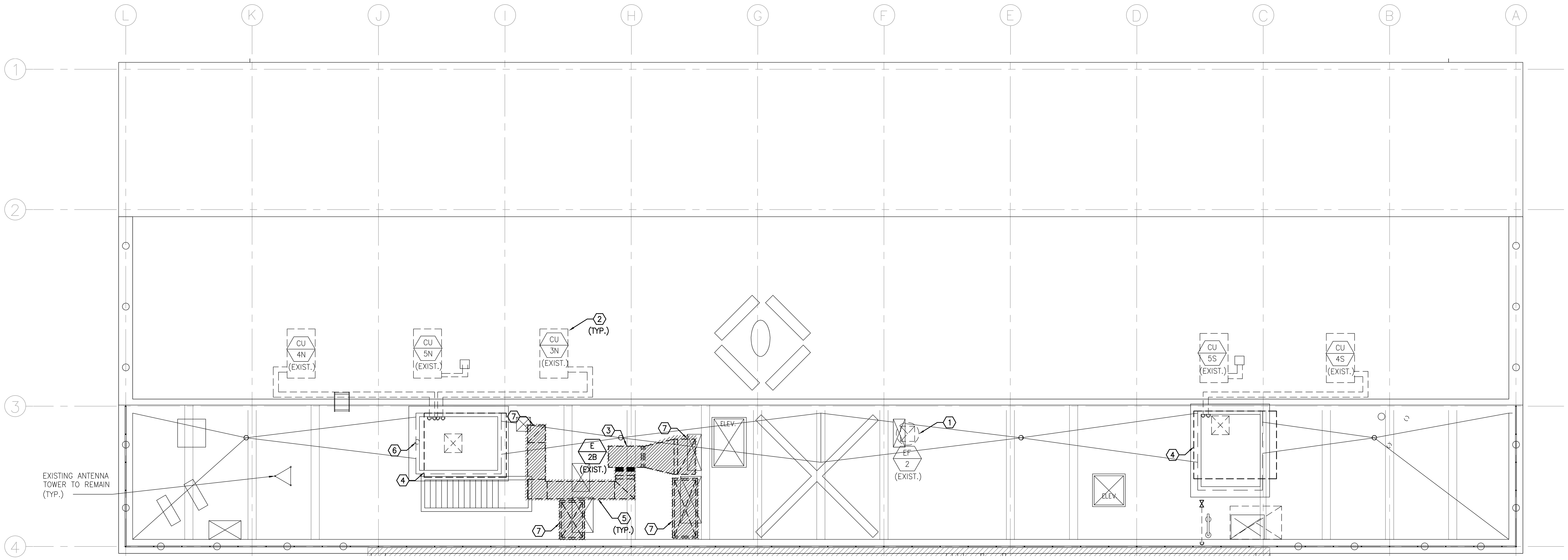
Job No.	18-6452

SHEET No.

M101



MECHANICAL ROOF DEMOLITION PLAN

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

1

DEMOLITION NOTES:

1. EXISTING ROOFTOP EXHAUST FAN TO REMAIN AS INDICATED.
2. EXISTING ROOFTOP CONDENSING UNIT TO REMAIN AS INDICATED.
3. EXISTING ROOFTOP EXHAUST FAN AND ALL ASSOCIATED CONTROLS SHALL BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.
4. EXISTING DOGHOUSE OVER EXISTING SHAFT OPENING TO BE REMOVED.
5. EXISTING DUCTWORK ON ROOF TO BE REMOVED AS INDICATED AND DISPOSED OF PROPERLY.
6. EXISTING VENT TO REMAIN, PROTECT IN PLACE.
7. PATCH AND REPAIR ROOF PENETRATIONS TO MATCH EXISTING.

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SHEET TITLE

MECHANICAL ROOF DEMOLITION PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

M102

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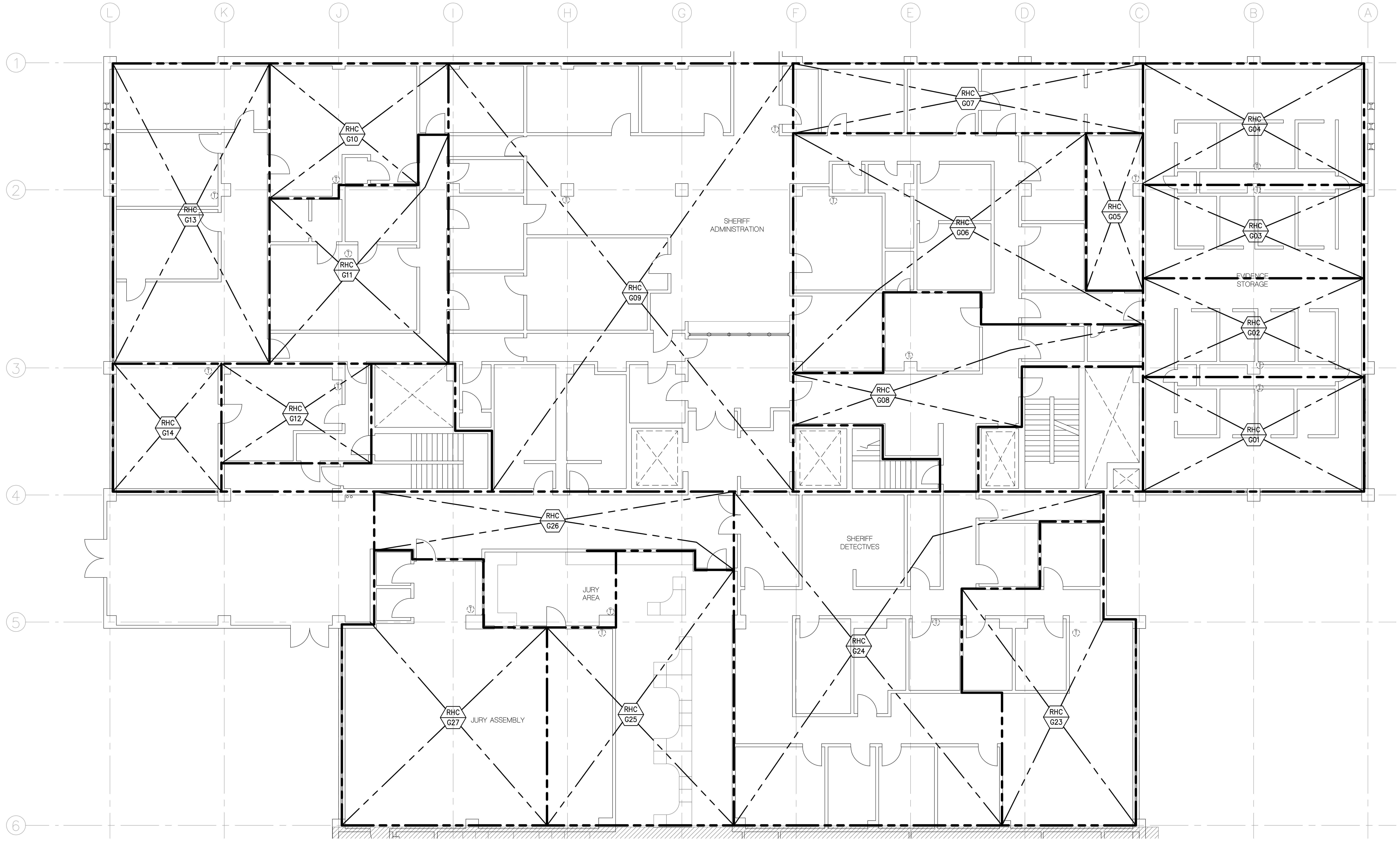

NORTH

MECHANICAL GROUND FLOOR ZONING PLAN

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

1

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SHEET TITLE

MECHANICAL GROUND FLOOR ZONING PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

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Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

M201Z

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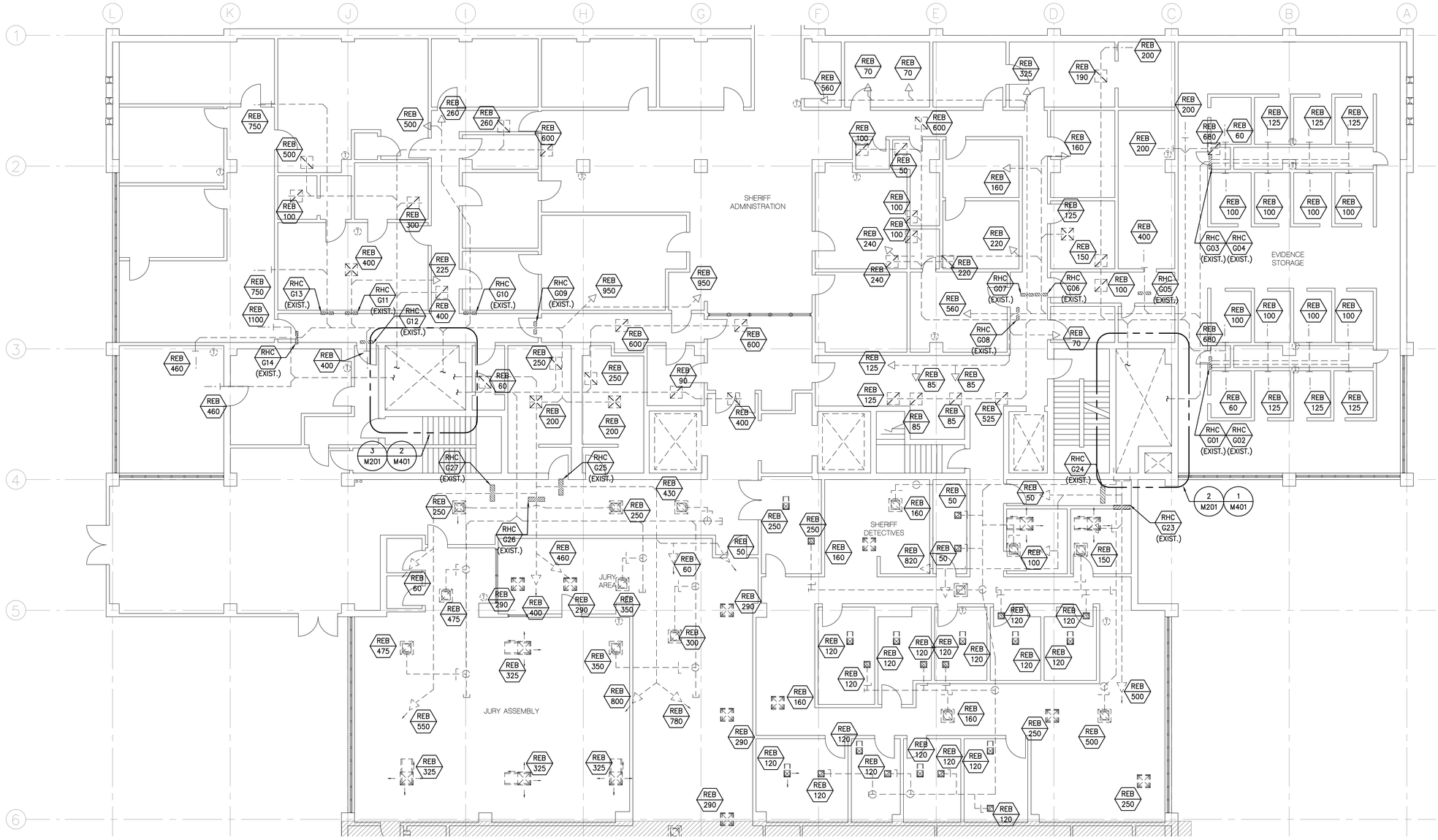
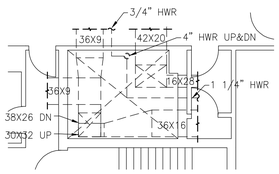


MECHANICAL GROUND FLOOR PLAN

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

1



SHAFT NO.2 PLAN - NORTH

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

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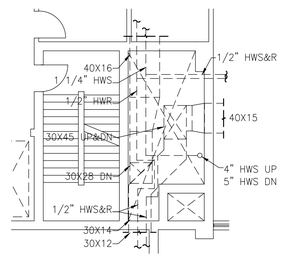

SHAFT NO.1 PLAN - SOUTH

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

2

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SHEET TITLE

MECHANICAL GROUND FLOOR PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

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Job No.	18-6452

SHEET No.

M201

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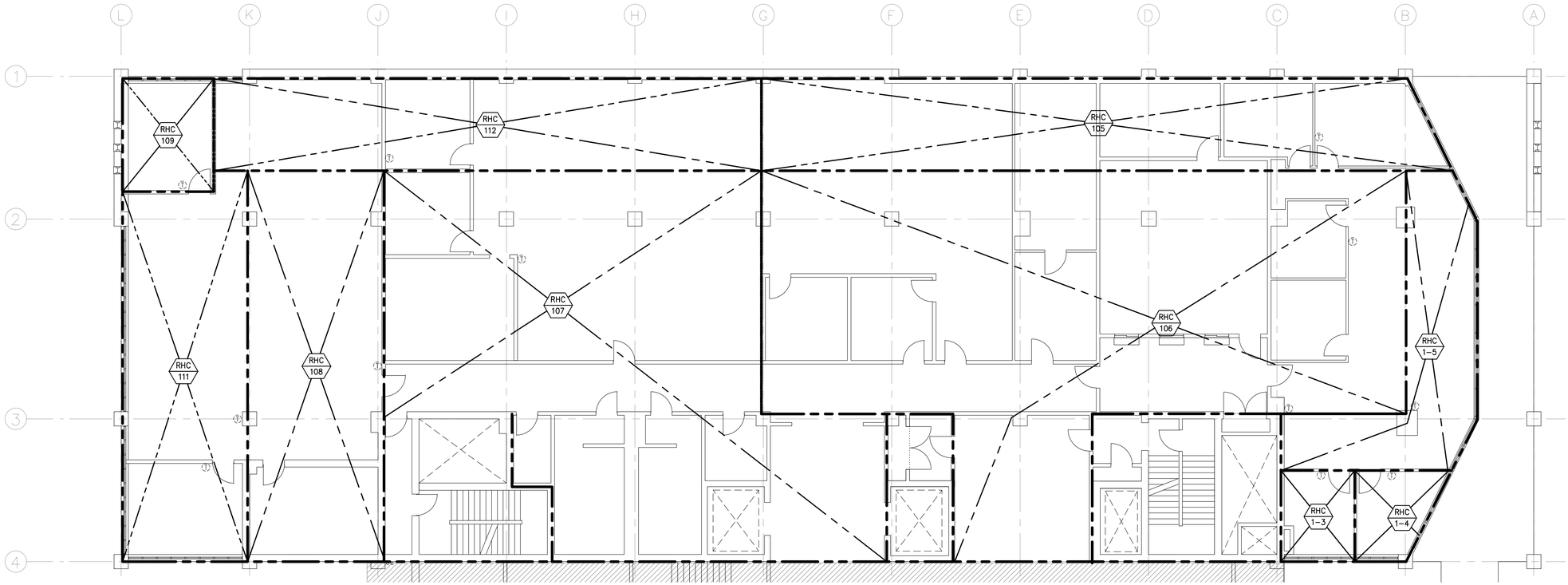

NORTH

MECHANICAL 1ST FLOOR ZONING PLAN

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

1

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SHEET TITLE

MECHANICAL 1ST FLOOR ZONING PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

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SHEET No.

M202Z

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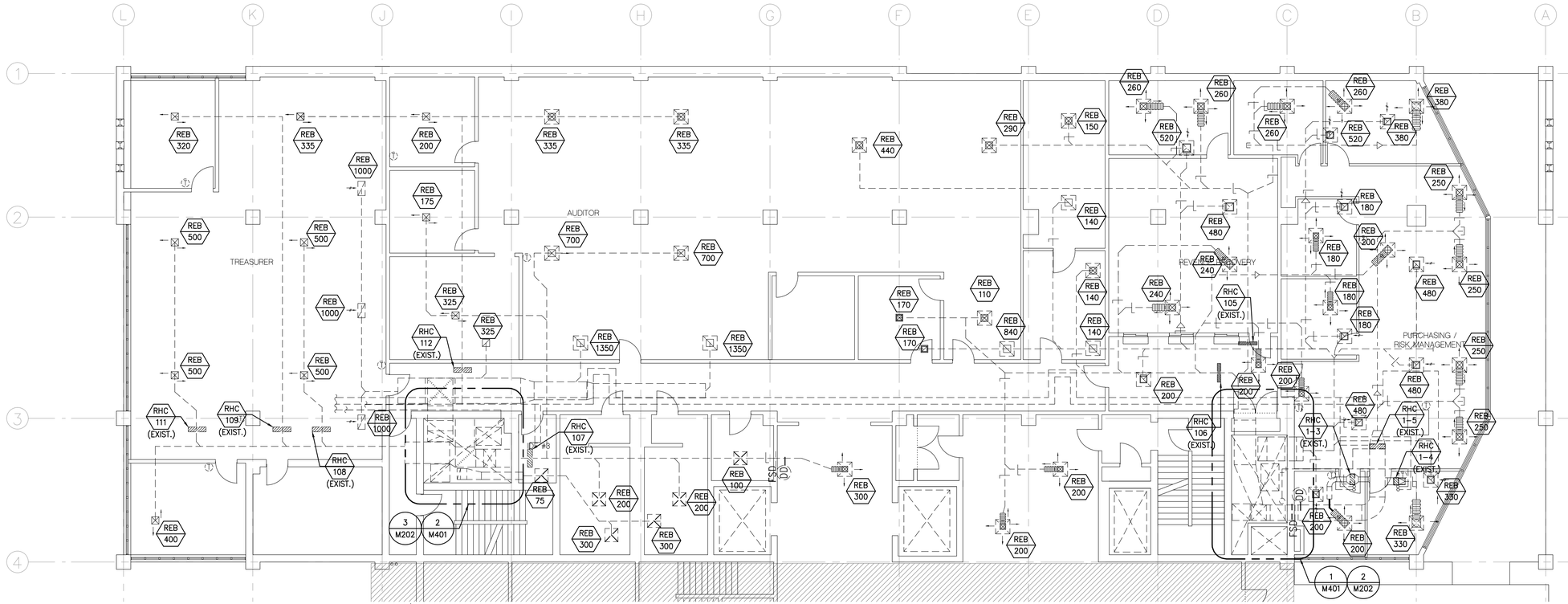
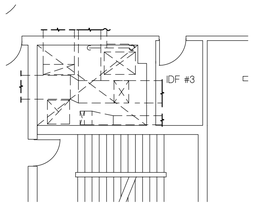


MECHANICAL 1ST FLOOR PLAN

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

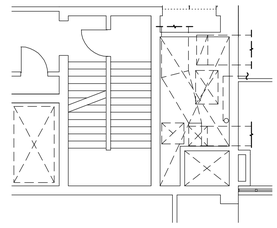
1



SHAFT NO.2 PLAN - NORTH

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

3



SHAFT NO.1 PLAN - SOUTH

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

2

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PROJECT NAME

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VICTIM / WITNESS & CAST

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SHEET TITLE
MECHANICAL 1ST FLOOR PLAN

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

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Scale	
Job No.	18-6452

SHEET No.

M202

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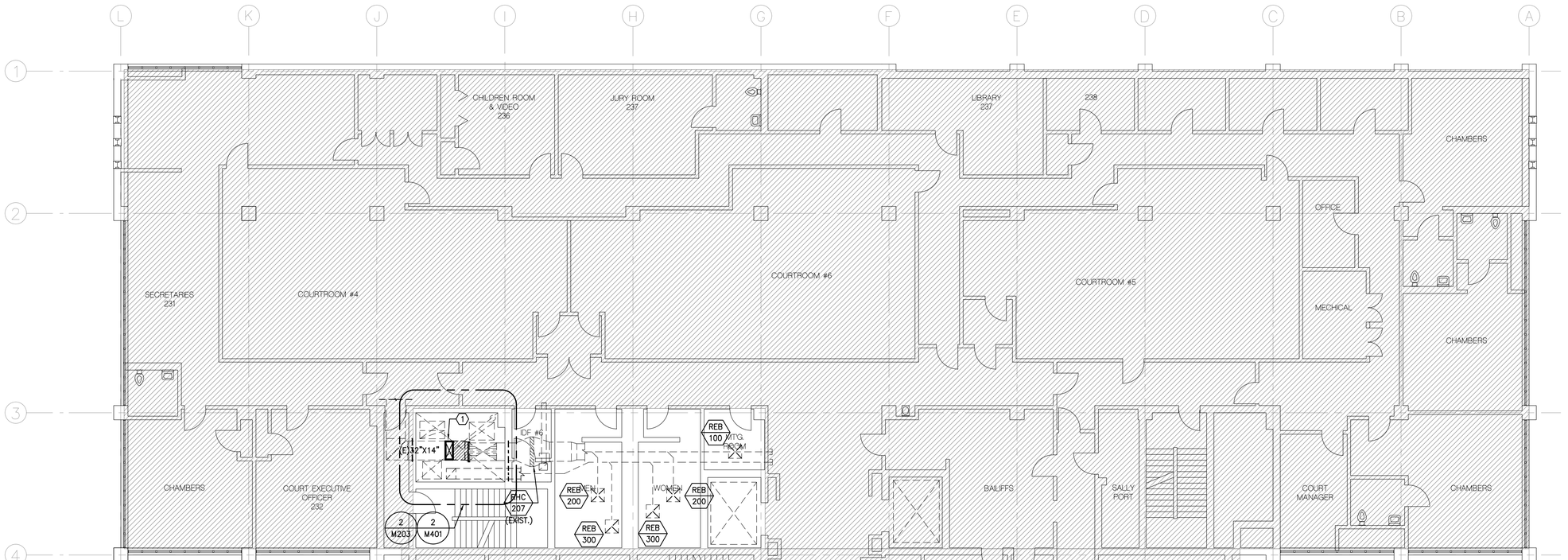


NORTH

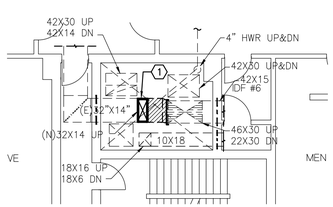
MECHANICAL 2ND FLOOR PLAN

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

1

KEY NOTES:

1 32"X14" OUTSIDE AIR DUCT SHALL BE DISCONNECT FROM SUPPLY AIR DUCT RISER AND CONNECTED TO EXISTING 30"X40" OUTSIDE AIR DUCT LOCATED ON 3RD FLOOR. REFER TO RISER DIAGRAM 2/M401.



SHAFT NO.2 PLAN - NORTH

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

2

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EUREKA, CA 95501

SHEET TITLE

MECHANICAL 2ND FLOOR PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

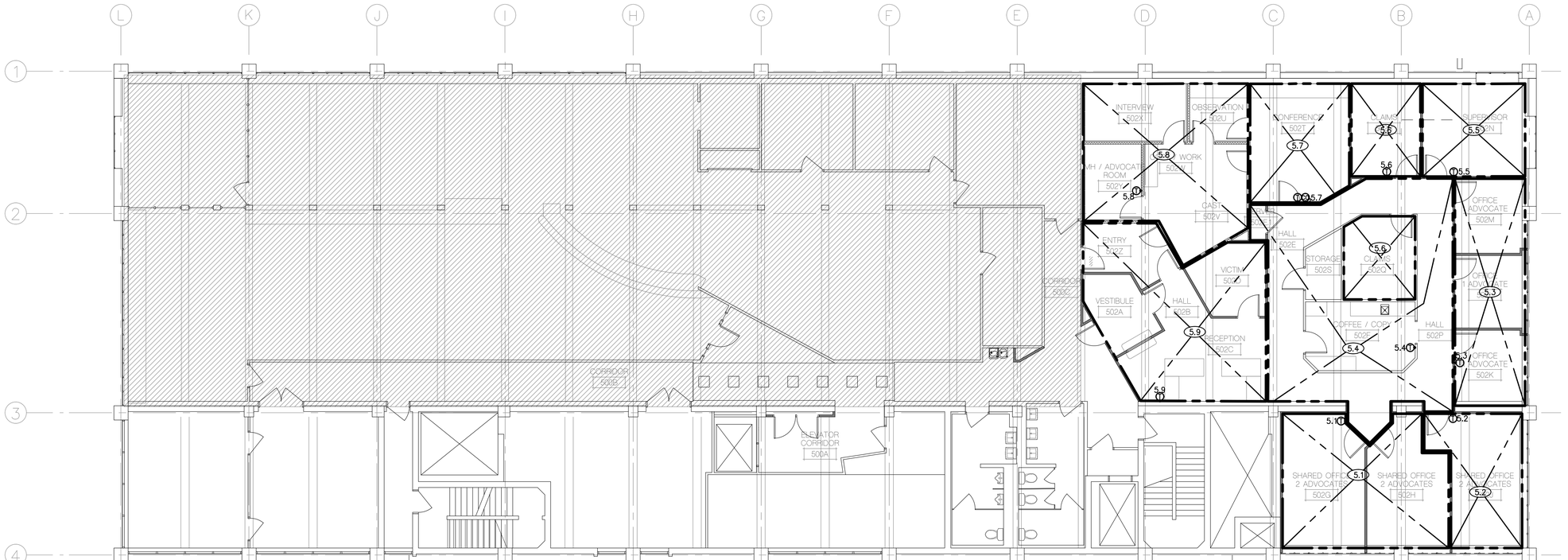
REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

M203



NORTH

MECHANICAL 5TH FLOOR ZONING PLAN

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

1

KEY NOTES:

1. THERMOSTAT MOUNTING DETEAIL SEE DETAIL 1/M501 (TYP.)

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Project Leader - Jeff Halliwell
Mechanical Lead - Jeff Halliwell
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER T. JWAN TANG No. M29973 Exp. 06-30-20 MECHANICAL STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

MECHANICAL 5TH FLOOR ZONING PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

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Date Drawn	6/28/19
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Job No.	18-6452

SHEET No.

M204Z

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Plot Date: June 27, 2019 - 5:23 pm
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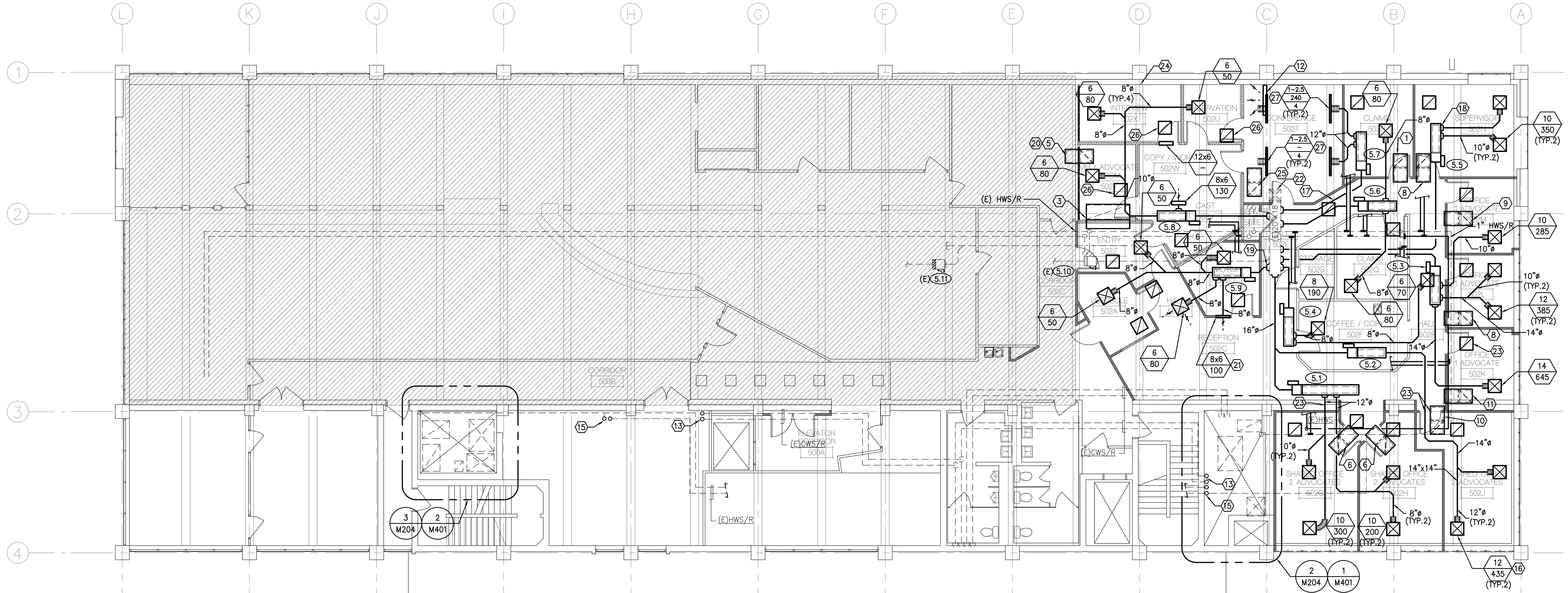


MECHANICAL 5TH FLOOR PLAN (1)

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

GENERAL NOTES:

A. FLEX DUCT SIZE SHALL MATCH DIFFUSER/REGISTER NECK SIZE.
B. CONTRACTOR SHALL FIELD VERIFY THAT THERE IS A CLEAR RETURN AIR PATH TO THE EXISTING RETURN AIR SHAFT.
C. VAV CONTROLS SHALL BE FREE OF ANY OBSTRUCTIONS.

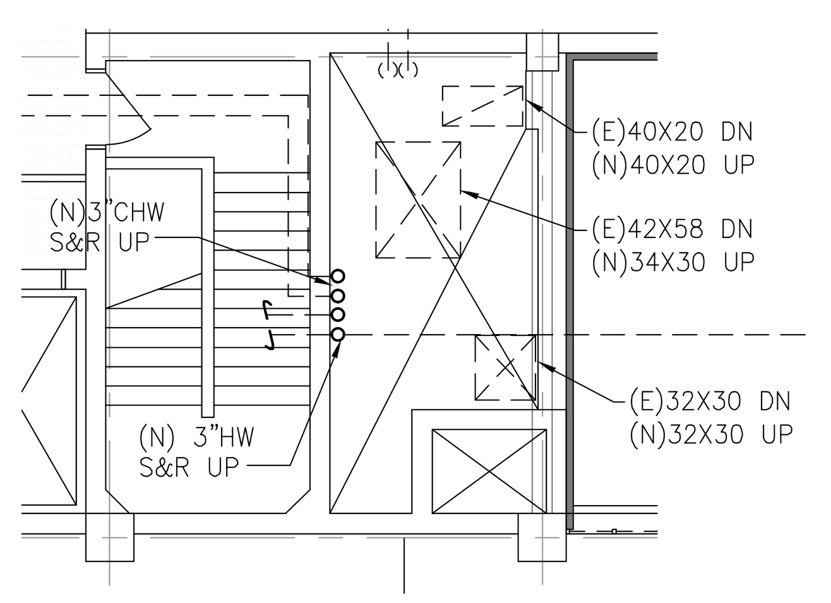
AIR TERMINAL UNITS - SINGLE-DUCT

VAV NO.	BOX SIZE	AIR QUANTITY (CFM) MAX.	AIR QUANTITY (CFM) 20% MIN.	DDC HEATING 20% MAX (CFM)	DDC HEATING GPM	REMARKS
5.1	10	1210	250	450	1.1	NEW EXTERIOR ZONE
5.2	10	1305	270	450	1.1	NEW EXTERIOR ZONE
5.3	12	1700	340	600	1.5	NEW EXTERIOR ZONE
5.4	6	260	70	200	0.5	NEW INTERIOR ZONE
5.5	8	700	140	300	0.8	NEW EXTERIOR ZONE
5.6	6	160	70	160	0.3	NEW INTERIOR ZONE
5.7	8	480	150	300	0.8	NEW INTERIOR ZONE W/ CO2 SENSOR
5.8	6	340	70	200	0.5	NEW INTERIOR ZONE
5.9	6	330	70	200	0.5	NEW INTERIOR ZONE
5.10	12	1290	EXISTING			
5.11	8	650	EXISTING			

NOTES:
1. PROVIDE WITH 3-WAY VALVE AND 2-ROW HEATING COIL.

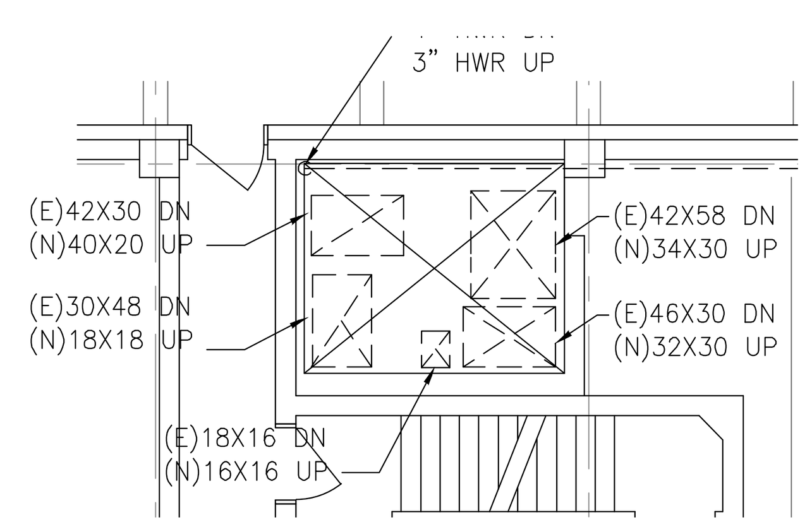
KEY NOTES:

1. 6"X4" TRANSFER AIR BOOT THROUGH FULL HEIGHT WALL.
2. NOT USED.
3. 72"X24" TRANSFER AIR BOOT THROUGH FULL HEIGHT WALL AND TERMINATING ABOVE THE SECONDARY HARD LID CEILING.
4. NOT USED.
5. 24X16" TRANSFER AIR BOOT THROUGH FULL HEIGHT WALL ABOVE SECONDARY HARD LID CEILING.
6. 14"X12" TRANSFER AIR BOOT THROUGH FULL HEIGHT WALL.
7. NOT USED.
8. 18"X14" TRANSFER AIR OPENING THROUGH FULL HEIGHT WALL.
9. 20"X16" TRANSFER AIR OPENING THROUGH FULL HEIGHT WALL.
10. 24"X18" TRANSFER AIR OPENING THROUGH FULL HEIGHT WALL.
11. 30"X20" TRANSFER AIR OPENING THROUGH FULL HEIGHT WALL.
12. EXISTING RETURN AIR GRILLE LOCATED ON PENTHOUSE WALL ABOVE CEILING.
13. 3" CHWS AND CHWR UP.
14. 72"X30" TRANSFER AIR BOOT THROUGH FULL HEIGHT WALL.
15. 2" HWS AND HWR UP.
16. CEILING DIFFUSER SEE DETAIL (TYP.) — 3/M501
17. DUCT SUPPORT SEE DETAIL (TYP.) — 4/M501
18. LOW LOSS FITTING SEE DETAIL (TYP.) — 5/M501
19. VAV BOX CONNECTION TO MAIN SEE DETAIL (TYP.) — 6/M501
20. "L" RETURN AIR BOOT W/ SOUND INSULATION SEE DETAIL (TYP.) — 7/M501
21. SIDEWALL REGISTER SEE DETAIL (TYP.) — 7/M502
22. EXISTING 20"X18" SUPPLY AIR DUCT UP TO AHI-5 LOCATED IN PENTHOUSE.
23. CONTRACTOR TO ROUTE DUCTWORK ON TOP OF EACH OTHER FOR PENETRATIONS THROUGH CONCRETE WALL TO MINIMIZE PENETRATION WIDTH.
24. PROVIDE MINIMUM 72"X30" RETURN AIR OPENING IN WALL ABOVE EXISTING TRUSS.
25. BOOT THRU SECONDARY HARD LID CEILING SEE DETAIL — 8/M501
26. RETURN AIR REGISTER W/ SOUND BOOT SEE DETAIL (TYP.) — 8/M501
27. LINEAR DIFFUSER SEE DETAIL — 1/M503



SHAFT NO.1 PLAN - SOUTH (2)

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



SHAFT NO.2 PLAN - NORTH (3)

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

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HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
MECHANICAL 5TH FLOOR PLAN

DRAWING STATUS
CONSTRUCTION DOCUMENTS

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Checked By	
Date Drawn	6/28/19
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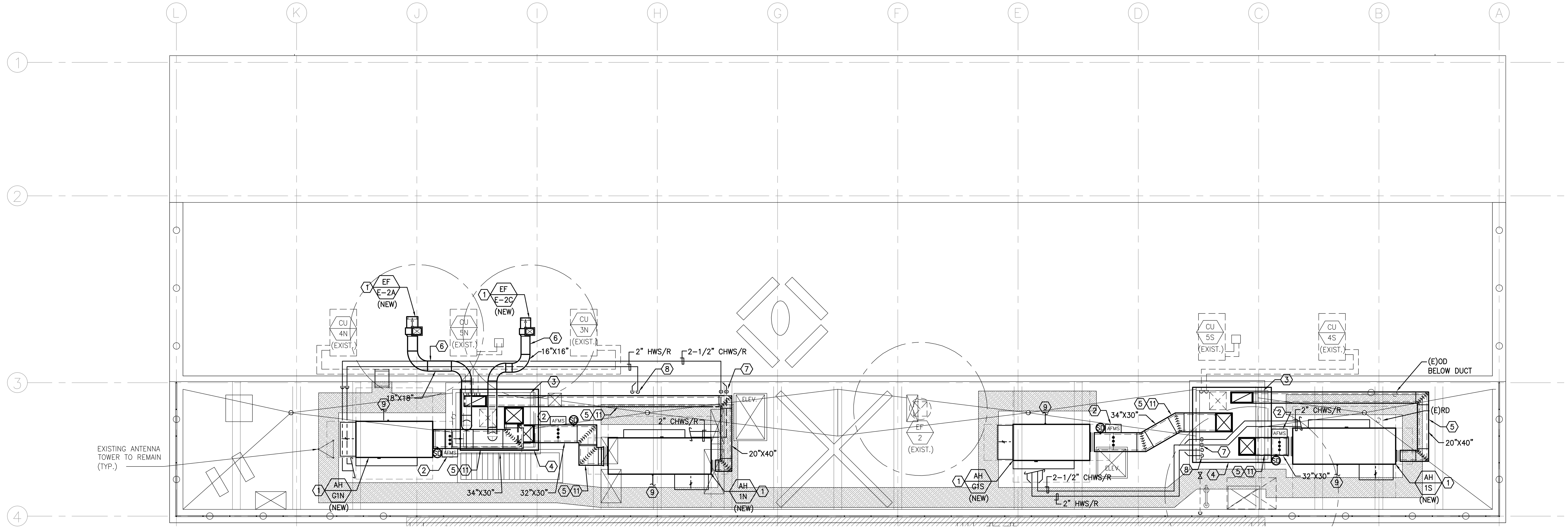
Job No.	18-6452

SHEET No.
M204



MECHANICAL ROOF PLAN

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

1

KEY NOTES:

1. LEVEL CONCRETE CURB. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. REFER TO VIBRATION DETAILS ON SHEET M503 (TYP.).
2. EBTRON AIR FLOW MEASURING STATION IN SUPPLY AIR DUCT. REFER TO CONTROLS M600 SERIES DRAWINGS FOR MORE INFORMATION.
3. EXISTING SHAFT OPENING. FIELD VERIFY EXACT SIZE AND LOCATION.
4. PROVIDE NEW DOGHOUSE OVER EXISTING SHAFT OPENING. REFER TO ARCHITECTURAL DWG'S.
5. STAINLESS STEEL DOUBLE-WALL DUCTWORK ON ROOF SHALL BE LINED WITH MINIMUM 2 INCH THICK DUCT LINER (R-8 VALUE).
6. STAINLESS STEEL EXHAUST DUCT.
7. (N) 3" CHWS AND CHWR DOWN.
8. (N) 2" HWS AND HWR DOWN.
9. CONDENSATE DRAIN, REFER TO PLUMBING DWG'S.

11. DOUBLE WALL DUCT SUPPORT ON ROOF SEE DETAIL (TYP.) — 3/M502

12. PIPE SUPPORT ON ROOF SEE DETAIL (TYP.) — 6/M502

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EUREKA, CA 95501

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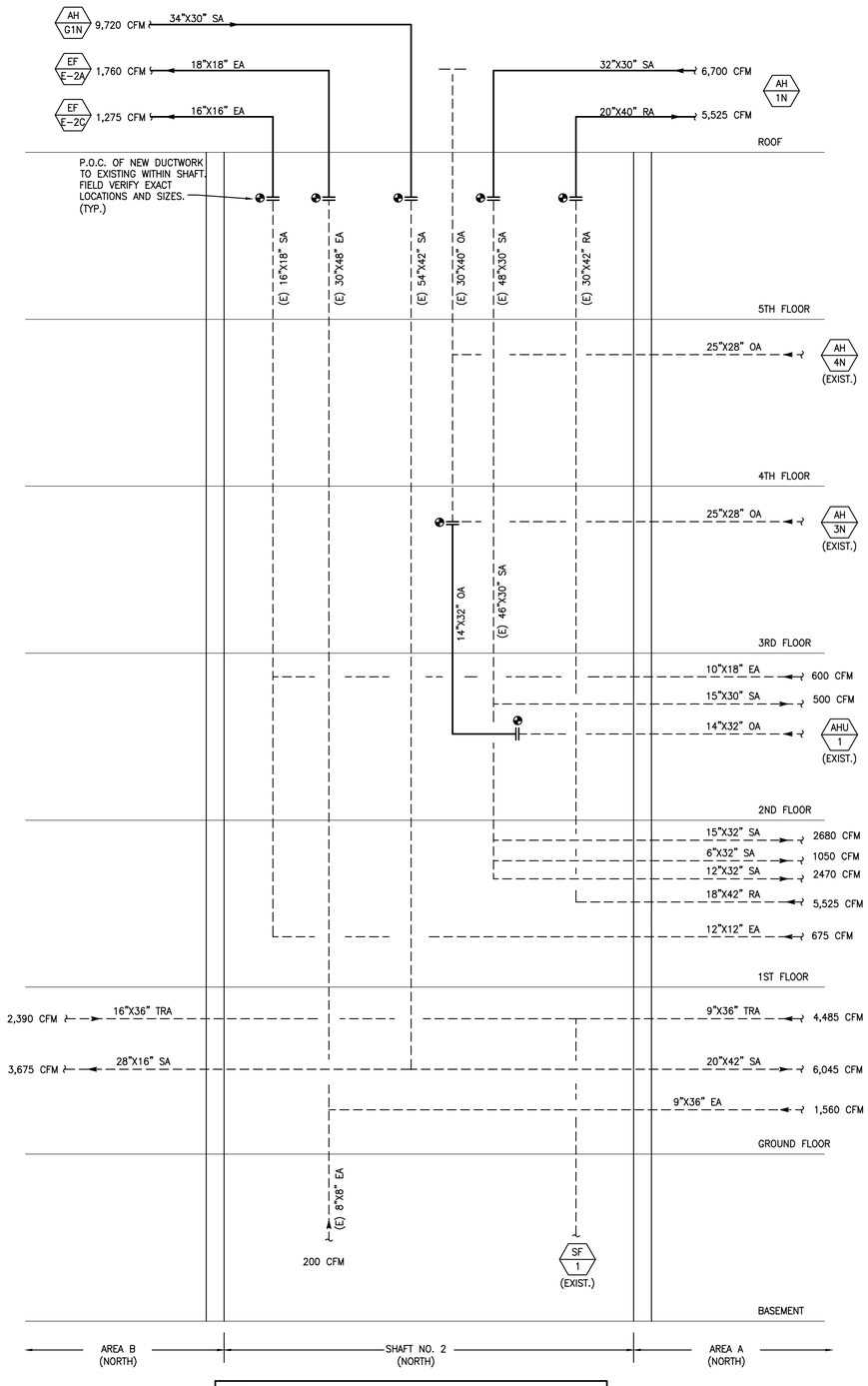
SHEET No.

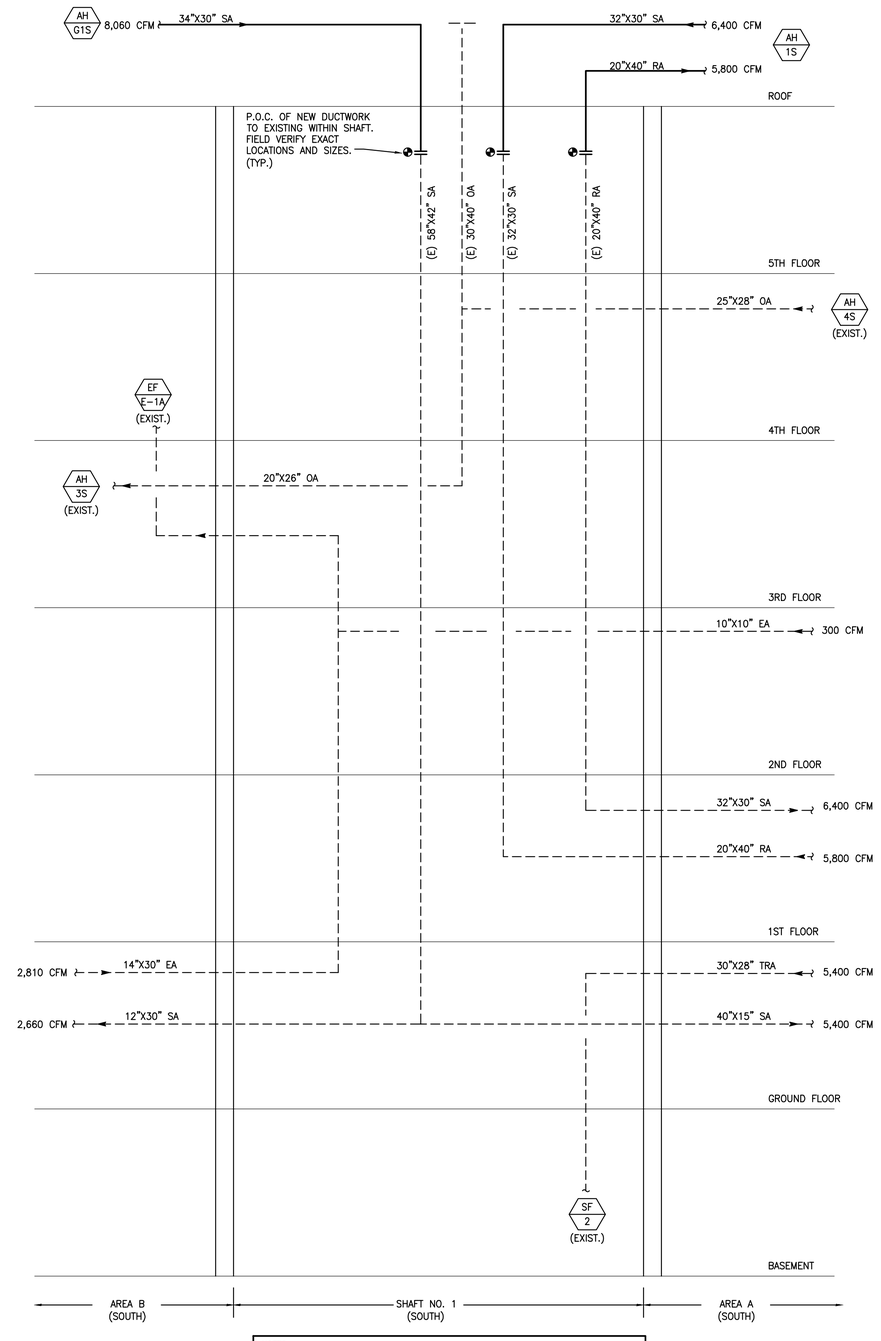
M205



NOTES:

1. DUCT LEAKAGE SEALING AND TESTING:
   a. CONTRACTOR TO CLOSE OFF AND SEAL ALL OPENINGS IN THE DUCT SECTION TO BE TESTED.
   b. EACH SECTION DUCT MAINS WITHIN THE SHAFT SHALL BE SEALED AND TESTED AT A PRESSURE CORRESPONDING TO ITS PRESSURE RATED. TOTAL ALLOWABLE LEAKAGE AT THE TESTING PRESSURE SHALL NOT EXCEED 6% OF THE TOTAL AIR HANDLER AIRFLOW FOR THE SECTION BEING TESTED.
2. CONTRACTOR SHALL PATCH AND SEAL ANY HOLES IN EXISTING MAINS. REPLACE DUCT INSULATION THAT IS DAMAGED.

SHAFT NO.2 RISER DIAGRAMS (NORTH) | SCALE – | 2



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SHAFT NO.1 RISER DIAGRAMS (SOUTH) | SCALE – | 1

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SHEET TITLE
RISER DIAGRAMS

DRAWING STATUS
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Checked By	
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Job No.	18-6452

SHEET No.
M401

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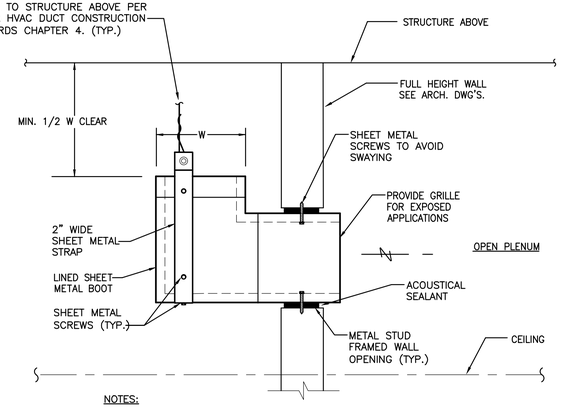
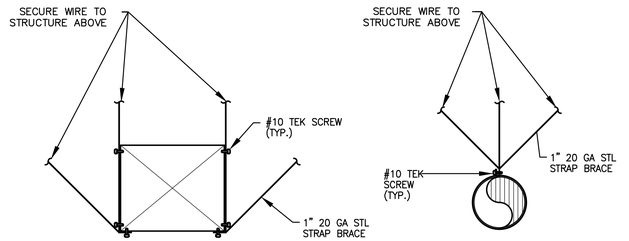


NOTES:

1. SEAL BETWEEN TRANSFER BOOT AND WALLS
2. TRANSFER BOOT TO BE CONSTRUCTED OF SHEET, GAUGE PER SMACNA GUIDELINES.
3. LOCATE AWAY FROM RETURN AIR GRILLES AND OTHER OPENINGS IN CEILING.
4. SIZE TRANSFER BOOT FOR MAXIMUM 500 FPM AIRFLOW VELOCITY. UNLESS OTHERWISE INDICATED.

"L" RETURN AIR BOOT W/ SOUND INSULATION

SCALE – 7

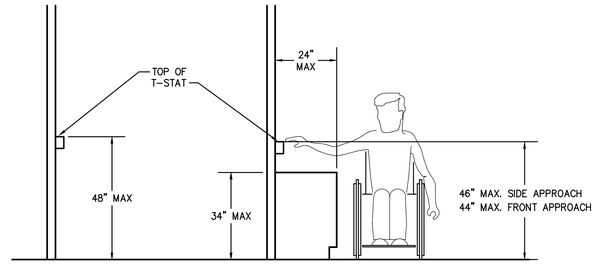


RECTANGULAR DUCT

ROUND DUCT (UP TO 20"ø)
(USE DOUBLE HANGERS FOR 22"ø & UP)

DUCT SUPPORT

SCALE – 4

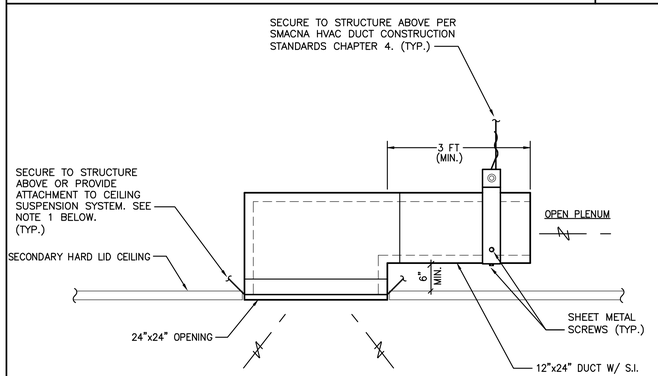


NOTES:

1. PRIOR TO ROUGH-IN OF THERMOSTATS, CONTRACTOR SHALL PROVIDE DIMENSIONED SHOP DRAWINGS SHOWING ALL WALL DEVICES TO ARCHITECT FOR COORDINATION WITH FURNITURE LAYOUT.
2. ALL CONTROL DEVICES SHALL MATCH IN COLOR.
3. THERMOSTATS ON EXTERIOR WALLS/ COLUMN COVERS SHALL BE PROVIDED WITH INSULATED BACKING TO PREVENT FALSE READINGS.
4. UPON PROJECT COMPLETION, CALIBRATE THERMOSTATS AND ENSURE ACCURACY AND REPEATABILITY.

THERMOSTAT MOUNTING DETAIL

SCALE – 1

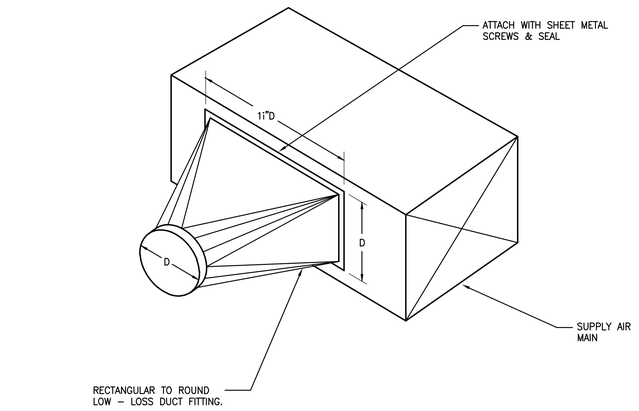


NOTES:

1. PER IBC 25.214, CEILING DIFFUSERS AND RETURN AIR GRILLES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION MAIN RUNNERS OR TO CROSS RUNNERS WITH THE SAME CARRYING CAPACITY AS THE MAIN RUNNERS. IF ATTACHMENT TO CEILING SUSPENSION SYSTEM IS NOT USED, DIFFUSER/GRILLE SHALL HAVE TWO HANGERS CONNECTED FROM TERMINAL TO THE STRUCTURE ABOVE.
2. RETURN AIR BOOT TO BE CONSTRUCTED OF SHEET, GAUGE PER SMACNA GUIDELINES.

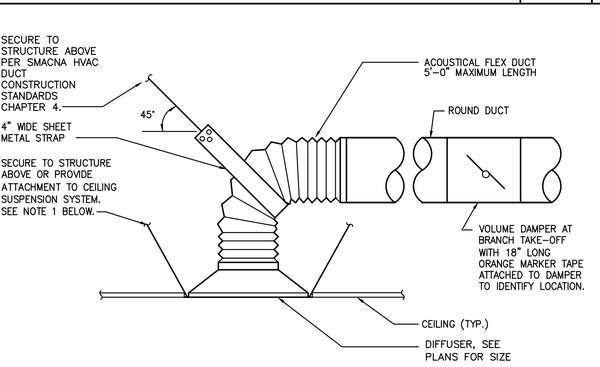
"L" BOOT THRU HARD LID CEILING

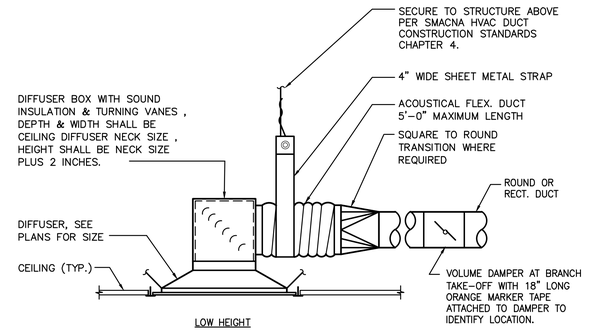
SCALE – 8



LOW LOSS FITTING

SCALE – 5





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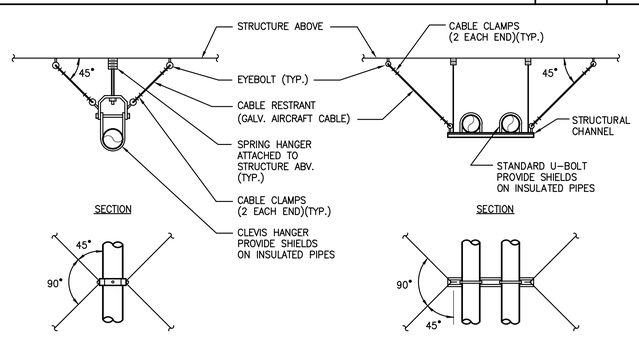
2. FLEXIBLE DUCT TO BE INSTALLED AND SUPPORTED PER SMACNA SECTION 3.5 AND 3.7.
3. FLEXIBLE DUCT CONNECTIONS SHALL BE CASCO SILENT FLEX II OR EQUAL.
4. RETURN AIR REGISTERS AND RELIEF AIR REGISTERS ARE SIMILAR.
5. EXHAUST AIR REGISTERS SIMILAR WITH RIGID DUCT IN LIEU OF FLEX.
6. DIFFUSERS AND REGISTERS TO BE INSTALLED PER SMACNA.
7. FLEX DUCT SHALL HAVE A BEND RADIUS OF NO LESS THAN 1.5 TIMES THE DUCT DIAMETER.

CEILING DIFFUSER

SCALE – 3



TYPE 1 SUPPORT

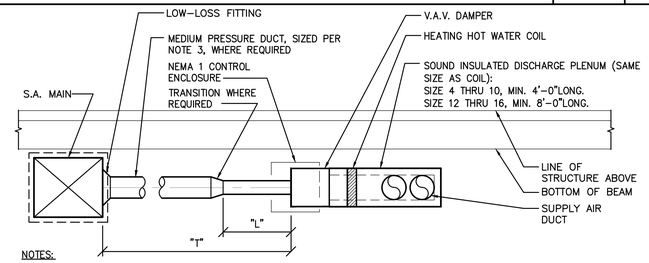
TYPE 2 SUPPORT

NOTES:

1. CABLE SIZE IS DETERMINED ASSUMING TOTAL LOAD ON ONE CABLE.
2. ANCHOR BOLTS ARE KWIK-BOLT CONCRETE INSERTS (OR EQUAL)
3. BOLT SIZE IS DETERMINED ASSUMING TOTAL LOAD ON ONE BOLT OR BOLT GROUP.
4. SIZES SHOWN ARE MINIMUM.
5. CABLE TO BE SLACK & ALLOW 1/4" MOVEMENT BEFORE BECOMING TAUT.
6. TRAPEZE CHANNELS REQUIRE WEB STIFFENERS 1/4" MINIMUM.
7. SUPPORTS TO BE CONSTRUCTED PER SMACNA STANDARDS.

HORIZONTAL PIPE SUPPORTS & CLEVIS HANGERS

SCALE – 9



NOTES:

1. "L" SHALL NOT BE GREATER THAN 12'-0". THE MIN. STRAIGHT LENGTH DUCT REQUIRED SHALL EQUAL THE GREATER OF THE FOLLOWING:
   A. 4 FEET.
   B. (4) x DUCT DIAMETER.
   C. V.A.V. BOX MANUFACTURER RECOMMENDATION.
2. THE DUCT DIAMETER OF "L" SHALL EQUAL THE VAV BOX INLET SIZE.
3. IF "T" IS GREATER THAN 12'-0", OR THERE ARE ELBOWS UPSTREAM OF THE VAV BOX INLET, THEN PROVIDE TAP-OFF OF SUPPLY AIR MAIN W/ DUCT DIAMETER EQUAL TO VAV BOX INLET SIZE PLUS 2", U.N.O.
4. THE CAV/VAV BOX ARRANGEMENT SHALL BE EASILY ACCESSIBLE FROM A SINGLE POINT OF CEILING ACCESS. THIS INCLUDES ACCESS TO THE DAMPER, DAMPER LINKAGE, DAMPER MOTOR, CONTROL ENCLOSURE, DISCONNECT SWITCH & HEATING COIL ARRANGEMENT IN ROOMS WHERE THE SUPPLY & RETURN BOXES ARE LOCATED ADJACENT TO ONE ANOTHER, ACCESS TO ALL COMPONENTS OF BOTH BOXES SHALL BE EASILY ACCESSIBLE FROM A SINGLE POINT OF CEILING ACCESS.

VAV BOX CONNECTION TO MAIN

SCALE – 6

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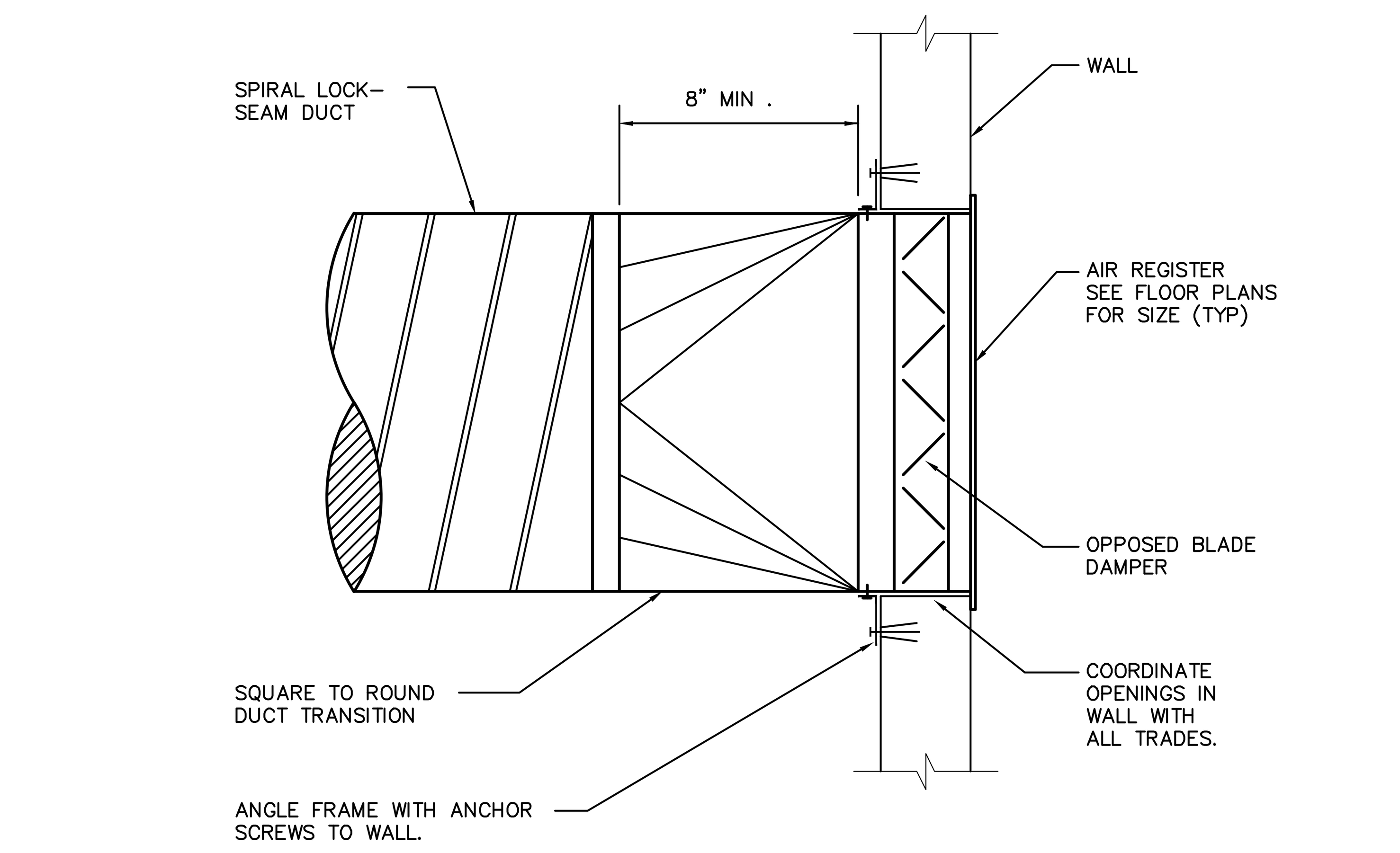
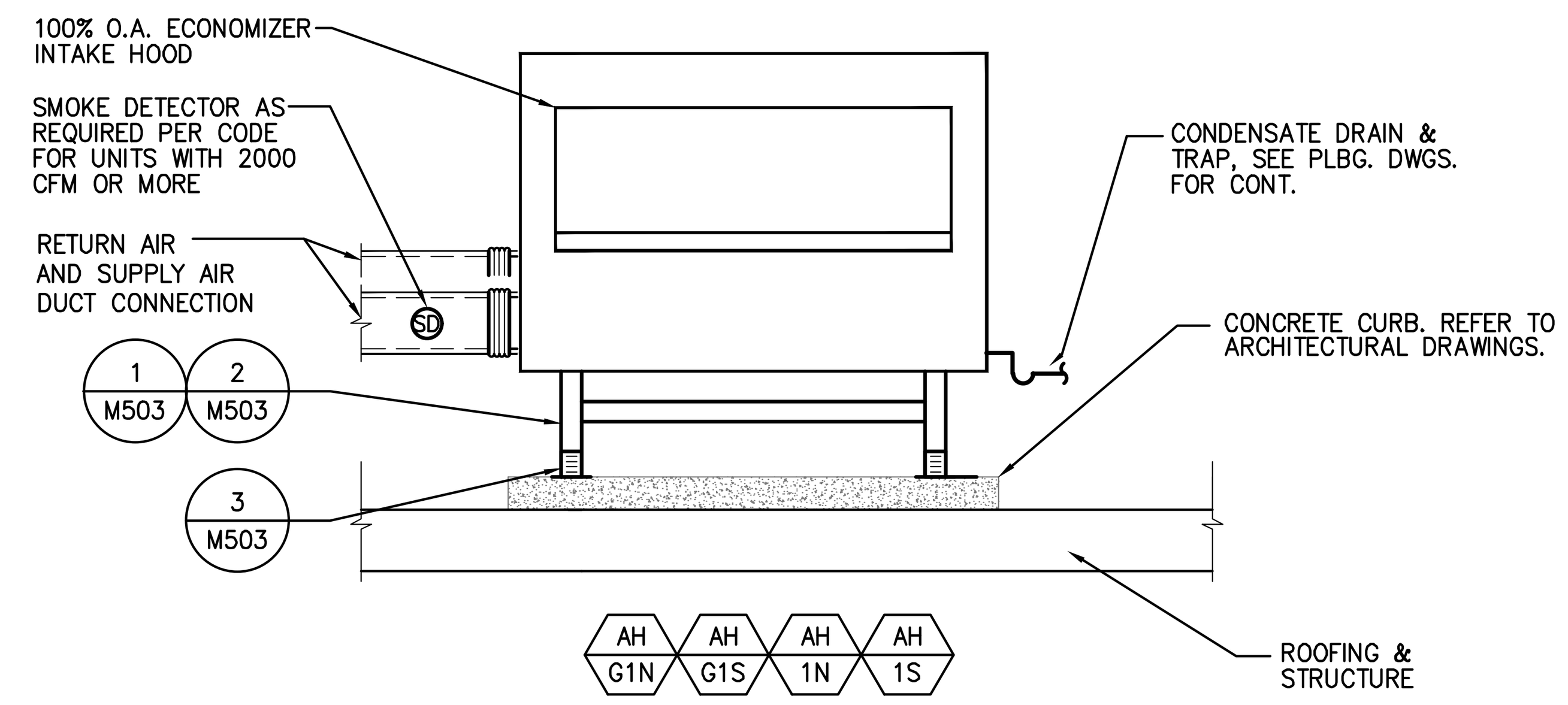


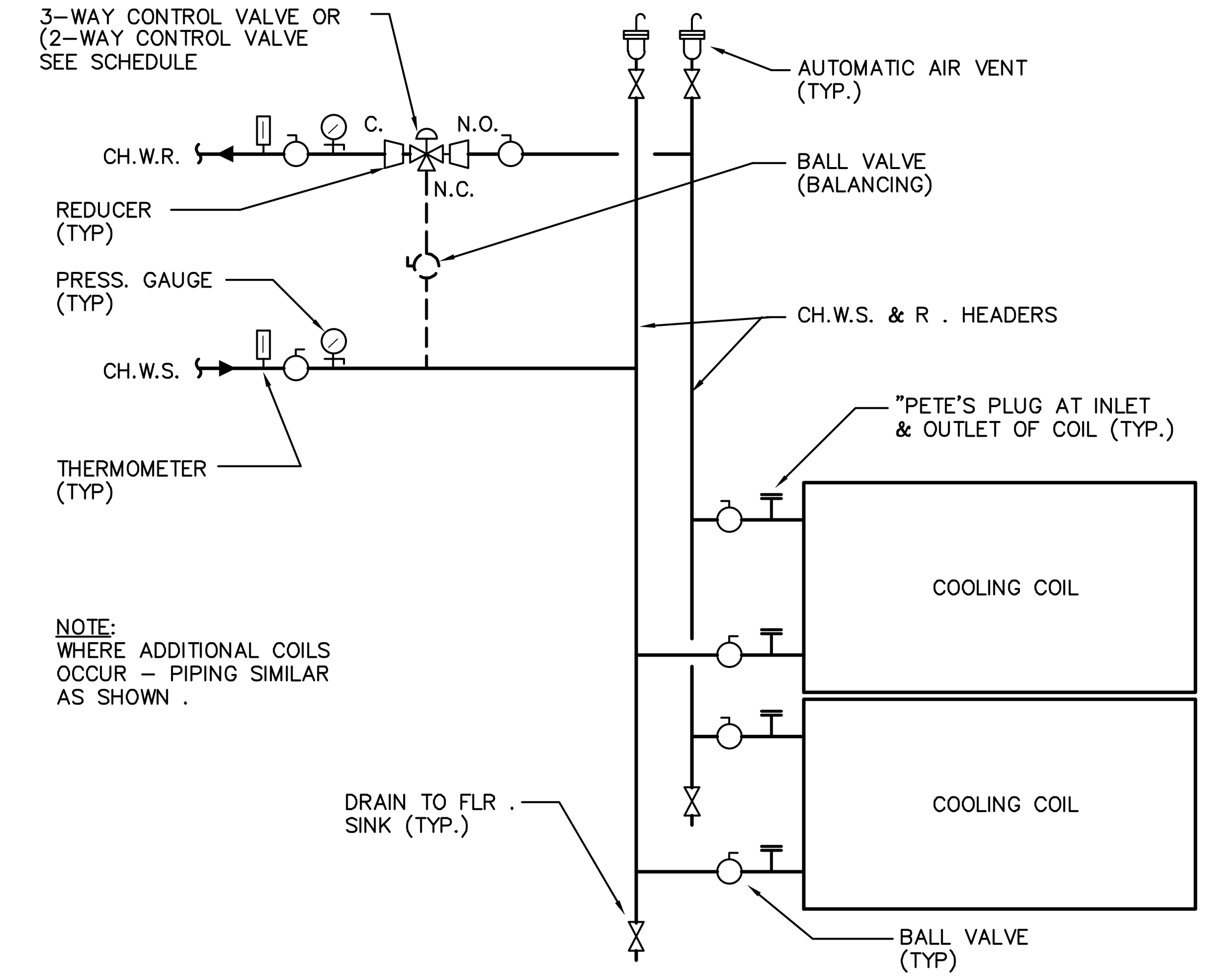
WALL REGISTER SIDEWALL DIFFUSER — SCALE – 7



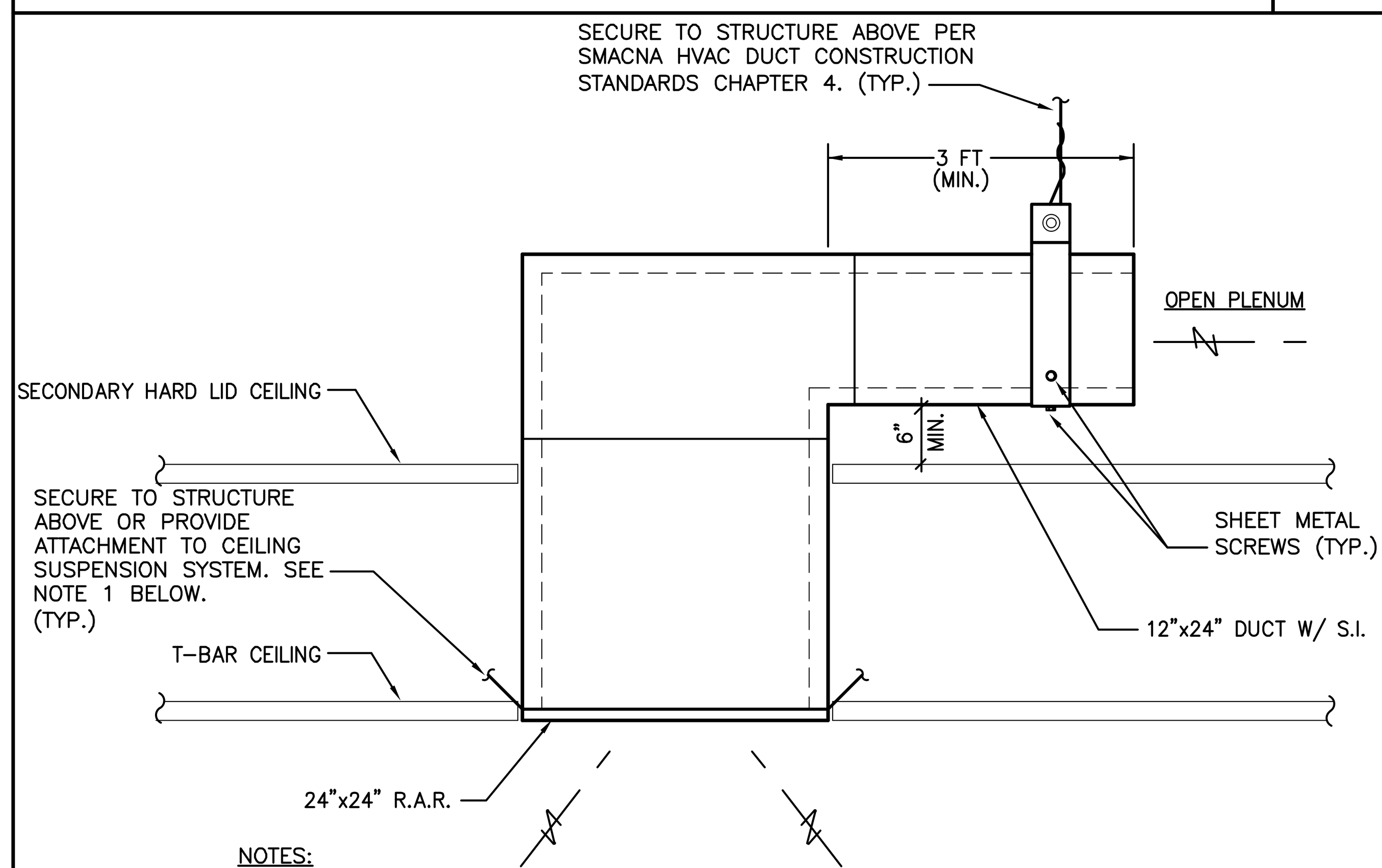
NOTES:

1. COORDINATE EXACT LOCATION AND FRAMING OF ROOF OPENING WITH GENERAL CONTRACTOR.
2. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR CURB AND ANCHORAGE DETAILS.

ROOFTOP AIR HANDLING UNIT — SCALE – 4



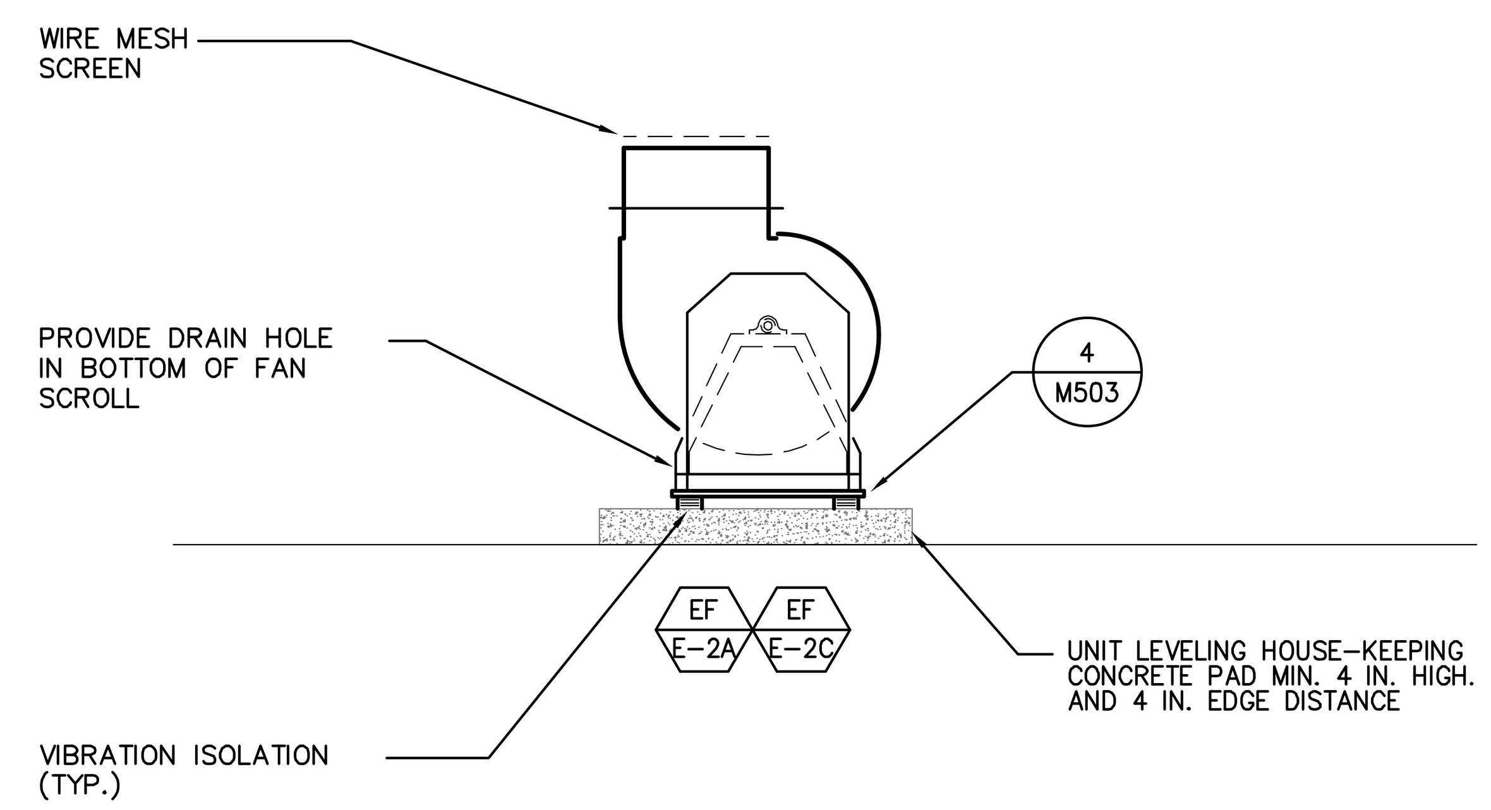
AIR HANDLER COOLING COIL PIPING — SCALE – 1



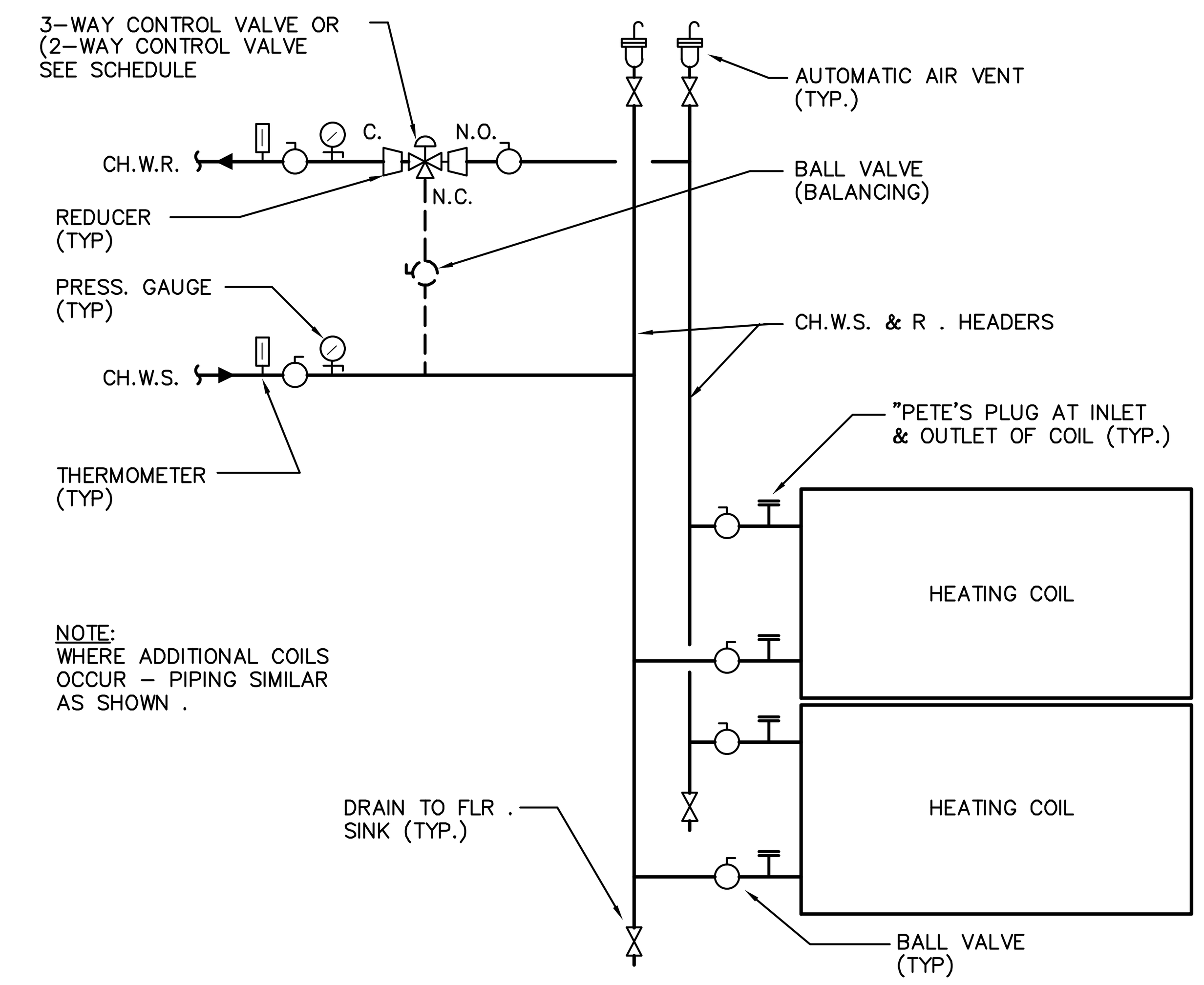
NOTES:

1. PER IBC 25.214, CEILING DIFFUSERS AND RETURN AIR GRILLES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION MAIN RUNNERS OR TO CROSS RUNNERS WITH THE SAME CARRYING CAPACITY AS THE MAIN RUNNERS. IF ATTACHMENT TO CEILING SUSPENSION SYSTEM IS NOT USED, DIFFUSER/GRILLE SHALL HAVE TWO HANGERS CONNECTED FROM TERMINAL TO THE STRUCTURE ABOVE.
2. RETURN AIR BOOT TO BE CONSTRUCTED OF SHEET, GAUGE PER SMACNA GUIDELINES.
3. OCCURS IN ROOMS 502U, 502X, AND 502Y.

RETURN AIR REGISTER W/ SOUND BOOT — SCALE – 8

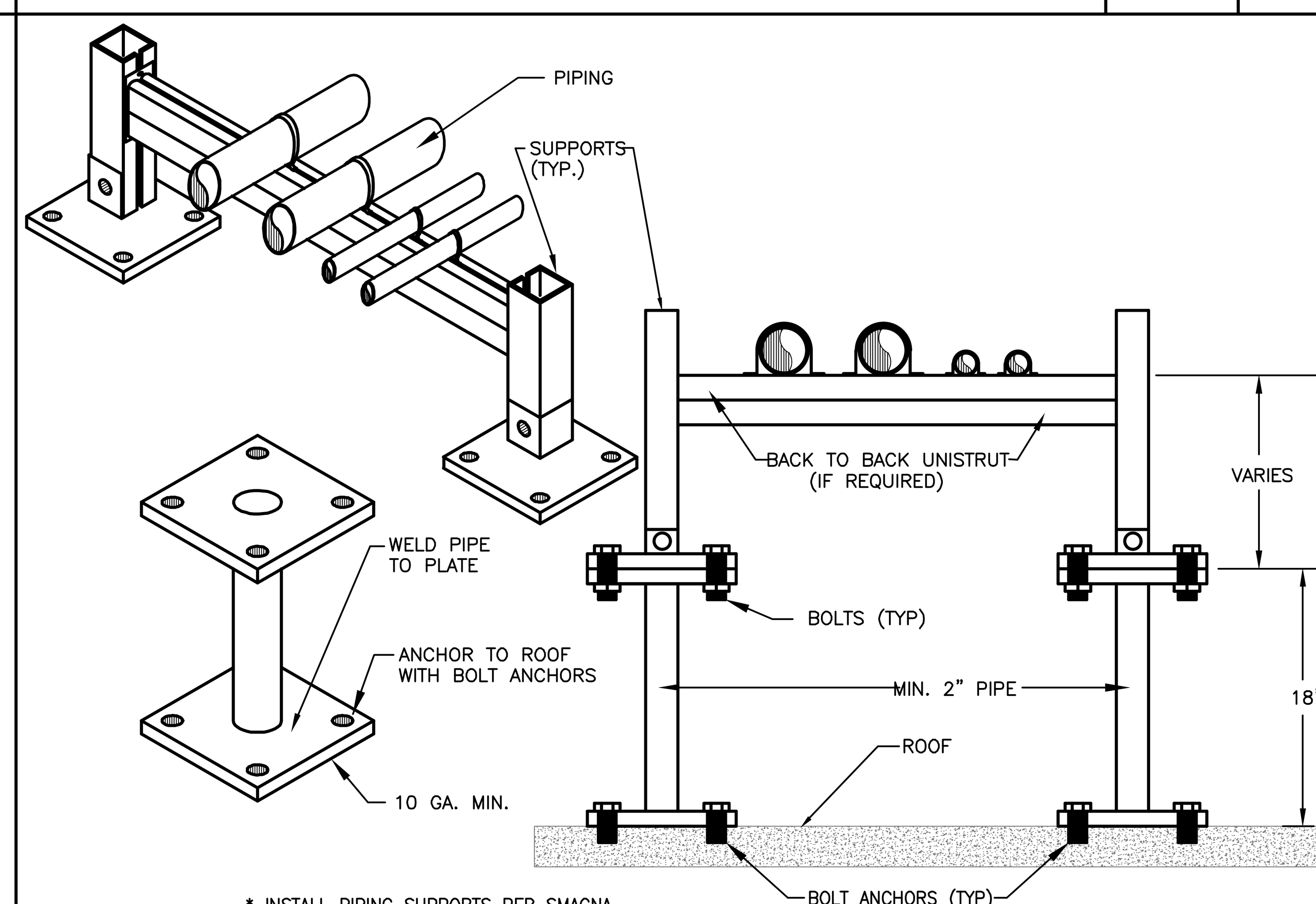


UTILITY SET EXHAUST FAN — SCALE – 5



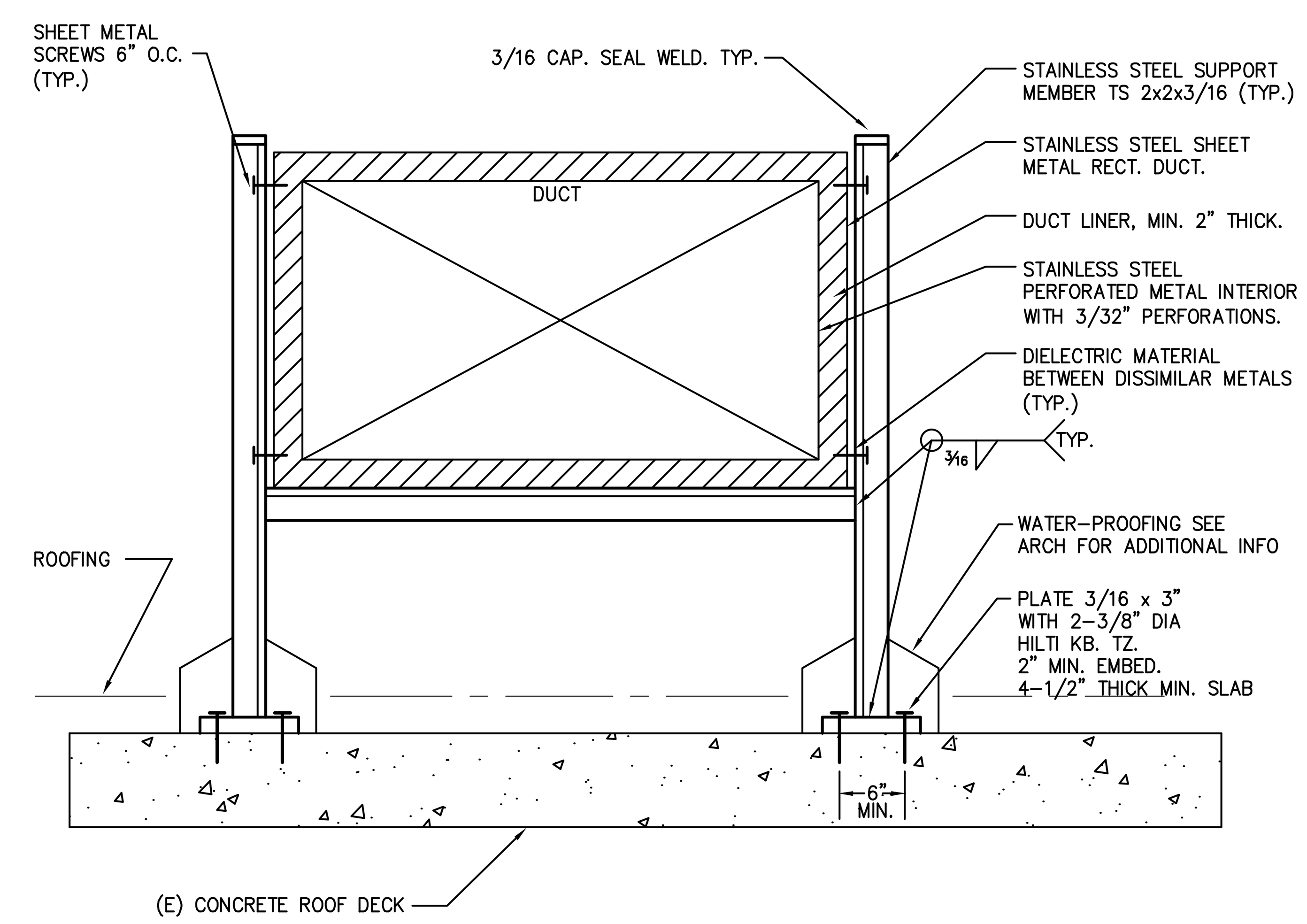
AIR HANDLER HEATING COIL PIPING — SCALE – 2

NOT USED — SCALE – 9



* INSTALL PIPING SUPPORTS PER SMACNA

PIPE SUPPORT ON ROOF WITH 2-PIECE SUPPORTS — SCALE – 6



DOUBLE WALL DUCT SUPPORT ON ROOF — SCALE – 3

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tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER · J. JWAN TANG · No. M29973 · Exp. 06-30-20 · MECHANICAL · STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

DETAILS

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

M502

Login Name: jhalliwell
Plot Date: June 27, 2019 - 5:51 pm
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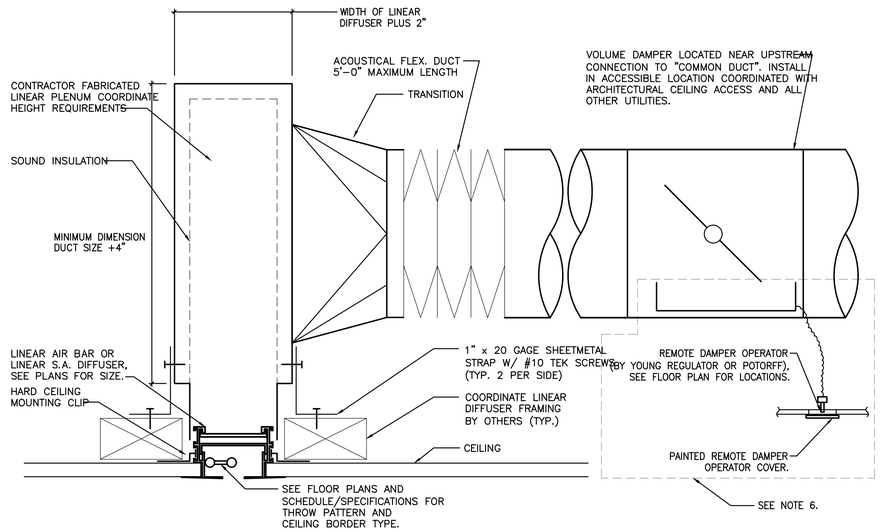
NOT USED

SCALE –

3



NOTE:

1. FOR EXACTING MOUNTING AND INTEGRATION OF LINEAR AIR BAR/DIFFUSER INTO CEILING SYSTEM, SEE ARCHITECTURAL DRAWINGS.
2. ALL TERMINAL SHALL BE MOUNTED IN A MANNER THAT WILL NOT COMPROMISE CEILING PERFORMANCE IN ACCORDANCE WITH SECTION 13.5.6.2.2(5) OF ASCE 7-05 AS AMENDED BY 2010 CBC SECTION 1615A.1.16 (1615.10.13*) AND ASTM E580 SECTION 5.3 AND 5.4.
3. MECHANICAL TERMINALS WEIGHING 56 LBS. OR MORE MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE WIRES ATTACHED TO THE HOUSING AND TO THE STRUCTURE ABOVE. THE FOUR (4) TAUT #12 GAGE WIRES, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIME THE WEIGHT OF THE UNIT.
4. RETURN AIR LINEAR SLOT INSTALLATION IS SIMILAR. PROVIDE FACTORY RETURN PLENUM. PAINT INSIDE SURFACE FLAT BLACK. RETURN AIR LINEAR SLOT SHALL NOT HAVE A PATTERN CONTROLLER.
5. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
6. PROVIDE REMOTE ADJUSTMENT (YOUNG REGULATOR) FOR VOLUME DAMPERS AT INACCESSIBLE CEILINGS.

LINEAR DIFFUSER

SCALE –

1

NOT USED

SCALE –

4

NOT USED

SCALE –

2

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PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
DETAILS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
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Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
M503

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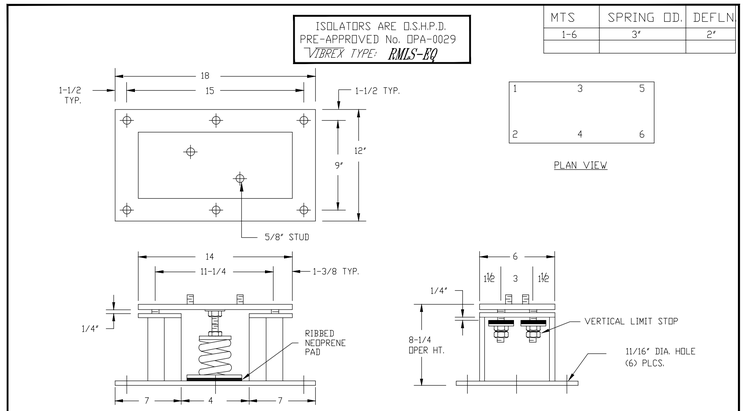
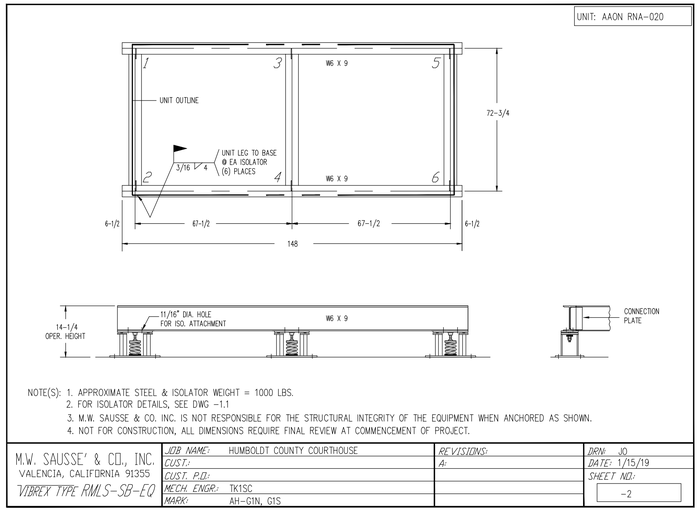
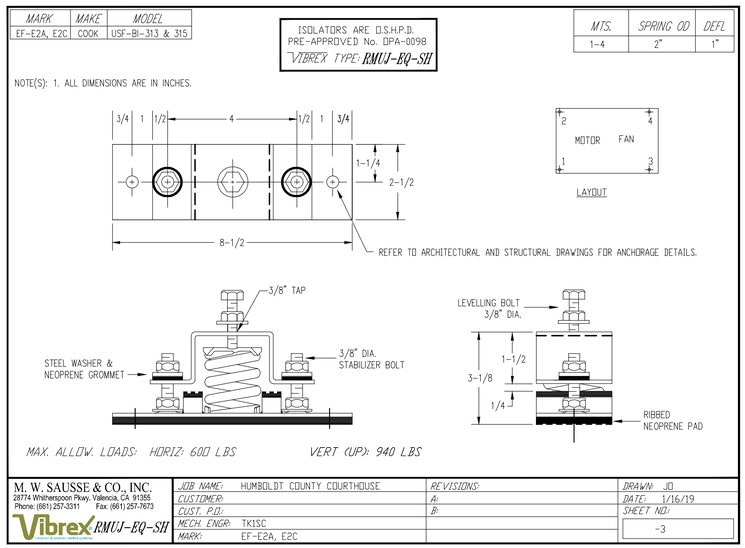


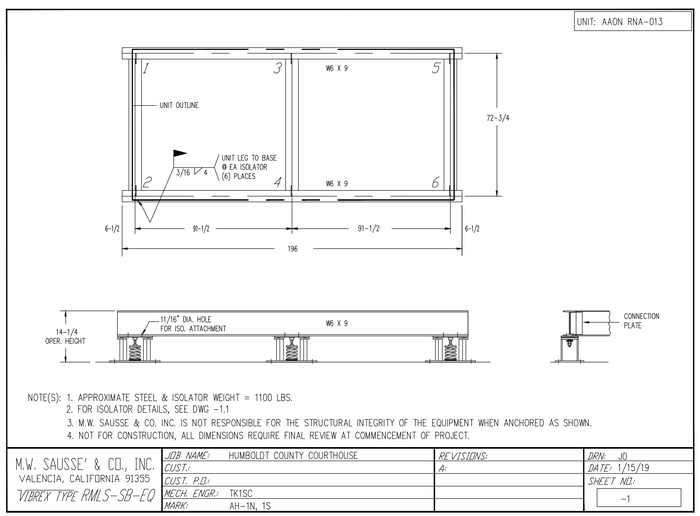
AHU VIBRATION ISOLATION MOUNTING (AH–1N, AH–1S, AH–G1N, AH–G1S)	SCALE –	3



AHU VIBRATION ISOLATION MOUNTING (AH–G1N, AH–G1S)	SCALE –	1



UTILITY SET EXHAUST FAN VIBRATION ISOLATION MOUNTING (EF E2A, EF E2C)	SCALE –	4



AHU VIBRATION ISOLATION MOUNTING (AH–1N, AH–1S)	SCALE –	2

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LICENSE STAMPS

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825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
DETAILS

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CONSTRUCTION DOCUMENTS

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Sym.	Description	By	Date

Drawn By	
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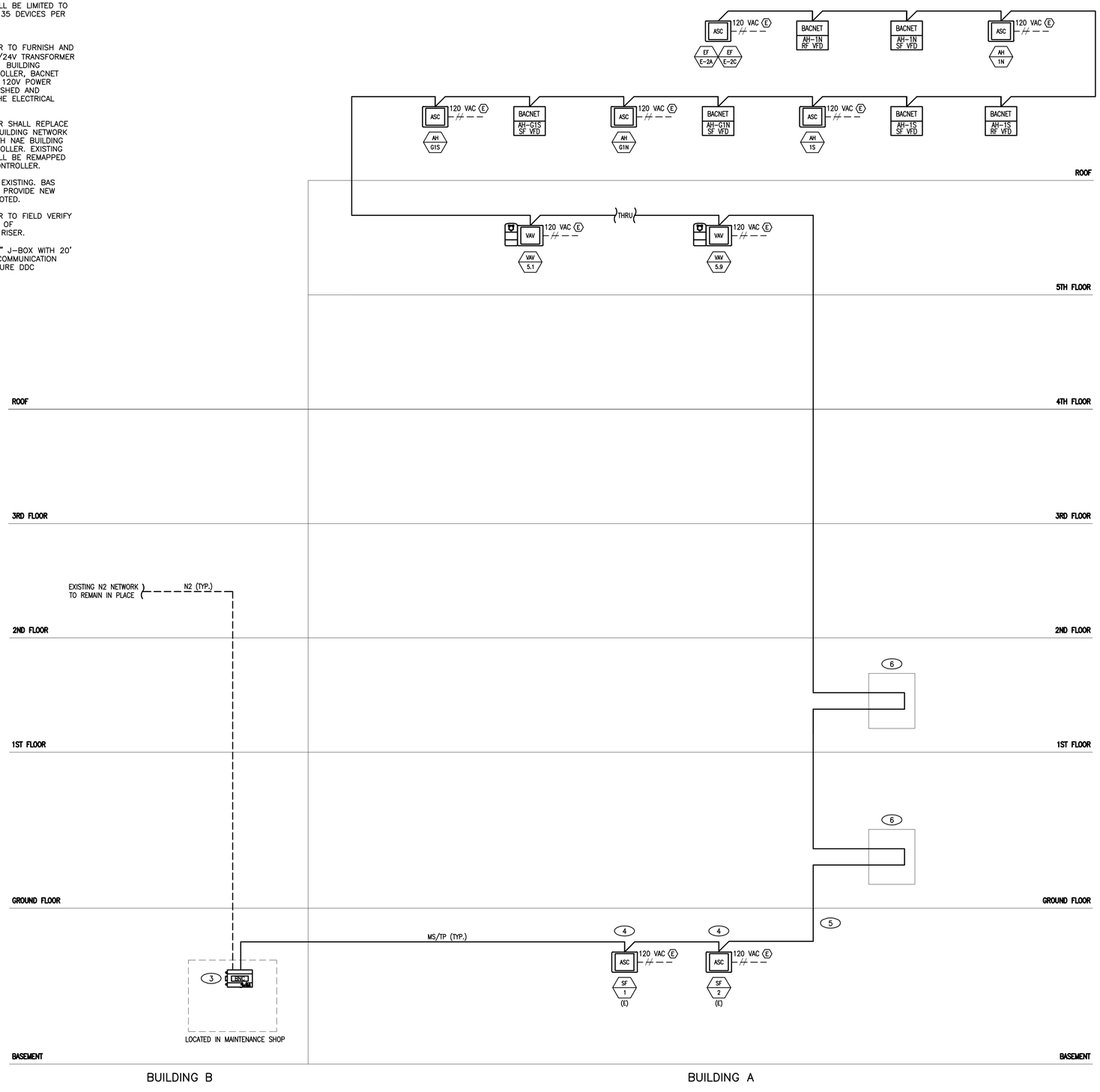
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
M504

KEYNOTES:

1. MS/TP LAN SHALL BE LIMITED TO NO MORE THAN 35 DEVICES PER TRUNK.
2. BAS CONTRACTOR TO FURNISH AND INSTALL A 120V/24V TRANSFORMER FOR EACH ASC, BUILDING NETWORK CONTROLLER, BACNET GATEWAY, ETC. 120V POWER SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
3. BAS CONTRACTOR SHALL REPLACE EXISTING NCM BUILDING NETWORK CONTROLLER WITH NAE BUILDING NETWORK CONTROLLER. EXISTING N2 SYSTEM SHALL BE REMAPPED TO NEW NAE CONTROLLER.
4. SF-1 & 2 ARE EXISTING. BAS CONTRACTOR TO PROVIDE NEW CONTROLS AS NOTED.
5. BAS CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF COMMUNICATION RISER.
6. PROVIDE 12"X12" J-BOX WITH 20' OF ADDITIONAL COMMUNICATION WIRING FOR FUTURE DDC BUILD-OUT.



SYMBOL	DESCRIPTION
AFMS	AIR FLOW MEASURING STATION
C	COOLING COIL
H	HEATING COIL
CR	CURRENT SENSING RELAY OR TRANSMITTER
CO2	CO2 SENSOR – DUCT MOUNTED
CO2	CO2 TRANSMITTER – WALL
DP	DIFFERENTIAL PRESSURE SWITCH OR TRANSMITTER – FILTER
DP	DIFFERENTIAL PRESSURE SWITCH OR TRANSMITTER –DUCT
DP	DIFFERENTIAL PRESSURE TRANSMITTER – BUILDING
H	HUMIDITY TRANSMITTER – WALL
H	HUMIDITY SWITCH
OS	OCCUPANCY SENSOR – WALL
E	FURNISHED AND INSTALLED BY ELECTRICAL
SD	SMOKE DETECTOR
T	TEMPERATURE SENSOR – WALL
T	TEMPERATURE SENSOR – DUCT
T	TEMPERATURE SENSOR – AVERAGING
T	TEMPERATURE SENSOR – OUTDOOR AIR
T	TEMPERATURE SENSOR – PIPE
BACNET ONICON T	BTU METER – WITH BACNET INTERFACE
FM	FLOW METER
M	DAMPER WITH ACTUATOR
	BACKDRAFT OR BAROMETRIC RELIEF DAMPER
DP	DIFFERENTIAL PRESSURE SWITCH OR TRANSMITTER, PIPE
M	BUTTERFLY VALVE WITH ACTUATOR
M AB A	2-WAY VALVE WITH ACTUATOR
M A AB B	3-WAY MIXING VALVE WITH ACTUATOR
M AB A B	3-WAY DIVERTING VALVE WITH ACTUATOR
A.I.	ANALOG INPUT
B.I.	BINARY INPUT
A.O.	ANALOG OUTPUT
B.O.	BINARY OUTPUT
BBNC	BUILDING NETWORK CONTROLLER
VAV	VAV CONTROLLER
ASC	APPLICATION SPECIFIC CONTROLLER
MS/TP BACNET AH-1 VFD	MANUFACTURE'S BACNET INTERFACE
SPD	SPD PANEL DRY CONTACT
M&V METER	MEASUREMENT AND VERIFICATION METER
FLOAT SWITCH	SWITCH

SYSTEM ARCHITECTURE | 2 | LEGEND & SYMBOLS | 1

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SHEET TITLE
CONTROLS

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Date Drawn	6/28/19
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Job No.	18-6452

SHEET No.
M601

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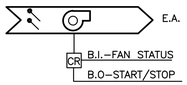


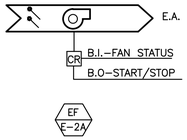
SUPPLY FAN – INTERLOCKED
THE SUPPLY FANS RECEIVE OUTSIDE AIR FROM ROOFTOP AIR HANDLERS AND SERVE A COMMON GARAGE SPACE. THE GARAGE SPACE IS ALSO SERVED BY TWO EXHAUST FANS, WHICH OPERATE BASED ON CARBON MONOXIDE CONCENTRATION.

RUN CONDITIONS – INTERLOCKED:
THE UNIT SHALL BE INTERLOCKED TO RUN WHENEVER THE ASSOCIATED AIR HANDLING UNIT, OR EITHER GARAGE EXHAUST FAN RUNS, UNLESS SHUTDOWN ON SAFETIES.
- SF–1 SHALL BE INTERLOCKED WITH AH–G1N, EF–10, & EF–11
- SF–2 SHALL BE INTERLOCKED WITH AH–G1S, EF–10, & EF–11

FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.

(EXISTING) SUPPLY FAN –INTERLOCKED | 2



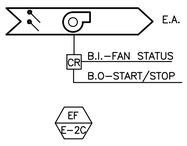
EXHAUST FAN – INTERLOCKED

RUN CONDITIONS – INTERLOCKED:
THE UNIT SHALL BE INTERLOCKED TO RUN WHENEVER AH–G1N RUNS, UNLESS SHUTDOWN ON SAFETIES.

FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.

EXHAUST FAN – INTERLOCKED | 3



EXHAUST FAN – TIME OF DAY

RUN CONDITIONS – SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE SHALL BE BETWEEN 7:00AM AND 6:00PM (ADJ.).

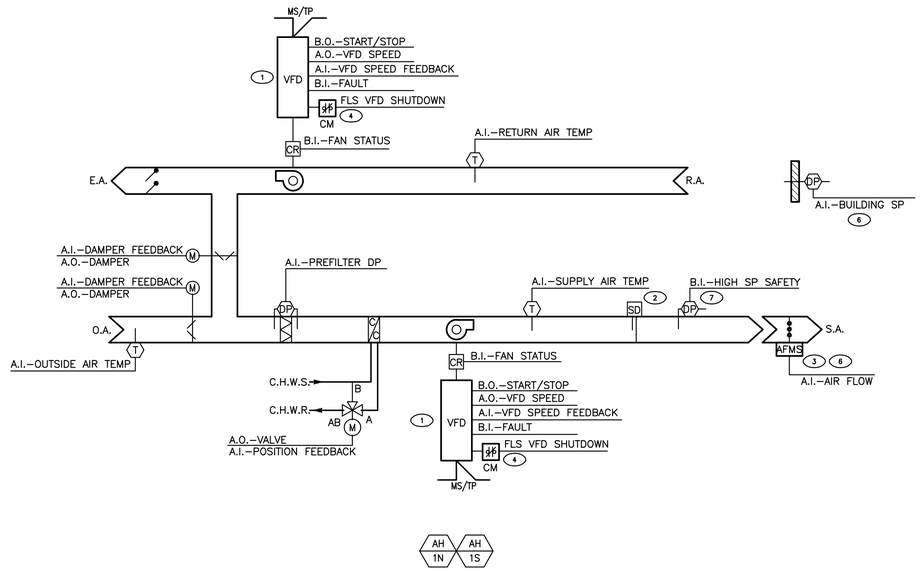
FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.

EXHAUST FAN – TIME OF DAY | 4

– | 5

KEYNOTES
1. SEE SCHEDULE SHEET FOR THE EXACT NUMBER OF FANS AND VFDS. PROVIDE STATUS FOR EACH FAN. CONTROLS TYPICAL FOR EACH FAN.
2. SMOKE DETECTOR FURNISHED BY FLS, INSTALLED BY MECHANICAL POWER FOR SMOKE DETECTOR FROM FLS CONTROL PANEL, ENTIRE AHU SHALL SHUTDOWN THROUGH FLS INTERLOCK WITH AHU EMERGENCY STOP TERMINALS.
3. FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY BAS CONTRACTOR.
4. UNLESS OTHERWISE NOTED, ALL SENSORS ACTUATORS AND CONTROL DEVICES ARE FURNISHED AND FIELD INSTALLED BY THE CONTROLS CONTRACTOR.
5. CONTROL MODULE FURNISHED AND WIRED BY FLS, INSTALLED BY MECHANICAL FOR EMERGENCY FAN SHUTDOWN.
6. SEE FLOOR PLANS FOR EXACT LOCATION.
7. STATIC PRESSURE SAFETIES SHALL BE HARD WIRED DIRECTLY TO THE FAN VFD EMERGENCY STOP TERMINALS.



AIR HANDLING UNITS – VAV
UNLESS OTHERWISE NOTED, ALL SETPOINTS AND TIME DELAYS SHALL BE ADJUSTABLE THROUGH THE BAS.

RUN CONDITIONS – SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: SHALL BE BETWEEN 7:00AM AND 6:00PM.
- PRE–OCCUPANCY PURGE MODE: SHALL BEGIN 1–HOUR PRIOR TO OCCUPANCY.
- •• THE OUTSIDE AIR DAMPER SHALL OPEN TO THE MINIMUM OUTSIDE AIR FLOW POSITION, UNLESS IN ECONOMIZER MODE.

HIGH STATIC PRESSURE SAFETY SHUTDOWN:
A HIGH STATIC PRESSURE SAFETY SWITCH SHALL MONITOR THE DUCT STATIC PRESSURE IN THE SUPPLY DUCT. IF THE STATIC SAFETY SWITCH IS TRIPPED, BOTH THE SUPPLY AND RETURN FANS SHALL BE DISABLED SIMULTANEOUSLY.
THE SETPOINT FOR THE SWITCH SHALL BE: 3.25" H20

SUPPLY AIR SMOKE DETECTION:
THE SUPPLY AND RETURN AIR FANS SHALL BOTH BE SHUT DOWN THROUGH THE SMOKE DETECTOR UPON DETECTION OF SMOKE. THE SMOKE DETECTOR SHALL BE HARD–WIRED DIRECTLY TO THE SUPPLY FAN VFD AND RETURN FAN VFD EMERGENCY STOP TERMINALS.

SUPPLY FAN(S):
THE SUPPLY FAN(S) SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES. THE CONTROLLER SHALL MODULATE THE SUPPLY FAN VFD TO MAINTAIN A CONSTANT AIRFLOW SETPOINT.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- SUPPLY FAN VFD FAULT

RETURN FAN(S):
THE RETURN FAN SHALL RUN WHENEVER THE SUPPLY FAN RUNS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- RETURN FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- RETURN FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- RETURN FAN VFD FAULT.

RETURN AIRFLOW – AIRFLOW TRACKING CONTROL:
THE CONTROLLER SHALL MONITOR THE SUPPLY FAN AIR FLOW, THE RETURN FAN AIR FLOW, AND THE BUILDING STATIC PRESSURE. THE RETURN FAN VFD SHALL MODULATE TO MAINTAIN AN AIR FLOW EQUAL TO THE SUPPLY FAN AIR FLOW MINUS A FIXED AIR FLOW OFFSET THAT SHALL BE DETERMINED DURING THE TEST AND BALANCE PROCESS.

THE AIR FLOW OFFSET SHALL BE RESET THROUGH TRIM AND RESPOND LOGIC TO MAINTAIN A BUILDING STATIC PRESSURE SETPOINT OF +0.02" H2O.
- IF THE BUILDING STATIC PRESSURE RISES ABOVE +0.03" H2O, THE AIR FLOW OFFSET SHALL BE DECREASED BY 10% EVERY 60 SECONDS.
- IF THE BUILDING STATIC PRESSURE DROPS BELOW +0.01" H2O, THE AIR FLOW OFFSET SHALL BE INCREASED BY 10% EVERY 60 SECONDS.
- THE MINIMUM AIR FLOW OFFSET VALUE SHALL BE EQUAL TO THE BUILDING EXHAUST AIR FLOW.
- THE MAXIMUM AIR FLOW OFFSET VALUE SHALL BE EQUAL TO THE BUILDING EXHAUST AIRFLOW PLUS 20%.

SUPPLY AIR TEMPERATURE SETPOINT AND RESET:
THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN A SUPPLY AIR TEMPERATURE SETPOINT. THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET BASED ON OUTSIDE AIR TEMPERATURE.

- THE SUPPLY AIR TEMPERATURE SHALL BE RESET LINEARLY BETWEEN 55°F AND 65°F AS OUTSIDE AIR TEMPERATURE VARIES BETWEEN 45°F TO 75°F.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP: THE SUPPLY AIR TEMPERATURE IS 5°F GREATER THAN SETPOINT.
- LOW SUPPLY AIR TEMP: THE SUPPLY AIR TEMPERATURE IS 5°F LESS THAN SETPOINT.

COOLING COIL VALVE:
THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE COOLING COIL VALVE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SETPOINT.

THE COOLING SHALL BE ENABLED WHENEVER:
- THE SUPPLY AIR TEMPERATURE IS LESS THAN SETPOINT.
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE RETURN FAN STATUS IS ON.

ECONOMIZER DIFFERENTIAL DRY BULB CONTROL – CLIMATE ZONE 01 (HUMBOLDT, CA):
THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE ECONOMIZER DAMPERS IN SEQUENCE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SETPOINT. THE OUTSIDE AIR DAMPERS SHALL MAINTAIN A MINIMUM ADJUSTABLE OUTSIDE AIRFLOW WHENEVER OCCUPIED (SEE THE EQUIPMENT SCHEDULE SHEET FOR THE MINIMUM OUTSIDE AIR FLOW SETTINGS).

THE ECONOMIZER SHALL BE ENABLED WHENEVER:
- THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE.
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE RETURN FAN STATUS IS ON.

THE ECONOMIZER SHALL BE DISABLED AND CLOSE TO MINIMUM POSITION WHENEVER:
- THE OUTSIDE AIR TEMPERATURE IS GREATER THAN THE RETURN AIR TEMPERATURE.
- OR ON LOSS OF SUPPLY FAN STATUS.
- OR ON LOSS OF RETURN FAN STATUS.

THE OUTSIDE AND EXHAUST AIR DAMPERS SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN WHEN THE UNIT IS OFF.

ECONOMIZER FAULT DETECTION DIAGNOSTICS:
ECONOMIZER FAULTS SHALL BE VIEWABLE AT THE ECONOMIZER CONTROLLER DISPLAY SCREEN. THE FOLLOWING FAULTS SHALL BE INDICATED:
1. AIR TEMPERATURE SENSOR FAULT.
2. NOT ECONOMIZING WHEN IT SHOULD.
3. ECONOMIZING WHEN IT SHOULD NOT.
4. DAMPER NOT MODULATING.
5. EXCESS OUTDOOR AIR.

MINIMUM OUTSIDE AIR VENTILATION – ECONOMIZER DISABLED
WHEN IN THE OCCUPIED MODE, AND WHEN ECONOMIZER IS DISABLED, THE CONTROLLER SHALL MODULATE THE OUTSIDE AND RETURN AIR DAMPERS TO ACHIEVE THE MINIMUM OUTSIDE AIR SETPOINT (SEE EQUIPMENT SCHEDULES FOR THE AIR QUANTITY).

MINIMUM OUTSIDE AIR VENTILATION – DEMAND CONTROLLED VENTILATION (FOR FUTURE BUILD–OUT):
DURING OCCUPIED MODE, DEMAND VENTILATION CONTROLS SHALL MONITOR SPACES WITH CO2 SENSORS. THE DEMAND VENTILATION CONTROLS SHALL FIRST INCREASE ZONE MINIMUM AIRFLOW TO SATISFY VENTILATION REQUIREMENTS, AND THEN INCREASE THE OUTDOOR AIR RATE AT THE AIR HANDLER AS DESCRIBED IN THE FOLLOWING SEQUENCE.
- AT THE AIR HANDLER LEVEL: IF THE VAV ZONE HAS REACHED ITS COOLING SETPOINT MAXIMUM AIRFLOW FOR 10 MINUTES, AND THE CO2 IS ABOVE SETPOINT, THEN INCREASE THE MINIMUM OUTDOOR AIR RATE TO THE DEMAND CONTROL VENTILATION SETPOINT AIRFLOW (SEE EQUIPMENT SCHEDULE).
- WHEN THE VAV ZONE REQUESTING DCV OUTSIDE AIR HAS DROPPED BELOW THE CO2 SETPOINT FOR 5 MINUTES, THE CONTROLLER SHALL MODULATE THE RETURN AIR DAMPER TO ACHIEVE THE MINIMUM OUTSIDE AIRFLOW SETPOINT (SEE THE EQUIPMENT SCHEDULE SHEET FOR THE MINIMUM AND DEMAND CONTROL VENTILATION OUTSIDE AIRFLOW SETTINGS).

FILTER DIFFERENTIAL PRESSURE MONITOR:
THE CONTROLLER SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTERS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- PREFILTER CHANGE REQUIRED: PREFILTER DIFFERENTIAL PRESSURE EXCEEDS 0.45" H20.

BUILDING STATIC PRESSURE MONITORING:
THE CONTROLLER SHALL MEASURE THE BUILDING STATIC PRESSURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH BUILDING STATIC PRESSURE: IF THE BUILDING STATIC PRESSURE IS GREATER THAN +0.10" H20"F FOR MORE THAN 15 MINUTES.
- LOW BUILDING STATIC PRESSURE: IF THE BUILDING STATIC PRESSURE IS LESS THAN –0.05" H20"F FOR MORE THAN 15 MINUTES.

OUTSIDE AIR DAMPER STROKING:
THE CONTROLLER SHALL MODULATE THE OUTSIDE AIR DAMPER FULLY OPEN, THEN FULLY CLOSED AT 11:55 PM EACH NIGHT TO REDUCE THE POSSIBILITY OF RUST AND CORROSION.

ROOFTOP CHW CONSTANT VOLUME AIR HANDLER – COOLING ONLY | 1

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Mechanical Lead - Jeff Halliwell
tk1sc Job #2018-0922

LICENSE STAMPS

PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
CONTROLS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

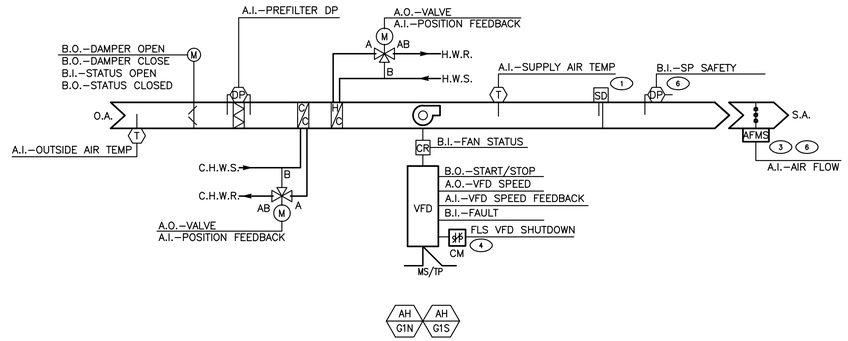
Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
M602

KEYNOTES

1. SMOKE DETECTOR FURNISHED BY FLS, INSTALLED BY MECHANICAL POWER FOR SMOKE DETECTOR FROM FLS CONTROL PANEL, ENTIRE AHU SHALL SHUTDOWN THROUGH FLS INTERLOCK WITH AHU EMERGENCY STOP TERMINALS.
2. FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY BAS CONTRACTOR.
3. UNLESS OTHERWISE NOTED, ALL SENSORS ACTUATORS AND CONTROL DEVICES ARE FURNISHED AND FIELD INSTALLED BY THE CONTROLS CONTRACTOR.
4. CONTROL MODULE FURNISHED AND WIRED BY FLS, INSTALLED BY MECHANICAL FOR EMERGENCY FAN SHUTDOWN.
5. SEE FLOOR PLANS FOR EXACT LOCATION.
6. STATIC PRESSURE SAFETIES SHALL BE HARD WIRED DIRECTLY TO THE FAN VFD EMERGENCY STOP TERMINALS.



AIR HANDLING UNITS – VAV
UNLESS OTHERWISE NOTED, ALL SETPOINTS AND TIME DELAYS SHALL BE ADJUSTABLE THROUGH THE BAS.

RUN CONDITIONS – SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: SHALL BE BETWEEN 7:00AM AND 6:00PM.
- PRE-OCCUPANCY PURGE MODE: SHALL BEGIN 1-HOUR PRIOR TO OCCUPANCY.

GARAGE EXHAUST & SUPPLY FAN INTERLOCK
TO PROVIDE SUFFICIENT MAKEUP AIR WHEN THE GARAGE EXHAUST AND SUPPLY FANS OPERATE, THE UNIT SHALL BE INTERLOCKED TO RUN WHEN THE ASSOCIATED BASEMENT SUPPLY FAN RUNS.
- AH-G1N SHALL BE INTERLOCKED TO SF-1
- AH-G1S SHALL BE INTERLOCKED TO SF-2

STATIC PRESSURE SAFETY SHUTDOWN:
A STATIC PRESSURE SAFETY SWITCH SHALL MONITOR THE DUCT STATIC PRESSURE IN THE SUPPLY DUCT. IF THE SAFETY SWITCH IS TRIPPED, THE SUPPLY FANS SHALL BE DISABLED.
- THE SETPOINTS FOR THE SWITCHES SHALL BE: 3.25" H20

SUPPLY AIR SMOKE DETECTION:
THE SUPPLY FANS SHALL BOTH BE SHUT DOWN THROUGH THE SMOKE DETECTOR UPON DETECTION OF SMOKE. THE SMOKE DETECTOR SHALL BE HARD-WIRED DIRECTLY TO THE SUPPLY FAN VFD EMERGENCY STOP TERMINALS.

SUPPLY FAN(S):
THE SUPPLY FAN(S) SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES. THE CONTROLLER SHALL MODULATE THE SUPPLY FAN VFD TO MAINTAIN A CONSTANT AIRFLOW SETPOINT.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- SUPPLY FAN VFD FAULT

SUPPLY AIR TEMPERATURE SETPOINT AND RESET:
THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN A SUPPLY AIR TEMPERATURE SETPOINT. THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET BASED ON OUTSIDE AIR TEMPERATURE.

- THE SUPPLY AIR TEMPERATURE SHALL BE RESET LINEARLY BETWEEN 55°F AND 65°F AS OUTSIDE AIR TEMPERATURE VARIES BETWEEN 45°F TO 75°F.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP: THE SUPPLY AIR TEMPERATURE IS 5°F GREATER THAN SETPOINT.
- LOW SUPPLY AIR TEMP: THE SUPPLY AIR TEMPERATURE IS 5°F LESS THAN SETPOINT.

COOLING COIL VALVE:
THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE COOLING COIL VALVE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SETPOINT.

THE COOLING SHALL BE ENABLED WHENEVER:
- THE SUPPLY AIR TEMPERATURE IS LESS THAN SETPOINT.
- AND THE SUPPLY FAN STATUS IS ON.

HEATING COIL VALVE:
THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE HEATING COIL VALVE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SETPOINT.

THE COOLING SHALL BE ENABLED WHENEVER:
- THE SUPPLY AIR TEMPERATURE IS LESS THAN SETPOINT.
- AND THE SUPPLY FAN STATUS IS ON.

OUTSIDE AIR DAMPER:
THE OUTSIDE AIR DAMPER SHALL OPEN ANYTIME THE UNIT RUNS AND SHALL CLOSE ANYTIME THE UNIT STOPS. THE SUPPLY FAN SHALL START ONLY AFTER THE DAMPER STATUS HAS PROVEN THE DAMPER IS OPEN. THE OUTSIDE AIR DAMPER SHALL CLOSE 15 SECONDS AFTER THE SUPPLY FAN STOPS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- OUTSIDE AIR DAMPER FAILURE TO OPEN: COMMANDED OPEN, BUT THE STATUS IS CLOSED.
- OUTSIDE AIR DAMPER FAILURE TO CLOSE: COMMANDED CLOSED, BUT THE STATUS IS OPEN.

FILTER DIFFERENTIAL PRESSURE MONITOR:
THE CONTROLLER SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTERS.

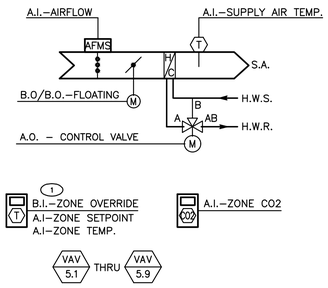
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- PREFILTER CHANGE REQUIRED: PREFILTER DIFFERENTIAL PRESSURE EXCEEDS 0.50" H20.

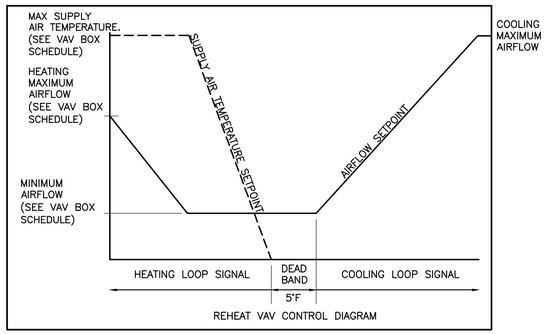
OUTSIDE AIR DAMPER STROKING:
THE CONTROLLER SHALL MODULATE THE OUTSIDE AIR DAMPER FULLY OPEN, THEN FULLY CLOSED AT 11:55 PM EACH NIGHT TO REDUCE THE POSSIBILITY OF RUST AND CORROSION.

ROOFTOP 100% O.S.A. CHW CONSTANT VOLUME AIR HANDLER WITH HW HEATING | 1

KEYNOTES

1. BAS CONTRACTOR SHALL FURNISH RELAY(S) TO ENABLE EXISTING AIR HANDLER VIA ZONE UNOCCUPIED OVERRIDE.





REHEAT VAV CONTROL DIAGRAM

VAV BOX COOLING AND HEATING:
UNLESS OTHERWISE NOTED, ALL SETPOINTS AND TIME DELAYS SHALL BE ADJUSTABLE THROUGH THE BAS.

RUN CONDITIONS – SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN A 75°F (ADJ.) COOLING SETPOINT, A 70°F (ADJ.) HEATING SETPOINT AND A DEADBAND OF 5°F BETWEEN COOLING AND HEATING.
- UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN AN 85°F COOLING SETPOINT AND A 55°F HEATING SETPOINT.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY 10°F.
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY 10°F.

TIME OF DAY SCHEDULE:
OCCUPIED MODE SHALL BE INITIATED UPON A START REQUEST FROM A VAV BOX.

MINIMUM VENTILATION ON CARBON DIOXIDE (CO2) CONCENTRATION (WHERE NOTED ON DRAWINGS):
WHEN IN THE OCCUPIED MODE, THE CONTROLLER SHALL MEASURE THE ZONE CO2 LEVELS AND MODULATE THE ZONE DAMPER OPEN ON RISING CO2 CONCENTRATIONS, OVERRIDING NORMAL DAMPER OPERATION TO MAINTAIN A CO2 SETPOINT OF NO MORE THAN 1,000 PPM. THE ZONE AIRFLOW SHALL NOT EXCEED THE DESIGN COOLING MAXIMUM AIRFLOW SETPOINT. TO PREVENT OVERCOOLING THE ZONE, THE CONTROLLER SHALL MODULATE THE REHEAT VALVE TO MAINTAIN THE ZONE HEATING SETPOINT.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE CARBON DIOXIDE CONCENTRATION: IF THE ZONE CO2 CONCENTRATION IS GREATER THAN 1,200 PPM FOR MORE THAN 20 MINUTES.

ZONE SETPOINT ADJUST:
THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR. THE RANGE OF ADJUSTMENT SHALL BE +/– 2°F.

ZONE UNOCCUPIED OVERRIDE:
A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR A 60 MINUTE PERIOD OF TIME. AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.

VARIABLE VOLUME TERMINAL UNIT – AIR FLOW CONTROL:
THE UNIT SHALL MAINTAIN ZONE SETPOINTS BY CONTROLLING THE AIRFLOW THROUGH ONE OF THE FOLLOWING:
- WHEN ZONE TEMPERATURE IS GREATER THAN ITS COOLING SETPOINT, THE ZONE DAMPER SHALL MODULATE BETWEEN THE MINIMUM AIRFLOW AND THE MAXIMUM AIRFLOW UNTIL THE ZONE IS SATISFIED.
- WHEN THE ZONE TEMPERATURE IS BETWEEN THE COOLING SETPOINT AND THE HEATING SETPOINT, THE ZONE DAMPER SHALL MAINTAIN THE MINIMUM AIRFLOW.
- WHEN ZONE TEMPERATURE IS LESS THAN ITS HEATING SETPOINT, THE CONTROLLER SHALL ENABLE HEATING. THE ZONE DAMPER SHALL MODULATE BETWEEN THE MINIMUM AIRFLOW AND THE HEATING MAXIMUM AIRFLOW UNTIL THE ZONE IS SATISFIED.

REHEATING – HIGH DISCHARGE AIR TEMPERATURE LIMIT:
THE CONTROLLER SHALL MEASURE THE DISCHARGE AIR TEMPERATURE AND LIMIT THE DISCHARGE AIR TEMPERATURE TO A MAXIMUM PER THE VAV SCHEDULE OR 95°F (SEE REHEAT VAV CONTROL DIAGRAM).
- STAGE 1: FOR A HEATING LOOP SIGNAL FROM 0% TO 50%, THE MINIMUM AIRFLOW SHALL BE MAINTAINED AND THE REHEAT VALVE SHALL MODULATE TO SATISFY THE ZONE SETPOINT UNTIL A MAXIMUM VAV BOX DISCHARGE AIR TEMPERATURE OF 95°F IS REACHED.
- STAGE 2: FOR A HEATING LOOP SIGNAL FROM 51% TO 100%, THE REHEAT VALVE SHALL MODULATE TO MAINTAIN THE VAV BOX DISCHARGE AIR TEMPERATURE PER THE VAV SCHEDULE OR 95°F MAX WHILE THE ZONE DAMPER MODULATES BETWEEN THE MINIMUM AIRFLOW AND THE HEATING MAXIMUM AIRFLOW UNTIL THE ZONE IS SATISFIED.

SUPPLY AIR TEMPERATURE MONITORING:
THE CONTROLLER SHALL MONITOR THE DISCHARGE AIR TEMPERATURE.
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS GREATER THAN 105°F IN HEATING.
- LOW SUPPLY AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS LESS THAN 45°F IN COOLING.

FLOATING SETPOINT ACTUATOR RE-SYNCHRONIZATION:
FLOATING SETPOINT ACTUATORS FOR THE VAV BOX DAMPER AND THE REHEAT VALVE SHALL BE RE-SYNCHRONIZED WEEKLY BY DRIVING THEM FULLY CLOSED AND FULLY OPEN.

VARIABLE AIR VOLUME BOX WITH REHEAT | 2

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949.751.5800 www.tk1sc.com
Project Leader - Jeff Halliwell
Mechanical Lead - Jeff Halliwell
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER T. JWAN TANG No. M29973 Exp. 06-30-20 MECHANICAL STATE OF CALIFORNIA

PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
CONTROLS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
M603

Login Name: jhalliwell
Plot Date: June 27, 2019 - 5:03 pm
File Name: x:\2018\2018-0922 Humboldt County Courthouse Prnt\Drawings and Models\CAD\Mechanical\M601, M602, M603.dwg
XREFS: x-HC-CH-Sht_TITLEBLOCK

ABBREVIATIONS

4S/DP	4" SQUARE BY 2-1/8" DEEP BOX
ADA	AMERICAN WITH DISABILITIES ACT
A.F.F.	ABOVE FINISH FLOOR
A.F.G.	ABOVE FINISH GRADE
AWG	AMERICAN WIRE GAUGE
AMP, A	AMPERE
A.I.C. or AIC	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)
A.F.C. or AFC	AVAILABLE FAULT CURRENT
AF/AT	AMP FRAME, AMP TRIP
AHJ	AUTHORITY HAVING JURISDICTION
AS/AF	AMP SWITCH, AMP FUSE
ATS	AUTOMATIC TRANSFER SWITCH
AVG	AVERAGE
BJ	BONDING JUMPER
BDF	BUILDING DISTRIBUTION FRAME
BR	BRANCH
BLDG	BUILDING
CBC	CALIFORNIA BUILDING CODE
CEC	CALIFORNIA ELECTRICAL CODE
CIRC., CKT.	CIRCUIT
CB	CIRCUIT BREAKER
CSFD	COMBINATION SMOKE FIRE DAMPER
C	CONDUIT
C.O.	CONDUIT ONLY, COMPLETE WITH PULLSTRING
CONN	CONNECTED
CPT	CONTROL POWER TRANSFORMER
CLCB	CURRENT LIMITING CIRCUIT BREAKER
CLF	CURRENT LIMITING FUSE
CT	CURRENT TRANSFORMER
(D)	EXISTING DEVICE TO BE DEMOLISHED
DAS	DISTRIBUTED ANTENNA SYSTEM
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
D.P.C.S.	DIMMING PANEL CONTROL STATION
E.C.	ELECTRICAL CONTRACTOR
EMS	ENERGY MANAGEMENT CONTROL SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NON-METALLIC TUBING
EWC	ELECTRIC WATER COOLER
E.P.O.	EMERGENCY POWER OFF
E-O-L	END-OF-LINE CIRCUIT TERMINATOR
EF	EXHAUST FAN
EGC or EG or E/G	EQUIPMENT GROUND (GREEN)
(E)	EXISTING DEVICE TO REMAIN
EP	EXPLOSION PROOF
(ER)	EXISTING DEVICE TO BE RELOCATED
FT or '	FEET
FA or F.A.	FIRE ALARM
FLA	FULL LOAD AMPS
GRD	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GE or GEC	GROUNDING ELECTRODE CONDUCTOR
HACR	HEATING AIR CONDITIONING REFRIGERATION
HOA	HAND-OFF-AUTO
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
H.,W.,D.,L.	HEIGHT, WIDTH, DEPTH, LENGTH
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
IN. or "	INCHES
I/G	ISOLATED GROUND
IBC	INTERNATIONAL BUILDING CODE
I.D.C.S.	INTEGRATED DIMMING CONTROL PANEL
IDF	INTERMEDIATE DISTRIBUTION FRAME
JBOX	JUNCTION BOX
K	DEGREE KELVIN
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOUR
LCL	LONG CONTINUOUS LOAD
LF, L.F.	LINEAR FEET
LTG, LTS	LIGHTING
LPS	LOW PRESSURE SODIUM
MAX.	MAXIMUM
MBJ	MAIN BONDING JUMPER
MDF	MAIN DISTRIBUTION FRAME
MOCP	MAXIMUM OVERCURRENT PROTECTION
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
M.C.	MECHANICAL CONTRACTOR
M	METER
M/M	METER MAIN
MV	MERCURY VAPOR
MH	METAL HALIDE
MIN.	MINIMUM
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MFR.	MANUFACTURER
MTD	MOUNTED
MW	MICROWAVE
NATS	NON AUTOMATIC DISCONNECT
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
NF	NON-FUSED
NIC	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NL	NIGHT LIGHT
NO. or #	NUMBER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
%Z	PERCENT IMPEDANCE
PH. or ø	PHASE
PC	PHOTOCELL
P.C.	PLUMBING CONTRACTOR
P	POLE
PVC	POLY VINYL CHLORIDE
PDU	POWER DISTRIBUTION UNIT
PRIMARY	OVER 600 VOLTS
PROVIDE	FURNISH, INSTALL AND CONNECT
PT	POTENTIAL TRANSFORMER
PA	PUBLIC ADDRESS
(R)	DENOTES RELOCATED DEVICE LOCATION.
REC, RECEPT	RECEPTACLE
REF	REFRIGERATOR
RGS	RIGID GALVANIZED STEEL
RMS	ROOT MEAN SQUARE
SCC	SHORT CIRCUIT CURRENT
SCCR	SHORT CIRCUIT CURRENT RATING
SCS	STRUCTURED CABLING SYSTEM
SFD	SMOKE FIRE DAMPER
SECONDARY	600 VOLTS AND LESS
SMACNA	SHEET METAL AND AIR COND. CONTRACTOR'S NAT'L ASSOC.
SQ.	SQUARE
SSBJ	SUPPLY SIDE BONDING JUMPER
SBJ	SYSTEM BONDING JUMPER
TC	TIMECLOCK
TEL/DATA	TELEPHONE AND DATA
TV	TELEVISION
T.V.S.S.	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
U.G.P.S.	UNDERGROUND PULL SECTION
U.O.N.	UNLESS OTHERWISE NOTED
U.P.S. or UPS	UNINTERRUPTABLE POWER SYSTEM
VAV	VARIABLE AIR VOLUME
V	VOLTS
VA	VOLT AMPERES
VD	VOLTAGE DROP
WP	WEATHERPROOF
W	WIRE
XFMR	TRANSFORMER

FIRE ALARM SYSTEM SYMBOLS

SEE FIRE ALARM OR CENTRAL MONITORING SYSTEM DRAWINGS FOR FIRE ALARM SYMBOLS.

SIGNAL SYSTEM SYMBOLS

- B — WALL MOUNTED CLOCK. FIELD VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION. "B" INDICATES BATTERY OPERATED CLOCK. "D" INDICATES DIGITAL CLOCK, "NO LETTER" INDICATES ANALOG CLOCK. REFER TO SPECIFICATIONS.
- —C— CONCEALED CLOCK CONDUIT RUN 1/2" CONDUIT, OR AS NOTED, WITH CONDUCTORS PER SPECIFICATIONS.
- TV — TV OUTLET, WALL MOUNTED. STUB A 3/4" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE BUSHING.
- TV — TV OUTLET FLUSH CEILING MOUNTED.
- —TV— CONCEALED TELEVISION CONDUIT RUN, 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS – REFER TO SPECIFICATIONS.
- M — MICROPHONE OUTLET, WALL MOUNTED. PROVIDE 3/4" C.O. (WITH PULL ROPE) UP TO 6" ABOVE ACCESSIBLE CEILING SPACE. PROVIDE BUSHING AT EACH END.
- M — MICROPHONE OUTLET, FLUSH CEILING MOUNTED.
- —M— CONCEALED MICROPHONE CONDUIT RUN, 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS – REFER TO SPECIFICATIONS.
- S V — SURFACE WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- S V — SURFACE MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- S V — FLUSH WALL MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- S V — CEILING FLUSH MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- SM V — ABOVE CEILING MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- V — VOLUME CONTROL, WALL MOUNTED.
- —S— CONCEALED SPEAKER CONDUIT RUN 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS – REFER TO SPECIFICATIONS.

SECURITY ALARM SYSTEM SYMBOLS

- SACP — SECURITY ALARM CONTROL PANEL – SEE SPECIFICATIONS.
- SPS — SECURITY SYSTEM POWER SUPPLY – SEE SPECIFICATIONS.
- ID — SECURITY ALARM PASSIVE INFRARED MOTION SENSOR – SEE SPECIFICATIONS.
- DT — SECURITY ALARM DUAL TECHNOLOGY MOTION SENSOR – SEE SPECIFICATIONS.
- UD — SECURITY ALARM ULTRASONIC MOTION SENSOR – SEE SPECIFICATIONS.
- DC — SECURITY ALARM DOOR CONTACT – SEE SPECIFICATIONS.
- PB — SECURITY ALARM PANIC BUTTON – SEE SPECIFICATIONS.
- KP — SECURITY ALARM KEY PAD – SEE SPECIFICATIONS.
- GB — SECURITY ALARM GLASS BREAK INDICATOR – SEE SPECIFICATIONS.
- —SA— SECURITY ALARM SYSTEM BRANCH CIRCUIT PER SECURITY ALARM RISER DIAGRAM AND/OR SPECIFICATIONS.

ACCESS CONTROL SYSTEM SYMBOLS

- ACCP — ACCESS CONTROL PANEL – SEE SPECIFICATIONS.
- APS — ACCESS CONTROL SYSTEM POWER SUPPLY – SEE SPECIFICATIONS.
- LPS — ACCESS CONTROL SYSTEM LOCK POWER SUPPLY – SEE SPECIFICATIONS.
- KS — ACCESS CONTROL KEY SWITCH – SEE SPECIFICATIONS.
- LA — ACCESS CONTROL LOCAL ALARM SOUNDER – SEE SPECIFICATIONS.
- PR — ACCESS CONTROL PROXIMITY READER – SEE SPECIFICATIONS.
- CR — ACCESS CONTROL CARD READER – SEE SPECIFICATIONS.
- KP — ACCESS CONTROL KEY PAD – SEE SPECIFICATIONS.
- ES — ACCESS CONTROL REQUEST TO EXIT SENSOR – SEE SPECIFICATIONS.
- —AC— ACCESS CONTROL SYSTEM BRANCH CIRCUIT PER ACCESS CONTROL RISER DIAGRAM AND/OR SPECIFICATIONS.

PROJECT SPECIFIC SYMBOLS

REQUIRED SPECIFICATION DEVIATIONS

THE FOLLOWING ITEM(S) ARE REQUIRED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS AND SHOULD BE INCLUDED AS PART OF THE BASE BID. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

NONE

ALLOWED SPECIFICATION DEVIATIONS

THE FOLLOWING ITEM(S) ARE ALLOWED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

NONE

DEDUCTIVE/ADDITIVE ALTERNATE PRICING

IN ADDITION TO ANY DEDUCTIVE OR ADDITIVE LINE ITEM PRICING CALLED FOR ON THE DRAWING OR IN THE SPECIFICATIONS, CONTRACTOR SHALL PROVIDE SEPARATE LINE ITEM DEDUCTIVE/ADDITIVE ALTERNATE PRICING FOR EACH OF THE FOLLOWING ITEM(S):

NONE

ANNOTATIONS

- A — PANEL CALLOUT, "A" INDICATES PANELBOARD OR EQUIPMENT DESIGNATION.
- AC / 2 — MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS.
- 3 / E-1 — DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.
- 2 — PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.
- 4 — REVISION REFERENCE.
- WYE CONFIGURATION — △ DELTA CONFIGURATION — GROUND

CCTV SYSTEM SYMBOLS

- CCVMS — VIDEO MANAGEMENT SYSTEM – CCTV HEADEND – SEE SPECIFICATIONS.
- CCWS — CCTV WORKSTATION AND MONITOR – SEE SPECIFICATIONS.
- CCTV FIXED POSITION CAMERA – SEE SPECIFICATIONS.
- CCTV PAN/TILT CAMERA – SEE SPECIFICATIONS.
- —CC— CCTV SYSTEM BRANCH CIRCUIT PER CCTV SYSTEM RISER DIAGRAM AND/OR SPECIFICATIONS.

TELEPHONE/DATA SYMBOLS

- TELEPHONE OUTLET BOX, WALL MOUNTED. STUB A 1" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
  - "W" = WALL MOUNTED PHONE
  - "P" = PUBLIC (PAY) PHONE. VERIFY ALL REQUIREMENTS WITH THE TELEPHONE UTILITY COMPANY. PROVIDE 1" C.O. (MIN) TO THE MAIN TELEPHONE BACKBOARD. MOUNTING HEIGHT AS REQUIRED.
- DATA OUTLET BOX, WALL MOUNTED. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX, WALL MOUNTED. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- TELEPHONE OUTLET BOX, FLUSH MOUNTED IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DATA OUTLET BOX FLUSH MOUNTED IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- COMBINATION TELEPHONE AND DATA OUTLET BOX FLUSH MOUNTED IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- TELEPHONE OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- DATA OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1" C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX MOUNTED IN ACCESSIBLE CEILING SPACE OR IN FLOOR BOX PER PLAN FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- COMBINATION TELEPHONE AND DATA OUTLET, WALL MOUNTED AT +18-INCHES A.F.F. FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. PROVIDE THE FOLLOWING:
  - IN A NON-RATED INSULATED WALL, OR NON-RATED UNINSULATED WALL, PROVIDE A 2-GANG MUD RING OR CADDY #RBS SERIES BOX MOUNTING BRACKET (EQUAL BY B-LINE OR RAYCO) WITH (2) 1-1/2"C.O. WITH PULL STRING TO ACCESSIBLE CEILING. PROVIDE 1-1/2" BUSHINGS AT CONDUIT ENDS. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
  - IN A RATED WALL, PROVIDE (1) 4S/DP BOX WITH (2) 1-1/4" C.O. AND (1) 4S/DP BOX WITH (1) 1-1/4" C.O. WITH PULL STRINGS IN EACH CONDUIT TO ACCESSIBLE CEILING. PROVIDE 1-1/4" BUSHINGS AT CONDUIT ENDS. UTILIZE CADDY #RBS SERIES BOX MOUNTING BRACKET TO MAINTAIN BOX ALIGNMENT (EQUAL BY B-LINE OR RAYCO). UTILIZE FIRESTOPPING SYSTEM PADS RATED FOR USE ON THE INSIDE OR OUTSIDE OF THE BOX (STI OR EQUAL) AS REQUIRED TO MAINTAIN RATING OF WALL OR MEMBRANE. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
- —T1— CONCEALED TELEPHONE/DATA CONDUIT RUN, 1-INCH CONDUIT ONLY (MIN). SEE TABLE FOR CONDUIT SIZE VARIATIONS.
  T2 = 1-1/4" C.O. T3 = 1-1/2" C.O. T4 = 2" C.O.
- FLUSH MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- SURFACE MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED, REFER TO SYSTEM GROUND DETAIL.

LIGHTING SYMBOLS

SITE LIGHTING FIXTURE SYMBOLS DEPICTED WITH CAPITAL LETTER(S) ADJACENT TO RESPECTIVE SYMBOL(S) INDICATE(S) LIGHT FIXTURE MOUNTING BASE DETAIL(S). SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE SYMBOL INFORMATION.

- 1a — LIGHTING FIXTURE CALL OUT, NUMBER(S) AND/OR UPPER CASE LETTER(S) (i.e. "1") INDICATES FIXTURE TYPE (REFER TO LIGHTING FIXTURE SCHEDULE). LOWER CASE LETTER (i.e. "a") ADJACENT TO FIXTURE TYPE INDICATES BALLAST OPTION (SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES).
- J — INDICATES FINAL CONNECTION TO A LIGHTING FIXTURE, NUMBER OF CONDUCTORS AS REQUIRED.

LIGHTING CONTROL SYMBOLS

SEE THE DISTRIBUTED LIGHTING CONTROL SPECIFICATIONS FOR MORE INFORMATION.

- LOW-VOLTAGE WIRING BETWEEN OCCUPANCY SENSORS, VACANCY SENSORS, DAY-LIGHTING CONTROLS, LOW-VOLTAGE SWITCHES, AND SWITCHPACKS. CONDUCTOR TYPE AND QUANTITY PER MANUFACTURER'S RECOMMENDATIONS AND WIRING DIAGRAMS.
- D — WALL MOUNTED DIMMER. SEE SINGE POLE SWITCH SYMBOL FOR RELATED SUBSCRIPTS. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF DIMMERS REQUIRED. PROVIDE DIMMER TYPE TO MATCH INDICATED BALLAST TYPE AND CONTROL REQUIREMENTS.
- $_{y}$ $_{(y)}$ $_{(y,z)}$ — WALL MOUNTED STAND ALONE OCCUPANCY SENSOR. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF RELAYS CIRCUITS REQUIRED – SEE CONTROL CONFIGURATIONS BELOW FOR MORE INFORMATION. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/FIXTURE TYPE.
- $^{H}_{y,(y)}$ I $^{H}_{y,(y)}$ N $^{H}_{y,(y)}$ — WALL MOUNTED NON-NETWORKED/INTERCONNECTED/NETWORKED, SYSTEM-BASED OCCUPANCY SENSOR. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF RELAYS/DIMMING CIRCUITS REQUIRED – SEE CONTROL CONFIGURATIONS BELOW FOR MORE INFORMATION. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/FIXTURE TYPE. ADJACENT UPPER CASE LETTER ("H") INDICATES CONNECTION TO HVAC SYSTEM CONTROLS.
- $^{H,DM,AV,P}_{y,(y)}$ I $^{H,DM,AV,P}_{y,(y)}$ N $^{H,DM,AV,P}_{y,(y)}$ — 1-WAY/2-WAY DIRECTIONAL CEILING MOUNTED, NON-NETWORKED/INTERCONNECTED/NETWORKED, SYSTEM-BASED OCCUPANCY SENSOR. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF RELAYS/DIMMING CIRCUITS REQUIRED – SEE CONTROL CONFIGURATIONS BELOW FOR MORE INFORMATION. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/FIXTURE TYPE. ADJACENT UPPER CASE LETTER ("H") INDICATES CONNECTION TO HVAC SYSTEM CONTROLS VIA CONTROLLED DRY-CONTACT CLOSURE. ADJACENT UPPER CASE LETTERS ("DM") INDICATES DUAL MODE CONTROL AT CORRIDORS, STAIRWELLS AND WAREHOUSE AISLEWAYS. ADJACENT UPPER CASE LETTERS ("AV") INDICATES CONNECTION TO A/V CONTROL SYSTEM. ADJACENT UPPER CASE LETTER ("P") INDICATES CONNECTION TO MOVEABLE PARTITION INTERFACE, SENSOR AND STATUS INDICATOR.
- L $_{Ky}$ L $_{Vy}$ L $_{y}$ L $_{DM}$ — LOW VOLTAGE MOMENTARY SWITCHES, WALL MOUNTED, FOR MANUAL "ON/OFF SWITCHING" AND "DIMMING" (STEPPED/ CONTINUOUS) CONTROL OF LIGHTING WHICH IS CONTROLLED BY CEILING MOUNTED OCCUPANCY SENSORS. ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF SWITCHLEGS TO BE CONTROLLED. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/FIXTURE TYPE. UPPER CASE SUBSCRIPT "K" INDICATES LOCKING SWITCH FOR THE SUBSEQUENT LOWER CASE LETTER. UPPER CASE SUBSCRIPT "V" INDICATES VANDAL RESISTANT SWITCH. UPPER CASE SUBSCRIPT "DM" INDICATES DUAL MODE CONTROL SWITCH.
- S $^{(50)}_{y+}$ — AUTOMATIC SWITCHING/STEP-DIMMING DAYLIGHTING CONTROLLER USED TO SWITCH OFF LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. NUMBER IN PARENTHESIS INDICATES THE AVERAGE WORKPLANE "TARGET ILLUMINATION" SYMBOL VALUE. ADJACENT LOWER CASE LETTER(S) INDICATES SWITCH LEG(S) CONTROLLED. ADJACENT "+" INDICATES PORTION OF SWITCHLEG CONTROLLED BY SENSOR.
- D $^{(50)}_{y+}$ — AUTOMATIC CONTINUOUS DIMMING DAYLIGHTING CONTROLLER USED TO DIM LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. NUMBER IN PARENTHESIS INDICATES THE AVERAGE WORKPLANE "TARGET ILLUMINATION" SYMBOL VALUE. ADJACENT LOWER CASE LETTER(S) INDICATES SWITCH LEG(S) CONTROLLED. ADJACENT "+, ++ AND *" INDICATES PORTION OF SWITCHLEG CONTROLLED BY SENSOR WHERE "+" INDICATES PRIMARY SIDELIT DAYLIT ZONE, "++" INDICATES SECONDARY SIDELIT DAYLIT ZONE, AND "*" INDICATES SKYLIT DAYLIT ZONE

CONTROL CONFIGURATIONS:

y	"y" INDICATES THAT SWITCH LEG "y" TO BE CONFIGURED IN A "AUTO ON 100% / AUTO OFF" AND BE CONTROLLED (CONTINUOUSLY DIMMED) BY THE ASSOCIATED CEILING SENSOR REMOTE SWITCH ON THE WALL.
y,(y)	"y,(y)" INDICATES THAT SWITCH LEG "y" TO BE CONFIGURED IN A "AUTO ON 50% / MANUAL ON 100% / AUTO OFF" AND BE CONTROLLED (CONTINUOUSLY DIMMED) BY THE ASSOCIATED DISTRIBUTED LIGHTING CONTROLS.
(y)	"(y)" INDICATES THAT SWITCH LEG "y" IS TO BE CONFIGURED IN A "MANUAL ON / AUTO OFF" (VACANCY SENSOR) AND BE CONTROLLED BY THE ASSOCIATED DISTRIBUTED LIGHTING CONTROLS.

MISCELLANEOUS SYSTEM SYMBOLS

- ICP — INVERTER CONTROL PANEL – SEE INVERTER SPECIFICATIONS.
- IAP — INVERTER ANNUNCIATOR PANEL – SEE INVERTER SPECIFICATIONS.
- GAP — GENERATOR ANNUNCIATOR PANEL – SEE GENERATOR SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- IDCS — INTEGRATED DIMMING CONTROL STATION (IDCS) PANEL – WALL MOUNTED. SEE IDCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- DPCS — DIMMING PANEL CONTROL STATION (DPCS) PANEL – WALL MOUNTED. SEE DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- L — LIGHTING CONTROL SYSTEM LOCAL SWITCH – WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- O — LIGHTING CONTROL SYSTEM OVERRIDE SWITCH – WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- M — LIGHTING CONTROL SYSTEM MASTER SWITCH – WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- R — IDCS/DPCS SYSTEM REMOTE STATION SWITCH – WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- P — IDCS/DPCS SYSTEM PARTITION STATION SWITCH – WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.

BRANCH CIRCUIT SYMBOLS

- A-1,3,5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED.
- A-1&3&5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS WITH SEPARATE NEUTRALS. "&" INDICATES SEPARATE NEUTRALS.
- A-1+3+5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. "+" INDICATES SEPARATE #10 NEUTRAL THROUGHOUT BRANCH CIRCUIT. HASH MARK " ⌡ " INDICATES AN ISOLATED GROUND CONDUCTOR.
- CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.
- CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND.
- SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.
- TANDEM WIRING CONNECTION.
- CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS
- CONDUIT CONTINUATION.
- FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
- CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW
- CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE

FLOOR BOX / SPECIALTY WALL BOX / PEDESTAL BOX SYMBOLS

- SINGLE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- TWO SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- THREE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- FOUR SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- SIX SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- AV — 7-GANG AV FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- AV — RECESSED, ADJUSTABLE DEPTH, FLAT PANEL TV/DISPLAY WALL BOX WITH FLUSH GROMMETED COVER PANEL (CHIEF #PAC525F) AND MINIMUM OF (1) 1-1/4"C.O. FROM TOP-MOUNTED L.V. CONDUIT ENTRY BOX TO ACCESSIBLE CEILING. SEE PLANS FOR ANY ADDITIONAL CONDUIT REQUIREMENTS. PROVIDE ADDITIONAL L.V. AND LINE VOLTAGE CONDUIT ENTRY BOXES AS REQUIRED TO ACCOMPLISH WALL BOX CONFIGURATION DEPICTED ON PLANS. FLUSH GROMMETED COVER SHALL BE WHITE, BLACK OR CUSTOM COLOR PER ARCHITECT. WHEN FIELD CONDITIONS PROHIBIT INSTALLATION OF THIS DEVICE (SUCH AS WALL STUD/CAVITY DEPTH OF LESS THAN 2.5" ETC), CONFIRM VIA WRITTEN RFI THE INSTALLATION OF A TRADITIONAL POWER AND DATA RECEPTACLE INSTALLATION ALONG SIDE CCTV/AV JUNCTION BOX CONSISTING OF 2-GANG DEEP JUNCTION BOX/2-GANG RING WITH 1-1/4"C.O. TO ACCESSIBLE CEILING IN ADDITION TO ANY OTHER CONDUIT REQUIREMENTS DEPICTED ON PLANS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHT.
- SINGLE OR DUAL SERVICE RECESSED EXTERIOR WALL BOX – TYPE "WP-A". PROVIDE DEVICES PER PLAN. EACH LV OR UNUSED COMPARTMENT SHALL BE EQUIPPED WITH A 1"C.O. TO THE NEAREST ACCESSIBLE CEILING SPACE U.O.N. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- SINGLE OR DUAL SERVICE EXTERIOR PEDESTAL – TYPE "WP-C". PROVIDE DEVICES PER PLAN. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. ARROW DENOTES DEVICE DOOR LOCATION.

POWER SYMBOLS

ALL RECEPTACLE OUTLETS SHOWN WITH A DIAGONAL SLASH SHALL BE CONTROLLED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS. WHERE DOUBLE DUPLEX RECEPTACLE OUTLETS ARE INDICATED AS CONTROLLED, ONLY A SINGLE DUPLEX RECEPTACLE OUTLET (NON-IG, NON-GCFI TYPE) SHALL BE CONTROLLED. WITHIN ANY CONTROLLED DUPLEX RECEPTACLE OUTLET, ONLY ONE RECEPTACLE SHALL BE CONTROLLED. NOTE THAT FOR FLOOR BOXES OR POKE-THRU DEVICES, THE ASSOCIATED CONTROL RELAY MAY NEED TO BE LOCATED WITHIN THE ELECTRICAL ROOM WHERE THE CONTROLLED CIRCUIT ORIGINATES.

- R $_{a}$ — OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY. WHERE LETTER DESIGNATION "a" REPRESENTS OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROL ZONE. SEE THE DISTRIBUTED LIGHTING CONTROL SPECIFICATION FOR MORE INFORMATION.
- DUPLEX RECEPTACLE, WALL MOUNTED.
- DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED.
- DUPLEX, GFCI RECEPTACLE, WALL MOUNTED. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DOUBLE DUPLEX, WALL MOUNTED, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DUPLEX RECEPTACLE, ONE HALF SWITCHED, WALL MOUNTED.
- DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED.
- 1,3 / 1,3a — COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED.
- COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND RECEPTACLES, WALL MOUNTED.
- SIMPLEX RECEPTACLE, WALL MOUNTED.
- SPECIAL RECEPTACLE, WALL MOUNTED. REFER TO PLAN NOTES.
- DUPLEX RECEPTACLE FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DOUBLE DUPLEX RECEPTACLE FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DUPLEX RECEPTACLE, ONE HALF SWITCHED, FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DUPLEX, ISOLATED GROUND RECEPTACLE, FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- 1,3 / 1,3a — COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, MOUNTED FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX SYMBOL.
- COMBINATION DOUBLE DUPLEX FLUSH IN CEILING: TWO ISOLATED GROUND RECEPTACLES – MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX SYMBOL.
- SIMPLEX RECEPTACLE FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- SPECIAL RECEPTACLE FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- DUPLEX, GFCI RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DOUBLE DUPLEX, WALL MOUNTED, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DUPLEX RECEPTACLE, BOTTOM HALF SWITCHED, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- 1,3 / 1,3a — COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND DUPLEX RECEPTACLES, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- SIMPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
- SPECIAL RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. REFER TO PLAN NOTES.
- WP-B — WET LOCATION-LISTED (RAINTITE-IN-USE) RECEPTACLE – SEE ELECTRICAL SPECIFICATION FOR ADDITIONAL INFORMATION.
- WP-D — DAMP LOCATION-LISTED (NOT-RAINTITE-IN-USE) RECEPTACLE – SEE ELECTRICAL SPECIFICATION FOR ADDITIONAL INFORMATION.
- DUPLEX RECEPTACLES WITH TWO 5V, 3.6A USB CHARGING PORTS. PROVIDE COLOR AS REQUIRED IN 15A OR 20A CONFIGURATION AND/OR TAMPER RESISTANT AND/OR HOSPITAL GRADE AS REQUIRED BY PLANS AND THE WIRING DEVICES SECTION OF THE GENERAL ELECTRICAL SPECIFICATIONS. (PASS & SEYMOUR OR EQUAL BY HUBBELL OR LEVITON.)
- QUAD RECEPTACLES WITH TWO 5V, 3.6A USB CHARGING PORTS. PROVIDE COLOR AS REQUIRED IN 15A OR 20A CONFIGURATION AND/OR TAMPER RESISTANT AND/OR HOSPITAL GRADE AS REQUIRED BY PLANS AND THE WIRING DEVICES SECTION OF THE GENERAL ELECTRICAL SPECIFICATIONS. (PASS & SEYMOUR OR EQUAL BY HUBBELL OR LEVITON.)
- J — JUNCTION BOX, WALL MOUNTED AT +18-INCHES A.F.F. OR AS NOTED. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..
- J — JUNCTION BOX, MOUNTED IN ACCESSIBLE CEILING FOR APPLICATION DENOTED ON PLAN. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..
- J — JUNCTION BOX, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..
- J — JUNCTION BOX MOUNTED IN ACCESSIBLE CEILING SPACE PER PLAN FOR FLEXIBLE CONNECTION TO PREWIRED FURNITURE SYSTEM. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. WHEN SHOWN WITH A DIAGONAL SLASH, THE LAST GENERAL RECEPTACLE CIRCUIT ON THE HOME-RUN CALLOUT SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR. COORDINATE CONTROLLED CIRCUIT CONNECTION REQUIREMENTS WITH FURNITURE SYSTEM MANUFACTURER PRIOR TO ROUGH-IN. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS.
- J — JUNCTION BOX, WALL MOUNTED AT +18-INCHES A.F.F. FOR FLEXIBLE CONNECTION TO PREWIRED FURNITURE SYSTEM. WHEN SHOWN WITH A DIAGONAL SLASH, THE LAST GENERAL RECEPTACLE CIRCUIT ON THE HOME-RUN CALLOUT SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR. COORDINATE CONTROLLED CIRCUIT CONNECTION REQUIREMENTS WITH FURNITURE SYSTEM MANUFACTURER PRIOR TO ROUGH-IN. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS.
- SURFACE MOUNTED MULTI-OUTLET ASSEMBLY. REFER TO GENERAL PRODUCT SPECIFICATIONS. PROVIDE ALL COMPONENTS NECESSARY FOR A COMPLETE INSTALLATION.
- T — THERMOSTAT OUTLET BOX, PROVIDE 1/2" C.O. TO RESPECTIVE MECHANICAL UNIT.
- EXHAUST FAN, OR MOTOR LOAD. REFER TO MECHANICAL, PLUMBING OR KITCHEN DRAWINGS FOR SPECIFIC LOAD REQUIREMENTS OR AS NOTED.
- FLUSH MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- SURFACE MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- DISTRIBUTION SWITCHBOARD. REFER TO SINGLE LINE DIAGRAM.
- T — TRANSFORMER, REFER TO SINGLE LINE DIAGRAM.
- F — FUSED DISCONNECT SWITCH, HP RATED, OR COMBINATION MOTOR STARTER/DISCONNECT SWITCH WITH FUSES PER EQUIPMENT MANUFACTURER AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT AND STARTER SIZES.
- NON-FUSED DISCONNECT SWITCH, HP RATED AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT SIZES.
- M — UTILITY COMPANY METER. PROVIDE "CT's" AND "PT's" AS REQUIRED, REFER TO SINGLE LINE DIAGRAM.
- A B C — CIRCUIT BREAKER: "A" REPRESENTS CIRCUIT BREAKER AMPERE RATING, "B" REPRESENTS NUMBER OF POLES AND "C" REPRESENTS MISCELLANEOUS BREAKER FEATURES.
  - SHUNT= PROVIDE SHUNT TRIP MECHANISM
  - GFP= GROUND FAULT PROTECTION
  - CLCB= CURRENT LIMITING CIRCUIT BREAKER
  - SS= PROVIDE SOLID STATE CIRCUIT BREAKER
  - LO= PROVIDE PERMANENT LOCK-OPEN (OFF) HARDWARE
  - LC= PROVIDE PERMANENT LOCK-CLOSED (ON) HARDWARE
- A B C D — FUSIBLE SWITCH: "A" REPRESENTS SWITCH/FRAME AMPERE RATING, "B" REPRESENTS THE FUSE AMPERE RATING, "C" INDICATES NUMBER OF POLES AND "D" REPRESENTS MISCELLANEOUS FUSE/SWITCH FEATURES.
  - SHUNT= PROVIDE SHUNT TRIP MECHANISM
  - GFP= GROUND FAULT PROTECTION
  - CLF= CURRENT LIMITING FUSE
- GROUND CONNECTION, SIZE AS INDICATED OR AS REQUIRED.
- $a,b — SINGLE POLE SWITCHES, WALL MOUNTED. SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING:

2 – DOUBLE POLE	LV – LOW VOLTAGE	RL – ROTARY LOCK KEY TYPE
3 – THREE WAY	P – PILOT LIGHT	PB – PUSHBUTTON
4 – FOUR WAY	R – REMOTE CONTROL	S – PROJECTION SCREEN
K – KEY OPERATED	M – MOTOR STARTING	

a, b, c, ETC. – DESIGNATES QUANTITY OF SWITCHES AT EACH LOCATION.

NOTE: ALL WALL SWITCHES CONTROLLING EMERGENCY CIRCUITS SHALL BE ENGRAVED WITH "EMERGENCY".

- EMERGENCY POWER OFF STATION, WALL MOUNTED PER EPO SYSTEM DETAIL.
- PB , OR P — PULLBOX, SIZED PER N.E.C. OR AS NOTED.

WALL MOUNTED DEVICE MOUNTING HEIGHT NOTE:

ALL WALL-MOUNTED EQUIPMENT MOUNTING HEIGHTS SHALL BE VERIFIED PRIOR TO ROUGH-IN PER REQUIREMENTS OF THE DEVICE ALIGNMENT AND MOUNTING HEIGHT DETAILS AND SPECIFICATIONS.

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tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWARTZ
No. E15610
Ex. 12/31/2019
ELECTRICAL
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY
DISTRICT ATTORNEY
REMODEL FOR

VICTIM /
WITNESS
& CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

ELECTRICAL
SYMBOLS LIST

DRAWING STATUS

CONSTRUCTION
DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

E001

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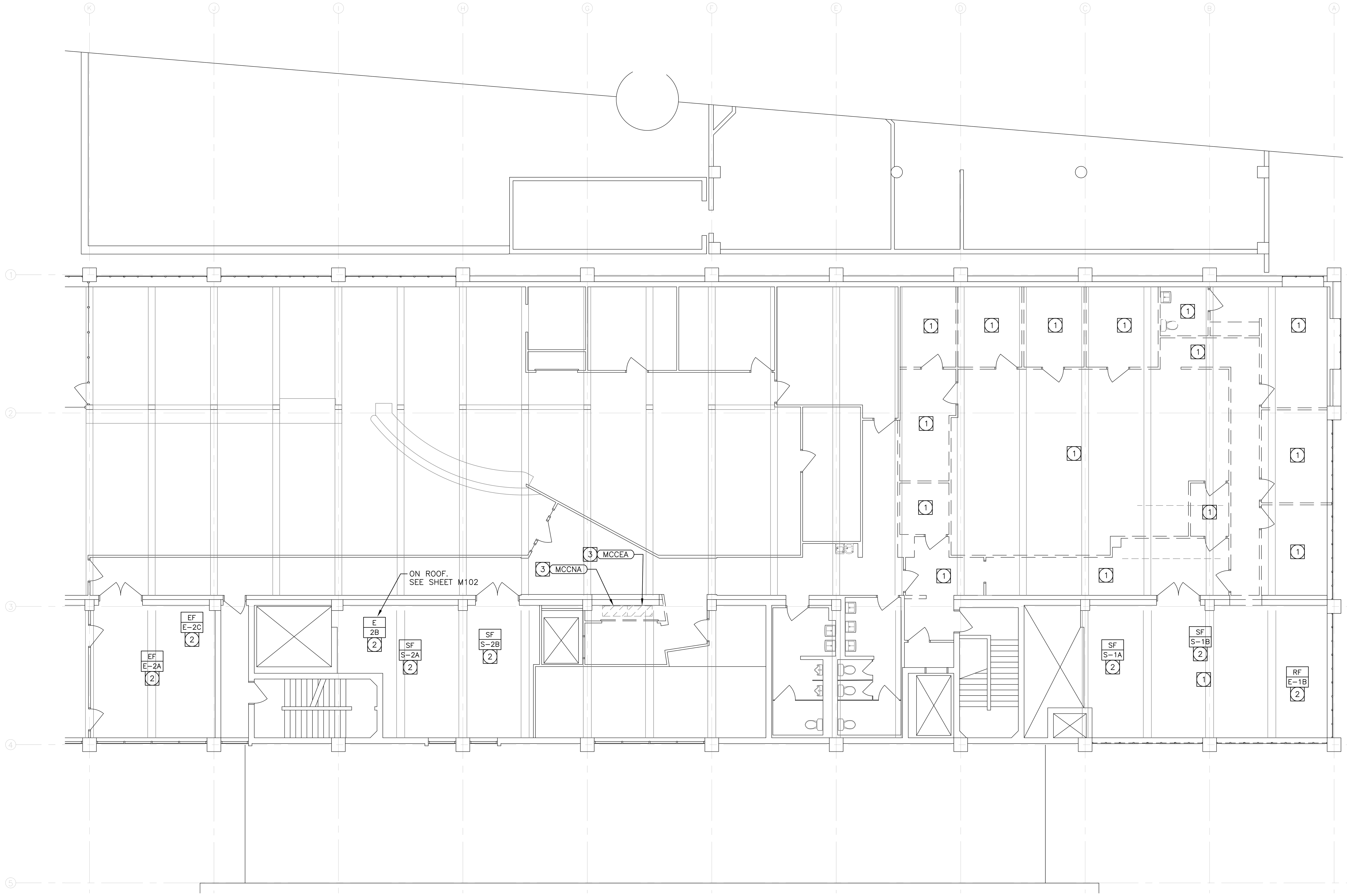

FIFTH FLOOR DEMOLITION PLAN

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

1

DEMOLITION PLAN NOTES:

1. REFER TO ARCHITECTURAL DEMOLITION DRAWING FOR DEMOLITION AREAS. THE SCOPE OF THE DEMOLITION SHALL INCLUDE ALL LABOR, EXISTING ELECTRICAL EQUIPMENT. VERIFY EXACT SCOPE PRIOR TO COMMENCING WORK. REFER TO DEMOLITION PLAN FOR SPECIFIC AREAS NOT IN SCOPE THE SCOPE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:
   - A. LIGHTING: CONTRACTOR TO DEMOLISH ALL EXISTING INTERIOR LIGHTING FIXTURES AND ASSOCIATED CONTROLS, U.O.N.
   - B. POWER: EXISTING DEVICES AND ASSOCIATED CONDUITS TO BE DEMOLISHED, U.O.N.
   - C. ALL EXISTING ELECTRICAL SWITCHGEAR, PANELBOARDS, PULLBOXES, ETC. TO REMAIN, U.O.N.
   - D. SIGNAL: EXISTING DEVICES AND ASSOCIATED CONDUITS IN TO BE DEMOLISHED, U.O.N.
   - E. FIRE ALARM: ALL EXISTING FIRE ALARM DEVICES, CONDUITS, AND ASSOCIATED EQUIPMENT SHALL REMAIN, U.O.N.
2. CONTRACTOR TO DISCONNECT EXISTING HVAC UNIT AND REUSE EXISTING CIRCUITING WHERE NOTED. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
3. EXISTING EQUIPMENT TO BE REMOVED ALONG WITH ASSOCIATED CONDUIT AND WIRE.

GENERAL DEMOLITION NOTES:

1. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE THE ELECTRICAL DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR OUTLETS. SEE ARCHITECTURAL PLANS, WHERE PROVIDED ON PROJECT, FOR EXTENT OF DEMOLITION.
2. THE EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO SUBMITTING BID. ALL DEMOLITION, ALTERATION, EXTENSION, RELOCATION, REHABILITATION WORK SHALL BE INCLUDED IN CONTRACT. NO ADDITIONAL ALLOWANCE OR CHANGE ORDERS WILL BE ACCEPTED.
3. CONTRACTOR IS RESPONSIBLE FOR RELOCATING OR REMOVING FROM WALLS, CEILINGS, FLOOR SPACES, ETC., ANY EXISTING CONDUITS, WIRES, BOXES, FITTINGS, FIXTURES OR OTHER ELECTRICAL EQUIPMENT WHICH INTERFERES WITH PLANNED REMODEL WORK. PROVIDE CIRCUIT CONTINUATION REQUIRED FOR ALL EXISTING OUTLETS, FIXTURES, EQUIPMENT, ETC. SCHEDULED TO REMAIN.
4. NOTIFY THE ENGINEER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, OR NOT INDICATED ON "AS-BUILT" DRAWINGS OR WAS BURIED UNDERGROUND OR EMBEDDED IN STRUCTURE WALLS.
5. CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT, UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE SMALLER AREA IF POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
6. EQUIPMENT, MATERIALS AND SUPPLIES TEMPORARILY REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
7. DEMOLITION WORK SHALL BE DONE IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO USERS OF THE PREMISES AND ADJACENT SITE, AND NOT INTERFERE WITH ITS OPERATION. ANY DEMOLITION WORK TO BE PERFORMED MUST BE PLANNED IN ADVANCE.
8. DO ALL DRILLING, CUTTING, ETC. REQUIRED TO DEMOLISH ELECTRICAL WORK AS INDICATED OR PROVIDE BLANK COVER PLATE ON ALL OUTLETS EXPOSED BY REMOVAL OF FIXTURE OR DEVICES.
9. RESEAL ALL PENETRATIONS OR OPENING THROUGH WALLS, CEILING, FLOORS, ETC., TO MAINTAIN THE RATING OF STRUCTURE.
10. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGED MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER AND NEATLY PILE OR STORE AND PROTECT FROM DAMAGE. DISPOSE OF ALL HAZARDOUS MATERIAL PER FEDERAL, STATE AND LOCAL REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION.
11. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDUIT/WIRING RUNS, REUSE AS REQUIRED, AND REMOVE ALL UNUSED CONDUIT/WIRING. UNUSED CONDUIT IN INACCESSIBLE LOCATIONS (WALLS TO REMAIN) MAY BE ABANDONED IN PLACE. REMOVE UNUSED WIRING INCLUDING ABANDONED TELEPHONE, DATA AND OTHER LOW VOLTAGE SYSTEMS CABLING AFTER CONFIRMING WITH THE OWNER'S PROJECT MANAGER THAT CABLING IS ABANDONED AND WILL NOT BE RE-USED.
12. CONTRACTOR TO VERIFY CIRCUIT NUMBER AND LOADS FOR ALL EXISTING EQUIPMENT PRIOR TO INSTALLATION OF NEW OR RELOCATED ELECTRICAL EQUIPMENT. REASSIGN CIRCUITS AND LOADS ACCORDINGLY. PROVIDE COMPLETE "AS BUILT" DRAWINGS AND TYPEWRITTEN DIRECTORIES FOR PANELS.
13. WHERE NECESSARY TO SHUT OFF UTILITY SERVICES OR CAUSE INTERRUPTION TO POWER OR SIGNAL SYSTEMS WHILE A BUILDING IS OCCUPIED OR THAT AFFECT ADJACENT BUILDINGS, SCHEDULE OUTAGES OR INTERRUPTIONS WITH THE OWNER, BUILDING OCCUPANTS AND/OR ADJACENT BUILDING OWNER(S) AND OCCUPANTS PRIOR TO CONDUCTING OUTAGE(S) OR INTERRUPTIONS.

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ELECTRICAL
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

FIFTH FLOOR DEMOLITION PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

E101

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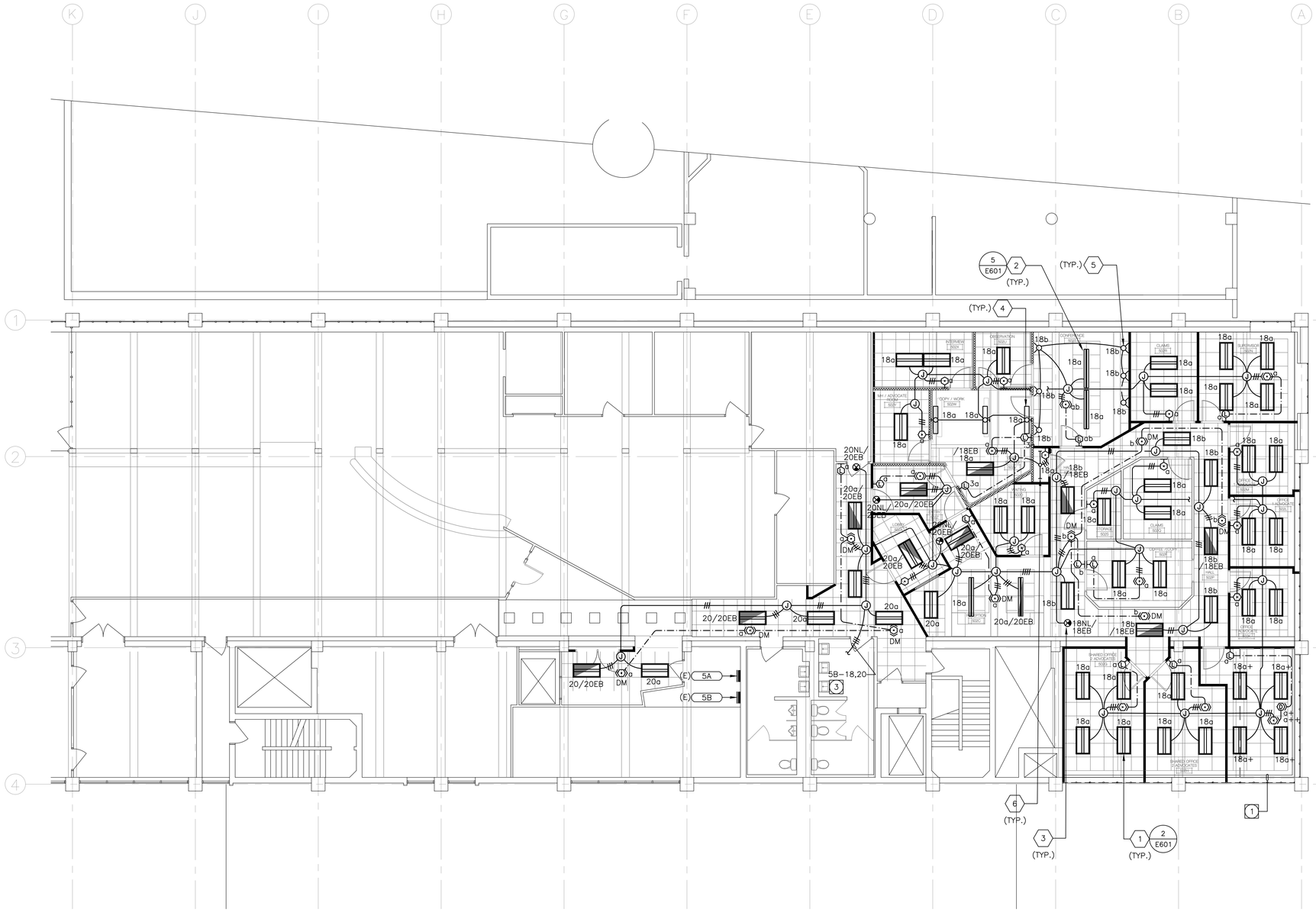

FIFTH FLOOR LIGHTING PLAN

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

1

PLAN NOTES:

1. PRIMARY DAYLIGHT AREA SHOWN PER TITLE 24 REQUIREMENTS.
2. SECONDARY DAYLIGHT AREA SHOWN PER TITLE 24 REQUIREMENTS.
3. INTERCEPT EXISTING LIGHTING BRANCH CIRCUIT AND EXTEND AS REQUIRED. VERIFY ACTUAL CIRCUIT NUMBER IN FIELD.

LIGHTING PLAN GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED ISSUE OF THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
4. ALL COVE MOUNTED FIXTURES SHALL EXTEND THE FULL LENGTH OF THE COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF FIXTURES AS REQUIRED.
5. ALL DIMMING BRANCH CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR FOR EACH ZONE/CHANNEL.
6. ALL FLUORESCENT DIMMING ZONES/CHANNELS SHALL BE PROVIDED WITH 3 LINE VOLTAGE CONDUCTORS (NEUTRAL, DIMMED HOT, SWITCHED HOT) OR 2 LINE VOLTAGE CONDUCTORS/2 CONTROL CONDUCTORS AS REQUIRED BY THE CONTROL/BALLAST TYPE.
7. ALL EMERGENCY BATTERY PACK FIXTURES SHALL BE PROVIDED WITH A CONSTANT HOT CONNECTION TO THE CHARGING LEAD. SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES FOR MORE INFORMATION.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXIT SIGN CHEVRONS AND NUMBER OF FACES PER EXIT SIGN. ANY DISCREPANCIES BETWEEN EXIT SIGNS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.
9. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
   - ALL BRANCH CIRCUITS SHALL BE IN EMT.
   - ALL BRANCH CIRCUITS SHALL BE ROUTED, NEATLY TRAINED, AND IN PARALLEL TO STRUCTURES OR DUCT WORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS.

   VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
10. ALL LED REMOTE INDICATORS FOR DUCT DETECTORS AND FIRE/SMOKE DAMPERS REQUIRED BY THE LOCAL AHJ SHALL BE LOCATED IN CEILINGS IN COORDINATION WITH ARCHITECT PRIOR TO ANY ROUGH-IN.
11. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.
12. PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
13. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
14. REFER TO GENERAL POWER PLAN NOTES AND COMMUNICATIONS PATHWAYS GENERAL NOTES FOR ADDITIONAL REQUIREMENTS WHEN POWER AND/OR DATA DEVICES ARE SHOWN ON THIS PLAN.

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PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
FIFTH FLOOR LIGHTING PLAN

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

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Job No.	18-6452

SHEET No.
E201

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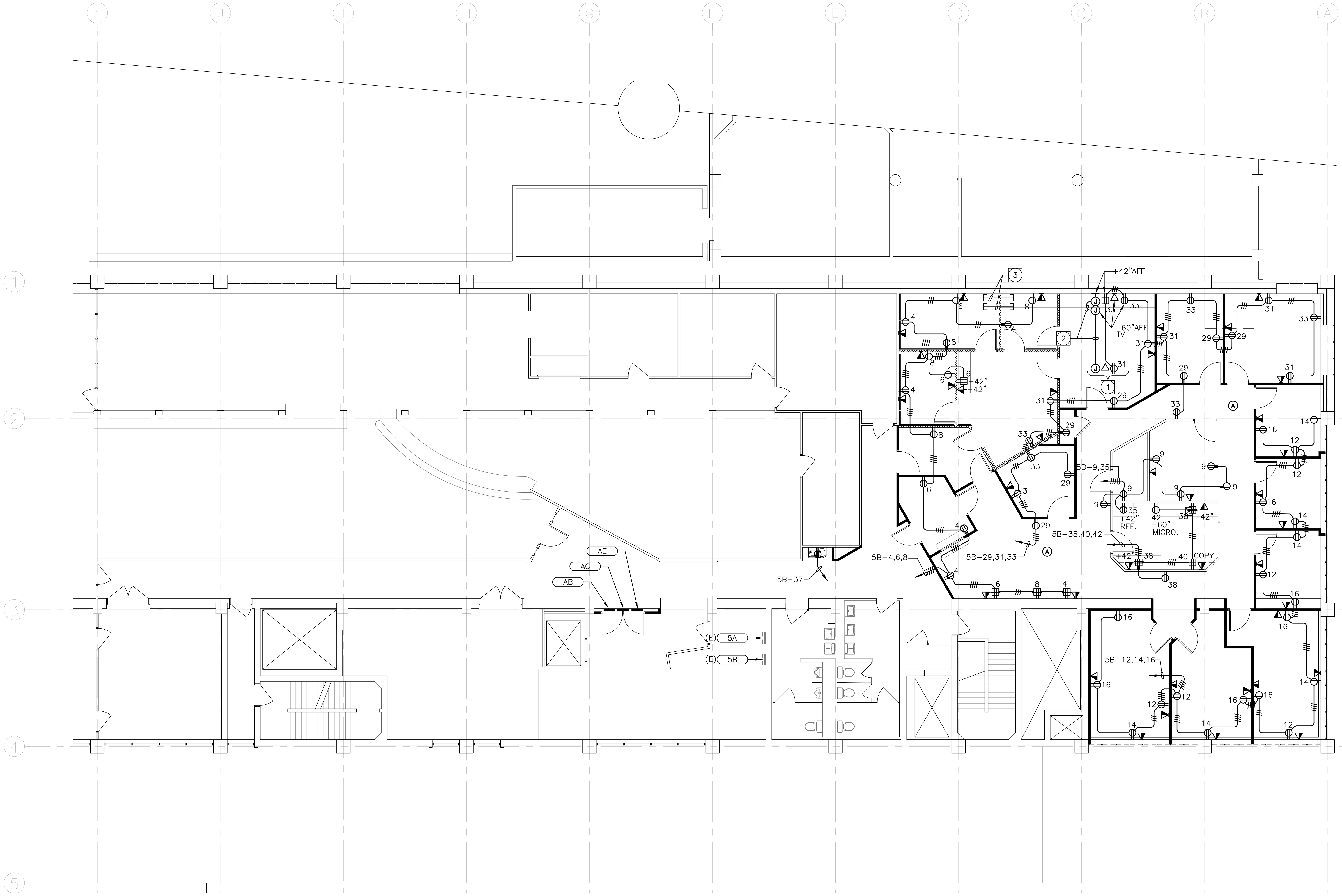

FIFTH FLOOR POWER AND SIGNAL PLAN

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

1

PLAN NOTES:

1. PROVIDE CEILING MOUNT POWER, DATA AND J-BOX FOR PROJECTOR. COORDINATE EXACT LOCATION IN FIELD.
2. PROVIDE 1"C. WITH PULL STRING. CONFIRM EXACT J-BOX LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
3. PROVIDE 2"C. WITH PULL STRING ABOVE CEILING SPACE.

POWER PLAN GENERAL NOTES:

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24-INCHES MINIMUM.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
3. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
4. ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.
5. ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
6. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
   - ALL BRANCH CIRCUITS SHALL BE IN EMT.
   - ALL BRANCH CIRCUITS SHALL BE ROUTED NEATLY AND IN PARALLEL TO STRUCTURES OR DUCT WORK.

   VISUALLY OBJECTIONABLE BRANCH CIRCUITS SHALL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
7. EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, **ARTICLE 300.22(C)**.
8. PROVIDE G.F.C.I. TYPE RECEPTACLE(S) OR RECEPTACLE(S) PROTECTED BY A GFCI CIRCUIT BREAKER(S) WHEN LOCATED WITHIN 6-FEET OF ANY SINK OR THERAPEUTIC TUB, LAUNDRY AREA, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, WITHIN ANY KITCHEN SPACE AND/OR LOCATED OUTDOORS. WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE, PROVIDE GFCI CIRCUIT BREAKER(S) TO PROTECT THE RESPECTIVE BRANCH CIRCUIT AND PROVIDE ADDITIONAL NEUTRAL CONDUCTORS IN THE BRANCH CIRCUITING AS REQUIRED TO ENSURE PROPER GFCI FUNCTION.
9. PROVIDE OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY(S) AS REQUIRED TO SWITCH CONTROLLED RECEPTACLES. CONNECT BRANCH CIRCUITRY AND CONTROL WIRING AS REQUIRED TO ALLOW OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM RELAY TO SWITCH STANDALONE AND/OR SYSTEMS FURNITURE CONTROLLED RECEPTACLES AS INDICATED ON PLANS. PROVIDE ADDITIONAL CONDUIT, WIRING AND PATHWAYS NECESSARY TO CONNECT BRANCH CIRCUITRY AND CONTROL WIRING TO REMOTE RELAYS TO INCLUDE RELAY(S) LOCATED ON ALTERNATE FLOORS, IN ELECTRICAL ROOMS, ETC.
10. PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
11. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

COMMUNICATIONS PATHWAYS GENERAL NOTES:

1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHEST TO 3-INCHES ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
8. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI-TIA-569-C. PULL BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULL BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	16"	3"	2"
2"	8"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	8"	8"

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA-569-C TABLE 12. - LATEST PUBLISHED EDITION.

9. CONDUIT(S) SHALL EXIT A PULL BOX ON THE WALL OPPOSITE THE WALL ENTERED.
10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.

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VICTIM / WITNESS & CAST

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EUREKA, CA 95501

SHEET TITLE

FIFTH FLOOR POWER AND SIGNAL PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

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Date Drawn	6/28/19
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Job No.	18-6452

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E202

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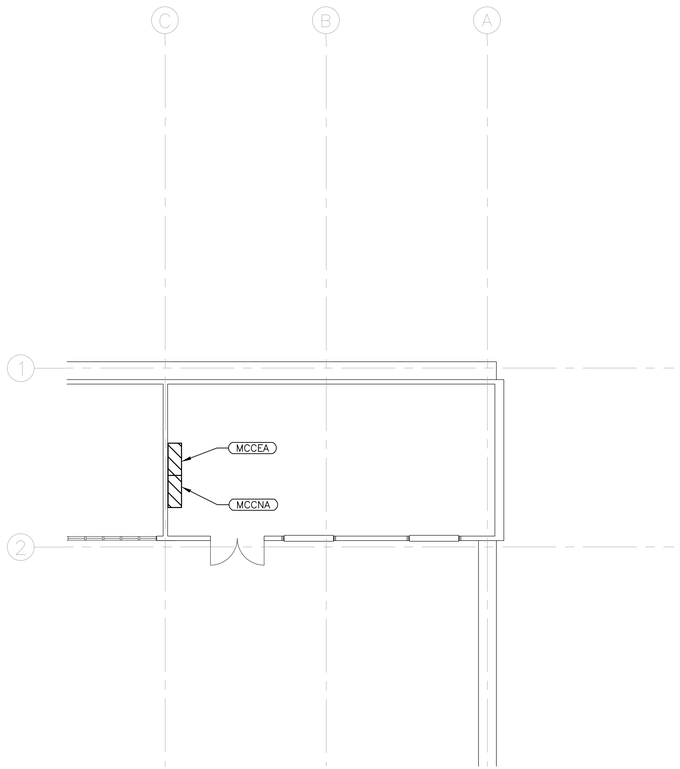
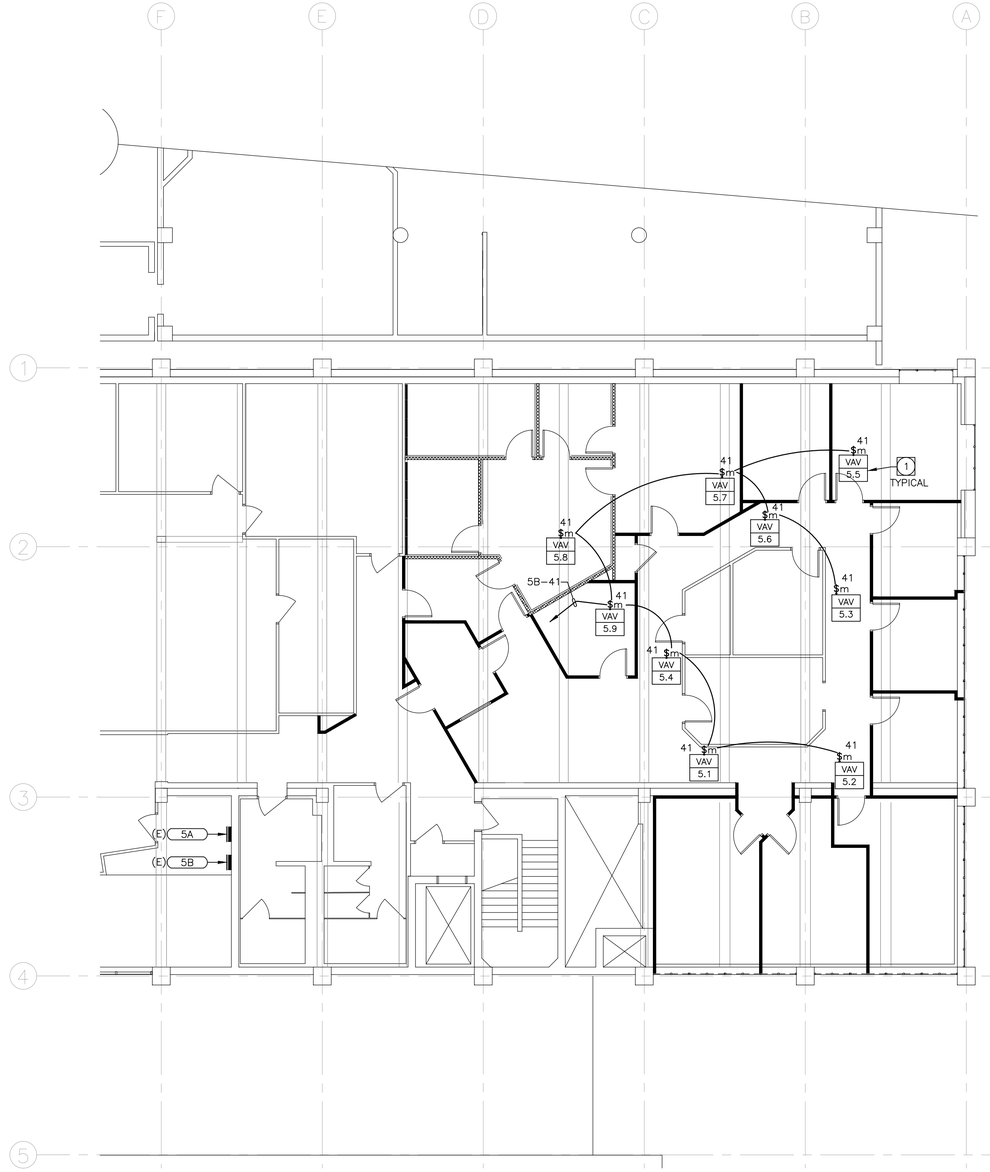


NORTH

PARTIAL ROOF PENTHOUSE PLAN

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

2



NORTH

FIFTH FLOOR MECHANICAL POWER PLAN

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

1

PLAN NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE CONNECTIONS WITH DISCONNECTS TO VAV BOXES AS REQUIRED. SEE MECHANICAL PLANS FOR QUANTITY AND APPROXIMATE LOCATION(S). VERIFY EXACT LOCATION OF VAV BOXES WITH M.C. PRIOR TO ROUGH-IN.

POWER PLAN GENERAL NOTES:

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24-INCHES MINIMUM.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
3. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
4. ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.
5. ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
6. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:

   - ALL BRANCH CIRCUITS SHALL BE IN EMT.
   - ALL BRANCH CIRCUITS SHALL BE ROUTED NEATLY AND IN PARALLEL TO STRUCTURES OR DUCT WORK.

   VISUALLY OBJECTIONABLE BRANCH CIRCUITS SHALL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
7. EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, **ARTICLE 300.22(C).**
8. PROVIDE G.F.C.I. TYPE RECEPTACLE(S) OR RECEPTACLE(S) PROTECTED BY A GFCI CIRCUIT BREAKER(S) WHEN LOCATED WITHIN 6-FEET OF ANY SINK OR THERAPEUTIC TUB, LAUNDRY AREA, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, WITHIN ANY KITCHEN SPACE AND/OR LOCATED OUTDOORS. WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE, PROVIDE GFCI CIRCUIT BREAKER(S) TO PROTECT THE RESPECTIVE BRANCH CIRCUIT AND PROVIDE ADDITIONAL NEUTRAL CONDUCTORS IN THE BRANCH CIRCUITING AS REQUIRED TO ENSURE PROPER GFCI FUNCTION.
9. PROVIDE OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY(S) AS REQUIRED TO SWITCH CONTROLLED RECEPTACLES. CONNECT BRANCH CIRCUITRY AND CONTROL WIRING AS REQUIRED TO ALLOW OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM RELAY TO SWITCH STANDALONE AND/OR SYSTEMS FURNITURE CONTROLLED RECEPTACLES AS INDICATED ON PLANS. PROVIDE ADDITIONAL CONDUIT, WIRING AND PATHWAYS NECESSARY TO CONNECT BRANCH CIRCUITRY AND CONTROL WIRING TO REMOTE RELAYS TO INCLUDE RELAY(S) LOCATED ON ALTERNATE FLOORS, IN ELECTRICAL ROOMS, ETC.
10. PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
11. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

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Project Leader - Jeff Halliwell
Electrical Lead - Jerry Leonhardt
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER RAYMOND W. SHAFFER No. E15610 12/31/2019 ELECTRICAL STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

FIFTH FLOOR MECHANICAL POWER PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

E203

Login Name: Leonhardt
Plot Date: June 27, 2019 - 3:58 pm
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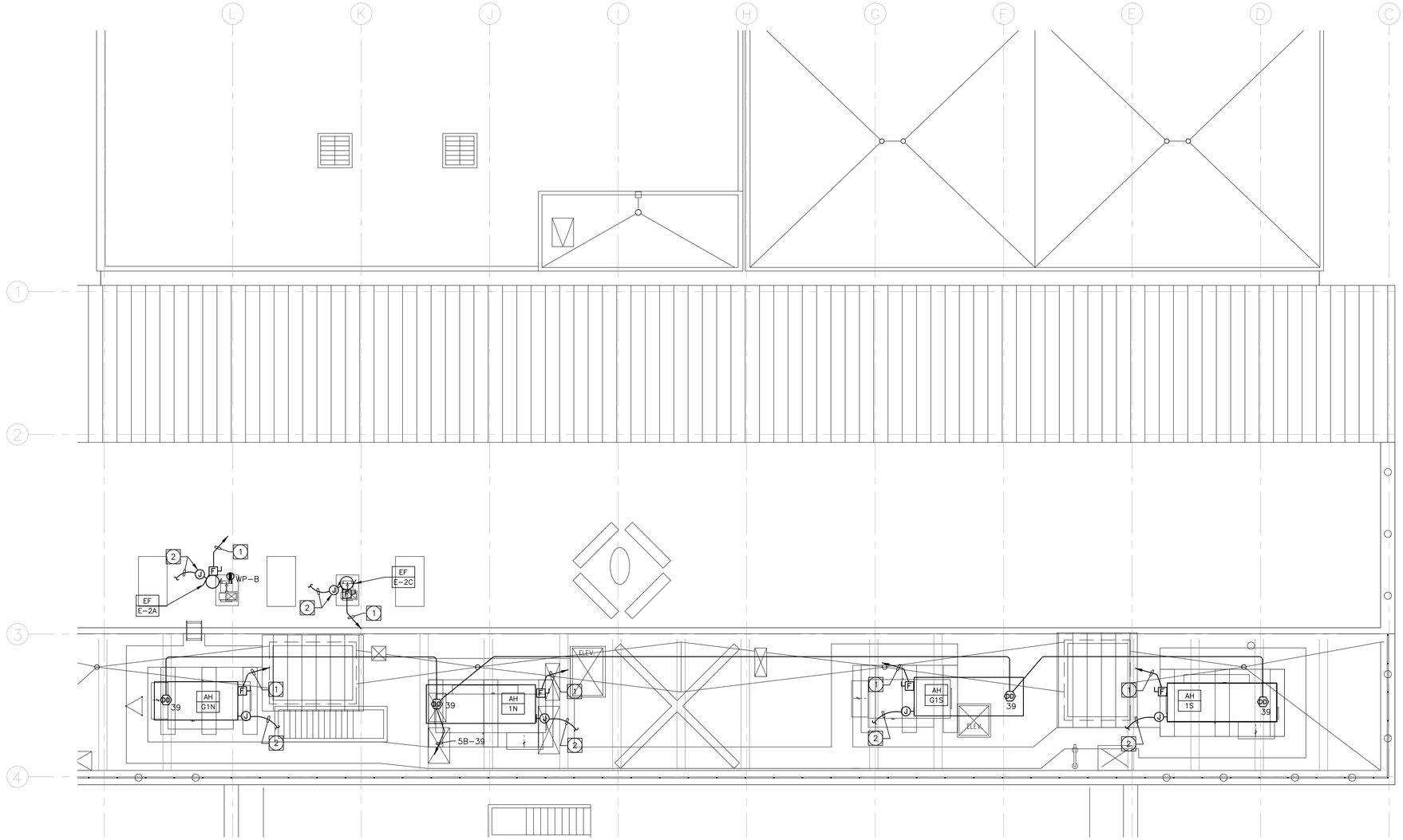

ROOF PLAN SPECIFIC NOTES:

(1) REFER TO MOTORIZED EQUIPMENT SCHEDULE FOR MOTOR FEEDER/ BRANCH CIRCUIT INFORMATION.

(2) PROVIDE 3/4" C.O.(S) TO RESPECTIVE CONTROL DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION.

ROOF PLAN GENERAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL REFER TO MECHANICAL/PLUMBING AND ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND CHARACTERISTICS OF ALL EQUIPMENT LISTED IN SCHEDULE. ANY MODIFICATIONS AND/OR ADDITIONAL WORK NECESSARY SHALL BE INCLUDED IN THE BASE BID.
2. ALL TEMPERATURE CONTROL AND INTERLOCK CONDUIT AND WIRING SHALL BE BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. SEE MECHANICAL/PLUMBING DRAWINGS FOR ALL INFORMATION.
3. ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL CONNECTION POINTS WITH THE EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE LOCAL REMOTE DISCONNECTING MEANS FOR ALL ELECTRIC HEATING EQUIPMENT IF REQUIRED BY THE LOCAL ELECTRICAL CODE.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE THE ROUTING OF CONDUIT/WIRING TO ROOF-MOUNTED EQUIPMENT WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN. WHERE ROOF-MOUNTED EQUIPMENT IS MANUFACTURED TO BE FED FROM WITHIN MECHANICAL CURB ASSEMBLY – SEPARATE ROOF PENETRATIONS FOR WIRING CONNECTIONS SHALL NOT BE PERMITTED. ALL WIRING SHALL BE BELOW THE ROOF IN AN ACCESSIBLE CEILING SPACE LOCATION.
6. ALL ROOF MOUNTED EQUIPMENT SHALL BE NEMA 3R RATED.
7. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

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LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER — RAYMOND W. SWARTZ — No. E15610 — 12/31/2019 — ELECTRICAL — STATE OF CALIFORNIA

PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
ELECTRICAL ROOF PLAN

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
E204

NORTH

ELECTRICAL ROOF PLAN

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

1

MOTORIZED EQUIPMENT SCHEDULE

ITEM	DESCRIPTION	EQUIPMENT RATING								DISC. SW. SIZE	CIRCUIT DATA	SPECIFIC
				MOTOR		VFD						
		VOLTS	PH.	HP	FLA	FLA	MCA	MOCP	SCCR	STARTER SIZE	CONDUIT – WIRE	NOTES
AH G1S	AIR HANDLING UNIT	208	3	–	30.4	–	38	60	–	60A –	SEE SINGLE LINE DIAGRAM	A,F
AH G1N	AIR HANDLING UNIT	208	3	–	46.4	–	58	100	–	60A –	SEE SINGLE LINE DIAGRAM	A,F
AH 1S	AIR HANDLING UNIT	208	3	–	36.0	–	45	60	–	60A –	SEE SINGLE LINE DIAGRAM	A,F
AH 1N	AIR HANDLING UNIT	208	3	–	36.0	–	45	60	–	60A –	SEE SINGLE LINE DIAGRAM	A,F
EF E-2A	EXHAUST FAN –	208	3	3/4	1.4	–	1.8	15	–	30A 1	SEE SINGLE LINE DIAGRAM	A,B
EF E-2C	EXHAUST FAN –	208	3	1/2	1.0	–	1.3	15	–	30A 1	SEE SINGLE LINE DIAGRAM	A,B
– –	–	–	–	–	–	–	–	–	–	– –	– –	–
– –	– –	–	–	–	–	–	–	–	–	– –	– –	–
– –	– –	–	–	–	–	–	–	–	–	– –	– –	–

MOTORIZED EQUIPMENT SCHEDULE SPECIFIC NOTES:

A. FUSED AS RECOMMENDED BY MANUFACTURER.

B. MAGNETIC MOTOR STARTER WITH CONTROL TRANSFORMER, AUXILIARY CONTACTS, INDICATOR LIGHT AND H.O.A. SWITCH. VERIFY CONTROL TRANSFORMER VOLTAGE WITH M.C. PRIOR TO ORDERING MATERIAL.

C. ROUTE THROUGH LINE VOLTAGE CONTROL. SEE MECHANICAL AND/OR PLUMBING PLANS FOR ADDITIONAL REQUIREMENTS.

D. VERIFY LOCATION WITH PLUMBING PLANS PRIOR TO ROUGH-IN. CONNECT TO AQUASTAT AND TIME CLOCK AS REQUIRED.

E. REMOTE VFD. PROVIDE EARLY BREAK CONTACTS ON ANY DISCONNECT SWITCHES REQUIRED BY CODE OR SHOWN ON PLANS THAT ARE DOWNSTREAM OF THE REMOTE VFD. PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED TO INTERCONNECT THE CONTACT WITH VFD "ENABLE" TERMINALS. REFER TO MECHANICAL AND/OR PLUMBING PLANS FOR LOCATION. PROVIDE FEEDER(S) TO CONNECT REMOTE VFD AND MOTOR(S) AS REQUIRED.

F. INTEGRAL VFD PROVIDED WITH EQUIPMENT. REFER TO MECHANICAL AND/OR PLUMBING PLANS FOR LOCATION. CONNECT TO VFD AS REQUIRED.

G. INTEGRAL DISCONNECT PROVIDED WITH EQUIPMENT. REFER TO MECHANICAL AND/OR PLUMBING PLANS FOR LOCATION. CONNECT TO INTEGRAL DISCONNECT AS REQUIRED.

H. INTEGRAL DISCONNECT PROVIDED WITH VFD. REFER TO MECHANICAL AND/OR PLUMBING PLANS FOR LOCATION. CONNECT TO INTEGRAL DISCONNECT AS REQUIRED.

MOTORIZED EQUIPMENT SCHEDULE GENERAL NOTES:

1. ALL BRANCH CIRCUIT DATA IS BASED UPON METALLIC CONDUITS. IF THE CONTRACTOR ELECTS TO USE NONMETALLIC CONDUITS, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED PER NEC, OR CEC WHERE ADOPTED, TABLE **250.122** AND THE CONDUIT SIZE SHALL BE INCREASED ACCORDINGLY.
2. ELECTRICAL CONTRACTOR SHALL REFER TO ALL DOCUMENTS RELATED TO THE EQUIPMENT (I.E. SHOP DRAWINGS, CONSTRUCTION DOCUMENTS, ETC.) IN REGARDS TO ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT LISTED IN THE SCHEDULE. ANY MODIFICATION AND/OR ADDITIONAL WORK NECESSARY SHALL BE INCLUDED IN THE BASE BID.
3. ELECTRICAL CONTRACTOR SHALL CHECK THE ROTATION OF ALL THREE PHASE MOTORS AND CORRECT THE ROTATION IF REVERSED.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE FUSES SIZED PER THE EQUIPMENT NAMEPLATE INFORMATION.
5. DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, EXTERNALLY OPERATED, QUICK MAKE QUICK BREAK AND SHALL BE FUSIBLE OR NON FUSIBLE AS INDICATED. A MAXIMUM VOLTAGE, CURRENT AND HORSEPOWER SHALL BE CLEARLY MARKED ON SWITCH ENCLOSURE. SWITCHES HAVING DUAL RATINGS (HIGHER RATINGS WHEN USED WITH DUAL ELEMENT FUSES) SHALL HAVE RATINGS INDICATED ON METAL PLATES RIVETED OR OTHERWISE PERMANENTLY ATTACHED TO THE ENCLOSURE. WHEN INDICATED, TOGGLE SWITCHES SHALL BE MOTOR RATED FOR THE APPLICATION.
6. ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREE C CONDUCTORS.
7. COMPLETE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF NEC (OR CEC WHERE ADOPTED) ARTICLES **430 AND 440**.
8. CONTRACTOR TO COORDINATE WITH ALL OTHER PROJECT TRADES AND WITH OWNER/ TENANT FOR TO OBTAIN RESPECTIVE EQUIPMENT SCCR AND PROVIDE APPROPRIATE PROTECTIVE DEVICES TO LIMIT AVAILABLE FAULT CURRENT TO LESS THAN THE EQUIPMENT NAMEPLATE SCCR PER NEC (OR CEC WHERE ADOPTED) **110.10**. SEE POWER SYSTEM STUDY SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
9. UNLESS OTHERWISE NOTED, MOCP VALUES FOR VFD-EQUIPPED DEVICE ARE SIZED PER NEC (OR CEC WHERE ADOPTED) **430.130(A).1.** CONTRACTOR SHALL COORDINATE WITH ALL OTHER PROJECT TRADES AND WITH OWNER/ TENANT (IF PROVIDING EQUIPMENT ON PROJECT) TO OBTAIN NAMEPLATE VFD-EQUIPPED DEVICE MOCP VALUE FROM MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE APPROPRIATE PROTECTIVE DEVICES TO COMPLY WITH NEC (OR CEC WHERE ADOPTED) **430.130(A).2.**

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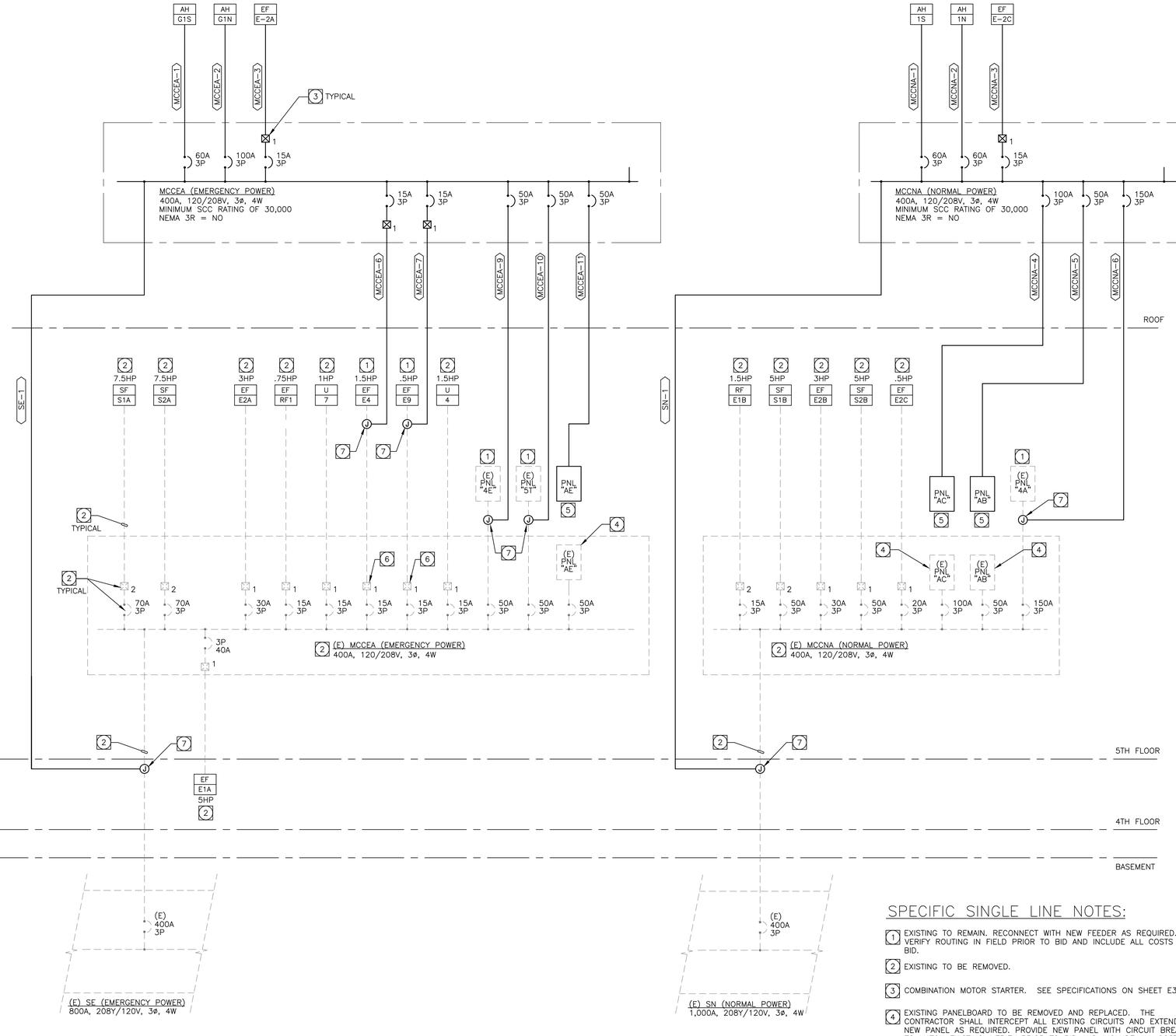
FEEDER SCHEDULE

FEEDER	CONDUIT AND CONDUCTORS	LOAD (A)	DISTANCE (FT)	V.D. (%)	AVAIL.FAULT CURRENT (A)	NOTES
SE-1	3-1/2"C. 4#500KCMIL & 1#3 GRD	(320)	–	–	–	–
MCCEA-1	1"C. 3#4 & 1#10 GRD	(48)	–	–	–	–
MCCEA-2	1-1/4"C. 3#2 & 1#8 GRD	(80)	–	–	–	–
MCCEA-3	3/4"C. 3#12 & 1#12 GRD	(12)	–	–	–	–
			–	–	–	–
			–	–	–	–
MCCEA-6	3/4"C. 3#12 & 1#12 GRD	(12)	–	–	–	–
MCCEA-7	3/4"C. 3#12 & 1#12 GRD	(12)	–	–	–	–
			–	–	–	–
MCCEA-9	1"C. 4#6 & 1#10 GRD	(40)	–	–	–	–
MCCEA-10	1"C. 4#6 & 1#10 GRD	(40)	–	–	–	–
MCCEA-11	1"C. 4#6 & 1#10 GRD	(40)	–	–	–	–
SN-1	3-1/2"C. 4#500KCMIL & 1#3 GRD	(320)	–	–	–	–
MCCNA-1	1"C. 3#4 & 1#10 GRD	(48)	–	–	–	–
MCCNA-2	1"C. 3#4 & 1#10 GRD	(48)	–	–	–	–
MCCNA-3	3/4"C. 3#12 & 1#12 GRD	(12)	–	–	–	–
MCCNA-4	1-1/4"C. 3#2 & 1#8 GRD	(80)	–	–	–	–
MCCNA-5	1"C. 4#6 & 1#10 GRD	(40)	–	–	–	–
MCCNA-6	2"C. 4#1/0 & 1#6 GRD	(120)	–	–	–	–
–	–	–	–	–	–	–

GENERAL FEEDER SCHEDULE NOTES:

1. ALL FEEDERS SHOWN, UNLESS SPECIFICALLY NOTED OTHERWISE, ARE PRESUMED TO BE ROUTED IN METAL RACEWAYS. IF P.V.C. CONDUITS ARE UTILIZED, THE CONTRACTOR SHALL PROVIDE AN EQUIPMENT GROUND PER NEC, OR CEC WHERE ADOPTED, **TABLE 250.122** OR, WHERE REQUIRED, PROVIDE A MAIN BONDING JUMPER PER **TABLE 250.66** AND INCREASE THE CONDUIT SIZE ACCORDINGLY.
2. LOADS INDICATED WITH " ( ) " REPRESENT WORST CASE LOAD IN AMPS.
3. DISTANCE SHOWN IS FOR DESIGN PURPOSES ONLY. IT IS NOT A MATERIAL TAKEOFF.
4. VOLTAGE DROP VALUE INDICATED IS AT THE END OF THE FEEDER.
5. AVAILABLE FAULT CURRENT VALUE AT THE END OF THE FEEDER INDICATED. CALCULATIONS ARE BASED UPON INITIAL VALUES RECEIVED FROM THE SERVING UTILITY AND THE LENGTH AND IMPEDANCE OF THE FEEDER. THE SHORT CIRCUIT CURRENT RATING, EQUIPMENT BUS BRACING, AND/OR AMP INTERRUPTING CURRENT OF EQUIPMENT CONNECTED ON THE LOAD SIDE OF THE FEEDER SHALL BE GREATER THAN THE AVAILABLE FAULT CURRENT.



SINGLE LINE DIAGRAM

SCALE: N.T.S.

1

GENERAL SINGLE LINE DIAGRAM NOTES:

1. FOR ADDITIONAL GENERAL SINGLE LINE DIAGRAM NOTES SEE SHEET E302.
2. ALL WORK SHOWN SHALL BE PERFORMED AT NIGHT AND ON WEEKENDS. THE CONTRACTOR SHALL BID ACCORDINGLY.
3. ALL EXISTING HVAC EQUIPMENT SHOWN TO BE REMOVED SHALL BE DISCONNECTED AND REMOVED PRIOR TO ENERGIZING ANY NEW LOADS.
4. THE CONTRACTOR SHALL COORDINATE ALL WORK SCHEDULES, SHUT DOWNS, ETC. IN WRITING WITH THE OWNER AT LEAST ONE WEEK PRIOR TO THE START OF ANY WORK.

SPECIFIC SINGLE LINE NOTES:

1. EXISTING TO REMAIN. RECONNECT WITH NEW FEEDER AS REQUIRED. VERIFY ROUTING IN FIELD PRIOR TO BID AND INCLUDE ALL COSTS IN BID.
2. EXISTING TO BE REMOVED.
3. COMBINATION MOTOR STARTER. SEE SPECIFICATIONS ON SHEET E302.
4. EXISTING PANELBOARD TO BE REMOVED AND REPLACED. THE CONTRACTOR SHALL INTERCEPT ALL EXISTING CIRCUITS AND EXTEND TO NEW PANEL AS REQUIRED. PROVIDE NEW PANEL WITH CIRCUIT BREAKERS TO MATCH EXISTING. VERIFY PRIOR TO BID AND INCLUDE ALL COSTS IN BID.
5. NEW PANELBOARD TO REPLACE EXISTING.
6. THE CONTRACTOR SHALL DISCONNECT AND EXTEND ALL EXISTING CONTROL WIRING FROM EXISTING STARTERS TO NEW STARTERS AS REQUIRED. PROVIDE ALL NEW CONDUIT AND CONDUCTORS AS REQUIRED. VERIFY EXTENT OF WORK PRIOR TO BID AND INCLUDE ALL COSTS IN BID.
7. THE CONTRACTOR SHALL INTERCEPT THE EXISTING FEEDER IN FOURTH FLOOR CEILING SPACE AND EXTEND AS REQUIRED. VERIFY EXTENT OF WORK PRIOR TO BID AND INCLUDE ALL COSTS IN BID.

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LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER RAYMOND W. SWARTZ No. E15610 12/31/2019 ELECTRICAL STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

SINGLE LINE DIAGRAM

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
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Job No.	18-6452

SHEET No.

E301

Login Name: Leonhardt
Plot Date: June 27, 2019 - 5:58 pm
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MOTOR CONTROL CENTER (MCC) SPECIFICATIONS:

1. THE MOTOR CONTROL CENTERS AND PROTECTION DEVICES IN THIS SPECIFICATION ARE DESIGNED AND MANUFACTURED ACCORDING TO LATEST REVISION OF THE FOLLOWING STANDARDS (UNLESS OTHERWISE NOTED).

   - ANSI/IEEE/NFPA 70 – NATIONAL ELECTRICAL CODE.
   - ANSI/NEMA ICS 6 – ENCLOSURES FOR INDUSTRIAL CONTROLS AND SYSTEMS.
   - NATIONAL ELECTRICAL CODE.
   - NEMA 250 ENCLOSURES FOR ELECTRICAL EQUIPMENT
   - NEMA ICS 2 – GENERAL STANDARDS FOR INDUSTRIAL CONTROL SYSTEMS
   - NEMA ICS 3 – STANDARDS FOR INDUSTRIAL CONTROL DEVICES, CONTROLLERS AND ASSEMBLIES
   - NEMA ST 20 – DRY TYPE TRANSFORMERS FOR GENERAL APPLICATIONS
   - U.L. 508 – INDUSTRIAL CONTROL EQUIPMENT
   - U.L. 845 – MOTOR CONTROL CENTERS

2. MOTOR CONTROL CENTER PHYSICAL CONSTRUCTION:

   - MOTOR CONTROL CENTER SHALL BE RATED AS INDICATED IN DRAWINGS.
   - STRUCTURES SHALL BE TOTALLY ENCLOSED, DEAD–FRONT, FREE STANDING ASSEMBLIES. INDOOR ENCLOSURES SHALL BE NEMA TYPE 1, TYPE 2, TYPE 12 AS THE ENVIRONMENT REQUIRES. OUTDOOR ENCLOSURES SHALL BE NEMA 3R. ALL ENCLOSURES SHALL BE PROVIDED WITH A SPACE HEATER PER VERTICAL SECTION AND THERMOSTATIC CONTROL WHEN THE AMBIENT TEMPERATURES CAN FALL BELOW 40 DEGREES FAHRENHEIT.
   - MOTOR CONTROL CENTER SHALL CONSIST OF VERTICAL SECTION(S) OF HEAVY GAUGE STEEL BOLTED TOGETHER FORMING A RIGID UNIT ASSEMBLY. REMOVABLE LIFTING ANGLES OR TABS SHALL BE MOUNTED ON TOP OF MOTOR CONTROL CENTER SECTIONS. REMOVABLE BOTTOM CHANNEL SILLS SHALL BE MOUNTED FRONT AND REAR OF VERTICAL SECTION EXTENDING FULL WIDTH OF LINEUP.
   - PHASE RELATIONSHIP OF STAB–IN UNITS FOR REAR MOUNTING SHALL BE SAME AS FOR FRONT–MOUNTED UNITS. NO PHASE ROTATION SHALL BE PERMITTED.
   - ALL SECTION PARTS SHALL BE ACCESSIBLE FROM FRONT FOR MAINTENANCE AND REARRANGEMENT.
   - EACH SECTION SHALL HAVE ALL NECESSARY HARDWARE AND BUSSING FOR MODULAR PLUG–IN UNITS TO BE ADDED AT ANY POINT IN SECTION. UNUSED SPACE SHALL BE COVERED BY HINGED BLANK DOORS AND EQUIPPED TO ACCEPT FUTURE UNITS.
   - EACH SECTION SHALL HAVE TOP PLATE AND TWO PIECE BOTTOM PLATE. EACH PLATE SHALL BE REMOVABLE TO CUT CONDUIT ENTRY OPENINGS.
   - EACH DEVICE COMPARTMENT SHALL HAVE AN INDIVIDUAL FLANGE FORMED PAN TYPE DOOR WITH QUICK RELEASE, QUARTER TURN LATCHES. DOOR SHALL BE MOUNTED ON UNIT SO THAT AN INDIVIDUAL UNIT MAY BE INSTALLED OR REMOVED WITHOUT DISTURBING ADJACENT UNITS OR REMOVING ANY HARDWARE.
   - VERTICAL SECTIONS SHALL CONTAIN 12 INCH HIGH HORIZONTAL WIREWAY AT TOP/BOTTOM OF ALL SECTIONS FOR INCOMING LINES AND WIRING BETWEEN SECTIONS. A 6 INCH HIGH HORIZONTAL WIREWAY SHALL BE LOCATED AT BOTTOM/TOP OF ALL SECTIONS.
   - A SEPARATE REMOVABLE VERTICAL WIRE TROUGH DOOR SHALL BE FURNISHED ADJACENT TO EACH PLUG–IN DEVICE. WIRE TROUGH PERMITS FIELD CONTROL WIRING TO BE ISOLATED IN TROUGH AREA RATHER THAN DRAWN THROUGH CUTOUTS INTO DEVICE.
   - CABLE TIE SUPPORTS SHALL BE FURNISHED IN VERTICAL WIRE TROUGH TO HOLD CABLE AND WIRING IN PLACE. EACH INDIVIDUAL DEVICE COMPARTMENT SHALL HAVE A SIDE BARRIER TO PERMIT PULLING WIRE FROM WIRE TROUGH AREAS WITHOUT DISTURBING ADJACENT DEVICE COMPARTMENTS.
   - THE MOTOR CONTROL CENTER STEEL PARTS SHALL BE CLEANED AND SPRAYED IN CONTROLLED CLEANING SOLUTIONS BY A 7–STAGE SPRAY WASHER. THE OPERATION SHALL PRODUCE AN IRON PHOSPHATE COATING OF A MINIMUM OF 150 MILLIGRAMS PER SQUARE FOOT TO MEET MIL SPECIFICATION TT–C–490. THE PRIMED METAL PARTS SHALL BE ELECTRO–STATICALLY COATED WITH POWDER PAINT CONSISTING OF 670–011 ANSI–61 ACRYLIC PAINT (LIGHT GRAY) WITH A GLOSS OF 60 +/– 5, AND THICKNESS OF 2.5 MILS. THE PAINT FINISH SHALL WITHSTAND A MINIMUM OF 1000 HOURS SALT SPRAY TEST.

3. MOTOR CONTROL CENTER BUSSING

   HORIZONTAL BUSSING:

   - POWER SHALL BE DISTRIBUTED BY MEANS OF A CONTINUOUS HORIZONTAL BUS RATED AS INDICATED IN DRAWINGS.
   - HORIZONTAL BUS SHALL BE ALUMINUM, ENCLOSED IN ISOLATED COMPARTMENT AT TOP OF EACH VERTICAL SECTION. HORIZONTAL BUS BARS SHALL BE EDGEWISE MOUNTED, ONE ABOVE THE OTHER, AND SUPPORTED ON WHITE POLYESTER REINFORCED INSULATORS. HORIZONTAL BUS SHALL BE ISOLATED FROM WIRE TROUGHS, STARTERS BY INSULATED BARRIERS. ALL BUS AND SPLICE BAR CONNECTIONS SHALL BE ACCESSIBLE BY SLIDING BARRIER PANELS OPEN, OR REMOVING STATIONARY BARRIERS.
   - HORIZONTAL BUS SPLICING BETWEEN SHIPPING SPLITS SHALL BE ACCOMPLISHED FROM THE FRONT WITHOUT ANY STRUCTURAL DISASSEMBLY. BUS RATINGS 1200 AMPERES AND LARGER MAY REQUIRE REMOVAL OF BARRIERS TO GAIN ACCESS TO MAIN BUS
   - CONNECTIONS.
   - HORIZONTAL BUS BARS SHALL BE FULLY RATED AS INDICATED IN DRAWINGS.
   - HORIZONTAL BUS BARS SHALL BE ARRANGED FOR FUTURE EXTENSION.
   - HORIZONTAL BUS SHALL BE BRACED TO WITHSTAND SHORT CIRCUIT CURRENTS AS INDICATED IN DRAWINGS.

   VERTICAL BUSSING

   - VERTICAL BUS SHALL BE FULLY RATED AS INDICATED IN DRAWINGS. BUS SHALL BE ALUMINUM.
   - VERTICAL BUS SHALL BE ENCLOSED IN FLAME–RETARDANT WHITE POLYESTER GLASS SANDWICH TO INSULATE BARS FRONT AND REAR AND ISOLATE INDIVIDUAL VERTICAL BUS BARS PHASE TO PHASE.
   - SMALL OPENINGS IN BUS SANDWICH SHALL PERMIT UNIT STABS TO PLUG INTO VERTICAL BUS BARS, RATHER THAN ONTO THEM. BOTTOM OF VERTICAL BUS SANDWICH SHALL BE BARRIERED TO PREVENT ENTRANCE OF FOREIGN OBJECTS.
   - VERTICAL BUS SHALL BE CONNECTED DIRECTLY TO HORIZONTAL BUS WITHOUT USING RISERS OR OTHER CONNECTORS.
   - DEVICES WITH CIRCUIT BREAKERS UP TO 225 AMPERE TRIPS AND FUSIBLE SWITCHES UP TO 200 AMPERES SHALL CONNECT TO VERTICAL BUS BY SPRING REINFORCED STAB–IN CONNECTORS. HIGHER RATED DEVICES SHALL BE BOLTED TO MAIN OR VERTICAL BUS OR TO DIRECT VERTICAL RISER BUS.
   - VERTICAL BUS SHALL BE BRACED TO WITHSTAND SHORT CIRCUIT CURRENTS AS INDICATED IN DRAWINGS.

   GROUND BUS SHALL ALUMINUM AND EXTEND FULL WIDTH AT BOTTOM OF MOTOR CONTROL CENTER LINE–UP. GROUND BUS WILL BE DRILLED AND LUGS FURNISHED AS SPECIFIED IN DRAWINGS. GROUND BUS SHALL BE SIZED PER DRAWINGS.

   NEUTRAL BUS (WHEN SPECIFIED) SHALL BE FULLY RATED. NEUTRAL BUS SHALL BE CONTINUOUS THROUGHOUT THE CONTROL CENTER. LUGS SHALL BE OF APPROPRIATE CAPACITY. BOTTOM PLATES SHALL BE FURNISHED WHEN NEUTRAL BUS IS SPECIFIED.

4. COMBINATION MOTOR STARTERS DEVICES

   - COMBINATION MOTOR CONTROLLER AND FEEDER TAP UNITS SHALL HAVE MOLDED CASE CIRCUIT BREAKER/FUSIBLE SWITCH FOR BRANCH CIRCUIT PROTECTION.
   - CIRCUIT BREAKER DISCONNECTS FOR COMBINATION MOTOR STARTERS SHALL BE THERMAL MAGNETIC.
   - COMBINATION STARTERS, CIRCUIT BREAKERS AND FUSIBLE SWITCHES, SHALL BE RATED AS INDICATED IN DRAWINGS.
   - PLUG–IN COMBINATION STARTER AND FEEDER UNITS SHALL USE A POSITIVE GUIDANCE MECHANICAL INSTALLATION SYSTEM TO ENSURE POSITIVE STABBING OF UNIT WEDGE SHAPED STAB ASSEMBLY INTO VERTICAL RISER BARS. POWER CABLES SHALL BE CONNECTED TO WEDGE STABS WITH MAINTENANCE FREE CRIMP CONNECTORS.
   - UNIT OPERATING HANDLE SHALL BE VERTICAL LIFT, CLOSE COUPLED TO UNIT DISCONNECT FOR POSITIVE INDICATION OF DISCONNECT POSITION WITH UNIT DOOR OPEN OR CLOSED. HANDLE SHALL BE MECHANICALLY INTERLOCKED WITH DOOR CLOSED SO THAT INTERLOCK MUST BE DEFEATED TO OPEN DOOR WITH DEVICE ENERGIZED, OR TO ENERGIZE DEVICE WITH DOOR OPEN. HANDLE SHALL HAVE PADLOCKING PROVISION IN OFF POSITION FOR UP TO (3) PADLOCKS WITH DOOR OPENED OR CLOSED. HANDLE SHALL HAVE DRILLING PATTERN TO ADD PADLOCK IN ON POSITION. CIRCUIT BREAKER HANDLES SHALL INDICATE TRIPPED POSITION IN ADDITION TO ON, OFF AND RESET.
   - UNIT SHALL HAVE MEANS TO PADLOCK FOR MAINTENANCE, IN THE LOCKOUT POSITION.
   - WHEN IN LOCKOUT POSITION, POWER STABS ARE DISENGAGED FROM VERTICAL BUS BARS SO NO POWER CAN ENTER UNIT.
   - COMBINATION STARTERS WITH TYPE B OR C WIRING SHALL HAVE DROUGHT SPLIT–TYPE CONTROL TERMINAL BLOCKS MOUNTED ON RIGHT–HAND SIDE. CONTROL TERMINAL BOARDS ARE TO BE MANUALLY SEPARABLE TYPE. COMBINATION STARTER UNITS SIZES 1–4 UP TO 48 INCHES HIGH SHALL BE REMOVABLE FROM SECTION WITHOUT REMOVING CONTROL LEADS TO TERMINAL BLOCKS.
   - COMBINATION MOTOR CONTROLLER UNITS SHALL HAVE LINE VOLTAGE CONTROL CIRCUITS ON ALL CIRCUIT BREAKERS AND FUSIBLE SWITCH COMBINATION STARTERS SHALL BE PROVIDED WITH NEMA CLASS J CURRENT–LIMITING FUSES MOUNTED IN BOTH LEGS OF UNIT CONTROL CIRCUIT.
   - NEMA SIZE 1–4 STARTERS SHALL HAVE CONTROL TERMINAL BOARD NEXT TO WIREWAYS. MOTOR LEADS SHALL CONNECT DIRECTLY TO STARTER TERMINALS. LARGER STARTERS SHALL BE ARRANGED SO THAT MOTOR LEADS EXIT THROUGH STARTER CUBICLE BOTTOM.
   - COMBINATION STARTER UNITS SHALL HAVE AUXILIARY DEVICES AS INDICATED ON THE DRAWINGS AND REQUIRED BY THE MECHANICAL/PLUMBING CONTROL DIAGRAMS.
   - STARTERS SHALL HAVE A SOLID STATE OVERLOAD RELAY AND SHALL BE CLASS 10, 20, 30 (SELECTABLE) WITH ADJUSTABLE PHASE LOSS/UNBALANCE (SENSITIVITY 20–50%), AMBIENT INSENSITIVE WITHIN THE STATED OPERATING TEMPERATURE RANGE OF –20 DEGREES C TO +70 DEGREES C, BUILT–IN THERMAL MEMORY, VISUAL TRIP INDICATION, SELF POWERED @ 50% OF MINIMUM CURRENT RANGE, STANDARD ISOLATED 1 NO AND 1 NC AUX. CONTACT.

5. INSTALLATION / FIELD QUALITY CONTROL / ADJUSTING / CLEANING

   - INSTALL PER MANUFACTURER'S INSTRUCTIONS. INSTALL REQUIRED SAFETY LABELS.
     MEGGER AND RECORD PHASE TO PHASE AND PHASE TO GROUND INSULATION RESISTANCE OF EACH BUS SECTION. MEGGER FOR 1 MINUTE FOR EACH MEASUREMENT AT MINIMUM VOLTAGE OF 1000 VDC. MEASURED INSULATION RESISTANCE SHALL BE AT LEAST 1 MEGOHMS. REFER TO MANUFACTURER'S INSTRUCTIONS FOR PROPER TESTING PROCEDURES.
     CHECK TIGHTNESS OF ALL ACCESSIBLE MECHANICAL AND ELECTRICAL CONNECTIONS WITH A CALIBRATED TORQUE WRENCH. MINIMUM ACCEPTABLE VALUES ARE SPECIFIED IN MANUFACTURER'S INSTRUCTIONS.
     TEST EACH KEY INTERLOCK SYSTEM FOR PROPER FUNCTIONING.
     OPERATE TEST PUSH BUTTON TO CHECK GROUND FAULT SYSTEM(S).
     ADJUST ALL CIRCUIT BREAKERS/SWITCHES/ACCESS DOORS/OPERATING HANDLES FOR FREE MECHANICAL/ELECTRICAL OPERATION AS DESCRIBED IN MANUFACTURER'S INSTRUCTIONS.
     ADJUST CIRCUIT BREAKER TRIP AND TIME DELAY SETTINGS TO VALUES DETERMINED BY COORDINATION STUDY.
   - CLEAN INTERIORS OF MOTOR CONTROL CENTERS TO REMOVE CONSTRUCTION DEBRIS, DIRT, SHIPPING MATERIALS. REPAINT SCRATCHED OR MARRED EXTERIOR SURFACES TO MATCH ORIGINAL FINISH.

6. SUBMITTALS/OPERATION AND MAINTENANCE DATA

   - MANUFACTURER SHALL PROVIDE COPIES OF PRODUCT DATA AND SHOP DRAWING DOCUMENTS TO OWNER FOR REVIEW AND EVALUATION IN ACCORDANCE WITH GENERAL REQUIREMENTS OF DIVISION 1 AND DIVISION 16.
   - MANUFACTURER SHALL PROVIDE TO OWNER COPIES OF INSTALLATION, AND MAINTENANCE PROCEDURES ASSOCIATED IN ACCORDANCE WITH GENERAL REQUIREMENTS OF DIVISION 1 AND DIVISION 16.

7. MANUFACTURE AND PRODUCT QUALIFICATIONS

   - GENERAL ELECTRIC COMPANY PRODUCTS HAVE BEEN USED AS THE BASIS FOR DESIGN. OTHER MANUFACTURERS' PRODUCTS OF EQUIVALENT QUALITY, DIMENSIONS AND OPERATING FEATURES MAY BE ACCEPTABLE, AT THE ENGINEER'S DISCRETION, IF THEY COMPLY WITH ALL REQUIREMENTS SPECIFIED OR INDICATED IN THESE CONTRACT DOCUMENTS.
   - MANUFACTURER SHALL HAVE SPECIALIZED IN THE MANUFACTURE AND ASSEMBLY OF LOW VOLTAGE MOTOR CONTROL CENTERS FOR 40 YEARS.
   - LOW VOLTAGE MOTOR CONTROL CENTERS SHALL BE LISTED AND/OR CLASSIFIED BY UNDERWRITERS LABORATORIES IN ACCORDANCE WITH STANDARDS LISTED IN THIS SPECIFICATION.
   - MOTOR CONTROL CENTER SHALL BE INSPECTED BEFORE SHIPMENT INCLUDING STRUCTURE, ELECTRICAL CONDUCTORS, BUSSING, GENERAL WIRING, AND DEVICES.
   - MANUFACTURER SHALL WARRANT EQUIPMENT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR 1 YEAR FROM DATE OF INSTALLATION.

MCC SYSTEM INSTALLATION REQUIREMENTS:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FURNISHING OF ALL MATERIAL, LABOR, EQUIPMENT, AND SERVICES, IN CONNECTION WITH THE INSTALLATION OF A COMPLETE AND FULLY FUNCTIONING AND CODE COMPLIANT INSTALLATION.
2. IT IS THE INTENT OF THE CONTRACT DOCUMENTS, WHICH ARE PRESENTED IN A DIAGRAMMATIC FORMAT, TO PROVIDE CONTRACTOR INFORMATION THAT SUPPLEMENTS AND ENHANCES THE GENERALLY ACCEPTED CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES EMPLOYED IN CONNECTION WITH INSTALLATION OF THIS TYPE OF PRODUCT/SYSTEM.
3. THE CONTRACTOR SHALL ALSO INCORPORATE THE REQUIREMENTS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS/WARRANTY REQUIREMENTS AS PART OF THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE CONTRACT DOCUMENT REQUIREMENTS AND THE MANUFACTURERS INSTALLATION REQUIREMENTS, THE MORE STRINGENT REQUIREMENTS SHALL APPLY – UNLESS THE MORE STRINGENT REQUIREMENT VOIDS APPLICABLE WARRANTIES OR VIOLATES THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION. ANY SUCH CONFLICT SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING THROUGH THE FORMAL RFI PROCESS.
4. REFER TO THE ASSOCIATED SCHEDULES, SCHEMATICS, DRAWINGS, AND SPECIFICATIONS FOR DETAILED INFORMATION/REQUIREMENTS ON THIS PRODUCT/SYSTEM.

GENERAL PANEL SCHEDULE NOTES:

1. PROVIDE BREAKER INTERLOCK WITH ADJACENT BREAKER(S) FOR ANY MULTI–WIRE BRANCH CIRCUIT. BREAKER INTERLOCK GROUPING SHALL BE BY BRANCH CIRCUIT GROUP (i.e. MULTIPLE CIRCUITS SHARING A COMMON NEUTRAL (NEC, OR CEC WHERE ADOPTED, **210.4(B)**,) COMMON YOKE (NEC, OR CEC WHERE ADOPTED, **210.7(B)**,) OR FURNITURE SYSTEM NEC OR CEC WHERE ADOPTED, **605.6** AND **605.7**). WHERE AN EXISTING PANEL IS BEING ALTERED OR MODIFIED IN ANY WAY, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO ADD BREAKER INTERLOCKS TO EXISTING MULTI–WIRE BRANCH CIRCUITS BASED ON CONTRACTOR'S INVESTIGATION OF EXISTING CONDITIONS.
2. UPON PROJECT COMPLETION, CONTRACTOR SHALL INSTALL TYPED AS–BUILT PANEL DIRECTORIES IN EACH PANEL WITHIN THE MFGR–PROVIDED DIRECTORY HOLDER. THE DIRECTORY SHALL CLEARLY IDENTIFY EACH CIRCUIT TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. EACH CIRCUIT IDENTITY SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS PER NEC, OR CEC WHERE ADOPTED, ART **408.1** AND **408.4**. HANDWRITTEN DIRECTORIES ARE UNACCEPTABLE. COPIES OF AS–BUILT PANEL SCHEDULES SHALL BE PLACED IN PANEL DIRECTORIES. E.C. TO INCLUDE ALL COSTS REQUIRED FOR LARGER–THAN–STANDARD CUSTOM PANEL DIRECTORY HOLDERS TO ACCOMMODATE COPIES OF AS–BUILT PANEL SCHEDULES.
3. PROVIDE SHOP DRAWING SUBMITTAL PER THE ELECTRICAL SPECIFICATION SUBMITTAL REQUIREMENTS FOR EACH PANEL DEPICTING CONFORMANCE WITH THE ABOVE NOTES AND SCHEDULES.

SPECIFIC PANEL SCHEDULE NOTES:

"F" PROVIDE A NEW BREAKER TO MATCH THE EXISTING IN PANEL.

"G" EXISTING BREAKER WITH NEW LOAD.

GENERAL SINGLE LINE DIAGRAM NOTES:

1. ALL SWITCHGEAR SHALL BE SQUARE D OR EQUAL BY CUTLER–HAMMER, RSE–SIERRA, G.E., SIEMENS, OR Z–POWER AND DISTRIBUTION.
2. ALL ITEMS DEPICTED ON THE SINGLE LINE DRAWINGS SHALL BE ASSUMED AS NEW U.O.N.
3. ALL OVERCURRENT DEVICES IN AN INDIVIDUAL PIECE OF EQUIPMENT SHALL HAVE AN AIC RATING EQUAL TO THE OVERALL RATING OF THE EQUIPMENT–SERIES RATING OF DEVICES WITHIN A PIECE OF EQUIPMENT IS NOT ALLOWED. SEE SPECIFICATIONS FOR MORE INFORMATION.
4. SERIES RATED DEVICES SHALL HAVE BEEN INVESTIGATED BY U.L. IN COMBINATION WITH THE END USE EQUIPMENT AND IN THE EQUIPMENT IN WHICH THESE DEVICES ARE USED AND SHALL BE MARKED WITH A SERIES RATING. ALL EQUIPMENT SHALL BE MARKED IN ACCORDANCE WITH NEC (OR CEC–WHERE ADOPTED) REQUIREMENTS. SEE SPECIFICATIONS FOR MORE INFORMATION. WHERE SERIES RATINGS ARE ALLOWED, THE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE A SERIES COMBINATION RATING WHICH SHALL BE READILY VISIBLE AND STATE THE FOLLOWING:

   **CAUTION – SERIES COMBINATION SYSTEM RATED AT ??,???
   AMPERES. USE ONLY IDENTIFIED REPLACEMENT COMPONENTS
   IN THIS SYSTEM.**

   WHERE ??,??? REPRESENTS AVAILABLE FAULT CURRENT. SEE SPECIFICATIONS FOR PLACARD REQUIREMENTS.
5. ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREE CELSIUS CONDUCTORS.
6. ALL SERVICE ENTRANCE EQUIPMENT RATED AT 400A OR GREATER SHALL BE PROVIDED WITH A BACKFEED–RATED, SOLID STATE MAIN OVERCURRENT DEVICE AND BUSSING RATED AT 100% OPERATION (1000A/sq.in. FOR CU, 750A/sq.in. FOR AL). NO HEAT RISE RATED BUSSING ALLOWED. NON–SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARDS LARGER THAN 600A SHALL BE PROVIDED WITH BUSSING RATED FOR 100% OPERATION – SEE SPECIFICATION FOR CIRCUIT BREAKER REQUIREMENTS. ALL NON–SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARD MAIN OVERCURRENT DEVICES SHALL BE BACKFEED–RATED. BACKFEED RATINGS SHALL COMPLY WITH NEC, OR CEC WHERE ADOPTED, **690.10 (E) AND 705.12(D)(4).** SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING CIRCUIT BREAKERS.
7. PROVIDE CIRCUIT BREAKER ARC ENERGY REDUCTION MAINTENANCE SWITCHING PER NEC, OR CEC WHERE ADPOPTED, **240.87(B)(3)** FOR ANY CIRCUIT BREAKER, 1200A FRAME AND LARGER. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
8. ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL HAVE:

   a. **TIN–PLATED ALUMINUM** BUSSING WITH RECTANGULAR CROSS SECTION. HORIZONTAL AND VERTICAL BUSSING SHALL BE FULL LENGTH AND SHALL HAVE PROVISIONS FOR FUTURE EXTENSIONS. ALL BUSSING SHALL HAVE MINIMUM WITHSTAND RATING EQUAL TO THE AVAILABLE FAULT CURRENT INDICATED. ALL VERTICAL AND HORIZONTAL BUSSING SHALL BE RATED AT FULL CAPACITY IN ALL SWITCHBOARD AND DISTRIBUTION BOARD SECTIONS. PROVIDE 100% NEUTRAL BUSSING MINIMUM UNLESS OTHERWISE NOTED. PROVIDE FULL LENGTH GROUND BUS AND, WHERE INDICATED ON PLANS, ISOLATED GROUND BUSSING. PROVIDE REAR WIRE WAY IN ALL SWITCHBOARD SECTIONS.

   b. LUGS SUITABLE FOR USE WITH COPPER OR ALUMINUM CONDUCTORS LISTED FOR USE WITH 75 DEGREE CELSIUS AMPACITY CONDUCTORS.

   c. PERMANENT PLACARD(S) MARKED PER THE SPECIFICATIONS AND PER NEC (OR CEC–WHERE ADOPTED) SECTIONS **225.37, 230.2(E), 690.56, 692.56, 700.7, 701.7, 702.7**, AND **705.10** DENOTING THE PRESENCE OF ADDITIONAL SERVICES, PHOTOVOLTAIC SYSTEMS, FUEL CELLS, EMERGENCY OR STAND–BY POWER SOURCES AS APPLICABLE.
9. CONTRACTOR SHALL SUBMIT SWITCHBOARD SHOP DRAWINGS TO THE SERVING UTILITY FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL SECURE CONFIRMATION THAT THE PROPOSED SWITCHBOARD COMPLIES WITH ELECTRIC UTILITY COMPANY REGULATIONS.
10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS FOR SWITCHBOARDS, DISTRIBUTION BOARDS, TRANSFORMERS, PANEL BOARDS, AND ALL OTHER DEVICES SHOWN ON THE SINGLE LINE, PRIOR TO FABRICATION.
11. ALLOWABLE DIMENSIONS IN MAIN ELECTRICAL ROOM ARE A CRITICAL COORDINATION ITEM. CONTRACTOR SHALL PROVIDE 1/4"= 1'–0" SCALE DRAWINGS WITH SWITCHGEAR SUBMITTALS SHOWING THAT ALL PROPOSED EQUIPMENT WILL FIT IN THE SPACE PROVIDED. SUBMITTALS WITHOUT THIS DRAWING SHALL BE REJECTED AS INCOMPLETE.
12. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON–BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

EXISTING PANEL 5B

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	120/208	MAIN	M.L.O.
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	225A
FEED THRU	NO	I/G BUS	NO	WIRE	4	A.I.C.	10,000

NOTES	LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC		CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION	NOTES
	EXISTING									20/1	1		2	20/1									EXISTING	
	EXISTING									20/1	3		4	20/1		7					1260		OFFICE 502 REC.	G
	EXISTING									20/1	5		6	20/1		6						1080	OFFICE 502 REC.	G
	EXISTING									20/1	7		8	20/1		6				1080			OFFICE 502 REC.	G
G	CLAIMS 502Q STORAGE 502E REC		1080					6		20/1	9		10	20/1									EXISTING	
	EXISTING									20/1	11		12	20/1		6						540	SHARED OFFICE 502 REC.	G
	EXISTING									20/1	13		14	20/1		6				540			SHARED OFFICE 502 REC.	G
	EXISTING									20/1	15		16	20/1		4					720		SHARED OFFICE 502 REC.	G
	EXISTING									20/1	17		18	20/1					50			1735	OFFICE LIGHTING	G
	EXISTING									20/1	19		20	20/1					13	433			OFFICE LIGHTING	G
	EXISTING									20/1	21		22	20/1									EXISTING	
	EXISTING									20/1	23		24	20/1									EXISTING	
	EXISTING									20/1	25		26	20/1									EXISTING	
	EXISTING									20/1	27		28	20/1									EXISTING	
G	OFFICE 502 REC.			1080				6		20/1	29		30	20/1									EXISTING	
G	OFFICE 502 REC.	1080						7		20/1	31		32	20/1									EXISTING	
G	OFFICE 502 REC.		1080					7		20/1	33		34	20/1									EXISTING	
G	REF.			850				1		20/1	35		36	20/1									EXISTING	
F	WATER FOUNT.	575						1		20/1	37		38	20/1		5				900			COFFEE/COPY REC.	F
F	SMOKE DETECTORS		100							20/1	39		40	20/1		1					900		COPIER	F
F	VAV BOXES			400						20/1	41		42	20/1		1						900	MICROWAVE	F

A= 4608 VA
PHASE A LCL= 108 VA
PHASE A W/LCL= 4716 VA

B= 5140 VA
PHASE B LCL= 0 VA
PHASE B W/LCL= 5140 VA

C= 6585 VA
PHASE C LCL= 434 VA
PHASE C W/LCL= 7019 VA

TOTAL VA= 16333
TOTAL LCL= 542
AMPS= **47**
TOTAL VA W/LCL= 16875
HIGH PHASE AMPS= **58**

AS–BUILT PANEL DIRECTORY NOTE:

BRANCH CIRCUIT LOCATIONS NOTED WITH "(E)" INDICATE EXISTING CIRCUIT(S). THE IDENTITIES OF THESE CIRCUITS ARE BASED ON EXISTING PANEL DIRECTORIES AND/OR LIMITED AS–BUILT INFORMATION. CONTRACTOR SHALL FIELD VERIFY EACH BRANCH CIRCUIT AND PROVIDE COMPLETE, TYPED AS–BUILT PANEL DIRECTORIES AS REQUIRED THAT DISTINGUISH EACH CIRCUIT PER NEC, OR CEC WHERE ADOPTED, ART **408.1** AND **408.4**. COMPLETED DIRECTORIES SHALL BE SUBMITTED TO THE ELECTRICAL INSPECTOR PRIOR TO FINAL ELECTRICAL INSPECTION. INCLUDE ALL COSTS IN BID.

EXISTING CIRCUIT BREAKER NOTE:

PROVIDE BREAKER INTERLOCK WITH ADJACENT BREAKER(S) FOR ANY MULTI–WIRE BRANCH CIRCUIT. BREAKER INTERLOCK GROUPING SHALL BE BY BRANCH CIRCUIT GROUP (i.e. MULTIPLE CIRCUITS SHARING A COMMON NEUTRAL (NEC, OR CEC WHERE ADOPTED, **210.4(B)**,) COMMON YOKE (NEC, OR CEC WHERE ADOPTED, **210.7(B)**,) OR FURNITURE SYSTEM NEC OR CEC WHERE ADOPTED, **605.6** AND **605.7**).
WHERE AN EXISTING PANEL IS BEING ALTERED OR MODIFIED IN ANY WAY, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO ADD BREAKER INTERLOCKS TO EXISTING MULTI–WIRE BRANCH CIRCUITS BASED ON CONTRACTOR'S INVESTIGATION OF EXISTING CONDITIONS.

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LICENSE STAMPS
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No. E15610
Ex.12/31/2019

PROJECT NAME
HUMBOLDT COUNTY
DISTRICT ATTORNEY
REMODEL FOR

VICTIM /
WITNESS
& CAST

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SHEET TITLE
PANEL SCHEDULE
AND MCC
SPECIFICATIONS

DRAWING STATUS
CONSTRUCTION
DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
E302

Login Name: Leonhardt
Plot Date: June 27, 2019 - 5:38 pm
File Name: P:\2018\2018-0922 Humboldt County Courthouse Rmdl\Drawings and Models\CAD\Electrical\2018-0922 E302 Panel Schedule.dwg
XREFS: x-HC-CH-5th_TITLEBLOCK

LIGHTING FIXTURE SCHEDULE NOTES:

A. GENERAL NOTES:

1. THE LIGHTING FIXTURES, LAMPS, BALLASTS, POWER SUPPLIES, DRIVERS AND TRANSFORMERS FOR THIS PROJECT HAVE BEEN SPECIFIED TO ENSURE THAT SPECIFIC AESTHETIC AND PERFORMANCE REQUIREMENTS WILL BE SATISFIED. THESE PRODUCTS HAVE BEEN CAREFULLY RESEARCHED AND EACH SPECIFIED ITEM HAS UNIQUE QUALITIES WHICH WERE DETERMINED TO BE ESSENTIAL IN SATISFYING THE OWNER'S, ARCHITECT'S, ENGINEER'S AND LIGHTING CONSULTANT'S DESIGN CRITERIA.
2. CONTRACTOR SHALL PROVIDE ALL MATERIALS AS DETAILED ON DRAWINGS AND/OR SCHEDULES, AND LABOR AS REQUIRED TO ACHIEVE A COMPLETE AND OPERATING LIGHTING SYSTEM.
3. CONTRACTOR SHALL NOTIFY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT OF ANY PROVISIONS OF THE SPECIFICATION THAT IS IN CONFLICT WITH LOCALLY ENFORCED CODES.
4. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY REQUIRED MODIFICATIONS THAT ARE NOT SHOWN ON THE DRAWINGS.
5. ALL ELECTRICAL MATERIAL SHALL BE IN NEW & UNDAMAGED CONDITION WHEN INSTALLED. ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
6. ALL DIMENSIONS & MEASUREMENTS FOUND ON PLANS ARE APPROXIMATE. CONTRACTOR SHALL VALIDATE ALL DIMENSIONS PRIOR TO ORDERING MATERIAL TO INCLUDE MAKING FIELD MEASUREMENTS BASED ON ACTUAL SITE CONDITIONS TO DEVELOP COMPLETE ORDERS AND INSTALL SYSTEMS PER DRAWINGS AND SPECIFICATIONS.
7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ASSOCIATED DEVICES AND EQUIPMENT.
8. PRIOR TO AIMING/ADJUSTING ACTIVITIES, COMMISSIONING OR PUNCHWALK COMMENCEMENT, CONTRACTOR SHALL PROPERLY TEST AND VERIFY ALL CIRCUITRY AND CONTROL WIRING AND IMPLEMENT ALL CONTROLS PROGRAMMING.

B. INSTALLATION:

1. LOCATIONS OF THE FIXTURES SHALL BE PER THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND SHALL BE COORDINATED AT TIME OF ROUGH IN. CONFLICTS BETWEEN THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND THE ELECTRICAL/LIGHTING DESIGN PLAN(S) SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO ORDERING FIXTURES.
2. LIGHTING DRAWINGS REPRESENT THE DESIGN INTENT OF THE EQUIPMENT, DEVICES, ETC. TO BE CONNECTED AND THE CIRCUITS TO WHICH THEY ARE TO BE CONNECTED. CONTRACTOR SHALL INSTALL ALL CONDUIT, J-BOXES AND ADDITIONAL HARDWARE AND DEVICES AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
3. ALL LIGHTING FIXTURES SHALL BE MOUNTED AND INDIVIDUALLY SUPPORTED IN ACCORDANCE WITH APPLICABLE CODES. FIXTURES SHALL BE FURNISHED AND INSTALLED WITH ALL REQUIRED MOUNTING DEVICES, HARDWARE AND ACCESSORIES.
4. CONTRACTOR TO VERIFY LIGHTING FIXTURE MOUNTING HARDWARE IS COMPATIBLE WITH APPROVED MOUNTING CONDITIONS. MOUNTING CONDITIONS MUST ALLOW FOR AIMING AND ADJUSTING OF LIGHTING FIXTURES ON SITE.
5. CONTRACTOR TO INCLUDE AIMING/ADJUSTING LABOR AFTER DARK AS REQUIRED FOR ANY ADJUSTABLE LIGHTING FIXTURE AND FOR EACH INDIVIDUAL LIGHTING FIXTURE HEAD OR LAMP HOLDER IN A MULTI-FIXTURE/MULTI-LAMP ASSEMBLY. LIGHTING FIXTURES TO BE AIMED/ADJUSTED PER THE DIRECTION OF OWNER, ARCHITECT AND/OR LIGHTING CONSULTANT.
6. CONTRACTOR TO SUPPLY ADEQUATE SUPPORT INCLUDING LADDERS, LIFTS OR OTHER EQUIPMENT REQUIRED TO ACCESS LIGHTING FIXTURES AT THE TIME OF FOCUS, INCLUDING EVENING OR NIGHT WORK AS MAY BE REQUIRED DUE TO SCHEDULE CONFLICT OR DAYLIGHT IMPACT. AIMING/ADJUSTING LABOR SHALL BE PREPARED FOR WORK WITH COMMON HAND TOOLS TO MAKE ADJUSTMENTS AND MINOR REPAIRS DURING AIMING.
7. ALL COVE MOUNTED LIGHTING FIXTURES SHALL EXTEND THE FULL LENGTH OF THE COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF LIGHTING FIXTURES AS REQUIRED. PROVIDE COMPLETE MANUFACTURER SHOP DRAWINGS OF BUILT-IN COVE OR LINEAR LIGHTING SYSTEMS.
8. CONTRACTOR TO REPLACE ALL INOPERATIVE LAMPS, LED ARRAYS OR SYSTEMS AT THE END OF THE CONSTRUCTION PHASE PRIOR TO THE FOCUS AND PROGRAMMING PHASE AND AGAIN PRIOR TO OWNER OCCUPANCY OR PROJECT OPENING.
9. ALL POLE MOUNTED FIXTURES, POST MOUNTED FIXTURES AND BOLLARDS SHALL BE PROVIDED WITH A STRUCTURAL FOOTING AS DETAILED ELSEWHERE IN THE DRAWINGS. FOOTING SIZE TO BE PROVIDED BY STRUCTURAL ENGINEER. REFERENCE FIXTURE SCHEDULE AND DETAILS FOR MORE INFORMATION.
10. ALL EXIT SIGNS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL FIRE PREVENTION CODE AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY HARDWARE SUCH THAT ALL EXIT SIGNS ARE INSTALLED IN AN APPROVED VISIBLE LOCATION. THE CONTRACTOR SHALL VERIFY CHEVRONS AND NUMBER OF FACES PER EXIT SIGN WITH ARCHITECTURAL REFLECTED CEILING PLAN(S). ANY DISCREPANCIES BETWEEN EXIT SIGNS DEPICTED ON ARCHITECTURAL AND ELECTRICAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.

C. SUBMITTALS AND SUBSTITUTIONS:

1. CONTRACTOR TO SUBMIT FOR APPROVAL ON THE PRODUCTS THEY INTEND TO FURNISH WITHIN TEN (10) DAYS OF AWARD OF CONTRACT. FAILURE TO SUBMIT WITHIN DEADLINE CONSTITUTES A GUARANTEE THAT ONLY THE BASE SPECIFIED PRODUCTS WILL BE SUPPLIED AND THAT NO OTHER PRODUCTS, WHETHER LISTED AS ALTERNATES OR NOT, WILL BE CONSIDERED.
2. CONTRACTOR TO PROVIDE A SUBMITTAL/SHOP DRAWING SUBMITTAL FOR EACH LIGHTING FIXTURE TYPE INCLUDING ACCESSORIES, BALLAST(S), POWER SUPPLIES, DRIVER(S) TRANSFORMER(S), AND INTEGRAL EMERGENCY BATTERIES AND TEST SWITCHES. ANY LIGHTING FIXTURE SUBMITTAL PROVIDED WITHOUT SPECIFIC LIGHTING FIXTURE'S ACCESSORIES, BALLAST, POWER SUPPLY, DRIVER, TRANSFORMER OR BATTERY INFORMATION SHALL BE REJECTED AS INCOMPLETE.
3. SUBSTITUTIONS OF THE SPECIFIED PRODUCTS ARE STRICTLY PROHIBITED – UNLESS APPROVED AS STATED HEREIN. LIGHTING FIXTURE SUBSTITUTIONS SHALL BE FORMALLY PRESENTED TO THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, BY APPOINTMENT ONLY, AT LEAST TEN (10) WORKING DAYS PRIOR TO BID TIME. THE SUBMITTAL MATERIAL SHALL INCLUDE THE FOLLOWING ITEMS.
   a. A COMPLETE AND OPERATING SAMPLE, WIRED FOR 120V OPERATION, WITH LAMP, CORD AND PLUG.
   b. A COMPLETE PHOTOMETRIC REPORT, FOR THE PROPOSED SUBSTITUTE PRODUCT, USING THE SPECIFIED LAMP OR LED TYPE AND WATTAGE, INCLUDING TABULATED CANDLEPOWER VALUES, COEFFICIENT OF UTILIZATION, AND AN ISO-FOOT-CANDLE DIAGRAM. PRORATED DATA WILL NOT BE ACCEPTABLE. THE PHOTOMETRIC REPORT MUST BE DONE IN ACCORDANCE WITH PUBLISHED I.E.S. TESTING PROCEDURES AND CERTIFIED BY A REGISTERED ELECTRICAL ENGINEER.
   c. A CURRENT ORIGINAL CATALOG DATA SHEET WITH LIGHTING FIXTURE CATALOG NUMBERS. MODIFIED DATA SHEETS WILL NOT BE ACCEPTABLE.
   d. A SIGNED COPY OF THE "SUBSTITUTION COMPLIANCE FORM", LOCATED IN THE DIVISION 1 SPECIFICATION, STATING THAT IF THE PROPOSED SUBSTITUTION IS ACCEPTED, THE PROJECT SCHEDULE WILL NOT BE NEGATIVELY AFFECTED. IF THE COMPLETION OF THE PROJECT IS DELAYED BECAUSE OF THE APPROVED SUBSTITUTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF ANY ESTABLISHED LIQUIDATED DAMAGES.
   e. FOR SPECIFIC INTERIOR FIXTURE SUBSTITUTIONS, WHEN DIRECTED BY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE SPECIFIC INTERIOR AREA. IF THE SUBSTITUTED FIXTURE IS AN EMERGENCY FIXTURE, THE REPORT SHALL BE RUN IN BOTH NORMAL AND EMERGENCY MODES. THIS REPORT SHALL BE CONFIGURED WITH SPECIFIC CONSTRAINTS, AS DIRECTED BY THE ENGINEER OF RECORD. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO OR BETTER THAN THE LIGHTING LEVELS OF THE SPECIFIED PRODUCT.
   f. FOR ALL EXTERIOR FIXTURE SUBSTITUTIONS, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE ENTIRE SITE PLAN BASED ON USING THE PROPOSED ALTERNATIVE FIXTURES. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO, OR BETTER THAN THE LIGHTING LEVELS AND UNIFORMITY RATIOS (MAX:MIN AND AVG:MIN) OF THE SPECIFIED PRODUCT. THIS REPORT SHALL BE CONFIGURED WITH THE FOLLOWING CONSTRAINTS.
      i. THE SPACING INCREMENT OR POINTS ON THE VERIFICATION REPORT SHALL NOT EXCEED TEN (10) FEET IN EITHER DIRECTION.
      ii. THE PHOTOMETRIC CALCULATION SHALL BE BASED ON PROVIDING MAINTAINED FOOT-CANDLE LEVELS USING MEAN LAMP LUMENS AND A LIGHT LOSS FACTOR, AS DIRECTED BY THE ENGINEER OF RECORD.
      iii. THE PHOTOMETRIC CALCULATION SHALL SHOW ANY ADDITIONAL ENERGY AND/OR ENERGY COSTS, FOR A TEN YEAR PERIOD, AS COMPARED TO THE ORIGINALLY SPECIFIED ITEM. THE TOTAL COSTS FOR THESE EXPENSES WILL BE DEDUCTED FROM THE CONTRACT COST.
4. CONFLICTS BETWEEN CATALOG NUMBERS AND LIGHTING FIXTURE DESCRIPTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT PRIOR TO BID TIME FOR CLARIFICATION.
5. FIXTURE FINISHES:
   a. ALL FIXTURE FINISHES AND COLORS, UNLESS NOTED AS CUSTOM, SHALL BE SELECTED FROM THE MANUFACTURERS STANDARD COLOR OPTIONS AS LISTED ON THE FIXTURE SPECIFICATION SHEET. STANDARD FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.
   b. ALL FIXTURES INDICATED WITH A PREMIUM OR CUSTOM COLOR SHALL BE ASSIGNED A CUSTOM COLOR REFERENCE NUMBER (SUCH AS RAL#) OR PROVIDE FIVE (5) PAINT CHIPS FOR MANUFACTURER TO USE TO MATCH COLOR. PREMIUM OR CUSTOM FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.
6. [OPTION?] IN THE LIGHTING FIXTURE MODEL NUMBER INDICATE A FIXTURE OPTION THAT THE CONTRACTOR MUST IDENTIFY PRIOR TO ORDERING/PROVIDING SUBMITTALS, INCLUDING, BUT NOT LIMITED TO: VOLTAGE, MOUNTING CONDITION/HARDWARE, FINISH, DIMMING REQUIREMENTS/BALLAST INFORMATION.
   a. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND PROVIDING ALL HANGERS, CLIPS AND NECESSARY HARDWARE TO INSTALL THE FIXTURE IN THE ENVIRONMENT AS SHOWN ON THE ARCHITECTURAL PLANS. ALL FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED CODES.
   b. VOLTAGES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING – SEE ELECTRICAL DRAWINGS FOR BRANCH CIRCUIT INFORMATION. IT IS POSSIBLE THAT FIXTURES WILL BE REQUIRED IN VARIOUS VOLTAGES
7. "NO KNOWN EQUAL" LIGHTING FIXTURE PRICING/BIDDING NOTES:
   a. EACH FIXTURE IDENTIFIED AS "NO KNOWN EQUAL" ON THIS PROJECT SHALL BE BID IN A "LINE ITEM" FORMAT. A PER UNIT MATERIAL COST SHALL BE PROVIDED FOR EACH "NO KNOWN EQUAL" FIXTURE. THIS PRICE SHALL INCLUDE LAMPS AS WELL AS ALL OTHER REQUIRED MATERIALS REQUIRED FOR INSTALLATION. THE FIXTURE PRICE QUOTED WILL BE UTILIZED, PRIOR TO SHOP DRAWING APPROVAL, FOR "ADDING" AND/OR "DELETING" ANY QUANTITY OF THE FIXTURE.
   b. A UNIT COST SHALL BE SUBMITTED FOR EACH "NO KNOWN EQUAL" FIXTURE. SUBMIT THE PRICING AS PART OF THE BID FORM ON A SEPARATE 8 1/2" X 11" SHEET.
   c. FAILURE TO SUBMIT A LINE ITEM FOR EACH "NO KNOWN EQUAL" FIXTURE MAY RESULT IN THE REJECTION, REFUSAL, OR NON-ACCEPTANCE OF THE CONTRACTOR'S BID.
8. FIXTURES IDENTIFIED AS "NO KNOWN EQUAL – OWNER STANDARD" OR "CAMPUS STANDARD" ARE TO BE PROVIDED AS SPECIFIED, WITH SUBSTITUTIONS STRICTLY PROHIBITED. SEE ADDITIONAL NOTES FOR "NO KNOW EQUAL" BIDDING REQUIREMENTS.

D. LIGHTING FIXTURE SPECIFICATIONS:

1. ALL EXTERIOR LIGHTING EQUIPMENT SHALL BE RATED FOR WET LOCATION AND THE IP RATING OF ALL EQUIPMENT, INCLUDING BALLAST, POWER SUPPLY AND TRANSFORMER ENCLOSURES SHALL CONFORM TO THE CONDITIONS IN WHICH THE LIGHTING FIXTURE IS MOUNTED.
2. ALL BALLASTS, POWER SUPPLIES, DRIVERS AND/OR TRANSFORMERS THAT ARE REMOTELY LOCATED SHALL BE INSTALLED AS NEAR TO THE LIGHTING FIXTURE(S) AS POSSIBLE, HIDDEN FROM PUBLIC VIEW IN AN ACCESSIBLE COMPARTMENT THAT IS WELL VENTILATED. CONTRACTOR TO COORDINATE LOCATION(S) WITH ARCHITECT PRIOR TO ROUGH-IN.
3. ALL TRANSFORMERS SHALL BE FUSED ON THE SECONDARY SIDE.
4. COLOR FILTERS SHALL BE GLASS OR DICHROIC UNLESS OTHERWISE INDICATED ON DRAWINGS.
5. CONTRACTOR TO PROVIDE 20% ADDITIONAL COLOR FILTERS FOR EACH COLOR AND SIZE.
6. CONTRACTOR TO VERIFY THAT ALL LIGHTING FIXTURES SPECIFIED WITH A COLOR FILTER ARE SUPPLIED WITH ANY AND ALL ATTACHMENT DEVICES FOR THE FILTER.
7. ALL TRACK LIGHTING FIXTURES SHALL BE PROVIDED WITH THE APPROPRIATE TRACK SYSTEM WHICH SHALL INCLUDE ALL MISCELLANEOUS COMPONENTS REQUIRED, AS WELL A ANY REQUIRED CIRCUIT LIMITERS FOR A COMPLETE INSTALLATION. TRACK LENGTH(S) SHALL BE PER DRAWINGS.

E. DRIVERS / TRANSFORMERS:

1. [OPTION?] IN FIXTURE MODEL NUMBER INDICATE THAT THE FIXTURE DRIVER TYPE AND QUANTITY MUST BE VERIFIED BY THE CONTRACTOR – USING FIXTURE CALLOUT INFORMATION AND FIXTURE SWITCHING CONFIGURATION INFORMATION.
2. CONTINUOUS DIMMING AND CONTROLLABLE LED:
   a. PROVIDE CONTROLLABLE LED DIMMING DRIVERS (INTEGRAL OR REMOTE) WITH POWER FACTOR GREATER THAN 0.85 AND MAXIMUM THD OF 20% AT FULL LOAD.
   b. PRIOR TO BID CONTRACTOR TO VERIFY DRIVER COMPATIBILITY WITH DIMMERS, DIMMING CONTROL SYSTEM(S) AND LIGHTING CONTROL SYSTEM(S) WITH RESPECTIVE LIGHTING MANUFACTURER(S) AND LIGHTING/DIMMING CONTROL SYSTEM MANUFACTURERS. IF COMPATIBILITY DOCUMENTATION IS UNAVAILABLE FOR A GIVEN LED FIXTURE/LIGHTING CONTROL SYSTEM COMBINATION, CONTRACTOR SHALL INCLUDE COSTS IN THE BASE BID FOR RESPECTIVE LIGHTING MANUFACTURER AND LIGHTING CONTROLS MANUFACTURER TO TEST/WARRANT COMPATIBILITY OF SAID COMBINATIONS.
   c. CONTINUOUS LED DIMMING DRIVERS SHALL BE AT MINIMUM 4-WIRE 0-10V 10% DIMMING (HOT, NEUTRAL, DIM+, DIM-). THE FIXTURE PART NUMBER SHOULD INDICATE THE TYPE OF DIMMING PROTOCOL REQUIRED.
   d. THE FIXTURE PART NUMBER SHOULD INDICATE THE TYPE OF DIMMING PROTOCOL REQUIRED.

E. EMERGENCY FIXTURES / BATTERY PACKS:

1. LIGHT FIXTURES INDICATED AS EMERGENCY SHALL BE IDENTIFIED / PROVIDED AS FOLLOWS:
   a. INTEGRAL BATTERY PACK (EB):
      3a/3EB – FIXTURE CONNECTED TO CIRCUIT "3", CONTROL SWITCHLEG "a" – WITH THE BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
      3NL/3EB – FIXTURE CONNECTED TO A CONSTANT HOT CIRCUIT "#3". BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
   b. REMOTE BACK-UP SOURCE (EM):
      3a/3EM – ROUTED THROUGH A U.L. LISTED TRANSFER RELAY (LC & D #GR-2001E/S) FOR SWITCHED CONTROLS OR A U.L. LISTED TRANSFER SWITCH (BODINE #GTD SERIES DEVICE) FOR DIMMING CONTROLS. CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3". SEE DISTRIBUTED LIGHTING CONTROL SPECIFICATIONS FOR DEVICE REQUIREMENTS WHEN CONTROLLED BY OCCUPANCY SENSORS.
      3NL/3EM – FIXTURE CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3".
   c. REMOTE BACK-UP SOURCE (EM) NOTES:
      – ALL REMOTE BACK UP SOURCE (EM) FIXTURES SHALL BE PROVIDED WITH AN IN LINE FUSE. PROVIDE ADDITIONAL LABELING TO INDICATE FIXTURE IS PROTECTED BY A FUSE.
2. EMERGENCY BATTERY PACK NOTES:
   a. PROVIDE INTEGRAL TEST SWITCH OPTION FOR ALL EMERGENCY BATTERY PACKS INSTALLED IN LIGHT FIXTURES.
   b. ALL RECESSED DOWNLIGHTS SUPPLIED WITH A BATTERY PACK SHALL BE PROVIDED WITH AN INTEGRAL COMBINATION TEST SWITCH / CHARGING INDICATOR LIGHT– MOUNTED INSIDE THE REFLECTOR. REMOTE TEST SWITCH / CHARGING LIGHTS ARE NOT ALLOWED. THE TEST SWITCH / CHARGING INDICATOR LIGHT SHALL BE SECURELY ATTACHED TO THE REFLECTOR WITH 18" OF SLACK LEADS, FOR EASY REMOVAL OF THE REFLECTOR ASSEMBLY.
   c. BATTERY PACKS ALL SHALL BE PROVIDED WITH A COMBINATION TEST SWITCH / CHARGE LIGHT.
   d. CONTRACTOR TO VERIFY WITH FIXTURE MANUFACTURER(S) PRIOR TO BID THAT EMERGENCY BATTERY PACKS ARE INTEGRAL TO FIXTURE HOUSINGS.
   e. SHOULD THE SPECIFIED LED EMERGENCY BATTERY PACK(S) NOT FIT WITHIN A GIVEN FIXTURE(S), CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO LOCATE/CONNECT SELF-TESTING MINI INVERTER(S) (IOTA #ILS SERIES OF BODINE#ELI-S-[WATT?]) REMOTELY FROM THE FIXTURE(S) IN THE NEAREST ELECTRICAL ROOM OR TO LOCATE EMERGENCY BATTERY PACK(S) REMOTELY FROM THE FIXTURE ABOVE THE NEAREST ACCESSIBLE CEILING.
   f. EMERGENCY OPERATION OF LED FIXTURE FOR A MINIMUM OF 90 MINUTES, AND A MINIMUM OF 10 WATTS, OR AS SPECIFIED. ACCEPTABLE MANUFACTURES: BODINE OR IOTA.
   g. TO MAINTAIN UL LISTING OF LED FIXTURE, FIXTURE MANUFACTURER(S) SHALL INSTALL LED EMERGENCY BATTERY PACKS AT THE FACTORY AND OBTAIN A UL LISTING FOR THE FIXTURE WITH EMERGENCY BATTERY PACK. FIELD-INSTALLATION OF LED EMERGENCY BATTERY PACK9S) IS PROHIBITED.
   h. PROVIDE "DL" OPTION IN ALL DAMP LABEL INSTALLATIONS.

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	MANUFACTURER AND MODEL NUMBER	FIXTURE VA/ LAMP WATTS	LAMP/ LAMP OPTION	GENERAL DESCRIPTION
	1	METALUX 24RDI-40-UNV-L835-CD-1 – EQUAL BY: LITHONIA	40	LED/3500	2'x4' RECESSED LED TROFFER WITH 4000 LUMEN LED MODULE, 0-10V DIMMING DRIVER, PERFORATED CENTER BASKET DIFFUSER. SHADED SYMBOL INDICATES EMERGENCY FIXTURE. PROVIDE 90 MIN BATTERY PACK FOR EMERGENCY LIGHTING –
	2	DAYOLITE STYSL-1DI-WOA-35-LO-6-ACY-W-DIM10 – EQUAL BY: PHILIPS LEDALITE, FINELITE, PEERLESS	63W/6FT	LED/3500K	LINEAR LED, DIRECT/INDIRECT CABLE HUNG LUMINAIRE WITH 9" HOUSING AND WHITE OPAL ACRYLIC LENS, 3,000 LUMENS PER FOUR FOOT SECTION, INTEGRAL DIMMING DRIVER, LENGTH AS SHOWN ON PLANS. INTEGRAL EMERGENCY BATTERY PACK WHERE SHOWN ON PLANS. MOUNTED AT 18" BELOW FINSIHED CEILING U.O.N. VERIFY IN FIELD.
OR	3	SURE-LITES ELX7-70-G – EQUAL BY: EVENLITE	4/4	LED	EDGE-LIT EXIT SIGN FOR USE WITH LED LAMPS. EMERGENCY BATTERY PACK. REFER TO ARCHITECTURAL PLANS FOR NUMBER OF FACES AND CHEVRONS. GREEN LETTERS
	4	DAYOLITE STYSL-1DI-WOA-35-LO-4-WM-W-DIM10 DARK-ZT-???-SCT EQUAL BY: PHILIPS LEDALITE, FINELITE	30W/4FT	LED/3500K	LINEAR LED, DIRECT/INDIRECT WALL MOUNTED LUMINAIRE WITH 9" HOUSING AND WHITE OPAL ACRYLIC LENS, 3,000 LUMENS PER FOUR FOOT SECTION, INTEGRAL DIMMING DRIVER. INTEGRAL EMERGENCY BATTERY PACK WHERE SHOWN ON PLANS. VERIFY EXACT MOUTNING HEIGHT WITH ARCHITECT.
	5	PORTFOLIO LD4B-15-D010-EU4B-1020-90-35-4LB-SW-1-L1 EQUAL BY: PRESCOLITE, LITEOLIER	15.5	LED/3500	RECESSED LED WALL WASH DOWNLIGHT WITH 4" APERATURE, ALUMINUM REFLECTOR, DIE CAST ALUMINUM COLLAR, 0-10V DIMMING DRIVER. – – –
	6	METALUX 4SNLED-LD5-22SL-LN-UNV-L835-CD1 – EQUAL BY: LITHONIA	16/16	LED/3500	ROUND SEMI-FROST LENSED STRIPLIGHT FOR USE WITH 16W, 2276 LUMEN MODULE 4 FOOT BY 3-INCH BY 3 11/16-INCH. FROSTED ACRYLIC LENS VERIFY HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN. PAINTED AFTER FABRICATION. 0-10V DIMMING. HIGH REFLECTANCE BAKED WHITE ENAMEL FINISH.
	7	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	8	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	9	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	10	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	11	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	12	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	13	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	14	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	15	– – – EQUAL BY: –	-/-	-/-	– – – – – –
	16	– – – EQUAL BY: –	-/-	-/-	– – – – – –

SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES FOR CRITICAL FIXTURE SPECIFICATION AND ORDERING INFORMATION.

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tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER RAYMOND W. SHARPE E15610 12/31/2019 ELECTRICAL STATE OF CALIFORNIA

PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
LIGHTING FIXTURE SCHEDULE

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
E401

Login Name: Leonhardt
Plot Date: June 27, 2019 - 5:38 pm
File Name: P:\2018\0922 Humboldt County Courthouse Revit\Drawings and Models\CAD\Electrical\2018-0922 E401 Lighting Fixture Schedule.dwg
XREFS: x-HC-CH-5th_TTI LEELOCK

DISTRIBUTED LIGHTING CONTROLS ACCEPTABLE MANUFACTURES:

WATTSTOPPER:

WALL BOX SENSORS:	STANDALONE SINGLE RELAY = #DW–100 STANDALONE 0–10V DIMMING WITH SINGLE RELAY = #PW–311 STANDALONE DUAL RELAY = #DW–200 SYSTEM–BASED DIMMING CONTROL = #LMDW–102
CEILING SENSORS:	ONE–WAY DIRECTIONAL = #LMDC–100 WITH MASKING AS REQUIRED. 360 DEGREE COVERAGE = #LMDC–100
DAYLIGHT SENSORS:	OPEN LOOP SENSOR = #LMLS–500 (1–3 ZONE) OR CLOSED LOOP SENSOR = #LMLS–400 (1 ZONE ONLY) REMOTE CONTROL = #LMCT–100 (HAND TO OWNER AT COMPLETION OF PROJECT.)
CONTROL UNITS:	SWITCHED = #LMRC–10? (NUMBER OF RELAYS AS REQUIRED). CONTINUOUS DIMMING (0–10V) = #LMRC–21? (NUMBER OF RELAYS AS REQUIRED). CONTINUOUS DIMMING (UNIVERSAL) = #LMRC–22? (NUMBER OF RELAYS AS REQUIRED). RECEPTACLE CONTROL = #LMPL–101 OR LMPL–201 WHERE MORE THAN 4 RECEPTACLE CONTROL UNITS ARE TIED TOGETHER. HVAC CONTROL = #LMRL–100 AV SYSTEM SERIAL INTERFACE = #LMDI–100 (SCREENS / AV SYSTEM INTEGRATION) MOVEABLE PARTITION INTERFACE & SENSOR = #LMIO–102 PARTITION INTERFACE, #LMPS–104 PARTITION SWITCH/STATUS INDICATOR, #BZ–50 POWER PACK (SENSOR POWER) & PARTITION SENSOR #ENTERTAINMENT NETWORKS SENSOR W/BOTTOM COVER (www.entertainmentworks.com). DUAL MODE CORRIDOR/STAIRWAY/AISLEWAY CONTROL INPUT = #LMZC–301, UNLESS OTHERWISE NOTED.
WALL CONTROLS:	DIMMING = #LMSW–101/102/103/104/108 (# OF SWITCHES AS REQUIRED 4/YOKE MAX). KEYED SWITCH = #LMIO–101 INPUT INTERFACE W/ LEVITON #1221–2L–? KEYED SWITCH
NETWORK COMPONENTS:	ZONE SEGMENT MANAGER = #LMSM–3E/#LMSM–6E W/#LMSM–ENC1 ENCLOSURE. NETWORK BRIDGE / ROUTER / SWITCH = #LMBC–300/#NB–ROUTER/#NB–SWITCH NETWORK WIRING = #LM–MSTP. NETWORK RELAY PANELS = LMCP8, 24 OR 48
INTERCONNECT COMPONENTS:	NETWORK BRIDGE / ROUTER / SWITCH = #LMBC–300/#NB–ROUTER/#NB–SWITCH PROVIDE TEMPORARY NB ROUTER AND LAPTOP TO DEMONSTRATE DEMAND RESPONSE CAPABILITY DURING ACCEPTANCE TESTING.
EMERGENCY POWER INTERFACE:	SWITCHING / STEP DIMMING = #ELCU–200 BYPASS DEVICE. CONTINUOUS DIMMING = #ELCU–200 BYPASS DEVICE.
LOAD INTERFACE DEVICE:	LUTRON COMPONENTS = LUTRON #BCI–0–10. REVERSE/FORWARD PHASE DIMMING COMPONENTS = LUTRON #PHPM–PA–DV–WH.

nLIGHT:

WALL BOX SENSORS:	STANDALONE SINGLE RELAY = #WSX–PDT STANDALONE DUAL RELAY = #WSX–PDT–2P SYSTEM–BASED DIMMING CONTROL = #nWSX–PDT–LV–DX
CEILING SENSORS:	ONE–WAY DIRECTIONAL = #NRM–PDT–9 W/MASKING AS REQUIRED. 360 DEGREE COVERAGE = #NRM–PDT–9 STANDARD RANGE, #NRM–PDT–10 EXTENDED RANGE/CORRIDOR
DAYLIGHT SENSORS:	CLOSED LOOP SENSOR = #NES–ADCX / #NRM–ADCX (ONLY IF REQUIRED BY CLG. TYPE). REMOTE CONTROL = N/A
CONTROL UNITS:	SWITCH / STEPPED DIMMING = #NPP–16/#NSP–16 (NUMBER OF RELAYS AS REQUIRED). CONTINUOUS DIMMING (0–10V) = #NPP16–D (NUMBER OF RELAYS AS REQUIRED). CONTINUOUS DIMMING (UNIVERSAL) = #NSP5–PCD (NUMBER OF RELAYS AS REQUIRED). AUXILIARY INPUT/ OUTPUT CONTROL = #NAR–40 RECEPTACLE CONTROL = #NPP20 PL HVAC CONTROL = #NAR–40 AV SYSTEM SERIAL INTERFACE = #nIO X (SCREENS / AV SYSTEM INTEGRATION) MOVEABLE PARTITION INTERFACE & SENSOR = #FRESCO TOUCH PANEL #NFCS–7TSN (PER SPACE) #NIO–1S POWER PACK (SENSOR POWER) & PARTITION SENSOR #ENTERTAINMENT NETWORKS SENSOR W/BOTTOM COVER (www.entertainmentworks.com). DUAL MODE CORRIDOR/STAIRWAY/AISLEWAY CONTROL INPUT = LC&D BLUE BOX, UNLESS OTHERWISE NOTED.
WALL CONTROLS:	DIMMING = #NPODM–DX SERIES (# OF DIMMERS AS REQUIRED – 4 / YOKE MAX) KEYED SWITCH = #NIO INPUT INTERFACE W/LEVITON #1221–2L–? KEYED SWITCH

NETWORK COMPONENTS:	GATEWAY = #NECY–120, NGWY2–GFX, 13.9"H x 10"W x 4.5"D ENCLOSURE TO BE PROVIDED BY CONTRACTOR
	BRIDGE = #NBRG–8–KIT
	NETWORK RELAY PANELS = ARP INTENCXX NLT XXFCR MVOLT, QTY AS REQUIRED, TO INCLUDE SPARE RELAYS SHOWN IN SCHEDULES.

INTERCONNECT COMPONENTS:	GATEWAY = #NECY–120, NGWY2–GFX, 13.9"H x 10"W x 4.5"D ENCLOSURE TO BE PROVIDED BY CONTRACTOR
	BRIDGE = #NBRG–8–KIT
	STANDARDS BASED ADR RECEIVER = NADR
	PROVIDE END USER CLIENT WITH (1) WIRELESS PROGRAMMING DEVICE (NIO–BT) FOR MAINTENANCE AND PROGRAMMING

EMERGENCY POWER INTERFACE:	SWITCHING / STEP DIMMING = NPP16–ER CONTINUOUS DIMMING = #NPP16–D–ER
LOAD INTERFACE DEVICE:	LUTRON COMPONENTS = LUTRON #BCI–0–10. REVERSE PHASE DIMMING COMPONENTS = #NSP5–PCD–ELV120/LUTRON #PHPM–PA–DV–WH. FORWARD PHASE DIMMING COMPONENTS = #NSP5–PCD–MLV/LUTRON #PHPM–PA–DV–WH. 2 & 3 WIRE DIMMING COMPONENTS = #NSP5–PCD–2W/3W OR LUTRON #PHPM–PA–DV–WH.

COOPER CONTROLS (GREENGATE):

WALL BOX SENSORS:	STANDALONE SINGLE RELAY = #ONW–D–1001–MV–N SERIES STANDALONE DUAL RELAY = #ONW–D–1001–DMV–N SERIES SYSTEM–BASED DIMMING CONTROL = NOT AVAILABLE
CEILING SENSORS:	ONE–WAY DIRECTIONAL = #OAC–DT–501 (500 S.F. MAXIMUM) 360 DEGREE COVERAGE = #OAC–DT–1000 (1,000 S.F. MAXIMUM) 360 DEGREE COVERAGE = #OAC–DT–2000
DAYLIGHT SENSORS:	OPEN LOOP SENSOR = #DSRC–FMOIR REMOTE CONTROL = #HHPRG–RC
CONTROL UNITS:	SWITCH / STEPPED DIMMING = #RC3D–PL PLENUM RATED SERIES (NUMBER OF RELAYS AS REQUIRED). CONTINUOUS DIMMING (0–10V) = #RC3D PLENUM RATED SERIES (NUMBER OF RELAYS AS REQUIRED). CONTINUOUS DIMMING (UNIVERSAL) = USE WITH LOAD INTERFACE DEVICE AUXILIARY INPUT / OUTPUT CONTROL = #OCC–RJ45 RECEPTACLE CONTROL = #SPRC–R–20–120 HVAC CONTROL = #–R OPTION ON OCCUPANCY SENSOR OR CONTACT CLOSURE VIA TERMINAL #5 ON RC CONTROL UNIT. AV SYSTEM SERIAL INTERFACE: REQUIRES NETWORKING TO PROVIDE SERIAL CONNECTION. MOVEABLE PARTITION INTERFACE & SENSOR: REQUIRES NETWORKING TO PROVIDE PARTITIONING. DUAL MODE COORDIDOR/STAIRWAY/AISLEWAY CONTROL INPUT = RC3 SERIES, UNLESS OTHERWISE NOTED.PROVIDE QTY OF CONTROLLERS AND SEPARATE DEMAND RESPONSE/INTERCONNECT CABLING AS REQUIRED.
WALL CONTROLS:	DIMMING = #RC SERIES DIMMERS (# OF DIMMERS AS REQUIRED – 4 / YOKE MAX) KEYED SWITCH = #OCC–RJ45 INPUT INTERFACE W/LEVITON #1221–2L–? KEYED SWITCH
NETWORK COMPONENTS:	NETWORK ADAPTER = RC3D–PL–N OR RC3DE–PL–N
INTERCONNECT COMPONENTS:	DEMAND RESPONSE INCLUDED STANDARD IN CONTROL UNITS. PROVIDE QTY OF CONTROLLERS AND SEPARATE DEMAND RESPONSE/INTERCONNECT CABLING AS REQUIRED.
EMERGENCY POWER INTERFACE:	SWITCHING / STEP DIMMING = PROVIDE THE #RC3E OPTION ON CONTROLLER. CONTINUOUS DIMMING = PROVIDE THE #RC3DE OPTION ON CONTROLLER.
LOAD INTERFACE DEVICE:	LUTRON COMPONENTS = LUTRON #BCI–0–10. REVERSE PHASE DIMMING COMPONENTS = LDCM–PL 2–WIRE DIMMING (FORWARD PHASE–ONLY) = GREENGATE #PD216 SERIES INTERFACE.
NETWORK INTERFACE:	NOT AVAILABLE

DISTRIBUTED LIGHTING CONTROLS SYSTEM SPECIFICATIONS (OCCUPANCY / VACANCY SENSORS AND DAYLIGHTING CONTROLS):

1. SEE LIGHTING PLAN DRAWINGS FOR DISTRIBUTED LIGHTING CONTROL SYSTEM (DLCS) SPECIFICS, SPACE SPECIFIC CONFIGURATIONS/REQUIREMENTS, AS WELL AS FIXTURE BALLAST/DRIVER CONFIGURATIONS.
2. ALL PRODUCTS SHALL BE BACKED BY A FIVE YEAR MANUFACTURER'S WARRANTY.
3. ALL PRODUCTS LISTED IN THIS SPECIFICATION ARE BASED UPON PRODUCTS LISTED ON THIS SHEET. THE FEATURES AND CHARACTERISTICS OF THE PRODUCT LITERATURE AND SPECIFICATION SHEETS AVAILABLE ON THE VARIOUS MANUFACTURER'S WEB–SITES ARE INCLUDED IN THE REQUIREMENT OF THESE SPECIFICATIONS. ALL DLCS NETWORKED/INTERCONNECTED/NON–NETWORKED SYSTEM–BASED AND STANDALONE COMPONENTS SHALL BE PROVIDED BY A SINGLE MANUFACTURER.
4. DLCS COMPONENTS SHALL BE COMPLIANT WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL ENERGY CODES AND BE PROVIDED AS FOLLOWS:
   a. WALL MOUNTED OCCUPANCY SENSORS:

      STANDALONE: WALL MOUNTED OCCUPANCY SENSORS SHALL BE UL LISTED AND HAVE A MINIMUM LOAD CAPACITY OF 800 WATTS AT 120 VOLTS AND 1200 WATTS AT 277 VOLTS. WALL SENSORS SHALL ALSO BE DECORATOR STYLE, WITH A LOW–PROFILE APPEARANCE AND A HARD LENS FOR DURABILITY. SENSOR SHALL UTILIZE PASSIVE INFRARED TECHNOLOGY (PIR) AND ULTRASONIC/MICROPHONIC TECHNOLOGY. UNIT SHALL BE RATED FOR 120/277 VOLT WITH NO MINIMUM LOAD, COMPATIBLE WITH ALL THE SPECIFIED BALLASTS, PROVIDED WITH A NEUTRAL CONNECTION (NO LEAKAGE TO GROUND) AND NO LEAKAGE TO LOAD IN THE "OFF" MODE. SENSOR SHALL BE UTILIZED IN SPACES NOT EXCEEDING 150 SQ.FT. SINGLE RELAY SENSORS SHALL BE CONFIGURED WITH THE RELAY IN A "MANUAL ON/ AUTO OFF" SETTING. DUAL RELAY SENSORS SHALL BE CONFIGURED WITH THE FIRST RELAY IN A "AUTOMATIC ON/ AUTOMATIC OFF" SETTING AND THE SECOND RELAY IN A "MANUAL ON/ AUTOMATIC OFF" SETTING. FACTORY STANDARD COLOR TO BE APPROVED BY ARCHITECT.

      SYSTEM–BASED: WHEN INDICATED WITH A DOT SYMBOL, "I" , OR "N" IN THE OCCUPANCY SENSOR SYMBOL, A LOW VOLTAGE, WALL MOUNTED OCCUPANCY SENSOR SHALL BE PROVIDED AND CONNECTED TO A CONTROL UNIT AS REQUIRED. SENSOR SHALL BE DECORATOR STYLE WITH A LOW–PROFILE APPEARANCE, HAVE ON/OFF/RAISE/LOWER BUTTONS, AND A HARD LENS FOR DURABILITY. SENSOR SHALL UTILIZE PASSIVE INFRARED TECHNOLOGY (PIR) AND ULTRASONIC/MICROPHONIC TECHNOLOGY. FACTORY STANDARD COLOR TO BE APPROVED BY ARCHITECT.
   b. SYSTEM–BASED CEILING MOUNTED OCCUPANCY SENSORS INDICATED WITH A DOT SYMBOL, "I" , OR "N" IN THE OCCUPANCY SENSOR SYMBOL SHALL HAVE A LOW–PROFILE APPEARANCE AND SHALL BE CONFIGURED IN ONE OF THE FOLLOWING WAYS AS INDICATED ON THE DRAWINGS:
      - AUTO ON: a/b
      - SWITCHED: AUTO ON a / MANUAL ON b
      - CONTINUOUS DIMMED: AUTO ON 50% a / MANUAL ON 100% a

      SENSOR(S) SHALL UTILIZE DUAL TECHNOLOGY (PIR AND ULTRASONIC/MICROPHONIC TECHNOLOGY) WITH 360 DEGREE COVERAGE. IN SPACES WITH DESKTOP ACTIVITIES, THE COVERAGE SHALL BE "HAND MOTION" AND SHALL NOT EXCEED 500 SQ. FT. AT A MAXIMUM CEILING HEIGHT OF 10 FT. IN CORRIDORS, STORAGE ROOMS AND OTHER SPACES WITH NON–DESKTOP ACTIVITIES, COVERAGE SHALL BE "HALF–STEP, WALKING MOTION" AND SHALL NOT EXCEED 1200 SQ. FT. AT A MAXIMUM CEILING HEIGHT OF 10 FT.
   c. "H" AT THE OCCUPANCY SENSOR INDICATES CONNECTION TO AUXILIARY OUTPUT CONTROL DEVICE FOR CONTROL OF A THIRD PARTY DEVICE VIA LOW–VOLTAGE CONTACT CLOSURES – 1 AMP @ 24V AC/DC. NC/NO RELAYS SHALL BE CONNECTED TO A CONTROLLER TO PERFORM THE AUXILIARY CONTROL REQUIREMENTS INDICATED BY THE DRAWINGS.
   d. "DM" PREFIX AT AT THE OCCUPANCY SENSOR INDICATES A DUAL MODE CORRIDOR/STAIRWAY/WAREHOUSE AISLE CONTROL FUNCTIONALITY TO BE IMPLEMENTED AS FOLLOWS:
      - BUSINESS HOUR MODE
        - ––UNOCCUPIED CORRIDOR/STAIRWAY/AISLE LIGHTING SHALL AUTOMATICALLY DIM TO ACHIEVE 50% LIGHTING POWER LEVEL.
        - ––UPON OCCUPANCY, LIGHTING SHALL AUTOMATICALLY BE BROUGHT TO 100% LIGHTING POWER LEVEL.
      - AFTER BUSINESS HOUR MODE
        - ––UNOCCUPIED CORRIDOR/STAIRWAY/AISLE LIGHTING SHALL AUTOMATICALLY TURN OFF BASED ON CEC–LISTED TIME CLOCK OUTPUT CONTACT POSTION/TIME CLOCK PROGRAMMING.
        - ––UPON OCCUPANCY, LIGHTING SHALL BE BROUGHT TO 100% LIGHTING POWER LEVEL.
        - ––ONCE OCCUPANCY IS DETECTED IN A CORRIDOR, STAIRWAY, OR AISLE, THAT RESPECTIVE AREA SHALL OPERATE IN BUSINESS HOUR MODE UNTIL THE NEXT AFTER BUSINESS HOUR MODE OCCURS.
        - ––UNOCCUPIED CORRIDOR/STAIRWAY/AISLEWAY LIGHTING SHALL AUTOMATICALLY REVERT TO BUSINESS HOUR MODE OPERATION BASED ON CEC–LISTED TIME CLOCK CONTACT POSTION/TIME CLOCK PROGRAMMING.

      E.C. SHALL BE RESPONSIBLE FOR PROVIDING ALL DEVICES AND WIRING REQUIRED FOR DUAL MODE OPERATIONS AND ANY PROGRAMMING/CONFIGURATION OF TIME–BASED OPERATING PARAMETERS TO INCLUDE OUTPUT CONTACT CLOSURES FROM TIME CLOCKS OR NETWORK GATEWAYS. COORDINATE WITH OWNER TO DETERMINE BUSINESS HOUR/AFTER BUSINESS HOUR MODES. WHERE DIAL MODE CONTROL IS ACCOMPLISHED THROUGH NON–NETWORK TIME CLOCK DEVICES, LOCATE EACH OF THESE DEVICES ADJACENT TO THE CLOSEST RESPECTIVE STAIRWAY/CORRIDOR/AISLEWAY CONTROL UNIT. IF THE PLANS IDENTIFY A NEW OR EXISTING CEC LIGHTING CONTROL PANEL AS THE SOURCE OF DUAL MODE TIMING, E.C. SHALL INCLUDE ALL COSTS TO INSTALL ANY NECESSARY I/O TERMINALS, CARDS, ETC. TO MAKE THE SYSTEM FULLY FUNCTIONAL.
   e. WHEN INDICATED WITH AN "N" IN THE OCCUPANCY SENSOR SYMBOL, A NETWORKED SYSTEM SHALL BE PROVIDED AND INSTALLED. THIS NETWORK–BASED SYSTEM SHALL PROVIDE/RESULT IN "LADDERLESS COMMISSIONING" OF DAYLIGHT CONTROLS. AT A MINIMUM, NETWORK ACQUIRED DATA SHALL PROVIDE CT–BASED LIGHTING POWER (WATTS) MEASUREMENTS PER THE COMMISSIONING PORTION OF THESE REQUIREMENTS. PROVIDE NETWORKED CONTROL UNITS/POWER PACKS/INTERFACES AND MISCELLANEOUS EQUIPMENT AS FOLLOWS:
      1. NETWORK SEGMENT MANAGER WITH NATIVE BACnet IP – QUANTITY AS REQUIRED BASED UPON A MAXIMUM OF 100 LOCAL ROOM NETWORKS PER SEGMENT AND A MINIMUM OF ONE SEGMENT MANAGER PER FLOOR. THIS EQUIPMENT SHALL BE LOCATED IN THE TYPICAL FLOOR ELECTRICAL ROOM.
      2. NETWORK BRIDGE CONNECTING THE SEGMENT MANAGER TO THE CONTROLLER SUB/LOCAL NETWORK.
      3. SEGMENT NETWORK WIRING FROM NETWORK SEGMENT MANAGER TO FIRST NETWORK CONTROLLER DEVICE AS WELL AS ALL OTHER NETWORK CONTROLLER CONNECTIONS (VIA LINEAR TOPOLOGY) AS REQUIRED.
      4. ALL CORRIDORS AND STAIRWELLS SHALL BE PROVIDED WITH DUAL MODE CORRIDOR/STAIRWAY CONTROLS TO INCLUDE CEC–LISTED TIME CLOCK(S) OR SYSTEM GATEWAYS, INTERPOSING RELAYS (WHEN INTERFACING WITH EXISTING CEC–LISTED RELAY PANELS), WIRING, 120V POWER, PROGRAMMING, ETC. NECESSARY FOR A COMPLETE AND FUNCTIONING CONTROL SYSTEM.
      5. INCLUDE ALL COSTS IN BASE BID TO PROVIDE 120V CIRCUIT(S) AND RECEPTACLE(S) NECESSARY TO POWER ALL DEMAND RESPONSE EQUIPMENT.
      6. PROVIDE DATA OUTLET/PATHWAY, DATA CABLING (IF REQUIRED ELSEWHERE BY PROJECT DOCUMENTS), AND CONNECTION TO THE PROJECT'S LOCAL AREA NETWORK.
      7. INCLUDE ALL COSTS IN BASE BID TO PROVIDE 120V CIRCUIT(S) AND RECEPTACLE(S) NECESSARY TO POWER ALL NETWORK SEGMENT MANAGERS, SWITCHES AND ROUTERS.
      8. DEMONSTRATE DLCS RESPONSE TO A SIMULATED DEMAND RESPONSE REQUEST AS PART OF THE LIGHTING COMMISSIONING PROCESS. WHERE MORE THAN ONE WIRING TOPOLOGY AND/OR ZONE IS REQUIRED TO ACCOMPLISH DEMAND RESPONSE – ALL WIRING TOPOLOGIES AND ZONES SHALL BE TESTED ACCORDINGLY.
   f. WHEN INDICATED WITH AN "I" IN THE OCCUPANCY SENSOR SYMBOL, A INTERCONNECTED CONTROL SYSTEM SHALL BE PROVIDED AND INSTALLED. THIS INTERCONNECTED CONTROL SYSTEM SHALL PROVIDE/RESULT IN "DRY CONTACT CLOSURE DEMAND RESPONSE LOAD SHED" CONTROL FUNCTIONALITY. AT A MINIMUM, A CONTACT CLOSURE SHALL REDUCE THE LIGHTING POWER LOAD BY AT LEAST 15%. WHERE AN INTERCONNECTED CONTROL SYSTEM IS SERVING CORRIDORS AND/OR STAIRWAYS, THE SYSTEM SHALL ALSO PROVIDE DUAL MODE CORRIDOR/STAIRWAY CONTROL. PROVIDE CONTROL UNITS/POWER PACKS/INPUT INTERFACES/TIME CLOCK AND MISCELLANEOUS EQUIPMENT AS FOLLOWS:
      1. INPUT CONTROL UNIT INTERFACE DEVICE CAPABLE OF RECEIVING SEPARATE DRY CONTACT INPUTS ACTIVATING A DIMMED SCENE WITH AT LEAST A 15% LOAD REDUCTION AND, WHEN SERVING CORRIDORS AND/OR STAIRWELL CONTROLLERS, ACTIVATING EITHER MODE OF THE DUAL MODE CORRIDOR/STAIRWAY CONTROL SYSTEM.
      2. PLENUM–RATED INTERCONNECT WIRING MEETING ALL THE OTHER REQUIREMENTS OF THE DLCS MANUFACTURER SHALL BE RUN BETWEEN EACH INPUT CONTROL UNIT INTERFACE DEVICE TO A LOCATION IN THE ELECTRICAL ROOM CONTAINING THE LIGHTING BRANCH CIRCUIT PANEL. WHERE DUAL MODE CORRIDOR/STAIRWAY CONTROL IS ALSO REQUIRED – PROVIDE ADDITIONAL INTERCONNECT WIRING AND DEVICES AS REQUIRED TO ACCOMPLISH BOTH DEMAND RESPONSE AND DUAL MODE CONTROL.
      3. DEMONSTRATE DLCS RESPONSE TO A SIMULATED DEMAND RESPONSE REQUEST AS PART OF THE LIGHTING COMMISSIONING PROCESS. WHERE MORE THAN ONE WIRING TOPOLOGY AND/OR ZONE IS REQUIRED TO ACCOMPLISH DEMAND RESPONSE – ALL WIRING TOPOLOGIES AND ZONES SHALL BE TESTED ACCORDINGLY.
   g. WHERE INDICATED ON DRAWINGS, PROVIDE INTEGRATED DAYLIGHTING CONTROLS AS FOLLOWS:
      1. AUTOMATIC SWITCHING DAYLIGHTING CONTROLS SHALL BE PROVIDED TO SWITCH SELECTED FIXTURES AND/OR LAMPS OFF AND ON BASED UPON LIGHTING LEVELS PRESENT IN THE CONTROLLED SPACE. THE DAYLIGHTING CONTROLS SHALL BE CONNECTED TO THE CONTROL UNIT. THE SENSOR SHALL UTILIZE AN INTEGRAL PHOTO DIODE TO MEASURE AMBIENT LIGHT LEVELS. CONTROLS SHALL BE FULLY ADJUSTABLE FROM 1 TO 6,500 FOOTCANDLES AND SHALL BE PROVIDED WITH AN ADJUSTABLE TIME DELAY AND ADJUSTABLE DEAD BAND SETTINGS.
      2. AUTOMATIC DIMMING DAYLIGHTING CONTROLS SHALL BE PROVIDED TO CONTINUOUSLY DIM SELECTED FIXTURES/LAMPS UP AND DOWN BASED UPON LIGHTING LEVELS PRESENT IN THE CONTROLLED SPACE. THE SENSOR SHALL UTILIZE AN INTERNAL PHOTO DIODE TO MEASURE AMBIENT LIGHT LEVELS. 0–10 VOLT DIMMING CONTROLS SHALL RANGE FROM 0.2 VOLTS TO 10 VOLTS, WITH AMBIENT LIGHTING SET POINTS FROM 1–6,500 FOOTCANDLES.
      3. AUTOMATIC DAYLIGHTING CONTROLS SHALL BE CONNECTED TO CONTROL UNITS TO PERFORM THE FIXTURE SWITCHING/DIMMING REQUIREMENTS INDICATED BY THE DRAWINGS – CONNECTIONS DIRECTLY TO A BALLAST ARE NOT ALLOWED.
      4. DAYLIGHT SENSOR SHALL PROVIDE CONTROLS FOR UP TO THREE DISTINCT LIGHTING ZONES TO ALLOW SEPARATE CONTROL OF PRIMARY DAYLIT, SECONDARY DAYLIT, AND SKYLIT ZONES.
   h. PROVIDE CONTROL UNITS AND SYSTEM FUNCTIONALITY AS FOLLOWS:
      1. CONTINUOUS DIMMING CONTROLS: SYSTEM–BASED WALL OR CEILING MOUNTED OCCUPANCY SENSORS (CONTINUOUS DIMMED – AUTO ON 50%/MANUAL ON 100%) SHALL BE PROVIDED WITH CONTROL UNITS TO PERFORM THE FIXTURE DIMMING REQUIREMENTS INDICATED BY THE BALLAST AND FIXTURE TYPE. SWITCH LEG INDICATED OUTSIDE THE PARENTHESIS TO BE CONFIGURED AS "AUTO ON 50%/MANUAL ON 100%" FOR CONTINUOUS DIMMED. SWITCH LEGS INSIDE PARENTHESIS INDICATES A MANUAL ACTION REQUIRED TO INCREASE LIGHTING LEVELS ABOVE 50%. CONTROL UNITS WITH INTEGRAL TRANSFORMERS SHALL BE UTILIZED TO PROVIDE POWER TO OCCUPANCY SENSORS AND OTHER CONTROL DEVICES. CONTROL UNITS SHALL BE LOCATED WITHIN JUNCTION BOXES AND NOT EXPOSED IN THE CEILING SPACE. CONTROL UNIT SHALL BE 120/277 VOLT RATED WITH NO MINIMUM LOAD, COMPATIBLE WITH ALL THE SPECIFIED BALLASTS PROVIDED WITH A NEUTRAL CONNECTION (NO LEAKAGE TO GROUND) AND NO LEAKAGE TO LOAD IN THE "OFF" MODE. ADDITIONAL RELAY ZONES MAY BE REQUIRED FOR THE ADDITION OF PRIMARY DAYLIT, SECONDARY DAYLIT, AND PRIMARY SKYLIT UTILIZING THE SAME CONTROL CHANNEL. (I.E. EVEN THOUGH A SINGLE LETTER "a" IS INDICATED AT THE PRIMARY SENSOR), ADDITIONAL RELAYS WOULD BE REQUIRED FOR THE "a+" (PRIMARY SIDELIT DAYLIT ZONE), "a++" (SECONDARY SIDELIT DAYLIT ZONE), AND "a*" (SKYLIT DAYLIT ZONE). WHERE MORE THAN ONE CIRCUIT/THREE SWITCH LEGS/THREE RELAY ZONES ARE REQUIRED, PROVIDE ADDITIONAL FULL FEATURE CONTROL UNITS AS REQUIRED.
      2. WHERE ADDITIONAL 120/ 277 VOLT DEVICES, RECEPTACLES, OR BRANCH CIRCUITS ARE BEING CONTROLLED BY THE ROOM CONTROLLER, AN ADDITIONAL CONTROL UNIT SHALL BE PROVIDED AS REQUIRED.
      3. THE OCCUPANCY SENSOR CONTROLLED RECEPTACLE BRANCH CIRCUIT RELAY, CONNECTED TO THE SPACE'S DISTRIBUTED LIGHTING CONTROL OCCUPANCY SENSOR RELAY, SHALL TURN ON WHEN THE ROOM IS OCCUPIED, REGARDLESS OF THE CONFIGURATION OF THE LIGHTING CONTROL STATE – I.E. AUTO ON/MANUAL ON. SEE THE DISTRIBUTED LIGHTING CONTROL SPECIFICATION FOR MORE INFORMATION. EVEN THOUGH A SINGLE SYMBOL IS INDICATED, MULTIPLE RELAYS MAY BE REQUIRED TO CONTROL THE REQUIRED NUMBER OF SWITCHLEGS/CIRCUITS.
      4. LOW VOLTAGE WALL CONTROLS SHALL BE DECORA STYLE, LOW–VOLTAGE, MOMENTARY SWITCHES WITH COLOR TO MATCH OTHER WALL DEVICES/SWITCHES. LOWER CASE LETTERS INDICATE SWITCHING CONFIGURATION. PROVIDE SWITCHING OR DIMMING CONTROL DEVICES AS REQUIRED BY DRAWINGS.

         DIMMING – NUMBER OF SWITCHES AS REQUIRED – 4 ZONES/YOKE MAX. EACH CONTROL ZONE TO HAVE A DEDICATED RAISE AND LOWER BUTTONS. FACTORY STANDARD COLOR BY ARCHITECT. EACH MULTI–ZONE DIMMING CONTROL STATION SHALL BE PROVIDED WITH MASTER ON AND MASTER OFF BUTTON IN ADDITION TO THE INDIVIDUAL CONTROL ZONE BUTTONS.
      5. WHERE INDICATED, PROVIDE VANDAL RESISTANT, HIGH ABUSE SWITCH CONNECTED TO THE DLCS INPUT/OUTPUT INTERFACE DEVICE FOR ON/ OFF AND DIMMING CONTROLS. SWITCHES LOCATED IN HIGH ABUSE AREAS (EXTERIOR AREAS OR AREAS SUBJECT TO WASH–DOWN ETC.) OR IDENTIFIED ON PLANS AS HIGH–ABUSE SWITCHES SHALL BE VANDAL RESISTANT, STAINLESS STEEL, TOUCH SENSITIVE AND AVAILABLE WITH UP TO TWO BUTTONS IN A SINGLE GANG. EACH HIGH ABUSE SWITCH SHALL BE ABLE TO BE PROGRAMMED FOR ON, OFF, TOGGLE OR MAINTAIN OPERATION. SWITCHES MUST BE CAPABLE OF HANDLING ELECTROSTATIC DISCHARGES OF AT LEAST 30,000 VOLTS (1CMSPARK) WITHOUT ANY INTERRUPTION OR FAILURE IN OPERATION.
      6. WHERE INDICATED, PROVIDE A LOCKING SINGLE POLE SWITCH CONNECTED TO THE ROOM CONTROLLER VIA A INPUT/OUTPUT INTERFACE DEVICE FOR ON/OFF CONTROLS. DIRECT CONNECTION OF THE KEYED SWITCH ON THE LOAD SIDE OF THE CONTROLLER IS PROHIBITED. PROVIDE AT LEAST THREE (3) KEYS TO OWNER AT CONCLUSION OF PROJECT. ADJACENT SWITCH SHALL ONLY BRING LIGHTS FULL ON. KEYED SWITCH ALLOWS MANUAL OFF FUNCTIONALITY. DIMMER SWITCH ALLOWS AUTO–ON 50% OVERRIDE TO 100% ALL–ON AND SHALL NOT ALLOW LIGHTING LEVELS TO DECREASE IN ANY WAY.

SYMBOLS / REPRESENTATIVE GRAPHIC IMAGES

   i. WHEN LIGHTING SYSTEM IS INDICATED WITH A CONNECTION TO A REMOTE EMERGENCY POWER SOURCE (I.E. AN INVERTER OR GENERATOR) PROVIDE UL924 LISTED INTERFACE EQUIPMENT TO ALLOW THE OVERRIDE OF THE LOCAL SWITCHING AND/OR DIMMING CONTROLS DURING A POWER OUTAGE.
   j. WHEN LIGHTING FIXTURES/CONTROLS ARE PROVIDED WITH LUTRON 3–WIRE DIMMING BALLASTS, AN INTERFACE DEVICE SHALL BE PROVIDED TO ALLOW 0–10V CONTROL OF LUTRON 3–WIRE DIMMING BALLASTS. MOUNT INTERFACE IN A NEMA1 ENCLOSURE IN ACCESSIBLE CEILING SPACE ADJACENT TO ITS ASSOCIATED CONTROL UNIT.
   k. WHEN LIGHTING FIXTURES/CONTROLS ARE LINE VOLTAGE DIMMED OR PROVIDED ELECTRONIC LOW–VOLTAGE, MAGNETIC LOW–VOLTAGE, NEON/COLD CATHODE, LUTRON "TU–WIRE" DIMMING BALLASTS, AN INTERFACE DEVICE SHALL BE PROVIDED TO ALLOW LINE VOLTAGE CONTROL. MOUNT INTERFACE IN A NEMA1 ENCLOSURE IN ACCESSIBLE CEILING SPACE ADJACENT TO ITS ASSOCIATED CONTROL UNIT.
   l. WHEN AV SYSTEM INTERFACE IS INDICATED, PROVIDE TWO–WAY CAPABLE RS–232 COMMUNICATIONS INTERFACE TO ALLOW AV CONTROL SYSTEM TO CALL ADDRESSABLE LIGHTING/ROOM SCENES. COMMUNICATIONS INTERFACE SHALL PROVIDE FEEDBACK TO THE AV CONTROL SYSTEM FOR LIGHT LEVEL STATUS.
   m. WHEN MOVEABLE PARTITION INTERFACE IS INDICATED, PROVIDE ALL COMPONENTS, SENSORS, WIRING, POWER SUPPLIES AND PROGRAMMING NECESSARY TO MONITOR AND REPORT MOVEABLE PARTION(S) OPEN/CLOSED STATUS. DLCS SYSTEM SHALL AUTOMATICALLY ADOPT SINGLE ROOM OR MULTI–ROOM CONTROL PROFILES AS REQUIRED BY PARTITION STATUS.
   n. WHEN NETWORKED LIGHTING CONTROL RELAY PANEL(S) ARE INDICATED, PROVIDE ALL COMPONENTS, WIRING, AND PROGRAMMING NECESSARY TO INTEGRATE RELAY PANELS WITHIN THE DLCS SYSTEM.
5. GENERAL SYSTEM REQUIREMENTS:
   a. ALL EQUIPMENT SHALL FEATURE A PRE–SET DEFAULT OPERATION. UPON INITIAL POWER UP, THE SYSTEM SHALL AUTOMATICALLY IDENTIFY THE DEVICES ON THE LOCAL NETWORK, THEN ENTERS THE PRE–SET CONFIGURATION TO ALLOW BASIC OPERATION OF ALL DEVICES. IN MOST APPLICATIONS THE RELATIONSHIP BETWEEN QUANTITY OF LOADS, SWITCHES AND OCCUPANCY SENSORS WILL NOT REQUIRE ANY ADJUSTMENTS – ALTHOUGH AN ADJUSTMENT TO THE AUTOMATIC SETTINGS SHALL BE INCLUDED IN THE BASE BID.
   b. ALL EQUIPMENT SHALL FEATURE A CONFIGURATION (CONFIG) BUTTON ON MOST DEVICES THAT ALLOWS EASY ACCESS TO THE INTEGRATED AUTO–CONFIGURATION TECHNOLOGY TO MODIFY SYSTEM OPERATION. FUNCTIONALITY OF THE CONFIG BUTTON SHALL BE STANDARDIZED THROUGHOUT THE PRODUCT LINE, AS IS THE OPERATION OF THE CONFIG LED INDICATORS.
   c. NETWORK DLCS SYSTEM CONTROL/CONFIGURATION SOFTWARE SHALL BE PRE–CONFIGURED TO THE MAXIMUM EXTENT POSSIBLE OFF–SITE AT THE DLCS FACTORY OR ENGINEERING FACILITY. THE CONTRACTOR SHALL DOCUMENT EVERY NETWORK COMPONENT'S LOCATION (ROOM AND FLOOR NUMBER) AND ITS' RESPECTIVE SERIAL NUMBER OR OTHER DEVICE IDENTIFIER ON A FULL SIZE FLOOR PLAN IN PDF FORMAT. HANDWRITTEN DOCUMENTATION IS UNACCEPTABLE. THE PREFERRED ACCEPTABLE METHOD OF NETWORK COMPONENT DOCUMENTATION IS COLLECTION OF FACTORY–PROVIDED, SELF–ADHESIVE, BAR–CODE IDENTIFIERS DESIGNED TO BE REMOVED FROM NETWORK COMPONENTS AS THEY ARE INSTALLED IN THE FIELD. BAR CODES IDENTIFIERS SHALL BE APPLIED TO A PAPER COPY OF A FLOOR PLAN WHICH SHALL BE PROVIDED TO THE FACTORY FOR USE IN OFF–SITE DLCS NETWORK PROGRAMMING AND CONFIGURATION. THE RESULTS OF EITHER METHOD SHALL BE SCANNED AND SUBMITTED AS A PART OF THE PROJECT CLOSEOUT DOCUMENTATION.
   d. NETWORK SYSTEMS SHALL BE INSTALLED BY VENDOR–CERTIFIED CONTRACTOR FIELD PERSONNEL TO PERFORM NETWORK INSTALLATIONS INCLUDING ACCURATE, REPEATABLE COMMUNICATIONS CABLING TERMINATIONS (BOTH LAN AND MS/TP TYPE). INCLUDE CERTIFICATES FOR EACH CERTIFIED INSTALLER TO BE UTILIZED ON THE PROJECT AS A PART OF THE PROJECT SUBMITTALS. A CERTIFIED FIELD INSTALLER SHALL BE ON–SITE SUPERVISING COMMUNICATIONS CABLING AND CABLING TERMINATIONS AT ALL TIMES WHEN THIS WORK IS OCCURRING ON THE PROJECT.
   e. PRIOR TO NETWORK SYSTEM FACTORY START–UP, THE CONTRACTOR SHALL 1) TEST ALL COMMUNICATIONS CABLING FOR SHORTS, POLARITY REVERSALS AND BAD TERMINATIONS/CONNECTIONS AND MAKE NECESSARY REPAIRS AND 2) DEMONSTRATE FULL CONNECTIVITY TO ALL NETWORK AND LOCAL (IN–ROOM) DEVICES VIA MS/TP CAPTURE OR OTHER VENDOR SPECIFIC TESTING PROCESS. CONTRACTOR SHALL PROVIDE A TEST REPORT OUTLINING TEST COMPLETION AND ANY REPAIRS MADE AND CERTIFY THAT NETWORK DEVICE AND LOCAL DEVICE CONNECTIVITY HAS BEEN ACHIEVED PRIOR TO SCHEDULED FACTORY START–UP. BASED ON PAST PROJECT EXPERIENCE, FAILURE TO PERFORM ANY OF THE ABOVE STEPS HAS RESULTED IN BOTH VERY INEFFICIENT FACTORY START–UP AND PROJECT DELIVERY DELAY. ANY ADDITIONAL COSTS ARISING OUT OF A FAILURE TO COMPLETE THIS TESTING SHALL BE BORNE SOLELY BY THE CONTRACTOR.
   f. NETWORK SYSTEMS SHALL BE INSPECTED, STARTED UP, CONFIGURED AND PROGRAMMED BY FACTORY START–UP TECHNICIANS TO MEET THE INTENDED CONTROLS SCENARIOS AND FUNCTIONALITY DESIRED BY THE SYSTEM USER. WHERE NETWORK SYSTEMS ARE INTEGRATED WITH BUILDING MANAGEMENT SYSTEMS (BMS), THE FACTORY TECHNICIAN SHALL ASSIST THE CONTROLS INTEGRATOR WITH DLCS POINT INTEGRATION.
6. INSTALLATION OF CONTROL UNITS, OCCUPANCY/VACANCY SENSORS AND DAYLIGHTING CONTROLS:
   a. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE NINETY (90) TO ONE HUNDRED (100) PERCENT COVERAGE AND SHALL ACCOMMODATE ALL HABITS OF SINGLE OR MULTIPLE OCCUPANTS AT ANY LOCATION WITHIN THE ROOM. THE LOCATIONS AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS THAT ARE TO BE PROVIDED WITH SENSORS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS AS REQUIRED TO PROPERLY AND COMPLETELY COVER THE RESPECTIVE ROOM. ADDITIONALLY, IT MAY BE NECESSARY FOR THE CONTRACTOR TO MAKE ADJUSTMENTS, CHANGE THE LOCATION OR TYPE OF SENSOR TO OBTAIN PROPER OPERATION IN A SPECIFIC ROOM. THE USE OF FACTORY SUPPLIED INTERNAL MASKING (PIR) SHALL BE PROVIDED/INSTALLED AS REQUIRED TO LIMIT DETECTION TO WITHIN THE CONTROLLED SPACE ONLY. THE CONTRACTOR SHALL HAVE FINAL RESPONSIBILITY FOR PROPER OPERATION OF THE SYSTEM IN EACH ROOM AND SHOULD THEREFORE MAKE LABOR ALLOWANCES FOR CHANGES AND ADJUSTMENTS.
   b. CEILING MOUNTED SENSORS SHOULD BE LOCATED IN THE SPACE TO BE COVERED, A MINIMUM OF 4', PREFERABLY 5', AWAY FROM THE LATCH SIDE OF THE DOOR, 2" TO 3" AWAY FROM THE WALL AND 3' TO 4' FROM AN AIR SUPPLY REGISTER. DO NOT MOUNT SENSORS OVER A DOORWAY OR BEHIND A FULL HEIGHT DOOR. SENSORS SHALL BE AIMED IN THE DIRECTION OF THE SPACE TO BE COVERED. DO NOT AIM SENSORS TOWARD A DOORWAY. THE USE OF FACTORY SUPPLIED INTERNAL MASKING (PIR) SHALL BE PROVIDED/INSTALLED AS REQUIRED TO LIMIT DETECTION TO WITHIN THE CONTROLLED SPACE ONLY.
   c. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL SENSORS SHALL BE ADJUSTED FOR A TIME DELAY OF TWENTY (20) MINUTES.
   d. EACH DAYLIGHTING CONTROL SYSTEM/ZONE SHALL BE INSTALLED/ADJUSTED AS FOLLOWS:
      1. AUTOMATIC SWITCHING/DIMMING CONTROL PLACEMENT: IT IS IMPORTANT TO SELECT A LOCATION IN THE DAYLIGHTING ZONE WHERE THE DAYLIGHT CONTRIBUTION IS REPRESENTATIVE OF THE DAYLIGHTING THROUGHOUT THE ZONE. A GOOD LOCATION IS OFTEN BETWEEN THE WINDOW AND/OR DAYLIGHTING SOURCE AND THE FIRST ROW OF LIGHTING FIXTURES. AVOID INSTALLATIONS WITHIN 6'–0" OF A WINDOW, MORE THAN 15'–0" FROM A WINDOW, AND LESS THAN 4'–0" TO A LIGHTING FIXTURE WITH INDIRECT DISTRIBUTION.
      2. AUTOMATIC STEP–DIMMED/CONTINUOUS DIMMING CONTROLS SHALL NOT BE OPERATIONAL UNTIL THE LAMPS HAVE HAD AN OPPORTUNITY TO "BURN IN" – TYPICALLY A MINIMUM OF 10 HOURS – OR GREATER AS RECOMMENDED BY THE RESPECTIVE LAMP AND BALLAST MANUFACTURERS.
      3. AUTOMATIC SWITCHING/STEP–DIMMED CONTROL SETTINGS:

         CONTRACTOR TO UTILIZE THE PHOTOSENSOR AUTOMATIC CALIBRATION AND SETPOINT FUNCTIONS TO ESTABLISH THE OPTIMAL ON/OFF SETPOINTS, TIME DELAYS AND DEADBAND SETTINGS FOR EACH CONTROL ZONE INDICATED WITH DAYLIGHTING CONTROLS.
      4. AUTOMATIC CONTINUOUS DIMMING CONTROL SETTINGS SHALL BE SET USING AN ILLUMINANCE METER, AT A LOCATION FURTHEST FROM THE DAYLIGHT SOURCE, AS FOLLOWS:
         - –NIGHT CONDITIONS/SETTING: SET AND ADJUST THE ILLUMINANCE LEVELS TO BE PER THE "TARGET ILLUMINATION" SYMBOL VALUE – SEE DRAWINGS. THE VALUE MUST BE AT OR BELOW THE "TARGET ILLUMINATION" SYMBOL VALUE.
         - –DAY CONDITIONS/SETTING: WITH WINDOW COVERINGS IN THE "OPEN" POSITION AND THE DAYLIGHT CONTRIBUTION (LIGHTS OFF) AT A MAXIMUM OF 75% OF THE "TARGET ILLUMINATION" SYMBOL VALUE, SET AND ADJUST THE COMBINED ARTIFICIAL ILLUMINATION AND DAYLIGHTING ILLUMINATION TO MEET THE SYMBOL VALUE AT THE SAME LOCATION/POSITION OF THE NIGHT SETTINGS.
         - –RAMP UP/DOWN RATES/CUT–OF TIME DELAY
   e. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A PRE–INSTALLATION MEETING WITH THE MANUFACTURER'S FACTORY AUTHORIZED REPRESENTATIVE, AT THE PROJECT, TO VERIFY PLACEMENT OF SENSORS AND INSTALLATION CRITERIA.
   f. PROPER JUDGMENT MUST BE EXERCISED IN EXECUTING THE INSTALLATION SO AS TO ENSURE THE BEST POSSIBLE INSTALLATION IN THE AVAILABLE SPACE AND TO OVERCOME LOCAL DIFFICULTIES DUE TO SPACE LIMITATIONS OR INTERFERENCE OF BUILDING STRUCTURAL COMPONENTS. THE CONTRACTOR SHALL ALSO PROVIDE, AT THE PROJECT, THE TRAINING NECESSARY TO FAMILIARIZE THE OWNER'S PERSONNEL WITH THE OPERATION, USE, MAINTENANCE, ADJUSTMENT, AND PROBLEM SOLVING DIAGNOSIS OF THE OCCUPANCY SENSING DEVICES AND SYSTEMS.
   g. CONNECT ALL DEVICES AS REQUIRED. UNLESS PROHIBITED BY LOCAL CODE, CONNECTIONS SHALL BE MADE WITH PLENUM–RATED CABLING ROUTED NEATLY INTO AND ABOVE THE ACCESSIBLE CEILING. CABLES SHALL BE SUPPORTED WITH DEDICATED SUPPORT WIRES AND J–HOOKS. WHERE LOCAL CODE REQUIRES LOW VOLTAGE CABLING TO BE ROUTED IN CONDUIT, INCLUDE ALL COSTS IN BASE BID TO PROVIDE APPROPRIATELY–SIZED SYSTEM OF CONDUITS AND JUNCTION BOXES TO ROUTE CONNECTION CABLING. J–BOXES/CONTROLLERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS AND NEVER IN HARD–LID CEILING AREAS. PRE–TERMINATED CABLING SHALL BE PROVIDED BY THE SYSTEM MANUFACTURER AND SHALL BE GREEN IN COLOR UNLESS IT IS ROUTED IN AN EXPOSED CEILING CONDITION WHERE IT SHALL BE BLACK, WHITE OR GREY AS DIRECTED BY THE ARCHITECT.
   h. INSTALL LINE VOLTAGE CONDUCTORS, LOW VOLTAGE CONDUCTORS AND COMMUNICATIONS CABLING BETWEEN LIGHTING FIXTURES AND DLCS COMPONENTS PER THE DLCS MANUFACTURER'S RECOMMENDATIONS REGARDING CONDUCTOR ROUTING, CONDUCTOR SEPARATION AND CONDUCTOR TERMINATIONS. CONTRACTOR SHALL UTILIZE INSTALLATION MEANS AND METHODS THAT DO NOT COMPROMISE THE DLCS SYSTEM WARRANTEE.
   i. WHERE CODE OR LOCAL AHJ REQUIREMENTS REQUIRE THE INSTALLATION OF ALL LOW–VOLTAGE CONDUCTORS TO BE INSTALLED IN CONDUIT – CONTRACTOR TO PROVIDE ALL REQUIRED MANUFACTURER SPECIFIC EQUIPMENT JUNCTION BOXES AND CONDUIT ADAPTERS AS REQUIRED.
   j. UNLESS PROHIBITED BY LOCAL CODE, ALL CONTROL UNITS SHALL BE PLENUM–RATED. WHERE CONTROL UNITS ARE LOCATED IN EXPOSED CEILING SPACES, INCLUDE ALL COSTS IN BASE BID TO PROVIDE APPROPRIATELY–SIZED VENTILATED CONTROL UNIT ENCLOSURES FOR CONCEALMENT. COLOR OF ENCLOSURE PER ARCHITECT.
   k. UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE–FREE INSTALLATION. THIS COMMISSIONING EFFORT SHALL BE PERFORMED IN A MANNER THAT MEETS ALL APPLICABLE FEDERAL, STATE, LOCAL ENERGY CODES AND/OR LEED CERTIFICATION PROGRAMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILLING OUT ALL APPLICABLE PAPERWORK AND/OR FORMS. CONTRACTOR TO PROVIDE A COPY OF THE COMPLETED FORMS TO THE ENGINEER OF RECORD PRIOR TO THE PUNCH LIST SITE VISIT FOR REVIEW AND POSSIBLE RECOMMENDATION OF SETTING REVISIONS.

      CONTRACTOR SHALL INCLUDE ALL COST IN THE BASE BID AND PROVIDE THE FOLLOWING WORK FOR EVERY CONTROL ZONE:
      - –INITIAL SETTINGS AS INDICATED ABOVE.
      - –COMMISSIONING OF EACH LIGHTING CONTROL DEVICE/ZONE PER NOTES BELOW.
      - –A FOLLOW UP SETTING(S) ADJUSTMENT, AS DICTATED BY THE ELECTRICAL ENGINEER, BASED UPON A REVIEW OF THE RESULTS OF THE CONTRACTOR'S COMMISSIONING EFFORT AND FINAL PUNCH LIST.
   l. REGARDLESS OF THE LESSER REQUIREMENTS OF ANY AHJ COMMISSIONING FORMS, THE FOLLOWING MINIMUM COMMISSIONING ITEMS MUST BE COMPLETED FOR EACH DEVICE/LIGHTING CONTROL ZONE:
      - –MEASURED LIGHTING POWER (KW) AT THE FULLY DIMMED CONDITION.
      - –MEASURED LIGHTING POWER (KW) AT FULL LIGHT OUTPUT.
      - –ONLY LIGHTING FIXTURES IN THE DAYLIGHTING ZONE ARE AFFECTED BY THE DAYLIGHTING CONTROLS.
      - –LIGHTING POWER IS REDUCED BY AT LEAST 50% IN WINDOW DAYLIT AREAS AND 65% IN SKYLIGHT DAYLIT AREAS.
      - –DIMMING SYSTEMS PROVIDE FLICKER FREE OPERATION.
      - –ILLUMINATION LEVELS, LOCATIONS OF MEASUREMENTS, SPECIFIC DEVICE SETTINGS ARE DOCUMENTED ON AS–BUILTS.
   m. AS PART OF THE "RECORD DRAWINGS", INDICATE ON THE REFLECTED CEILING PLAN THE EXACT LOCATION (CEILING TILE OR ACCESS PANEL) OF ANY ABOVE CEILING DEVICE.
   n. WHEN THE PROJECT REQUIRES TWENTY–FIVE (25) OR MORE CEILING MOUNTED SENSORS, CONTRACTOR TO PROVIDE A REMOTE CONTROL PROGRAMMING/CONTROL DEVICE, AND HAND IT TO THE OWNER AT THE END OF THE PROJECT.
   o. INCLUDE ALL COSTS TO PROVIDE USER–TRAINING AS OUTLINED ELSEWHERE IN ANY PROJECT SPECIFIC COMMISSIONING SPECIFICATION. WHERE A NETWORK DLCS IS SPECIFIED, MINIMUM TRAINING SHALL INCLUDE 6 HOURS OF ON–SITE USER TRAINING FOR A MINIMUM OF 3 PERSONNEL.

DISTRIBUTED LIGHTING CONTROL SYSTEM REQUIREMENTS:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FURNISHING OF ALL MATERIAL, LABOR, EQUIPMENT, AND SERVICES, IN CONNECTION WITH THE INSTALLATION OF A COMPLETE AND FULLY FUNCTIONING AND CODE COMPLIANT INSTALLATION.
2. IT IS THE INTENT OF THE CONTRACT DOCUMENTS, WHICH ARE PRESENTED IN A DIAGRAMMATIC FORMAT, TO PROVIDE CONTRACTOR INFORMATION THAT SUPPLEMENTS AND ENHANCES THE GENERALLY ACCEPTED CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES EMPLOYED IN CONNECTION WITH INSTALLATION OF THIS TYPE OF PRODUCT/SYSTEM.
3. THE CONTRACTOR SHALL ALSO INCORPORATE THE REQUIREMENTS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS/WARRANTY REQUIREMENTS AS PART OF THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE CONTRACT DOCUMENT REQUIREMENTS AND THE MANUFACTURER'S INSTALLATION REQUIREMENTS, THE MORE STRINGENT REQUIREMENTS SHALL APPLY – UNLESS THE MORE STRINGENT REQUIREMENT VOIDS APPLICABLE WARRANTIES OR VIOLATES THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION. ANY SUCH CONFLICT SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING THROUGH THE FORMAL RFI PROCESS.
4. REFER TO THE ASSOCIATED SCHEDULES, SCHEMATICS, DRAWINGS, AND SPECIFICATIONS FOR DETAILED INFORMATION/REQUIREMENTS ON THIS PRODUCT/SYSTEM.
5. SHOP DRAWINGS AND COMPONENT SUBMITTALS SHALL BE SUBMITTED PER THE GENERAL SPECIFICATION REQUIREMENTS SHOWING ALL COMPONENTS, WIRING CONFIGURATIONS AND PROGRAMMING SCHEDULES. SCALED SHOP DRAWINGS DEPICTING/IDENTIFYING ALL SYSTEM COMPONENT LOCATIONS SHALL BE PROVIDED. SUBMITTALS SHALL BE MADE SPECIFIC TO THE PROJECT – GENERIC SUBMITTALS AND SUBMITTALS WITHOUT SCALED SHOP DRAWINGS SHALL BE REJECTED.

Login Name: Leonhardt
Plot Date: June 27, 2019 - 5:38 pm
File Name: P:\2018\2018-0922 Humboldt County Courthouse Rmdl\Drawings and Models\CAD\Electrical\2018-0922 E402 Distributed Lighting Controls.dwg
XREFS: x-HC-CH-5th__TITLEBLOCK

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Project Leader - Jeff Halliwell
Electrical Lead - Jerry Leonhardt
tk1sc Job #2018-0922

LICENSE STAMPS

RAYMOND W. SWARTZ
No. E15610
Ex.12/31/2019

PROJECT NAME

HUMBOLDT COUNTY
DISTRICT ATTORNEY
REMODEL FOR

VICTIM /
WITNESS
& CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
DISTRIBUTED
LIGHTING CONTROLS

DRAWING STATUS
CONSTRUCTION
DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
E402

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.1, §140.6, and §141.0(b)2 for indoor lighting scopes using the prescriptive path.	
Project Name: Humboldt County District Attorney - 5th Floor Remodel	Report Page: Page 1 of 6
Project Address: 825 5th Street, Ste 502	Date Prepared: 1/25/2019

A. GENERAL INFORMATION

01	Project Location (city)	Eureka	04	Total Conditioned Floor Area (ft^2)	3,931
02	Climate Zone	8	05	Total Unconditioned Floor Area (ft^2)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

☑ Office ☐ Retail ☐ Warehouse ☐ Hotel/Motel ☐ School ☑ Support Areas
☐ Parking Garage ☐ High-Rise Residential ☐ Relocatable ☑ Other (write in):

B. PROJECT SCOPE

Table Instructions: Include any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations. WARNING: Changing the Calculation Method in this table will result in the deletion of data previously input. If you need to change the calculation method, please open a new form or use "Save As".

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft^2)	Calculation Method	Area (ft^2)
☑ New Lighting System	Area Category	3,931	Area Category	0
☐ Altered Lighting System				
Total Area of Work (ft^2)	**3,931**		**0**	

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1.	Allowed Lighting Power per §140.6(b) (Watts)						≥	Actual Lighting Power per §140.6(a) (Watts)					Compliance Results
	01	02	03	04	=	05		06	07	08	=	09	10
	Complete Building §140.6(c)1 (See Table I)	Area Category §140.6(c)2 (See Table I)	Area Category Footnotes §140.6(c)2G (+) (See Table K)	Tailored §140.6(c)3 (+) (See Table L)		**Total Allowed** (Watts)		Total Designed (Watts) (See Table F)	Adjustments: Portable Lighting §140.6(a) (-) (See Table J)	Adjustments: PAF Control Credits §140.6(a)2 (-) (See Table R)		**Total Actual** (Watts) *Includes Adjustments	**05 Must be ≥ 09** §140.6
Conditioned:		3,493.1			=	**3,493.1**	≥	2,630			=	**2,630**	**COMPLIES**
Unconditioned:					=		≥				=		
												Controls Compliance (See Table H for Details)	**COMPLIES**
												Rated Power Reduction Compliance (See Table S for Details)	**Not Applicable**

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Humboldt County District Attorney - 5th Floor Remodel	Report Page: Page 2 of 6
Project Address: 825 5th Street, Ste 502	Date Prepared: 1/25/2019

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: Include all permanent designed lighting and all portable lighting in offices.

01	02	03		04	05	06	07	08	09	
Name or Item Tag	Complete Luminaire Description	Specialized Luminaire Types: Track	Portable	Watts per luminaire[1]	How Wattage is determined	Total number luminaires	Exempt per §140.6(a)3	Design Watts	Field Inspector: Pass	Fail
1	Type 1 - Recessed 2x4 LED	☐	☐	43	Mfr. Spec[1]	59	☐	2,537	☐	☐
2	Type 2 - Linear Led Direct/Indirect.	☐	☐	30	Mfr. Spec[1]	2	☐	60	☐	☐
5	Type 5 - 1'x4' Wraparound Led	☐	☐	33	Mfr. Spec[1]	1	☐	33	☐	☐
							Total Designed Watts CONDITIONED SPACES:	**2,630**		

[1]NOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c) Wattage used must be the maximum rated for the luminaire, not the lamp.

G. TRACK LIGHTING

This Section Does Not Apply

H. INDOOR LIGHTING CONTROLS (Not Including PAFs)

*Table Instructions: Please include lighting controls for conditioned and unconditioned spaces in this table. When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*	**Building Level Controls**			
	01	02	03	
	Mandatory Demand Response §130.1(e)	Shut-off Controls §130.1(c)	Field Inspector: Pass	Fail
	Required > 10,000 SF	See Area Level Controls	☐	☐
Area Level Controls				

Table Continued

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Humboldt County District Attorney - 5th Floor Remodel	Report Page: Page 3 of 6
Project Address: 825 5th Street, Ste 502	Date Prepared: 1/25/2019

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Skylit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector: Pass	Fail
All Small Offices	Office <= 250 sqft	Manual ON/OFF	Dimmer	Occ Sensor	N/A	N/A	☑	☐	☐
Shared Office 502J	Office <= 250 sqft	Manual ON/OFF	Dimmer	Occ Sensor	Included	N/A	☑	☐	☐
Lobby, Entry,Reception	Lobby, Main Entry	Manual ON/OFF	Dimmer	Occ Sensor	N/A	N/A	☑	☐	☐
Conference 502T	Convention/Conference/Meeting	Manual ON/OFF	Dimmer	Occ Sensor	N/A	N/A	☑	☐	☐
Hall 502E, Corridor	Corridor/Restroom/Support	Manual ON/OFF	Dimmer	Occ Sensor	N/A	N/A	☑	☐	☐
Storage 502S	Corridor/Restroom/Support	Manual ON/OFF	Dimmer	Occ Sensor	N/A	N/A	☑	☐	☐
Cast Waiting 502V	Waiting Area	Manual ON/OFF	Dimmer	Occ Sensor	N/A	N/A	☑	☐	☐
Coffe/Copy 502F	Kitchenette	Manual ON/OFF	Dimmer	Occ Sensor	N/A	N/A	☑	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.

EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2

13 — Plan Sheet Showing Daylit Zones:

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Table Instructions: Complete the table for each area complying using the Complete Building or Area Category Methods per §140.6(b). Indicate if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

01	02	03	04	05	06		
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft^2)	Area (ft^2)	Allowed Wattage (Watts)	Additional Allowances / Adjustments: Footnotes	PAF	Portable Ltg
Office <=250 sqft	Office (<= 250 square feet)	1	1,751	1,751	☐	☐	☐
Lobby, Main Entry, Reception	Main Entry Lobby	0.95	426	404.7	☐	☐	☐
Conference	Convention, Conf., Meeting	1.2	230	276	☐	☐	☐
Corridor/Support	Corridor, Restrm, Stair, Support	0.6	1,034	620.4	☐	☐	☐
Storage	Corridor, Restrm, Stair, Support	0.6	45	27	☐	☐	☐
Waiting	Waiting Area	0.8	300	240	☐	☐	☐
Kitchenette	Kitchen, Food Preparation	1.2	145	174	☐	☐	☐
		TOTAL:	**3,931**	**3,493.1**	See Tables J, K, R for detail		

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Humboldt County District Attorney - 5th Floor Remodel	Report Page: Page 4 of 6
Project Address: 825 5th Street, Ste 502	Date Prepared: 1/25/2019

J. POWER ADJUSTMENT: PORTABLE LIGHTING IN OFFICES

This Section Does Not Apply

K. ADDITIONAL LIGHTING ALLOWANCE: AREA CATEGORY METHOD FOOTNOTES

This Section Does Not Apply

L. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This Section Does Not Apply

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED SPECIAL FUNCTION AREAS

This Section Does Not Apply

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This Section Does Not Apply

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This Section Does Not Apply

P. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This Section Does Not Apply

Q. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This Section Does Not Apply

R. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (PAF)

This Section Does Not Apply

S. RATED POWER REDUCTION COMPLIANCE BY SPACE

This Section Does Not Apply

TITLE 24 GENERAL NOTE

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN STATE OF CALIFORNIA 2016 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL SECTION 13.2.2.

SEE STATE OF CALIFORNIA 2016 BUILDING ENERGY EFFICIENCY STANDARDS SECTIONS 10–103(a)3A AND 10–103(a)3B AND SECTION 130.4 FOR MORE INFORMATION.

SEE STATE OF CALIFORNIA 2016 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL CHAPTER 13 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

SEE STATE OF CALIFORNIA 2016 BUILDING ENERGY EFFICIENCY STANDARDS RESIDENTIAL COMPLIANCE MANUAL CHAPTER 2 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

PROVIDE COMPLETED INSTALLATION CERTIFICATE(S) AND CERTIFICATE(S) OF ACCEPTANCE AS REQUIRED TO THE SATISFACTION OF THE ENFORCEMENT AGENCY.

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Project Leader - Jeff Halliwell
Electrical Lead - Jerry Leonhardt
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER RAYMOND W. SWARTZ No. E15610 Ex.12/31/2019 ELECTRICAL STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

TITLE 24 FORMS (INDOOR)

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

E501

Login Name: Leonhardt
Plot Date: June 27, 2019 - 5:38 pm
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XREFS: x-HC-CH-5th_TITLEBLOCK

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 9/17)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Humboldt County District Attorney - 5th Floor Remodel	Report Page:	Page 5 of 6
Project Address:	825 5th Street, Ste 502	Date Prepared:	1/25/2019

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCI

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
●	○	NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐
●	○	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐
○	●	NRCI-LTI-03-E - Must be submitted for a line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting, to be recognized for compliance.	☐	☐
○	●	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐	☐
○	●	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐	☐
○	●	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
●	○	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐	☐
●	○	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐	☐
○	●	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐	☐
○	●	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF).	☐	☐

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 9/17)

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Humboldt County District Attorney - 5th Floor Remodel	Report Page:	Page 6 of 6
Project Address:	825 5th Street, Ste 502	Date Prepared:	1/25/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

Documentation Author Name:	RAY SWARTZ	Documentation Author Signature:	[signature]
Company:	tk1sc	Signature Date:	1/25/2019
Address:	15231 LAGUNA CANYON RD	CEA/ HERS Certification Identification (if applicable):	E15610
City/State/Zip:	IRVINE, CA 91746	Phone:	949.751.5800

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:	Ray Swartz	Responsible Designer Signature:	[signature]
Company :	tk1sc	Date Signed:	1/25/2019
Address:	15231 Laguna Canyon Road, Suite 100	License:	E15610
City/State/Zip:	Irvien, CA 92618	Phone:	(949) 751 5800

TITLE 24 GENERAL NOTE

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN STATE OF CALIFORNIA 2016 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL SECTION 13.2.2.

SEE STATE OF CALIFORNIA 2016 BUILDING ENERGY EFFICIENCY STANDARDS SECTIONS 10-103(a)3A AND 10-103(a)3B AND SECTION 130.4 FOR MORE INFORMATION.

SEE STATE OF CALIFORNIA 2016 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL CHAPTER 13 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

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PROVIDE COMPLETED INSTALLATION CERTIFICATE(S) AND CERTIFICATE(S) OF ACCEPTANCE AS REQUIRED TO THE SATISFACTION OF THE ENFORCEMENT AGENCY.

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ARCHITECTS + ENGINEERS
300 KNOLLCREST DRIVE
REDDING, CA. 96002
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http://www.nmrdesign.com

CONSULTANTS

tk1sc COLLABORATIVE
15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com
Project Leader - Jeff Halliwell
Electrical Lead - Jerry Leonhardt
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWARTZ
No. E15610
Exp. 12/31/2019
ELECTRICAL
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

TITLE 24 FORMS (INDOOR)

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

E502

Login Name: Leonhardt
Plot Date: June 27, 2019 - 5:38 pm
File Name: P:\2018\2018-0922 Humboldt County Courthouse Rmdl\Drawings and Models\CAD\Electrical\2018-0922 E502 Title 24 (Indoor).dwg
XREFS: x-HC-CH-5th_TITLEBLOCK

STATE OF CALIFORNIA

Electrical Power Distribution

CEC-NRCC-ELC-01-E (Revised 05/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-01-E
Electrical Power Distribution	(Page 1 of 7)
Project Name: Humboldt County Victim / Witness and Cast	Date Prepared: 01/23/2019

A. General Information

Project Address: 825 5th Street, Suite 502 Eureka, CA 95501	Climate Zone: 6	Conditioned Floor Area : 4,178 Unconditioned Floor Area :	
Building Type:	☒ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel
☒ Schools	☐ Relocatable Public Schools	☒ Conditioned Spaces	☐ Unconditioned Spaces
Phase of Construction:	☐ New Construction	☐ Addition	☒ Alteration

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STATE OF CALIFORNIA

Electrical Power Distribution

CEC-NRCC-ELC-01-E (Revised 05/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-01-E
Electrical Power Distribution	(Page 2 of 7)
Project Name: Humboldt County Victim / Witness and Cast	Date Prepared: 01/23/2019

B. Electrical Service Metering

☐ Each newly installed electrical service (in both existing and newly constructed buildings) is required to be metered, as set out in Table 130.5-A, which is reproduced below.

☐ Fill out a separate line for each electrical service that is connected to the building.

Electrical Service Schedule	Electrical Service Rating	Metering Capabilities (check all that are present)				Field Inspector	
A	B	C	D	E	F	G	
Designation/location in building/description	kVA	Instantaneous (at the time) kW demand	Historical peak demand (kW)	Resettable kWh	kWh per rate period	Pass	Fail
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
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		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐

Table 130.5-A - MINIMUM REQUIREMENTS FOR METERING OF ELECTRICAL LOAD

Meter Rating (kVA)	50 kVA or less	More than 50kVA and less than or equal to 250 kVA	More than 250 kVA and less than or equal to 1000kVA	Services rated more than 1000kVA
Instantaneous (at the time) kW demand	Required	Required	Required	Required
Historical peak demand (kW)	Not required	Not required	Required	Required
Resettable kWh	Required	Required	Required	Required
kWh per rate period	Not required	Not required	Not required	Required

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STATE OF CALIFORNIA

Electrical Power Distribution

CEC-NRCC-ELC-01-E (Revised 05/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-01-E
Electrical Power Distribution	(Page 3 of 7)
Project Name: Humboldt County Victim / Witness and Cast	Date Prepared: 01/23/2019

C. Disaggregation of Electrical Circuits

☐ Each newly installed switchboard, panel, and motor control center (in both existing and newly constructed buildings) is required to be disaggregated according to the requirements of Table 130.5-B, shown on the next page.

☐ Individual branch circuits, taps or disconnects that require overcurrent protection devices rated 60A or greater.

☐ As an alternative, current transformers can be added for individual branch circuits and loads throughout the building, and a permanent measurement system can be installed. In this case, disaggregated wiring would not be required as long as the metering system allows the equivalent disaggregated measurements.

☐ Fill out a separate line for each switchboard, motor control center, panelboard and subpanel.

Switchboard, motor control center, panelboard or subpanel	Electrical Service that supplies that switchboard or panel	Electrical Service Rating	Field Inspector	
			Pass	Fail
A	B	C	D	
Designation/location in building/description	Designation/location in building/description	kVA	☐	☐
-	-	-	☐	☐
	-	-	☐	☐
			☐	☐
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			☐	☐
			☐	☐
OR Current transformers have been attached to individual branch circuits and loads throughout the building, and a permanent measurement system is installed that allows an equivalent degree of disaggregated measurement as required by the Standards..			☐	☐

STATE OF CALIFORNIA

Electrical Power Distribution

CEC-NRCC-ELC-01-E (Revised 05/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-01-E
Electrical Power Distribution	(Page 4 of 7)
Project Name: Humboldt County Victim / Witness and Cast	Date Prepared: 01/23/2019

D. Disaggregation of Electrical Circuits (continued)

Table 130.5-B - MINIMUM REQUIREMENTS FOR SEPARATION OF ELECTRICAL LOAD

Table 130.5 – B sets the upper limit on how many load(s) of each type can be supplied by each feeder. A feeder may not supply loads of more than one type unless the service is rated at 50 kVA or less. For instance, on the fifth row of the table, one feeder on a service >50 kVA could be used to supply all the plug loads on a floor of a building, provided that there are no areas in which more than 25kVA of plug load is supplied to a space less than 5000sf

Load Type	Services rated 50 kVA or less	Services rated more than 50kVA and less than or equal to 250 kVA	Services rated more than 250 kVA and less than or equal to 1000kVA	Services rated more than 1000kVA
Lighting including exit and egress lighting and exterior lighting	Not required	All lighting in aggregate	All lighting disaggregated by floor, type or area	All lighting disaggregated by floor, type or area
HVAC systems and components including chillers, fans, heaters, furnaces, package units, cooling towers, and circulation pumps associated with HVAC	Not required	All HVAC in aggregate	All HVAC in aggregate and each HVAC load rated at least 50 kVA	All HVAC in aggregate and each HVAC load rated at least 50kVA
Domestic and service water system pumps and related systems and components	Not required	All loads in aggregate	All loads in aggregate	All loads in aggregate
Plug load including appliances rated less than 25 kVA	Not required	All plug load in aggregate Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	All plug load separated by floor, type or area Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	All plug loads separated by floor, type or area. All groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf
Elevators, escalators, moving walks, and transit systems	Not required	All loads in aggregate	All loads in aggregate	All loads in aggregate
Other individual non-HVAC loads or appliances rated 25kVA or greater	Not required	All	Each	Each
Industrial and commercial load centers 25 kVA or greater including theatrical lighting installations and commercial kitchens	Not required	All	Each	Each
Renewable power source (net or total)	Each group	Each group	Each group	Each group
Loads associated with renewable power source	Not required	All loads in aggregate	All loads in aggregate	All loads in aggregate
Charging stations for electric vehicles	All loads in aggregate	All loads in aggregate	All loads in aggregate	All loads in aggregate

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STATE OF CALIFORNIA

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CERTIFICATE OF COMPLIANCE	NRCC-ELC-01-E
Electrical Power Distribution	(Page 5 of 7)
Project Name: Humboldt County Victim / Witness and Cast	Date Prepared: 01/23/2019

E. Voltage Drop

☐ Attach voltage drop worksheet to this form,

☐ Field inspector has discretion to approve the worksheets; the tables shown below in this section are advisory only

☐ Feeder conductors and branch circuits that are dedicated to emergency services are exempt from these requirements.

☐ An advisory table of typical power factors is shown below

	Field Inspector	
	Pass	Fail
Feeders. Feeder conductors shall be sized for a maximum voltage drop of 2 percent at design load.	☐	☐
Branch Circuits. Branch circuit conductors shall be sized for a maximum voltage drop of 3 percent at design load.	☐	☐

Compliance Manual, Chapter 8, Table 8 2: Typical Power Factors for Voltage Drop Calculations

Load Type	Default Power Factor at 120 volts	Default Power Factor at 277 volts	Clarifying Notes
Fluorescent lighting	0.95	0.95	
Compact fluorescent lighting	0.9 (hardwired) 0.5 (GU-24)	0.9 (hardwired) 0.3 (GU-24)	NPF magnetic ballasts use GU-24 values
LED lighting	0.7	0.5	May be higher if specifications call for high power factor drivers
Incandescent lighting	1.0	1.0	
HID lighting	0.9	0.9	May be lower if NPF ballasts are specified
HVAC packages	0.85	0.9	
Other motors <5 HP	0.8	0.8	
Other motors >5 HP	0.85	0.85	
Kitchen equipment	0.9	N/A	
Receptacles	0.6	N/A	For dedicated receptacles, may be rated according to the load
Electric heating including hot water	1.0	1.0	
Other	0.85	0.85	

STATE OF CALIFORNIA

Electrical Power Distribution

CEC-NRCC-ELC-01-E (Revised 05/15) CALIFORNIA ENERGY COMMISSION

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Electrical Power Distribution	(Page 6 of 7)
Project Name: Humboldt County Victim / Witness and Cast	Date Prepared: 01/23/2019

F. Circuit Controls for 120-Volt Receptacles

☐ Controlled 120 volt receptacles shall be provided, as required by Section 130.5(d) of the Standards.

☐ In open office areas, controlled circuit receptacles are not required if, at time of final permit, workstations are installed, and each workstation is equipped with an occupant sensing control that is permanently mounted in each workstation, and which controls a hardwired, nonresidential-rated power strip. Plug-in strips and other plug-in devices that incorporate an occupant sensor shall not be used for this exception.

☐ Receptacles that are only for the following purposes are exempt:
-Receptacles specifically for refrigerators and water dispensers in kitchenettes.
-Receptacles located a minimum of six feet above the floor that are specifically for clocks.
-Receptacles for network copiers, fax machines, A/V and data equipment other than personal computers in copy rooms.

	Field Inspector	
	Pass	Fail
1. At least one controlled receptacle is installed within 6 feet of each uncontrolled receptacle, or split-wired duplex receptacles are installed, that have one controlled and one uncontrolled receptacle. This applies in all of the following spaces: • Private offices, open office areas • Receptions and lobbies • Conference rooms • Kitchenettes in office spaces • Copy room	☐	☐
2. Electric circuits serving controlled receptacles are equipped with automatic shut-OFF controls following the requirements prescribed in Section 130.1(c)1 through 5 (in many cases this will mean that the receptacles are connected to the same automatic shut-OFF system as the general lighting of the space).	☐	☐
3. Controlled receptacles shall have a permanent marking to differentiate them from uncontrolled receptacles.	☐	☐
4. For open office areas, controlled circuits shall be provided and marked to support installation and configuration of office furniture with receptacles that comply with Section 130.5(d) 1, 2, and 3.	☐	☐
5. For hotel and motel guest rooms at least one-half of the 120-volt receptacles in each guest room are controlled receptacles that comply with Section 130.5(d)1, 2, and 3 (see numbers 1,2 and 3 above). Electric circuits serving controlled receptacles have captive card key controls, occupancy sensing controls, or automatic controls such that, no longer than 30 minutes after the guest room has been vacated, power is switched off.	☐	☐
6. Plug-in strips and other plug-in devices that incorporate an occupant sensor are not used to comply with any of these requirements.	☐	☐

STATE OF CALIFORNIA

Electrical Power Distribution

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CERTIFICATE OF COMPLIANCE	NRCC-ELC-01-E
Electrical Power Distribution	(Page 7 of 7)
Project Name: Humboldt County Victim / Witness and Cast	Date Prepared: 01/23/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Ray Swartz	Documentation Author Signature:
Company: tk1sc	Signature Date: 01/23/2019
Address: 15231 Laguna Canyon Rd, Suite100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Irvine, CA 92618	Phone: (951) 751-5800

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).
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Responsible Designer Name: Ray Swartz	Responsible Designer Signature:
Company : tk1sc	Date Signed: 01/23/2019
Address: 15231 Laguna Canyon Rd, Suite100	License: E15610
City/State/Zip: Irvine, CA 92618	Phone: (951) 751-5800

VOLTAGE DROP WORKSHEET: TITLE 24– FOR REFERENCE ONLY

1. ALL BRANCH CIRCUITS ARE DESIGNED TO LIMIT VOLTAGE DROP 3% OR LESS USING THE FOLLOWING CRITERIA:

120 VOLT, 1 PHASE LOAD:

LOAD (VA)	DISTANCE	CU CONDUCTOR SIZE
0–1000 VA 0–8 AMPS	0–130 FT	#12
	131–205 FT	#10
	205–330 FT	#8
1001–1500 VA 8–12.5 AMPS	0–87 FT	#12
	88–138 FT	#10
	139–219 FT	#8
	220–350 FT	#6
1501–1920 VA 12.5–16 AMPS	0–68 FT	#12
	69–108 FT	#10
	109–172 FT	#8
	173–273 FT	#6
1921–2880 VA 16–24 AMPS	0–72 FT	#10
	73–114 FT	#8
	115–182 FT	#6

208 VOLT, 1 PHASE LOAD:

LOAD (VA)	DISTANCE	CU CONDUCTOR SIZE
0–1000 VA (500 PER PHASE) 0–4.8 AMPS	0–225 FT	#12
	226–360 FT	#10
	361–572 FT	#8
1001–2000 VA (1,000 PER PHASE) 4.8–9.6 AMPS	0–151 FT	#12
	152–240 FT	#10
	241–380 FT	#8
	381–604 FT	#6
2001–3,328 VA (1,664 PER PHASE) 9.6–16 AMPS	0–78 FT	#12
	79–125 FT	#10
	126–198 FT	#8
3329–4,992 VA (2,496 PER PHASE) 16–24 AMPS	0–52 FT	#12
	53–83 FT	#10
	84–132 FT	#8

277 VOLT, 1 PHASE LOAD:

LOAD (VA)	DISTANCE	CU CONDUCTOR SIZE
0–4432 VA 0–16 AMPS	0–158 FT	#12
	159–250 FT	#10
	251–397 FT	#8

480 VOLT, 3 PHASE LOAD:

LOAD (VA)	DISTANCE	CU CONDUCTOR SIZE
0–13,296 VA (4,432 PER PHASE) 0–16 AMPS	0–45 FT	#12
	46–72 FT	#10
	73–114 FT	#8
13,297–19,994 VA (6,648 PER PHASE) 16–24 AMPS	0–30 FT	#12
	31–48 FT	#10
	49–76 FT	#8

ANY 3 PHASE LOADS GREATER THAN 30 AMPS ARE SHOWN ON THE FEEDER SCHEDULE OR MOTORIZED EQUIPMENT SCHEDULE WITH ASSOCIATED VOLTAGE DROP LIMITED TO 2% OR LESS.

TITLE 24 GENERAL NOTE

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN STATE OF CALIFORNIA 2016 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL SECTION 13.2.2.

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CONSULTANTS

tk1sc COLLABORATIVE
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Irvine, California 92618
949.751.5800 www.tk1sc.com

Project Leader - Jeff Halliwell
Electrical Lead - Jerry Leonhardt
tk1sc Job #2018-0922

LICENSE STAMPS

RAYMOND W. SWARTZ
No. E15610
Ex.12/31/2019

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

TITLE 24 FORMS (POWER)

DRAWING STATUS

CONSTRUCTION DOCUMENTS

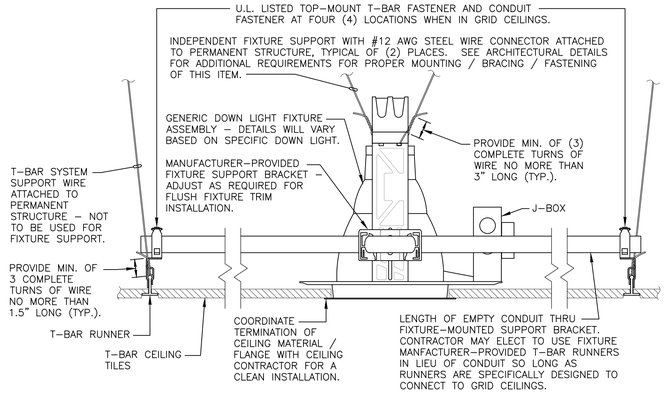
REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

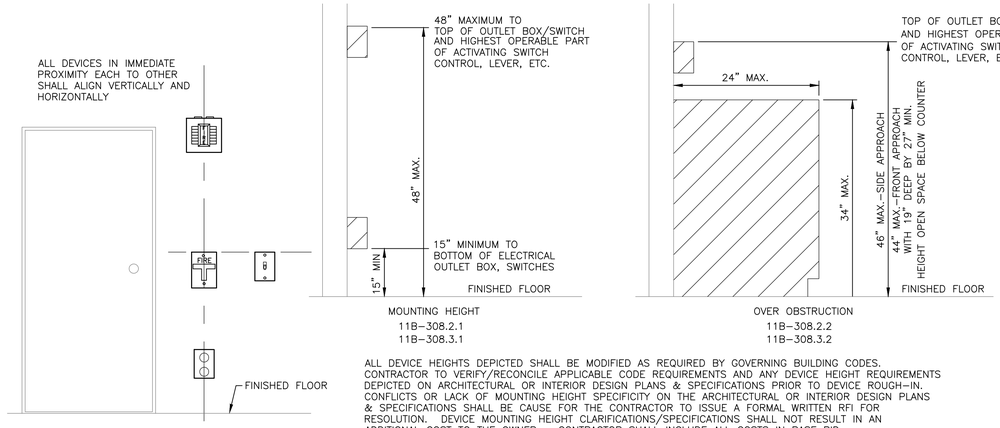
SHEET No.

E503



DOWN LIGHT FIXTURE SUPPORT DETAIL (T-BAR) 4

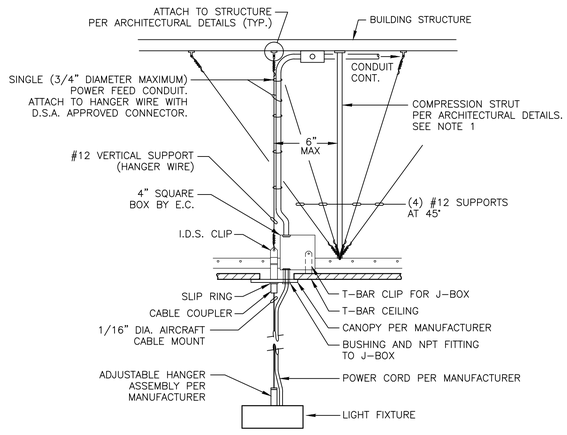
SCALE: NTS



ALL DEVICE HEIGHTS DEPICTED SHALL BE MODIFIED AS REQUIRED BY GOVERNING BUILDING CODES. CONTRACTOR TO VERIFY/RECONCILE APPLICABLE CODE REQUIREMENTS AND ANY DEVICE HEIGHT REQUIREMENTS DEPICTED ON ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS PRIOR TO DEVICE ROUGH-IN. CONFLICTS OR LACK OF MOUNTING HEIGHT SPECIFICITY ON THE ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS SHALL BE CAUSE FOR THE CONTRACTOR TO ISSUE A FORMAL WRITTEN RFI FOR RESOLUTION. DEVICE MOUNTING HEIGHT CLARIFICATIONS/SPECIFICATIONS SHALL NOT RESULT IN AN ADDITIONAL COST TO THE OWNER - CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID.

DEVICE ALIGNMENT AND MOUNTING HEIGHT DETAILS 1

SCALE: NTS

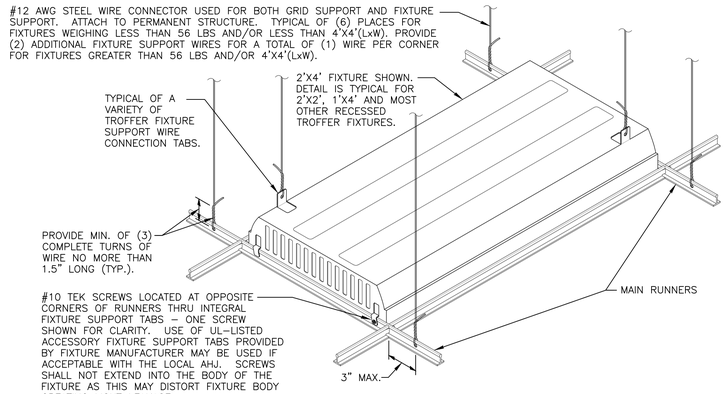


NOTES:

1. COMPRESSION STRUT PER ARCHITECTURAL DETAILS. ATTACH TO MAIN RUNNERS WITHIN 2" OF CROSS RUNNER WITH 2-#12 SELF-DRILLING SELF-TAPPING (SDST) SCREWS AND TO STRUCTURE WITH 2-#12 x 2" SCREWS AT WOOD OR 3/16" DIAMETER ANCHOR AT CONCRETE/STEEL. COMPRESSION STRUT SHALL NOT REPLACE HANGER WIRE.
2. SUSPENSION SYSTEMS FOR LIGHT FIXTURES WHICH HAVE PASSED SHAKING TABLE TESTS APPROVED BY D.S.A., OR WHICH, AS INSTALLED, ARE FREE TO SWING A MINIMUM OF 45° FROM THE VERTICAL IN ALL DIRECTIONS WITHOUT CONTACTING OBSTRUCTIONS, SHALL BE ASSUMED TO COMPLY WITH THE LATERAL-FORCE REQUIREMENTS OF 2007 C.B.C. SECTION 1614A AND CHAPTER 13, ASCE 7-05. UNLESS THE CABLE-TYPE, FREE-SWINGING SUSPENSION SYSTEMS SHALL HAVE A SAFETY WIRE OR CABLE ATTACHED TO THE FIXTURE AND STRUCTURE AT EACH SUPPORT CAPABLE OF SUPPORTING (4) FOUR TIMES THE SUPPORTED LOAD MINIMUM.
3. CONTRACTOR TO VERIFY EXACT AIRCRAFT CABLE LENGTHS AND FIXTURE MOUNTING HEIGHTS ABOVE FINISHED FLOOR.
4. SUPPORT TYPICAL FOR FEED POINT. SIMILAR FOR NON FEED POINT (WITHOUT J-BOX AND FLEX).
5. SHOULD A CONFLICT OCCUR BETWEEN FIXTURE SUPPORT DETAIL AND HVAC DUCT ROUTING, E.C. SHALL INCLUDE ALL COSTS IN BASE BID TO PROVIDE A UNISTRUT "TRAPEZE" WITH 3/8" DIAMETER THREADED ROD HANGERS AROUND THE HVAC DUCT OR OTHER OBSTRUCTION. TRAPEZE SHALL BE SUBMITTED TO PROJECT STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OR ORDERING TRAPEZE MATERIAL.
6. PROVIDE POSITIVE CONNECTION FOR HANGER WIRE AT CEILING GRID.

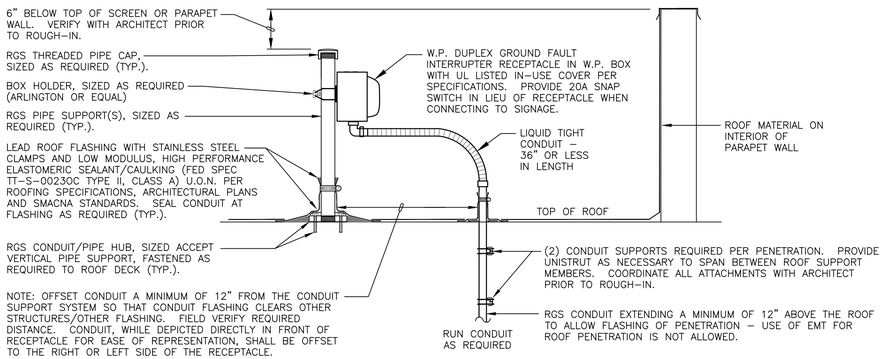
CABLE MOUNTED FIXTURE DETAIL (T-BAR) 5

SCALE: NTS



FIXTURE SUPPORT DETAIL 2

SCALE: NTS



HOLIDAY/STAND ALONE/SIGN DISCONNECT SWITCH/RECEPTACLE MOUNTING DETAIL 3

SCALE: NTS

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tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER RAYMOND W. SWARTZ No. E15610 12/31/2019 ELECTRICAL STATE OF CALIFORNIA

PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
DETAILS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
E601

Login Name: Loonhardt
Plot Date: June 27, 2019 - 5:59 pm
File Name: P:\2018\2018022 Humboldt County Courthouse Rmdl\Drawings and Models\CAD\Electrical\2018-0922 E601Details.dwg
XREFS: x-HC-CH-5th_TITLEBLOCK

FIRE ALARM SYSTEM SPECIFICATIONS

PART 1 – GENERAL REQUIREMENTS

GENERAL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FURNISHING OF ALL FINAL DESIGN, AGENCY APPROVALS, PLAN CHECK FEES, LABOR, EQUIPMENT, MATERIALS, AND PERFORMANCE OF OPERATIONS IN CONNECTION WITH THE INSTALLATION OF A COMPLETE AND FULLY FUNCTIONING CODE APPROVED FIRE ALARM SYSTEM.

THE COMPLETE INSTALLATION SHALL CONFORM TO APPLICABLE SECTIONS OF **NFPA–72 2016** EDITION OR LATEST ADOPTED VERSION, LOCAL CODE REQUIREMENTS AND NATIONAL ELECTRICAL CODE.

IT IS THE INTENT OF THE CONTRACT DOCUMENTS, WHICH ARE PRESENTED IN A DIAGRAMMATIC, "DESIGN–BUILD" FORMAT, FOR THE CONTRACTOR TO DESIGN, PROVIDE AND INSTALL A COMPLETE AND FULLY FUNCTIONING, CODE APPROVED FIRE ALARM SYSTEM. IN THE EVENT THAT ADDITIONAL DETAILS OR SPECIAL CONSTRUCTION IS REQUIRED FOR WORK INDICATED OR SPECIFIED IN THIS SECTION OR WORK SPECIFIED IN OTHER SECTIONS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MATERIAL AND EQUIPMENT WHICH IS USUALLY FURNISHED WITH SUCH SYSTEMS, IN ORDER TO PROVIDE A COMPLETE AND FULLY FUNCTIONING INSTALLATION, WHETHER MENTIONED HEREIN OR NOT.

DESIGN REQUIREMENTS: THE FIRE ALARM SYSTEM SHALL BE RESPONSIBLE FOR CONTINUALLY SUPERVISING AND MONITORING BY ZONE THE FOLLOWING INITIATING, SIGNALING AND MONITORING CIRCUITS (AT A MINIMUM):

MANUAL FIRE PULL STATIONS.
SMOKE AND HEAT DETECTORS – INCLUDING THOSE REQUIRED UNDER OTHER SECTIONS.
(FOR HVAC, SHUTOFF, SMOKE FIRE DAMPER CONTROL, ETC.)
SPRINKLER FLOW / TAMPER SWITCHES – INCLUDING THOSE IN OTHER SECTIONS.
PIV / OS&Y DEVICES – INCLUDING THOSE INSTALLED IN OTHER SECTIONS.
ALARM SIGNALING CIRCUITS.
REMOTE ANNUNCIATE.

SYSTEM CONTROLS SHALL BE U.L. LISTED FOR POWER LIMITED APPLICATIONS PER NEC (OR CEC WHERE ADOPTED) **ART. 760.121**. SYSTEM SHALL BE CAPABLE OF COMMUNICATING WITH AN OFFICE SITE CENTRAL MONITORING SYSTEM.

ALL WIRING SHALL BE INSTALLED IN CONCEALED CONDUIT. ROUTE FIRE ALARM SYSTEM WIRING IN SEPARATE CONDUITS FROM ALL OTHER WIRING. ADDITIONALLY:

1. WHEN CONDUIT CANNOT BE CONCEALED, CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM ARCHITECT/ENGINEER TO PROVIDE SURFACE RACEWAYS OR CONDUITS PRIOR TO ANY ROUGH–IN. SURFACE RACEWAYS AND CONDUITS SHALL BE PROPERLY PREPARED AND PAINTED – COLOR AS SELECTED BY ARCHITECT/ENGINEER.
2. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, CONDUITS SHALL BE ROUTED NEATLY AND IN PARALLEL TO STRUCTURES OR DUCT WORK.
3. VISUALLY OBJECTIONABLE CONDUITS SHALL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.

SYSTEM SHALL UTILIZE INTELLIGENT ANALOG ADDRESSABLE SENSORS. ALL OPEN AREA SENSORS SHALL BE LOW PROFILE DESIGN (MAXIMUM ALLOWABLE HEIGHT 2.25").

CONTROL PANEL SHALL EMPLOY AUTOMATIC DRIFT COMPENSATION OF SMOKE DETECTORS. CONTROL PANEL SHALL MEET THE REQUIREMENTS OF NAPA CHAPTER 7 FOR CALIBRATED TEST.

MANUAL STATIONS SHALL BE DUAL ACTION WITH A KEYED RESET. KEY SHALL MATCH THE CONTROL PANEL. STATIONS SHALL BE ADA 5 LB. PULL FORCE APPROVED.

ALL AUDIO VISUAL DEVICES SHALL BE MANUFACTURER'S STANDARD WHITE UNLESS OTHERWISE NOTED. ALL VISUAL DEVICES WITHIN THE SAME AREA SHALL BE SYNCHRONIZED.

PROVIDE ALL NECESSARY CONDUIT(S) AND CONDUCTORS AS REQUIRED TO CONNECT DEVICES REQUIRED TO BE MONITORED BY THE LOCAL AUTHORITY HAVING JURISDICTION. THESE INCLUDE, BUT ARE NOT LIMITED TO, PIV(S), BACKFLOW PREVENTER(S), DETECTOR CHECK VALVE(S), OS&Y VALVE(S), ETC. REFER TO CIVIL/PLUMBING DRAWINGS FOR EXACT LOCATIONS AND QUANTITIES OF THESE DEVICES.

CONTROL PANEL SHALL BE FIELD PROGRAMMABLE WITHOUT THE USE OF A LAP TOP COMPUTER OR OTHER SPECIAL INSTRUMENTS.

REQUIRED APPROVALS: THE FIRE ALARM SYSTEM SHALL BE APPROVED BY THE LOCAL FIRE AUTHORITY IN ADDITION TO ANY OTHER REQUIRED APPROVALS. THIS APPROVAL SHALL BE OBTAINED PRIOR TO THE SUBMITTAL OF SHOP DRAWING DOCUMENTATION TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL.

INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DRAWINGS, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS NUMBERS OF FIRE ALARM COMPONENTS, ARE SUBMITTED TO AND APPROVED BY THE LOCAL FIRE MARSHAL. WRITTEN CERTIFICATION BY FIRE ALARM EQUIPMENT DISTRIBUTOR OR MANUFACTURER SHALL BE SUBMITTED TO THE ARCHITECT AND THE STATE FIRE MARSHAL STATING THAT THE NEW SYSTEM AND ITS COMPONENT PARTS ARE AS "APPROVED AND LISTED" BY THE STATE FIRE MARSHAL AND THAT INSTALLATION CONFORMS IN ALL RESPECTS TO REQUIREMENTS SET FORTH IN ARTICLE 72, TITLE 24, PART 2, CALIFORNIA CODE OF REGULATIONS. FIRE ALARM SYSTEM CONSTRUCTION SHALL NOT BE STARTED UNTIL FIRE ALARM DRAWINGS ARE APPROVED BY AHJ AND ENGINEER.

SYSTEM PERFORMANCE: FURNISH AND INSTALL A COMPLETE FIRE ALARM SYSTEM AS DESCRIBED HEREIN AND AS INDICATED ON DRAWINGS TO BE WIRED, CONNECTED, AND LEFT IN FIRST CLASS OPERATING CONDITION. SYSTEM SHALL USE CLOSED LOOP INITIATING DEVICE CIRCUITS WITH INDIVIDUAL ZONE SUPERVISION, INDIVIDUAL INDICATING APPLIANCE CIRCUIT SUPERVISION, INCOMING AND STANDBY POWER SUPERVISION. INCLUDE A CONTROL PANEL, MANUAL PULL STATIONS, AUTOMATIC FIRE DETECTORS, HORNS, BELLS, FLASHING LIGHTS, ANNUNCIATOR, ALL WIRING, CONNECTIONS TO DEVICES, OUTLET BOXES, JUNCTION BOXES, AND ALL OTHER NECESSARY MATERIAL FOR A COMPLETE OPERATING SYSTEM.

SUBMITTALS: SUBMIT IN ACCORDANCE WITH PROJECT GENERAL REQUIREMENTS SPECIFICATIONS. SHOW EQUIPMENT LOCATIONS, WIRING SCHEMATICS, DETAILS, PANEL CONFIGURATION AND SIZES AND A POINT–TO–POINT SCHEMATICS OF CIRCUITS AND ZONE SCHEDULES. INCLUDE FRONT ELEVATIONS, CABINET DIMENSIONS, TYPE OF MOUNTING, DOORS, BARRIERS, CATALOG NUMBER OF LOCKS, AND FINISHES FOR ALL TERMINAL CABINETS. SHOW INTERFACES TO EQUIPMENT FURNISHED BY OTHERS, IDENTIFYING NUMBERS OF WIRES AND TERMINATION REQUIREMENTS. PROVIDE MANUFACTURER CUT SHEETS FOR ALL SYSTEM COMPONENTS INDICATING U.L. AND CSFM LISTINGS. GENERIC CUT SHEETS ARE UNACCEPTABLE – EACH CUT SHEET SHALL INDICATE/IDENTIFY SPECIFIC COMPONENTS ALONG WITH ANY REQUIRED COMPONENT OPTIONS/ACCESSORIES UTILIZED ON THE PROJECT. PROVIDE COMPLETE SEQUENCE OF OPERATIONS OF SYSTEM. PROVIDE COMPLETE SYSTEM WIRING DIAGRAMS FOR COMPONENTS CONNECTED TO SYSTEM AND INTERFACES TO EXISTING EQUIPMENT. PROVIDE A COPY OF ANY STATE OR LOCAL FIRE ALARM SYSTEM EQUIPMENT APPROVALS. PROVIDE ONE COPY OF ACCEPTANCE TEST PROCEDURES FOR REVIEW.

CERTIFICATION OF INSTALLATION COMPANY:

A. PROOF THAT THE FIRE ALARM CONTRACTOR IS UNDERWRITERS LABORATORIES, INC. (U.L.) LISTED UNDER THE CLASSIFICATION OF "PROTECTIVE SIGNALING SERVICES– LOCAL, AUXILIARY, REMOTE STATION AND PROPRIETARY (UUJS) AND CENTRAL STATION PROTECTIVE SIGNALING SERVICES (UUFX)."
B. COPY OF THE FOLLOWING (NICET) CERTIFICATES. PROOF THAT THE CERTIFICATE HOLDERS ARE A PART OF THE FIRE ALARM CONTRACTOR'S LOCAL FACILITY SERVICING THIS PROJECT AND WILL INSTALL THE FIRE ALARM SYSTEM. NON–NICET INSTALLERS MAY BE UTILIZED ON THE PROJECT TO ASSIST NICET–CERTIFIED INSTALLER ONLY IF DIRECTLY SUPERVISED BY NICET–CERTIFIED INSTALLER. THE RATIO OF NICET–TO–NON–NICET INSTALLERS SHALL NOT EXCEED 1:3.
    1. CERTIFIED NICET TECHNICIAN LEVEL 2 (INSTALLER).
    2. CERTIFIED NICET TECHNICIAN LEVEL 4 (SUPERVISOR)
C. QUALITY ASSURANCE: WORK SHALL BE PERFORMED BY A QUALIFIED SYSTEMS CONTRACTOR HOLDING A C–10 LICENSE.
D. AUTHORIZATION LETTERS: LETTER FROM THE FIRE ALARM EQUIPMENT MANUFACTURER STATING THAT THE FIRE ALARM CONTRACTOR IS A FACTORY AUTHORIZED DISTRIBUTOR, AND IS TRAINED AND CERTIFIED FOR THE EQUIPMENT PROPOSED ON THIS PROJECT AND IS LICENSED TO PURCHASE AND INSTALL THE SOFTWARE REQUIRED TO PROVIDE THE SPECIFIED FUNCTIONS.

WARRANTY: CONTRACTOR SHALL WARRANT COMPLETED FIRE ALARM SYSTEM WIRING AND EQUIPMENT TO BE FREE FROM INHERENT MECHANICAL AND ELECTRICAL DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF COMPLETION AND CERTIFIED TEST, OR FROM DATE OF FIRST BENEFICIAL USE. THE EQUIPMENT MANUFACTURER SHALL MAKE AVAILABLE TO THE OWNER A MAINTENANCE CONTRACT PROPOSAL TO PROVIDE A MINIMUM OF (2) INSPECTIONS AND TESTS PER YEAR IN COMPLIANCE WITH NFPA–72 GUIDELINES.

PART II – EXECUTION

ZONING: THE BUILDING SHALL BE DIVIDED INTO ZONES FOR ALARM ANNUNCIATION AND SYSTEM CONFIGURATION PER THE REQUIREMENTS OF THE LOCAL FIRE MARSHAL AND/OR AUTHORITY. A ZONE WILL BE ASSIGNED FOR EACH SPRINKLER FLOW SWITCH AND EACH TAMPER SWITCH. AIR–HANDLING SYSTEMS REQUIRING IN–DUCT DETECTION SHALL BE ZONED PER UNIT. UNIT SHALL BE SHUT DOWN DIRECTLY BY AUXILIARY RELAY CONTROLLED BY DUCT SMOKE DETECTOR.

ACCEPTANCE TESTING: FINAL ACCEPTANCE WILL BE GIVEN AFTER SUCCESSFUL ACCEPTANCE TESTING AND SUBMISSION OF APPROVED AS–BUILT DOCUMENTATION AND OPERATION AND MAINTENANCE MANUALS. ACCEPTANCE TESTING OF FIRE DETECTION SYSTEM SHALL BE AS REQUIRED BY THE STATE FIRE MARSHAL AND LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING REQUIRED TESTING, COORDINATING SCHEDULING, AND CONDUCTING TEST NECESSARY TO ACHIEVE OCCUPANCY CERTIFICATION. TESTS SHALL INCLUDE THE FOLLOWING:

AN OPERATION OF EACH INITIATING DEVICE.
AN OPERATION OF EACH INDICATING DEVICE (ALARM, HORN, AND ALARM LAMP).
OPERATION OF ALL FEATURES OF SYSTEM UNDER NORMAL OPERATION.
OPERATION OF SUPERVISORY FEATURES OF SYSTEM.
OPERATION OF SYSTEM ON STANDBY POWER WITH PRIMARY POWER OFF.

UPON COMPLETION OF INSTALLATION OF FIRE ALARM EQUIPMENT, ELECTRICAL CONTRACTOR SHALL PROVIDE TO THE ENGINEER A SIGNED, WRITTEN STATEMENT CONFIRMING THAT THE FIRE ALARM EQUIPMENT WAS INSTALLED IN ACCORDANCE WITH SPECIFICATIONS, WIRING DIAGRAMS, INSTRUCTIONS AND DIRECTIONS PROVIDED BY MANUFACTURER. A COMPLETE DESCRIPTION OF NATURE AND SCOPE OF TRAINING PROGRAM FOR MAINTENANCE TECHNICIANS, OPERATORS, SYSTEM USERS, AND MANAGEMENT PERSONNEL SHALL BE PROVIDED. CONTRACTOR SHALL PROVIDE A COMPLETE TRAINING PROGRAM FOR SYSTEM USERS, AND A MINIMUM OF (4) COPIES OF OPERATING INSTRUCTIONS. IN ADDITION, CONTRACTOR SHALL PROVIDE A TRAINING PROGRAM FOR THE OWNER'S MAINTENANCE PERSONNEL. THIS TRAINING SHALL BE PROVIDED FOR A MINIMUM OF (3) PERSONS WITHIN ONE YEAR OF COMPLETION DATE. COSTS FOR INSTRUCTION SHALL BE PAID BY CONTRACTOR. TRAINING SHALL BE SCHEDULED AND COORDINATED BY THE OWNER.

NFPA 72, CHAPTER 7, INSPECTION TESTING AND MAINTENANCE COMPLETE THE INSPECTION AND TESTING FORM IN ITS ENTIRETY. SUBMIT A COPY TO THE OWNER, ARCHITECT AND FIRE AUTHORITY.

PART III – PRODUCTS (FACP)

FIRE ALARM EQUIPMENT SHALL BE U.L. LISTED AND C.S.F.M. LISTED. CATALOG AND MODEL NUMBERS LISTED ARE INTENDED TO ESTABLISH TYPE AND QUALITY OF EQUIPMENT AND SYSTEM DESIGN AS WELL AS OPERATING FEATURES REQUIRED. MANUFACTURER'S SPECIFICATION SHEETS OF EACH ITEM SO LISTED SHALL BE CONSIDERED TO BE A PART OF THESE SPECIFICATIONS AND BINDING HEREIN. ANY DEVIATION FROM INTENDED FUNCTIONS OF SYSTEM SPECIFIED MAY NOT BE APPROVED, AT OPTION OF THE OWNER/ENGINEER.

EQUIPMENT SUBSTITUTIONS MUST BE PRE–APPROVED BY THE ELECTRICAL ENGINEER (10) DAYS PRIOR TO THE BID DATE. CONTRACTOR MUST SHOW OPERATION OF EQUIPMENT AND COMPLIANCE WITH ALL FUNCTIONS AND FEATURES SPECIFIED. EQUIPMENT SUBSTITUTIONS NOT PRE–APPROVED PRIOR TO BID DATE WILL BE REJECTED.

FIRE ALARM CONTROL PANEL (FACP): WHERE INDICATED ON DRAWINGS, PROVIDE AND INSTALL A FIRE ALARM CONTROL PANEL. CONSTRUCTION SHALL BE MODULAR WITH SOLID STATE, MICROPROCESSOR–BASED ELECTRONICS.

FIRE ALARM SYSTEM POWER SUPPLY (FAPS): THE FAPS IS A DEVICE DESIGNED FOR USE AS EITHER A REMOTE 24 VOLT POWER SUPPLY OR USED TO POWER NOTIFICATION APPLIANCES. THE FAPS SHALL OFFER UP TO 6.0 AMPS (4.0 AMPS CONTINUOUS) OF REGULATED 24 VOLT POWER. IT SHALL INCLUDE AN INTEGRAL CHARGER DESIGNED TO CHARGE 7.0 AMP HOUR BATTERIES AND TO SUPPORT 60 HOUR STANDBY. THE FAPS SHALL HAVE TWO INPUT TRIGGERS. THE INPUT TRIGGER SHALL BE A NOTIFICATION APPLIANCE CIRCUIT (FROM THE FIRE ALARM CONTROL PANEL) OR A RELAY. FOUR OUTPUTS (TWO STYLE Y OR Z AND TWO STYLE Y) SHALL BE AVAILABLE FOR CONNECTION TO THE NOTIFICATION DEVICES. THE FAPS SHALL INCLUDE THE ABILITY TO DELAY THE AC FAIL DELAY PER NFPA REQUIREMENTS.

VOICE EVACUATION PANEL (VEC): THE VC IS SELF–CONTAINED A.V. POWER SUPPLY/TRANSPONDER FOR USE WITH DISTRIBUTED MULTI CHANNEL VOICE SYSTEMS CAPABLE OF UP TO FOUR SIMULTANEOUS MESSAGES (MINIMUM OF EIGHT WHEN USED AS PART OF A MASS NOTIFICATION SYSTEM). IT CONTAINS AN INTEGRATED AUDIO AMPLIFICATION AND DISTRIBUTION SUB SYSTEM CONTROLLED BY THE FLAP. THE TRANSPONDER SHALL BE CAPABLE OF PLAYING UP TO FOUR SIMULTANEOUS MESSAGES OVER (4) INTEGRATED, CONTINUOUSLY SUPERVISED SPEAKER CIRCUITS. A FIREMAN'S MICROPHONE WITH ALL–CALL LOCAL PAGE CAPABILITY SHALL BE PROVIDED.

ANNUNCIATOR/NETWORK SYSTEM ANNUNCIATOR: WHERE INDICATED ON DRAWINGS, PROVIDE AND INSTALL A CHARACTER DISPLAY REMOTE ANNUNCIATOR. REMOTE ANNUNCIATOR SHALL BE ELECTRICALLY SUPERVISED FROM CONTROL PANEL. REMOTE ANNUNCIATOR SHALL BE INSTALLED IN A FLUSH OR SURFACE MOUNTED CABINET WITH HINGED DOOR AND LOCK. COORDINATE FINAL LOCATION OF ALL ANUNNCIATORS WITH THE ARCHITECT AND LOCAL AHJ PRIOR TO ROUGH–IN.

FATC: PROVIDE FIRE ALARM TERMINAL CABINET AS REQUIRED OR AS SHOWN ON DRAWINGS.

HORN/STROBE: HORN/STROBE DEVICES SHALL BE WALL OR CEILING MOUNTED PER DRAWINGS OR AS REQUIRED BY LOCAL AHJ. SOUNDER/STROBE SHALL OPERATE ON 24 VDC POLARIZED CIRCUIT AND SHALL BE PROVIDED WITH A SEMI–FLUSH MOUNTING PLATE. STROBE LIGHT SHALL BE WHITE LEXAN WITH "FIRE" ON (2) SIDES. HORN SHALL HAVE A MINIMUM SOUND OUTPUT OF 100 DB AT 10'–0". THE STROBE SHALL HAVE A CANDELA DISTRIBUTION/RATING TO MEET ADA REQUIREMENTS.

SPEAKER/STROBE: SPEAKER/STROBE DEVICES SHALL BE WALL OR CEILING MOUNTED PER THE DRAWINGS OR AS REQUIRED BY LOCAL AH. SPEAKER/STROBE SHALL OPERATE ON 24 VC POLARIZED CIRCUIT AND SHALL BE PROVIDED WITH A SEMI–FLUSH MOUNTING PLATE. STROBE LIGHT SHALL BE WHITE LEAN WITH "FIRE" ON (2) SIDES. SPEAKER SHALL HAVE DUAL VOLTAGE CAPABILITY AND FIELD SELECTABLE TAPS ADJUSTABLE FROM 1/8 TO 8 WATTS. THE STROBE SHALL HAVE A CANDELA DISTRIBUTION/RATING TO MEET ADA REQUIREMENTS.

SPEAKER: SPEAKER DEVICES SHALL BE WALL OR CEILING MOUNTED PER THE DRAWINGS. SPEAKER SHALL OPERATE ON 24 VC POLARIZED CIRCUIT AND SHALL BE PROVIDED WITH A SEMI–FLUSH MOUNTING PLATE. SPEAKER SHALL HAVE DUAL VOLTAGE CAPABILITY AND FIELD SELECTABLE TAPS ADJUSTABLE FROM 1/8 TO 8 WATTS.

SPRINKLER BELL: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AH. INCLUDE ALL COSTS IN BASE BID TO PROVIDE AND INSTALL A FLUSH HORN OR BELL PER THE EXTERIOR FLUSH HORN DETAIL. AN EXPOSED EXTERIOR BELL OR HORN IS NOT ACCEPTABLE UNLESS ITS USE IS DIRECTED BY THE LOCAL FIRE MARSHAL. THE FIRE ALARM CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE USE OF SURFACE MOUNTED BELLS/HORNS PRIOR TO ROUGH–IN.

MANUAL STATIONS: FURNISH AND INSTALL WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AH. DEVICE SHALL BE ADDRESSABLE UNLESS OTHERWISE NOTED. STATION SHALL BE KEYED ALIKE AS THE CONTROL PANEL.

SMOKE DETECTORS: FURNISH AND INSTALL WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. SENSORS SHALL BE ANALOG ADDRESSABLE TYPE.

DUCT SMOKE DETECTORS: PROVIDE DUCT SMOKE DETECTORS WHERE SHOWN ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. DUCT SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE AND THE INSTALLATION MUST COMPLY WITH NFPA–90A.

HEAT DETECTORS: FURNISH AND INSTALL WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. SENSORS SHALL BE ADDRESSABLE.

BEAM DETECTORS: BEAM DETECTORS SHALL BE REFLECTIVE TRANSMITTER/RECEIVER TYPE WITH INTEGRAL SENSITIVITY TRANSMITTING AN INFRARED SIGNAL TO A REFLECTIVE SURFACE OR RECEIVER. THE BEAM DETECTOR SHALL HAVE A KEYED REMOTE TEST AND ALARM INDICATOR MOUNTED WITHIN 100 FEET OF THE BEAM DETECTOR. FINAL LOCATION TO BE DETERMINED BY ARCHITECT. THE BEAM DETECTOR SHALL HAVE AN INTEGRAL OPTICS ALIGNMENT (TOOL) BUILT IN THE TRANSMITTER. AN ADDRESSABLE, (4) WIRE MONITORING MODULE SHALL COMMUNICATE THE ALARM AND TROUBLE INDICATIONS OF THE BEAM DETECTOR BACK TO THE FIRE ALARM CONTROL PANEL OR TRANSPONDER.

WATERFLOW SWITCHES: WATERFLOW SWITCHES SHALL BE PROVIDED WITH A TAPPED 1/2" CONDUIT CONNECTION. THE FLOW SWITCH SHALL BE U.L. LISTED FOR ITS INTENDED PURPOSE. DEVICE TO BE FURNISHED AND INSTALLED BY SPRINKLER CONTRACTOR.

TAMPER SWITCHES: SPRINKLER VALVE TAMPER SWITCHES COVER REMOVAL SHALL BE SUPERVISED. SWITCH SHALL BE PROVIDED WITH EITHER ONE OR TWO SETS OF S.P.D.T. MICRO SWITCHES AS REQUIRED. TAMPER SWITCH SHALL BE URL LISTED FOR ITS INTENDED PURPOSE. DEVICE TO BE FURNISHED AND INSTALLED BY SPRINKLER CONTRACTOR.

MONITOR MODULE: MONITOR RELAYS FOR MONITORING SMOKE DOORS, GENERATORS, AUTOMATIC TRANSFER SWITCHES, FIRE SUPPRESSION SYSTEMS, ETC. AND WHERE INDICATED ON THE DRAWINGS OR AS REQUIRED BY LOCAL AH.

CONTROL MODULE: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AH.

MAGNETIC DOOR HOLDER: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AH.

RELAY MODULE: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. RELAY(S) SHALL BE RATED FOR CONTINUOUS MOTOR OR INDUCTIVE LOADS SUCH AS COMBINATION SMOKE FIRE DAMPERS (CSFDs), MAGNETIC HOLD OPENS, ETC. QUANTITY OF RELAYS SHALL BE BASED ON PROJECT–SPECIFIC CSFD LOADS WHICH SHALL NOT EXCEED 80% OF MOTOR LOAD RATING OF THE RELAY. INCLUDE ALL COSTS IN BASE BID TO ADD ADDITIONAL 120V CONDUCTORS AS REQUIRED TO PARTITION LOADS ON INDIVIDUAL RELAYS TO MEET THE 80% RELAY MOTOR LOAD LIMIT.

REMOTE LED: PROVIDE REMOTE LED AND/OR REMOTE LED/TEST STATION WHERE SHOWN ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. DEVICE LOCATION SHALL BE COORDINATED WITH LOCAL AHJ AND ARCHITECT PRIOR TO ROUGH–IN.

UNIVERSAL DIGITAL ALARM COMMUNICATOR TRANSMITTER (UDACT): THE UDACT IS AN INTERFACE FOR COMMUNICATING DIGITAL INFORMATION BETWEEN A FIRE ALARM CONTROL PANEL AND A URL LISTED CENTRAL STATION.

1. THE UDACT SHALL BE COMPACT IN SIZE, MOUNTING IN A STANDARD MODULE POSITION OF THE FIRE ALARM CONTROL CABINET. THE CONNECTION BETWEEN THE UDACT AND THE CONTROL PANEL SHALL BE COMPLETELY SUPERVISED.
2. THE UDACT SHALL INCLUDE CONNECTIONS FOR DUAL TELEPHONE LINES (WITH VOLTAGE DETECT), PER U.L./NFPA REQUIREMENTS. IT SHALL INCLUDE THE ABILITY FOR SPLIT REPORTING OF PANEL EVENTS.
3. THE UDACT SHALL BE COMPLETELY FIELD PROGRAMMABLE FROM A BUILT–IN KEYPAD AND FOUR–CHARACTER RED, SEVEN–SEGMENT DISPLAY.
4. THE UDACT SHALL BE CAPABLE OF TRANSMITTING EVENTS IN AT LEAST NINE DIFFERENT FORMATS. THIS ENSURES COMPATIBILITY WITH EXISTING AND FUTURE TRANSMISSION FORMATS. ACCEPTED FORMATS INCLUDE 3+1 STANDARD, 4+1 STANDARD, DECO CONTACT ID OR 4+1 AND 4+2 DECO.
5. COMMUNICATION SHALL INCLUDE VITAL SYSTEM STATUS SUCH AS:

    INDEPENDENT ZONE (ALARM, TROUBLE, NON–ALARM)
    INDEPENDENT ZONE SUPERVISORY SIGNAL
    AC (MAINS) POWER LOSS
    LOW BATTERY AND EARTH FAULT
    SYSTEM OFF NORMAL
    12 AND 24 HOUR TEST SIGNAL
    ABNORMAL TEST SIGNAL (PER URL REQUIREMENTS)
    EIA–485 COMMUNICATIONS FAILURE

6. THE UDACT SHALL INCLUDE INDEPENDENT ZONE/POINT REPORTING IN THE CONTACT ID FORMAT. IN THIS FORMAT THE UDACT SHALL SUPPORT TRANSMISSION OF UP TO 2,040 POINTS. THIS ENABLES THE CENTRAL STATION TO HAVE EXACT DETAILS CONCERNING THE ORIGIN OF THE FIRE OR RESPONSE EMERGENCY.
7. UDACT PROVISIONING SHALL BE INCLUDED IN THE BASE BID BASED ON THE FOLLOWING ASSUMPTIONS:

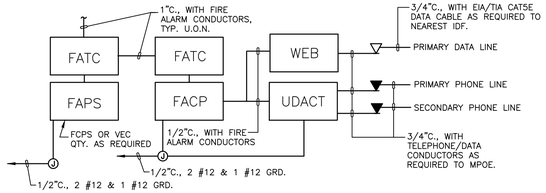
    ASSUME THE FOLLOWING INFORMATION WILL BE PROVIDED BY THE OWNER TO PROGRAM AN INSTALLED UDACT TO A THIRD–PARTY CENTRAL STATION:

    a. MONITORING ACCOUNT NUMBER
    b. PRIMARY RECEIVER PHONE NUMBER
    c. SECONDARY RECEIVER PHONE NUMBER
    d. RECEIVER TYPE
    e. TRANSMISSION FORMAT
    f. MONITORING COMPANY NAME
    g. MONITORING COMPANY MAIN PHONE
    h. CONTACT PERSON AT MONITORING COMPANY

    ASSUME THIRD–PARTY CENTRAL STATION PROVIDER SHALL PROVIDE 72 HOURS ADVANCE NOTICE FOR FIRE ALARM CONTRACTOR/INSTALLER TO BE PRESENT FOR UDACT PROGRAMMING, PRE–TESTING, TESTING, AND CONNECTION.

    ASSUME A REPRESENTATIVE FROM THE THIRD–PARTY CENTRAL STATION IS REQUIRED AT LOCATION AT TIME OF PROGRAMMING, PRETEST AND CONNECTION. ADDITIONALLY, THIRD–PARTY CENTRAL STATION PROVIDER SHALL PROVIDE ANY MONITORING REPORTS REQUIRED BY THE FIRE DEPARTMENT. A SEPARATE PERMIT WILL BE SUBMITTED AND PAID FOR BY THE THIRD–PARTY CENTRAL STATION PROVIDER.

    WEB SERVER (WS): THE WEB SERVER IS AN INTERFACE FOR COMMUNICATING SYSTEM EVENTS VIA OWNER LOCAL AREA NETWORK. WEB SERVER SHALL BE CONFIGURED WITH A FIXED IP ADDRESS (FURNISHED BY OWNER–IMPLEMENTED BY CONTRACTOR) TO ALLOW AUTOMATIC EMAIL OR CELL PHONE TEXT MESSAGING IN RESPONSE TO ANY SYSTEM EVENT. ADDITIONAL WEB SERVER SHALL ALLOW VIEWING OF SYSTEM STATUS, SYSTEM EVENT HISTORY AND DEVICE PROPERTIES BASED ON ACCESS PERMISSIONS DEFINED BY THE OWNER. CONTRACTOR SHALL INCLUDE (8) HOURS OF SERVER CONFIGURATION BASED ON OWNER INPUT COMBINED WITH CONFIGURATION TRAINING FOR THE OWNER'S REPRESENTATIVES IN BASE BID.



FIRE ALARM SYSTEM SCHEMATIC

EXISTING SYSTEM EXTENSION REQUIREMENTS

1. ALL SYSTEM EXTENSIONS AND FINAL CONNECTIONS TO THE EXISTING FIRE ALARM (FA) OR CENTRAL MONITORING (CM) SYSTEM SHALL BE MADE BY THE BUILDING OWNER'S FIRE ALARM CONTRACTOR, CONTRACTING DIRECTLY WITH THE ELECTRICAL/GENERAL CONTRACTOR, INCLUDING FINAL TESTING AND COORDINATION WITH THE FIRE MARSHAL AND BUILDING OWNER'S SECURITY DEPARTMENT.
2. THE CONTRACTOR SHALL COORDINATE THE LOGISTICS AND WORK IMPLEMENTATION WITH THE BUILDING OWNER, BUILDING OWNER'S SECURITY STAFF, ALARM MONITORING COMPANY AND FIRE ALARM CONTRACTOR BEFORE STARTING ANY WORK.
3. EVERY SURPLUS FA/CM DEVICE, RESULTING FROM THIS PROJECT, SHALL BE TURNED OVER TO THE BUILDING OWNER.
4. THE CONTRACTOR SHALL COORDINATE WITH THE BUILDING OWNER'S FIRE ALARM CONTRACTOR TO DETERMINE THE EXTENT OF THEIR WORK INCLUDING, BUT NOT LIMITED TO, SUCH ITEMS AS CONDUITS, WIRES, "J" BOXES, ETC. THE ACTUAL FINAL CONNECTIONS OF ALL FA/CM DEVICES SHALL BE THE RESPONSIBILITY OF THE BUILDING OWNER'S FIRE ALARM CONTRACTOR.
5. ALL ROUGH ELECTRICAL, CONDUITS, "J" BOXES AND WIRING SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL/GENERAL CONTRACTOR. THE ELECTRICAL/GENERAL CONTRACTOR SHALL PROVIDE "J" BOXES, AT MINIMUM, WHERE SMOKE DETECTORS ARE SHOWN. USE STANDARD 4" OCTAGONAL BOX UNLESS OTHERWISE DIRECTED BY BUILDING OWNER'S FIRE ALARM CONTRACTOR.
6. COORDINATE AND SECURE APPROVAL FROM BUILDING OWNER PRIOR TO THE START OF NOISY CONSTRUCTION ACTIVITIES TO PREVENT COMPLAINTS FROM ADJACENT TENANT SUITES.
7. COORDINATE ALL SMOKE DETECTOR PROTECTION WITH BUILDING OWNER'S ALARM MONITORING COMPANY TO PREVENT ACTIVATION OF FALSE ALARMS WHEN PUT BACK ON LINE.
8. TO PRECLUDE EXISTING FA/CM SMOKE DETECTOR ACTIVATION DUE TO THE PROXIMITY OF ANY DEMOLITION OR CONSTRUCTION RELATED ACTIVITIES, THE CONTRACTOR SHALL, WHEN WORKING IN THE PROXIMITY OF ANY SENSOR, REQUEST THAT BUILDING OWNER'S ALARM MONITORING COMPANY PUT THE SYSTEM OFF LINE. ON AND OFF LINE ACTIVATION OF THE SYSTEM SHALL BE THOROUGHLY COORDINATED WITH THE BUILDING OWNER AND BUILDING OWNER'S ALARM MONITORING COMPANY. THERE IS A $2,000 PENALTY, ENFORCED BY THE BUILDING OWNER, FOR EACH OCCURRENCE OF A FALSE ALARM CAUSED BY THE NEGLIGENCE OF CONSTRUCTION ACTIVITIES.
9. SMOKE DETECTORS SHALL BE PROTECTED/PROVIDED IN ACCORDANCE WITH CURRENTLY ADOPTED **NFPA 72 STANDARD (17.7.1.11.2 &.3)** AND LOCAL AHJ REQUIREMENTS FOR SMOKE DETECTION DURING CONSTRUCTION.
10. ALL INITIAL DISCONNECTION/DEMOLITION OR FINAL CONNECTION TO THE FA/CM SYSTEM SHALL BE MADE BY THE BUILDING OWNER'S FIRE ALARM CONTRACTOR CONTRACTING DIRECTLY WITH THE ELECTRICAL/GENERAL CONTRACTOR, INCLUDING FINAL TESTING AND COORDINATION WITH THE FIRE MARSHAL AND OWNER'S ALARM MONITORING COMPANY. IN ESSENCE, THE CONTRACTOR SHALL SECURE A BID FROM THE BUILDING OWNER'S FIRE ALARM CONTRACTOR FOR ALL THE WORK AND MATERIALS FURNISHED AND INSTALLED BY THEM IN FULL COORDINATION WITH OWNER. THE BUILDING OWNER'S FIRE ALARM CONTRACTOR SHALL SPECIFICALLY CONFIRM WITH THEIR BID ALL RELATED EXCLUSIONS FOR WHICH THE CONTRACTOR SHALL BE RESPONSIBLE IN ORDER TO FURNISH A FULLY OPERATIONAL SYSTEM.
11. SYSTEM EXTENSION SHALL BE BY BUILDING OWNER'S DESIGNATED FIRE ALARM CONTRACTOR. FOR QUOTES AND ADDITIONAL REQUIREMENTS TO BE INCLUDED IN THE ELECTRICAL/GENERAL CONTRACTOR'S BASE BID CONTACT:

COMPANY:	ADVANCED SECURITY
CONTACT PERSON:	BLAINE BERMERS
PHONE:	(707) 496–8734

FIRE ALARM/CENTRAL MONITORING SYSTEM SYMBOLS

FACP	FIRE ALARM CONTROL PANEL – SEE SPECIFICATIONS.
CMCP	CENTRAL MONITOR CONTROL PANEL– SEE SPECIFICATIONS
FAAP	FIRE ALARM ANNUNCIATOR PANEL – SEE SPECIFICATIONS.
FATC	FIRE ALARM TERMINAL CABINET – SEE SPECIFICATIONS.
FAPS	FIRE ALARM SYSTEM POWER SUPPLY/TRANSPONDER PANEL – SEE SPECIFICATIONS.
PACP	FIRE ALARM PRE–ACTION CONTROL PANEL – SEE SPECIFICATIONS.
VEC	FIRE ALARM VOICE EVACUATION SYSTEM CONTROL PANEL – SEE SPECIFICATIONS.
H	FIRE ALARM HORN, WALL MOUNTED – SEE SPECIFICATIONS.
HF	FIRE ALARM HORN/FLASHING LIGHT (ADA APPROVED), WALL MOUNTED – SEE SPECIFICATIONS. CANDELA RATING AS REQUIRED TO MEET ADA COVERAGE REQUIREMENTS.
HF	FIRE ALARM HORN/FLASHING LIGHT (ADA APPROVED), CEILING DEVICE SEE SPECIFICATIONS. CANDELA RATING AS REQUIRED TO MEET ADA COVERAGE REQUIREMENTS.
F	FIRE ALARM FLASHING LIGHT (ADA APPROVED), WALL MOUNTED – SEE SPECIFICATIONS. CANDELA RATING AS REQUIRED TO MEET ADA COVERAGE REQUIREMENTS.
F	FIRE ALARM FLASHING LIGHT (ADA APPROVED), CEILING MOUNTED DEVICE – SEE SPECIFICATIONS. CANDELA RATING AS REQUIRED TO MEET ADA COVERAGE REQUIREMENTS.
F E F E	SMOKE/CO ALARM STROBE LIGHT – 120V, WALL/CEILING MOUNTED. DEVICE TO BE USED IN CONJUNCTION WITH A 120V SMOKE/CO ALARM DEVICE. UNIT SHALL BE LISTED PER UL1971. BRK #SL177.
SF	FIRE ALARM SPEAKER/FLASHING LIGHT, WALL MOUNTED – SEE SPECIFICATIONS.
SF	FIRE ALARM SPEAKER/FLASHING LIGHT, CEILING MOUNTED DEVICE – SEE SPECIFICATIONS.
S	FIRE ALARM SPEAKER, CEILING MOUNTED – SEE SPECIFICATIONS.
S	FIRE ALARM SPEAKER, WALL MOUNTED – SEE SPECIFICATIONS.
B	FIRE ALARM BELL – SEE SPECIFICATIONS.
MS	FIRE ALARM MANUAL PULL STATION, WALL MOUNTED – SEE SPECIFICATIONS.
MS PA	FIRE ALARM DUAL ACTION/PREACTION RELEASING STATION, WALL MOUNTED – SEE SPECIFICATIONS.
SD	FIRE ALARM SMOKE DETECTOR, CEILING MOUNTED – SEE SPECIFICATIONS.
SD E	STAND ALONE SMOKE DETECTORS: AREA SMOKE DETECTORS FOR THE CONTROL OF COMBINATION SMOKE/FIRE DAMPERS (CSFD'S) SHALL BE GENTEX MODEL 8100PY (CSFM #7272–0569:102). THE DETECTORS SHALL BE 120VAC POWERED AND SHALL NOT CONNECT TO THE FIRE ALARM PANEL. THE DETECTORS SHALL PROVIDE AN AUDIBLE AND VISUAL INDICATION AND SHALL AUTOMATICALLY CAUSE THE RESPECTIVE CSFD'S TO CLOSE. THE DETECTORS SHALL INCORPORATE A SELF RESETTING FEATURE WHEN SMOKE HAS CLEARED. THE AREA SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 90A AND APPLICABLE SECTIONS OF NFPA 72 – AND ARE ONLY ALLOWED WHEN SPECIFICALLY SHOWN ON PLANS.
SC E	SMOKE/CO ALARM DEVICE – 120V. 120V SINGLE/MULTIPLE STATION SMOKE AND CARBON MONOXIDE SENSOR WITH MONITORED 9V BATTERY BACKUP. DEVICE TO HAVE DISTINCT SMOKE AND CO SENSORS AND SOUND PATTERNS. UNIT SHALL BE U.L. LISTED PER UL217 AND UL2034. BRK #SC9120B. IF THIS DEVICE IS TO BE SUPERVISED – CONNECT VIA A BRK #RM4 RELAY.
SC	SMOKE/CO ALARM DEVICE – ADDRESSABLE. SMOKE AND CARBON MONOXIDE SENSOR MOUNTED TO AN ADDRESSABLE SOUNDER BASE. UNIT SHALL BE U.L. LISTED PER UL268 AND UL2075.
SA E	SMOKE ALARM DEVICE – 120V. 120V SINGLE/MULTIPLE STATION SMOKE ALARM WITH MONITORED 9V BATTERY BACKUP. DEVICE TO HAVE DISTINCT SMOKE SENSOR AND SOUND PATTERNS. UNIT SHALL BE U.L. LISTED PER UL217 AND UL2034. BRK #SC9120. IF THIS DEVICE IS TO BE SUPERVISED – CONNECT VIA A BRK #RM4 RELAY.
SA	FIRE ALARM SMOKE DETECTOR, CEILING MOUNTED TO AN ADDRESSABLE SOUNDER BASE – SEE SPECIFICATIONS.
ID	FIRE ALARM SMOKE DETECTOR, IN–DUCT – SEE SPECIFICATIONS.
RA	FIRE ALARM SMOKE DETECTOR, RETURN AIR – SEE SPECIFICATIONS.
DD	FIRE ALARM DUCT DETECTOR PHOTOELECTRIC TYPE – SEE SPECIFICATIONS.
DD E	STAND ALONE DUCT DETECTORS: DUCT DETECTORS SHALL BE PROVIDED ON THE SUPPLY OF EACH AIR HANDLER EXCEEDING 2,000 CFM OR ALL AIR HANDLERS SERVING A COMMON AREA WHERE THEIR COMBINED SUPPLY EXCEEDS 2,000 CFM. THE DUCT DETECTORS SHALL BE SYSTEM SENSOR MODEL D4120, PHOTOELECTRIC TYPE (CSFM #3240–1653:207). THE DUCT SMOKE DETECTOR SHALL CAUSE THE RESPECTIVE AIR HANDLER UNIT TO AUTOMATICALLY SHUTDOWN. THE DUCT SMOKE DETECTOR SHALL BE PROVIDED WITH A REMOTE TEST/RESET INDICATOR, SYSTEM SENSOR MODEL #RTS2 (CSFM #7135–1653:196). THE TEST INDICATOR SHALL PROVIDE AUDIBLE AND VISUAL ALARM INDICATION AND SHALL PROVIDE MEANS TO RESET THE DUCT DETECTOR. THE DUCT SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 90A AND APPLICABLE SECTIONS AND OF NFPA 72 – AND ARE ONLY ALLOWED WHEN SPECIFICALLY SHOWN ON PLANS.
HD	FIRE ALARM HEAT DETECTOR, CEILING MOUNTED – SEE SPECIFICATIONS.
BT	FIRE ALARM BEAM DETECTOR – TRANSMITTER – MOUNTED AS INDICATED ON PLANS.
BR	FIRE ALARM BEAM DETECTOR – RECEIVER – MOUNTED AS INDICATED ON PLANS.
W	FIRE ALARM FLOW SWITCH – SEE SPECIFICATIONS.
T	FIRE ALARM TAMPER SWITCH – SEE SPECIFICATIONS.
PV	FIRE ALARM POST INDICATING VALVE/OS&Y/DOUBLE BACK CHECK VALVE – SEE SPECIFICATIONS.
M	FIRE ALARM SYSTEM MONITOR MODULE – SEE SPECIFICATIONS.
C	FIRE ALARM SYSTEM CONTROL MODULE – SEE SPECIFICATIONS.
CR	FIRE ALARM SYSTEM CONTROL RELAY MODULE – SEE SPECIFICATIONS.
R	CA FIRE MARSHAL–LISTED FIRE ALARM RELAY – SEE SPECIFICATIONS.
/	FIRE ALARM MAGNETIC HOLD OPEN DEVICE – SEE SPECIFICATIONS.
I	FIRE ALARM REMOTE L.E.D. INDICATOR. IF REQUIRED BY AHJ, PROVIDE REMOTE L.E.D. WITH TEST STATION.
PH	FIRE ALARM SYSTEM FIREMANS PHONE JACK – SEE SPECIFICATIONS.
—FA—	FIRE ALARM BRANCH CIRCUIT PER FIRE ALARM WIRING DIAGRAMS & SPECIFICATIONS.
—∧∧	FIRE ALARM END–OF–LINE RESISTOR – SEE SPECIFICATIONS.

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Project Leader - Jeff Halliwell
Electrical Lead - Jerry Leonhardt
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWARTZ
No. E15610
Ex.12/31/2019
ELECTRICAL
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY
DISTRICT ATTORNEY
REMODEL FOR

VICTIM /
WITNESS
& CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

FIRE ALARM
SYMBOLS LIST

DRAWING STATUS

CONSTRUCTION
DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

E602

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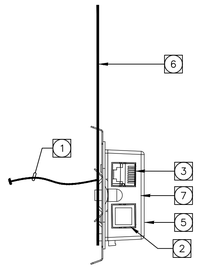
WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND/OR STRUCTURED CABLING SYSTEM DRAWINGS:

Ⓐ

THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.



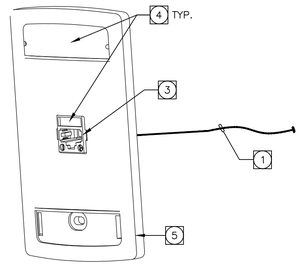
WIRELESS ACCESS POINT DEVICE 3

SCALE: N.T.S.

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND/OR STRUCTURED CABLING SYSTEM DRAWINGS:

▽ ▽

THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.



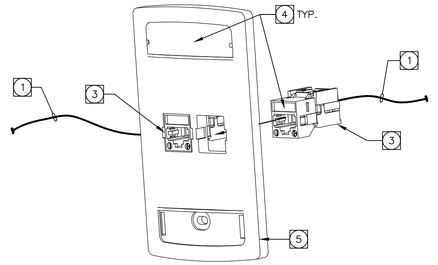
SINGLE PORT DATA OUTLET 2

SCALE: N.T.S.

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND/OR STRUCTURED CABLING SYSTEM DRAWINGS:

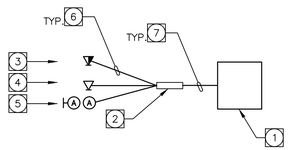
▽̸

THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.



VOICE/DATA COMBINATION OUTLET 1

SCALE: N.T.S.



LAN AND WIRELESS LAN SYSTEMS DIAGRAM KEY NOTES:

1. OFOI SWITCH. PROVIDE NEW PATCH PANELS, PATCH CORDS, WIRE MANAGERS AND ALL OTHER REQUIRED ACCESSORIES TO ACCOMMODATE ALL NEW DATA INSTALLATIONS AND CONNECTIONS TO THIS SWITCH.
2. WALL MOUNTED **CATEGORY–6** PATCH PANEL. QUANTITY AS REQUIRED TO TERMINATE ALL CABLES ON THIS PROJECT. PROVIDE 6" STAND OFF MOUNTING BRACKETS.
3. DATA/VOICE OUTLET. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE FACEPLATE DETAILS FOR MORE INFORMATION.
4. DATA OUTLET. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE FACEPLATE DETAILS FOR MORE INFORMATION.
5. CABLING AND TERMINATION FOR WIRELESS ACCESS POINT DEVICE. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE FACEPLATE DETAILS FOR MORE INFORMATION.
6. CATEGORY–6 4PAIR UTP CABLE. QUANTITY OF CABLES TO EACH DEVICE PER FACEPLATE DETAILS. TERMINATE DATA CABLES ON CAT6 PATCH PANEL.
7. CATEGORY–6 PATCH CABLE. QUANTITY OF CABLES AS REQUIRED FOR THIS PROJECT. TERMINATE PATCH CABLES ON CAT6 PATCH PANEL AND SWITCH.

LAN AND WIRELESS LAN SYSTEMS GENERAL NOTES:

1. PROVIDE COMPLETE WITH ALL CABLES, DEVICES, MATERIAL, TERMINATIONS, TESTING, AND LABOR, PER THE SPECIFICATIONS.
2. TERMINATE ALL CABLING AS SPECIFIED BY MANUFACTURER, IN THEIR RESPECTIVE TERMINAL CABINETS.
3. ALL CABLING SHALL BE RATED FOR THE ENVIRONMENT FOR WHICH IT IS INSTALLED, PER CALIFORNIA ELECTRICAL CODE AND TIA–568–C.
4. PROVIDE ALL REQUIRED CONDUIT, BOXES, BUSHINGS, FITTINGS, SUPPORTS, MOUNTS, FASTENERS, WEATHERPROOFING, FIREPROOFING, ETC. AS REQUIRED.
5. ALL CABLES SHALL BE TESTED PER TIA/EIA CATEGORY 6 STANDARD LINK TEST. PROVIDE TEST RESULTS FROM LEVEL 3 TEST SCANNER TO OWNER.
6. LABEL ALL CABLES JACKS, AND FACEPLATES PER TIA–569 LATEST VERSION.

LOCAL AREA NETWORK (LAN) AND WIRELESS LAN SYSTEM BLOCK DIAGRAM 4

SCALE: NTS

FACEPLATE DETAIL NOTES

1. PROVIDE (1) CATEGORY 6, 4 PAIR UTP CABLE. TERMINATE STATION END(S) IN CATEGORY 6 JACK PER SPECIFICATIONS. TERMINATE OTHER END ON CATEGORY 6 PATCH PANEL IN EXISTING MDF. LABEL BOTH ENDS OF CABLE WITH PERMANENT MACHINE GENERATED LABELS (PANDUIT OR EQUAL).
2. BLANK INSERT. COLOR TO MATCH FACEPLATE.
3. PROVIDE CATEGORY 6 JACK. COLOR PER DISTRICT'S DIRECTION.
4. PROVIDE FACEPLATE LABELING PER SPECIFICATIONS. SEE SPECIFICATIONS FOR ALL OTHER LABELING REQUIREMENTS.
5. PROVIDE FACEPLATE WITH LABEL WINDOWS, PER SPECIFICATIONS. FACEPLATE MATERIAL, FINISH AND COLOR SHALL MATCH ADJACENT/NEARBY POWER FACEPLATES.
6. INSTALL DEDICATED SUSPENDED CEILING WIRE/HANGAR OR SUPPORT ROD/ROD HANGAR DIRECTLY TO STRUCTURAL CEILING ABOVE TO SUPPORT WAP 2–PORT HOUSING.
7. PROVIDE (1) SURFACE MOUNT, PLENUM–RATED TWO–PORT HOUSING. (LEVITON 41089–2WP OR EQUAL) MOUNTED TO IN–CEILING BRACKET WITH SPRING WIRE MOUNT(LEVITON 49223–CBC OR EQUAL) WHERE APPLICABLE. PROVIDE 15FT SLACK LOOP NEAR WAP SUSPENSION POINT.

GENERAL NOTES

1. INSTALLATION OF EQUIPMENT AND WIRING MUST MEET ALL APPLICABLE CODES AND STANDARDS INCLUDING BUT NOT LIMITED TO NEC, NFPA, ANSI/EIA/TIA AND ISO 9001.
2. EQUIPMENT AND MATERIALS MUST COMPLY WITH UL LISTING AND EACH ITEM STAMPED OR LABELED AS SUCH.
3. COMPLIANCE WITH ANSI/TIA/EIA 569–C. COMMERCIAL BUILDING STANDARDS FOR TELECOMMUNICATIONS PATHWAYS AND SPACES.
4. COMPLIANCE WITH ANSI/TIA/EIA 568–D. COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARDS.
5. DRAWINGS AND LAYOUTS ARE PRIMARILY DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR FINAL FOOTAGES AND EXACT LOCATIONS.
6. REFERENCE ALL ELECTRICAL DRAWINGS (SHELL & T.I.).
7. REFERENCE ALL ARCHITECTURAL DRAWINGS (SHELL & T.I.).
8. CONTRACTOR SHALL UTILIZE CONDUIT(S)/SLEEVE(S) SEQUENTIALLY, MAXIMIZING THE CABLE FILL IN EACH BEFORE UTILIZING THE NEXT CONDUIT(S)/SLEEVE(S). MAXIMUM ALLOWABLE CONDUIT FILL SHALL BE BASED ON NEC TABLES FOR CONDUIT FILL.

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Project Leader - Jeff Halliwell
Electrical Lead - Jerry Leonhardt
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER RAYMOND W. SWARTZ No. E15610 12/31/2019 ELECTRICAL STATE OF CALIFORNIA

PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
VICTIM / WITNESS & CAST
COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE
LOW VOLTAGE DETAILS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
T001

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Plot Date: June 27, 2019 - 3:59 pm
File Name: J:\2018\18-6452 Humboldt County Courthouse Proj\Drawings and Models\CAD\Electrical\2018-0922 T001 Low Voltage Details.dwg
XREFS: x-HC-CI-I-5th_TITLEBLOCK

PLUMBING GENERAL NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES AND DRAINS.
2. COORDINATE ALL LOCATIONS, SIZES AND ELEVATIONS OF ALL SLEEVES THROUGH BEAMS, SLABS AND FOOTINGS WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
3. CONTRACTOR SHALL VERIFY THE EXACT LOCATION, SIZE AND ELEVATION OF ALL EXISTING PIPING AT P.O.C.'S PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT IF SAID CONNECTIONS ARE NOT IN THE LOCATION SHOWN OR ARE NOT OF SUFFICIENT SIZE OR DEPTH TO MAKE THE CONNECTION.
4. THE LOCATION AND ELEVATION OF ALL PLUMBING PIPING SHALL BE VERIFIED AND COORDINATED WITH ALL OTHER TRADES, STRUCTURAL CONDITIONS AND BUILDING CONSTRUCTION, PRIOR TO START OF INSTALLATION.
5. ALL VALVES AND COCKS SHALL BE LOCATED TO BE READILY ACCESSIBLE. WHERE VALVES ARE INSTALLED WITHIN, OR BEHIND WALLS PARTITIONS OR CEILINGS, AN ACCESS PANEL SHALL BE INSTALLED.
6. WHERE EXISTING FIXTURES ARE REMOVED, ALL PLUMBING CONNECTIONS SHALL TERMINATE IN AN APPROVED MANNER AND SO AS NOT TO CONFLICT WITH NEWLY FINISHED AREAS.
7. INSTALL ALL NEW PLUMBING AND PIPING WORK TO AVOID INTERFERENCE WITH NEW AND EXISTING MECHANICAL, ELECTRICAL & OTHER EQUIPMENT. WHERE REQUIRED, OFFSET NEW PIPING TO CLEAR EXISTING OBSTRUCTIONS.
8. THE LINE ROUTING AND VALVING SHOWN ON PLANS IS DIAGRAMMATIC. ROUTING AS SHOWN AVOIDS ALL KNOWN MAJOR OBSTRUCTIONS. CONTRACTOR SHALL REROUTE PIPING AS NECESSARY TO AVOID CONFLICTS WITH EXISTING CONDITIONS.
9. ALL PENETRATIONS THRU RATED WALLS SHALL BE SEALED WITH APPROVED FIREPROOFING .
10. ALL WORK SHALL COMPLY WITH BUILDING STANDARDS, SPECIFICATIONS, STATE AND COUNTY HEALTH DEPARTMENT REQUIREMENTS, 2016 CALIFORNIA BUILDING CODE AND 2016 CALIFORNIA PLUMBING CODE.
11. FOR FIRE PROTECTION PIPING SEE FIRE SPRINKLER SHOP DRAWINGS. FIRE SPRINKLER DESIGN/BUILD CONTRACTOR SHALL COORDINATE HIS WORK DURING SHOP DRAWING PHASE.
12. ALL PIPE, FITTINGS, FIXTURES, ETC. THAT CONTACT POTABLE WATER FOR HUMAN CONSUMPTION SHALL SHOW APPROVAL TO NSF 61, ANNEX "G". EFFECTIVE JANUARY 1, 2010, THE LEAD CONTENT OF THE WETTED SURFACE AREA OF THE PIPES, FITTINGS AND FIXTURES CONVEYING POTABLE WATER FOR HUMAN CONSUMPTION, OF NOT HUMAN CONSUMPTION, OF NOT MORE THAN 0.25%, SHALL BE DETERMINED PURSUANT TO A PRESCRIBED FORMULA AS DETERMINED BY THIRD PARTY CERTIFIERS TO NSF STANDARD 61, ANNEX "G". REFERENCE SECTION 604.2, CALIFORNIA PLUMBING CODE, 2016 EDITION, AND HEALTH & SAFETY CODE SECTION 116875.
13. "TRAP SEAL PRIMERS SHALL BE ACCESSIBLE FOR MAINTENANCE, AND SHALL BE IN ACCORDANCE WITH ASSE 1018 OR ASSE 1044."

PLUMBING SHEET INDEX

SHEET NO.	DESCRIPTION
P001	PLUMBING LEGEND, SCHEDULES AND NOTES
P003	EQUIPMENT SCHEDULES
P204	PLUMBING 5TH FLOOR PLAN
P205	PLUMBING ROOF PLAN
P501	DETAILS

LEGEND

SYMBOL	ABBR.	DESCRIPTION
	S OR W	SOIL OR WASTE ABOVE FLOOR OR GRADE
	S OR W	SOIL OR WASTE BELOW FLOOR OR GRADE
SD	SD	STORM DRAIN ABOVE FLOOR OR GRADE
SD	SD	STORM DRAIN BELOW FLOOR OR GRADE
OD	OD	OVERFLOW DRAIN ABOVE FLOOR OR GRADE
OD	OD	OVERFLOW DRAIN BELOW FLOOR OR GRADE
	V	SANITARY VENT
	CW	COLD WATER
ICW	ICW	INDUSTRIAL COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
A	A	COMPRESSED AIR
F	F	FIRE MAIN
AS	AS	AUTOMATIC FIRE SPRINKLER
ASD	ASD	AUTOMATIC SPRINKLER DRAIN
D	D	INDIRECT DRAIN LINE
ED	ED	EMERGENCY DRAIN
CD	CD	CONDENSATE DRAIN
SCD	SCD	SECONDARY CONDENSATE DRAIN
G	G	FUEL GAS
TP	TP	TRAP PRIMER
		DIRECTION OF FLOW
	G.C.	GAS COCK
	P.R.V.	PRESSURE REDUCING VALVE
	B.V.	BALL VALVE
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
		DOWN
		RISE
		UNION
%		SLOPE IN DIRECTION OF FLOW
	W.H.A.	WATER HAMMER ARRESTOR
	P.O.C.	POINT OF CONNECTION
	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
	ABV.	ABOVE
	A.P.	ACCESS PANEL
	BEH.	BEHIND
	BEL.	BELOW
	CLG.	CEILING
	CONT.	CONTINUATION
	CO.	CLEAN OUT
(E)	EXIST. (E)	EXISTING
	FDC	FIRE DEPT. CONNECTION
	F.F.E.	FINISHED FLOOR ELEVATION
	FLR.	FLOOR
	FR.	FROM
	G.P.F.	GALLONS PER FLUSH
	GR	GRADE
	HDR	HEADER
	I.E.	INVERT ELEVATION
	O.S.&Y.	OUTSIDE SCREW & YOKE
	VTR	VENT THROUGH ROOF
	ET	EXPANSION TANK

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Project Leader - Jeff Halliwell
Plumbing Lead - Jonathan Soler
tk1sc Job #2018-0922

LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER
TIWAN TANG
No. M29973
EXP. 06-30-20
MECHANICAL
STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

LEGEND , SCHEDULES & NOTES

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

P001

Login Name: jpoter
Plot Date: June 27, 2019 - 6:48 pm
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ELECTRIC WATER HEATER

UNIT NO.	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	STORAGE CAPACITY	REC @ 60° △T (GPH)	INLET TEMP °F	OUTLET TEMP °F	ELECTRICAL				OPER. WT. LBS.	REMARKS
								KW	V	PH	HZ		
EWH-1	EEMAX SP60	COFFEE ROOM 502F	DOMESTIC HOT WATER	0	INSTANTANEOUS	60	108	6.0	277	1	60	10	MICROPROCESSOR CONTROLLED, FIELD SERVICE-ABLE HEATING ELEMENT, HIGH TEMPERATURE LIMIT SWITCH.

PLUMBING FIXTURE SCHEDULE

UNIT NO.	DESCRIPTION	CONNECTION SIZES					REMARKS
		TRAP	W	V	CW	HW	
S-1	KITCHEN SINK	2"	2"	1½"	½"	½"	KITCHEN SINK WITH 1.5 GPM MAX FAUCET
GD-1	GARBAGE DISPOSER	--	--	--	--	--	IN-SINK-ERATOR EVOLUTION 120V / 3/4 HP

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EQUIPMENT SCHEDULES

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Checked By	
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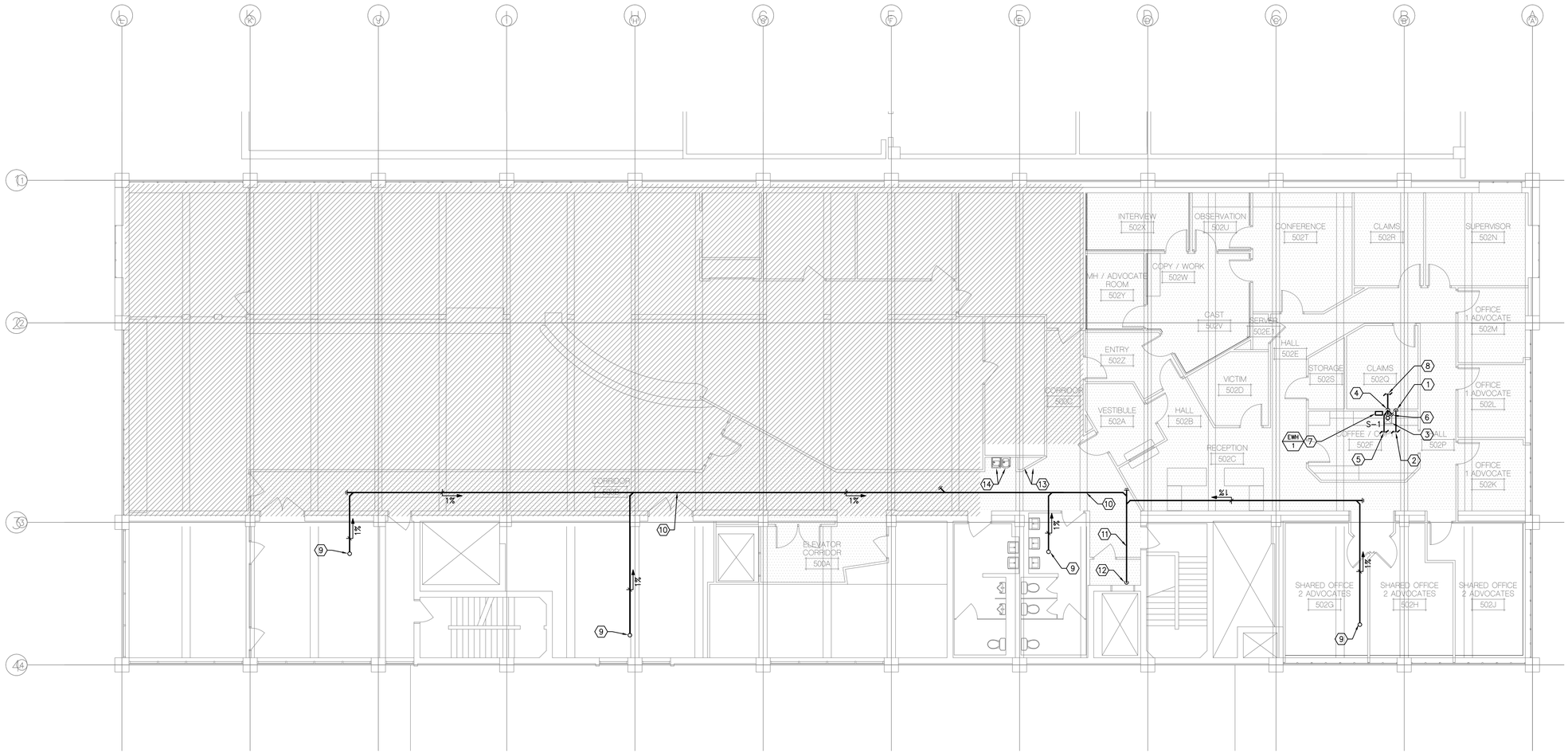
Scale	
Job No.	18-6452

SHEET No.

P003



PLUMBING 5TH FLOOR PLAN

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

1

SHEET NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES AND DRAINS .
2. COORDINATE ALL LOCATIONS , SIZES AND ELEVATIONS OF ALL SLEEVES THROUGH BEAMS , SLABS AND FOOTINGS WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS .
3. CONTRACTOR SHALL VERIFY THE EXACT LOCATION, SIZE AND ELEVATION OF ALL EXISTING PIPING AT P.O.C.'S PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT IF SAID CONNECTIONS ARE NOT IN THE LOCATION SHOWN OR ARE NOT OF SUFFICIENT SIZE OR DEPTH TO MAKE THE CONNECTION.
4. THE LOCATION AND ELEVATION OF ALL PLUMBING PIPING SHALL BE VERIFIED AND COORDINATED WITH ALL OTHER TRADES , STRUCTURAL CONDITIONS AND BUILDING CONSTRUCTION , PRIOR TO START OF INSTALLATION .
5. ALL VALVES AND COCKS SHALL BE LOCATED TO BE READILY ACCESSIBLE . WHERE VALVES ARE INSTALLED WITHIN , OR BEHIND WALLS PARTITIONS OR CEILINGS , AN ACCESS PANEL SHALL BE INSTALLED .
6. WHERE EXISTING FIXTURES ARE REMOVED, ALL PLUMBING CONNECTIONS SHALL TERMINATE IN AN APPROVED MANNER AND SO AS NOT TO CONFLICT WITH NEWLY FINISHED AREAS.
7. INSTALL ALL NEW PLUMBING AND PIPING WORK TO AVOID INTERFERENCE WITH NEW AND EXISTING MECHANICAL, ELECTRICAL & OTHER EQUIPMENT. WHERE REQUIRED, OFFSET NEW PIPING TO CLEAR EXISTING OBSTRUCTIONS.
8. THE LINE ROUTING AND VALVING SHOWN ON PLANS IS DIAGRAMATIC. ROUTING AS SHOWN AVOIDS ALL KNOWN MAJOR OBSTRUCTIONS. CONTRATOR SHALL REROUTE PIPING AS NECESSARY TO AVOID CONFLICTS WITH EXISTING CONDITIONS.
9. ALL PENETRATIONS THRU RATED WALLS SHALL BE SEALED WITH APPROVED FIREPROOFING .
10. ALL WORK SHALL COMPLY WITH BUILDING STANDARDS, SPECIFICATIONS, STATE AND COUNTY HEALTH DEPARTMENT REQUIREMENTS, 2016 CALIFORNIA BUILDING CODE, 2016 CALIFORNIA PLUMBING CODE.

KEY NOTES

1. ¾" COLD WATER DOWN, PROVIDE BALL VALVE TYPE SHUT OFF VALVE BELOW SINK. SEE DETAIL 1/P5.01.
2. ¾" COLD WATER LINE AT CEILING LEVEL. CONTRACTOR TO CONNECT TO NEAREST EXISTING COLD WATER MAIN.
3. NEW SINK, PROVIDE WITH GARBAGE DISPOSER GD-1. SEE DETAIL 2/P5.01.
4. 2"WASTE DOWN, 1½" VENT UP.
5. 1½" VENT AT CEILING LEVEL. CONTRACTOR TO CONNECT TO NEAREST EXISTING WASTE VENT MAIN AT CEILING LEVEL.
6. WALL CLEAN OUT.
7. INSTANTANEOUS WATER HEATER BELOW SINK. SEE DETAIL 2/P5.01.
8. 2" WASTE BELOW FLOOR. CONTRACTOR TO CONNECT TO NEAREST EXISTING WASTE MAIN.
9. 1" CONDENSATE DOWN FROM THE NEW MECHANICAL EQUIPMENT IN THE ROOF.
10. 1¼" CONDENSATE LINE AT CEILING LEVEL.
11. 1½" CONDENSATE LINE AT CEILING LEVEL.
12. CONTRACTOR TO DISCHARGE CONDENSATE TO THE EXISTING MOP SINK.
13. REMOVE AND RELOCATE EXISTING HI-LO DRINKING FOUNTAIN AND ITS ACCESSORIES.
14. NEW LOCATION OF EXISTING HI-LO DRINKING FOUNTAIN. EXTEND OR MOVE EXISTING WASTE, VENT AND WATER LINE TO NEW LOCATION. INSTALL HI-LO PER ADA REQUIREMENTS.

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LICENSE STAMPS

REGISTERED PROFESSIONAL ENGINEER TIWAN TANG No. M29973 EXP 06-30-20 CIVIL STATE OF CALIFORNIA

PROJECT NAME

HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR

VICTIM / WITNESS & CAST

COURTHOUSE, 5TH FLOOR
825 5TH STREET, STE 502
EUREKA, CA 95501

SHEET TITLE

PLUMBING 5TH FLOOR PLAN

DRAWING STATUS

CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

P204

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Plot Date: June 27, 2019 - 6:52 pm
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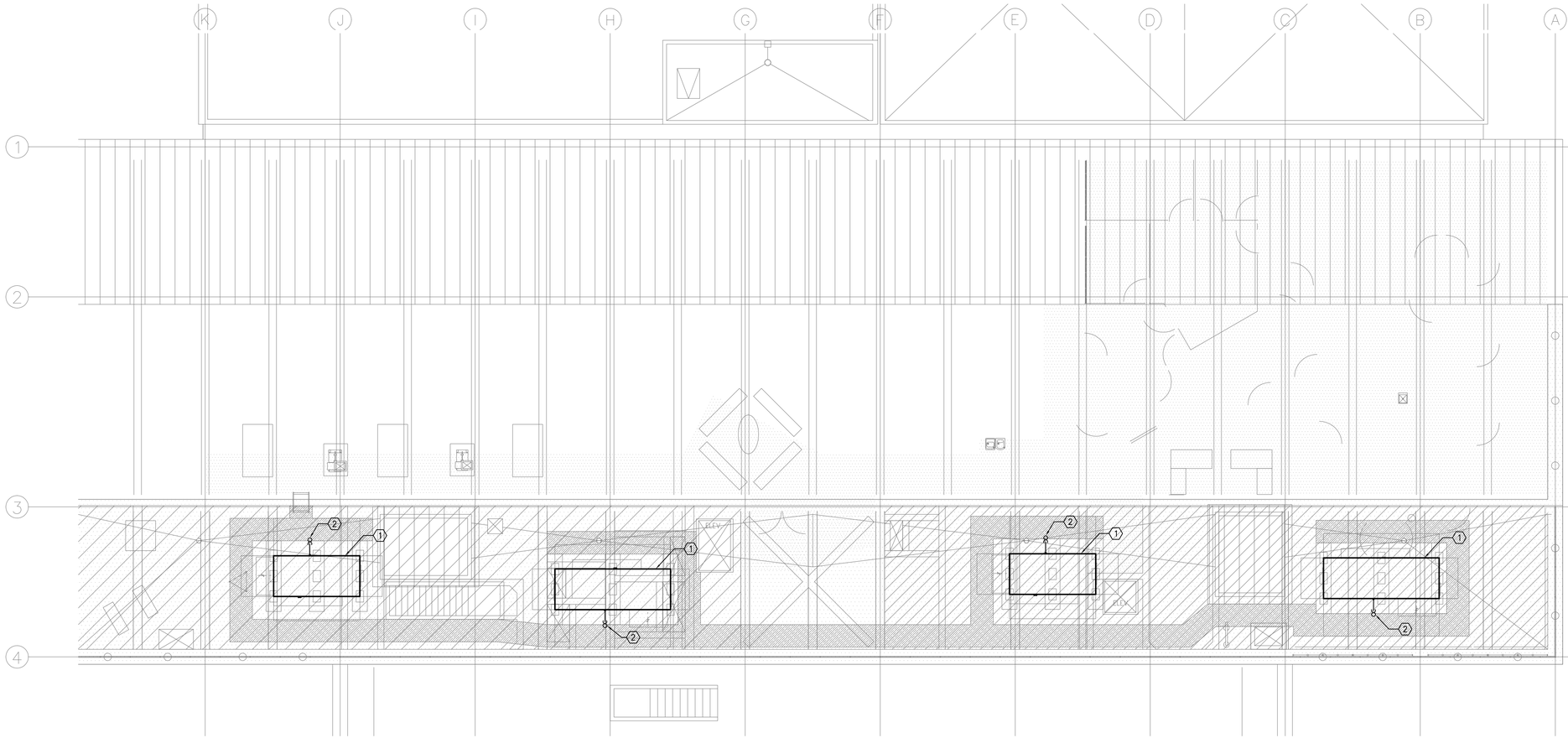

PLUMBING ROOF PLAN

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

1

KEYNOTES

1. TYPICAL AHU UNIT AT ROOF LEVEL. SEE MECHANICAL FOR EXACT LOCATION.
2. 1" CONDENSATE DRAIN DOWN. SEE DETAIL 1/P501.

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TIWAN TANG
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EXP 06-30-20
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DISTRICT ATTORNEY
REMODEL FOR

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SHEET TITLE

PLUMBING ROOF PLAN

DRAWING STATUS
CONSTRUCTION
DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.

P205

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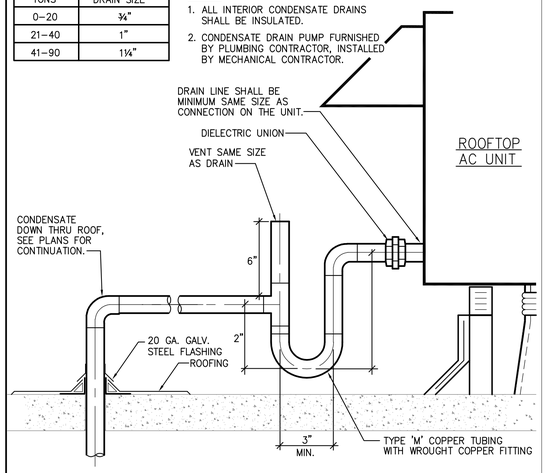
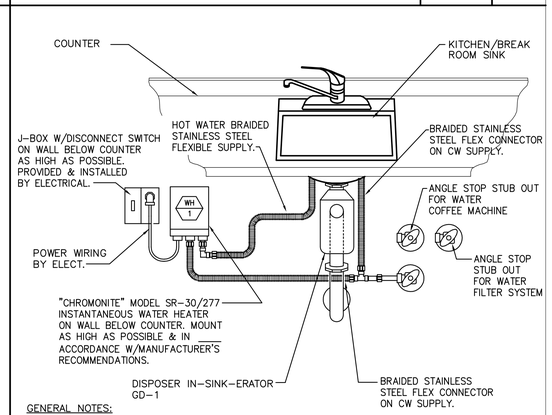
TONS	DRAIN SIZE
0–20	¾"
21–40	1"
41–90	1¼"

NOTES:
1. ALL INTERIOR CONDENSATE DRAINS SHALL BE INSULATED.
2. CONDENSATE DRAIN PUMP FURNISHED BY PLUMBING CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR.

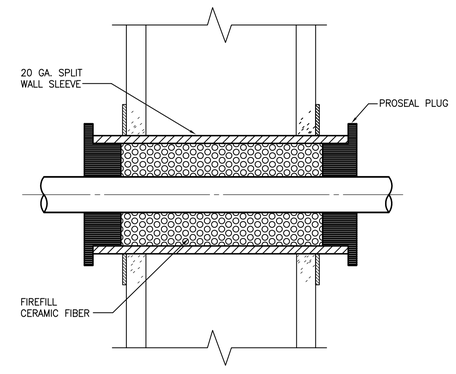


CD DRAIN @ ROOF MOUNTED AH UNIT — SCALE – — 1



GENERAL NOTES:
1. THE INSTANTANEOUS WATER HEATER SHALL BE PROVIDED WITH INTEGRAL ⅜" REDUCER FITTING ON INLET & OUTLET CONNECTIONS.

INSTANTANEOUS WATER HEATER (SINK) — SCALE – — 2



UNDERWRITERS LABORATORIES FILE NO. R1033B
PROSET FIRESTOP PENETRATOR

PIPE PENETRATION (GYPSUM WALL) — SCALE – — 3

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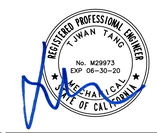
LICENSE STAMPS



PROJECT NAME
HUMBOLDT COUNTY DISTRICT ATTORNEY REMODEL FOR
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SHEET TITLE
DETAILS

DRAWING STATUS
CONSTRUCTION DOCUMENTS

REVISIONS

Sym.	Description	By	Date

Drawn By	
Checked By	
Date Drawn	6/28/19
Scale	
Job No.	18-6452

SHEET No.
P501

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