

one-eighth inch = one foot
one-quarter inch = one foot
three-eighths inch = one foot
one-half inch = one foot
three-quarters inch = one foot
one inch = one foot
one and one-half inch = one foot
two inches = one foot
three inches = one foot
four inches = one foot
five inches = one foot
six inches = one foot
seven inches = one foot
eight inches = one foot
nine inches = one foot
ten inches = one foot
eleven inches = one foot
twelve inches = one foot
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fifteen inches = one foot
sixteen inches = one foot
seventeen inches = one foot
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eighty-nine inches = one foot
ninety inches = one foot
ninety-one inches = one foot
ninety-two inches = one foot
ninety-three inches = one foot
ninety-four inches = one foot
ninety-five inches = one foot
ninety-six inches = one foot
ninety-seven inches = one foot
ninety-eight inches = one foot
ninety-nine inches = one foot
one hundred inches = one foot

1. 'E' SERIES GENERAL NOTES

- COORDINATE ELECTRICAL SHUTDOWN WITH C.O.T.R.
- VERIFY EXACT LOCATION OF CONNECTION POINTS PRIOR TO CONNECTION.
- MOUNTING HEIGHTS ARE TO CENTER OF DEVICE OR EQUIPMENT, UNLESS OTHERWISE NOTED.
- PROVIDE RACEWAY, WIRE AND CABLE, ASSOCIATED FITTINGS AND CONNECTORS, AND COMPLETE CONNECTIONS REQUIRED FOR DESIGNATED BRANCH CIRCUITS FROM DEVICE(S) TO FINAL OVERCURRENT DEVICE AND TO LOCAL CONTROL DEVICE(S) PER SPECIFICATIONS.
- MINIMUM BRANCH CIRCUIT WIRE SIZE SHALL BE #12 AWG EXCEPT LIFE SAFETY BRANCH CIRCUIT WIRING WHICH SHALL BE MINIMUM #10 AWG. MAINTAIN MAXIMUM BRANCH CIRCUIT CONDUCTOR LENGTHS AS PER SPECIFICATIONS. INCLUDE GROUND CONDUCTOR DERATINGS.
- PROVIDE GROUNDING PER NEC. ALSO PROVIDE GREEN GROUND WIRE IN ALL BRANCH AND FEEDER CIRCUITS SIZED PER NEC.

2. ABBREVIATIONS

A	AMPERE	JB	JUNCTION BOX
AC	ARMOR CLAD CABLE	KV	KILOVOLT
AF	ABOVE FLOOR / AMPERE FRAME	KVA	KILOVOLT AMPERE
AFF	ABOVE FINISH FLOOR	KW	KILOWATT
AHU	AIR HANDLING UNIT	KWH	KILOWATT HOUR
AIC	AMPERE INTERRUPTING CAPACITY	MC	METAL CLAD CABLE
AL	ALUMINUM	MCB	MAIN CIRCUIT BREAKER
AM	AMMETER	MECH	MECHANICAL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MIN	MINIMUM
ATS	AUTOMATIC TRANSFER SWITCH	MLO	MAIN LUGS ONLY
AWG	AMERICAN WIRE GAUGE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BAS	BUILDING AUTOMATION SYSTEM	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
BKBD	BACKBOARD	NIC	NOT IN CONTRACT
BKR	CIRCUIT BREAKER	NTS	NOT TO SCALE
C	CONDUIT	OCPO	OVERCURRENT PROTECTIVE DEVICE
CAT	CATALOG	RCP	REFLECTED CEILING PLANS
CKT	CIRCUIT	RE	REFER TO
CLG	CEILING	REF	REFRIGERATOR
CM	CONSTRUCTION MANAGER	RM	ROOM
CO	COMPANY	SFL	SUB FEED LUGS
DIA	DIAMETER	SPEC	SPECIFICATION
DIV	DIVISION	SWBO	SWITCHBOARD
DN	DOWN	TC	TERMINAL CABINET
DWG	DRAWING	TEL	TELEPHONE
EA	EACH	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
ET	EXHAUST FAN	TV	TELEVISION
EGS	ENGINE-GENERATOR SET	TYP	TYPICAL
ELEV	ELEVATOR	UC	UNDERCOUNTER
EMT	ELECTRICAL METALLIC TUBING	UPS	UNINTERRUPTIBLE POWER SUPPLY
EQUIP	EQUIPMENT	V	VOLT
FACU	FIRE ALARM CONTROL UNIT	VA	VOLT-AMPS
FTL	FEED THRU LUGS	VSD	VARIABLE SPEED DRIVE
GA	GAUGE	VM	VOLTMETER
GEN	GENERATOR		
GFCI	GROUND FAULT CIRCUIT INTERRUPTING		
GFI	GROUND FAULT INTERRUPTING		
GND	GROUND		

2. DEVICE SUBSCRIPTS

a LOWER CASE LETTER INDICATES DEVICE CONTROL ARRANGEMENT
7 NUMERAL INDICATES BRANCH CIRCUIT NUMBER
C ITEM INSTALLED FLUSH IN CEILING
C* CONTROL POINT IDENTIFIER (* INDICATES CONTROL NUMBER)
E EXISTING BACKBOX TO REMAIN AND BE REUSED
GFCI GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE
GFI GROUND FAULT CIRCUIT INTERRUPTING BREAKER PROTECTED
IGI ISOLATED GROUND RECEPTACLE
K KEY OPERATED
L LOW VOLTAGE
S SURFACE MOUNTED
W ITEM INSTALLED 44" A.F.F. OR AS DETAILED
WP WEATHERPROOF

GENERAL

- NEW EQUIPMENT
- EXISTING EQUIPMENT
- DEVICE TO BE REMOVED (DEMO PLANS)
- WIRE AND/OR CONDUIT RUN CONTINUED ON REFERENCED DETAIL

DRAWING NOTES AND DESIGNATIONS

- DRAWING KEYED NOTES
- BRANCH CIRCUITING NOTES
- EQUIPMENT DESIGNATIONS
- ROOM NUMBER
- FEEDER NUMBER
- DETAIL OR SECTION REFERENCE TAG

RACEWAYS

- CONDUIT TERMINATION AT DEVICE
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- CAPPED CONDUIT
- CONDUIT STUBBED AND BUSHED INTO ACCESSIBLE CEILING CAVITY
- SERVICE WEATHERHEAD

WIRE AND CABLE

MULTI-CIRCUIT HOME RUN IN NEC CONDUIT TO ASSOCIATED PANELBOARD.
SLASH MARKS INDICATE QUANTITY OF WIRES. PHASE WIRE SIZE SHOWN FOLLOWING THE # SYMBOL IF APPLICABLE

1UNL1-12 NUMBER INDICATES SOURCE PANELBOARD AND CIRCUITS

WIRING TERMINATIONS

- MOTOR - NUMBER INDICATES HORSEPOWER
- DIRECT CONNECTION OR MATCHING RECEPTACLE FOR 120 VOLT EQUIPMENT

BOXES AND CABINETS

CABINET, TOP OF TRIM 6'-2" A.F.F.

WIRING TERMINATIONS

- DIRECT CONNECTION OR MATCHING RECEPTACLE FOR 120 VOLT EQUIPMENT
- MOTOR - NUMBER INDICATES HORSEPOWER

TRANSFORMERS

- TRANSFORMER (PLAN DENOTATION)
- TRANSFORMER (SINGLE-LINE DENOTATION)

WIRING DEVICES

- SINGLE POLE SWITCH, 44" AFF
- NEMA 5-20R RED DUPLEX RECEPTACLE, 18" AFF

MOTOR CONTROLLERS

- FRACTIONAL HORSEPOWER MOTOR CONTROLLER, RECESSED 48" AFF OR ABOVE CEILING (MANUAL THERMAL SWITCH)
- COMB. MOTOR CONTROLLER/DISCONNECT, 44" AFF (5'-0" IN EQUIP. ROOMS)
- VARIABLE FREQUENCY DRIVE
- VARIABLE SPEED DRIVE

INTERIOR AND EXTERIOR LIGHTING

FLUORESCENT STRIP LUMINAIRE

EMERGENCY POWER GENERATION

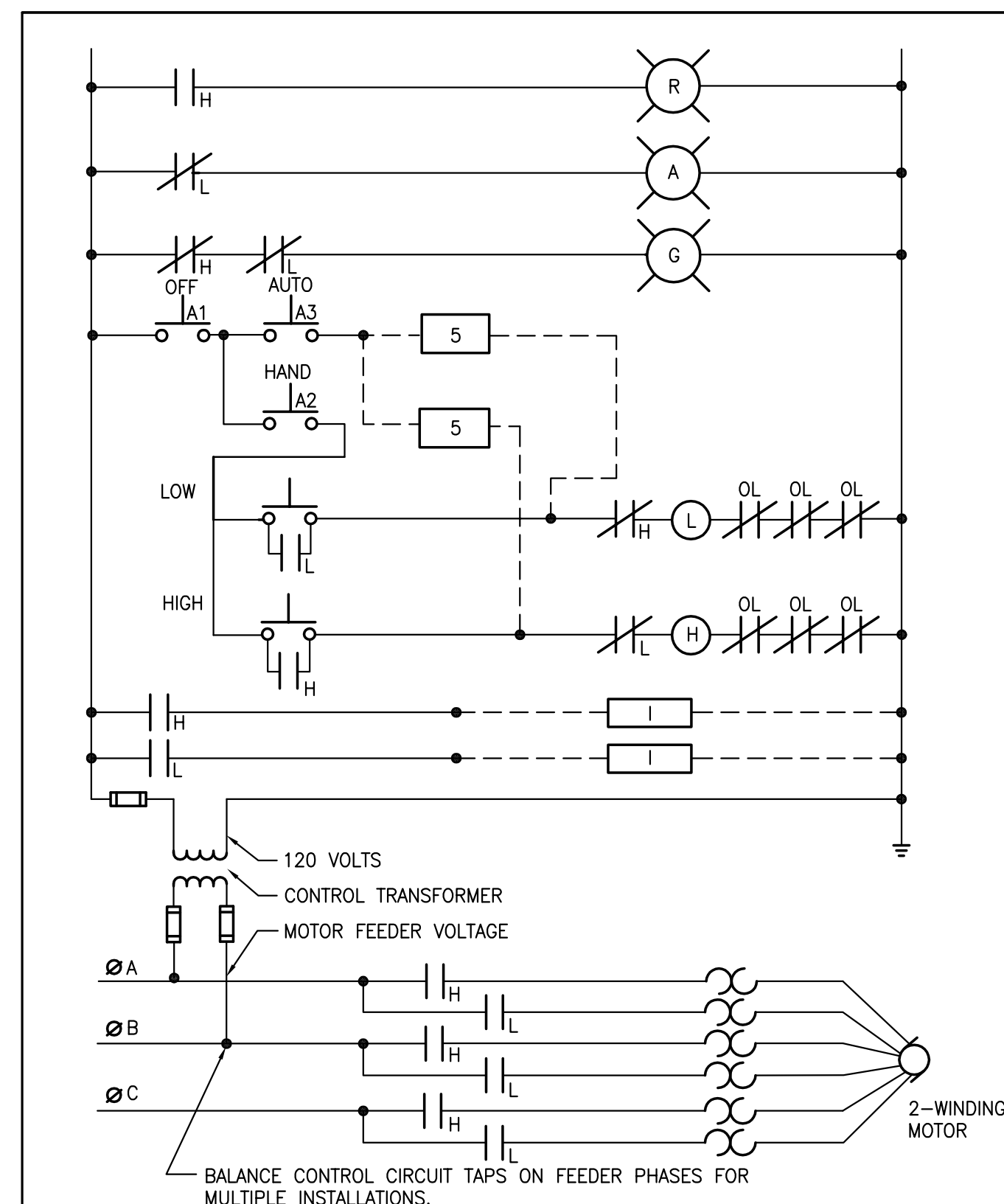
TRANSFER SWITCH

FIRE ALARM SYSTEMS

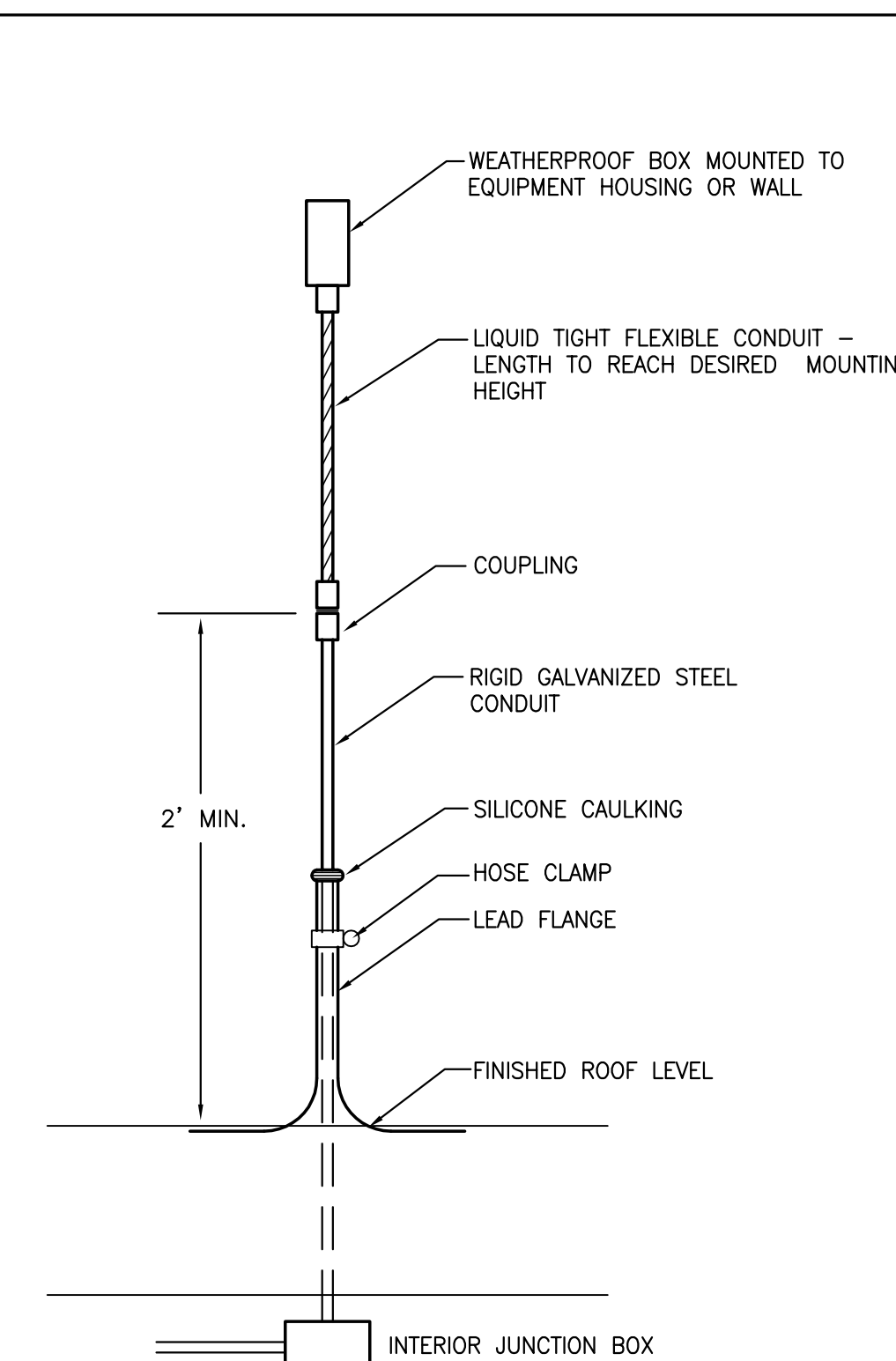
SMOKE DETECTOR, SURFACE CEILING MOUNTED

PANELBOARDS

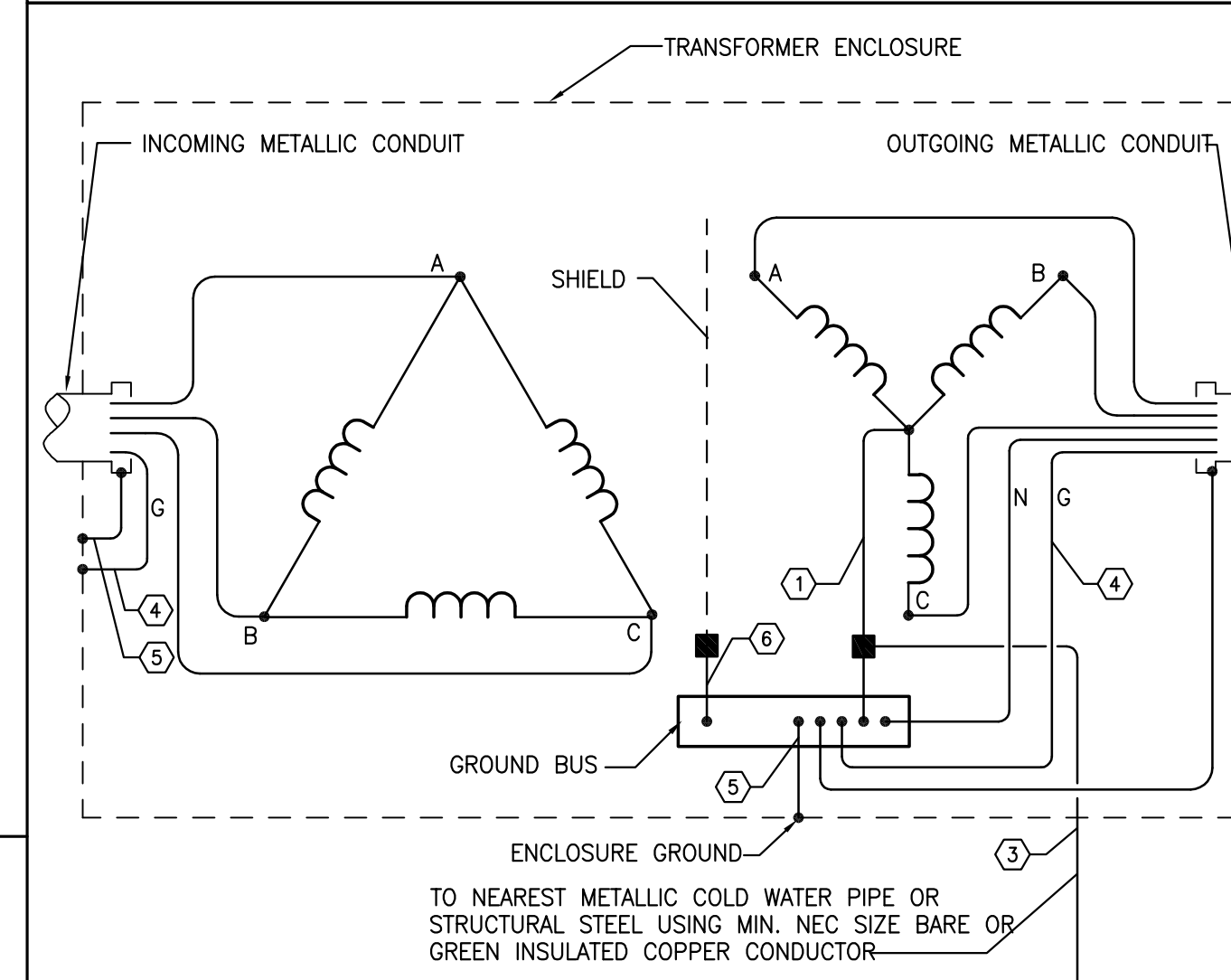
- 480 VOLT PANELBOARD, TOP OF TRIM 6'-2" AFF
- 208 VOLT PANELBOARD, TOP OF TRIM 6'-2" AFF
- EXISTING PANELBOARD



HAND-OFF-AUTO (H-O-A) TWO SPEED STARTER CONTROL CIRCUIT DETAIL

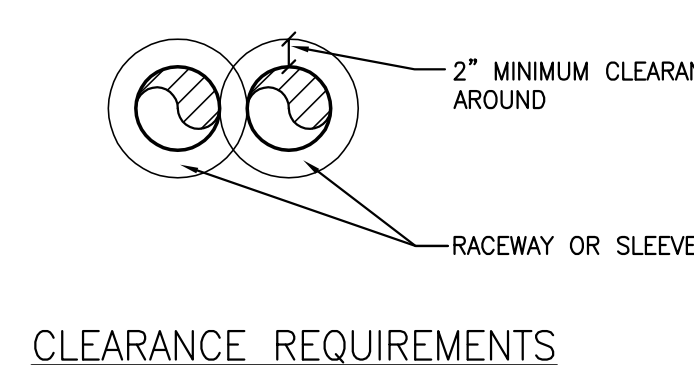


RACEWAY ROOF PENETRATION DETAIL

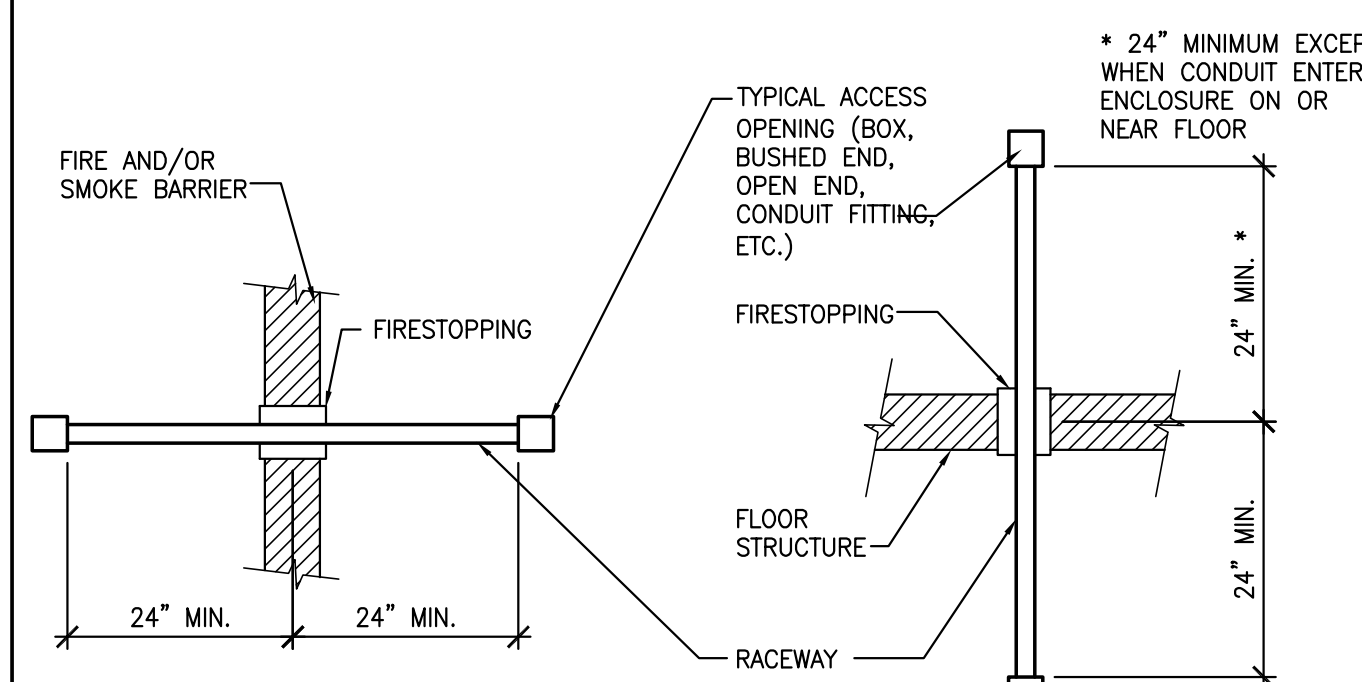


- NOTES:
- GROUNDING CONDUCTOR (NEUTRAL)
 - FUSION WELD (OR INDEPENDENT TRANSFER NEUTRAL LUGS)
 - GROUNDING ELECTRODE CONDUCTOR PER NEC. 250.
 - EQUIPMENT GROUNDING CONDUCTOR PER NEC. 250.
 - BONDING JUMPER PER NEC. 250.
 - ELECTROSTATIC SHIELD GROUNDING CONDUCTOR (IF USED)

TRANSFORMER GROUNDING DETAIL



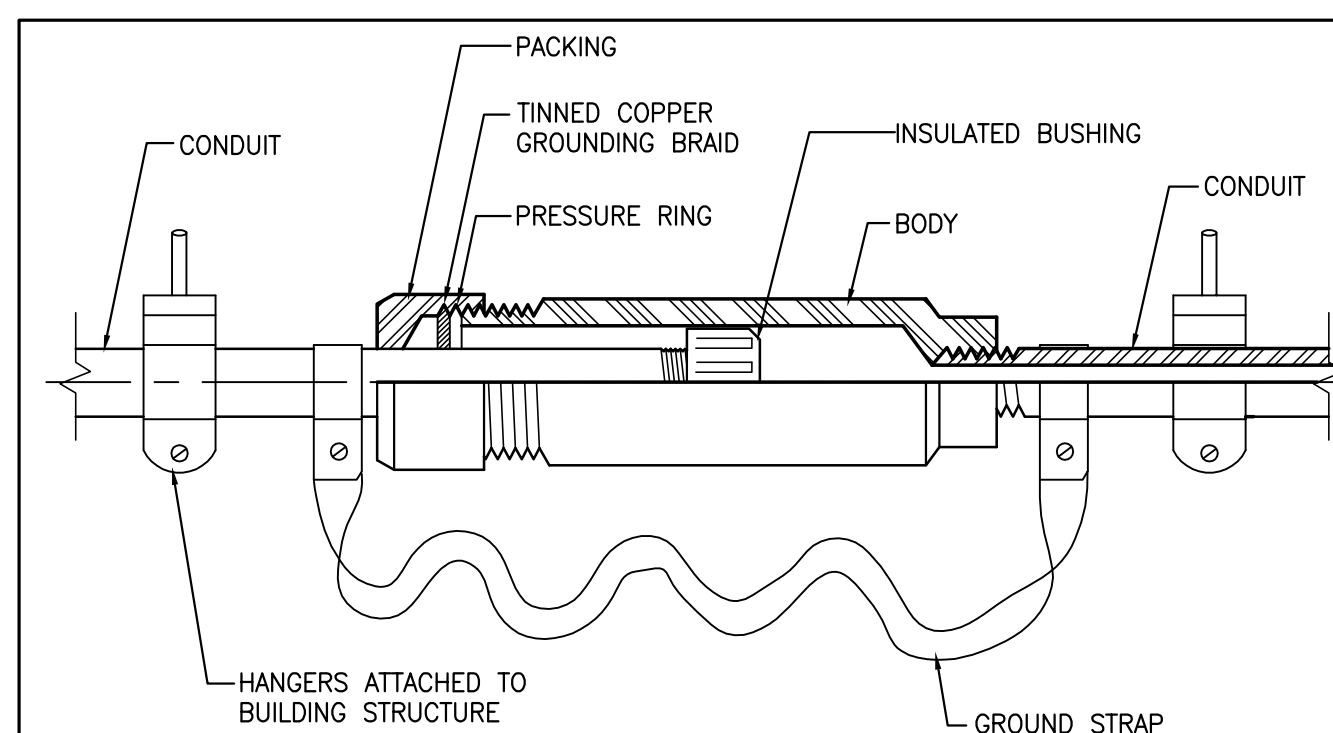
CLEARANCE REQUIREMENTS



ELEVATION

ELEVATION

PENETRATION THROUGH VERT./HORIZ. FIRE AND SMOKE BARRIER DETAIL



CONDUIT EXPANSION FITTING DETAIL

CONSTRUCTION DOCUMENTS	09/14/12
Revisions	Date

VA WESTERN NEW YORK HEALTHCARE SYSTEM
3495 BAILEY AVENUE
BUFFALO, NEW YORK 14215

CANNONDESIGN

2170 Whitehaven Road, Grand Island, New York 14072
T: 716.773.6800 F: 716.773.5909

Boston ■ New York ■ Baltimore ■ Washington DC ■
Buffalo ■ Toronto ■ Chicago ■ St. Louis ■ Phoenix ■ Calgary ■
Vancouver ■ Victoria ■ San Francisco ■ Los Angeles ■ Shanghai

Architect

stamp

CARDIOLOGY MANAGER

DATE

ENGINEERING MANAGER

DATE

INFECTION CONTROL

DATE

CARELINE MANAGER

DATE

SAFETY OFFICER

DATE

CHIEF OF STAFF

DATE

Drawing Title

LEGEND

MEDICAL CENTER DIRECTOR

DATE

ASSOCIATE MEDICAL CENTER DIRECTOR

DATE

Project Title

CRITICAL ELECTRICAL
SYSTEM EXPANSION -
WINGS B AND C

Building Number

BLDG. #1

Checked

TF

Drawn

MO

Location

V.A.M.C. BUFFALO, NEW YORK

Date

September 14, 2012

Station No.

528-P-0168

12-104-E001

