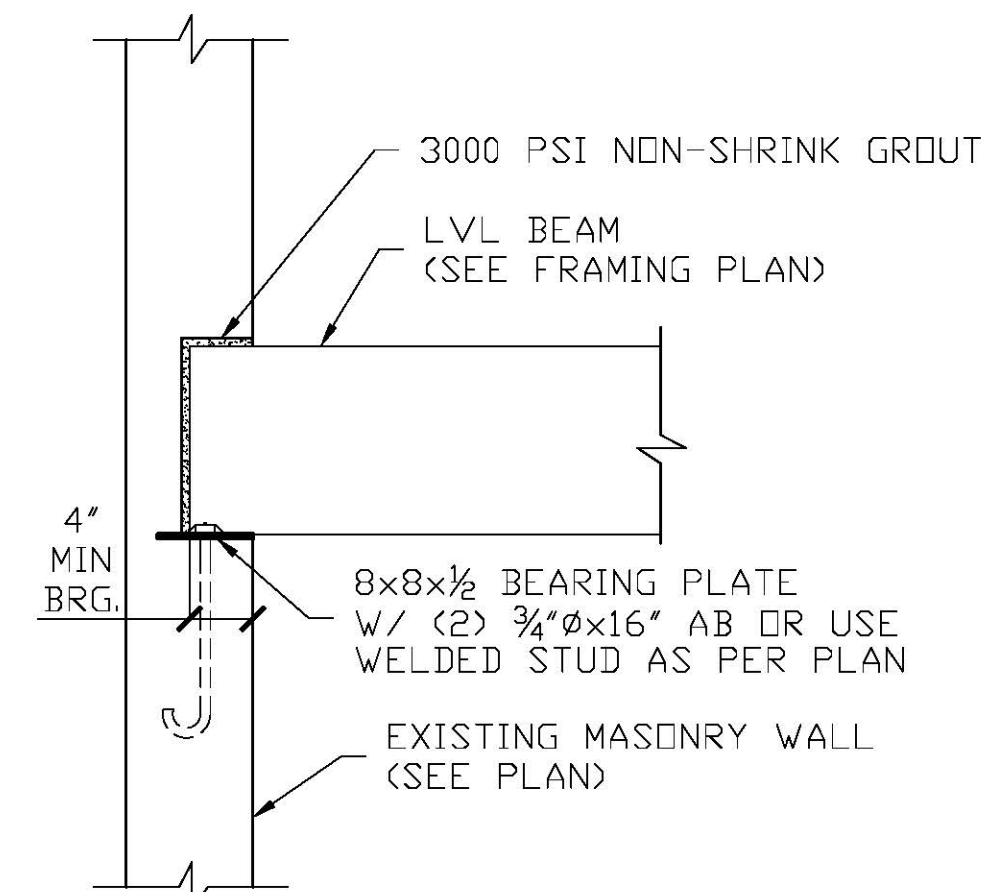
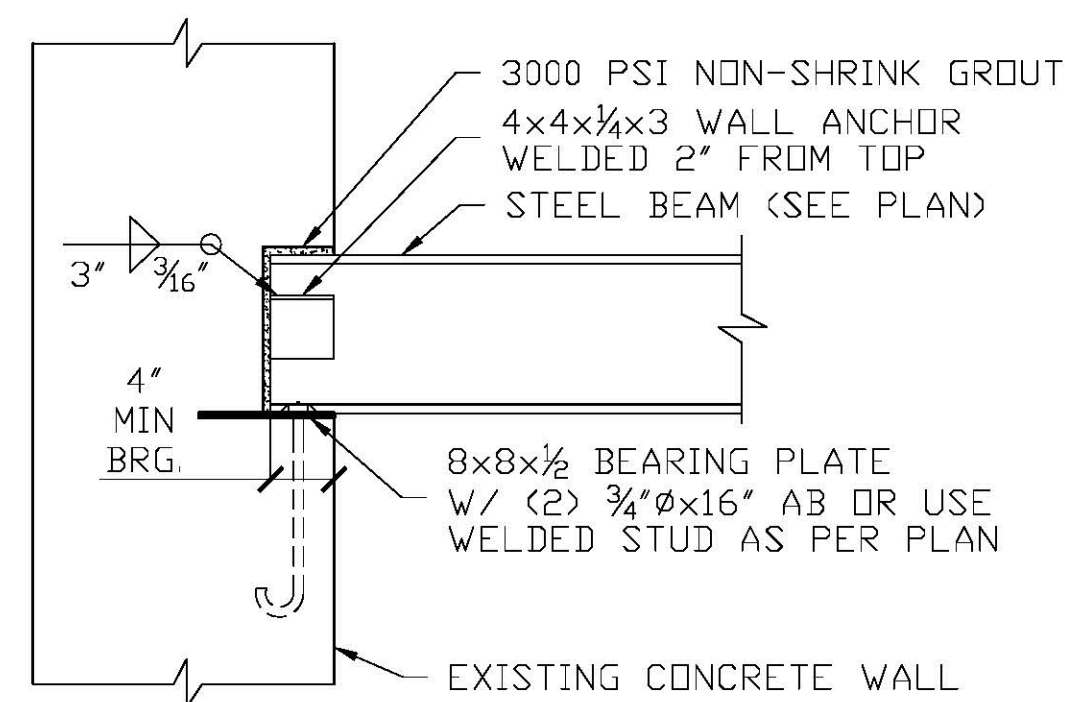


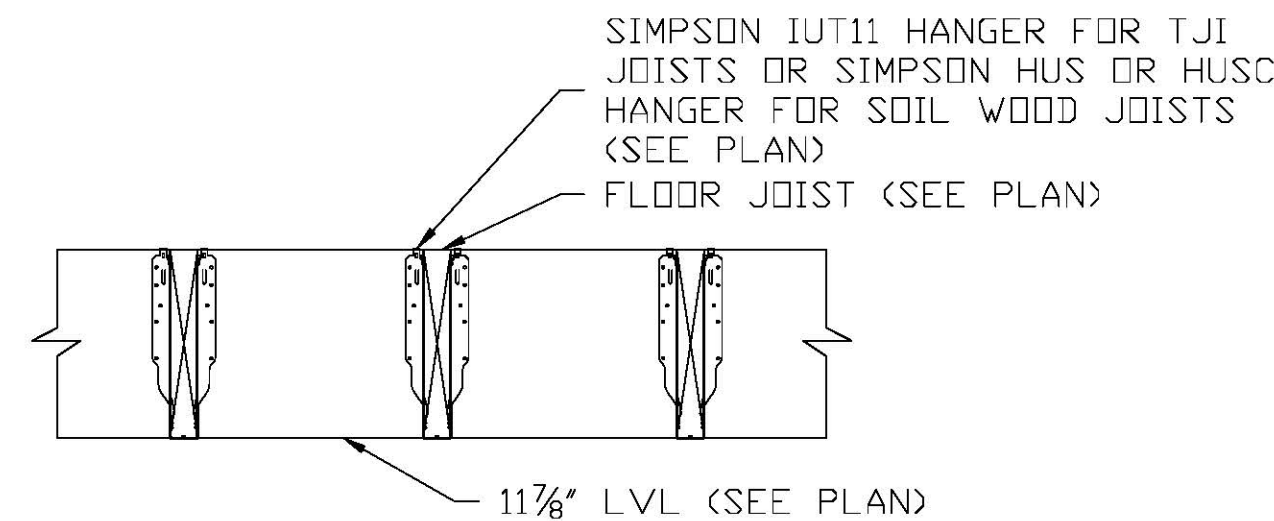
File Location: Y:\Projects 2014\2014-180 1521 Varnum St NW\Struct2014-180 1521 Varnum Street NW Structural Set.dwg Last Saved: 7/30/2014 12:22:02 AM by Ahmed Plot Date: Wednesday, July 30, 2014 7:28:20 AM by Ahmed



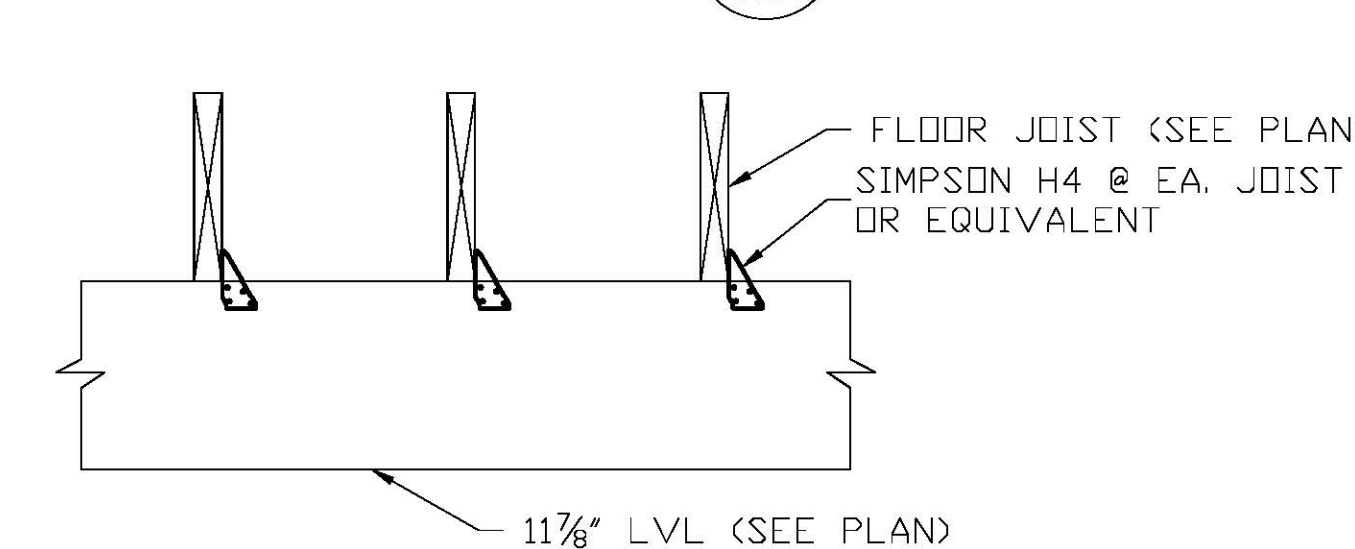
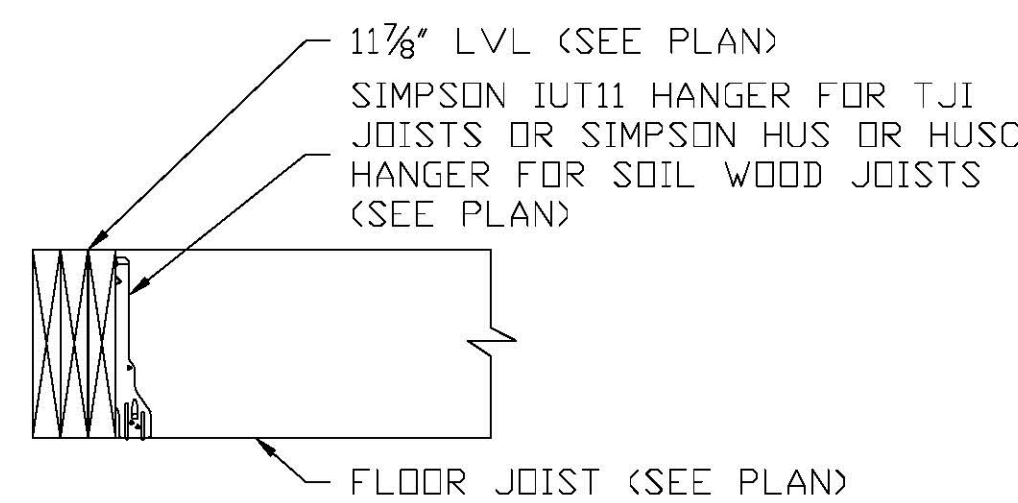
1 LVL TO EX. MASONRY WALL CONN.
SCALE: N.T.S.



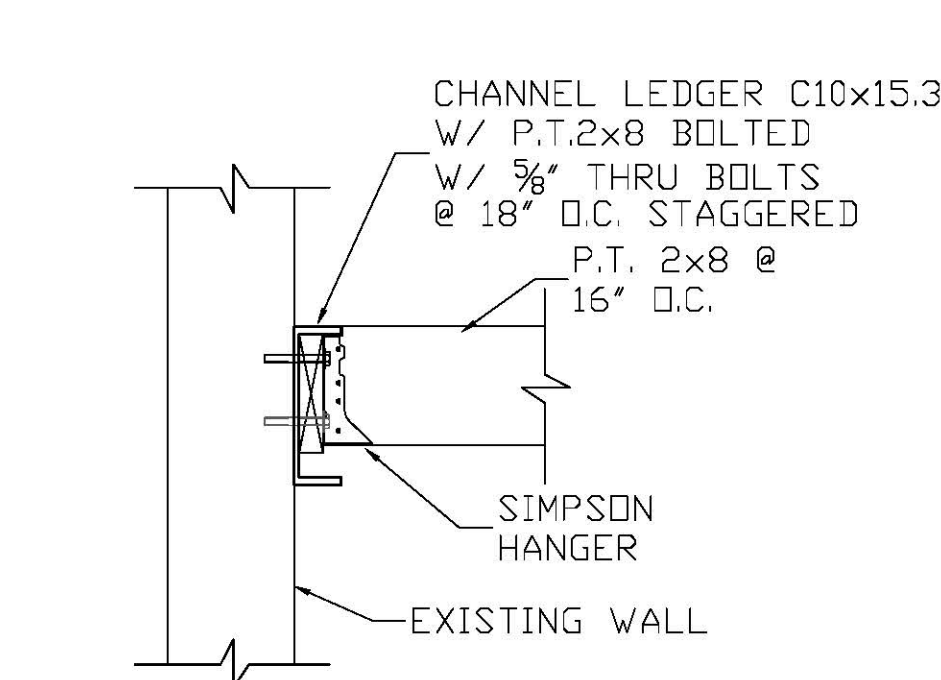
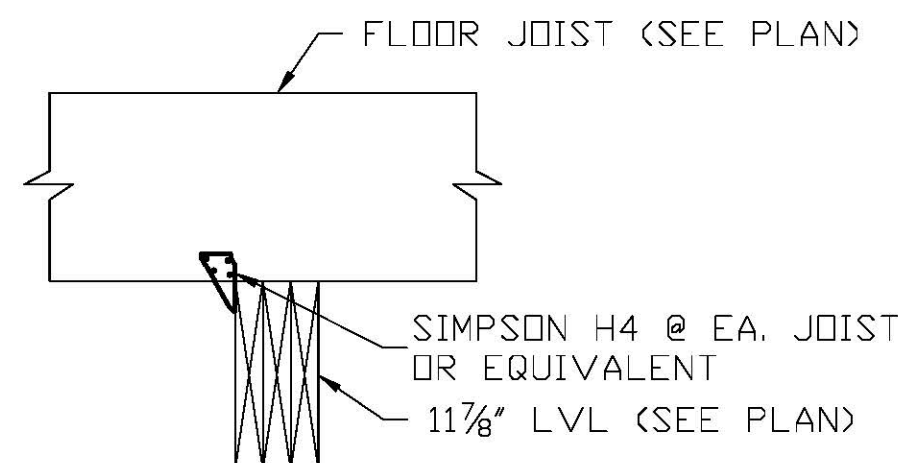
STEEL BEAM TO EX. MASONRY WALL CONN.
SCALE: N.T.S.



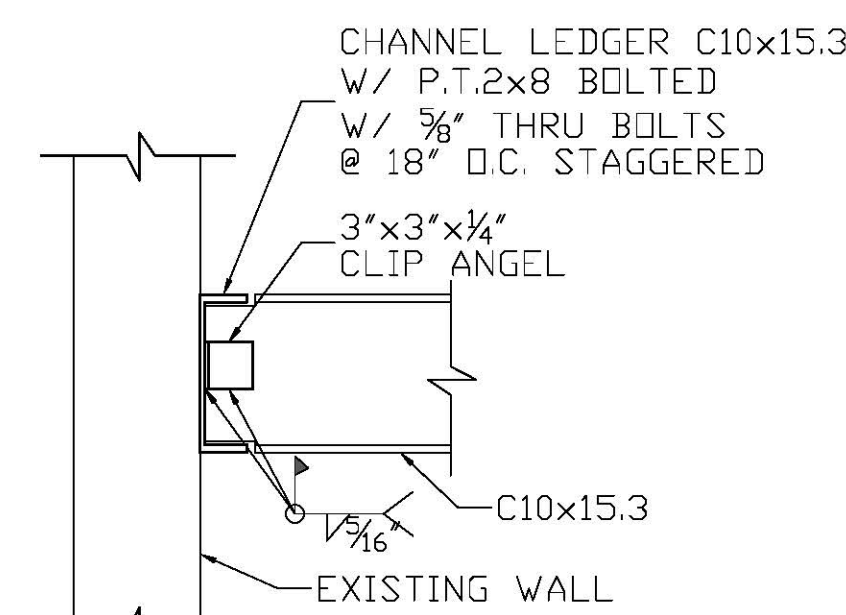
3 TJI TO FLUSH BEAM CONN.
SCALE: N.T.S.



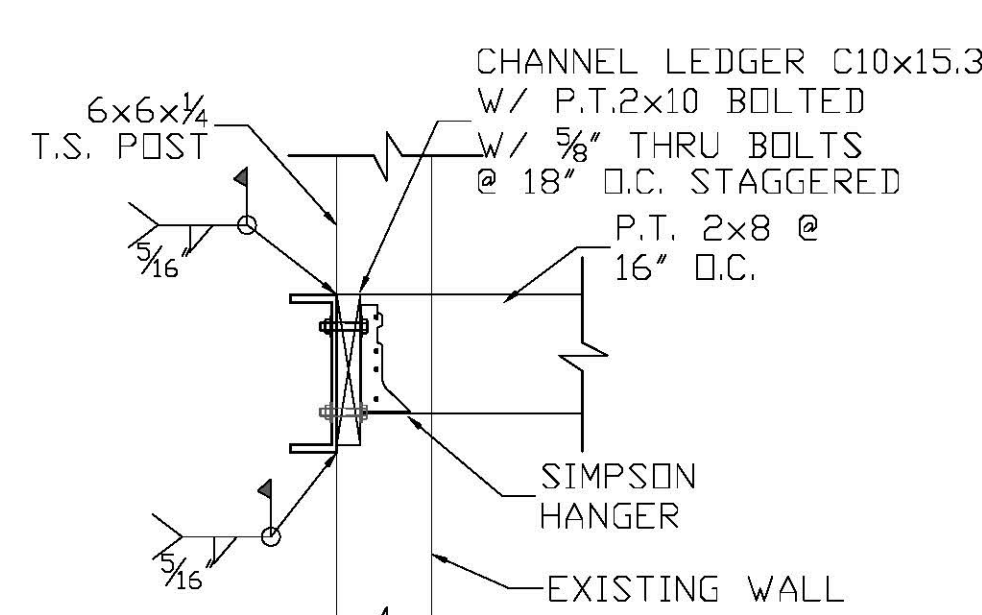
TJI TO DROPPED BEAM CONN.
SCALE: N.T.S.



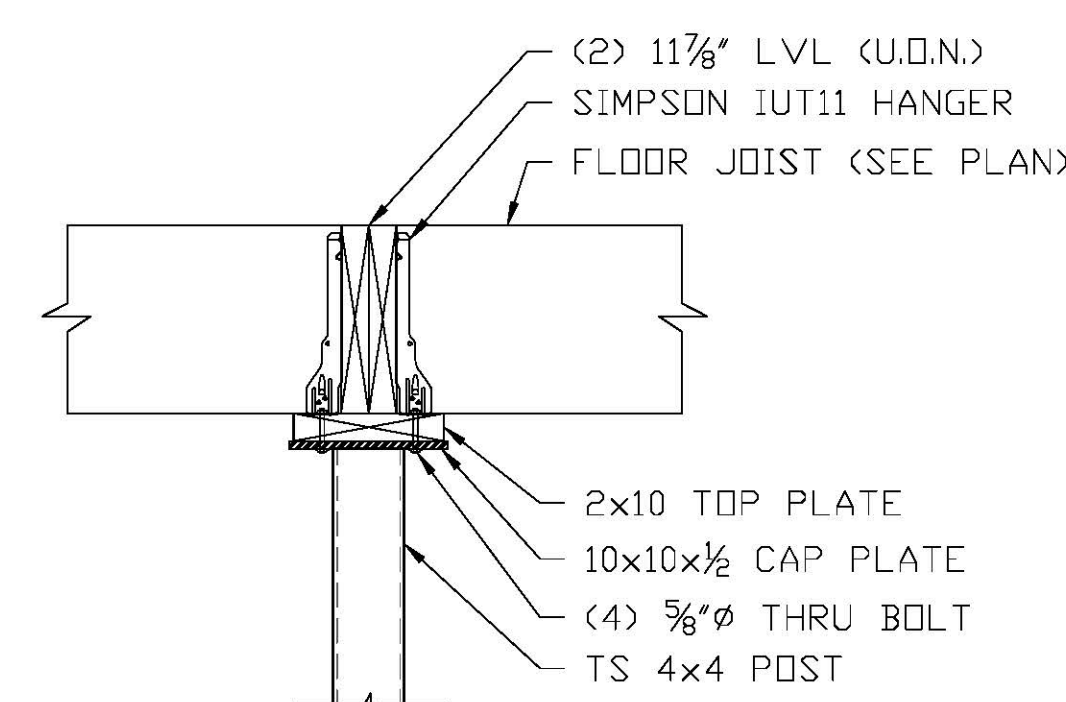
CHANNEL LEDGER DETAIL FOR DECKS
SCALE: N.T.S.



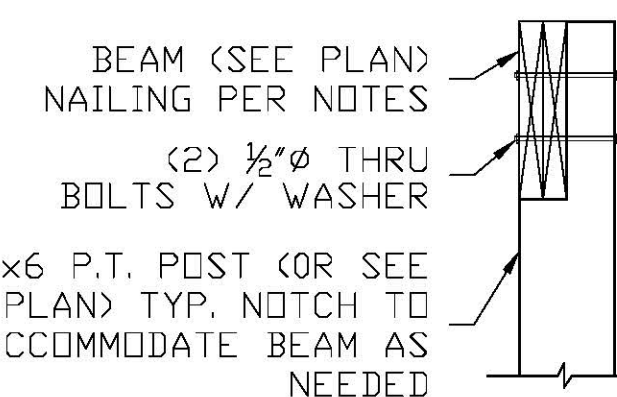
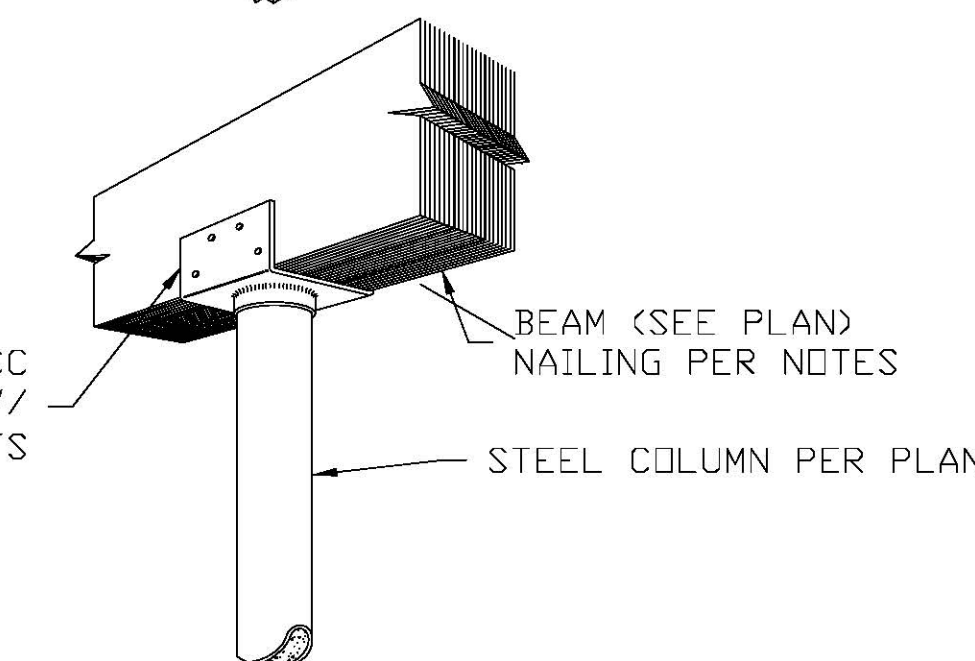
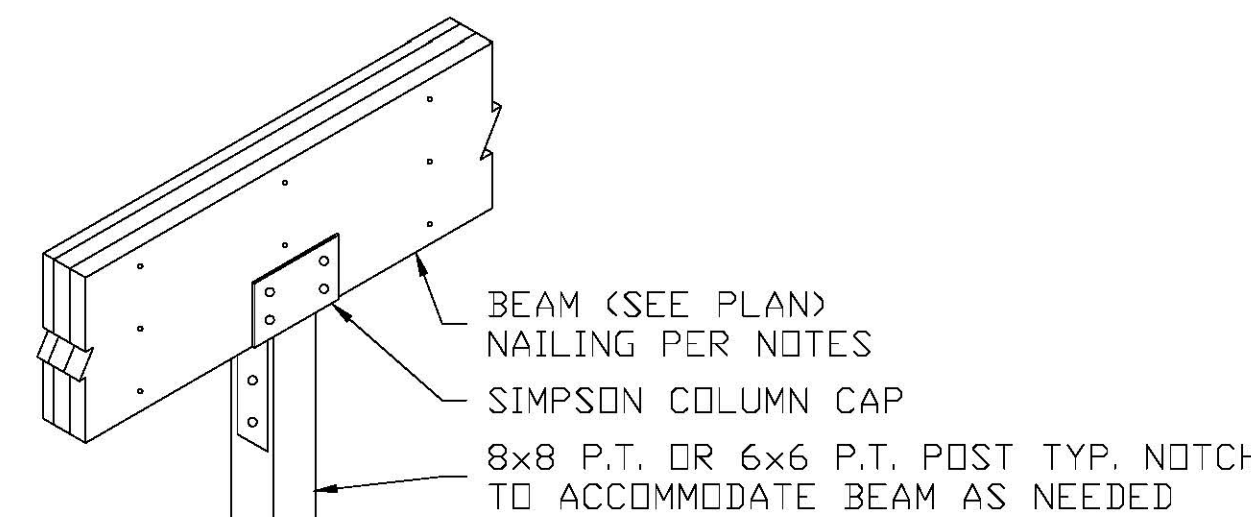
CHANNEL LEDGER TO COLUMN
DETAIL FOR DECKS
SCALE: N.T.S.



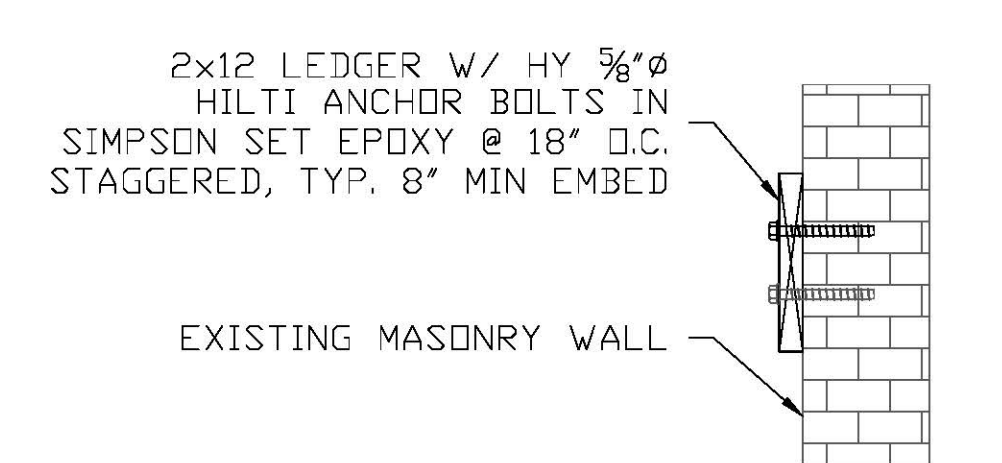
CHANNEL TO CHANNEL
DETAIL FOR DECKS
SCALE: N.T.S.



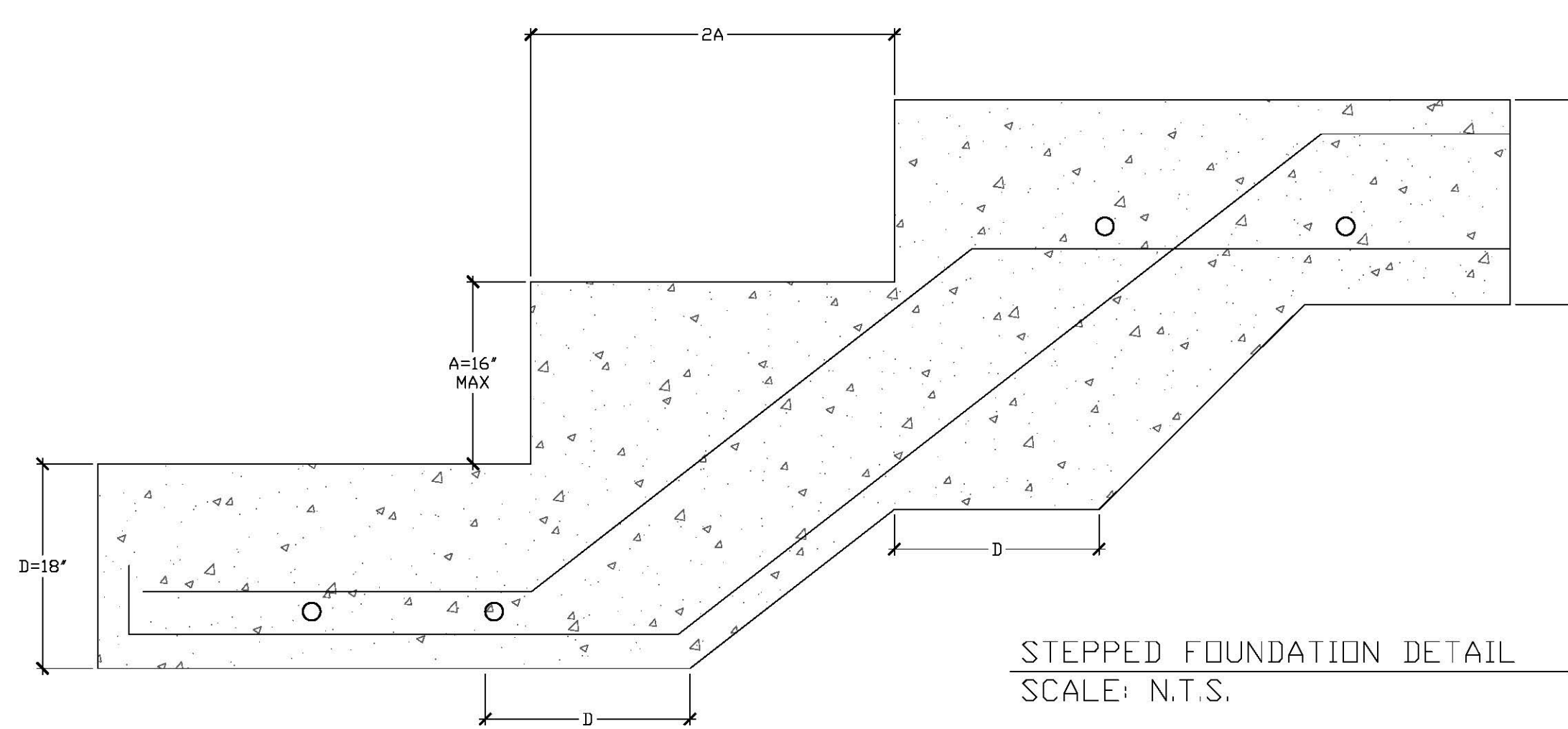
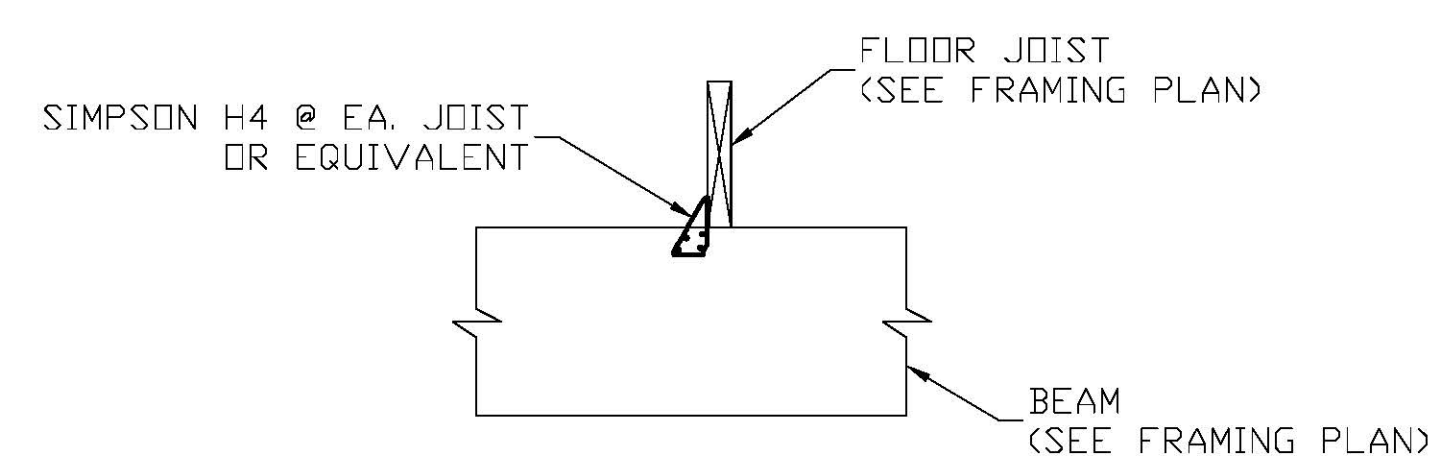
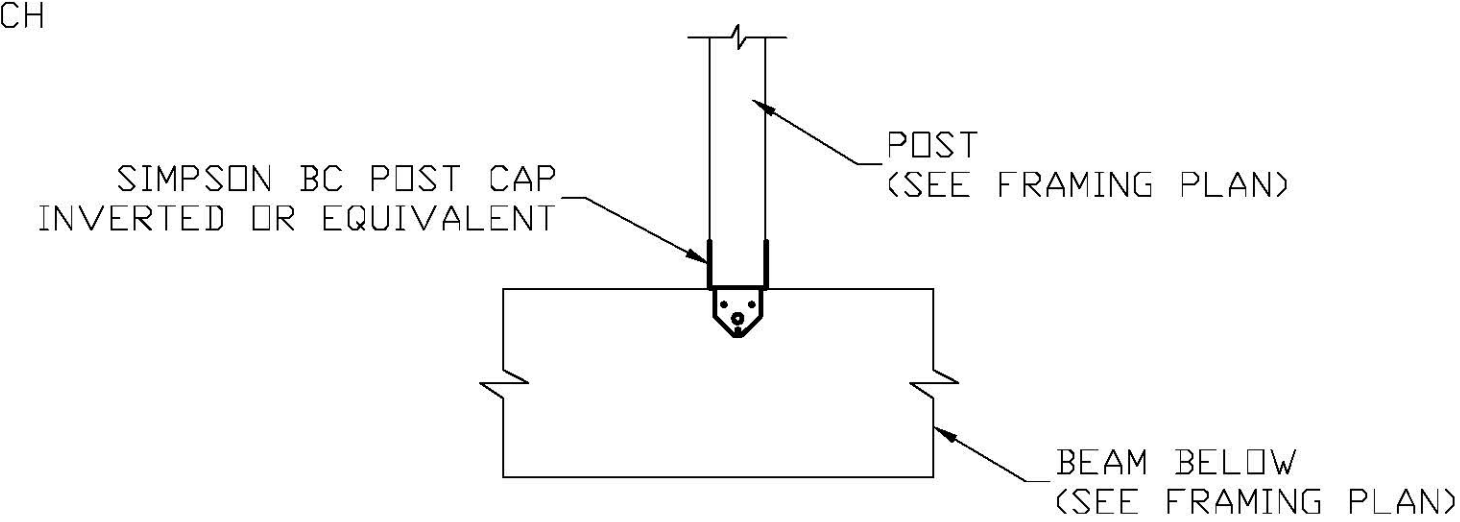
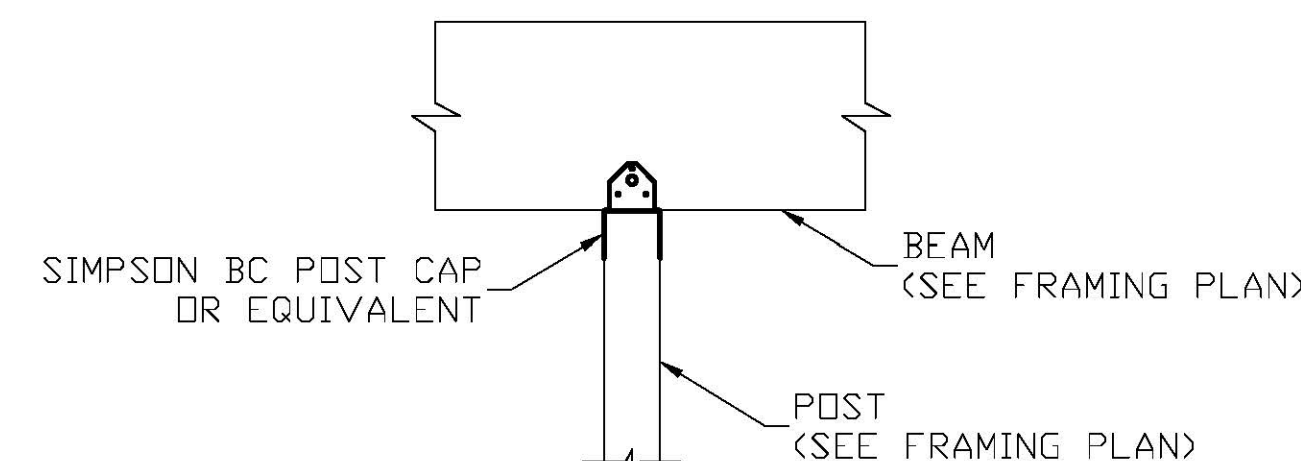
LVL TO STEEL COLUMN CONN.
SCALE: N.T.S.



NOTCHED COLUMN DETAIL
SCALE: N.T.S.



2 LEDGER BOARD TO WALL CONN.
SCALE: N.T.S.



STEPPED FOUNDATION DETAIL
SCALE: N.T.S.

SCHEDULE OF HEADERS		
HEADER	NO. OF JACKS	SIZE OF OPENINGS
2 - 2x6	1	FOR OPENINGS LESS THAN 3'-0"
2 - 2x8	2	FOR OPENINGS LESS THAN 5'-0"
2 - 2x10	2	FOR OPENINGS LESS THAN 6'-0"
2 - 2x12	2	FOR OPENINGS UP TO 8'-0"
2 - 1 3/4x11 7/8 LVL	3	FOR OPENINGS UP TO 12'-0"

SCHEDULE OF LINTELS - GALVANIZED (8" minimum bearing each end)	
STEEL ANGLE SIZE	SPAN
4 x 3 1/2 x 1/4 LLV	4'-5" OR LESS
5 x 3 1/2 x 1/4 LLV	4'-6" - 6'-0"
6 x 3 1/2 x 1/4 LLV	AS MARKED ON PLANS 7'-6"
4 x 3 1/2 x 1/4 LLV	AS MARKED ON PLANS 4'-0"; 4'-6" ARCHED
5 x 3 1/2 x 1/4 LLV	AS MARKED ON PLANS 5'-7" ARCHED

OWNER

WESTEND
DEVELOPMENT

PRIME CONSULTANT

FMC & Associates, LLC

515 M St. SE, SUITE 106, WASHINGTON DC 20003
Telephone: 202-863-0911 Fax: 202-863-0944
www.fmcassoc.com

SEAL

PROJECT TITLE

STRUCTURAL DESIGN
FOR
1521 VARNUM ST. NW
WASHINGTON, DC

ISSUES

NO.	DATE	DESCRIPTION

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT NO:

2012-065

CAD DWG FILE:

2014-180 1521 VARNUM STREET NW STRUCTURAL SET.DWG

DRAWN BY:

AWA

CHKD BY:

SCALE:

SEE DRAWING

DATE:

07-15-2014

SHEET TITLE

TYPICAL DETAILS

SHEET NUMBER

S-2.1

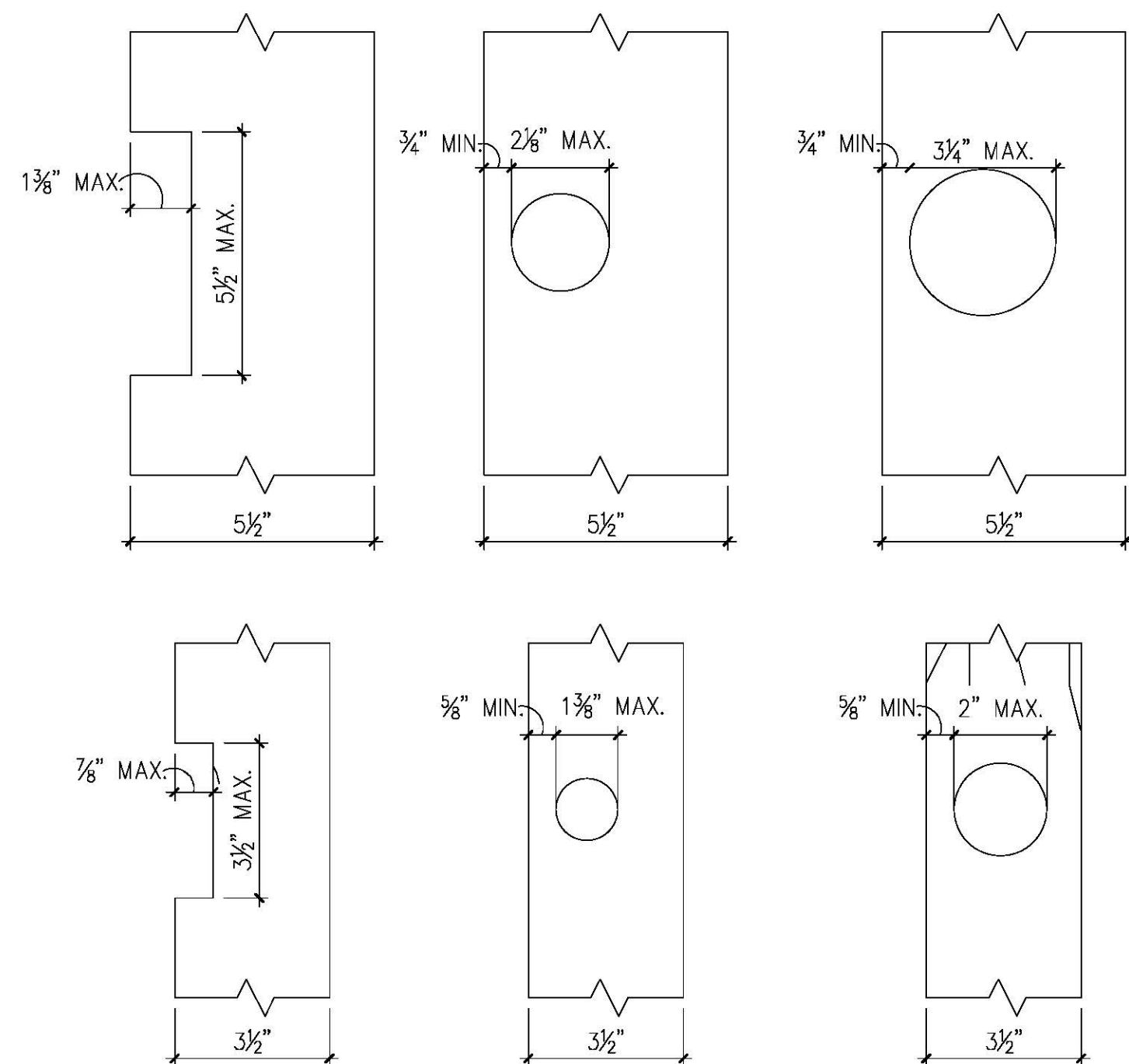
SHEET

1

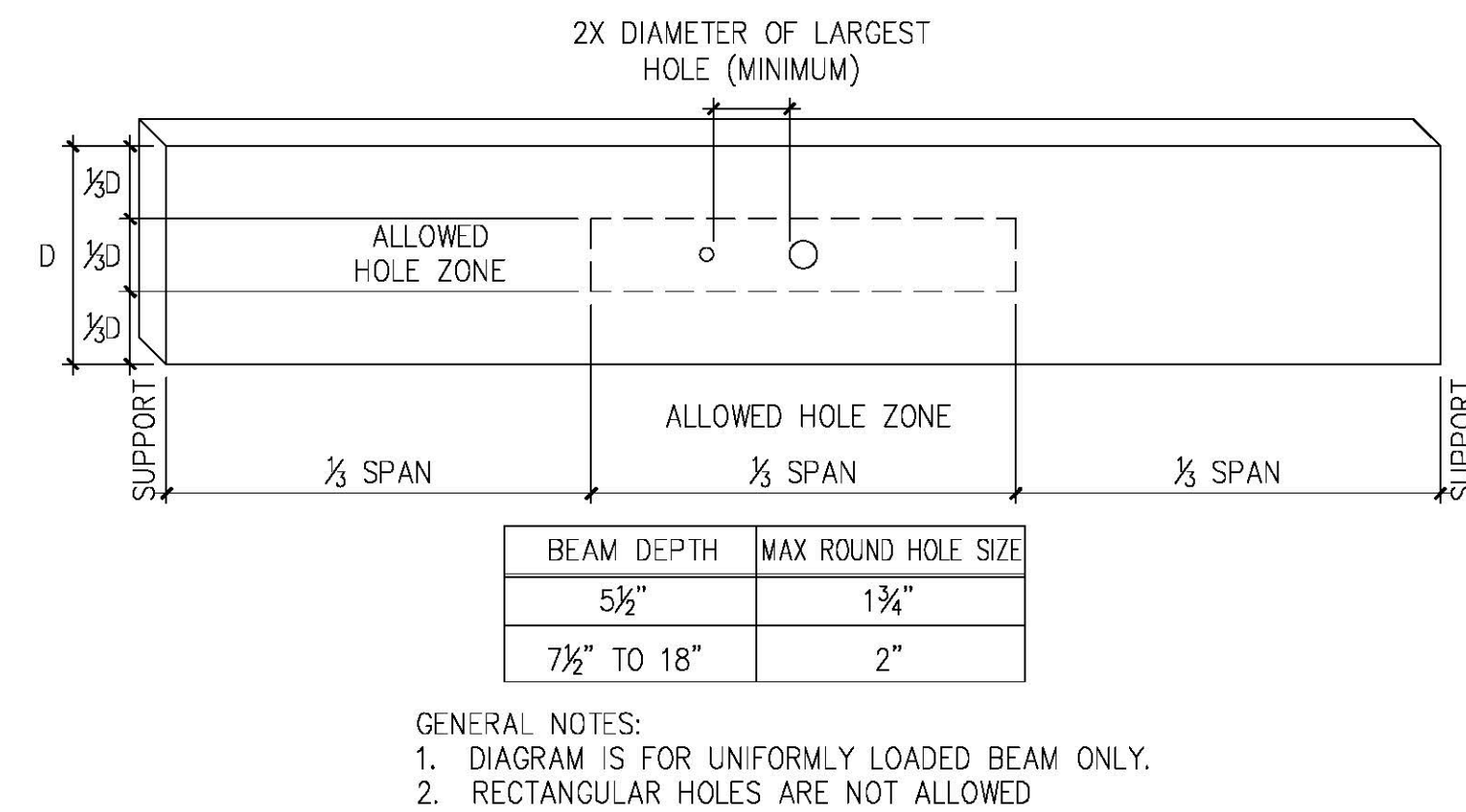
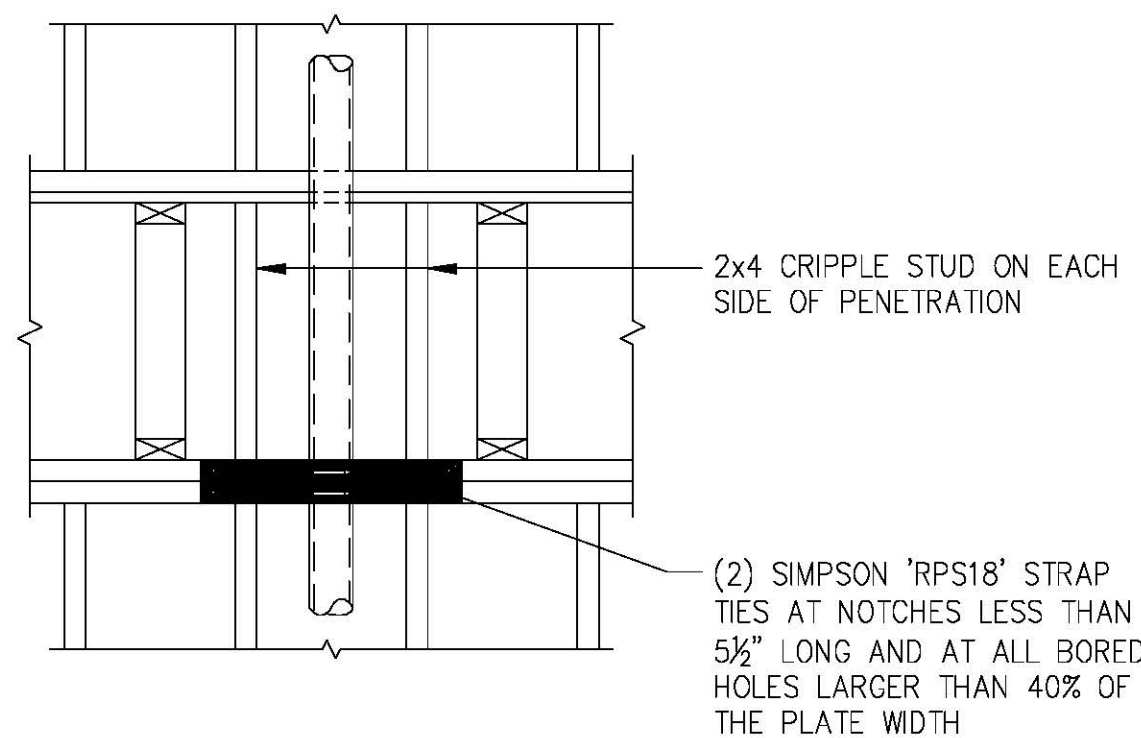
OF

8

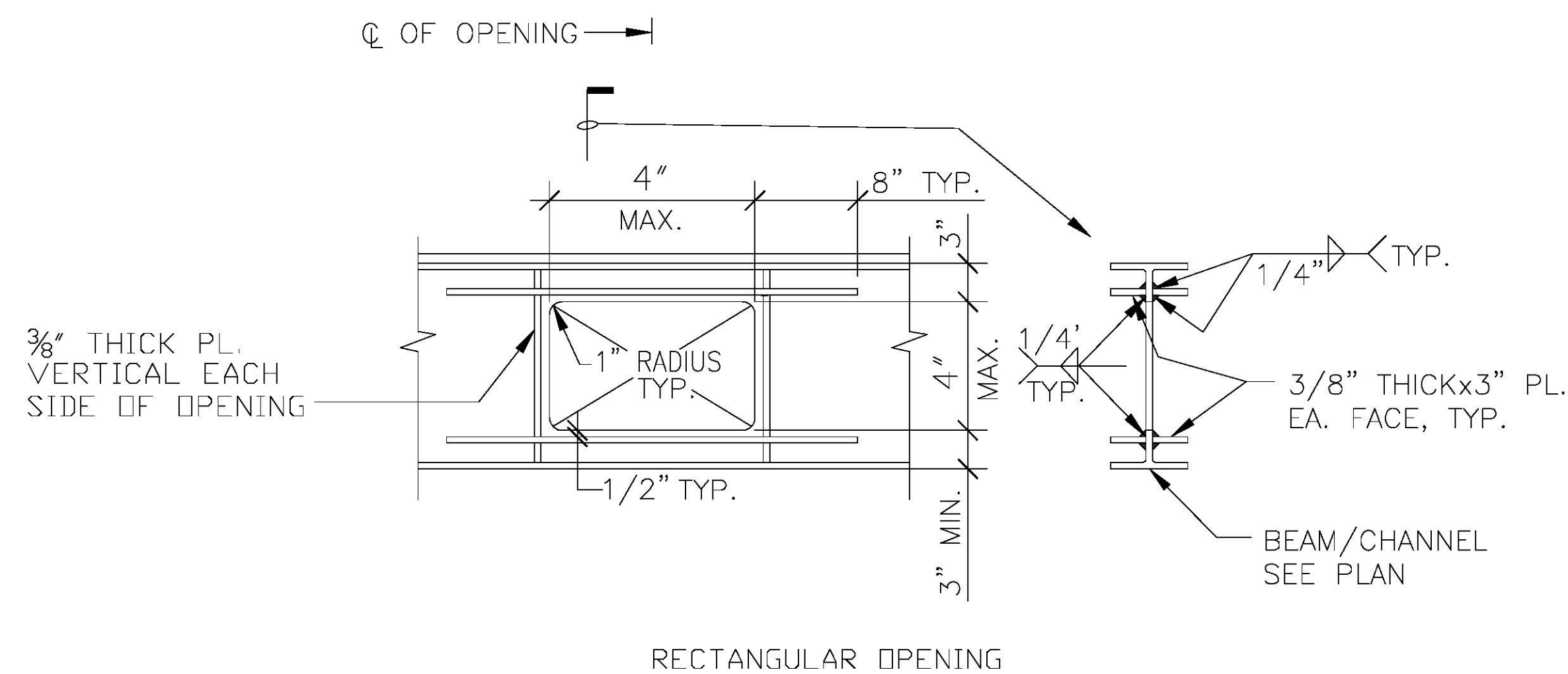
File Location: Y:\Projects 2014\2014-180 1521 Varnum St NW\Struct2014-180 1521 Varnum Street NW Structural Set.dwg Last Saved: 7/30/2014 7:22:02 AM, by Ahmed Plotted: Wednesday, July 30, 2014 7:28:59 AM by Ahmed



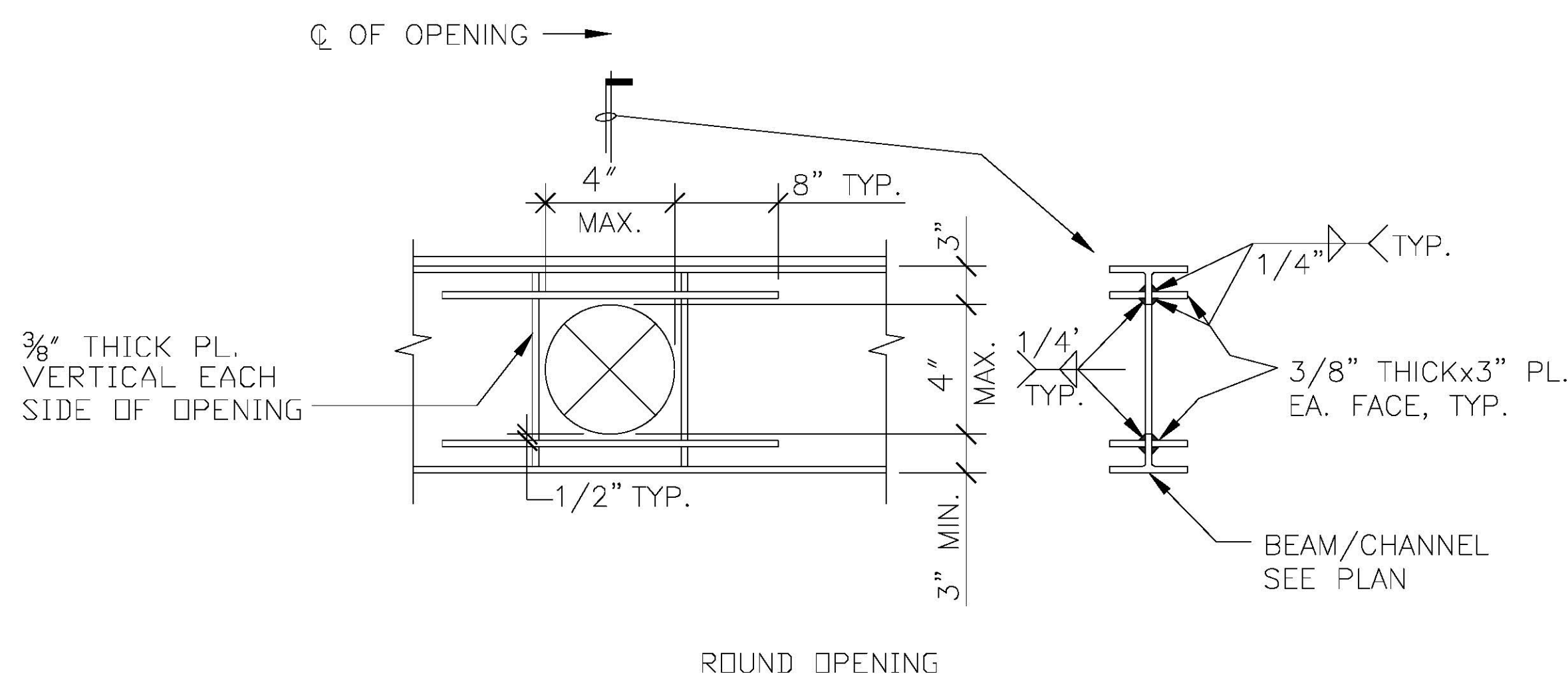
TOP PLATE PENETRATIONS
SCALE: N.T.S. AT BEARING WALLS



3 ALLOWABLE HOLE GUIDE FOR BEAM OR HEADER
SCALE: N.T.S.

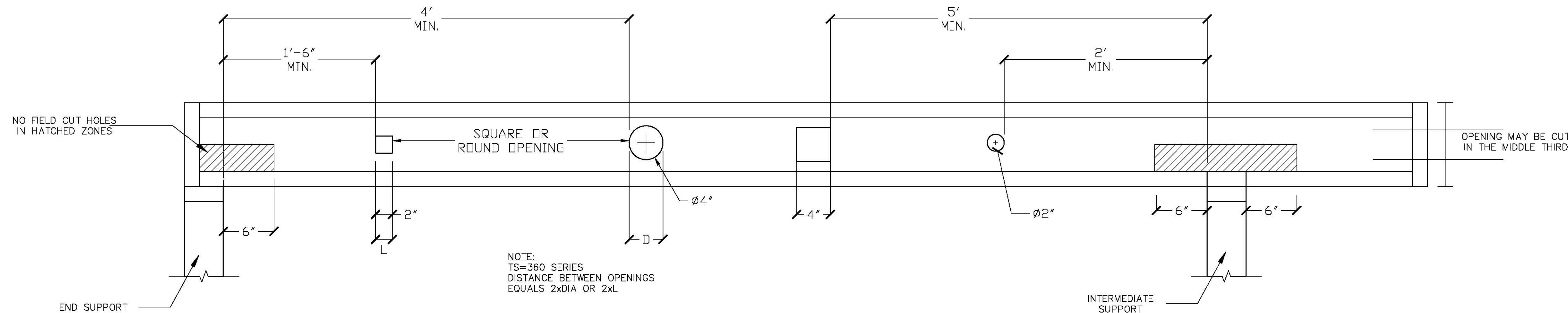


RECTANGULAR OPENING



ROUND OPENING

4 TYPICAL STEEL BEAM w/ CUT IN OPENING DETAIL
SCALE: N.T.S.



5 ALLOWABLE HOLES IN TJI JOISTS (TYP.)
SCALE: N.T.S.

OWNER

WESTEND DEVELOPMENT

PRIME CONSULTANT

FMC & Associates, LLC
515 M St. SE, SUITE 108, WASHINGTON DC 20003
Telephone: 202-863-0911 Fax: 202-863-0944
www.fmcassoc.com

SEAL

PROJECT TITLE

STRUCTURAL DESIGN FOR

1521 VARNUM ST. NW
WASHINGTON, DC

ISSUES

NO.	DATE	DESCRIPTION

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT NO: 2012-065

CAD DWG FILE: 2014-180 1521 VARNUM STREET NW STRUCTURAL SET.DWG

DRAWN BY: AWA

CHKD BY:

SCALE: SEE DRAWING

DATE: 07-15-2014

SHEET TITLE

TYPICAL OPENING DETAILS

SHEET NUMBER

S-502
8 OF 8

ELECTRICAL NOTES

1. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE LOCAL CODE ENFORCING AUTHORITIES.
2. THE ELECTRICAL DRAWINGS SHALL BE CONSIDERED AS BEING DIAGRAMMATIC AND FOR BIDDING PURPOSES ONLY. THE ATTENTION OF THE CONTRACTOR IS CALLED TO THE FACT THAT WHILE THESE DRAWINGS ARE GENERALLY TO SCALE AND ARE MADE AS ACCURATELY AS THE SCALE WILL PERMIT, ALL IMPORTANT DIMENSIONS SHALL BE DETERMINED IN THE FIELD. THEY ARE NOT TO BE CONSIDERED AS ERECTION DRAWINGS. THEY DO NOT INDICATE EVERY FITTING, ELBOW, OFFSET, PULL BOX, ETC. WHICH IS REQUIRED TO COMPLETE THE JOB. CONTRACTOR SHALL PREPARE FIELD ERECTION DRAWINGS AS REQUIRED FOR THE USE OF HIS MECHANICS TO INSURE PROPER INSTALLATION.
3. ELECTRICAL WIRING SHALL BE NO. 12 THHN AWG COPPER MINIMUM UNLESS OTHERWISE NOTED.
4. ELECTRICAL CONTRACTOR SHALL FURNISH RECORD SET OF DRAWINGS WITH ANY DEVIATIONS MARKED IN RED INK.
5. NOT USED.
6. WHERE EXISTING CIRCUITS TO REMAIN ARE INTERRUPTED DUE TO NEW CONSTRUCTION, CONDUIT AND WIRE SHALL BE EXTENDED TO EXISTING PANELS.
7. CONTRACTOR'S PRE-BID SITE VISITS SHALL VERIFY ALL EXISTING CONDITIONS AND HE SHALL BE RESPONSIBLE FOR THE INCLUSION OF ALL REQUIRED DEMOLITION IN AREAS UNDERGOING MODIFICATION WHETHER SUCH WORK IS OR IS NOT INDICATED ON THE PLANS.
8. THE CONTRACTOR SHALL VERIFY THE ACTUAL CONDITIONS BEFORE SUBMITTING BID AND NOTIFY THE ARCHITECT IF EXISTING CONDITIONS PREVENT THE INSTALLATION OF THE PLANNED ELECTRIC SYSTEM AS SHOWN ON THESE DRAWINGS.
9. PROVIDE STAINLESS STEEL PLATES ON ALL DEVICES AND OUTLETS.
10. CONTRACTOR SHALL GUARANTEE ALL WORK FOR WHICH MATERIALS ARE FURNISHED, FABRICATED OR FIELD ERECTED, ALL FACTORY ASSEMBLED EQUIPMENT FOR WHICH NO SPECIFIC MANUFACTURER'S GUARANTEE IS FURNISHED, AND ALL WORK IN CONNECTION WITH INSTALLING MANUFACTURER'S GUARANTEED EQUIPMENT. THIS PERSONAL GUARANTEE SHALL EXIST FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK AND SHALL APPLY TO DEFECTS IN MATERIAL AND TO DEFECTIVE WORKMANSHIP OF ANY KIND.
11. THE ELECTRICAL CONTRACTOR SHALL DO ALL CUTTING REQUIRED FOR THE ELECTRICAL INSTALLATION UNDER THE SUPERVISION OF THE GENERAL CONTRACTOR SUBJECT TO THE DIRECTION AND APPROVAL OF THE OWNER'S REPRESENTATIVE. DO NOT ENDANGER THE STABILITY OF THE STRUCTURE OR ANY PART THEREOF BY CUTTING, BURNING, DIGGING OR OTHERWISE.
12. THIS CONTRACTOR SHALL EXTEND WIRING TO ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AND MAKE FINAL AND COMPLETE CONNECTIONS TO SAME. BEFORE "ROUGHING-IN" OUTLETS, THE LOCATION AND TYPE OF OUTLET SHALL BE VERIFIED FROM SHOP DRAWINGS OF THE EQUIPMENT. DO NOT RUN ANY CONDUIT EXPOSED. PROVIDE A SEPARATE GROUND WIRE AND CONNECTION FOR EACH PIECE OF EQUIPMENT. ALL APPLIANCES SHALL BE PROVIDED WITH A MEANS OF DISCONNECT, EITHER A RECEPTACLE AND PLUG, DISCONNECT SWITCH OR C/B IN PANELBOARD WHERE WITHIN SIGHT.
13. WHERE JUNCTION BOXES ARE REQUIRED TO BE INSTALLED ABOVE NON-ACCESSIBLE CEILINGS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO THE CEILING CONTRACTOR FOR INSTALLATION.
14. ALL WIRING AND EQUIPMENT FOR RACEWAYS OF DIFFERENT TEMPERATURES SHALL COMPLY WITH ARTICLE 300-7 OF THE N.E.C. AND THE NORTH CAROLINA STATE ELECTRIC CODE.
15. ALL ELECTRICAL EQUIPMENT SHALL BE UNDERWRITER'S LABORATORY (U.L.) LISTED AND LABELED FOR THE QUALIFIED USE AND INSTALLED PER ARTICLE 110-3(B) OF THE N.E.C.
16. ALL FIXTURES INSTALLED IN RECESSED CAVITIES IN WALLS OR CEILINGS SHALL COMPLY WITH ARTICLE 410-16 AND 410-65 THROUGH 410-72 OF THE N.E.C.
17. ALL WIRING AND EQUIPMENT FOR EMERGENCY SYSTEM SHALL COMPLY WITH ARTICLE 700 OF THE N.E.C. AND SECTIONS 623 AND 624 OF THE B.O.C.A.
18. ALL WIRING SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE MINIMUM 3/4" ELECTRICAL METALLIC TUBING (EMT) WITH WATERTIGHT COMPRESSION FITTINGS. CONDUIT SHALL BE MOUNTED WITH ONE (1) HOLE STEEL STRAPS ON FLAT SURFACES AND WHERE SUSPENDED USE ALL-THREAD ROD. ALL CONDUIT SUPPORTS SHALL BE SPACED 18" FROM FITTING, ELBOW OR OUTLET BOX AND 8'-0" O.C. IN STRAIGHT RUNS. WHERE PERMITTED BY THE LOCAL CODE ENFORCING AUTHORITIES, AND APPROVED BY THE OWNER'S REPRESENTATIVE, (UL) LISTED TYPE (MC) OR (BX WHEN APPROVED), WIRING MAY BE USED ABOVE HUNG CEILINGS AND IN VOIDS OF WALLS ONLY.
19. WIRE AND CABLE SHALL BE AS MANUFACTURED BY ANACONDA, WALKER, GENERAL CABLE, GENERAL ELECTRIC OR SIMPLEX AND SHALL BE COPPER, MINIMUM CONDUCTIVITY OF 99%.
20. FEEDERS AND/OR BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE XHHW, THW OR THWN, #12 MINIMUM. WIRE AND CABLE #12 AND #10 SHALL BE SOLID AND #8 AND LARGER SHALL BE STRANDED.
21. PROVIDE AN INSULATED GREEN GROUNDING WIRE IN THE SAME CONDUIT AS THE BRANCH CIRCUIT OR FEEDER WIRING AND FOR ALL THREE (3) PHASES AND/OR SINGLE PHASE, 120 AND 208 VOLT BRANCH CIRCUITS AND FOR ALL FEEDERS, SHOWN OR NOT SHOWN.
22. ALL PANELS, SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ELECTRICAL APPARATUS SHALL BE CLEARLY MARKED FOR EASY IDENTIFICATION AND SAFETY. USE BLACK PLASTIC OR BAKELIGHT NAMEPLATE ENGRAVED WITH WHITE LETTERS 1/4" HIGH. PUNCHED TAPE IS NOT ACCEPTABLE. PROVIDE TYPEWRITTEN CIRCUIT DIRECTORIES ON SUITABLE CARDS TO FIT INTO THE HOLDERS IN THE PANELBOARD DOORS.
23. WHERE JOB CONDITIONS REQUIRE MINOR DEVIATIONS FROM THE CONTRACT DOCUMENTS, MAKE SUCH DEVIATIONS WITHOUT ADDITIONAL COST TO THE OWNER. MAJOR DEVIATIONS SHALL NOT BE MADE WITHOUT FIRST OBTAINING WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE.
24. EXAMINE OTHER SECTIONS OF THE SPECIFICATIONS AND DRAWINGS AS MAY BE NECESSARY TO BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THIS WORK.
25. BRING ANY DISCREPANCIES DETERMINED OR OMISSIONS FOUND IN THE DRAWINGS AND SPECIFICATIONS TO THE OWNER'S REPRESENTATIVE'S ATTENTION BEFORE SUBMITTING THE BIDS. AFTER AWARD OF CONTRACT, THE INTERPRETATION OF ANY CONFLICT WILL BE MADE BY THE OWNER'S REPRESENTATIVE.
26. ANYTHING DRAWN OR SPECIFIED SHALL NOT BE CONSTRUED TO CONFLICT WITH ANY LOCAL, MUNICIPAL OR STATE LAW, REGULATION OR ORDINANCE WHICH GOVERNS THE INSTALLATION OF ANY ELECTRICAL OR RELATED WORK. ITEMS SHALL NOT BE INSTALLED IN CONFLICT WITH THE NORTH CAROLINA ELECTRIC CODE. RESOLVE ANY AND ALL CONFLICTS BEFORE INSTALLATION AT NO ADDITIONAL EXPENSE TO THE OWNER.
27. REFERENCE TO CATALOGS, STANDARDS, CODES, SPECIFICATIONS, RECOMMENDATIONS, ETC. MEANS LATEST EDITION OF SUCH PUBLICATIONS IN EFFECT AT DATE OF INVITATION TO SUBMIT PROPOSAL.

28. ALL CONDUIT SHOULD BE EMT EXCEPT AS FOLLOWS: RIGID GALVANIZED STEEL WHEN EXPOSED WITHIN 8' OF THE FLOOR.
29. PROVIDE SINGLE GANG PLASTER RING AND A 1/8" DIAMETER NYLON PULL ROPE TO ACCESSIBLE CEILING SPACE FROM ALL NEW TELEPHONE AND/OR DATA OUTLETS
30. NOT USED.
31. OPEN CABLING IN PLENUM CEILING NOT ALLOWED
32. TYPE BX CABLE ALLOWED WHEN APPROVED. A MAXIMUM OF 6 FEET OF TYPE MC CABLE MAY BE USED IN THE CEILINGS FOR CONNECTIONS OF RECESSED LIGHTING FIXTURES, AS APPROVED BY THE AIRPORT ENGINEERING BRANCH
33. REFER TO ARCHITECTURAL DRAWINGS AND EQUIPMENT CUT SHEETS REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF RECEPTACLES, AND LIGHTING FIXTURES, ETC.
34. ALL WIRE, CABLE AND EQUIPMENT INSTALLED IN PLENUM CEILINGS (RETURN AND SUPPLY) SHALL BE PLENUM RATED AND CONFORM TO UL 910 AND SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
35. A LICENSED QUALIFIED ELECTRICIAN SHALL BE ON THE JOB SITE AT ALL TIMES DURING THE EXECUTION OF ANY ELECTRICAL WORK.
36. ACCESS TO ELECTRICAL PANELS IN EQUIPMENT ROOMS REMOTE FROM THE WORK SITE MUST BE COORDINATED THROUGH THE AIRPORT'S ENGINEERING BRANCH.
37. EXCEPT AS OTHERWISE NOTED, ALL EXISTING ELECTRICAL WORK WHICH WILL NOT BE RENDERED OBSOLETE AND WHICH MAY BE DISTURBED DUE TO ANY CHANGES REQUIRED UNDER THIS CONTRACT SHALL BE RESTORED TO ITS ORIGINAL OPERATING CONDITION.

WIRING DEVICE NOTES

WIRING DEVICES SHALL BE SPECIFICATION GRADE, IVORY WITH NYLON FACE AS FOLLOWS:

	HUBBELL	P&S	ARROW HART
20 AMP DUPLEX	5352I	5352I	5362I
GROUND FAULT RECEPTACLE	GF5262I	1591SIWL	GF8200I
SINGLE RECEPTACLE, 20A, 250V			
SINGLE POLE SWITCH	1223I	20AC1I	1993I
THREE WAY SWITCH	1223I	20AC3I	1993I

COVER PLATES ON WALLS SHALL BE RIGID NON-METALLIC, SMOOTH FINISH, IVORY IN COLOR, AND SHALL BE STANDARD SIZE. OVERSIZE PLATES ARE NOT ACCEPTABLE.

ENGRAVED PLATES SHALL HAVE 3/16" LETTERS.

PHOTELECTRIC CONTROL: TORK #2101, FACING NORTH

FLOOR BOXES: HUBBELL B-2436,B-4233, B-4333; STEEL CITY 640 SERIES

GENERAL LIGHTING NOTES:

- 1.1. LIGHTING FIXTURE LAYOUTS INDICATED ON PLAN ARE FOR CONVENIENCE ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT THE LIGHTING FIXTURE LAYOUT AND INSTALL ACCORDINGLY.
- 1.2. GENERAL CONTRACTOR SHALL COORDINATE CEILING INSTALLATION AS REQUIRED TO ALLOW ELECTRICAL CONTRACTOR TO INSTALL LIGHTING FIXTURES AS INDICATED.
- 1.3. ALL DOWN LIGHTS SHALL BE ALIGNED IN CEILING UNLESS OTHERWISE NOTED
- 1.4. EXTEND TO DUAL LEVEL LIGHTING SWITCHES AT SWITCH BANK.
- 1.5. PROVIDE BLDG. MOUNTED PHOTOCELL TO CONTROL FIXTURE AT ENTRANCE.

JOB RESPONSIBILITY

PROVIDE ADEQUATE STORAGE FACILITIES FOR MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK.

BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIAL AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE OWNER. PROTECT SAME FROM ANY CAUSE WHATSOEVER.

BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT. DO NOT INSTALL SENSITIVE OR DELICATE EQUIPMENT UNTIL MAJOR CONSTRUCTION WORK IS COMPLETED.

OBSERVE AND CONFORM TO APPLICABLE SAFETY REGULATIONS, INCLUDING THOSE REQUIRED BY THE OWNER'S REPRESENTATIVE.

ERECT AND MAINTAIN SUITABLE BARRIERS, PROTECTIVE DEVICES, LIGHTS AND WARNING SIGNS FOR THE PROTECTION OF OCCUPANTS, TRANSIENTS AND WORKMEN FROM DANGER DUE TO WORK PERFORMED BY THE ELECTRICAL CONTRACTOR.

MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF GOD, ACTS OF NEGLIGENCE, STRIKES, VIOLENCE OR THEFT UP TO THE TIME OF FINAL ACCEPTANCE BY THE OWNER.

BE RESPONSIBLE FOR ANY LOSS OR INJURY TO PERSONS OR PROPERTY RESULTING FROM NEGLIGENCE OR ANY OTHER CAUSES ON THE PART OF THE CONTRACTOR.

DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY.

ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.

DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL FROM THE OWNER'S REPRESENTATIVE AND THE OWNER. A WRITTEN REQUEST FOR EXTRA WORK SHALL STATE THE NATURE OF THE WORK, BY WHOM REQUESTED, AND THE PRICE TO BE CHARGED.

NOT ALL ABBREVIATIONS INDICATED HERE MAY APPEAR ON THE CONTRACT DRAWINGS

ABBREV	DESCRIPTION	ABBREV	DESCRIPTION
A AMP	AMPERES	NL	NIGHT LIGHT
ABBREV	ABBREVIATIONS	NO	NORMALLY OPEN
AC	ALTERNATING CURRENT	NTS	NOT TO SCALE
ACU	AIR CONDITIONING UNIT	NFSS	NON FUSED SAFETY SWITCH
AF	AMPERE FRAME	OC	ON CENTER
AFB	ABOVE FINISHED FLOOR	OH	OVERHEAD
AFG	ABOVE FINISHED GRADE	OL	OVERLOAD
AHU	AIR HANDLING UNIT	P	POLE OR POLES
AIC	AMPERE INTERRUPTING CAPACITY	PF	POWER FACTOR
ATC	AUTOMATIC TEMPERATURE CONTROL	PH	PHASE
ATS	AUTOMATIC TRANSFER SWITCH	PT	POTENTIAL TRANSFORMER
AUX	AUXILIARY	PL	PILOT LIGHT
AWG	AMERICAN WIRE GAUGE	PML	PANELBOARD
BES	BLDG ELECTRICAL SYSTEM	RS	POLYVINYL CHLORIDE
BL	BASIC IMPLUSE LEVEL	R	RACEWAY
BLDG	BUILDING	RAF	RETURN AIR FAN
BKBD	BACKBOARD	RECEPT	RECEPTACLE
BRKR	BREAKER	REOD	REQUIRED
C	CONDUIT	RGS	RIGID GALVANIZED STEEL
CB	CIRCUIT BREAKER	RMS	ROOT MEAN SQUARE
CCTV	CLOSED CIRCUIT TELEVISION	RST	RAPID START
CKT	CIRCUIT	RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
CR	CARD READER	SIN	SOLID NEUTRAL
CL	CURRENT LIMITING	SD	SMOKE DETECTOR
CLG	CEILING	SEC	SECONDARY
CPT	CONTROL POWER TRANSFORMER	SFA	SPRINKLER FLOW ALARM
CT	CURRENT TRANSFORMER	SMR	SURFACE METAL RACEWAY
CUH	CABINET UNIT HEATER	SPEC	SPECIFICATION
CW	COOL WHITE	ST	SHUNT TRIP
DGS	DIESEL GENERATOR SET	SS	SUB STATION
DIA	DIAMETER	STR	STARTER
DISC	DISCONNECT	SYS	SYSTEM
DIST	DISTRIBUTION	SWD	SWITCHBOARD
DN	DOWN	SWGR	SWITCHGEAR
DP	DISTRIBUTION PANEL	SYM	SYMMETRICAL
DWG	DRAWING	SOPN	SPACE OR POLE NUMBER
E	EMERGENCY	TA	TRIP AMPERE
EBH	ELECTRIC BASEBOARD HEATER	TB	TERMINAL BOX
EC	EMPTY CONDUIT	TC	TIME CLOCK
ECB	ENCLOSED CIRCUIT BREAKER	TD	TIME DELAY
EF	EXHAUST FAN	TTB	ELECTRIC TERMINAL BOARD
EGS	ELECTRIC GENERATOR SET	TTC	TELEPHONE TERMINAL CLOSET
EH	ELECTRIC HEATER	TYP	TYPICAL
ELECT	ELECTRICAL	TV	TELEVISION
EMT	ELECTRICAL METALLIC TUBING	UC	UNDER COUNTER
ENCL	ENCLOSURE	UG	UNDERGROUND
EQUIP	EQUIPMENT	UH	UNIT HEATER
ER	EXISTING RELOCATED	UOI	UNLESS OTHERWISE INDICATED
ETR	EXISTING-TO-REMAIN	UON	UNLESS OTHERWISE NOTED
EWC	ELECTRIC WATER COOLER	UL	UNDERWRITER'S LABORATORY
EWB	ELECTRIC WATER HEATER	V	VOLT (S) OR VOLTAGE
EX	EXISTING	VA	VOLT AMPERE
EXH	EXHAUST	W	WIRE
F	FUSED OR FUSIBLE	WI	WITH
FA	FRAME AMPERE	WP	WEATHER PROOF
FAAP	FIRE ALARM ANNUNCIATOR PANEL	WW	WIREWAY
FACP	FIRE ALARM CONTROL PANEL	W/O	WITHOUT
FADS	FIRE ALARM AND DETECTION SYSTEM	XFMR	TRANSFORMER
FBO	FURNISHED BY OTHERS	Ø	PHASE
FCU	FAN COIL UNIT	#	NUMBER
FOR	FEEDER	Ø	CENTER LINE
FL	FLOOR	Q	AT
FLUOR	FLUORESCENT		
FSS	FUSED SAFETY SWITCH		
FT	FOOT OR FEET		
FVNR	FULL VOLTAGE NON REVERSIBLE		
GFCI	GROUND FAULT CURRENT INTERRUPTER		
GRD	GROUND		
GN	GENERAL NOTE		
GRS	GALVANIZED RIGID STEEL		
GWB	GYPSPUM WALL BOARD		
GW	GROUND WIRE		
HD	HEAVY DUTY		
HIC	HANDICAP		
HO	HIGH INTENSIFY DISCHARGE		
HID	HAND-OFF-AUTOMATIC		
HOA	HORSE POWER		
HP	HIGH PRESSURE SODIUM		
HPS	HEATER		
HTR	HIGH VOLTAGE		
HV	HEATING, VENTILATING AND AIR CONDITIONING		
HVAC	HERTZ		
HZ	THAT IS		
IE	INTERMEDIATE METALLIC CONDUIT		
IMC	JUNCTION BOX		
JB	KILOVOLT		
KV	KILOVOLT-AMPERE		
KVA	KILOWATT		
KW	KILOWATT-HOUR		
KWH	LIGHTING ARRESTOR		
LA	LIMIT SWITCH		
LS	LIGHTING		
LTS	LOW VOLTAGE		
LV	MAXIMUM		
MAX	MAIN CIRCUIT BREAKER		
MCB	MOTOR CONTROL CENTER		
MCC	MOTOR CIRCUIT PROTECTOR		
MCP	MOUNTING HEIGHT		
MH	MINIMUM		
MIN	MAIN DISTRIBUTION PANEL		
MDP	THOUSAND CIRCULAR MILLS		
MCM	MOUNTED		
MTD	MAIN LUGS ONLY		
MLO	MOUNTING		
MTG	NEUTRAL		
N	NORMALLY CLOSED		
NC	NATIONAL ELECTRIC CODE		
NEC	NOT-IN-CONTRACT		
NIC			

NOT ALL CONVENTIONS INDICATED HERE MAY APPEAR ON THE CONTRACT DRAWINGS

CONVENTIONS

A

3

G

3 INDICATES SOPN NUMBER

S

3

a

3 INDICATES PANELBOARD DESIGNATION

S

3

a

a INDICATES CONTROL

S

3

S

S, S₃ INDICATES SYMBOL SYMBOL

R

3

a

3 INDICATES SOPN NUMBER

R

3

a

R INDICATES PANELBOARD DESIGNATION

X

X

INDICATES DRAWING NOTE UNLESS OTHERWISE NOTED. DRAWING NOTE APPLIES ONLY TO THE DRAWING ON WHICH IT APPEARS

X

X

INDICATES KITCHEN EQUIPMENT NUMBER

EGN-X

ELECTRICAL GENERAL NOTE APPLY TO ALL DRAWINGS, UNLESS OTHERWISE NOTED.

R2,4

HOMERUN TO PANELBOARD DISTRIBUTION EQUIPMENT AS INDICATED.

2,4

2,4 NUMBERS INDICATE SOPN NUMBER FOR PANEL

R

R INDICATES THE PANEL

CROSS HATCH LINES WITH DOT AT END INDICATES THE EQUIPMENT GROUNDING CONDUCTOR (GREEN WIRE) AND SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE 250. GREEN GROUNDING WIRE SHALL BE PROVIDED WITH EACH CIRCUIT, AND/OR FEEDER.

2

(TWO) CURRENT CARRYING CONDUCTORS AND 1 (ONE) GRD FOR BRANCH CIRCUIT WIRING - RACEWAY AS INDICATED.

X

Y

Z

X INDICATES THE DETAIL OR ELEVATION NUMBER.

Z INDICATES DRAWING NUMBER ON WHICH THE DETAIL OR ELEVATION APPEARS.

Y INDICATES DRAWING NUMBER ON WHICH REFERRED.

INDICATES AMP

INDICATES POLE

INDICATES NEMA ENCLOSURE

FUSED DISCONNECT SWITCH. PROVIDE FUSES AS RECOMMENDED BY EQUIPMENT MANUFACTURER.

NOTE: UNLESS OTHERWISE INDICATED, STANDARD MOUNTING HEIGHTS FOR OUTLET BOXES FOR THE FOLLOWING EQUIPMENT/DEVICE SHALL BE ABOVE FINISHED FLOOR AND SHALL BE TO THE CENTER LINE OF EQUIPMENT

EQUIPMENT/DEVICE

MOUNTING HEIGHT

SWITCHES

48 INCH

RECEPTACLE-GENERAL

18 INCH

RECEPTACLE-SPECIAL

18 INCH

RECEPTACLE-SINGLE

18 INCH

RECEPTACLE-BATHROOM

9 INCH ABOVE BASIN

RECEPTACLE-COUNTER

9 INCH ABOVE COUNTER

RECEPTACLE-EXTERIOR

30 INCH

TELEPHONE-GENERAL

18 INCH

TELEPHONE-WALL TYPE

54 INCH, (48 INCH FOR HANDICAPPED)

THERMOSTAT

60 INCH

SAFETY SWITCH

72 INCH TO HANDLE

PANELBOARD

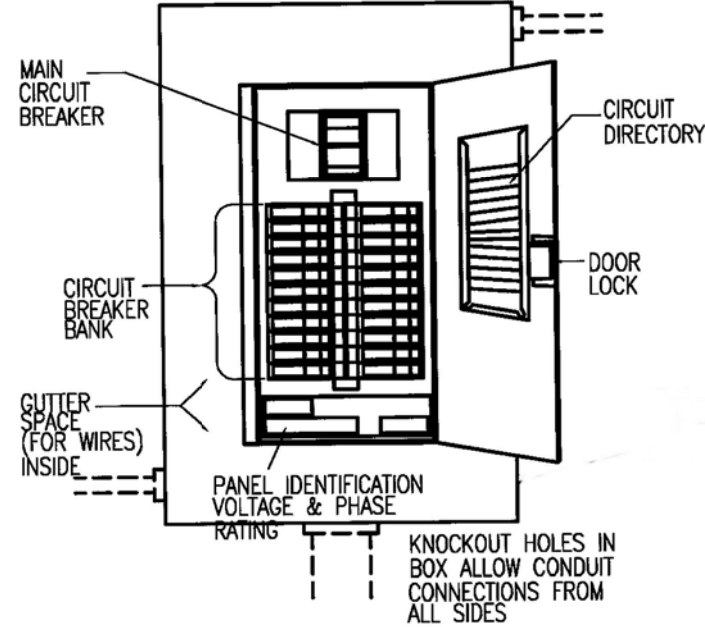
72 INCH TO TOP CB

MANUAL MOTOR STARTER

48 INCH

PUSH BUTTON

48 INCH



PANEL REQUIREMENTS

1. ALL PANELS SHALL BE PROVIDED WITH DOOR LOCK.
2. PROVIDE TYPED CIRCUIT DIRECTORY.
3. EACH PANEL SHALL BE PROVIDED WITH MAIN CIRCUIT BREAKER UNLESS NOTED OTHERWISE IN PANEL SCHEDULE.

JA DESIGN DEVELOPMENT
1930 Columbia RD. NW
Washington, DC 20009
P: 202.255.6945
www.jadesigndevelopment.com

JADD

SHEET TITLE

ELECTRICAL PLANS

2014

PROJECT TITLE

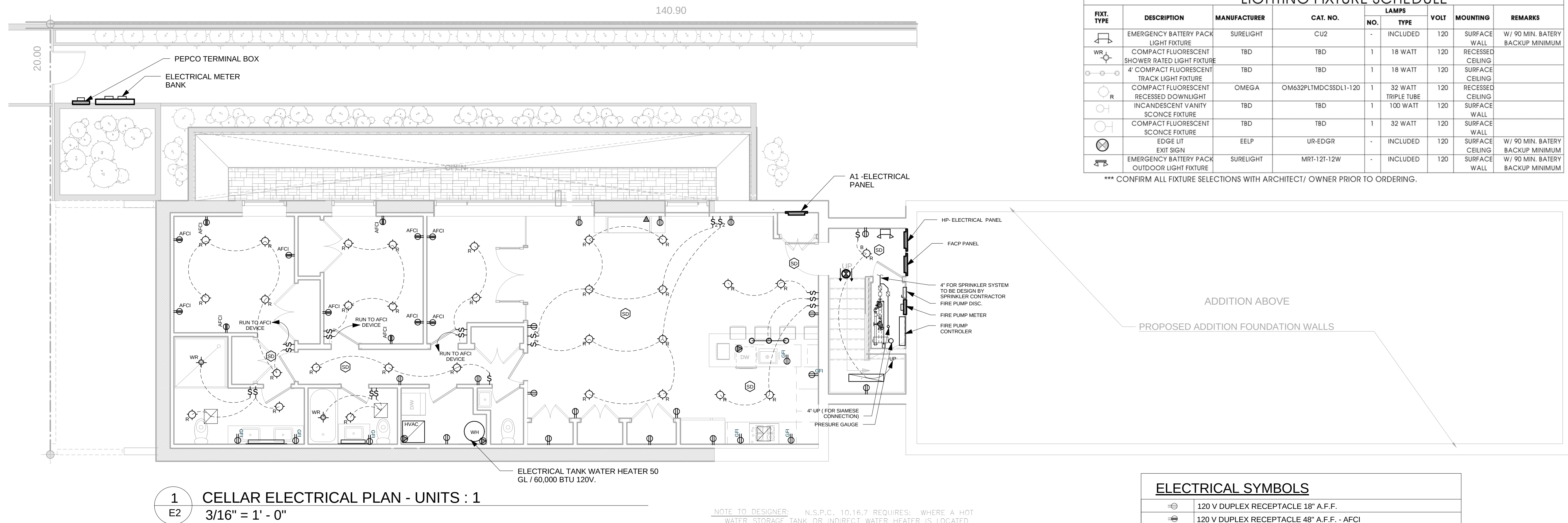
1521 LOFTS
1521 VARNUM ST NW
WASHINGTON, DC 20011

PERMIT SET - FEBRUARY 2015

SEAL

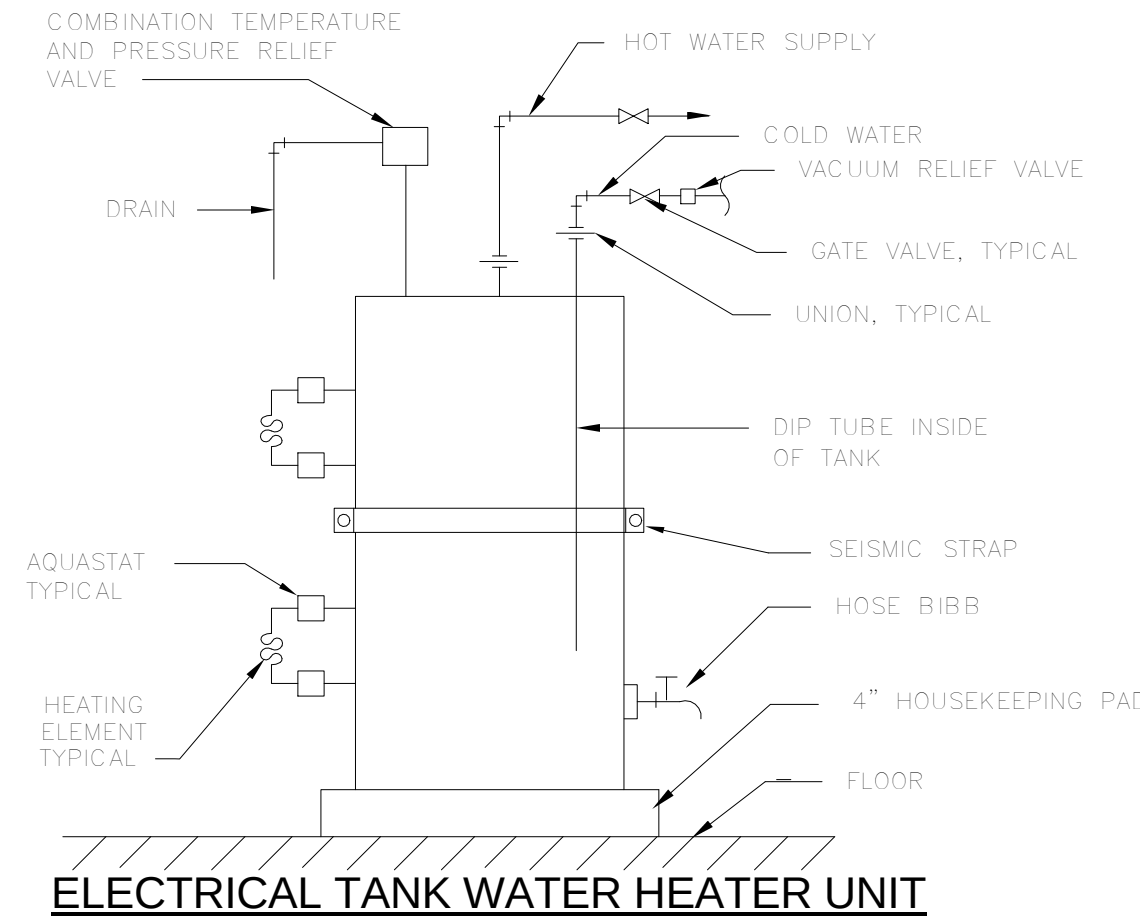
DISTRICT OF COLUMBIA
KEITH ST. CLAIR FREED
1982
PROFESSIONAL ENGINEER

E1

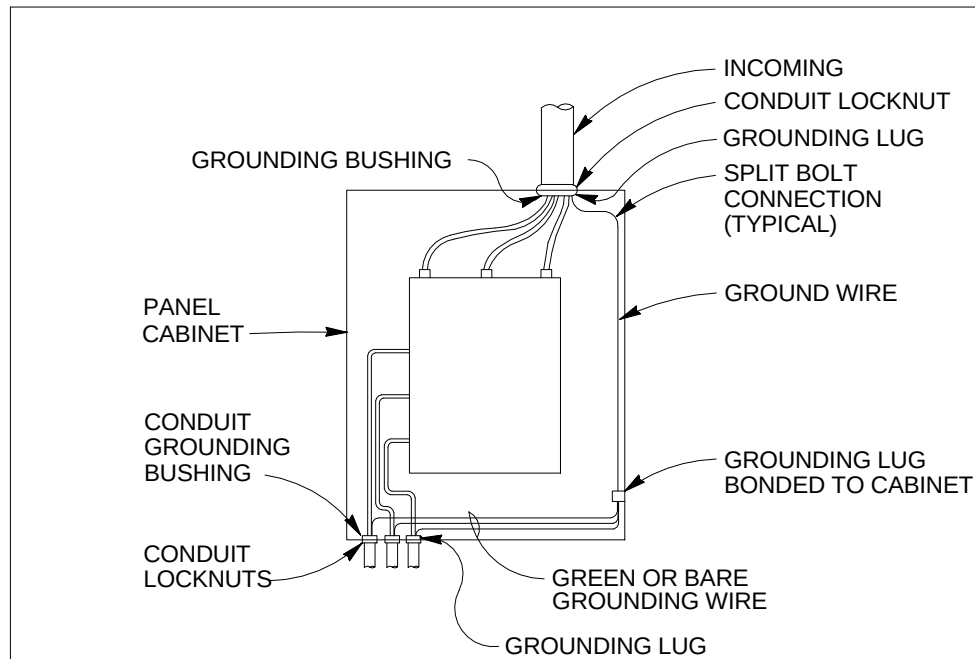


LIGHTING FIXTURE SCHEDULE								
FIXT. TYPE	DESCRIPTION	MANUFACTURER	CAT. NO.	LAMPS		VOLT	MOUNTING	REMARKS
				NO.	TYPE			
	EMERGENCY BATTERY PACK LIGHT FIXTURE	SURELIGHT	CU2	-	INCLUDED	120	SURFACE WALL	W/ 90 MIN. BATTERY BACKUP MINIMUM
WR 	COMPACT FLOURESCENT SHOWER RATED LIGHT FIXTURE	TBD	TBD	1	18 WATT	120	RECESSED CEILING	
	4' COMPACT FLOURESCENT TRACK LIGHT FIXTURE	TBD	TBD	1	18 WATT	120	SURFACE CEILING	
	COMPACT FLOURESCENT RECESSED DOWNLIGHT	OMEGA	OM632PLTMDCSSDL1-120	1	32 WATT TRIPLE TUBE	120	RECESSED CEILING	
	INCANDESCENT VANITY SCONCE FIXTURE	TBD	TBD	1	100 WATT	120	SURFACE WALL	
	COMPACT FLOURESCENT SCONCE FIXTURE	TBD	TBD	1	32 WATT	120	SURFACE WALL	
	EDGE LIT EXIT SIGN	EELP	UR-EDGR	-	INCLUDED	120	SURFACE CEILING	W/ 90 MIN. BATTERY BACKUP MINIMUM
	EMERGENCY BATTERY PACK OUTDOOR LIGHT FIXTURE	SURELIGHT	MRT-12T-12W	-	INCLUDED	120	SURFACE WALL	W/ 90 MIN. BATTERY BACKUP MINIMUM

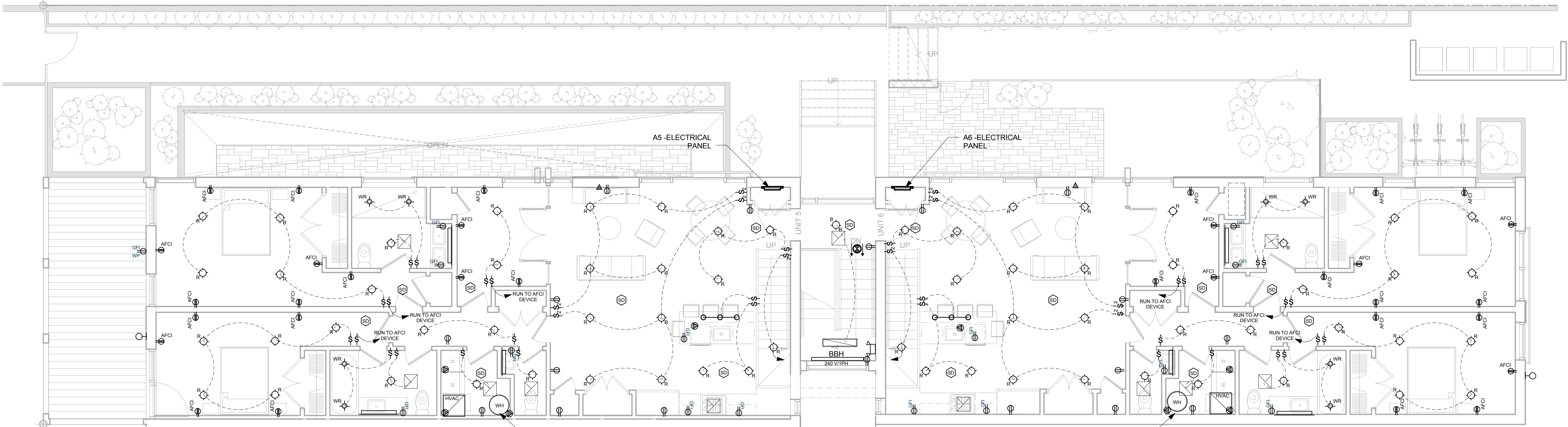
*** CONFIRM ALL FIXTURE SELECTIONS WITH ARCHITECT/ OWNER PRIOR TO ORDERING



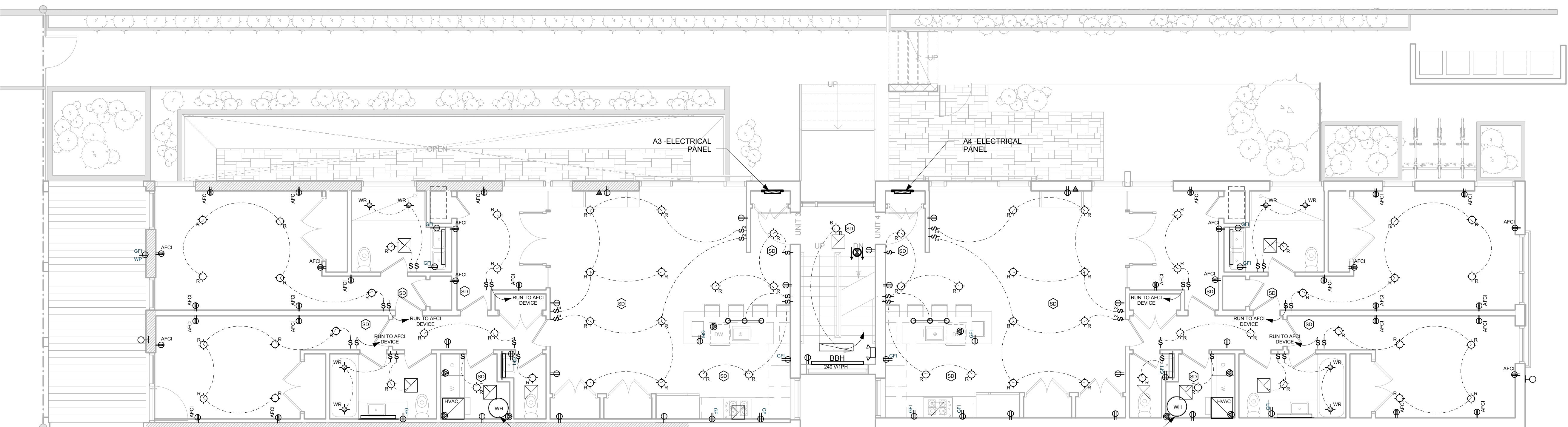
	120 V DUPLEX RECEPTACLE 18" A.F.F.
	120 V DUPLEX RECEPTACLE 48" A.F.F. - AFCI
	GROUND FAULT INTERRUPTOR RECEPTACLE
	SWITCH
	2 WAY SWITCH
	TELEPHONE OUTLET, SINGLE/DUPLEX
	ELECTRIC PANEL
	DISHWASHER/WASHER MACHINE OUTLET
	FAN / VENT TO OUTSIDE & UP TO ROOF
	UNDERCABINET LIGHT
	4'-0" x 6" FLUORESCENT LIGHT FIXTURE
	PENDANT LIGHT
	WALL MOUNTED JUNCTION BOX
	FLUORANCE RECESSED LIGHT - 4" ϕ
	FLOURANCE RECESSED LIGHT - 6" ϕ
	FLUORANCE RECESSED WATER PROOF LIGHT - 4" ϕ
	LIGHT-WALL SCONE TYP.
	TRACKING LIGHTS
	SMOKE DETECTOR - HARD WIRED INTERCONNECTED AND BATTERY BACK-UP
	FIRE EXTINGUISHER
	EMERGENCY LIGHT WITH BATTERY BACK-UP
	CEILING EXIT LIGHT
	LINEAR FLUORANCE VANITY LIGHT - 20" L
	LINEAR FLUORANCE VANITY LIGHT - 36" L



N.T.S

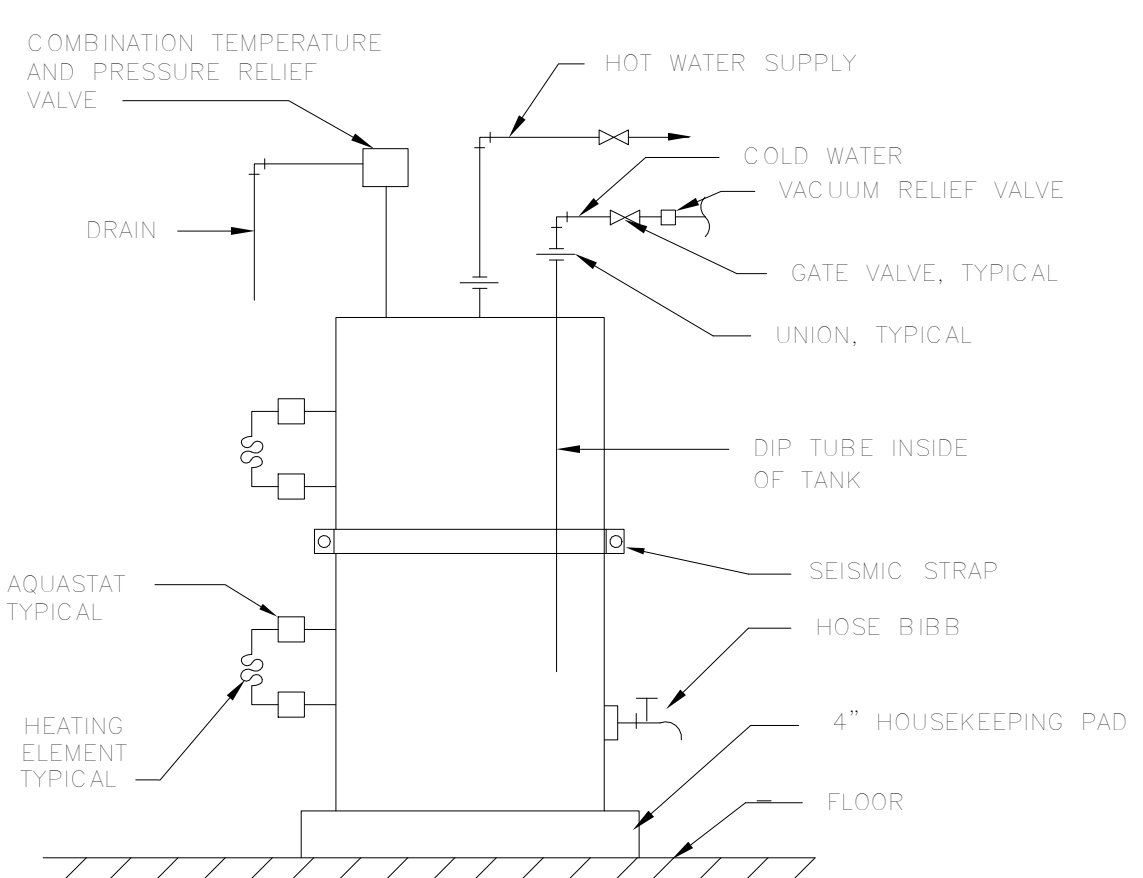


2
E3
THIRD FLOOR ELECTRICAL PLAN - UNITS : 5 & 6
3/16" = 1' - 0"



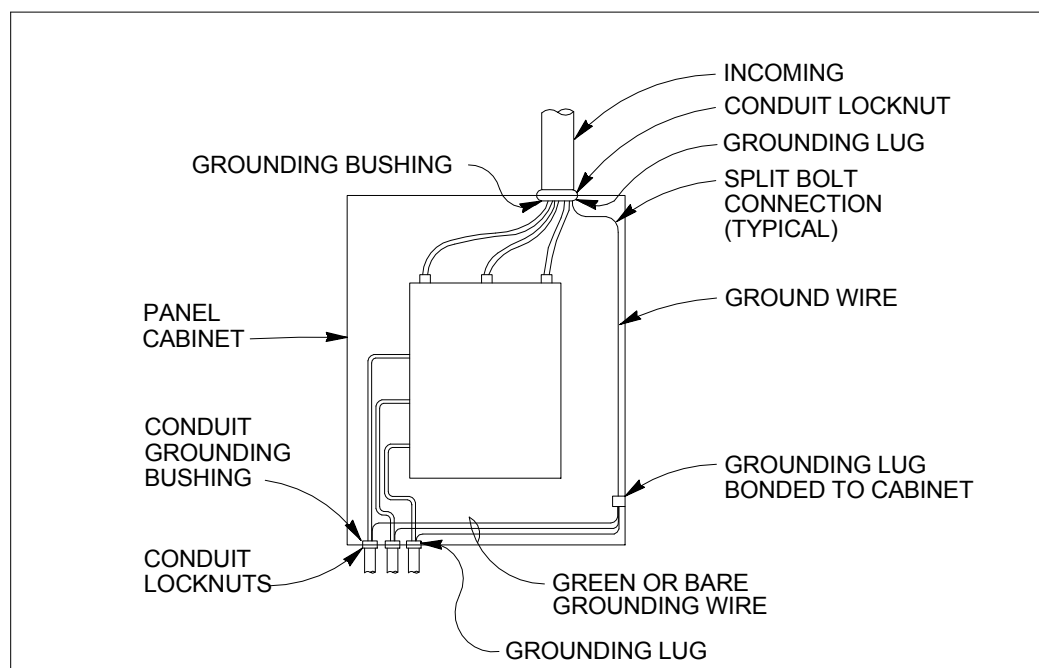
1
E3
SECOND FLOOR ELECTRICAL PLAN - UNITS : 3 & 4
3/16" = 1' - 0"

NOTE TO DESIGNER: N.S.P.C. 10.16.7 REQUIRES: WHERE A HOT WATER STORAGE TANK OR INDIRECT WATER HEATER IS LOCATED AT AN ELEVATION ABOVE THE FIXTURE OUTLETS IN THE SYSTEM A VACUUM RELIEF VALVE SHALL BE INSTALLED ON THE STORAGE TANK.



ELECTRICAL TANK WATER HEATER UNIT

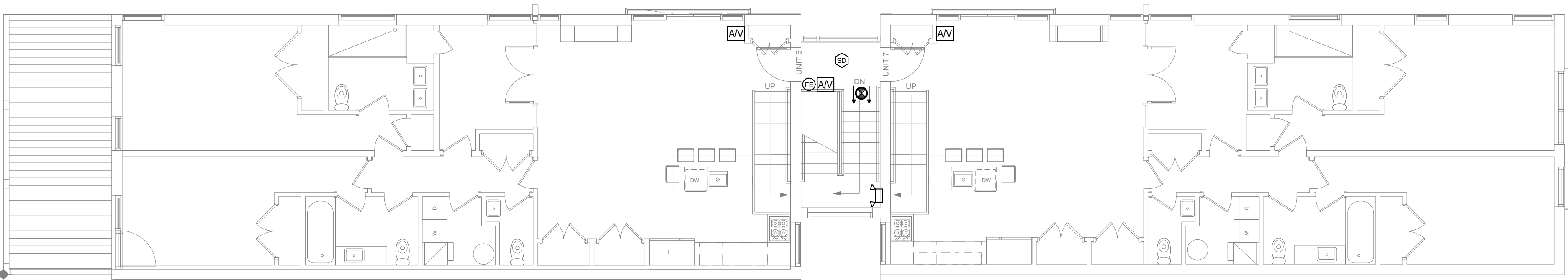
ELECTRICAL SYMBOLS	
	120 V DUPLEX RECEPTACLE 18" A.F.F.
	120 V DUPLEX RECEPTACLE 48" A.F.F. - AFCI
	GROUND FAULT INTERRUPTOR RECEPTACLE
	SWITCH
	2 WAY SWITCH
	TELEPHONE OUTLET, SINGLE/DUPLEX
	ELECTRIC PANEL
	DISHWASHER/WASHER MACHINE OUTLET
	FAN / VENT TO OUTSIDE & UP TO ROOF
	UNDERCABINET LIGHT
	4" X 6" FLOURESCENT LIGHT FIXTURE
	PENDANT LIGHT
	WALL MOUNTED JUNCTION BOX
	FLOURANCE RECESSED LIGHT - 4" #
	FLOURANCE RECESSED LIGHT - 6" #
	FLOURANCE RECESSED WATER PROOF LIGHT - 4" #
	LIGHT-WALL SCONE TYP.
	TRACKING LIGHTS
	SMOKE DETECTOR - HARD WIRED INTERCONNECTED AND BATTERY BACK-UP
	FIRE EXTINGUISHER
	EMERGENCY LIGHT WITH BATTERY BACK-UP
	CEILING EXIT LIGHT
	LINEAR FLOURANCE VANITY LIGHT - 20" L
	LINEAR FLOURANCE VANITY LIGHT - 36" L



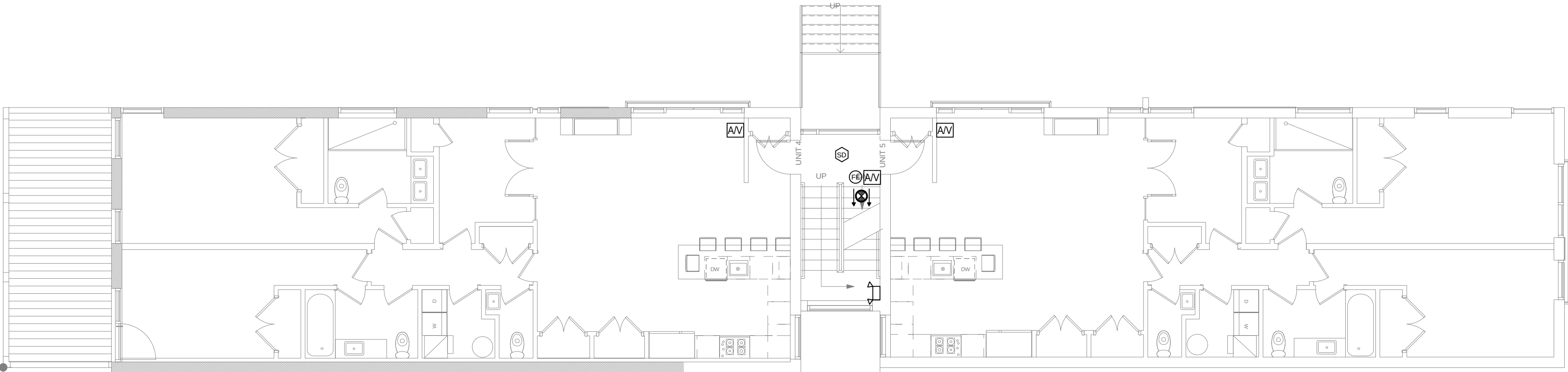
NOTES:
1. ALL WIRES TO BE NEATLY LACED.
2. AT THE POINT OF ATTACHMENT OF THE GROUNDING LUG TO THE CABINET, THE SURFACES SHALL BE SCRAPED FREE OF PAINT AND THOROUGHLY CLEANED TO INSURE PROPER BONDING.
3. NEUTRAL CONDUCTOR NOT SHOWN FOR CLARITY.

TYPICAL PANEL GROUNDING
N.T.S.

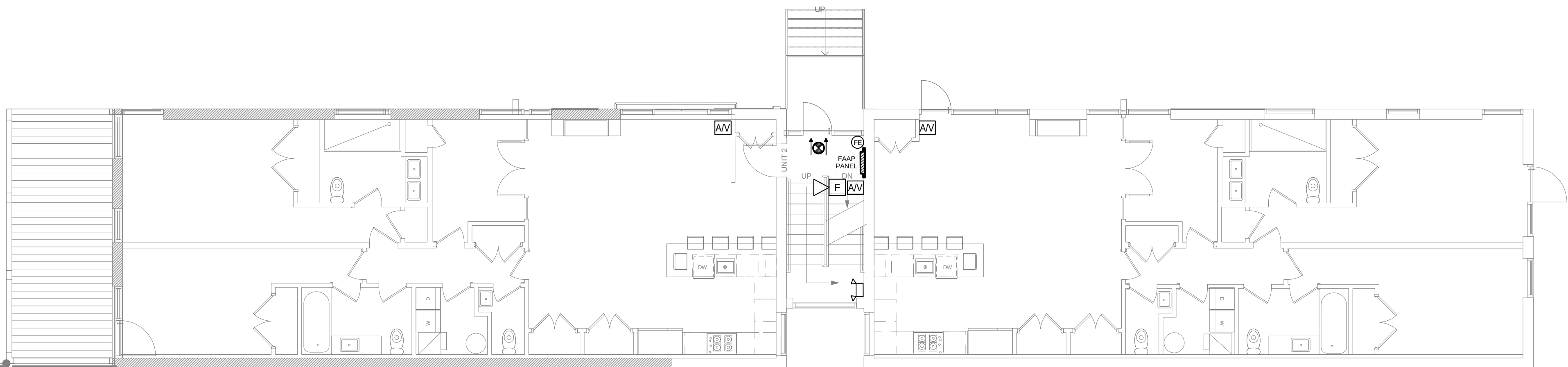
- ### ELECTRICAL NOTES
- ALL WORK SHALL BE DONE IN ACCORDANCE TO THE LOCAL ELECTRICAL CODE.
 - THE PROVISIONS OF THE CODE SHALL APPLY TO THE ERECTION, INSTALLATION, ALTERATION, REPAIRS, HEALTH, PROPERTY AND PUBLIC WELFARE REGULATING AND CONTROLLING THE DESIGN, CONSTRUCTION, INSTALLATION, QUALITY OF MATERIALS, LOCATION, OPERATION AND MAINTENANCE OR USE OF ELECTRICAL EQUIPMENT AND SYSTEMS.
 - CONTRACTOR SHALL VERIFY ALL CEILING TYPES AND COORDIANTE TRIMS PRIOR TO PURCHASE OF LIGHTING FIXTURES. FURNISHALL LIGHTING FIXTURES COMPLETE WITH MOUNTING ACCESSORIES TO MEET JOB REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FIXTURES ARRIVING ON SITE WITH INCORRECT MOUNTING.
 - FINAL INSPECTION SHALL BE MADE AFTER THE BUILDING IS COMPLETE. ALL ELECTRICAL FIXTURES ARE IN PLACE AND PROPERLY CONNECTED, AND THE STRUCTURE IS READY FOR OCCUPANCY. THE HOLDER OF THE ELECTRICAL SHALL BE RESPONSIBLE FOR THE SCHEDULING OF SUCH INSPECTIONS.
 - MOUNTING HEIGHTS OF ALL WALL MOUNTED AND PENDANT MOUNTED LIGHTING FIXTURES SHALL BE DETERMINED BY ARCHITECT. REFER TO ARCHITECTURAL SECTIONS AND ELEVATIONS.
 - LOCATION AND GROUPING ARRANGEMENT/ORIENTATION OF ALL SWITCHES SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION (TYP.)
 - COORDINATE LOCATION OF ALL LIGHTING FIXTURES WITH THE MECHANICAL AND PLUMBING PRIOR TO ELECTRICAL ROUGH-IN. (TYP.)
 - INDICATES FIXTURE SHALL BE CONNECTED TO "CONSTANT-ON" EMERGENCY (LIFE-SAFETY) CIRCUIT. PROVIDE "LOCK-ON" EMERGENCY BREAKER AT PANELBOARD (TYP.)
 - CUTTING OF FLOORS, WALLS, AND CEILINGS SHALL BE REQUIRED FOR THE INSTALLATION OF PIPES, CONDUITS, DUCTS, WIRING,SLEEVES AND SEAL AS REQUIRED AND DIRECTED BY THE ARCHITECT.
 - ALL SYSTEMS SHALL BE ADJUSTED AND BALANCED WITH AIR QUANTITIES NOTED OR AS DIRECTED. TOLERANCE SHALL BE FROM MINUS 5 PERCENT TO PLUS 25 PERCENT.
 - ALL EQUIPMENT SHALL BE CLEANED AND ADJUSTED AD REQUIRED TO GIVE SATISFACTORY OPERATION.
 - ASSEMBLE PRINTED INSTRUCTION FOR THE OPERATION AND MAINTENANCE OF EACH MAJOR ITEM. BIND TOGETHER WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS. DELIVER THREE COPIES TO ARCHITECT.
 - FINAL INSPECTION AND TEST SHALL BE MADE BY THE CONTRACTOR IN THE PRESENCE OF THE ARCHITECT. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, INSTRUMENTS AND MISCELLANEOUS EQUIPMENT REQUIRED FOR THE TESTS. FINAL PAYMENT SHALL HELD PENDING SATISFACTORY OUTCOME OF THE FINAL INSPECTION. PROVIDE ALL INSPECTION REPORTS AND APPROVALS BY UTILITIES, GOVERNMENT, OR AUTHORITIES AS REQUIRED, INCLUDING OCCUPANCY PERMIT.



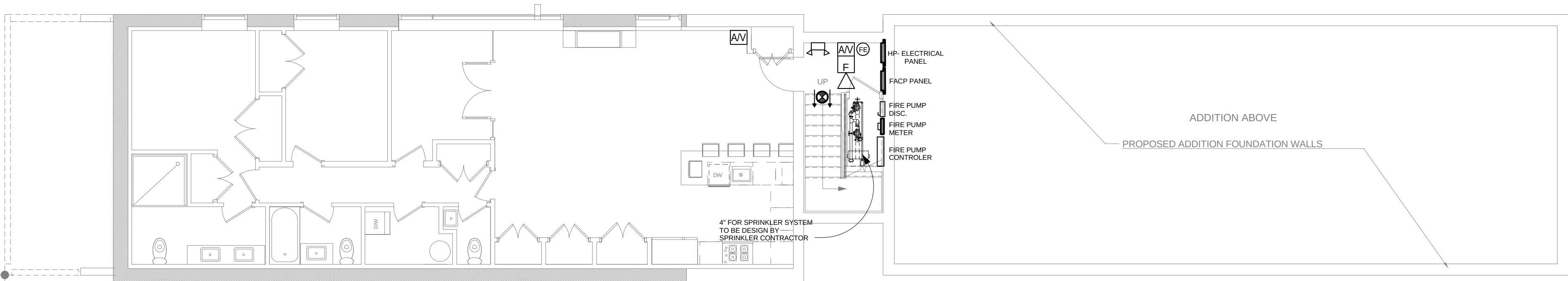
3TH. FLOOR PLAN



2ND. FLOOR PLAN



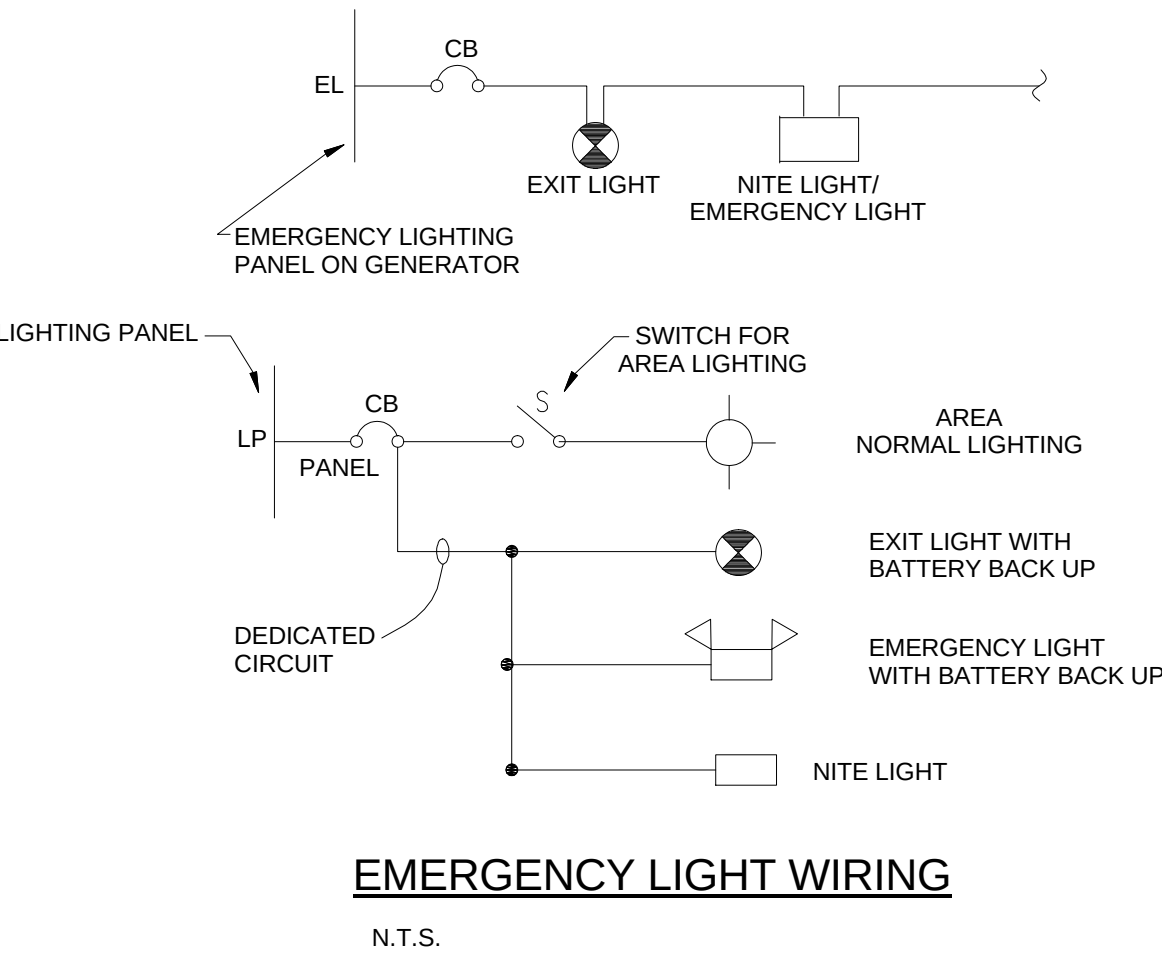
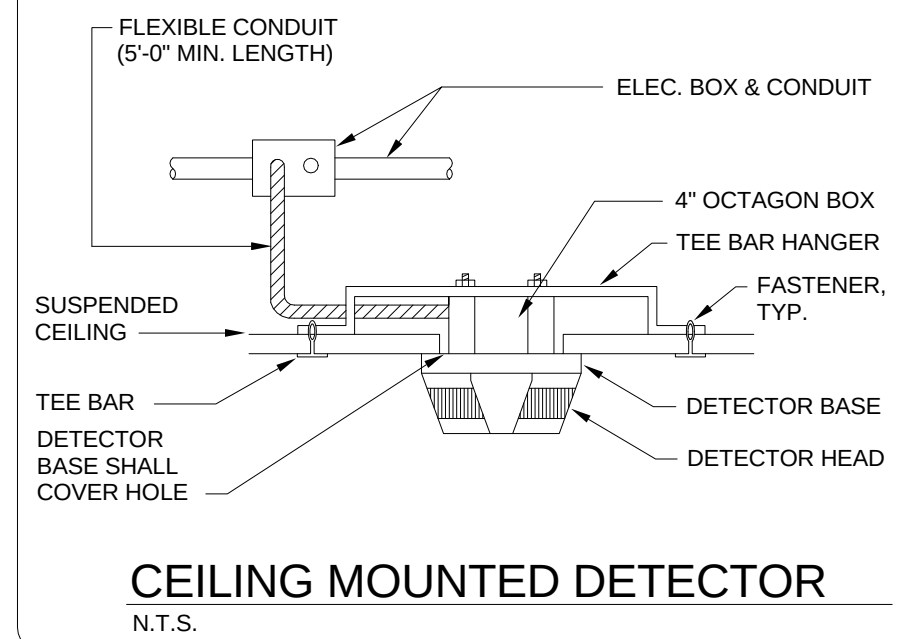
1ST. FLOOR PLAN



CELLAR FLOOR PLAN

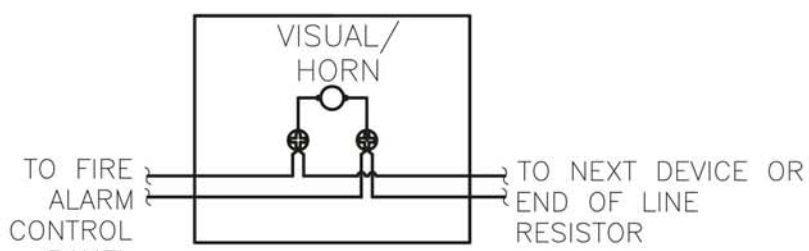
FIRE ALARM SYMBOLS

- FIRE ALARM CONTROL PANEL / FIRE ALARM ANNUNCIATOR PANEL
- SMOKE DETECTOR, 120V WITH INTEGRAL BATTERY BACK-UP
- SINGLE STATION HEAT DETECTOR
- FLOW SWITCH
- TAMPER SWITCH
- FIRE ALARM STROBE MTD. @ 80" A.F.F
"15cd" DENOTES CANDELA RATING
- FIRE ALARM PULL STATION MTD. @48" AFF
- FIRE ALARM AUDIOVISUAL MTD. 6" BELOW CEILING.
- DUCT SMOKE DETECTOR



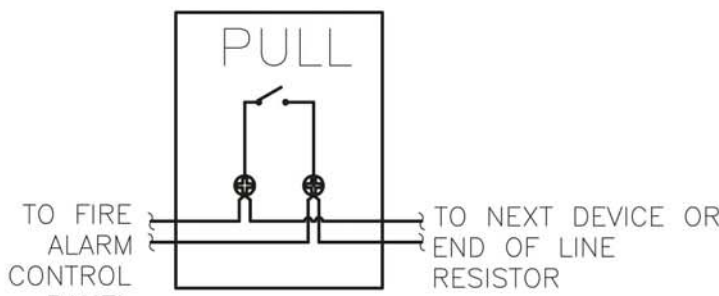
EMERGENCY LIGHT WIRING

N.T.S.



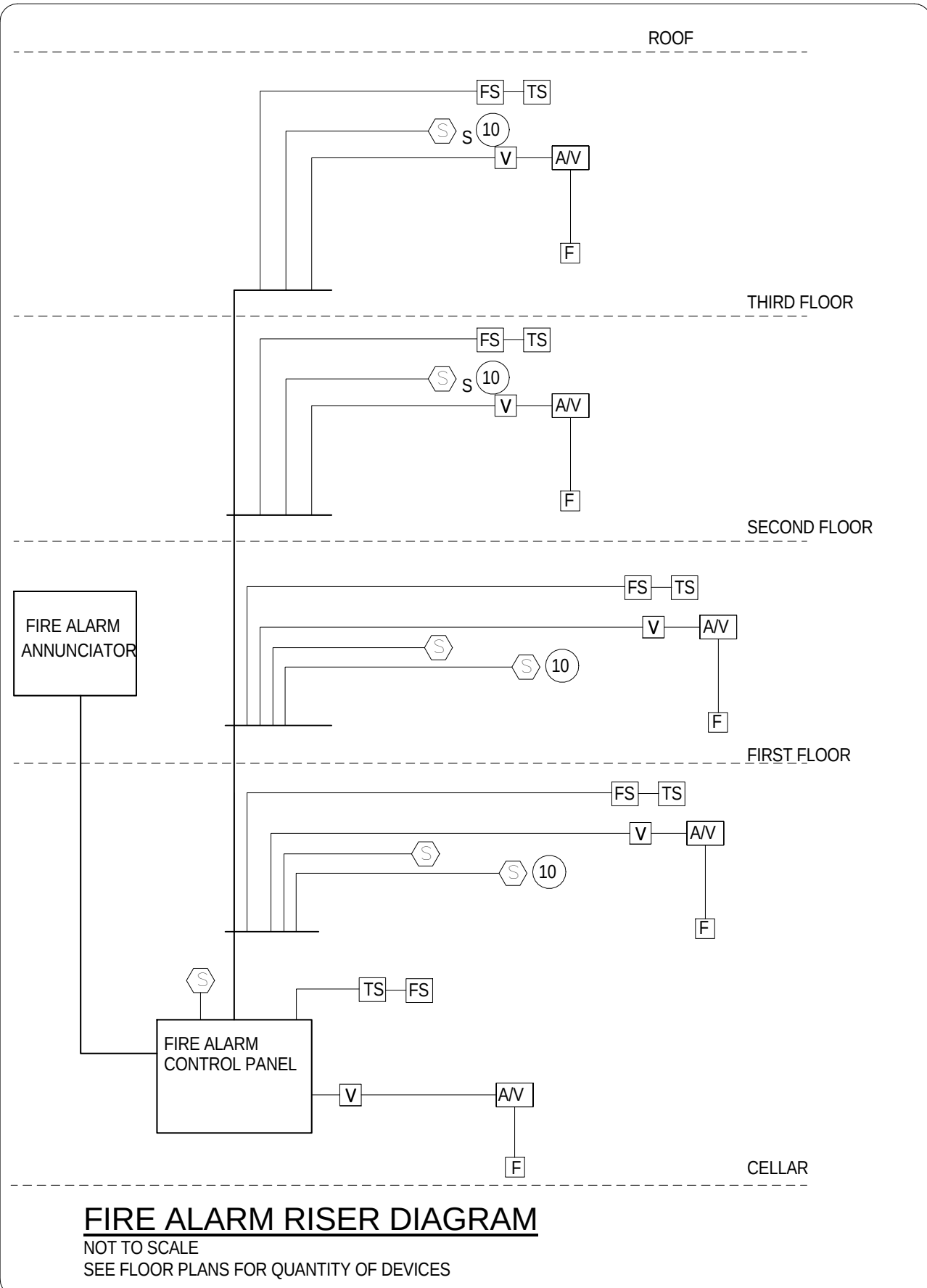
VISUAL / HORN DETAIL

NOT TO SCALE



PULL STATION DETAIL

NOT TO SCALE



FIRE ALARM RISER DIAGRAM

NOT TO SCALE
SEE FLOOR PLANS FOR QUANTITY OF DEVICES

FIRE ALARM GENERAL NOTES

- REFER TO FLOOR PLANS FOR EXACT NUMBER OF DEVICES REQUIRED.
- REFER TO PLUMBING/MECHANICAL DRAWINGS FOR EXACT LOCATION OF SPRINKLER SYSTEM DEVICES & DUCT SMOKE DETECTORS.
- ALL STROBE LIGHTS AND AUDIO DEVICES TO BE INSTALLED PER AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. ALL SMOKE DETECTORS TO BE INSTALLED PER NFPA722002 EDITION.
- THE FIRE ALARM SYSTEM TO BE APPROVED BY OF THE BLRA/FIRE PROTECTION DIVISION PRIOR TO INSTALLATION.
- THE ENTIRE FIRE ALARM SYSTEM TO BE INSTALLED IN EMT CONDUIT OR FIRE RATED FLEXIBLE CABLE AS APPROVED BY THE BLRA/FIRE PROTECTION DIVISION
- CONTRACTOR TO PROVIDE ADDITIONAL BATTERY CAPACITY, ALARM DEVICES (STROBE LIGHTS, AUDIO DEVICES, ETC) ON EACH FLOOR.
- AUTOMATIC DIALER AND MESSAGE TO BE AS APPROVED BY THE BLRA/ FIRE PROTECTION DIVISION
- PROVIDE EST OR EQUIVALENT SYSTEM WITH 2 SPARE ZONES
- ALL VISUAL DEVICES IN OPEN AREA TO BE SYNCHRONIZED
- MULTI STATION TYPE SMOKE DETECTORS ON FLOORS TO ANNUNCIATE WITHIN FLOORS (TYPICAL)
- PROVIDE BATTERY CAPACITY TO OPERATE FIRE ALARM SYSTEM ALARM AND SUPERVISORY CONDITIONS AS REQUIRED BY THE BLRA/ FIRE PROTECTION DIVISION

SPRINKLER NOTE

SPRINKLER CONTRACTOR IS TO OBTAIN A SEPARATE PERMIT SET FOR THIS WORK. SPRINKLER CONTRACTOR IS TO OBTAIN CURRENT HYDRANT TEST DATA AND PROVIDE CALCULATIONS FOR SYSTEM PIPE SIZE IN ACCORDANCE WITH NFPA 13. CONTRACTOR IS TO SUBMITT SHOP DRAWINGS INDICATING HYDRAULIC CALCULATIONS, PIPING LAYOUT & SIZING - ALL WORK SHOULD BE SIGNED & SEALED BY A PROFESSIONAL ENGINEER. ALL WORK IS TO BE DONE IN ACCORDANCE WITH ALL STATE, LOCAL AND APPLICABLE CODES.

SHEET TITLE

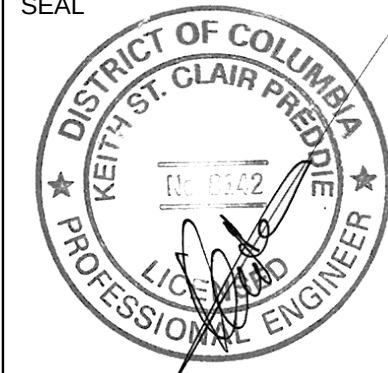
FIRE ALARM PLANS

PROJECT TITLE

1521 LOFTS
1521 VARNUM ST NW
WASHINGTON, DC 20011

PERMIT SET - FEBRUARY 2015

SEAL



JA DESIGN DEVELOPMENT
1930 Columbia RD. NW
Washington, DC 20009
P: 202.255.6945
www.jadesigndevelopment.com



2014

FA

GENERAL SPECIFICATIONS

1. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING BUILDING SYSTEMS. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS.
2. THE SITE, LOCATION AND ROUTING OF NEW AND EXISTING BUILDING SYSTEMS ARE SHOWN AS ACCURATELY AS FIELD CONDITIONS WILL PERMIT. BIDDERS SHALL THOROUGHLY EXAMINE THE CONTRACT DRAWINGS, VISIT THE SITE AND VERIFY, IN THE FIELD, ALL EXISTING CONDITIONS. BIDDERS WHO DO NOT VISIT THE SITE MAY BE UNILATERALLY NOT ALLOWED TO SUBMIT A BID. BIDDERS SHALL REPORT TO THE DESIGN ENGINEER ANY CONDITIONS WHICH MIGHT MAKE INSTALLATION OF REQUIRED EQUIPMENT A PROBLEM, BEFORE SUBMITTING A BID. BY THE SUBMISSION OF A BID, THE CONTRACTOR SHALL ACKNOWLEDGE ACCEPTANCE OF THIS PLAN SET AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON INADEQUACY OF PLANS WILL NOT BE CONSIDERED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO INVESTIGATE EXISTING CONDITIONS OR MISUNDERSTANDINGS OF THE CONTRACTUAL REQUIREMENTS.
3. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, STANDARDS, ORDINANCES, RULES AND REGULATIONS OF ALL LOCAL AND STATE GOVERNMENTAL AUTHORITIES, THE RULES OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), THE NATIONAL ELECTRIC CODE (NEC) AND ASHRAE AS INTERPRETED BY THE GOVERNMENTAL AUTHORITY AND PUBLIC UTILITIES HAVING JURISDICTION OVER ANY OF THE SYSTEMS HEREIN SPECIFIED.
4. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY ANY OF THE PREVIOUSLY IDENTIFIED AUTHORITIES AND PAY FOR ALL OTHER COSTS IN CONNECTION WITH THE WORK. ALL PERMIT AND INSPECTION CERTIFICATES SHALL BE DELIVERED TO THE OWNER IN DUPLICATE.
5. IN CASE OF A CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY AS DETERMINED BY THE DESIGN ENGINEER.
6. DEFINITIONS:

a) "PROVIDE": FURNISH AND INSTALL

b) "FURNISH": SUPPLY AND DELIVER TO THE PROJECT SITE

c) "INSTALL": ERECT IN PLACE

d) "CONCEALED": HIDDEN BY ARCHITECTURAL WALLS AND CEILINGS

e) "EXPOSED": VISIBLE TO VIEW

f) "INDICATED": SHOWN IN THE CONTRACT DOCUMENTS
7. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICE. UNLESS OTHERWISE SHOWN OR SPECIFIED, FOLLOW THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND PROVIDE ALL REQUIRED AUXILIARY ITEMS.
8. ALL EQUIPMENT PROVIDED SHALL BE NEW (UNLESS INDICATED OTHERWISE) AND THE CURRENT MODEL FOR WHICH REPLACEMENT PARTS ARE AVAILABLE. SUBSTITUTIONS SHALL ONLY BE ACCOMPLISHED AT THE DISCRETION OF THE DESIGN ENGINEER. SHOP DRAWINGS ARE TO BE SUBMITTED AND APPROVED BEFORE THE EQUIPMENT IS INSTALLED. SUBMIT SIX (6) COPIES OF SHOP DRAWINGS TO THE ARCHITECT OF THE FOLLOWING:

A. GAS FURNACE

B. WATER HEATER

C. WALL HEATER

D. FANS

E. PLUMBING FIXTURES

F. SHEET METAL

G. PIPING AND PIPING SPECIALTIES

H. AIR DEVICES

I. CONTROLS
9. ALL EQUIPMENT SUPPLIED SHALL BE SUITABLE FOR THE PURPOSE INTENDED. ALL MANUFACTURERS SHALL HAVE HAD SIMILAR PRODUCTS IN SERVICE FOR A MINIMUM OF 3 YEARS.
10. ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED IN FULL FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.
11. THE CONTRACTOR SHALL INSTALL ALL DUCTWORK, PIPING, RACEWAYS, CIRCUITRY, ETC., AS HIGH AS POSSIBLE. ALL DUCTWORK, PIPING, RACEWAYS, CIRCUITRY, ETC., SHALL, UNLESS OTHERWISE NOTED, BE RUN PARALLEL TO OR PERPENDICULAR TO BUILDING WALLS IN A NEAT WORKMANLIKE MANNER. PROVIDE ALL SUPPORT STEEL, HANGERS, VIBRATION ISOLATION AND ACCESSORIES NECESSARY FOR EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. DO NOT SUPPORT ANY CEILINGS OR OTHER BUILDING STRUCTURE FROM DUCTWORK, PIPING OR CONDUITS. DO NOT ALLOW DUCTWORK, PIPING OR CONDUITS TO COME INTO DIRECT CONTACT WITH BUILDING WALLS OR FLOORS.
12. WHERE ACCESS PANELS ARE REQUIRED FOR EQUIPMENT SERVICE ACCESS, THE CONTRACTOR SHALL COORDINATE FINAL ACCESS PANEL LOCATION WITH EQUIPMENT LOCATION. ACCESS PANELS SIZE SHALL SUFFICIENT TO ALLOW SERVICE AS INDICATED IN THE MANUFACTURER'S PUBLISHED OPERATION AND MAINTENANCE MANUALS.
13. THE CONTRACTOR SHALL TEST ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT AND DEMONSTRATE TO THE OWNER IT'S PROPER OPERATION.
14. PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF DUCTWORK, PIPING AND CONDUIT. REPAIR ALL WALLS, CEILINGS AND FLOORS, PENETRATED. THE REPAIRS SHALL BE WITH MATERIALS AND FINISHES THAT MATCH EXISTING CONSTRUCTION. ALL PENETRATIONS IN FIREWALLS SHALL BE SEALED WITH SUITABLE MATERIALS TO PRESERVE FIREWALL INTEGRITY. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL. ALL PENETRATIONS THROUGH THE ROOF SHALL BE BY THE GENERAL CONTRACTORS.
15. THE CONTRACTOR SHALL THOROUGHLY CLEAN THE CONTRACT AREA DAILY. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE CONTRACT AREA AND ALL OTHER AREAS USED FOR STORAGE, STAGING, ETC.

MECHANICAL/PLUMBING SPECIFICATIONS

1. GENERAL

A. THESE DRAWINGS ARE SCHEMATIC AND INTENDED TO DEPICT THE GENERAL LOCATION OF MECHANICAL SYSTEM COMPONENTS. CONSULT ARCHITECTURAL PLANS FOR PROPER DIMENSIONS AND LOCATION OF EQUIPMENT. CONTRACTOR SHALL SUBMIT 1/4 SCALE SHEET METAL DRAWINGS BEFORE FABRICATING DUCTWORK.

B. PROVIDE ALL NECESSARY TRANSITIONS IN DUCTWORK AND PIPING FOR COMPLETE INSTALLATION. NOT ALL OFFSETS ARE SHOWN ON THE DRAWINGS. ALL PIPING AND DUCTWORK AND THEIR ACCESSORIES SHALL BE FULL SIZE AND REDUCED IN SIZE ONLY IMMEDIATELY BEFORE THE CONNECTION POINT TO EQUIPMENT.

C. ALL ROTATING MECHANICAL EQUIPMENT, SUCH AS FANS AND GAS FURNACE SHALL BE CONNECTED TO DUCTWORK USING RUBBERIZED-CANVAS FLEXIBLE CONNECTIONS. ALL ROTATING MECHANICAL EQUIPMENT SHALL BE MOUNTED WITH VIBRATION ISOLATION FITTINGS.

D. FREE ACCESS IS REQUIRED ON SIDE OF HEATERS AND SIMILAR EQUIPMENT. ALL SUCH EQUIPMENT SHALL BE LOCATED AS TO PROVIDE ADEQUATE SERVICE CLEARANCE AND AS REQUIRED TO MEET THE CLEARANCES REQUIRED BY THE NATIONAL ELECTRICAL CODE.

E. THE CONTRACTOR SHALL BALANCE ALL AIR SYSTEMS AND SUBMIT SIX (6) COPIES OF THE FINAL BALANCE REPORTS TO THE DESIGN ENGINEER STAMPED BY THE AABC OR NEBB CERTIFIED TESTER WHO SUPERVISED THE WORK. ALL BALANCING SHALL BE PERFORMED ACCORDING TO THE PROCEDURES AS OUTLINED BY NEBB OR AABC. FURNISH ALL LABOR, INSTRUMENTS, TOOLS AND MATERIALS AS REQUIRED FOR THE TESTS. ALL BALANCING DEVICES SHALL BE CLEARLY MARKED AFTER BALANCING.
2. DUCTWORK

A. DUCTWORK SHALL BE FABRICATED FROM GALVANIZED SHEET STEEL ACCORDING TO SMACNA DUCT CONSTRUCTION STANDARDS TO 2" W.G., SEAL CLASS C. EXHAUST DUCTS AND TRANSFER DUCTS SHALL BE CONSTRUCTED TO 1/2" W.G., SEAL CLASS C. NO DUCT LEAKAGE SHALL BE NOTICEABLE TO THE HAND OR EAR OF THE ENGINEER. ALL DUCTWORK SHALL BE SEALED WITH HARDCAST. DUCT TAPE SHALL NOT BE USED.

B. FLEXIBLE DUCTWORK SHALL BE U.L. 181 CLASS 1 FACTORY-INSULATED EQUIVALENT TO THERMAFLEX G-KM. FLEXIBLE DUCTWORK LENGTH SHALL NOT EXCEED 8 FEET. FLEXIBLE DUCTWORK DIAMETER SHALL BE THE SAME SIZE AS THE COLLAR TO WHICH IT IS CONNECTED.

C. ALL DUCTWORK SHALL BE INSTALLED TIGHT TO UNDERSIDE OF THE BUILDING STRUCTURE IN ACCORDANCE WITH THE SMACNA DUCT CONSTRUCTION STANDARDS. DUCTWORK SUPPORTS SHALL BE SECURELY ATTACHED TO THE STRUCTURE ABOVE.

D. ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS, WHETHER OR NOT SAME IS SHOWN. WHERE NECESSARY TO AVOID OBSTRUCTIONS THE SHEET METAL DUCTWORK SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE REQUIRED FREE AREA BEING MAINTAINED. ADJUST DUCTWORK SIZES, LOCATION AND CONFIGURATION, INCLUDING LINEAR DIFFUSER PLENUMS, AS REQUIRED TO COORDINATE WITH WORK OF THIS AND ALL OTHER TRADES. THIS SHALL INCLUDE DIAGONAL STEEL BRACING AT THE EXTERIOR WINDOW WALLS AND SIMILAR LOCATIONS SUCH AS BRACING FOR DOORFRAMES. REFER TO ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR BRACING DETAILS. COORDINATION ITEMS SHALL BE SHOWN BY THE CONTRACTOR ON THE SHOP DRAWINGS.

E. PROVIDE AIR TURNING DEVICES IN DUCTWORK AT ANY CHANGES IN DIRECTION OF 30 DEGREES OR GREATER WHEN THE CROSS SECTION AREA OF THE DUCT IS OVER 90 SQUARE INCHES. KITCHEN EXHAUST DUCT SHALL HAVE NO OBSTRUCTIONS INSIDE THE DUCT. TURNING VANES SHALL BE DOUBLE THICKNESS TYPE. SPLITTER DAMPERS SHALL HAVE LOCKING QUADRANTS.

F. BRANCH CONNECTIONS SHALL BE IN ACCORDANCE WITH SMACNA FIG. NO. 2-8 WITH THE EXCEPTION OF STRAIGHT TAPS AND DOVETAIL JOINTS WHICH ARE NOT ALLOWED.

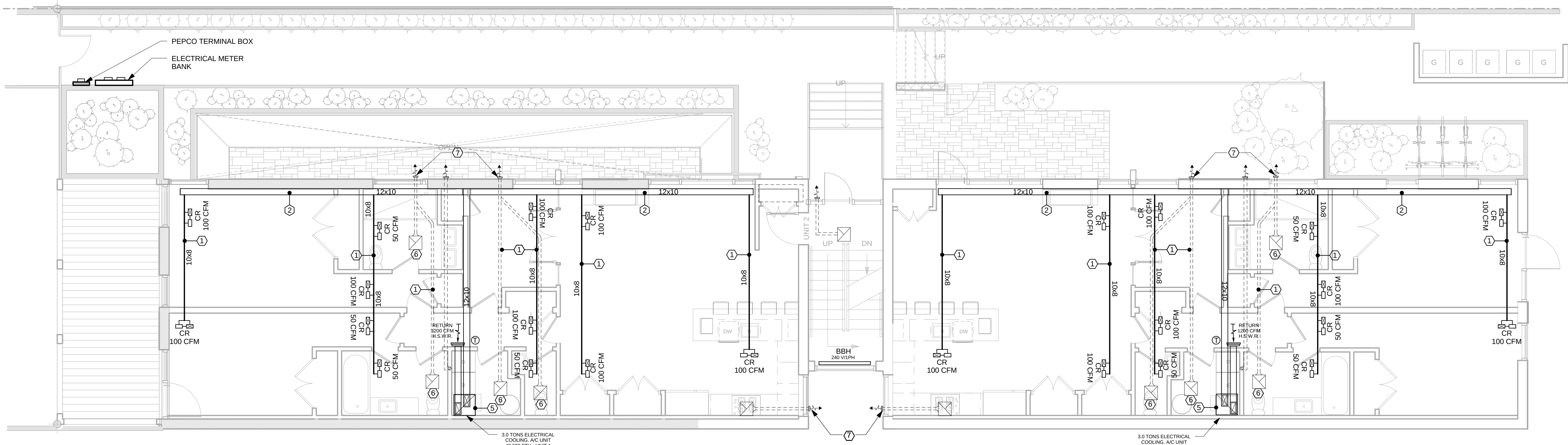
G. MANUAL BALANCING DAMPERS SHALL BE REINFORCED TO PREVENT VIBRATION. DAMPERS SHALL BE PROVIDED WITH LOCKING QUADRANT LEVERS THAT ARE CLEARLY MARKED FOR POSITION DAMPERS SHALL BE BOLTED OR RIVETED TO QUADRANT TO REFLECT THEIR TRUE POSITION. PROVIDE ELEVATED LOCKING QUADRANT WHEN INSTALLED IN INSULATED DUCTWORK.

H. PROVIDE FILTERS FOR GF-1
3. PIPING

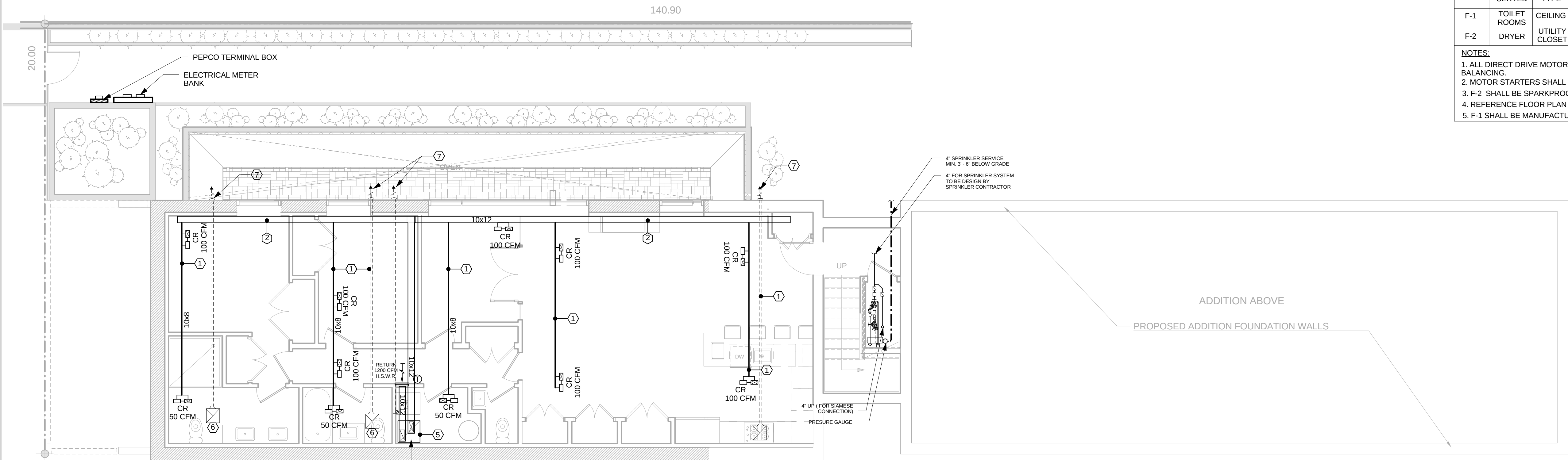
CONDENSATE DRAIN PIPING: TYPE DWV COPPER INSTALLED WITH A SLOPE OF 1/8" PER LINEAR FT AND TRAPPED AT EACH DRAW THROUGH UNIT. ROUTE CONDENSATE PIPING FROM GAS FURNACE AND COOLING COOL SEPARATELY TO THE OUTDOORS AND DAYLIGHT ON GRADE.

A. DRAIN VALVES: NIBCO 585-70 600 LBS. W.O.G., TWO PIECE BODY, FULL PORT, MIL SPEC MSS SP-110, WITH "NIB-SEAL" EXTENDED HANDLE AND DRAIN CAP.

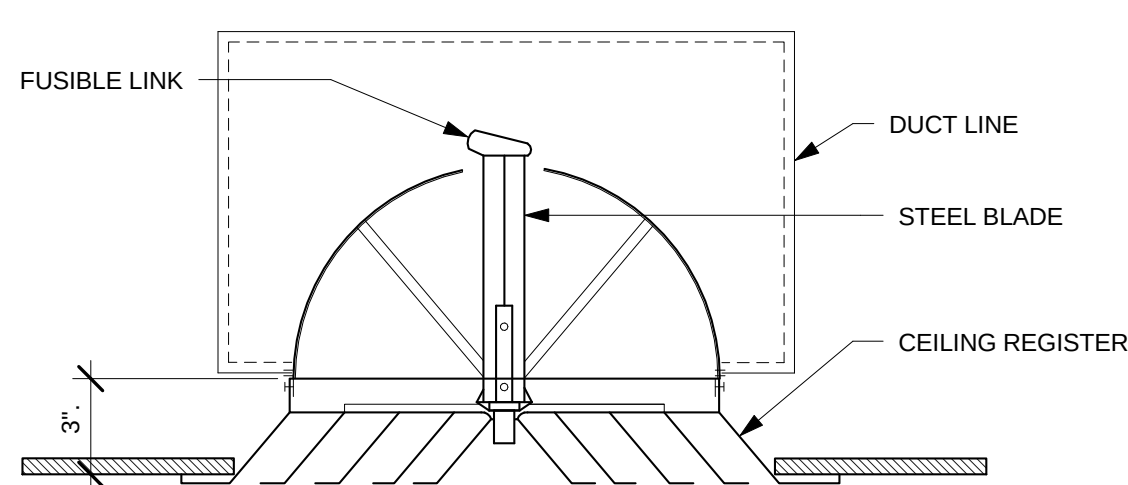
B. UNIONS: BRONZE BODY, SOLDERED ENDS, 12# - 1/2" - 3/4" - 1" - 1 1/2" - 2" - 3" - 4" - 6" - 8" - 10" - 12" - 16" - 20" - 24" - 30" - 36" - 42" - 48" - 60" - 72" - 84" - 96" - 108" - 120" - 144" - 168" - 192" - 216" - 240" - 288" - 324" - 360" - 408" - 456" - 504" - 576" - 648" - 720" - 800" - 900" - 1000" - 1100" - 1200" - 1300" - 1400" - 1500" - 1600" - 1800" - 2000" - 2200" - 2400" - 2600" - 2800" - 3000" - 3200" - 3400" - 3600" - 3800" - 4000" - 4200" - 4400" - 4600" - 4800" - 5000" - 5200" - 5400" - 5600" - 5800" - 6000" - 6200" - 6400" - 6600" - 6800" - 7000" - 7200" - 7400" - 7600" - 7800" - 8000" - 8200" - 8400" - 8600" - 8800" - 9000" - 9200" - 9400" - 9600" - 9800" - 10000" - 10200" - 10400" - 10600" - 10800" - 11000" - 11200" - 11400" - 11600" - 11800" - 12000" - 12200" - 12400" - 12600" - 12800" - 13000" - 13200" - 13400" - 13600" - 13800" - 14000" - 14200" - 14400" - 14600" - 14800" - 15000" - 15200" - 15400" - 15600" - 15800" - 16000" - 16200" - 16400" - 16600" - 16800" - 17000" - 17200" - 17400" - 17600" - 17800" - 18000" - 18200" - 18400" - 18600" - 18800" - 19000" - 19200" - 19400" - 19600" - 19800" - 20000" - 20200" - 20400" - 20600" - 20800" - 21000" - 21200" - 21400" - 21600" - 21800" - 22000" - 22200" - 22400" - 22600" - 22800" - 23000" - 23200" - 23400" - 23600" - 23800" - 24000" - 24200" - 24400" - 24600" - 24800" - 25000" - 25200" - 25400" - 25600" - 25800" - 26000" - 26200" - 26400" - 26600" - 26800" - 27000" - 27200" - 27400" - 27600" - 27800" - 28000" - 28200" - 28400" - 28600" - 28800" - 29000" - 29200" - 29400" - 29600" - 29800" - 30000" - 30200" - 30400" - 30600" - 30800" - 31000" - 31200" - 31400" - 31600" - 31800" - 32000" - 32200" - 32400" - 32600" - 32800" - 33000" - 33200" - 33400" - 33600" - 33800" - 34000" - 34200" - 34400" - 34600" - 34800" - 35000" - 35200" - 35400" - 35600" - 35800" - 36000" - 36200" - 36400" - 36600" - 36800" - 37000" - 37200" - 37400" - 37600" - 37800" - 38000" - 38200" - 38400" - 38600" - 38800" - 39000" - 39200" - 39400" - 39600" - 39800" - 40000" - 40200" - 40400" - 40600" - 40800" - 41000" - 41200" - 41400" - 41600" - 41800" - 42000" - 42200" - 42400" - 42600" - 42800" - 43000" - 43200" - 43400" - 43600" - 43800" - 44000" - 44200" - 44400" - 44600" - 44800" - 45000" - 45200" - 45400" - 45600" - 45800" - 46000" - 46200" - 46400" - 46600" - 46800" - 47000" - 47200" - 47400" - 47600" - 47800" - 48000" - 48200" - 48400" - 48600" - 48800" - 49000" - 49200" - 49400" - 49600" - 49800" - 50000" - 50200" - 50400" - 50600" - 50800" - 51000" - 51200" - 51400" - 51600" - 51800" - 52000" - 52200" - 52400" - 52600" - 52800" - 53000" - 53200" - 53400" - 53600" - 53800" - 54000" - 54200" - 54400" - 54600" - 54800" - 55000" - 55200" - 55400" - 55600" - 55800" - 56000" - 56200" - 56400" - 56600" - 56800" - 57000" - 57200" - 57400" - 57600" - 57800" - 58000" - 58200" - 58400" - 58600" - 58800" - 59000" - 59200" - 59400" - 59600" - 59800" - 60000" - 60200" - 60400" - 60600" - 60800" - 61000" - 61200" - 61400" - 61600" - 61800" - 62000" - 62200" - 62400" - 62600" - 62800" - 63000" - 63200" - 63400" - 63600" - 63800" - 64000" - 64200" - 64400" - 64600" - 64800" - 65000" - 65200" - 65400" - 65600" - 65800" - 66000" - 66200" - 66400" - 66600" - 66800" - 67000" - 67200" - 67400" - 67600" - 67800" - 68000" - 68200" - 68400" - 68600" - 68800" - 69000" - 69200" - 69400" - 69600" - 69800" - 70000" - 70200" - 70400" - 70600" - 70800" - 71000" - 71200" - 71400" - 71600" - 71800" - 72000" - 72200" - 72400" - 72600" - 72800" - 73000" - 73200" - 73400" - 73600" - 73800" - 74000" - 74200" - 74400" - 74600" - 74800" - 75000" - 75200" - 75400" - 75600" - 75800" - 76000" - 76200" - 76400" - 76600" - 76800" - 77000" - 77200" - 77400" - 77600" - 77800" - 78000" - 78200" - 78400" - 78600" - 78800" - 79000" - 79200" - 79400" - 79600" - 79800" - 80000" - 80200" - 80400" - 80600" - 80800" - 81000" - 81200" - 81400" - 81600" - 81800" - 82000" - 82200" - 82400" - 82600" - 82800" - 83000" - 83200" - 83400" - 83600" - 83800" - 84000" - 84200" - 84400" - 84600" - 84800" - 85000" - 85200" - 85400" - 85600" - 85800" - 86000" - 86200" - 86400" - 86600" - 86800" - 87000" - 87200" - 87400" - 87600" - 87800" - 88000" - 88200" - 88400" - 88600" - 88800" - 89000" - 89200" - 89400" - 89600" - 89800" - 90000" - 90200" - 90400" - 90600" - 90800" - 91000" - 91200" - 91400" - 91600" - 91800" - 92000" - 92200" - 92400" - 92600" - 92800" - 93000" - 93200" - 93400" - 93600" - 93800" - 94000" - 94200" - 94400" - 94600" - 94800" - 95000" - 95200" - 95400" - 95600" - 95800" - 96000" - 96200" - 96400" - 96600" - 96800" - 97000" - 97200" - 97400" - 97600" - 97800" - 98000" - 98200" - 98400" - 98600" - 98800" - 99000" - 99200" - 99400" - 99600" - 99800" - 100000" - 100200" - 100400" - 100600" - 100800" - 101000" - 101200" - 101400" - 101600" - 101800" - 102000" - 102200" - 102400" - 102600" - 102800" - 103000" - 103200" - 103400" - 103600" - 103800" - 104000" - 104200" - 104400" - 104600" - 104800" - 105000" - 105200" - 105400" - 105600" - 105800" - 106000" - 106200" - 106400" - 106600" - 106800" - 107000" - 107200" - 107400" - 107600" - 107800" - 108000" - 108200" - 108400" - 108600" - 108800" - 109000" - 109200" - 109400" - 109600" - 109800" - 110000" - 110200" - 110400" - 110600" - 110800" - 111000" - 111200" - 111400" - 111600" - 111800" - 112000" - 112200" - 112400" - 112600" - 112800" - 113000" - 113200" - 113400" - 113600" - 113800" - 114000" - 114200" - 114400" - 114600" - 114800" - 115000" - 115200" - 115400" - 115600" - 115800" - 116000" - 116200" - 116400" - 116600" - 116800" - 117000" - 117200" - 117400" - 117600" - 117800" - 118000" - 118200" - 118400" - 118600" - 118800" - 119000" - 119200" - 119400" - 119600" - 119800" - 120000" - 120200" - 120400" - 120600" - 120800" - 121000" - 121200" - 121400" - 121600" - 121800" - 122000" - 122200" - 122400" - 122600" - 122800" - 123000" - 123200" - 123400" - 123600" - 123800" - 124000" - 124200" - 124400" - 124600" - 124800" - 125000" - 125200" - 125400" - 125600" - 125800" - 126000" - 126200" - 126400" - 126600" - 126800" - 127000" - 127200" - 127400" - 127600" - 127800" - 128000" - 128200" - 128400" - 128600" - 128800" - 129000" - 129200" - 129400" - 129600" - 129800" - 130000" - 130200" - 130400" - 130600" - 130800" - 131000" - 131200" - 131400" - 131600" - 131800" - 132000" - 132200" - 132400" - 132600" - 132800" - 133000" - 133200" - 133400" - 133600" - 133800" - 134000" - 134200" - 134400" - 134600" - 134800" - 135000" - 135200" - 135400" - 135600" - 135800" - 136000" - 136200" - 136400" - 136600" - 136800" - 137000" - 137200" - 137400" - 137600" - 137800" - 138000" - 138200" - 138400" - 138600" - 138800" - 139000" - 139200" - 139400" - 139600" - 139800" - 140000" - 140200" - 140400" - 140600" - 140800" - 141000" - 141200" - 141400" - 141600" - 141800" - 142000" - 142200" - 142400" - 142600" - 142800" - 143000" - 143200" - 143400" - 143600" - 143800" - 144000" - 144200" - 144400" - 144600" - 144800" - 145000" - 145200" - 145400" - 145600" - 145800" - 146000" - 146200" - 146400" - 146600" - 146800" - 147000" - 147200" - 147400" - 147600" - 147800" - 148000" - 148200" - 148400" - 148600" - 148800" - 149000" - 149200" - 149400" - 149600" - 149800" - 150000" - 150200" - 150400" - 150600" - 150800" - 151000" - 151200" - 151400" - 151600" - 151800" - 152000" - 152200" - 152400" - 152600" - 152800" - 153000" - 153200" - 153400" - 153600" - 153800" - 154000" - 154200" - 154400" - 154600" - 154800" - 155000" - 155200" - 155400" - 155600" - 155800" - 156000" - 156200" - 156400" - 156600" - 156800" - 157000" - 157200" - 157400" - 157600" - 157800" - 158000" - 158200" - 158400" - 158600" - 158800" - 159000" - 159200" - 159400" - 159600" - 159800" - 160000" - 160200" - 160400" - 160600" - 160800" - 161000" - 161200" - 161400" - 161600" - 161800" - 162000" - 162200" - 162400" - 162600" - 162800" - 163000" - 163200" - 163400" - 163600" - 163800" - 164000" - 164200" - 164400" - 164600" - 164800" - 165000" - 165200" - 165400" - 165600" - 165800" - 166000" - 166200" - 166400" - 166600" - 166800" - 167000" - 167200" - 167400" - 167600" - 167800" - 168000" - 168200" - 168400" - 168600" - 168800" - 169000" - 169200" - 169400" - 169600" - 169800" - 170000" - 170200" - 170400" - 170600" - 170800" - 171000" - 171200" - 171400" - 171600" - 171800" - 172000" - 172200" - 172400" - 172600" - 172800" - 173000" - 173200" - 173400" - 173600" - 173800" - 174000" - 174200" - 174400" - 174600" - 174800" - 175000" - 175200" - 175400" - 175600" - 175800" - 176000" - 176200" - 176400" - 176600" - 176800" - 177000" - 177200" - 177400" - 177600" - 177800" - 178000" - 178200" - 178400" - 178600" - 178800" - 179000" - 179200" - 179400" - 179600" - 179800" - 180000" - 180200" - 180400" - 180600" - 180800" - 181000" - 181200" - 181400" - 181600" - 181800" - 182000" - 182200" - 182400" - 182600" - 182800" - 183000" - 183200" - 183400" - 183600" - 183800" - 184000" - 184200" - 184400" - 184600" - 184800" - 185000" - 185200" - 185400" - 185600" - 185800" - 186000" - 186200" - 186400" - 186600" - 186800" - 187000" - 187200" - 187400" - 187600" - 187800" - 188000" - 188200" - 188400" - 188600" - 188800" - 189000" - 189200" - 189400" - 189600" - 189800" - 190000" - 190200" - 190400" - 190600" - 190800" - 191000" - 191200" - 191400" - 191600" - 191800" - 192000" - 192200" - 192400" - 192600" - 192800" - 193000" - 193200" - 193400" - 193600" - 193800" - 194000" - 194200" - 194400" - 194600" - 194800" - 195000" - 195200" - 195400" - 195600" - 195800" - 196000" - 196200" - 196400" - 196600" - 196800" - 197000" - 197200" - 197400" - 197600" - 197800" - 198000" - 198200" - 198400" - 198600" - 198800" - 199000" - 199200" - 199400" - 199600" - 199800" - 200000" - 200200" - 200400" - 200600" - 200800" - 201000" - 201200" - 201400" - 201600" - 201800" - 202000" - 202200" - 202400" - 202600" - 202800" - 203000" - 203200" - 203400" - 203600" - 203800" - 204000" - 204200" - 204400" - 204600" - 204800" - 205000" - 205200" - 205400" - 205600" - 205800" - 206000" - 206200" - 206400" - 206600" - 206800" - 207000" - 207200" - 207400" - 207600" - 207800" - 208000" - 208200" - 208400" - 208600" - 208800" - 209000" - 209200" - 209400" - 209600" - 209800" - 210000" - 210200" - 210400" - 210600" - 210800" - 211000" - 211200" - 211400" - 211600" - 211800" - 212000" - 212200" - 212400" - 212600" - 212800" - 213000" - 213200" - 213400" - 213600" - 213800" - 214000" - 214200" - 214400" - 214600" - 214800" - 215000" - 215200" - 215400" - 215600" - 215800" - 216000" - 216200" - 216400" - 216600" - 216800" - 217000" - 217200" - 217400" - 217600" - 217800" - 218000" - 218200" - 218400" - 218600" - 218800" - 219000" -



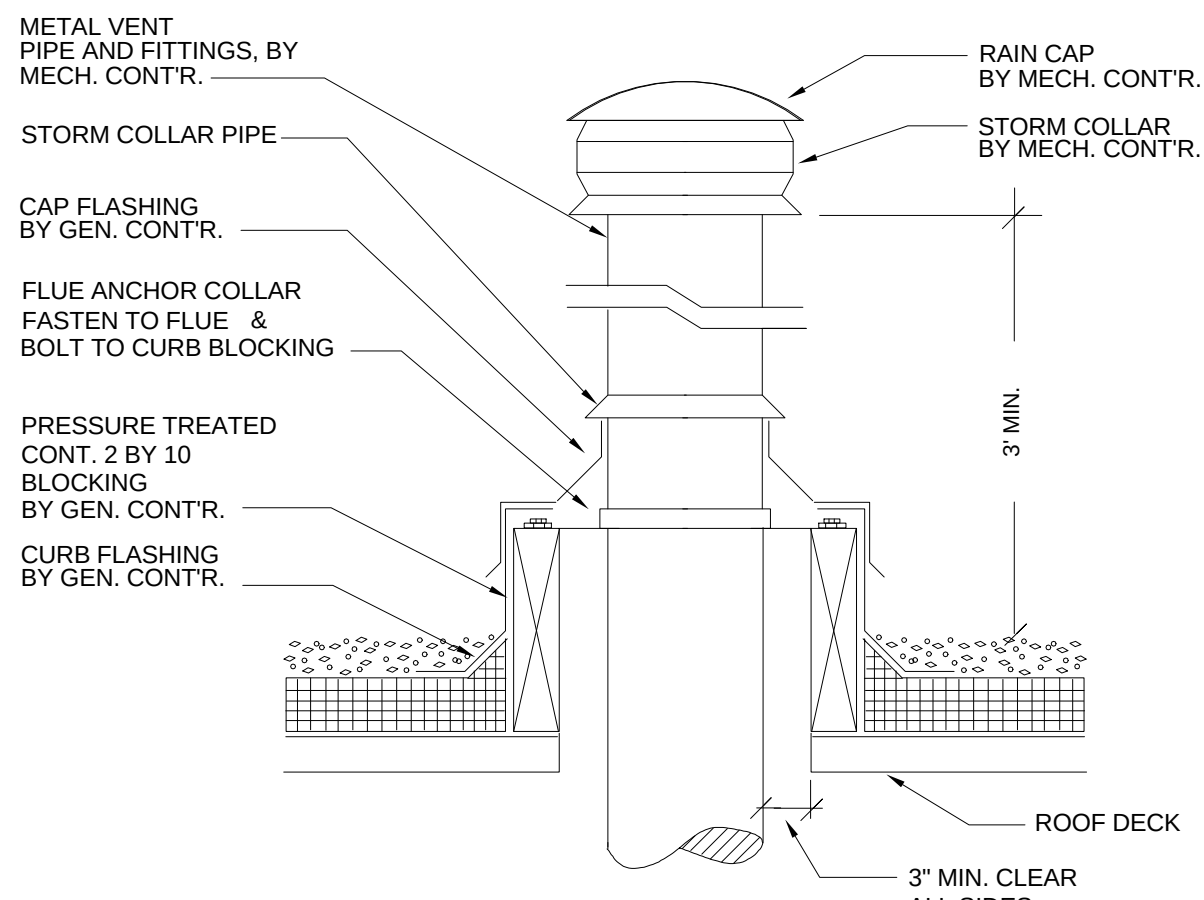
2 FIRST FLOOR MECHANICAL PLAN - UNIT-2 & 3
3/16" = 1' - 0"



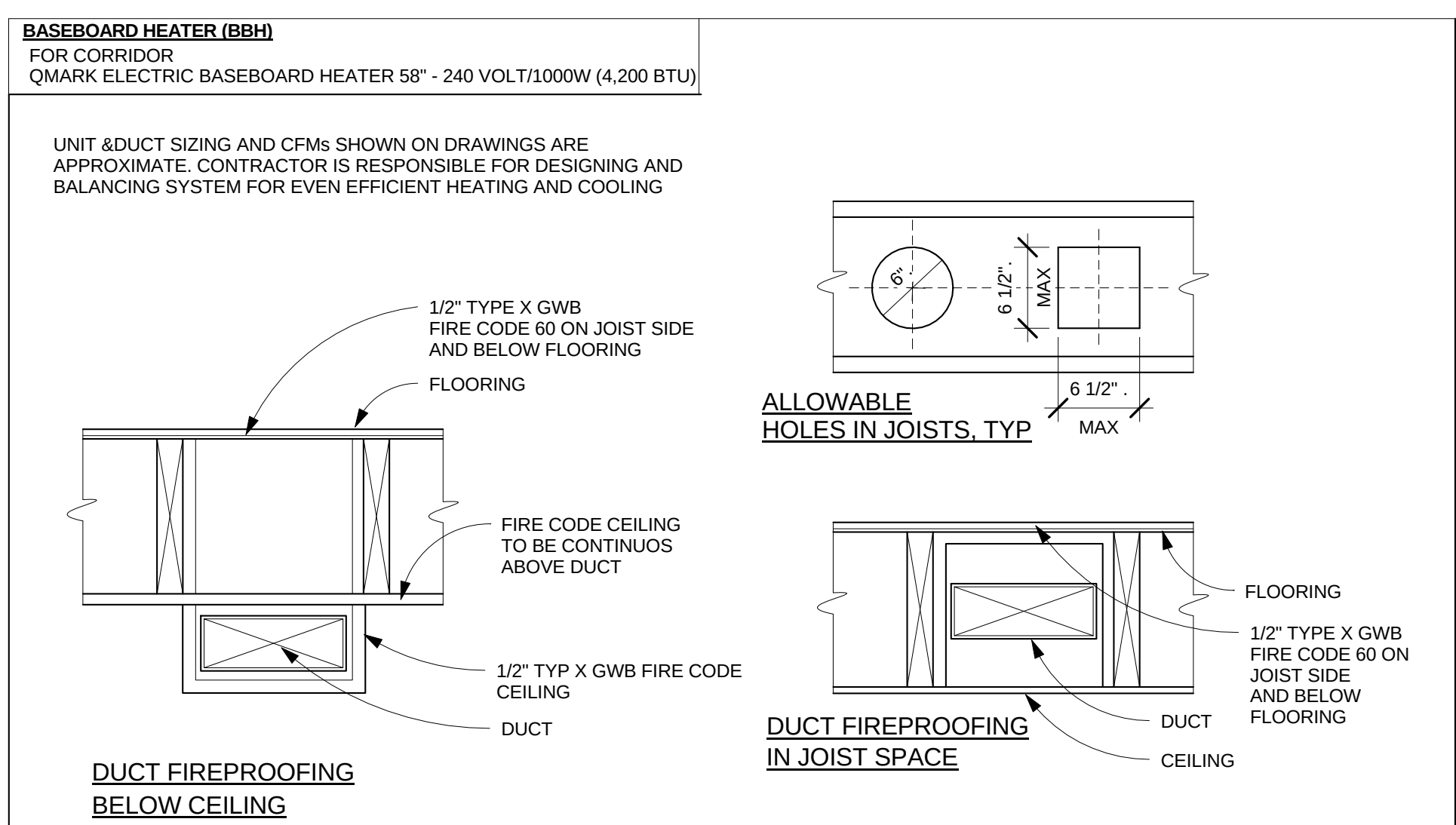
1 CELLAR MECHANICAL PLAN - UNIT 1
3/16" = 1' - 0"



CEILING RADIATION DAMPERS SHALL BE TESTED AS PART OF A FIRE RESISTANCE - RATED FLOOR / CEILING OR ROOF / CEILING ASSEMBLY IN ACCORDANCE WITH ASTM E 119 OR UL 263. CEILING RADIATION DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS LISTED IN THE FIRE-RESISTANCE-RATED ASSEMBLY AND THE MANUFACTURER'S INSTALLATIONS INSTRUCTIONS AND THE LISTING CEILING.



4 ROOF FLUE VENT DETAIL, TYP.
SCALE = N.T.S.



FAN SCHEDULE									
NO.	AREA SERVED	FAN TYPE	CFM	S.P. INCH	MAX. RPM	DRIVE	MOTOR		CONTROL INTERLOCK
							H.P.-(WATTS)	VOLTS/PH	
F-1	TOILET ROOMS	CEILING	100	0.25	769	DIRECT	(60)	120V/1P	WALL SWITCH
F-2	DRYER	UTILITY CLOSET	400	0.375	1,140	DIRECT	1/6	120V/1P	CONTIN.

NOTES:
1. ALL DIRECT DRIVE MOTOR EXHAUST FANS SHALL BE FURNISHED WITH FACTORY INSTALLED THREE SPEED SWITCH FOR BALANCING.
2. MOTOR STARTERS SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
3. F-2 SHALL BE SPARKPROOF CONSTRUCTION WITH MOTOR OUTSIDE OF AIR STREAM
4. REFERENCE FLOOR PLAN FOR QUANTITY OF FANS.
5. F-1 SHALL BE MANUFACTURED FOR FIRE RATED CEILING ASSEMBLY

GENERAL NOTES

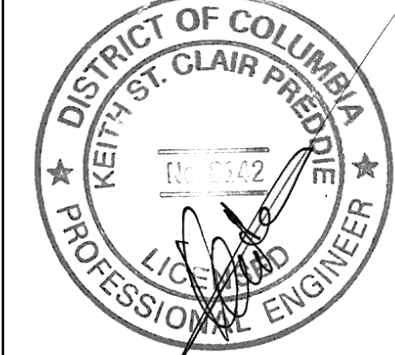
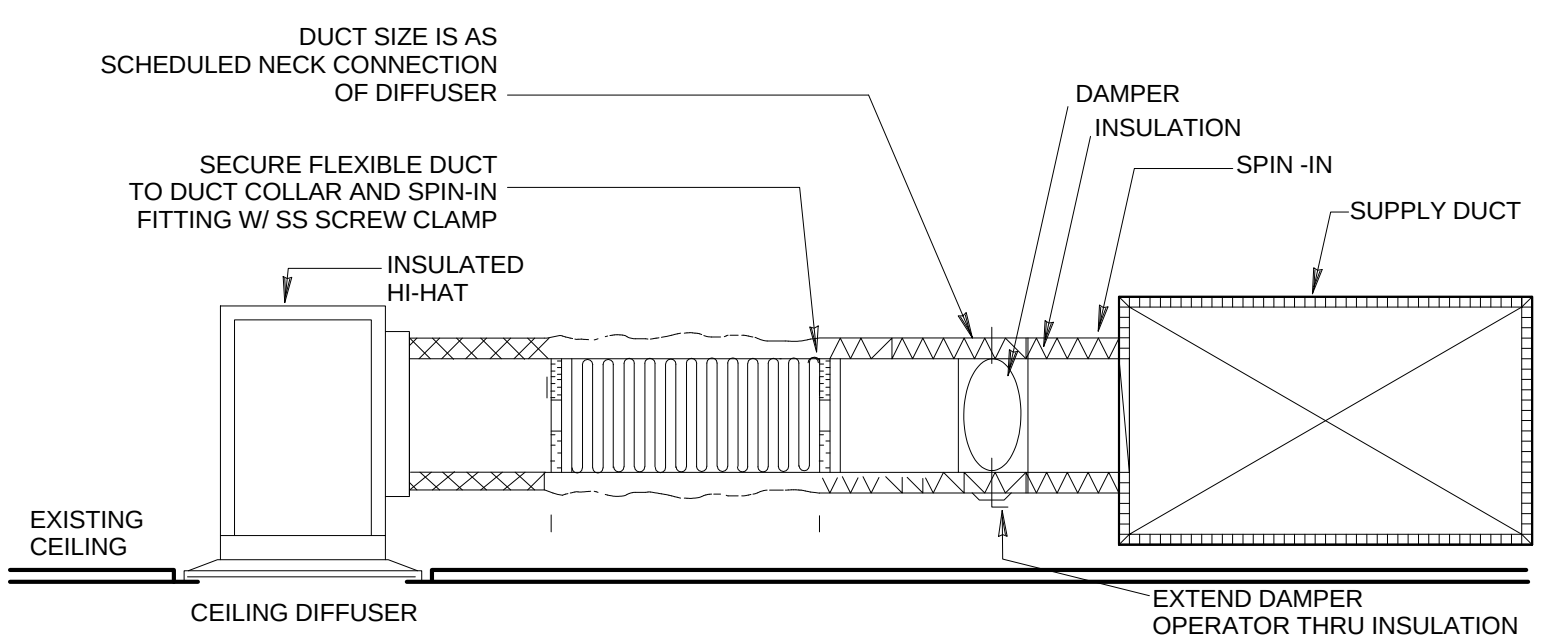
- REFER TO DRAWING M4 FOR SYMBOLS, ABBREVIATIONS, SCHEDULES & DETAILS - SPECIFICATIONS.
- COORDINATE WITH OWNER / ARCHITECT FOR EXACT LOCATION OFR AIR DEVICES IN CEILING - FIELD COORDINATION.
- PROVIDE ELECTRONIC WATER DETECTION DEVICE WITH ALARM IN CONDENSATION DRAIN PAN INTERLOCKED TO SHUTDOWN AIR HANDLING UNIT.

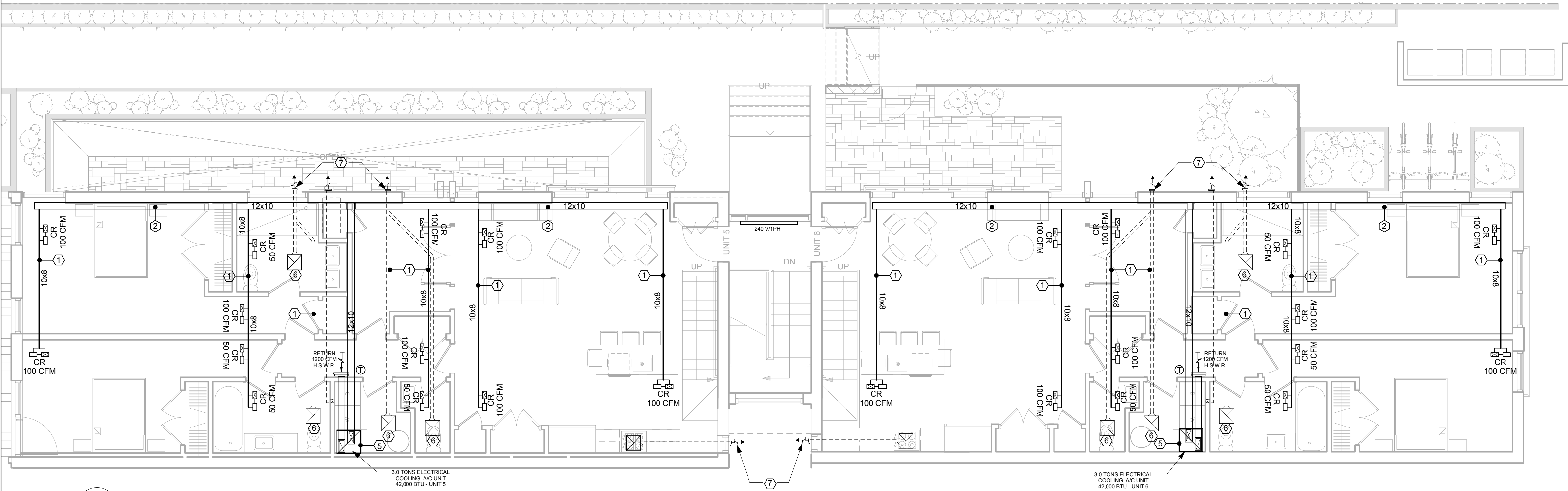
KEY NOTES

- RUN DUCTWORK & ROUND FAN EXHAUST PIPE BETWEEN JOIST
- RUN DUCTWORK TIGHT UNDERSIDE OF STRUCTURE IN SOFIT
- RUN ROUND 4 INCH. DIAMETER EXHAUST PIPE BETWEEN JOIST
- RUN ROUND 4 INCH. DIAMETER EXHAUST PIPE TO BE INSTALLED THROUGH FRAMING JOIST STRUCTURE.
- INSTALL, SIZE, AND ROUTE REFRIGERATOR PIPING AS RECOMMENDED BY SPLIT SYSTEM MANUFACTURES.
- PROVIDE RADIATION DAMPERS IN CEILING REGISTERS, DUCT PENETRATION & EXHAUST FANS MATCHING CEILING FIRE RATING.
- WALL CAP 4" & 6" FAN EXHAUST BRICK VENTS - WALL CAP MATCHING DUCT SIZE

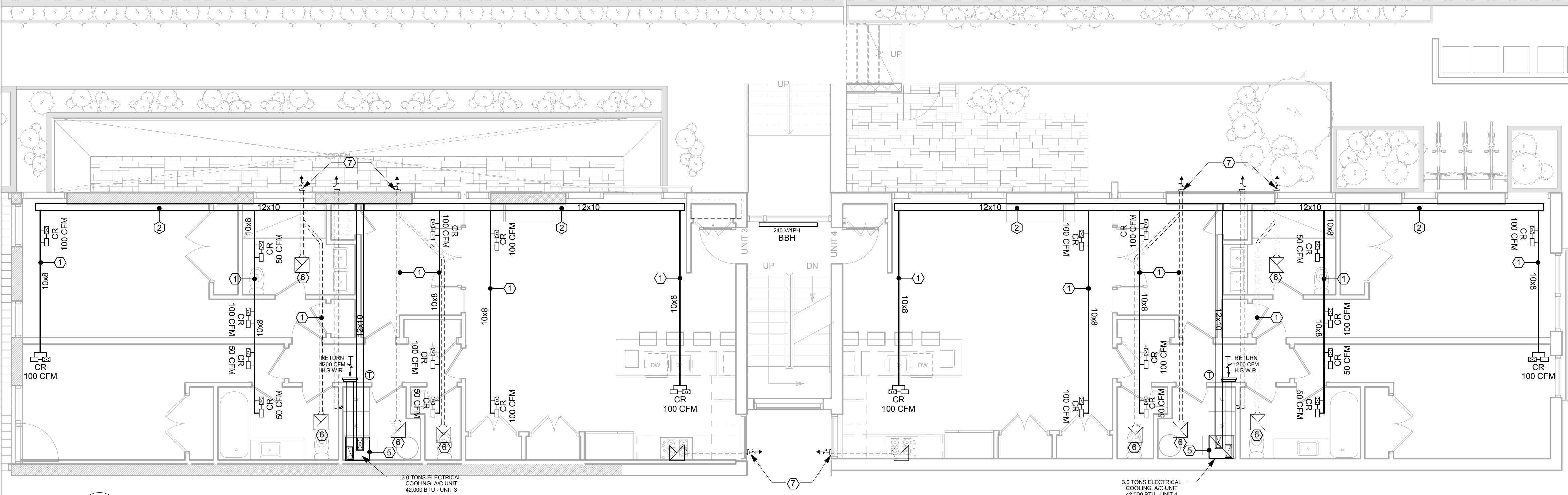
MECHANICAL SYMBOLS

	FLOOR REGISTER	CR	CEILING REGISTER
	CEILING REGISTER	CG	CEILING GRILL
	SUPPLY AIR DUCT	FR	FLOOR REGISTER
	RETURN AIR DUCT	HSWR	HIGH SIDE WALL RETURN
	EXHAUST AIR DUCT	HSWG	HIGH SIDE WALL GRILL
	ROUND DUCT	LSWR	LOW SIDE WALL RETURN
	DIGITAL THERMOSTAT	LSWG	LOW SIDE WALL GRILL
CFM	CFM	BJ	BETWEEN JOISTS

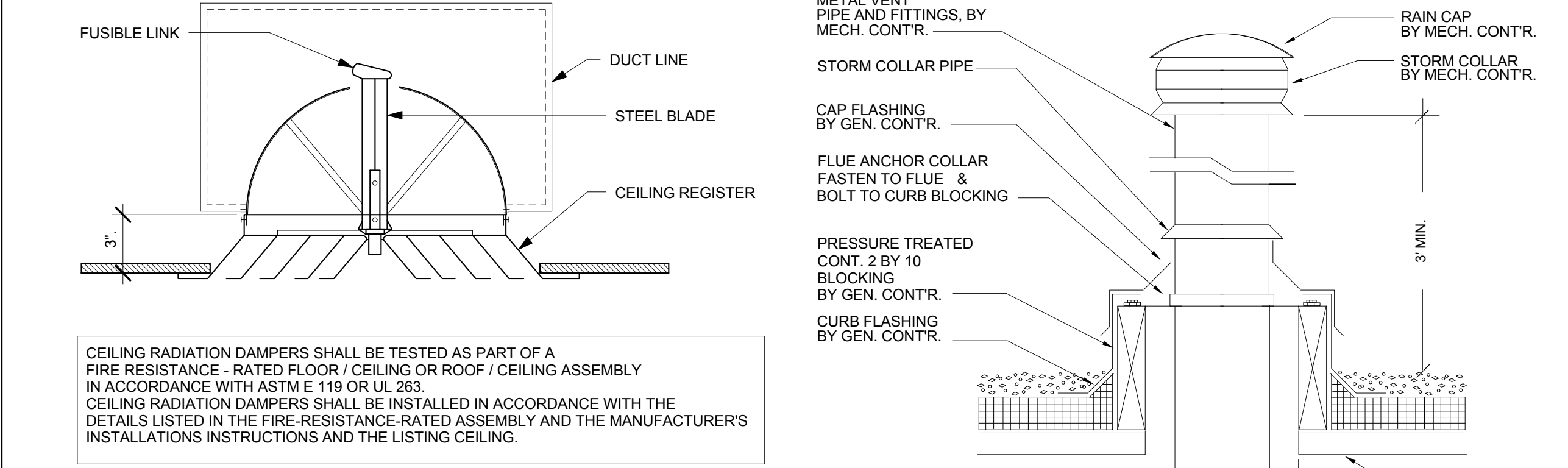




1 THIRD FLOOR MECHANICAL PLAN - UNIT-5 & 6
M3 3/16" = 1' - 0"

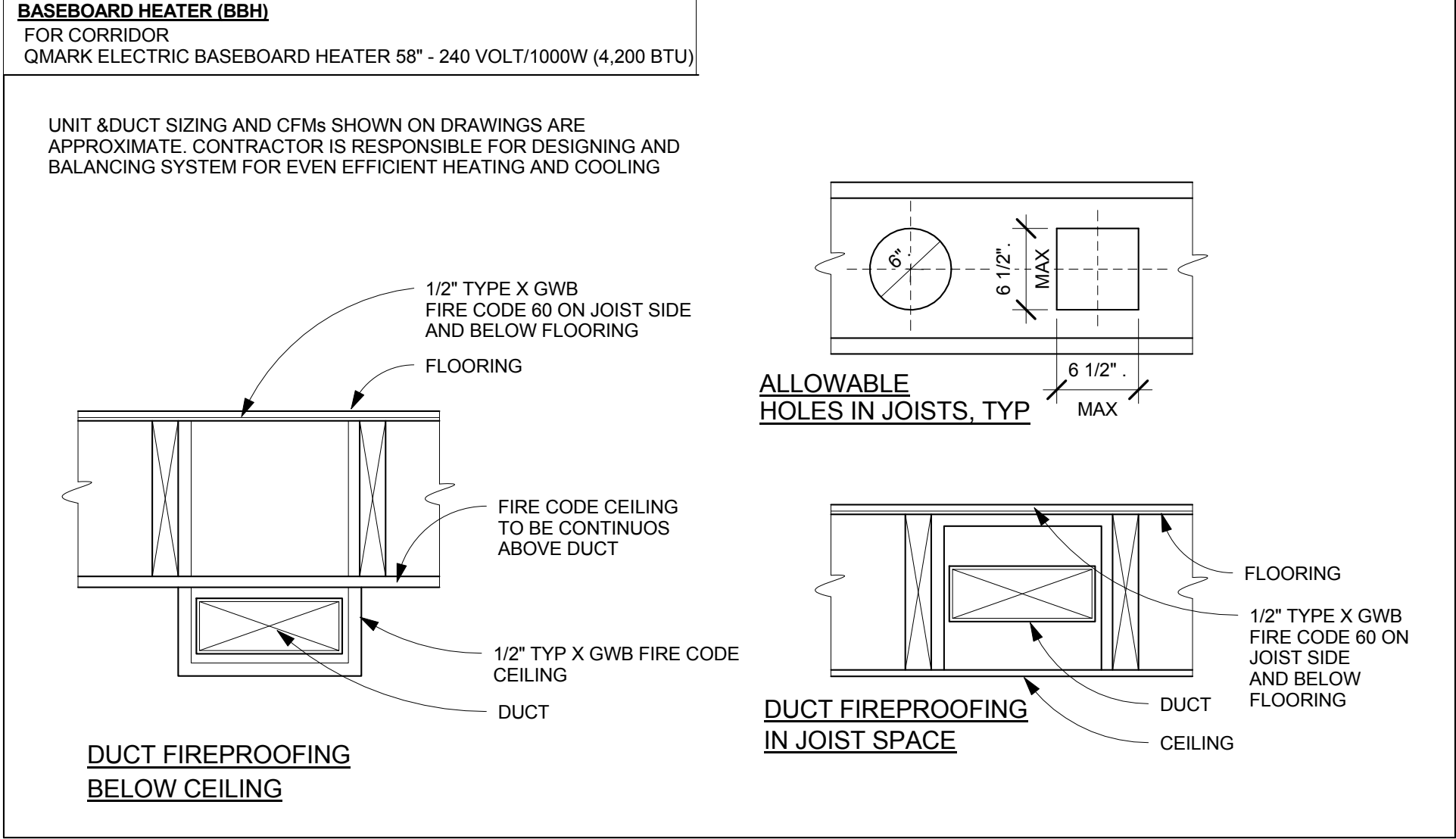


1 SECOND FLOOR MECHANICAL PLAN - UNIT-3 & 4
M3 3/16" = 1' - 0"



3 CEILING REG./DAMPER DETAIL, TYP.
M3 SCALE = N.T.S.

4 ROOF FLUE VENT DETAIL, TYP.
M3 SCALE = N.T.S.



FAN SCHEDULE									
NO.	AREA SERVED	FAN TYPE	CFM	S.P. INCH	MAX. RPM	DRIVE	MOTOR		CONTROL INTERLOCK
							H.P.-(WATTS)	VOLTS/PH	
F-1	TOILET ROOMS	CEILING	100	0.25	769	DIRECT	(60)	120V/1P	WALL SWITCH
F-2	DRYER	UTILITY CLOSET	400	0.375	1,140	DIRECT	1/6	120V/1P	CONTIN.

NOTES:
1. ALL DIRECT DRIVE MOTOR EXHAUST FANS SHALL BE FURNISHED WITH FACTORY INSTALLED THREE SPEED SWITCH FOR BALANCING.
2. MOTOR STARTERS SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
3. F-2 SHALL BE SPARKPROOF CONSTRUCTION WITH MOTOR OUTSIDE OF AIR STREAM
4. REFERENCE FLOOR PLAN FOR QUANTITY OF FANS.
5. F-1 SHALL BE MANUFACTURED FOR FIRE RATED CEILING ASSEMBLY

GENERAL NOTES

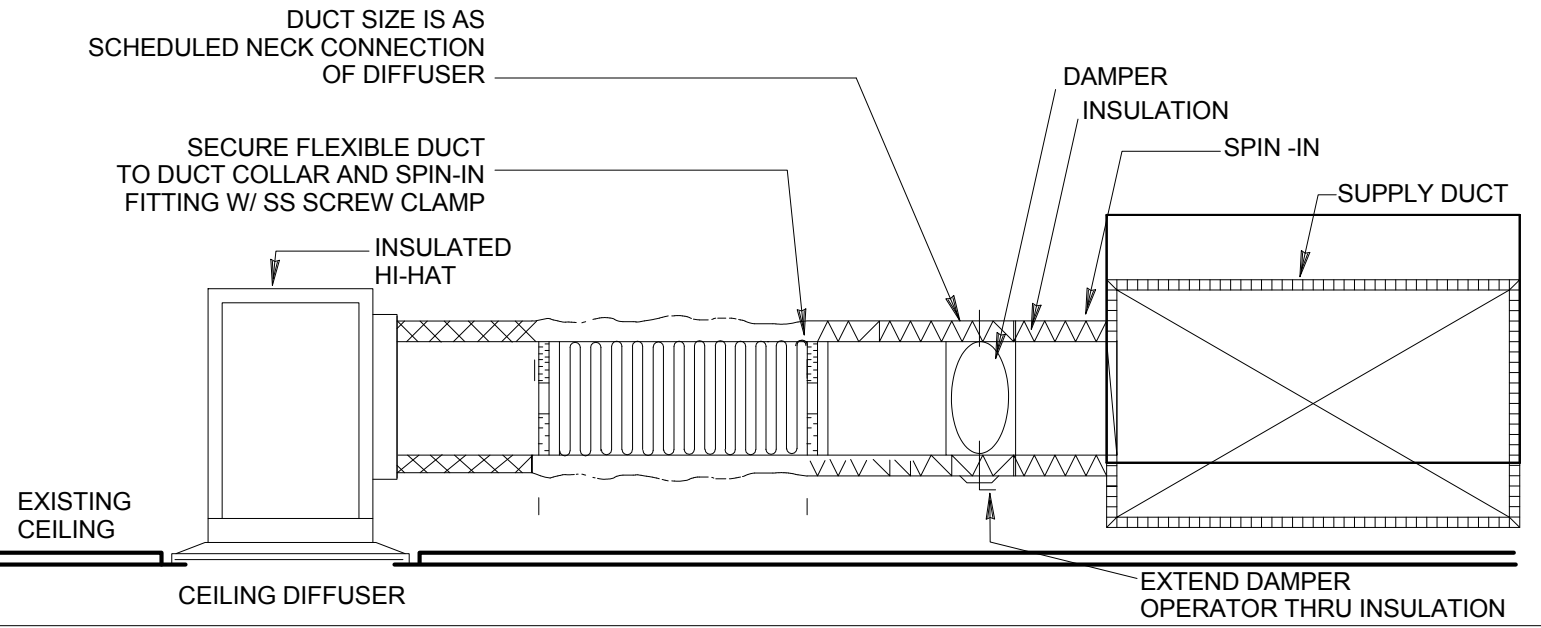
- A. REFER TO DRAWING M4 FOR SYMBOLS, ABBREVIATIONS, SCHEDULES & DETAILS - SPECIFICATIONS.
- B. COORDINATE WITH OWNER / ARCHITECT FOR EXACT LOCATION OFR AIR DEVICES IN CEILING - FIELD COORDINATION.
- B. PROVIDE ELECTRONIC WATER DETECTION DEVICE WITH ALARM IN CONDENSATION DRAIN PAN INTERLOCKED TO SHUTDOWN AIR HANDLING UNIT.

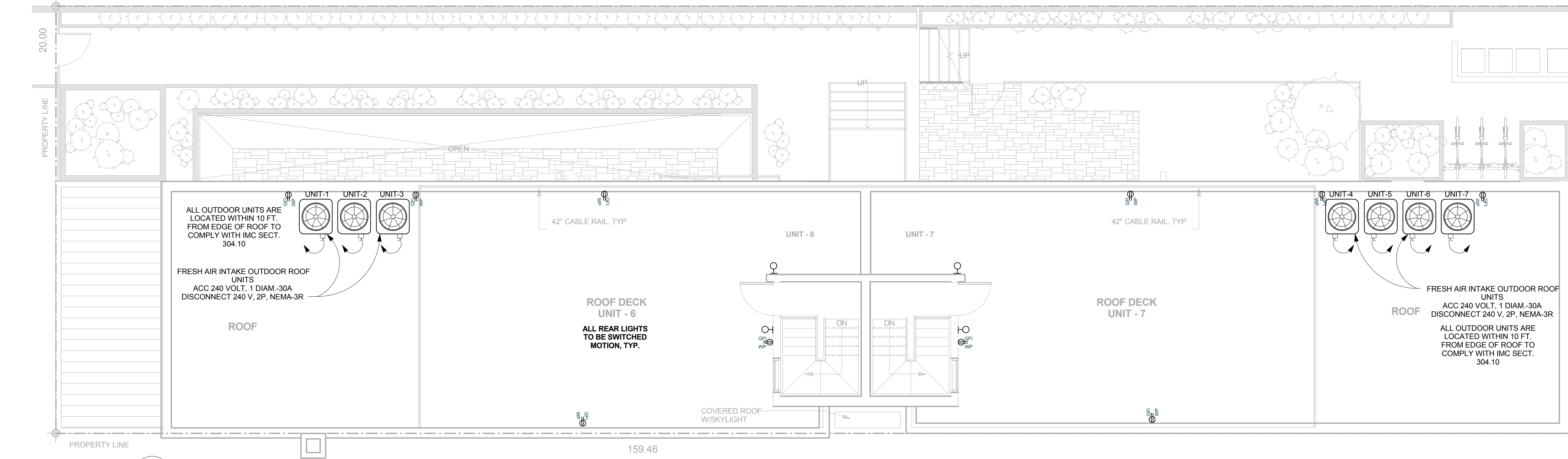
KEY NOTES

- 1 RUN DUCTWORK BETWEEN JOIST
- 2 RUN DUCTWORK TIGHT UNDERSIDE OF STRUCTURE IN SOFIT
- 3 RUN ROUND 4 INCH. DIAMETER EXHAUST PIPE UNDERSIDE OF STRUCTURE IN SOFIT - COORDINATE WITH DUCKWORK.
- 4 RUN ROUND 4 INCH. DIAMETER EXHAUST PIPE TO BE INSTALLED THROUGH FRAMING JOIST STRUCTURE.
- 5 INSTALL, SIZE, AND ROUTE REFRIGERATOR PIPING AS RECOMMENDED BY SPLIT SYSTEM MANUFACTURES.
- 6 PROVIDE RADIATION DAMPERS IN CEILING REGISTERS, DUCT PENETRATION & EXHAUST FANS MATCHING CEILING FIRE RATING.
- 7 WALL CAP 4" & 6" FAN EXHAUST BRICK VENTS - WALL CAP MATCHING DUCT SIZE

MECHANICAL SYMBOLS

	FLOOR REGISTER	CR	CEILING REGISTER
	CEILING REGISTER	CG	CEILING GRILL
	SUPPLY AIR DUCT	FR	FLOOR REGISTER
	RETURN AIR DUCT	HSWR	HIGH SIDE WALL RETURN
	EXHAUST AIR DUCT	HSWG	HIGH SIDE WALL GRILL
	ROUND DUCT	LSWR	LOW SIDE WALL RETURN
	DIGITAL THERMOSTAT	LSWG	LOW SIDE WALL GRILL
CFM	CFM	BJ	BETWEEN JOISTS





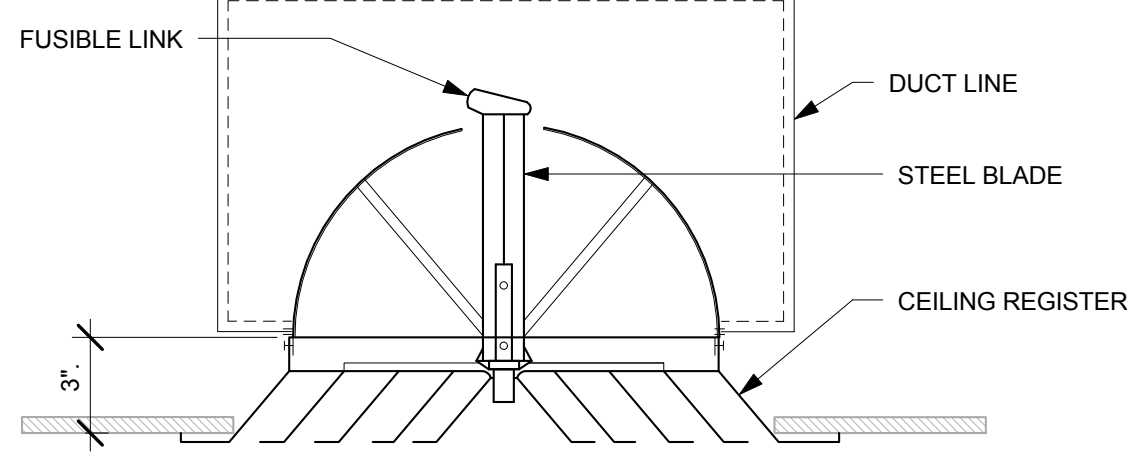
1 ROOF MECHANICAL PLAN - ALL ACC UNITS
M4 3/16" = 1' - 0"

GENERAL NOTES

- A. REFER TO DRAWING 1M FOR SYMBOLS, ABBREVIATIONS, SCHEDULES & DETAILS - SPECIFICATIONS.
- B. COORDINATE WITH OWNER / ARCHITECT FOR EXACT LOCATION OF AIR DEVICES IN CEILING - FIELD COORDINATION.
- B. PROVIDE ELECTRONIC WATER DETECTION DEVICE WITH ALARM IN CONDENSATION DRAIN PAN INTERLOCKED TO SHUTDOWN AIR HANDLING UNIT.

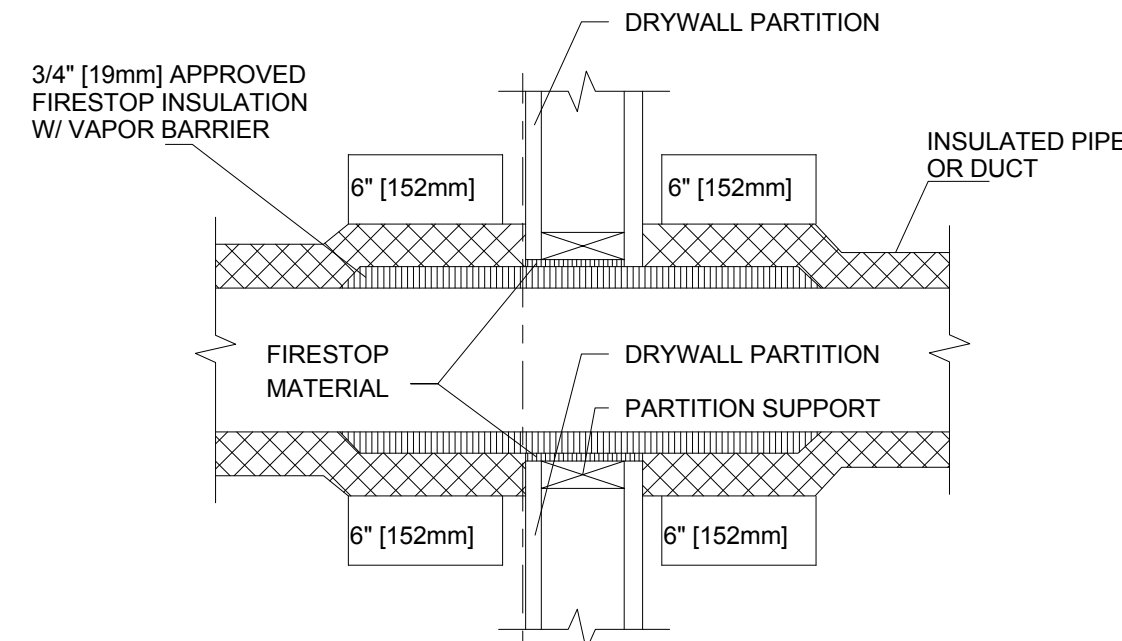
KEY NOTES

- 1 RUN DUCTWORK BETWEEN JOIST
- 2 RUN DUCTWORK TIGHT UNDERSIDE OF STRUCTURE IN SOFIT
- 3 RUN ROUND 4 INCH. DIAMETER EXHAUST PIPE UNDERSIDE OF STRUCTURE IN SOFIT - COORDINATE WITH DUCKWORK.
- 4 RUN ROUND 4 INCH. DIAMETER EXHAUST PIPE TO BE INSTALLED THROUGH FRAMING JOIST STRUCTURE.
- 5 INSTALL, SIZE, AND ROUTE REFRIGERATOR PIPING AS RECOMMENDED BY SPLIT SYSTEM MANUFACTURERS.
- 6 PROVIDE RADIATION DAMPERS IN CEILING REGISTERS, DUCT PENETRATION & EXHAUST FANS MATCHING CEILING FIRE RATING.
- 7 WALL CAP 4" & 6" FAN EXHAUST BRICK VENTS - WALL CAP MATCHING DUCT SIZE

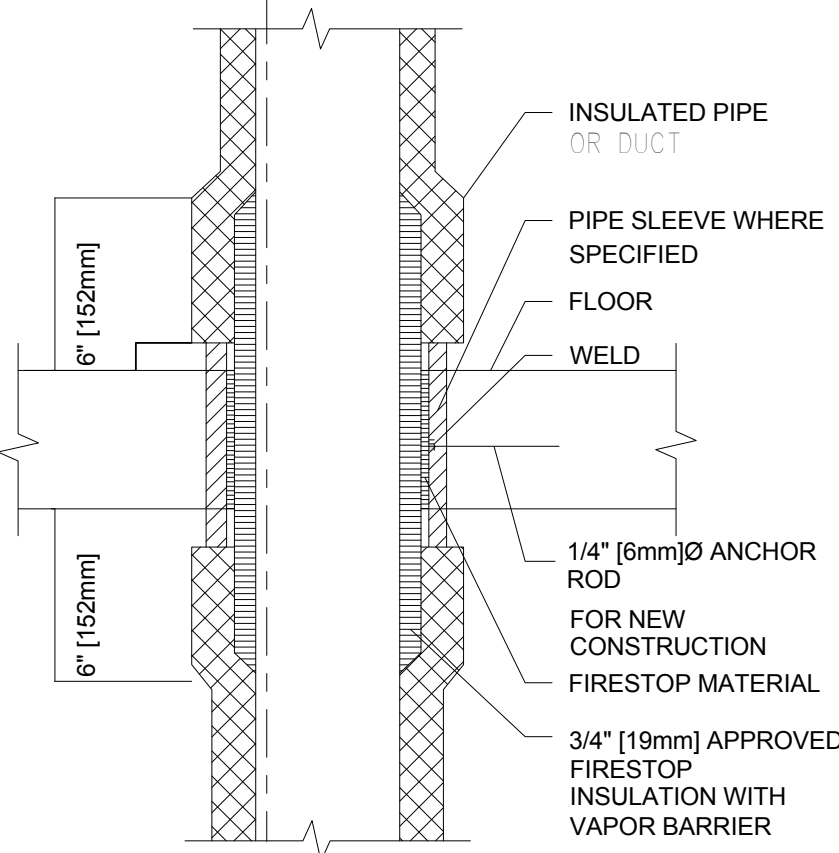


4 CEILING REGISTER DETAIL, TYP.
M4 SCALE = N.T.S.

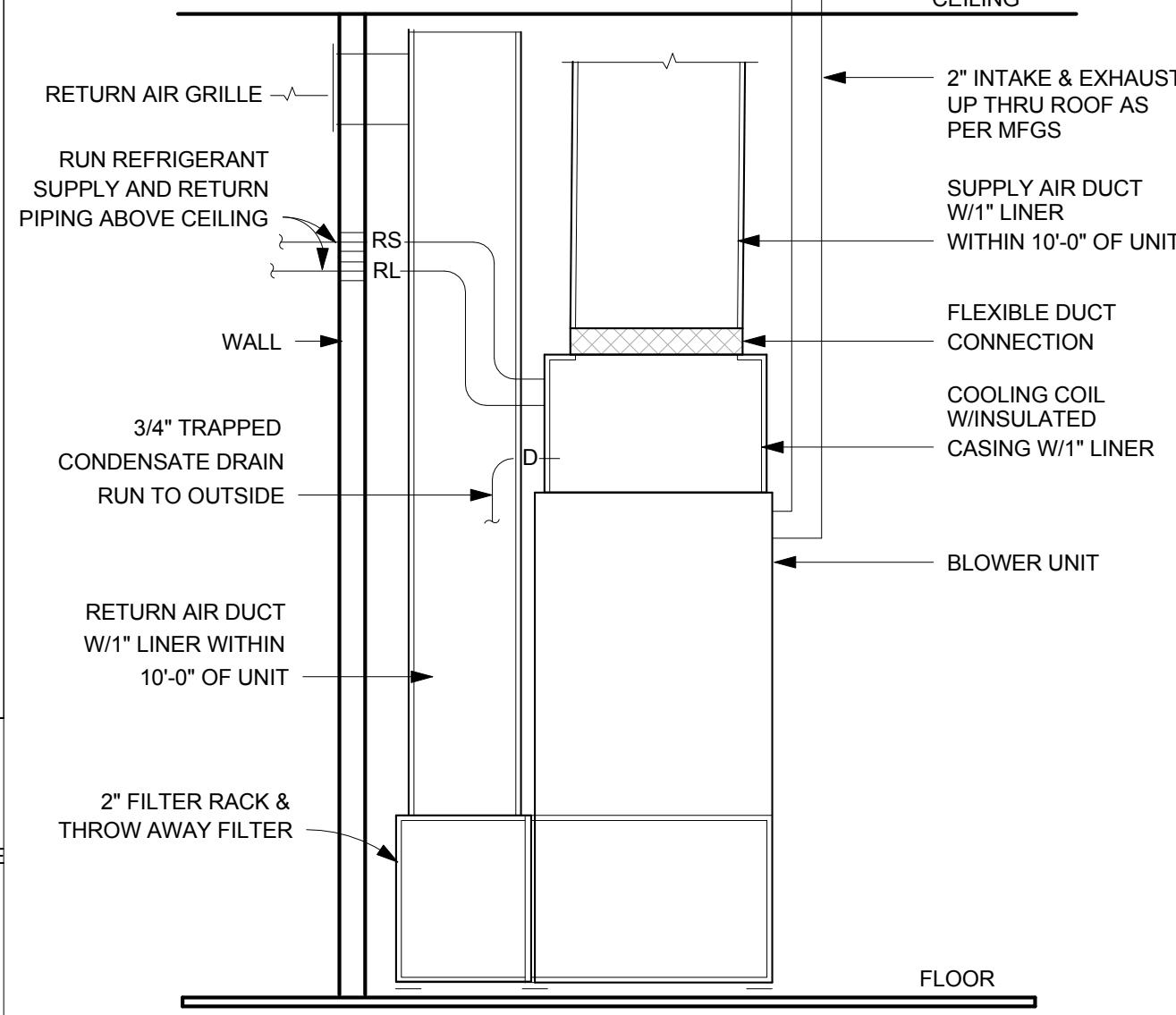
- NOTES:
- (1) PROVIDE WITH WALL MOUNTED THERMOSTAT.
 - (2) PROVIDE WITH WALL MOUNTED HUMIDISTAT.
 - (3) PROVIDE WITH HOT GAS BY-PASS AND SCR REHEAT.
 - (4) OUTDOOR UNIT SHALL BE PROVIDED WITH FACTORY APPLIED SEACOAST PROTECTION PACKAGE ON COIL, CASING AND ALL COMPONENTS EXPOSED TO THE ELEMENTS.



PARTITION OR CHASE PENETRATION, TYP.



PIPE / DUCT PENETRATION OF FIRE/SMOKE BARRIERS, TYP.



3 A/C ELECTRICAL UNIT DETAIL, TYP.
M4 SCALE = N.T.S.

SPLIT SYSTEM HEATPUMP -TYP -ALL UNITS

INDOOR UNIT (AHU) - TRANE MODEL "TWE036" VERTICAL AIR HANDLING UNIT WITH INTEGRAL ELECTRIC RESISTANCE HEATER, 1200 CFM @ 0.5" ESP. UNIT SHALL PRODUCE 33.8 MBH TOTAL AND 21.8 MBH SENSIBLE COOLING CAPACITY @ ARI STANDARDS. HEATPUMP HEATING CAPACITY SHALL PRODUCE 32.4 MBH @ 47 F AMBIENT TEMP. ELECTRIC HEATER SHALL BE UL LABELED AND FACTORY PREWIRED AND SHALL INCLUDE STEPPING RELAYS AND CONTRACTORS TO FACILITATE 2 STEP CONTROL WITH 45 SECOND TIME DELAY BETWEEN STEPS.

ELECTRIC CHARACTERISTICS:

- 1- FAN MOTOR 1/2 HP
- 2- 208 VOLTS, 1 PHASE
- 3- ELECTRIC HEATER- 14.42 KW @ 208V

OUTDOOR UNIT (ACC)
TRANE MODEL "2TWB3042" TO HAVE TOTAL CAPACITY OF 42,000 BTUH WITH 40" SST MIN SEER 13

ELECTRIC CHARACTERISTICS:

- 1- COMPRESSOR 1 @ 15.4 RLA, 93.5 LRA
- 2- FAN 1 @ 1/6 HP
- 3- 208 VOLTS, 1 PHASE
- 4- MCA 21
- 5- MOCP 35

OUTDOOR UNIT ACCESSORIES:

- TIME DELAY RELAY
- EVAPORATOR FREEZE THERMOSTAT
- ISOLATION RELAY
- THERMOSTATIC EXPANSION VALVE
- HI-PRESSURE SWITCH
- FILTER DRIER-BI-FLOW

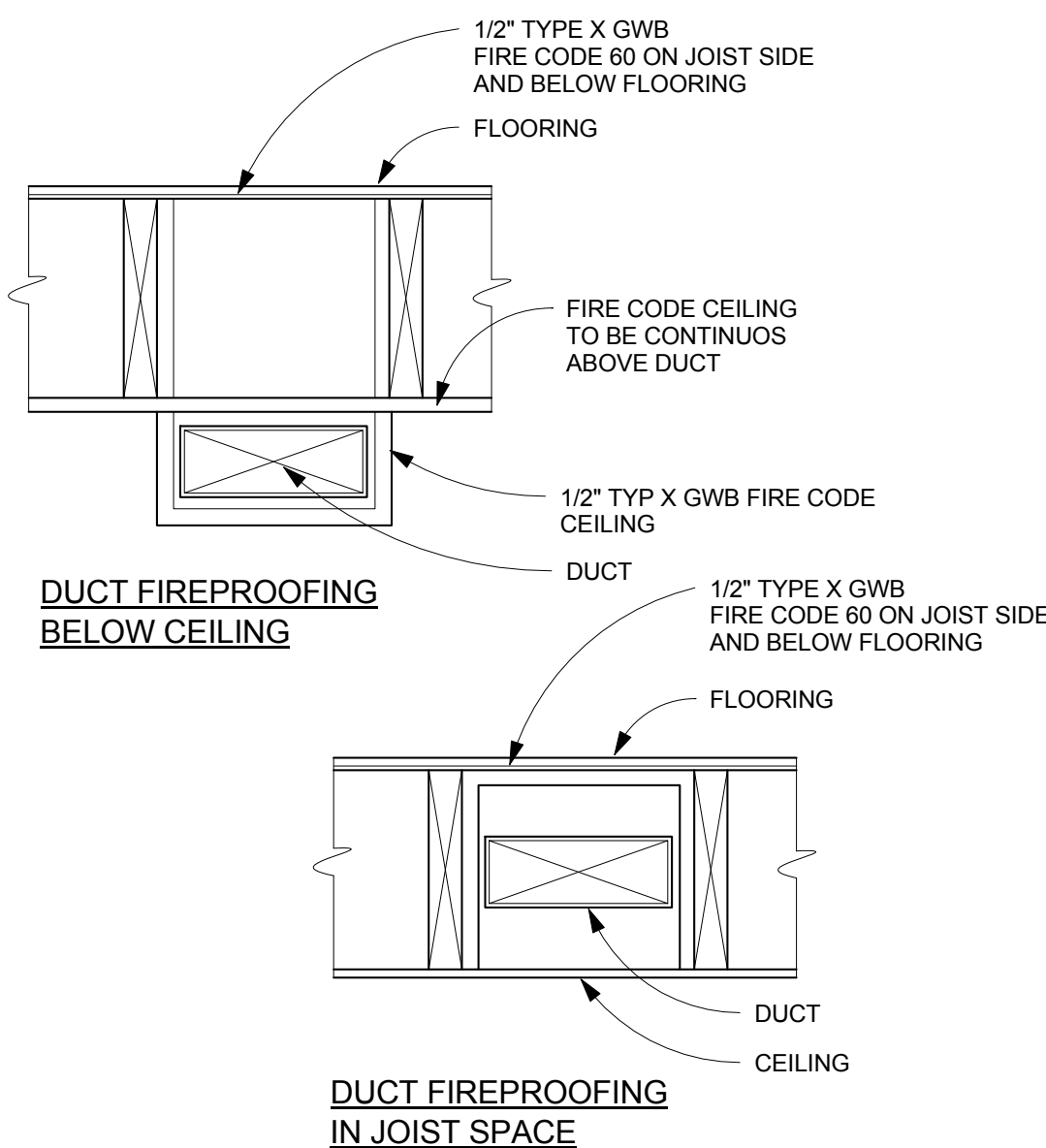
LIQUID SOLENOID VALVE
LOW-PRESSURE SWITCH
HI-PRESSURE SWITCH
MOUNTING PAD
HI-PRESSURE SWITCH

NOTE: INDOOR UNIT SHALL BE MANUFACTURED FOR FIRE RATED CEILING ASSEMBLY
*ACCEPTABLE MANUFACTURERS: TRANE, CARRIER, YORK

MECHANICALS NOTES:

1. FURNISH ALL LABOR, MATERIALS, FIXTURES EQUIPMENT AND SERVICES NECESSARY FOR THE INSTALLATION OF A COMPLETE AND PROPERLY FUNCTIONING H.V.A.C. SYSTEM, PLUMBING SYSTEM, AND ELECTRICAL SYSTEM.
2. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND REGULATIONS, CONSIDERED AS MINIMUM REQUIREMENTS.
3. APPLY FOR AND PAY FOR ALL PERMITS AND CONNECTION FEES REQUIRED FOR THE WORK.
4. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE WORK TO BE DONE AND SHALL EXAMINE THE SITE AND CONSIDER THE CONDITIONS UNDER WHICH HE WILL BE OBLIGED TO OPERATE IN THE PERFORMANCE OF THE CONTRACTED WORK. NO ALLOWANCES SHALL BE MADE SUBSEQUENTLY IN THIS CONNECTION, FOR ANY ERRORS THROUGH NEGLIGENCE ON HIS PART. THE CONTRACTOR IS HERE BY ADVISED THAT HE WILL BE REQUIRED TO OBSERVE ALL RECOMMENDED PRACTICES FOR FIRE AND SAFETY PRECAUTIONS FOR THE PROTECTION OF THE FACILITY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LOCATIONS AND CLEARANCES AND COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO STARTING OF WORK.
5. FOR OTHER DETAILS, THE ARCHITECTURE, STRUCTURAL, HVAC, PLUMBING, ELECTRICAL PLANS AND EXISTING CONSTRUCTION SHALL BE FOLLOWED AND ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE NEATLY FITTED THERETO.
6. ALL DUCTWORK SHALL BE FABRICATED FROM FIELD TAKEN DIMENSIONS AND NOT FROM DRAWINGS. PRIOR TO DUCT FABRICATION, CEILING CLEARANCES SHALL BE VERIFIED WITH ALL ELECTRICAL, PLUMBING AND ARCHITECTURAL.
7. SUBMIT SIX COPIES OF EACH SHOP DRAWINGS FOR THE FOLLOWING: HIGH EFFICIENCY FURNACE, SPLIT SYSTEM COOLING COILS, AIR COOLED CONDENSING UNIT, THERMOSTAT, GRILLES, REGISTERS, DUCTS, TRIMS, PIPES, JOINING METHODS, WATER HEATER, GUY GRAY UNIT, FLOOR DRAINS, BREAKER PANEL, CIRCUIT BREAKERS, SWITCHES, LUMINAIRES, MOTION DETECTORS, DISCONNECT SWITCHES AND OUTLETS.
9. DUCTWORK SHALL BE SHEET METAL, GALVANIZED, CONSTRUCTED, BRACED AND SUPPORTED IN ACCORDANCE WITH SMACNA LOW PRESSURE GUIDES, SEAL ALL JOINTS TO BE AIRTIGHT USING HARDCAST # AM-401 TAPE APPLIED OVER CLEAN, DRY DUCT.
10. ALL SUPPLY AND RETURN DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED WITH 1/2" FIBERGLASS INSULATION WITH ASI VAPOR BARRIER, OR EQUAL.

UNIT & DUCT SIZING AND CFMS SHOWN ON DRAWINGS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND BALANCING SYSTEM FOR EVEN EFFICIENT HEATING AND COOLING



2 ROOF FLUE VENT DETAIL, TYP.
M4 SCALE = N.T.S.

MECHANICAL SYMBOLS

	FLOOR REGISTER	CR	CEILING REGISTER
	CEILING REGISTER	CG	CEILING GRILL
	SUPPLY AIR DUCT	FR	FLOOR REGISTER
	RETURN AIR DUCT	HSWR	HIGH SIDE WALL RETURN
	EXHAUST AIR DUCT	HSWG	HIGH SIDE WALL GRILL
	ROUND DUCT	LSWR	LOW SIDE WALL RETURN
	DIGITAL THERMOSTAT	LSWG	LOW SIDE WALL GRILL
CFM	CFM	BJ	BETWEEN JOISTS

SHEET TITLE

MECHANICAL PLANS

PROJECT TITLE
1521 LOFTS
1521 VARNUM ST NW
WASHINGTON, DC 20011

PERMIT SET - FEBRUARY 2015

SEAL



M4

JA DESIGN DEVELOPMENT
1930 Columbia RD. NW
Washington, DC 20009
P: 202.255.6945
www.jadesigndevelopment.com

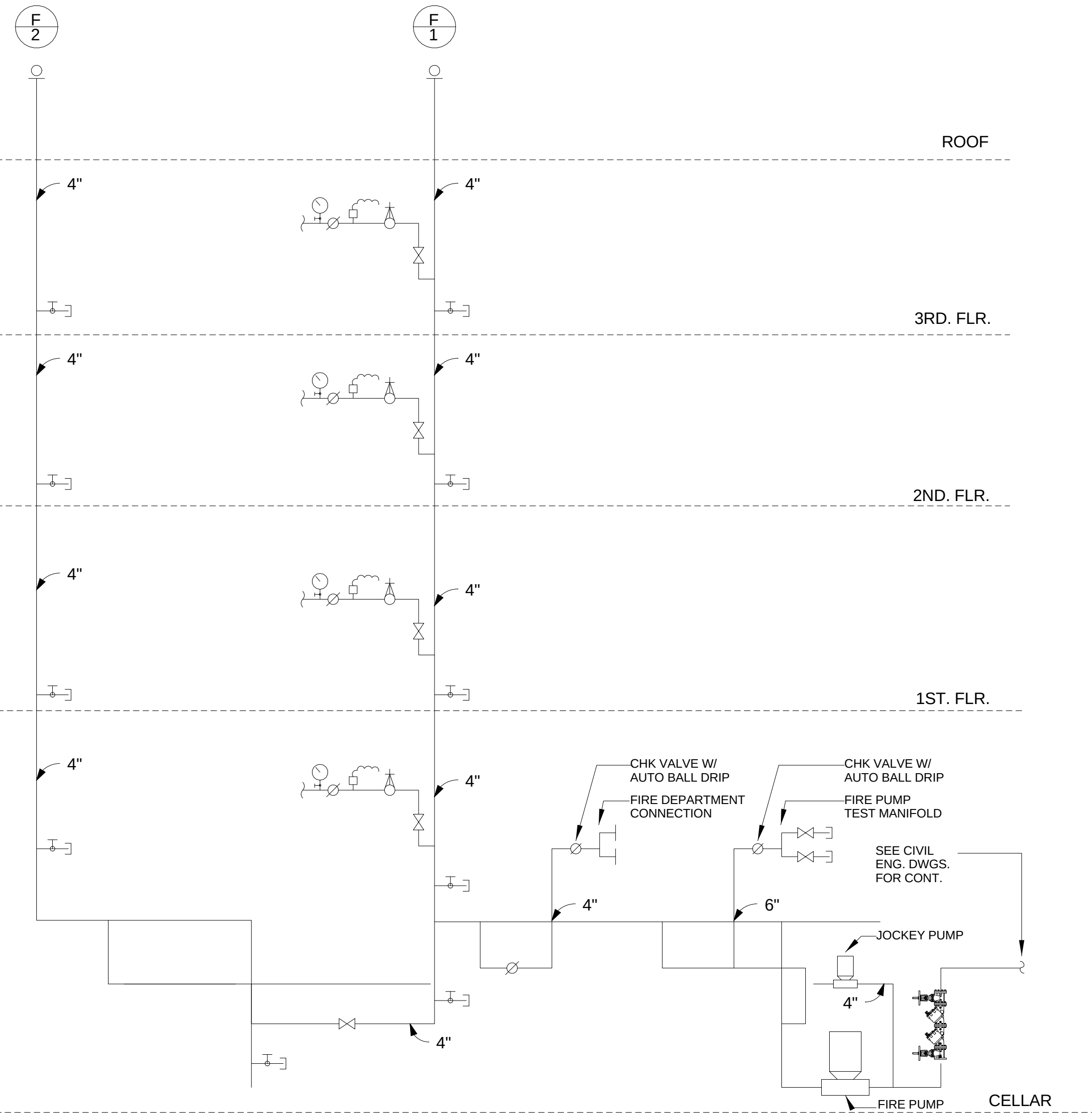


1. ALL WORK SHALL BE DONE IN ACCORDANCE TO THE LOCAL PLUMBING CODE.
2. THE PROVISIONS OF THE CODE SHALL APPLY TO THE ERECTION, INSTALLATION, ALTERATION, REPAIRS, HEALTH, PROPERTY AND PUBLIC WELFARE REGULATING AND CONTROLLING THE DESIGN, CONSTRUCTION, INSTALLATION, QUALITY OF MATERIALS, LOCATION, OPERATION AND MAINTENANCE OR USE OF PLUMBING EQUIPMENT AND EQUIPMENTS
3. ALL PLUMBING SYSTEMS, MATERIALS AND APPURTENANCES, BOTH EXISTING AND NEW, AND ALL PART THEREOF SHALL BE MAINTAINED IN PROPER CONDITION IN ACCORDANCE WITH THE ORIGINAL DESIGN IN A SAFE AND SANITARY CONDITION. ALL DEVICES OR SAFEGUARDS REQUIRED BY THIS CODE SHALL BE MAINTAINED IN COMPLIANCE WITH THE CODE EDITION UNDER WHICH INSTALLED. THE OWNER OR THE OWNERS DESIGNATED AGENT SHALL BE RESPONSIBLE FOR THE MAINTAINANCE OF PLUMBING SYSTEMS. TO DETERMINE COMPLIANCE WITH THIS PROVISION, THE CODE OFFICIAL SHALL HAVE THE AUTHORITY TO REQUIRE ANY PLUMBING SYSTEM TO BE REINSPECTED.
4. MINOR ADDITIONS, ALTEATIONS, RENOVATIONS AND REPAIRS TO EXISTING PLUMBING SYSTEMS SHALL BE PERMITTED IN THE SAME MANNER AND ARRANGEMENT AS IN THE EXISTING SYSTEM, PROVIDED THAT SUCH REPAIRS OR REPLACEMENT ARE NOT HAZARDOUS AND ARE NOT APPROVED.
5. FINAL INSPECTION SHALL BE MADE AFTER THE BUILDING IS COMPLETE, ALL PLUMBING FIXTURES ARE IN PLACE AND PROPERLY CONNECTED, AND THE STRUCTURE IS READY FOR OCCUPANCY. THE HOLDER OF THE PLUMBING SHALL BE RESPONSIBLE FOR THE SCHEDULING OF SUCH INSPECTIONS.



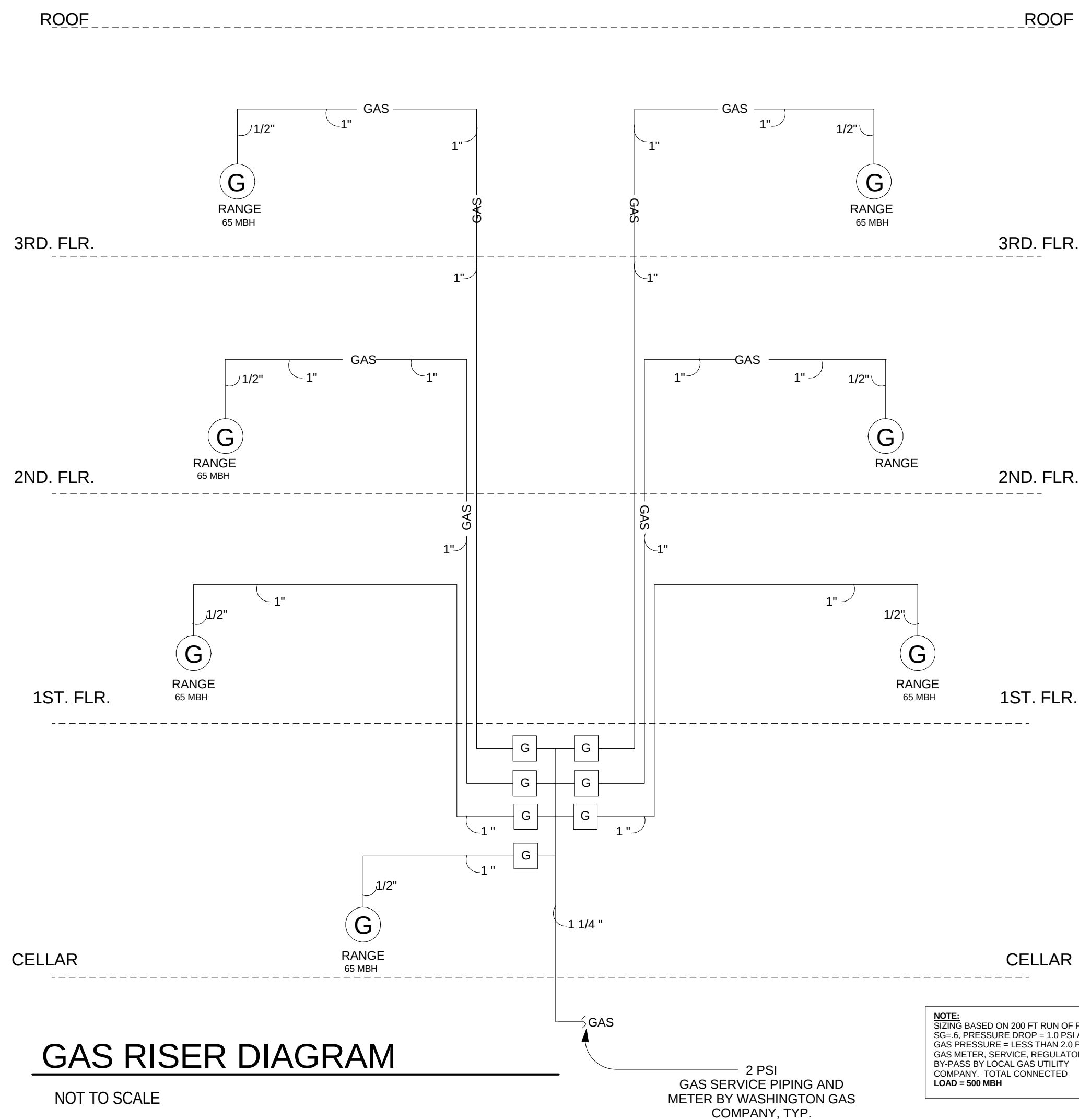
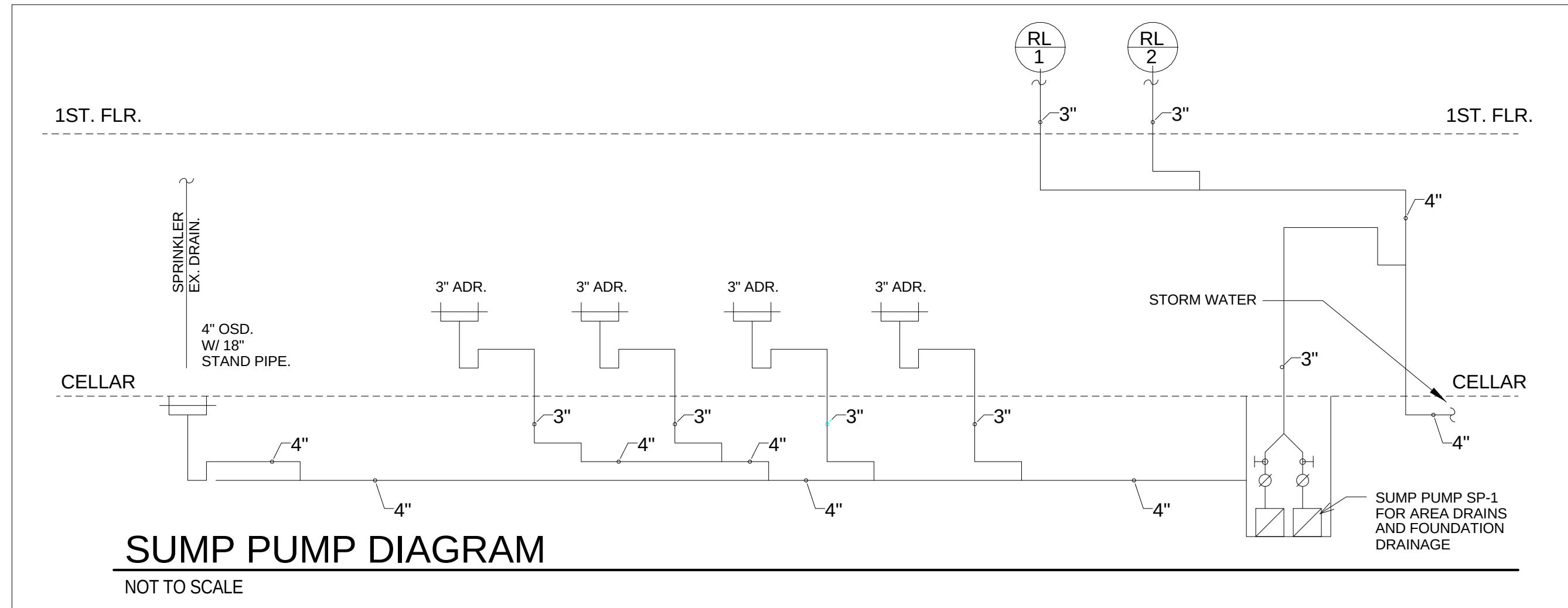
PLUMBING SYMBOLS					
AAV V.T.R.	AIR ADMITTANCE VALVE VENT THRU ROOF		HPIU.	HEAT PUMP INDOOR UNIT	
BT LAV.	BATH TUB LAVATORY			WATER SHUT OFF VALVE	
WC	WATER CLOSET		CW	COLD WATER	
WASH.	WASHER		HW	HOT WATER	

PLUMBING FIXTURES CONNECTION SCHEDULE					
FIXTURE	WASTE	VENT	C.W.	H.W.	REMARKS
WATER CLOSET	3"	2"	1/2"	NONE	FLOOR MOUNTED FLUSH TANK
LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	IN COUNTER TOP
K. SINK	1 1/2"	1 1/2"	1/2"	1/2"	IN COUNTER TOP
BATH TUB	1 1/2"	1 1/2"	1/2"	1/2"	PRESSURE BALANCE MIXING VALVE
DISH WASHER	1 1/2"	1 1/2"	1/2"	1/2"	FLOOR MOUNTED FLUSH TANK
WASHER MACHINE	2"	1 1/2"	1/2"	1/2"	FLOOR MOUNTED FLUSH TANK



FIRE STANDPIPE DIAGRAM

NOT TO SCALE



GAS RISER DIAGRAM

NOT TO SCALE

PLUMBING NOTES

1.

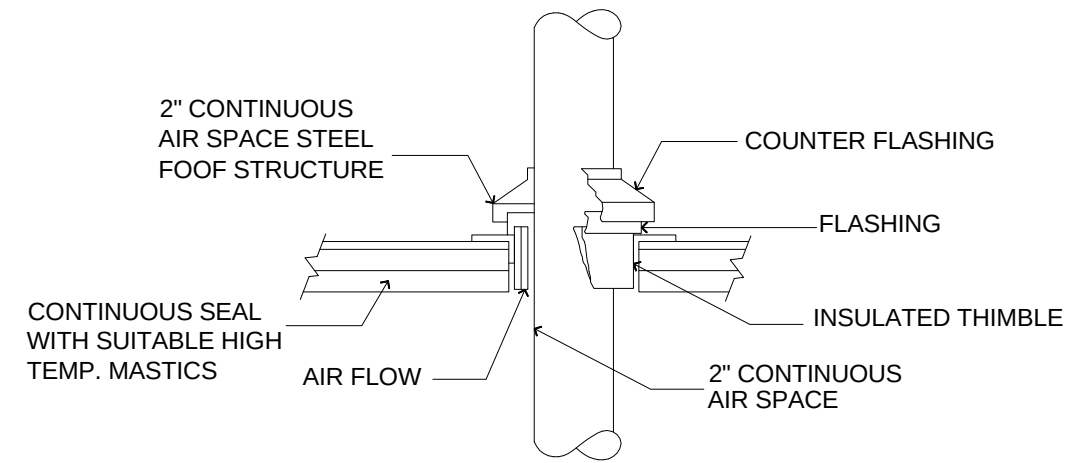
ALL WORK SHALL BE DONE IN ACCORDANCE TO THE LOCAL PLUMBING CODE.
2.

THE PROVISIONS OF THE CODE SHALL APPLY TO THE ERECTION, INSTALLATION, ALTERATION, REPAIRS, HEALTH, PROPERTY AND PUBLIC WELFARE REGULATING AND CONTROLLING THE DESIGN, CONSTRUCTION, INSTALLATION, QUALITY OF MATERIALS, LOCATION, OPERATION AND MAINTENANCE OR USE OF PLUMBING EQUIPMENT AND EQUIPMENTS
3.

ALL PLUMBING SYSTEMS, MATERIALS AND APPURTENANCES, BOTH EXISTING AND NEW, AND ALL PART THREROF SHALL BE MAINTAINED IN PROPER CONDITION IN ACCORDANCE WITH THE ORIGINAL DESIGN IN A SAFE AND SANITARY CONDITION. ALL DEVICES OR SAFRGUARDS REQUIRED BY THIS CODE SHALL BE MAINTAINED IN COMPLIANCE WITH THE CODE EDITION UNDER WHICH INSTALLED. THE OWNER OR THE OWNERS DESIGNATED AGENT SHALL BE RESPONSIBLE FOR THE MAINTAINANCE OF PLUMBING SYSTEMS. TO DETERMINE COMPLIANCE WITH THIS PROVISION, THE CODE OFFICIAL SHALL HAVE THE AUTHORITY TO REQUIRE ANY PLUMBING SYSTEM TO BE REINSPECTED.
4.

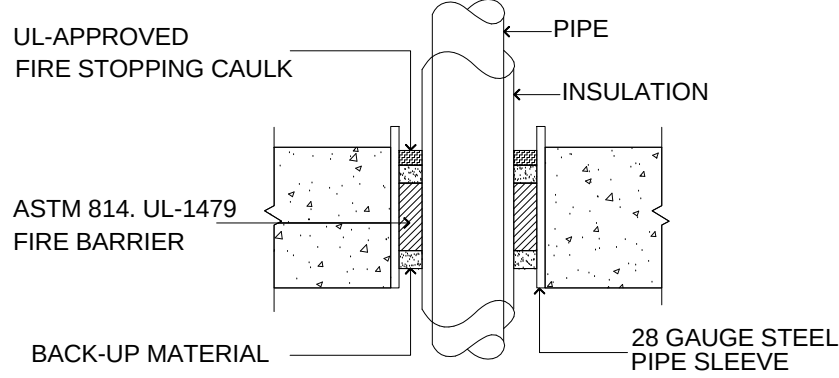
MINOR ADDITIONS, ALTREATIONS, RENOVATIONS AND REPAIRS TO EXISTING PLUMBING SYSTEMS SHALL BE PERMITTED IN THE SAME MANNER AND ARRANGEMENT AS IN THE EXISTING SYSTEM, PROVIDED THAT SUCH REPAIRS OR REPLACEMENT ARE NOT HAZARDOUS AND ARE NOT APPROVED.
5.

FINAL INSPECTION SHALL BE MADE AFTER THE BUILDING IS COMPLETE, ALL PLUMBING FIXTURES ARE IN PLACE AND PROPERLY CONNECTED, AND THE STRUCTURE IS READY FOR OCCUPANCY. THE HOLDER OF THE PLUMBING SHALL BE RESPONSIBLE FOR THE SCHEDULING OF SUCH INSPECTIONS.

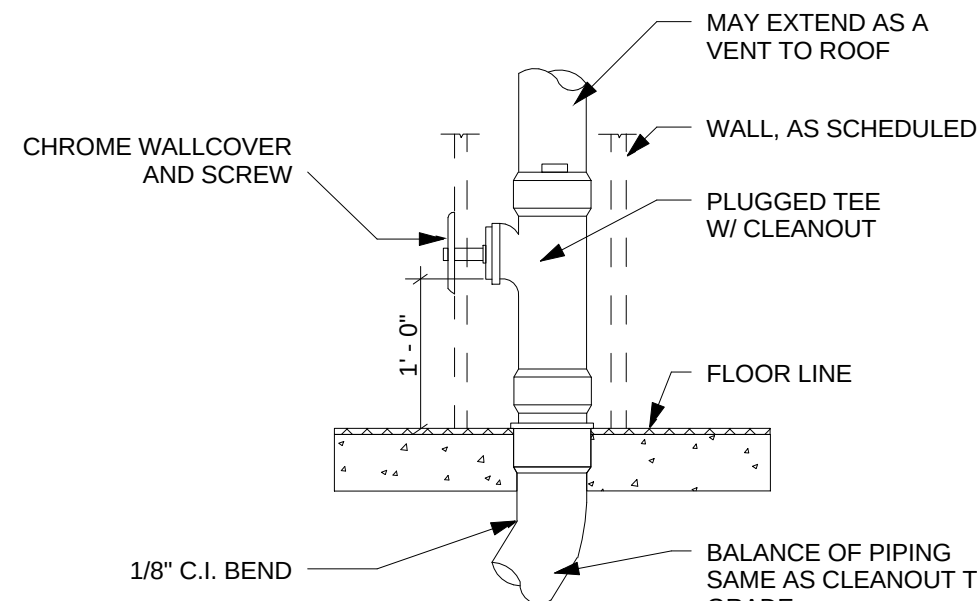


DETAIL OF VENT PIPE

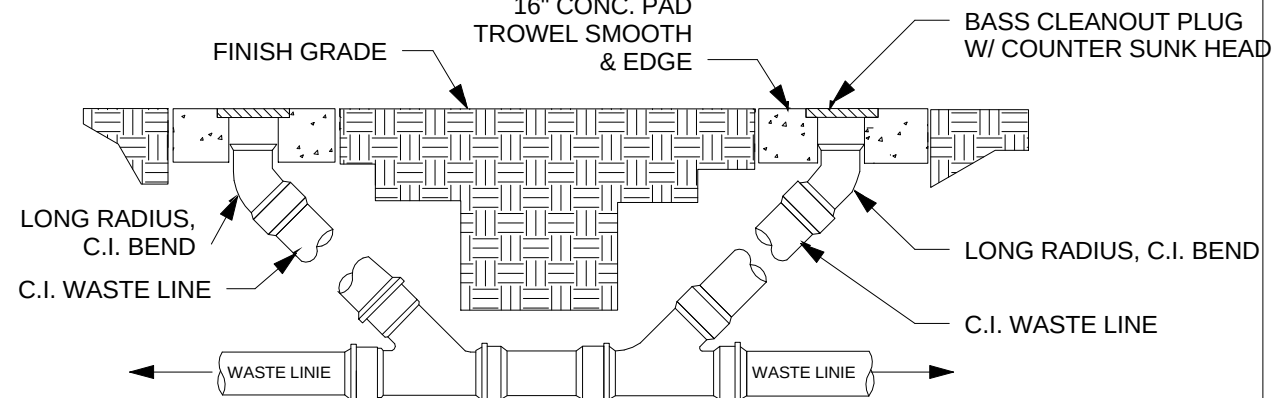
PASSING THRU ROOF
NOT TO SCALE



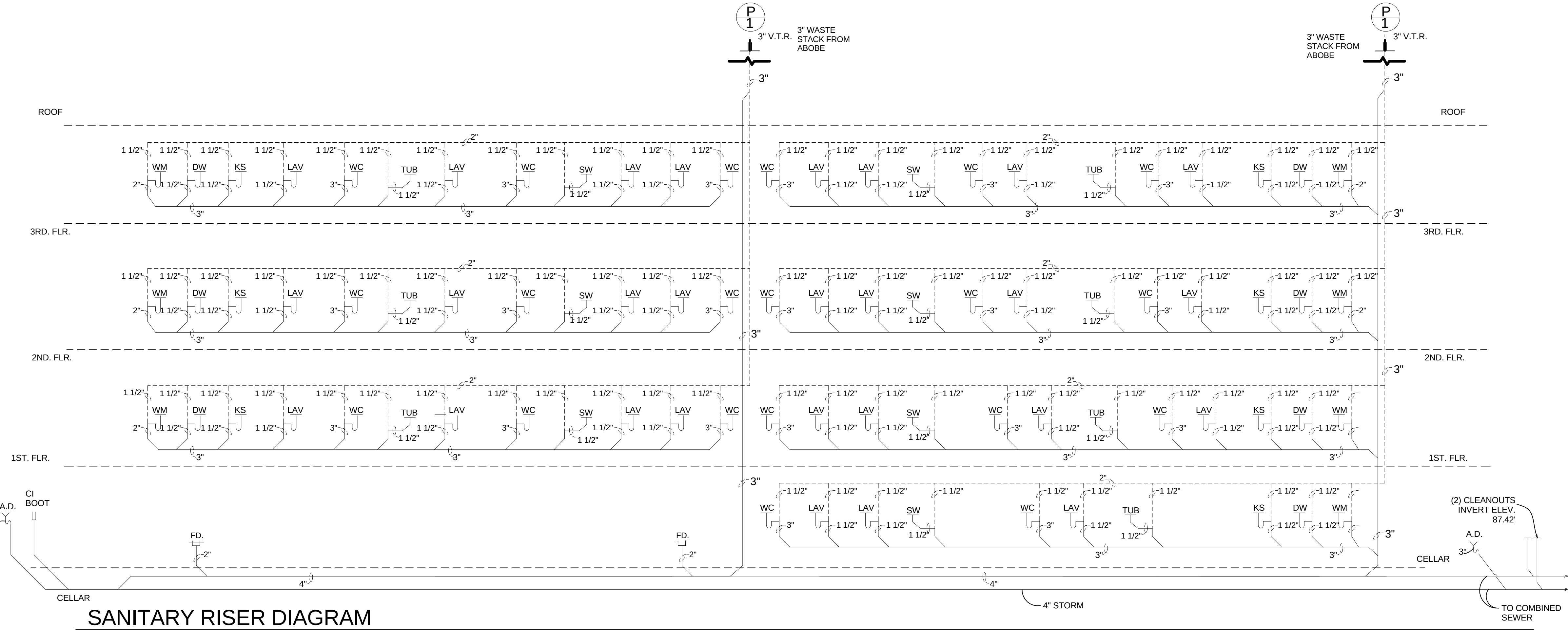
FLOOR PENETRATION DETAIL
NOT TO SCALE



WALL CLEANOUT DIAGRAM
NOT TO SCALE

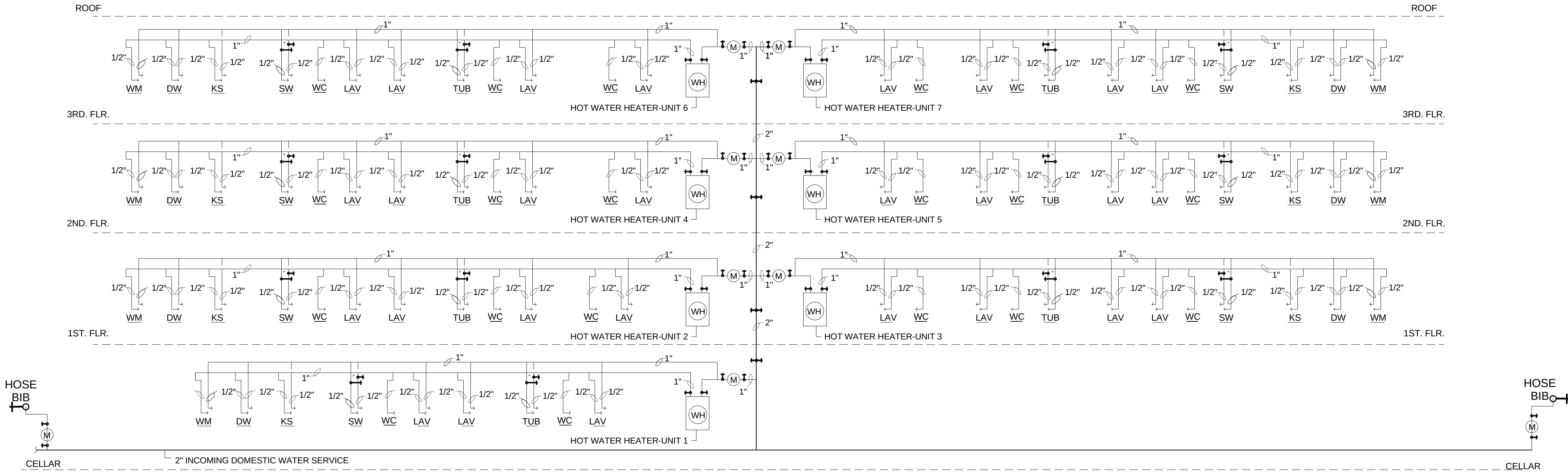


TWO-WAY CLEANOUT TO GRADE
NOT TO SCALE



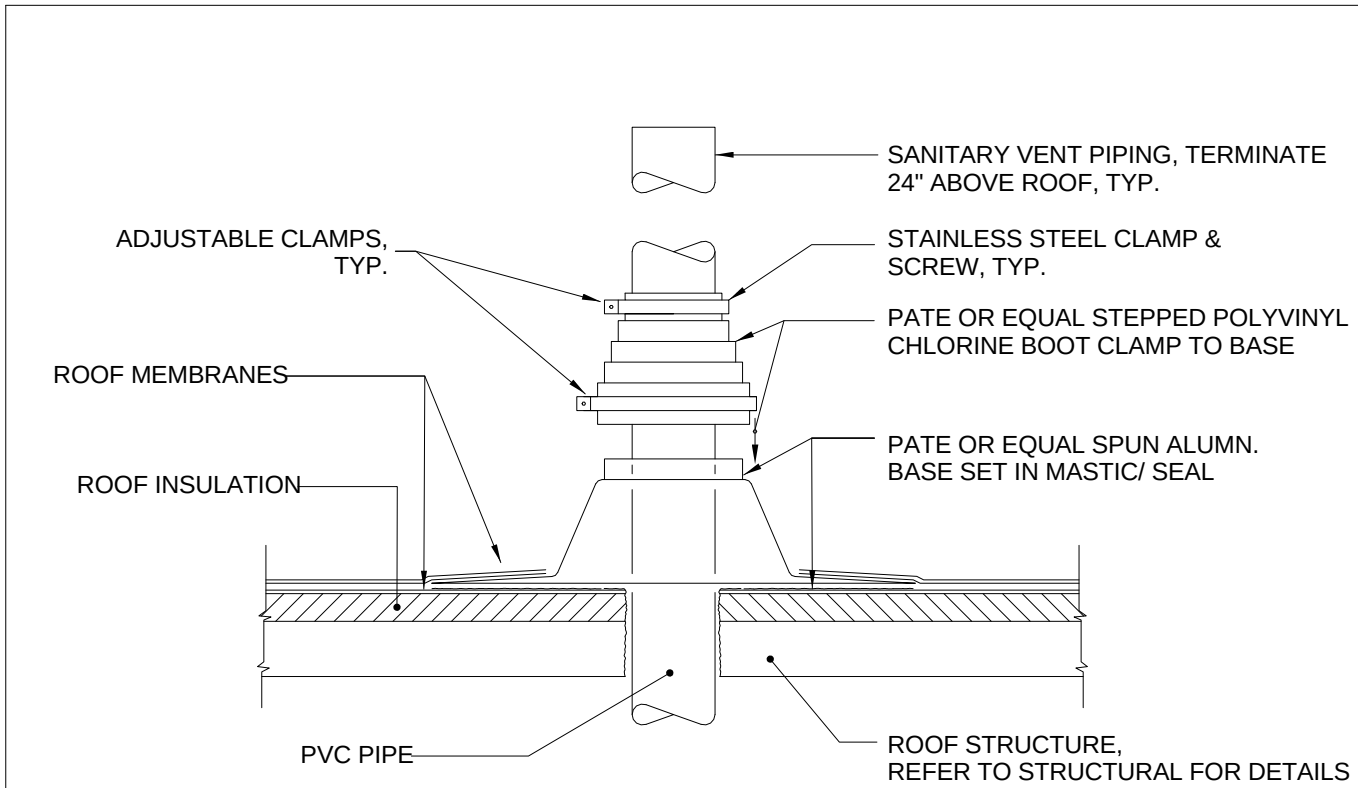
SANITARY RISER DIAGRAM

NOT TO SCALE



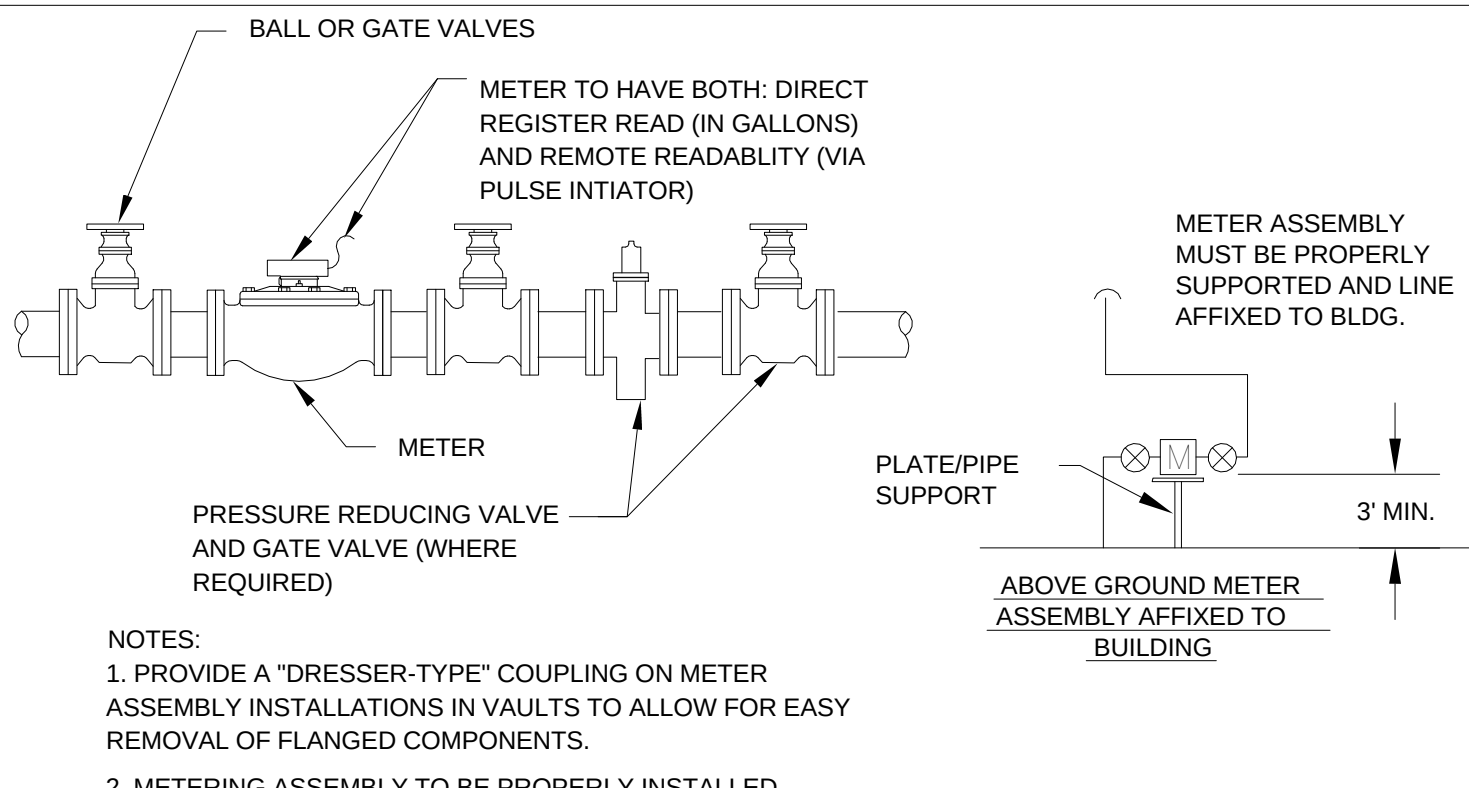
WATER SUPPLY RISER DIAGRAM

NOT TO SCALE



SANITARY VENT THRU DETAIL

NOT TO SCALE

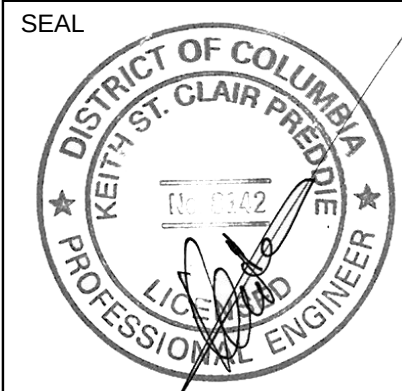


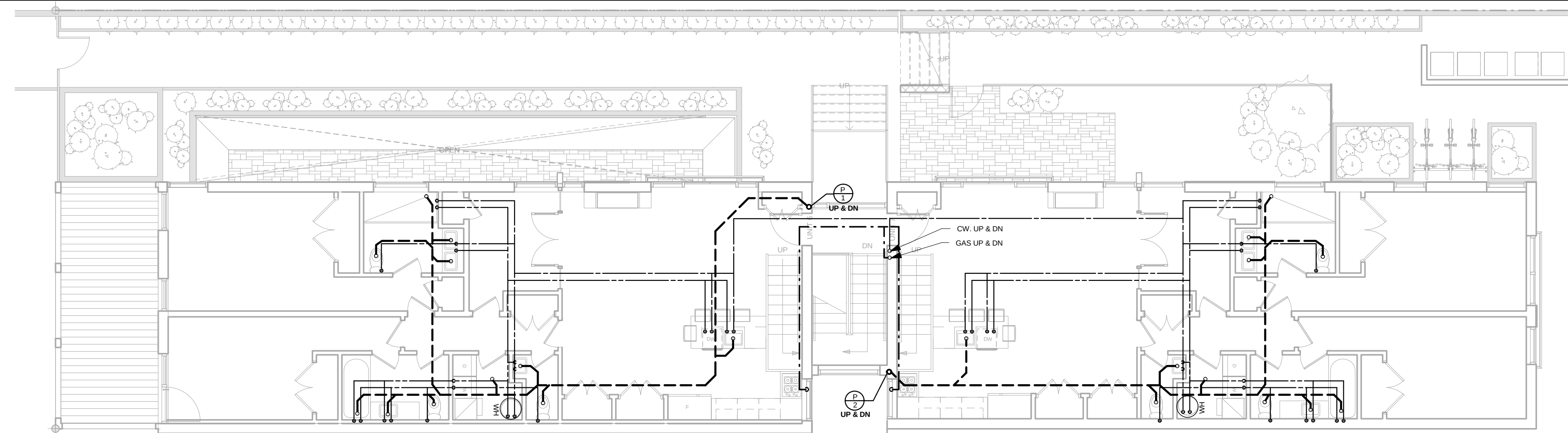
WATER METER CONFIGURATION

N.T.S. LESS THAN 2" - DISK OR DISPLACEMENT TYPE

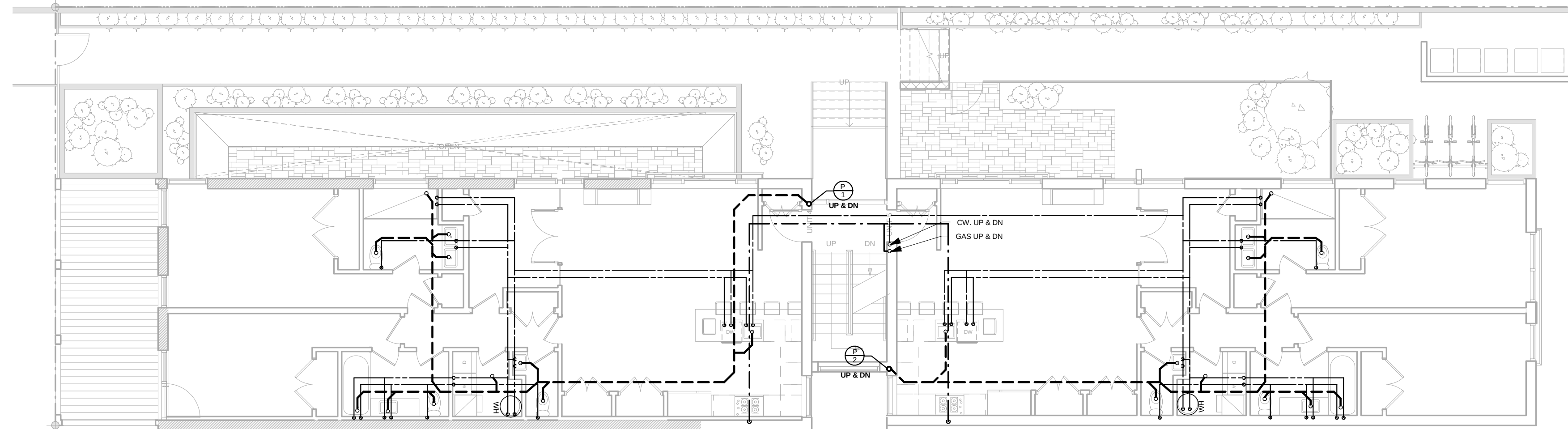
PLUMBING SYMBOLS					
AAV		AIR ADMITTANCE VALVE	HPIU.		HEAT PUMP INDOOR UNIT
V.T.R.		VENT THRU ROOF			
BT		BATH TUB			WATER SHUT OFF VALVE
LAV.		LAVATORY	CW		COLD WATER
WC		WATER CLOSET	HW		HOT WATER
WASH.		WASHER			

PLUMBING FIXTURES CONNECTION SCHEDULE					
FIXTURE	WASTE	VENT	C.W.	H.W.	REMARKS
WATER CLOSET	3"	2"	1/2"	NONE	FLOOR MOUNTED FLUSH TANK
LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	IN COUNTER TOP
K. SINK	1 1/2"	1 1/2"	1/2"	1/2"	IN COUNTER TOP
BATH TUB	1 1/2"	1 1/2"	1/2"	1/2"	PRESSURE BALANCE MIXING VALVE
DISH WASHER	1 1/2"	1 1/2"	1/2"	1/2"	FLOOR MOUNTED FLUSH TANK
WASHER MACHINE	2"	1 1/2"	1/2"	1/2"	FLOOR MOUNTED FLUSH TANK

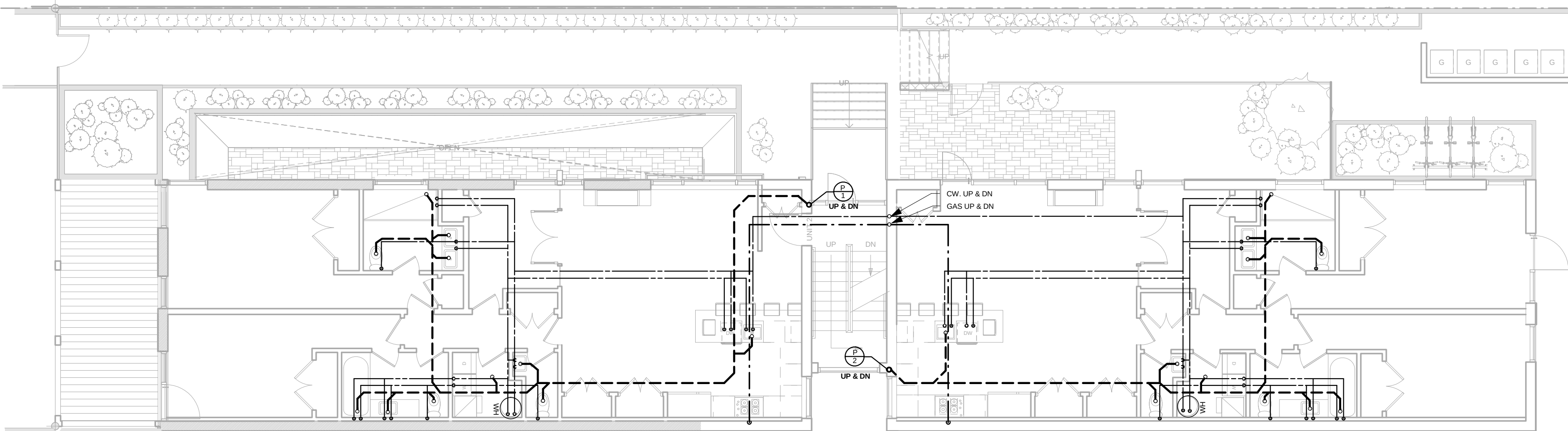




4 THIRD FLOOR PLUMBING PLAN - UNIT-6 & 7
P3 1/8" = 1' - 0"



3 SECOND FLOOR PLUMBING PLAN - UNIT-4 & 5
P3 1/8" = 1' - 0"



2 FIRST FLOOR PLUMBING PLAN - UNIT-2 & 3
P3 1/8" = 1' - 0"

