

ABBREVIATIONS

AC	AIR CONDITIONING UNIT	L	LONG (DIM)
ACH	AIR CHANGES PER HOUR	LBS	POUNDS
AD	ACCESS DOOR, AUTOMATIC DAMPER	LDB	LEAVING DRY BULB TEMPERATURE
AFF	ABOVE FINISHED FLOOR	LWB	LEAVING WET BULB TEMPERATURE
AHU	AIR HANDLING UNIT	LWT	LEAVING WATER TEMPERATURE
AP	ACCESS PANEL	MAX	MAXIMUM
APPROX	APPROXIMATE	MBH	1000 BTUH
ARCH	ARCHITECTURAL	MECH	MECHANICAL
AUTO	AUTOMATIC	MFR	MANUFACTURER
		MIN	MINIMUM
		MISC	MISCELLANEOUS
BD	BACKDRAFT DAMPER	NC	NORMALLY CLOSED
BHP	BRAKE HORSEPOWER	NIC	NOT IN CONTRACT
BL	FAN OR BLOWER	NO	NORMALLY OPEN, NUMBER
BLDG	BUILDING	NTS	NOT TO SCALE
BOD	BOTTOM OF DUCT		
BOP	BOTTOM OF PIPE		
BR	BOILER		
BTU	BRITISH THERMAL UNIT		
BTUH	THERMAL UNIT / HOUR		
BV	BALANCING VALVE, BALL VALVE	OAD	OUTSIDE AIR DAMPER
		OA	OUTSIDE AIR
		OC	ON CENTER OUTSIDE
		OD	DIAMETER
CAP	CAPACITY	PA	PIPE ANCHOR
CC	COOLING COIL	PD	RESSURE DROP
CD	CONDENSATE DRAIN	PLUMB	PLUMBING
CFM	CUBIC FEET PER MINUTE	POC	POINT OF CONNECTION
CF	CAPPED FOR FUTURE	POD	POINT OF DISCONNECTION
CLC	CEILING	PSI	POUNDS PER SQUARE INCH (GAUGE)
CLR	CLEAR	PSIG	POUNDS PER SQUARE INCH
CONC	CONCRETE		
CONN	CONNECTION	R	RADIUS; RISER
CONT	CONTINUOUS, CONTINUE	RA	REVERSE ACTING
CONTR	CONTRACTOR	RAD	RETURN AIR DAMPER
CU	COPPER, CONDENSING UNIT	REQD	REQUIRED
CV	CONSTANT VOLUME AIR TERMINAL UNIT	RF	RETURN FAN
Cv	FLOW COEFFICIENT	RM	ROOM
CW	COLD WATER	RPM	REVOLUTIONS PER MINUTE
		SA	SUPPLY AIR
DET	DETAIL	SAD	SEE ARCHITECTURAL DRAWING
DIAG	DIAGRAM	SD	SMOKE DETECTOR
DIM	DIMENSION	SF	SQUARE FEET, SUPPLY FAN
DN	DOWN	SIM	SIMILAR
DP	DIFFERENTIAL PRESSURE	SM	SHEET METAL
DPS	DIFFERENTIAL PRESSURE SWITCH	SPEC	SPECIFICATIONS
DSD	DUCT SMOKE DETECTOR	SP	STATIC PRESSURE
DWG	DRAWING	SQ	SQUARE
		SSTL/SS	STAINLESS STEEL
EA	EACH OR EXHAUST AIR	ST	SOUND TRAP
EAD	EXHAUST AIR DAMPER	STD	STANDARD
ECM	ELECTRONICALLY COMMUTATED MOTOR	STL	STEEL
EDB	ENTERING DRY BULB TEMPERATURE	STRUCT	STRUCTURAL
EF	EXHAUST FAN		
EL	ELEVATION	TC	TEMPERATURE CONTROL
ELEC	ELECTRICAL	TOP	TEMPERATURE CONTROL PANEL
ELEV	ELEVATION	TD	TRANSFER DUCT
EQPT	EQUIPMENT	TEMP	TEMPERATURE, TEMPORARY
EWB	ENTERING WET BULB TEMPERATURE	THRU	THROUGH
EW	ENTERING WATER TEMPERATURE	TON	12,000 BTUH OF COOLING
EXH	EXHAUST	TRYP	TYPICAL
EXP	EXPOSED	UON	UNLESS OTHERWISE NOTED
EXIST	EXISTING	UTR	UP THROUGH ROOF
		V	VENT
F	FAHRENHEIT	VAV	VARIABLE VOLUME AIR TERMINAL UNIT
FC	FLEXIBLE CONNECTION	VD	VOLUME DAMPER
FIN	FINISHED	VERT	VERTICAL
FLEX	FLEXIBLE	VFD	VARIABLE FREQUENCY DRIVE
FLR	FLOOR	VOL	VOLUME
FMCS	FACILITIES MONITORING AND CONTROL SYSTEM	W	WIDTH
FPM	FEET PER MINUTE	WG	WATER GAUGE
FSD	FIRE/SMOKE COMBINATION DAMPER	WT	WEIGHT
FT (')	FOOT OR FEET	W/W	WITH
		W/O	WITHOUT
GA	GAGE	(E)	EXISTING
GALV	GALVANIZED	(F)	FUTURE
GPM	GALLONS PER MINUTE	(N)	NEW
GSM	GALVANIZED SHEET METAL	@	AT
GYP BD	GYPSONUM BOARD	#	CENTER LINE
		#	NUMBER
		&	AND
H, HT	HEIGHT	Ø	DIAMETER, PHASE
HC	HEATING COIL	2P	2 POSITION
HD	HEAD (FEET OF WATER)	2W	2 WAY
HHWR	HEATING HOT WATER RETURN	3W	3 WAY
HHWP	HEATING HOT WATER PUMP	°	DEGREE FAHRENHEIT
HHWD	HEATING HOT WATER SUPPLY	(E)	EXISTING
HP	HORSEPOWER	(F)	FUTURE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	(N)	NEW
HZ	HERTZ (CYCLES PER SEC)	@	AT
		#	CENTER LINE
		#	NUMBER
		&	AND
ID	INSIDE DIAMETER	2P	2 POSITION
IN (")	INCH OR INCHES	2W	2 WAY
INS	INSULATION	3W	3 WAY
		°	DEGREE FAHRENHEIT

DIFFUSER & REGISTER SCHEDULE

DIFFUSER TYPE AND DESCRIPTION	ROOM TYPE	CEILING TYPE	REMARKS
B PERFORATED CEILING DIFFUSER	OFFICES WAITING CONFERENCE RMS HALLWAYS	LAY-IN, GYPBOARD	1. PATTERN CONTROLLERS FOR SUPPLY, NONE FOR RETURN/EXHAUST. 2. 24x24 MODULE UON.
C LOUVERED FACE DIFFUSER	STORAGE RMS EQUIPMENT RMS ELECT. RMS. DATA	GYPBOARD, NO CEILING	1. SUPPLY ONLY. 2. SEE PLANS FOR NO. AND DIRECTIONS OF THROW.
D HORIZONTAL LOWER BLADE REGISTER OR GRILLE	STORAGE RMS EQUIPMENT RMS HALLWAYS RECEPTION TOILET ROOMS HAC	GYPBOARD, SIDEWALL, NO CEILING	1. 3/4" BLADE SPACING. 2. OPPOSED BLADE DAMPER. 3. DOUBLE DEFLECTION SUPPLY. 4. SINGLE DEFLECTION RETURN, EXHAUST, OR TRANSFER.
F PERFORATED CEILING DIFFUSER WITH FIRE/SMOKE DAMPER	CLEAN LINEN CLEAN STORAGE SOILED UTILITY	1-HR RATED CEILING	1. SUPPLY, RETURN, AND EXHAUST.
G ARCHITECTURAL LINEAR SLOT DIFFUSER	DINING RECEPTION	WOOD PANEL, GYPBOARD	1. TITUS FLOWBAR WITH PLENUM, HIGH THROW UON. 2. SEE PLANS FOR ACTIVE DIFFUSER LENGTH, NO. OF SLOTS AND SLOT WIDTH. 3. BLANK-OFF INACTIVE PORTIONS OF DIFFUSERS.

PIPING LEGEND

— HHWS —	HEATING HOT WATER SUPPLY	— [ ] —	CHECK VALVE
— HHWR —	HEATING HOT WATER RETURN	— [ ] —	BALANCING VALVE
— CW —	COLD WATER	— [ ] —	GLOBE VALVE
— G —	NATURAL GAS	— [ ] —	BALL VALVE
— / —	SUPPLY / RETURN PIPING	— [ ] —	STRAINER WITH BLOWDOWN VALVE
— V —	VENT	— [ ] —	AUTOMATIC CONTROL VALVE - MODULATING 2 WAY
— [ ] —	SINGLE LINE REPRESENTATION OF PIPING CONNECTION TO EQUIPMENT	— [ ] —	AUTOMATIC CONTROL VALVE - MODULATING 3 WAY
— [ ] —	ARROW INDICATES DIRECTION OF FLOW IN PIPE. LEADER INDICATES DOWNWARD SLOPE.	— [ ] —	RELIEF VALVE
— [ ] —	PIPE SIZE CHANGE	— [ ] —	TEST FITTING
— [ ] —	PIPE INTO PLANE	— [ ] —	PRESSURE GAUGE WITH ISOLATION VALVE
— [ ] —	PIPE OUT OF PLANE	— [ ] —	FLANGE
— [ ] —	PIPE DIRECTION CHANGE	— [ ] —	UNION
— [ ] —	PIPE BRANCH - OUT OF PLANE	— [ ] —	PLUG, CAP OR BLIND FLANGE
— [ ] —	PIPE BRANCH - IN TO PLANE	— [ ] —	PIPE ANCHOR
— [ ] —	PIPE BRANCH - IN PLANE, INTO PLANE, OR OUT OF PLANE CONNECTION AS REQUIRED.	— [ ] —	DRAIN WITH BALL VALVE AND HOSE BIBB WITH REMOVABLE CAP.
— [ ] —	CONCENTRIC/ECCENTRIC REDUCER/INCREASER	— [ ] —	AIR VENT - MANUAL, AUTO OR THERMOSTATIC IF INDICATED
— [ ] —	GATE VALVE	— [ ] —	PRESSURE GAUGE ISOLATION VALVE

DESIGN CRITERIA

ITEMS	SUMMER	WINTER
OUTDOOR AIR TEMPERATURE: SOLAR/TRANSMISSION CALCULATIONS	93°F DB/67°F WB	35°F DB
PATIENT ROOMS	93°F DB/67°F WB	35°F DB
OFFICES	70°F WB	
COOLING TOWER		
INDOOR AIR CONDITIONS:		
BATHROOM & TOILET ROOMS	78°F (NO RH)	72°F (NO RH)
DINING	78°F (50% RH)	72°F (30% RH)
ELECTRIC EQUIPMENT ROOMS	78°F (50% RH)	50°F (NO RH)
EXAMINATION ROOMS	78°F (50% RH)	78°F (30% RH)
LOUNGES/LOCKER ROOMS	78°F (50% RH)	72°F (30% RH)
OFFICE	78°F (NO RH)	72°F (NO RH)
BEDROOMS	78°F (50% RH)	78°F (30% RH)
MEDS	72°F (50% RH)	72°F (30% RH)
EQUIPMENT LOAD ALLOWANCE: OFFICES & PATIENT ROOMS	1.5 WATT/SF	
TELECOM OR EQUIPMENT ROOMS	ACTUAL LOAD	
AIR CHANGE RATES:		
BEDROOMS	MINIMUM 6 OR 30 CFM/PERSON	
TOILETS	15 EXHAUST	
OFFICES	6 OR 20 CFM/PERSON	
CORRIDORS	4	
MINIMUM OUTSIDE AIR:		
BEDROOMS	30 CFM/PERSON	
OFFICES	20 CFM/PERSON	
LOUNGE/WAITING	15 CFM/PERSON	
SPACE PRESSURIZATION:		
BEDROOMS	NEGATIVE TO CORRIDOR	
TOILET ROOMS	NEGATIVE TO CORRIDOR	
OFFICES	POSITIVE TO CORRIDOR	
BUILDING	POSITIVE TO OUTDOORS	
AIR FILTRATION:		
BEDROOMS	30% PRE-FILTER, 85% AFTER FILTER	
OFFICES	30% PRE-FILTER, 85% AFTER FILTER	
PHARMACY	30% PRE-FILTER, 85% AFTER FILTER	
HVAC SYSTEMS		
BEDROOMS & SUPPORT SPACES:	ECONOMIZER VARIABLE VOLUME WITH TERMINAL REHEAT.	
OFFICES:	ECONOMIZER VARIABLE VOLUME WITH TERMINAL REHEAT.	

VAV AND CV AIR TERMINAL UNIT W/REHEAT COIL SCHEDULE

TAG	INLET SIZE (")	CFM SETTING		MAX. S.P.	M.P.	REHEAT COIL (EAT=53°F, EWT=180°F)		MIN. CAPACITY	LWT	GPM	WATER P.D. FT.	NOTES AND REMARKS
		MAX.	MIN.			W.G.	MBH					
520-VAV-A1	12	1330	600	0.18	19.4	85	149.5	1.3	0.4	(3)	A-170	
520-VAV-A12	5	120	120	0.02	5.2	93	146.0	0.3	0.1	(2)	CV A-111	
520-VAV-A25	5	210	165	0.06	5.7	85	142.7	0.3	0.1	(2)	A-160	
520-VAV-A34	8	400	400	0.08	13.8	85	166.8	2.1	2.7	(2)	CV A-143	
520-VAV-A35	5	280	160	0.10	5.7	86	143.0	0.3	0.1	(2)	A-145	
520-VAV-A37	5	200	150	0.05	5.6	87	143.7	0.3	0.1	(2)	A-148	
520-VAV-A1E	10	900	230	0.10	-	-	-	-	-	(4)	A-170	
520-VAV-A2E	6	410	410	0.17	-	-	-	-	-	(4)	CV A-176	

REMARKS: 1. FOR REHEAT COILS SCHEDULED AT <0.5 GPM, BALANCE TO 0.5 GPM.  
2. EXISTING TERMINAL. REBALANCE BRANCH AIR FLOWS TO QUANTITIES NOTED.  
3. NEW SUPPLY VAV TERMINAL WITH REHEAT COIL, REPLACES EXISTING.  
4. NEW EXHAUST VAV TERMINAL.

EXHAUST FAN SCHEDULE

FAN TAG	MFR/MODEL	DESCRIPTION	NOTES
EF-A4	GREENHECK G-143-VG	1,300 CFM AT 1.0" S.P., 1287 RPM, 0.41 BHP, 14" BI WHEEL, 3/4 HP, 15V/60HZ/1Ø MOTOR AT 1550 RPM	DIRECT-DRIVE ECM MOTOR, CONTROLLABLE VIA THE FMCS WITH 0-10 VDC INPUT SIGNAL CURB ADAPTER CAP. PRE-FABRICATED BY MFR, OR CONTRACTOR-FABRICATED GRAVITY BACKDRAFT DAMPER

COMBINATION FIRE/SMOKE DAMPER SCHEDULE

DAMPER NO.	DUCT SIZE IN	DUCT TYPE	DESIGN CFM	AHU SYSTEM	OPERATOR	NOTES
FSD-A2	6"	MEDIUM PRESSURE	55	AC-A	DIGITAL	NEW
FSD-A3	18x14	MEDIUM PRESSURE	2130	AC-A	DIGITAL	NEW
FSD-A4	24x12	MEDIUM PRESSURE	1680	AC-A	DIGITAL	RELOCATE (E)
FSD-A6	16x12	MEDIUM PRESSURE	1100	AC-A	DIGITAL	NEW
FSD-A9	8"	MEDIUM PRESSURE	190	AC-A	DIGITAL	RELOCATE (E)
FSD-A11	6"	MEDIUM PRESSURE	100	AC-A	DIGITAL	RELOCATE (E)

DUCT LEGEND

SINGLE LINE	DOUBLE LINE	EXISTING TO REMAIN
EXISTING TO BE REMOVED (ON DEMO DRAWING), OR NEW WORK (ON NEW WORK DRAWING)		
RECTANGULAR DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES		
RECTANGULAR OR SQUARE		SUPPLY AIR DUCT - TURNING UP OR TOWARD
		SUPPLY AIR DUCT - TURNING DOWN OR AWAY
		EXHAUST AIR DUCT - TURNING UP OR TOWARD
		EXHAUST AIR DUCT - TURNING DOWN OR AWAY
		SUPPLY RETURN EXHAUST } RECTANGULAR DUCT SECTION
		ROUND DUCT WITH NET INSIDE DIMENSION SHOWN IN INCHES
		ROUND AIR DUCT - TURNING UP OR TOWARD
		ROUND AIR DUCT - TURNING DOWN OR AWAY
		ROUND DUCT SECTION
		INCLINED RISE } WITH RESPECT TO AIR FLOW, 15° NOMINAL INCLINE WITH RADIUS TURNS = DEPTH OF DUCT.
		INCLINED DROP
		R/W = 1. ROUND DUCT SIMILAR TO RECTANGULAR
		TURNING VANES - AIR FOIL TYPE.
		RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND DUCT TRANSFORMATION. MAXIMUM 15° INCLUDED ANGLE EXCEPT WHERE SHOWN OTHERWISE.
		RECTANGULAR TO ROUND DUCT TRANSFORMATION
		BRANCH DUCT SPLIT WITH 6 INCH WIDTH AND MINIMUM R = WIDTH OF BRANCH DUCT DOWNSTREAM. ELBOW TURNING VANE OPTIONAL.
		CONICAL TAKE-OFF
		RECTANGULAR TAKE-OFF WITH TRANSITION TO ROUND. TAKE-OFF AREA MIN. 150% OF ROUND DUCT SIZE.
		TAP ENTRY AREA EQUALS 150% OF BRANCH AREA
		FLARED TAP AT RISERS.
		DUCT CHANGE IN PLANE. PLAN AND ELEVATION. USE 45° RADIUS ELBOW WHERE PRACTICAL. ROUND DUCT SIMILAR.
		DIFFUSER DROP. PLAN AND ELEVATION
		DIFFUSER DROP. PLAN AND ELEVATION
		FLEXIBLE DUCT CONNECTION
		FLEXIBLE DUCT
		SINGLE BLADE OR MULTIBLADE VOLUME DAMPER (BLANK OR VD) R=REMOTE OPERATOR
		ACTUATED DAMPER IN DUCT
		BACKDRAFT DAMPER
		FIRE/SMOKE COMBINATION DAMPER IN DUCT
		ACCESS PANEL REQUIRED
		ACCESS PANEL
		ACCESS DOOR IN DUCT OR PLENUM
		VAV OR CV TERMINAL W/ REHEAT COIL & COIL ACCESS PANEL (ACCESS DOOR NOT SHOWN ON PLANS)
		CEILING SUPPLY DIFFUSER
		CEILING RETURN REGISTER
		CEILING EXHAUST REGISTER
		SIDEWALL SUPPLY REGISTER
		SIDEWALL EXHAUST/RETURN REGISTER
		CEILING SUPPLY DIFFUSER WITH FLEXIBLE DUCT
		LINEAR SLOT DIFFUSER WITH FLEXIBLE DUCT
		LINEAR SLOT DIFFUSER WITH BLANKED-OFF INACTIVE ENDS

TOP FIGURE INDICATES CFM AND LETTER DESIGNATION OF INLET / OUTLET TYPE. BOTTOM FIGURES INDICATE NECK SIZE AND NUMBER OF THROWS ON SUPPLY DIFFUSER. ARROWS ON PLAN DESIGNATE DIRECTIONS OF THROW, OR 4-WAY THROW IF NOT SHOWN. DUCT SIZE IS FULL SIZE OF DIFFUSER/REGISTER CONNECTION UNLESS NOTED OTHERWISE. SEE SPEC AND DIFFUSER SCHEDULE ON MH1.02.

TOP FIGURE INDICATES CFM. BOTTOM FIGURES INDICATE ACTIVE SLOT LENGTH, NUMBER AND WIDTH OF SLOT(S). LETTER DESIGNATES SPECIFIED TYPE. SEE SPEC.

GENERAL NOTES

- COORDINATE WITH ELECTRICAL LIGHT AND POWER CONDUIT RUNS, LIGHT FIXTURES, SPRINKLER PIPING, PLUMBING PIPING, AND STRUCTURE.
- FLEXIBLE DUCTS AT ROUND NECK DIFFUSERS ARE SAME AS DIFFUSER NECK SIZE UNLESS OTHERWISE INDICATED. PROVIDE REQUIRED DUCT TRANSITIONS.
- RECTANGULAR DUCTS AT RECTANGULAR NECK DIFFUSERS ARE SAME AS DIFFUSER NECK SIZE UNLESS OTHERWISE INDICATED. PROVIDE REQUIRED DUCT TRANSITIONS. DUCTS AT CONSTANT OR VARIABLE VOLUME AIR TERMINAL UNIT INLETS ARE SAME SIZE
- AIR TERMINAL INLETS, UNLESS OTHERWISE INDICATED. PROVIDE REQUIRED INLET AND OUTLET TRANSITIONS.
- SEE CONSTANT OR VARIABLE VOLUME AIR TERMINAL UNIT SCHEDULE FOR SIZES OF TERMINALS.
- HHW PIPING RUNOUTS TO REHEAT COILS ARE 3/4" UNLESS SHOWN OTHERWISE.
- SEE ARCHITECTURAL DRAWINGS FOR COORDINATING LOCATIONS OF CEILING SUPPLY, RETURN, AND EXHAUST FIXTURES.
- DUCTS TO AND FROM EQUIPMENT ARE SAME SIZE AS CONNECTION, UNLESS OTHERWISE NOTED.
- ALL DUCT AND SPACE SMOKE DETECTORS ARE FURNISHED AND WIRED BY ELECTRICAL. MECHANICAL CONTRACTOR INSTALLS DUCT SMOKE DETECTORS AT LOCATIONS SHOWN ON PLANS.
- PROVIDE ALL HORIZONTAL AND VERTICAL DUCTWORK AND PIPING OFFSETS AS REQUIRED TO CLEAR ALL CEILING AND DUCT ACCESS DOORS.
- PROVIDE FIRE-SMOKE DAMPERS IN GALVANIZED STEEL DUCT SYSTEMS AT EACH PENETRATION OF FIRE RATED PARTITIONS, INCLUDING BUT NOT LIMITED TO CORRIDORS AND AREA SEPARATIONS. INCLUDE ACCESS PANELS. PROVIDE WHETHER SHOWN OR NOT ON THE DRAWINGS EXCEPT AT ONE HOUR RATED CORRIDOR PARTITIONS WHERE THE DUCTS HAVE NO OPENINGS TO THE CORRIDOR.
- PROVIDE A SPACE TEMPERATURE SENSOR FOR EACH VARIABLE OR CONSTANT VOLUME SUPPLY AIR VAV TERMINAL OR REHEAT COIL WHETHER SHOWN OR NOT, UNLESS MULTIPLE TERMINALS ARE SPECIFICALLY SHOWN TO BE CONTROLLED BY A SINGLE TEMPERATURE SENSOR OR DUCT MOUNTED SENSOR.



Department of Veterans Affairs  
3801 Miranda Ave., Palo Alto CA

Project Title  
**520 A WING RENOVATE FOR F.O.R PROGRAM**

Location  
**VA MED CTR, PALO ALTO, CA**

Project Number **640-12-110P** Building Number **520**

**ARCHITECTS:**

The Design Partnership

Architects and Planners

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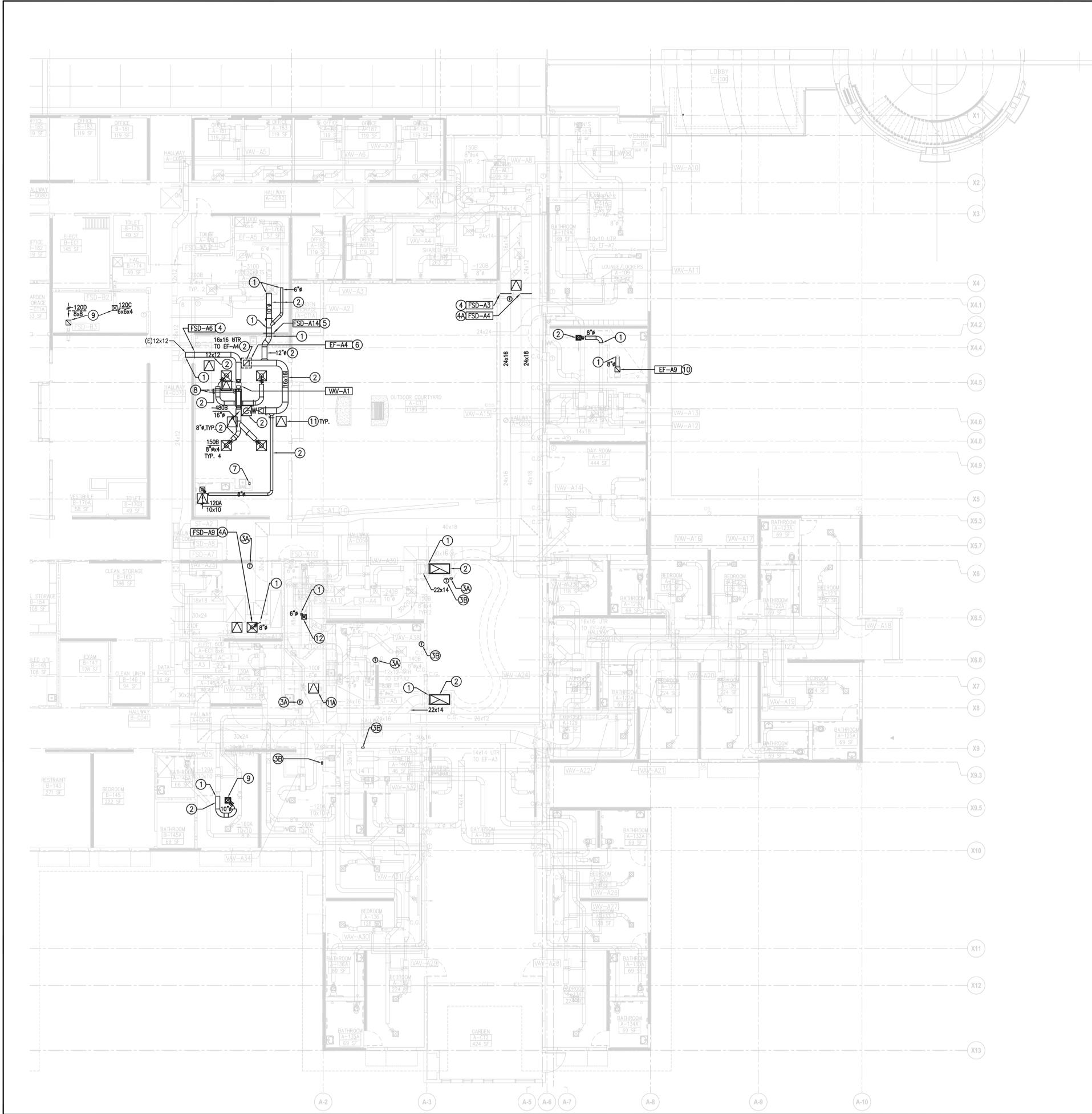
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three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
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**GENERAL NOTES:**

- A. EXISTING WORK SHOWN IS FROM ORIGINAL DESIGN DRAWINGS. VERIFY EXISTING CONDITIONS IN THE FIELD.
- B. EXISTING WORK TO REMAIN IS SHOWN SCREENED. REMOVE EXISTING WORK SHOWN DARK, INCLUDING ALL SUPPORTS.
- C. PATCH AND REPAIR ALL CEILINGS AND WALLS WHERE AFFECTED BY REMOVAL OF DUCTS AND ACCESSORIES.
- D. ALL DEMOLITION WORK OF FRAMING AND FINISHES THAT WILL BE REQUIRED TO REMOVE AND INSTALL DUCTWORK AND ACCESSORIES IS NOT SHOWN HERE. COORDINATE EXTENT AS REQUIRED IN THE FIELD.

**SHEET NOTES:**

- 1. POINT OF DISCONNECT OF DEMO WORK FROM EXISTING TO REMAIN.
- 2. EXISTING WORK TO BE REMOVED.
- 3. REMOVE EXISTING ROOM TEMPERATURE OR PRESSURE CONTROL/MONITOR DEVICE.
  - A. REINSTALL IN NEW LOCATION PER MH 2.11.
  - B. TURN OVER TO OWNER AFTER REMOVAL.
- 4. REMOVE EXISTING FIRE/SMOKE DAMPER IN WALL OR AT CEILING DIFFUSER NECK. PATCH/REPAIR EXISTING DUCT AND/OR CEILING WHERE FSD WAS REMOVED. ASSOCIATED DUCT ACCESS PANEL TO REMAIN.
  - A. REINSTALL IN NEW LOCATION PER MH 2.11.
- 5. EXISTING WORK TO REMAIN.
- 6. REMOVE EXISTING ROOF EXHAUST FAN AND CONNECTING DUCTWORK THROUGH ROOF. ROOF CURB AND CONDUIT FOR WIRING TO REMAIN FOR RE-USE.
- 7. REMOVE EXISTING CO2 SENSOR AND REINSTALL AT NEW LOCATION PER MH 2.11.
- 8. DISCONNECT HHWS/R BRANCH PIPING DOWNSTREAM OF SHUT-OFF VALVE TO COIL AND UPSTREAM OF CONTROL VALVE.
- 9. DISCONNECT SUPPLY OR EXHAUST DIFFUSER/GRILLE FROM CONNECTING DUCT AND REINSTALL AT NEW CEILING/LOCATION PER MH 2.11. RETAIN DUCT TRANSITION FITTING IF PRESENT.
- 10. REMOVE EXISTING CEILING EXHAUST FAN. DISCONNECT EXHAUST DUCT AT ELBOW CONNECTING TO RISER UP TO ROOF. FAN TO BE REINSTALLED AT NEW LOCATION PER MH 2.11.
- 11. REMOVE EXISTING ARCHITECTURAL CEILING ACCESS PANEL. COORDINATE PATCH AND REPAIR OF CEILING WITH ARCHITECT AS NEEDED.
  - A. REINSTALL AT NEW LOCATION PER MH 2.11.
- 12. IF NEEDED TO ACCOMMODATE WALL RELOCATION, DISCONNECT SUPPLY OR EXHAUST DIFFUSER/GRILLE FROM CONNECTING DUCT AND REINSTALL AT NEW CEILING/LOCATION PER MH 2.11. RETAIN DUCT TRANSITION FITTING IF PRESENT.



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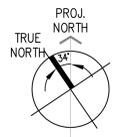


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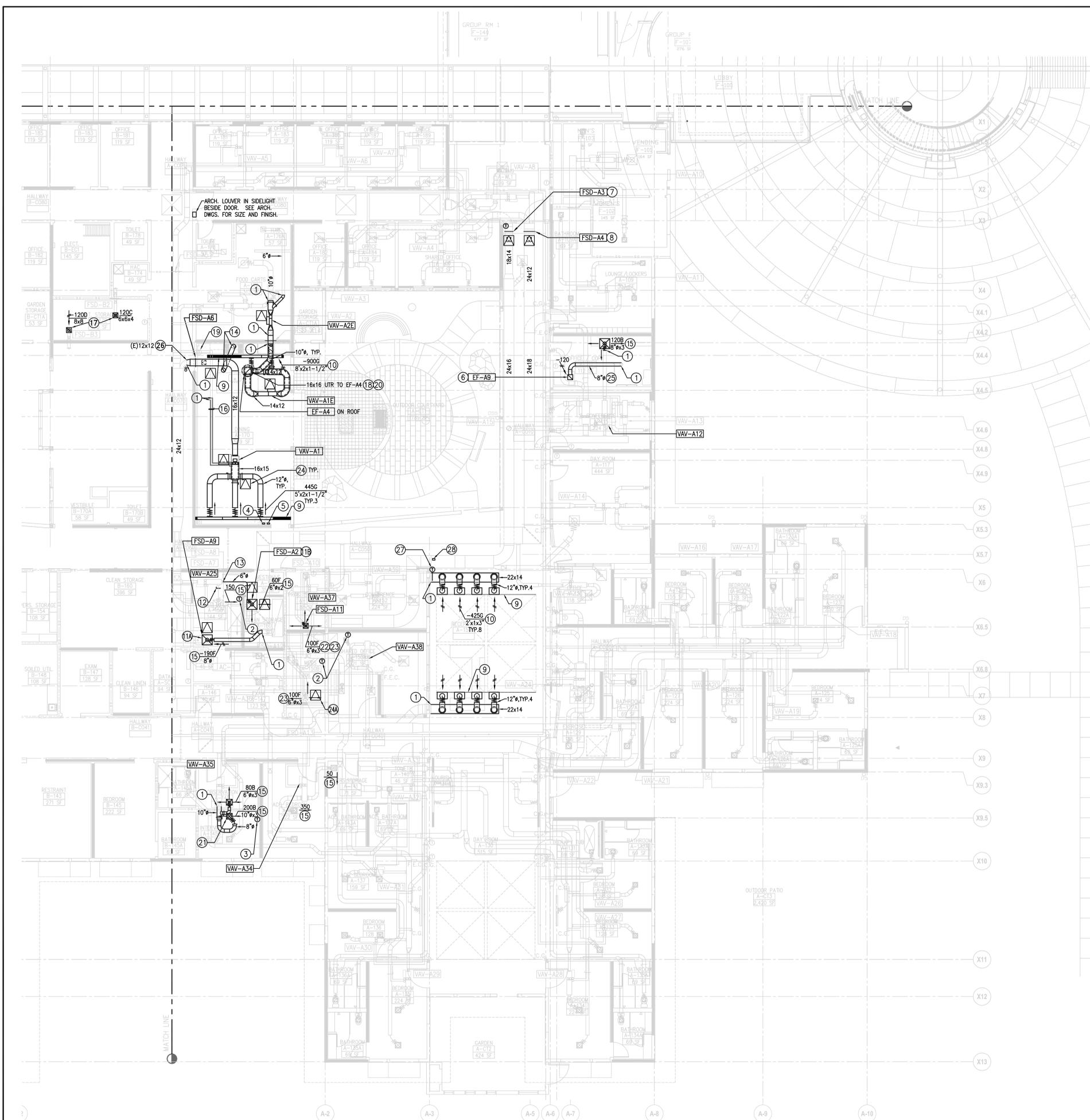
Revisions:	Date

100% CONSTRUCTION DOCUMENTS 06-15-2012  
Approved: Project Director

**Drawing Title**  
PARTIAL FLOOR PLAN NURSING UNIT A DEMO WORK  
**Scale:** 1/8"=1'-0"  
**Date:** JUNE 15, 2012  
**Checked:** SL **Drawn:** EYO **Dwg. of:** -



three inches = one foot  
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- B. EXISTING WORK IS SHOWN SCREENED AND NEW WORK IS SHOWN DARK. INCLUDE ALL SUPPORTS.
- C. PATCH AND REPAIR ALL CEILINGS AND WALLS WHERE REMOVED TO INSTALL NEW DUCTS, PIPES, ACCESSORIES, SUPPORTS, ETC. AND OTHER RELATED NEW WORK.
- D. EXISTING TEMPERATURE CONTROL IS SIEMENS APOCEE DIRECT DIGITAL CONTROL SYSTEM. ALL TEMPERATURE CONTROL RELATED WORK SHALL BE PERFORMED BY SIEMENS. TEST ALL MODIFIED, EXISTING, AND NEW CONTROLS.

**SHEET NOTES:**

- 1. POINT OF CONNECTION FOR NEW WORK TO EXISTING.
- 2. RELOCATED THERMOSTAT FOR VAV WITH REHEAT TERMINAL CONTROL. EXTEND AND/OR PROVIDE CONTROL WIRING TO NEW LOCATION AS NEEDED.
- 3. NEW THERMOSTAT FOR VAV WITH REHEAT TERMINAL CONTROL. DISABLE (E) CONTROL BY TEMPERATURE SENSOR IN RETURN AIR DUCT ABOVE RA GRILLE.
- 4. RELOCATE EXISTING CO2 SENSOR TO NEW LOCATION SHOWN. MOUNT AT 6'-0" AFF.
- 5. ROOM STATIC PRESSURE SENSOR FOR EXHAUST FAN EF-A4 AND VAV TERMINAL VAV-A1E CONTROL.
- 6. REINSTALL EXISTING CEILING EXHAUST FAN EF-A9 AT NEW LOCATION. DEACTIVATE CONTROL BY LIGHT SWITCH AND INTERLOCK EXHAUST FAN OPERATION WITH AC-A VIA THE DDC SYSTEM.
- 7. INSTALL NEW FIRE/SMOKE DAMPER WITH CONTROLS IN EXISTING DUCT, AND INSTALL NEW DUCT ACCESS PANEL. SEE DETAIL 6/MH6.11 AND DAMPER SCHEDULE. COORDINATE LOCATION WITH NEW FIRE-RATED SOFFIT AND CEILING ACCESS PANEL. SEE ARCHITECTURAL DRAWINGS.
- 8. RELOCATE EXISTING FIRE/SMOKE DAMPER WITH CONTROLS TO NEW LOCATION IN EXISTING DUCT, AND INSTALL NEW DUCT ACCESS PANEL. COORDINATE LOCATION WITH NEW FIRE-RATED SOFFIT AND CEILING ACCESS PANEL. SEE ARCHITECTURAL DRAWINGS.
- 9. CONTINUOUS CEILING OR SIDEWALL LINEAR SLOT DIFFUSER (TYPE G). BLANK-OFF UNUSED PORTIONS OF SLOT DIFFUSER.
- 10. LINEAR SLOT DIFFUSER WITH INLET DAMPER OPERABLE THROUGH DIFFUSER FACE.
- 11. INSTALL TYPE F CEILING DIFFUSER OR REGISTER WITH FIRE/SMOKE DAMPER IN NECK. SEE DETAIL 2/MH6.12. COORDINATE CEILING ACCESS PANEL WITH ARCHITECT. A. EXISTING DIFFUSER W/FSD RELOCATED TO NEW LOCATION. B. NEW DIFFUSER W/FSD.
- 12. INSTALL NEW VOLUME DAMPER IN EXISTING 10" DUCT.
- 13. CONNECT NEW BRANCH DUCT TO VAV PLENUM OUTLET.
- 14. NEW 12" KITCHEN HOOD EXHAUST DUCT. CONSTRUCT DUCT PER MEDIUM PRESSURE CLASS. OFFSET ABOVE CEILING TO MIN. 4 FEET FROM ANY 2-HR. FIRE-RATED WALL CONSTRUCTION, THEN PENETRATE UP THROUGH ROOF. SEE DETAIL 4/MH6.12. PROVIDE DUCT TRANSITION FITTING FOR CONNECTION TO THE EXHAUST HOOD.
- 15. REBALANCE BRANCH DUCTS OR DIFFUSER/GRILLE TO AIR FLOWS SHOWN.
- 16. EXTEND 3/4" HHWS/R BRANCH PIPING TO NEW REHEAT COIL AT VAV TERMINAL. SEE DETAIL 5/MH6.12 FOR PIPING AT REHEAT COIL.
- 17. REINSTALL EXISTING SUPPLY AND EXHAUST GRILLES AT LEVEL OF NEW CEILING. PROVIDE ADDITIONAL DUCTWORK AS NEEDED TO EXTEND EXISTING DUCTS DOWN TO GRILLES.
- 18. NEW EXHAUST FAN ON ROOF. MOUNT WITH ADAPTER TO FIT ON EXISTING CURB. SEE DETAIL 3/MH6.12.
- 19. RE-USE EXISTING THERMOSTAT FOR CONTROL OF NEW VAV TERMINAL WITH REHEAT COIL.
- 20. NEW 16x16 EXHAUST PLENUM. TERMINATE AT APPROX. 10'-6" AFF. CONNECT (N) 14x12 AND 12" EXHAUST BRANCH DUCTS TO SIDES OF VERTICAL PLENUM. SEE DETAIL 3/MH6.12.
- 21. REINSTALL EXISTING SUPPLY GRILLE WITH NECK TRANSITION FITTING AT NEW LOCATION. PROVIDE ADDITIONAL DUCTWORK AS INDICATED.
- 22. SHIFT EXISTING SUPPLY DIFFUSER IF NEEDED TO ACCOMMODATE WALL RELOCATION.
- 23. ADJUST SUPPLY DIFFUSER NUMBER AND DIRECTION OF THROWS AS INDICATED.
- 24. CEILING ACCESS PANEL, TYP. COORDINATE LOCATION WITH ARCHITECT. A. EXISTING RELOCATED TO NEW LOCATION.
- 25. INSTALL NEW EXHAUST DUCT, CONNECTING RELOCATED EXISTING CEILING EXHAUST FAN TO EXISTING VERTICAL EXHAUST DUCT RISER UP THROUGH ROOF.
- 26. CONNECT NEW DUCT FITTING TO (E) 12x12 WITH TRANSITION TO (N) 16x12 FSD.
- 27. NEW DUCT-MOUNTED TEMPERATURE SENSOR IN RETURN AIR DUCT FOR VAV WITH REHEAT TERMINAL CONTROL.
- 28. RELOCATE EXISTING SPACE STATIC PRESSURE SENSOR/MONITOR TO LOCATION SHOWN. MOUNT IN CEILING AND EXTEND AND/OR PROVIDE CONTROL WIRING TO NEW LOCATION AS NEEDED.



**Department of Veterans Affairs**  
3801 Miranda Ave., Palo Alto CA

Project Title  
**520 A WING RENOVATE FOR F.O.R PROGRAM**

Location  
**VA MED CTR, PALO ALTO, CA**

Project Number **640-12-110P** Building Number **520**

**ARCHITECTS:**

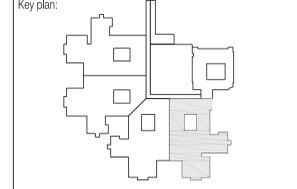
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CONSTRUCTION DOCUMENT  
SET

Revisions:	Date
100% CONSTRUCTION DOCUMENTS	06-15-2012
Approved: Project Director	

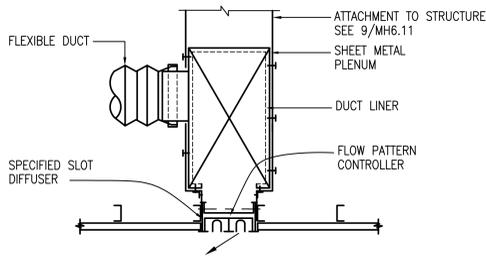
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**PARTIAL FLOOR PLAN NURSING UNIT A NEW WORK**

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

Date: JUNE 15, 2012

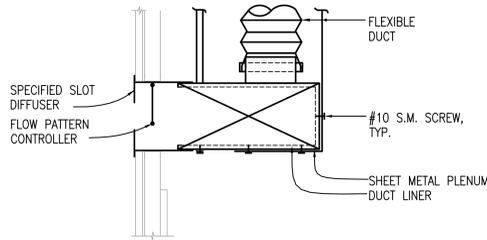
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Drawing Number  
**MH 2.11**



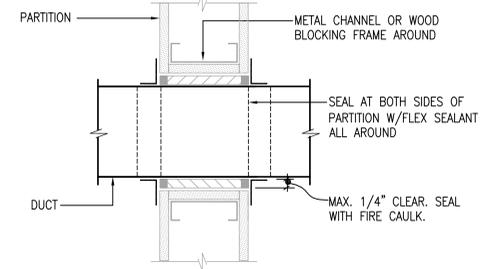
NOTE: 1. SEE PLANS AND SPECIFICATIONS FOR CEILING TYPES.

1 SLOT DIFFUSER



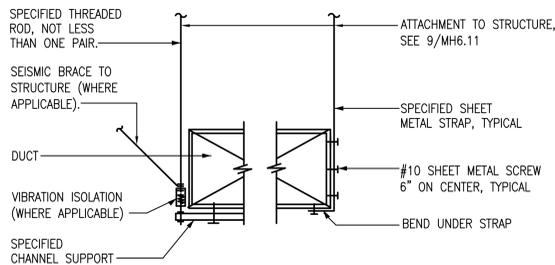
NOTE: 1. SEE PLANS AND SPECIFICATIONS FOR CEILING TYPES.

2 HORIZONTAL SLOT DIFFUSER



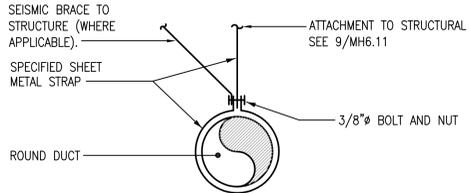
NOTES: 1. DETAIL SIMILAR FOR ALL CONCEALED AND EXPOSED DUCTS THROUGH PARTITION.  
2. PROVIDE FIRE DAMPERS WHERE SHOWN AND WHERE REQUIRED.  
3. CAULK ALL AROUND.  
4. GALVANIZED SHEET METAL ANGLE CLOSURES AT ALL LOCATIONS.  
5. SUPPORT DUCT ON BOTH SIDES OF PARTITION.

3 DUCT THROUGH PARTITION



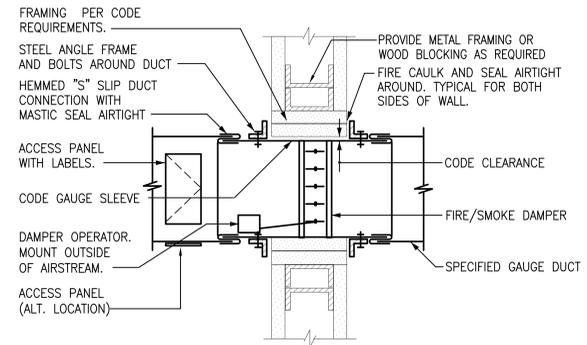
NOTES: 1. USE SPECIFIED SPACING AND NOT LESS THAN ONE SUPPORT PER BRANCH.  
2. SEE SPECIFICATIONS FOR VIBRATION ISOLATION.

4 RECTANGULAR DUCT SUPPORT



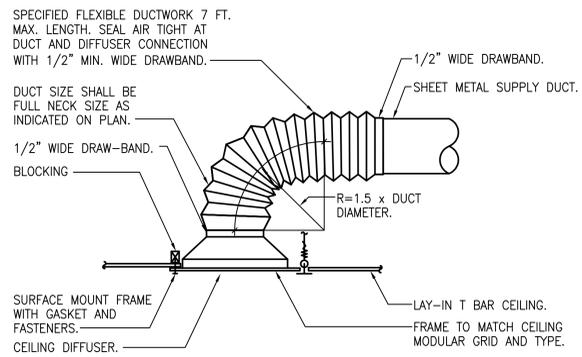
NOTES: 1. USE SPECIFIED SPACING AND NOT LESS THAN ONE SUPPORT PER BRANCH.

5 ROUND DUCT SUPPORT



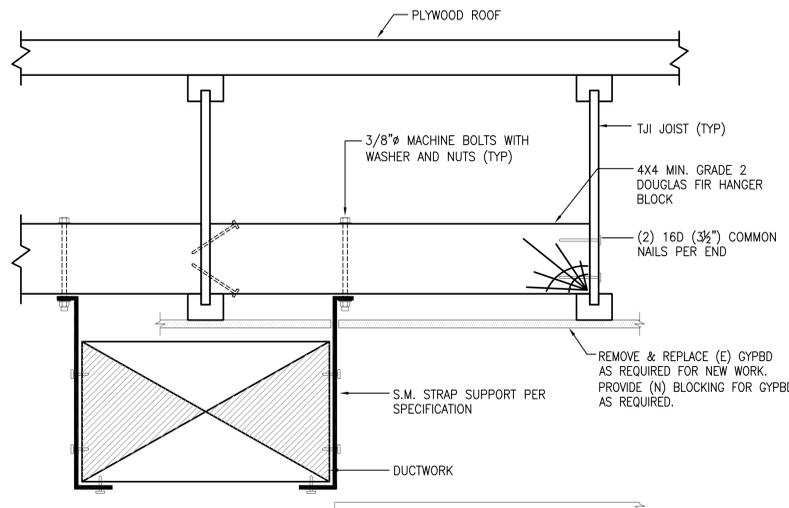
NOTE: 1. DAMPER INSTALLATION SHALL BE PERFORMED AS PER MANUFACTURER'S RECOMMENDATION, AND SHALL COMPLY WITH NFPA 90A AND APPROPRIATE LOCAL CODES.

6 FIRE/SMOKE DAMPER IN DUCT THRU WALL

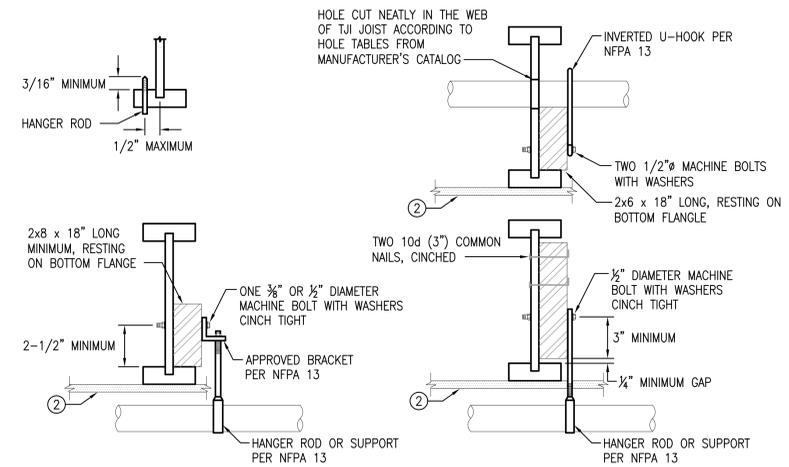


NOTES: 1. SEE DETAIL 2/MH6.12 FOR CEILING DIFFUSER WITH FIRE/SMOKE DAMPER.  
2. CONTRACTOR SHALL PROVIDE SHEET METAL PLENUM BOX ON THE TOP OF DIFFUSER IF THE 1.5 DIAMETER RADIUS CANNOT BE MAINTAINED.  
3. PROVIDE TRANSITION AS NEEDED BETWEEN DUCT AND DIFFUSER NECK.

7 CEILING DIFFUSER DETAIL



8 TYPICAL DUCTWORK SUPPORT DETAIL



NOTES: 1. DETAIL SIMILAR FOR PIPING OR DUCTWORK.  
2. REMOVE AND REPLACE (E) GYPBD AS REQUIRED FOR NEW WORK. PROVIDE (N) BLOCKING FOR GYPBD AS REQUIRED.

9 ATTACHMENT TO STRUCTURE



Department of Veterans Affairs  
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**640-12-110P 520**

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**Revisions:**

Revisions	Date
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Drawing Title  
**DETAILS**

Scale: NONE Drawing Number  
Date: JUNE 15, 2012 **MH 6.11**  
Checked: SL Drawn: EYO Dwg. of -

