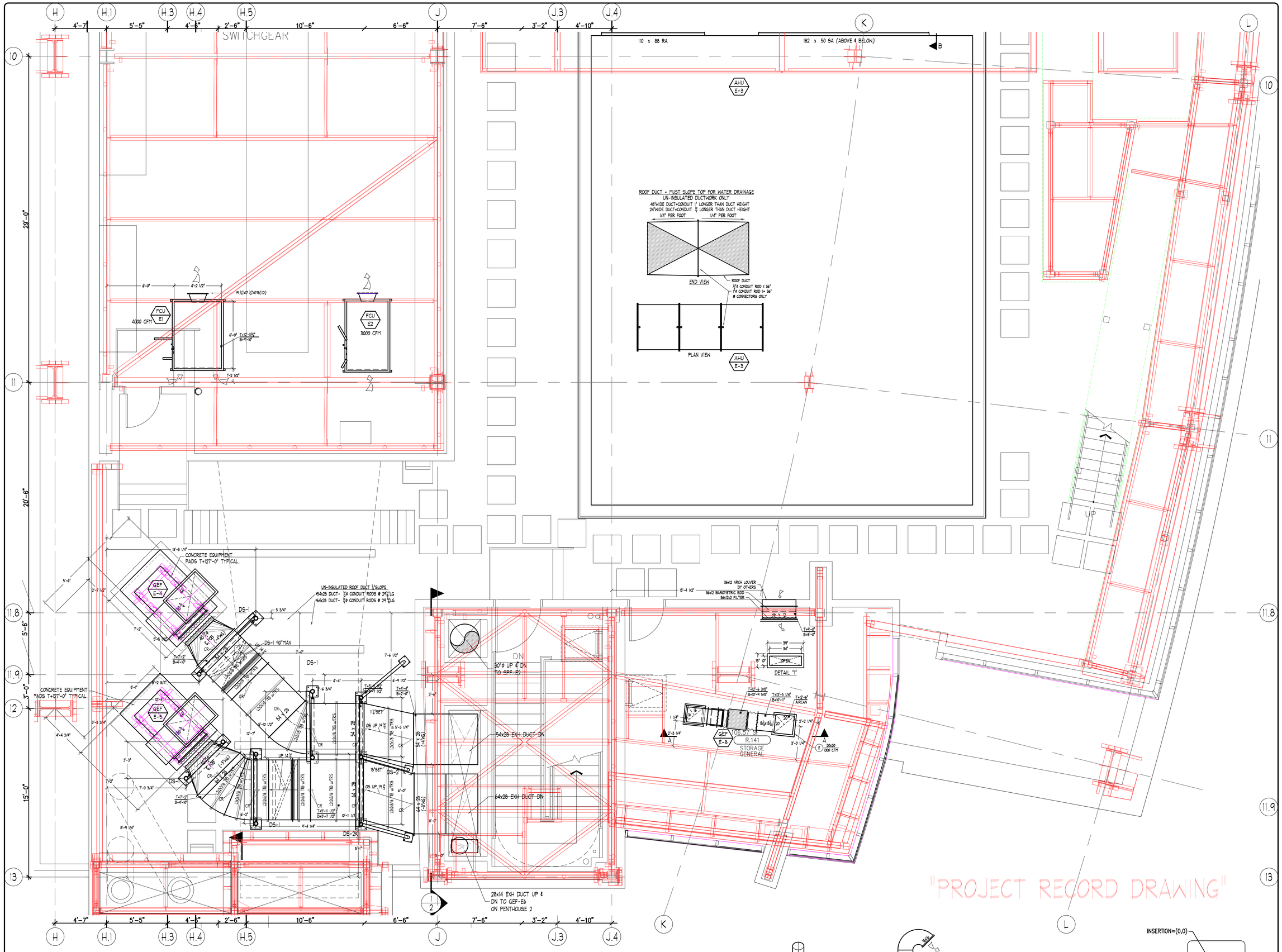
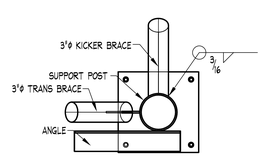
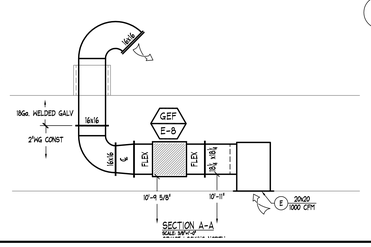


PENTHOUSE LEVEL 1 - SOUTH EAST

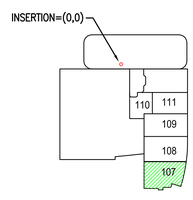
FINISHED FLOOR ELEVATION=125'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)



KICKER WELD DETAIL
N.T.S.



SECTION A-A



KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE BOTTOM OF DUCTWORK. ALLOWANCE MUST BE MADE FOR TRANSVERSE CONNECTORS, HORIZONTAL AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

S & D	S & DRAW CONNECTION
SPW	SPIN-IN FITTING
SLV	SLEEVE
SP	STATIC PRESSURE
T	TEE
TDC	TRANSVERSE DUCT CONNECTOR
Th	THROAT
TRANS	TRANSITION FITTING
TV	TURNING VANES
U	UP
V	VERTICAL
VD	VOLUME DAMPER
W/	WITH
WG	WATER GAUGE
WI	WALL INDUCTION
FWI	FIBER INDUCTION

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR ACCESS PLATE
	DUCTWORK PIECE NO. INDICATOR
	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
1-06-11	07A	ROOF SUPPORT BASES
12-17-10	07B	ROOF SUPPORTS
10-12-10	07C	12"MG SUPPLY AIR DUCTWORK
10-12-10	07D	-4", 3" & 2"MG EXHAUST AIR DUCTWORK

REVISIONS

DATE	NO.	DESCRIPTION
10-2-10	1	PREPARE FOR LISTING
10-26-10	2	REVISED PER LISTING
1-10-11	3	REVISED FOR INSTALLATION
5-13-11	4	SUPPORT DIMENSIONS ADDED
4-3-12	5	FCU-E2 RELOCATED PER RFI#39-0
5-1-12	5	AS-BUILT RECORD DRAWINGS

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404
PHONE: (801) 731-0577
FAX NO: (801) 731-0580
WEBSITE: WWW.HARRIS-HART.COM
E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 107

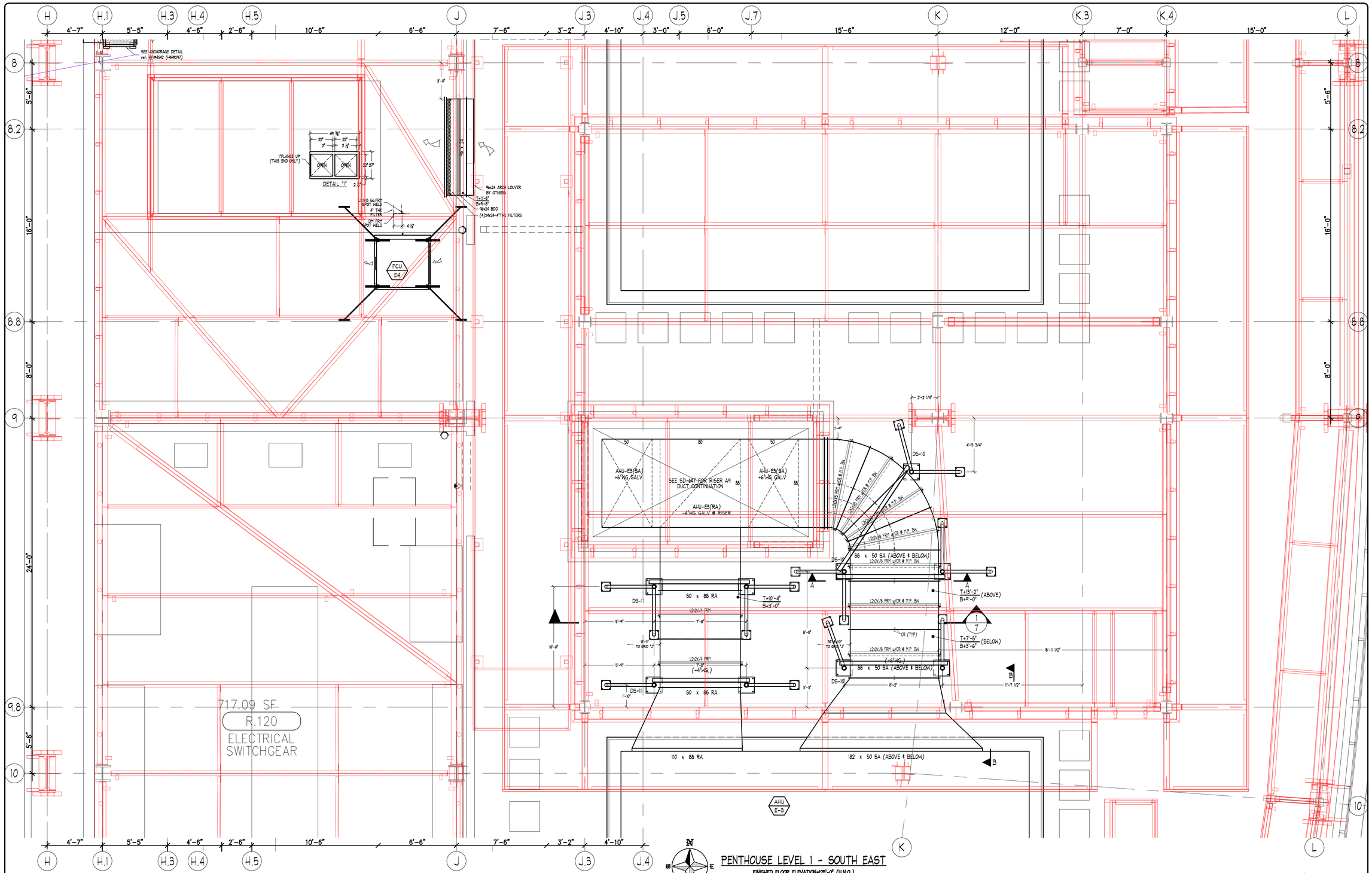
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
PENTHOUSE LEVEL 1 AREA A
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.80 STRUCT: S2.9A&B MECH: M3.8A

BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"

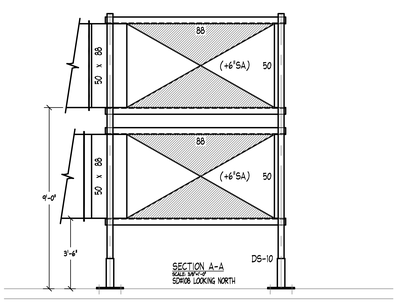
DRAWING NO:
107 OF 115



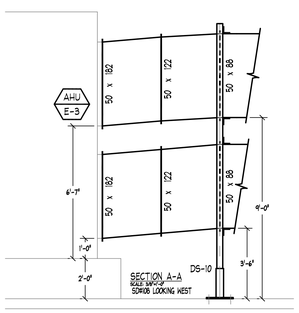
PENTHOUSE LEVEL 1 - SOUTH EAST

FINISHED FLOOR ELEVATION=125'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

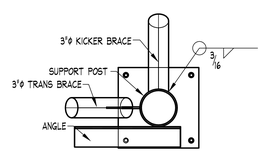
"PROJECT RECORD DRAWING"



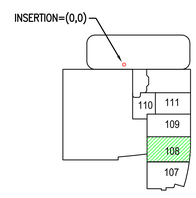
SECTION A-A
SCALE: 3/8"=1'-0"
SD#09 LOOKING NORTH



SECTION A-A
SCALE: 3/8"=1'-0"
SD#09 LOOKING WEST



KICKER WELD DETAIL
N.T.S.



KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO BE VERIFIED BY CONTRACTOR. ALL ADJUSTMENTS MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN CONFORMING ELEVATIONS.

ABBREVIATIONS

ACCESS DOOR ACCESS PLATE	S & D
AT OR BOTT BOTTOM	SLV SLEEVE
℄ CENTERLINE	SP STATIC PRESSURE
D. DN DOWN	T. TEMP
F. CONN FLEXIBLE CONNECTOR	TDC TRANSVERSE DUCT CONNECTOR
F. FEM FEMALE	TH THROAT
FD FIRE DAMPER	TRANS TRANSITION FITTING
FD FLANGE IN	TW TRANSITION WIDTH
FD FLAT ON BOTTOM	U. UP
FOB FLAT ON SIDE	V. VERTICAL
FOS FLAT ON TOP	VD VOLUME DAMPER
FOT HORIZONTAL	W. WITH
H. MALE	WG WATER GAUGE
M. OFFSET	⊕ MALE INDICATOR
PG PLUG	⊖ FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH HAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR ACCESS PLATE
	DUCTWORK PIECE NO. LOCATION
	INDICATOR
	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

NO.	DESCRIPTION	DATE
106C	4" WG. SUPPLY AIR DUCTWORK	10-3-10
106D	-4" T & -2" WG. RETURN & TRANSFER	10-3-10
106A	PIPE SUPTOR FOR DUCT SUPPORTS	12-1-10
106B	ROOF DUCT SUPPORTS	1-10-11

REVISIONS

NO.	DESCRIPTION	DATE
1	PREPARE FOR LISTING	10-3-10
2	REVISE FOR INSTALLATION	1-10-11
3	SUPPORT DIMENSIONS ADDED	5-3-11
4	FCU-E2 RELOCATED TO SD#07 (REF#SR-5)	4-3-12
5	AS-BUILT RECORD DRAWING	5-1-12

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404
PHONE: (801) 731-0577
FAX NO: (801) 731-0580
WEBSITE: WWW.HARRIS-HART.COM
E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

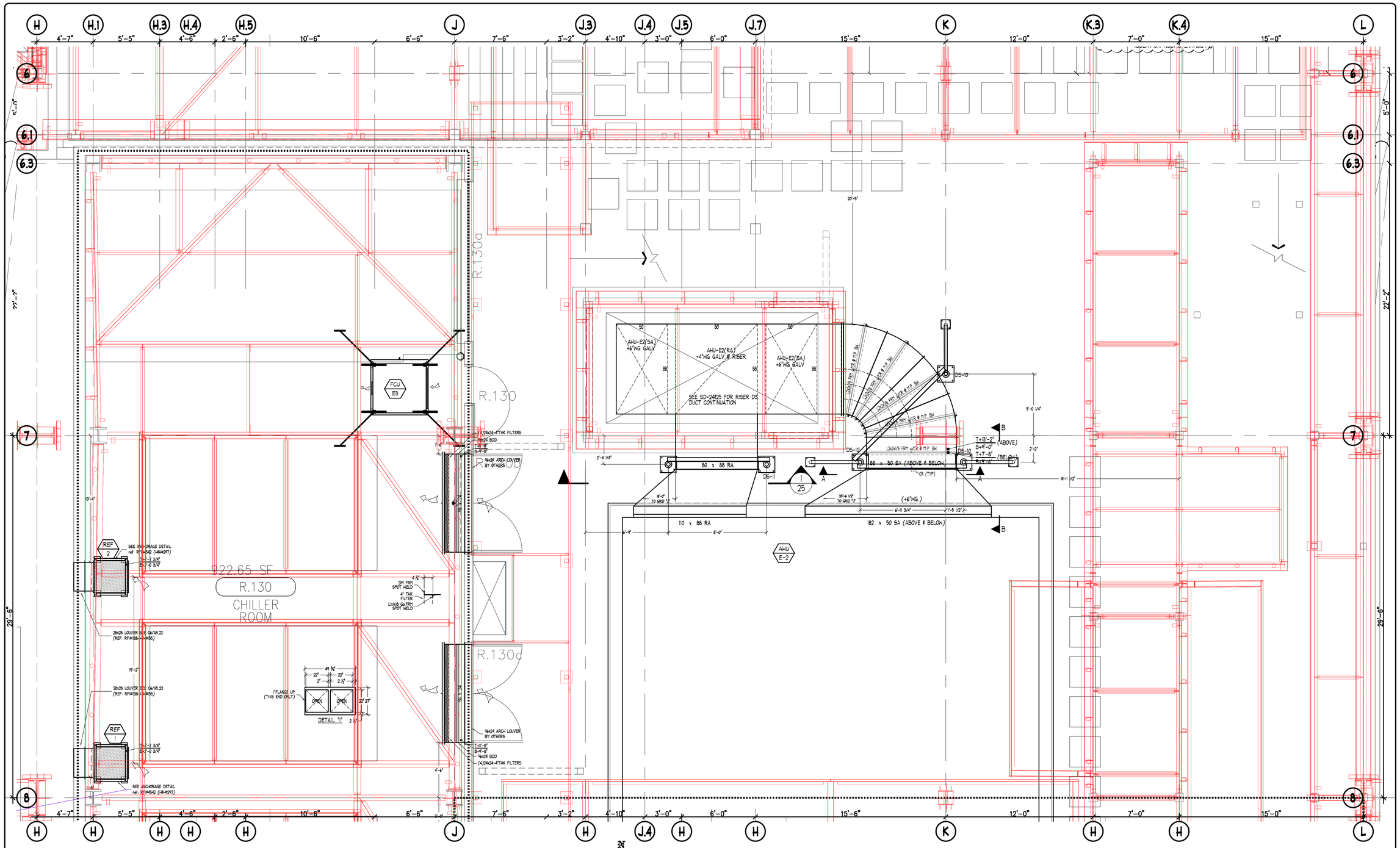
JOB NO: 9507 PAY ITEM: 108

PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
PENTHOUSE LEVEL 1 AREA F
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.80 STRUCT: S2.9AAB MECH:M3.8F

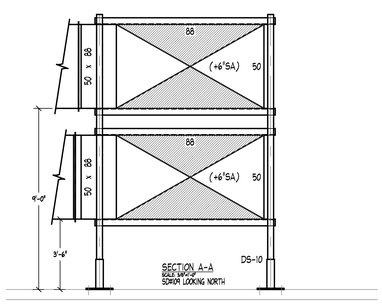
BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"
DRAWING NO.
108 OF 115

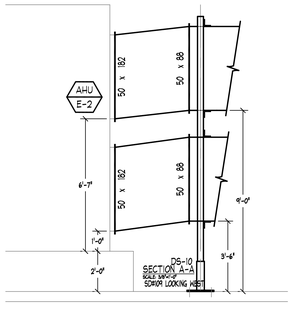


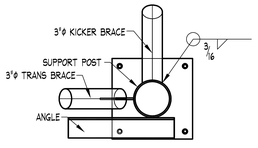
PENTHOUSE LEVEL 1 - NORTH EAST

FINISHED FLOOR ELEVATION=125'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

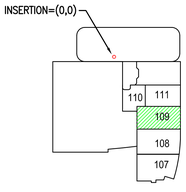
"PROJECT RECORD DRAWING"







KICKER WELD DETAIL
N.T.S.



KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO BE USED FOR ROUGHING IN PURPOSES ONLY. MAKE FOR TRANSVERSE CONNECTORS, HORIZONTAL AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

S & D	S & DRIVE CONNECTOR
SPIN-IN	SPIN-IN FITTING
SLV	SLEEVE
SP	STATIC PRESSURE
T	TEE
TDC	TRANSVERSE DUCT CONNECTOR
TH	THROAT
TRANS	TRANSITION FITTING
TYP	TYPICAL UNLESS NOTED
U	UP
V	VERTICAL
VD	VOLUME DAMPER
W	WITH
WG	WATER GAUGE
⊕	WALL INDICATION
⊕	SMOKE INDICATOR
ACD	ACCESS DOOR ACCESS PLATE
BOTT	BOTTOM
CL	CENTERLINE
DN	DOWN
D	DRIVE CONNECTOR
F	FEMALE
FD	FIRE DAMPER
FD	FLANGE IN
FD	FLANGE OUT
FOB	FLAT ON BOTTOM
FOS	FLAT ON SIDE
FOT	FLAT ON TOP
H	HORIZONTAL
M	MALE
OFF	OFFSET
RD	ROUND

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER. NO. INDICATES DAMPER SIZE.
	VOLUME DAMPER WITH MANUAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR ACCESS PLATE
	SUPPLY AIR DIFFUSER WITH ANCHOR. NECK SIZE. PIECE NO.
	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

NO.	DESCRIPTION	
10C	14" WG. SUPPLY AIR DUCTWORK	PCS1-3
10D	12" WG. EXHAUST & TRANSFER AIR DUCTWORK	PCS1-3
10B	PIPE STANDS FOR DUCT SUPPORTS	PCS1-3
10AL	ROOF DUCT SUPPORTS	PCS1-3

REVISIONS

NO.	DESCRIPTION	DATE
1	PREPARE FOR LISTING	10-3-09
2	REVISED PER LISTING	10-26-09
3	REVISED FOR INSTALLATION	1-10-11
4	SUPPORT DIMENSIONS ADDED	5-13-11
5	AS-BUILT RECORD DRAWING	5-1-12

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404
PHONE: (801) 731-0577
FAX NO: (801) 731-0580
WEBSITE: WWW.HARRIS-HART.COM
E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

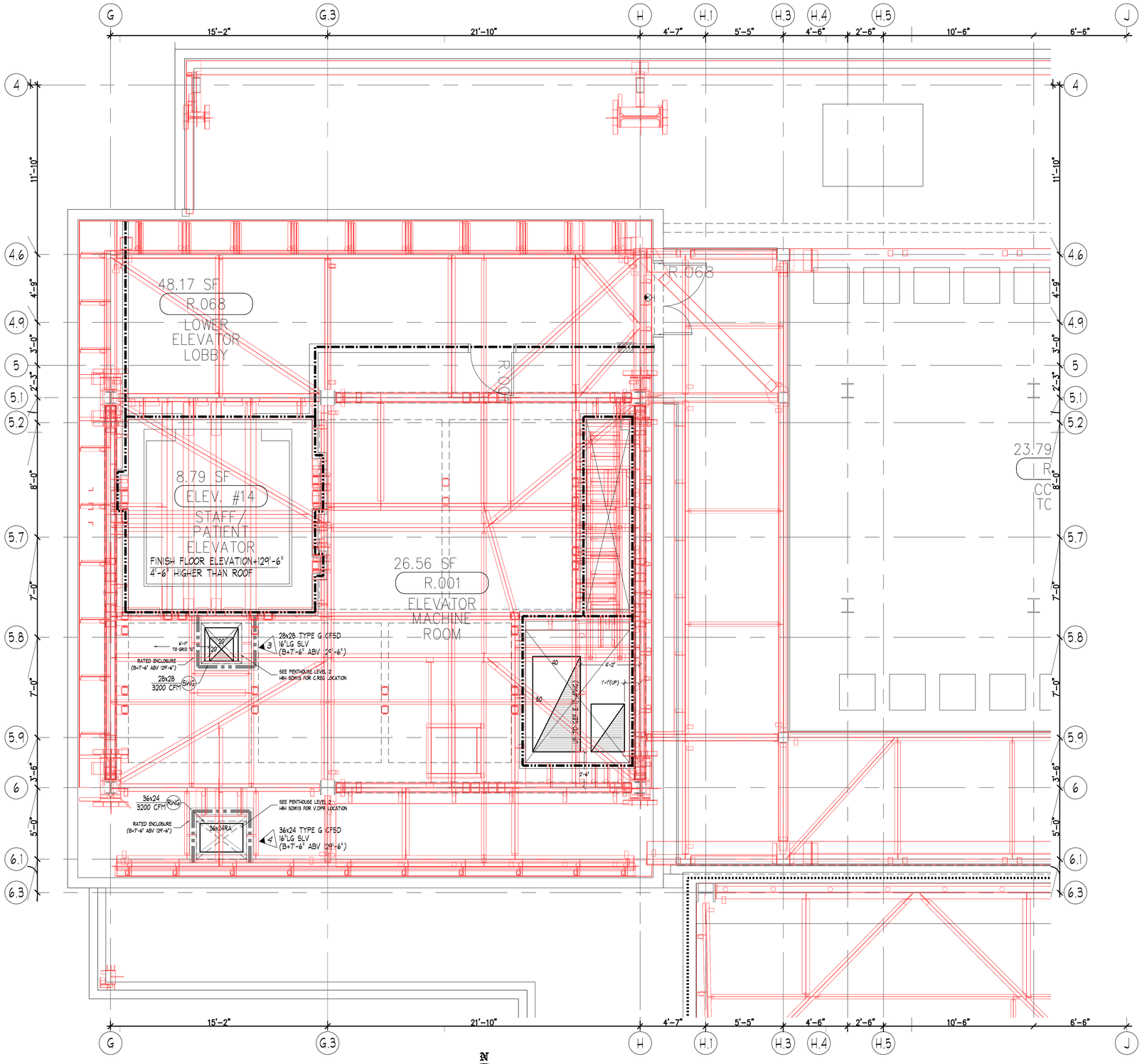
JOB NO: 9507 PAY ITEM: 109

PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
PENTHOUSE LEVEL 1 AREA G
HVAC SYSTEM LAYOUT

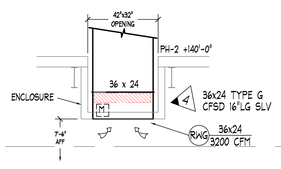
REFERENCE DRAWINGS
ARCH:A3.80 STRUCT: S2.9A&B MECH: M3.8G

BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"
DRAWING NO: 109 OF 115

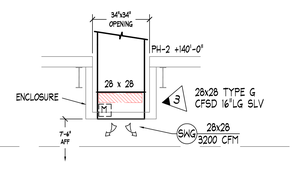


PENTHOUSE LEVEL 1 - NORTH WEST

FINISHED FLOOR ELEVATION=129'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

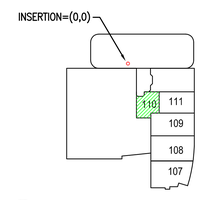


SECTION AT PH-1
RETURN DUCT INTO ELEV MACHINE ROOM



SECTION AT PH-1
SUPPLY DUCT INTO ELEV MACHINE ROOM

"PROJECT RECORD DRAWING"



PH1 KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND SUPPORTS. INSTALLATION MUST BE COORDINATED WITH OTHER TRADES.

ABBREVIATIONS

SYMBOL	DESCRIPTION			
	FIRE DAMPER WITH ACCESS DOOR	AD, AP	ACCESS DOOR, ACCESS PLATE	S & D
	FIRE/SMOKE DAMPER WITH ACCESS DOOR	B, BOTT	BOTTOM	SD
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR	S, CN	CENTERLINE	SIV
	MANUAL VOLUME DAMPER WITH REMOTE REGULATOR	CLG	CEILING	SP
	CONTROL MOTOR/DAMPER/DIAGONAL REGULATOR	DM	DIACTAULIC CONNECTOR	T
	MOTORIZED DAMPER	F, FEM	FEMALE	TDC
	DIACTAULIC ACCESS DOOR OR ACCESS PLATE	FD	FIRE DAMPER	TDF
	DIACTAULIC PIECE NO.	FSD	FIRE/SMOKE DAMPER	TH
	INDICATOR	FO	FLANGE OUT	TRANS
	TOP OF DUCT/BOTTOM OF DUCT	FOB	FLAT ON BOTTOM	TV
	SUPPLY INDICATOR	FOS	FLAT ON SIDE	U
		FOT	FLAT ON TOP	VD
		H	HORIZONTAL	W
		M	WALL	WG
		R	RADIUS	>D

S & D — S & DRIVE CONNECTOR
SD — SPIN-IN FITTING
SIV — SLIDE VALVE
SP — STATIC PRESSURE
T — TOP
TDC — TRANSVERSE DUCT CONNECTOR
TDF — TOP DIAGONAL FITTING
TH — THERMOSTAT
TRANS — TRANSITION FITTING
TV — TURNING VANES
U — UP
V — VERTICAL
VD — VOLUME DAMPER
W — WITH
WG — WATER GAUGE
>D — VALVE INDICATOR
FEMALE INDICATOR

MATERIAL LISTS

NO.	DESCRIPTION	DATE
110A	<2"WG SUPPLY AIR DUCTWORK	10-14-09
110B	>2"WG RA & EA DUCTWORK	10-14-09

REVISIONS

NO.	DESCRIPTION	DATE
1	PREPARE FOR LISTING	10-14-09
2	REVISED FOR LISTING	10-26-09
3	REVISED FOR INSTALLATION	1-11-11
4	DUCT ELEVATIONS CORRECTED	5-5-11
5	REVISED PER AHJ REV 2#1	6-6-11
6	AS-BUILT RECORD DRAWING	5-1-12

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404
PHONE: (801) 731-0577
FAX NO: (801) 731-0580
WEBSITE: WWW.HARRIS-HART.COM
E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 110

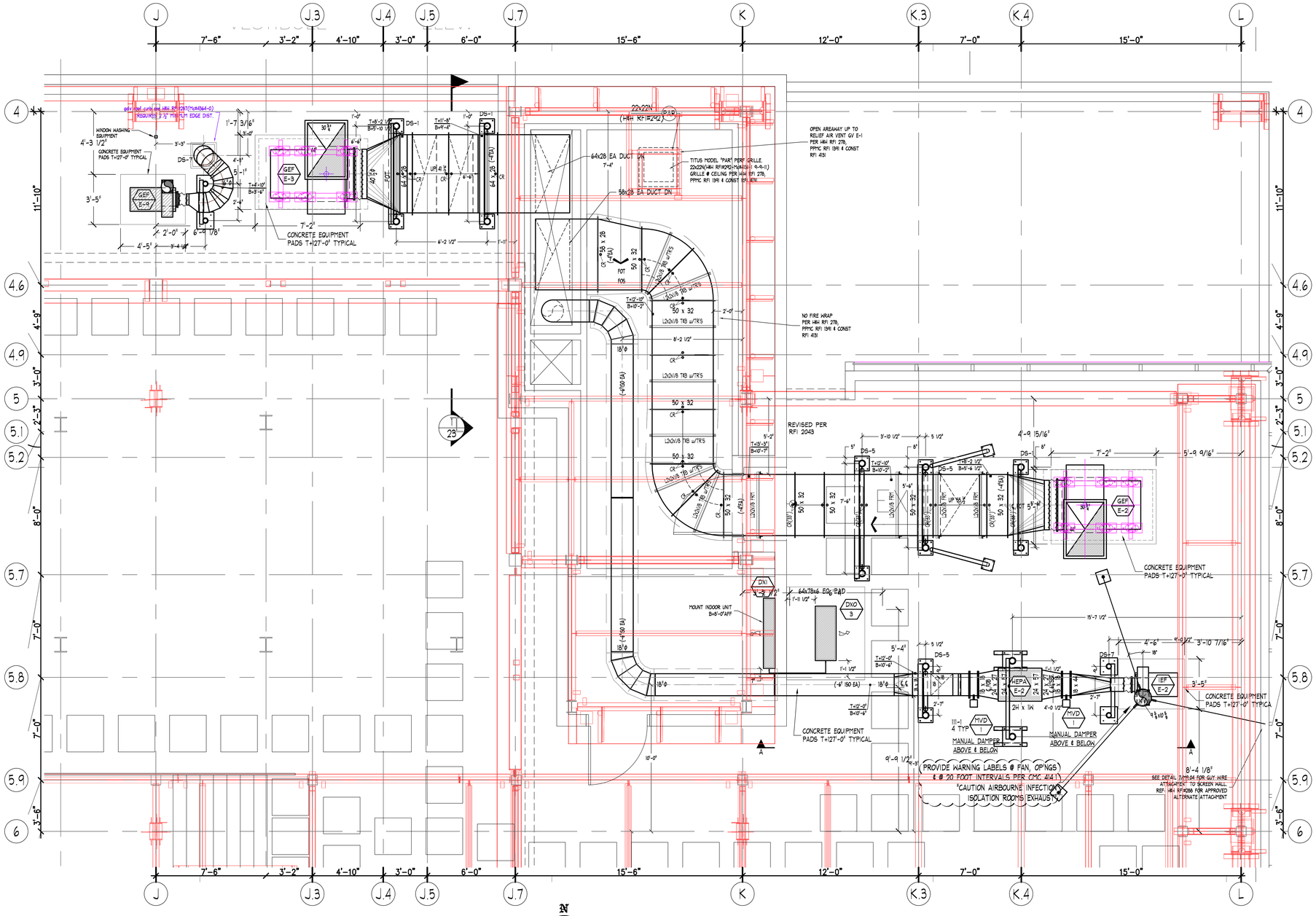
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
PENTHOUSE LEVEL 1 AREA H
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.80 STRUCT: S2.9A&D MECH:M3.8H

BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"

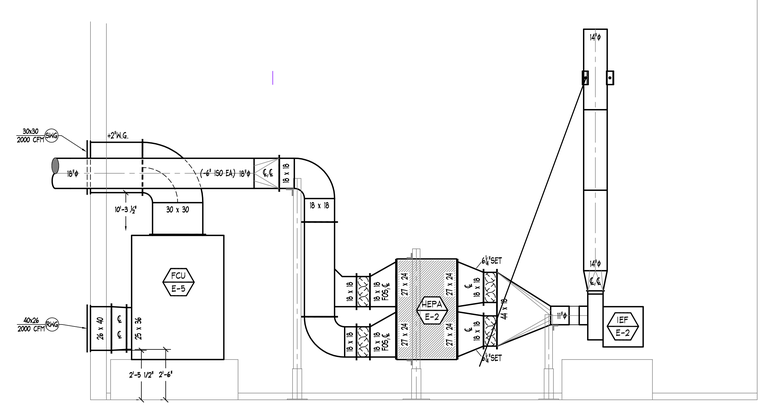
DRAWING NO.
110 OF 115



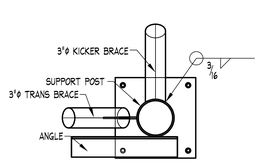
PENTHOUSE LEVEL 1 - NORTH EAST

FINISHED FLOOR ELEVATION=125'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

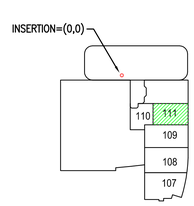
"PROJECT RECORD DRAWING"



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



KICKER WELD DETAIL
N.T.S.



KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR THICKNESS OF ADDITIONAL REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR, ACCESS PLATE
B, BOTT	BOTTOM
CL	CENTERLINE
DOWN	DOWN
E, DN	EXCHANGE CONNECTOR
EW	EXTERIOR WALL
F, FLTW	FLOW
FD	FIRE DAMPER
FL	FLANGE IN
FLD	FLANGE OUT
FOB	FLAT ON BOTTOM
FOS	FLAT ON SIDE
FOT	FLAT ON TOP
H	HORIZONTAL
M	MALE
RS	OFFSET
R	TRANSS
S & D	S & DRAIN CONNECTOR
SF	SPIRAL FITTING
SLV	SLEEVE
SP	STATIC PRESSURE
T	TOP
T.C.	TEMPERATURE DUCT CONNECTOR
THR	THROAT
TH	TRANSITION FITTING
TRANS	TRANSFER
TV	TURNING VANES
U	UP
V	VERTICAL
VD	VOLUME DAMPER
W	WIDE
WG	WATER GAUGE
MS	MALE INDICATOR
FS	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	FIRE DAMPER OR COMBINATION
	FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL, SEE DETAIL 1/M-03
	MANUAL VOLUME DAMPER WITH QUADRANT LOCKING DEVICE
	CEILING MOUNTED CONCEALED REGULATOR
	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR DAMPER
	ACCESS PLATE
	DUCTWORK PIECE NO.
	DIRECTION OF AIR FLOW
	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
10-29-10	11C	12" SUPPLY AIR DUCTWORK
10-29-10	11D	RETURN & EXHAUST AIR DUCTWORK
10-29-10	11E	HELDED STAINLESS STEEL
10-29-10	11F	PLASMASED SPIRAL & DUCTWORK
10-29-10	11P	PIPE STANDS FOR DUCT SUPPORTS
12-17-10	11A	ROOF DUCT SUPPORTS
1-10-11	11B	

REVISIONS

DATE	NO.	DESCRIPTION
10-29-10	1	PREPARE FOR LISTING
10-29-10	2	REVISED PER LISTING
1-10-11	3	REVISED FOR INSTALLATION
2-22-11	4	REVISED PER RFI 2043 SEE FO #28 FOR NON PIECES
3-15-11	5	SUPPORT DIMENSIONS ADDED
8-3-11	6	REV PER HEH RFI 278, PPMC RFI 1391, CONST RFI 431
8-4-11	7	ADDED FIREWRAP PER RFI
5-1-12	8	AS-BUILT RECORD DRAWING

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404
PHONE: (801) 731-0577
FAX NO: (801) 731-0580
WEBSITE: WWW.HARRIS-HART.COM
E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 111

PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
PENTHOUSE LEVEL 1 AREA M
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.80 STRUCT: S2.9A&B MECH: M3.8M

BY: BP
DATE:
SCALE: 3/8"=1'-0"

DRAWING NO.
111 OF 115