

# ARCHITECTURE ENGINEERING CONSTRUCTION

# OI&T DUMBWAITER VENTILATION AND ELEVATOR

## PROJECT 554-13-806

FULLY SPRINKLERED

100% CONSTRUCTION DOCUMENTS

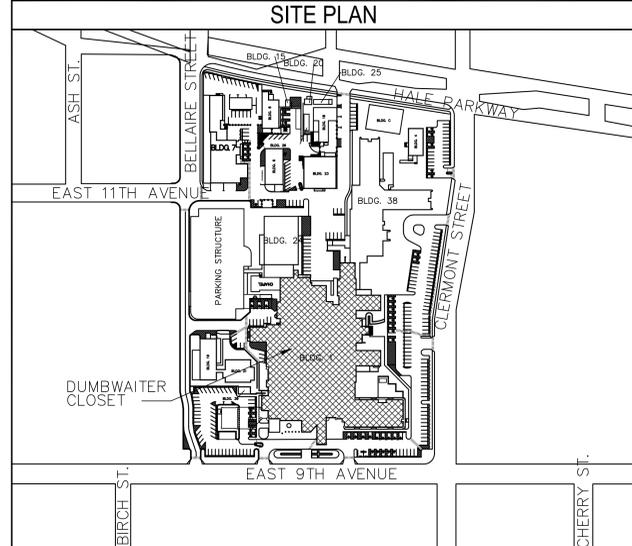
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**GENERAL NOTES**

- CONTRACTOR ENCOURAGED TO VISIT ALL AREAS OF WORK, INCLUDING WALKING THE SITE, MEASURING EXISTING DIMENSIONS AND OBSERVING EXISTING CONDITIONS BEFORE BIDDING WORK, ORDERING MATERIALS, AND/OR STARTING ANY CONSTRUCTION WORK.
- CONTRACTOR TO RECYCLE REMOVED MATERIALS WHENEVER POSSIBLE.
- CONTRACTOR TO COMPLETE WORK DURING BUSINESS HOURS WHENEVER POSSIBLE. THE WORK IS NOT TO INTERFERE WITH FACILITY OPERATIONS. THOSE AREAS THAT NEED TO BE COMPLETED AFTER HOURS TO BE COORDINATED WITH COR.
- CONTRACTOR TO CLEAN ALL AREAS OF WORK UPON COMPLETION.
- THERE SHALL BE NO FOOD OR DRINK PRESENT DURING THE WORK, WHILE WORKING IN THE IT CLOSETS.
- DO NOT USE RED MARKED (EMERGENCY) POWER OUTLETS FOR POWER TO THE FAN COIL UNITS. 110 OUTLETS MAY BE USED.
- UPON COMPLETION OF WORK, THERE SHALL NOT BE ANY WATER PRESENT, CONDENSATION OR OTHERWISE, AND NO "NOISE" ON THE DATA LINES.
- CONTRACTOR MUST BE ESCORTED AT ALL TIMES WHEN WORKING IN IT CLOSETS.
- WHEN PLACING ROOFTOP UNITS, ALL DAMAGE TO THE ROOFING SHALL BE REPAIRED BY A ROOFER CERTIFIED IN REPAIR OF WELDED MEMBRANE ROOFING. ROOFER TO BE APPROVED BY VA, PRIOR TO WORK.
- ROOFTOP HVAC EQUIPMENT REMOVAL AND SETTING: THE CONTRACTOR AT HIS OPTION, AND UPON REVIEW AND APPROVAL OF THE COR, SHALL DETERMINE THE MOST ECONOMICAL AND EFFICIENT METHOD FOR THE REMOVAL AND SETTING OF HVAC EQUIPMENT ON THE MEDICAL CENTER ROOF. REMOVAL OF THE EXISTING ROOFTOP HVAC UNIT ON THE 11TH FLOOR ROOF, SETTING THE NEW ROOFTOP UNIT ON THE 11TH FLOOR ROOF, AND SETTING OF NEW AIR COOLED CONDENSING UNIT ON THE 9TH FLOOR ROOF SHALL BE ACCOMPLISHED DURING A SINGLE LIFTING SESSION.
- X-RAY SLAB AT LOCATIONS OF ALL NEW FLOOR PENETRATIONS PRIOR TO CORE DRILLING. AVOID CUTTING REBAR. NO PENETRATIONS ARE ALLOWED THROUGH THE EXISTING THICKENED SLAB WHICH EXTEND APPROXIMATELY SIX FEET FROM EDGE OF COLUMNS. PIPING FOR FIXTURES LOCATED ABOVE THE THICKENED SLAB SHALL BE OFFSET ABOVE FLOOR IN WALL SPACE OR BELOW CASEWORK TO AVOID STRUCTURAL SLAB PENETRATION.

**FIRE PROTECTION NOTES:**

- EXISTING SPRINKLER HEADS TO REMAIN.
- PROVIDE FIRESTOPPING MATERIAL IN ABANDONED PENETRATIONS ABOVE CEILING GRID TO AREAS SPECIFIED ON DRAWINGS AND OTHER AREAS AS DEEMED NECESSARY.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL CODES, ORDINANCES, REGULATIONS AND NFPA 13.



**INFECTION CONTROL RISK ASSESSMENT**

- LOW RISK LEVEL

**INFECTION CONTROL RISK ASSESSMENT NOTES:**

\* OBTAIN INFECTION CONTROL PERMIT BEFORE CONSTRUCTION BEGINS. ISOLATE HVAC SYSTEM IN AREA WHERE WORK IS BEING DONE TO PREVENT CONTAMINATION OF THE DUCT SYSTEM. COMPLETE ALL CRITICAL BARRIERS OR IMPLEMENT CONTROL CUBE METHOD BEFORE CONSTRUCTION BEGINS. MAINTAIN NEGATIVE AIR PRESSURE WITHIN WORK SITE UTILIZING HEPA EQUIPPED AIR FILTRATION UNITS. SEAL HOLES, PIPES, CONDUITS, AND PUNCTURES APPROPRIATELY. DO NOT REMOVE BARRIERS FROM WORK AREA UNTIL COMPLETED PROJECT IS INSPECTED BY THE OWNER'S SAFETY DEPARTMENT AND THOROUGHLY CLEANED BY THE OWNER'S ENVIRONMENTAL SERVICES DEPARTMENT. REMOVE BARRIER MATERIAL CAREFULLY TO MINIMIZE SPREADING OF DIRT AND DEBRIS ASSOCIATED WITH CONSTRUCTION. CONTAIN CONSTRUCTION WASTE BEFORE TRANSPORT IN TIGHTLY COVERED CONTAINERS. COVER TRANSPORT RECEPTACLES OR CARTS. TAPE COVERING UNLESS SOLID LID. VACUUM WORK AREA WITH HEPA FILTERED VACUUMS. WET MOP AREA WITH DISINFECTANT. REMOVE ISOLATION OF HVAC SYSTEM IN AREAS WHERE WORK IS BEING PERFORMED.

**INTERIM LIFE SAFETY MEASURES NOTES (ILSM):**

IF APPLICABLE:

HOT WORK PERMITS. PERMITS MUST BE OBTAINED 24 HOURS PRIOR TO COMMENCEMENT OF WORK, WHENEVER POSSIBLE. ORIGINAL PERMIT TO BE POSTED WHERE WORK IS BEING PERFORMED; CONTRACTOR MUST RETURN PERMIT TO SAFETY OFFICE WHEN WORK IS COMPLETED. FIRE WATCH. CONTRACTOR MUST INITIAL, DATE AND TIME EVERY 30 MINUTES AFTER HOT WORK HAS STARTED.

CONTRACTOR TO PROVIDE WARNING SIGNAGE AND DIRECTIONAL SIGNAGE THAT SHALL BE POSTED IN CONSTRUCTION AREA WHILE WORK IS PERFORMED.

CONFINED SPACE. CONTRACTOR TO OBTAIN CONFINED SPACE PERMIT PRIOR TO ENTRY INTO MECHANICAL CHASE. ENSURE IT IS APPROVED BY VA SAFETY DEPARTMENT AND COR.

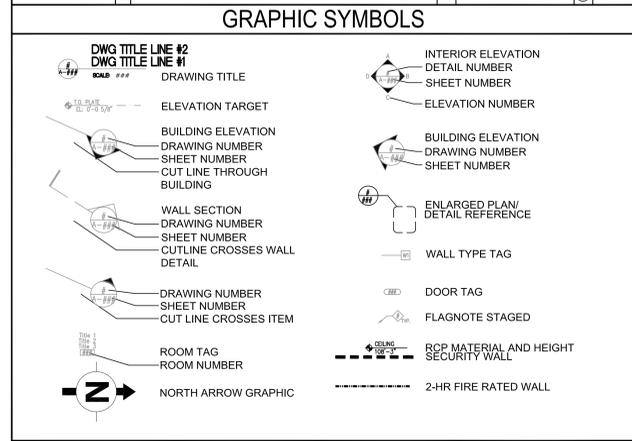
CONTRACTOR TO ENSURE THAT ALL EXISTING MEANS OF EGRESS ARE MAINTAINED THROUGHOUT CONSTRUCTION.

**PHASING**

ALL WORK WILL BE PHASED AND APPROVED BY COR AND VA PERSONNEL. WORK TO TAKE PLACE DURING BUSINESS HOURS. IF WORK CAN NOT BE COMPLETED DURING BUSINESS HOURS WORK WILL BE SCHEDULED AT NIGHT OR ON WEEKENDS. CONTRACTOR TO COORDINATE EACH TASK AND PHASE WITH COR AND STAFF TWO (2) WEEKS IN ADVANCE.

**VA PROJECT TEAM**

<b>OWNER</b> VETERANS AFFAIRS VA ECHS MEDICAL CENTER 1055 CLERMONT STREET DENVER, CO 80220-3808	<b>OWNER'S CONTRACTING OFFICER</b> VISN 19 CONTRACTING OFFICER ROCKY MOUNTAIN CONSOLIDATED CO. 4100 E. MISSISSIPPI AVE, SUITE 900 GLENDALE, CO 80248
<b>DESIGN INTENT</b> AES GROUP RUSS OSTLER PH:303.841.3922 FAX:303.841.3772	<b>INTEGRATED PROJECT TEAM</b> END USERS MECHANICAL/HVAC ELECTRICAL SAFETY



**PLOTTING NOTES:**

- FULL SIZE V.A. "E" SHEET (AS INDICATED)
- HALF SIZE V.A. "D" SHEET (1/2 THE INDICATED SCALE)
- LETTER SIZE: (NOT SCALE)

**GENERAL NOTES:**

- SCALED DIMENSIONS + ARCHITECTURAL FEATURES MAY NOT BE CORRECT.
- CONTRACTORS + A/E'S ARE RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS WITHIN THE PROJECT AREA.

**DEPARTMENT OF VETERANS AFFAIRS**  
**MEDICAL CENTER**  
1055 Clermont Street  
Denver, Colorado, 80220

Drawing Title <b>COVER SHEET AND SHEET INDEX</b>		Project Title <b>OI&amp;T DUMBWAITER VENTILATION AND ELEVATOR</b>		Project Number 554-13-806	
Approved Project Director		Location DENVER VA MEDICAL CENTER		Building Number BUILDING 1	
Date APRIL 26, 2013	Checked R. OSTLER	Drawn A. KEOUGH	Drawing Number <b>GI001</b>		
			Dwg. 1 of 6		

**Office of Construction and Facilities Management**

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot

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Revisions  
Date

### MECHANICAL LEGEND

NOT ALL ITEMS LISTED BELOW ARE USED ON THIS SET OF DRAWINGS

PLUMBING PIPING		PIPING SYMBOLS		PIPING SYMBOLS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
CW	DOMESTIC COLD WATER	[Symbol]	WALL HYDRANT	[Symbol]	GATE VALVE WITH CURB BOX
HW	DOMESTIC HOT WATER	[Symbol]	HOSE BIBB	[Symbol]	WATER METER
HWC	DOMESTIC HOT WATER CIRCULATING	[Symbol]	YARD HYDRANT	[Symbol]	GAS METER
HW	DOMESTIC HOT WATER AT TEMP. SHOWN	[Symbol]	BALANCING VALVE / FLOW MEASURING DEVICE	[Symbol]	THRUST BLOCK
W	SOIL OR WASTE	[Symbol]	BALL VALVE	[Symbol]	MANHOLE
BD	BUILDING DRAIN	[Symbol]	OS&Y GATE VALVE	[Symbol]	CATCH BASIN
BS	BUILDING SEWER	[Symbol]	SHUT-OFF VALVE	[Symbol]	FLOOR SINK
V	SANITARY VENT	[Symbol]	GLOBE VALVE	[Symbol]	ROOF DRAIN OR OVERFLOW DRAIN
SD	STORM DRAIN ABOVE FLOOR	[Symbol]	CHECK VALVE	[Symbol]	FLOOR CLEANOUT
SD	STORM DRAIN BELOW FLOOR	[Symbol]	BUTTERFLY VALVE		
OD	OVERFLOW DRAIN ABOVE FLOOR	[Symbol]	FLOW SWITCH		
OD	OVERFLOW DRAIN BELOW FLOOR	[Symbol]	SOLENOID VALVE		
SS	STORM SEWER	[Symbol]	PRESSURE REDUCING VALVE		
AW	ACID WASTE ABV. FLOOR	[Symbol]	GAS VALVE		
AW	ACID WASTE BEL. FLOOR	[Symbol]	MIXING VALVE		
AV	ACID VENT	[Symbol]	REDUCED PRESSURE BACKFLOW PREVENTER		
GW	GREASE WASTE	[Symbol]	ATMOSPHERIC VACUUM BREAKER		
SOD	SEDIMENT & OIL DRAIN	[Symbol]	WATER HAMMER ARRESTER		
G	NATURAL GAS	[Symbol]	RELIEF VALVE		
MFG	NATURAL GAS MEDIUM PRESSURE	[Symbol]	STRAINER		
LPG	PROPANE GAS	[Symbol]	STRAINER WITH BLOW-OFF VALVE		
CA	COMPRESSED AIR	[Symbol]	UNION		
T	TEMPERED WATER	[Symbol]	PRESSURE GAUGE		
TR	TEMPERED WATER CIRCULATION	[Symbol]	THERMOMETER		
FD	FOOTING DRAIN	[Symbol]	PRESSURE AND TEMPERATURE TAP		
IW	INDIRECT WASTE	[Symbol]	CONCENTRIC REDUCER		
PD	PUMP DISCHARGE LINE	[Symbol]	ECCENTRIC REDUCER		
FM	FORCE MAIN	[Symbol]	FLEXIBLE CONNECTOR		
LI	LAWN IRRIGATION	[Symbol]	AREA/FLOOR DRAIN		

PIPING SYMBOLS	
SYMBOL	DESCRIPTION
[Symbol]	ARROW IN LINE INDICATES DIRECTION OF FLOW
[Symbol]	INDICATES PIPE SLOPE DOWN
[Symbol]	REMOVE EXISTING
[Symbol]	BOTTOM PIPE CONNECTION
[Symbol]	PIPING UP
[Symbol]	PIPING DOWN
[Symbol]	FIXTURE OR DRAIN TRAP
[Symbol]	PIPING CAP OR PLUG
[Symbol]	PUMP

HVAC PIPING	
SYMBOL	DESCRIPTION
HS	HOT WATER SUPPLY
HR	HOT WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
CS	CONDENSER SUPPLY
CR	CONDENSER RETURN
LPS	LOW PRESSURE STEAM
LPC	LOW PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HPC	HIGH PRESSURE CONDENSATE
PC	PUMPED CONDENSATE
D	EQUIPMENT DRAIN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RHC	REFRIGERANT HOT GAS
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FOV	FUEL OIL VENT

FIRE PROTECTION PIPING	
SYMBOL	DESCRIPTION
F	FIRE SPRINKLER
A/S	AUTO SPRINKLER LINE
DSP	DRY STANDPIPE
WSP	WET STANDPIPE
CSP	COMBINED STANDPIPE
FDC	FIRE DEPT. CONNECTION
D	DRAIN
[Symbol]	POST INDICATOR VALVE
[Symbol]	EXISTING SPRINKLER HEAD
[Symbol]	UPRIGHT SPRINKLER HEAD
[Symbol]	PENDANT SPRINKLER HEAD
[Symbol]	DRY PENDANT SPRINKLER HEAD
[Symbol]	REMOVE EXISTING SPRINKLER HEAD
[Symbol]	REMOVE & RELOCATE EXISTING SPRINKLER HEAD
[Symbol]	NEW LOCATION EXISTING SPRINKLER HEAD
[Symbol]	ANGLE VALVE W/ DRAIN
[Symbol]	PUMP TEST HEADER
[Symbol]	SECTIONAL VALVE W/ DRAIN
[Symbol]	DOUBLE CHECK VALVE
[Symbol]	FIRE HOSE/VALVE CABINET
[Symbol]	FIRE DEPT. CONNECTION
[Symbol]	FIRE HYDRANT

DOUBLE LINE DUCTWORK		SINGLE LINE DUCTWORK	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
[Symbol]	RECTANGULAR SUPPLY AIR DUCT UP	[Symbol]	RECTANGULAR SUPPLY AIR DUCT UP
[Symbol]	RECTANGULAR SUPPLY AIR DUCT DOWN	[Symbol]	RECTANGULAR SUPPLY AIR DUCT DOWN
[Symbol]	RECT. RETURN/EXH AIR DUCT UP	[Symbol]	RECT. RETURN/EXH AIR DUCT UP
[Symbol]	RECT. RETURN/EXH AIR DUCT DOWN	[Symbol]	RECT. RETURN/EXH AIR DUCT DOWN
[Symbol]	ROUND DUCT UP	[Symbol]	ROUND DUCT UP
[Symbol]	ROUND DUCT DOWN	[Symbol]	ROUND DUCT DOWN
[Symbol]	BRANCH DUCT 45° TAKE-OFF	[Symbol]	BRANCH DUCT 45° TAKE-OFF
[Symbol]	RECTANGULAR DUCT ELBOW WITH TURNING VANES	[Symbol]	RECTANGULAR DUCT ELBOW WITH TURNING VANES
[Symbol]	RADIUS ELBOW RECTANGULAR/ROUND DUCT	[Symbol]	RADIUS ELBOW RECTANGULAR/ROUND DUCT
[Symbol]	DUCT TRANSITION	[Symbol]	DUCT TRANSITION
[Symbol]	FLEX CONNECTION	[Symbol]	CONICAL SPIN-IN FITTING
[Symbol]	MANUAL VOLUME DAMPER W/LOCKING QUADRANT	[Symbol]	CONICAL SPIN-IN FITTING W/DAMPER
[Symbol]		[Symbol]	FLEXIBLE DUCT

### GENERAL NOTES:

- GENERAL NOTES ON THIS DRAWING ARE APPLICABLE TO EACH MECHANICAL DRAWING OF THIS SET. SEE EACH DRAWING FOR SPECIFIC NOTES APPLICABLE TO THAT DRAWING.
- OUTSIDE AIR INTAKE OPENINGS FOR VENTILATION AIR SHALL BE LOCATED 10 FEET MEASURED IN ANY DIRECTION FROM ANY FLUES, VENTS, CHIMNEYS, GAS METERS, GAS REGULATORS, PLUMBING VENTS UNLESS TOP OF SUCH INTAKE OPENING IS 2 FEET BELOW ANY OF THE LISTED ITEMS.
- OVERHEAD PIPING IN SPACES WITHOUT HUNG CEILINGS SHALL BE RUN AS CLOSE TO ROOF DECK AS PRACTICABLE, AS CLOSE TO PARALLEL JOISTS AS POSSIBLE AND ABOVE LIGHTING FIXTURES TO CONCEAL PIPING.
- OVERHEAD DUCTWORK AND PIPING IN SPACES WITH CEILINGS SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
- COORDINATE LOCATION OF GRILLES, REGISTERS, DIFFUSERS, THERMOSTATS AND OTHER WALL OR CEILING MOUNTED HVAC ACCESSORIES WITH REFLECTED CEILING PLAN. COORDINATE LIGHTING FIXTURE LAYOUT AND ACCESSORIES INSTALLED BY OTHER TRADES SO AS TO PRESENT A NEAT AND ATTRACTIVE INSTALLATION THROUGHOUT THE ENTIRE BUILDING. IT IS THE INTENT FOR CEILING MOUNTED GRILLES, REGISTERS AND DIFFUSERS TO BE INSTALLED IN THE CENTER OF CEILING PANELS.
- ARRANGE PIPING AND DUCTWORK, PARTICULARLY ABOVE CEILING, AS REQUIRED TO CLEAR STRUCTURE, DUCTS, CONDUIT, ETC., ALLOWING SPACE FOR PIPE HANGERS, EXPANSION LOOPS AND ACCESS TO VALVES, FILTERS AND MAINTENANCE OF EQUIPMENT.
- THE DIAMETER OF THE SUPPLY PIPE AT ANY GAS FIRED EQUIPMENT SHALL NOT BE OF A SMALLER SIZE THAN THE INLET CONNECTION TO THE EQUIPMENT.
- EQUIPMENT WITH FILTERS SHALL BE INSTALLED SO THAT FILTERS CAN BE EASILY REMOVED AND REPLACED.
- CONTRACTOR SHALL VERIFY REFRIGERANT PIPE SIZES WITH EQUIPMENT MANUFACTURER FOR THE INDICATED INSTALLATION.
- COORDINATE LOCATION AND INSTALLATION OF EQUIPMENT WITH OTHER TRADES.
- THERMOSTATS SHALL BE LOCATED IN THE ROOMS INDICATED. INSTALL AT 4'-0" ABOVE FINISH FLOOR.
- VALVES AND SPECIALTIES SHALL BE LINE SIZE, EXCEPT FOR CONTROL & BALANCING VALVES OR UNLESS NOTED OTHERWISE.
- EXTEND DRAIN LINES TO NEAREST FLOOR DRAIN OR AS INDICATED. ROUTING SHALL NOT INTERFERE WITH PASSAGEWAYS AND MAINTENANCE. DRAINS FROM AIR CONDITIONING CONDENSATE DRAIN PANS SHALL BE TRAPPED. SLOPE SUSPENDED CONDENSATE DRAIN PIPING AT 1/8" PER FOOT (1 PER 100).
- PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH NON-RATED FLOORS, WALLS AND PARTITIONS, UNLESS OTHERWISE NOTED.
- NO PIPING SHALL BE SMALLER THAN 1/2" UNLESS OTHERWISE NOTED.
- RUN-OUTS SHALL PITCH DOWN IN DIRECTION OF FLOW A MINIMUM OF 1/8" PER FOOT (1PER 100).
- FOR PIPE SIZES NOT INDICATED ON PLANS SEE EQUIPMENT CONNECTION DETAILS, FLOW DIAGRAMS, RISER DIAGRAMS AND SCHEDULES.
- PROVIDE UNION OR FLANGED CONNECTIONS AT EACH PIECE OF EQUIPMENT AND ON BOTH SIDES OF CONTROL VALVES AND PRESSURE REGULATING VALVES. PROVIDE SHUT-OFF VALVES ON BOTH SIDES OF AUTOMATIC VALVES.
- RELIEF VALVE DRAIN PIPING SHALL BE EXTENDED TO 6" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- FLOOR MOUNTED EQUIPMENT IN THE MECHANICAL ROOM SHALL BE LOCATED ON 6" THICK CONCRETE PADS WITH CHAMFERED EDGES UNLESS OTHERWISE NOTED.
- PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATION. ADDITIONAL SUPPORTS OR HANGERS SHALL BE ADJACENT TO ELBOWS, TO PREVENT WEIGHT OF PIPING BEING PLACED ON THE EQUIPMENT.
- CORRECT SETTING ON BALANCING FITTINGS SHALL BE PERMANENTLY MARKED.
- LOCATE AND SIZE CONCRETE PADS AND CURBS FOR MECHANICAL EQUIPMENT IN ACCORDANCE WITH ACTUAL EQUIPMENT PURCHASED.
- FOR LOCATION OF MOTOR STARTERS, SEE ELECTRICAL DRAWINGS.

### PLUMBING GENERAL NOTES

- MAKE PROPER PIPING CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAINS, ELBOWS AND CONNECTIONS ARE NOT SHOWN.
- COORDINATE WITH ARCHITECTURAL WORKING DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES.
- UNLESS OTHERWISE NOTED, PIPING SHALL BE RUN AS HIGH AS POSSIBLE, CONCEALED ABOVE CEILINGS, IN WALLS AND PARTITIONS, AND IN PIPE CHASES.
- SLOPES AND INVERT ELEVATIONS SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED.
- ALL PIPING SHALL BE LOCATED AND DETERMINED WHERE TO BE RUN TO AVOID CONFLICT WITH OTHER TRADES.
- ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED.
- ALL HOSE BIBBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE SPECIFIED.
- COORDINATE WORK WITH OTHER TRADES SO AS NOT TO DISTURB NEW OR REPAIRED FINISHES.
- ALL PLUMBING VENTS IN EXTERIOR WALLS SHALL BE OFF-SET A MINIMUM OF 3'-0" AT ROOF BEFORE ROOF PENETRATION.
- ALL PLUMBING VENTS WITHIN A 10'-0" RADIUS OF EXHAUST VENTS SHALL BE EXTENDED TO A HEIGHT OF 2'-0" ABOVE EXHAUST VENT CROWN.
- ALL HOT AND COLD WATER PIPING INDICATED TO BE RUN ABOVE FINISHED CEILINGS OR IN EXTERIOR WALLS SHALL BE INSTALLED ON THE CONDITIONED SPACE SIDE OF THE BUILDING INSULATION.
- SLOPES AND INVERT ELEVATIONS OF EXTERIOR SEWERS, MANHOLES, ETC. SHALL BE ESTABLISHED AND VERIFIED BY THE CONTRACTOR BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED AND NECESSARY INVERT ELEVATION OBTAINED.
- PROVIDE DEEP SEAL P-RAPS (4" MAX) WITH TRAP SEAL PRIMERS FOR ALL FLOOR DRAINS.

### DEMOLITION NOTES:

- EXISTING HVAC PIPING, DUCTWORK AND EQUIPMENT SHOWN IS BASED ON EXISTING AND FIELD OBSERVATION WITHOUT DEMOLITION. DURING DEMOLITION, ANY CLARIFICATION REQUIRED TO DETERMINE SCOPE OF WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
- THE CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, PRIOR TO STARTING DEMOLITION.
- DRAWINGS DO NOT SHOW EVERY EXISTING PIPE, CONDUIT, DUCT, ETC. CONTRACTOR SHALL TAKE CARE TO REMOVE ONLY ITEMS REQUIRED TO BE REMOVED AND VERIFY PIPES, DUCTS, ETC. BEFORE REMOVAL.

### SHEET METAL GENERAL NOTES

- INSTALL CEILING REGISTERS A MINIMUM OF 12" FROM EXTERIOR WALL.
- PROVIDE A MINIMUM OF THREE TIMES THE FAN DIAMETER OF STRAIGHT DUCTWORK OFF THE SUPPLY AIR DISCHARGE BEFORE ANY TAKEOFFS OR ELBOWS.
- PROVIDE LOCKING QUADRANT VOLUME BALANCING DAMPERS AT ALL BRANCH TAKEOFFS TO CEILING/SIDEWALL SUPPLY AND EXHAUST DEVICES
- SPACE ABOVE CEILING IS TO BE USED AS A RETURN AIR PLENUM WHERE DUCTWORK IS NOT INDICATED ABOVE RETURN AIR GRILLES.
- PROVIDE ACCESS DOORS IN DUCTWORK WHERE INDICATED OR REQUIRED FOR ACCESS TO SYSTEM COMPONENTS INCLUDING THE FOLLOWING: DAMPER MOTORS AND/OR MOTOR OPERATED DAMPERS, FIRE DAMPERS AND SMOKE DAMPERS.
- DUCT DIMENSIONS SHOWN ON DRAWINGS ARE NET FREE INTERIOR, NOT INCLUDING LINING OR INSULATION.

### DESIGN CONDITIONS

ROOM DESCRIPTION	INDOOR		OUTDOOR		
	FDB	%RH	FDB	TWB	FDB
DATA CLOSETS	85	30-40	85	61	-1
ELEVATOR MACHINE ROOM	85	--	65	61	-1
--	--	--	--	--	--
--	--	--	--	--	--

ABBREVIATIONS			
BFP	BACKFLOW PREVENTER	GC	GENERAL CONTRACTOR
CB	CATCH BASIN	LD	LINE CLEAN OUT
CC	CENTERLINE	MC	MECHANICAL CONTRACTOR
DNZ	DOWNSPOUT NOZZLE	(N)	NEW
(E)	EXISTING	INC	NOT IN CONTRACT
EC	ELECTRICAL CONTRACTOR	NO	NORMALLY OPEN
EL	ELEVATION	NTS	NOT TO SCALE
FO	FLOOR CLEAN OUT	PRV	PRESSURE REDUCING VALVE
		POC	POINT OF CONNECTION
		SRV	SAFETY RELIEF VALVE
		TW	THERMOSTATIC MIXING VALVE
		TRP	TYPICAL
		WSD	WALL CLEAN OUT
		VR	VENT THROUGH ROOF

### PLOTTING NOTES:

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- LETTER SIZE: (NOT SCALE)

### GENERAL NOTES:

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- CONTRACTORS + A/E'S ARE RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS WITHIN THE PROJECT AREA.

DEPARTMENT OF VETERANS AFFAIRS  
**MEDICAL CENTER**  
 1055 Clermont Street  
 Denver, Colorado, 80220

Drawing Title  
**MECHANICAL LEGEND AND GENERAL NOTES**

Approved Project Director

Project Title  
**O+T DUMBWAITER VENTILATION AND ELEVATOR**

Location  
 DENVER VA MEDICAL CENTER

Date  
 APRIL 26, 2013

Checked  
 R. OSTLER

Drawn  
 P. MCDONALD

Project Number  
 554-13-806

Building Number  
 BUILDING 1

Drawing Number  
**MH001**

Dwg 2 of 6

Office of Construction and Facilities Management

Department of Veterans Affairs

FULLY SPRINKLERED  
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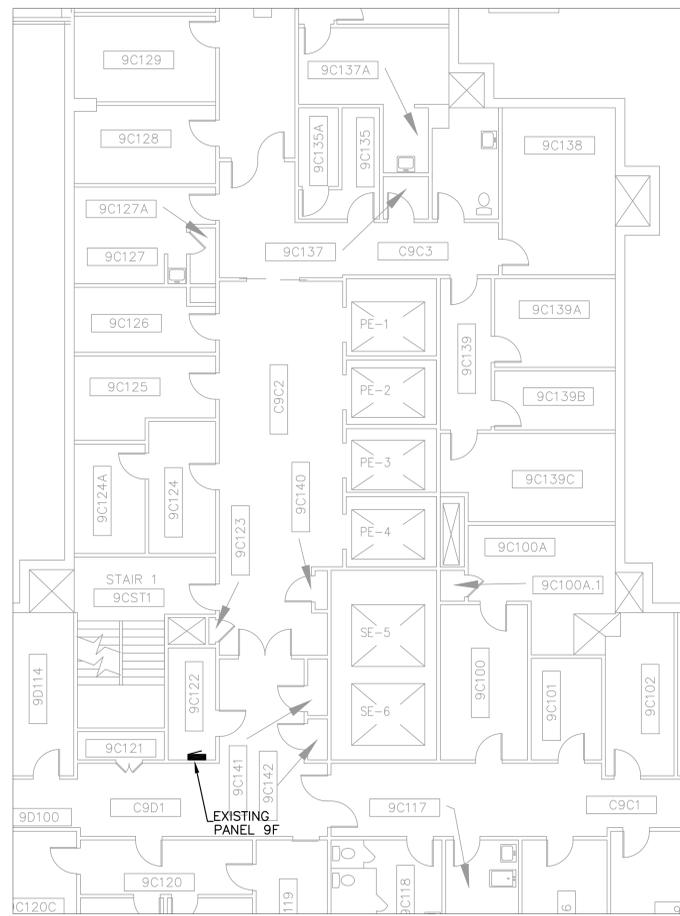




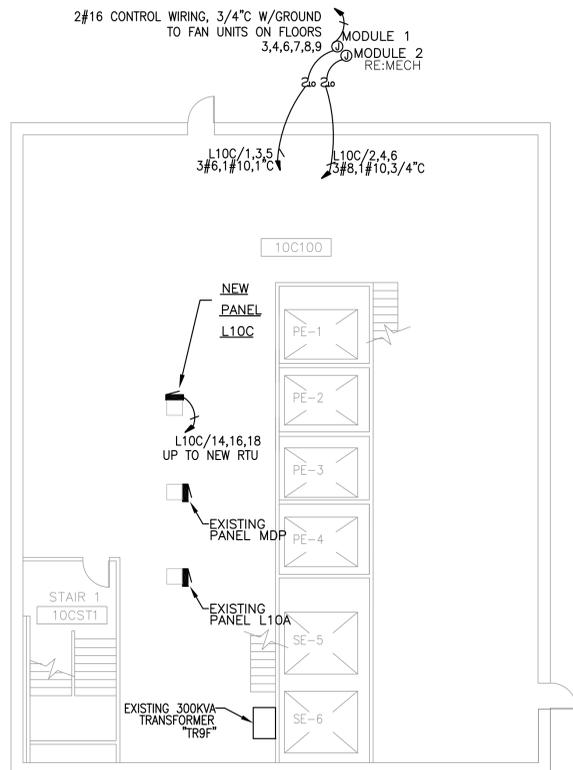
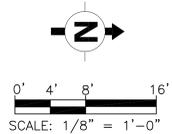
three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot  
 one sixteenth inch = one foot

FULLY SPRINKLERED

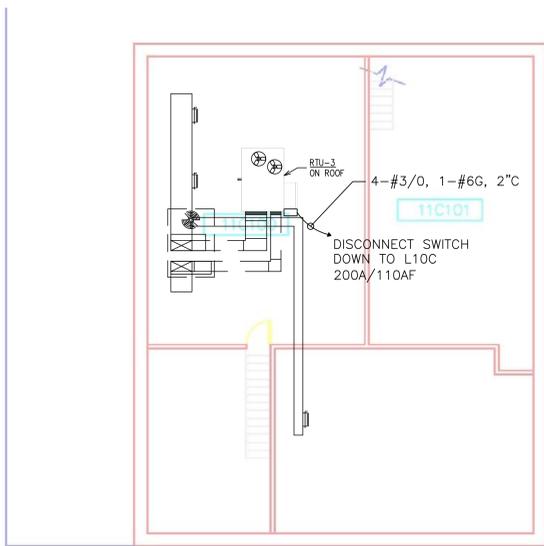
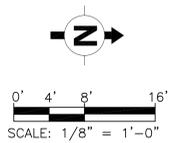
100% CONSTRUCTION DOCUMENTS



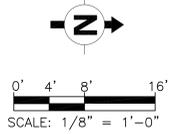
1 9th FLOOR POWER PLAN



2 10th FLOOR POWER PLAN



3 11th FLOOR POWER PLAN



Branch Panel: **9F** ①

Location: BUILDING 1 9TH FLOOR C WING. Volts: 120/208 WYE. A.I.C. Rating: - AIC  
 Manufacturer: ITE GOULD TYPE CDP Phases: 3 Mains Type: MLO  
 Mounting: SURFACE Wires: 4 Mains Rating: 800 A  
 MCB Rating: NONE

Notes:

Circuit Number	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	Circuit Number
1	SPARE	175	3	3	150	PANEL D	2
3							4
5							6
7	PANEL C	150	3	3	125	PANEL PP	8
9							10
11							12
13	PANEL A	175	3	3	150	PANEL B	14
15							16
17							18
19	PANEL PE	100	3	3	100	CHILLER DRUG TRIMNT	20
21							22
23							24
25	DISCONNECT SQ D	100	2	3	100	SPARE	26
27							28
29	SPACE						30

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
LIGHTING	-	125%	-	Total Conn. Load: - VA
RECEPTACLE	-	100%	-	Total Est. Demand: - VA
RECEPTACLE	-	50%	-	Total Conn.: - A
MOTOR	-	100%	-	Total Est. Demand: - A
LARGEST MOTOR	-	25%	-	Total Conn.: - A
MISCELLANEOUS	-	100%	-	
KITCHEN	-	100%	-	

PANEL KEYNOTES:

- PANEL 9F IN THE FIELD OR LL9F PER THE ONE LINE IS AN EXISTING PANEL BOARD LOCATED IN 9TH FLOOR ZONE C.
- RE-USE 3PH CIRCUIT#1,3,5 SPARE BREAKER FOR NEW PANEL LOCATED IN THE 10TH FLOOR.

Branch Panel: **L10C** ③

Location: BUILDING 1 10TH FLOOR C WING. Volts: 120/208 WYE. A.I.C. Rating: 10KAIC  
 Manufacturer: PER VA Phases: 3 Mains Type: MLO  
 Mounting: SURFACE Wires: 4 Mains Rating: 200 A  
 MCB Rating: NONE

Notes:

Circuit Number	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	Circuit Number
1	COOLING UNIT-MODULE 1	50	3	3	35	COOLING UNIT-MODULE 2	2
3							4
5							6
7	SPARE	50	3	3	-		8
9							10
11							12
13							14
15							16
17							18

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
LIGHTING	-	125%	-	Total Conn. Load: - VA
RECEPTACLE	-	100%	-	Total Est. Demand: - VA
RECEPTACLE	-	50%	-	Total Conn.: - A
MOTOR	-	100%	-	Total Est. Demand: - A
LARGEST MOTOR	-	25%	-	Total Conn.: - A
MISCELLANEOUS	-	100%	-	
KITCHEN	-	100%	-	

PANEL KEYNOTES:

- PROVIDE NEW PANEL BOARD "L10C" ON THE 10TH FLOOR. PANEL L10C TO BE SURFACE MOUNTED CLOSER TO THE NEW MECHANICAL EQUIPMENT.
- PANEL SIZE WILL BE A 200 MLO FED FROM EXISTING PANEL 9F CIRCUIT 1,3,5 BREAKER 175A

PLOTTING NOTES:

- FULL SIZE V.A. "E" SHEET (AS INDICATED)
- HALF SIZE V.A. "D" SHEET (1/2 THE INDICATED SCALE)
- LETTER SIZE: (NOT SCALE)

GENERAL NOTES:

- SCALED DIMENSIONS + ARCHITECTURAL FEATURES MAY NOT BE CORRECT.
- CONTRACTORS + A/E'S ARE RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS WITHIN THE PROJECT AREA.

DEPARTMENT OF VETERANS AFFAIRS  
 MEDICAL CENTER  
 1055 Clermont Street  
 Denver, Colorado, 80220

Drawing Title	POWER PLAN
Approved Project Director	

Project Title	O+T DUMBWATER VENTILATION AND ELEVATOR
Project Number	554-13-806
Building Number	BUILDING 1
Location	DENVER VA MEDICAL CENTER
Date	APRIL 26, 2013
Checked	R. OSTLER
Drawn	D. SILVA
Drawing Number	EPI00
Dwg	5 of 6

Office of Construction and Facilities Management

