Department of Transportation
Federal Aviation Administration

Security System Modernization and Upgrade
Denver TRACON
Denver, Colorado

December 2010

Jacobs

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A NEED TO KNOW, AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

JE JACOBS

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA

TRACON
SECURITY SYSTEM MODERNIZATION & UPGRADE
COVER SHEET

DENVER DENVER INTERNATIONAL AIRPORT CO

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJECT ENGINEER	MGR: ENGR'G - SEATTLE
DESIGNED	ISSUED BY	DATE 5/9/2011 JCN 1000625
DRAWN	ENGINEERING SERVICES INFRASTRUCTURE	DRAWING NO. DEN-1000625-G001 REV
CHECKED		

DENVER TRACON
DENVER
COLORADO

ISSUED FOR CONSTRUCTION

CONSTRUCTION STAGING NOTES

THE FOLLOWING NOTES REPRESENT MANY OF THE MAJOR REQUIREMENTS STATED IN "DIVISION 1 GENERAL REQUIREMENTS" OF THE SPECIFICATIONS. THESE NOTES PARAPHRASE DIVISION 1 REQUIREMENTS AND ARE NOT INTENDED TO MODIFY OR REPLACE DIVISION 1 REQUIREMENTS.

CONSTRUCTION ACCESS, PARKING, OFFICES AND EXTENT/SIZE OF CONSTRUCTION STAGING AREA SHALL BE COORDINATED WITH SITE PERSONNEL VIA COTR; PARTICULARLY IN CONJUNCTION WITH ONGOING PROJECTS. CONSTRUCTION STAGING AREA SIZE TO BE DETERMINED AT PRECONSTRUCTION CONFERENCE.

A. CONSTRUCTION ACCESS

A.1 VEHICLES, PEDESTRIAN AND DELIVERIES TO SITE SHALL BE THROUGH MAIN ENTRANCE SECURITY GATE. ALTERNATE SITE ACCESS DURING GUARDHOUSE WORK SHALL BE DETERMINED & COORDINATED WITH COTR.

A.2 PROVIDE SIGNAGE TO INDICATE ACCESS ROUTE FOR CONSTRUCTION EMPLOYEES AND DELIVERIES ON SITE. PROVIDE NECESSARY BARRICADES, LIGHTS, SIGNAGE AND FENCING TO PROTECT, WARN AND DIRECT PERSONS NEAR CONSTRUCTION AREAS.

A.3 ACCESS TO BUILDING SHALL BE LIMITED AS DIRECTED BY COTR

A.4 KEEP LOADING DOCK ACCESSIBLE FOR FAA DELIVERIES.

A.5 DELIVERIES SHALL BE SCHEDULED AND APPROVED IN ADVANCE WITH COTR AND AT TIMES OTHER THAN FAA EMPLOYEES SHIFT CHANGES TO AVOID CONGESTION.

B. CONTRACTOR PARKING

B.1 PARKING SHALL BE LIMITED TO CONSTRUCTION STAGING AREA. PROVIDE ADDITIONAL CONSTRUCTION EMPLOYEE PARKING OFF-SITE. EXISTING PARKING SPACES AT TRACON ARE OFF-LIMITS FOR CONTRACTOR PARKING. CONSTRUCTION PARKING SHALL NOT BLOCK FAA ACCESS TO THE FACILITY, NOR INTERFERE WITH FAA OPERATIONS.

COORDINATE WITH COTR.

C. FAA SECURITY REQUIREMENTS

C.1 AN ADVANCE LIST AND WEEKLY LOG OF CONTRACTOR'S PERSONNEL SHALL BE PROVIDED TO COTR. TEMPORARY SECURITY BADGES SHALL BE ISSUED TO CONSTRUCTION PERSONNEL. CONTRACTOR'S SUPERVISORY PERSONNEL SHALL BE RESPONSIBLE FOR CONDUCT OF THEIR PERSONNEL WHILE IN THE BUILDING. CONTRACTOR'S VEHICLES SHALL BE MARKED. REFER TO DIVISION 1 FOR MORE DETAILED REQUIREMENTS.

C.2 SITE IS A SECURE AREA AND CONSTRUCTION PERSONNEL SHALL REMAIN IN CONSTRUCTION AREAS.

C.3 FAA ESCORTS SHALL BE REQUIRED FOR CONSTRUCTION PERSONNEL WORKING WITHIN THE BUILDINGS, UNLESS CONSTRUCTION PERSONNEL HAVE A FAA BLUE BADGE TO ESCORT UNBADGED CREW. COORDINATE WORK WITHIN THE BUILDINGS IN ADVANCE WITH COTR. REFER TO DIVISION 1 FOR MORE DETAILED REQUIREMENTS.

C.4 USE GREAT CARE AND CAUTION WHILE WORKING IN ALL AREAS OF THIS FACILITY. WORK SHALL BE COORDINATED WITH COTR. DISRUPTION OF THIS FACILITY SHALL NOT BE PERMITTED.

C.5 EXISTING FAA AIR TRAFFIC EQUIPMENT SHALL REMAIN OPERATIONAL THROUGHOUT DURATION OF THIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS PROTECTION OF THIS EQUIPMENT FROM PHYSICAL OR ELECTRICAL DAMAGE AS A RESULT OF INCIDENTAL OR ACCIDENTAL NEGLIGENCE SUCH AS, BUT NOT LIMITED TO, DISRUPTION OF POWER TO UNITS. NOTIFY COTR IMMEDIATELY OF DAMAGE OR DISRUPTION OF ELECTRICAL SERVICES. **LOSS OF THIS EQUIPMENT FOR ANY AMOUNT OF TIME WILL JEOPARDIZE SAFETY OF THE FLYING PUBLIC AND MAY RESULT IN CRIMINAL CHARGES AGAINST THE CONTRACTOR.**

D. CONSTRUCTION MATERIAL STORAGE

D.1 STORAGE OF CONSTRUCTION MATERIALS AND TRAILERS ON SITE SHALL BE LIMITED TO THE CONSTRUCTION STAGING AREA. THE CONSTRUCTION STAGING AREA SHALL BE SURROUNDED BY A FENCE. MATERIALS SHALL BE NEATLY STORED AND PROTECTED. LIGHTING SHALL BE INSTALLED BY THE CONTRACTOR AT THE DISCRETION OF COTR. NO DIGGING SHALL BE DONE WITHOUT PRIOR PERMISSION FROM COTR. BURIED CABLES (UNDERGROUND UTILITIES) MAY RUN THROUGH STAGING AREA AND ELSEWHERE.

E. CONSTRUCTION DEBRIS

E.1 ENCLOSED DUMPSTERS FOR DISPOSAL OF CONSTRUCTION DEBRIS SHALL BE PROVIDED BY CONTRACTOR WITHIN THE CONSTRUCTION STAGING AREA. COORDINATE LOCATIONS WITH COTR. AREAS AROUND DUMPSTERS SHALL BE KEPT CLEAN AND FREE OF EXCESS DEBRIS AND DUST DURING CONSTRUCTION. DEBRIS SHALL BE REMOVED BY CONTRACTOR DAILY.

E.2 FAA DUMPSTERS SHALL NOT BE USED FOR DISPOSAL OF WASTE OR DEBRIS ASSOCIATED WITH THIS WORK.

G. CONSTRUCTION OFFICE

G.1 COORDINATE THE LOCATION OF CONSTRUCTION TRAILERS WITH THE APPROVAL OF COTR. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THEIR OWN UTILITIES INCLUDING ELECTRICITY, TELEPHONE AND WATER AND IS RESPONSIBLE FOR UTILITY HOOK-UPS AND TRANSFERS OF DROP POLE LOCATIONS. COORDINATE LOCATION OF TEMPORARY POWER SOURCE WITH COTR. CONTRACTOR SHALL INSTALL CONCRETE FILLED BOLLARDS TO PROTECT POWER SOURCE FROM VEHICULAR TRAFFIC. COORDINATE WITH COTR LOCATING OVERHEAD POWER LINES TO CONSTRUCTION STAGING AREA. USE OF CELL PHONE FOR COMMUNICATION IS ALLOWED WITH EXCEPTIONS. PRIOR TO WORK COORDINATE WITH COTR LOCATIONS WHERE CELL PHONE USE IS PROHIBITED.

H. CONSTRUCTION TOILET FACILITIES

H.1 PORTABLE CHEMICAL TOILETS SHALL BE PROVIDED BY CONTRACTOR, COORDINATE THEIR LOCATION WITH COTR. TOILETS INSIDE FACILITY ARE FOR FAA USE ONLY.

I. DEMOLITION AND CONSTRUCTION HOURS

I.1 WORK SHALL NOT INTERFERE WITH AIR TRAFFIC CONTROL FUNCTION OF THIS FACILITY. DEMOLITION AND CONSTRUCTION NOISE SHALL BE MINIMIZED BETWEEN 9:00 AM AND 5:00 PM, OR AS DIRECTED BY COTR.

I.2 COORDINATE WORK WITH COTR ON CRITICAL EQUIPMENT WITHIN THE TRACON. WORK ON CRITICAL EQUIPMENT SHALL BE ACCOMPLISHED DURING OFF-HOURS OF 12:00 PM (MIDNIGHT) TO 5:00 AM, OR AS DIRECTED BY COTR.

I.3 NOISY DEMOLITION (INSIDE OR OUTSIDE) AND OFF-HOURS CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED, COORDINATED AND APPROVED IN WRITING BY COTR WITH A MINIMUM OF 10 WORKING DAYS NOTICE IN ADVANCE OF PERFORMANCE OF THE WORK.

I.4 CONCRETE SAWING, CORE DRILLING, CONCRETE DEMOLITION AND ANCHOR DRILLING SHALL BE ALLOWED ONLY AT PREARRANGED TIMES APPROVED BY COTR. SCHEDULE, COORDINATE AND HAVE APPROVAL BY COTR IN WRITING, A MINIMUM OF 10 WORKING DAYS BEFORE THE PERFORMANCE OF THE WORK.

L. PARKING LOT AND DRIVEWAY REPAIR

L.1 UPON COMPLETION OF WORK REPAIR PAVED SURFACES TO ORIGINAL CONDITION, INCLUDING ANY PAVEMENT STRIPING, AT THE CONSTRUCTION STAGING AREA(S).

L.2 DISTURBED LAWNS AND LANDSCAPING INCLUDING BUT NOT LIMITED TO SPRINKLER SYSTEM, SIDEWALKS AND CURBS. SHALL BE RESTORED TO ORIGINAL CONDITION TO THE SATISFACTION OF COTR.

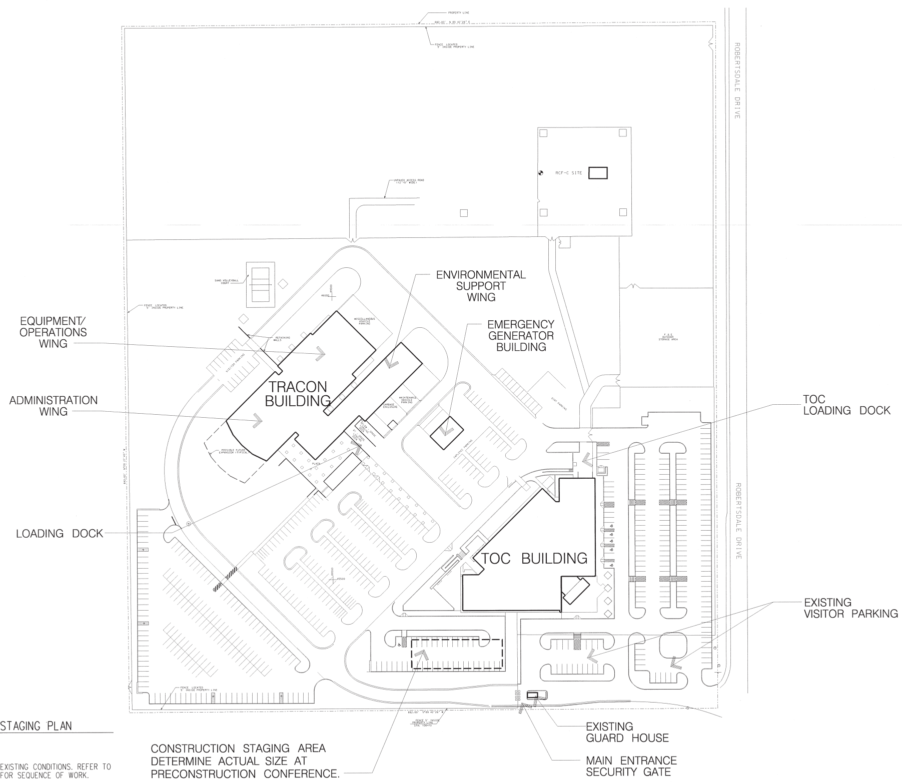
M. EQUIPMENT PROTECTION

M.1 PROTECT FAA EQUIPMENT, BOTH INSIDE AND OUTSIDE BUILDING, FROM DAMAGE, INCLUDING BUT NOT LIMITED TO, DAMAGE CAUSED BY IMPACT, WATER, ASBESTOS, DEBRIS AND DUST, INCLUDING CORE DRILLING.

M.2 SHUTDOWNS AND SWITCHOVERS OF MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE ACCOMPLISHED DURING OFF-HOURS AS INDICATED IN NOTE I.2 THIS SHEET UNDER DEMOLITION AND CONSTRUCTION HOURS. PREPARATORY WORK SHALL BE COMPLETED PRIOR TO SHUTDOWN AND SWITCHOVER. SCHEDULE, COORDINATE AND HAVE APPROVAL IN WRITING BY COTR WITH A MINIMUM OF 10 WORKING DAYS NOTICE IN ADVANCE OF PERFORMANCE OF WORK. ONLY FAA SPECIALIST ARE PERMITTED TO OPERATE CIRCUIT BREAKERS OR TURN WATER ON/OFF. REQUEST PERMISSION OF FAA IN ADVANCE AND IN WRITING FOR EACH CASE OF BREAKER OPERATION OR TO OPEN OR CLOSE A PLUMBING VALVE.
DO NOT OPEN (DE-ENERGIZE) OR CLOSE (ENERGIZE) ANY CIRCUIT BREAKER AT ANY TIME.

M.3 THE TRACON IS A 24 HOUR 7 DAY PER WEEK OPERATING FACILITY. IT IS NECESSARY TO COORDINATE CONSTRUCTION ACTIVITY SO AS NOT TO INTERFERE WITH FUNCTIONS OF THE TRACON.

M.4 NO WELDING EQUIPMENT SHALL BE POWERED BY THE FACILITY ELECTRICAL SYSTEM. WELDING SHALL NOT BE PERMITTED IN FAA OCCUPIED AREAS UNLESS APPROVED IN WRITING BY COTR.



A1 / G002 CONSTRUCTION STAGING PLAN
SCALE: NTS

NOTE:
CONSTRUCTION STAGING PLAN INDICATES EXISTING CONDITIONS. REFER TO CIVIL FOR CONSTRUCTION PHASING PLAN FOR SEQUENCE OF WORK.

DRAWING INDEX

REV LTR	DRAWING NUMBER	DRAWING TITLE
		GENERAL
	G001	COVER SHEET
	G002	DRAWING INDEX, GENERAL AND CONSTRUCTION STAGING NOTES
	G003	ABBREVIATIONS AND LEGENDS
		CIVIL
	C001	CIVIL ABBREVIATIONS, LEGEND AND GENERAL NOTES
	C101	SITE REMOVAL PLAN
	C102	EROSION AND SEDIMENT CONTROL PLAN
	C103	CONSTRUCTION PHASING PLAN
	C200	OVERALL SITE LAYOUT PLAN
	C201	SITE LAYOUT PLAN
	C301	SITE GRADING PLAN
	C401	SITE UTILITY PLAN
	C501	STORM SEWER PROFILES
	C601	DETAILS
	C602	DETAILS
	L201	LANDSCAPE PLAN
		ARCHITECTURAL
	A101	DEMOLITION - EXISTING GUARD HOUSE
	A201	TRACON BUILDING - FIRST AND SECOND FLOOR PLANS
	A202	TRACON BUILDING - ATTIC FLOOR AND ROOF PLANS
	A203	TOC BUILDING - FIRST AND SECOND FLOOR PLANS
	A204	TOC BUILDING - ATTIC/ROOF PLAN AND ENGINE GENERATOR BUILDING AND DOOR SCHEDULE
	A205	GUARD HOUSE - PLANS AND TOILET ROOM ELEVATIONS
	A301	GUARD HOUSE - BUILDING ELEVATIONS AND SECTIONS
	A401	GUARD HOUSE - EXTERIOR DETAILS
	A701	GUARD HOUSE - INTERIOR ELEVATIONS, SECTIONS AND DETAILS
	A801	GUARD HOUSE - DOOR, FINISH AND PARTITION TYPE SCHEDULES
		STRUCTURAL
	S201	STRUCTURAL PLANS, SECTIONS, DETAILS AND NOTES
		MECHANICAL
	M001	HVAC AND PLUMBING ABBREVIATIONS, LEGEND AND GENERAL NOTES
	M101	HVAC AND PLUMBING FLOOR PLANS AND SCHEDULES
	M102	HVAC AND PLUMBING SECTIONS AND DETAILS
		ELECTRICAL
	E001	ELECTRICAL ABBREVIATIONS, LEGEND AND GENERAL NOTES
	E101	SITE PLAN - DEMOLITION
	E201	SITE PLAN - POWER AND SECURITY
	E202	SITE PLAN - LIGHTING AND GROUNDING
	E301	TRACON AND EMERGENCY GENERATOR BUILDING FIRST FLOOR - POWER AND SECURITY
	E302	TOC BUILDING FIRST FLOOR - POWER AND SECURITY
	E303	GUARD HOUSE FLOOR PLANS
	E701	LIGHTING FIXTURE AND PANEL SCHEDULES
	E801	DETAILS
	E802	DETAILS
		FIRE PROTECTION
	Y201	FIRE ALARM FLOOR PLAN, RISER DIAGRAM AND MATRIX

GENERAL NOTES

A. DIMENSION LINES SHOWN ON ARCHITECTURAL SHEETS ARE FROM COLUMN CENTER LINES AND FACE OF MASONRY, CONCRETE OR FINISHED FACE OF WALL, UNLESS OTHERWISE NOTED.

B. FIELD VERIFY EXISTING CONDITIONS & DIMENSIONS BEFORE DEMOLITION OF BUILDING SYSTEMS. COORDINATE DEMOLITION WITH THE WORK AND NOTIFY COTR OF CONFLICTS. NO DEMOLITION WORK SHALL PROCEED UNTIL CONFLICTS ARE RESOLVED TO SATISFACTION OF COTR.

C. FINISHES & ASSOCIATED ADJACENT FINISHES AFFECTED BY THE WORK SHALL BE PATCHED AND REPAIRED TO MATCH EXISTING FINISHES.

D. VERIFY DEMOLITION REQUIRED TO FACILITATE ROUTING OF MECHANICAL AND ELECTRICAL SYSTEMS. FOR DEMOLITION REQUIRED OUTSIDE OF AREA SHOWN ON ARCHITECTURAL DRAWINGS, REFER TO MECHANICAL, ELECTRICAL AND CIVIL FOR ITEMS TO BE REMOVED.

E. EXISTING BUILDINGS WILL BE OCCUPIED BY FAA DURING CONSTRUCTION. COORDINATE WITH COTR WORK TO NOT DISRUPT FAA OPERATIONS.

F. CLEAN CONSTRUCTION AREAS DAILY. CONSTRUCTION DEBRIS & EQUIPMENT SHALL NOT BE LEFT IN OCCUPIED AREAS.

G. MAINTAIN FIRE RATINGS OF FIRE RATED ASSEMBLIES IN FLOORS, WALLS, CEILINGS, ROOFS OR SMOKE BARRIERS PENETRATED BY DUCTS, ELECTRICAL CONDUITS, PIPES AND OTHER PENETRATIONS CAUSED BY THE WORK OF THIS PROJECT WITH AN APPROVED U.L. SYSTEM. WHERE WORK IS REQUIRED ON BUILDINGS WHICH ARE PART OF THE FACILITY. COORDINATE WITH COTR TO VERIFY EXISTING CONDITION OF BUILDING SYSTEMS (INCLUDING EXTERIOR WALLS, PARTITIONS, FLOORS, CEILINGS AND ROOFS) BEFORE ANY DEMOLITION OR NEW CONSTRUCTION.

H. DO NOT SCALE DRAWINGS.

I. EXISTING FAA COMPUTER AND OTHER SENSITIVE EQUIPMENT SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. COORDINATE WITH COTR DEMOLITION WORK THAT MAY CAUSE VIBRATION OR DISRUPTION TO EQUIPMENT IN THE WORK AREA. PROVIDE DUST PROOF PARTITIONS AND BARRIERS AS REQUIRED BY COTR TO PROTECT ACTIVE EQUIPMENT. COORDINATE WITH COTR NOT TO DISRUPT FAA OPERATIONS, TYP.

CONTRACTOR SHALL ACCOMODATE THE 24-HOUR OPERATIONAL FACILITY SCHEDULE AND REQUIREMENTS.

J. PROVIDE OPENINGS THROUGH EXISTING WALLS (GWB, MASONRY AND CONCRETE) FOR PROVISION OF ARCHITECTURAL, MECHANICAL, ELECTRICAL & FIRE PROTECTION EQUIPMENT. COORDINATE SIZE & LOCATION WITH MECHANICAL AND ELECTRICAL.

K. PART OF THE WORK OF THIS PROJECT IS TO PROVIDE SUPPORT FOR SECURITY SYSTEMS AND EQUIPMENT BEING PROVIDED AND INSTALLED BY OTHERS IN A SEPARATE CONTRACT, WHICH MAY BE DONE AT A FUTURE TIME. PART OF THE WORK OF THIS PROJECT IS ALSO TO PROVIDE SUPPORT FOR GOVERNMENT FURNISHED EQUIPMENT WHICH WILL BE INSTALLED BY THE CONTRACTOR FOR THIS PROJECT.

THESE DOCUMENTS (CALLED THE "BRICKS AND MORTAR" PACKAGE FOR THE OVERALL FAA SECURITY SYSTEM MODERNIZATION UPGRADE PROJECT) REFLECT THE MOST CURRENT INFORMATION FOR THESE OTHER SYSTEMS AND EQUIPMENT AS PROVIDED BY THE FAA AND THE HOLDER OF THE SEPARATE CONTRACT AT THE TIME THESE DOCUMENTS WERE COMPLETED.

SHOULD CRITERIA FOR THESE OTHER SYSTEMS AND EQUIPMENT FOR WHICH THIS PROJECT IS PROVIDING SUPPORT CHANGE AFTER THESE DOCUMENTS HAVE BEEN COMPLETED, THE FAA WILL SO NOTIFY THE BIDDERS/CONTRACTOR FOR THIS PROJECT.

L. WORK AREA(S) AND BUILDING(S) MIGHT CONTAIN HAZARDOUS MATERIALS (HAZMAT). IF HAZMAT IS ENCOUNTERED, CEASE WORK IN THAT AREA, NOTIFY COTR, AND DEVELOP PLAN HOW TO PROCEED WITH WORK INVOLVING HAZMAT. ACCORDING TO THE FACILITY THERE ARE NO KNOWN SOURCES OF LEAD COATINGS OR ASBESTOS CONTAINING MATERIALS WITHIN THE FACILITY.

M. PROVIDE TEMPORARY DUST PROOF PARTITIONS (DP) WITH ACCESS DOORS WHERE DETERMINED BY COTR. TEMPORARY PARTITIONS SHALL BE ACCESSIBLE TO FAA PERSONNEL AND NOT RESTRICT ACCESS TO MECH, ELEC, FAA, OR FIRE PROTECTION EQUIPMENT. VERIFY FINAL LOCATIONS & SPECIAL REQUIREMENTS WITH COTR BEFORE INSTALLATION. REFER TO SPECIFICATIONS FOR DUSTPROOF PARTITIONS CONSTRUCTION. ANCHORING DEVICES FOR DUSTPROOF CONSTRUCTIONS INTO CONCRETE SHALL BE REMOVED UPON COMPLETION OF WORK. ANCHORING HOLES IN CONCRETE SURFACES SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT SURFACES.

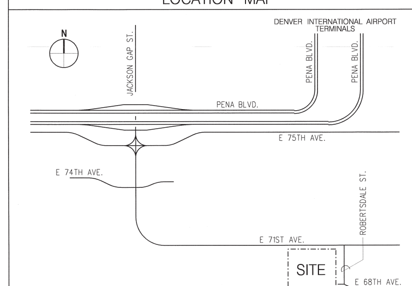
N. UNSCHEDULED INTERRUPTIONS SHALL BE NOT TOLERATED. WORK REQUIRING PERMANENT, TEMPORARY OR PARTIAL OUTAGES SHALL BE SCHEDULED AND APPROVED IN WRITING BY COTR AT LEAST 10 WORKING DAYS IN ADVANCE OF PERFORMANCE OF WORK.

O. EXISTING BUILDING FLOOR PLANS AND SITE PLANS FOR THE EXISTING BUILDING CONSTRUCTION PRESENTED IN THIS DOCUMENT WERE OBTAINED FROM THE FAA. THESE DRAWINGS MAY NOT REFLECT EXISTING AS-BUILT CONDITION OR THE CURRENT ONGOING RENOVATION PROJECTS. PLAN INFORMATION RELATED TO THE PROJECT WERE UPDATED PER FAA DIRECTION. FIELD VERIFY EXISTING CONDITION PRIOR TO ANY CONSTRUCTION WORK REQUIRED.

BUILDING CODE ANALYSIS

1. APPLICABLE CODES AND REGULATIONS:
   INTERNATIONAL BUILDING CODE (IBC), 2006 EDITION
   NFPA 101 - LIFE SAFETY CODE, 2006 EDITION
   ABAAS, ADA AND ABA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (2004)
   OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) GENERAL INDUSTRY SAFETY & HEALTH STANDARDS (29 CFR 1910 AND 1926 - CURRENT ISSUE)
   NFPA 70 (NATIONAL ELECTRICAL CODE (NEC), 2005
   INTERNATIONAL FIRE CODE, 2006 EDITION
   INTERNATIONAL MECHANICAL CODE, 2006 EDITION
   NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS, 2002 EDITION
   NFPA 72, NATIONAL FIRE ALARM CODE, 2002 EDITION
2. OCCUPANCY CLASSIFICATION: IBC, GROUP B
   NFPA 101, EXISTING BUSINESS
3. CONSTRUCTION TYPE: TYPE II B IBC

LOCATION MAP



SENSITIVE SECURITY INFORMATION
WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

JE JACOBS

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA
TRACON
SECURITY SYSTEM MODERNIZATION & UPGRADE
DRAWING INDEX, GENERAL AND CONSTRUCTION STAGING NOTES
DENVER DENVER INTERNATIONAL AIRPORT CO
REVIEWED BY / SUBMITTED BY: [signature] PROJECT ENGINEER
APPROVED BY: [signature] MGR: ENGR'G - SEATTLE
DESIGNED / DRAWN / CHECKED
ISSUED BY ENGINEERING SERVICES INFRASTRUCTURE
DATE 5/9/2011 JCN 1000625
DRAWING NO DEN-1000625-G002 REV
DENVER TRACON DENVER COLORADO
ISSUED FOR: CONSTRUCTION
$FILES 5/6/2011 12:58:40 PM loridivona
EDM: den-1000625-g002.dgn

ABBREVIATIONS

Abbreviation	Meaning
A	
A	AMPERE, AIR, COMPRESSED AIR LINE
AA	AIR COOLED
AAV	AUTOMATIC AIR VENT
AC	ALTERNATING CURRENT, ASPHALT CONC OR AIR COMPRESSOR
ACC	AIR COOLED LIQUID CHILLER
ACD	ADDRESSABLE CONTROL DEVICE
ACM	ASBESTOS CONTAINING MATERIALS
ACT	ACCESS CONTROL TERMINAL
ACU	AIR CONDITIONING UNIT
A/C	AIR CONDITIONING
AD	AREA DRAIN, ACCESS DOOR
ADJ	ADJACENT OR ADJUSTABLE
ADR	ACCESS DOOR
ADTN	ADMINISTRATIVE DATA TRANSMISSION NETWORK
AF	AMPERE FRAME, AIR FLOW SENSOR
AFF	ABOVE FINISH FLOOR
AFMS	AIR FLOW MEASURING STATION
AH/AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY
AID	ADDRESSABLE INTERFACE DEVICE
AIF	AIR INTAKE FILTER
AL	ALUMINUM
ALT	ALTERNATE
AM	AMP METER
AMM	AMMETER
ANN	ANNUNCIATOR
AO	ANALOG OUTPUT
AP	ANNUNCIATOR POINT
APC	ACOUSTICAL PANEL CEILING
APPROX	APPROXIMATELY
ARCH	ARCHITECT(URAL)
ARTCC	AIR ROUTE TRAFFIC CONTROL CENTER
ARTS	AUTOMATED RADAR TERMINAL SYSTEM
AS	AIR SEPARATOR
ASSY	ASSEMBLY
AT	AMPERE TRIP
ATB	AIR TERMINAL BOX
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AV	ACID VENT
AVG	AVERAGE
AWG	AMERICAN WIRE GUAGE
AWR	AUTOMATION WING REHABILITATION
&	AND
@	AT
B	
B	BOILER
BAT CHGR	BATTERY CHARGER
BC	BARE COPPER
BD	BOARD, BACK-DRAFT DAMPER, BLOWDOWN
BEL	BELOW
BF	BLIND FLANGE
BFP	BACK FLOW PREVENTER
BFV	BUTTERFLY VALVE
BFW	BOILER FEED WATER
BHP	BRAKE HORSE POWER
BKR	BREAKER
BLDG	BUILDING
BLKG	BLOCKING
BLO	BLOWER
BLV	BALANCING VALVE
BM	BENCH MARK OR BEAM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOT, BOTT	BOTTOM
BPU	BREAKER PROGRAMMING UNIT
BRG	BEARING
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BTU/H	BRITISH THERMAL UNIT PER HOUR
BV	BALL VALVE
BWP	BACK WATER PREVENTER
BWV	BACK WATER VALVE
C	
C	CONDUIT
CA	COMBUSTION AIR, COMPRESSED AIR
CAB	CABINET
CB	CIRCUIT BREAKER
CC	COOLING COIL
CCMS	CENTRAL CONTROL AND MONITORING SYSTEM
CD	CONTROL DAMPER, CEILING DIFFUSER, CONDENSATE DRAIN
CENT	CENTRIFUGAL
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFT	CUBIC FOOT
CG	CEILING GRILLE
CH	CHILLER
CI	CURB INLET, CAST IRON
CIP	CAST IRON PIPE, CAST IN PLACE
CIR	CIRCULATING
CKT	CIRCUIT
CL, ℄	CENTER LINE
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CLR	CLEAR
CMP	COTRRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT, CONDUIT ONLY
COL	COLUMN
COMB	COMBINATION, COMBINE, COMBUSTION AIR
COMM	COMMUNICATIONS
COMP	COMPRESSIBLE, COMPRESSED
CONC	CONCRETE
COND	CONDITION, CONDENSATE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS OR CONTINUATION
CONTR	CONTRACTOR
COTR	CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE
CP	CONTROL PANEL, CIRCULATING PUMP
CPC	CRITICAL POWER CENTER
CPT	CARPET/RAISED FLOOR
CPU	CENTRAL PROCESSING UNIT
CR	CEILING REGISTER, CONTROL RELAY
CS	CONTROL SWITCH
CT	CABLE TRAY, COOLING TOWER, CERAMIC TILE
CTR	CENTER, COOLING TOWER WATER RETURN
CTS	COOLING TOWER WATER SUPPLY
CU	CONDENSING UNIT
CW	DOMESTIC COLD WATER
CWR	CHILLER WATER RETURN
CWS	CHILLER WATER SUPPLY
CWV	COMBINATION WASTE AND VENT
CU	CONDENSING UNIT
CV	CONTROL VALVE, CONSTANT VOLUME TERMINAL
CYD	CUBIC YARD
D	
D	DRAIN, DELTA CONNECTION, DIFFUSER, DAMPER
DB	DIRECT BURIAL, DRY BULB
DBL	DOUBLE
DC	DIRECT CURRENT
DDCP	DIRECT DIGITAL CONTROL PANEL
DEG	DEGEE(S)
DET	DETAIL
DGP	DATA GATHERING PANEL
DI	DROP INLET, DAMPER POSITION INDICATOR, DIGITAL INPUT
DIA	DIAMETER
DIAG	DIAGONAL
DISC	DISCONNECT
DISP	DISPENSER
DIST	DISTRIBUTION
DL	DEAD LOAD
DM	DEMAND METER
DN	DOWN
DO	DIGITAL OUTPUT
DOM	DOMESTIC
DP	DUSTPROOF PARTITION, DIFFERENTIAL PRESSURE SWITCH
DPDT	DOUBLE POLE DOUBLE THROW
DPNL	DISTRIBUTION PANEL
DPST	DOUBLE POLE SINGLE THROW
DR	DOOR
DWG(S)	DRAWING(S)
E	
EA	EACH, EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ECP	ENGINE CONTROL PANEL
EDAM	ELECTRICAL DATA ACQUISITION AND MONITORING
EE	"EMERGENCY EXIT" SIGNAGE
EEO	"EMERGENCY EXIT ONLY" SIGNAGE
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	ENGINE GENERATOR, EXHAUST GRILLE
EH	ELECTRIC HEATER
EHC	ELECTRIC HEATING COIL
EL, ELEV	ELEVATION
ELEC	ELECTRIC(AL)
EMD	ESTIMATED MAXIMUM DEMAND
EMERG	EMERGENCY
EMT	ELECTRICAL METAL TUBING
ENT, ENTR	ELECTRICAL METAL TUBING
EP	EXHAUST PIPE
EQ	EQUAL
EQUIP	EQUIPMENT
ER	EXHAUST REGISTER
ERMS	ENVIRONMENTAL REMOTE MONITORING SYSTEM
ES	EXHAUST SILENCER
ET	ELECTRIC HEAT TRACE
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST
EXIST, EX	EXISTING
EXP	EXPOSED
EXPN	EXPANSION
EXT	EXTERIOR
F	
F	FILTER, FIRE LINE
FA	FAN COOLED
FAA	FEDERAL AVIATION ADMINISTRATION
FC	FAN COIL UNIT
FCO	FLOOR CLEANOUT
FCV	FLOW CONTROL VALVE
FD	FIRE DAMPER OR FLOOR DRAIN
FD/SD	COMBINATION FIRE AND SMOKE DAMPER
FDR	FEEDER
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FEPC	FRONT END PERSONAL COMPUTER
FFE	FINISHED FLOOR ELEVATION
FHC	FIRE HOSE CABINET
FI	FLANGE INSULATION, FLOW INDICATOR
FIN	FINISH
FIX, FIXT	FIXTURE
FL, FLR	FLOOR
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE DUCT
FLG	FLANGE
FLUOR	FLUORESCENT
FM	FLOW METER, FIRE MAIN
FO	FIBER OPTIC
FOL	FUEL OIL LEVEL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOT	FIBER OPTIC TERMINAL
FOV	FUEL OIL VENT
FPM	FEET PER MINUTE
FPU	FIELD PROGRAMMING UNIT
FRP	FIBER GLASS REINFORCED PLASTIC
FS	FLOW SWITCH
FSRM	FACILITY SECURITY RISK MANAGEMENT
FT,'	FEET
FTR	FINNED TUBE RADIATION
FV	FULL VOLTAGE
FZ	FREEZESTAT
G	
G	GAS
GA	GAGE, GUAGE
GALV	GALVANIZED
GEN	GENERATOR
GC	GENERAL CONTRACTOR
GFE	GOVERNMENT FURNISHED EQUIPMENT
GFM	GOVERNMENT FURNISHED MATERIAL
GL	GLASS
GND	GROUND, GROUND CONNECTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
GRV	GRAVITY VENT
GS	GAS SENSOR
GV	GATE VALVE
GW	GLYCOL WASTE
GWB	GYPSUM WALLBOARD
GWH	GAS WATER HEATER
H	
H	HUMIDISTAT
HAZMAT	HAZARDOUS MATERIALS
HB	HOSE BIBB
HC	HEATING COIL
HCS	HOST COMPUTER SYSTEMS
HDW	HARDWARE
HE	HEAT EXCHANGER
HERM	HERMETIC
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSE POWER, HEAT PUMP HIGH PRESSURE, HIGH POINT
HPL	HIGH PRESSURE LAMINATE
HPS	HIGH PRESSURE SODIUM, HIGH PRESSURE STEAM
HP	HIGH POINT
HR	HOUR
HS	HIGH STRENGTH, HUMIDITY SENSOR
HT	HEIGHT
HTG	HEATING
HTP	HOT TAP (W/STOPPLE FITTING)
HTR	HEATER
HU	HUMIDIFIER
HVAC	HEATING/VENTILATING/AIR CONDITIONING
HW	DOMESTIC HOT WATER
HWL	HIGH WATER LEVEL
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	HERTZ
HWY	HIGHWAY
I	
ID	INSIDE DIAMETER
IEWH	INSTANTANEOUS ELECTRIC WATER HEATER
IF	INSIDE FACE OR INTERIAL FILTER
IN,"	INCH
INST	INSTRUMENT
INSUL	INSULATION, INSULATED
INT	INTERIOR
INV	INVERT
J	
J	JUNCTION
JB	JUNCTION BOX
JCI	JOHNSON CONTROLS, INC
JFI	JACOBS FACILITIES, INC
JT	JOINT
K	
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT AMPERE
KW	KILOWATTS
L	
LAN	LOCAL AREA NETWORK
LBS, #	POUNDS
LCC	LEAD CONTAINING COATING
LCP	LOCAL CONTROL PANEL
LCV	LEVEL CONTROL VALVE
LF	LINEAR FEET
LG	LEVEL GAUGE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
LPS	LOW PRESSURE STEAM
LS	LEVEL SWITCH
LT	LIGHT
LTG	LIGHTING
M	
M	MOTOR
MANUF, MFG	MANUFACTURER
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MET	METAL
MG	MOTOR GENERATOR
MIL	MILLIMETER
MIN	MINIMUM
MO	MASONRY OPENING
MOD	MODIFICATION
MS	MOISTURE SENSOR
MTD	MOUNTING OR MOUNTED
MTL	METAL
N	
N/A	NOT APPLICABLE
NARACS	NATIONAL RADIO COMMUNICATIONS SYSTEM
NAS	NATIONAL AIRSPACE SYSTEM
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO, #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O	
OA	OUTSIDE AIR
OC	ON CENTER
OD	OUTSIDE DIAMETER, OPEN DRAIN
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
OSW	OPERATIONS SUPPORT WING
P	
P	PUMP, PHASE OR POLE
PBX	PRIVATE BRANCH EXCHANGE
PC	PRESSURE CONTROL SWITCH
PCB	POLYCHLORINATED BIPHENYLS
PCF	POUNDS PER CUBIC FOOT
PD	PRESSURE DIFFERENTIAL
PDI	PRESSURE DIFFERENTIAL INDICATOR
PDS	PRESSURE DIFFERENTIAL SENSOR
PH	PHASE
PHC	PREHEAT COIL
PI	POINT OF INTERSECTION, PRESSURE INDICATOR
PIV	POST INDICATOR VALVE
PLAM	PLASTIC LAMINATE
PL	PROPERTY LINE OR PLATE
PLF	POUNDS PER LINEAR FOOT
PNL	PANEL
POC	POINT OF CONNECTION
PR	PAIR
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSM	POWER SYSTEMS MODIFICATION
PT	PAINT
PTD	PAINTED
PTVC	POINT OF VERTICAL CURVATURE
PVC	POLYVINYL CHLORIDE
PVDS	PORTABLE VISUAL DISPLAY SYSTEM
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	
RA	"RESTRICTED ACCESS" SIGNAGE
RA	RETURN AIR
RAD, R	RADIUS
RECEPT RPTS	RECEPTACLE
REF	REFERENCE
REG	REGISTER
REINF	REINFORCING
REQ'D	REQUIRED
REV	REVERSE, REVISION
RF	RETURN FAN
RGS	RIGID GALVANIZED STEEL
RH	ROOF HATCH
RHC	REHEAT COIL
RM	ROOM
RO	ROUGH OPENING
RV	REFRIGERANT VENT
S	
S	SINGLE
S	SMOKE DETECTOR
SA	SUPPLY AIR
SAN	SANITARY
SAP	SOUND ABSORBING PANEL
SCH, SCHED	SCHEDULE
SD	SMOKE DAMPER
SEC	SECTION
SF	SUPPLY FAN, SQUARE FEET
SHT	SHEET
SIG	SIGNAL
SIM	SIMILAR
SM	SPRINKLER MAIN
SP	SUMP PUMP/SEWAGE PUMP, STATIC PRESSURE INDICATOR
SPEC	SPECIFICATIONS
SQ	SQUARE
SRF	SAFETY RUBBER FLOOR TILE
SSTL	STAINLESS STEEL
ST	STEAM, STREET
STA	STATION
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STE	STANDARD TAPERED END
STGP	SIGNAL TRANSPORT GROUND PLANE
STL	STEEL
STOR	STORAGE
STRUC	STRUCTURAL
SUCT	SUCTION
SUSP	SUSPENDED
SW	SWITCH
SYM	SYMMETRICAL
T	
T	THERMOSTAT
TBD	TO BE DETERMINED
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TEMPERATURE CONTROL SWITCH
TECH	TECHNICAL
TELCO	TELECOMMUNICATION, TELEPHONE COMPANY LINE
TEMP	TEMPERATURE
TI	TEMPERATURE INDICATOR
TIC	TEMPERATURE INDICATING CONTROLLER
TK	TANK
TOC	TOP OF CONCRETE, TECHNICAL OPERATIONS CENTER
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRACON	TERMINAL RADAR APPROACH CONTROL
TRANS	TRANSVERSE
TRTD	TREATED
TS	TEMPERATURE SENSOR, TAMPER SWITCH
TYP	TYPICAL
U	
UBC	UNIFORM BUILDING CODE
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORIES, INC.
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SYSTEM
UV	UNIT VENTILATOR
V	
V	VOLT
VAT	VINYL ASBESTOS TILE
VAV	VARIABLE VOLUME TERMINAL
VB	VINYL BASE
VBT	VINYL BASE & TRIM COMPONENTS
VC	VERTICAL CURVE
VCT	VINYL COMPOSITION TILE
VD	VOLUME DAMPER
VERT	VERTICAL
VF	VERTICAL FEET OR VENTILATION FAN
VFD	VARIABLE FREQUENCY DRIVE
VGWB	VINYL SURFACED GYPSUM WALL BOARD
VIF	VERIFY IN FIELD
VP	VELOCITY PRESSURE, VACUUM PRODUCER
VS	VIBRATION SWITCH
VTR	VENT THROUGH ROOF
W	
W	WATT
W/	WITH
WD	WOOD
WG	WATER GAGE
W/O	WITHOUT
WP	WEATHERPROOF
WT	WEIGHT
X	
XFER, XFR	TRANSFER
XFMR	TRANSFORMER
Y	
Y	WYE CONNECTION
YD	YARD
YH	YARD HYDRANT

GENERAL LEGEND

REFERENCE

- COLUMN LINE GRID DESIGNATION — K, 8
- CENTER LINES
- MATCH LINE SYMBOL — FOR CONT SEE DWG A005
- BREAK LINES
- ELEVATION SYMBOL — EL 00.00'
- DRAWING/DETAIL TITLE — DETAIL NUMBER; A1 / A101 DRAWING/DETAIL TITLE SCALE: 1/8" = 1'-0"; SHEET ON WHICH DETAIL IS DRAWN OR SCHEDULED
- DETAIL TITLE REFERENCE — DETAIL DESIGNATION; A1 / A01; SHEET ON WHICH DETAIL IS DRAWN
- SECTION TITLE REFERENCE — DETAIL DESIGNATION; B3 / A010; SHEET ON WHICH SECTION IS DRAWN
- SECTION CUT — A2 / A05
- PARTIAL SECTION CUT — A2 / A01
- ELEVATION REFERENCE — E1 / A012
- NORTH/TRUE NORTH ARROW — NORTH ARROW OR PROJECT NORTH ARROW; TRUE NORTH ARROW; N
- ROOM/AREA NUMBER — B120
- DEMOLITION — OR
- REVISION — CLOUD TO ENCOMPASS REVISED AREA
- REVISION DESIGNATION — 1
- SHEET NOTE NUMBER — 1
- DEMOLITION NOTE — 1
- GRAPHIC SCALE — 0, 4', 8', 16'; 1/8" = 1'-0"

ARCHITECTURAL/STRUCTURAL LEGEND

MATERIALS

- EARTH, ETC — EARTH, GRAVEL, SAND
- CONCRETE, ETC — CONC, TER, ASPH
- METALS — STEEL, ALUMINUM, OTHER, STRUCT, STL
- MASONRY — CMU, BRICK, TILE
- WOOD — FINISH EL, BLKG, STUD PARTITION, PLYWOOD
- GYPSUM
- GLASS — LARGE SCALE, SMALL SCALE, ELEV
- INSULATION — BATT OR LOOSE, RIGID

SYMBOLS

- CONTRACTOR'S ACCESS ROUTE
- VEHICULAR TRAFFIC DIRECTION
- RAISED FLOOR PANELS AND/OR CEILING GRID — EXISTING, NEW; PERFORATED AIR FLOW PANEL
- WALL
- DEMOLITION WALL
- ATC PANEL (NOT SHOWN)
- RECESSED LIGHT FIXTURE (NOT SHOWN)
- FUTURE ATC PANEL
- SUPPLY AIR CEILING DIFFUSER
- RETURN AIR CEILING REGISTER
- TRANSFER AIR GRILLE
- SERVICE SINK — FLOOR MOUNTED, WALL MOUNTED
- LAVATORY
- URINAL
- WATER CLOSET
- ELECTRIC WATER COOLER
- WATER COOLER
- AREA DESIGNATION
- TEMPORARY DUSTPROOF PARTITION WITH DOOR — DP
- TEMPORARY INTERIOR WALL WITH DOOR
- DOOR NUMBER — B72
- LOUVER NUMBER — L2
- FINISH SYMBOL — P 1
- WALL TYPE NUMBER — 2
- ELECTRICAL PANEL
- SUPPLY AIR DUCT
- EMERGENCY SHOWER AND EYEWASH
- FLOOR DRAIN — FD, FD
- FLOOR SINK — FS
- FLOOR HATCH
- ROOF HATCH — RH
- STEEL LADDER
- SUMP
- LOCKERS
- FIRE EXTINGUISHER — FE, FE
- FIRE EXTINGUISHER CABINET — SURFACE MOUNTED, SEMI-RECESSED
- INDIRECT PENDANT LIGHT FIXTURE
- ACOUSTICAL BAFFLES

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

JACOBS

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — WESTERN SERVICE AREA

TRACON
SECURITY SYSTEM MODERNIZATION & UPGRADE
ABBREVIATIONS AND LEGENDS

DENVER — DENVER INTERNATIONAL AIRPORT — CO

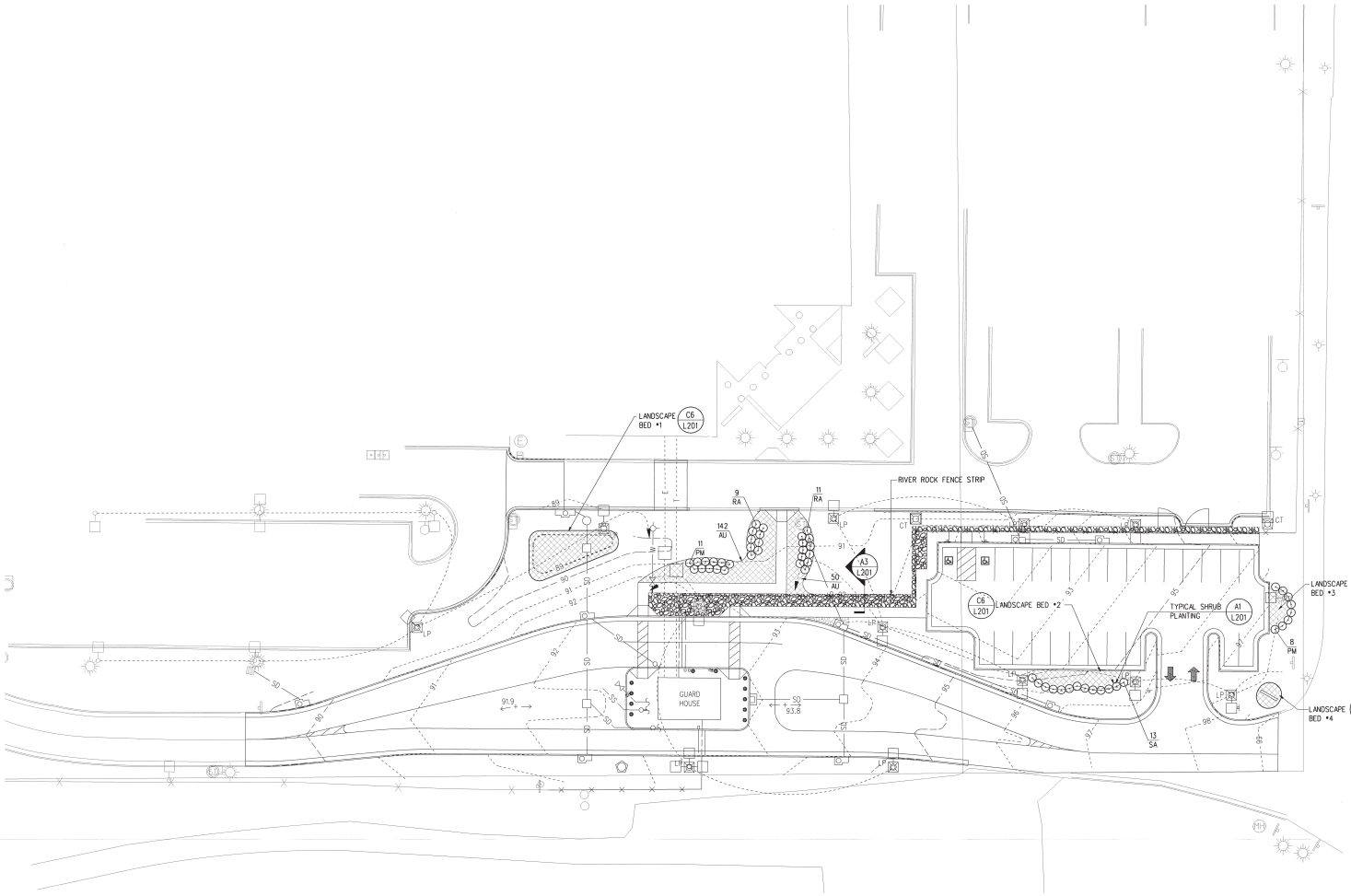
DENVER TRACON DENVER COLORADO

REVIEWED BY / SUBMITTED BY: PROJECT ENGINEER / APPROVED BY
MGR: ENGR'G - SEATTLE
DESIGNED / DRAWN / CHECKED
ISSUED BY: ENGINEERING SERVICES INFRASTRUCTURE
DATE 5/9/2011 — JCN 1000625
DRAWING NO DEN-1000625-G003 — REV

ISSUED FOR: CONSTRUCTION

EDM: den-1000625-g003.dgn

$FILES 5/6/2011 12:56:49 PM loridivona



GENERAL SHEET NOTES:

1. ALL AREAS LEFT DISTURBED BY CONSTRUCTION SHALL BE LAWN UNLESS OTHERWISE NOTED.

2. CONTRACTOR TO HAND WATER PLANTS WHERE IRRIGATION SYSTEM HAS BEEN DISRUPTED.

3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR DESIGN AND CONSTRUCTION OF NEW IRRIGATION SYSTEM FOR ALL NEW LAWN AREAS SIGNED AND SEALED BY LICENSED ENGINEER IN THE STATE OF COLORADO.

4. REFER TO ARCHITECTURAL AND CIVIL DRAWINGS FOR DETAILED SITE DEMOLITION INFORMATION AND NEW WORK.

SYMB.	QTY.	COMMON NAME	SCIENTIFIC NAME	SIZE	SPACING
SHRUBS					
PM	19	Mountain Ninebark	Physocarpus monogynus	18-24" HT	AS SHOWN
RA	20	Skunkbush	Rhus aromatica ssp. trilobata	18-24" HT	AS SHOWN
SA	13	Snowberry	Symphoricarpos albus	18-24" HT	AS SHOWN
GROUNDCOVERS / GRASSES / MEADOW PLANTINGS					
AC	117	COLORADO COLUMBINE	AQUILEGIA CAERULEA	#1 CONT.	18"
AL	101D	WHITE YARROW	ACHILLEA LANULOSA	#1 CONT.	18"
AU	192	KINNIKINNICK	ARCTOSTAPHYLOS UVA-URSI	#1 CONT.	36"
CG	48	BLUE GRAMA	CHONDROSUM GRACILE	#1 CONT.	18"
MF	117	WILD BERGAMOT	MONARDA FISTULOSA	#1 CONT.	18"
RH	49	BLACK EYED SUSAN	RUDBECKIA HIRTA	#1 CONT.	24"
SS	67	LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	#1 CONT.	24"

D6 L201 PLANT LIST

LANDSCAPE BED #1 PLANTING:
- 37 LITTLE BLUESTEM (20%)
- 37 BLACK EYED SUSAN (20%)
- 48 BLUE GRAMA (15%)
- 48 WILD BERGAMOT (15%)
- 49 WHITE YARROW (15%)
- 49 COLORADO COLUMBINE (15%)

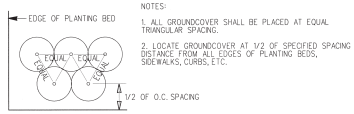
LANDSCAPE BED #2 PLANTING:
- 20 LITTLE BLUESTEM (25%)
- 33 WILD BERGAMOT (25%)
- 33 WHITE YARROW (25%)
- 33 COLORADO COLUMBINE (25%)

LANDSCAPE BED #3 PLANTING:
- 12 BLACK EYED SUSAN (25%)
- 19 WILD BERGAMOT (25%)
- 18 WHITE YARROW (25%)
- 18 COLORADO COLUMBINE (25%)

LANDSCAPE BED #4 PLANTING:
- 10 LITTLE BLUESTEM (33%)
- 17 WILD BERGAMOT (33%)
- 17 COLORADO COLUMBINE (33%)

NOTE: VARY PLANT SPECIES LOCATIONS WITHIN LANDSCAPE BEDS AND DO NOT GROUP BY SPECIES. USE TRIANGULAR SPACING PER GROUNDCOVER PLANTING DETAIL.

C6 L201 LANDSCAPE BED PLANT MIXES

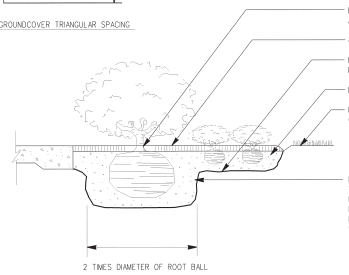


GROUNDCOVER TRIANGULAR SPACING

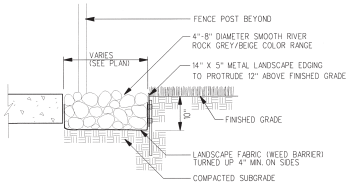
NOTES:

1. ALL GROUNDCOVER SHALL BE PLACED AT EQUAL TRIANGULAR SPACING.

2. LOCATE GROUNDCOVER AT 1/2 OF SPECIFIED SPACING DISTANCE FROM ALL EDGES OF PLANTING BEDS, SIDEWALKS, CURBS, ETC.



A1 L201 SHRUB AND GROUNDCOVER PLANTING DETAIL



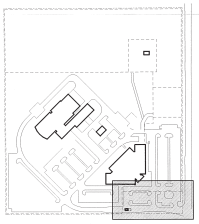
A3 L201 RIVER ROCK DETAIL

20' 10' 0 20' 40'
1" = 20'-0"

N

NOTE:

THE CONTRACTOR SHALL MAINTAIN 24/7 ACCESS TO THE SITE FOR FAA EMPLOYEES AND FAA DELIVERIES DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO PROVIDE A SEPARATE AREA FOR THE GUARDS TO PERFORM SECURITY SURVEY OF DELIVERY VEHICLES.



KEY PLAN

N
KEY NORTH

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION FOR U.S. GOVERNMENT AGENCIES. PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

JE JACOBS

REV	APPROVED DATE	DESCRIPTION	JOB	REVIEW DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA

TRACON
SECURITY SYSTEM MODERNIZATION & UPGRADE
LANDSCAPE PLAN

DENVER DENVER INTERNATIONAL AIRPORT CO

REVIEWED BY
SUBMITTED BY: PROJECT ENGINEER
APPROVED BY: MGR: ENGRG - SEATTLE
DESIGNED
DRAWN
CHECKED
ISSUED BY: ENGINEERING SERVICES INFRASTRUCTURE
DATE: 5/9/2011
JOB: 1000625
DRAWING NO: DEN-1000625-L201
REV:

DENVER TRACON
DENVER
COLORADO

ISSUED FOR CONSTRUCTION

MECHANICAL LEGEND

PIPING

SIZE TYPE

CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
STM	STEAM
CR	CONDENSATE RETURN
LPS	LOW PRESSURE STEAM
PC	PUMPED CONDENSATE

- PITCH DOWN IN DIRECTION OF ARROW
- ANCHOR
- ALIGNMENT GUIDE
- EXPANSION JOINT
- FLEXIBLE HOSE (FLANGED ENDS)
- FLEXIBLE HOSE (SCREWED ENDS)
- FLEXIBLE PIPE CONNECTOR
- FLUID FLOW DIRECTION
- AIR ELIMINATOR
- TEST COCK
- PRESSURE GAGE WITH COCK
- STEAM TRAP
- VALVE AND BLIND FLANGE
- PIPE HEADER WITH BLIND FLANGE
- MAV — MANUAL AIR VENT
- PIPE TURNING UP
- PIPE TURNING DOWN
- ET — ELECTRIC HEAT TRACE
- THERMOWELL WITH TEMPERATURE GAGE
- FLOW CONTROL BALL VALVE
- FLOW CONTROL VALVE
- SIGHT GLASS
- FLOW METER
- CONCENTRIC REDUCER/ENLARGER
- ECCENTRIC REDUCER/ENLARGER
- STRAP-ON SENSOR
- WELD CAP
- CAPPED PIPE/OUTLET
- PLUGGED PIPE/OUTLET
- PLUG VALVE
- BALL VALVE
- BUTTERFLY VALVE
- SOLENOID VALVE
- MOTOR OPERATED CONTROL VALVE
- THREE-WAY CONTROL VALVE
- UNION
- STRAINER WITH BLOWDOWN VALVE
- BALANCING VALVE
- GATE VALVE
- ANGLE VALVE
- GLOBE VALVE
- CHECK VALVE
- PRESSURE REGULATING VALVE
- PRESSURE RELIEF OR SAFETY VALVE
- THERMOMETER
- PUMP

EQUIPMENT

SYMBOL
EQUIPMENT DESIGNATION
NUMBER

AH	AIR HANDLING UNIT (EXISTING)
AHU	AIR HANDLING UNIT (NEW)
CC	COOLING COIL
CD	CEILING DIFFUSER
CP	CIRCULATING PUMP
CT	COOLING TOWER
CV	CONSTANT VOLUME TERMINAL
EF	EXHAUST FAN
EG	EXHAUST AIR GRILLE/REGISTER
EH	ELECTRIC HUMIDIFIER
EHC	ELECTRIC HEATER COIL
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
F	FILTER
FC	FAN COIL UNIT
GWH	GAS WATER HEATER
HC	HEATING COIL
HE	HEAT EXCHANGER
HP	HEAT PUMP
IEWH	INSTANTANEOUS ELECTRIC WATER HEATER
P	PUMP
RF	RETURN FAN
RG	RETURN AIR GRILLE/REGISTER
SF	SUPPLY FAN
SP	SUMP PUMP/SEWAGE PUMP
TK	TANK
VAV	VARIABLE AIR VOLUME TERMINAL

DUCTWORK

SINGLE LINE

- FILTER
- COOLING COIL
- HEATING COIL
- LOUVER
- MOTORIZED PARALLEL BLADE DAMPER
- BACKDRAFT DAMPER
- MOTORIZED OPPOSED BLADE DAMPER
- ELECTRIC HEATING COIL
- FIRE/SMOKE DAMPER
- AFMS — AIR FLOW MEASURING STATION
- HUMIDIFIER
- UNIT HEATER
- PROPELLER FAN
- FAN
- FAN STARTER

DOUBLE LINE

- 20X10 — RECTANGULAR DUCT (FIRST FIGURE IS SIDE SHOWN)
- FLEXIBLE DUCT
- FLEXIBLE CONNECTION
- VD — VOLUME DAMPER, CONTROL DAMPER
- FD, SD — FIRE DAMPER, SMOKE DAMPER
- FD/SD — COMBINATION FIRE/SMOKE DAMPER
- TURNING VANES
- EXTRACTOR
- SUPPLY DUCT (UP OR OUT)
- SUPPLY DUCT (DOWN)
- RETURN OR EXHAUST DUCT (UP OR OUT)
- RETURN OR EXHAUST DUCT (DOWN)
- SIZE CFM — SUPPLY REGISTER OR GRILLE
- SIZE CFM — RETURN OR EXHAUST REGISTER OR GRILLE
- SIZE CFM — OUTSIDE FRESH AIR INTAKE
- SIZE CFM — ROUND CEILING DIFFUSER (SUPPLY)
- SIZE CFM — SQUARE CEILING DIFFUSER (SUPPLY)
- DOOR LOUVER
- R — DUCT RISE
- D — DUCT DROP
- TRANSITION-RECTANGULAR TO ROUND
- BD — BACKDRAFT DAMPER
- SPD — STATIC PRESSURE DAMPER
- DUCTWORK LINED WITH SOUND INSULATION
- VARIABLE AIR VOLUME TERMINAL
- VARIABLE AIR VOLUME TERMINAL WITH HOT WATER REHEAT
- 10" DIA — ROUND DUCT
- 20X10 — TEMPORARY DUCT

PLUMBING LEGEND

PIPING

SYMBOL	ABBREVIATION	DESCRIPTION
	CW	DOMESTIC COLD WATER
	CW&V	COMBINATION WASTE & VENT ABOVE FLOOR OR GRADE
	CW&V	COMBINATION WASTE & VENT BELOW FLOOR OR GRADE
D	D	DRAIN LINE
G	G	NATURAL GAS (LOW PRESSURE)
	HW	DOMESTIC HOT WATER SUPPLY
	DHR	DOMESTIC HOT WATER RETURN
	ID	INDIRECT DRAIN
TP	TP	TRAP PRIMER SUPPLY LINE
	SAN	SANITARY SEWER/WASTE ABOVE FLOOR OR GRADE
SAN	SAN	SANITARY SEWER/WASTE BELOW FLOOR OR GRADE
SD	SD	STORM DRAIN ABOVE FLOOR OR GRADE
SD	SD	STORM DRAIN BELOW FLOOR OR GRADE
	SS/W	SANITARY SEWER/WASTE ABOVE FLOOR OR GRADE
	SS/W	SANITARY SEWER/WASTE BELOW FLOOR OR GRADE
	V	SANITARY VENT
	WHA	WATER HAMMER ARRESTER
		DIRECTION OF FLOW
		ANCHOR
	RBFP	REDUCED PRESSURE BACKFLOW ASSEMBLY
	BFP	BACKFLOW PREVENTOR
		FLUID FLOW DIRECTION
		PIPE TURNING UP
		PIPE TURNING DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		CAPPED PIPE/OUTLET
		PLUGGED PIPE/OUTLET
	ES	EMERGENCY SHOWER AND EYEWASH
		RUNNING TRAP
	BV	BALL VALVE
	GV	GATE VALVE
	AV	ANGLE VALVE
	GLV	GLOBE VALVE
	CV	CHECK VALVE
	PRV	PRESSURE REGULATING VALVE
	P/TRV	PRESSURE / TEMPERATURE RELIEF OR SAFETY VALVE
	U	UNION
	HB/WH	HOSE BIBB OR WALL HYDRANT
	FS	FLOOR SINK
	CO	CLEAN OUT
	FD	FLOOR DRAIN

SYMBOLS

SYMBOL	ABBREVIATION	DESCRIPTION
	OFD	OVERFLOW ROOF DRAIN
	RD	ROOF DRAIN
	FLD	FUNNEL DRAIN, OPEN
	WCO	WALL CLEANOUT
	FCO	FLOOR CLEANOUT
	FD	FLOOR DRAIN
	BV	BALANCING VALVE
	GC	GAS COCK
	PV	PLUG VALVE
	SV	SOLENOID VALVE
	OS&Y	OUTSIDE SCREW AND YOKE
	BFV	BUTTERFLY VALVE

MECHANICAL LEGEND (CONT)

ABBREVIATIONS

A	A	COMPRESSED AIR LINE
	AAV	AUTOMATIC AIR VENT
	ACU	AIR CONDITIONING UNIT
	AD	AREA DRAIN, ACCESS DOOR, AIR DRYER
	ADP	ACCESSORY DEVICE PANEL
	AFF	ABOVE FINISHED FLOOR
	AFMS	AIR FLOW MEASURING STATION
	AH	AIR HANDLER
	AIF	AIR INTAKE FILTER
	AS	AIR SEPARATOR
	ATB	AIR TERMINAL BOX
	AV	ACID VENT
	AW	ACID WASTE
B	B	BOILER
	BD	BACKDRAFT DAMPER, BLOWDOWN
	BF	BLIND FLANGE
	BFP	BACK FLOW PREVENTER
	BFV	BUTTERFLY VALVE
	BFW	BOILER FEED WATER
	BHP	BRAKE HORSE POWER
	BLO	BLOWER
	BLV	BALANCING VALVE
	BOD	BOTTOM OF DUCT
	BTU	BRITISH THERMAL UNIT
	BTU/H	BRITISH THERMAL UNIT PER HOUR
	BV	BALL VALVE
	BWP	BACK WATER PREVENTER
	BWV	BACK WATER VALVE
C	CA	COMBUSTION AIR, COMPRESSED AIR
	CD	CONTROL DAMPER, CEILING DIFFUSER
	CENT	CENTRIFUGAL
	CFH	CUBIC FEET PER HOUR
	CFM	CUBIC FEET PER MINUTE
	CG	CEILING GRILLE
	CH	CHILLER
	CI	CAST IRON
	CIR	CIRCULATING
	CO	CLEAN OUT
	COMB	COMBUSTION AIR
	COND	CONDENSATE
	CONN	CONNECTION
	COTR	CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE
	CR	CEILING REGISTER
	CTR	COOLING TOWER WATER RETURN
	CTS	COOLING TOWER WATER SUPPLY
	CU	CONDENSING UNIT
	CW	DOMESTIC COLD WATER
	CWR	CHILLED WATER RETURN
	CWS	CHILLER WATER SUPPLY
	CWV	COMBINATION WASTE AND VENT
D	D	DIFFUSER, DAMPER
	DB	DRY BULB
	DHR	DOMESTIC HOT WATER RETURN
	DOM	DOMESTIC
	DT	DRAIN TILE
E	EA	EXHAUST AIR
	EAT	ENTERING AIR TEMPERATURE
	EG	EXHAUST AIR GRILLE
	EP	EXHAUST PIPE
	ER	EXHAUST REGISTER
	ES	EXHAUST SILENCER
F	F	FILTER
	FCO	FLOOR CLEANOUT
	FD/SD	COMBINATION FIRE AND SMOKE DAMPER
	FDR	FEEDER
	FEPC	FRONT END PERSONAL COMPUTER
	FI	FLANGE INSULATION
	FIXT	FIXTURE
	FLD	FUNNEL DRAIN
	FLEX	FLEXIBLE
	FLG	FLANGE
	FM	FLOW METER
	FOL	FUEL OIL LEVEL
	FOR	FUEL OIL RETURN
	FOS	FUEL OIL SUPPLY
	FOV	FUEL OIL VENT
	FPM	FEET PER MINUTE
	FRP	FIBER GLASS REINFORCED PLASTIC
G	GPH	GALLONS PER HOUR
	GPM	GALLONS PER MINUTE
	GR	GRILLE
	GRV	GRAVITY VENT
	GV	GATE VALVE
	GW	GLYCOL WASTE
H	HB	HOSE BIBB
	HP	HIGH PRESSURE
	HPS	HIGH PRESSURE STEAM
	HTG	HEATING
	HTP	HOT TAP
	HTR	HEATER
	HW	DOMESTIC HOT WATER
	HWL	HIGH WATER LEVEL
	HWR	HEATING WATER RETURN
	HWS	HEATING WATER SUPPLY
I	ID	INDIRECT DRAIN
	IW	INDUSTRIAL COLD WATER
J	JKT	JACKET
	JW	JACKET WATER
	JWR	JACKET WATER RETURN
	JWS	JACKET WATER SUPPLY
L	LAT	LEAVING AIR TEMPERATURE
	LBS	POUNDS
	LB/HR	POUND PER HOUR
	LCV	LEVEL CONTROL VALVE
	LDP	LEAK DETECTION PANEL
	LO	LUBRICATING OIL
	LPS	LOW PRESSURE STEAM
	LR	LONG RADIUS
	LWL	LOW WATER LEVEL
M	MAN	MANIFOLD, MANUAL
	MBH	THOUSAND BTU PER HOUR
	MPG	MEDIUM PRESSURE GAS
	MS	MOP SINK
	MVD	MOTORIZED VOLUME DAMPER
N	N	NECK
O	OA	OUTSIDE AIR
	OBD	OPPOSED BLADE DAMPER
	OS&Y	OUTSIDE SCREW AND YOKE
P	PD	PRESSURE DROP
	PHC	PREHEAT COIL
	PI	PRESSURE INDICATOR
	POC	POINT OF CONNECTION
	POD	POINT OF DEMOLITION
	PRV	PRESSURE REDUCING VALVE, POWER ROOF VENTILATOR
	PSV	PRESSURE SAFETY VALVE
	PTRV	PRESSURE-TEMPERATURE RELIEF VALVE
	PV	PLUG VALVE
R	RA	RETURN AIR
	RED	REDUCER
	R	REGISTER
	RD	RETURN AIR DIFFUSER
	RG	RETURN AIR GRILLE
	RH	RELATIVE HUMIDITY, RELIEF HOOD
	RHC	REHEAT COIL
	RL	RAIN LEADER
	RPM	REVOLUTIONS PER MINUTE
	RR	RETURN REGISTER
	RV	REFRIGERANT VENT
S	SA	SUPPLY AIR
	SAN	SANITARY SEWER
	SD	SUPPLY AIR DIFFUSER
	SG	SUPPLY AIR GRILLE
	SOV	SOLENOID OPERATED VALVE, SHUT-OFF VALVE
	SP	STATIC PRESSURE
	SSD	SUB SOIL DRAIN
T	T	THERMOSTAT
	TA	TRANSFER AIR
	TD	THERMAL DETECTOR
	TG	TRANSFER GRILLE
	TR	TOP REGISTER
	TW	THERMOWELL
U	UG	USED GLYCOL
	UH	UNIT HEATER
	UV	UNIT VENTILATOR
V	V	VENT, SANITARY VENT
	VAC	VACUUM
	VAV	VARIABLE AIR VOLUME
	VCP	VITRIFIED CLAY PIPE
	VD	VOLUME DAMPER
	VIV	VARIABLE INLET VOLUME
	VTR	VENT TO ROOF
W	WB	WET BULB
	WCO	WALL CLEANOUT
	WG	WATER GAGE
	WHA	WATER HAMMER ARRESTOR
	WO	WASTE OIL
	WSP	WET STANDPIPE

GENERAL NOTES:

A. —— EXISTING WORK.

B. —— NEW WORK.

C. PIPING CALL-OUT: FIRST CALL-OUT APPLIES TO NEAREST PIPE.
CWS
CWR
CWR & CWS

D. PROVIDE WORK IN ACCORDANCE WITH THE SPECIFICATIONS.

E. PROVIDE UNIONS ADJACENT TO THREADED VALVES AND EQUIPMENT CONNECTIONS. VERIFY AND COORDINATE EXACT LOCATIONS AND DIMENSIONS.

F. SUBMIT A PIPING AND DUCT LAYOUT TO COTR FOR APPROVAL AFTER SITE INSPECTION AND PRIOR TO START OF WORK.

G. EXPEDITIOUSLY REMOVE DEMOLISHED MATERIALS FROM THE BUILDING.

H. COORDINATE DUCTWORK, PIPING, AND EQUIPMENT LOCATIONS WITH ELECTRICAL, STRUCTURAL, PLUMBING, AND OTHER TRADES TO AVOID INTERFERENCE AND DELAYS.

I. DUCTWORK DIMENSIONS ARE IN INCHES. DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.

J. NO WELDING SHALL BE POWERED FROM THE FACILITY ELECTRICAL SYSTEM. FACILITY STRUCTURAL STEEL SHALL NOT BE USED AS GROUND. PROVIDE SEPARATE GROUND WIRE.

K. AIR FLOW QUANTITIES SHOWN ON THE DRAWINGS ARE ACTUAL AIR FLOW QUANTITIES AT 5283 FEET ABOVE SEA LEVEL.

L. SCHEDULE WELDING IN WRITING WITH COTR AND PERFORM OUTSIDE OF THE FACILITY OR IN A SAFE LOCATION TO BE DETERMINED BY THE COTR.

M. LOCATIONS, SIZES, CLEARANCES, AND CONFIGURATIONS OF EQUIPMENT SHOWN ARE BASED ON SPECIFIC SCHEDULED AND SPECIFIED MANUFACTURERS AND MODEL NUMBERS. VERIFY AND COORDINATE LOCATION, SIZE, CLEARANCE AND CONFIGURATION OF SUCH WORK AND PROVIDE NECESSARY MOUNTING TEMPLATES AND BOLT PATTERNS FOR ANCHORING EQUIPMENT. SUBSTITUTION OF SUCH EQUIPMENT MANUFACTURERS WILL REQUIRE THE CONTRACTOR'S PRIOR VERIFICATION OF CONFORMANCE PER THE REQUIREMENTS OF LOCATION, SIZE, CLEARANCES, AND CONFIGURATION AS COMPARED TO THE SPACE ALLOCATED TO HOUSE THE SPECIFIC EQUIPMENT. SUBMIT PROPOSED EQUIPMENT TO COTR FOR APPROVAL.

N. CONSEQUENCES AND/OR APPURTENANCE REQUIRED AS A RESULT OF SUBSTITUTION SUCH AS ADDITIONAL LABOR, EQUIPMENT, MATERIAL, ETC. SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE FAA.

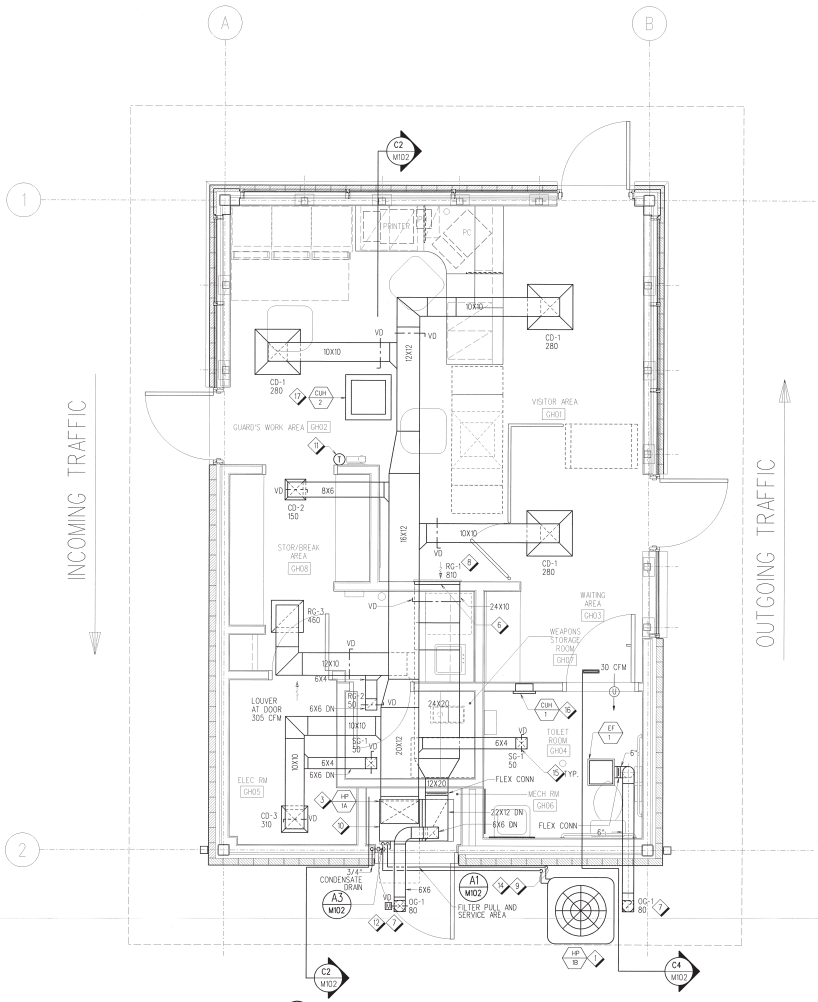
O. INSTALLATION SHALL PROVIDE FOR EASY ACCESS TO DAMPERS, FILTERS, VALVES, COILS AND OTHER CONTROL DEVICES. ACCESS DOORS SHALL BE INSTALLED TO PROVIDE ADEQUATE CLEARANCES FOR DIRECT ACCESS TO DAMPERS.

SENSITIVE SECURITY INFORMATION
WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

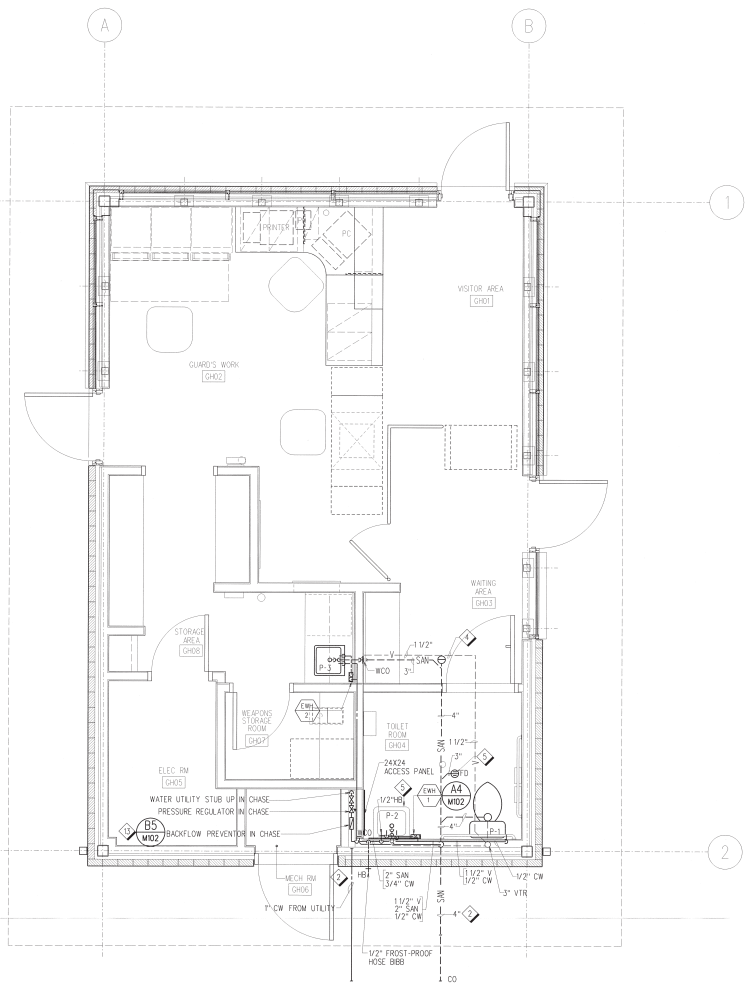
JACOBS

REV | APPROVED DATE | DESCRIPTION | JCN | REDLINE DATE | APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — WESTERN SERVICE AREA
TRACON
SECURITY SYSTEM MODERNIZATION & UPGRADE
HVAC AND PLUMBING
ABBREVIATIONS, LEGEND AND GENERAL NOTES
DENVER — DENVER INTERNATIONAL AIRPORT — CO
REVIEWED BY | SUBMITTED BY: PROJECT ENGINEER | APPROVED BY: MGR: ENGR'G - SEATTLE
DESIGNED | DRAWN | CHECKED | ISSUED BY: ENGINEERING SERVICES INFRASTRUCTURE
DATE 5/19/2011 | JCN 1000625 | REV
DRAWING NO DEN-1000625-M001
DENVER TRACON DENVER COLORADO
ISSUED FOR: CONSTRUCTION
EDM: den-1000625-m001.dgn
$FILES 5/6/2011 11:33:24 AM loridivona



B2 M101 HVAC STANDARD GUARD HOUSE - FLOOR PLAN
SCALE: 1/2" = 1'-0"



B4 M101 PLUMBING STANDARD GUARD HOUSE - FLOOR PLAN
SCALE: 1/2" = 1'-0"

AIR DEVICE SCHEDULE

MARK	TYPE	CFM RANGE	NECK SIZE	MAX PD (IN. W.G.)	MAX NC	KNOWN ACCEPTABLE SOURCE
CD-1	CEILING SUPPLY AIR DIFFUSER 24 IN SQ LAY IN	280	10X10	0.04	14	TITUS PMC
CD-2	CEILING SUPPLY AIR DIFFUSER DROP FACE	150	8X8	0.03	17	TITUS PMC
CD-3	CEILING SUPPLY AIR DIFFUSER DROP FACE	310	10X10	0.06	21	TITUS PMC
RG-1	RETURN GRILLE	810	24X10	0.03	18	TITUS 350
RG-2	RETURN GRILLE	50	6X6	0.03	13	TITUS 350
RG-3	RETURN GRILLE	480	12X12	0.03	15	TITUS 350
SG-1	SUPPLY GRILLE	50	6X6	0.02	15	TITUS 301
OG-1	OUTSIDE GRILLE	80	6X6	0.03	13	TITUS 350

FAN SCHEDULE

SYMBOL	LOCATION	DRIVE	CFM	TSP IN WG	RPM	MTR WATTS	ELECTRIC SERVICE VOLT	AMPS	HZ	KNOWN ACCEPTABLE SOURCE	REMARKS
EF-1	TOILET ROOM	DIRECT	80	.375	640	87	120	1.1	60	BROAN L100	TIMER SWITCH

WATER HEATER SCHEDULE

DESIGNATION	RISE °F @ 0.5 GPM	AMPS	VOLT	PHASE	HZ	KW	KNOWN ACCEPTABLE SOURCE
EWH-1	56	19.7	208	1	60	4.1	EEMAX SP420B
EWH-2	56	19.7	208	1	60	4.1	EEMAX SP420B

PLUMBING FIXTURE SCHEDULE

DESIGNATION	DESCRIPTION	CONNECTION W	V	CW	HW	REMARKS
P-1	WATER CLOSET	4"	2"	1/2"	–	FLOOR MOUNTED TANK TYPE
P-2	LAVATORY	1 1/4"	1 1/2"	1/2"	1/2"	WALL MOUNTED
P-3	SINK	1 1/2"	1 1/2"	1/2"	1/2"	PACKAGED

HEAT PUMP SCHEDULE

SYMBOL	INDOOR UNIT MOTOR HP	OA CFM	CFM	ESP (IN WG)	VOLTS/PH/HZ	ACCESSORY ELECTRIC HEATERS KW	VOLTS/PH/HZ	SYMBOL	COOLING CAPACITY (MBH) AT 95°F CONDENSER TEMP 67°F WB EVAPORATOR TEMP TOTAL	SENSIBLE	HEATING CAPACITY (MBH) AT -3°F OUTDOOR TEMP 65°F EDB INDOOR TEMP	SYSTEM POWER USAGE EXCLUDING ACCESSORY HEATERS KILOWATTS COOLING	HEATING	OUTDOOR UNIT VOLTS/PH/HZ	REFRIGERANT	MIN. SEER	KNOWN ACCEPTABLE SOURCE	REMARKS
HP-1A	3/4	80	1400	.5	208/1/60	11.3	208/3 /60	HP-1B	42.6	32.1	19.3	4.03	3.15	208/1 /60	R-410A	13.0	CARRIER 25HB243 4 TON HEAT PUMP, FX4C INDOOR FAN COIL	PROVIDE EXTERNAL CIRCUIT PROTECTION FOR ACCESSORY HEATERS

GENERAL NOTES:

A. REFER TO SHEET M001 FOR MECHANICAL GENERAL NOTES.
B. PROVIDE SINGLE THICKNESS TURNING VANES IN RECTANGULAR DUCTWORK ELBOWS PER SMACNA RECOMMENDATIONS.
C. PLUMBING PIPING IS TO BE RUN IN WALL CAVITIES BELOW CEILING LEVEL UNLESS OTHERWISE NOTED.

SHEET NOTES:

1. PROVIDE 18" MANUFACTURER SNOW STAND UNDER UNIT.
2. CONNECT POTABLE WATER AND SANITARY PIPING TO EXISTING UTILITIES. CONSULT DRAWING C401 FOR LOCATION OF AVAILABLE SERVICE.
3. PROVIDE FLEX CONNECTIONS FOR SUPPLY AND RETURN DUCT CONNECTIONS TO INDOOR HEAT PUMP UNIT.
4. PLUMBING VENT PIPING ABOVE ACOUSTICAL CEILING.
5. PROVIDE MECHANICAL TRAP PRIMER AND CONNECT TO CW PIPING BELOW SINK. CONNECT TO FLOOR DRAIN AND CONDENSATE TRAPS.
6. PROVIDE TWO 1/4 INCH BOLTS THROUGH DUCTWORK DIRECTLY BEHIND RETURN GRILLE SPACE ONE BOLT 4 INCHES LEFT OF THE DUCT CENTERLINE. PLACE THE SECOND BOLT 4 INCHES RIGHT OF THE DUCT CENTERLINE. SECURE BOLTS WITH WASHERS AND NUTS. WELD NUTS TO BOLT TO PREVENT REMOVAL OF BOLT FROM INSIDE DUCT.
7. PROVIDE 1/4 INCH WIRE MESH BEHIND SOFFIT GRILLES.
8. TOP OF GRILLE AT 1 INCH BELOW FINISHED CEILING.
9. PROVIDE REFRIGERANT PIPING IN ACCORDANCE WITH HEAT PUMP MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS. PROVIDE LINE SIZE RECOMMENDED BY HEAT PUMP MANUFACTURER. PROVIDE P-TRAPS AND INSTALL REFRIGERANT PIPING AT SLOPE RECOMMENDED BY HEAT PUMP MANUFACTURER.
10. PLACE UNIT ON 3/4 INCH THICK NEOPRENE PAD.
11. MOUNT THERMOSTAT APPROX. 5 FEET ABOVE FINISHED FLOOR. REFER TO SHEET A110 FOR OTHER ITEMS ON WALL IN THIS AREA.
12. INTERLOCK MOTORIZED DAMPER TO OPEN WHEN INDOOR FAN HP-1A IS OPERATING.
13. PROVIDE UNIONS FOR BOTH SIDES OF BACKFLOW PREVENTOR.
14. SECURE REFRIGERANT PIPING TO EXTERIOR WALL. ROUTE PIPING HIGH ON WALL TO CLEAR DOOR OPENING.
15. COORDINATE VOLUME DAMPER LOCATION WITH ACCESS DOOR PLACEMENT. REFER TO DRAWING A110.
16. MOUNT CABINET UNIT HEATER IN WALL WITH BOTTOM OF UNIT 6" ABOVE FINISHED FLOOR.
17. MOUNT CUH-2 RECESSED ABOVE ACOUSTICAL CEILING. SUPPORT WEIGHT FROM STRUCTURE.

CABINET UNIT HEATER SCHEDULE

DESIGNATION	CAPACITY WATTS	AMPS	VOLT	PHASE	KNOWN ACCEPTABLE SOURCE
CUH-1	1500	12.6	120	1	Q-MARK CWH-115IDS W/ INTEGRAL THERMOSTAT AND DISCONNECT
CUH-2	2500	9.0	277	1	CEILING MOUNT Q-MARK CDF-557 W/ INTEGRAL THERMOSTAT AND DISCONNECT.

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

JE JACOBS

REV	APPROVED DATE	DESCRIPTION	JCN	REGULAR DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA

TRACON
SECURITY SYSTEM MODERNIZATION & UPGRADE
HVAC AND PLUMBING
FLOOR PLANS AND SCHEDULES

DENVER — DENVER INTERNATIONAL AIRPORT — CO

REVIEWED BY: Cal Hopson
SUBMITTED BY: Cal Hopson
APPROVED BY: James G. Bell
PROJECT ENGINEER: MGR-ENGR'G - SEATTLE
DESIGNED: ISSUED BY: ENGINEERING SERVICES INFRASTRUCTURE
DATE: 5/7/2011
JCN: 1000625
DRAWN: REV:
CHECKED:
DRAWING NO: DEN-1000625-M101

DENVER TRACON
DENVER
COLORADO

ISSUED FOR CONSTRUCTION

1/2" = 1'-0"

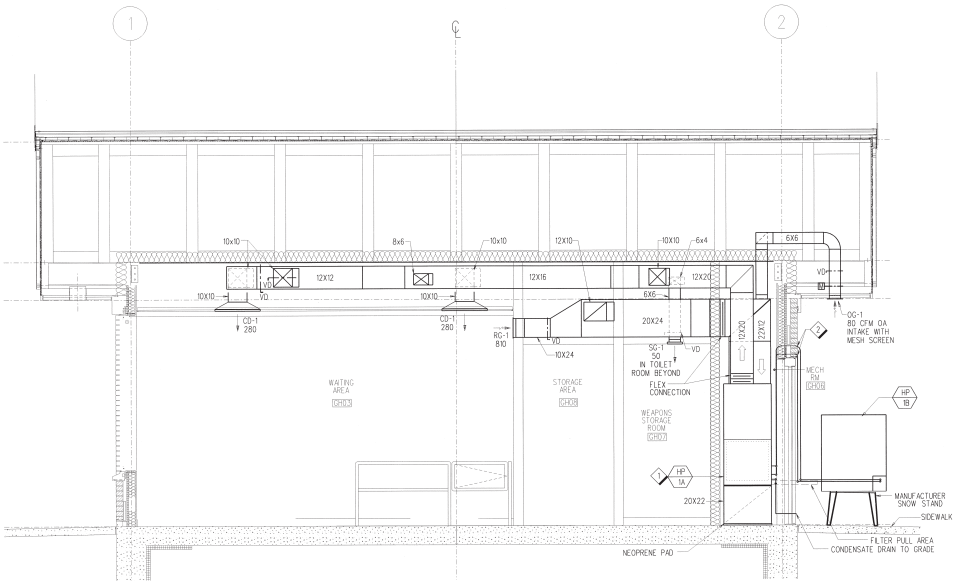
GENERAL NOTES:

A. REFER TO SHEET M001 FOR MECHANICAL GENERAL NOTES.

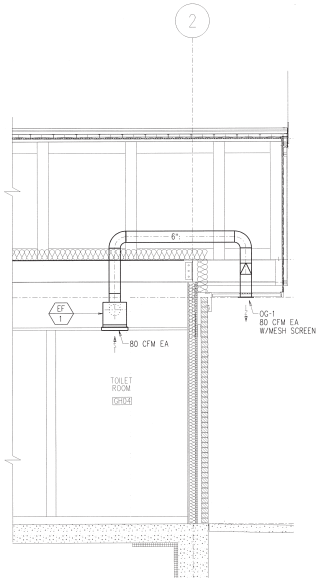
B. PROVIDE SINGLE THICKNESS TURNING VANES IN RECTANGULAR DUCTWORK ELBOWS PER SMACNA RECOMMENDATIONS.

SHEET NOTES:

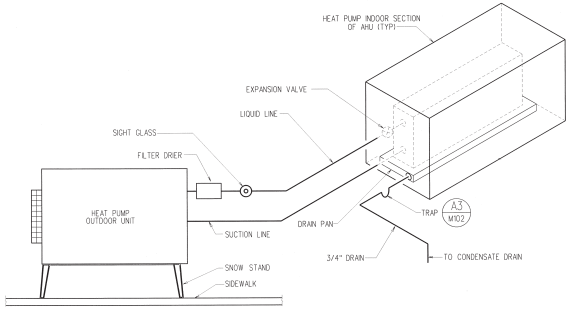
1. PROVIDE FLEX CONNECTIONS FOR SUPPLY AND RETURN DUCT CONNECTIONS TO INDOOR HEAT PUMP UNIT.
2. PROVIDE PIPE SLEEVE AT PENETRATION. SEAL AIRTIGHT AROUND PERIMETER OF PIPE, BOTH SIDES OF WALL.



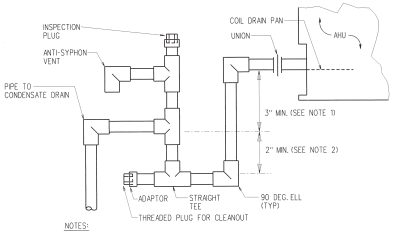
REF M101 (C2 / M102) SECTION
SCALE:1/2" = 1'-0"



REF M101 (C4 / M102) EXHAUST FAN SECTION
NOT TO SCALE

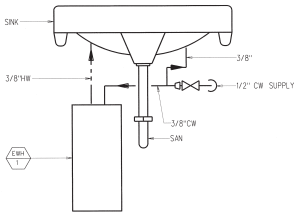


REF M101 (A1 / M102) REFRIGERANT PIPING DIAGRAM
NOT TO SCALE



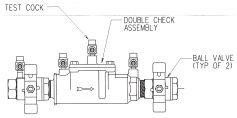
NOTES:
1. THIS DIMENSION SHALL BE THE SUCTION PRESSURE (INCHES OF WATER GAGE) DOWNSTREAM OF THE COOLING COIL RELATIVE TO ATMOSPHERE PLUS 1" OR SHALL BE 3", WHICHEVER IS GREATER.
2. THIS DIMENSION SHALL BE ONE HALF THE SUCTION PRESSURE (INCHES OF WATER GAGE) DOWNSTREAM OF THE COOLING COIL RELATIVE TO ATMOSPHERE PLUS 1", OR SHALL BE 2", WHICHEVER IS GREATER.
3. THIS DETAIL APPLIES TO DRAW-THRU UNITS ONLY.

REF M101 M102 (A3 / M102) TYPICAL CONDENSATE DRAIN DETAIL
NTS



REF M101 (A4 / M102) WATER HEATER HOOKUP DETAIL
NTS

NOTE: EWH-2 HOOKUP SIMILAR



REF M101 (B5 / M102) BACKFLOW PREVENTOR DETAIL
NTS

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PARTS OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "TRANSPORTATION SECURITY NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

JE JACOBS

REV	APPROVED DATE	DESCRIPTION	JCN	REGLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA

TRACON
SECURITY SYSTEM MODERNIZATION & UPGRADE
HVAC AND PLUMBING
SECTIONS AND DETAILS

DENVER — DENVER INTERNATIONAL AIRPORT — CO

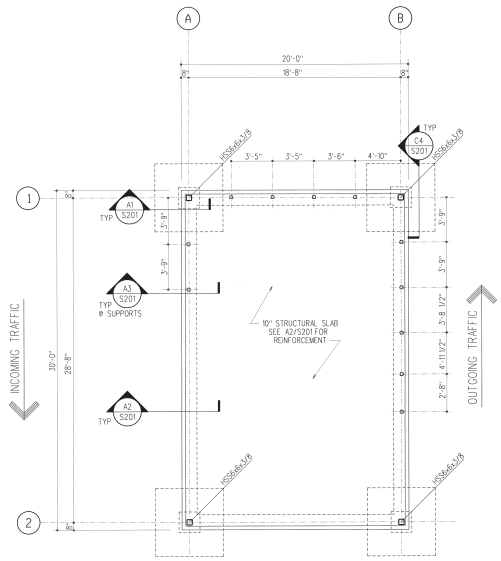
REVIEWED BY: SUBMITTED BY: PROJECT ENGINEER
APPROVED BY: MGR: ENGRG - SEATTLE
DATE: 5/9/2011
JCN: 1000625
DRAWN BY: ENGINEERING SERVICES INFRASTRUCTURE
DRAWING NO: DEN-1000625-M102
REV:
CHECKED:

DENVER TRACON
DENVER
COLORADO

1/2" = 1'-0"

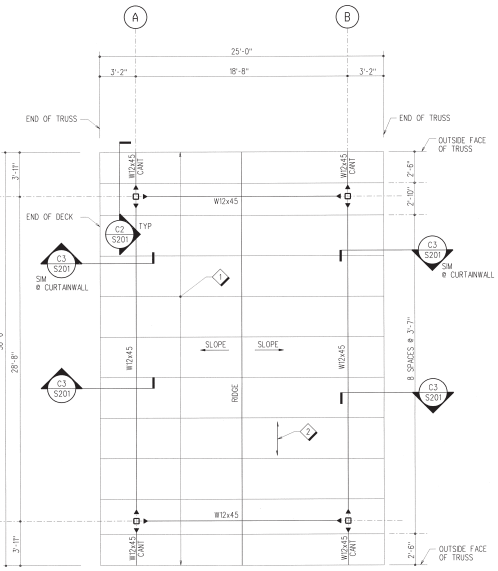
ISSUED FOR CONSTRUCTION

ECW-JAN-1000625-M102.DWG



NOTE:
TOP OF SLAB ELEVATION = 0'-0" = EL. 780.55 (SEE SHEET C-301)

D2 S201 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



NOTE:
TOP OF STEEL ELEVATION = TRUSS BEARING ELEVATION = +11'-8".

D3 S201 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

GENERAL

1. THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (IBC), 2006.
2. THE FLOOR LIVE LOAD IS 100 PSF
3. THE ROOF DESIGN GRAVITY LOADS ARE AS FOLLOWS:
   DEAD LOADS APPLIED TO TRUSS TOP CHORD 6 PSF
   DEAD LOADS APPLIED TO TRUSS BOTTOM CHORD 10 PSF
   LIVE LOADS (MIN) 30 PSF
   SNOW LOADS - REFER TO SNOW LOADS BELOW
4. THE DESIGN SNOW LOADS IN ACCORDANCE WITH ASCE 7-05 ARE AS FOLLOWS:
   GROUND SNOW LOAD, P_g = 30 PSF
   FLAT ROOF SNOW LOAD, P_f = 23.1 PSF
   SNOW EXPOSURE FACTOR, C_e = 1.0
   SNOW LOAD IMPORTANCE FACTOR, I = 1.0
   THERMAL FACTOR, C_t = 1.1
5. THE DESIGN WIND LOADS IN ACCORDANCE WITH ASCE 7-05 ARE AS FOLLOWS:
   BASIC WIND SPEED (3-SECOND GUST), V = 90 MPH
   WIND IMPORTANCE FACTOR, I = 1.0
   WIND EXPOSURE CATEGORY = C
   INTERNAL PRESSURE COEFFICIENT, GC_{pi} = +/-0.18
6. THE DESIGN SEISMIC LOADS IN ACCORDANCE WITH ASCE 7-05 ARE AS FOLLOWS:
   SEISMIC IMPORTANCE FACTOR 1.00
   MAPPED SPECTRAL RESPONSE ACCELERATION AT 0.2 SEC, S_S = 0.204
   MAPPED SPECTRAL RESPONSE ACCELERATION AT 1.0 SEC, S_1 = 0.054
   SITE CLASS C
   SPECTRAL RESPONSE COEFFICIENT AT 0.2 SEC, S_{DS} = 0.16
   SPECTRAL RESPONSE COEFFICIENT AT 1.0 SEC, S_{D1} = 0.061
   SEISMIC DESIGN CATEGORY B
   BASIC SEISMIC - FORCE RESISTING SYSTEM - ORDINARY MOMENT FRAME
   DESIGN BASE SHEAR, V = 0.06W
   SEISMIC RESPONSE MODIFICATION FACTOR, R = 3.5
   ANALYSIS PROCEDURE USED IS THE EQUIVALENT LATERAL FORCE PROCEDURE

FOUNDATION

7. FOUNDATION DESIGN IS IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION, FOUNDATION AND PAVEMENT DESIGN REPORT BY TETRA TECH, INC AND DATED APRIL 18, 2008.
8. SPREAD FOOTINGS SHALL REST ON UNDISTURBED SOIL OR SOIL COMPACTED TO 95% OPTIMUM DENSITY.
9. NET ALLOWABLE SOIL BEARING PRESSURE IS 3000 PSF. ACTUAL SOIL CONDITIONS AND METHODS OF CONSTRUCTION ARE TO BE VERIFIED BY A GEOTECHNICAL ENGINEERING FIRM LICENSED IN THE STATE OF COLORADO PRIOR TO CONSTRUCTION.
10. FOOTINGS SHALL BEAR AT A MINMUM 3'-0" BELOW ADJACENT GRADE.

CONCRETE

10. CONCRETE SHALL BE NORMAL WEIGHT: f'c = 4000 PSI
11. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A497.

STEEL

12. STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING:
    W-SHAPES: ASTM ASTM A992
    PLATES AND ANGLES ASTM A36
    STRUCTURAL STEEL TUBING ASTM A500 GRADE B.
13. CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36.
14. WELDING SHALL USE E70XX ELECTRODES OR EQUAL.
15. ▲ DENOTES MOMENT CONNECTION.

GENERAL NOTES CONTINUED:

METAL DECK

14. ROOF DECK SHALL BE GALVANIZED 1 1/2", 20 GAGE TYPE B ROOF DECK. FASTEN DECK WITH #12 TEK SCREWS AT SUPPORTS 36/7 PATTERN AND AT 6 INCHES ON CENTER ALONG SIDE LAPS WITH #10 TEK SCREWS.
15. WELDING OF ROOF DECK UNITS SHALL COMPLY WITH THE AMERICAN WELDING SOCIETY'S "STRUCTURAL WELDING CODE - SHEET STEEL" (AWS D1.3).
16. WELD AND MECHANICAL FASTENERS SHALL COMPLY WITH THE STEEL DECK INSTITUTE'S "SPECIFICATIONS AND COMMENTARY FOR STEEL ROOF DECK".

LIGHT GAGE METAL TRUSSES

17. ROOF LIGHT GAGE METAL TRUSSES SHALL BE DESIGNED AND DETAILED BY TRUSS MFR. LOCAL CODE, IBC LOADING, ASCE 7-05 & LOADING PROVIDED ON DRAWINGS SHALL BE USED BY THE MFR IN THE DESIGN OF THE TRUSSES. THE MOST STRINGENT SHALL APPLY.

MASONRY OPENINGS

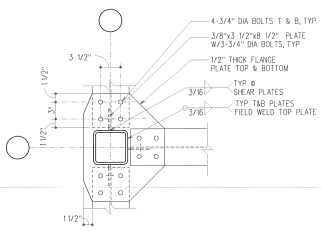
18. LINTELS SHALL BEAR ON MASONRY WALLS A MINIMUM OF 8" AT EACH END, UNLESS NOTED OTHERWISE. THE FOLLOWING LINTELS MAY BE USED WHEN THE HEAD OF THE MASONRY OPENING IS BELOW ROOF BEARING ELEMENTS BY A MINIMUM DISTANCE OF 75% OF THE LINTEL SPAN:

CLEAR SPAN	GALVANZED STEEL ANGLE LINTEL @ EXT BRICK MASONRY WYTHE
0 - 4'-0"	L6 x 4 x 3/8 LLH

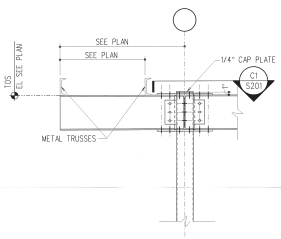
TEMPORARY SHORING OF LINTELS MUST BE PROVIDED UNTIL MASONRY HAS CURED. CONTROL JOINTS IN MASONRY SHALL NOT BE LOCATED WITHIN A DISTANCE EQUAL TO 50% OF THE LINTEL SPAN ADJACENT TO EACH SIDE OF THE OPENING.

SHEET NOTES:

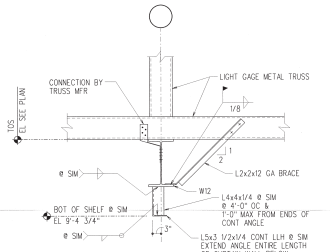
1. LIGHT GAGE METAL TRUSSES.
2. METAL DECK. SEE GENERAL NOTES FOR DECK INFO.
3. BASE PLATE 1/2" x 6" x 0'-10" W/ (4) 1/2" DIA INJECTION ADHESIVE ANCHORS W/ 6 3/8" EMBED & 3/4" NON-SHRINK GROUT. ANCHORS ARE TO HAVE A MIN ALLOWABLE TENSILE STRENGTH OF 5295 LB AND SHEAR STRENGTH OF 3335 LB.



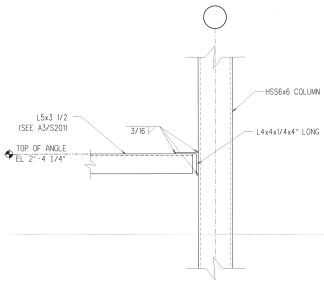
C1 S201 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



C2 S201 SECTION
SCALE: 3/4" = 1'-0"



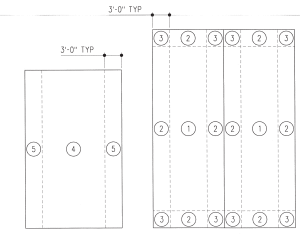
C3 S201 DETAIL
SCALE: 3/4" = 1'-0"



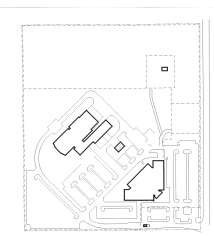
C4 S201 DETAIL
SCALE: 1 1/2" = 1'-0"

EFFECTIVE WIND AREA (FT^2)		
10	500	
22.1 PSF	16.9 PSF	ZONE 4 WIND LOAD AWAY FROM SURFACE
27.3 PSF	16.9 PSF	ZONE 5 WIND LOAD AWAY FROM SURFACE
20.4 PSF	15.2 PSF	ZONES 4 & 5 WIND LOAD TOWARD SURFACE
EFFECTIVE WIND AREA (FT^2)		
10	100	
11.7 PSF	8.3 PSF	ZONES 1, 2 AND 3 WIND LOAD TOWARD SURFACE
18.7 PSF	16.9 PSF	ZONE 1 WIND LOAD AWAY FROM SURFACE
32.5 PSF	23.8 PSF	ZONE 2 WIND LOAD AWAY FROM SURFACE
48.0 PSF	37.7 PSF	ZONE 3 WIND LOAD AWAY FROM SURFACE
41.1 PSF	41.1 PSF	ZONE 2 WIND LOAD TO OVERHANG
67.0 PSF	46.3 PSF	ZONE 3 WIND LOAD TO OVERHANG

NOTE: REFER TO FIGURE BELOW FOR ZONES 1 THROUGH 5.

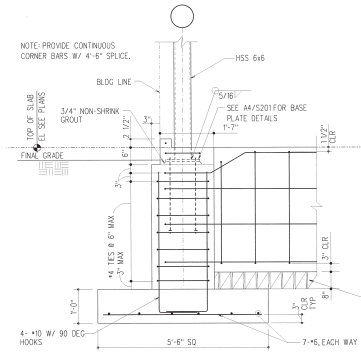


B5 S201 COMPONENT & CLADDING WIND LOADING
SCALE: N.T.S.

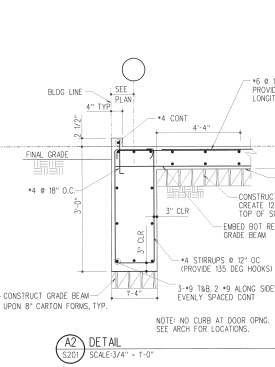


KEY PLAN

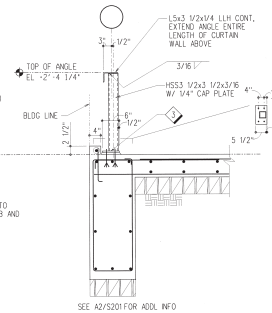
N
KEY NORTH



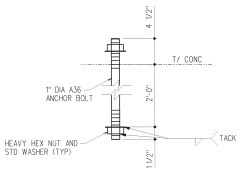
A1 S201 DETAIL
SCALE: 3/4" = 1'-0"



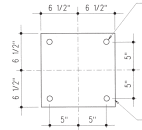
A2 S201 DETAIL
SCALE: 3/4" = 1'-0"



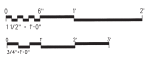
A3 S201 DETAIL
SCALE: 3/4" = 1'-0"



B4 S201 ANCHOR BOLT DETAIL
SCALE: NTS



A4 S201 BASE PLATE DETAIL
SCALE: NTS



SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

JE JACOBS

REV	APPROVED DATE	DESCRIPTION	JOB	REVISE DATE	APV

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA

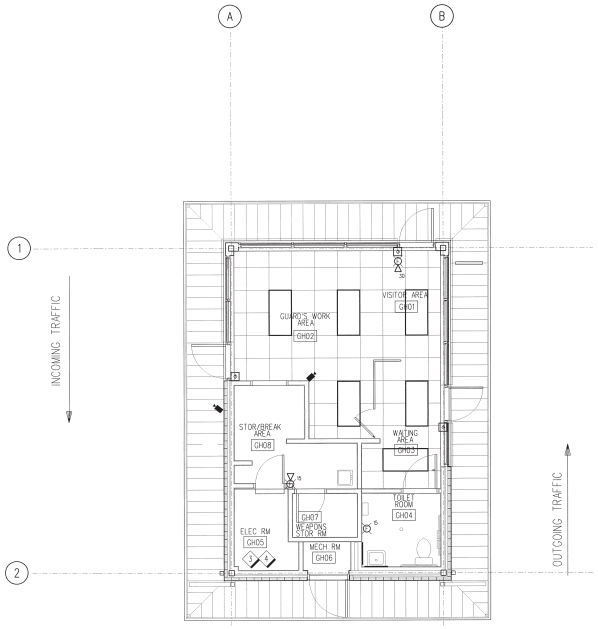
TRACON
SECURITY SYSTEM MODERNIZATION & UPGRADE
STRUCTURAL PLANS, SECTIONS, DETAILS, AND NOTES

DENVER — DENVER INTERNATIONAL AIRPORT — CO

REVIEWED BY	SUBMITTED BY: PROJECT ENGINEER	APPROVED BY: MGR: ENGRG - SEATTLE
DESIGNED	ISSUED BY: ENGINEERING SERVICES INFRASTRUCTURE	DATE 5/8/2011 JOB 1000625
DRAWN		DRAWING NO DEN-1000625-S201
CHECKED		

DENVER TRACON
DENVER
COLORADO

ISSUED FOR CONSTRUCTION



C1 Y201 FIRE ALARM FLOOR PLAN
SCALE: 1/4" = 1'-0"

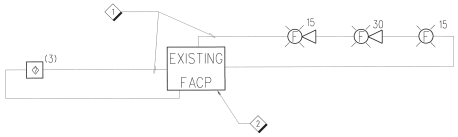
FIRE ALARM NOTIFICATION MATRIX - ADDRESSABLE FACP

● INDICATES ACTION WILL CAUSE SPECIFIC RESULTS

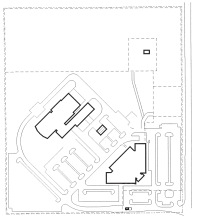
INDICATES ACTION WILL NOT CAUSE SPECIFIC RESULTS

ACTIONS		SYSTEM OUTPUTS: CONTROL UNIT AREA/S										NOTIFICATION			
SYSTEM INPUTS		A ACTUATE FACP COMMON ALARM SIGNAL INDICATOR	B ACTUATE FACP AUDIBLE ALARM SIGNAL	C ACTUATE FACP COMMON SUPERVISORY SIGNAL INDICATOR	D ACTUATE FACP AUDIBLE SUPERVISORY SIGNAL	E ACTUATE FACP COMMON TROUBLE SIGNAL INDICATOR	F ACTUATE FACP AUDIBLE TROUBLE SIGNAL	G ACTUATE COMMON ALARM SIGNAL AT CENTRAL STATION	H ACTUATE COMMON TROUBLE SIGNAL AT CENTRAL STATION	I ACTUATE COMMON SUPERVISORY SIGNAL AT CENTRAL STATION	J	K ACTUATE NOTIFICATION DEVICES IN GUARD HOUSE	L	M	N	
1	Guard House: Manual Pull Station	●	●					●				●			1
2	Guard House: Fire Alarm Circuit Short, Open, Ground					●	●		●						2
3	Guard House: Base Building Alarm											●			3
4	Guard House														4
5	Guard House														5
6	Guard House														6
SYSTEM INPUTS		A	B	C	D	E	F	G	H	I	J	K	L	M	N

C4 Y201 FIRE ALARM MATRIX
SCALE: N.T.S.



B4 Y201 FIRE ALARM RISER
SCALE: N.T.S.



KEY PLAN

N
KEY NORTH

GENERAL NOTES:

A. THE FIRE ALARM SYSTEM SHALL BE DESIGNED, INSTALLED AND TESTED IN ACCORDANCE WITH THE 2007 EDITION OF NFPA 72.

B. FOR COMPLETE SYSTEM CONTROL, SEE MATRIX OF OPERATIONS.

C. FINAL FIRE ALARM TEST SHALL BE WITNESSED BY THE COTR.

D. FILE A "RECORD OF COMPLETION" IN ACCORDANCE WITH NFPA 72 TO THE COTR PRIOR TO REQUESTING FINAL TEST.

E. OBTAIN ALL REQUIRED PERMITS AND APPROVALS FROM THE AHJ PRIOR TO COMMENCING WORK.

F. RISER DIAGRAM IS DIAGRAMMATIC IN NATURE. INSTALL WIRING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE MANUFACTURER'S WIRING REQUIREMENTS.

SHEET NOTES:

1. PROVIDE NEW CLASS A IDC AND NOTIFICATION APPLIANCE CIRCUIT FROM THE EXISTING FACP TO THE NEW GUARDHOUSE. PROVIDE TRANSIENT VOLTAGE SURGE SUPPRESSION AT THE POINT EACH CIRCUIT ENTERS/EXITS A BUILDING. TOTAL OF FOUR REQUIRED.
2. EXISTING FACP IS LOCATED IN THE MAIN BUILDING AND FEEDS OTHER AREAS OF THE FACILITY AND SHALL REMAIN OPERATIONAL AT ALL TIMES.
3. RUN FIRE ALARM WIRING TO 12 x 12 x 6 TELCOM PULLBOX. SEE ELECTRICAL DRAWINGS FOR EXACT LOCATION OF PULLBOX.
4. USE NEW 4" TELCOM CONDUIT TO RUN FIRE ALARM CABLE BACK TO TELCO ROOM IN TOC BUILDING. FIRE ALARM CABLE MUST BE LISTED FOR UNDERGROUND USE.

LEGEND

- MANUAL PULL STATION
- COMBINATION STROBE/HORN (XX DENOTES CANDELA RATING)
- STROBE (XX DENOTES CANDELA RATING)

0 2' 4' 8'
1/4" = 1'-0"

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

JE JACOBS

REV	APPROVED DATE	DESCRIPTION	JCN	REQUIRE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA

TRACON

SECURITY SYSTEM MODERNIZATION & UPGRADE
FIRE ALARM FLOOR PLAN,
RISER DIAGRAM AND MATRIX

DENVER — DENVER INTERNATIONAL AIRPORT — CO

REVIEWED BY: PROJECT ENGINEER
SUBMITTED BY: [signature]
APPROVED BY: [signature]
MGR: ENGRG - SEATTLE
DESIGNED
DRAWN
CHECKED
ISSUED BY: ENGINEERING SERVICES INFRASTRUCTURE
DATE: 5/17/2011
JCN: 1000625
DRAWING NO: DEN-1000625-Y201
REV:

DENVER TRACON
DENVER
COLORADO

ISSUED FOR CONSTRUCTION