

DUCTWORK

	ACOUSTICAL LINING (INSULATION)
	DIRECTION OF AIR FLOW
	DUCT SIZE, FIRST FIGURE IS FOR SIDE SHOWN
	DUCT SECTION, POSITIVE PRESSURE (SUPPLY AIR)
	DUCT SECTION, NEGATIVE PRESSURE (RETURN AIR)
	DUCT TRANSITION, ROUND TO RECTANGULAR
	DUCT TRANSITION
	MANUAL SPLITTER
	FIRE DAMPER WITH ACCESS DOOR
	MANUAL VOLUME DAMPER
	MOTORIZED DAMPER
	ACCESS DOOR
	TURNING VANES
	CHANGE IN DUCT ELEVATION (R-RISE, D-DROP)
	FLEXIBLE DUCT AND EQUIPMENT CONNECTION
	CENTRIFUGAL FAN
	AXIAL FLOW FAN
	PROPELLER FAN
	SUPPLY AIR FLOW
	EXHAUST OR RETURN AIR FLOW
	SUPPLY GRILLE OR REGISTER
	EXHAUST/RETURN GRILLE OR REGISTER
	SUPPLY GRILLE OR REGISTER, CEILING
	EXHAUST OR RETURN GRILLE, CEILING
	DIFFUSER (ROUND OR RECTANGULAR)
	AIR FILTER
	AIR FLOW THROUGH DOOR LOUVER (DL) OR UNDERCUT DOOR (UC)
	LOUVER (WITH SCREEN)
	ROOF VENTILATOR, INTAKE
	ROOF VENTILATOR, EXHAUST
	UNIT HEATER (E-ELECTRIC, G-GAS)

PIPING

	CONDENSATE DRAIN
	REFRIGERANT LIQUID
	REFRIGERANT HOT GAS
	REFRIGERANT SUCTION
	DIRECTION OF FLOW
	GLYCOL
	NATURAL GAS
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	COMPRESSED AIR
	MAKE - UP WATER SUPPLY
	PITCH OF PIPE (R-RISE, D-DROP)

PIPE SPECIALTIES

	CAP
	BUSHING
	PIPE SLEEVE
	PLUG
	THERMOMETER
	ORIFICE (FLOW METER)
	GAUGE
	PUMP
	FLEXIBLE PIPE CONNECTOR
	STRAINER
	UNION
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC, FLUSH TOP
	REDUCER ECCENTRIC, FLUSH BOTTOM
	STRAINER WITH BLOW DOWN
	FLOW SWITCH
	PIPE RESTRAINER, (A-ANCHOR, H-HANGER)
	PIPE GUIDE
	EXPANSION JOINT

FITTINGS

	PLAN	OUTLET UP	OUTLET DOWN
ELBOW 90°			
ELBOW 45°			
TEE			

VALVES

	PRESSURE REDUCING VALVE
	GATE VALVE
	GLOBE VALVE, BALL VALVE
	ANGLE VALVE
	CHECK VALVE
	MOTORIZED VALVE
	MANUAL AIR VENT
	BALANCING COCK
	HOSE BIBB
	SAFETY VALVE (P-PRESS, T-TEMP)
	AUTOMATIC CONTROL VALVE
	CONTROL VALVE 2 WAY
	CONTROL VALVE 3 WAY
	AUTOMATIC AIR VENT
	GAS PRESSURE REGULATOR
	COCK WITH CAP
	GAS COCK
	BACKFLOW PREVENTER

AUTOMATIC TEMPERATURE CONTROLS

	THERMOSTAT - REMOTE BULB
	HUMIDISTAT
	THERMOSTAT
	FIRESTAT
	FLOW SENSOR
	MOTOR OPERATOR
	THERMAL EXPANSION VALVE

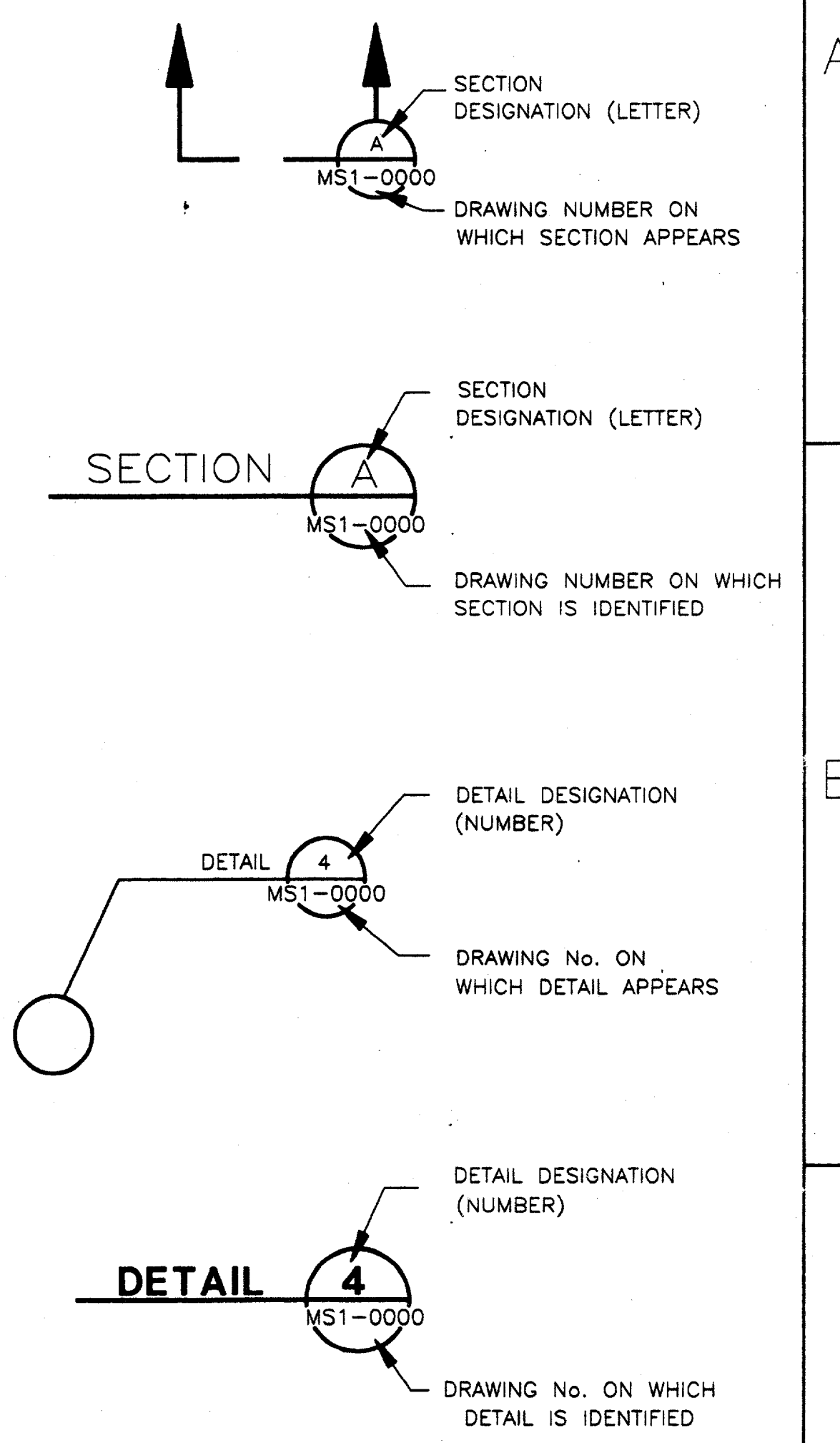
GENERAL

	POINT OF CONNECTION - NEW WORK TO EXISTING WORK.
	DEMOLITION ENDS HERE - CAP PIPING & DUCTS
	EQUIPMENT CALLOUT
	RISER CALLOUT

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT	kBTU/H	THOUSANDS OF BTU PER HOUR
A/C	AIR CONDITIONING	LVR	LOUVER
A/CU	AIR CONDITIONING UNIT	MAU	MAKE UP AIR UNIT
ADR	ACCESS DOOR	MAX	MAXIMUM
AHU	AIR HANDLING UNIT	MBTU/H	MILLIONS OF BTU PER HOUR
AHUF	AIR HANDLING UNIT FAN	MECH	MECHANICAL
AL	ALUMINUM	MIN	MINIMUM
APPROX	APPROXIMATELY	NC	NORMALLY CLOSED
AUTOTC	AUTOMATIC TEMPERATURE CONTROL	NIC	NOT IN CONTRACT
AUX	AUXILIARY	NO	NORMALLY OPEN
BDD	BACK DRAFT DAMPER	No.	NUMBER
BTU/H	BRITISH THERMAL UNIT PER HOUR	NTS	NOT TO SCALE
C TO C	CENTER TO CENTER	OA	OUT SIDE AIR
CFM	CUBIC FEET PER MINUTE	OBD	OPPOSED BLADE DAMPER
*	CENTER LINE	OC	ON CENTER
CLG	CEILING	OPNG	OPENING
CONN	CONNECT, CONNECTS, CONNECTION	OS & Y	OUTSIDE SCREW AND YOKE
CONST	CONSTRUCTION	PRV	PRESSURE REDUCING VALVE
CONT	CONTINUOUS, CONTINUATION	RA	RETURN AIR
CW	COLD WATER	RAF	RETURN AIR FAN
DIA	DIAMETER	REF	REFERENCE
DIFF	DIFFUSER	REG	REGISTER
DIL	DYNAMIC INSERTION LOSS	REQD	REQUIRED
DH	DUCT HEATER, ELECTRIC	RM	ROOM
DN	DOWN	SA	SUPPLY AIR
DPR	DAMPER	SAF	SUPPLY AIR FAN
DWG	DRAWING	SHT	SHEET
DX	DIRECT EXPANSION	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION, INC.
EBB	ELECTRIC BASEBOARD HEATER	Sq Ft	SQUARE FOOT, SQUARE FEET
ECS	ENVIRONMENTAL CONTROL SYSTEM	SST	STAINLESS STEEL
EL	ELEVATION	STD	STANDARD
ELEC	ELECTRIC, ELECTRICAL	STPR	STATIC PRESSURE
ELEV	ELEVATOR	TBF	TUNNEL BOOSTER FAN
EHC	ELECTRIC HEATING COIL	TCC	TRAIN CONTROL CENTER
EQ	EQUAL	TTLPR	TOTAL PRESSURE
EXF	EXHAUST FAN	TVF	TUNNEL VENTILATION FAN
EXH	EXHAUST	TXV	THERMAL EXPANSION VALVE
EXIST	EXISTING	TYP	TYPICAL
EXP	EXPANSION	UPE	UNDERPLATFORM EXHAUST
FCU	FAN COIL UNIT	UPEF	UNDERPLATFORM EXHAUST FAN
FLEX	FLEXIBLE	VAV	VARIABLE AIR VOLUME
F/P	FIRE PROTECTION	VD	VOLUME DAMPER
FT	FOOT, FEET	VERT	VERTICAL
GA	GAUGE	VP	VELOCITY PRESSURE
GRL	GRILLE	W/	WITH
HEX	HEXAGONAL	W/O	WITHOUT
HORIZ	HORIZONTAL		
HTR	HEATER		
HVAC	HEATING, VENTILATING & AIR CONDITIONING		
IN.	INCH		

DETAIL AND SECTION DESIGNATION



GENERAL NOTES:

1. SYMBOLS AND ABBREVIATIONS SHOWN HERE MAY INCLUDE ITEMS WHICH ARE NOT PART OF THIS CONTRACT.

Contract Number: 9700136  
 Company Name: WEA  
 Chief of Firm Signature: [Signature]  
 Title of Officer: President  
 Date: 14-AUG-97

**CONFORMED**

CONTRACT SHEET No. 82 of 95

REV.	DATE	DESCRIPTION	BY	ENG.	CHK.	APP.	REV.	DATE	DESCRIPTION	BY	ENG.	CHK.	APP.



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DART PROJECT



SCALE:	NO SCALE
DRAWN	P. JACKSON
DESIGNED	E. BRAUN
CHECKED	W. GERARD
IN CHARGE	V. STEVENS
DATE:	14-AUG-97

**ADDISON TRANSIT CENTER**  
 MECHANICAL STANDARDS  
 ABBREVIATIONS & SYMBOLS

CONTRACT	DWG. No.	REV.
C-97000136	MC1-0001	0