

ABBREVIATIONS

(ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)

A	AIR CONDITIONING ABOVE ALTERNATING CURRENT AIR COOLED CHILLER AIR COOLED CONDENSING UNIT ADJUSTABLE AMPERE FUSE ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE AMPERE INTERRUPTING CURRENT ALUMINUM AMPERES AMERICAN NATIONAL STANDARDS INSTITUTE ARCHITECT, ARCHITECTURAL AIR CONDITIONING AND REFRIGERATION INSTITUTE AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS AMERICAN SOCIETY OF MECHANICAL ENGINEERS AMERICAN SOCIETY OF TESTING AND MATERIALS AUXILIARY AIR VENT AMERICAN WIRE GAUGE AMERICAN WELDING SOCIETY AMERICAN WATER WORKS ASSOCIATION AUTOMATIC TELLER MACHINE	G	GROUND PRESSURE DROP GALLON GALVANIZED GENERAL CONTRACTOR GROUND FAULT INTERRUPTER GROUND FAULT RELAY GALLONS PER DAY GALLONS PER HOUR GALLONS PER MINUTE	P	PUBLIC ADDRESS GAUGE POWER FACTOR PHASE POST INDICATOR VALVE PLUMBING PANEL POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH ABSOLUTE POUNDS PER SQUARE INCH GAUGE PRESSURE SAFETY VALVE, RELIEF VALVE PLUG VALVE POLYVINYL CHLORIDE
B	BUILDING AUTOMATION SYSTEM BACKDRAFT DAMPER BELOW FINISHED FLOOR BOILER FEED WATER BREAKER BUILDING BOTTOM OF DUCT BOTTOM OF PIPE BOTTOM OF STRUCTURE BRITISH THERMAL UNIT	H	HEIGHT HEAD, HUB DRAIN HAND-OFF-AUTOMATIC HORIZONTAL HORSEPOWER HUMIDISTAT HIGH PRESSURE STEAM HEATING HEATER HEATING, VENTILATING AND AIR CONDITIONING HOT WATER HYDRANT HERTZ	Q	QUANTITY
C	CONDUIT CABLE TELEVISION SYSTEM CLOSED CIRCUIT TELEVISION CUBIC FEET PER HOUR CUBIC FEET PER MINUTE CUBIC FEET PER SECOND CAST IRON CIRCULATING CIRCUIT CENTERLINE CEILING CONCRETE MASONRY UNIT CLEANOUT COLUMN CHLORINATED POLYVINYL CHLORIDE COPPER COLD WATER DEGREES CELSIUS CONTACTOR	I	INSIDE DIAMETER INVERT ELEVATION INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS ILLUMINATING ENGINEERING SOCIETY ISOLATED GROUND INCH INCHES OF WATER COLUMN	R	RETURN AIR REFLECTED CEILING PLAN, REINFORCED CONCRETE PIPE ROOF DRAIN REFERENCE, REFER RECYCLATE REINFORCING REQUIRED REVISION, REVISE RIGID GALVANIZED STEEL RELATIVE HUMIDITY REFRIGERANT HOT GAS REFRIGERANT LIQUID RUNNING LOAD AMPS ROOM REVOLUTIONS PER MINUTE REFRIGERANT SUCTION ROOF TOP UNIT
D	DEPTH DRY BULB DIRECT CURRENT DEGREES DESIGNATION DIAMETER DIMENSION DISCONNECT DOWN DOUBLE-POLE, DOUBLE-THROW DOUBLE-POLE, SINGLE-THROW DOWNSPOUT DRAWING DIRECT EXPANSION	J	JUNCTION BOX	S	SUPPLY AIR SMOKE DAMPER, STORM DRAIN SECTION SQUARE FEET SHEET SIMILAR SHEET METAL SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION STATIC PRESSURE SPECIFICATION SQUARE STAINLESS STEEL, SANITARY SEWER SOUND TRAP, STEAM TRAP STANDARD STEEL SURFACE SUSPEND
E	EACH ENTERING AIR TEMPERATURE ECCENTRIC ENTERING DRY BULB EXHAUST FAN ELEVATION ELECTRICAL ENCLOSURE EQUIPMENT EXTERNAL STATIC PRESSURE ENTERING WET BULB ELECTRICAL WATER COOLER ENTERING WATER TEMPERATURE EXHAUST EXISTING ELECTRIC UNIT HEATER	K	1000 CIRCULAR MILS KILOVOLT KILOVOLT-AMPS KILOWATT KILOWATT-HOUR	T	TOTAL DYNAMIC HEAD THROUGH TOTAL PRESSURE TOTAL STATIC PRESSURE THERMOSTAT TYPICAL TELEVISION TRANSFER FAN
F	FIRE ALARM FIRE ALARM CONTROL PANEL FLOOR CLEANOUT FAN COIL UNIT FLOW LINE FULL LOAD AMPS FLEXIBLE FEET PER MINUTE FOOT, FEET FULL-VOLTAGE, NON-REVERSING DEGREES FAHRENHEIT	L	LENGTH LEAVING AIR TEMPERATURE POUNDS LEAVING DRY BULB LINEAR FEET LOW PRESSURE LOCKED MOTOR AMPS LOW PRESSURE STEAM (15 PSIG) LIGHTING LEAVING WET BULB LEAVING WATER TEMPERATURE	U	UNDERFLOOR UNDERGROUND UNDERSLAB UNDERWRITERS LABORATORIES, INC. UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY

ELECTRICAL SYMBOLS

(ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)

LIGHTING	INCANDESCENT OR HID LIGHTING FIXTURE, LETTER DENOTES TYPE WALL WASHER LIGHTING FIXTURE, LETTER DENOTES TYPE EXIT SIGN, ARROWS AS INDICATED, LETTER DENOTES TYPE DARKENED AREA DENOTES LIGHTED FACE STRIP FLUORESCENT LIGHTING FIXTURE, LETTER DENOTES TYPE LIGHT FIXTURE ON EMERGENCY OR LIFE SAFETY CIRCUIT FLUORESCENT FIXTURE, LETTER DENOTES TYPE WALL MOUNTED LIGHT FIXTURE, LETTER DENOTES TYPE EMERGENCY LIGHTING FIXTURE WITH BATTERY PACK
SWITCHES	SWITCH, SPST, 20A, 120/277V SWITCH, 20A, 120/277V, "2" DENOTES DPST, "3" DENOTES THREE-WAY, "4" DENOTES FOUR-WAY SWITCH, SPDT, CENTER OFF, MOMENTARY CONTACT SWITCH, SPST, 20A, 120/277V, "K" DENOTES KEY SWITCH, "P" DENOTES PILOT LIGHT, "N" DENOTES NARROW MULTION SWITCH DIMMER CONTROL SWITCH, 2000 WATT UNLESS OTHERWISE NOTED
RECEPTACLES AND OUTLETS	SIMPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V DUPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V, "H" DENOTES MOUNTED HORIZONTALLY, "R" SPECIFICATIONS DUPLEX WALL RECEPTACLE ON DEDICATED CIRCUIT DUPLEX WALL RECEPTACLE, "WP" DENOTES WEATHERPROOF, "TP" DENOTES SAFETY TYPE, "GI" DENOTES GROUND FAULT INTERRUPTER FOURPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V FOURPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V ON DEDICATED CIRCUIT SPECIAL RECEPTACLE, NEMA CONFIGURATION AS NOTED FLOOR RECEPTACLE, "F" DENOTES FLUSH TELEVISION OUTLET CLOCK RECEPTACLE MULTI-OUTLET SURFACE RACEWAY WITH NEMA 5-20R, 20A, 125V AT 12" ON CENTER JUNCTION BOX POWER & LIGHTING, S-SECURITY SYSTEM POWER/TELEPHONE/DATA POLE (FOR MODULAR FURNITURE) FLOOR TELEPHONE OUTLET "F" DENOTES FLUSH FLOOR DATA OUTLET "F" DENOTES FLUSH FLOOR RECEPTACLE/TELEPHONE OUTLET "F" DENOTES FLUSH FLOOR RECEPTACLE/DATA OUTLET "F" DENOTES FLUSH TELEPHONE OUTLET STUB 3/4" CONDUIT & PULLCORD OUT 6" AFC. DATA OUTLET STUB 3/4" CONDUIT AND PULLCORD OUT 6" AFC. TELEPHONE & DATA OUTLET STUB 3/4" CONDUIT AND PULLCORD OUT 6" AFC.
CIRCUITING AND WIRING	CIRCUIT CONCEALED IN WALL OR CEILING CIRCUIT BELOW SLAB OR GRADE UNDERGROUND CIRCUIT/DUCTBANK HASH MARKS INDICATE NUMBER OF CONDUCTORS (LEFT TO RIGHT NEUTRAL/PHASE/SWITCH LEG/GROUND). NO HASH MARKS INDICATE 2*12 AND 1*12 GROUND, UNLESS OTHERWISE NOTED. HOMERUN TO PANEL WITH CIRCUIT NUMBER(S) AS INDICATED. CONDUIT STUB UP CONDUIT STUB DOWN
ELECTRICAL EQUIPMENT	DISTRIBUTION PANEL SWITCHBOARD OR MOTOR CONTROL CENTER ON HOUSEKEEPING PAD. PANELBOARD (FLUSH OR SURFACE MOUNT) AS INDICATED ON PANEL SCHEDULE. DRY-TYPE TRANSFORMER AUTOMATIC TRANSFER SWITCH PLYWOOD TERMINAL BOARD, TYPE AS NOTED, 4' X 8' X 3/4" UNLESS OTHERWISE NOTED TERMINAL CABINET, TYPE AS NOTED 24" X 48" X 3-1/2" UNLESS OTHERWISE NOTED. SURFACE MOUNTED WIREWAY, NEMA 1
DRAWING/DETAIL REFERENCE KEY	REFER TO DRAWING/DETAIL NUMBER SHEET NUMBER ON WHICH DETAIL IS DRAWN
MISCELLANEOUS	DRAWING NOTE REFERENCE (NOTES BY SYMBOL) THERMOSTAT INTRUSION ALARM (MAGNETIC SWITCH) DEVICE.

MOUNTING HEIGHTS

(UNLESS OTHERWISE NOTED)

WALL SWITCHES-48" A.F.F. TO CENTER OF SWITCH.
WALL RECEPTACLES:
DUPLEX - 15" A.F.F. TO CENTER OF RECEPTACLE.
QUADPLEX - 15" A.F.F. TO CENTER OF RECEPTACLE.
WALL TELEPHONE/DATA OUTLETS:
FINISHED AREAS-12" A.F.F. TO CENTER OF OUTLET.
WALL MOUNTED - 48" A.F.F. TO CENTER OF OUTLET.
WALL DIMMER SWITCHES-48" A.F.F. TO CENTER OF SWITCH.
WALL MOUNTED EMERGENCY LIGHT FIXTURE-84" A.F.F. TO CENTER OF FIXTURE.
CLOCK OUTLET-84" A.F.F. TO CENTER OF OUTLET.
FIRE ALARM PULL STATION-48" A.F.F. TO CENTER OF STATION.
FIRE ALARM HORN OR BELL-84" A.F.F. TO CENTER OF HORN OR BELL.

GENERAL NOTES

- REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS FOR ELECTRICAL CONSTRUCTION
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE EXACT LOCATION OF ALL CEILING MOUNTED DEVICES.
 - REFER TO ARCHITECTURAL INTERIOR ELEVATION DRAWINGS, WHERE THE ARCHITECT HAS DRAWN SUCH ELEVATIONS, FOR THE LOCATIONS OF ALL WALL MOUNTED DEVICES.
 - COORDINATE EXACT LOCATION OF ALL LIGHTING FIXTURES IN MECHANICAL / ELECTRICAL SPACES WITH EQUIPMENT, DUCTWORK AND PIPING.
 - PROVIDE 2*12, 1*12G, IN A MINIMUM 1/2" C., UNLESS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS.
 - PROVIDE 4*12, 1*12 GND, FOR ALL 3 CIRCUIT HOMERUNS.
 - MINIMUM SIZE CONDUIT FOR HOMERUNS IS 3/4" C.
 - COORDINATE ALL SLAB PENETRATIONS AND SLEEVES PRIOR TO EACH CONCRETE POUR.
 - PROVIDE ACCESS DOORS IN WALLS AND CEILINGS WHERE ACCESS IS REQUIRED TO CONCEALED ELECTRICAL BOXES AND DEVICES.
 - MAINTAIN ALL NEC. REQUIRED CLEARANCES. NOTIFY A/E OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
- LIGHTING FIXTURE CIRCUITING NOTES**
- THE LIGHTING PLANS INDICATE SWITCHING AND BRANCH CIRCUIT NUMBERS FOR ALL LIGHTING FIXTURES. LOWER CASE LETTERS AT SWITCHES AND LIGHT FIXTURES INDICATE SWITCHING WHERE THE CONTROL PATTERN IS NOT OBVIOUS. PROVIDE BRANCH CIRCUIT WIRING IN A RACEWAY TO ALL RIGIDLY ATTACHED LIGHT FIXTURES AND TO JUNCTION BOXES FOR ALL LAY-IN LIGHT FIXTURES. AS REQUIRED TO PROVIDE SWITCHING AND CIRCUITING AS SHOWN ON THE DRAWINGS. RE: SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - BRANCH CIRCUIT HOMERUNS SHALL BE LIMITED TO A MAXIMUM OF THREE PHASE CONDUCTORS (ON DIFFERENT PHASES), ONE NEUTRAL CONDUCTOR AND ONE GROUND CONDUCTOR, AND SHALL BE INSTALLED IN CONDUIT. CIRCUITS HAVING DIMMERS SHALL HAVE INDIVIDUAL NEUTRALS FOR EACH PHASE WIRE.

PANEL DESIGNATIONS (NEW)

H2A	"H" DENOTES VOLTAGE - "H"=480Y/277V, "L"=208Y/120V
H2EA	"2" DENOTES FLOOR WHERE PANEL IS LOCATED (OMITTED IF SINGLE STORY) "E" DENOTES SYSTEM TYPE - BLANK = NORMAL POWER, E= EMERGENCY POWER "A" DENOTES PANEL SEQUENCE

MOTORS AND CONTROLS

	SINGLE OR THREE PHASE MOTOR (NUMBER INSIDE SYMBOL CAN INDICATE HORSEPOWER)
	ELECTRIC DUCT HEATER
	DISCONNECT (SAFETY) SWITCH "200/3/150" DENOTES AMPERES/POLE/FUSE, "NF" DENOTES NON-FUSED
	MOTOR STARTER, NEMA SIZE AS NOTED
	COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER, "30/3/15/11" DENOTES AMPERES/POLES/FUSE/POLE/BREAKER/ NEMA STARTER SIZE, "NF" DENOTES NON-FUSED.
	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD
	LIGHTING CONTACTOR
	PHOTOCELL
	PUSH BUTTON STATION
	DOOR CONTACT SWITCH
	TIME CLOCK

SITE

EXISTING	EXISTING TO BE REMOVED	NEW	DESCRIPTION
			PAD MOUNTED TRANSFORMER NUMBER INDICATES KVA RATING AREA LIGHT POLE & BRACKET ORIENTATION SHOWN, LETTER DENOTES TYPE
			UNDERGROUND PRIMARY
			UNDERGROUND SECONDARY 480Y/277V, 3PH, 4W
			UNDERGROUND TELEPHONE

4			
3			
2			
1			
NO.	DATE	REVISION	APPROV.

TOWN OF ADDISON, TEXAS

MIDWAY/BELTLINE SANITARY SEWER PHASE II

LIFT STATION ELECTRICAL SYMBOLS & ABBREVIATIONS

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Unit	Scale	Date	04-05-96
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