

I. MATERIALS

THE ALUMINUM POLES SHALL BE AS FOLLOWS:

THE STREET LIGHT POLE SHALL CONSIST OF A ROUND, TAPERED, SPUN ALUMINUM SHAFT HAVING A BASE WELDED TO THE LOWER END AND COMPLETE WITH BOLTS, TRANSFORMER BASE AND BRACKET AS SPECIFIED AND WITH A POLE TOP. THE COMPLETE UNIT SHALL BE DESIGNED FOR WIND LOADING OF 80 MILES PER HOUR, 1.3 GUST PER AASHTO 1994.

THE TRANSFORMER BASE SHALL BE APPROXIMATELY 17" HIGH, 15-1/2" SQUARE AT THE BASE AND 11-3/4" SQUARE AT THE TOP. THE DOOR OPENING IN THE BASE SHALL BE APPROXIMATELY 8-3/4" X 9-1/4" X 13" AND THE DOOR SHALL BE ATTACHED TO THE BASE WITH A STAINLESS STEEL PIANO HINGE. THE HINGE SHALL BE PLACED AT THE TOP OF THE DOOR AND ATTACHED TO THE BASE AND THE DOOR WITH STAINLESS STEEL RIVETS. THE DOOR SHALL BE HELD IN PLACE WITH A TAMPER RESISTANT FASTENER AT THE BOTTOM.

EACH BASE SHALL BE PROVIDED WITH FOUR (4) LOOSE BEARING PLATES AND NUTS TO FASTEN THE BASE DOWN TO THE ANCHOR BOLTS. THE TRANSFORMER BASE SHALL FASTEN TO THE SHAFT ANCHOR BASE BY MEANS OF FOUR (4) LOOSE BEARING PLATES AND FOUR (4) HOT DIPPED GALVANIZED HEX HEAD STEEL MACHINE BOLTS AND NUTS. ALL BEARING PLATES SHALL BE HOT DIPPED GALVANIZED.

A 1/2"-13 UNC TAPPED HOLE SHALL BE PROVIDED FOR THE GROUNDING LUG. THE SHAFT SHALL HAVE NO LONGITUDINAL OR CIRCUMFERENTIAL WELDS EXCEPT AT THE LOWER END JOINING THE SHAFT TO THE BASE AND SHALL BE 8" X 4.5" X 35'6" AND BE 6063 ALLOY T-6 WITH MINIMUM WALL THICKNESS 0.188".

AN OPENING SHALL BE FURNISHED NEAR THE TOP OF THE SHAFT TO PROVIDE A CABLE ENTRANCE FROM THE SHAFT INTO THE BRACKET ARM. A SPECIAL CAST ADAPTER SHALL BE WELDED INTO THIS OPENING, PROVIDING A SMOOTH CABLE GUIDE FOR WIRING AND A SUPPORT FOR THE ATTACHING PLATE WHICH IS WELDED TO THE BRACKET ARM. THE TOP OF THE SHAFT SHALL BE EQUIPPED WITH A CAST ALUMINUM REMOVABLE POLE TOP HELD SECURELY IN PLACE BY MEANS OF SET SCREWS.

THE BRACKET ARM SHALL BE THE TRUSS TYPE OF DESIGN WITH AN UPPER AND LOWER MEMBER JOINED NEAR THE LUMINAIRE END OF THE ARM AND BRACED WITH A VERTICAL STRUT. THE UPPER MEMBER SHALL BE THE CONTINUOUS OR WIRING MEMBER AND SHALL BE A TAPERED TUBE OVALIZED AT THE POLE SHAFT END WITH THE MAJOR DIMENSION OF THE OVAL IN THE HORIZONTAL PLANE. ITS NOMINAL WALL THICKNESS SHALL BE 1/8". THE LOWER MEMBER SHALL BE STANDARD PIPE. THE VERTICAL STRUT SHALL BE OVALIZED STANDARD PIPE. BOTH UPPER AND LOWER MEMBERS SHALL BE ATTACHED TO THE POLE SHAFT WITH 1/4" THICK EXTRUDED ALUMINUM PLATES. THE UPPER ATTACHMENT SHALL BE MADE WITH FOUR 1/2" ALUMINUM BOLTS, NUTS AND WASHERS. THE LOWER ATTACHMENT SHALL BE MADE WITH TWO 3/8" STAINLESS STEEL BOLTS AND BLIND NUTS WHICH HAVE BEEN INSTALLED IN THE POLE SHAFT AT THE FACTORY. WIRING AT THE UPPER ATTACHMENT SHALL BE THROUGH A GROMMETED 1" DIAMETER HOLE. THE MATERIAL OF THE MAIN BRACKET MEMBERS AND THEIR ATTACHMENTS PLATES SHALL BE ALLOY 6063-T6.

THE BRACKET ARM SHALL INCORPORATE A 2" PIPE SIZE SLIPFITTER TENON AT LEAST 6" LONG.

FOUR (4) 1"X36"+4" HIGH STRENGTH, HOT DIPPED GALVANIZED, HOOKED STEEL ANCHOR BOLTS, FITTED WITH A HEX NUT, SHALL BE FURNISHED WITH THE POLES. EACH ANCHOR BOLT BE THREADED AT THE TOP END. THREADED ENDS AND ALL NUTS SHALL BE GALVANIZED. ANCHOR BOLTS SHALL BE CAPABLE OF RESISTING AT YIELD STRENGTH STRESS THE BENDING MOVEMENT OF THE SHAFT AT ITS YIELD STRENGTH STRESS.

ALL HARDWARE (BOLTS, NUTS AND WASHERS-BUT NOT INCLUDING ANCHOR BOLTS) NOT OTHERWISE SPECIFICALLY DESIGNATED IN THIS SPECIFICATION, SHALL BE ALUMINUM OR STAINLESS STEEL (AT THE OPTION OF THE SUPPLIER).

ALL ALUMINUM SURFACES ON THE POLE AND BASE COVER SHALL BE ROTARY SANDED TO A SATIN GROUND FINISH AND BRACKETS SHALL BE ETCHED TO A MATTE FINISH. SHAFTS AND BRACKETS SHALL BE TREATED WITH AN ALCOHOL-PHOSPHORIC ACID SOLUTION AT 70 °F FOR APPROXIMATELY FIVE MINUTES FOLLOWED BY A COLD WATER RINSE. SHAFTS AND BRACKETS SHALL BE PRIMED WITH EPOXY ZINC CHROMATE (DUPONT 825S) AND FINISHED WITH A SPRAY COATING OF DARK BRONZE POLYURETHANE ENAMEL (DUPONT IMRON NO. 338Y68382). THE FINISH COAT SHALL BE 2 MILLS DRY FILM THICKNESS.

SHAFT AND BRACKET ARM ASSEMBLY SHALL BE TIRE-WRAPPED WITH A HEAVY WATER RESISTANT PAPER FOR PROTECTION DURING SHIPMENT AND INSTALLATION.

BRACKET LENGTH (FT)	APPROVED PRODUCT (OR APPROVED EQUAL)
10	HAPCO # 17880-010 P30
15	HAPCO # 17959 P30

II. INSTALLATION

THE POLES AND BASES SHALL BE SET ON THE FOUNDATION SECURELY ANCHORED TO THE ANCHOR RODS SO THAT THE T-BASE DOOR IS OPPOSITE THE CURB. POLE BASES SHALL BE PROPERLY PLUMBED BY MEANS OF SHIMS.

III. BASIS OF PAYMENT

ITEM	UNIT	DESCRIPTION
MIS-304	EACH	POLE, ALUMINUM, 10' BRACKET, T-BASE, 40' MOUNTING HEIGHT, BRONZE
MIS-304	EACH	POLE, ALUMINUM, 15' BRACKET, T-BASE, 40' MOUNTING HEIGHT, BRONZE

MIS-304	CITY OF COLUMBUS, OHIO DEPT. OF PUBLIC UTILITIES - DIVISION OF POWER		
	POLE, ALUMINUM, X' BRACKET, T-BASE, 40' MOUNTING HEIGHT, BRONZE (10',15')		
	DRAWN BY: BEN	DATE: 1/1/2018	
	APPROVED: <i>Amy A. Wilk</i>		
SCALE: NONE	SHEET: 1 OF 1	304	