

I. MATERIALS

THE ALUMINUM POLES SHALL BE AS FOLLOWS:

THE STREET LIGHT POLE SHALL CONSIST OF A ROUND, TAPERED, SPUN ALUMINUM SHAFT WITH A POLE TOP, AND A BASE WELDED TO THE LOWER END THE UNIT SHALL SHIP COMPLETE WITH BOLTS, TRANSFORMER BASE AND SINGLE 10' BRACKET AS SPECIFIED. THE COMPLETE UNIT SHALL BE DESIGNED FOR WIND LOADING OF 90 MILES PER HOUR, 3 SECOND GUST PER AASHTO 2013.

THE TRANSFORMER BASE SHALL BE APPROXIMATELY 17" HIGH, 15.38" SQUARE AT THE BASE AND 13.12" SQUARE AT THE TOP. THE DOOR OPENING IN THE BASE SHALL BE APPROXIMATELY 9.25" X 9.75" X 11.75" 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 25'9" 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 ALCOHOLIC-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). THE ENTIRE POLE ASSEMBLY SHALL BE 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 SPIRALLY-WRAPPED WITH A HEAVY WATER RESISTANT PAPER FOR PROTECTION DURING SHIPMENT AND INSTALLATION.

BRACKET LENGTH (FT)	APPROVED PRODUCT (OR APPROVED EQUAL)
8	HAPCO # 70342-001
10	HAPCO # 70342-002
15	HAPCO # 70342-002

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.

THIS POLE REQUIRES THE USE OF MIS-201; STREET LIGHT FOUNDATION, 6' (PAID SEPARATELY) FOR NEW POLE INSTALLATIONS.

III. BASIS OF PAYMENT

ITEM	UNIT	DESCRIPTION
MIS-303	EACH	POLE, ALUMINUM, 8' BRACKET, T-BASE, 30' MOUNTING HEIGHT, BRONZE
MIS-303	EACH	POLE, ALUMINUM, 10' BRACKET, T-BASE, 30' MOUNTING HEIGHT, BRONZE
MIS-303	EACH	POLE, ALUMINUM, 12' BRACKET, T-BASE, 30' MOUNTING HEIGHT, BRONZE

MIS-303	DEPARTMENT OF PUBLIC UTILITIES - DIVISION OF POWER CITY OF COLUMBUS, OHIO		
	POLE, ALUMINUM, X' BRACKET, T-BASE, 30' MOUNTING HEIGHT, BRONZE (8',10',12')		
	DRAWN BY: SAW	DATE: 12/13/23	
	SCALE: NONE	SHEET: 1 OF 1	303