

APPENDIX B

TOWN OF ST. JOHN STREET LIGHTING STANDARDS

Section 1: Requirements for Underground Wiring:

The subdivider shall make arrangements for all lines for telephone, electric, television, and other similar services distributed by wire or cable to be placed underground entirely throughout a subdivided area.

Such conduits or cables shall be placed underground within dedicated public ways or easements.

All such facilities placed in dedicated public easements or rights-of-way shall be planned so as not to conflict with other underground utilities. All underground utility installations, which traverse privately owned property, shall be protected by easements granted by the sub-divider to the Town.

Section 1.1 – Street Lighting:

Street lighting improvements shall be installed to serve properties within a subdivision or planned unit development. Such improvements shall consist of standards, luminaries, cable, conduit, controllers, and all other miscellaneous work and equipment necessary for the integrated system of street lights.

Section 2: Construction:

All construction work shall be performed in accordance to the latest edition of the National Electric Code.

Section 2.1 – Electric Service:

Power furnished by Northern Indiana Public Service Company shall be 120/240 volts, single phase, three wires, at their transformer. The power company shall approve the electrical service connection and location. A lockable, watertight disconnect box with appropriate size circuit breakers shall be provided. Service shall be underground conduit from point of connection to the proposed control station.

Section 2.2– Lighting Control:

An independent control cabinet will be installed at a location approved by Northern Indiana Public Service and the Town of St. John Electrical Inspector. Unless otherwise approved by the Towns Electrical Inspector, the Controller shall contain a main breaker for the control circuit and a contactor. A photoelectric cell located at the top of the pole closest to the control cabinet or at the control cabinet shall control the contactor for all lighting circuits. A locking, weatherproof control cabinet shall be provided to house all

electrical, and control equipment. The cabinet must be a minimum of 24" x 36"x 18" deep in size and shall be placed within the roadway easement, as close to side yard lot lines as possible, centered in the area between the sidewalk and the curb. Alternate size cabinets will be considered, but require the consent of the Towns electrical inspector. The cabinet's door shall face the sidewalk. The control cabinet shall be constructed entirely of either stainless steel or aluminum. The stainless steel cabinet shall remain unfinished; aluminum cabinets shall be painted green utilizing epoxy paint. In either case the words STREET LIGHTING CONTROLS shall be cast into the door. The cabinet is to be set on a minimum four inch (4") thick concrete slab. The concrete slab shall have a stone base of at least six inches (6"). The cabinet shall also contain a 110 volt 20 amp GFI duplex outlet. Cabinet shall be wired in a fashion so that a standard 110-watt light bulb, or led bulb lumen equivalent, automatically illuminates when the cabinet door is opened.

Section 2.3 – Voltage:

All lighting circuits shall be 240 VAC. Control circuits shall be 120 VAC. Voltage drop shall not exceed five percent (5%) from disconnect to last standard.

Section 2.4 – Light Standard:

Light standards shall be an aluminum pole and bracket arm with a nominal mounting height of thirty (30) feet. Bracket arm shall be a truss type, eight (8) feet in length for commercial applications and six (6) foot for residential.

Section 2.5 Light Distribution:

All luminaries shall have MS type II 4-way distribution. Shields shall be provided where required to eliminate any unnecessary glare.

Section 2.6 – Underground Wiring:

All wiring between poles shall be underground. Colors shall be black, red, white, and green Underground cable shall be of four (4) No. 4 XHHW, one (1) conductor in one inch (1-1/4 ") duct, buried a minimum of thirty inches (30") below finished grade. The cable shall be located three (3) feet behind back of curb. Great care shall be taken when installing conduits to avoid conflicts with other buried utilities. Splicing of underground cable will not be permitted. Hand holes, when required, shall conform to the attached detail.

Section 2.7 – Grounding:

A one-half inch by eight foot (1/2" x 8') copperweld ground rod shall be located in the trench outside each foundation and shall be connected to the ground wire and the grounding lug located in the base of each lighting standard.

Section 2.8 – Pole Wiring:

Pole wiring shall be No. 10 AWG type use wire in a continuous length from underground distribution system to luminaire. It shall be connected to the underground cable by means of a waterproof in-the-line fuse holder. Cables shall be long enough to allow extensions through pole hand hole of not less than eight inches (8").

Section 2.9 – Luminaires:

A subdivision shall be lighted by high-pressure sodium luminaires and shall be used throughout the subdivision. All luminaires on secondary and minor streets, intersection and cul-de-sacs shall be 100-watt high-pressure sodium. General Electric model number M2AR10SON1GMS2 shall be the standard. The Town reserves the right to specify larger wattage fixtures, as it deems necessary.

Section 2.10 – Conduit:

Two-inch (2") schedule 40 PVC conduit shall be installed at all locations that the underground cable crosses a commercial driveway or roadway. Conduit shall extend one foot (1') beyond back of curb or edge of driveway. Schedule 40 PVC conduit shall also extend one foot (1') beyond any location, or proposed location, where two sidewalks meet at an intersection. The ends of all conduits shall be provided with a pipe thread insulated conduit bushing.

Section 2.11 – Spacing:

One light fixture shall be installed at each intersection, at the end of each cul-de-sac, in between intersections spaced not more than 600 feet apart or at other locations deemed necessary by the Plan Commission. An additional streetlight shall be provided at each pedestrian-way or crosswalk. Plans submitted for preliminary approval to the Plan Commission shall indicate the locations of streetlights for the Plan Commissions review. Spacing requirements for decorative lighting shall be determined based on the manufacturers recommended intervals considering pole height and lamp wattage. The developer shall install streetlights prior to receiving final acceptance of the street by the Town.

Section 2.12 – Location:

Poles shall be set as close to the side yard lot lines as possible within the road right-of-way. Poles located at intersections shall be installed at a point away from any existing or proposed sidewalk crossing. Poles shall not be installed at the point between the two sidewalk crossings and the curb's radius. Light poles shall be set back a distance of 3' from the back edge of the curb to the center of the pole. Where practical, street lighting system shall be installed on the opposite side of the street as the water main.

Section 2.13 – Foundation:

Concrete foundations for light standards shall be twenty-four inches (24") in diameter and six feet (6') in length. Anchor bolts shall be in one inch (1") in diameter, thirty-six inches (36") in length, with four-inch (4") hook at the bottom. Each foundation shall be provided with a sufficient number of non-metallic raceways for cable entry.

Section 2.14 – Materials:

All materials shall be as specified below, or as approved by the Towns Electrical Inspector.

Section 3: Aluminum Poles and Bracket Arm:

Section 3.1 – Shaft:

The shaft shall be a one-piece, round tapered tube of alloy 6063, and shall be full-length heat-treated after welding on the base flange to produce T6 temper. (See attached detail) Poles shall include a 4" x 6" reinforced handhole centered 18" above the bottom of the shaft. Length of shaft in a residential setting shall be 25' and installations in commercial / industrial settings shall be 30'. A cover with stainless steel screws shall be provided on each pole. If requested by the Town a manufactured, independently fused, 110 volt 20 amp festoon lighting outlet shall be factory installed into the shaft. The outlet shall be installed into the shaft at a height of thirteen feet (13') from the base of the pole. Festoon shall also have a cover to prevent moisture entering the receptacle while in use. (See detail) Town staff shall determine the locations of the poles that must include a festoon.

Section 3.2 – Base flange:

The base flange for the attachment of the shaft to the foundation shall be a one-piece cast socket of aluminum alloy 356. The flange shall be joined to the shaft by means of complete circumferential welds, externally at the top of the flange and internally at the bottom of the shaft tube. Four anchor bolt covers of aluminum alloy 43 and stainless steel screws for their attachment shall be provided.

Section 3.3 – Bracket Arm:

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 tub ovalized at the pole shaft end with the major dimension of the oval in a horizontal plane. Its nominal wall thickness shall be 1/8". The lower member shall be standard pipe. Both the upper and lower members shall be attached to the pole shaft with 1/4" thick wrought plates. The upper attachment shall be made with two 3/8" stainless steel bolts and blind nuts that have been installed in the pole shaft in the factory. Arms that are eight (8') feet in length shall be installed in commercial or industrial areas in Town, and six (6') in length in

residential areas. Wiring at the upper attachment shall be through a grommeted 1-1/4" diameter hole. The material of the main bracket members and their attachment plates shall be alloy 6063-T6. Bracket arms installed in residential settings shall be 6' in length and ones installed in a commercial / industrial setting the shall be 8'.

Section 3.4 – Shaft Cap:

An ornamental cap of aluminum alloy shall be provided with each shaft. The cap shall be fastened to the shaft by means of a stainless steel screw. Underwriters tags and labels shall be permanently removed from the reels by the contractor and given to the Town for its records.

Conductors shall be No. 6 AWG and comply with underwriters standard No. 83 for thermoplastic insulated conductors. Conductor insulation shall be heat and moisture resistant for use in 75-degree temperatures, in dry and wet locations at 600 volts. Conductors shall be stranded copper and comply with ASTM specification B-8, Class B.

Duct shall be black polyethylene, flexible enough for easy coiling and uncoiling but rigid enough to maintain its shape over its entire life. It shall be permanently marked at twelve inch (12") intervals on the outside with the manufacturer's name or trademark. One and One quarter (1-1/4") duct shall have a wall thickness of .080 inches minimum. Unit duct shall be installed so that it is possible to withdraw a conductor and pull in a new one. Under no circumstances shall bends be less than eighteen inches (18") radius.

Where unit duct terminates in an anchor base pole, the duct shall terminate at a point halfway between the bottom of the pole and the handhole. The cables and conductors shall extend eighteen inches (18") beyond the duct. It is intended that the duct can be pulled to the opening in the handhole for pulling in a replacement conductor or cable. Ground conductor shall be No. 6 AWG bare soft- drawn copper, having been manufactured with twelve months of installation.

Section 3.5 – Miscellaneous Hardware:

All nuts, bolts, and washers used in the fabrication of the pole shall be grade 18-8 stainless steel, aluminum alloy 2024-T4 with alumilite No. 204 finish, or aluminum alloy 6061-T6, except for anchorage hardware.

Section 3.6 – Grounding:

Each pole shaft shall contain an internal lug with a 3/8" diameter hole for the purpose of attaching a grounding connector.

Section 3.7 – Welding:

Welding shall be done by the inert gas shielded metal arc method with consumable electrode. Aluminum alloy 4043 electrode shall be used.

Section 3.8 – Surface Finish:

The pole shaft shall be provided with a satin finish accomplished by mechanical rotary grinding. The bracket arms shall be provided with a satin-etched finish. All material shall be cleaned and free from dents and unsightly scratches. The Town shall reserve the right to inspect all materials prior to their installation.

Section 3.9 – Luminaire:

The luminaire housing, both upper and lower, shall consist of cast aluminum joined by an integrally cast pin hinge at the mounting, and a one-hand latch at the door. The reflector shall be highly polished anodic-surfaced aluminum secured with spring latch for each positioning. The refractor shall be of the unbreakable type secured with spring latches. The ballast shall be the regulator type, wired for 240-volt operation. It shall be suitable for high ambient temperature operation. General Electric model number M2AR10S0N1GMS21. (See attached detail)

The luminaries shall have an adjustable socket capable of producing an MS II or MS II 4-way distribution. Also, it shall be capable of adapting to 1-1/4" or two inch (2") mounting brackets.

Section 3.10 – Lamp:

100-watt high-pressure sodium vapor lamps. The lamp shall be designed to burn in any position and have a rated life of 24,000 hours with 10 hours burning time per start and shall come to full candle power in not over four minutes after starting. The lamp shall have a minimum initial lumen output of 27,500 and 16,000 lumens respectively, and shall provide 98% of the initial lumens after 6,000 hours of operation. The maximum operating temperature shall not exceed 120 degrees C at the inside bottom of the reflector when operating at 25 degrees ambient temperature. Bulbs must be manufactured in a way that allows the Town to meet all state and federal regulations concerning high-pressure sodium lamp disposal without any costs incurred by the Town for disposal. The town reserves the right to specify more effective and efficient bulbs as lighting technologies advance. LED lighting is the current best technology as of 2020.

Section 3.11 – Cable-In-Duct:

The cable duct assembly shall be made at the factory in continuous lengths that will permit installation of the longest spans shown on the plans without splicing or cutting either conduit or cable. Splices of cable or conduit will be permitted only in handholes or pole bases. None will be permitted in the trench. Both conduit and cable will be continuous from pole to pole. The unit duct assembly shall be factory coiled and delivered on reels with identifying underwriters' tags and labels attached there to. Cable duct shall be 1-1/4" in diameter.

Section 3.12 – Conduit:

Conduit shall be constructed of schedule 40 PVC pipe.

Section 3.13 – Foundation:

The concrete pole foundation shall conform to the specifications of Class X concrete as contained in the Indiana Department of Transportation lighting specifications, latest edition.

Section 3.14 – Fuse Holder:

The fuse holder shall be made of a durable molded plastic material in two sections held together with a captive nut. Waterproofing shall be provided by an "O" ring at the point of connection. The fuse will be held on the load side of the unit when separated, the line being recessed. The tubular terminals on each end of the fuse holder shall be the crimp-type and shall accommodate various sizes of wire on the line side. A crimpable insulating sleeve covers each terminal to provide a good surface for taping. The fuse holder to be used shall be HEB-AB and HEB-AD, and each fuse holder shall come complete with a 13/32" x 1-1/2" fuse, type KTK, rated at 10 AMPS complete with boot style covers.

Section 4: Submittal, Inspections, and Approvals:

The Town, before construction, shall approve all street lighting plans and review and approve all lighting submittals. A permit shall be obtained by a licensed electrical contractor for all street lighting projects prior to construction beginning.

After the electric cable is in place, and before being connected to the luminaires and equipment, the system shall be tested for shorts and grounds by means of an approved type of constant potential 'Megger' in the presence of the Towns Electrical Inspector. All cables showing insulations resistance lower than recommended by the cable manufacturer shall be replaced. Luminaires shall also be adjusted to the satisfaction of the Town to obtain proper light distribution. After notification that the work is complete, the Town will make such tests and inspections as it may deem necessary to determine the acceptability of the system. The developer shall furnish all labor and equipment necessary for the above tests at no cost to the Town and shall be responsible for all costs associated with adjusting fixtures or correcting worked deemed to be inferior by the Town.

As-built plans will be submitted to the Town at or prior to the final inspection of the installation or the final inspection shall not be considered complete.

Section 4.1 – Operation Expenses

The developer shall be responsible for a period of two years from the date of acceptance by the town for all electrical charges from NIPSCO and the fees are to be paid to the Town prior to the Towns final acceptance of the lighting system. The developer shall be

responsible for all maintenance of the street lighting system for a period of three years from the date of acceptance. At that point in time the lighting system shall become the property of the Town and all costs associated with the future of maintenance and operation expenses shall transfer.

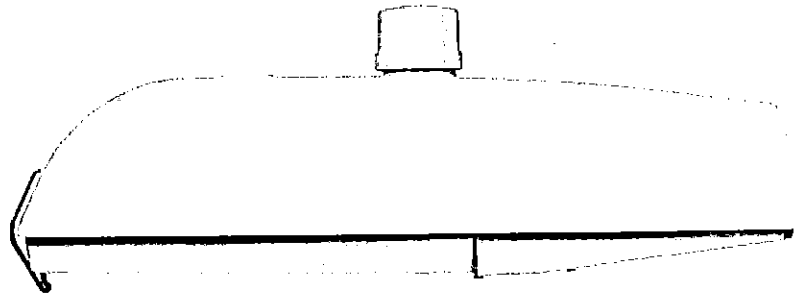
Section 5: Decorative Lighting

The Town may consider decorative light poles and fixtures. The standard shall be manufactured by Hadco and shall be the Victorian style model number V 71 with the base and pole being model number P-1765, fourteen foot in height or approved equal. (See attached detail). Decorative lighting must meet Dark Skies standards and must provide 9,000 lumens and 4,000 kelvins.

GE
Lighting

Roadway Lighting

M-250A2 Powr/Door™ with Cutoff Optics (M2AC)



imagination at work

Product Features

From HID to LED, GE continues to push Roadway Lighting to new heights. Recognized for the highest quality and reliability in street, highway, parkway, and commercial applications, GE offers a wide selection of styles to meet the lighting needs of municipalities, utilities, DOT customers and more.

Applications

- For residential streets, access roads, parking lots where light trespass could be a problem



Housing

- Die-cast aluminum housing
- External stainless steel bail latch

Finish

- Polyester powder gray paint finish

Rating

- /  Listed for wet location available as an option

Mounting

- Universal two-bolt slipfitter

Reflectors

- ALGLAS™ finish on reflector

Unique Features

- Streetside adjustable E39 mogul base socket standard where lamp is available in mogul base (E26 Medium Base otherwise)
- No-tool PE receptacle
- Plug-in ignitor
- Plastic pest guard standard (not required for 2 in. pipe)
- True 90° cutoff – no light above 90°
- Filtered optics
- Power/Module ballast assembly

Ordering Number Logic

M-250A2 Powr/Door™ with Cutoff Optics (M2AC)

M2AC

PROD. ID	WATTAGE	LIGHT SOURCE	VOLTAGE	BALLAST TYPE SELECTION	PE FUNCTION	LENS TYPE (PRISMATIC) REFRACTOR	IES DISTRIBUTION TYPE	FILTER	OPTIONS
M2AC = M-250A2 with Cutoff* Optics	05 = 50 07 = 70 10 = 100 15 = 150 (55V) 17 = 175 (55V) 20 = 200 21 = 303/150 (55V) 25 = 250 71 = 70/100	E = Energy Act Compliant Pulse MH (EPMH) S = HPS P = PMH Standard Lamp not included.	60Hz 0 = 120/200/240/277 Multivolt 1 = 120 2 = 208 3 = 240 4 = 277 5 = 480 7 = 120X240 8 = 240V Ballast 120V PE Receptacle not reconnectable D = 347 F = 120X347 T = 220 50Hz 6 = 220 R = 230 Y = 240	See Ballast Selection Table A = Astarg G = Mag-Reg with Grounded Socket Shell H = HPS Reactor or Log J = CMH H = Mag-Reg N = HPS Reactor or Log P = CMH with Grounded Socket Shell S = Series III Top Housing	1 = None 2 = PE Receptacle NOTE: Receptacle connected some voltage as unit, Order PE Control separately.	See Photometric Selection Table A = Acrylic Clear Globe G = Flat Glass L = Polycarbonate Clear Globe S = Sag Glass Clear Globe NOTE: 150 watt Maximum with Acrylic or Polycarbonate Clear Globes * = Previously IESNA Full Cutoff Optics	See Photometric Selection Table S = Short M = Medium C = Cutoff* 2 = Type I 3 = Type II * = Previously IESNA Full Cutoff Optics	1 = Fiber gasket 2 = Charcoal with elastomer gasket	F = Fusing (Not available with multivolt or dual voltage) J = Line Surge Protector, Explosion Type (UL not available) U = (UL listed (all HPS up to 175W PMH max) with glass or polycarbonate (50Hz only)

Ballast Selection Table

Wattage	Light Source	Ballast Type/Voltage 60Hz										Ballast Type/Voltage 50Hz			
		Multivolt	120	208	240	277	480	120X240	347**	120X347	240/120 PER	220	220	230	240
50	HPS	H,N	H,N	H,N	H,N	H,N	H,N	H,N	H,N	H,N	H,N	N/A	N/A	N/A	N/A
70,100,150 (55V)	HPS	A,H,N	A,G,H,M,N,P	A,G,H,M,N	A,G,H,M,N	A,G,H,M,N	G,M	G,M,P	G*,H,M*,N	G,M,N	N/A	N/A	H,M,N	H	M**
100/150 (55V)	HPS	N/A	H, N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
200	HPS	A,J,P	A,H,N,P	A,H,N,P	A,H,N,P	A,P	A	A,P	N/A	A,H,N	N/A	N/A	N/A	N/A	
250	HPS	A,J,P	A,H,N,P	A,H,N,P	A,H,N,P	A,P	A,P	A,J,P	A,P	A,H,N	H	A,H,N	H	A,H	
175	EPMH	A	A	A	A	A	A	A	N/A	A	N/A	N/A	N/A	N/A	
100**	PMH	H, N	H, N	H, N	H, N	H, N	H, N	H, N	H, N	H, N	N/A	N/A	N/A	N/A	
150**	PMH	N/A	A, H	H	H	H	N/A	H	H	H	N/A	N/A	N/A	N/A	
250	EPMH	A	A	A	A	A	A	A	N/A	A	N/A	N/A	N/A	N/A	

NOTE: N/A = Not Available **150(55V) only *Not available in 120X347V **Medium Base Socket

Photometric Selection Table

All light sources are clear unless otherwise indicated.

Wattage	Light Source	Lens Type	IES Distribution Type Photometric Curve Number 35- (Socket Position)		
			MC2	MC3	SC2
50, 70, 100, 150 (55V)	HPS	Clear globe, acrylic or Polycarbonate	N/A	177287 (IA)	N/A
50	HPS	Clear globe, glass	452543 (2CL)	452544 (1CL)	N/A
70	HPS	Clear globe, glass	452545 (3CL)	452546 (1CL)	N/A
100	HPS	Clear globe, glass	452547 (2CL)	452548 (1CL)	N/A
150 (55V)	HPS	Clear globe, glass	452549 (2CL)	452550 (1CL)	N/A
50, 70, 100, 150 (55V)	HPS	Glass, flat*	177286 (2CL)	177285 (1CL)	N/A
200	HPS	Clear globe, glass	452551 (2CH)	452552 (2CL)	N/A
250	HPS	Clear globe, glass	N/A	452553 (2CH)	N/A
200, 250	HPS	Glass, flat*	177303 (20H)	177304 (10H)	N/A
175, 250	EPMH	Glass, flat*	N/A	N/A	177299 (18)
**100, 150	PMH	Glass, flat*	452707	451435 (2CL)	453603

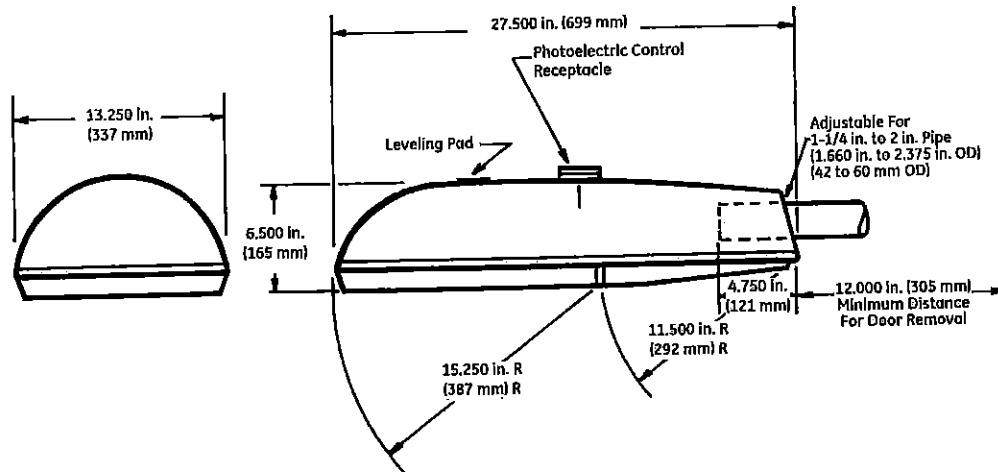
NOTE: N/A = Not Available *PMH - Contact Manufacturer **Meets RPB-2000 for full cutoff with flat glass **Medium base socket

M2AC – Suggested Catalog Ordering Numbers

Catalog Number	Wattage	Light Source	Voltage (60 Hz)	Ballast Type	Reflector Type	Photometric Distribution
M2AC10S1N2GMC21	100	HPS	120	NPF Reactor	Glass	MC2
M2AC15S1N2GMC21	150	HPS	120	NPF Reactor	Glass	MC2
M2AC25SDA2GMC31	250	HPS	Multivolt	Auto-Regulator	Glass	MC3

All GE suggested catalog ordering numbers come with PE receptacle. PE control must be ordered separately. Order and install SCCL-PECTL if no PE is desired. Multivolt ballasts can be for either 120, 208, 240, or 277 volt incoming power supply.

Product Dimensions



DATA

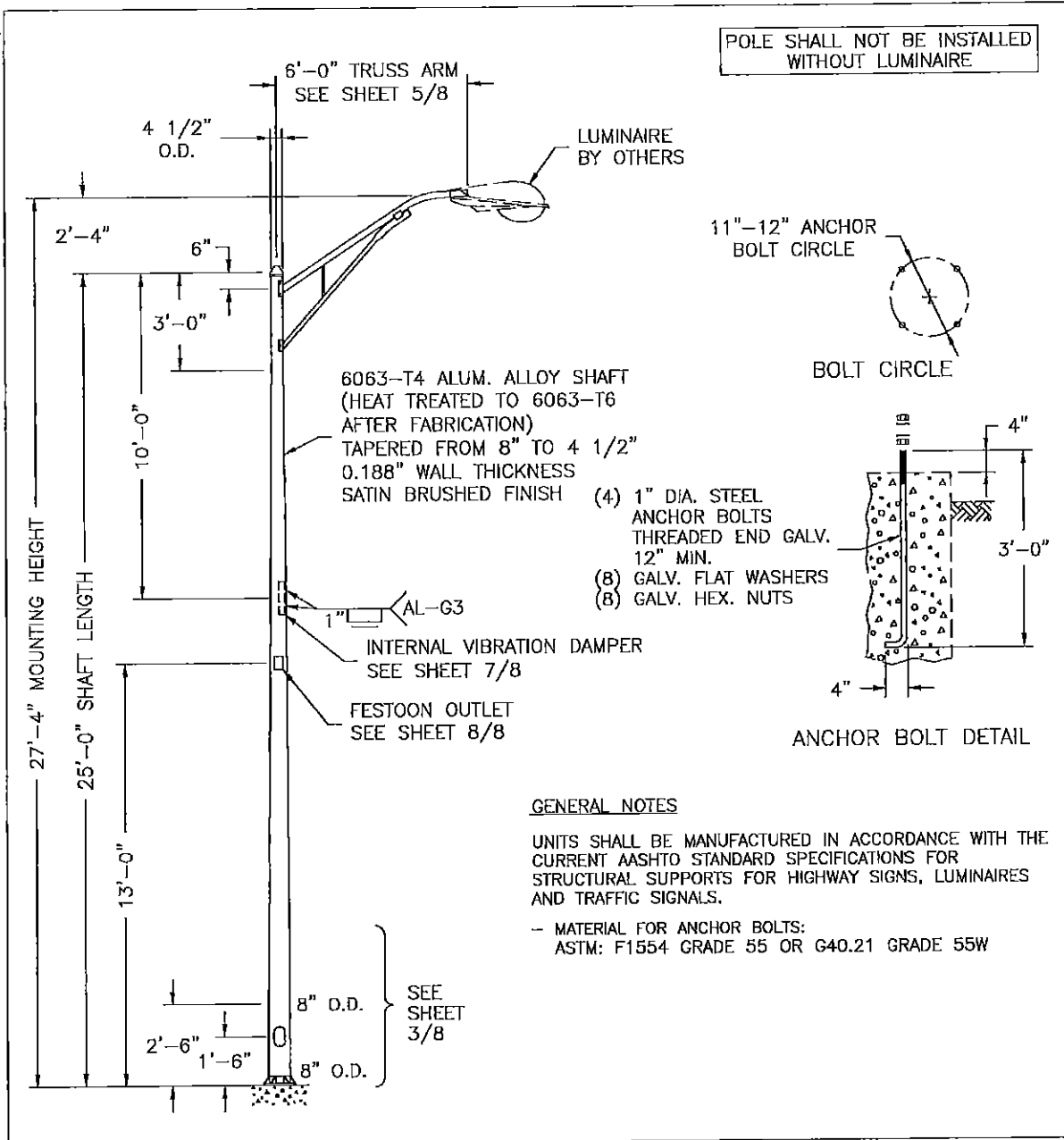
- Approximate Net Weight: 20-30 lbs (9-14 kgs)
- Effective Projected Area:
 - Flat Glass Unit 0.9 sq. ft. max. (0.08 sq. M max.)
 - Clear Acrylic Globe Unit 1.0 sq. ft. max. (0.09 sq. M max.)
- Suggested Mounting Height: 20-40 ft. (6-12 M)



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OLP2935 (Rev 11/04/14)



GENERAL NOTES

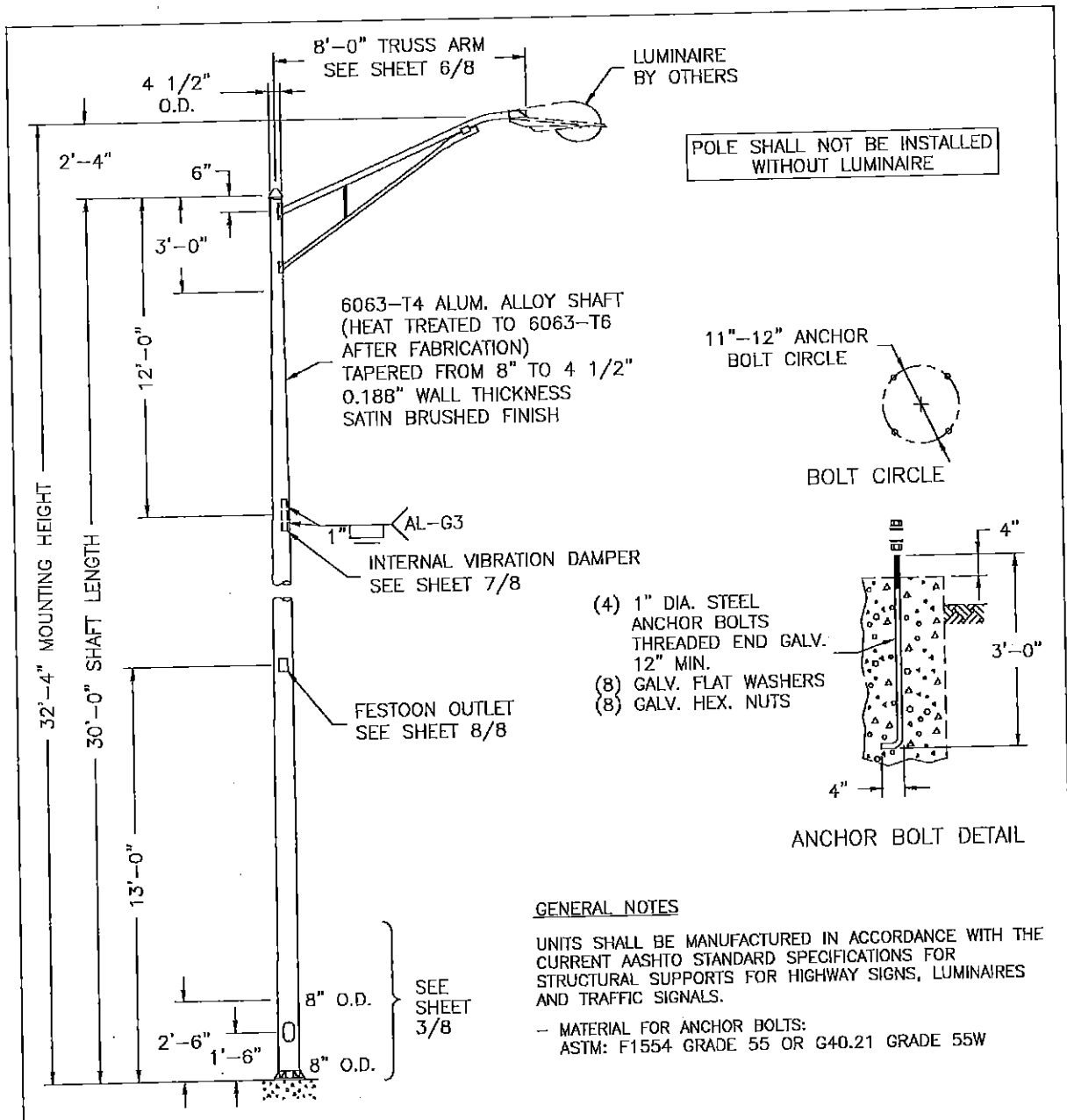
UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.

- MATERIAL FOR ANCHOR BOLTS:
ASTM: F1554 GRADE 55 OR G40.21 GRADE 55W



Poles Division, Valmont Industries, Inc.
P.O. Box 228 Farmington, Minnesota 55024-0228
Phone: (651) 463-8990 (800) 899-7577
Fax: (651) 483-3349

JOB NAME TOWN OF ST. JOHN'S	DRAWN BY R.J.		
SOLD TO	CHK'D BY P.P.	DATE	REVISION
SHIP TO	APPR'D BY	QUANTITY	
P.O. NO.	DATE 02-03-07	ORDER NO.	
AGENT LIGHTING SOLUTIONS OF ILLINOIS, INC.	SCALE 1 = 50	CATALOG NO. 31-27406CS0845R0	
TITLE ALUMINUM TAPERED POLE WITH 6'-0" TRUSS ARM	DRAWING NO. ILO20307	1/8	



GENERAL NOTES

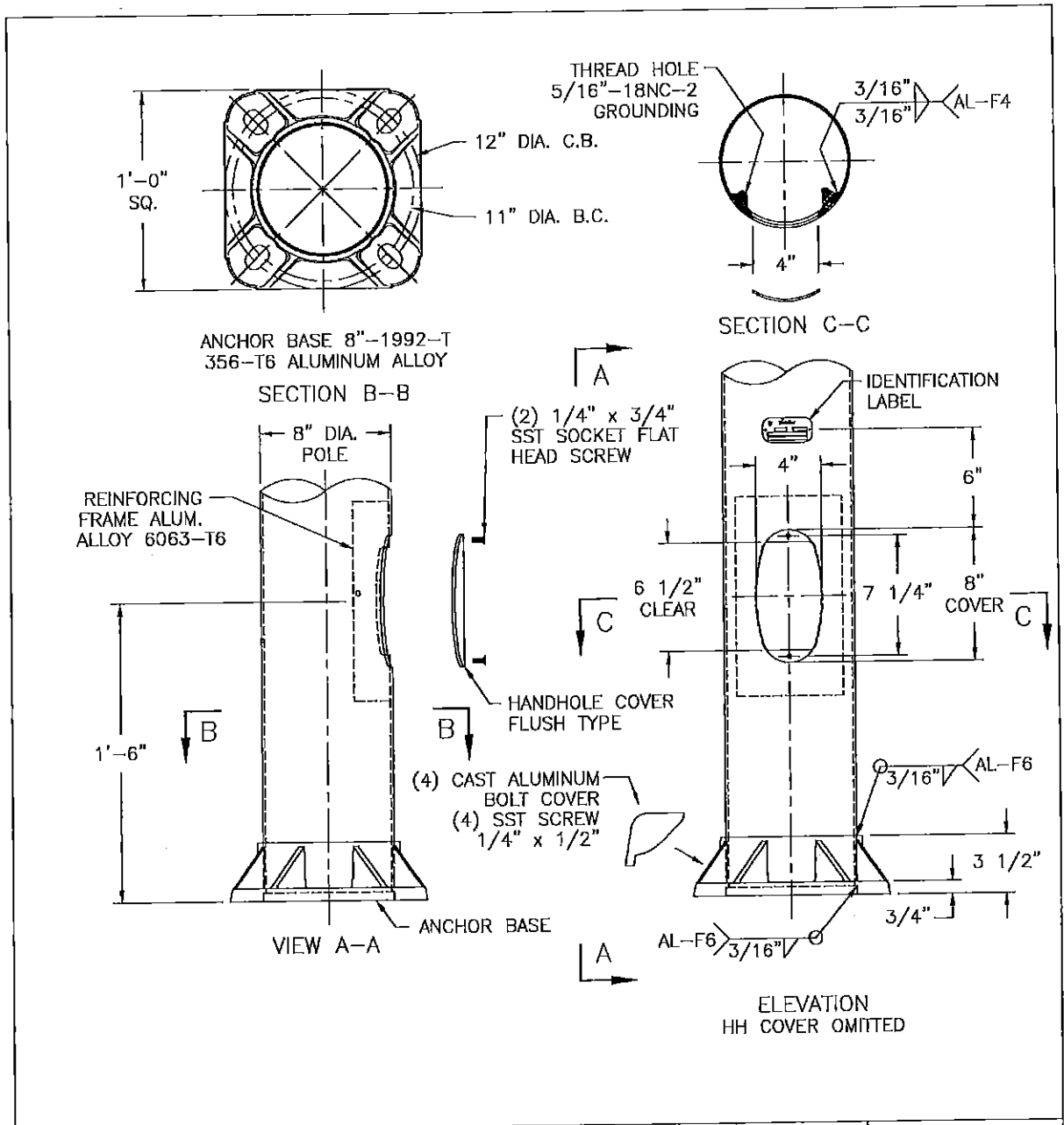
UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.

- MATERIAL FOR ANCHOR BOLTS:
ASTM: F1554 GRADE 55 OR G40.21 GRADE 55W



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P.O. Box 228 Farmington, Minnesota 55024-0228
Phone: (651) 463-8990 (800) 899-7577
Fax: (651) 463-3349

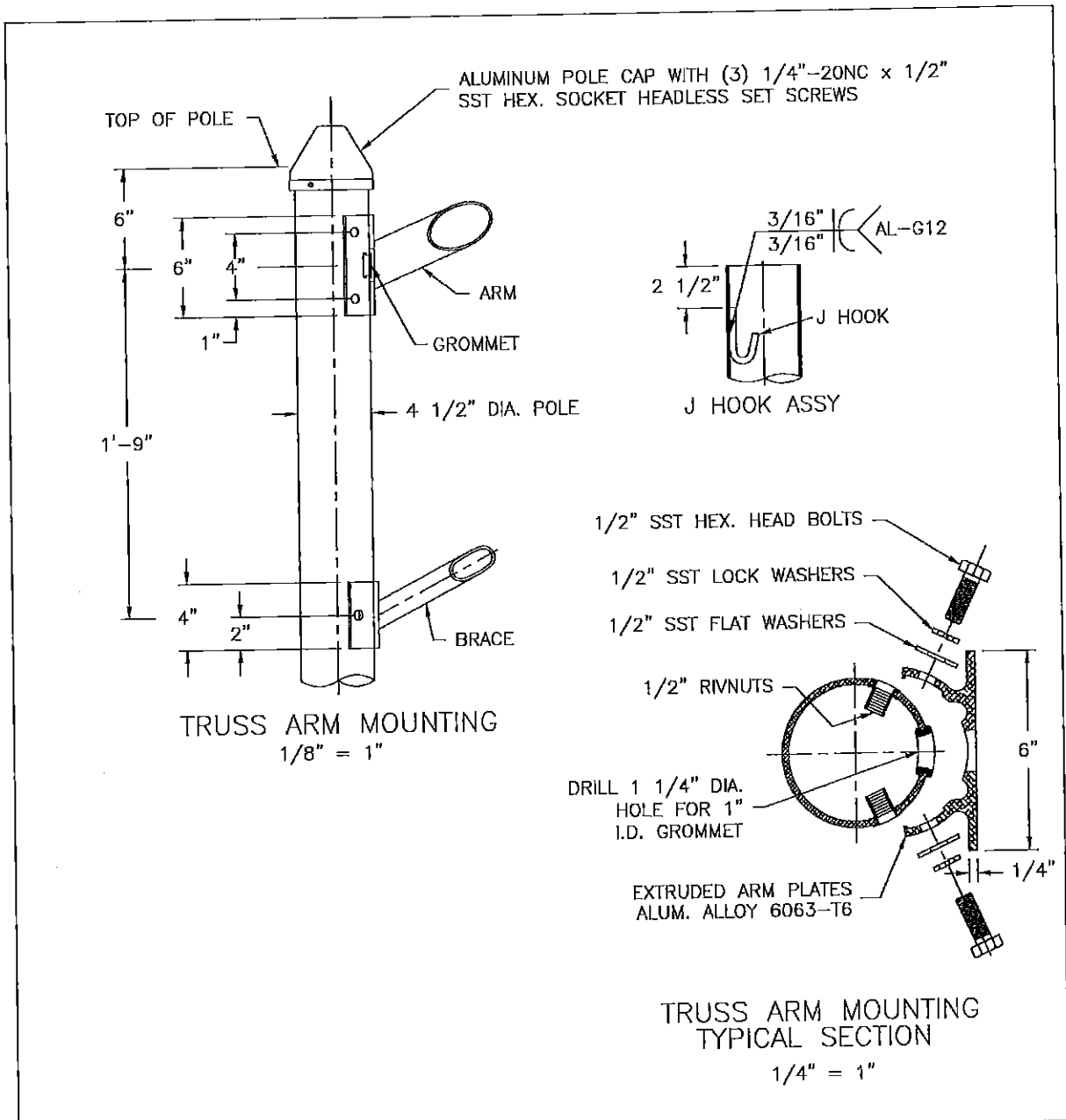
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SHIP TO	APPR'D BY	QUANTITY	
P.O. NO.	DATE 02-03-07	ORDER NO.	
AGENT LIGHTING SOLUTIONS OF ILLINOIS, INC.	SCALE 1 = 50	CATALOG NO. 31-32408CS0845R0	
TITLE ALUMINUM TAPERED POLE WITH 8'-0" TRUSS ARM	DRAWING NO. 11.020307	2/8	




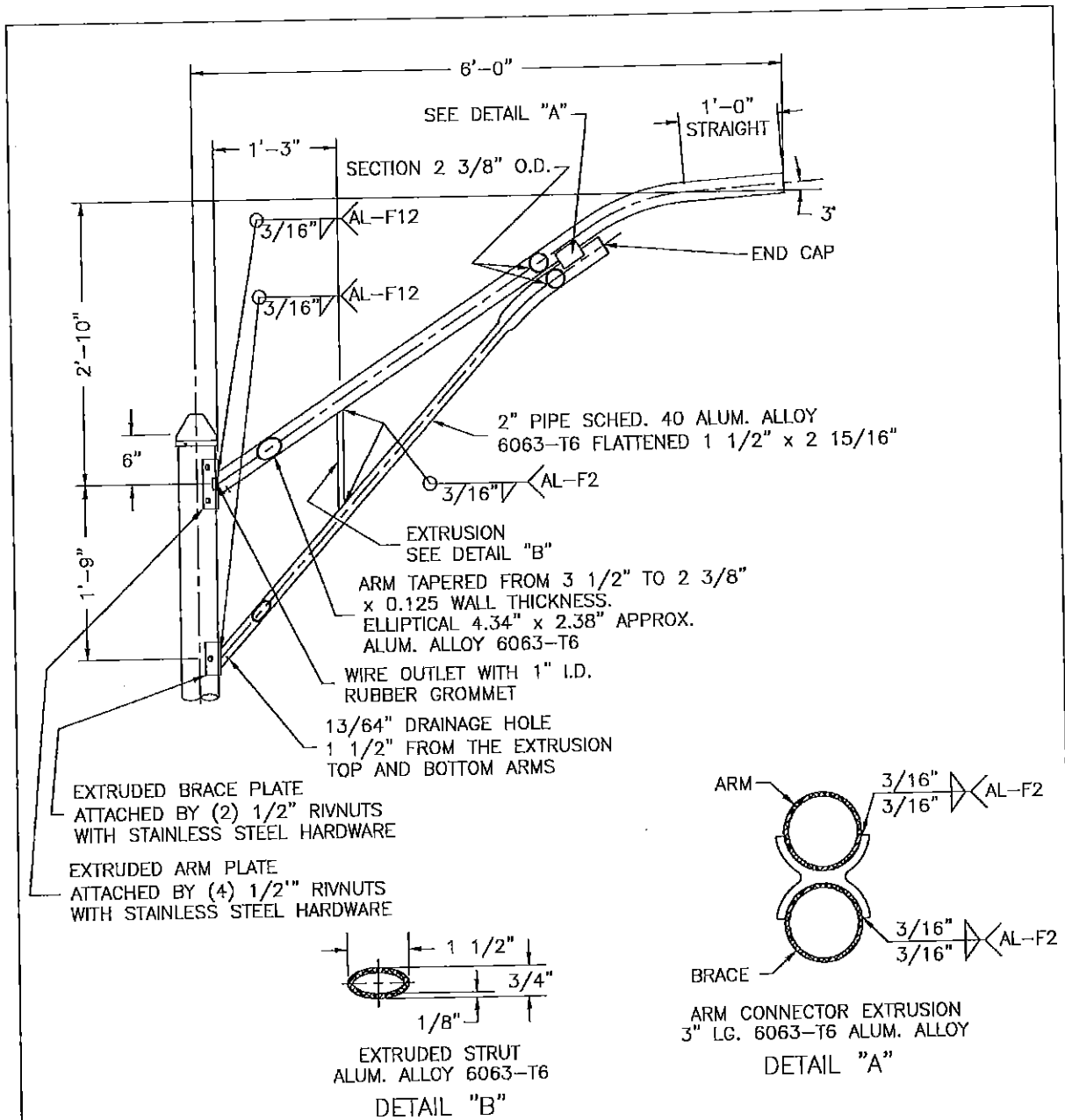
valmont
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Fax: (851) 463-3349

JOB NAME TOWN OF ST. JOHN'S	DRAWN BY R.J.		
SOLD TO	CHK'D BY P.P.	DATE	REVISION
SHIP TO	APPR'D BY	QUANTITY	
P.O. NO.	DATE 02-03-07	ORDER NO.	
AGENT LIGHTING SOLUTIONS OF ILLINOIS, INC.	SCALE	CATALOG NO.	
TITLE 8" DIA. LIGHT POLE LOWER PART	DRAWING NO. ILO20307	3/8	



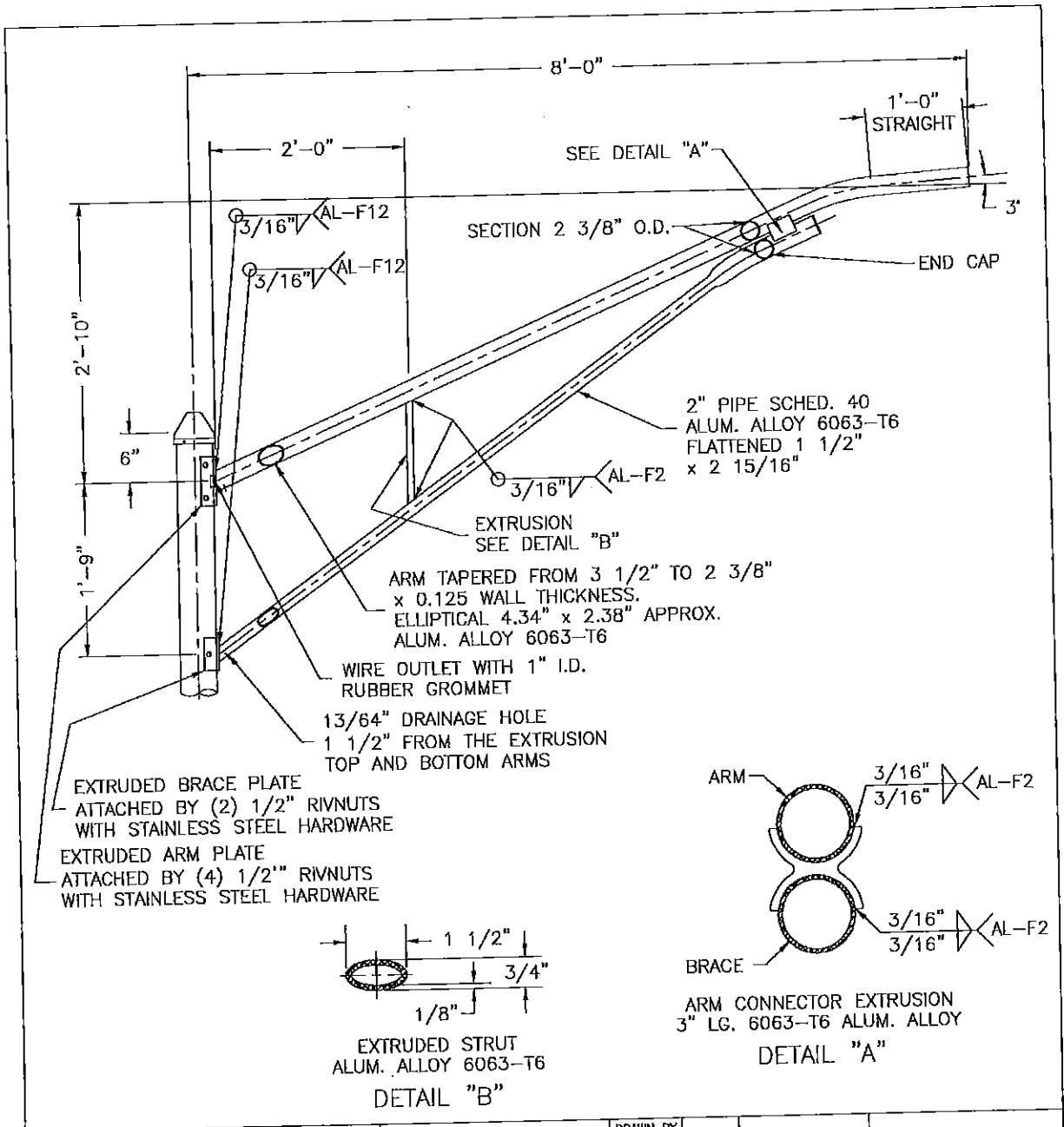
 <p>Poles Division, Valmont Industries, Inc. P.O. Box 228 Farmington, Minnesota 55024-0228 Phone: (851) 463-8890 (800) 899-7677 Fax: (651) 483-3349</p>	JOB NAME TOWN OF ST. JOHN'S	DRAWN BY R.J.		
	SOLD TO	CHK'D BY P.P.	DATE	REVISION
	SHIP TO	APPR'D BY	QUANTITY	
	P.O. NO.	DATE 02-03-07	ORDER NO.	
	AGENT LIGHTING SOLUTIONS OF ILLINOIS, INC.	SCALE AS SHOWN	CATALOG NO.	
	TITLE ARM AND BRACE PLATES ASS'Y ON 4 1/2" DIA. POLE	DRAWING NO. 1L020307	4/8	



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Poles Division, Valmont Industries, Inc.
P.O. Box 228 Farmington, Minnesota 55024-0228
Phone: (651) 463-8990 (800) 899-7577
Fax: (651) 463-3349

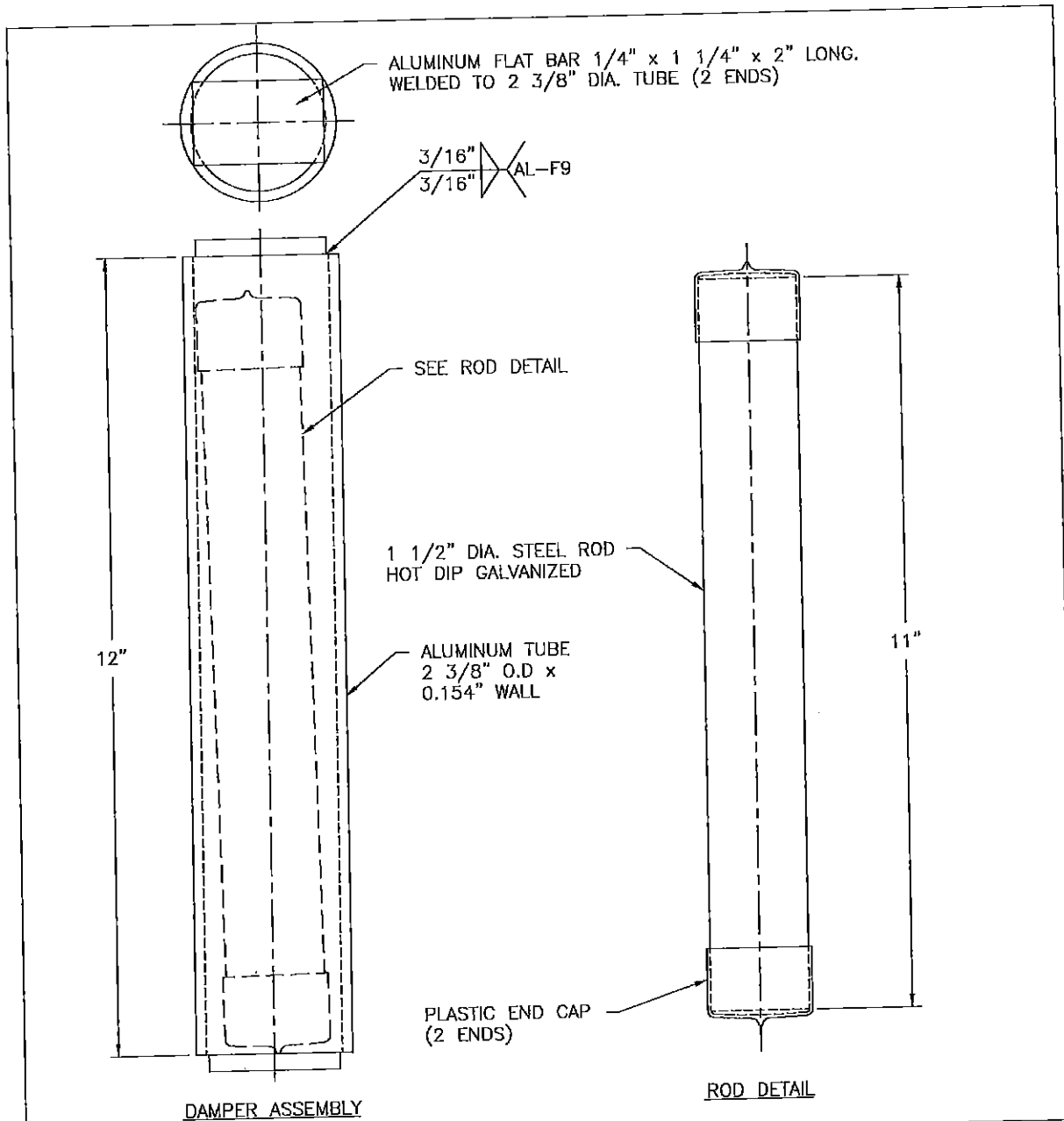
JOB NAME TOWN OF ST. JOHN'S	DRAWN BY R.J.		
SOLD TO	CHK'D BY P.P.	DATE	REVISION
SHIP TO	APPR'D BY	QUANTITY	
P.O. NO.	DATE 02-03-07	ORDER NO.	
AGENT LIGHTING SOLUTIONS OF ILLINOIS, INC.	SCALE 1/16"=1"	CATALOG NO.	
TITLE TRUSS ALUMINUM ARM 6'-0"	DRAWING NO. 1L020307	5/8	



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Fax: (651) 463-3349

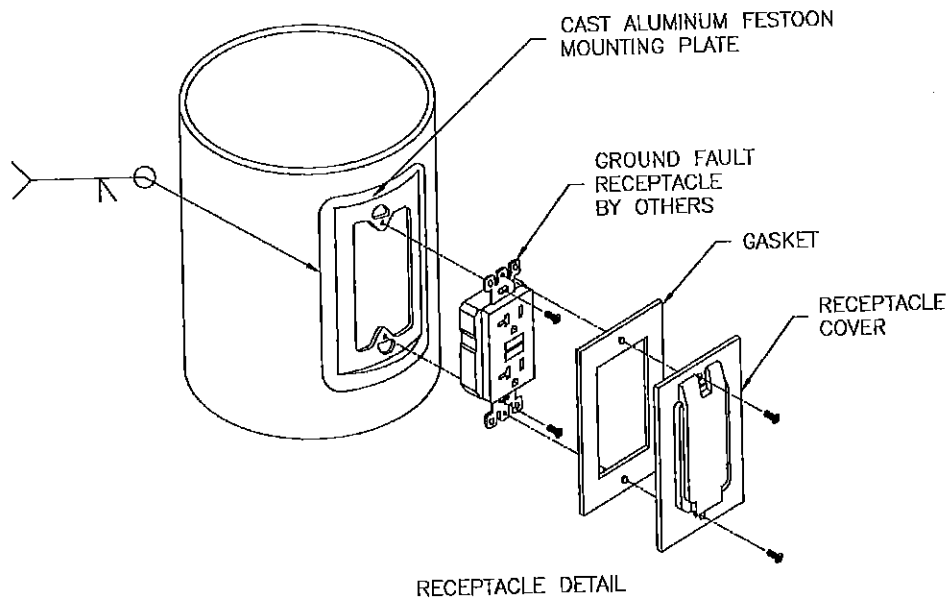
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P.O. NO.	DATE 02-03-07	ORDER NO.	
AGENT LIGHTING SOLUTIONS OF ILLINOIS, INC.	SCALE 1/16"=1"	CATALOG NO.	
TITLE TRUSS ALUMINUM ARM 8'-0"	DRAWING NO. ILO20307	6/8	



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P.O. Box 228 Farmington, Minnesota 55024-0228
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P.O. NO.	DATE 02-03-07	ORDER NO.	
AGENT LIGHTING SOLUTIONS OF ILLINOIS, INC.	SCALE 1/2"=1"	CATALOG NO.	
TITLE VIBRATION DAMPER	DRAWING NO. ILO20307	7/8	

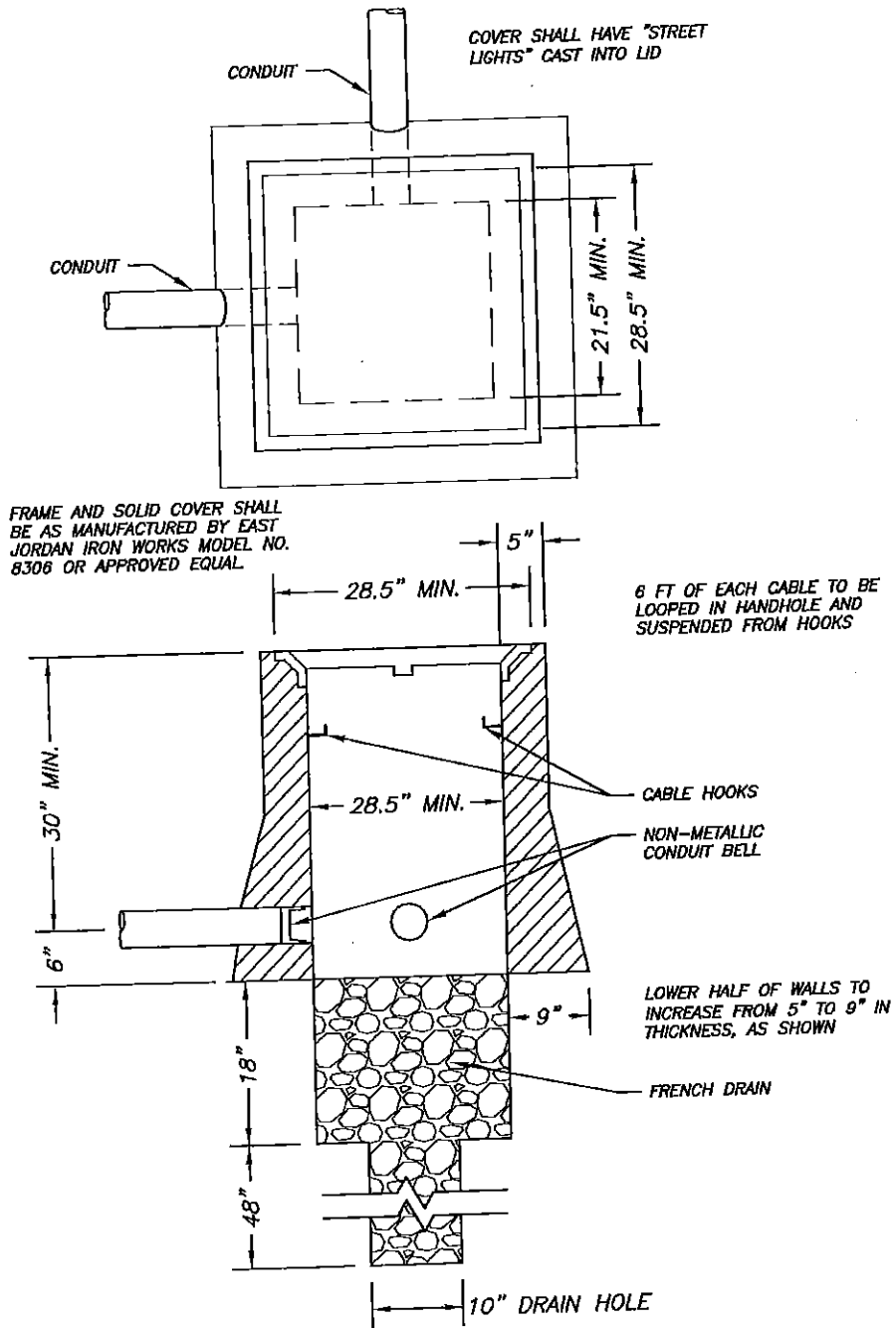


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P.O. NO.	DATE 02-03-07	ORDER NO.	
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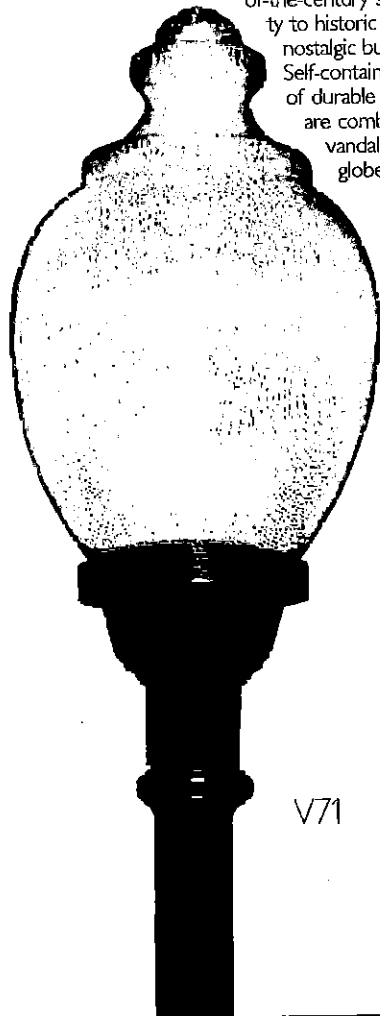
STANDARD HANDHOLE



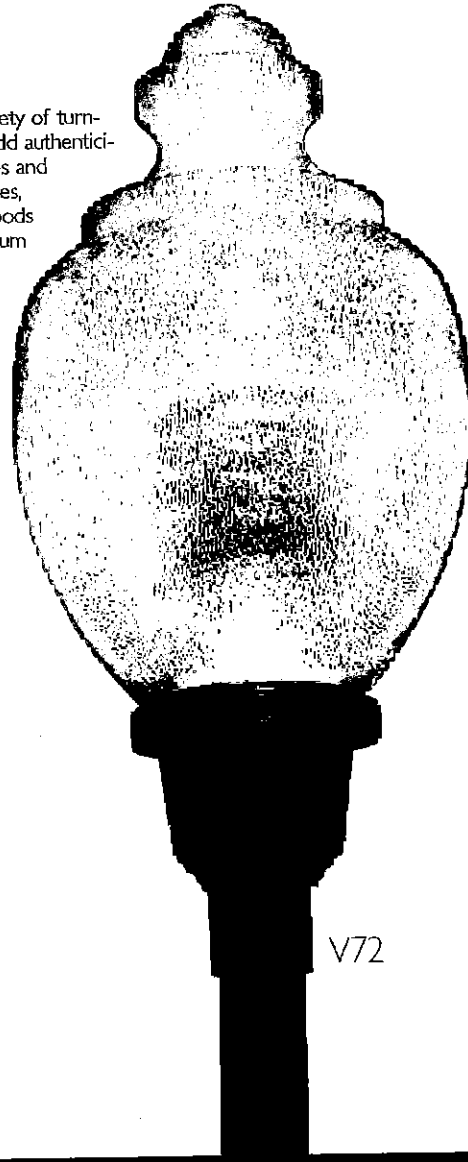
VICTORIAN V71, V72

VICTORIAN V71, V72

Polycarbonate globes in a variety of turn-of-the-century shapes to add authenticity to historic streetscapes and nostalgic building themes. Self-contained ballast pods of durable cast aluminum are combined with vandal-resistant globes.

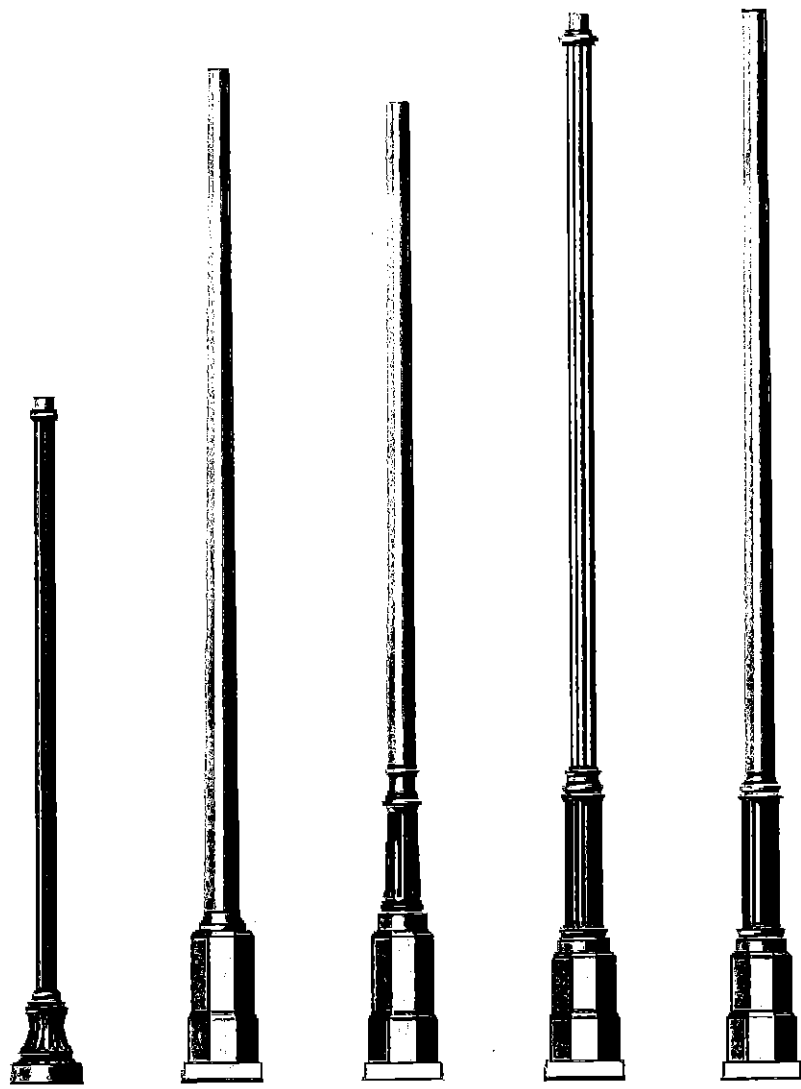


V71



V72

HADCO



MODEL #	P-2260	P-1710	P-1740	P-1765	P-1790																																																																		
TENON/TOP	3" O.D.	3" O.D.	3" O.D.	3" O.D.	3" O.D.																																																																		
(Base Template)																																																																							
BOLT CIRCLE	5 7/16" dia.	12 3/8" dia.	12 3/8" dia.	11 3/8" dia.	11 3/8" dia.																																																																		
ANCHOR RODS	(3) 1/2" x 18"	(4) 1/2" x 18"	(4) 1/2" x 18"	(4) 1/2" x 18"	(4) 1/2" x 18"																																																																		
BASE	12 1/4" dia. x 14 1/4" H	10 1/2" Sq. x 24 1/2" H	10 1/2" Sq. x 46" H	10 1/2" Sq. x 46" H	10 1/2" Sq. x 46" H																																																																		
BASE COVER	Internal Anchor Rods	11 1/2" Sq. x 2 1/2" H	11 1/2" Sq. x 2 1/2" H	11 1/2" Sq. x 2 1/2" H	11 1/2" Sq. x 2 1/2" H																																																																		
HAND HOLE OPENING	7" X 5 1/2" x 4"	9" x 10"	9" x 10"	9" x 10"	9" x 10"																																																																		
SHAFT	3" Fluted	5" to 3" Tapered	4" to 3" Tapered	4" Fluted	4" to 3" Tapered																																																																		
WALL	.125 Aluminum	.125 Aluminum	.125 Aluminum	.125 Aluminum	.125 Aluminum																																																																		
HEIGHT/EPA	<table border="1"> <thead> <tr> <th>HT.</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>6'</td> <td>3.90</td> <td>2.30</td> </tr> <tr> <td>8'</td> <td>2.80</td> <td>1.50</td> </tr> </tbody> </table>	HT.	80	100	6'	3.90	2.30	8'	2.80	1.50	<table border="1"> <thead> <tr> <th>HT.</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>8'6"</td> <td>19.15</td> <td>11.87</td> </tr> <tr> <td>10'6"</td> <td>15.29</td> <td>9.30</td> </tr> <tr> <td>12'6"</td> <td>12.47</td> <td>7.40</td> </tr> <tr> <td>14'6"</td> <td>8.23</td> <td>4.72</td> </tr> </tbody> </table>	HT.	80	100	8'6"	19.15	11.87	10'6"	15.29	9.30	12'6"	12.47	7.40	14'6"	8.23	4.72	<table border="1"> <thead> <tr> <th>HT.</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>8'8"</td> <td>7.29</td> <td>4.26</td> </tr> <tr> <td>10'8"</td> <td>5.53</td> <td>3.03</td> </tr> <tr> <td>12'8"</td> <td>4.21</td> <td>2.08</td> </tr> </tbody> </table>	HT.	80	100	8'8"	7.29	4.26	10'8"	5.53	3.03	12'8"	4.21	2.08	<table border="1"> <thead> <tr> <th>HT.</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>10'</td> <td>15.21</td> <td>9.42</td> </tr> <tr> <td>12'</td> <td>11.56</td> <td>6.96</td> </tr> <tr> <td>14'</td> <td>7.22</td> <td>4.17</td> </tr> <tr> <td>16'</td> <td>5.57</td> <td>2.98</td> </tr> </tbody> </table>	HT.	80	100	10'	15.21	9.42	12'	11.56	6.96	14'	7.22	4.17	16'	5.57	2.98	<table border="1"> <thead> <tr> <th>HT.</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>10'</td> <td>14.31</td> <td>8.64</td> </tr> <tr> <td>12'</td> <td>11.69</td> <td>6.86</td> </tr> <tr> <td>14'</td> <td>7.73</td> <td>4.36</td> </tr> <tr> <td>16'</td> <td>5.83</td> <td>3.11</td> </tr> </tbody> </table>	HT.	80	100	10'	14.31	8.64	12'	11.69	6.86	14'	7.73	4.36	16'	5.83	3.11
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