AUSTIN ENERGY

PURCHASE SPECIFICATION

FOR

BORE SPACER, DIST, URD

DATE	PREPARED BY	ISSUANCE/REVISION	APPROVAL DIVISION MANAGER/STANDARDS MANAGER
2/11/20	Julius Heslop	Issuance	----------

REASON FOR REVISION	***AFFECTED PARAGRAPHS***

This specification, until rescinded, shall apply to each future purchase and contract for the commodity described herein.
Retain for future reference.

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PURCHASE SPECIFICATION
FOR
BORE SPACER,DIST,URD

1.0 SCOPE

This specification shall define the minimum physical and operational characteristics for boring spacers.

2.0 APPLICABLE STANDARDS

2.1 All characteristics, definitions, and terminology, except as specifically covered in this specification, shall be in accordance with the latest revision of the following standards:

2.1.1 ASTM D-149 – Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies

2.1.2 ASTM D-256 – Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics

2.1.3 ASTM D-570 – Standard Test Method for Water Absorption of Plastics

2.1.4 ASTM D-638 – Standard Test Method for Tensile Properties of Plastics

2.1.5 ASTM D-790 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

3.0 GENERAL

3.1 Jacking or boring pipe shall be in accordance with Item No. 501S, 505S, and 510 of the City of Austin code, and will not be covered under this specification.

3.2 Boring Spacer will be sized based on number and type of pipes to be bored.

3.3 Boring Spacer shall be custom fit Formex brand, or Distribution Standards Engineering approved equal. Equal must meet the following requirements:

3.4 Physical Requirements

3.4.1	Strength	
	3.4.1.1 Dielectric (ASTM D-149)	500 Volts/Mil
	3.4.1.2 Flexural (ASTM D-790)	1000 psi
	3.4.1.3 Compressive (ASTM D-693)	3200 psi
	3.4.1.4 Tensile (ASTM D-638)	3500 psi
	3.4.1.5 Impact (ASTM D-256)	2.0 ft lb/in of notch
3.4.2	Water Absorption (ASTM D-570)	less than 0.01%
3.4.3	Specific Gravity	min 0.96
3.4.4	Width	½ in
3.4.5	Material	High Density Polyethylene (HDPE)
3.4.6	Max Continuous Operating Temp	140 °F

3.4.7 Min Duct O.D. to Duct O.D. 2 in

3.4.8 Min Duct O.D. to Spacer O.D. ¾ in

3.5 Required Information

3.5.1 Conduit Size(s)

3.5.2 Number of Conduits

3.5.3 Type of Conduit

3.5.4 Casing Type/ Material

3.5.5 Casing Outer Diameter

3.5.6 Casing Wall Thickness

3.5.7 Length of Run

3.5.8 Minimum Conduit-to-Conduit Separation

3.5.9 Grout – Filled or Not Filled

3.5.10 Casing- Filled or Not Filled

3.5.11 Duct Size

3.5.12 Type of Duct

3.6 Bore Spacer shall be designed by manufacturer to have the physical requirements listed with the required information given.

3.7 The perimeter of the spacer shall be scalloped and spaces shall be placed to allow easier flow of grout.

3.8 Grout fill injection hole size shall be 3 in diameter.

3.9 Casters

3.9.1 Casters shall be 3 in diameter (low profile).

3.9.2 Casters shall be High Density Polyethylene (HDPE) with a steel axle.

3.9.3 Casters shall be placed to prevent conduit back flotation.

3.9.4 Conduit bank weight shall be balanced on both vertical and horizontal centerlines.

3.9.5 A minimum of 3 casters shall be used.

3.9.6 Minimum load capacity of each roller shall be 600 lb.

3.10 Either HD strapping or Nylon 275 lb tie straps shall be used on either side of the spacer to secure the conduit in place.

3.11 Spacers shall be placed per manufacturer’s recommendation, but not more than 5 ft horizontally apart.

3.12 Encasement pipe boot/seal wrap

3.12.1 Encasement pipe ends shall be sealed with a boot cap or seal wrap at each end.

3.12.2 Spacers shall be placed between 12 in and 18 in from pipe seal/boot.

3.12.3 Encasement pipe and Casing spacer shall have up to 1 inch of vertical clearance

4.0 PROCEDURE

4.1 Bore or jack encasement pipe per COA standards.

4.2 Place pipes and spacers per COA standards and manufacturers guidelines.

4.3 Encasement and all conduits shall be completely filled with water prior to pumping grout.

4.4 Grout shall be pumped through a 3 in diameter injection hole.

5.0 PERFORMANCE GUARANTEE

5.1 Failure of the spacer by manufacturing error or mishandling by the manufacturer or vendor shall cause the product to be rejected and the product will be returned to the manufacturer/vendor for a full refund.

ATTACHMENT 1 – ENCASEMENT AND SPACER DETAIL

1418-XX	BORING BASE SPACER	
SHEET 1 OF 1	CONDUITS AND UNDERGROUND STRUCTURES	
06/22/16	CONDUIT	REV 9/22/19