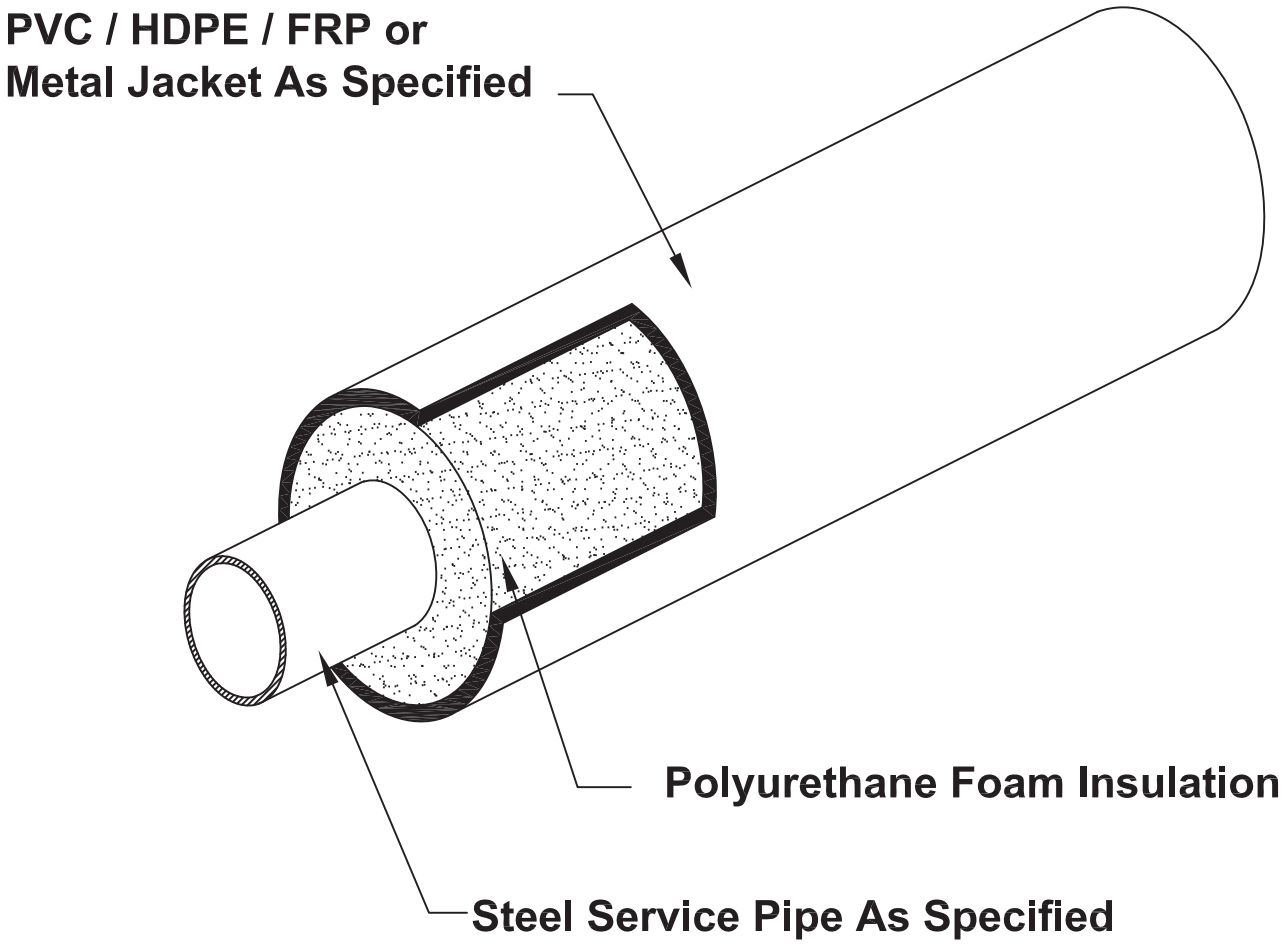
TRICON STEEL 250 SYSTEM

For Applications Up To 250° F Below And Above Ground

- ☐ Chilled Water
- ☐ Condensate
- ☐ Condenser Water
- ☐ Low Pressure Steam
- ☐ Heating Hot Water
- ☐ Process Piping



TRICON
Piping Systems, Inc. ®

P.O. Box 361, Canastota, New York 13032
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TRICON STEEL 250 System Specifications

TABLE 1

Pipe Size	Minimum Insulation Thickness	HDPE Jacket O.D.	HDPE Jacket Wall
½"	1.68"	4.50"	.150"
¾"	1.58"	4.50"	.150"
1"	1.44"	4.50"	.150"
1¼"	1.25"	4.50"	.150"
1½"	1.14"	4.50"	.150"
2"	1.91"	6.63"	.200"
2½"	1.66"	6.63"	.200"
3"	1.35"	6.63"	.200"
4"	1.58"	8.00"	.175"
5"	1.00"	8.00"	.175"
6"	1.51"	10.00"	.175"
8"	1.73"	12.43"	.175"
10"	1.48"	14.06"	.175"
12"	1.39"	15.87"	.175"
14"	1.72"	17.83"	.175"

TABLE 2

Pipe Size	Minimum Insulation Thickness	PVC Jacket O.D.	PVC Jacket Wall
½"	1.76"	4.50"	.070"
¾"	1.66"	4.50"	.070"
1"	1.53"	4.50"	.070"
1¼"	1.35"	4.50"	.070"
1½"	1.23"	4.50"	.070"
2"	1.81"	6.14"	.070"
2½"	1.56"	6.14"	.070"
3"	2.25"	8.16"	.070"
4"	1.75"	8.16"	.080"
5"	1.25"	8.16"	.080"
6"	1.69"	10.20"	.100"
8"	1.69"	12.24"	.120"
10"	1.65"	14.32"	.140"
12"	1.47"	16.00"	.160"

Service Pipe:
Carbon steel service pipe shall be standard weight A53 ERW or A106 seamless beveled for welding. Condensate return piping shall be Schedule 80. (Stainless Steel piping shall be Type 304L or 316L.) All joints for pipe 2 ½" and larger in size shall be butt-welded. Sizes 2" and smaller shall be socket welded. Straight lengths of piping will be supplied with 6" of piping exposed at each end for field joint fabrication. Pipe lengths to be supplied in 21-42 ft. lengths.

Insulation: *
The insulation shall be a foamed in place closed cell polyurethane which completely fills the annular space between the carrier pipe and the exterior casing per ASTM C-591. The insulation shall have the following physical properties:

Minimum Density (lb./cu. ft.) 2.0	ASTM D-1622
90-95 % Closed Cell	ASTM D-2856
"K" Factor BTU/Hr. sq. ft. °F/in. . . .16	ASTM C-177

Exterior Casing:**
The exterior casing shall be

(1) Seamless, extruded white PVC Type 1, Grade 1 Class 12454-B per ASTM D-1784 or

(2) High Density Polyethylene (H.D.P.E.) ASTM D-1248 with the following physical properties:
ASTM D-3350…Resin Type III, Grade P34
ASTM D-638…Ultimate Elongation 850%
ASTM D-638…Tensile Yield Strength 3300 psi
ASTM D-790…Tangent Flexural Modules 175,000 psi

No polyethylene tape casings will be allowed.

Sub-Assemblies:
All fittings, anchors, end seals, other accessories shall be prefabricated or field fabricated dependant upon engineer's option and/or site conditions.

Field Joints:
After welding and hydrostatic testing, PVC jacketed straight field joints shall be insulated with polyurethane foam to the thickness specified, PVC sleeve and pressure sensitive tape. HDPE jackets will use polyurethane foam and a heat shrinkable sleeve.

Expansion Compensation: ***
Expansion and contraction within the piping system shall be accommodated with factory prefabricated internal expansion elbows, z-bends, expansion loops, and anchors specifically designed for each application. External expansion compensation can be provided with the use of flexible foam bolsters.

Installation:
No Piping shall be installed in standing water. **Trenches shall be maintained dry until final field closure is complete.**
The installing contractor shall handle the piping system in accordance with the directions furnished by the manufacturer and as approved by the architect and engineer. The carrier piping shall be hydrostatically tested to 1-1/2 times the operating pressure, or as specified in the contract documents. The test shall be maintained for a minimum time of 1 hour. ***EXERCISE DUE CARE WHEN INSTALLING AND TESTING THE PIPING SYSTEM.***

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Backfill:
A 6-inch layer of sand or fine gravel, less than ½" in diameter, shall be placed and tamped in the trench to provide uniform bedding for the **Steel 250** system. Once the system is in place, the trenches shall be carefully backfilled with similar material and hand tamped in 6" layers until a minimum of 12" above the top of the preinsulated pipe has been achieved. The remainder of the backfill shall be void of rocks, frozen earth and foreign material. The trench shall be compacted to comply with H-20 Highway loading.

Accessories:

Heat Tracing

System Options:

* Insulation thickness will vary depending on the type of insulation specified and the operating temperature. Contact your Tricon representative for available sizes and system options.

** Optional metallic casings for above grade applications include Spiral Lockseam in Galvanized, Aluminum or Stainless Steel.

** Optional non-metallic casings for below grade offered include, Filament Wound FRP.

*** Optional push-on expansion couplings are available upon request.

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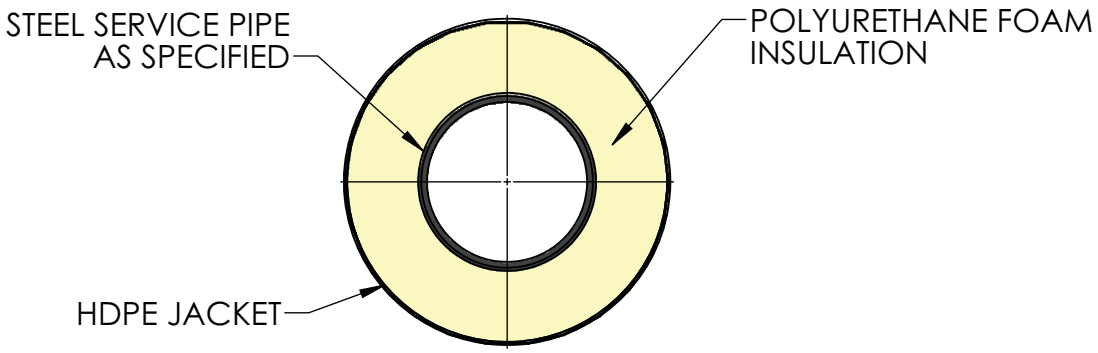

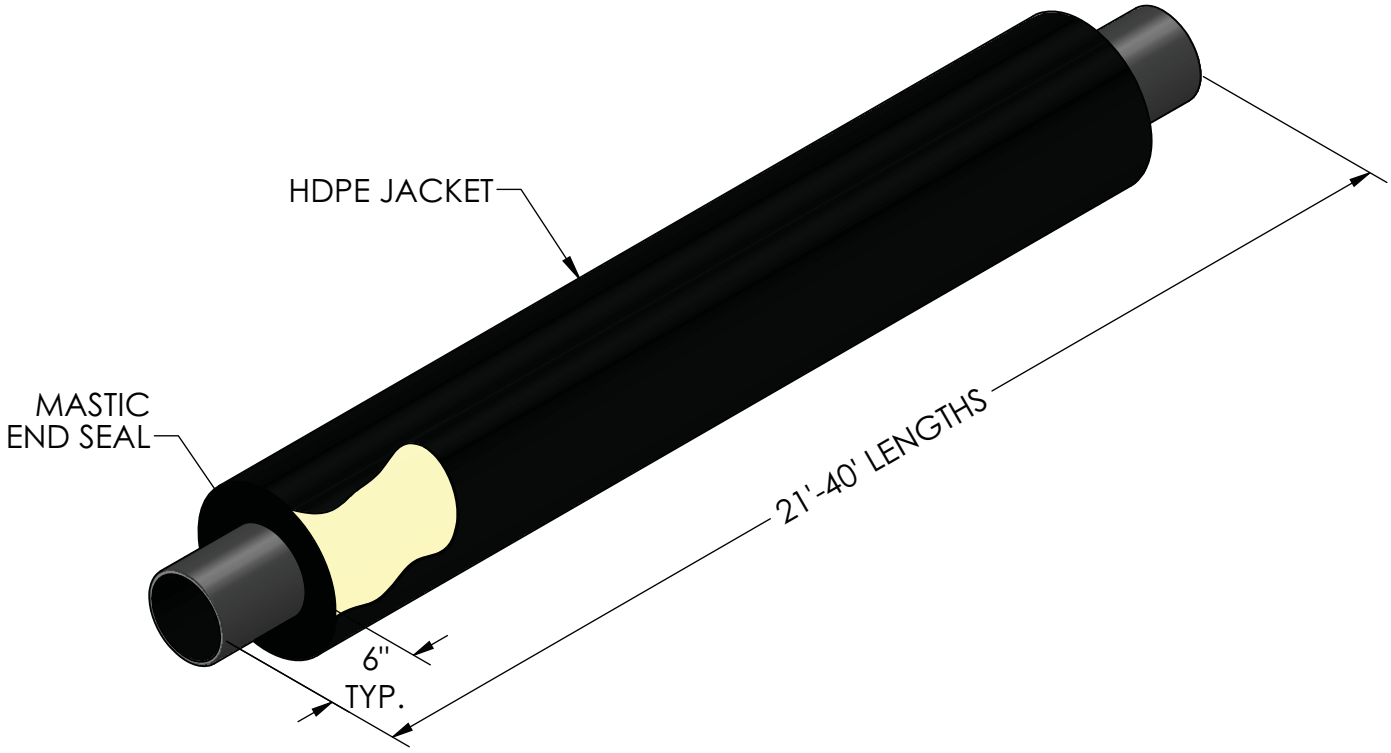

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SHEET TITLE	STRAIGHT LENGTH DETAIL			
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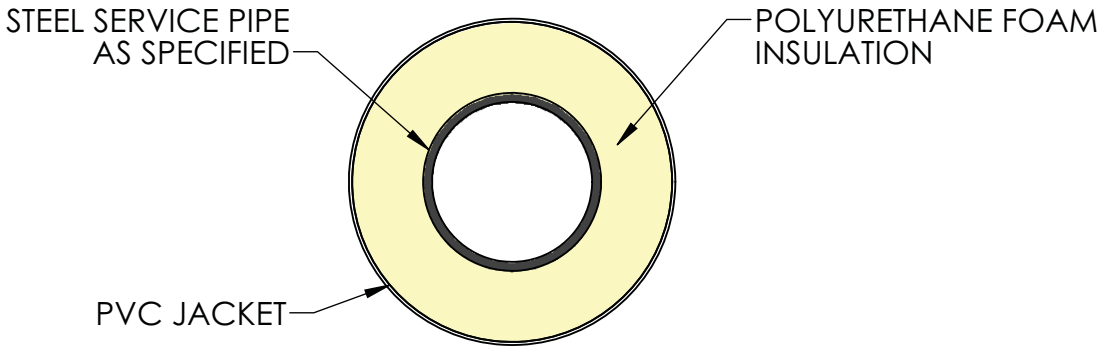
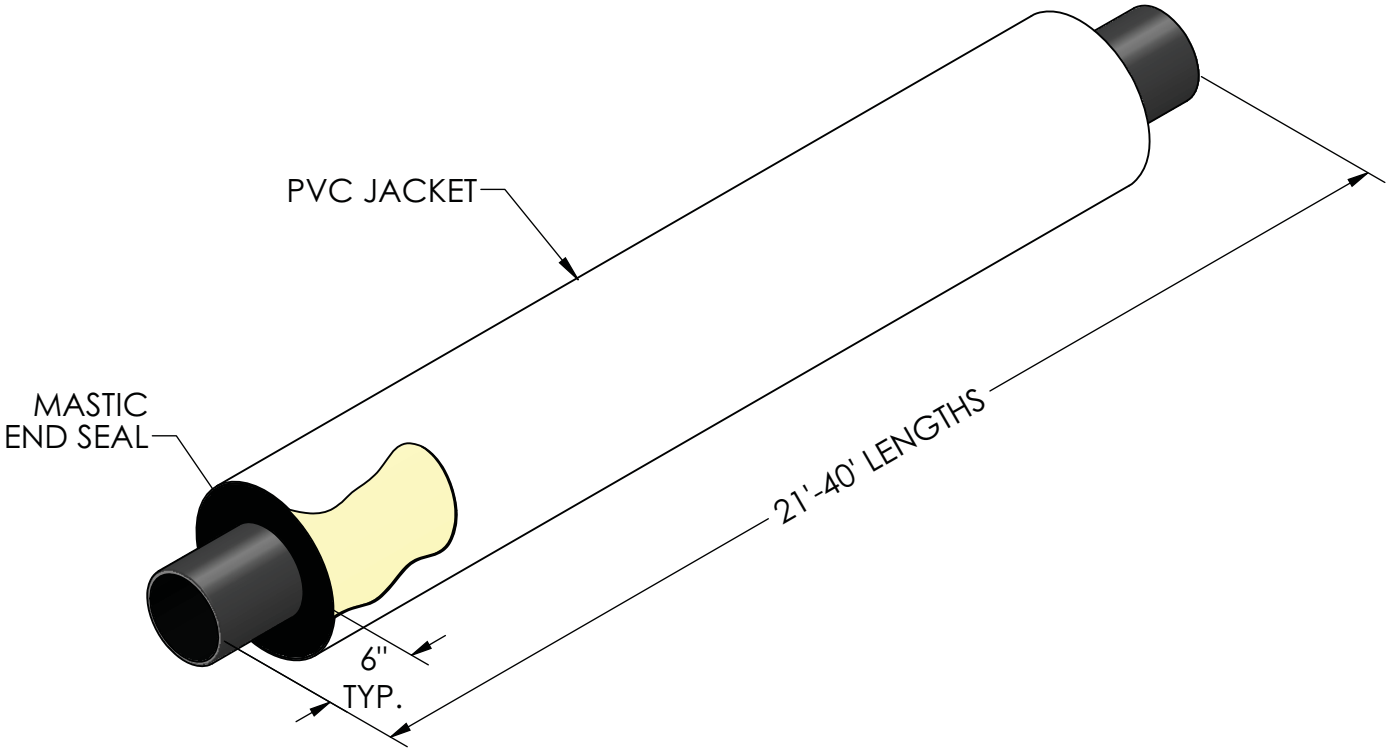
		DWG. NO. S250-1		SHEET





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SHEET TITLE
STRAIGHT LENGTH DETAIL

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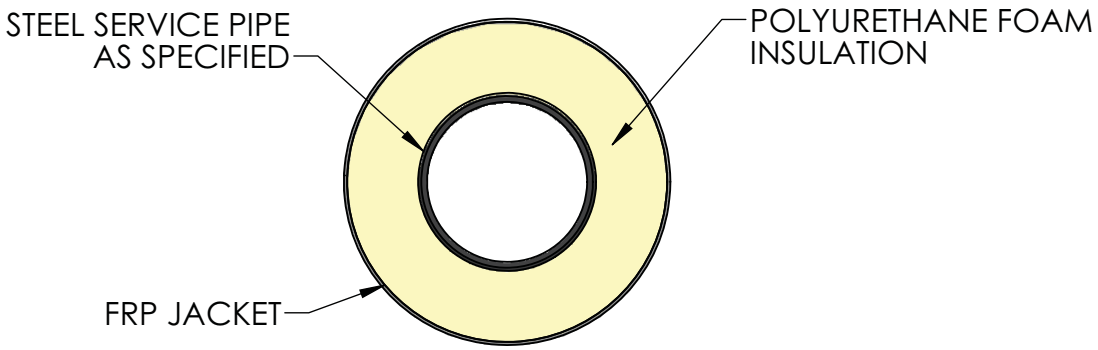
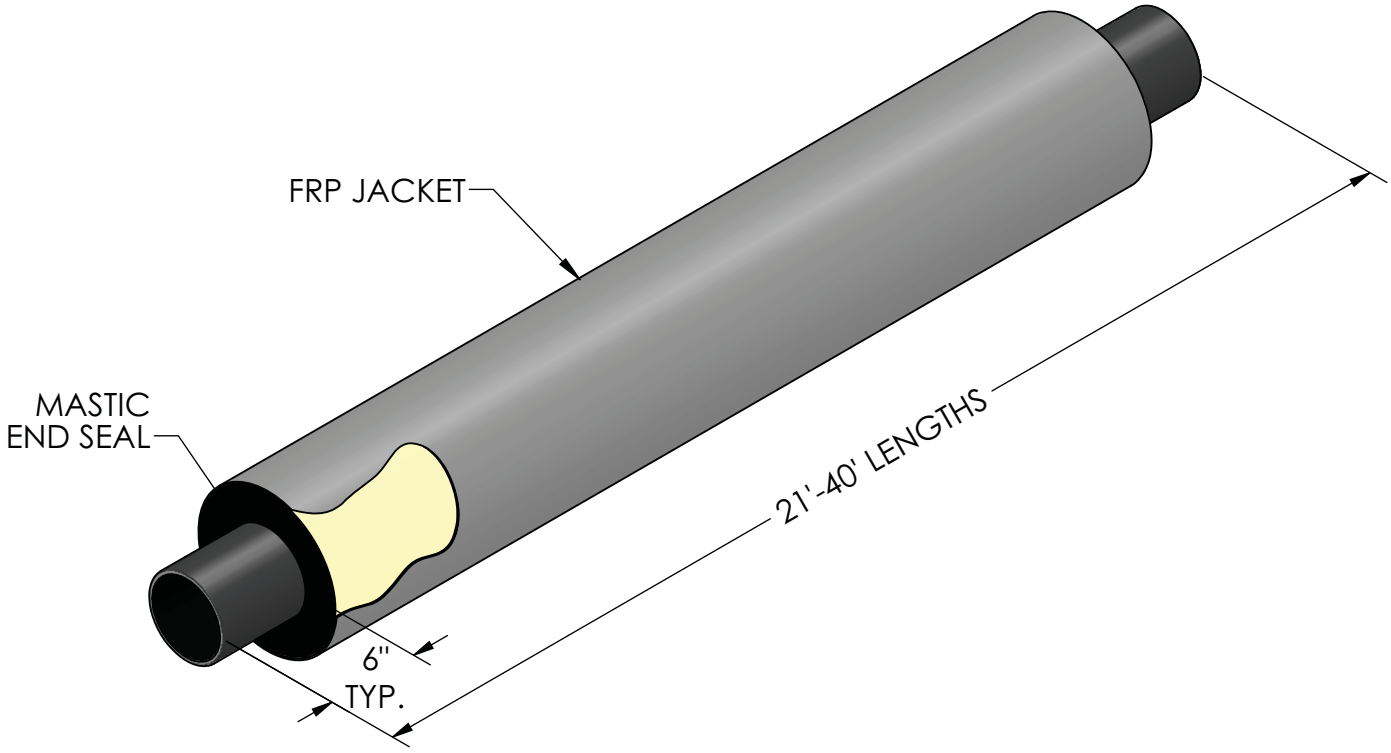
Tricon Steel-250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.	SHEET
S250-1	





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SHEET TITLE: STRAIGHT LENGTH DETAIL				
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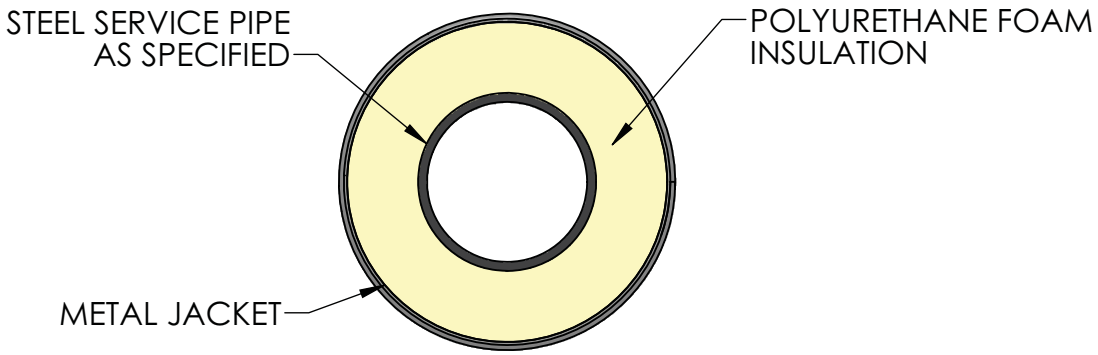
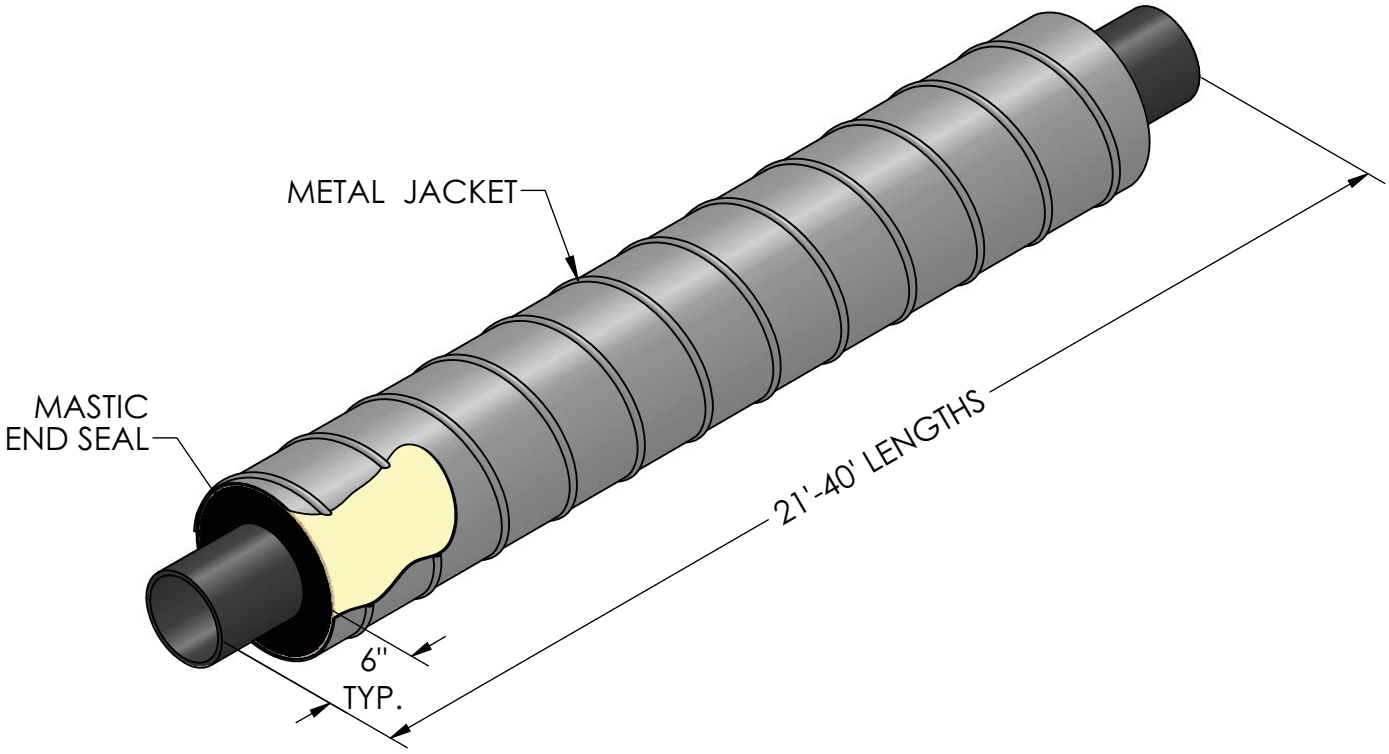
	DWG. NO.: S250-1		SHEET:	





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SHEET TITLE	STRAIGHT LENGTH DETAIL			
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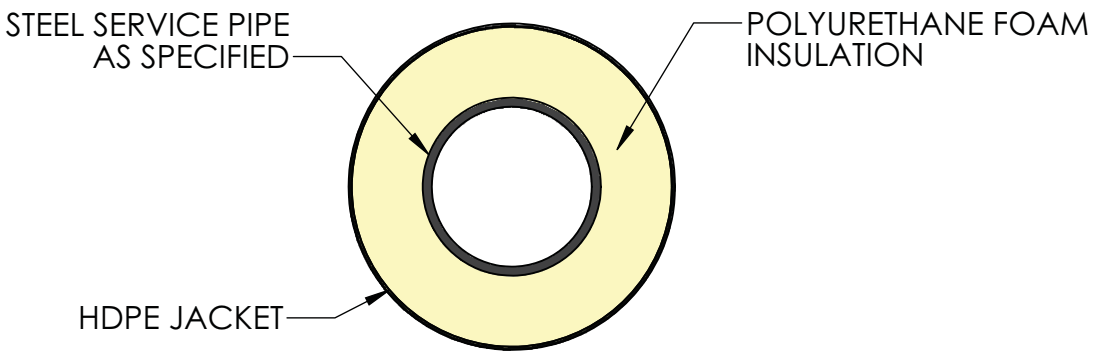

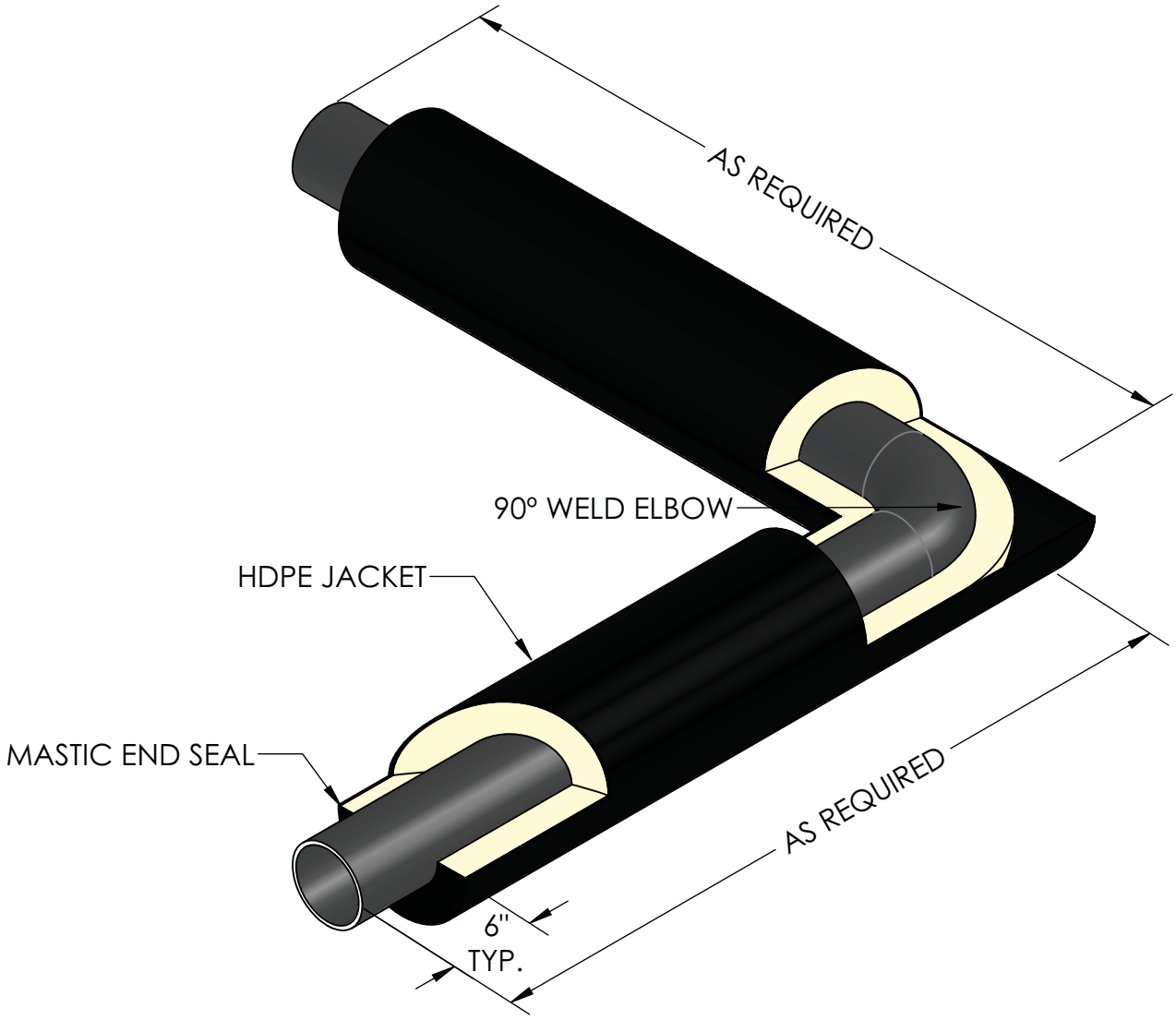

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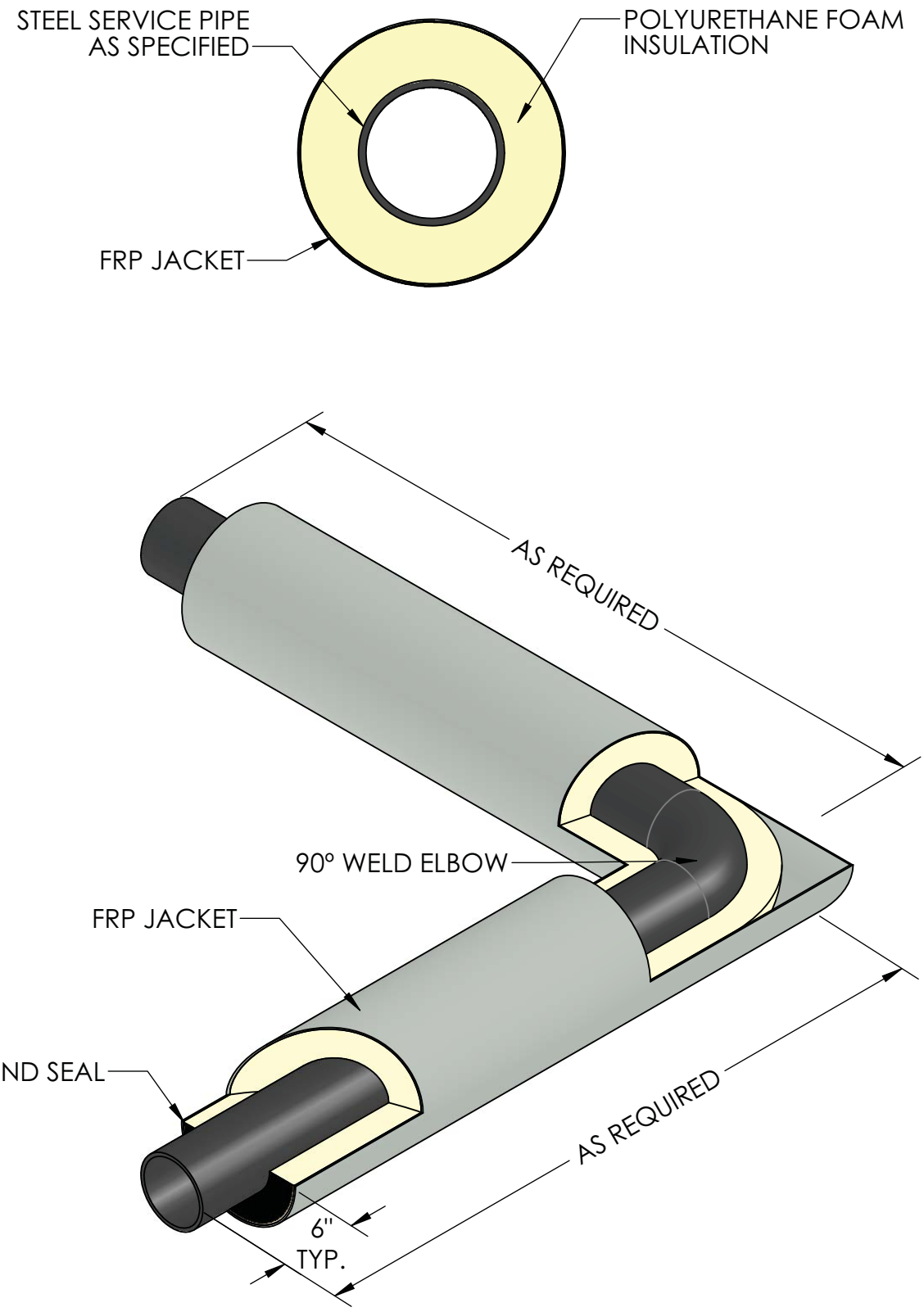
SHEET TITLE
PRE-FABRICATED 90-DEGREE ELBOW DETAIL

PRODUCT
TRICON STEEL-250

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO.
S-250-2



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SHEET TITLE	PRE-FABRICATED 90-DEGREE ELBOW DETAIL			
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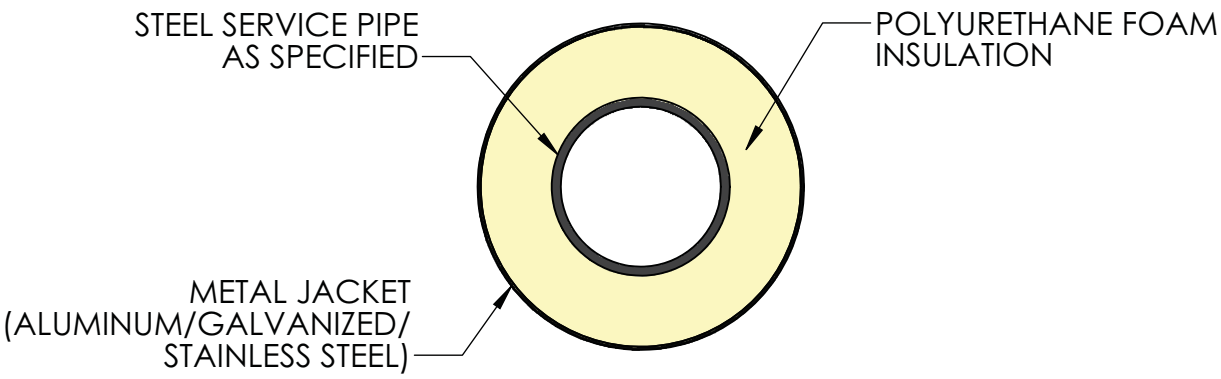
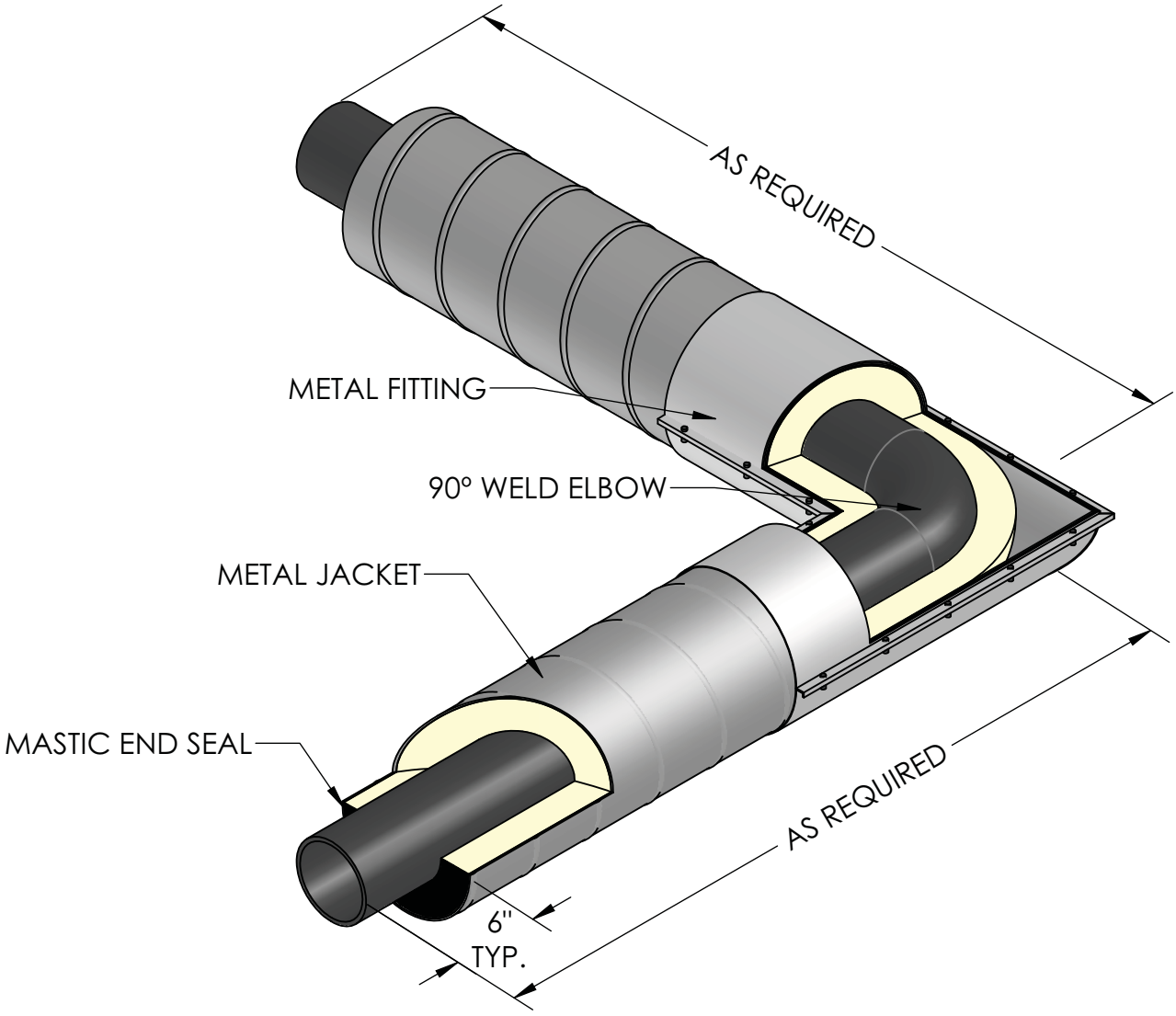
		DWG. NO. S250-2		SHEET





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SHEET TITLE: PRE-FABRICATED 90-DEGREE ELBOW DETAIL

PRODUCT: TRICON STEEL 250

SIZE	SCALE	DATE
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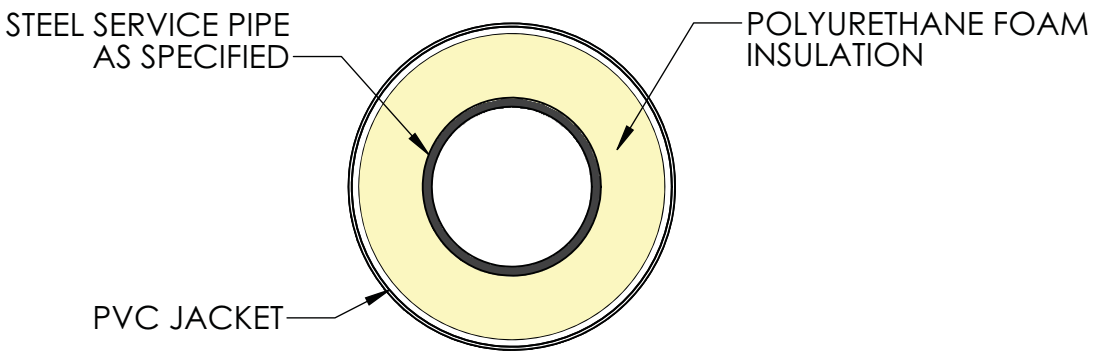
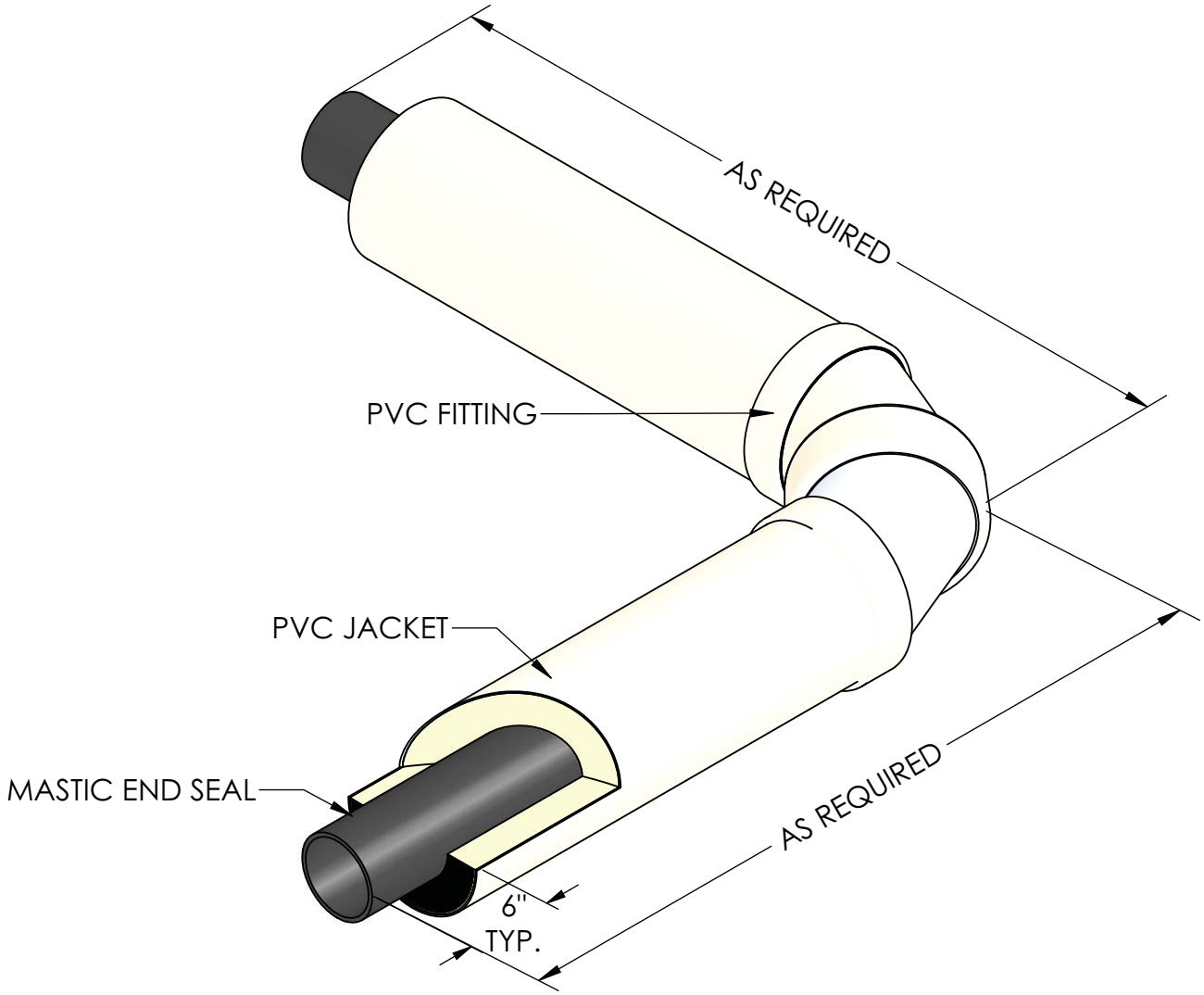
S250-2	





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PRODUCT
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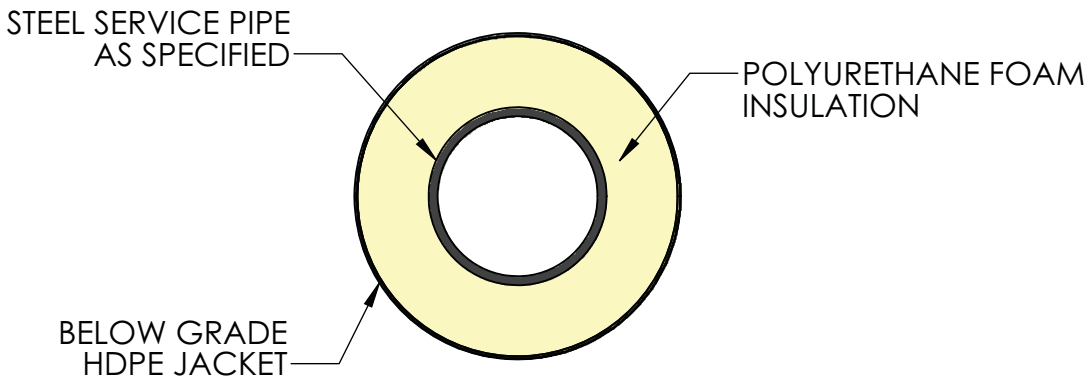

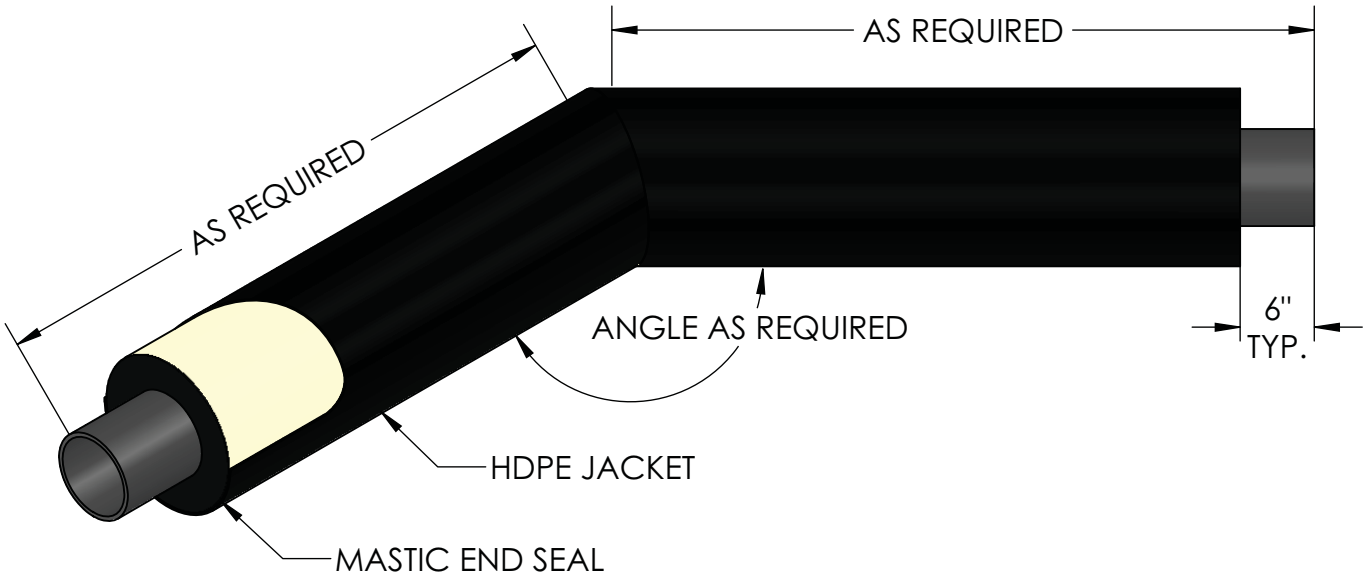

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PRODUCT
TRICON STEEL-250

SIZE	SCALE	DATE
A	NTS	11/01/2016

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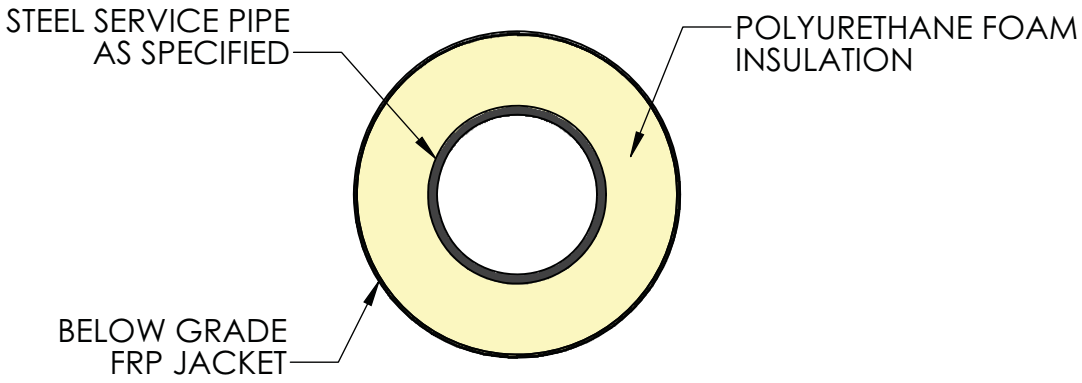
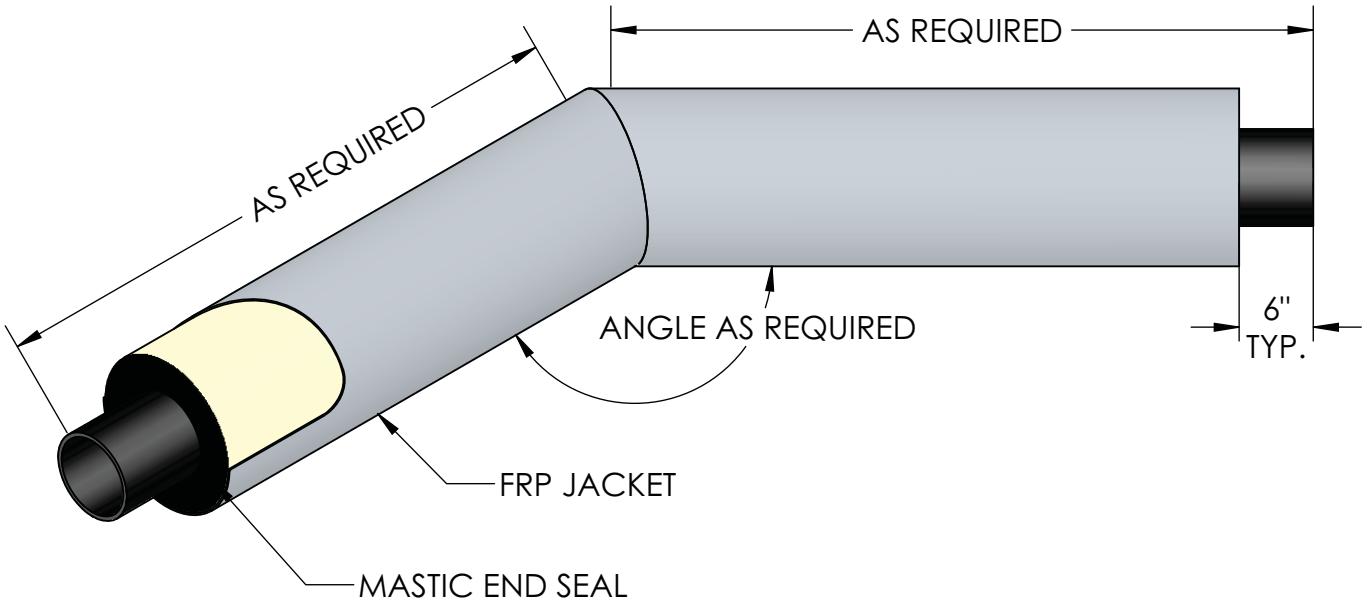
S250-3	





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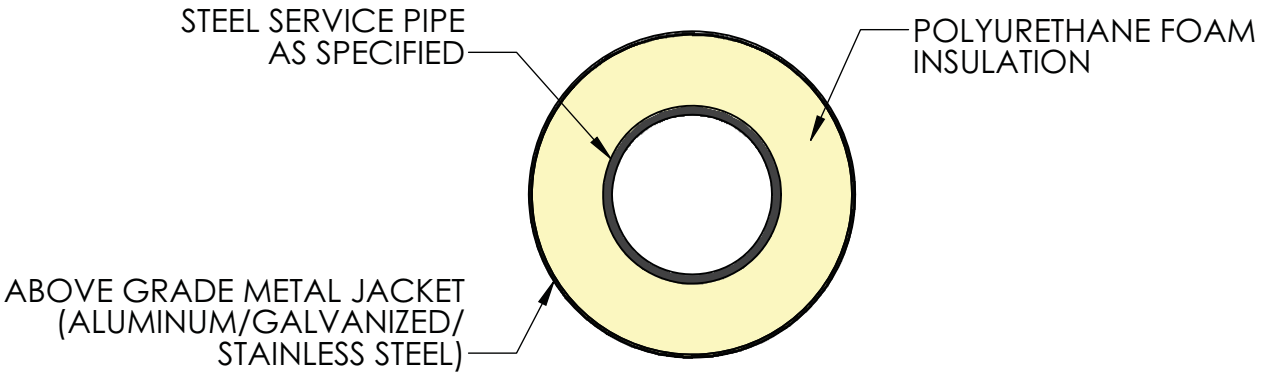

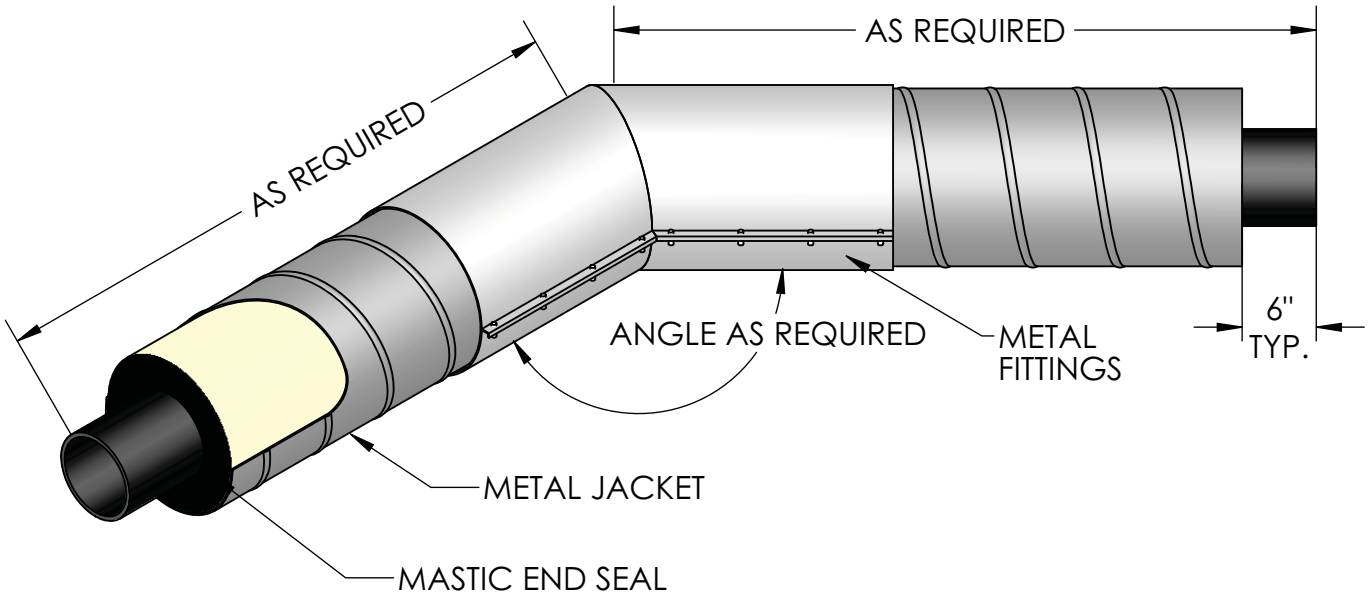

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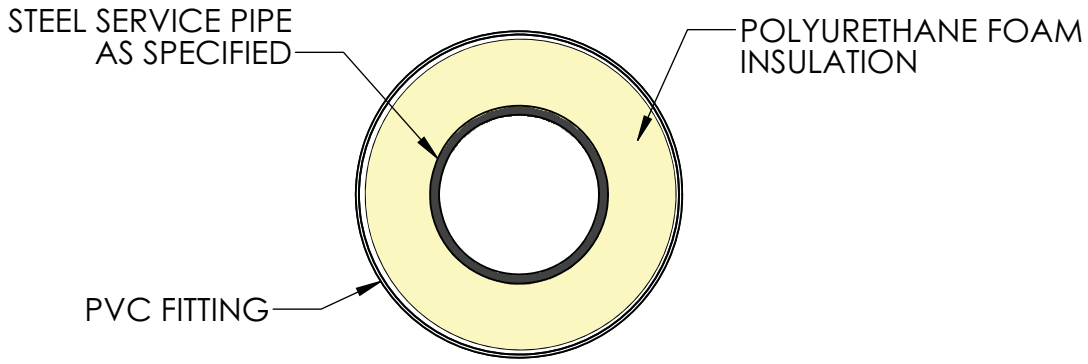

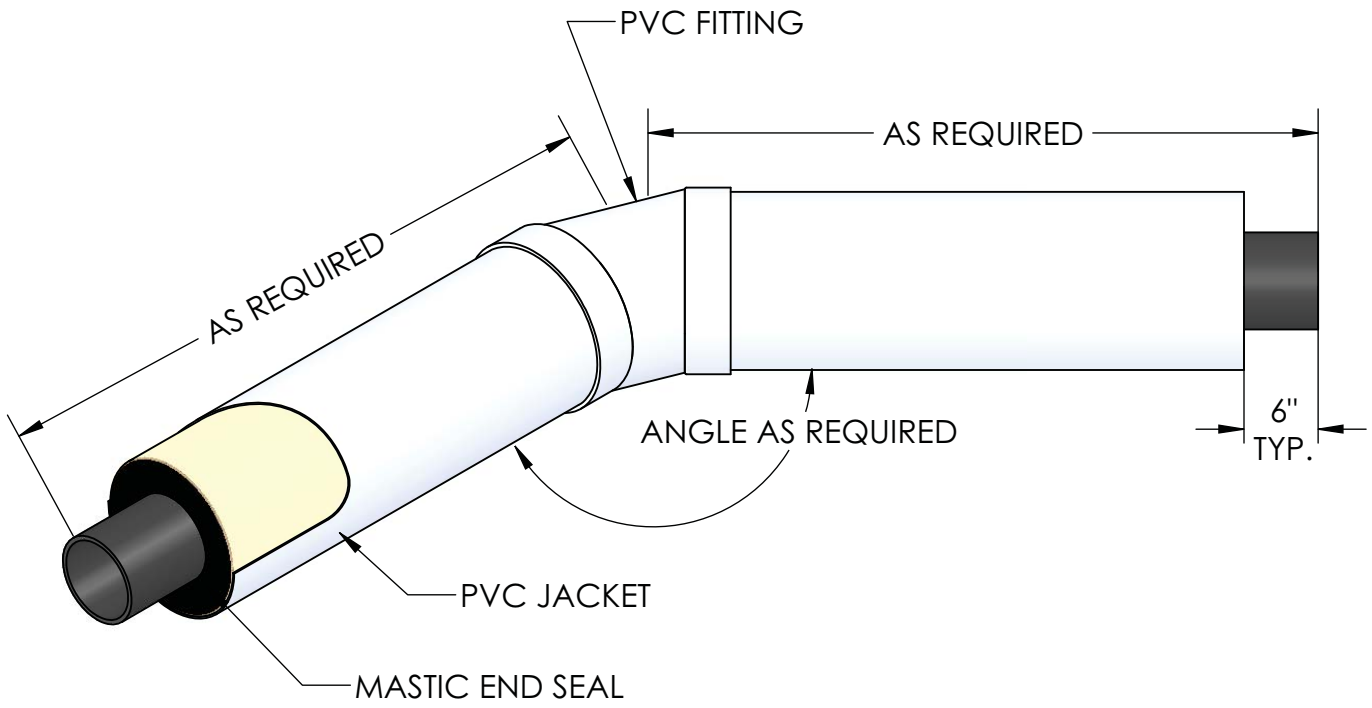

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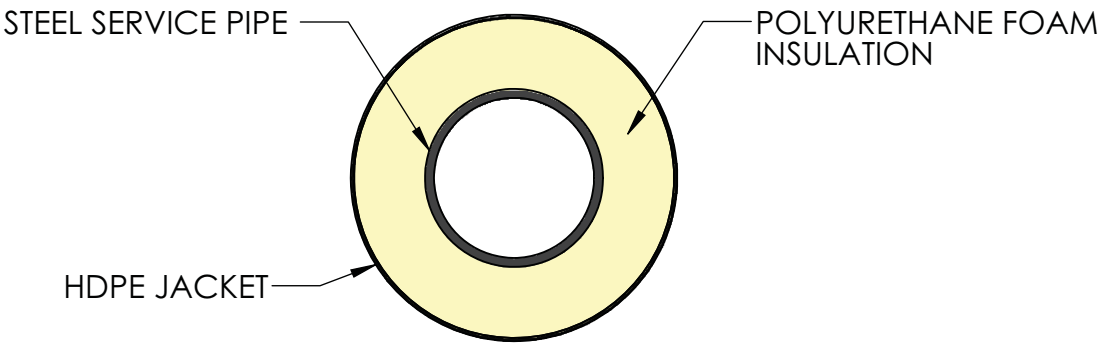

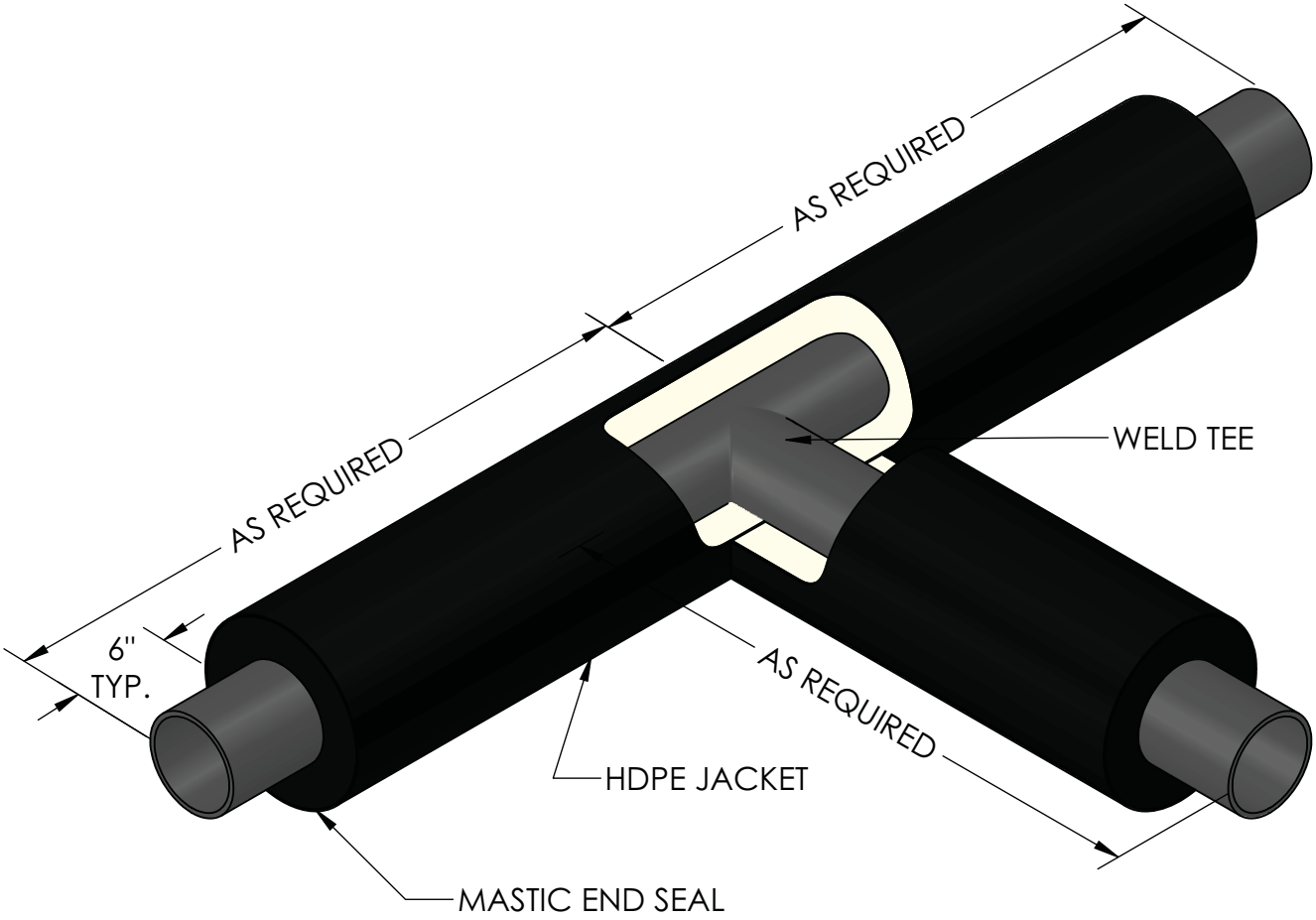

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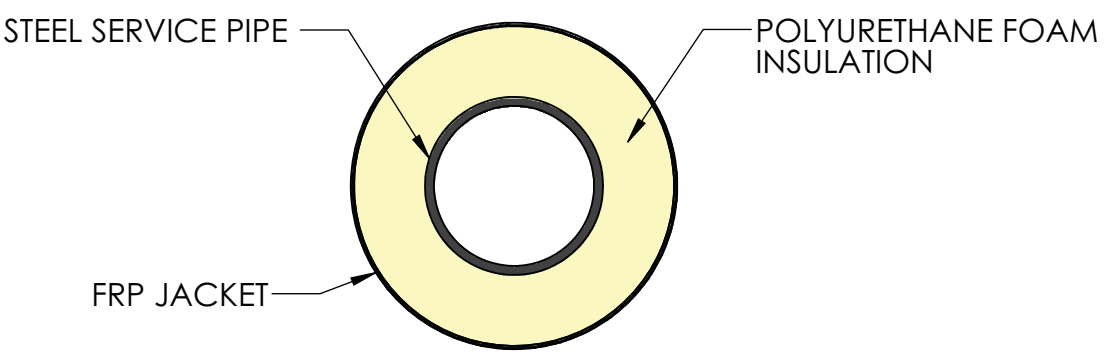
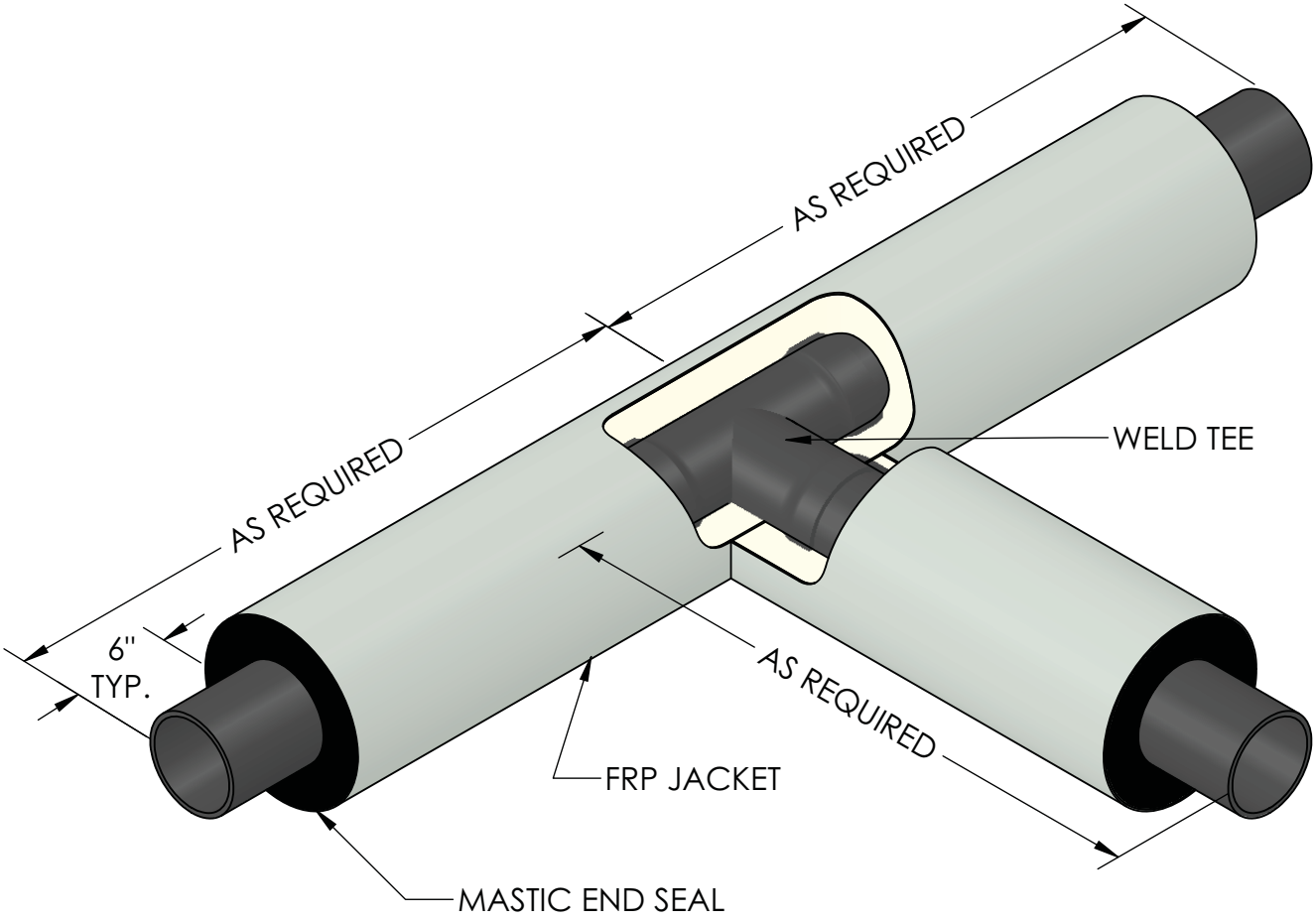
PRE-FABRICATED TEE DETAIL

PRODUCT
TRICON STEEL-250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.	SHEET
S250-4	





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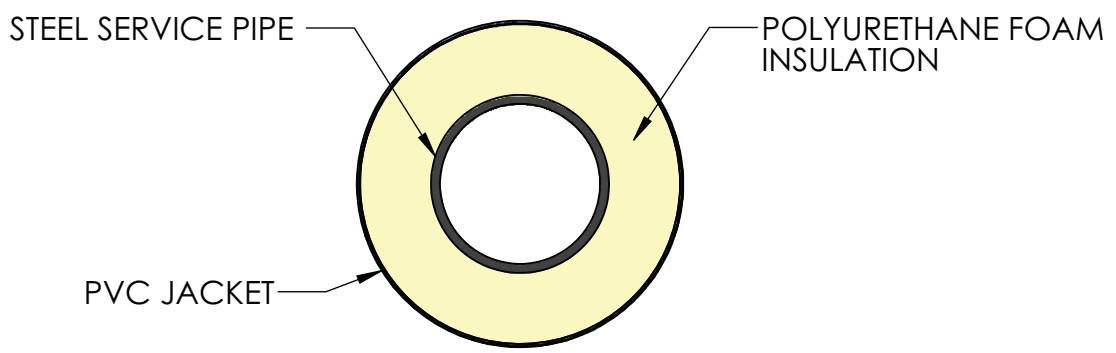

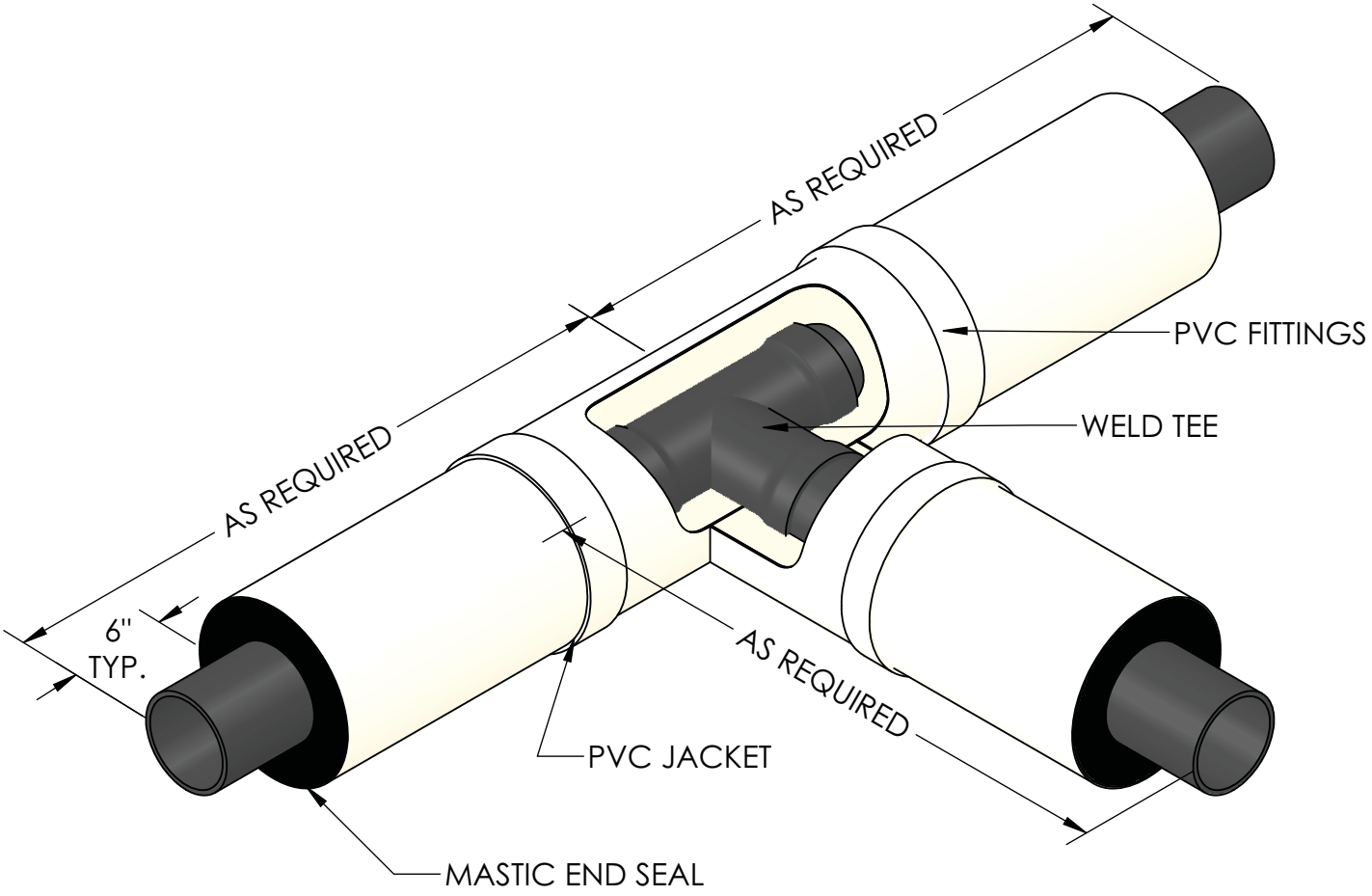

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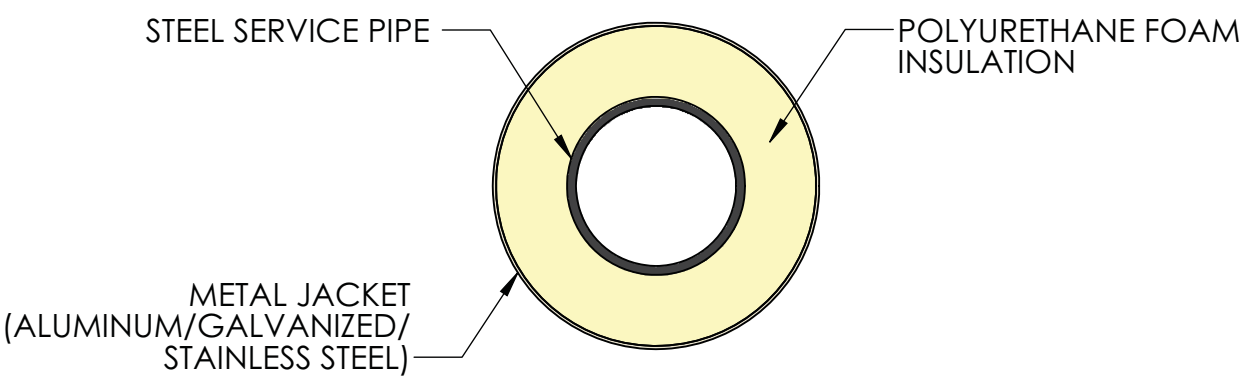

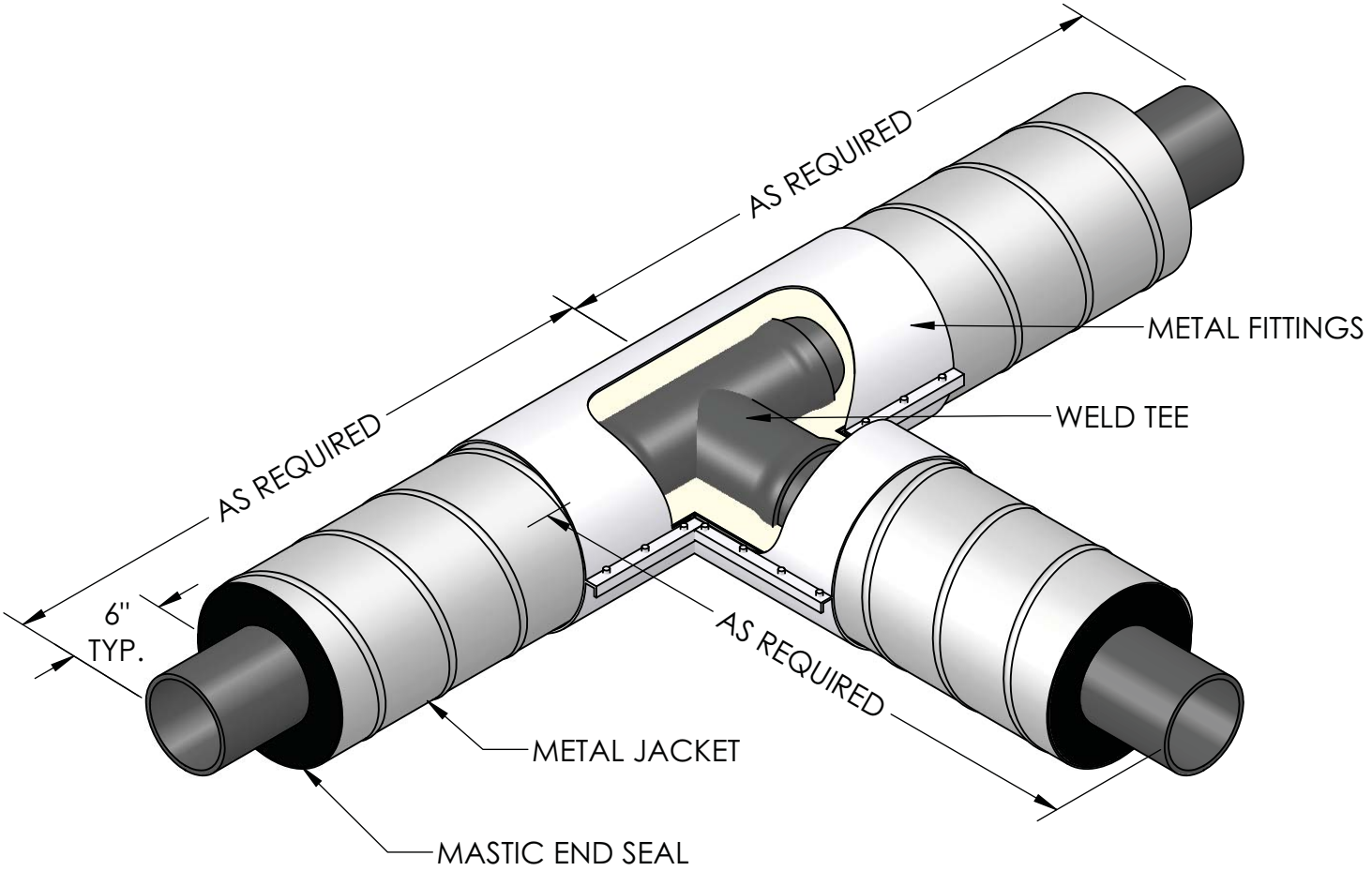

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SHEET TITLE: PRE-FABRICATED TEE DETAIL

PRODUCT: TRICON STEEL-250

SIZE	SCALE	DATE
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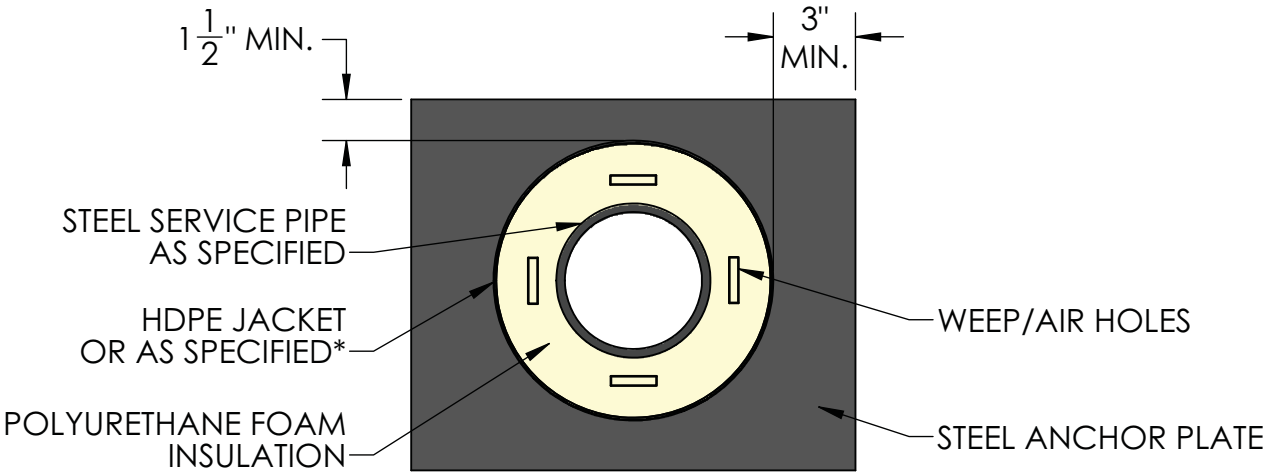
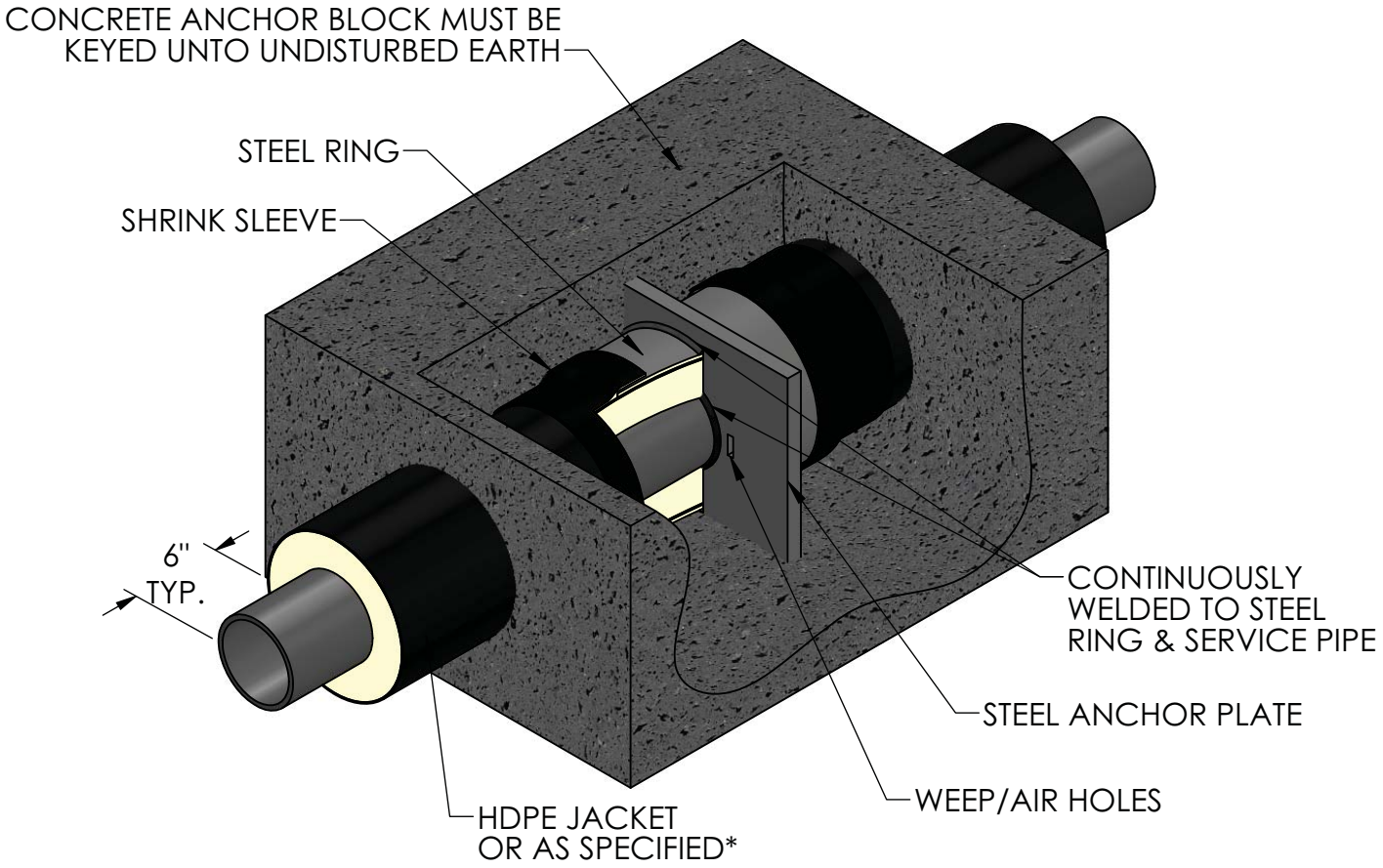
S250-4	



END VIEW



NOTE: 1. EXPOSED STEEL ANCHOR PLATE AND RING TO BE CORROSION COATED
2. ANCHOR BLOCK SIZE TO BE DETERMINED BY SOIL CONDITIONS
3. *OPTIONAL PVC OR FRP JACKETS ARE AVAILABLE FOR BELOW GRADE APPLICATIONS.

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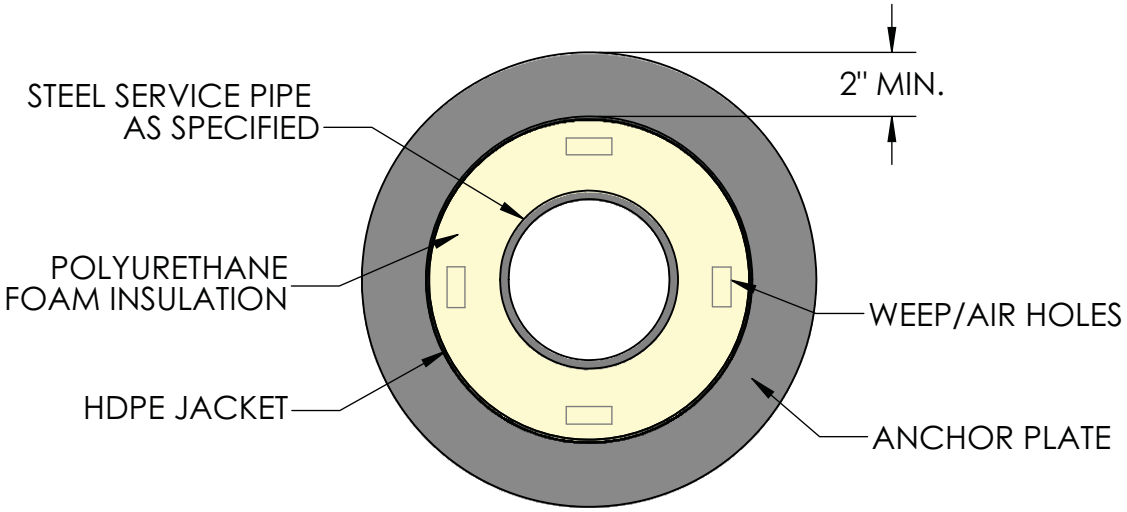
SHEET TITLE: SQUARE ANCHOR DETAIL

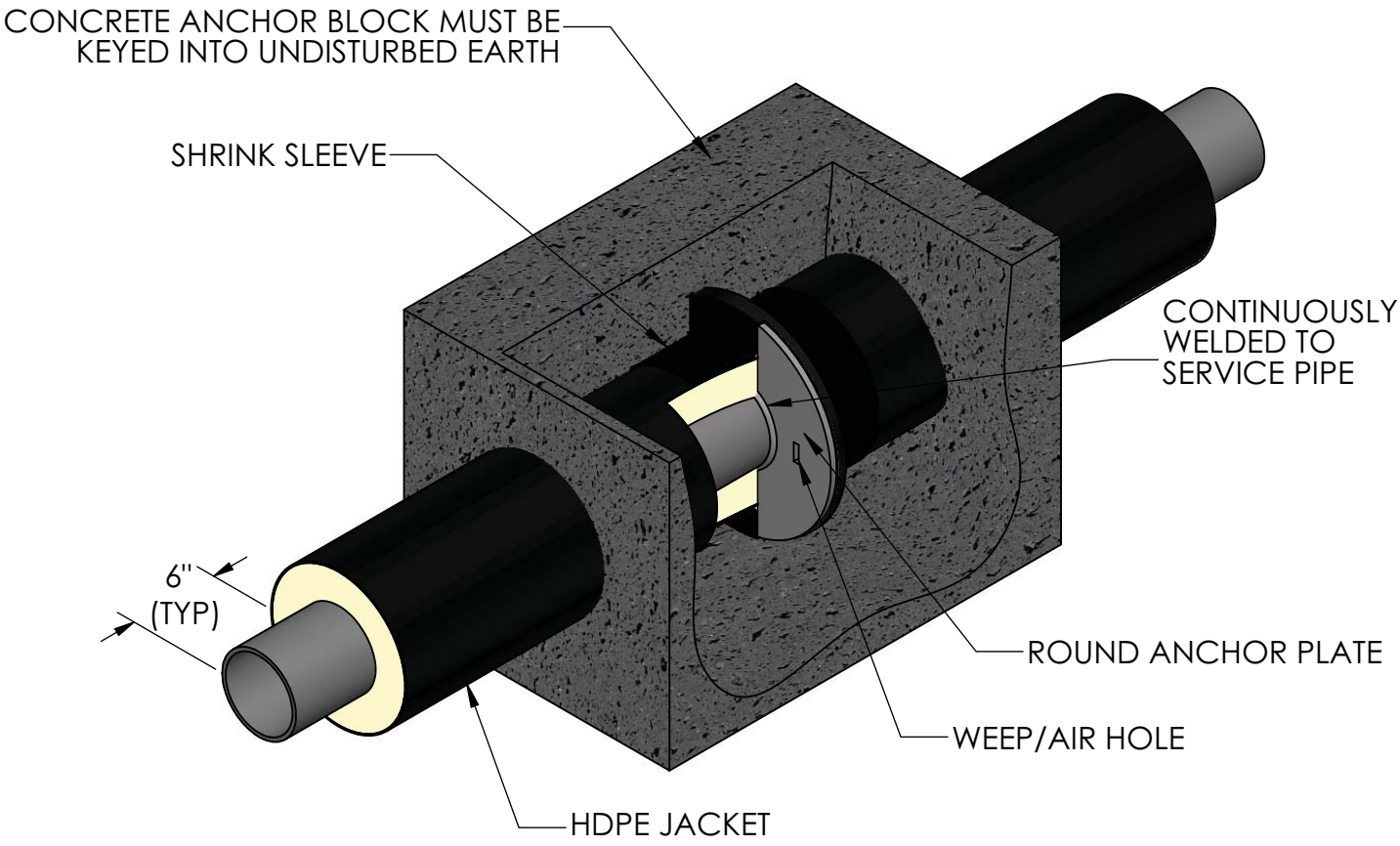
PRODUCT: TRICON STEEL-250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO. S250-5



END VIEW



NOTE: ANCHOR BLOCK SIZE TO BE DETERMINED BY SOIL CONDITIONS

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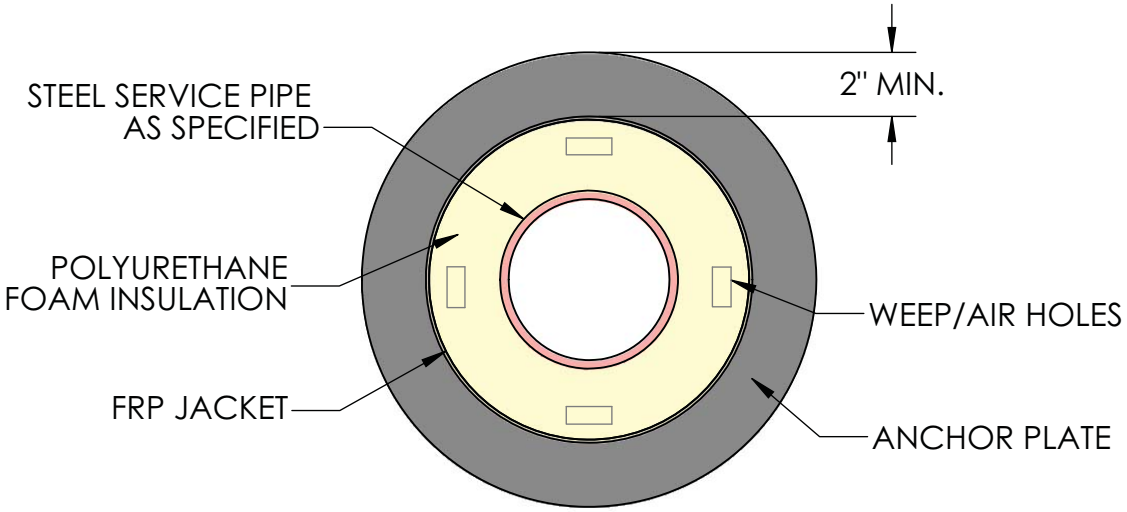
SHEET TITLE: ROUND ANCHOR DETAIL

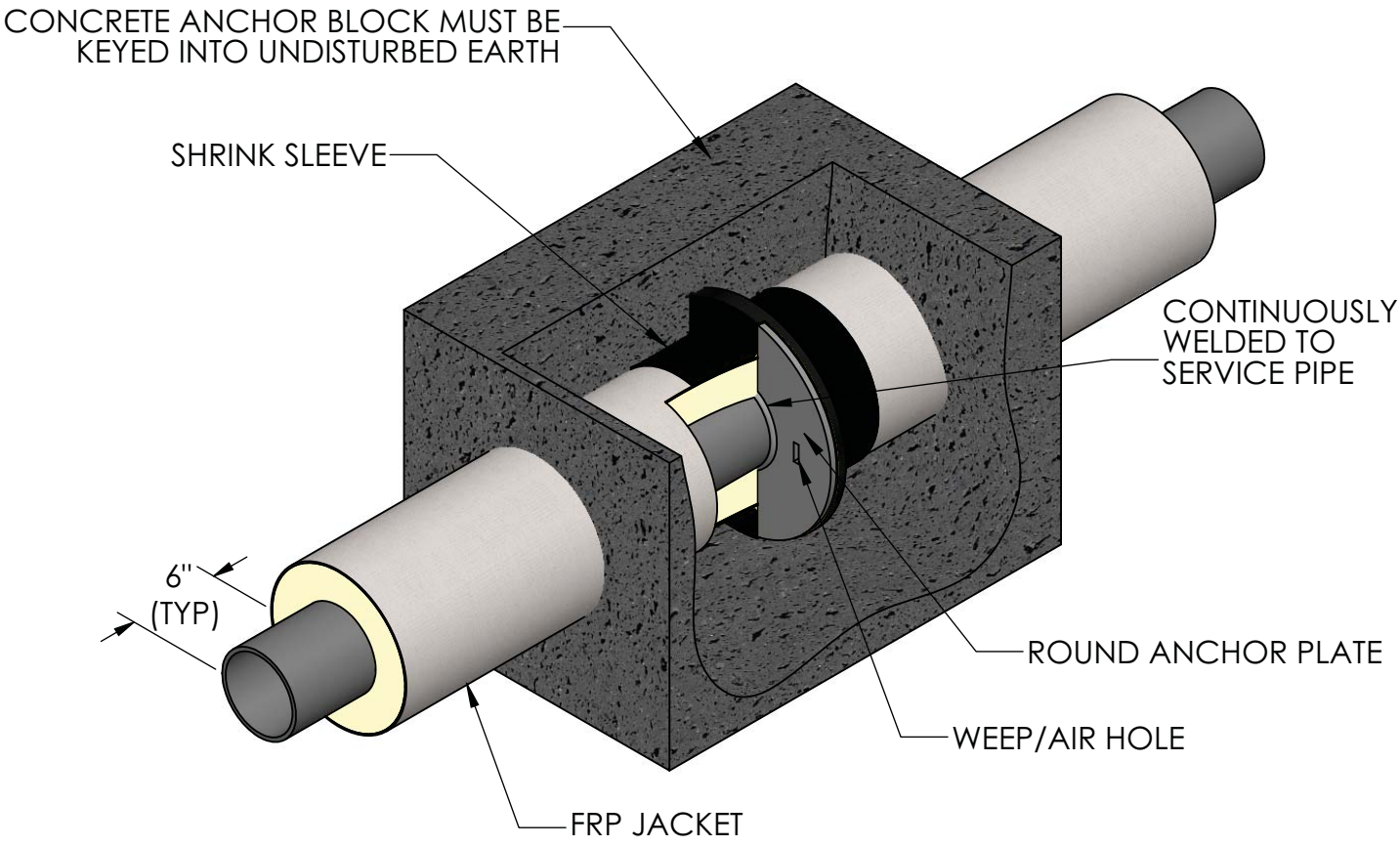
PRODUCT: TRICON COPPER

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO. CU-6



END VIEW



NOTE: ANCHOR BLOCK SIZE TO BE DETERMINED BY SOIL CONDITIONS

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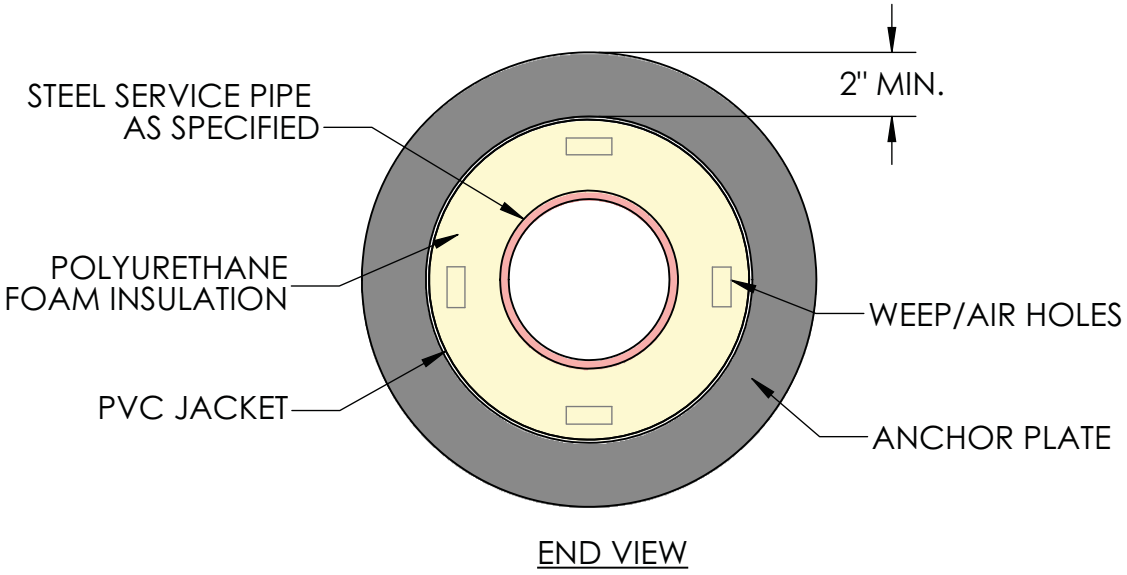
SHEET TITLE: ROUND ANCHOR DETAIL

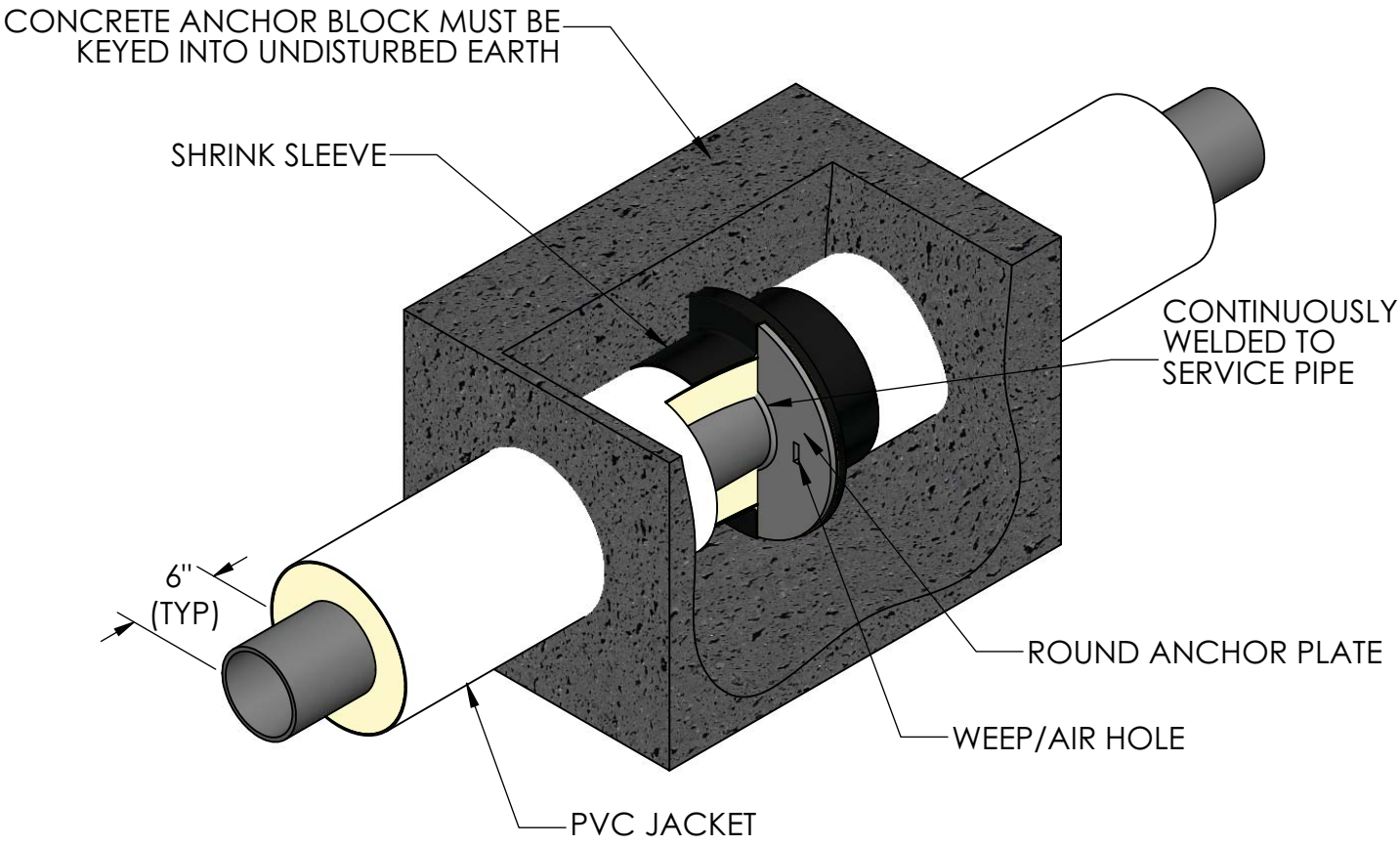
PRODUCT: TRICON COPPER

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO. CU-6



END VIEW



NOTE: ANCHOR BLOCK SIZE TO BE DETERMINED BY SOIL CONDITIONS

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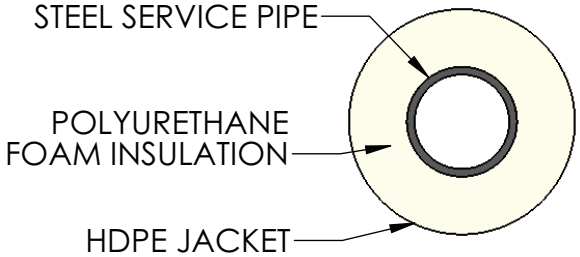
SHEET TITLE: ROUND ANCHOR DETAIL

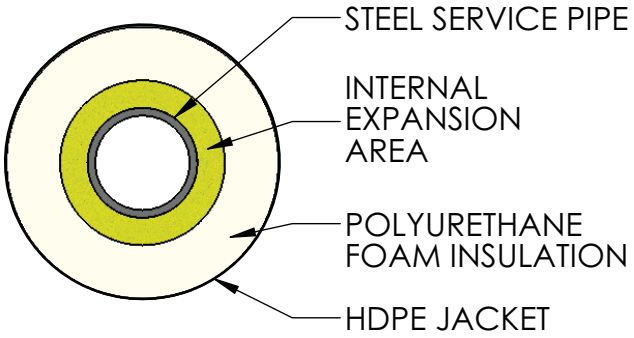
PRODUCT: TRICON COPPER

SIZE	SCALE	DATE
A	NTS	12/01/2016

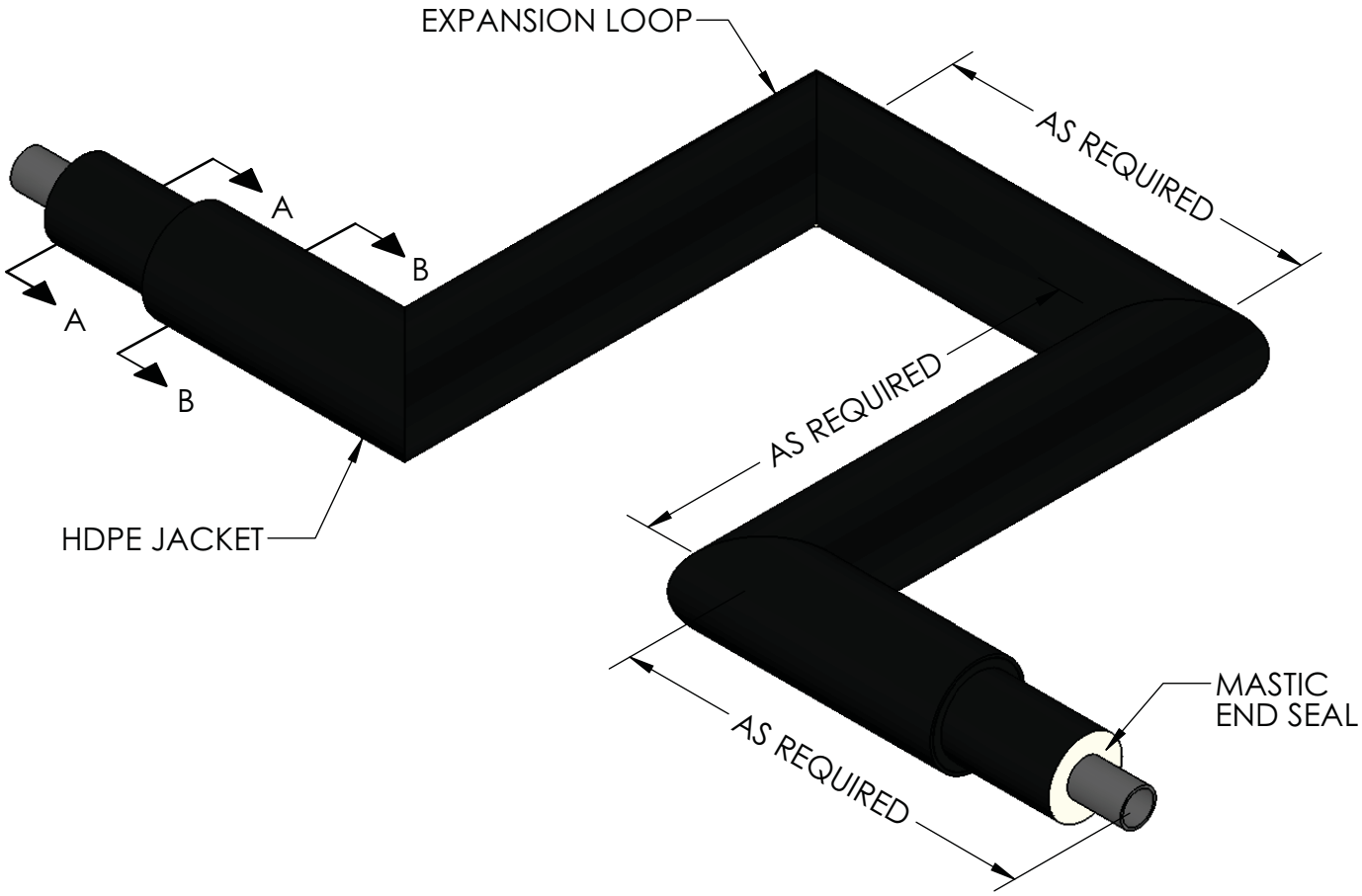
DWG. NO. CU-6



SECTION A-A



SECTION B-B



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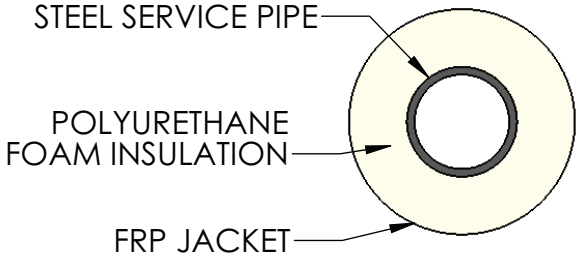
SHEET TITLE
EXPANSION LOOP WITH INTERNAL EXPANSION DETAIL

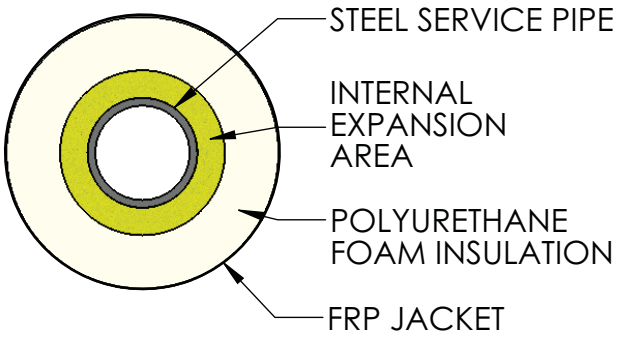
PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

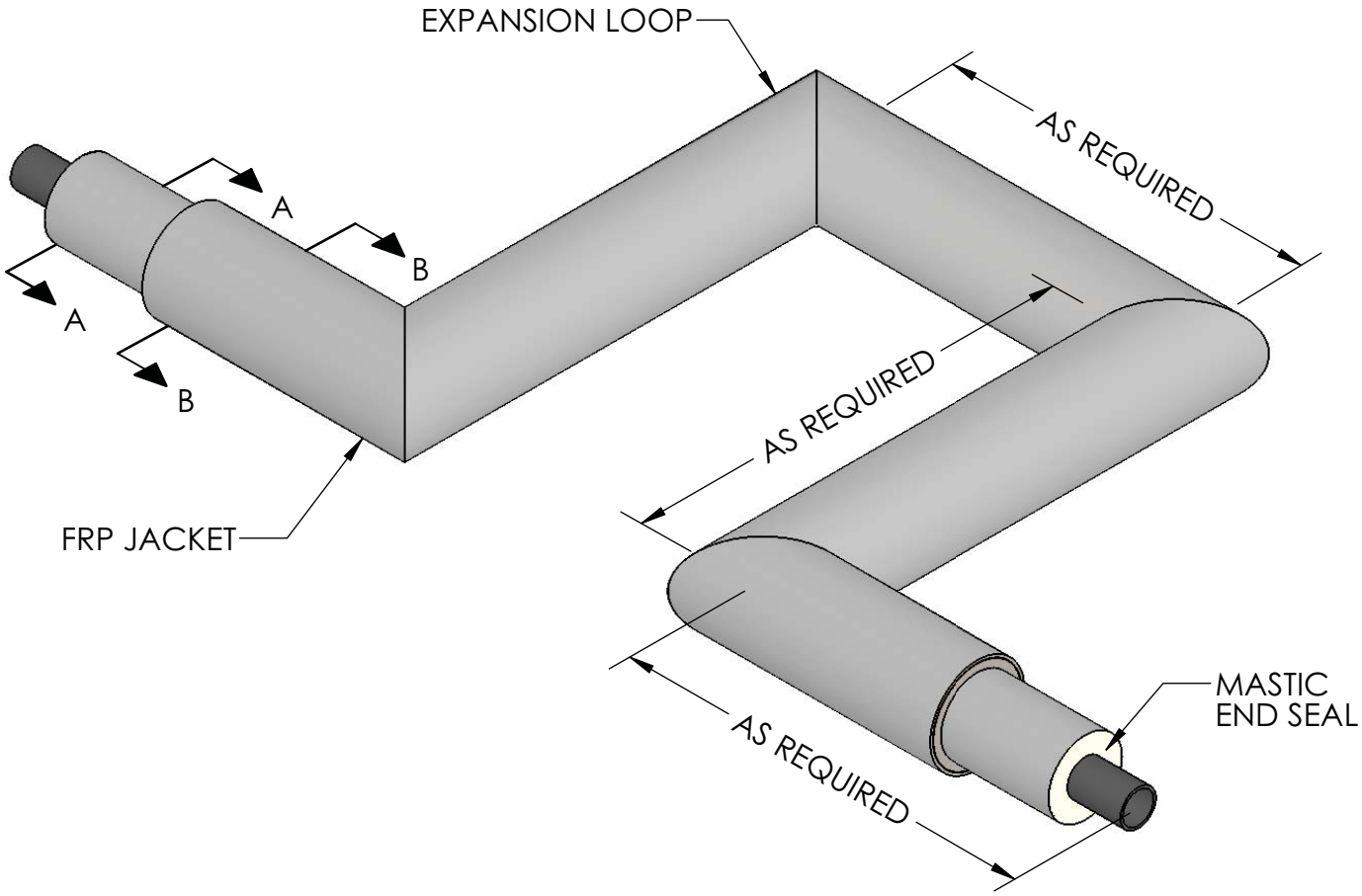
DWG. NO.	SHEET
S250-7	



SECTION A-A



SECTION B-B



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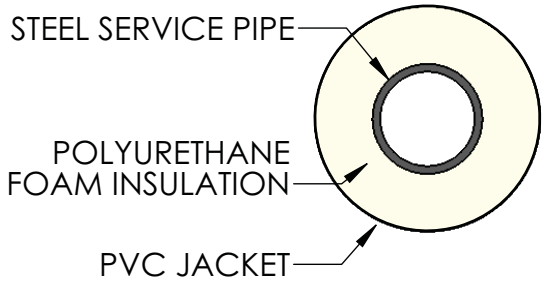
SHEET TITLE
EXPANSION LOOP WITH INTERNAL EXPANSION DETAIL

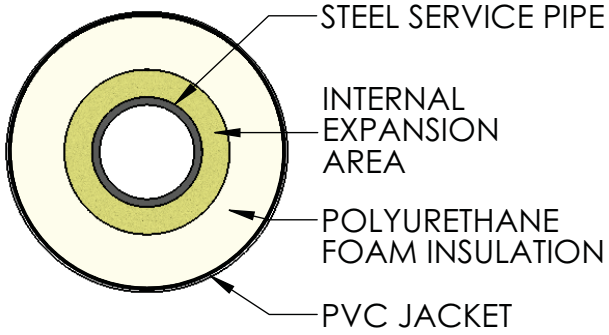
PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

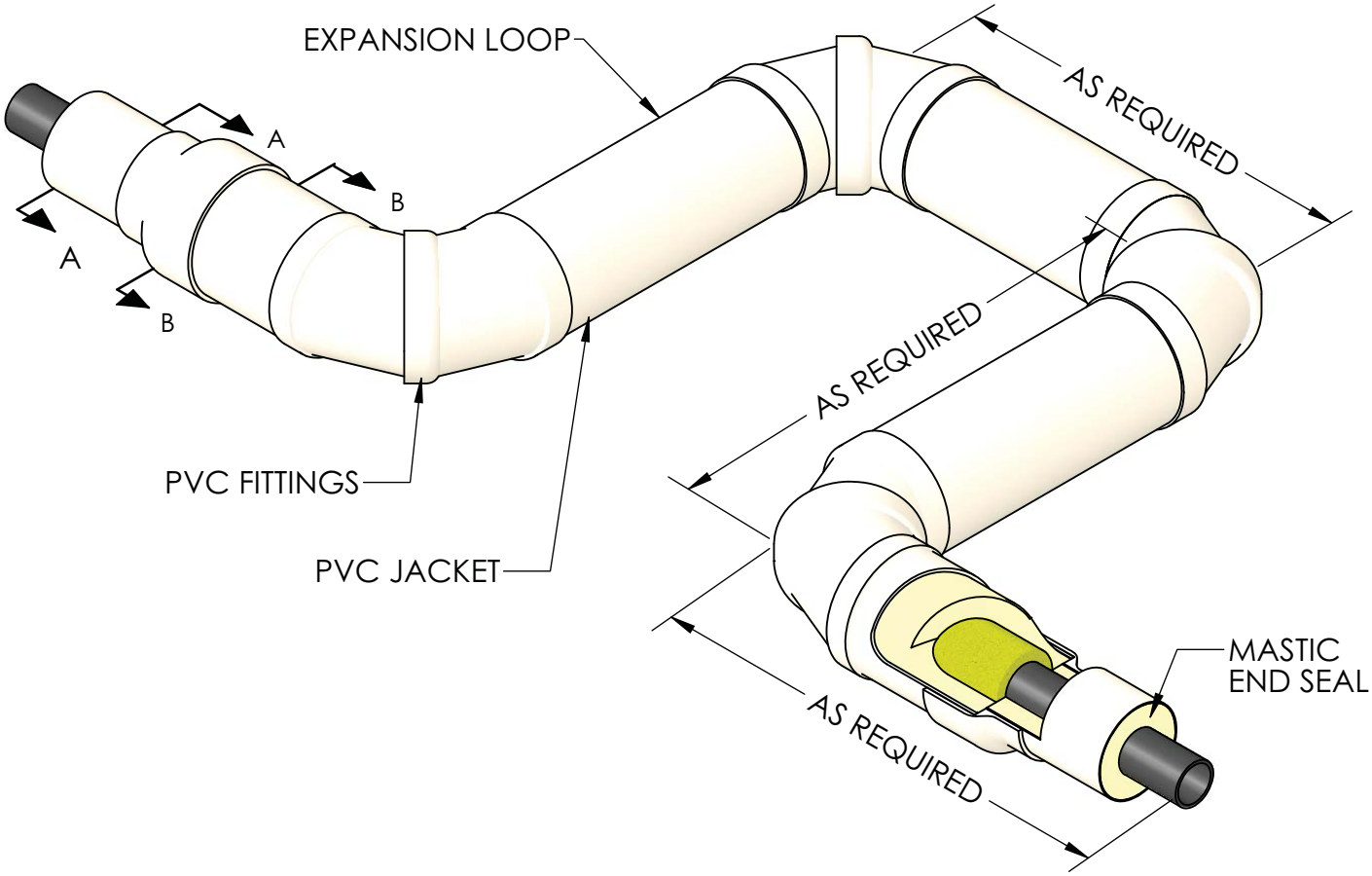
DWG. NO.	SHEET
S250-7	



SECTION A-A



SECTION B-B



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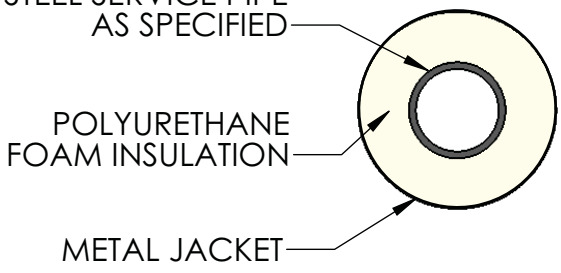
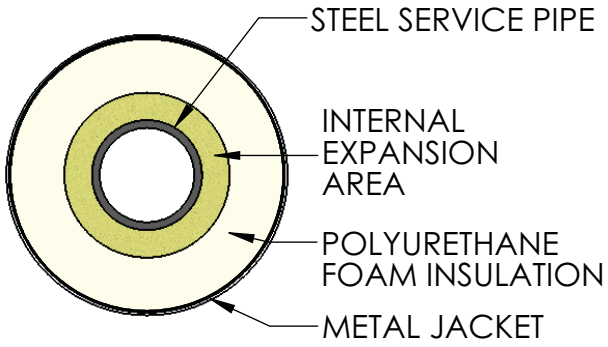
SHEET TITLE
EXPANSION LOOP WITH INTERNAL EXPANSION DETAIL

PRODUCT
TRICON STEEL 250

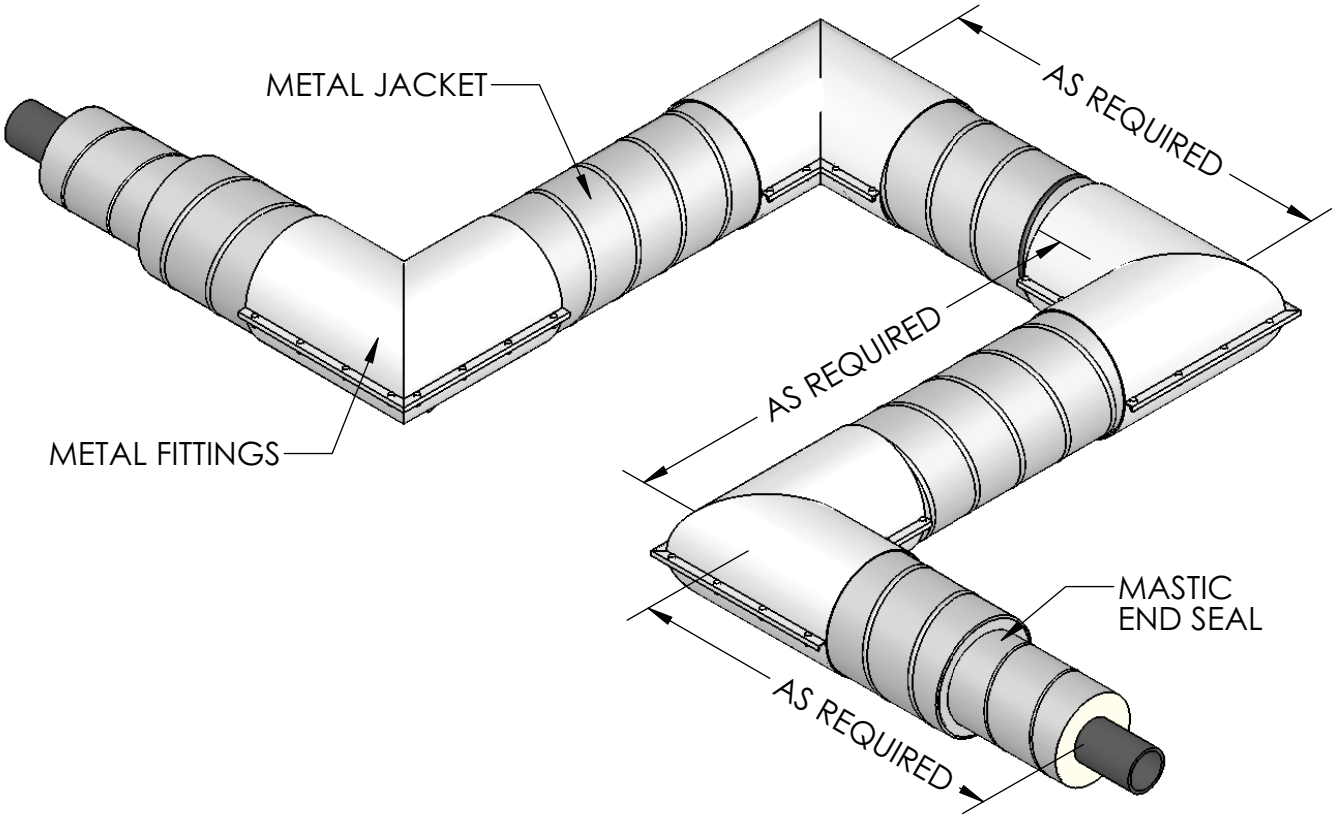
SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.	SHEET
S250-7	





END VIEW
NOT TO SCALE



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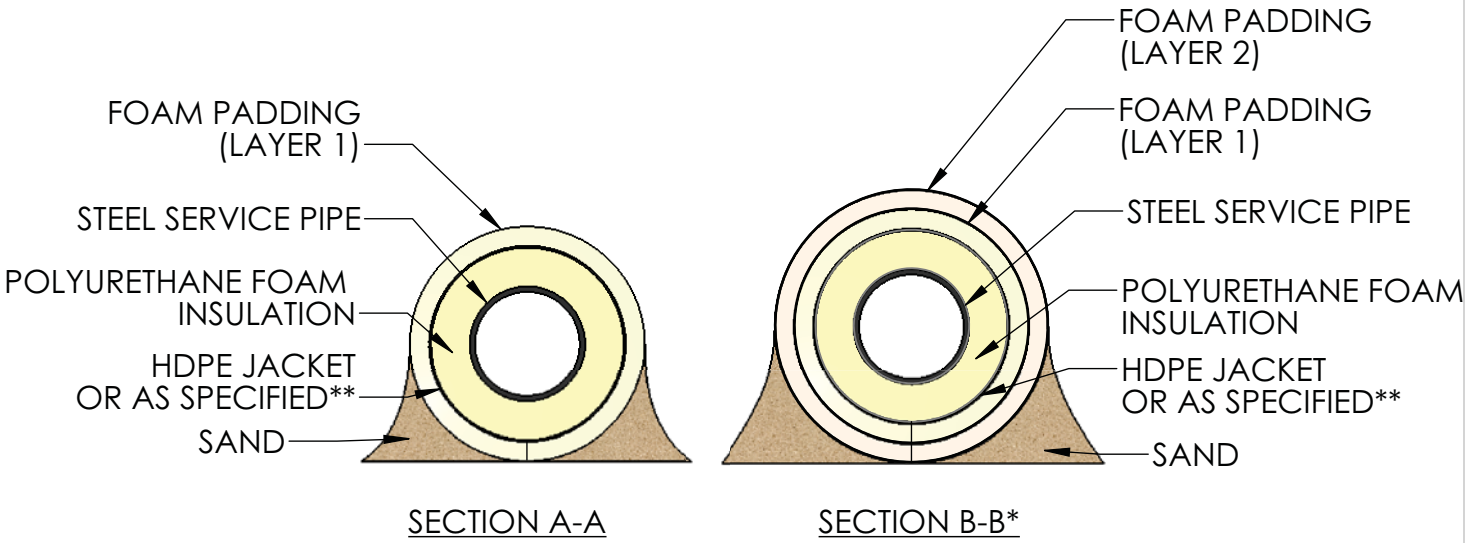
SHEET TITLE
EXPANSION LOOP WITH INTERNAL EXPANSION DETAIL

PRODUCT
TRICON STEEL 250

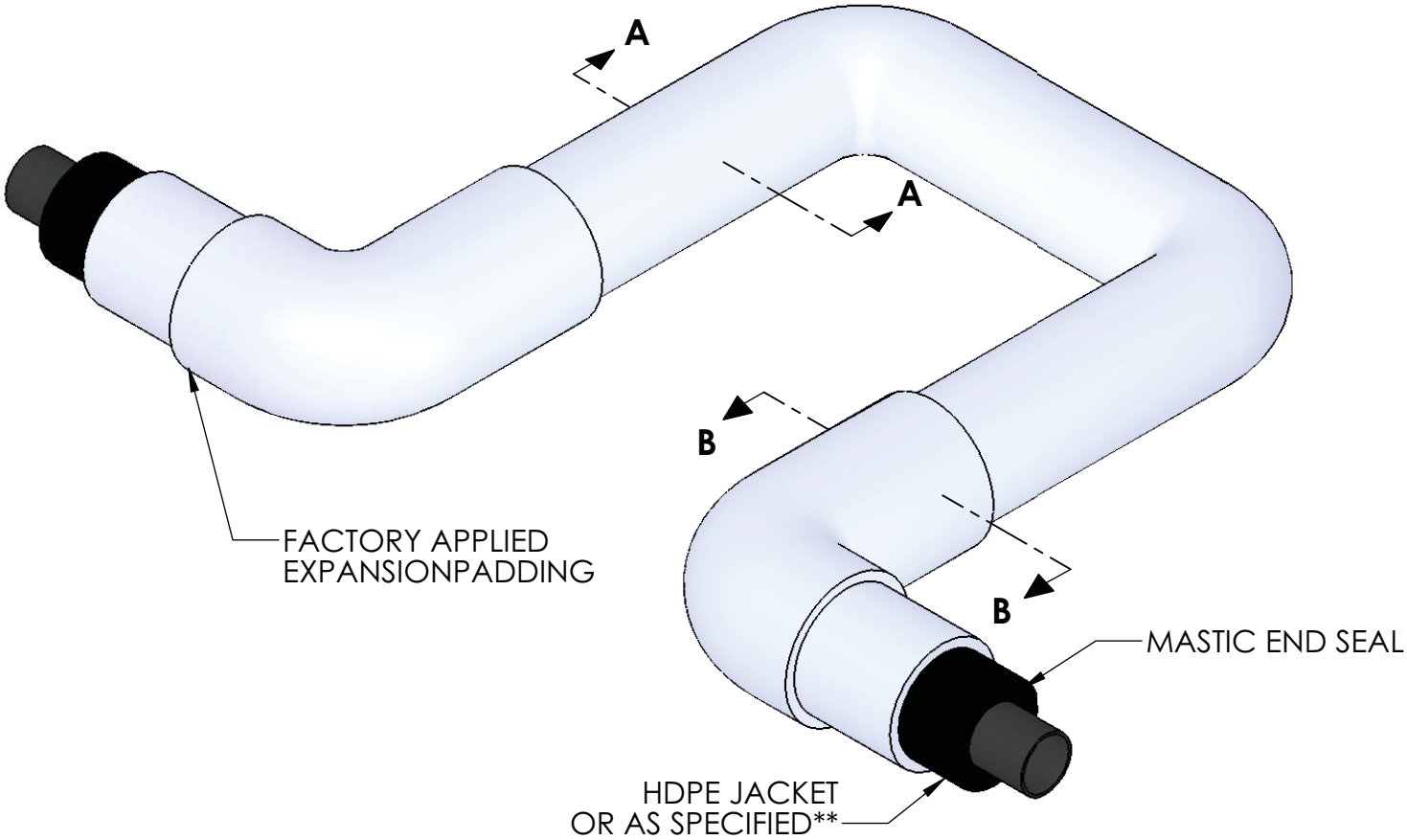
SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.	SHEET
S250-7	



SECTION A-A

SECTION B-B*



NOTE: 1. *THE NUMBER OF PADDING LAYERS DETERMINED BY AMOUNT OF THERMAL MOVEMENT.
2. **OPTIONAL PVC OR FRP JACKETS ARE AVAILABLE FOR BELOW GRADE APPLICATIONS.

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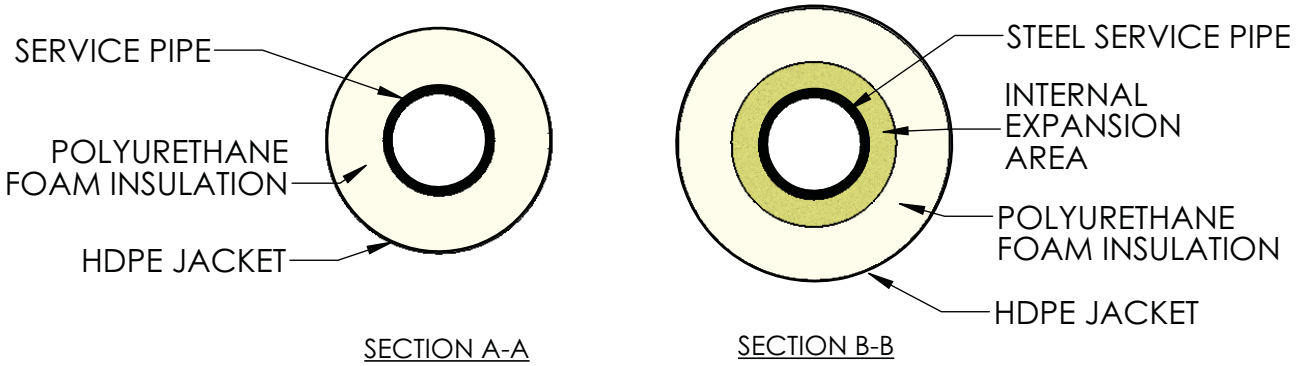
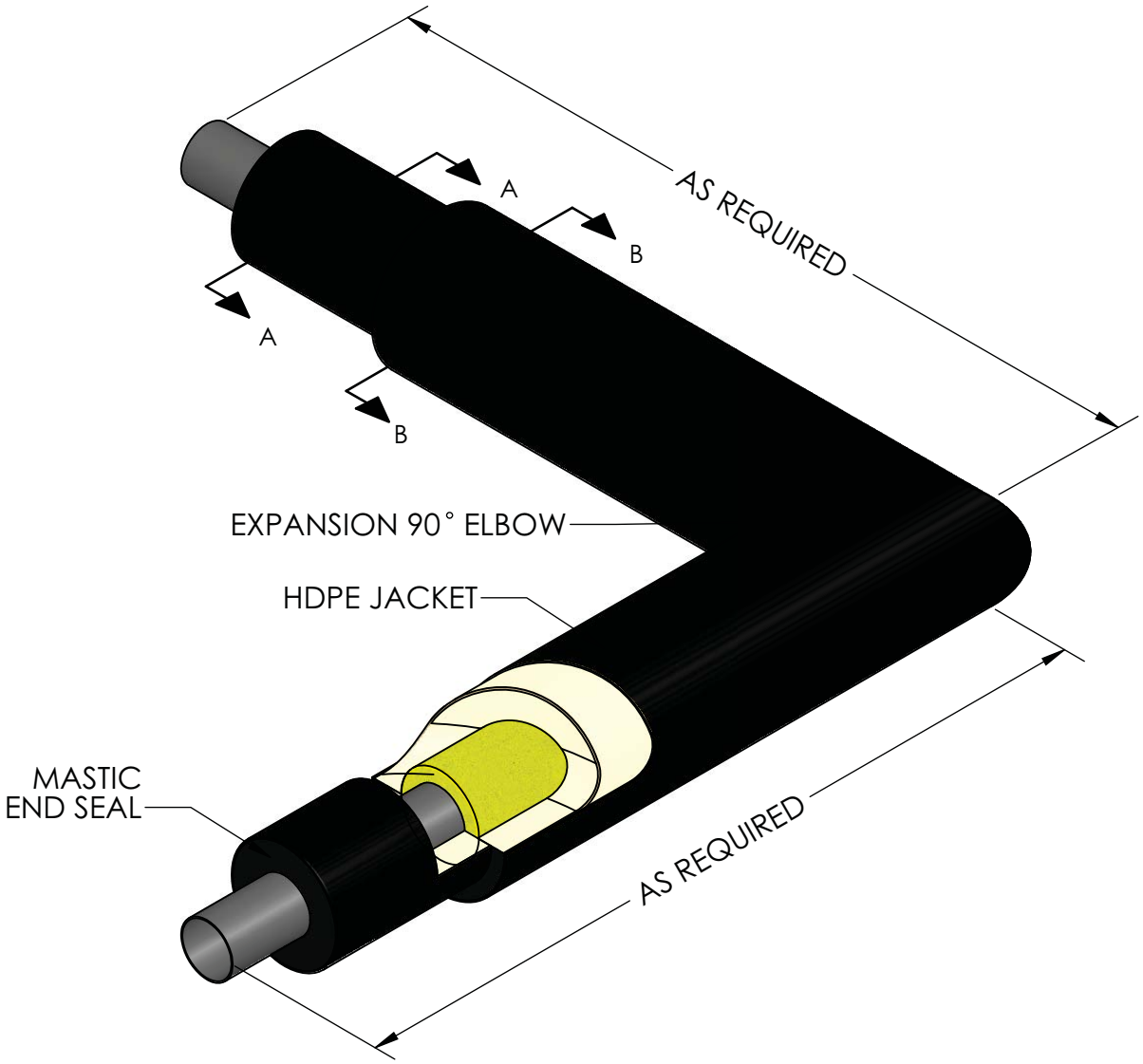
SHEET TITLE
EXPANSION LOOP WITH EXTERNAL EXPANSION PADDING DETAIL

PRODUCT

SIZE	SCALE	DATE
A		

DWG. NO.
S250-7





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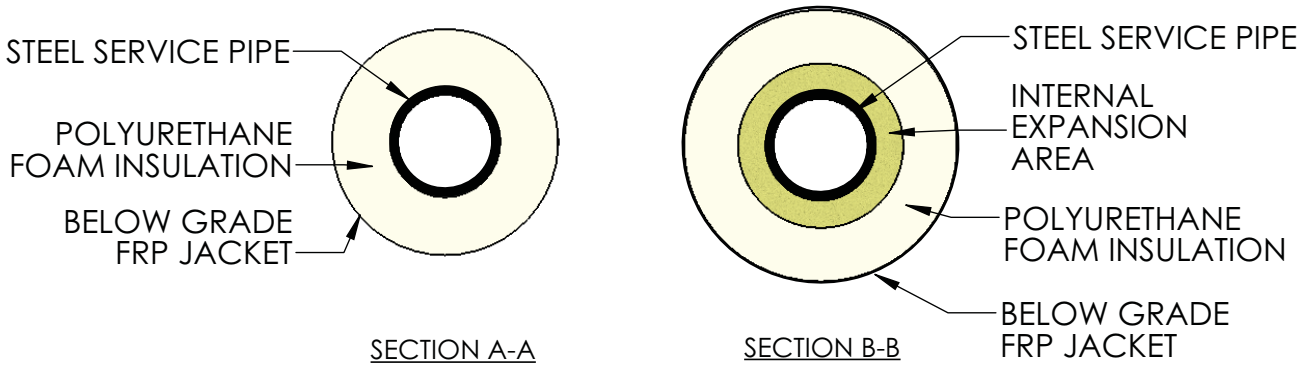
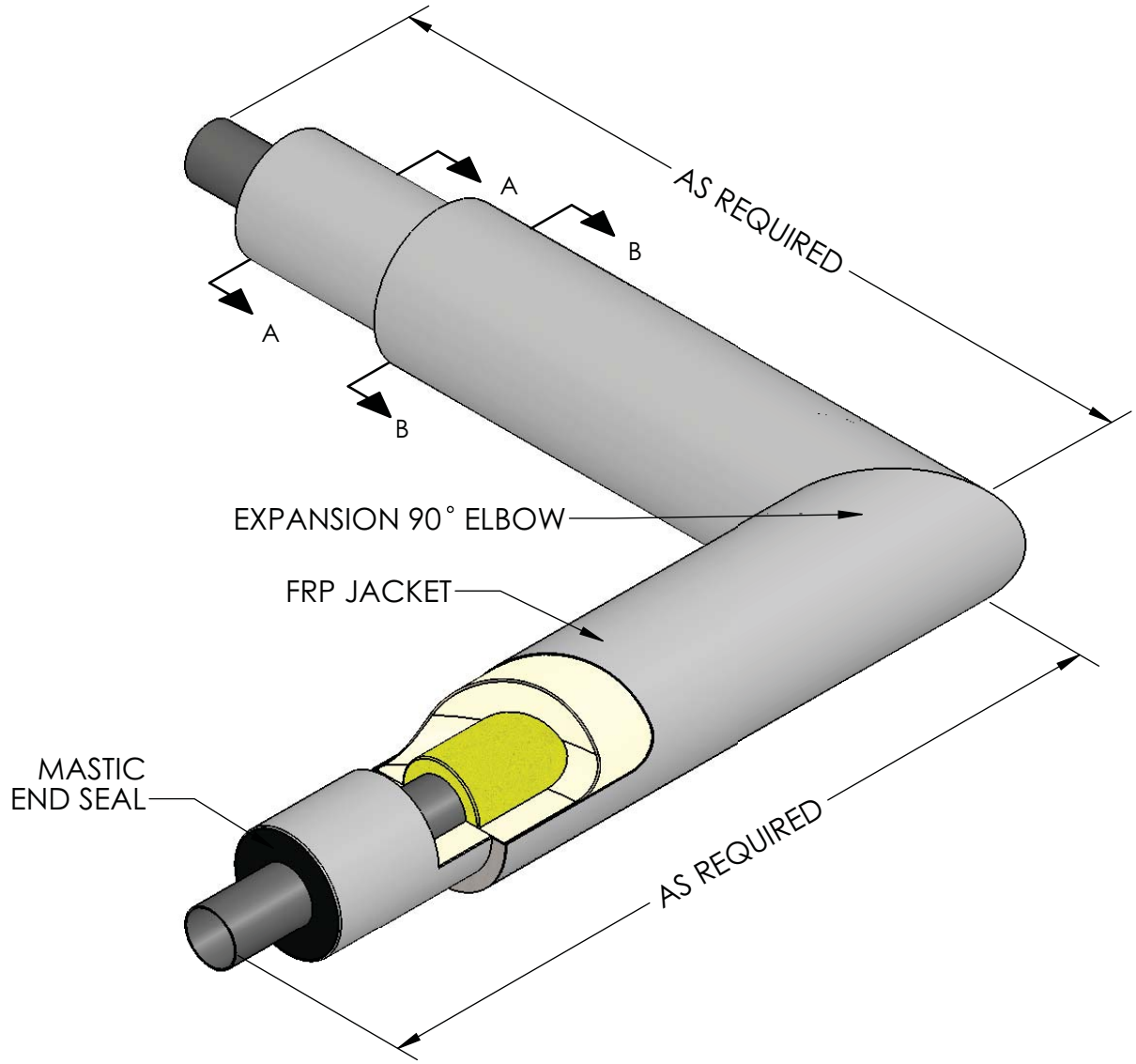
SHEET TITLE
90-DEGREE ELBOW WITH INTERNAL EXPANSION DETAIL

PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.	SHEET
S250-8	





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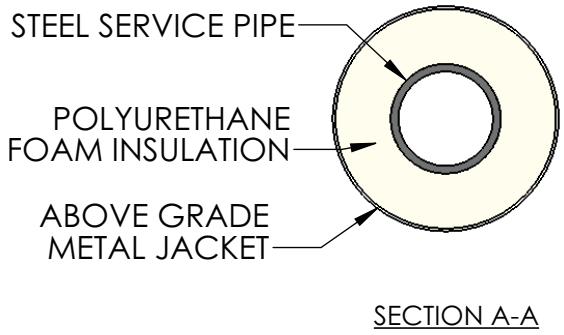
SHEET TITLE
90-DEGREE ELBOW WITH INTERNAL EXPANSION DETAIL

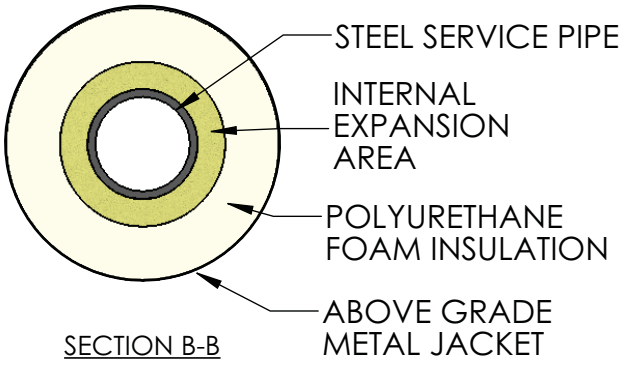
PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

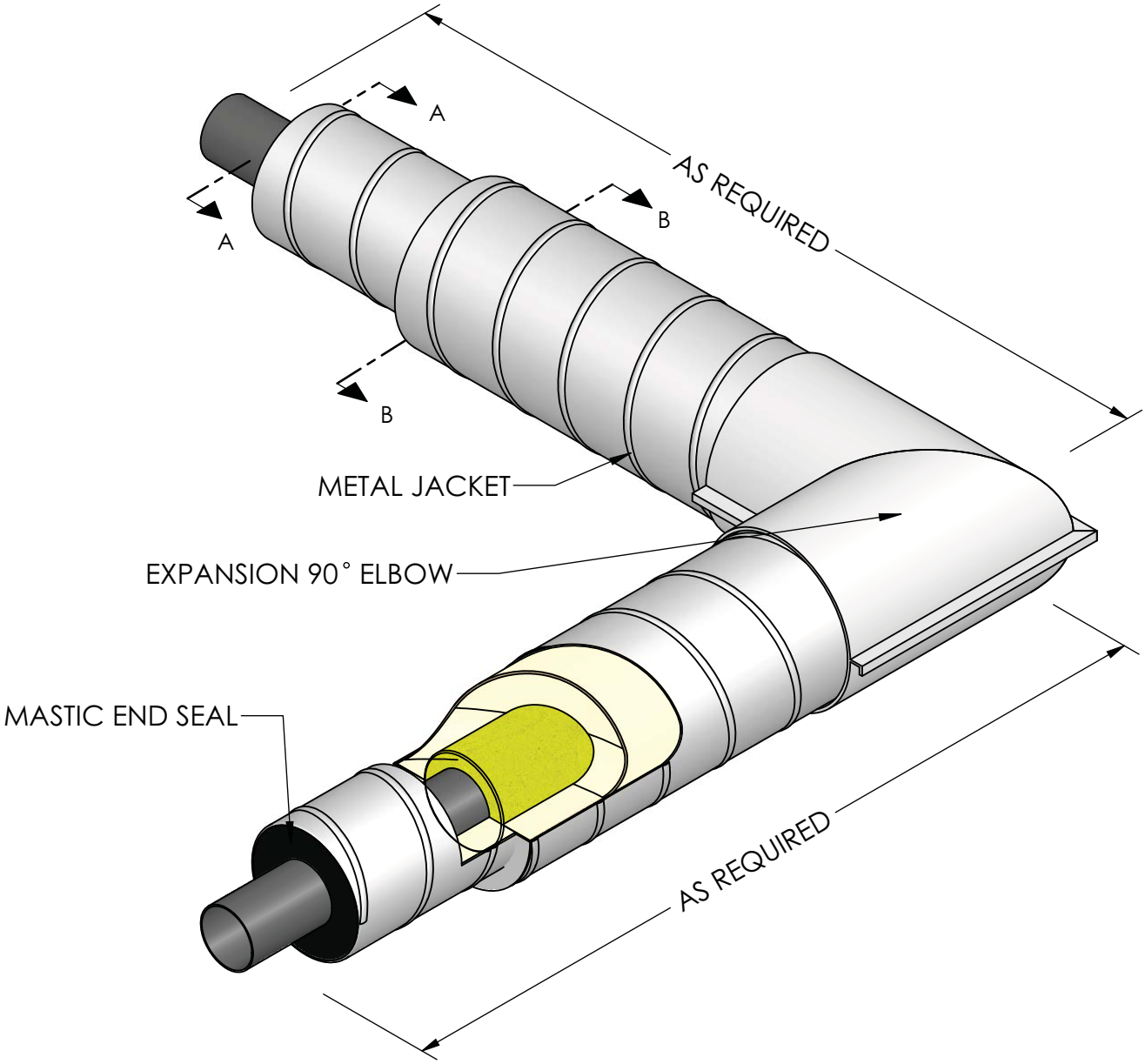
DWG. NO.	SHEET
S250-8	



SECTION A-A



SECTION B-B



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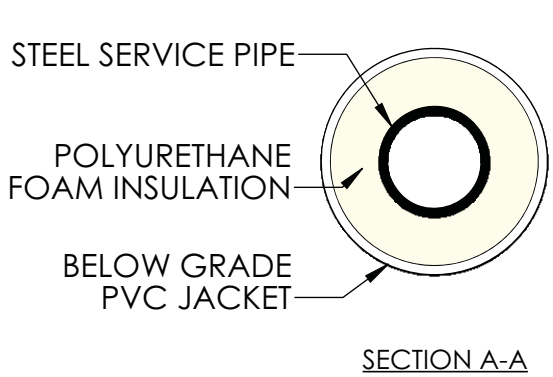
SHEET TITLE
90-DEGREE ELBOW WITH INTERNAL EXPANSION DETAIL

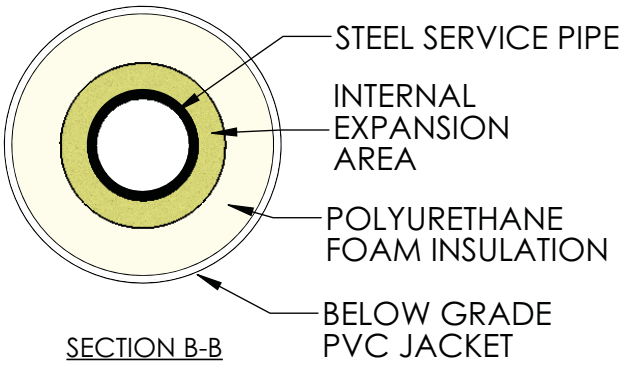
PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

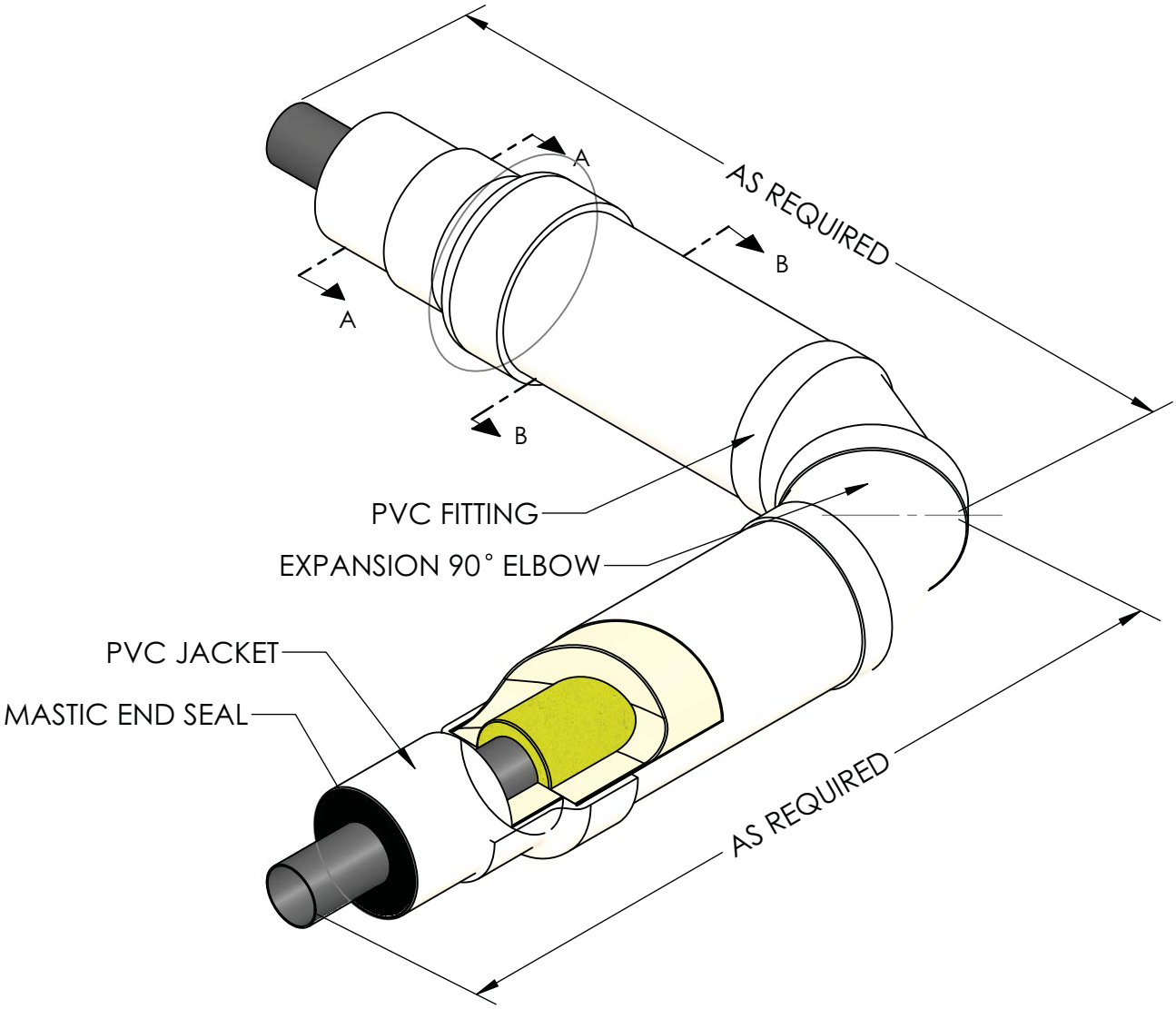
DWG. NO.	SHEET
S250-8	



SECTION A-A



SECTION B-B



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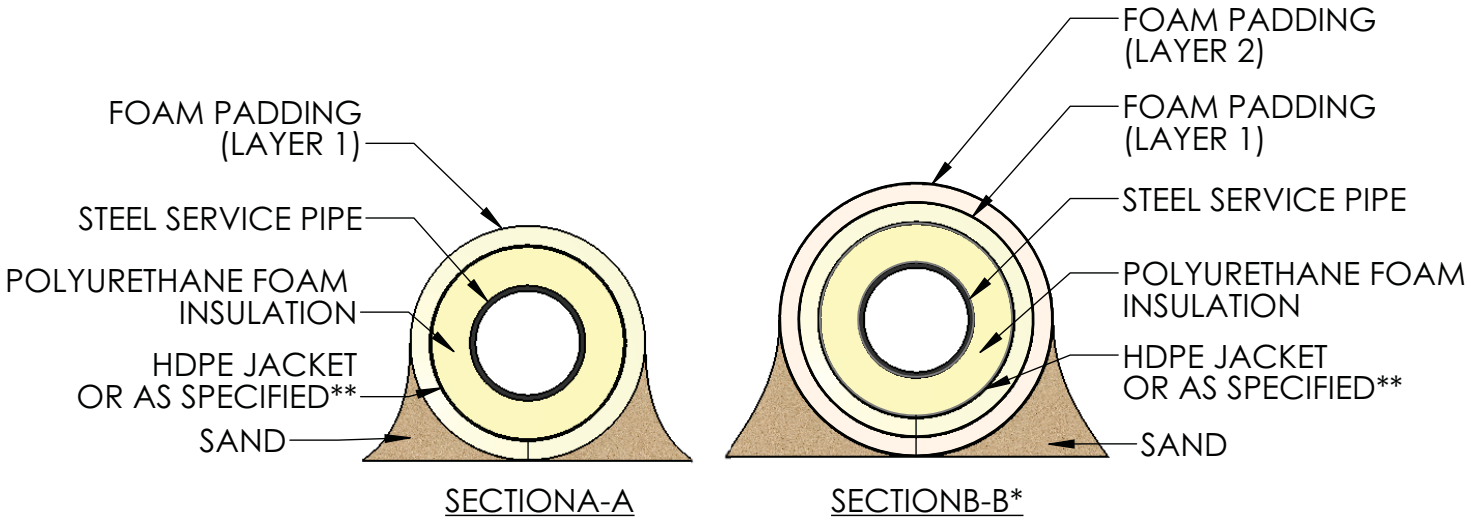
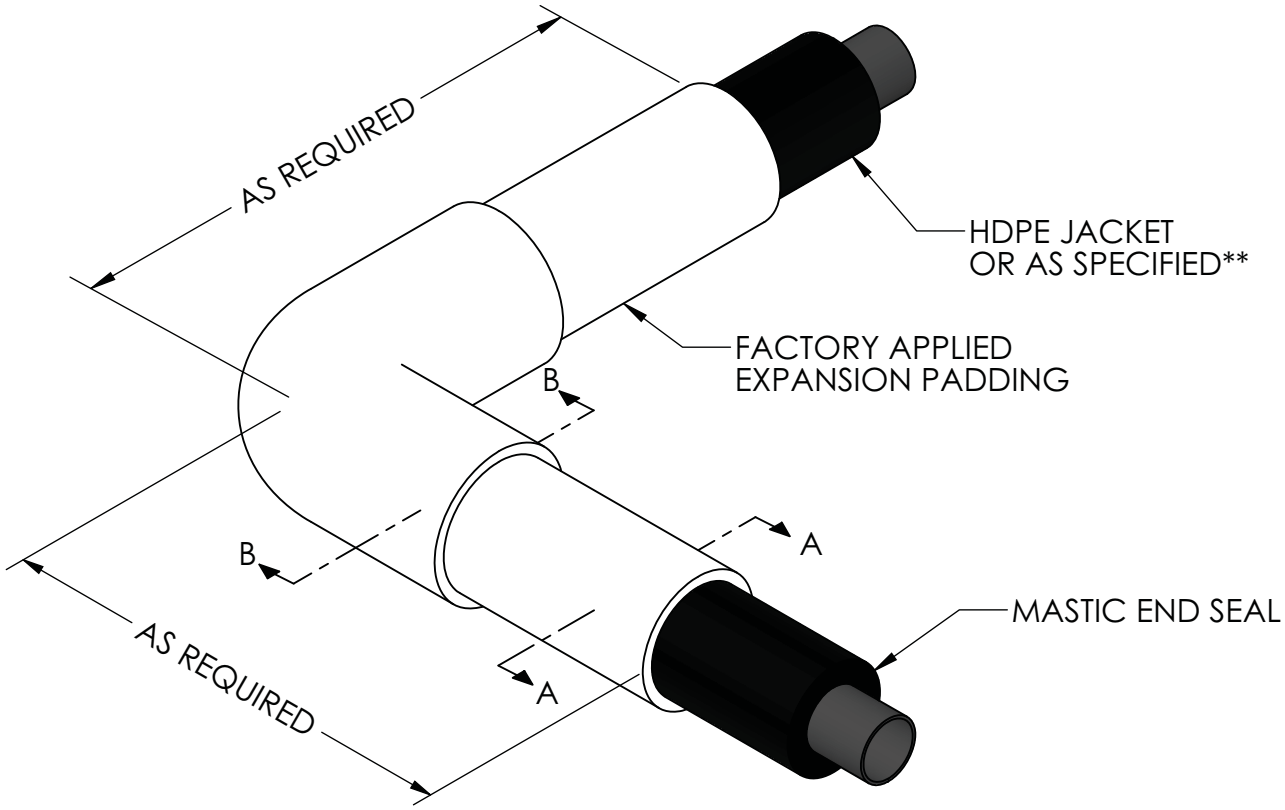
SHEET TITLE
90-DEGREE ELBOW WITH INTERNAL EXPANSION DETAIL

PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.	SHEET
S250-8	





NOTE: 1. *THE NUMBER OF PADDING LAYERS DETERMINED BY AMOUNT OF THERMAL MOVEMENT.
2. **OPTIONAL PVC OR FRP JACKETS ARE AVAILABLE FOR BELOW GRADE APPLICATIONS.

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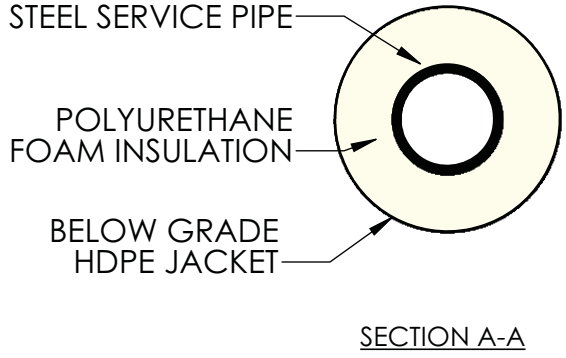
SHEET TITLE
EXPANSION ELBOW WITH EXTERNAL EXPANSION DETAIL

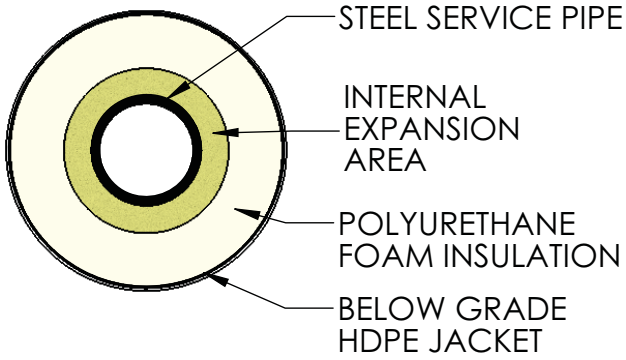
PRODUCT

SIZE	SCALE	DATE
A		

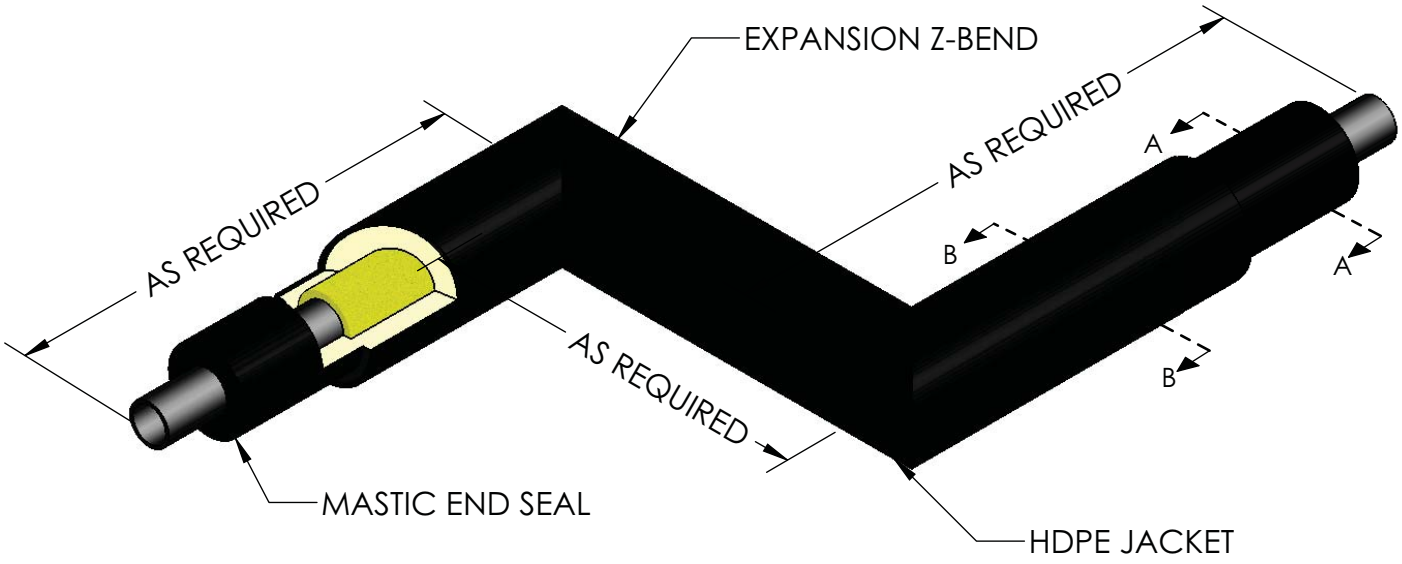
DWG. NO.
S250-8



SECTION A-A



SECTION B-B



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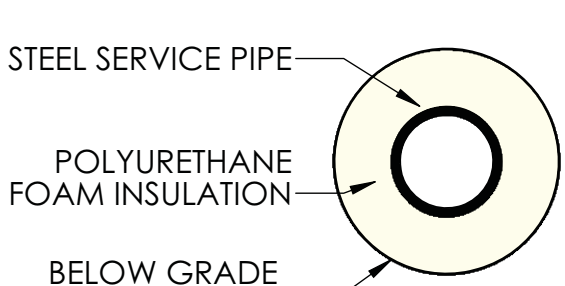
SHEET TITLE
EXPANSION Z-BEND WITH INTERNAL EXPANSION DETAIL

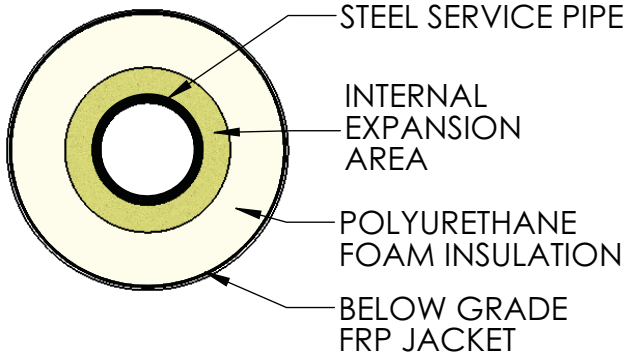
PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

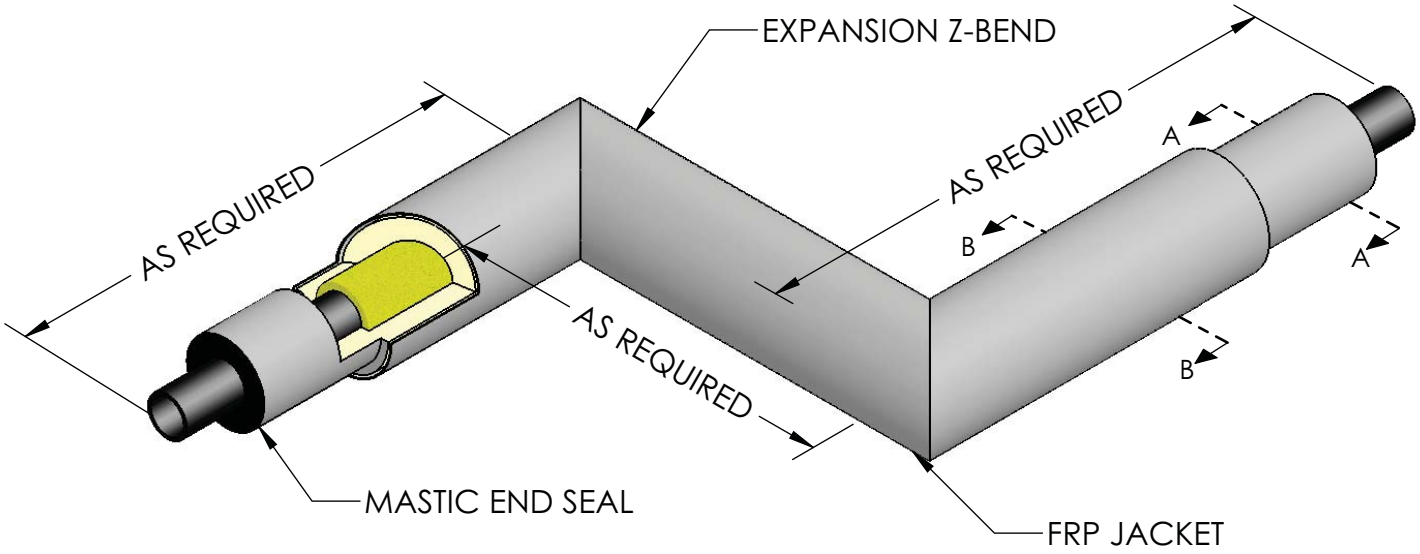
DWG. NO.	SHEET
S250-9H	



SECTION A-A



SECTION B-B



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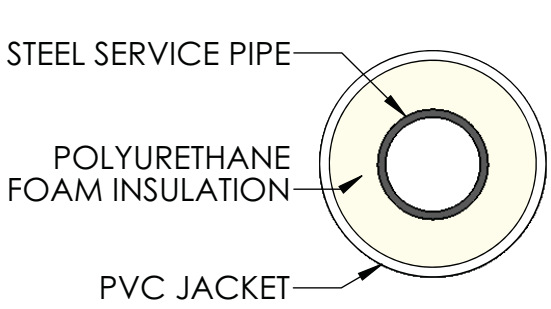
SHEET TITLE
EXPANSION Z-BEND WITH INTERNAL EXPANSION DETAIL

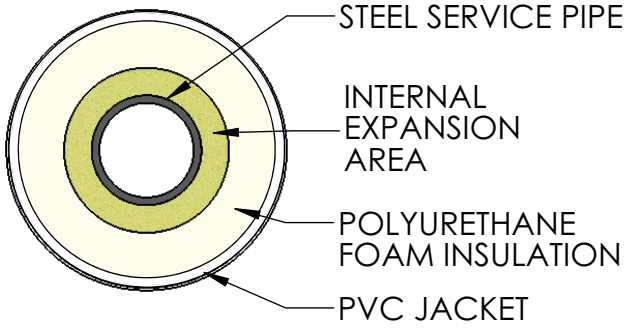
PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

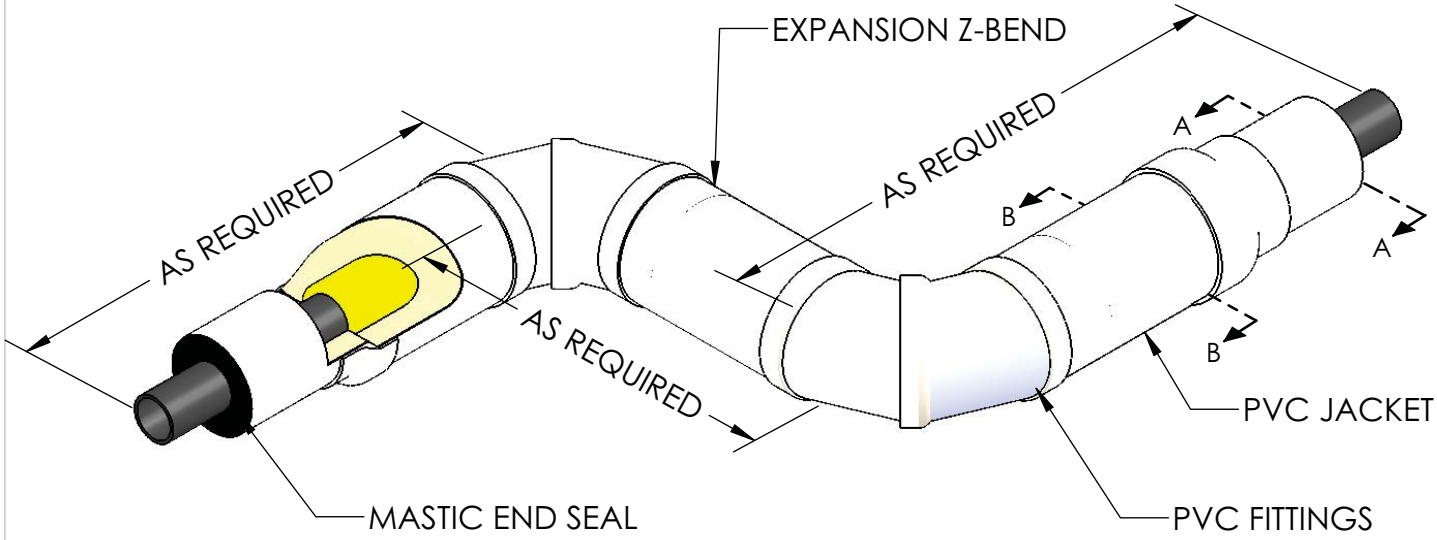
DWG. NO.	SHEET
S250-9F	



SECTION A-A



SECTION B-B



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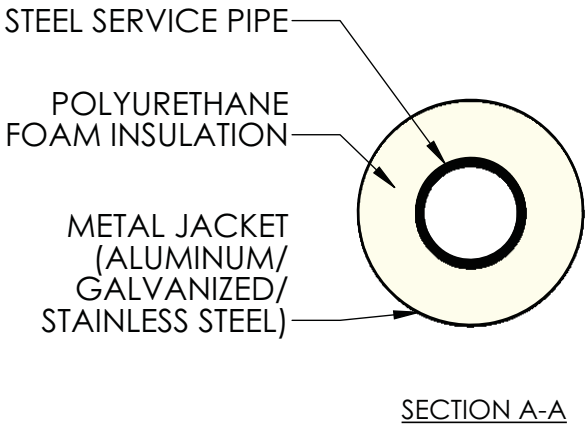
SHEET TITLE
EXPANSION Z-BEND WITH INTERNAL EXPANSION DETAIL

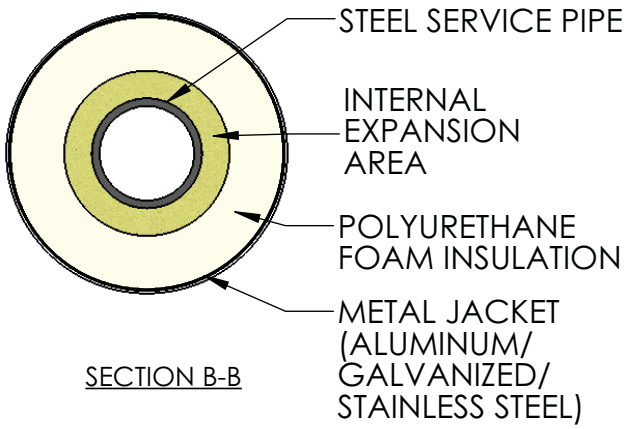
PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

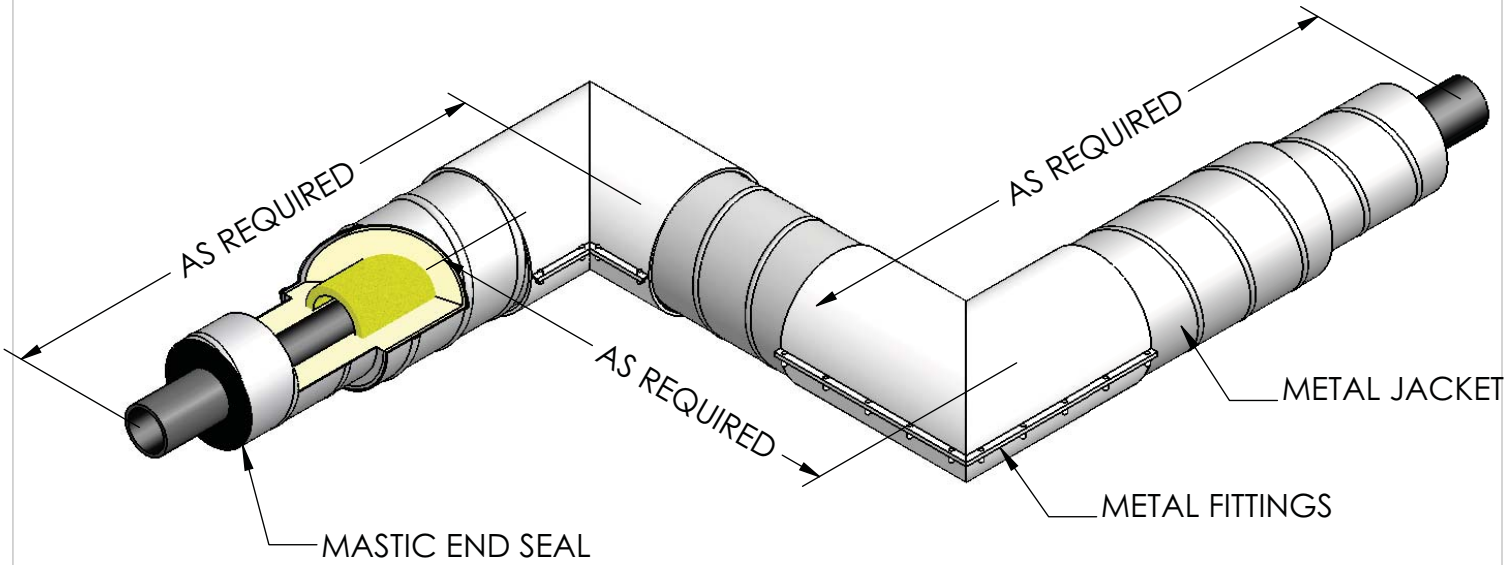
DWG. NO.	SHEET
S250-9P	



SECTION A-A



SECTION B-B



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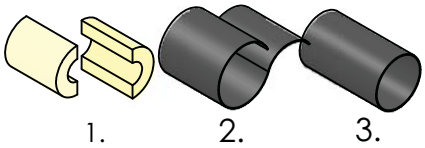
SHEET TITLE
EXPANSION Z-BEND WITH INTERNAL EXPANSION DETAIL

PRODUCT
TRICON STEEL 250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.	SHEET
S250-9M	

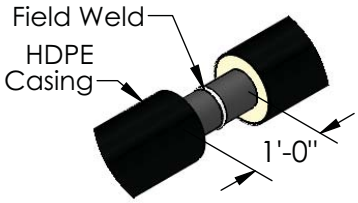
STEP #1: Gather Materials



The field joint kit includes:
1. Urethane pipe covering (3-ft sections)
2. Shrink Sleeve materials
3. Split HDPE Rockshield (18" long)

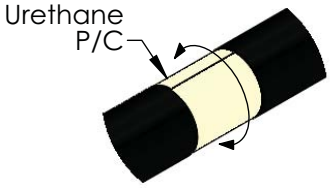
Equipment List:
Hand saw, razor knife, propane tank, torch, and safety glasses.

STEP #2: Join Service Pipe



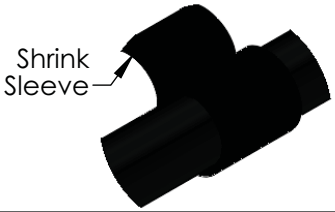
After field welding, test/check the service pipe as required.

STEP #3: Apply Insulation



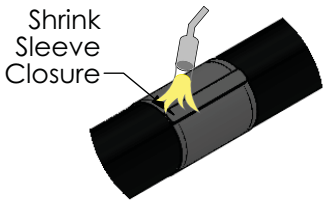
Make sure the pipe and casing are clean and dry. Cut the polyurethane foam half-shells to length using a hand saw. Fit the urethane to contours of service pipe by rotating the half-shells back and forth until they seat properly. Secure the urethane into place. Some trimming may be required for a tight fit.

STEP #4: Apply Shrink Sleeve



Remove release liner and place shrink sleeve around pipe insulation. Gently heat backing of sleeve and closure. Do not get dirt onto inside of shrink sleeve. Overlap sleeve at the 10 and 2 o'clock positions. Press the closure firmly into place. Gently heat closure and pat down.

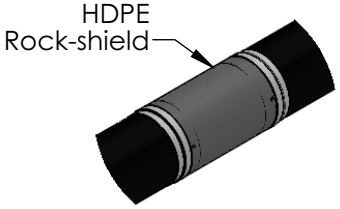
STEP #5: Heat the Shrink Sleeve



With a yellow flame, heat the shrink sleeve from the middle toward each side of the sleeve until recovery is complete. Remove any wrinkles or trapped air by working them from the center outward using the roller. Shrinking has been completed when adhesive oozes from the sides.

Note: Avoid excessive heat to overlap area.

STEP #6: Inspect Shrink Sleeve & Apply Rockshield



After shrink sleeve has cooled, inspect the sleeve to ensure full contact with casing and that adhesive has flowed at 360° beyond both sleeve edges. Make sure no cracks or holes appear on the sleeve. Install HDPE rockshield over shrink sleeve with a minimum 2" overlap over sleeve and secure in place.

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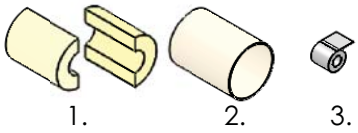
SHEET TITLE
Field Joint Kit (Rigid Foam) with HDPE Casing Detail

PRODUCT
Tricon Steel-250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.
S250-10H

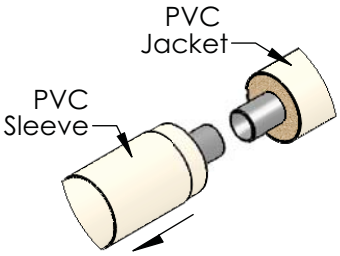
STEP #1: Gather Materials



The field joint kit includes:
1. Urethane pipe covering (3-ft sections)
2. PVC Sleeve (18" long)
3. Pressure-sensitive tape

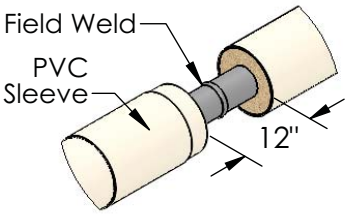
Equipment List:
Hand saw, razor knife, and safety glasses

STEP #2: Prepare PVC Sleeve



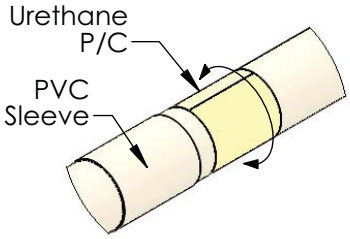
Prior to welding service pipe, slide PVC sleeve over casing and move away from weld point to prevent damage.

STEP #3: Join Service Pipe



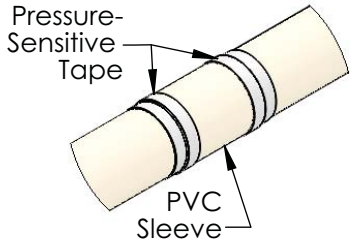
Weld service pipe and test/check all welds as required.

STEP #4: Apply Insulation



Make sure the pipe and casing are clean and dry. Cut the polyurethane foam half-shells to length using a hand saw. Fit the urethane to contours of service pipe by rotating the half-shells back and forth until they seat properly. Secure the urethane into place.

STEP #5: Seal Casing



Slide PVC sleeve into the center of joint over insulation. Apply a wrap of pressure- sensitive tape around both areas were casing and sleeve meet. Allow 2" overlap of tape onto both surfaces.

Note: In colder weather, tape must be kept warm until time of use.

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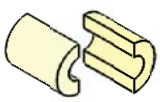
SHEET TITLE: Field Joint Kit (Rigid Foam) with PVC Casing Detail

PRODUCT: Tricon Steel-250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO. S250-10P

STEP #1: Gather Materials



1.

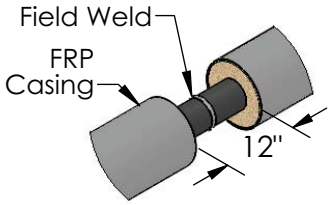
2.

3.

The field joint kit includes:
1. Urethane pipe covering (3-ft sections)
2. Split FRP Sleeve (12" long)
3. FRP Mat (6" wide), sandpaper, resin, catalyst, and roller

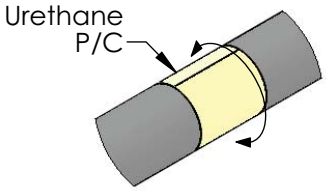
Equipment List:
Hand saw, razor knife, gloves, and safety glasses.

STEP #2: Join Service Pipe



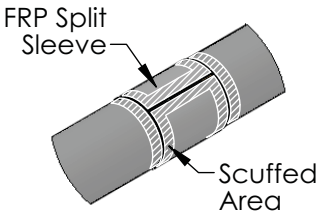
Weld the service pipe and test/check all welds as required.

STEP #3: Apply Insulation



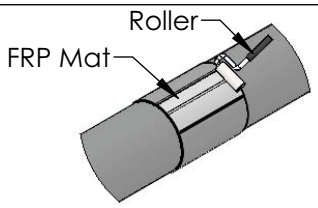
Make sure the pipe and casing are clean and dry. Cut the polyurethane foam half-shells to length using a hand saw. Fit the urethane to contours of service pipe by rotating the half-shells back and forth until they seat properly. Secure the urethane into place.

STEP #4: Prepare FRP Split Sleeve



Place FRP split sleeve around the insulation with the horizontal split at the 10 o'clock position. Create a good binding surface for the hand lay-up by scuffing the ends of the FRP sleeve and jacket.

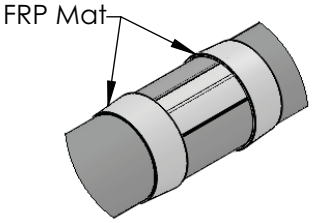
STEP #5: FRP Lay-up (Horizontal)



Mix 1/2 gallon of FRP resin with 1/2 ounce of catalyst and stir. It is imperative that you have a good mix between resin and catalyst. Take four (4) layers of precut 6" wide fiberglass mat and saturate with FRP resin. Place over the split of the FRP sleeve. Roll into place with FRP roller until mat lies flat and there are no air bubbles.

Note: Warmer temperatures will accelerate reaction time.

STEP #6: FRP Lay-up (Circumferential)



Repeat Step #5 for the two circumferential joints to seal the FRP sleeve to the casing.

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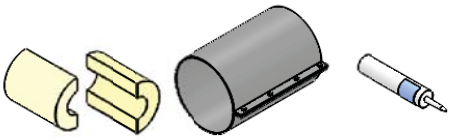
SHEET TITLE
Field Joint Kit (Rigid Foam) with FRP Casing Detail

PRODUCT
Tricon Steel-250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.
S250-10F

STEP #1: Gather Materials

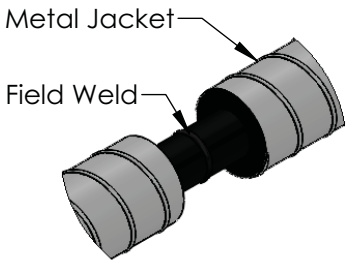


1. 2. 3.

The field joint kit includes:
1. Urethane pipe covering (3-ft sections)
2. Metal Draw Band
3. Silicone Sealant

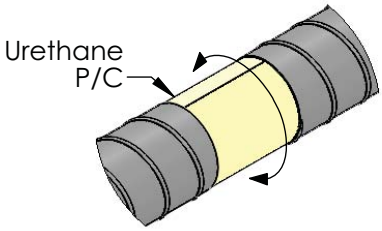
Equipment List:
Hand saw, razor knife, and safety glasses.

STEP #2: Join Service Pipe



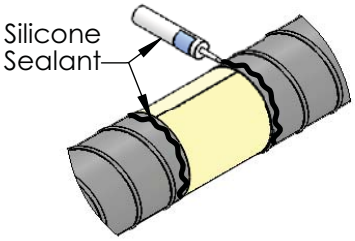
Weld the service pipe and test/check all welds as required.

STEP #3: Apply Insulation



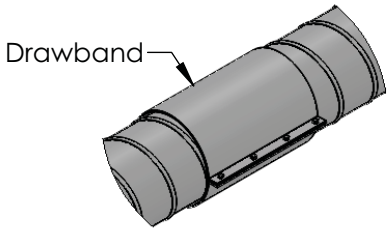
Make sure the pipe and casing are clean and dry. Cut the polyurethane foam half-shells to length using a hand saw. Fit the urethane to contours of service pipe by rotating the half-shells back and forth until they seat properly. Secure the urethane into place.

STEP #4: Apply Silicone



Put a bead of silicone sealant around the jacket 1" from each end.

STEP #5: Install Drawband



Center the drawband in place and dry fit. Place the drawband over the joint and tighten the bolts. Apply silicone sealant around the edge of the drawband and jacket.

Note: Metal casing options include Stainless Steel, Aluminum, and Galvanized Steel.

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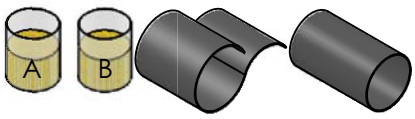
SHEET TITLE
Field Joint Kit (Rigid Foam) with Metal Casing Detail

PRODUCT
Tricon Steel-250

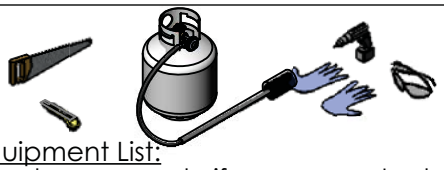
SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO.
S250-10M

STEP #1: Gather Materials

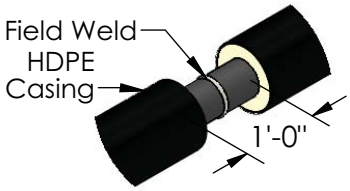


One field joint kit includes:
1. Liquid Urethane Foam Materials
2. Shrink Sleeve Materials
3. Split HDPE Rockshield (18" long)



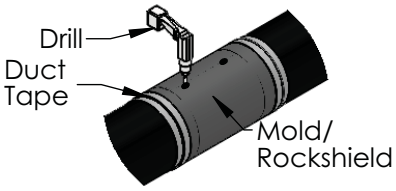
Equipment List:
Hand saw, razor knife, propane tank, torch, drill, safety glasses, and gloves

STEP #2: Join Service Pipe



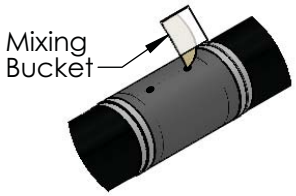
Weld the service pipe and test/check all welds as required.

STEP #3: Ready The Mold



Place HDPE mold/rockshield into the center of the joint and wrap seams tightly with duct tape. Drill two (2) 1" holes into the top of the HDPE mold/rockshield for introduction of polyurethane foam mixture.

STEP #4: Insulate

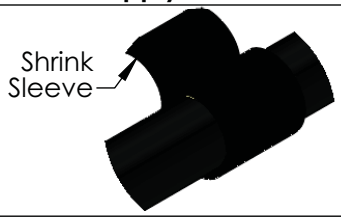


Refer to the chart for the foam amount based on the jacket size. Mix "A" and "B" in a bucket and pour foam into opening. When the foam reacts, temporarily seal the opening with duct tape. Allow 4-5 minutes for reaction to take place.

Note: Required proportions may vary based on weather conditions and foam thickness (chart based on 1½" nominal insulation thickness). Contact your Tricon representative for more information.

Jacket Size (In.)	"A" (Oz.)	"B" (Oz.)
3	3	3
4	4	4
5	5	5
6	6	6
8	8	8
10	10	10
12	12	12
14	14	14
16	16	16

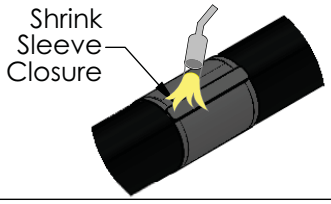
STEP #5: Apply Shrink Sleeve



After reaction has taken place, trim off any excess foam and remove HDPE mold/rockshield from joint .

Remove release liner and place shrink sleeve around pipe insulation. Gently heat backing of sleeve and closure. Overlap sleeve at the 10 and 2 o'clock positions. Press the closure firmly into place. Gently heat closure and pat down.

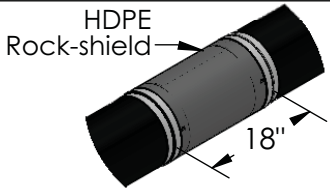
STEP #6: Heat the Shrink Sleeve



With a yellow flame, heat the shrink sleeve from the middle toward each side of the sleeve until recovery is complete. Remove any wrinkles or trapped air by working them from the center outward using the roller. Shrinking has been completed when adhesive oozes from the sides.

Note: Avoid excessive heat to overlap area.

STEP #7: Inspect Shrink Sleeve & Apply Rockshield



After shrink sleeve has cooled, inspect the sleeve to ensure full contact with casing and adhesive has flowed beyond both sleeve edges. Make sure no cracks or holes appear on the sleeve. Install HDPE Mold/Rockshield over shrink sleeve with a minimum 2" overlap over sleeve and secure in place.

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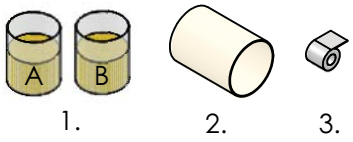
SHEET TITLE
Field Joint Kit (Liquid Foam) with HDPE Casing Detail

PRODUCT
Tricon Steel-250

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO.
S250-11H

STEP #1: Gather Materials

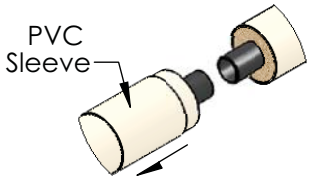


1. 2. 3.

The field joint kit includes:
1. Liquid Urethane Foam Materials
2. PVC Sleeve (18" long)
3. Pressure-sensitive tape

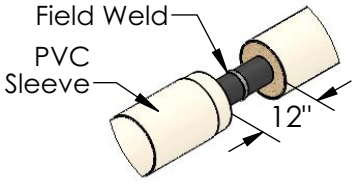
Equipment List:
Razor knife, drill, gloves, and safety glasses.

STEP #2: Prepare PVC Sleeve



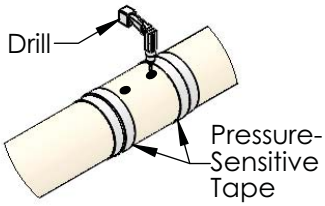
Prior to welding service pipe, slide PVC sleeve over casing and move away from weld point to prevent damage.

STEP #3: Join Service Pipe



Welding service pipe and test/check all welds as required.

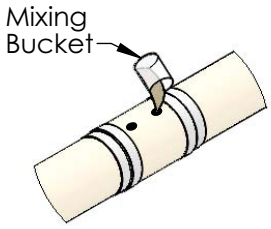
STEP #4: Apply Sleeve and Cut Hole



Slide PVC sleeve into the center of the joint and secure into place. Drill two (2) 1" holes into the top of the PVC sleeve for introduction of polyurethane foam mixture.

Apply a wrap of pressure-sensitive tape around both areas were casing and sleeve meet. Allow 2" overlap of tape onto both surfaces.

STEP #5: Insulate

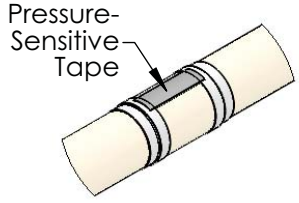


Refer to the chart for the foam amount based on the jacket size. Mix "A" and "B" in a bucket and pour foam into opening. When the foam reacts, temporarily seal the opening with duct tape. Allow 4-5 minutes for reaction to take place.

Note: Required proportions may vary based on weather conditions and foam thickness (chart based on 1½" nominal insulation thickness). Contact your Tricon representative for more information.

Jacket Size (In.)	"A" (Oz.)	"B" (Oz.)
3	3	3
4	4	4
5	5	5
6	6	6
8	8	8
10	10	10
12	12	12
14	14	14
16	16	16

STEP #6: Trim and Seal



Trim off excess material after curing is complete. Apply additional pressure sensitive tape over hole in PVC sleeve. Additional wraps may be required to ensure a water-tight seal.

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P.O. BOX 361, Canastota, NY 13032
p (315)697-8787 f (315)697-8788

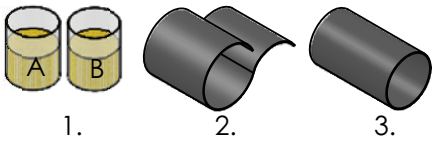
SHEET TITLE
Field Joint Kit (Liquid Foam) with PVC Casing Detail

PRODUCT
Field Joint Kit (Liquid Foam) with PVC Casing Detail

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO.
S250-11P

STEP #1: Gather Materials

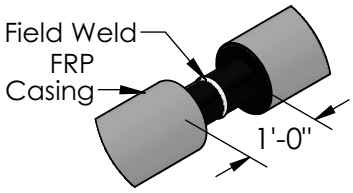


1. 2. 3.

One field joint kit includes:
1. Liquid Urethane Foam Materials
2. Shrink Sleeve materials
3. Split FRP Rockshield (18" long)

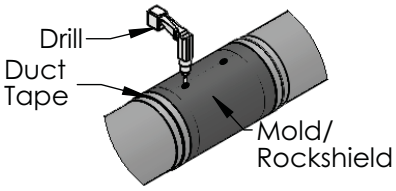
Equipment List:
Hand saw, razor knife, propane tank, torch, drill, safety glasses, and gloves

STEP #2: Join Service Pipe



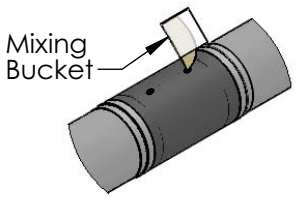
Weld the service pipe and test/check all welds as required.

STEP #3: Ready The Mold



Place FRP mold/rockshield into the center of the joint and wrap seams tightly with duct tape. Drill two (2) 1" holes into the top of the FRP mold/rockshield for introduction of polyurethane foam mixture.

STEP #4: Insulate

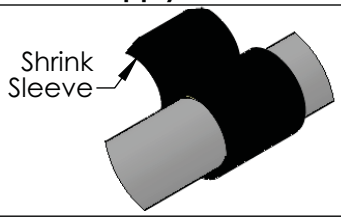


Refer to the chart for the foam amount based on the jacket size. Mix "A" and "B" in a bucket and pour foam into opening. When the foam reacts, temporarily seal the opening with duct tape. Allow 4-5 minutes for reaction to take place.

Note: Required proportions may vary based on weather conditions and foam thickness (chart based on 1½" nominal insulation thickness). Contact your Tricon representative for more information.

Jacket Size (In.)	"A" (Oz.)	"B" (Oz.)
3	3	3
4	4	4
5	5	5
6	6	6
8	8	8
10	10	10
12	12	12
14	14	14
16	16	16

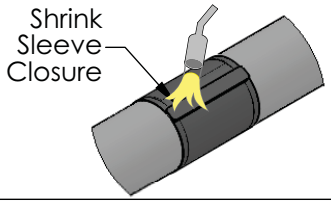
STEP #5: Apply Shrink Sleeve



After reaction has taken place, trim off any excess foam and remove HDPE mold/rockshield from joint .

Remove release liner and place shrink sleeve around pipe insulation. Gently heat backing of sleeve and closure. Overlap sleeve at the 10 and 2 o'clock positions. Press the closure firmly into place. Gently heat closure and pat down.

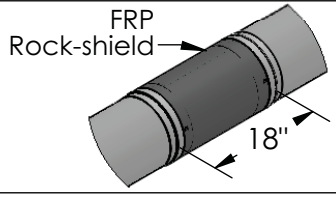
STEP #6: Heat the Shrink Sleeve



With a yellow flame, heat the shrink sleeve from the middle toward each side of the sleeve until recovery is complete. Remove any wrinkles or trapped air by working them from the center outward using the roller. Shrinking has been completed when adhesive oozes from the sides.

Note: Avoid excessive heat to overlap area.

STEP #7: Inspect Shrink Sleeve & Apply Rockshield



After shrink sleeve has cooled, inspect the sleeve to ensure full contact with casing and adhesive has flowed beyond both sleeve edges. Make sure no cracks or holes appear on the sleeve. Install FRP Mold/Rockshield over shrink sleeve with a minimum 2" overlap over sleeve and secure in place.

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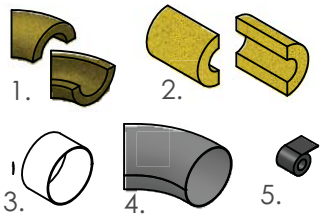
SHEET TITLE
Field Joint Kit (Liquid Foam) with FRP Casing Detail

PRODUCT
Tricon Steel-250

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO.
S250-11F

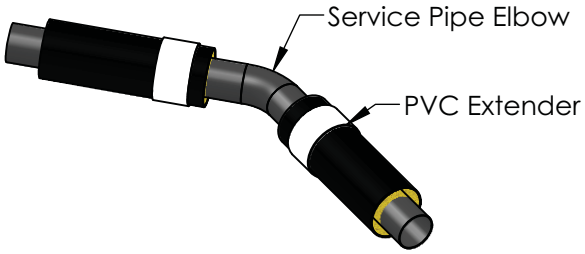
STEP #1: Gather Materials



The field joint kit includes:
1. Urethane pipe covering (3-ft sections)
2. Urethane Elbow
3. PVC Extenders
4. PVC Cover
5. Pressure-sensitive Tape

Equipment List:
Razor knife, drill, and safety glasses.

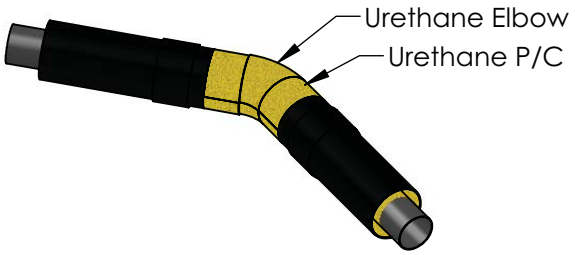
STEP #2: Place PVC Extenders and Join Service Pipe



Prior to welding service pipe, slide PVC extenders over casing and move away from weld point to prevent damage.

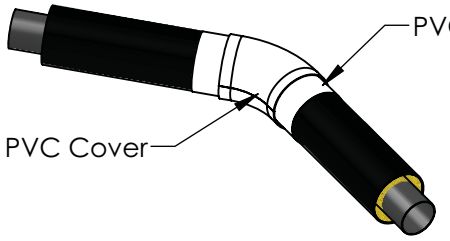
Weld fitting to service pipe and test/check all welds as required.

STEP #3: Apply Insulation



Make sure the pipe and casing are clean and dry. Fit urethane elbow over over fitting. Cut the urethane pipe-covering to length using a hand saw. Fit over service pipe and secure in place.

STEP #4: Fit PVC over the insulation



Slide the PVC extenders in place and secure in place. Fit the PVC cover in place.

STEP #5: Tape wrap

Spiral wrap fitting with pressure-sensitive tape as shown.

Note: In colder weather, tape must be kept warm until time of use.

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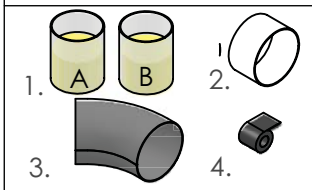
SHEET TITLE: Elbow Kit (Rigid Foam) Detail

PRODUCT: Tricon Steel-250

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO. S250-12

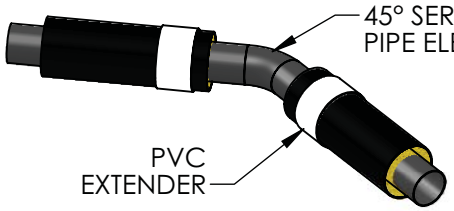
STEP #1: Gather Materials



The field joint kit includes:
1. Liquid Urethane Foam Materials
2. PVC Extenders
3. PVC Fitting Cover
4. Pressure-sensitive Tape

Equipment List:
Razor knife, drill, gloves, and safety glasses.

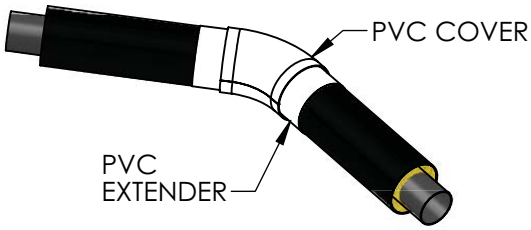
STEP #2: Place PVC Extenders and Join Service Pipe



Prior to welding service pipe, slide PVC extenders over casing and move away from weld point to prevent damage.

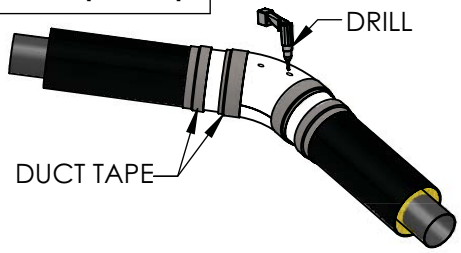
Weld fitting to service pipe and test/check all welds as required.

STEP #3: Fit PVC Cover & Extenders



Slide the PVC extenders in place and secure in place. Fit the PVC cover in place.

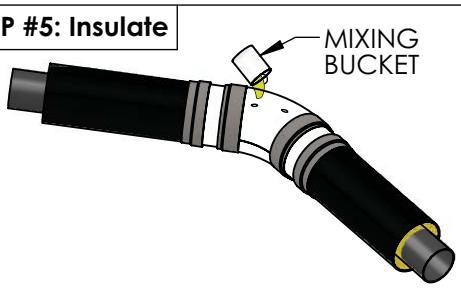
STEP #4: Tape wrap



Wrap seams tightly with duct tape.

Drill two (2) 1" holes into the top of the PVC cover for introduction of polyurethane foam mixture.

STEP #5: Insulate

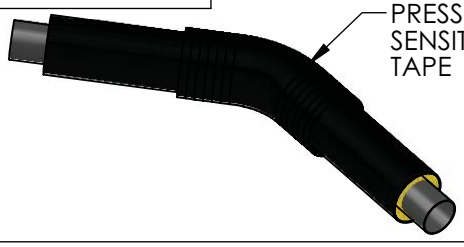


Refer to the chart for the foam amount based on the jacket size. Mix "A" and "B" in a bucket and pour foam into opening. When the foam reacts, temporarily seal the opening with duct tape. Allow 4-5 minutes for reaction to take place.

Note: Required proportions may vary based on weather conditions and foam thickness (chart based on 1½" nominal insulation thickness). Contact your Tricon representative for more information.

Jacket Size (In.)	"A" (Oz.)	"B" (Oz.)
3	6	2
4	6	2
5	9	3
6	9	3
8	12	4
10	15	5
12	21	7

STEP #5: Trim & Tape



Trim off excess material after curing is complete.

Spiral wrap fitting with pressure-sensitive tape as shown.

Note: In colder weather, tape must be kept warm until time of use.

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p (315)697-8787 f (315)697-8788

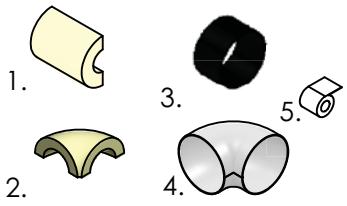
SHEET TITLE
Elbow kit (liquid foam) Detail

PRODUCT
45° Joint Kit (Liquid Foam) with PVC Casing Detail

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO.
S250-5

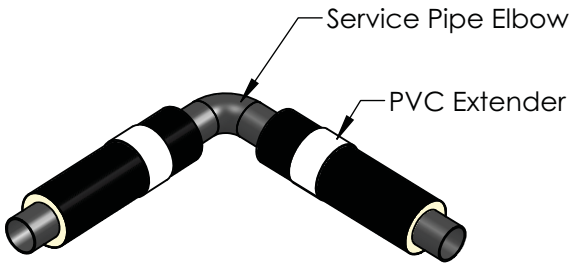
STEP #1: Gather Materials



The field joint kit includes:
1. Urethane pipe covering (3-ft sections)
2. Urethane Elbow
3. PVC Extenders
4. PVC Cover
5. Pressure-sensitive Tape

Equipment List:
Razor knife, drill, and safety glasses.

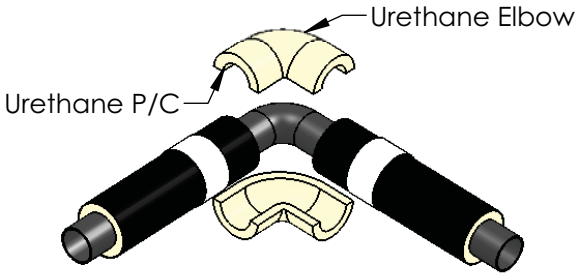
STEP #2: Place PVC Extenders and Join Service Pipe



Prior to welding service pipe, slide PVC extenders over casing and move away from weld point to prevent damage.

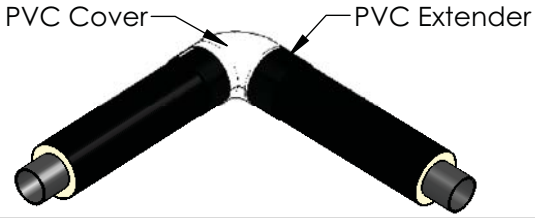
Weld fitting to service pipe and test/check all welds as required.

STEP #3: Apply Insulation



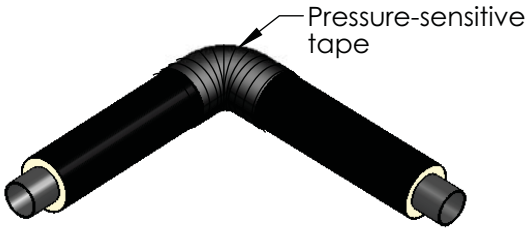
Make sure the pipe and casing are clean and dry. Fit urethane elbow over over fitting. Cut the urethane pipe-covering to length using a hand saw. Fit over service pipe and secure in place.

STEP #4: Fit PVC over the insulation



Slide the PVC extenders in place and secure in place. Fit the PVC cover in place.

STEP #5: Tape wrap



Spiral wrap fitting with pressure-sensitive tape as shown.

Note: In colder weather, tape must be kept warm until time of use.

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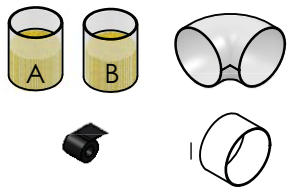
SHEET TITLE: 90 Degree Elbow Kit (Rigid Foam) Detail

PRODUCT: TRICON STEEL-250

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO. S250-12

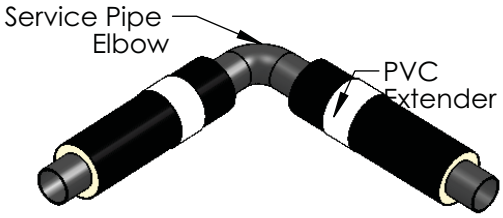
STEP #1: Gather Materials



The field joint kit includes:
1. Liquid Urethane Foam Materials
2. PVC Extenders
3. PVC Cover
4. Pressure-sensitive Tape

Equipment List:
Razor knife, drill, gloves, and safety glasses.

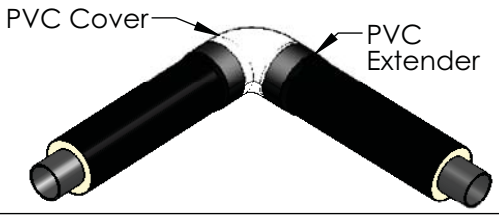
STEP #2: Place PVC Extenders and Join Service Pipe



Prior to welding service pipe, slide PVC extenders over casing and move away from weld point to prevent damage.

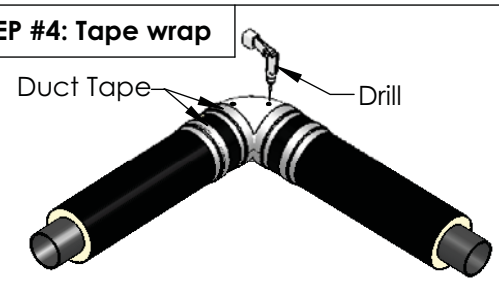
Weld fitting to service pipe and test/check all welds as required.

STEP #3: Fit PVC Cover & Extenders



Slide the PVC extenders in place and secure in place. Fit the PVC cover in place.

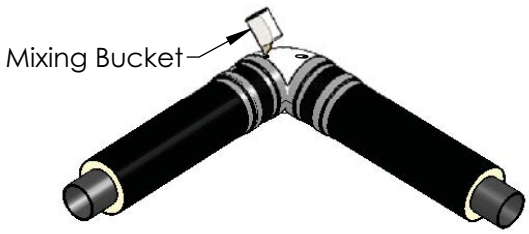
STEP #4: Tape wrap



Wrap seams tightly with duct tape.

Drill two (2) 1" holes into the top of the PVC cover for introduction of polyurethane foam mixture.

STEP #5: Insulate

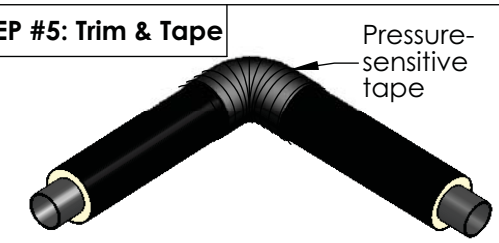


Refer to the chart for the foam amount based on the jacket size. Mix "A" and "B" in a bucket and pour foam into opening. When the foam reacts, temporarily seal the opening with duct tape. Allow 4-5 minutes for reaction to take place.

Note: Required proportions may vary based on weather conditions and foam thickness (chart based on 1½" nominal insulation thickness). Contact your Tricon representative for more information.

Jacket Size (In.)	"A" (Oz.)	"B" (Oz.)
3	3	1
4	6	2
5	6	2
6	6	2
8	12	4
10	18	6
12	24	8

STEP #5: Trim & Tape



Trim off excess material after curing is complete.

Spiral wrap fitting with pressure-sensitive tape as shown.

Note: In colder weather, tape must be kept warm until time of use.

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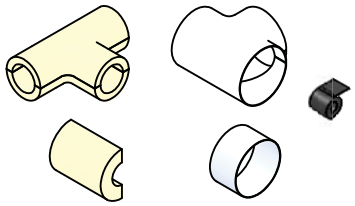
SHEET TITLE: 90 Degree Elbow Kit (Liquid Foam) Detail

PRODUCT: TRICON STEEL-250

SIZE	SCALE	DATE
A	NTS	12/01/2016

DWG. NO. S250-12

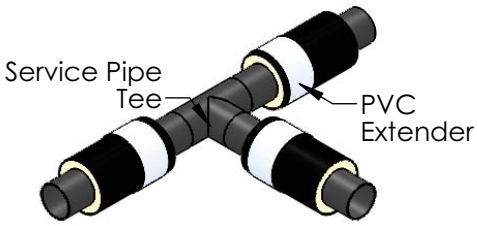
STEP #1: Gather Materials



The field joint kit includes:
1. Urethane pipe covering (3-ft sections)
2. Urethane Tee
3. PVC Extenders
4. PVC Cover
5. Pressure-sensitive Tape

Equipment List:
Razor knife, drill, and safety glasses.

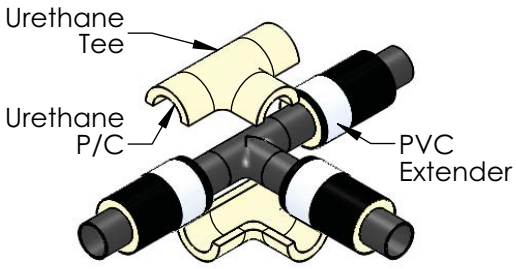
STEP #2: Place PVC Extenders and Join Service Pipe



Prior to welding the tee to the service pipes, slide PVC extenders over casing and move away from weld point to prevent damage.

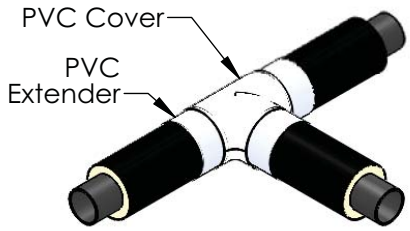
Weld fitting to service pipe and test/check all welds as required.

STEP #3: Apply Insulation



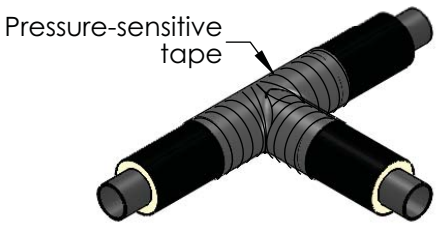
Make sure the pipe and casing are clean and dry. Fit urethane tee over over fitting. Cut the urethane pipe-covering to length using a hand saw. Fit over service pipe and secure in place.

STEP #4: Fit PVC over the insulation



Slide the PVC extenders in place and secure in place. Fit the PVC cover in place.

STEP #5: Tape wrap



Spiral wrap fitting with pressure-sensitive tape as shown.

Note: In colder weather, tape must be kept warm until time of use.

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P.O. BOX 361, Canastota, NY 13032
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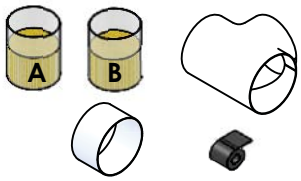
SHEET TITLE: TEE KIT (RIGID FOAM) DETAIL

PRODUCT: TRICON STEEL-250

SIZE	SCALE	DATE
A	NTS	11/01/2016

DWG. NO. S250-14

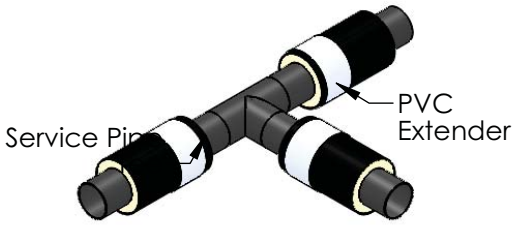
STEP #1: Gather Materials



The field joint kit includes:
1. Liquid Urethane Foam Materials
2. PVC Extenders
3. PVC Cover
4. Pressure-sensitive Tape

Equipment List:
Razor knife, drill, gloves, and safety glasses.

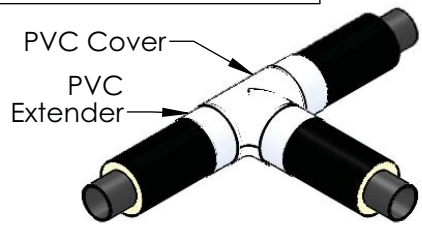
STEP #2: Place PVC Extenders and Join Service Pipe



Prior to welding tee to the service pipes, slide PVC extenders over casing and move away from weld point to prevent damage.

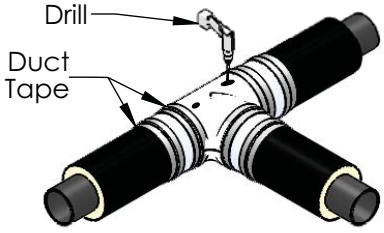
Weld fitting to service pipe and test/check all welds as required.

STEP #3: Apply Insulation



Slide the PVC extenders in place and secure in place.
Fit the PVC cover in place.

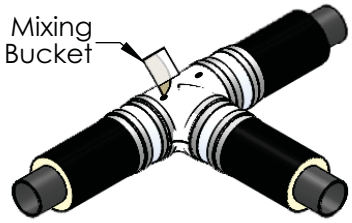
STEP #3: Apply Insulation



Wrap seams tightly with duct tape.

Drill two (2) 1" holes into the top of the PVC cover for introduction of polyurethane foam mixture.

STEP #4: Fit PVC over the insulation

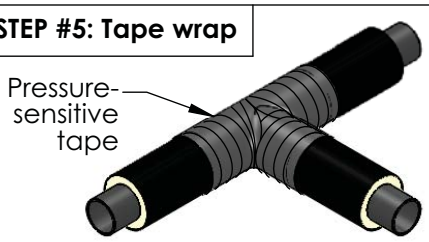


Refer to the chart for the foam amount based on the jacket size. Mix "A" and "B" in a bucket and pour foam into opening. When the foam reacts, temporarily seal the opening with duct tape. Allow 4-5 minutes for reaction to take place.

Note: Required proportions may vary based on weather conditions and foam thickness (chart based on 1½" nominal insulation thickness). Contact your Tricon representative for more information.

Jacket Size (In.)	"A" (Oz.)	"B" (Oz.)
3	9	9
4	12	12
5	12	12
6	15	15
8	21	21
10	30	30
12	48	48

STEP #5: Tape wrap



Trim off excess material after curing is complete.

Spiral wrap fitting with pressure-sensitive tape as shown.

Note: In colder weather, tape must be kept warm until time of use.

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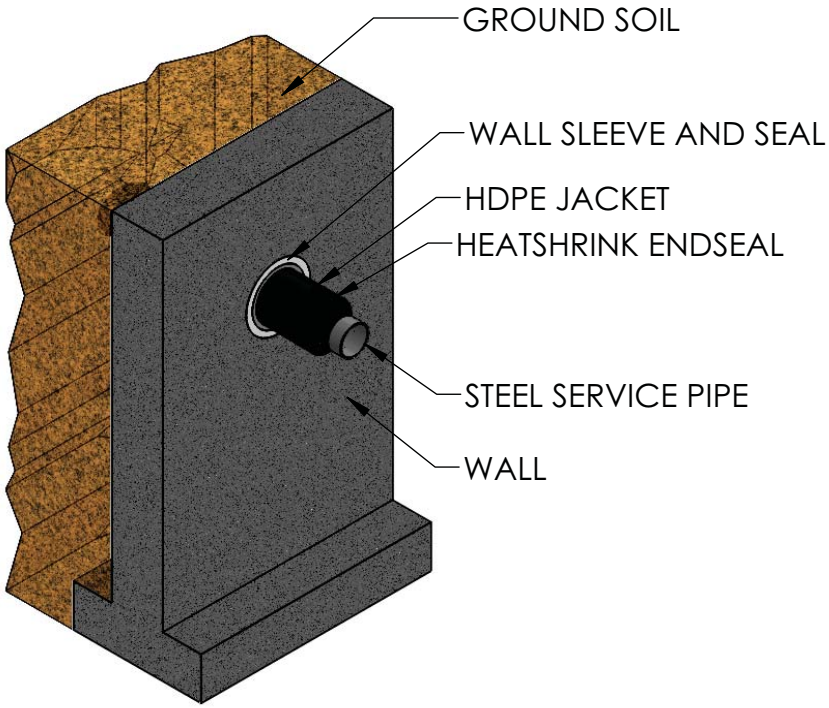
SHEET TITLE: TEE KIT (RIGID FOAM) DETAIL

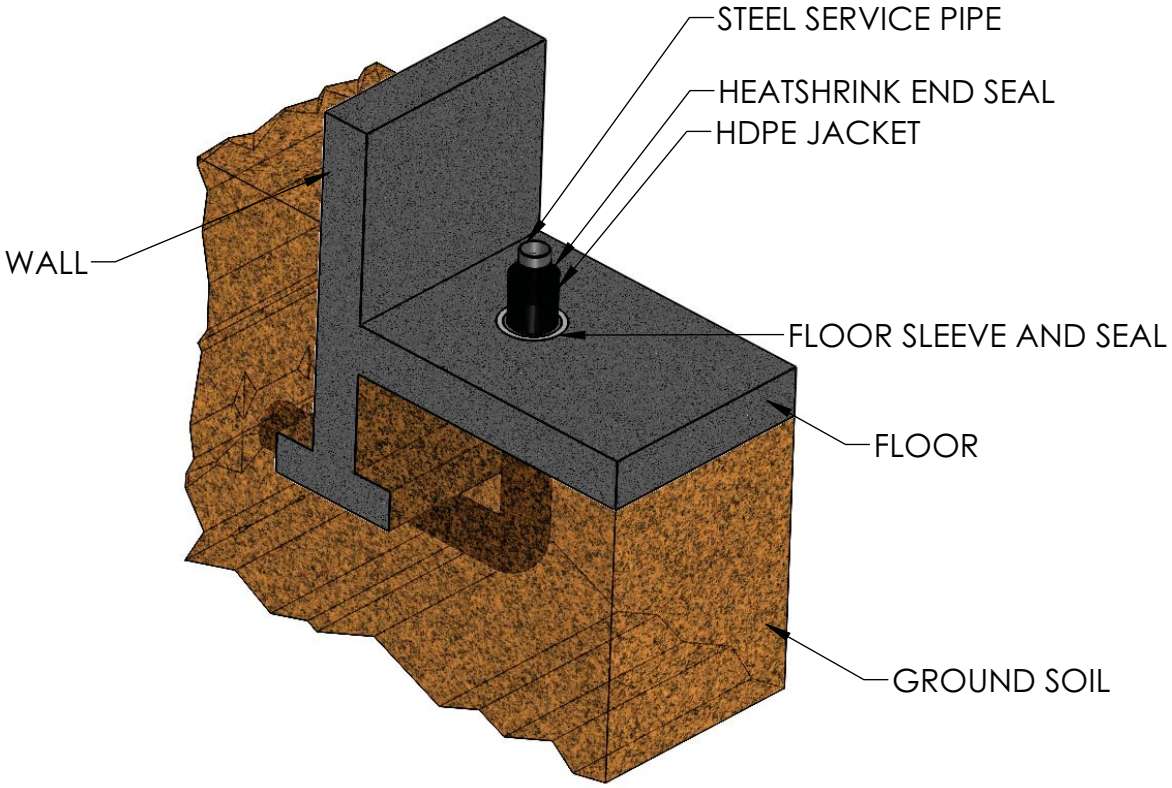
PRODUCT: TRICON STEEL-250

SIZE: A | SCALE: NTS | DATE: 11/01/2016

DWG. NO.: S250-15



WALL PENETRATION DETAIL



BUILDING RISER DETAIL

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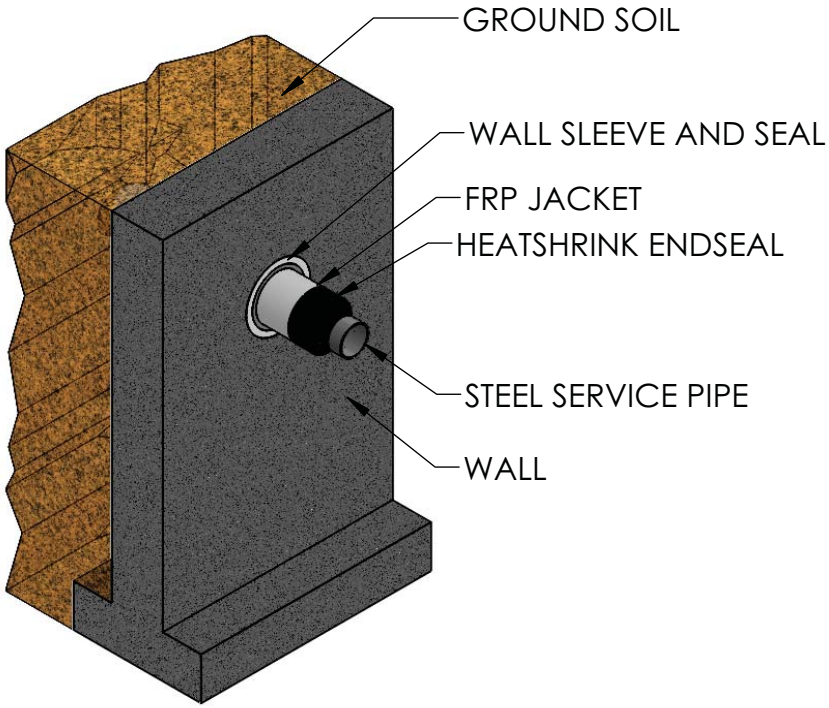
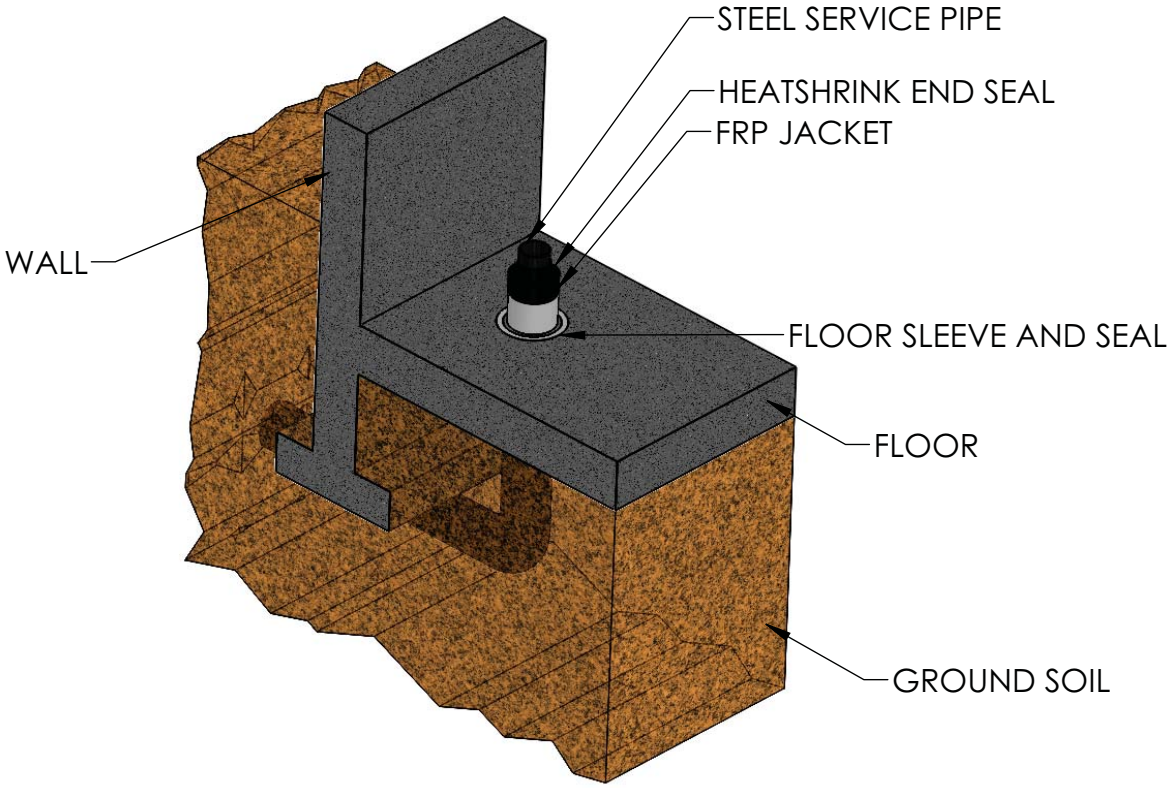
SHEET TITLE	HEAT SHRINK END SEAL DETAIL			
PRODUCT	TRICON STEEL-250	SIZE A	SCALE NTS	DATE 12/01/11
		DWG. NO. S250-14		SHEET



WALL PENETRATION DETAIL



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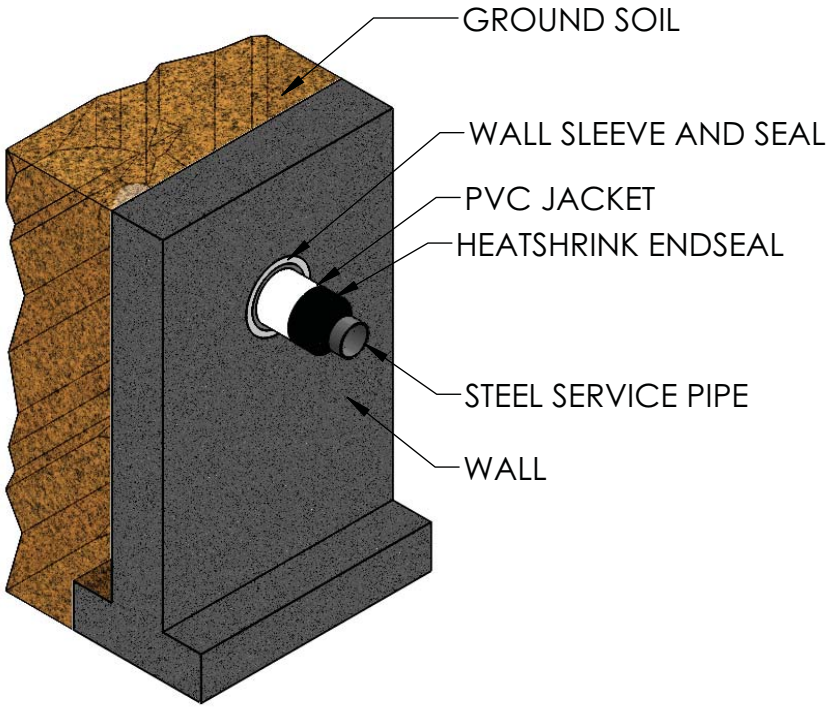
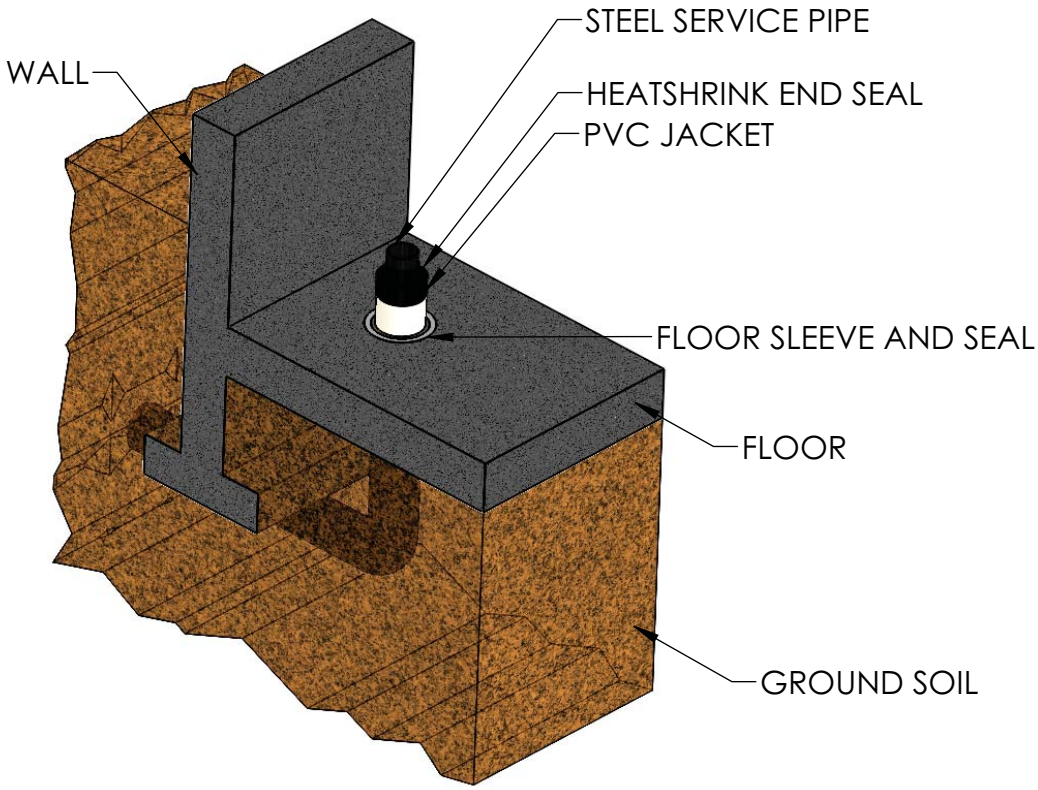


WALL PENETRATION DETAIL



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