

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—		634	0634-009-101, B659	28

Notes:

Material - Ductile iron with mechanical joint
Minimum thickness - Class 52 (rated pressure 300 psi)
Hydrostatic test pressure shall be 200 psi minimum.
Specification: ANSI A 21.51/AWWA C151
Finish - Cement lined; bituminous outer coat
Steel casing - API 5L-B $\frac{3}{8}$ " wall

Structural steel for angles shall be the same as that for the beams/girders. If the beams/girders are painted, the angles shall be galvanized in accordance with ASTM A123.

If the angle is galvanized, the H.S. bolts shall be ASTM A325 galvanized.
If the angle is not painted (unpainted weathering steel), the H.S. bolts shall be ASTM A325, Type 3.

Abutment - Casing as detailed or Century-Line sleeve to be used for proposed structure only.
Seal - one link-seal at each face.

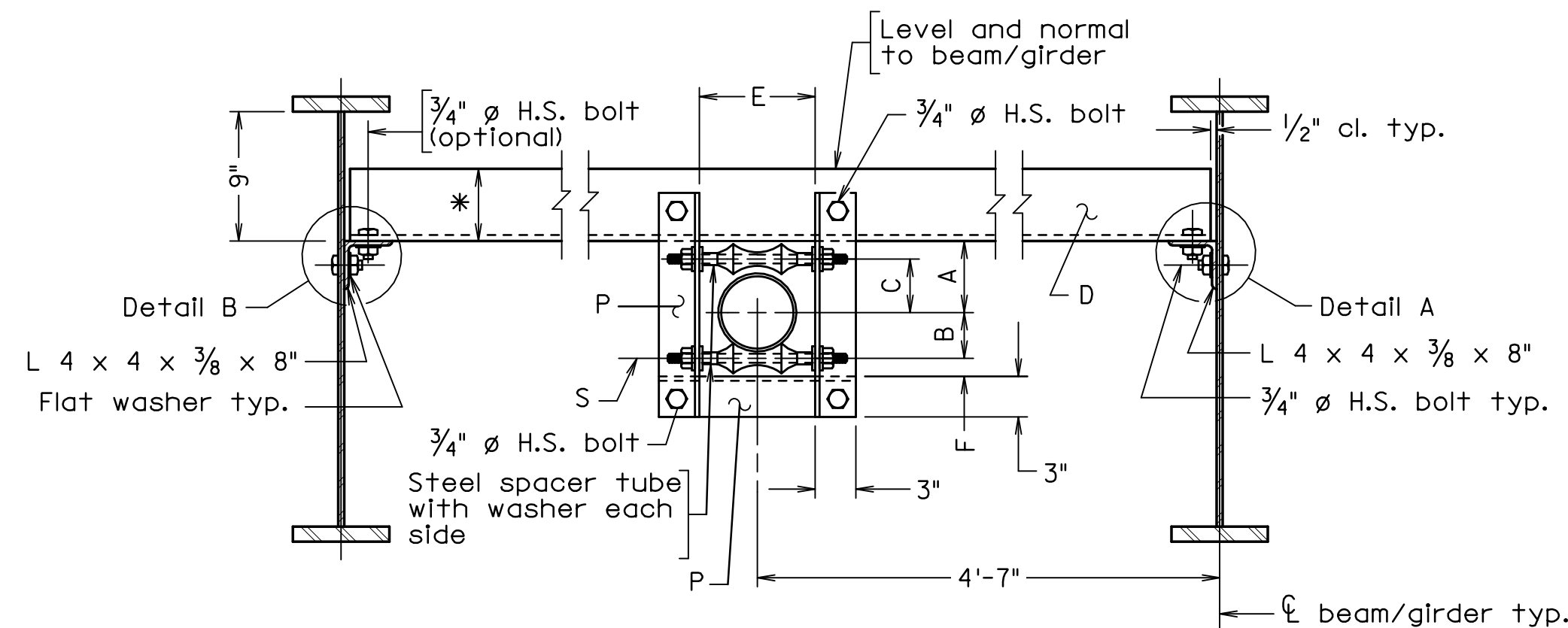
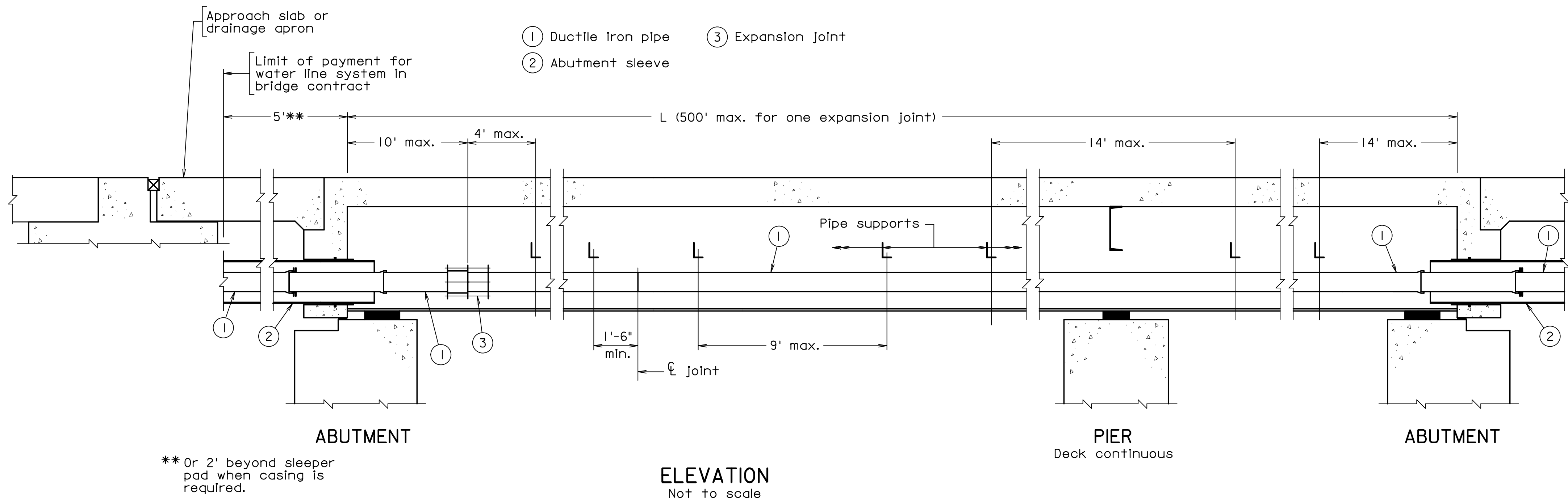
Expansion Joint - Dresser style 63, Type 3

Galvanization - Miscellaneous hardware: Rods, nuts, etc. shall be galvanized in accordance with ASTM A153. When the supporting angles to which the rods are attached are weathering steel, a neoprene or vinyl washer shall be placed between the angle surface (on both sides) and the nut/washer to isolate the contact between the two surfaces.

Insulation will will not X be required.

Casing under approach slab will X will not ___ be required.

Payment - Water Line System shall be paid for on a lump sum basis, wherein no measurement shall be made, and shall be paid for at the contract lump sum price, which price shall include furnishing and installing ductile iron water main, expansion joints, testing, disinfecting (when required), insulation and cover (when required), hangers, rollers, rods, abutment sleeves, link seals, casing under approach slab (when required) and miscellaneous hardware; all as detailed on the Water Main drawing included herein and within the city limits shown thereon. Such price shall be full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work.

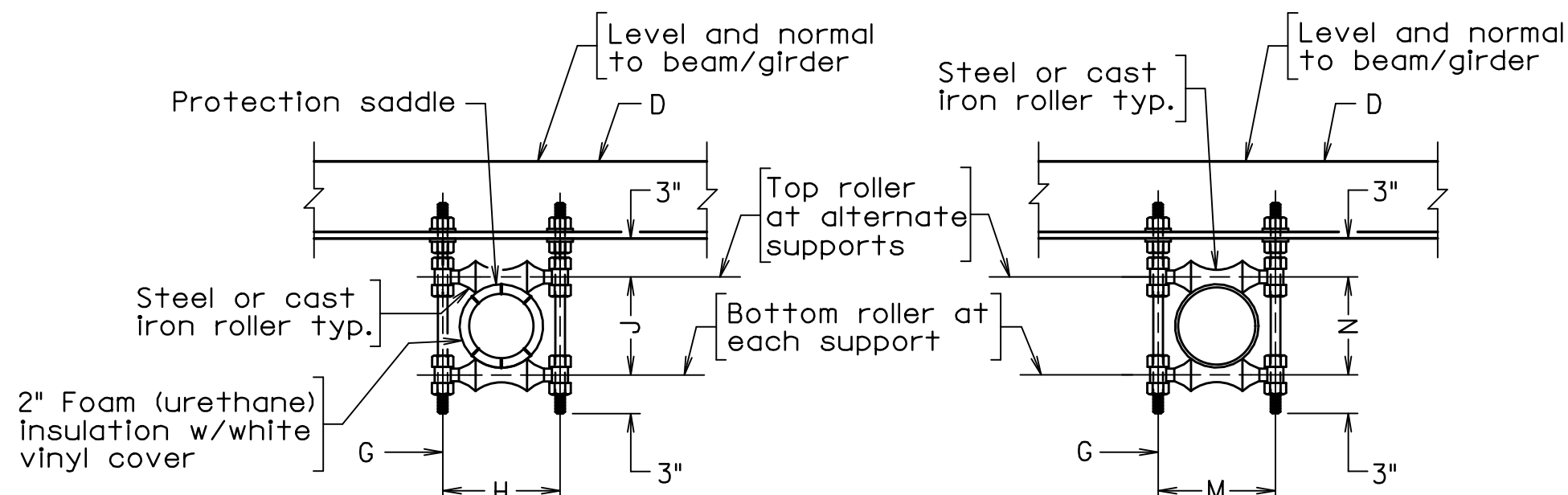


TYPICAL SUPPORT DETAIL AT EXPANSION JOINT

Scale: 1" = 1'-0"

* Dimension is either 6", 7" or 8"

For insulation, use 2" foam (urethane) insulation with white vinyl cover and protection saddles. Provide support detail on both sides of expansion joint for bridges over 500'.



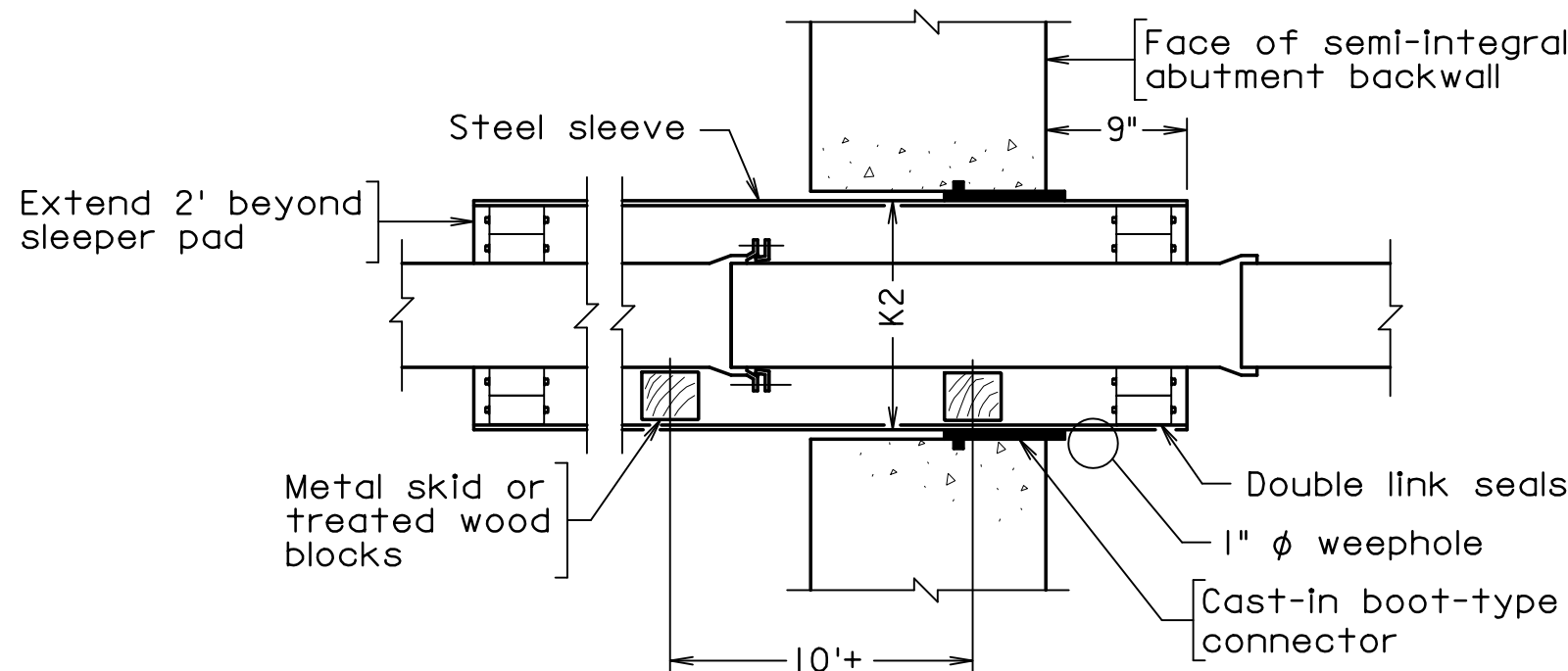
INSULATED

NOT INSULATED

TYPICAL SUPPORT DETAIL

Scale: 1" = 1'-0"

For details not shown, see Typical Support Detail
at Expansion Joint.



ABUTMENT SLEEVE DETAIL
NEW STRUCTURE

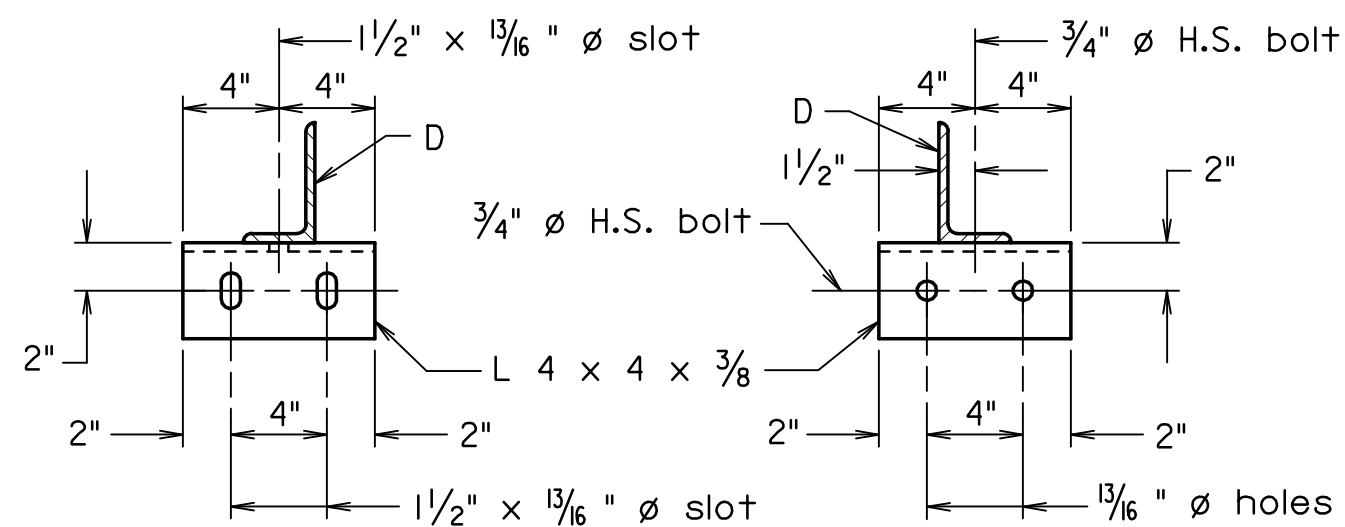
Scale: 1" = 1'-0"

Note: Water line casing detail when line is under approach slab.

DIMENSIONS															
Pipe Ø	A**	B**	C**	D	E	F	G	H**	J**	K1	K2	M**	N**	P	S
6"	8½"	6½"	6¾"	L 6 x 4 x ½	1'-1"	2¾"	7⁄8"	1'-2"	1'-1/16"	0'-10"	1'-2"	9¹⁄₁₆"	8⁄16"	L 3 x 3 x ⅔	7⁄8"
8"	9¾"	7½"	7¾"	L 6 x 4 x ½	1'-3"	2¾"	7⁄8"	1'-3¾"	1'-35⁄8"	1'-0"	1'-4"	1'-0⁄8"	105⁄8"	L 3 x 3 x ⅔	1"
10"	11½"	8¾"	9"	L 6 x 4 x ½	1'-5"	2¾"	1"	1'-5¾"	1'-6¾"	1'-2"	1'-6"	1'-2⁄8"	1'-0⁄8"	L 3 x 3 ½ x ⅔	1¹⁄₈"
12"	1'-0¾"	10"	10¼"	L 6 x 4 x ½	1'-7"	2¾"	1"	1'-7¾"	1'-8¼"	1'-4"	1'-8"	1'-4"	1'-3"	L 3 x 3 ½ x ⅔	1¼"
14"	11"	8¾"	85⁄8"	L 7 x 4 x ½	1'-9"	4"	1"	1'-9½"	1'-95⁄8"	1'-6"	1'-10"	1'-5¾"	1'-4¾"	L 3 x 4 x ⅔	1¹⁄₈"
16"	1'-0¼" 1'-2"	9½" 10½"	9¾" 10¾"	L 7 x 4 x ½	1'-11" 2'-1"	4"	1"	1'-11½" 1'-10"	1'-117⁄8" 1'-9"	1'-8" 1'-8¾"	2'-0" 2'-0¾"	1'-7¾"	1'-7"	L 3 x 4 x ⅔	1¼"
18"	1'-1½"	10½"	10¾"	L 8 x 4 x ½	2'-1"	4"	1¹⁄₈"	2'-1¾"	2'-2⁄8"	1'-10"	2'-2"	1'-9⁄8"	1'-9"	L 3 x 5 x ⅔	1¼"
20"	1'-3"	115⁄8"	117⁄8"	L 8 x 4 x ¾	2'-3"	4"	1½"	2'-4"	2'-4⁄8"	2'-0"	2'-10"	2'-0¼"	1'-11¼"	L 3 x 5 x ⅔	1¼"
24"	1'-7"	1'-2"	1'-2¼"	L 8 x 4 x ¾	2'-7"	4"	1½"	2'-8¾"	2'-9⁄8"	2'-6"	2'-10"	2'-45⁄8"	2'-4"	L 3 x 5 x ⅔	1½"

G = diameter of rod
S = diameter of shaft

 ** The Contractor shall verify and/or adjust these values based on the manufacturer's requirements.





DETAIL A

DETAIL B

Scale: $1\frac{1}{2}" = 1'-0"$

Scale as noted

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			COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
			STRUCTURE AND BRIDGE DIVISION			
			WATER LINE SYSTEM			
	16" ø pipe K1 and K2 dimension revised	12-07-17	Designed: CECH... Drawn:KJD..... Checked: TUL.....	Date	Plan No.	Sheet No.
	16" ø pipe dimensions revised	10-25-17				
No.	Description	Date				
Revisions						

295-22_028r3.dgn

BWL - I MOD. 08-07-2012



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STRUCTURAL ENGINEER