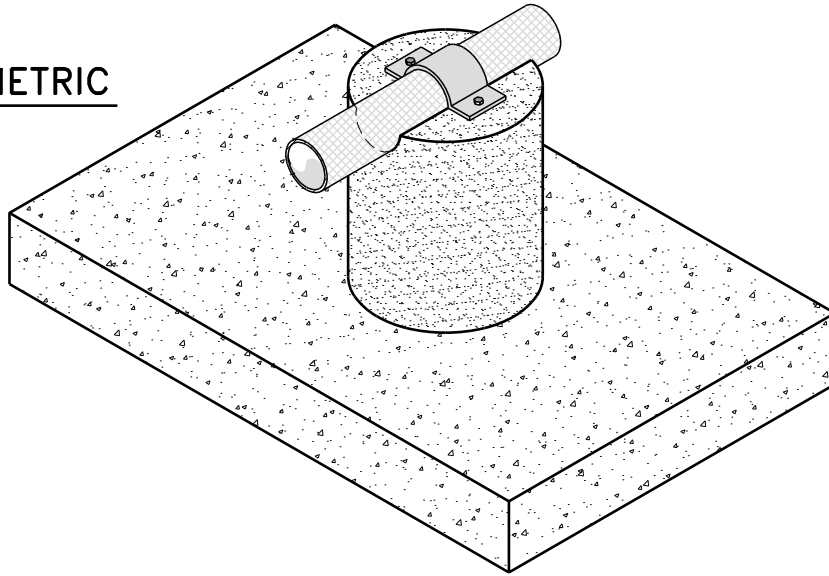


ISOMETRIC



PIPE SUPPORT PIER FOR WATER CROSSING

PIPE DIAMETER	STEM DIAMETER "D"	STEM HEIGHT "H"	STEM REINF. BARS "A"	FOOTING SIZE			FOOTING REINF. BARS "X" (L)	FOOTING REINF. BARS "Y" (W)	STEM CONC. VOL. / VERT. FT. CU. YARDS	STEM STEEL WT. / VERT. FT. LBS.	FOOTING CONC. VOL. CU. YARDS	FOOTING STEEL WT. / LBS.
				"L"	"T"	"W"						
8" TO 10"	2'-6"	1'-3'	10#4	8'-0"	2'-0"	5'-6'	6#5	9#4	0.18	9.04	3.26	77.0
		4'-6'	10#5	10'-0"	2'-6"	5'-0"	6#5	11#4		12.79	4.63	92.5
		7'-9'	10#5	11'-0"	2'-8"	6'-0"	7#6	12#5		12.79	6.52	179.2
		10'-12'	10#6	12'-0"	3'-0"	7'-0"	8#6	13#5		17.38	9.33	226.3
12" TO 16"	3'-0"	1'-3'	10#4	10'-0"	2'-6"	5'-0"	6#5	11#4	0.26	9.63	4.63	92.5
		4'-6'	10#5	12'-0"	2'-8"	5'-0"	6#6	13#5		13.38	5.92	164.6
		7'-9'	10#6	13'-0"	3'-0"	6'-0"	7#7	14#5		17.97	8.67	259.2
		10'-12'	10#8	14'-0"	3'-0"	6'-0"	7#8	15#6		26.65	9.33	376.2
18" TO 20"	3'-6"	1'-3'	14#5	11'-0"	2'-6"	5'-0"	6#5	12#5	0.36	18.14	5.09	122.0
		4'-6'	14#6	12'-0"	3'-0"	6'-0"	7#6	13#5		24.57	8.00	195.5
		7'-9'	14#6	14'-0"	3'-0"	6'-0"	7#7	15#6		24.57	9.33	317.1
		10'-12'	14#8	15'-0"	3'-6"	6'-0"	7#8	16#6		40.92	11.67	403.2
24"	3'-6"	1'-3'	14#5	11'-0"	2'-6"	6'-0"	7#5	12#5	0.36	18.14	6.11	145.5
		4'-6'	14#6	13'-0"	3'-0"	6'-0"	7#6	14#6		24.57	8.67	247.1
		7'-9'	14#6	14'-0"	3'-4"	7'-0"	8#7	15#6		24.57	12.10	367.2
		10'-12'	14#8	15'-0"	4'-0"	7'-0"	8#8	16#6		40.92	15.56	465.9

NOTES:

1. MINIMUM SOIL BEARING CAPACITY REQUIRED = 3,000 PSF. ENGINEER SHALL INSPECT ALL FOOTINGS PRIOR TO PLACEMENT OF CONCRETE.
2. CONCRETE - 3,000 PSI @ 28 DAYS.
3. REINFORCING - ATSM A615, GRADE 60.
4. FOOTING TO BE PLACED SO THAT SIDE IS PARALLEL TO DIRECTION OF STREAM FLOW AT FLOOD STAGE.
5. IF FOOTING IS PLACED DIRECTLY ON SOLID ROCK, 1" DIA. DOWELS TO BE PLACED IN ROCK TO CONNECT FOOTING TO ROCK AND PREVENT SLIDING. DOWELS TO BE PLACED ON 24" CENTERS IN EACH DIRECTION.
6. SUPPORT SIZE BASED ON 15 FPS STREAM FLOW WITH EMPTY (BUOYANT) PIPE.
7. FOR VELOCITIES >15 FPS, PIERS SHALL BE DESIGNED BY LICENSED PROFESSIONAL ENGINEER.



THE CITY OF LYNCHBURG

PIPE SUPPORT PIER
FOR WATER CROSSING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:
NOT TO SCALE

DETAIL #
27.18

REVISION DATE:
4-2020

SHEET #:
2 OF 2