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	TY PIP DIMENS		VER		
Max Safety	Required Pipe Runner Size				
Pipe Runner Length	Pipe Size	Pipe O.D.	Pipe I.D.		
11' - 2"	3" STD	3.500"	3.068"		
15' - 6"	3 ½" STD	4.000"	3.548"		
20' - 10''	4" STD	4.500"	4.026"		
35' - 4''	5" STD	5.563"	5.047"		

(1) Dimension "D" is based on reinforced concrete pipe (RCP) meeting the requirements of

Slope of 3:1 or flatter is required for vehicle safety.
ion is shown elsewhere in the plans.
st end treatments with concrete riprap. Concrete riprap 467, "Safety End Treatment".
to provide for the minimum distance between safety end

 $({ar O})$ Provide cement stabilized bedding and backfill in accordance with the Item 400, "Excavation ar Backfill for Structures". Bedding and backfill is considered subsidiary to the Item 467, "Safet End Treatment". When concrete riprap is specified around the safety end treatment, backfill

Precast safety end treatment for reinforced concrete pipe (RCP), and

pecified in Item "Safety End Treatment". When precast safety end treatment is used as a Contractor's alternate to mitered RCP, riprap will not be required unless noted otherwise on Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete

Manufacture this product in accordance with Item 467, "Safety End Treatment" except as noted below : A. Provide minimum reinforcing of #4 at 6" (Grade 40) or #4 at 9" (Grade 60) each way or 6"x6" - D12 x D12 or 5"x5" - D10 x D10 welded wire reinforcement (WWR).

B. For precast (steel formed) sections, provide Class "C" concrete (f'c = 3,600 psi). At the option and expense of the Contractor, the next larger size of safety end treatment may be furnished as long as the "D" dimension cast is that of the required size of pipe. Pipe runners are designed for a traversing load of 1,800 Lbs at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside ross-Drainage Structures", Texas Transportation Institute, March 1981.

Provide safety pipe runners, cross pipes, pipe support posts, and pipe stubs meeting the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52. Galvanize all steel components except reinforcing steel after fabrication Repair galvanizing damaged during transport or construction in accordance with the specifications. Connect RCP using the Optional Joint for RCP detail shown or in accordance with Item 464 "Reinforced Concrete Pipe". Connect TP by grouting. See PBGC standard for grouted connections with TP and precas

> Bridge Division Standai Texas Department of Transportation PRECAST SAFETY END TREATMENT TYPE II ~ CROSS DRAINAGE

PSET-SC DN: RLW CK: KLR DW: JTR CK: CONT SECT JOB HIGHWAY psetscss-20.dgn DOT February 2020 REVISIONS COUNTY

RECORD DRAWING THESE RECORD DRAWINGS ARE BASED ON AS-BUILT DOCUMENTS PROVIDED BY THE CONTRACTOR OR DEVELOPER. FIELD INSPECTION OF CONSTRUCTION, IF EQUIRED FOR COMPLIANCE WITH CERTAIN REGULATORY STANDARDS, WAS NOT PERFORMED BY THE DESIGN NGINEER. IT IS NOT GUARANTEED THAT THIS DOCUMEN REPRESENTS "AS-BUILT CONDITIONS." 03/22/2022

JOB DATE DESI CHE				NO. REVISION	DATE
NO E GNER	CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS	ENGINEERS	ADAM S. 984 984 ADAM S.		
# 6126300 June 21 CoR DRAWN CoR 20	STORM DRAINAGE DETAILS SHEET 2	FORT WORTH I SAN ANTONIO I AUSTIN I HOUSTON I DALLAS 6500 W FWY, STE 700 I FT. WORTH, TX 76102 I 817.870.3668 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION #470			