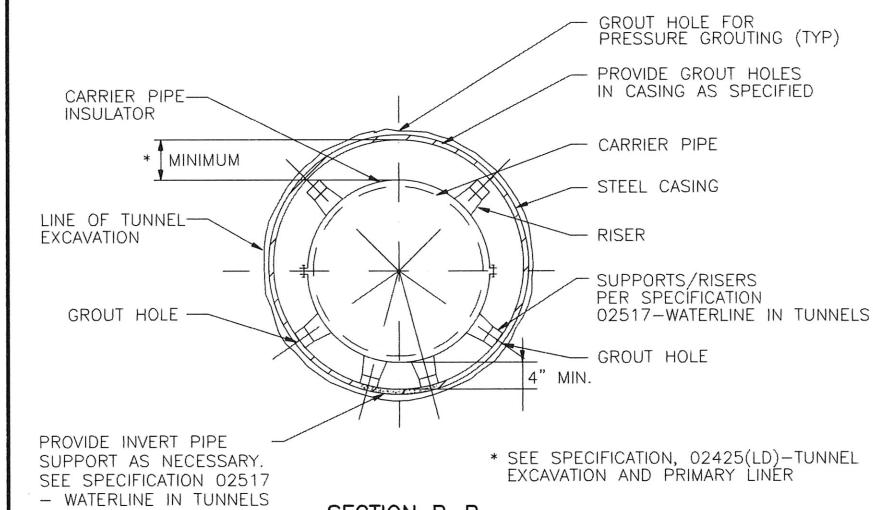


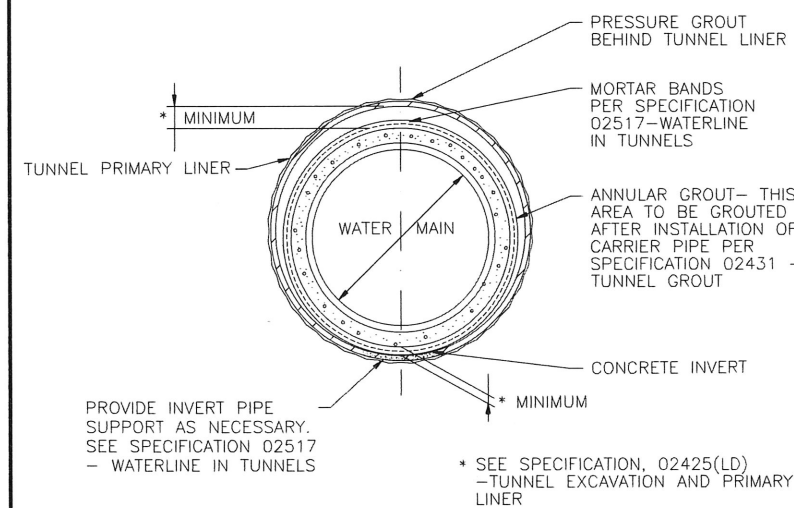
SECTION A-A

1 WATER LINE CARRIER PIPE INSTALLATION IN TUNNEL USING BLOCKING



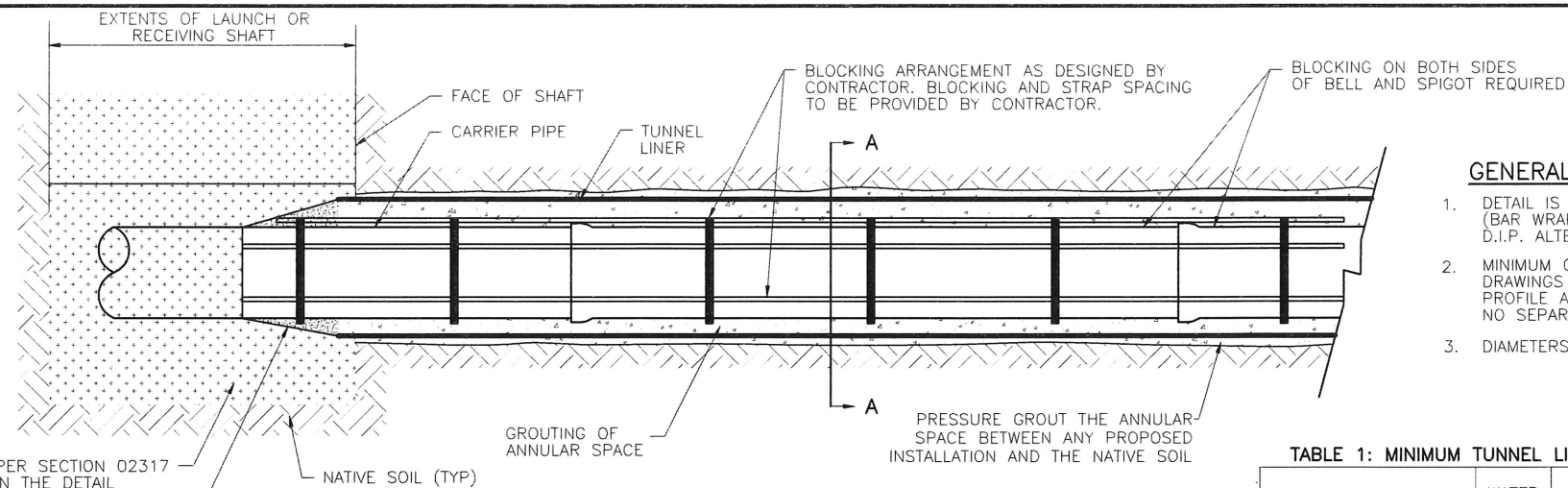
SECTION B-B

2 WATER LINE CARRIER PIPE INSTALLATION IN TUNNEL USING CASING SPACERS

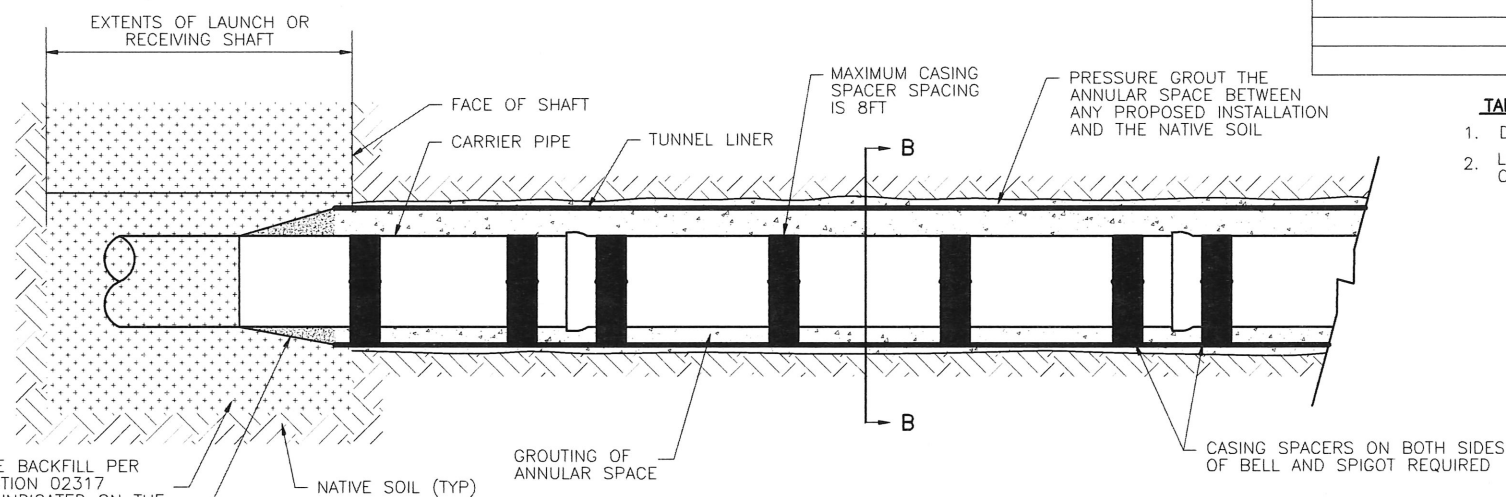


SECTION C-C

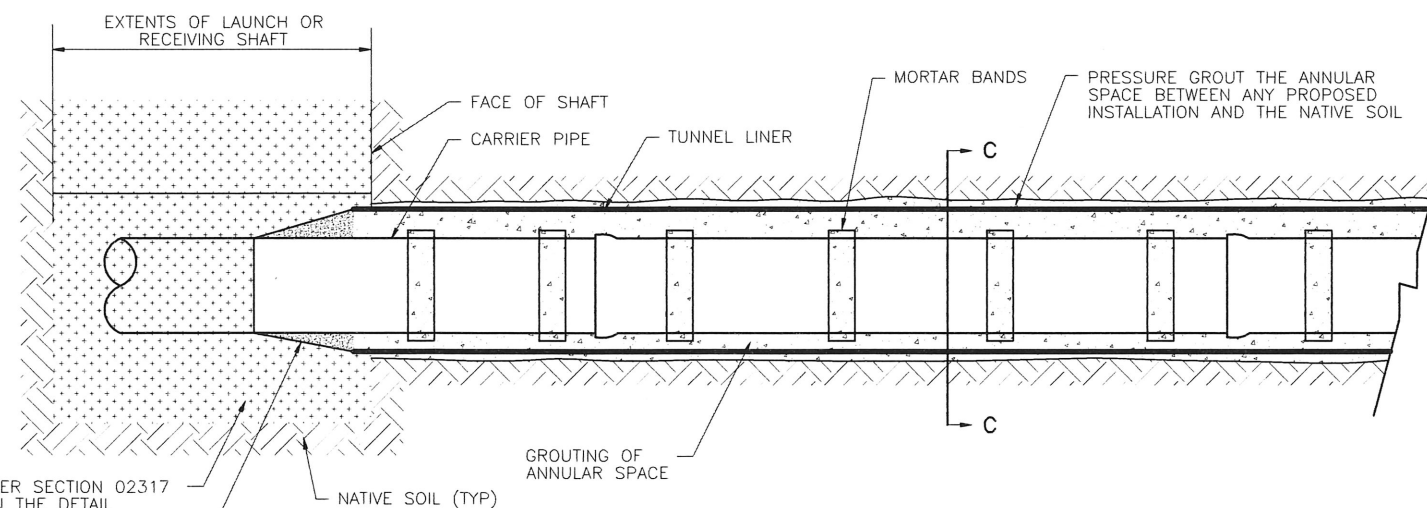
3 WATER LINE CARRIER PIPE INSTALLATION IN TUNNEL USING MORTAR BANDS



WATER LINE CARRIER PIPE INSTALLATION IN TUNNEL USING BLOCKING



WATER LINE CARRIER PIPE INSTALLATION IN TUNNEL USING CASING SPACERS



WATER LINE CARRIER PIPE INSTALLATION IN TUNNEL USING MORTAR BANDS

(ONLY APPLICABLE FOR MORTAR COATED CARRIER PIPES)

GENERAL NOTES:

1. DETAIL IS FOR PRESTRESSED CONCRETE CYLINDER PIPE (BAR WRAPPED STEEL CYLINDER PIPE, STEEL PIPE AND D.I.P. ALTERNATE SIMILAR).
2. MINIMUM CLEARANCES SHOWN ON THE PLAN & PROFILE DRAWINGS ARE TO THE O.D. OF TUNNEL LINER. ADJUST PROFILE AS REQUIRED TO MAINTAIN CLEARANCES IDENTIFIED. NO SEPARATE PAY.
3. DIAMETERS INDICATED ON PLANS ARE NOMINAL DIAMETERS.

TABLE 1: MINIMUM TUNNEL LINER / CASING SIZES AND THICKNESS

LOCATION	WATER MAIN DIA.	PIPE MATERIAL	NOMINAL DIA ⁽¹⁾ (IN)(CASING O.D.)/WALL THICKNESS (IN.)		
			2-FLANGE ⁽²⁾ LINER PLATE	4-FLANGE LINER PLATE	STEEL CASING

TABLE 1 - NOTES:

1. DIAMETER OF LINER PLATE IS AT NEUTRAL AXIS.
2. LINER PLATE IS TWO FLANGE AND NOMINALLY 2-INCH CORRUGATION BY 6-INCH PROFILE.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

LDWL
TUNNEL AND CASING DETAILS
FOR WATER LINES 24-INCH AND LARGER

(NOT TO SCALE)

APPROVED BY:

Suhail Kanwar
CITY ENGINEER

APPROVED BY:

Carl Addade
DIRECTOR OF
HOUSTON PUBLIC WORKS

EFF DATE: JUL - 01 - 2021

DWG NO: 02517-01