

SECTION 00589 - UTILITY ATTACHMENTS ON STRUCTURES

Section 00589, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00589.00 Scope - This work consists of providing for attachment or installation of utilities on new and existing structures as shown or as directed.

(Use the following two paragraphs when structures have been designated "Special Structures" by Bridge Engineering Section. List the designated Special Structures by bridge number.)

The following structures are designated "Special Structures":

- Bridge No. _____
- Bridge No. _____

Utility attachments to Special Structures shall not alter the appearance of the structure. Make attachments only inside the girder line, as close as possible to the soffit, or as required to make the installation as inconspicuous as practicable.

Materials

00589.10 General - Construct utility attachment systems using materials from the QPL and meeting the following requirements:

Structural steel	02530
Forgings, shafting, castings and nonferrous materials	02540
Fasteners	02560
Reflective sheeting	02910.30
Resin bonded anchor system	00535.10

Furnish brackets constructed of stainless steel or hot-dip galvanized structural steel.

Construction

00589.40 General - Provide sufficient space around utilities for maintenance activities.

Avoid drilling through reinforcing steel. If reinforcing steel is hit, move the anchor location and patch the hole with an approved patching material from the QPL.

Attach conduits or brackets to concrete structures with resin bonded concrete anchors, unless otherwise shown or approved.

00589.41 Natural Gas Lines - Conform to CFR 49 Part 192 in all aspects applicable to the work. Provide isolation valving 61 m (200 feet) from each end of the bridge.

00589.48 Labeling - Clearly label all piping or conduit systems according to the following APWA color code:

Table 00589-1

Material	Marker Background Color
Electrical Power Lines, Cables, Conduits, Lighting Cables	Red
Gas, Oil, Steam, Petroleum, Gaseous Materials	Yellow
Communications, Alarm, Signal Lines, Cables, or Conduits	Orange
Potable Water	Blue
Reclaimed Water, Irrigation, Slurry Lines	Purple
Sewers, and Drain Lines	Green

Generate purple by placing purple transparent film over white reflective sheeting. The purple tint of the transparent film shall match Federal Standard Color 595B No. 37100.

Minimum length of label shall be as shown in Table 00589-2.

Table 00589-2 (Metric)

Pipe O.D. Min. (mm)	Pipe O.D. Max. (mm)	Length of Label (mm)	Width of Label (mm)
19	32	200	19
38	51	200	25
64	150	300	50
200	250	300	50
250	—	300	50

Table 00589-2 (English)

Pipe O.D. Min. (inch)	Pipe O.D. Max. (inch)	Length of Label (inch)	Width of Label (inch)
3/4	1 1/4	8	3/4
1 1/2	2	8	1
2 1/2	6	12	2
8	10	12	2
10	—	12	2

Place labels on each pipe or conduit, on each side of every bent, and at each entrance to a box girder.

Where piping is above or below normal line of sight, place pipe labels so that label may be seen from normal eye height.

Measurement

00589.80 Lump Sum Basis - No measurement of quantities will be made for this work.

Payment

00589.90 Lump Sum Basis - Payment for this work will be made at the Contract lump sum amount for the item "Utility Attachment on Structures".

Payment will payment in full for furnishing all materials, equipment, labor, and incidentals necessary to complete the work as specified.