

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
BOLLARD

DET:MS

1 of 1

APPR:JFS:NAP:08-06-21

a.Description. This work consists of fabricating, galvanizing, delivering and installing concrete-filled steel pipe bollards and high-density polyethylene (HDPE) bollard covers.

b.Materials.

1.Furnish steel pipe in accordance with ASTM A53/A53M, Type E.

2.Furnish Grade 3500 concrete in accordance with section 1004 and mortar/grout in accordance with section 1005 of the Standard Specifications for Construction.

3.Furnish yellow HDPE bollard covers from one of the following manufacturers: Encore Commercial Products, Global Industrial Inc. or Omega Industrial Products.

c.Construction. Fabricate the bollard to the dimensions shown on the plans. Prior to galvanizing, grind all sharp edges to a minimum 3/32 inch radius. After fabrication, galvanize bollards in accordance with subsection 716.03.B.4 of the Standard Specifications for Construction.

Repair damage to galvanized surfaces, at no additional cost to the contract, in accordance with subsection 716.03.E of the Standard Specifications for Construction.

Install bollards plumb. Brace pipes to prevent displacement from center and plumb during pouring and curing of concrete. Consolidate wet concrete by rodding or vibrating. Finish concrete at top of pipe with convex (upward) dome for shedding of precipitation, while permitting bollard cover to be installed properly.

Install bollard covers according to manufacturer's specifications.

d.Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Bollard.....	Each

Bollard includes fabricating, galvanizing, delivering, and installing the bollard and bollard cover at the location shown on the plans. The pay item Bollard also includes repair of damaged galvanized surfaces, the cost of placing and finishing concrete in the bollard and constructing a concrete foundation for the bollard.