DESIGN STANDARDS FOR: BOLLARDS

1.01 Bollards:

A. The SPR Standards for Removable Bollards shall be one of the following choices:

1. "SPR Generic Removable Bollard" shall consist of three pieces including a ground-sleeve with chained locking cover, sleeve and removable pipe-bollard with handle, per SPR Standard Detail No. 12 93 63.23. This bollard shall be all-steel construction, fabricated of schedule 40 steel pipe, ¼" steel plate, ½" steel rod, and ¼" galvanized mild steel straight chain. All parts shall be hot-dipped galvanized after fabrication, as manufactured by FairWeather, Inc.
2. "Historic (Olmsted) Removable or Fixed Bollard" shall be a removable or fixed bollard (depending on site conditions), consisting of a 6" diameter x 36" height; Cast Aluminum or Cast Iron bollard with Black or Dark Green colored powder-coated finish, including sleeve and locking mechanism for removable version, per SPR Standard Detail Nos. 12 93 63.39-43, as manufactured by Urban Accessories, Inc. or Olympic Foundry, Inc.

B. The SPR Standards for Fixed Bollards shall be one of the following choices:

1. "The SPR Generic Fixed Steel Bollards" - Small Fixed (or for Litter Receptacle attachment), shall consist of a one-piece 3-1/2" diameter, schedule 40 galvanized steel pipe with cap on one end, 4' in length with an optional ½" eye bolt welded to the bollard 6" from the capped, top end, set in an 18"x18"x15' depth concrete footing with 2'-6'' above finish grades, per SPR Standard Details Nos. 12 93 63.26-29. All parts shall be hot-dipped galvanized after fabrication, as manufactured by FairWeather, Inc.
2. "The SPR Generic Fixed Bollard" - Large Fixed (for use as a heavy-duty vehicle barrier), shall consist of a one-piece 6" diameter, schedule 40 galvanized steel pipe with cap on one end, 4' in length, set in an 18"x18"x15' depth concrete footing with 2'-6'' above finish grades, per SPR Standard Detail No. 12 93 63.33. All parts shall be hot-dipped galvanized after fabrication, as manufactured by FairWeather, Inc.

C. "The SPR Treated Wood (Removable or Fixed) Bollards" (aka the "Old Standard"), shall only be used to match existing site conditions, as approved by the Parks Engineer. It shall be constructed of SPR approved pressure treated 8x8 timbers and galvanized steel components, per SPR Design Standard for Wood Use & Treated Wood Nos. 06 00 00-01 and Standard Detail No. 12 93 63.36.

D. Optional SPR Standards for Bollards shall include the following choices:

1. Square Concrete Bollard, shall be an 8'x 8 'x 3'-6" long, pre-cast concrete with steel reinforcement, per SPR Standard Detail No. 12 93 63.13, as produced and supplied by SPR Facilities Maintenance at a cost of $250/each.
2. Boundary Marker Bollard, shall be an 8"x 8" x 3'-6" long, pre-cast concrete with steel reinforcement, per SPR Standard Detail No. 12 93 63.16, as produced and supplied by SPR Facilities Maintenance at a cost of $250/each.
3. Wood-grained Concrete Bollard, shall be an 8" dia. x 3'-6" long, pre-cast concrete with steel reinforcement, per SPR Standard Detail No. 12 93 63.19, as produced and supplied by SPR Facilities Maintenance at a cost of $250/each.

END OF SECTION