**Bollards**

**Description:**
The purpose of the section is to highlight the current applicable UMD Design Standards for the design, selection and location of protective site bollards.

**Related Sections:**
- TBD

**Effective Date:**
January 1, 2020

**Applicable Standards:**
- TBD

**General Requirements:**
Site standards have been established for the following items:

**Bollards:**
- **Steel Pedestrian Bollard and Chain**
  - **Material:** Powder Coated Steel
  - **Manufacturer:** Key Stone Ridge Designs
  - **Model:**
    - GV2CE Two Chain (GROVE SERIES) and/or
    - GV2CE One Chain (GROVE SERIES) as required by design
  - **Description:**
    - Non-Removable: Bollards constructed of heavy-duty steel painted with two-coat black powder coating.
    - Removable: Bollards constructed of heavy-duty steel painted with two-coat black powder coating w/ ability to add lock.
  - **Performance:**
    - Non-Removable bollards are placed around landscape features to control pedestrian traffic.
    - Removable bollards are placed strategically as control devices at driving lanes to control pedestrian traffic.
  - **Related Details:** N.A.
  - **Alternate Manufacturer:** Victor Stanley
  - **Anchoring:** As directed by Architect.

- **Steel Vehicular Control Bollard**
  - **Material:** Powder Coated Steel
  - **Manufacturer:** Key Stone Ridge Designs
  - **Model:** PT-6 (Port Bollard Sleeves)
  - **Description:**
    - Non-Removable: Bollard covers are constructed of heavy-duty polyethylene, to be placed over concrete filled 6” steel posts.
  - **Performance:**
    - Non-Removable bollards are placed around building utility features to prevent damage, (i.e. dumpsters, gas meters, hydrants, landscape features to control vehicular traffic).
  - **Related Details:** N.A.
  - **Alternate Manufacturer:** Victor Stanley
  - **Anchoring:** As directed by Architect.