

SECTION 347115

STEEL PIPE BOLLARDS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Cast-in-Place Concrete: Section 033000 or 033001.

1.02 REFERENCES

- A. Standard: American Concrete Institute, ACI 301- 89, for concrete Work of this Section, unless otherwise indicated on the Drawings or specified.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's name, specifications, and installation instructions, for each item specified.
- B. Shop Drawings: Show installation details.
- C. Submit an Environmental Product Declaration (EPD) from the manufacturer for steel within this specification section, if available. A statement of the contractor's good faith effort to obtain the EPD shall be provided if not available.
 - 1. Manufacturer-provided EPDs must be Product Specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services*.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Steel Pipe: Standard weight, Schedule 40, black or galvanized; ASTM A 53 or ASTM A 135.
- B. Concrete: Normal weight 4000 psi, air entrained 6 percent plus or minus 1 percent. Mix in accordance with Method No. 1, 6 bags per cu yd min, allowable slump 2 to 4 inches.
- C. Bumper Post Sleeve: Model 1737 by Eagle Manufacturing Company, 2400 Charles Street, Wellsburg, WV 26070, (304) 737-3171, www.eagle-mfg.com.
 - 1. Color: Yellow.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Set pipe in center of hole and brace plumb.
- B. Fill annular space around pipe with concrete.
- C. Remove braces after concrete has set.
- D. Install bumper post sleeve in accordance with the manufacturer's printed instructions.
- E. Install two Torx center pin security machine screws at the base of the bumper post sleeve to fasten sleeve to steel pipe.

END OF SECTION