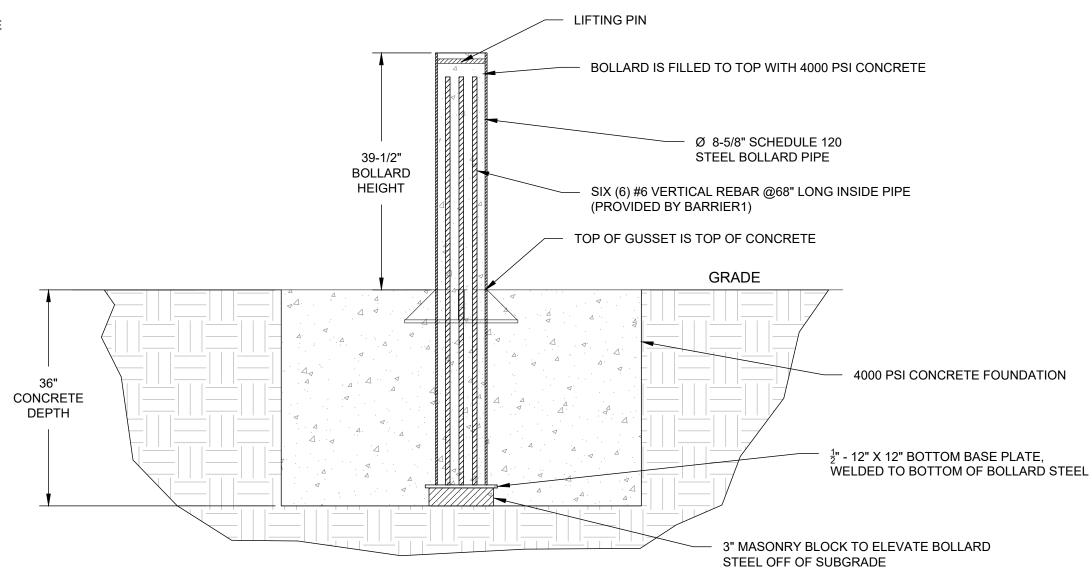
SET & POUR BOLLARD - MODEL SPB-400 CRASH TESTED TO ASTM F2656-07 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

TYPICAL SINGLE BOLLARD INSTALLATION

KEY FEATURES:

- 1. PREFABRICATED BOLLARD UNIT
- 2. NO REBAR IN FOUNDATION
- 3. BOLLARD SYSTEM CAN ACCOMMODATE ANY TURNING RADIUS





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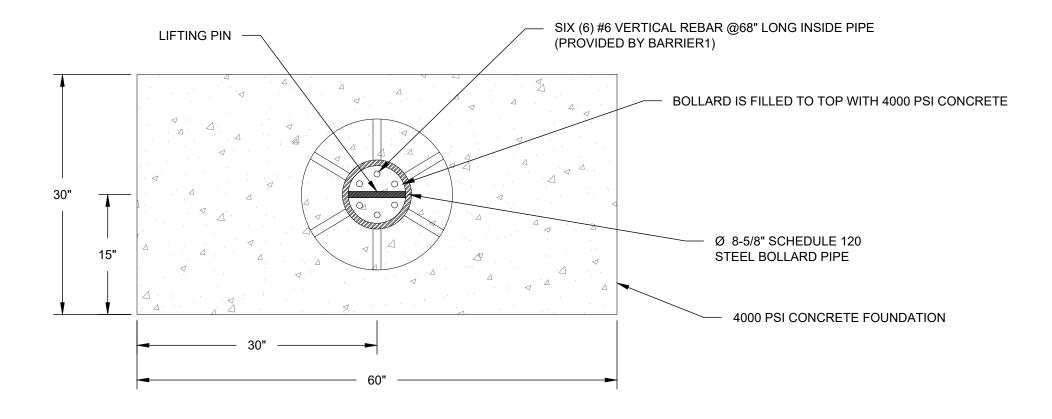
ELEVATION VIEW (STAND-ALONE)

SPB-400 SUBMITTAL DRAWING SHEET: 1 OF 6

20230227-10-M

SET & POUR BOLLARD - MODEL SPB-400 CRASH TESTED TO ASTM F2656-07 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

TYPICAL SINGLE BOLLARD INSTALLATION





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PLAN VIEW (STAND-ALONE)

SPB-400 SUBMITTAL DRAWING SHEET: 2 OF 6

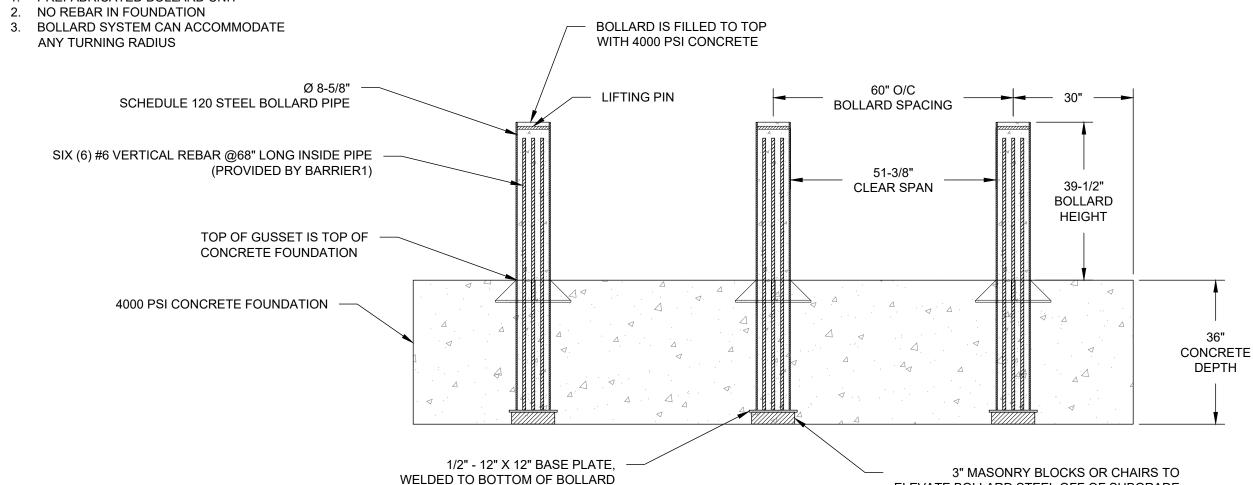
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SET & POUR BOLLARD - MODEL SPB-400 CRASH TESTED TO ASTM F2656-07 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

TYPICAL BOLLARD ARRAY INSTALLATION

KEY FEATURES:

1. PREFABRICATED BOLLARD UNIT



NOTE

1. MODIFIED SPACING FOR SITE SPECIFIC CONDITIONS AVAILABLE.



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ELEVATION VIEW (ARRAY)

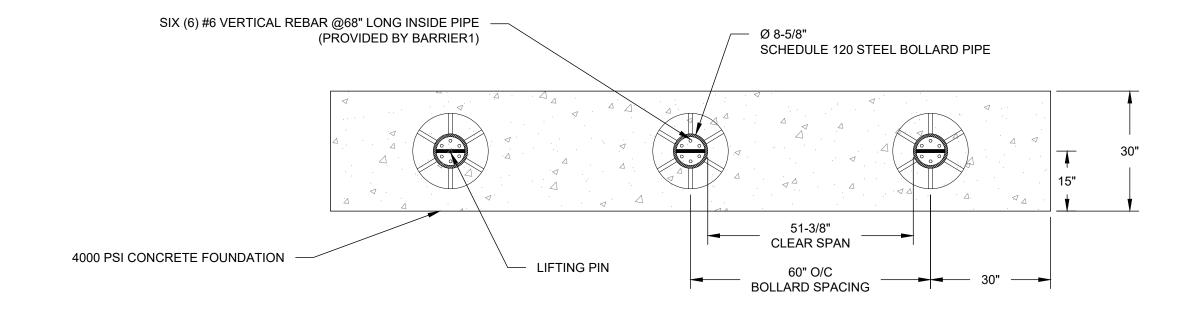
ELEVATE BOLLARD STEEL OFF OF SUBGRADE

SPB-400 SUBMITTAL DRAWING SHEET: 3 OF 6

20230227-10-M

SET & POUR BOLLARD - MODEL SPB-400 CRASH TESTED TO ASTM F2656-07 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

TYPICAL BOLLARD ARRAY INSTALLATION



NOTE

1. MODIFIED SPACING FOR SITE SPECIFIC CONDITIONS AVAILABLE.



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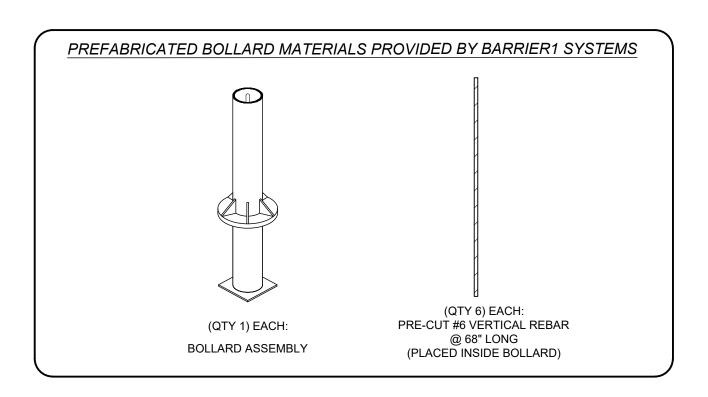
PLAN VIEW (ARRAY) SPB-400 SUBMITTAL DRAWING SHEET: 4 OF 6

20230227-10-M

SET & POUR BOLLARD - MODEL SPB-400 CRASH TESTED TO ASTM F2656-07 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

MATERIALS PROVIDED

STANDARD FINISH: BLACK PAINT



MATERIALS PROVIDED BY INSTALLER

- 1. CONCRETE, ABOUT 1.5 CUBIC YARDS PER BOLLARD
- 2. MASONRY BLOCKS OR CHAIRS TO ELEVATE BOLLARDS OFF OF SUBGRADE



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MATERIALS PROVIDED

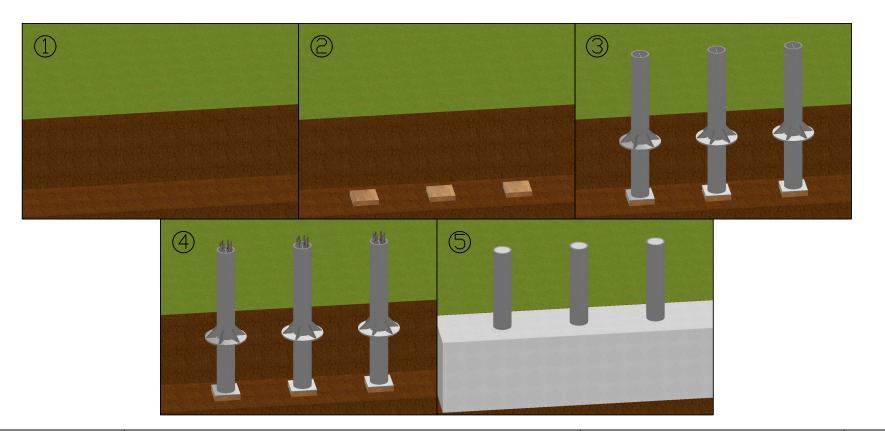
SPB-400 SUBMITTAL DRAWING SHEET: 5 OF 6

20230227-10-M

SET & POUR BOLLARD - MODEL SPB-400 CRASH TESTED TO ASTM F2656-07 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

INSTALLATION STEPS

- 1 EXCAVATE THEN TAMP SUBGRADE WITH PLATE TAMPER.
- USE MASONRY BLOCK OR CHAIRS TO ELEVATE BOLLARD OFF SUBGRADE, SO THAT TOP OF GUSSET / SLEEVE IS SAME HEIGHT AS TOP OF CONCRETE.
- 3 PLACE PREFABRICATED BOLLARDS INTO EXCAVATION.
- (4) INSERT VERTICAL REBAR INTO BOLLARD TUBE.
- (5) FILL BOLLARD TUBE AND EXCAVATION WITH CONCRETE.





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INSTALLATION STEPS

SPB-400 SUBMITTAL DRAWING SHEET: 6 OF 6

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